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Edinburgh Tram Project
Progress Report No. 27
13th October to 9th November 2013
FINAL

CONFIDENTIAL – LEGALLY PRIVILEGED AND FOI(S)A EXEMPT

November 2013



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1 Executive Summary

- In the context of the ongoing project closeout CEC has requested Turner & Townsend no longer provide a full Period Report. This short form report will now be issued at each Period End
- There were 3 safety incidents recorded in the Period although none were serious or involved members of the public
- Turner & Townsend continue to forecast Section D Completion on 6th June 2014
- Sectional Completion to Edinburgh Park Station being pursued and client target of May 2014 fully supported
- Overall Forecast reduced by £323k this Period although there are a number of key issues which could affect the overall forecast
- In the period Infraco completed the energisation and dynamic tram testing to Section B1
- CEC have confirmed the EAL Tramstop “Hub” works will be constructed by others and will be completed in time for open for revenue service. During the period it was agreed that the materials required from Siemens would be vested until required by CEC at the transport ‘Hub’, these will then be installed by CEC. The final testing and commissioning will be completed by Siemens as a variation to the maintenance contract.
- The NWR close out has highlighted Immunisation as the key remaining issue with Siemens due to issue an ISRP submission template document on 18th Nov 2013. The Immunisation test has been confirmed for the 9th/10th December 2013.
- Turner & Townsend, CEC and Infraco are continuing to record the closure of snagging works and to date in excess of 5000 snags have been identified with just over 1000 closed out. With the current rate of progress however it is unlikely all snagging will be completed by end December 2013.
- The readiness of Edinburgh Trams remains a key concern until the operator testing programme and driver familiarisation requirements are agreed with Infraco for the Immunisation Test
- Parkeon installation dates have been revised and agreed with Infraco with an anticipated completion of installation being February 2014
- There are a number of commercial and technical issues with CAF that are a cause for serious concern.
- The maintenance agreements review has continued and concerns remain regarding commercial terms with Infraco
- While the tests were completed on all Parkeon equipment in the Period the results of the tests showed that Parkeon still have some work to do to provide Edinburgh with a fully functional ticketing system
- Turner & Townsend continue to provide an Assurance Monitoring role on the project and the Safety Verification and Assurance functions continue to report through the ‘Deliver a Safe Tram’ (DaST) report. Previously Turner & Townsend provided an update on any issues that Edinburgh Trams highlight as significant in the DaST. Based on the request from CEC however to reduce the volume of the Turner & Townsend report the DaST report will not now be commented upon but will rather be attached for CEC information.

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2 Health, Safety & Environment and Quality

2.1 Management of Health & Safety

The rolling 13 Period Accident Frequency Rate (AFR) is 0.10, better than the benchmark KPI of 0.24 for the project. 100% of planned PM joint inspections and Joint Safety Tours have been undertaken during Period 08.

Energisation of substations and the OLE between Edinburgh Park and Haymarket is due to take place on 19 November 2013. All OLE along the full route must be considered to be live and authorisation / permits obtained before commencing work close to the system. Compliance will be rigorously monitored.

2.2 Incident Management

There were 3 reported incidents since the last report (3 Near Miss/Unsafe condition). There were no incidents involving members of the public during Period 08. However, a legal claim for damages has been received relating to a previously unreported occurrence in July involving a woman allegedly suffering a leg/knee injury when she stepped on an uneven chamber cover in a pedestrian area. Learning points including the appropriate protection of hazards will be used to inform on-going public safety checks. The legal/insurance claim is being managed by CEC Insurance in conjunction with Infraco.

2.3 CDM Regulations

Parkeon Transit Ltd will commence installation of TVMs at tram stops in the near future. Arrangements are being made for issue of Permits to Work / Authority to Work respectively from Siemens and ET for this activity. Whilst an F10 HSE notification had previously been raised for this work, a review of the scope and likely work duration has concluded that it is now below this notification threshold. Parkeon will now be acting as a Contractor for CEC rather than a Principal Contractor and a fully documented construction phase health and safety plan is no longer required. Adequate H&S arrangements by Parkeon for the works will still be sought and monitored.

2.4 Environmental & Quality

No environmental incidents were reported during the period. CoCP compliance was recorded at 86% during the Period. No significant quality issues to report. The number of NCRs raised to date is 891 with 2 NCRs being raised during the Period and 8 closed out. 52 open NCRs are greater than 6 months old and 89 remain open.

