



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

Our Ref: INF CORR  
2003/FMcF

Date: 10<sup>th</sup> August 2009

Dear Sirs,

**Edinburgh Tram Network - Infraco  
Infraco Progress Meeting**

Please find attached herewith Minutes of Progress Meeting held on 14<sup>th</sup> July 2009 as agreed by tie/BSC representatives for your information/action as required.

In addition, we enclose tie's comments on Progress Report No 2-4 for your information/action as required.

[Redacted]  
Yours faithfully

[Redacted]  
Steven Bell  
Project Director – Edinburgh Tram  
[Redacted]

delivering transport projects

tie limited

Citypoint 65 Haymarket Terrace Edinburgh EH12 5HD

tel +44 (0) 131 622 8300 / 623 8600 fax +44 (0) 131 622 8301 / 623 8601 web [www.tie.ltd.uk](http://www.tie.ltd.uk)

Registered in Scotland No: 230949 at City Chambers, High Street, Edinburgh EH1 1YJ

CEC00423299\_0001





## tie Limited

**Minutes:** Infraco Progress Meeting  
**Date:** 14 July 2009  
**Time:** 13.00 – 14.45  
**Venue:** Training Room, 1<sup>st</sup> Floor Edinburgh Park

<b>Attendees:</b>	Robert Bell	RB	tie	Colin Brady	CB	BSC - BB	
	Bob Cummins	BC	tie	Jim Donaldson	JD	BSC - BB	
	Tony Glazebrook	TG	tie	Stefan Rotthaus	SR	BSC - BB	
	Michael Jesuarul	MJ	tie	Jim Cowie	JC	BSC - BB	
				Miguel Berrozpe	MB	BSC - Siem	
				David Steele	DS	BSC - CAF	
				Robert Sheehan	RS	BSC - BB	
				Joe Richardson	JR	BSC - BB	
				Arran Haynes	AH	BSC - BB	
				Martin Hutchinson	MH	BSC - BB	
				Fenella Watson (mins)	FW	BSC - Siem	
	<b>Apologies:</b>	Steven Bell	SB	tie	Alfred Brandenburger	AB	BSC - Siem
		Susan Clark	SC	tie	Alan Dolan	AD	SDS
Dennis Murray		DM	tie	Jason Chandler	JC	SDS	
Frank McFadden		FM	tie	Alejandro Urriza	AU	BSC - CAF	
Colin Kerr		CK	tie	Martin Förder	MF	BSC - BB	
Alastair Richards		AR	TEL	Kevin Russell	KR	BSC - BB	

<b>1.0</b>	<b>Welcome and Introductions</b>	
<b>1.1</b>	RB welcomed everyone to the meeting. The meeting is to cover two progress reports, 2-3 and 2-4.	Note
<b>2.0</b>	<b>Agreement / Corrections of previous minutes</b>	
<b>2.1</b>	NA	
<b>3.0</b>	<b>Progress Report - HSQE</b>	
<b>3.1</b>	Arran Haynes is filling in for Douglas Ross and Joe Richardson is filling in for Jim Noblett.	Note
<b>3.2</b>	RB noted that the incident of BAA instructing work to stop on the Edinburgh Park bridge was not mentioned in the report. CB stated the incident was omitted from the 2-3 period report in error. tie state they are satisfied that the incident was closed out properly.	Note
<b>3.3</b>	There was also no mention of the concrete at Gogarburn bridge; two NCRs resulted, one of which is closed out, the other ongoing. Target date for closure of this outstanding NCR is unknown.	JR
<b>3.4</b>	BC referred to bullet point 1.1 re plans issued to tie; tie have not yet responded – the first plan is to be accepted, the second has an ROR with some issues. These plans will be returned to BSC soon.	Note

DOC.NO.	VERSION	STATUS	DATE	SHEET
PROGRES	1	For Approval	14 Jul 09	1



<b>3.0</b>	<b>Progress Report - HSQE</b>	
<b>3.5</b>	MB clarified that the hours mentioned in the report are Edinburgh hours only and does not include hours in other locations in Britain, Spain, Germany, etc.	Note
<b>3.6</b>	Audits – the section 2A audit from February is still being closed out	Note
<b>3.7</b>	The meeting with HSE went fine with no problems. Occupational Health is a big issue with HSE this year. Training has been added to the induction process.	Note
<b>4.0</b>	<b>Progress Report - Programme</b>	
<b>4.1</b>	The Programme has been updated to 10 July reflecting progress. It shows a finish date of September 2012 due to scope and delay. The programme no longer represents the current state of the project. Rev 2 is subject to meetings and has not reached conclusion.	Note
<b>4.2</b>	Look-Ahead Programme has also been updated to 10 July. The traffic management for Section 1A has been accepted by Forth Ports and CEC. Section 1B proposal for time saving has been rejected and other options are currently being looked at. RB asked JD to have a conversation with Colin Neil regarding this.	JD
<b>4.3</b>	Princes Street – Section 1C – ongoing planning, Waverley Bridge has increased work area to 65%. BSC understand MUDFA will be at the bottom of Lothian Road until late July.	Note
<b>4.4</b>	Haymarket – Section 1D – MUDFA are expected to be in Haymarket until 10 October with BT works. The programme is to be updated to reflect these dates.	JC
<b>4.5</b>	The design of the Guided Busway is ongoing. RB has requested an updated Guided Busway programme. OLE and drainage are ongoing design issues. There is a meeting on this tomorrow. MB requested tie to fast-track the approvals for this issue.	JC
<b>5.0</b>	<b>Progress Report - Design and Consents</b>	
<b>5.1</b>	RB had a meeting to discuss two different options to further design progress. Tie chose to stick with the regular reporting of design packages.	Note
<b>5.2</b>	BSC has revisited design support and it has been agreed that Siemens would manage these people in the future; BSC will still seek tie's approval of extended construction support. tie to come back tomorrow on this.	RB
<b>5.3</b>	SR reported that a series of internal workshops had been held to identify misalignments and that Development Workshops with tie are being scheduled. RB repeated previous request for definitive dates for all outstanding Development Workshops.	SR
<b>5.5</b>	Tie note that the SDS Programme is slipping with no explanation; tie request a review of the SDS programme is carried out by BSC prior to issuing to tie to explain why dates are slipping and what is being done to bring them back. SR agreed to provide these by 17/07/09. SR noted that the example used by tie was a particular software error.	SR
<b>5.6</b>	TROs are still being amended but SDS have not yet had an instruction to	Note

