

THE EDINBURGH TRAM INQUIRY

Supplementary Submissions of Siemens Plc

1.0 INTRODUCTION

1. This supplementary submission is made pursuant to the 'Note by Chairman for Core Participants Concerning Further Submissions', dated 9 October 2018 and further to the provision of additional documents received by the Inquiry in response to the Chairman's Note dated 30 August 2018.
2. The additional documents received consist of a supplementary witness statement by David Gough of BBUK, dated 1 October 2018¹ and Supplementary Submissions by SETE Group, dated October 2018.
3. Siemens makes no comment in relation to the supplementary statement by Mr. Gough as this statement, in the main, relates to BBUK's pricing. Siemens was not privy to BBUK's pricing or its provisions for risk.
4. Siemens does, however, wish to address directly the SETE Supplementary Submissions [TRI00000296] and the statements, observations and assertions made therein.
5. This submission is supplemental to Siemens' Closing Submissions [TRI00000290] dated 11 May 2018.

¹ TRI00000295.

2.0 RESPONSE TO SETE SUPPLEMENTARY SUBMISSIONS

6. The main allegations and assertions made in the SETE Supplementary Submissions are:

- 1) Under Clause 81 any Changes to SDS Design to support Infraco requirements were a cost to be borne by Infraco and not by the Client;
- 2) Changes to design required by Siemens were mischaracterised as TIE Changes in terms of the numerous INTCs submitted by Infraco²;
- 3) Ongoing Issues with design post Contract Close were likely to be due to design changes to suit Infraco Proposals and thus properly a contractor liability³;
- 4) The advanced degree of design preparation in June 2010 is difficult to reconcile both with Infraco's claimed inability to progress the Works and also with the large number of outstanding issues with design noted at the time of mediation;

7. It is Siemens' position that these allegations are misconceived for the reasons set out below.

2.1 Assertion 1: Under Clause 81 any Changes to SDS Design to support Infraco requirements were a cost to be borne by Infraco and not by the Client

8. The risk of misalignment between the Infraco Proposals and the Base Date Design Information ('**BDDI**') was a TIE risk pursuant to the express terms of the Infraco Contract.

9. The Pricing Assumptions in Schedule Part 4 [**USB00000032**] reflect the incomplete nature of the SDS design at Contract Close and the extent of divergence between the Deliverables produced by SDS and the Infraco Proposals. Pricing Assumption 3 [**USB00000032_0006**] expressly provides that:

² Allied to this assertion, SETE assert that TIE had no visibility of the progress of design post novation [**TRI00000296_0003**].

³ This is considered to be a repetition of the assertion at **TRI00000296_0001** that "delays were due to redesign to suit Siemens proposals".

"The Deliverables prepared by the SDS Provider prior to the date of this Agreement comply with the Infraco Proposals and the Employer Requirements."

10. The agreed process for resolution of misalignment between the Infraco Proposals and the SDS Deliverables was prescribed in the SDS Novation Agreement⁴. Clause 4.7 required the 'Parties'⁵ to hold Development Workshops to progress design and Clause 4.8 required the Parties to document the conclusions of these workshops in a joint report.
11. The SETE supplementary submission fails to acknowledge both the risk allocation and the procedural mechanisms agreed in the Infraco Contract despite the extensive evidence before the Inquiry on this matter. During oral evidence Mr. Steven Bell of TIE conceded that the contract intent was to resolve the misalignment between the SDS design and the Infraco Proposals post contract and that Change Orders were likely⁶. The SETE supplemental submission seeks to resile from this position.
12. The SETE position is also contrary to the legal advice given to TIE in October 2009⁷. The advice to TIE from McGrigors was clear: the product of the Development Workshops triggered a Mandatory TIE Change⁸:

"The base line comparator for determining whether the IFC drawings constitute a Notified Departure is the BDDI save in relation to those misalignment matters indentified in the Novation Agreement where the comparator is the Deliverables in the form in which they existed as at 14 May 2008 subject to any specific Pricing Assumptions. In a number of the misalignment matters, such as Trackform, the BDDI remained the Deliverables as at 14 May 2008 and the product of the workshop was the IFC drawings. In these cases a Mandatory tie Change is triggered without having to go through the tests laid down in relation to a Notified Departure."