3 Programme

3.1 Programme Overview

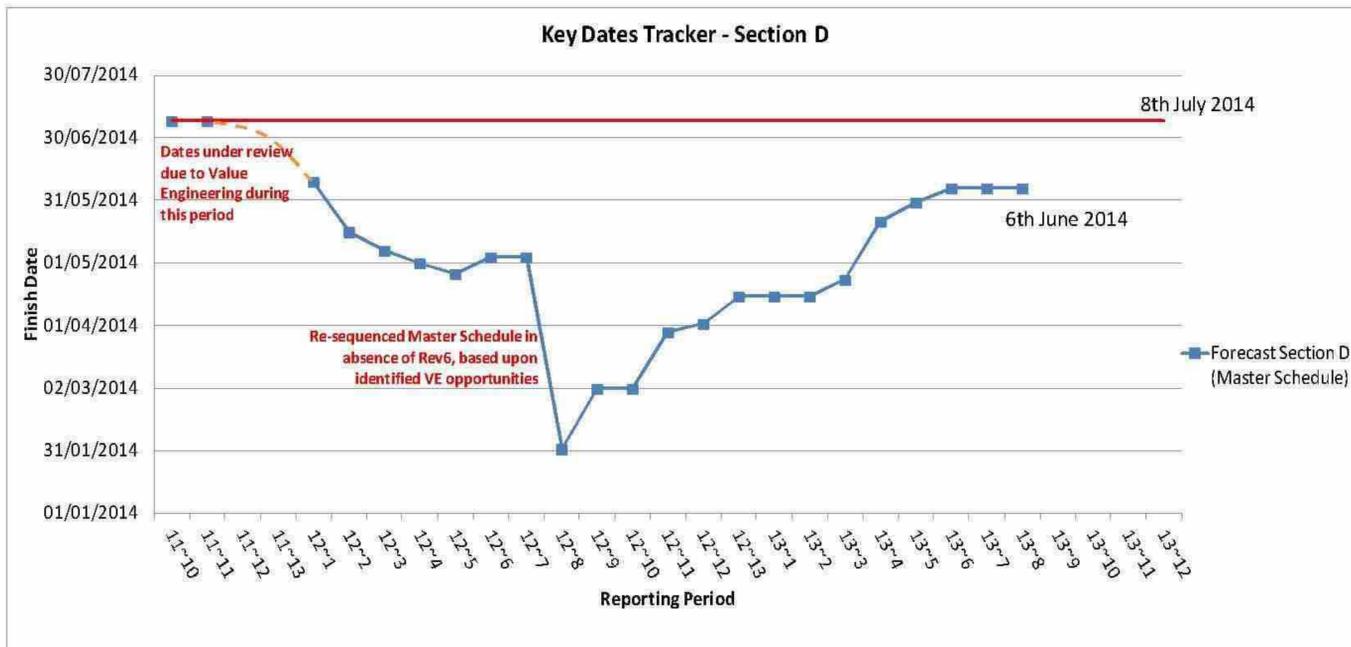
Based upon progress up to 12th of October 2013 the Contract milestones for Sections D has been held to the forecast date reported last period. The forecast date remains earlier than the contractual dates.

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The charts below tracks the forecast Section D Completion date (based upon the Master Schedule) against the set contractual date. All information and analysis contained in this section of the report is based upon the Master Schedule, unless otherwise stated.

Section D; Open for Revenue



3.2 Client Target Programme

CEC is continuing to discuss possible early completion with Infracore and Infracore is endeavouring to complete a section of the line from the Depot to the Edinburgh Park Station crossover by the 20th of December 2013. Furthermore, CEC has confirmed to elected members that the target open for revenue service date is May 2014, subject to weather and ICP sign off. As discussed previously the wider discussions on the client target programme are not reflected in this report although Turner & Townsend fully supports the stated CEC objectives and is working closely with all parties to meet a revised improved opening date.

3.3 Critical Path and Key Float Paths (Master Schedule)

The Critical Path relates to the 'Longest Path' through the schedule, which would adversely affect the currently forecast end date if delayed. For the purposes of this project Turner and Townsend monitor the critical path and the next three longest paths, referred to as "Key Float Paths" through the schedule. This period the critical path has evolved. Still remaining critical are the track works and OHLE installation between Murrayfield and Haymarket. Structural Gauge Test and OCS energisation are now forecast for completion in mid November 2013. The date of these System Integration Tests will also be influenced by 3rd party agreements with Network Rail; in relation to immunisation monitoring of the Edinburgh Tram's energised overhead catenary system.