DOC.NO.	VERSION	STATUS	DATE	SHEET
PROGRES	1	For Approval	14 Jul 09	2



	amend the IFCs. TROs appear to be an open-ended issue at the moment.	
5.7	RB stated that he was not aware of any issue with the Forth Ports Agreement not being signed that was hindering progress and that BSC should progress this design.	Note
5.8	RB advised that Transdev were entitled to comment as part of the Schedule 14 Design Review process and it didn't automatically follow that these comments were a tie Change.	Note
6.0	<b>Progress Report - Procurement</b>	
6.1	Section 7A – clarify that tie are to deal with the warranty issue. RB stated that if this issue is delaying any progress, then BSC should take this up directly with Dennis Murray.	Note
6.2	The only adjustment has been for 1% of two sections. Anticipated completion is from Revision 1 of the programme, which is different from reality.	Note
6.3	In reference to 4.1.5.7 of the report, tie request clarification on whether BSC has done the contamination tests.	JD
6.4	In reference to 4.1.5.2, the design for HV diversions is out to tender. (Post Meeting note: Existing utilities within Lindsay Road will be transferred to Infraco This utility diversion is a significant scope of work.)	Note
7.0	<b>Progress Report – E and M</b>	
7.1	MB reiterates that Siemens has postponed procurement of orders without jeopardising the Programme. MB clarifies that this is not to be interpreted as concurrent delay, but as a prudent management measure to mitigate monetary impact from the current project delay situation. This will also ensure manufacturing warranties are not wasted on idle time in storage.  To the extent possible and taking into account delivery times, orders will be managed by Siemens so that all equipment and materials will still be timely on the site, but, without unnecessarily incurring into long term storage at Edinburgh.	Note
7.2	TG clarified that Siemens' Submission Schedule is to be issued every 2 weeks and to include the DAS dates.	MB
7.3	Wheel/Rail Interface – the key issue is worn rails and worn wheels, at points and crossings especially. ORR are due back in September for a presentation on the points & crossings. Klaus Dieker is dealing with this. MB to confirm a date for ORR to come.	MB
7.4	OLE – BSC are attempting to take advantage of the traffic management in place to achieve some works on OLE without disrupting civils. This is still under investigation.	Note
7.5	BSC are dealing with the materials for building fixings; if tie accept that BSC has a method statement non-disruptive to the population, the more works BSC can advance ahead of all other works. BSC are working on procuring the materials and will provide an update in	Note

DOC.NO.	VERSION	STATUS	DATE	SHEET
PROGRES	1	For Approval	14 Jul 09	3



	next month's report.	
7.6	Vibration – D2S have made a full assessment of the 10-12 locations along the route. BSC to deliver the full report within the next 2-3 weeks. Preliminary results indicate no mats are needed in Princes Street, but may be required at other parts of the line.	Note
7.7	The drainage box has been approved by CEC but has been rejected by tie. The silt trap is fine, but the drainage goes into a combined sewer; it is the prevention of escape of sewer gas that is the issue. BSC are looking into what SDS and CEC have said previously about the gas trapping. CB accepted that the gas trap is a civil's issue.	CB
7.8	DWE – BSC have delivered details on component drawings for major machines. A ROR from tie has asked for evidence that it has been interfaced, known and accepted by CAF as suitable. MB to ask NWU to update on the Lifting Plant.	MB
7.9	Tie asked MB to provide an update on the schedule of deliveries.	MB
7.10	Signalling, SCADA, and Coms are at Level A and B for the most part. Material has not been ordered due to the delay in installation, but the E&B boxes have been procured and are being installed.	Note
7.11	In reference to 4.2.6 Traffic Light Control, Siemens have submitted an offer to tie which is currently under negotiation. MB requests that tie agree a preliminary for the first part of the order to enable Siemens to begin work clarifying interfaces that, if put off, would negatively impact the project at a later date. MB requests tie to agree a cost for the engineering bit and finalise the remaining costs later. tie to come back on this request.	RB
7.12	HV/LV – Siemens have made an offer, but the management costs are under negotiation. The action is on John Newton to come back. tie accept the direct costs for the subcontractor.	John Newton
8.0	<b>Progress Report - Tramco</b>	
8.1	CAF are proceeding with the manufacturing and it's going well.	Note
8.2	There is an issue with the bus tracker; currently being discussed by tie. CAF should have all the free issue equipment; this is now holding up CAF's progress.	tie
9.0	<b>Progress Report- System Integration</b>	
9.1	SDS are keeping records before CVIs and drawings record; this is not being omitted. The ITPs are not clear re the Earthing & Bonding; tie request more clarity.	Note
9.2	Stray Current – the Code of Practice; there is a meeting to be held in Manchester with the relevant parties to sort out these issues.	Note