4 **CEC01370880**-Novation of System Design Services Agreement.

5 The 'Parties' were defined as Infraco, SDS and TIE.

6 Public Inquiry Transcript 24 October 2017, page 163:5 to 164:23.

7 **CEC00797336**-McGrigors, 'General Contractual Issues' 16 October 2009.

8 **CEC00797336_0006**, paragraph 47.

13. In short, the amendment of Deliverables in misalignment matters triggered an automatic Clause 80 TIE Change. There was no right or obligation to instigate a Clause 81 Infraco Change⁹.

2.2 Assertion 2: Changes to design required by Siemens were mischaracterised as TIE Changes in terms of the numerous INTCs submitted by Infraco

14. This assertion is both legally and factually wrong.

15. The changes to design noted in the BBUK monthly reports, upon which SETE rely, refer to the known misalignments between (1) the Siemens designs for OLE and trackform outlined in the Infraco Proposals and (2) the SDS designs for OLE and trackform, as set out in the BDDI and in the Deliverables.

16. These misalignments were known and identified at Contract Close and are more particularly set out at Appendix 7C and Appendix 4 of the SDS Novation Agreement [CEC01370880]. However, in summary terms, the Siemens trackform design was based upon adoption of the Rheda system. The Infraco Proposals set out in detail the proposed trackform for the various sections of the proposed alignment [USB00000088_0225-0231]. In contrast, the BDDI incorporated the generic SDS trackform design, namely Embedded Track^{10 & 11}.

17. The SDS design for OLE was based upon a mixture of Auto-Tensioned (AT) and Fixed Termination (FT) trolley wire equipment whereas the Siemens' system utilised AT trolley wire on-street and AT catenary off-street [USB00000088_0302]¹².

18. By the terms of the SDS Novation Agreement the parties were expressly required to participate in Development Workshops for both OLE and trackform. Clause 4.7 provides:

⁹ Clause 81.1 excludes any variation listed in Clause 79.1.

¹⁰ During oral evidence Mr. Chandler confirmed that prior to the development workshops SDS had "*only produced a generic trackform by this point.*" [Inquiry Transcript_13 October 2017, page 97, line 7-8].

¹¹ Pricing Assumptions 11, 28 and 29 at Schedule Part 4 detailed the assumptions made regarding implementation of any trackform design misalignments [USB00000032].

¹² The OLE Development Workshop Report acknowledges that the OLE misalignments arose from the technical differences between these systems [CEC00971086_0008, paragraph 2.2].

"As soon as reasonably practicable, the Parties shall commence and expeditiously conduct a series of meetings to determine the development of the Infraco Proposals and any consequential amendment to the Deliverables (the "**Development Workshops**"). The matters to be determined at the Development Workshops shall be those set out in the report annexed at Part C of Appendix Part 7 (the "**Misalignment Report**"), together with any items identified as "items to be finalised in the SDS/BBS alignment workshops" in Appendix 4 to be dealt with in the following order of priority and objective unless otherwise agreed:

1. *Roads and associated drainage and vertical alignment with the objective of minimising the extent of full depth reconstruction for roads thus minimising cost and construction programme duration;*
 2. *Structures value engineering, including track fixings to structures with the objective of enabling BBS to realise the Value Engineering savings for the structures identified in Schedules 4 and 30 of the Infraco Contract (Pricing and Infraco Proposals respectively);*
 3. *OLE Design with the objective of identifying and agreeing the actions, responsibilities and programme to enable Infraco to implement their proposals for OLE as identified in the Infraco Proposals; [Emphasis Added]*
 4. *Trackform with the objective of completing an integrated design to enable BBS to implement their proposals for trackform;" [Emphasis Added]*
19. Following Contract Close¹³, Infraco initiated 27 development workshops to develop the original design to 'agreed for construction' status and to incorporate changes required to the civil infrastructure to accommodate the Infraco Proposals [**CEC01121557_0009, Section 4.1.1.2**]. These workshops addressed the matters identified in the Misalignment Report¹⁴ in the manner prescribed by the SDS Novation Agreement.