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4 Commercial & Risk

4.1 Commercial Summary

The overall forecast has **reduced** by £323k in the period, principally due to a reduction of the forecast risk allowance following a joint Turner & Townsend / CEC review held on 29 October 2013. Despite this reduction, there remain a number of key issues which could affect the overall forecast described in more detail below.

| Cost Heading | £M | Comment |
|-------------------------|--------|--|
| Base cost forecast | 506.39 | Total forecast of approved change, change in progress and anticipated change, offset by forecast contributions. Rev3A/Rev 4 programme change: £4.06M from total £4.5M included as instructed by CEC 22 weeks cost engineering: £6.45M from total £6.45M included as instructed by CEC |
| Risk Forecast | 2.25 | Forecast risk allowance based on QCRA and QSRA of remaining project risks. |
| Total Forecast | 508.64 | Total forecast for Infraco, Tramco and Post Mediation Utility costs. Refer to narrative for exclusions to this forecast. |
| CEC target saving | 3.14 | CEC anticipate limiting payment of programme extension costs associated with the Rev 3a to 4 and 22 week changes to £7.857M, a saving of £3.14M from agreed change value of £11.001m. Payments to date amount to £10.52M. There is no evidence from Infraco that they accept this approach. |
| Adjusted total forecast | 505.50 | |

4.2 Key issues

Infraco Final Account Negotiations: Following direction from CEC to Infraco that CEC wished to secure certainty of final account projections, Infraco's civil engineering On street sub-contractors have recently submitted a list of final items to be considered within their final account (note that we have not seen a final account as such but have been advised that there will be no further issues introduced). These items include issues which we consider to be ex-contract claims, previously excluded from our cost report since they were not claimed as part of the contract procedures. We have advised CEC on the potential financial assessment should a negotiated settlement be pursued and made some provision within the risk forecast for them amounting to circa £500K.

As far as we are aware, other than the on street subcontractors, there are no other claims to be submitted from Infraco or any of its subcontractors.

Programme: There have been some variances to the completion dates for some of Bilfinger's off-street subcontractors, potentially resulting in extension of time claims. However, although there has been some client instruction, potentially contributing to delays, it would be argued that

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the majority of the delays are not caused by the client and no allowance is included for any future claim. This is a risk to the forecast. CEC have sought to clarify this position at the Joint Project Forum.

Prelims / Overhead Mark ups on change: Bilfinger's method for applying mark-ups to omitted work is, in our view, not in accordance with the contract and leads to double recovery of prelims. We have received an Independent Certifier opinion instructing payment in certain cases where this has occurred but await instruction for York Place turnback, floating track slab and Cathedral Lane.

Surfacing Indices: We await an Independent Certifier opinion to support payment for increases to surfacing costs in accordance with increases to cost indices. In the meantime CEC has instructed us to include these costs in the interim payment certificates. In our opinion there is no entitlement to this within the contract.

Immunisation: The cost report includes a forecast saving from the immunisation budget of £1.5m. This is based on the immunisation mitigation measures already undertaken being successful and all immunisation tests passing to the satisfaction of Network Rail. However, there remains a risk that final testing may necessitate minor works to Network Rail's infrastructure and delay to the Tram project; this would reduce or eliminate this saving. It should be noted that the potential impact is significant however probability is low.

Scottish Water: We have provided CEC advice to support their meetings with Scottish Water to close out the commercial issues associated with the pre September 2011 costs. Although Scottish Water had previously advised that they are looking for additional costs of between £3 and £6 million, CEC have advised them that there is a maximum of £700k to conclude matters. We were advised by CEC at the commercial review meeting of 29/10/13 that their expectation is that Scottish Water will settle at this amount and to remove the risk allowance associated with this item.

Tramco: CAF have notified CEC of the "Occurrence of a Compensation Event" which, in accordance with the contract triggers delay payments of €259,340 per month. However, there is some ambiguity in the validity and application of this amount and as a result, CEC has held discussions with CAF over a resolution. We have been advised by CEC that the outcome of these discussions is that additional payments will be on a "demonstrable cost" basis. To date we have received nothing further from CAF to support such costs and the resolution of this item remains a significant risk to the forecast. We are awaiting further instructions from CEC on this matter.

4.3 Risk and Contingency

Following the most recent risk review, the risk allowance included in the forecast amounts to £2,250k. This is based on the outputs of the Turner & Townsend risk review of 7 October 2013. While the risk provision is reducing in line with project completion, it should be noted that a number of the remaining risk items have a potential high impact if they occur and as such need careful monitoring. In particular, any risks to programme have potentially significant commercial implications due to the level of delay damages in the Infracore and Tramco contracts which could be in excess of £0.25m per week if triggered. A number of these risks, such as operator performance are out with our control and as such, excluded from our reporting.

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5 Tram Infrastructure Works, Testing & Commissioning

5.1 Works Progress

Outstanding Infraco snagging in all areas is ongoing with a target completion date of Mid December 2013. It is unlikely however that Infraco will complete all snags before the end of the year.

In the period Shandwick Place to Haymarket was handed over to CEC with vehicular access being returned to the area between Haymarket Station and Lothian Road. The Shandwick Place Tramstop will remain as an island site until the works are completed by the end of November 2013.

