From: Bruce H.T. Ennion [bhte@

Sent: 06 January 2008 19:12

To: Reynolds, Steve; Chandler, Jason

Cc: Ennion, Bruce

Subject: RE: tie V3 ER - Urgent

Steve and Jason

Firstly I am sending you this from my home machine as my PB mailbox over-floweth and still appears to be totally locked up despite requests for an increase in size. There have been a number of emails over the so called Christmas break associated with this subject and the equally important EMC works which may or may not have been sent but I am unable to find out until I return on Monday.

Secondly I totally agree with the sentiment in your Email.

As assistance, I outline a brief potted history of the ETN which I believe is not (cannot be?) fully understood by those within **tie** who have inherited the responsibility to progress the ETN Project.

The **tie** Project Director (Ian Kendall) invited tenders for the ETN System Design Services some time ago resulting in the **tie**/SDS Agreement which defines the role and responsibility **tie** expected SDS to full fill and sat within the **tie** ETN procurement strategy applicable at the time.

As the result of a number of subsequent changes in both **tie** Directorship and senior management **tie** have recreated and restructured earlier versions of their Employers Requirements document and have now produced Version 3. The reason for the **tie** Employers Requirement document was and is a document that is intended to define the characteristics (Functionality, Reliability, Availability etc) **tie** required of the infrastructure and systems **tie** considered necessary to provide Edinburgh with a Tram System. A **tie** document, to be supported by the SDS Design and procurement documentation at the time the Infraco tender.

In parallel, **tie** management, staff and their technical advisors have very carefully monitored and eventually approved the SDS development of the Infrastructure (Civil, Building etc) Detail Design and the Systems Procurement Documentation. This process followed the original **tie** procurement strategy and the output was required by **tie** to be issued by **tie** during their Infraco tendering process. However as things have transpired and basically as the result of the totally unnecessary prevarication on behalf of **tie** and the fact that they have spent so much time in developing their ERs the whole **tie** Infraco Procurement process became disjointed.

During the actual tender process SDS assisted **tie** by responding to the many **tie** requests for the additional issue of SDS Drawings and procurement documentation which had 'not been readily available' in the **tie** organisation. SDS also supported **tie** by providing **tie** with 250 + answers to the many TQ's submitted by the bidders.

The tender process was carried out by **tie** without consultation with SDS despite numerous SDS letters to **tie** requesting sight of the various ER updates and drawing the attention of **tie** to the fact that the ongoing SDS works themselves was possibly out of step.

The **tie** preferred bidders tender has now been further reviewed by **tie** and, from what is being said, it does not appear to fully reflect the various SDS design details and procurement specifications issued in support of their ER's. In order for **tie** to progress to an acceptable contract award **tie** appear to have modified their requirements with little cognisance of the **tie** approved work carried out by SDS in respect of SDS Detail Design including some very detailed SDS procurement specifications, parts of which have been necessary to enable SDS to progress their Detail Designs and achieve planning consents etc.

Irrespective of the fact that **tie** have taken more than 12 months to update their Employers Requirements to Version 3 it appears that, based upon their present circumstances **tie** now consider they need the SDS assistance – SDS/**tie** meeting Thursday 20th December 2007 confirmed in Mathew Cross Email 2nd January 2008 which also quite clearly indicates he is not happy that SDS have not been able to respond when requested even though it is the Christmas period and SDS people had previously made their arrangements for family holidays.

I have to admit that I am somewhat at a loss as to what **tie** are expecting and I believe there requests reflect a lack of understanding of their Agreement with SDS, the further lack of the intended **tie** procurement process and of particular importance the reason behind their production of their ER and the contents of same.

- A one day page turning exercise to conclude the ER's alignment together with the legal agreement issues –
 this confuses me, with what in mind? It is surely not the compatibility of the tie ER that is in question it is the
 compatibility between that which tie have accepted and the SDS output of the tie/SDS Agreement. See also
 later.
- A chapter and section scan by Bruce over the Christmas Holidays for what purpose?

As mentioned in numerous earlier Emails on this subject, one of the most recent I understand has been copied to Mathew, the **tie** ER's define the characteristics of the Infrastructure and the Systems **tie** require to provide Edinburgh with a Tram System. They also, or should also, define the many processes and procedures **tie** expect the Infraco Contractor to accommodate as part of his Works - Testing, Third Parties liaison, Programming, Progress Reports being but a few but this is another aspect which is not necessarily an SDS issue other than SDS having a professional responsibility to a client.

As far as the technical elements are concerned the ER document refers to many aspects of the intended works which have been developed from the documentation originally produced by SDS as part of their obligation to tie. All such SDS documentation elaborated on the basic brief provided to SDS and gave a more detailed picture of what the ETN would consist of when constructed. Hence the planning approval process called for by tie.

We are now in the position where **tie** have accepted something which, whilst possibly still complying with the ER's, most certainly will not fully comply with the CEC/tie/SDS approved detail.

I suggest that until **tie** are able to confirm with SDS the details as to what it is they have accepted SDS are not able to comment on the implications.

As an example, I propose the ER's refer to OLE as being supported on poles and building fixings. SDS has held many meetings with CEC and others and the conclusion was that where poles are to be used they shall be tapered poles. Understandably the SDS Documentation refers to Tapered Poles. I believe BBS have proposed poles with shoulders.

Both solutions meet the ER's however the implication on this issue alone is significant as, apart from somebody obtaining a change in the concept agreed as acceptable by CEC, all the SDS documentation may need updating.

