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**EDINBURGH TRAM NETWORK
INFRACO CONTRACT**

**PERIOD REPORT No 3
TO 21 JUNE 2008**

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1 EXECUTIVE SUMMARY

Mobilisation has continued in the period, focussed on pre-construction activities. Staff recruitment, which has been adversely affected by the extended contract finalisation process and consequent uncertainty over project commencement is now well advanced. Most of the consortium permanent senior management team is now based in Edinburgh and the remainder will be on site as soon as possible. The tender/initial delivery team will remain allocated as required to the project to ensure a smooth transition.

Production of management plan deliverables, construction control and safety documentation and Employer's Requirements documentation is in progress, and will accelerate in the next period as newly mobilised personnel become effective.

The Contract Programme remains linked to the November 2007 (V26) design programme, which is outdated. Efforts to update the programme to incorporate the design programme at Contract Close (V31) are in progress, but the issues of entitlement to extra time and effective mitigation of delay will require effort from tie and BCS to resolve. Since Contract Close, further external delays to design completion and approval have occurred, requiring a second iteration of programme review. The impact of delays in utility diversions completion is also impacting the works, mainly in the off-street section. The progress update in this report shows the original programme activity bars, together with an approximate update against the V31 and latest (V33) design status. The uncertainty over contract programme is an impediment to procurement and project management, and must be resolved urgently.

Progress on the Client's base design has been generally good in the period, but continuing uncertainty in some critical areas, and lack of progress on some critical approvals, is likely to impact procurement and construction commencement. Alignment of BSC design with the base design has been affected by overstretch of BSC technical resources, resulting from mobilisation delays, but is now improving and will move forward more effectively in the next period. Uncertainty over payment for SDS resources allocated to Construction Support is causing considerable concern and must be resolved urgently to ensure these experienced staff remain available to the project.

The Systems design team nucleus is in place and interface/alignment activities have commenced. Work has commenced on the basis of available, unapproved track alignment and OLE/power drawings, but areas of incomplete detail and the lack of IFC information means that the risk of rework and delay exists. This situation is being closely monitored and will be the subject of further discussion in the next period, to minimise risk and optimise progress.

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Procurement of civil package subcontractors has continued in the period, and closure of packages for the depot and section 7 is anticipated by end July. Available initial works and long lead procurement is being carried out on limited instruction, such that delay to construction start is minimised. Resolution of contract programme uncertainty is required urgently, to ensure effective procurement and package management.

Systems and Tram procurement activities have commenced, with selection of key suppliers and securing of manufacturing timetables in progress. The rail subcontractor, BAM Rail, is in place and rail procurement is in progress. Finalisation of IFC design is required urgently to allow other detailed design and long lead procurement, such as traction power sectioning and manufacture of S&C (points) to move forward.

Minor site clearance works have been progressed in the period, with more significant progress achieved since the period end, particularly in respect of demolition of the Caledonian Ale House. ~~tie~~ concerns over coverage of initial safety control documentation have been taken on board to ensure future submissions are acceptable.

BSC's commercial team is in place and managing procurement, contract financial procedures and change administration. The number and volume of design change issues, together with the significant effort required to satisfy the ongoing commitment to achieving Value Engineering savings where possible, comprises a significant workload on the team. This has resulted in some tasks being re-prioritised until sufficient staff are mobilised. This situation will improve in the next period.

Note : The previous monthly report, for the period to 24th May, was incorrectly titled as Period Report No 1 but actually refers to Period No 2.

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2 HSQE MANAGEMENT

2.1 Health & Safety

2.1.1 Safety Management, including CDM

The updates of the Construction Phase Health and Safety Plan to Revision 2 were issued to tie on 19th June to address previous comments. The plan has been accepted with comments – a meeting has been held with tie on Monday 30th June to agree resolution of comments, the revised plan is to be issued shortly.

Network Rail Construction Phase Plan

Prior to Contract close, it was confirmed by tie and Network Rail that the only potential requirement for a Principal Contractor's Licence (PCL) was for un-segregated work on or near the line (i.e. within 3 m) which, at worst would cover establishment of initial safety fencing and, later in the programme, bridge deck works. This was the basis of programming and pricing at contract close on 14th May 2008. The first issue was sent to Network Rail for comment on the 15th May 2008. However within their comments on the Plan NWR changed their requirements and now require a Principal Contractors Licence to be in place. Initially STS were to be appointed as Principal Contractor by tie under CDM for NWR work but STS were not equipped to act as Principal Contractor as they have little or no experience as PC on civil works. Following discussions involving all parties it was decided works would be carried out under Siemens Transportation Systems PCL with BSC remaining as Principal Contractor under CDM. These changing requirements have resulted in several re-drafts to the Plan. The re-drafted Plan is currently with STS for review.

These changed requirements have introduced delay to construction start, and will potentially result in substantially increased costs, which are the subject of a change notification.

2.1.2 Accidents & Incidents

No accidents during the period.
No Near Misses reported in the period on the project.
No reportable incidents in the period. AFR for the first three periods is 0.00.

The total number of hours worked in the period was 17,572.
Non Site Hours = 15,698
Site Hours = 1,875

Breakdown of Site Hours
Parsons Brinckerhoff 1,216
BSC 549
Graham + CAH 110

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False start occurred at the Caledonian Ale House which has been covered by a Non Conformance Report (No. 002)

2.2 Quality

2.2.1 Quality Management

The Project Management Plan (including Project Quality Plan) initially issued on 12th February 2008 is currently being revised to incorporate **tie**'s comments with submission expected w/c 7th July 2008.