DOC.NO.	VERSION	STATUS	DATE	SHEET
PROGRES	1	For Approval	14 Jul 09	4



9.3	System Assurance – tie again requested the System Integration Plan, which is currently being worked on by Michael Wilken, previously due in February, then 29 <sup>th</sup> June 2009.	MW
9.4	Tie are inspecting drawings used on site to ensure they are AFC and have been through the full IDC process. tie request confirmation at a suitable time that everything has been checked. CB agreed that BSC would assist and comply with this endeavour. A letter with a report on this topic will come at the end of this week.	Note
9.5	Track – There is concern over the quality of the insulation and water-proofing in Princes Street. Siemens is discussing with BAM better methods of workmanship to ensure the seal will keep water out.	MB
9.7	BSC have agreed to provide tie with copies of CVIs.	Note
9.8	tie are under pressure to work under the CoCP. The project is not compliant at some areas of the route. tie are offering to brief subcontractors on this scheme to ensure better compliance.	Note
10.0	<b>Progress Report – Commercial</b>	
10.1	Meetings are continuing on an ad hoc basis over the next few weeks.	Note
11.0	<b>AOB</b>	
11.1	MB requests that the progress report not have any repeated numbering sequences. tie request the report to be given page numbers.	Note
11.2	Appendix 10 – to clarify, it's the KPI report, not the hours return; this will be changed in the next report.	Note
11.3	TG reminded BSC that RFIs from ICP – 6, 8 and 10 still need to be closed. J Riley and others are aware of these.	Note
11.4	tie state that the commentary on the progress reports is still to come.	Note
11.5	BSC acknowledge receipt of commentary but do not accept it. Absence of comment on commentary does not indicate acceptance or otherwise. Relevant issues are dealt with through correspondence.	Note
15.0	<b>Next meeting</b>	
15.1	The next meeting will take place 11 August 2009	Note

Prepared by Fenella Watson

DOC.NO.	VERSION	STATUS	DATE	SHEET
PROGRES	1	For Approval	14 Jul 09	5





### Comments on Infraco Report No 2-4

Item No	Section	BSC Comments	Comments
1	Executive Summary – 4 <sup>th</sup> paragraph	Civil drawings, revised to incorporate Siemens design [OLE bases] are in progress.	Late issue of OLE plinth design is continuing to delay to construction of the bridge deck at Edinburgh Park Bridge.
	Executive Summary – last paragraph	Virtually all construction works are impacted by external issues, which require resolution through the change process of the contract.	<p>Not true – some items may require a change, but a lot of the issues can be resolved by BSC, e.g. Grahams were due to start on 2A on 05 Jan 2009; however, they still have not turned up. BSC advised w/e 12/06/09 that Graham's were still pricing BDDI to IFC Changes for BSC.</p> <p>BSC report states they are still doing final negotiations with Graham's. Bridge beams for Carrick Knowe now due for delivery September 2009 [11 months late]. BSC refusing to progress works at Carrick Knowe Bridge until Changes are agreed.</p> <p>Delivery &amp; installation of the bridge beams for Edinburgh Park commenced 08 April 2009 – these beams should have been installed at Christmas 2008. Further delays at Edinburgh Park Bridge include late changes to the crank bar details in the pier diaphragms, reinforcement details for robust kerb not being in place on time and the continuing delay due to the OLE plinth details still not being available. These issues are BSC's responsibility to manage.</p> <p>Russell Road Bridge works delayed due BSC/Graham's changing the temporary works support to the railway embankment from sheet piles to soil nails. Trial soil nails were due to commence early April 2009, however no WPP has been submitted to date. Bsc advised 09 April 09 that they want a Change agreed for the soil nails before proceeding.</p>
2.4	Quality	None	No mention of Gogarburn Bridge concrete test failures and remedial works.
2.4.3	Audits - HSQE	The outstanding audit findings [11] from tie Audit Ref: TQA-08-07 carried out between the 13th & 15th January 2009 were addressed in our letter ref: 25.1.201/DR/2825 dated 12th June 2009.	None of the responses given in letter 25.1.201/DR/2825 where accepted by tie. Letter stating required action sent to BSC 25 <sup>th</sup> June. Upon discussion with Dougie Ross BSC Quality Manager there appears to be an issue re the design management plan completion. Meeting to be arrange w/c 20/7/09 with BSC/SDS and tie to agree final close out of the audit.
3.1	Programme	Programme: The critical path remains....	The Depot does not feature on the critical path which is unlikely given the lack of progress while BDDI to IFC change is agreed.

3.1	Programme	Progress achieved up to 10 July 2009 has then been recorded against the above baseline including inputting the latest IFC dates received from SDS (V46).	The data date for V46 is 1 <sup>st</sup> June 2009 so therefore the information being used is 6 weeks out of date.
		No IFC date has been received for the redesign of South Gyle Access Bridge (programme defaulting to 10 July 2009).	Why not? In addition, why is the 10 <sup>th</sup> July being used when in your Rev 2.0 programme you are indicating IFC on 4 <sup>th</sup> August 2009?
		Sectional Completion date A 22 April 2011.	Sectional Completion date A has slipped 31 calendar days in the period. BSC have full access to this section so why is progress not indicated.
		The critical path remains as previously reported namely, 1. South Gyle Access bridge 2. 5B Track laying 3. 1D track work 4. Picardy Place 5. 5C track work 6. 5C 7. 1B 8. 1C OHLE 9. 1C Electrical cabling, Signalling and Wayside Equipment.	1. South Gyle Access bridge is critical as it awaits BSC's designer (SDS) to redesign the substructure to avoid an existing sewer. BSC/SDS have been aware of this since October 2008 but as yet have not attempted any mitigation to provide early design solutions. 2. 5B Track is critical, as BSC have programmed this such that the track installation cannot commence until the full South Gyle access bridge structure is complete. This can be mitigated by over-lapping the track and structure construction. 3. Correct, although due to a combination of Rev B programme still incorporated and resource constraints. 4. Correct, a direct knock-on from item 3 5. Correct, although due to awaiting resources to be released from 1D West Maitland Street. 6. Other than track, the other critical items are E&M, which is dependent on track, so would dispute this. 7. Critical activities in 1B are track activities, which are dependent on the release of resources from 1A. 8. 1C OHLE is dependent on the release of resources from 1B. 9. As item 8
		As a result of events, which have negatively impacted on the Programme the works, have had to be re-sequenced in an attempt to mitigate the delays, which are being incurred. Effectively the following constraints have been disregarded by the BSC Construction team	INCORRECT – Road works Phase 2 at Lothian Road junction are dependent on the completion of MUDFA Diversions, which then releases further Phases. INCORRECT – Road works Princes Street North Channel are dependent on the completion of MUDFA Diversions. INCORRECT – Road works Princes Street South Channel are dependent on the completion of MUDFA Diversions. INCORRECT – Track works Phase 2 at Lothian Road junction are