I understand BBS/Siemens are minimising the amount of trackside DC Reinforcing Cabling by various means which themselves are contrary to the **tie**/SDS Documentation. There are some 160 plus SDS cross section drawing alone that need to be revised to reflect this change. This is as well as well as the various Traction Power Drawings some of which are now redundant.

BBS Track form is different. What are the implications to all the Track documentation?

Simple things like the Communication proposals. In a number of areas very different to the **tie**/SDS proposals. Will this impact on the various Stop documents and drawings? Almost certainly but until **tie** are able to advise what they are requiring – I don't know.

On the subject of Stops, which have a very high profile public conception impact, I have been at meetings when a bus shelter type shelter has been mentioned by BBS/Siemens which is somewhat different to the tie/SDS design but <u>may</u> still comply with the ER.

Whilst I hope this does not sound negative I believe it does reflect the situation we, or more importantly **tie** face. A situation apparently not fully recognised by **tie**.

I fully understand the need to support a very important client and I will do all I can to continue to do so however I believe it essential that PB protect their long and short term interests and I seek early discussion with you to plan our way forward.

| | Ιt | looks | like | we | face | an | interesting | few | weeks |
|--|----|-------|------|----|------|----|-------------|-----|-------|
|--|----|-------|------|----|------|----|-------------|-----|-------|

Regards

Bruce.

From: Reynolds, Steve [mailto:ReynoldsS@pbworld.com]

Sent: 04 January 2008 17:32

To: Bruce H.T. Ennion; Chandler, Jason

Cc: Ennion, Bruce

Subject: RE: tie V3 ER - Urgent

As per my recent email, it's vital we keep our shape on this and don't let tie assume our agreement to this seemingly muddled revision.

I believe we should be able to protect our position by sticking to our guns, but quite where this leaves the project direction is perplexing.

Steve

From: Bruce H.T. Ennion [mailto:bhte@

Sent: 28 December 2007 11:40 **To:** Reynolds, Steve; Chandler, Jason

Cc: Ennion, Bruce

Subject: tie V3 ER - Urgent

Importance: High

Steve & Jason

A speed read of the above has raised a number of concerns which I believe we need to address before responding to **tie** with our comments.

- 1. The document is, in my opinion,
- · Significantly lacking in a number of areas,

There appears to be inadequate reference to the previously agreed **tie** requirements for testing (Works, Soak, Site, Integrated Testing and Trail running etc) and commissioning of the various Systems forming the ETN. Traction Power Equipments, Communications equipments, OLE Equipments etc. At the same time it is somewhat OTT in respect of the requirements for Tram all of which I would have expected to find in the separate Tram Procurement Contract Documentation.

 Seriously incorrect in places – in my opinion a matter which should be of serious concern to SDS

For example - Sections 38, 39.10 & 39.14 all make references to SDS Design. I believe the use of the term SDS Design within this document to be both misleading and wrong. This appears to be continuations of the mistaken believe that SDS design everything.

totally OTT in elements

The **tie** programme requirements contained in the relevant section of this document are, in my opinion, a clear reflection of a distinct lack of understanding of the various processes applicable to a project of this nature.

Whilst Section 23 very briefly, and in my opinion, inadequately, covers Testing & Commissioning requirements I would have expected an experienced Client to be monitoring the Contractors progress in respect of at least the following activities — **Design** (not all design has been carried out, indeed serious design packages have yet to commence), **procurement** (procurement, placing of orders, committed/anticipated deliveries, long lead items etc of materials for the Civil Works, components and equipments for the E&M Works, hardware and software for the electronics, systems etc), **manufacture** (of the various structures/assemblies forming the civil works, the various equipments Transformers, Switchgear, Cabinets, substation Buildings etc), **Works testing** including soak testing of assemblies, representative samples of the Systems to be delivered to site etc, **Deliveries** (of obvious interest to anyone who is running a construction site) **Site Construction and Installation activities, Site Testing** (individual systems) **Integrated System Testing**. **Trial Running** etc

Clause 39.10 for example refers to SDS Design but there is no other WBS activity covering 'Design'. See comment above re lack of recognition as to SDS role and, more importantly, the total lack of a **tie** programme activity covering the design responsibilities of the Infraco.

Whilst the **tie** document covers some incredibly (unrealistic) detailed WBS, LBS activities it will not enable **tie** to monitor the progress of the Infraco in those activities which will be critical to the success of the Project.

2 - Based solely upon the opening statements within Version 3, copied below, SDS have already written to **tie** some 2/3 weeks ago seeking their instructions as to what they wish SDS to do with an earlier copy of V3 of this document issued to SDS

This issue of the Employer's Requirements is a further step towards producing a set of Employer's Requirements that can be accepted by Infraco, Tramco, **tie** and SDS to become an integral part of the Infraco contract and the associated novation of Tramco and SDS.

It is therefore inviting acceptance or material comment from SDS, Infraco and Tramco as part of the Contract Close process. The programme for this process is set out separately by **tie**

In order to protect SDS I believe we need to again formally seek clarification as it appears **tie** are indirectly asking SDS to sign up to this document which, although it is basically limited to functionality, most certainly does not reflect the significant time and effort put in by both **tie** and SDS in the development of the various SDS designs and procurement packages **tie** have signed up to as illustrative of their specific requirements and sought tenders against..

All the very best

Bruce

Episode two will follow as time becomes available. Its almost as good as battling with the family and grandchildren even if it is Christmas

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