Parkeon contract works, in conjunction with Infraco, have been rescheduled for January 2014. This is to ensure Siemens resource is available for critical project electrical installation and commissioning works along with a reduction in risk associated with vandalism of the Parkeon equipment.

Good progress has been made in the Period with OHLE wire installation completed and final OHLE registration taking place. Infraco are completing Balgreen tram stop civils works along with the access ramp and Balgreen Road Toucan crossing which is due to be completed by Mid November 2013.

Siemens are progressing with the final fit out works at the tram stops and the installation and commissioning of the modifications at the ScotRail access road which are due to be completed by the end of November. The works to the ScotRail Depot Shed (Earthing & Bonding fence) have commenced in the period and are due for completion by 19th November 2013. Also in the period works with regards to the Roseberry House Earthing and Bonding issue have been completed. In the period the Junction 200 HAZOP was also completed and actions arising from this are currently ongoing. In the period Infraco completed the energisation and dynamic tram testing to Section B1.

5.2 Infraco Testing and Commissioning Progress

In the period the dynamic gauging run in Section B1 has been completed and the radio system has been tested in 2 trams. Infraco are working with CAF and the operator to prepare 6 trams for Section C dynamic gauging commencing on 2nd December 2013. This will include the operator obtaining access to Section B1 to increase driver familiarity ahead of the main dynamic gauging test and then the subsequent Immunisation Test. The line is on schedule to be energised between Bankhead and York Place on the 19th November 2013. Turner and Townsend are tracking progress of the Infraco Testing and Commissioning programme in the Testing and Commissioning Governance meeting. The contents of the tracker are being agreed on a weekly basis with Infraco, Edinburgh Trams, CAF and CEC. The tracker is currently aligned to the Infraco contract programme dates and takes account of the interdependencies required to support completion of Section C and D in accordance with the Infraco contract.

5.3 Edinburgh Trams Operational Readiness Progress

In the period Turner and Townsend have continued to project manage Edinburgh Trams ahead of preparation for shadow running. Turner and Townsend have agreed a series of dates for the delivery of the operational procedures that are required to support the SMS. The key procedures

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will be issued by the end of November 2013 as working draft and these will be sufficiently developed to support the Infraco and CAF maintenance works and procedures. The key issue at present is the agreement on dates for completion of operator tests including those that interface with Emergency Services. Turner and Townsend have developed a proforma for each of the key tests and these are being issued to the Emergency Services to allow agreement on the test dates. It is expected that the tests will be agreed with the commanders of the Emergency Services at a meeting arranged for the 6th December 2013. Once these are agreed the operator will produce detailed work plans for each test in conjunction with the CEC emergency planning team.

5.4 Key Issues

CEC have confirmed the EAL Tramstop "Hub" works will be constructed by others and will be completed in time for open for revenue service. During the period it was agreed that the materials required from Siemens would be vested until required by CEC at the transport 'Hub', these will then be installed by CEC. The final testing and commissioning will be completed by Siemens as a variation to the maintenance contract.

The NWR close out has highlighted Immunisation as the key remaining issue with Siemens due to issue an ISRP submission template document on 18th Nov 2013. The Immunisation test has been confirmed for the 9th/10th December 2013.

The liability for close out of issues brought about through Off Street Road Safety Audits and the ICP; have progressed in the Period. To date no significant issues have been discovered by the RSA process or through walkouts with the ICP. The final RSA inspection is due to be completed by the end November 2013.

Interim Handover and Snagging: Turner & Townsend, CEC and Infraco are continuing to record the closure of snagging works. A process is in place to escalate snags with Infraco senior management and to date no significant issues have arisen. To date in excess of 5000 snags have been identified with just over 1000 closed out. With the current rate of progress however it is unlikely all snagging will be completed by end December 2013.

The readiness of Edinburgh Trams remains a key concern until the operator testing programme and driver familiarisation requirements are agreed with Infraco for the Immunisation Test. Both of these items will be reviewed in the coming weeks and key issues escalated if required.

6 Trams, Fare Collection & Assurance

6.1 Trams Operation and Test

Edinburgh Trams continue to operate 12 hour shifts, with the six tram timetable now delivering an average of between 130 and 150 tram journeys per day between the Depot and Edinburgh Airport.

Edinburgh Trams are reporting that tram availability and reliability has been 'generally good' through the period, however it is accepted that the number of spare trams available is contributing greatly to the high level of performance attained.

Turner & Townsend is looking to support Edinburgh Trams in the development of a procedure whereby issues identified during the analysis of the information provided shall be raised to a

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fortnightly 'technical' meeting; with issues which require further investigation / action being raised to a monthly Tram Liaison Meeting.

