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Billfinger Berger – Siemens – CAF Consortium  
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Our Ref: INF CORR 5346

Date: 15<sup>th</sup> June 2010

Dear Sirs,

**Edinburgh Tram Network Infraco**

We respond to your letters 25.1.20/KDR/5978 and 5980 dated 10 June 2010 which are said to refer to, (but not that they answer), our letters of 4 June 2010, references 5272 and 5273 and 5133 dated 24 May 2010. In responding we also refer to for relevance, but not fully respond to your letter 25.1.201/BDo/5937 – we will respond to that letter in due course.

Our letters are clear in their intention to respond to what you have said and to explain our position whilst at the same time confirm that we have given you certain legitimate instructions which you still have not carried out.

We do confirm that we have not instigated any of the "press coverage" to which you refer. However, we see it as reflecting a widely held frustration as to your behaviour. Indeed a simple example of such frustration is where, even if your interpretation of various contract provisions is correct, which in some cases we deny, complying with our instructions does not place you in breach of the Infraco Contract or even cause you any prejudice. To explain, why can you not simply provide details, requisite under Clause 28, for whatever Billfinger Berger subsidiary you propose to carry out the work on behalf of the Infraco?

Obstinacy does not sit well with the provisions of Clause 6.1. However, it is emerging that your refusal to respond positively to even the simple things may have deeper seated reasons.

We have duties (statutory and contractual, corporate and individual) to understand with relevant urgency why for example, your Mr. Walker should assert that agreeing to item five of our suggested "outline methodology" set out in our letter 3 June 2010 would be contrary to his duties as a "professional engineer". We need your explanation of why Mr. Walker is concerned about not only his company's risk of prosecution (criminal or civil) but also his own. Moreover, we need your explanation as to whether this is a reason why you have not as yet been able to deliver an integrated design for the trackwork. We will hold you responsible if you fail to respond or act in a timely manner.

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You need to explain the relationship between the various "designers" involved in whatever proposals you intend to make. Moreover, you need to give us assurances that the intellectual property of those designers has been passed down to us (reference Clause 102) and obtain valid warranties from those designers in our favour. Until you do this, your warranty under the Infraco Contract cannot be safe. Please provide these Deliverables without delay together with all other documentation, minutes etc. which demonstrate the actions you have taken to deliver a design solution capable of assurance in accordance with the terms of the Infraco Contract.

As you know we have discussed our "outline methodology" with John Dolan, the Independent Competent Person, who in addition to our own and CEC's statutory obligations has to be satisfied that he should not object to the ETN coming into service. His comments are worrying, not because of the methodology, to which he has no objection, but because you have not submitted any Design Assurance Statements for any of the Infraco Works. Moreover, he is concerned that the work you have carried out in Princes Street may not have considered circumstances outlined in the attached note prepared by Mr. Dolan for discussion.

The absence of the requisite design assurance on Princes Street and on Off-street works is at your risk, but we require you to provide assured designs which have a high degree of certainty of resulting in Works which will not prevent the ETN operating if constructed properly by Infraco.

To further explain, all of the issues Mr. Dolan raises cause us concern, but we refer to two particularly: Road & Rail Alignment and the "Detailed Considerations". As you are aware the wearing surface, especially around the rails, on Princes Street is already starting to show signs of disintegration. This has caused the relative road/rail level to become a hazard – with the consequent legal implications. By this letter we give you notice that we will hold you responsible in case of accident or claim arising from these defects.

We refer to your letter 5937 which inter alia now admits that you have not finalised the design of the On-street trackworks (Item 7). Moreover, you letter de facto admits errors and defects caused by Infraco in six circumstances. All of this despite the attempts made by us in February 2009 (15 months) to obtain an integrated design validated by SDS. In their own words "*provision of detailed pavement design and specification*".