No Inspection and Test Plans have yet been formally submitted to **tie**.

The implementation of a solution to address the requirement for project collaboration and project control through BIW is ongoing.

Two Quality Management System training sessions have been arranged to be held on 9th July for new staff.

2.2.2 NCR's

One Non Conformance Report was raised during the period. NCR 002 raised in relation to false start occurred at the Caledonian Ale House.

2.2.3 Audit

A combined BSI ISO 9001 Quality and ISO14001 Environmental ongoing assessment audit took place in the Edinburgh Office on 11th and 12th June 2008. BBUK has successfully maintained our ISO 9001 certification. A copy of the BSI audit report has been forwarded to **tie**.

2.2.4 Trend Analysis

Nothing to report at present

2.3 Environment

2.3.1 Environmental Management

The initial issue Construction Phase Project Environmental Management Plan was submitted to **tie** on 27th June 2008.

An Edinburgh Tram specific template is being developed for the Site Specific Environmental Management Plans.

2.3.2 Issues

There were no Environmental Events reported in the period on the project.

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2.4 Management System / Deliverables

2.4.1 Management System

A BSC Management system update was issued on 8th June 2008. The Rail Management System is undergoing revision to satisfy the requirements of Link-Up Version 2, procedure and form updates will be issued shortly.

2.4.2 Deliverables prior to construction commencement.

Project Management Plan

Addressed under Section 2.2, Quality. Revised plan to be issued w/c 7th July

Construction Health and Safety Plan

Addressed under 2.1 Health & Safety. Plan accepted with comments.

Construction Management Plan

Contained within Section 16 of the Project Management Plan.

Network Rail Interface Plan

Covered by the Network Rail Construction Phase Plan which is addressed under 2.1 Health & Safety.

Quality Management Plan

This forms part of the Project Management Plan

Traffic Management Plan

Submission planned w/c 7th July 2008

2.5 KPI's

KPI spreadsheet for Period 3 was submitted to tie on 24th June along with associated notes; a further copy is attached as Appendix 10.1.

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3 PROGRAMME

3.1 Contract Programme Status

The programme, attached to this report, has two baselines. One baseline shows the original Contract Programme (which is based on V26 of the SDS Design Programme) and one which updates the IFC dates in line with version 31 of the SDS Design Programme. The second baseline has been produced without any changes being made to the original logic of the contract programme.

Progress achieved up to 21 June 2008 has then been recorded against the above baselines including inputting the latest IFC dates received from SDS (V33). The links between the Advanced Works Contract activities and the activity “Award of Contract” have been removed to prevent any erroneous effect occurring due to none completion of Advanced Work items.

No revised MUDFA programme has been received and therefore where MUDFA completions were shown as being completed before the 21 June 2008 they are now defaulting to the data date.

The result is the following changes to Section Completion Dates:

21 June Update	29 April (Contract Programme)
A 26 May 2010	25 March 2010
B 15 July 2010	09 May 2010
C 19 April 2011	17 January 2011
D 17 October 2011	16 July 2011

The above slippage is a direct consequence of incorporating design programmes V31 and V33 into the contract programme. The effect of each issue is separately shown on the schedule.

Programme update attached as Appendix 10.2

3.2 Look Ahead Programmes

The 3 month look ahead programme takes the above update to the contract programme and as well as adding further detail makes a number of assumptions to be able to provide a working programme of the activities to be undertaken in the next 3 months. The following points should be noted.

- Roadworks now start in Leith Walk on 1 September due to the IFC date of section 1B now being predicted to slip to 31 July 2008. It is proposed that these works commence with CH 100 to 350 and not the Foot of the Walk junction as originally programmed.

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- It is assumed IFC drawings will be available by end of July 2008 to allow the construction of the Haymarket Station Access Road and the work at Haymarket Yards in mid August.
- Commencement of Haymarket Viaduct is dependent on approval of our Works Package Plan by Network Rail.
- An IFC date for the Scotrail Depot Car Park has been added for 19 September 2008
- The IFC for Murrayfield Tram Stop Retaining Wall has been put back to the end of August (V33 27 June 2008) because we understand CEC have rejected the current design.
- The commencement of Russell Road Bridge, Murrayfield Stadium Retaining Wall (S21B), Carrick Knowe Bridge, Bankhead Drive Retaining Wall, South Gyle Access Bridge and Edinburgh Park Viaduct are dependent upon Network Rail Form C approvals, the temporary works design and associated ground investigation is currently being progressed.
- The programme for South Gyle Access Bridge (and the connected Bankhead Drive Retaining Wall) does not take account of the recently instructed redesign to relocate the piles to avoid an existing sewer.
- The programme does not include for the potential change order to relocate the street lighting cables at South Gyle Access Bridge.
- The programme does not include for the potential change order to relocate the high voltage electric cable running through the proposed location of the north abutment at Carrick Knowe Bridge.
- The commencement of works at Gyle Tram Stop Retaining Wall is dependent upon and assumes MUDFA will be complete in this area by 29 August 2008.
- A8 underpass is programmed to commence on 28 August 2008 following receipt of IFC on 30 July 2008 and assumes that MUDFA will have removed all conflicting traffic management by this date.
- MUDFA is assumed to be completed in the depot area by 1 September 2008 which will allow excavation to commence.
- The initial material excavated from the depot will be hauled to the surcharged embankment in area 7.
- We await details of the Murrayfield Accommodation Works which were programme to be completed in the SRU close season.
- IFC for the hotel car park (Section 7) are assumed to be available by 12 August 2008.
- Approval of the Works package plans for the plant crossings in area 7 are assumed to be received by 11 July 2008.