The following technical issues have been raised to the monthly Tram Liaison Meeting, as they are potentially either endemic / epidemic defects which cannot be rectified immediately, or have the potential to affect the successful operation of the trams to timetable:

- Tram Control & Management System (TCMS) screens freezing
- Traction Control Unit (TCU) isolation
- Battery Charger failures (reported on all operational trams)
- Wheel Flats (reported on four trams)

There are now six trams which have been reported as suffering from wheel flats. Although the cause of each is as yet unconfirmed, it is believed that at least two occurrences were due to wheels sliding as a result of a hydraulic oil leak.

CAF will use the Wheel Lathe to determine the type of wheel flats which have occurred and will then work with Edinburgh Trams to identify potential causes of the wheel flats on the other trams.

- CCTV Image Quality

Edinburgh Trams and the ICP have informally raised a number of issues related to the functionality and quality of images produced by the CCTV system and whether it will support the safe operation of the trams.

Turner & Townsend have arranged a demonstration / discussion on the issues raised, with the ICP, Tram Inspector, CAF, Edinburgh Trams and CEC confirming attendance. The outcome of this session will be the identification of all CCTV issues and a quantified assessment of those with the potential to affect passenger service. This will then be used to ensure all necessary issues are addressed.

- CCTV system performance (reported on numerous trams)

CAF recently implemented a modification programme to improve the reliability and performance of the Passenger Information (PISPASPA) and CCTV systems; however it appears that the modification may not have been 100% successful.

This will also be addressed during the above discussions.

6.2 Tram Related Incidents

There were no significant tram related incidents reported during the period.

6.3 Operational Incidents

There were four road crossing incidents reported during the period, with one involving a pedestrian at Gogar Castle crossing resulting in the driver applying the Emergency Brake. The 30 kph temporary speed restriction at Eastfield Avenue will remain in place until the sighting distances have been improved by the removal of line-side trees.

6.4 Tram Maintainer Services

CAF have reported that they are awaiting information from the Operator before they can complete the outstanding actions to address non-conformances found during the 'readiness for service' audit undertaken in May. It is anticipated that Turner & Townsend will perform a follow

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up review of completed actions at the end of November, when CAF's Safety Management System documentation becomes available.

Turner & Townsend continue to support CEC and Edinburgh Trams in a review of the infrastructure and tram maintenance contracts; to identify changes to the scope of services required as a result of the reduced scope of the network and any potential savings in the ongoing maintenance costs associated with this reduced scope.

6.5 Fare Collection System

During the last period, Turner & Townsend attended the Factory Acceptance Tests for the Ticket Vending Machines (TVM), Platform Validators (PV), Hand Held Devices (HHD) and the Back Office System (BOS) at Parkeon's factory in Poole, with representatives from Lothian Buses and the project's independent technical advisor. Representation from Edinburgh Trams was also requested, but this was declined.

While the tests were completed on all equipment, the results of the tests showed that Parkeon still have some work to do to provide Edinburgh with a fully functional ticketing system. All issues raised during the testing were reviewed by the project team and categorised, dependant on their potential effect on the operation of the system. Parkeon have committed to address the issues raised, with the more important issues to be addressed prior to the commencement of Site Acceptance Testing. During the closeout meeting, we also raised concerns regarding Parkeon's configuration management and potential issues with a lack of testing resource. Parkeon have committed to address both issues immediately.

Preparations for the installation of the Model Office, a single instance of each piece of equipment installed for testing and training purposes at Gogar Depot is ongoing, with the installation expected to be completed in the coming two weeks. This shall give the project team immediate access to any software or configuration changes made by Parkeon's team in Poole, dramatically improving the efficiency of the testing process.

It is anticipated that the installation of ticketing system equipment for the Site Acceptance Testing (SAT) at Ingliston Park & Ride will be approved by Siemens in the coming week. Installation is currently planned for 3rd and 4th December 2013, with SATs starting week commencing 9th December 2013. Installation of equipment at the remainder of the tramstops will commence on 6th January 2014.

6.6 Assurance Monitoring

Turner & Townsend continue to provide an Assurance Monitoring role on the project and the Safety Verification and Assurance functions continue to report through the 'Deliver a Safe Tram' (DaST) report. Previously Turner & Townsend provided an update on any issues that Edinburgh Trams highlight as significant in the DaST. Based on the request from CEC however to reduce the volume of the Turner & Townsend report the DaST report will not now be commented upon but will rather be attached for CEC information.

6.7 Key Issues

Following identification during the 'Ready for Operations' audit that the planned recruitment of maintenance staff posed a threat to the commencement of Shadow Running, the number of CAF

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maintenance technicians has been reduced further, with only three of the original trained technicians now remaining.