¹³ The development workshop process started on 15 July 2008 with a joint visit to Berlin and Potsdam, instigated by Siemens, to view the OLE system [**CEC00971086_0015, item 2**].

¹⁴ SDS Novation Agreement, Schedule Part 23, Appendix 7C.

20. For both OLE and trackform, the required design instructions were identified at the respective Development Workshops¹⁵. In addition, for trackform, on 13 February 2009, (following Trackform Development Workshops on 19 November 2008, 22 January 2009 and 5 February 2009), TIE issued Change Order 20 in the sum of £371,057.96¹⁶ in respect of the additional design work required to address the identified misalignments in respect of (i) Ground Improvement Layer; and (ii) Noise & Vibration. No redesign works were undertaken by Siemens and no payments were made to Siemens in respect of this TIE Change¹⁷.
21. In addition, the Trackform Development Report acknowledged that the associated construction works in respect of the trackform misalignment would constitute a Change to the Infraco Works:
- "Implementation of any Ground Improvement Layer will be a Change, to be evaluated and instructed in accordance with the Contract Change Procedure."*
[CEC00771984_0011].
22. Similarly, it was acknowledged that a Change Order would be necessary for the related installation works for the noise and vibration design change **[CEC00771984_0010]**.
23. Table 1 below provides an extract from the Change Register from the February 2011 Period Report to demonstrate the amounts claimed by Siemens for notified Changes arising from the trackform misalignment process **[BFB00003289_0301]**. Siemens is satisfied that these additional installation costs arose as a direct result of the redesign undertaken by SDS and that the amounts claimed were wholly warranted.

¹⁵ Inquiry Document **BFB00095824** lists the SDS Client Changes.

¹⁶ **[CEC00771984_0029]**.

¹⁷ The reference for this Change was INTC 269.

References			Location / Description				Value of Estimate / Change Order
INTC	tNC	tCO	Location	Section	Activity Identifier	Brief Description of Change	Siemens
269		20	SW	SW	Trackform	Instructions arising from Trackform Development Workshop	
411			Off	SW OFF	Trackform	IFC Drawing Changes	149,757
614			On	SW ON	Trackform	BDDI to IFC Drawing Changes	168,545
859	104	210 tCOs					318,302

Table 1- Trackform Workshop Changes

24. The OLE Development Workshop Report [**CEC00971086**] was issued on 9 April 2009 following OLE Development Workshops on 17 November 2008, 3 December 2008, and 3 April 2009.
25. The Workshop Development Report indentified the following misalignments and associated SDS instructions¹⁸:
- 1) OLE Pole Foundation Loads: Instruct SDS to revise OLE foundation designs to suit OLE loads and locations;
 - 2) OLE Building Fixing Loads: Instruct SDS to amend Building Fixing designs for amended loadings;
 - 3) OLE Pole and Building Fixing Locations: Instruct SDS to amend layout drawings;
 - 4) Combined OLE/Lighting Poles: For planning consent reasons instruct SDS to design provision of alternative lighting where OLE poles not required;
 - 5) OHLE Fixings at Depot Access Bridge: Instruct SDS to amend design to incorporate direct fixed catenary because of low headroom.
26. However, the required Change Orders had not been agreed as part of the workshop process¹⁹. Accordingly, on 28 April 2009 Infracore instigated INTC 375 to INTC 380 (inclusive) in respect of these design instructions²⁰.

¹⁸ Section 3-Conclusions [**CEC00971086_0012 &0013**].

¹⁹ On 17 April 2009 TIE confirmed its acceptance of the contents of the OLE Development Workshop Report (Attached Exhibit – Letter reference INF CORR 1275/JM).

²⁰ Inquiry Document **BFB00095824** lists the SDS Client Changes.