Look Ahead Programme attached as Appendix 10.3

3.3 Design and Consents Programme Status

A **tie** / BSC meeting has been held to consider the implications of version 31 of the SDS Design Programme on the INFRACO programme. At this meeting **tie** proposed various changes to the logic of the INFRACO contract programme that would reduce its overall duration and hence mitigate the effect of V31. BSC are considering the viability of **tie**'s proposals.

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3.4 Tramco Programme Status

Tram design, procurement, manufacturing, delivery and commissioning programme attached as Appendix 10.4.

3.5 Critical Impact Notices

The following present potential risks to the programme:

Completion of MUDFA works.

We do not have a copy of the current MUDFA programme and its effect, if any, cannot therefore be analysed against the contract programme. To assist our short term planning we have to assume a number of completion dates as noted above.

IFC dates post V31

We are still experiencing slippage to the programme as the result of the projected late release of IFC drawings.

Track /Roads Alignment Issues

We are programmed to commence roadworks on Leith Walk on 1 September 2008. However our current programme does not include for full reconstruction.

Transfer of MUDFA Works to INFRACO

We are aware of utility diversions required at South Gyle Access Bridge and Carrick Knowe that will effect the commencement of these structures.

Network Rail Form C Implications

The Murrayfield structures and Bankhead Drive Retaining Wall post design freeze drawings now include a considerable element of temporary works. These structures will be prolonged both for the time taken to construct the temporary works and the associated Network Rail Form C approval

Murrayfield Accommodation Works

We understand that the third party agreement with the SRU is still to be signed. The associated accommodation works were programmed to be undertaken between June and August 2008 to allow construction of Structure 21B and access to 21E. If this work has to be delayed until next summer it will have a critical effect on the programme.

By geographical area the issues are as follows:

Section 7;

- The construction of Burnside Road for BAA.
- Location of Airport Tramstop.
- RBS requirements for Gogarburn Tramstop.

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- Archaeological Works obstruction to INFRACO.
- MUDFA Completion date.

Section 6;

- Completion of the 800 diameter water main diversion.
- Completion of other MUDFA works.

Section 6 / 5C;

- 1500 Sewer diversion.
- Consortium Offices.

Section 5C;

- MUDFA completion.
- A8 Underpass value engineering.

Section 5B;

- Edinburgh Park Viaduct value engineering.
- MUDFA completion.
- Transfer of MUDFA works to INFRACO

Section 5A;

- SRU 3rd Part Agreement completion.
- SRU Accommodation Works.
- Roseburn Street Viaduct value Engineering.
- Scot Rail Depot (Oil Tanks etc.).
- MUDFA completion.

Section 2;

- Caledonian Ale House demolition

Sections 1D, 1C, 1B, 1A;

- Alignment of pavement design with INFRACO bid.

Timely resolution of the aforementioned issues is essential to achieve the programme as currently presented.

3.6 Milestones

No comments on current milestone allocation/structure

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4 PROGRESS

Programme update attached as Appendix 10.2.

Look-ahead programme attached as Appendix 10.3.

4.1 Mobilisation

4.1.1 Consortium

The Consortium Office modular building has been procured and manufactured. Due to the ongoing delay in provision of land by **tie**, the offices have been placed in storage. A lease agreement for land at Edinburgh Park was signed on the 4th of July by **tie** and preparation works on the compound commenced on the 8th July. Preparation works will progressed as quickly as possible to minimise impact on the scheduled delivery date for the office building of 21st July.

In the meantime, additional office space has been procured at Lochside House to accommodate the growing number of Consortium and contractor staff.

4.1.2 Civil & Building

Staff mobilisation has been severely affected by uncertainty over the project commencement date due to extended pre contract negotiation, but is now in progress. A mobilisation Organisation Chart is attached as Appendix 10.7.

Activities in progress are principally associated with pre construction preparation, production of safety and control documentation etc, and minor enabling works, as described in section 4.3.2 below.

4.1.3 E&M Systems

3 additional staff mobilised since 1st July. Activity includes setting up major internal procedures, delegated authority, basic commercial structure, procurement and internal monitoring/fortnightly meeting structure.

4.1.4 Trams

Initial interface meetings with E&M Systems teams commenced.

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4.2 Engineering

4.2.1 Civil & Building Design

4.2.1.1 Production of Design

There has been ongoing dialogue, with workshops to align the BSC offer with the SDS detailed design. Additional workshops have been held for track, roads, structures, OLE, power supplies and systems and communications.