		<i>Completion of MUDFA works in Intermediate section 1D and the start of the INFRACO works.</i>	dependent on the completion of MUDFA Diversions, which then releases further Phases. INCORRECT – Road works Haymarket ch.1250-1125 are dependent on the completion of MUDFA Diversions.
3.2	Look Ahead programme.	Look Ahead programme.	No mention of revised A8 sequencing to combine Phases 1&2 and save 6-8 weeks on the overall duration.
3.2	Look-Ahead programme	The Look-Ahead Programme for the period July to Oct 09 is an extract from the current Construction Programme updated with the latest IFC dates from the SDS V46 Programme.	Please confirm that this is a direct extract from the Rev 1 programme or that the Construction programme is a separate programme.
		MUDFA activities are now scheduled in accordance with their programme Rev.08 received 05 May 08. Where MUDFA Works are ongoing; the Completion Milestones will continue to default to the report date unless planned completion dates are later.	Why can a competent contractor not make an assessment of potential completion dates to provide realistic mitigation rather than use inaccurate "report date" information?
		Section 1D - Haymarket Junction to Shandwick Place INFRACO Works on Haymarket Junction were originally planned to commence on 05 January 09. Ongoing Utility Works currently delay the commencement of INFRACO Works in this section. Handover to the INFRACO was previously notified by TIE as 2 August 2009, but is now expected to be 10 Oct 09, with the possibility of BT works to follow until late Nov 09, which may affect access.	See note 3 lines above regarding re-sequencing of activities in 1D to take account of MUDFA delays.
		Section 2	There are no activities commented on for Section 2 Haymarket to Roseburn junction although full access has been available since late May09. Why?
		Section 2	S19 Haymarket viaduct – we note that BSC have previously advised us that this structure could not recommence until the completion of Verity House access road. Verity House access road was completed on 25 <sup>th</sup> May 2009. BSC now programming to re-commence this structure 20 <sup>th</sup> July 09.

			Please explain.
		Section 2	Trackwork – we note that BSC have programmed to commence this activity from 27 <sup>th</sup> July although you have separately advised us that you cannot install track in this section until the east abutment of S20 Russell road bridge is constructed to backfill against. S20 Russell road bridge abutments are not programmed in this 3 month look-ahead. Please explain.
		Section 5A	There are no activities commented on for Section 5A Roseburn junction to Balgreen Rd although full access is available an works could be progressing. Why?
		Section 5A	W3 Russell road RW No.1 – BSC programme indicates redesign of W3 due to proximity of existing sewer although your designer does not indicate this in their v46 programme. Assumption therefore is that this constitutes temporary works redesign under Infracore responsibility.
		Section 5B	S26 South Gyle Access bridge – BSC advise that S26 is “On Hold” awaiting tie decision on design. Please explain?
		Section 5B	W11 Bankhead Drive RW - BSC programme indicates redesign of W11 although your designer does not indicate this in their v46 programme. Assumption therefore is that this constitutes temporary works redesign under Infracore responsibility.
		Section 5C	There are no activities commented on for Section 5C Edinburgh Park Central to Gogarburn although the A8 Underpass and S27 Edinburgh Park viaduct amongst other continue to progress slowly. Why?
		Section 6	There are no activities commented on for Section 6 Depot although full access is available and earthworks are underway, albeit very slowly. Why?
		Earthworks	80,000m <sup>3</sup> of earthworks programmed to complete by 20-Oct-09 although at 01Jul-09 approx.47,000m <sup>3</sup> (107,000m <sup>3</sup> – 60,000m <sup>3</sup> ) had been removed.
		Section 7	There are no activities commented on for Section 7 Gogarburn to Airport although full access is available and remedial works have continued to Gogarburn bridge. Why?
		Section 7	S29 Gogarburn bridge – works shown as continuing on East abutment. Please confirm that there is no remedial works required on this abutment.
		Section 7	S29 Gogarburn bridge – Please include activities for remedial works to West abutment columns and capping beams.

		RBS Gogarburn Tram Stop – agreement between tie and RBS is required in order to complete the Gogarburn Tram Stop design. BSC are awaiting tie instruction. BSC are assisting tie in finalising future proofing requirements for the RBS Tram Stop.	This has now reverted to a generic design with Future proofing.
		West End Tram Stop Review – tie to authorise change estimate.	What is this for?
		Siemens have produced detailed design documentation for The Wheel Lathe, the Tram Wash, and the Under Floor Lifting Plant. Following review of this information and dedicated workshops Siemens are now in a position to issue 'For Construction' reports that will include all information necessary for incorporation into the SDS design.	"For Construction" drawings were issued in 2008. Siemens information is consortium Inter-disciplinary design checks
4.1.1.3	RBS Tramstop:	RBS Tramstop:	Critical to design close out. Meeting held 12/6/09 with RBS to revise design to allow for future proofed expansion of tramstop with exemplar tramstop being used in interim.
4.1.1.3	Issues and Concerns	None	BSC make no mention of the following:  1) Section 7: Earthworks specification revision has called for additional SI to confirm SDS design for surcharge at Gogar Landfill. Tie/BSC discussing at Design Issues Meeting. 2) Section 5&7 Soft Ground: Workshop to be held w/c 20/7/09 to review options for soft ground treatment.
4.1.1.6a	Depot Paint Booth	Depot: Paint Booth – a proposal has been submitted for tie comment	CAF proposal being reviewed by tie.
4.1.1.6d	Substation	Substation: Tender submissions are revising ducting arrangements for civils work.	This should have been anticipated and will result in changes to SDS drawings. SDS will require instruction. This is typical of any Mechanical and Electrical integration process with the civils design.
4.1.2.1	Sub-contractors	Section 7A: BSC awaiting tie EAL warranty step down	This is not a tie liability.