While CAF have completed interviews for a further six technician posts, with job offers to be issued imminently, there is still a genuine concern that CAF will be unable to complete the ongoing maintenance of trams and train their new staff prior to Shadow Running; particularly if the Operator increases either tram requirements or operational hours.

CAF have been asked to consider whether it would be possible to obtain additional staff to support maintenance of trams in the short term, while technicians were being trained. CAF has also committed to reviewing the work required as part of their 'Pre-Service Inspection', to determine whether the time required to perform this maintenance could be reduced.

Following discussions between CEC and CAF on CAF's initial claim for recover of 'additional costs' in relation to the Tram Supply Agreement, Turner & Townsend received an application during the period which included costs for the completion of 'Conservation Activities' from April 2013 and 'Schedule 24 Part B' costs from 22nd September; however there was no cost breakdown attached to either of these high level costs as had been expected.

Turner & Townsend is still awaiting a submission from CAF in relation to demonstrable costs incurred in relation to this claim, which Turner & Townsend can then discuss with CAF to establish if a satisfactory commercial settlement can be reached.

Turner & Townsend is awaiting advice from CEC on how the completion of the Sub-Contractor Direct Agreements should be progressed, having submitted a simpler contract document to be reviewed by CEC's legal team.

1.0 Executive Summary

- **Independent Competent Person** – RFI 023 relating to the signalling controls at Eastfield Avenue was issued on 29th October 2013. B&S have committed to respond in two weeks following discussions with SDS.
- The ICP performed independent tests on the Tram CCTV in-cab monitors and the quality of images presented to drivers in the hours of darkness on 30th October 2013. This has been documented in the Pre SV audit report TSA/12/08 part 1 which has been circulated to the relevant client organisations to determine the best way forward.
- The ICP noted a concern with regards to the depot east signalling system with respect to flanking arrangements noted during the testing and commissioning of the depot entry and exit. This was discussed at ICP liaison meeting 21 and will be tracked in that forum.
- **Requirements Management** – A total number of 2010 requirements are now compliance confirmed 47% of the overall total, this figure has not improved on the last period though work on the requirements continues and it is expected the figure will improve during the coming period.
- **Safety Verification Scheme Audits** – Audit TSA/13/03 – Suitability of Carrick Knowe Bridge occurred on 31st July 2013. No further evidence was presented by Infracore during the period – currently the audit team await issue of the signed Approval in Principal document.
- Audit TSA/13/04 – Track transition points at the floating track slabs – The audit was carried out on the 1st October 2013. Evidence is currently being reviewed by the SV team. It has been agreed that this review will now include the as built drawings, which are currently not finalised.
- Audit TSA/13/02 (part) – Operator Competency to Control the Overhead Line was carried out on the 24th September 2013. A draft report has been compiled and is being reviewed by TSS.
- Audit TSA/12/08 Part 1: SVS Audit Report – Tram CCTV was performed on 16th October 2013. A draft report has been published with proposed actions. The ICP performed his test following receipt of this draft report. Turner and Townsend have been tasked with resolving the concerns raised in both reports. They are currently forming a cross organisation group to take the resolution forward.
- **Infrastructure** – The testing of the road crossings on section B1 were successfully completed and the signalling ISA signed off the depot east entry and exit interlocking system.
- **Edinburgh Trams** – The new SMS and associated procedures are under revision following consultation with the SV team operations expert. A number of the documents are now issued as working drafts. There is a delivery programme agreed with ET to ensure the required information is available to support the handover of section B1.

2.0 Safety Verification Scheme (SVS)

- Audit TSA/13/03 – Suitability of Carricknowe Bridge occurred on 31st July 2013. The further evidence requested by the SV team during the last period has not yet been presented by Infraco. Currently the SV team are awaiting issue of the signed Approval in Principal document, along with a number of clarifications regarding current revision of documents provided as evidence during the original audit.
- Audit TSA/13/04 – Track transition points at the floating track slabs – Subsequent to a meeting with TSS and Infraco on the 4th November 2013, it has been agreed that as built drawings will now form part of the review of evidence for this audit. These drawings are currently being finalised thus the final review by TSS, and therefore issue of the audit report will be delayed until these drawings have been received. It is the understanding that the review of the as built drawings will address a large number of the concerns that TSS have raised through the audit, thus the agreement to delay reporting.
- Audit TSA/13/02 (part) – Operator Competency to Control the Overhead Line was carried out on the 24th September 2013. The SV team are currently awaiting comment on the draft report from TSS.
- There is no update on the Section B ROR closure.
- The Design Assurance Statements (DAS) have not yet been received. B&S have advised the delivery date is now end November as oppose to the end October as previously reported. An SV audit will be performed on these documents. It is anticipated the SV audit will take a month to complete.
- Audit TSA/12/08 Part 1: SVS Audit Report – Tram CCTV was performed on 16th October 2013. A draft report has been published with findings. The ICP performed his test following receipt of this draft report. Turner and Townsend have been tasked with resolving the concerns raised in both reports. They are currently forming a cross organisation group to take the resolution forward.