Dates below record the workshop meetings and topics discussed:

2 Jun 08 – tie OLE/Substation Workshop
17 Jun 08 – Depot Technical Coordination meeting
25 Jun 08 – Siemens OLE meeting
1 Jul 08 – Siemens OLE/Road Lighting meeting
1 Jul 08 – Siemens Depot Power Supplies meeting
2 Jul 08 – Siemens Stop Presentation

The workshops have so far not identified any new significant areas of misalignment between the BSC offer and the SDS design and some notable progress has been made in the identification of the potential solutions for resolution of previously identified misalignments. These are summarised below indicating the areas of concern to be addressed:

Structures

Roseburn Viaduct remains as per the original SDS design. The SDS Design Team is moving forward with their design with TAA activities and IDC close out during this period. The IFC issue date of 25th July is on target and no instruction to stop has been received from BSC. Signing of the SRU Agreement is imminent.

South Gyle Access Bridge – Requirement letter from BSC was received during the period to revisit the structural design of the bridge in order to clear Scottish Water sewers in the vicinity of the sub-structure.

Roads

Split into two areas, geometry and pavement design.

Geometry - Opportunities have been identified by BSC to modify the design constraints used by SDS in the development of the geometric design for roads to reduce the scope of the associated highway works by methods such as reducing the freeboard height at kerbs. The proposal produced by BSC has been reviewed by CEC and opportunities for re design to reduce the scope of the roads works have been discussed between BSC and SDS on 26th June and 2nd/4th July 2008 on a more detailed level at specific locations through the route. This activity continues.

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Pavement design – A programme of testing has commenced by BSC with further core testing commencing 14th July 2008. When results become available, further work-shops will be required between to assess/confirm the areas of potential scope reduction for associated roads works. At this time it is not possible to issue an instruction to amend the design, and SDS are continuing to progress the design as it currently stands through both technical and prior/planning approvals, to secure the programme.

Utilities

Information from **tie**/MUDFA is now arriving on CCTV sewer and manhole positions within the tramway exclusion zone and at SDS designed structures. Sewer clashes are evident from this late information in the following areas.

South Gyle Access Bridge
Russell Road Access Ramp
Water of Leith Bridge

As-built records have been requested from **tie** in an accurate format. Submissions received so far fall short of this requirement.

4.2.1.2 Approvals and Consents

Total Number of Detailed Design Packages	Total Delivered	Total Outstanding	
330	306	24	
Total Number of Planning/PA/Building Warrant Packages	Total Approved	Total Remaining to be Approved	Submitted
95	42	53	36
Total Number of Technical Approval Packages	Total Approved	Total Remaining to be Approved	Submitted
124	51	73	44
Total Number of IFC Packages	Total Delivered	Total Outstanding	
115	33	82	

SDS is continuing record delays or potential delays to Prior and Technical Approvals due to the change requested to the design by CEC/**tie** during

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formal application process. BSC/SDS requires formal instruction on these issues.

A general issue already highlighted above is the ongoing effect of previous delays in validating Prior Approvals, SDS have advised of the impact of these delays and consequential effects such as IFC dates (see below) on SDS resource management.

A further generic delay has been the time taken by CEC to process the SDS prior Approval applications between validation and 21 day consultation starting (weekly list), these are listed below.

This has resulted in consequential impacts on SDS ability to resource plan to secure other Prior Approval submissions.

SDS has also received numerous design changes from CEC during the formal consultation stage of the prior approvals, as listed below. After all of the time spent developing preliminary design, detailed design and having informal consultation it is very disappointing that new comments are received at this stage and these will, in many cases impact on the IFC dates and will require change instructions to be issued to SDS for the design to be amended.

Specific Issues

Section 1

Prior Approvals for Bernard Street, York Place and Princes Street granted on 3 July. Technical Approval for Roads 1B granted. 1/08 Foot of the Walk – submitted 2 May and Validated 2 June. CEC Portal shows received on 2 June. Letter received on 9 July asking for revisions to OLE and tram stop location and design.

1/12 Picardy Place – ongoing work with CEC to complete roads design.

1/17 Shandwick Place – CEC requesting fundamental changes post submission. CEC has agreed to fund cost of moving tram stop. SDS seeking change for amended work.

Section 1D roads – design solution being progressed with CEC to address Roads Safety Audit concerns

Section 2

All Prior Approvals in place.

Section 3

3/02 Roseburn Bridge – application in 23 March Delay in validation 9 June and weekly list 16 June. With CEC for determination. IFC missed (7.7).

3/05 Ravelston bridge – IFC missed. With CEC for determination.

3/12 Telford bridge – approved by CEC

3/16 West Pilton – delay due to Change form CEC and redesign Application submitted on 10.6.08

IFC due on 15.8.08 Compressed approval period required.

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3/19 Caroline Park – Submitted 10.10.07. Revised tram stop submitted Feb 07. Awaiting decision from CEC.

Section 5

5/06 Murrayfield Stop. Prior Approval was submitted on 25 April but not validated until 27 May and on weekly list 2 June. IFC was due on 27 June. Design amendments required by CEC have been sketched and submitted for comment.

5/07 Roseburn Viaduct/Stadium Retaining Wall works – submitted to CEC on 11.6. The IFC is due on 25 July with a compressed approval period required this is also programme critical. CEC has accepted amended wall design and colour scheme.

5/07a Stadium turnstiles – on hold due to SRU agreement not in place.

5/08 Water of Leith Bridge/Underpass - Approved by CEC on 3.7

5/10 Balgreen Bridge Stop/Baird Drive. Prior Approval submitted. All information with CEC for decision. IFC due on 24 July:

5/22 –Letter of 3 July from CEC asks for hedge and boundary treatment. SDS to discuss with tie.