4.1.2.1	Procurement - Subcontractors	Sections 2A & 5A [part] – Final Negotiations are proceeding to conclude a subcontractor order.	Graham's should have started 05/01/09. There are several areas where Graham's could be working now – Haymarket Viaduct, Haymarket Yards – track works, Russell Road Bridge, Russell Road retaining walls, Murrayfield pitches retaining walls, Murrayfield Underpass.
		Section 5A [Part], 5B & 5C [part] – Package quotations for the balance of the civils works in Section 5 have been received, and are currently under review; however, BSC's ability to review these prices is affected by the uncertainty over programme and access.	The subcontractor should be on site now. Clarification required from BSC regarding uncertainty over access.
4.1.2.1	Sub-contractors		No mention of Graham's or section 2 in the Sub-contractor summary.
4.1.4	Long Lead Procurement Management	Long Lead Procurement Management	No mention of Depot cladding 26 week lead in and how this process is being managed. No mention of Siemens procurement issues to electrical supplies, Depot plant and equipment etc.
4.1.4	Long Lead Procurement Management	Currently sourcing beams and bearing etc	This comment has not changes for the last few periods. Is this valid or have they progressed from this point.
4.1.4	Long Lead Procurement Management	BSC are currently sourcing prices for the beams and bearings for Tower Dock Bridge to maintain programme. These materials relate to section 1A2.	BSC submitted 3 Month Look-ahead programme indicates this structure commencing from 28th July 09 with beams required c.6 months later. Please confirm procurement schedule meets this requirement.
4.1.5	IFC design incomplete for carriage way construction in sections 1B, 1C3,1D & 5B	IFC Design incomplete for trackwork construction (4.1.5.8)  IFC design incomplete for carriageway construction (4.1.5.3, 4.1.5.4, 4.1.5.5)	IFC process, seems to be as follows:  <ol style="list-style-type: none"> <li>(1) SDS submits roads / track design to CEC for approval</li> <li>(2) CEC gives approval with comments</li> <li>(3) SDS incorporates comments in design</li> <li>(4) SDS issues IFC to BSC</li> </ol> <p>At this point SDS has met its contractual obligation to produce Issue for Construction drawings defined as "those Deliverables necessary for Infraco to commence construction of the relevant part of the Infraco Works and as shown on the Design Delivery Programme, which have been fully approved by all Approval Bodies and in accordance with the Review Procedure".</p>

			<p>The process then continues with:</p> <ul style="list-style-type: none"> <li>(5) SDS produces close report to CEC demonstrating that SDS has incorporated CEC comments in design and highlighting to both CEC and BSC where comments can only be incorporated by inclusion of Infracore design</li> <li>(6) BSC reviews SDS design and incorporates Infracore design elements – these include trackform</li> </ul> <p>BSC has been asked to provide a statement of how it intends to deal with outstanding CEC comments but has not provided any substantive response.</p>
4.1.5	Construction 4.1.5.6 Section 2A Haymarket to Roseburn Junction	Haymarket Station Viaduct No activities carried out during period. Currently 39 weeks behind Programme (Rev 1).	As above please explain why no works have progressed in the period.
	Issues and Concerns 4.1.5.6 Section 2A Haymarket to Roseburn Junction	Haymarket Station Viaduct	Changes from BDDI to IFC are yet to be agreed.
		Trackwork Haymarket to Russell Road No activities carried out during period. Currently 43 weeks behind Programme (Rev 1).	As above please explain why no works have progressed in the period.
	Issues and Concerns 4.1.5.6 Section 2A Haymarket to Roseburn Junction	Trackwork Haymarket to Russell Road	IFC design incomplete for carriageway and trackwork construction. Trackwork & Carriageway Changes from BDDI to IFC have yet to be agreed.
	Construction 4.1.5.7 Section 5A Roseburn Junction to Balgreen Road	Russell Road Bridge No activities carried out during period. Currently 51 weeks behind Programme (Rev 1).	Please explain why no works have progressed in the period.
	Issues and Concerns 4.1.5.7 Section 5A Roseburn Junction to Balgreen Road	Russell Road Bridge	Changes from BDDI to IFC are yet to be agreed.
		Russell Road Retaining Walls W3 & W4 No activities carried out during period. Currently 43 weeks behind Programme	Please explain why no works have progressed in the period.