27. Table 2 below summarises the notified Changes arising from the OLE misalignment process²¹.

References			Location / Description				Value of Estimate / Change Order
INTC	tNC	tCO	Location	Section	Activity Identifier	Brief Description of Change	Siemens
375			On	SW ON	OLE	Revised OLE foundation and layout to Section1	
375a			On	SW ON	OLE	Changes to OLE bases Section A1, B, C & D	
376			SW	SW	Design	Redesign of OLE poles foundations due to increased loadings - Line 2	
377			SW	SW	Design	Amend OLE system design documents	
378			SW	SW	Design	Amend site wide OLE Building fixing loads and layout drawings	
379			SW	SW	Design	Combined OLE/Pole/Lighting poles	
380			Off	5C	Design	Amend OHLE fixings at Depot Access Bridge	
612			SW	SW	OLE	OLE related planning consents	66,704

Table 2- OLE Misalignment Changes

28. Table 2 demonstrates that in respect of INTC's 375-380 (inclusive) no monies were claimed by Siemens. Subsequently, Siemens sought payment pursuant to INTC 612 for the additional costs incurred by Siemens in securing planning consents for OLE locations in Princes Street.
29. These Changes were not accepted by TIE. However, it is Siemens' position that the notified Changes in Table 2 were wholly warranted.
30. In response to the assertion that TIE had little visibility of the design post novation, it should be noted that, in addition to the OLE Development Workshops, TIE and Infracore met on 13 May 2009, and on 18 June 2009²² to discuss the SDS Design Estimates in respect of INTCs 375-380. In addition, on 14 January 2010 TIE instigated an 'Information Audit' in respect of 'OLE Systems and Design' pursuant to Clause 104²³. The audit scope expressly

²¹ Table 2 is extracted from the Change Register provided with the February 2011 Period Report [BFB00003289_0301].

²² Attached Exhibit - Letter reference 25.1.201/CBr/2892.

²³ Attached Exhibit -TIE letter reference INF CORR 3176/RB.

included "a review of evidence to substantiate why the IFC design constitutes a Change under the Infraco Contract"²⁴.

31. Accordingly, it is difficult to see how TIE was somehow unaware of the nature of the OLE and trackform Changes, as seems to be asserted by SETE. The process prescribed in Clause 4.7 and Clause 4.8 of the SDS Novation Agreement [CEC01370880_0007] required the active participation of all parties. In respect of both OLE and trackform TIE was actively involved in the design development process and was fully aware of the nature of the Changes initiated by Infraco. This assertion also ignores the fact that all design changes required design approval and technical approval from CEC²⁵.

32. Siemens reject the assertion that these Changes have, in any sense, been mischaracterised or misrepresented. Siemens is wholly satisfied that the Changes it initiated and the monies claimed withstand scrutiny²⁶.

2.3 Assertion 3: Ongoing Issues with design post Contract Close were likely to be due to design changes to suit Infraco Proposals and thus properly a contractor liability

33. SETE also assert that design delays were "*due to re-design to suit Siemens proposals*" [TRI00000296_0001]. SETE fails to acknowledge that such redesign was contemplated by the Infraco Contract and constituted a Change to the Infraco Works.

34. Pursuant to Schedule Part 23, amendment of the Deliverables/BDDI, in order to facilitate implementation of the Infraco Proposals, constituted a TIE Change under the Infraco Contract and a Client Change under the SDS Agreement.

35. The delay encountered in regard to both trackform and OLE was largely a function of the prescribed process in Schedule Part 23. Unless and until the Parties had agreed upon the required amendments of the Deliverables, the

²⁴ Attached Exhibit - Attachment to TIE letter reference INF CORR 3176/RB.

²⁵ Mr. Chandler of SDS rejects the assertion that TIE had little or no control over design post novation at paragraphs 607- 609 of his witness statement [TRI0000027_0149]. Pursuant to Clause 10 and Schedule Part 14 of the Infraco Contract, TIE was required to review all Deliverables [CEC00036952_0029].