5/30 Gogarburn Stop– tie to instruct BSC regarding the Prior Approval application date. tie advised SDS that by 1 September a decision will be made on stop design either being amended to accord with the requests of RBS or that SDS should complete a standard stop design. RBS to provide a full specification for the stop if their design is to be progressed and this is to be provided to SDS by 1 September if IFC critical path for construction is to be maintained.

Section 6

6/21 and 6/24 Depot – approved by CEC on 3 July.

Building Warrant for Depot -meeting on 10 July to discuss CEC comments.

Section 7

All applications with CEC except for 7/29 BAA Airport CEC requests for boundary fencing and landscaping issues have been causing delays

7/29 Airport – BAA approval required. Action on tie to confirm requirements to SDS.

4.2.1.3 Issues and Concerns

There remain numerous areas where progress to complete the detailed design remains hindered/blocked. These include :-

Delay to Murrayfield Stadium Tram Stop and Murrayfield Stop retaining walls. In accordance with Version 31 of the SDS programme, SDS submitted the Prior Approval for the Murrayfield Stop and Retaining Wall stop batch on 25 April 2008. It was validated by CEC on 27 May 2008.

SDS met with CEC Planning on 28 April to discuss the drawings and received feedback from CEC on 8 design issues on the same day. No issues were raised with the content or quality of the planning package.

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CEC could have validated this construction critical application following the 28 April submission. The planning package was in accordance with CEC's Advice Note 40.

Following submission of SDS's response to the 8 design issues raised above, SDS was informed by CEC on 27 May that it had decided to proceed with validation of Murrayfield Stadium Tram Stop. However "due to a number of factors concerning design, public safety and the lack of appropriate pre-submission consultation it has been decided that CEC will not support or approve the application in its current format."

CEC stated that it was awaiting feedback from the Lothian and Borders Police Murrayfield Stadium Control Officer. Once this was received, CEC agreed to meet with SDS/**tie** and all relevant parties to discuss the submission.

SDS noted that minutes of prior consultation with the SDS, **tie**, CEC safety officer and the Police were readily available and these were issued to CEC planning for information.

Despite repeated requests to CEC Planning and repeatedly raising this issue at the Approvals Task Force meetings CEC has been unwilling to meet the SDS team until 23rd June 08.

The following IFC dates have not been met.

- Murrayfield Stop Retaining Walls (SDS51560) 27 June.
- Murrayfield Stadium Tram Stop (A26680) 27 June

CEC did not give SDS formal comments on the Batch until 8 weeks after submission (which is not as per the agreed protocol) and this has considerably affected the programme for IFC issues. Any delay due to changes could have been mitigated if CEC had responded in a timely manner.

SRU agreement is not signed. This means that abortive works potentially on the Prior Approval for Roseburn Street Viaduct and Murrayfield Stadium Accommodation works batch 5/07. (See Structures above.) This will also impact on the Planning Permission for turnstiles at Murrayfield.

Craig Wallace the Lawyer for SRU has advised SDS on 12 June that SRU will object to any planning permission/prior approval. SDS awaits instruction from **tie** via BSC on the submission of the Planning permission even though there is no signed agreement with SRU.

SDS has attended a further meeting with **tie** and BAA in this period, which BSC also attended. It is clear that the concept design for the Kiosk area (although it has been accepted by TEL) has not been agreed with BAA. Since these works are outwith the LoD it is critical that the design gains approval from BAA. SDS also awaits BAA's confirmation of the design for the covered walkway over the Kiosk. SDS believes that BAA has appointed their architects, Capita, to review the scope for this. BAA still to confirm approval of concourse and kiosk.

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The relocation of Burnside Road is construction critical, as BSC are aware, and the phasing of this will drive the design in some key areas. SDS are awaiting information to determine the width of the clearances required at the back of the kiosk (i.e. 2m for maintenance or 3m for walkway) , which depends on construction phasing. SDS are also awaiting information of how much space is available to design the retaining wall alongside Jubilee rd, since the latest BSC design encroaches into the LoD.

The Gogarburn retaining wall, instruction is still awaited. This will need to be reviewed and redesigned in this area, due to the changes in design requirements, and space constraints.

SDS anticipates that the following IFC will be delayed:

- Airport Stop (A27800) 9 September '08.
 - Gogarburn Retaining Walls (431 & 461) 8 October '08.
 - 7A Roads, Lighting, landscaping, OLE (SDS30920) 1 October '08
- SDS confirms to BSC that the risk of not gaining Technical or Prior Approvals in a satisfactory timescale lies with **tie** as agreed, and that the payment for this IFC be as per the agreed contract.

General landscaping requests from CEC which DO NOT require PA. This has impacted several submissions, most recently Section 7 Prior approval. Generally these issues cause a small delay to the prior approval but this may impact on the IFC for each instance.

Changes on Balgreen Rd bridge which have now been resolved as of 12 June but have delayed Batch 5/10. This was due to finalisation of CEC requirements for the enclosure of the 'free space' between the pedestrian tunnel and the soffit of the bridge deck. This has now been agreed and final amendments are being made to the drawings for submission of the prior approval. Until Prior Approval is granted, the IFC date remains at risk.