		(Rev 1).	
	Issues and Concerns 4.1.5.7 Section 5A Roseburn Junction to Balgreen Road	Russell Road Retaining Walls W3 & W4	Changes from BDDI to IFC are yet to be agreed. Wall W3 redesign has not been issued IFC.
		Baird Drive Retaining Wall No activities carried out during period. Currently 41 weeks behind Programme (Rev 1).	Please explain why no works have progressed in the period.
	Issues and Concerns 4.1.5.7 Section 5A Roseburn Junction to Balgreen Road	Baird Drive Retaining Wall	Changes from BDDI to IFC have yet to be agreed.
	Construction 4.1.5.8 Section 5B Balgreen Road to Edinburgh Park Central	Carrick Knowe Bridge No activities carried out during period. Currently 41 weeks behind Programme (Rev 1).	Please explain why no works have progressed in the period.
	Issues and Concerns 4.1.5.8 Section 5B Balgreen Road to Edinburgh Park Central	Carrick Knowe Bridge	Changes from BDDI to IFC have yet to be agreed.
		Trackwork Carrick Knowe – South Gyle Access Bridge (Guided Busway) GI for OLE foundations has been completed and submitted to SDS. Currently 41 weeks behind Programme (Rev 1).	Please explain why no works have progressed in the period.
	Issues and Concerns 4.1.5.8 Section 5B Balgreen Road to Edinburgh Park Central	Trackwork Carrick Knowe – South Gyle Access Bridge (Guided Busway)	OLE design not yet issued IFC. Trackwork design not yet issued IFC. Drainage Changes from BDDI to IFC have yet to be agreed. OLE & Trackwork Changes from BDDI to IFC have yet to be agreed.
		Track work South Gyle Access Bridge to Edinburgh Park No activities carried out during the period. Currently 41 weeks behind Programme (Rev 1).	Please explain why no works have progressed in the period.
	Issues and Concerns 4.1.5.8 Section 5B Balgreen Road to Edinburgh Park Central	Track work South Gyle Access Bridge to Edinburgh Park	Trackwork Changes from BDDI to IFC have yet to be agreed. Earthworks Changes from BDDI to IFC have yet to be agreed. Drainage Changes from BDDI to IFC have yet to be agreed.
		Track Work Edinburgh Park Station –	Please explain why no works have progressed in the period.



		Edinburgh Park Central No activities carried out during period. Currently 42 weeks behind Programme (Rev 1).	
	Construction 4.1.5.9 Section 5C Edinburgh Park Central to Gogarburn	Track Work Edinburgh Park Central – Gyle Centre No activities carried out during period. Currently 41 weeks behind Programme (Rev 1).	Please explain why no works have progressed in the period.
	Issues and Concerns 4.1.5.9 Section 5C Edinburgh Park Central to Gogarburn	Track Work Edinburgh Park Central – Gyle Centre	Trackwork Changes from BDDI to IFC have yet to be agreed. Earthworks Changes from BDDI to IFC have yet to be agreed. Drainage Changes from BDDI to IFC have yet to be agreed. Utility Changes Instructed by tie have yet to be agreed.
	Construction 4.1.5.10 Section 6A Depot	Depot Building No activities carried out during period. Currently 43 weeks behind Programme (Rev 1).	Please explain why no works have progressed in the period.
	Issues and Concerns 4.1.5.10 Section 6A Depot	Depot Building	Changes from BDDI to IFC have yet to be agreed.
	Construction 4.3.5.11 Section 7A Gogarburn to Edinburgh Airport	Gogarburn Culvert No 1 No activities carried out during period. Currently 29 weeks behind Programme (Rev 1).	Please explain why no works have progressed in the period.
	Issues and Concerns 4.1.5.11 Section 7A Gogarburn to Edinburgh Airport	Gogarburn Culvert No 1	Changes from BDDI to IFC have yet to be agreed.
		Trackwork Gogarburn to Ingliston Park & Ride No activities carried out during period. Currently 17 weeks behind Programme (Rev 1).	Please explain why no works have progressed in the period.
	Issues and Concerns 4.1.5.11 Section 7A Gogarburn to Edinburgh Airport	Trackwork Gogarburn to Ingliston Park & Ride	Trackwork changes from BDDI to IFC have yet to be agreed. Earthworks changes from BDDI to IFC have yet to be agreed. Drainage changes from BDDI to IFC have yet to be agreed.
		Gogarburn Culvert No 2 No activities carried out during period. Currently 28 weeks behind Programme (Rev 1).	Please explain why no works have progressed in the period.

	Issues and Concerns 4.1.5.11 Section 7A Gogarburn to Edinburgh Airport	Gogarburn Culvert No 2	Changes from BDDI to IFC have yet to be agreed.
4.1.5	Construction	Trackwork changes from BDDI to IFC Noted throughout network	BSC wrote to Tie in November 2008 re IC after checking BDDI to IFC both the Horizontal & Vertical design had not changed. When this was raised with BSC they replied saying they could not identify the change but there would be one
4.1.5.3	Section 1B Foot of Leith to McDonald Road	IFC for Carriageway not complete	IFC drawing for the carriage way in 1B were issued Sept. 08 and works commenced Oct. 08.
4.1.5.4	Section 1C McDonald Road to Princes Street West	Trackwork McDonald Road to Picardy Place – No activities carried out during period. Currently on Programme (Rev 1). Trackwork Picardy Place to St Andrew Square – No activities carried out during period. Currently on Programme (Rev 1) Scheduled to commence 10 February 2010. Trackwork St Andrew Square to Waverly Bridge – No activities carried out during period. Currently 21 weeks behind Programme (Rev 1) Trackwork Waverly Bridge to Castle Street – Duct and drainage installation has continued. OLE foundation and carriageway construction has continued. Track improvement layer and track installation has commenced in the period. Currently 22 weeks behind Programme (Rev 1)	Progress is summarised, but no mention is made of fact that lengths of the track slab have been poured and that re-kerbing and carriageway construction works have also commenced.
4.1.5.5	Section 1D Princes Street to Haymarket	<b>Trackwork Haymarket to Lothian Road</b> Trackwork & Carriageway Changes from BDDI to IFC have yet to be agreed. Change estimates on Utility transferred by tie have not been agreed.	Estimate awaited from BSC.  Estimate awaited from BSC.
4.1.5.6	Section 2A Haymarket to Roseburn	<b>Haymarket Viaduct</b>	