²⁶ The evidence of Roland Brueckmann highlights the difficulties Siemens and Infraco experienced in seeking to agree such Changes with TIE [TRI00000120_0012, paragraph 58].

contents of the Development Workshop Report and the consequential Change Orders, the required design amendments could not progress²⁷.

36. OLE design was also impacted by the need to secure third-party approvals and for planning consent from CEC for the design amendments²⁸.
37. Thus, despite the protracted misalignment process for OLE, the parties had been unable to agree upon the design Estimates. On 19 June 2009²⁹ Infraco advised that, as a result, it was unable to progress the OLE redesign without a suitable Change Notice. Thus, in the period to which the SETE Supplementary Submissions refers, namely October 2008 to May 2009, no agreement was reached in regard to the OLE design Changes required to address the identified misalignments. Accordingly, despite adherence by Infraco to the process prescribed by the SDS Novation Agreement, it was not possible to progress the OLE design.
38. However, despite these delays Infraco progressed with available work. Thus, OLE foundation construction in Princes Street commenced on 12 May 2009 [CEC00624376_0016] following conclusion of the PSSA. Siemens obtained planning consent for the revised OLE design in Princes Street³⁰ following a formal presentation on 22 October 2009 and in November 2009 Siemens commenced OLE installation in Princes Street [CEC00624424_0041]. By way of context, at this juncture Siemens had postponed OLE procurement because of ongoing delay and lack of access to the Works [CEC00624424_0041]. The delay to OLE design did not cause critical delay to the Infraco Works.
39. Infraco also proceeded with trackform. Following the issue of Change Order 20 on 13 February 2009 for trackform redesign [CEC00771984_0024], SDS proceeded with required design works. After execution of the PSSA agreement

²⁷ The oral evidence of Mr. Chandler indicates the impact of design misalignment on the production and approval of the SDS design [Inquiry Transcript 13 October 2017, page 87: 8 to 90:10]. The failure of TIE to resolve the misalignments is noted in Siemens Closing Submission by reference to the evidence of Mr. Chandler [TRI0000290_0057, paragraph 157].

²⁸ By way of example the minutes of OLE Development Workshop No.2 confirm the requirement to obtain prior approval from CEC for combined lighting poles (item 1.6), for SDS to undertake a Road Safety Audit (item 1.9), and the requirement to obtain agreement from Forth Ports (item 1.11) [CEC00971086_0019].

²⁹ Attached Exhibit-Letter reference 25.1.201/CBr/2892.

³⁰ Period Report 2-9, Section 4.2.1 [CEC00624424_0040, paragraph 4.2.1]. INTC 0612 refers (Table 2).

Infraco commenced work in Princes Street on 23 March 2009. Track installation in Princes Street commenced, as planned, on 8 June 2009, in accordance with the Princes Street Detailed Construction Programme [CEC00624371_0010]. Thus, despite the protracted design development process, the redesign of the ground improvement layer had no material impact on the regular progress of the Infraco Works.

40. As explained in the Siemens Closing Submissions, the ongoing delay to Siemens' progress was due to lack of access, arising from ongoing MUDFA delays³¹. Siemens also direct the Inquiry to the written evidence of Roland Brückmann in regard to the incomplete nature of both the SDS design and utility diversion at Contract Close³².

2.4 Assertion 4: The advanced degree of design preparation in June 2010 is difficult to reconcile both with Infraco's claimed inability to progress the Works and also with the large number of outstanding issues with design noted at the time of mediation

41. The percentage completion (98%) to which SETE refer relates to the production of civil and building drawings by SDS in the period to 30 June 2010 on behalf BBUK, as opposed to Systems design [BFB00112200_0005]. Accordingly, Siemens does not have insight into its precise derivation.
42. However, in general terms, it is correct to say that both civil and Systems design was substantially complete by 30 June 2010. Infraco Period Report 3-4 (to 17 July 2010) records that civil drawings, revised to incorporate, System Engineering design was largely complete and that production of civil/building drawings with revised planning and technical approvals was 78% complete [BFB00003291]. The same Period Report records that System engineering design was substantially complete for all disciplines and technical lots [BFB00003291_0003]³³.