Despite your habit of asserting that the Princes Street Supplemental Agreement resulted in a satisfactory conclusion, the evidence on the ground very much contradicts you. The facts support a conclusion that Infraco have not complied with their obligations under the Infraco Contract especially pursuant to Clause 7.2 – "*exercise a reasonable level of professional skill, care and diligence to be expected of a properly qualified and competent professional contractor experienced in carrying out works and services of a similar nature to the Infraco works in connection with a project of a similar scope and complexity and have failed to apply Good Industry Practice.*"

Our conclusion is that the Infraco have failed to comply with these obligations. In summary we are of the opinion that there are significant faults in the works which are a hazard, are capable of creating further hazards and will severely reduce the life of the pavement. We note that some of the failings are also seen in those areas which are constructed of granite setts.

This is a matter we will deal with in our response to your letter 5937 – but at this juncture you should be aware of the seriousness of the failings your letter so inadequately deals with. You should be aware that approval of the RHEDA City “C” will be subject of a formal application to Overseeing Organisation (The City of Edinburgh Council). The formal application must include all construction details and all design calculations together with any empirical evidence that the applicant needs to submit to support his application. You should now be aware that your poor performance both in time to finalise the design and in Princes Street may jeopardise that approval. You will certainly have to explain any change to the method adopted in Princes Street.

We regret to say that it is inescapable to not conclude from all of this that Infraco’s management of the Contract has been based on the wrong priorities. We urge you, rather than contemplating what the next procedural move could be, to concentrate on reducing the impact of delay caused by your clear inability to produce a design which integrates the Employer’s Requirements with your Proposals and which is assured by the SDS Provider. Any refutation of responsibility by you is without foundation or substance and is totally unrealistic.

Yours faithfully



Steven Bell  
Edinburgh Trams – Project Director



## Street track notes

Identify special risks, including

- Double deck buses turning, especially the rear axles
- Proximity to the sea shore (salt wind, lingering surface damp)
- Use of rock salt in winter
- Need to minimise future street works, a safety and congestion risk, even if this requires additional tram maintenance; that is carried out in a controlled, managed environment.

Identify genuine requirements, including

- Need for alleged ORR 1m span requirement
  - Basis for this in documentation
  - Basis for this – was it for embedded rails?
  - Logic for this on a structural basis as rails in track can span much more than this. Sleepers are regularly changed under traffic. The pedestal spacing in depots is often much more than 1m. Tram rail is actually stronger in bending than normal railway rail; there is more metal, concentrated in the “flanges”, with a taller web, all tending to improve things.
- Road and rail to be level
  - Statutory requirements (Scotland)
  - Legal decisions, e.g., Sheffield, and applicability in Scotland
  - Designs that facilitate maintenance of “level”

Adopted Standards

- Where not UK / EN, the logic for adoption
- Where the Standard has Categories, the logic for Category choice
- Where from a different (or several different) regime(s)
  - Coherence and integration
  - Completeness – some Standard suites are designed to fill in around prescriptive legal requirements not relevant in Scotland, and are inherently incomplete

Detailed considerations

- Rails to be held to gauge. Movement tends to cause surfacing to break up
- Rail fastenings to resist rail roll. Movement tends to cause surfacing to break up
- Construction must mitigate risk of water penetration followed by freeze-thaw cycles, which can lead to a “debond” between road base and rail support. This can be a problem with embedded rails, leading to embedded rails rotating in slots.
- Flexible fill between rail head and surfacing designed and installed to resist rapid rip out (especially by turning buses)
- Recognition that minor defects will propagate under traffic at an accelerating rate, becoming major defects, endangering road users, especially two-wheeled road users. The best mitigation is quality control.

Design and construction need to consider the inspection and maintenance regime for the road / rail interface. This should, in particular, focus on the relevant road and tramway inspection frequencies and the risks that might develop on either side of the interface. To some extent, it is independent of the actual responsibility split:

	Tramway	Roads Authority
Safety Responsibility	Defined	Defined
Required Action*	Defined	Defined
Financial Responsibility	Defined	Defined

\*May be involve advising the other party, carrying out the necessary work or both