	Junction	Changes from BDDI to IFC are yet to be agreed <b>Trackwork Haymarket to Russell Road</b> Trackwork & Carriageway Changes from BDDI to IFC have yet to be agreed.	Estimate awaited from BSC for the internal retaining wall.  Estimate awaited from BSC.
4.1.5.6	Progress on site	Haymarket Station Viaduct – no activity during the period.	No activity as Graham's are not on site & BSC are still negotiating the contract with them – see subcontract section of the report. BSC have also stated that they will not start the work until the alleged Change at the structure is agreed.
		Haymarket to Roseburn Track work – No activity during the period.	BSC should have been getting on with this - however Graham's not on site. Estimate for alleged Change not submitted as of 10/07/09.
4.1.5.7	Section 5A Roseburn Junction to Balgreen Road	Russell Road Bridge – No activities carried out during the period.	BSC stated 09/04/09 that BSC wanted the change from sheet piles to soil nails agreed as a Change before Graham's would progress the works. Start of works continues to be delayed, due to BSC/Graham's changing the temporary works details.
	Russell Road Retaining Walls [W3 & W4] – 22 weeks behind programme.	Late demolition of buildings, Graham's late mobilising, no submission of WPP's or Form C's. SDS redesigned W3B to remove the lateral loading on the brick sewer. Should be constructing W3A, the New Scotrail Car park and associated sections of the retaining wall.	Russell Road Retaining Walls [W3 & W4] – 22 weeks behind programme.
	Murrayfield Stadium Retaining Wall	BSC should be re-designing the Roseburn St. Viaduct so that this retaining wall can be construction in advance of the viaduct.	Murrayfield Stadium Retaining Wall
	Murrayfield Stadium Underpass [S21C] - No activities carried out during the period.	Sewer Diversion is completed. Underpass structure is an in situ box culvert, BSC should be progressing this structure and design the adjacent retaining wall around the underpass. BSC stated 09/04/09 that they were looking at using soil nails to retain the sheet piles as they did not think they could achieve the design toe level due to the presence of boulder clay. No WPP or Form C submitted as of	Murrayfield Stadium Underpass [S21C] - No activities carried out during the period.

		10/07/09.	
	Murrayfield Retaining Wall [S21D] – No activities carried out during the period.	Structure being redesigned by BSC/SDS. BSC stated 09/04/09 that they were expecting a response from Grahams in 2-3 weeks regarding proposals for ground treatment in this section – details of ground treatment still not available as of 15/06/09. 08/07/09 BSC stated that they were no longer progressing the ground treatment option. No WPP in place, Graham's not on site, 3 <sup>rd</sup> Party notification not in place.	Murrayfield Retaining Wall [S21D] – No activities carried out during the period.
	Baird Drive Retaining Wall - No activities carried out during the period.	08/07/09 – BSC stated that redesign has not been progressed. No WPP or Form C prepared or submitted as of 10/07/09.	Baird Drive Retaining Wall - No activities carried out during the period.
4.1.5.7	Section 5A Roseburn Junction to Balgreen Road		Utility diversions in entrance to Scotrail depot have been transferred to BSC, but not progressed to date. BSC still to provide action plan for dealing with remaining Japanese knotweed. Depot private utilities have been transferred to BSC.
		<b>Russell Road Bridge</b> Changes from BDDI to IFC are yet to be agreed.	Estimate awaited from BSC.
		<b>Russell Road Retaining Walls W3 &amp; W4</b> Changes from BDDI to IFC are yet to be agreed.	Estimate for W3 awaited from BSC.
		<b>Murrayfield Tram Stop Retaining Wall</b> - BDDI to IFC Change	Estimate awaited from BSC.
		<b>Russell Road to Murrayfield Stadium Trackwork</b> - BDDI to IFC Change	Estimate awaited from BSC.
		<b>Murrayfield Stadium Retaining Wall S21B</b> - BDDI to IFC Change	Estimate awaited from BSC.
		<b>Murrayfield Underpass S21C</b> - BDDI to IFC Change	Estimate awaited from BSC.
		<b>Murrayfield Pitches Retaining Wall</b>	Estimate awaited from BSC.

		<b>S21D - BDDI to IFC Change</b>	
		<b>Water of Leith Bridge - BDDI to IFC Change</b>	Estimate awaited from BSC.
		<b>Baird Drive Retaining Wall</b> Changes from BDDI to IFC have yet to be agreed.	Awaiting a response from BSC.
		<b>Balgreen Road Tram Bridge - BDDI to IFC Change</b>	Estimate awaited from BSC.
		<b>Balgreen Road Access Bridge - BDDI to IFC Change</b>	Estimate awaited from BSC.
4.1.5.8	Section 5B Balgreen Road to Edinburgh Park Central	<b>Balgreen Road Retaining Wall - BDDI to IFC Change</b>	Estimate awaited from BSC.
		<b>Trackwork Balgreen Road – Carrick Knowe</b> Trackwork Changes from BDDI to IFC have yet to be agreed. Earthworks Changes from BDDI to IFC have yet to be agreed. Drainage Changes from BDDI to IFC have yet to be agreed.	Estimate awaited from BSC. Estimate being reviewed by tie. Estimate being reviewed by tie.
		<b>South Gyle Access Bridge</b> Changes from BDDI to IFC have yet to be agreed.	Estimate awaited from BSC.
		<b>Bankhead Retaining Wall</b> Changes from BDDI to IFC have yet to be agreed.	Estimate awaited from BSC.
		<b>South Gyle Access Bridge to Edinburgh Park Bridge</b> Trackwork Changes from BDDI to IFC have yet to be agreed. Earthworks & Drainage Changes from BDDI to IFC have yet to be agreed.	Estimate awaited from BSC. Estimate being reviewed by tie.
		<b>Edinburgh Park Bridge</b> IFC details on OLE plinths & tram restraint plinths are yet to be issued IFC.	BSC responsibility to manage interdisciplinary issues and ensure details are available to meet the construction programme.
		<b>Track Work Edinburgh Park Bridge to Edinburgh Park Central - BDDI to IFC</b>	Estimate awaited from BSC for track / earthworks/drainage.