³¹ Axel Eickhorn witness statement, paragraph 44 also refers [TRI00000171_0025].

³² Witness Statement TRI00000120, paragraphs 14, 15-16, 19-28, 39-42, 47-51, and 61.

³³ Siemens MIS Report dated 7 December 2010 records that Systems 'Design Submission Status remains at 95%'. It also confirms that planning consents for OLE for On-street (other than Princes Street) were still outstanding [SIE00000294_001].

43. The SETE allegation demonstrates an ongoing lack of understanding regarding the impediments to progress of the Infraco Works.
44. In its Closing Submissions, Siemens explained, in some detail, that it was denial of access to Site and to Designated Working Areas which prevented it from progressing the Infraco Works³⁴. Regardless of how advanced the degree of completion of design, if you cannot access site then you cannot implement that design. Infraco Period Report 3-4 records the numerous ongoing impediments to progress of the physical works³⁵ and the fact that the critical path was been driven by completion of MUDFA in Section 1B³⁶.
45. A graphic example of this fact is provided by the decision taken by Siemens in June 2010 to suspend building fixing installation in Section 1A to 1C because of restricted access due to MUDFA works. Siemens had commenced these works at risk and ahead of schedule in order to mitigate ongoing programme delay [CEC00189082]³⁷. The BBUK monthly report for June 2010 highlights similar difficulties with both access and continuity of work³⁸.
46. The SETE submission also fails to acknowledge the distinction between design production and design approval and the significant issues with outstanding design approval and consents in 2010. Significantly, post Mar Hall this was a collaborative process³⁹ which, together with the self-certification regime instigated in MOV 4,⁴⁰ helped ensure the prompt resolution of design and approvals. Key to this process was the active engagement and collocation of CEC staff⁴¹.

34 Section 3.1 [TRI00000290_0025] and Axel Eickhorn witness statement, paragraph 44 [TRI00000171_0025].

35 This report indicates that civil works in Sections 1A [BFB00003291_0010], 1B/C [BFB00003291_0012], and 1D [BFB00003291_0013] were impacted by MUDFA works. Report also records that agreement of BDDI to IFFC changes was impacting progress in Sections 2, 5A [BFB00003291_0013], 5B/ 5C/6 and 7 [BFB00003291_0014].

36 [BFB00003291_0009].

37 Siemens Closing Submissions, Section 6.2, paragraph 242-243 [TRI00000290_0084].

38 "Where work is available subcontractors are working under limited notices to proceed but all our contractors are very concerned about the impact on their works of unresolved changes." [BFB00112200_0005, item 1.3.1].

39 In oral evidence Mr. Chandler of SDS stated "so after Mar Hall we had a collaboration that we'd always been looking for, that if we made that change, or the series of changes, that would be deemed acceptable, and that was the step change that we had been missing to that point." [Public Inquiry Transcript, 13 October 2017, page 111:1-111:5].

40 MoV 4, clause 3.6 [CEC01731817_0008].

41 Siemens Closing Submissions, paragraph 499 [TRI00000290_0172].

5 NOVEMBER 2018

TRI00000297_0014

THE EDINBURGH TRAM INQUIRY

Exhibits



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For The Attention of Martin Foerder
 Project Director
 Bilfinger Berger Siemens CAF Consortium
 9 Lochside Avenue
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Our Ref: INF CORR 1275/
 JM

Date: 17th April 2009

Dear Sirs,

**Edinburgh Tram Network - Infraco
 Development Workshop - OLE**

We refer to your letter of 9th April ref 25.1.0201/CHBB/2239 and can confirm our acceptance of the content of the OLE Development Workshop Report enclosed.

We await your completion of this process and outstanding actions along with the SDS design estimate.