There is still not final agreement between CEC and Forth Ports on bypass road. If not quickly resolved this will fundamentally impact TRO and Ocean Terminal design. **tie** have instructed SDS to move the design on with Rev 3 of the agreement drawings. SDS understand, however, that these issues are not formally resolved with Forth Ports and this is likely to result in objection to the Prior Approval.

CEC Planning have requested a revised pattern using two tensar block colours for S21B and W18. This will impact the technical and planning drawings for both structures, and will have an impact on the cost. This will be covered under a Change request.

In accordance with the programme, SDS submitted information to CEC Roads Authority for Technical Approvals on 18 April 2008. To date, no comments have been received from CEC, which were due by 04 July 2008

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under v31 of the SDS programme. As such the following IFC issues will be delayed:

SDS27980 – 3C Roads, Street Lighting, Landscape and Drainage – original IFC delivery date of 01 August 08.

SDS will confirm a revised IFC delivery date for the above, upon receipt of comments from CEC.

SDS submitted Batch 3/19 for Prior Approval to CEC on 11th October 2007 and the package was registered by CEC on 19th October 2007. Subsequently SDS received a letter from CEC on 29th February 2008, requesting a variety of design changes which were at variance to the concept presented to and accepted by CEC during the informal consultation period. Additionally, CEC requested significant alterations to the previously agreed exemplar tramstop layout, which affected the details shown at Caroline Park Tramstop.

SDS subsequently re-submitted the Caroline Park drawings via tie on 22/04/08. Following the resubmission, SDS has made frequent verbal requests to CEC for a determination on this batch, to which CEC have stated that this batch is in a queue waiting to be dealt with. Therefore, whilst the IFC package for Caroline Park tramstop was ready for submission on 18/06/08, per the SDS programme agreed at novation, the package will not be submitted until SDS is in receipt of the prior approval.

During the preparation of Prior Approval batch 3/05 'Ravelston Tramstop & Ravelston Dykes Bridge' for submission to CEC, PB has received requests from CEC to amend details shown on the previously submitted batch 3/13 'Telford Road Tramstop' and batch 3/20 'Saltire Square Tramstop'. The necessary prioritisation of design alterations to these packages has consequently caused a delay in the preparation and submission of the batch 3/05 'Ravelston Tramstop & Ravelston Dykes Bridge' package. CEC will take up to 8 weeks to determine the prior approval submission, with subsequent approval conditions then having to be incorporated into the associated IFC packages. Therefore, due to the additional design changes requested work PB requests the currently programmed IFC dates for the below elements to be amended to 15/08/09:

- Ravelston Tramstop
- Ravelston Dykes Bridge
- Roseburn Retaining Walls (W100)

In accordance with V31 of the PB programme, PB submitted Prior Approval batch 3/02 'Roseburn Tramstop & Roseburn Terrace Bridge' for prior approval on 27/03/08. Subsequently, PB received a letter from CEC on 28/04/08, stating that the package would not be validated until their enclosed requests were met. These request included alterations to the design proposal along with further drawing details.

These alterations were made and a meeting was held with PB/CEC/tie on 21/05/08 where CEC requested further alterations to the design proposal, along with provision of further drawing details. These changes are currently

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being dealt with, and the package is proposed to be resubmitted to CEC on 30/05/08.

CEC will take up to 8 weeks to determine the prior approval submission, with subsequent approval conditions then having to be incorporated into the associated IFC packages. Due to the change requested by CEC the currently programmed IFC dates for the below elements need to be amended to 01/08/08:

- Roseburn Terrace Bridge
- Roseburn Tramstop
- Roseburn Retaining Walls A to H (one package)

Construction Support

In accordance with the Novation Agreement, SDS have mobilised resources to assist BSC with detailed design support and Construction design support. This team has assisted with, amongst other things, the conversion of drawings, technical queries, and approvals and consents assistance. The team is integrating with the BSC construction team and is continuing to maintain links with CEC.

SDS and BSC await formal approval for the resource allocation to the project in accordance with the Novation agreement. This is urgently required for SDS to maintain the support currently being provided. Discussions with BSC on 2nd July 2008 and tie on 8th July 2008 have not produced an acceptable solution to the acceptance of the current SDS work team and its input. This is urgently required to prevent demobilisation of this team.

4.2.2 E&M Systems Design

4.2.2.1 Production of Design

Trackwork

Interfaces between track and other systems are being identified (mainly for civil works) and raised in the ICF (interface control procedure), including definition and proposals for resolution.

A trackwork engineering deliverables list has been compiled for all phases of the design. Preliminary trackwork design has commenced.

OLE

Clarification of input information required for commencement of detailed design continued during the period. A successful design walk-through workshop with SDS was held to identify available design documentation and format/content of submissions to CEC, together with definition of further requirements from SDS.

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The formal interface clarification process has been established and initial definitions sent out. An initial interface meeting has been held with CAF.

Presentation to be given to **tie/CEC** on 15th July, on OLE systems in the city centre and airport areas is in progress. This will be followed by a site visit to Potsdam on 23rd July. The purpose of these events is to confirm **tie/CEC** acceptance that design can progress on the basis of BSC proposals and to identify which other information is required, so that it can be obtained urgently.

Traction Power

Clarification of input information required for commencement of detailed design continued during the period.