		Change	<b>Public Utilities</b> – Estimate previously agreed and instructed by tie – no progress to date by BSC. <b>Private Utilities</b> – Estimate awaited from BSC.
4.1.5.8	Section 5B Balgreen Road to Edinburgh Park Central	Carrick Knowe Bridge	Delay due to slow start by BSC, late Form C & WPP submissions, poor possession planning, missing the key disruptive possession in October 2008, plant breakdowns at Christmas, non-use of New Year possession, lack of package contractor for the structure. BSC have also missed the March 2009 disruptive possession due to the above. BSC also refusing to progress the works until the Change is agreed. Expanded now constructing the structure, however WPP and Form C for the abutments remains outstanding as of 10/07/09.
	South Gyle Access Bridge to Edinburgh Park Bridge	Utility works completed in this section – BSC programme for track works awaited.	South Gyle Access Bridge to Edinburgh Park Bridge
	Edinburgh Park Bridge	Works delayed by late submission of Form C's for the bridge beam installation. Late casting/delivery of the bridge beams. Installation of the bridge beams commenced 08 April 09. Further delays due to BAA stopping works during weekend nightshift due to lack of crane permit, late issue of reinforcement details by SDS & late issue of OLE base design.	Edinburgh Park Bridge
	Edinburgh Park Bridge to Edinburgh Park Central.	Utility diversions have been transferred to BSC – programme awaited.	Edinburgh Park Bridge to Edinburgh Park Central.
4.1.5.9	Section 5C Edinburgh Park Central to Gogarburn	<b>Gyle Tram Stop</b> – BDDI to IFC Change	Estimate awaited from BSC.
4.1.5.9	Section 5C Edinburgh Park Central to Gogarburn	Section 5C A8 Underpass	Tie believe all the 43 week delay to date at A8 Underpass is a result of BSC issues. Current Issue Temporary Works piling in delay since 12/3/09 due to obstructions at 4.5m. Temporary road being constructed to allow combing phases 1 and 2. BSc have now some year after contract award issued details of BDDI to IFC changes in an attempt to further stall process. Issues are minor but depending on design development resolution may have some contractual entitlement.
4.1.5.9	Section 5C Edinburgh Park Central	Section 5C: Depot Access Bridge: On	BSC are to submit Estimate for Depot Access Bridge for BDDI to IFC.

	to Gogarburn	programme for 5 <sup>th</sup> August start.	Estimate now very late if works to start in August 2009.
4.1.5.9	Issues and Concerns	Section 5C: A8 Underpass: BDDI to IFC and Utility Diversions not completed	BDDI to IFC BSc have been aware since May 08 but details only just received despite commencing structure. Minor issues that could have been resolved by now. Utility Diversions: tie have instructed all diversions timeously however BSC have changed position or delayed issuing Estimates.
4.1.5.9	Issues and Concerns	Section 5C: Depot Access Bridge BDDI to IFC	BSC estimate overdue.
4.1.5.10	Section 6A Depot - Issues and Concerns	Depot: BDDI to IFC	Most issues well known and part of detailed negotiation.
4.1.5.11	Section 7A Gogarburn to Edinburgh Airport - Issues and Concerns	Section 7: BDDI to IFC	Most issues known with BSC missing dates for issue of Estimates. Estimates overdue for Drainage, Earthworks BDDI to IFC, Gogar Landfill and soil Nailing, Soft Ground. See also item 5
4.3.5.11 (should be 4.1.5.11)	Section 7A Gogarburn to Edinburgh Airport	Section 7:	Culvert 1: No progress due to BDDI to IFC. Gogarburn bridge: Progress limited to 80% reinforced earth wall not 100%, West columns removed and east being assessed by SDS, BDDI to IFC awaits information from design team. Culvert 2: Works completed Culvert 3: No progress possible due to SEPA approvals. Gogarburn retaining Walls: no progress due to no SEPA consents or BAA approval due to late submission of Design data for approval.
4.2.3	TRW (Trackwork)	Drainage box approved by CEC	The proposed track drainage does not provide a trapped drainage solution. It will trap silt to an extent but does not prevent odours and gases escaping the sewer.
4.2.3	TRW (Trackwork)	<b>Following activities are planned</b> Track installation on Princes ST.	This activity is ongoing however although the basic track installation has progressed beyond Frederick St. only 60m of track has been encased and further road works cannot proceed until the encasement of the track proceeds.
4.2.4	DWE Depot Workshop Equipment - Issues and Concerns	DWE Issues and Concerns	Bogie Turntable instructed by tie and compressed air solution agree with Siemens and CAF. Change of Forklift to pallet stagger and ultrasonic cleaning bath and arc welding omission to be agreed.
4.2.4	DWE (Depot Workshop Equipment)	DWE Issues and Concerns	Bogie Turntable instructed by tie and compressed air solution agree with Siemens and CAF. Change of Forklift to pallet stagger and ultrasonic cleaning bath and arc welding omission to be agreed.
4.2.5	Signalling, Communication, SCADA, PIS, PA - Production	PID Units ordered	Has approval for the proposed PID been received from CEC, as SCC PM has no knowledge of CEC granting approval. Evidence required. Alternatively, are BSC ordering these units at their own risk?

4.3.2.1	Tram delivery	"Bus tracker materials not delivered to CAF"	These materials are free-issue from tie/TEL. Does this mean that the first trams to be delivered will not be fitted with the Bus tracker equipment? Will this need to be retro-fitted and if so does this have cost and programme implications. This information & equipment has been repeatedly requested by BSC (CAF).
4.4.1.1	Earthing & Bonding	Earthing And Bonding	Integration of E&B Design with BB civils team and Siemens is poor with little understanding of priorities or scope. Will be particularly exposed for Depot Building Slab with E&B design ongoing.
6	Stakeholder and Third Party Issues	Third parties	No mention of progress on BAA approvals.