Yours faithfully

Steven Bell
 Project Director – Edinburgh Tram

delivering transport projects

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Our ref: **25.1.201/CBr/2892**

19 June 2009

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For the attention of Steven Bell – Tram Project Director

Dear Sirs,

**Edinburgh Tram Network Infraco
Infraco Contract – Infraco Notification of tie Change (INTC) Nos 375, 376, 377, 378, 379, 380:
OLE Works arising from the Development Workshop Report**

We refer to our letter no 25.1.201/CBr/2780 dated 2 June 2009 and to the meetings (tie / BSC / SDS) on 13 May 2009 and 18 June 2009. Our internal notes of the meeting on 18 June 2009 are attached for information.

Discussions in the meeting highlighted two extremely important issues:

1. You advised that the cost estimates for redesign of the OLE system civil works to resolve misalignments were unacceptable. We advised that the estimates for foundation redesign had been reviewed and were now firm. We offered to carry out the design works on some form of re-measurable basis – you declined to consider this offer.
2. You clarified that you do not accept the costs of implementing civil works, redesigned as a consequence of resolving misalignments between the Base Date Design Information and the Infraco proposal, are subject to a tie change.

We are therefore now in a situation where we are unable to progress OLE redesign without a suitable Change Notice. We are also unable to implement the redesign (ie. construct the necessary OLE foundations) without agreement regarding the associated tie Change.

This situation will have a direct impact on programmed works on the Guided Busway, Edinburgh Park Bridge and Gogarburn Bridge.

Due to the position outlined above and the implied principle it is essential that this issue is dealt with as a matter of urgency between senior management of both tie and BSC.



Yours faithfully,

A handwritten signature in blue ink, appearing to read 'M. Foerder'.

M Foerder
Project Director
Bilfinger Berger Siemens CAF Consortium

cc: J Newton, CBr, KRu

**Bilfinger Berger – Siemens – CAF Consortium : Edinburgh Tram Network
Meeting Notes**

Subject	Development Workshop Report and Redesign Estimates : OLE		Location	Project Office
Date	18 th June 2009		Time	
Attendees	Representing	Attendees	Representing	
Bob Bell	Tie	Alan Dolan	SDS	
Gail Blythe	Tie	Mike Coupe	SDS	
David Carnegy	Tie	Colin Brady	BSC	
Gavin Murray	Tie			
Distribution	Attendees J Newton	S Rotthaus		

		Action	Date
1	General		
	Meeting held at Tie request to :- (i) comment on Development Workshop Report (ii) Review Revised OLE civil redesign estimates		
2	Development Workshop Report (DWR) : OLE, rev 2, 9/4/09		
2.1	Revision details on page header are incorrect. Resolve in next issue.	BSC	next issue
2.2	DWR Section 1 1 st sentence states " The Infraco Contract became effective on 14/5/09, at which time it was known that misalignments existed between the Base Date Design Information produced by SDS, on which the civil works price was generally based, and the Infraco Proposals for certain systems, such as trackform, on which the Systems price was based." Tie do not accept this statement, and state that the Infraco price is based upon the Infraco Proposals. Tie require the DWR to be reworded accordingly. Tie confirmed that this requirement is to be interpreted by BSC as Tie's formal position on the costs of implementation of works redesigned to resolve misalignments. BSC do not accept this interpretation of the contract on this issue and will respond to this point separately.	Note BSC	ongoing
2.3	DWR Section 1, table on p4-5 Tie queried why the line item "Approvals –catenary" has not been		