The SV team have received a number of comments on the draft report; the report is now under review for formal issue by 8th November 2013.

- The meeting to discuss the B&S letter with regards the SVS and Safety Assurance Plan (SAP) is scheduled for 14th November 2013.
- The SV team is working with CEC to develop the electronic storage of the technical library. The original project evidence file has now been developed and will be trialled over the next 2 weeks.

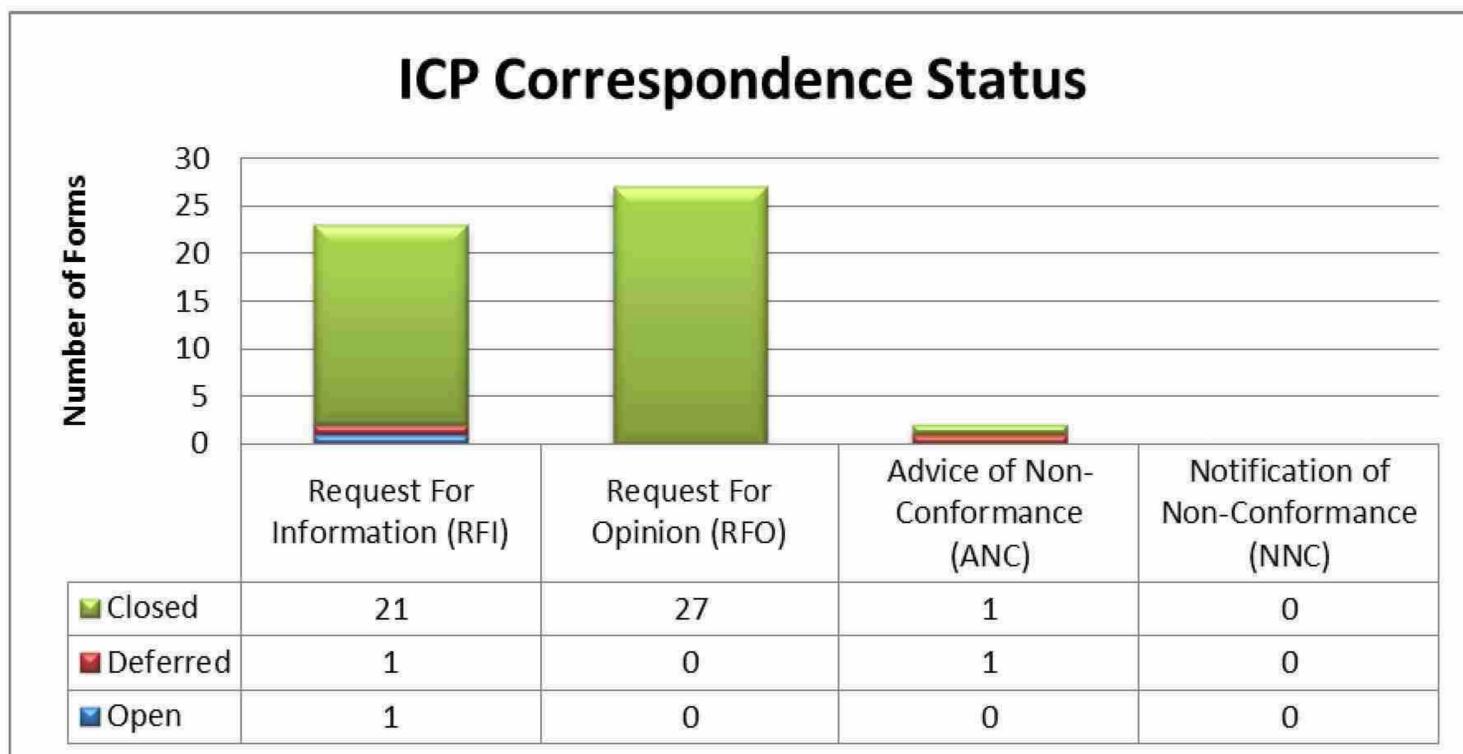
3.0 Independent Competent Person Issues

- During this period the ICP made an additional visit to Edinburgh to witness the testing and commissioning of the depot east entry and exit interlocking system. The ISA determined the system was safe. Prior to the test it was agreed additional testing would be performed to check the functionality of the interlocking when in operation. This test was observed by the ICP. The test noted there to be a problem with the flanking arrangement. B&S are to respond to this issue formally through the ICP liaison meetings.