The formal interface clarification process has been established and initial definitions sent out. An initial interface meetings have been held with Scottish Power and CAF.

A meeting was held with **tie**, SDS, BB and Siemens to develop detailed substation layouts. Further meetings to fully reconcile traction power equipment requirements with current substation design will be held in the next period.

Depot Workshop Equipment

Not yet commenced

Traffic Light Control

Assembly of input information and clarifications to allow design work to start is in progress.

HV/LV Supply

Assembly of input information and clarifications to allow design work to start is in progress.

4.2.2.2 Approvals and Consents

Trackwork

No formal submissions for approval have been made to date.

OLE and Traction Power

Concept approval sought from **tie/CEC** for as noted above.

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4.2.2.3 Issues and Concerns

Trackwork

The track alignment has not yet been issued for construction. Autocad drawings are awaited for engineering and procurement purposes. These are required for verification of the alignment and detailed design (e.g. by supplier of switches, to ensure timely delivery of these long lead items).

OLE and Traction Power

The following input data is not yet available in confirmed final detail :-

- concept approval by **tie**/CEC
- confirmed track geometry design, in electronic format
- confirmed OLE plan information, including streets, pavements, crossings, buildings and utilities locations
- confirmed tram data
- confirmed high load areas (for OLE)
- confirmed OLE sectioning
- confirmed building fixing location information
- integration details for combined OLE/street lighting
- restrictions/requirements for OLE poles on structures
- depot track layout

Design can therefore only proceed on the basis of interim information, with the risk of redesign and delay.

4.2.3 Tram Design

4.2.3.1 Production of Design

See progressed programme attached as Appendix 10.4. Design work in progress includes :-

- Initial engineering definition
- Tram mock up design
- Underframe
- development of specifications

4.2.3.2 Approvals and Consents

No comments

4.2.3.3 Issues and Concerns

No comments

4.2.4 System Assurance

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System Assurance/Requirements management will be led, within the Consortium, by Siemens. A DOORS based management system for Requirements is being established, and existing SDS Design Assurance Statements will be incorporated into this system. A full report on System Assurance will be instituted when the system is functional.

4.2.5 Design Change Management

Management of the process of Design Change is part of the responsibility of the Consortium Engineering Manager, working closely with the Systems Engineering Manager.

4.2.6 Value Engineering

Progress on technical resolution of Value Engineering opportunities has been impacted in the period by the need for SDS to focus on resolution of other critical design/approval delays. There is a significant difference in view on feasibility of several VE opportunities between tie and BSC, which will be elevated in the next period for resolution. See also section 7.3 below.

4.2.7 RFI's and TQ's

4.2.7.1 Civil & Building Works

A copy of the Civil Works RFI schedule is attached as Appendix 10.4A.

4.2.7.2 E&M Systems

RFI's and TQ's have been distributed to internal departments to commence resolution. Interface management process to clarify scope and identify misalignment between contract offer and SDS design is in progress.

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4.3 Civil & Building Works

4.3.1 Procurement

4.3.1.1 Subcontractors

A subcontract procurement schedule, showing status at 7th July, is attached as Appendix 10.5.

The procurement of civil package contractors is progressing in line with the construction dates based on the V31 design programme dates.

Section 6

We are currently finalising the terms and conditions of the full subcontractor order for Barr Ltd for the construction of the depot. A meeting is arranged for Friday 18 July 2008 to conclude outstanding matters. In the meantime Barr Ltd has been issued with a limited Instruction to Proceed to progress in any area of the depot which we consider to be critical to our progress, at risk pending IFC design. An order for structural steel for the depot has been placed on the basis for approval drawings. This order was placed on 24 June 2008.

Section 7A

Negotiations are proceeding with Farrans to conclude a subcontractor order. For the moment there are limited areas where Farrans can proceed due to delay in IFC design, and if our negotiations take longer than anticipated we will issue a limited Instruction to Proceed as required. A meeting with Farrans is arranged for week commencing 14 July 2008.

Section 2A and 5A (Part)

A Limited Instruction to Proceed has been issued to Grahams for the demolition of the Caledonian Ale House and this can be amended to include other areas of Section 2A as required. Negotiations with piling contractors are at an advanced stage and financial closure of the subcontract order is targeted in week commencing 14 July 2008.

Section 1A

Negotiations are ongoing with RJ McLeod and other potential package contractors for Section 1A.

Procurement of relevant key subcontractors (Major Civil Works Contractors, Piling Contractors, Ground stabilisation specialists) includes the requirement for provision of a Collateral Warranty, in accordance with cl 28.7 of the Contract.

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4.3.1.2 Materials

Procurement is progressing in line with the construction dates based on the V31 design programme dates. Non availability of IFC design is a concern in that delay could expose the contractor to further inflation based price rises. Reimbursement for such cost impact would be sought as part of the impact of such external delay.

4.3.1.3 Long Lead Procurement Management

Where it has been necessary to secure our programme position we have issued a letter of limited instruction to proceed or a letter of intent e.g. Barr Ltd on long lead items we have issued a letter of intent to Fairfield Mabey to secure delivery of the beams for the Water of Leith bridge in early December and we are about to issue an order for the supply of precast concrete beams.

Whilst procurement of many items is progressing the late issue of 'for construction' drawings is affecting our ability to secure a fixed price. The cost impact of such delay is outside our control and will be the subject of further discussion with tie.