	blanked in the same way as the line item "approvals – auto tensioned" BSC to respond	BSC	next issue
2.4	DWR, section 2.6 Tie enquired when were original (SDS design) foundation designs issued as IFC. BSC to respond	BSC	next issue
2.5	DWR, section 2.6 Tie asked BSC to substantiate requirement 5D – additional design in respect of revised earthing, bonding and insulation requirements.	BSC	next issue
2.6	DWR, section 2.8 Tie ask BSC to reconcile line item for "Approvals –catenary" as item 2.3 above.	BSC	next issue
2.7	DWR, section 2.8 Last 2 lines on page 9 repeated on page 10. BSC to correct.	BSC	next issue
3.8	DWR, section 3.2 Insert "system" after "details of the" in line 2	BSC	next issue
3.9	DWR, section 3.6 Replace words "possibly in a form ... reasons" with "that achieves planning Consent, similar to OLE poles if possible"	BSC	next issue
3.10	DWR, section 4, Development Workshop Notes Include status of closure of actions from previous Development Workshops.	BSC	next issue
3.11	DWR, section 6.2 Update, calrify combined pole loadings to show what was included in SDS IFC design, for comparison with impact of OLE loadings on redesigned foundations.	BSC	next issue
2	Redesign Estimates		
2.1	Ref generic quaifications included in SDS estimates (e.g items 1-14 on pp 1 and 2 of estimate no DCR0130v3, include commentary by BSC confirming that these qualifications are resolved by BSC or	BSC	ongoing

	highlighting any that pass through to Tie, for clarity.		
2.2	<p>Cost Estimates</p> <p>Tie raised a number of queries about the man-hour allocations to tasks in the SDS estimates, stating that SDS/BSC were unable to provide satisfactory justification for the figures.</p> <p>SDS advised that the estimates were based on actual experience of man hours required to produce IFC designs on this project, and that further reductions would not be offered.</p> <p>BSC repeated the offer to carry out the design work on some form of remeasurable open book basis, such that Tie could verify designer man hours utilised. Tie declined this offer.</p> <p>BSC advised that they were unwilling to continue to underwrite SDS design costs for urgent OLE design (Guided Busway, bridges, next on-street areas without an instruction from Tie.</p> <p>BSC advised that there was no basis for continuing discussion in this meeting. BSC and SDS left the meeting.</p>	<p>Note</p> <p>Note</p> <p>Note</p> <p>Note</p>	



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For The Attention of Martin Foerder
 Project Director
 Bilfinger Berger Siemens CAF Consortium
 9 Lochside Avenue
 Edinburgh Park
 Edinburgh EH12 9DJ

Our Ref: INF CORR 3176/RB

14th January 2010

Dear Martin,

**Edinburgh Tram Network Infraco
 Information & Audit Access – OLE System and Foundations**

You are advised that tie wishes to exercise its rights under Clause 104 of the InfraCo Contract to audit and review Deliverables and associated information, records and documentation in relation to design and integration matters. A copy of the audit scope and objectives is attached for your information.

This audit would be led by Bob Bell under my delegated authority as tie's representative supported by others. It is intended to commence at 09.00 am on Wednesday 20th January 2010 at Edinburgh Park.

Please arrange for the information and personnel to be made available at Edinburgh Park, along with access to InfraCo's information management systems.

Please arrange for the relevant designers to be present/available for the audit.

Bob Bell will contact you directly to confirm who shall be the lead person on your behalf.

Yours sincerely,

Steven Bell
Project Director – Edinburgh Tram

Attachment: Structures – OLE Systems & Foundation - Audit Scope dated 14 Jan.2010

delivering transport projects

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OLE System & Foundations – Audit Scope

Seq No	Audit Criteria
Design Stage	
1	Review of evidence to substantiate why the IFC design constitutes a Change under the Infraco Contract.
2	Review of evidence as to whether change emanated from Infraco, an approval body, or client instruction.
3	Confirm and evidence that delivery of the IFC was not delayed by late or inadequate instruction or information from Infraco members or subcontractors (including SDS) or any other third party.
4	Confirm and evidence that Infraco and the SDS Provider considered how a change could be mitigated in terms of cost and time and how they considered best value.
5	Review of evidence that Planning, technical approvals and close out of informatives was completed prior to IFC issue.
6	Provide evidence that the Programme obligations for the changed design have been discharged.
7	Demonstrate and evidence the process for carrying out an Inter Disciplinary Review [IDR] including how integration of Siemens design was carried out.
8	Provide copy of Buildability reports and evidence of CDM & ROGS compliance.
9	Provide take-off sheets and sources of rates associated with Estimates

tie Letter Reference INF CORR 3176
Dated 14th January 2010