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4.3.2 Construction

4.3.2.1 Progress on site, to 11th July

Site Clearance

Tree felling and shrub clearance have been completed to sections 5 and 7 with the exception of the area adjacent to the airport hotel and those areas which impact on Network Rail controlled infrastructure.

Demolition of the Caledonian Ale House

Asbestos removal and internal soft strip have been completed. The external scaffold has been erected and demolition of the building itself is ongoing

Traffic Management

Traffic/pedestrian management plans and proposals have been submitted for the following locations:

- Cycle path closure for works at Russell Road
- Road closure for works at Russell Road
- TM at Russell Road submitted and accepted
- TM at Balgreen Road for site access submitted and accepted
- TM at Carrick Knowe South submitted and accepted
- TM at Edinburgh Park North submitted and accepted

Work Package Plans

Work Package Plans have been submitted for the following work activities:

Caledonian Ale House Demolition
Site clearance at Haymarket depot
Edinburgh Park Bridge
Site clearance at Sections 5 & 7
A8 Underpass
Infraco Project Office
Demolition of NCR
Demolition of Viking Building
Demolition of Simlock Building
Carrick Knowe Bridge
Establishment of Infraco offices at Edinburgh Park
Site Investigation

4.4 E&M Systems

4.4.1 Procurement

4.4.1.1 Trackwork

Orders have been placed for :-

- S49 for ballasted and grass track

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- 60R2 for straight track on-street
- 59R2 for curved track on-street
- Switches – rail section 59R2. As noted above, detailed alignment design is required for switch design and manufacturing.
- Rheda sleepers.

Trackwork subcontractor (BAM Rail) in place.

4.4.1.2 Other Systems

Procurement dependent on design progress, as noted above

4.5 Trams

Programme attached at end of section 4. Narrative report will be included in next period report.

4.5.1 Procurement

Supplier selection in progress. Preparation of supply orders in progress. Initial procurement for car body components commenced.

4.6 Testing, Commissioning and Start-up

No comments

4.7 Delays and Recovery Action

The process of identification of key delays and possible recovery action has now commenced (e.g. discussion of how best to deal with impact of V26-V31 design delivery dates), but has not yet led to agreed mitigation. As BSC permanent are mobilised and appreciate the background to issues, this process will become more effective.

A summary of Delay/Recovery Action progress will be included in future reports.

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5 tie OBLIGATIONS

A commentary from BSC on **tie** progress in discharging obligations, and any significant impacts, will be included in future reports.

6 STAKEHOLDER AND THIRD PARTY ISSUES

The Consortium Public Liaison Manager was appointed in the period but then withdrew due to personal issues. Recruitment has re-commenced. In the meantime, liaison with third parties is proceeding on an ad-hoc basis to support early construction activities. This issue will be comprehensively reported in future reports.

The Consortium Traffic Manager is now in post and working closely within the existing project TM structure to ensure this critical area is efficiently managed. The importance of providing accurate construction start dates and TM arrangements to third parties is well understood, but is of course significantly impacted by the currently unresolved impact of delay in issue of IFC design on the programme.

BSC await the issue of **tie's** 3rd party Agreement Programme.

7 COMMERCIAL

7.1 Milestones

Milestones Achieved in the Period

Month 3	Preliminaries Month 3 (BB)
Month 3	Preliminaries Month 3 (S)
Month 3	SDS Interface Month 3
1a	Depot Equipment

Milestones Programmed but not Achieved

Month 3	Network Rail Immunisation
113	Haymarket Stn Viaduct, Bankseat at GL1
192	Haymarket Stn Viaduct, Pier 2
227	Haymarket Stn Viaduct, Pier 3
108	Murrayfield Tramstop Retaining Walls, Site Clearance
182	Murrayfield Tramstop Retaining Walls, Site Clearance
187	Murrayfield stadium Underpass, Temp Wks – Demolition
127	Bankhead Retaining Wall, Construction
159	Gogarburn Underbridge Temp Access Roads, Excavn/Piling Platform

Milestones 113-227 and 159 relate to activities for which IFC design is available or not immediately required. Progress has been affected by mobilisation delay (as described above). The other workscope milestones are impacted by lack of IFC design.

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7.2 Changes/Instructions/Departures

See Change Register attached as Appendix 10.6

7.3 Risks and Opportunities

The Risk and Opportunity identification and management is under development, with incorporation of the CAF element still to be completed. This will be the subject of a submission in the next period. The listing below indicates the developing coverage/structure.

The issue of near term Value Engineering opportunities requires resolution within the next period, to minimise abortive design work. It remains the view of BSC, as clarified in the last report, the identified near term VE opportunities are unlikely to be feasible/cost beneficial. Regarding the ongoing alignment of the SDS Design with the BSC offer, the value engineering opportunity identified for Roseburn Viaduct has been reviewed and submitted on 9th of June in the letter no. 25.1.201/DT/150. Feedback from **tie** is awaited.

8 RESOURCES

8.1 Organisation Chart

See Appendix 10.7

9 OTHER ISSUES

No comments

10 Appendices

10.1 KPI Report

10.2 Programme Update

10.3 Look Ahead Programme

10.4 Tram Programme

10.4A RFI Register

10.5 Civil Works Procurement Schedule

10.6 Change Register

10.7 Organisation Charts