- ICP liaison meeting 21 took place on 30th October 2013. During this meeting B&S committed to respond to RFI 023 by the 13th November 2013.
- The ICP advised that he was now listing potential areas of concern within his monthly report. It was agreed with the SV team that these issues would be moved to the beginning of the report in order that they were more obvious to the reader.
- A meeting was held with the ICP on the 30th October 2013 to further discuss areas of potential infringements. During the meeting B&S provided evidence of further surveys carried out on Section B. The survey results were more favourable. B&S confirmed that 11 infringements had been confirmed 2 off which were of concern to the ICP though it was noted that B&S plan to make adjustments to the verticality of the OLE pole in these instances which should improve the survey results to a more satisfactory level. B&S will provide further survey results upon completion of this works.
- The monthly informal site walk occurred during the ICP visit. The ICP recorded the findings of the walk.
- The ICP had informal communications with the SAM on the following topics:
 - The suitability of the operators proposed testing. This was later discussed between the ICP and the ET Safety and Standards Manager. A common understanding was agreed;
 - The depot east exit and entry interlocking testing and the request to perform the additional testing and then discussing the outcome of the test.
 - The Infraco submission covering their competency management system. The ICP made observation which will be communicated to B&S via an ROR.
 - The draft Section B1 Case for Safety from Infraco which was presented for information prior to formal submission. The few points raised will be discussed with Infraco as observations which they may wish to consider in the final document;
 - The wording of RFI 023 prior to formal issue.
- The ICP reviewed the output from the Section A ROR meeting and agreed that the ROR was closed.
- The ICP raised RFI 023 during the reporting period, which relates to changes made through the design process of the tram position detection system at the Eastfield Crossing. The RFI was issued to B&S who have already arranged a meeting with SDS to discuss. B&S agreed at the ICP liaison meeting that an update would be provided in the next two weeks.

ICP Correspondence Overview:

| ICP Correspondence | Open | Deferred | Closed | Total |
|---------------------------------------|------|----------|--------|-------|
| Request For Information (RFI) | 1 | 1 | 21 | 23 |
| Request For Opinion (RFO) | 0 | 0 | 27 | 27 |
| Advice of Non-Conformance (ANC) | 0 | 1 | 1 | 2 |
| Notification of Non-Conformance (NNC) | 0 | 0 | 0 | 0 |



4.0 B&S Design, Construction and Testing & Commissioning Assurance

Design/Construction

Electromagnetic Compatibility (EMC)

- The Network Rail Immunisation works commenced W/C 7th October 2013 with the introduction of monitoring along the Network Rail corridor. The Immunisation test is programmed for 9th December 2013.
- No update has been provided with respect to the stray current protection on Princes Street. It was confirmed by B&S at the testing and commissioning control meeting on 11th September 2013 that trams can run along Princes Street in advance of resolving this matter with the third party stray current representative.

Trackform

- The SV team witnessed and element of Rail stressing in Section 5 on the 11th October 2013. The ICP was satisfied that the welding process was adequate; however he raised concerns with regard to the competency of the Technical Supervisor who was

overseeing the process. This concern was raised with Infraco who expressed the same concern, and advised that the concerns were being addressed. It was noted that the Senior Supervisor for BAM was present for the majority of the stressing witnessed.

Testing & Commissioning

- The testing of the road crossings on section B1 were successfully completed and the signalling ISA signed off the depot east entry and exit interlocking system.

5.0 Edinburgh Trams

- The new SMS and associated procedures are under revision following consultation with the SV team operations expert. A number of the documents are now issued as working drafts. There is a delivery programme agreed with ET to ensure the required information is available to support the handover of section B1. The delivery of these documents is not being tracked by the SV team.
- The SV team is awaiting delivery of the processes which underpin the daily log to determine faults are correctly notified, addressed and recorded as such. It is understood the Operator is currently in discussions with Asset Management software companies to determine how best to manage this matter. It is understood that fault reporting is being performed and action being taken by each organisation (Infraco and Tramco) however in certain situations the support from the project could be given a higher priority. This is being fed into the discussions on the Infraco DRACAS process. The Tramco items are discussed at the weekly tram and monthly tram liaison meeting.
- The Operator is currently reviewing the use of the second coupling strap when coupling two trams together for towing purposes. The ICP is being fully involved in the discussions and does not have an undue concern to the second strap not being used. The Operator will make any change to the tram coupling process via their change control process to ensure the relevant parties agree the change.

6.0 Metrics Inspections

- Jim Forrest of Turner and Townsend has now taken on the duty of completing the outstanding metrics inspection and is progressing well.

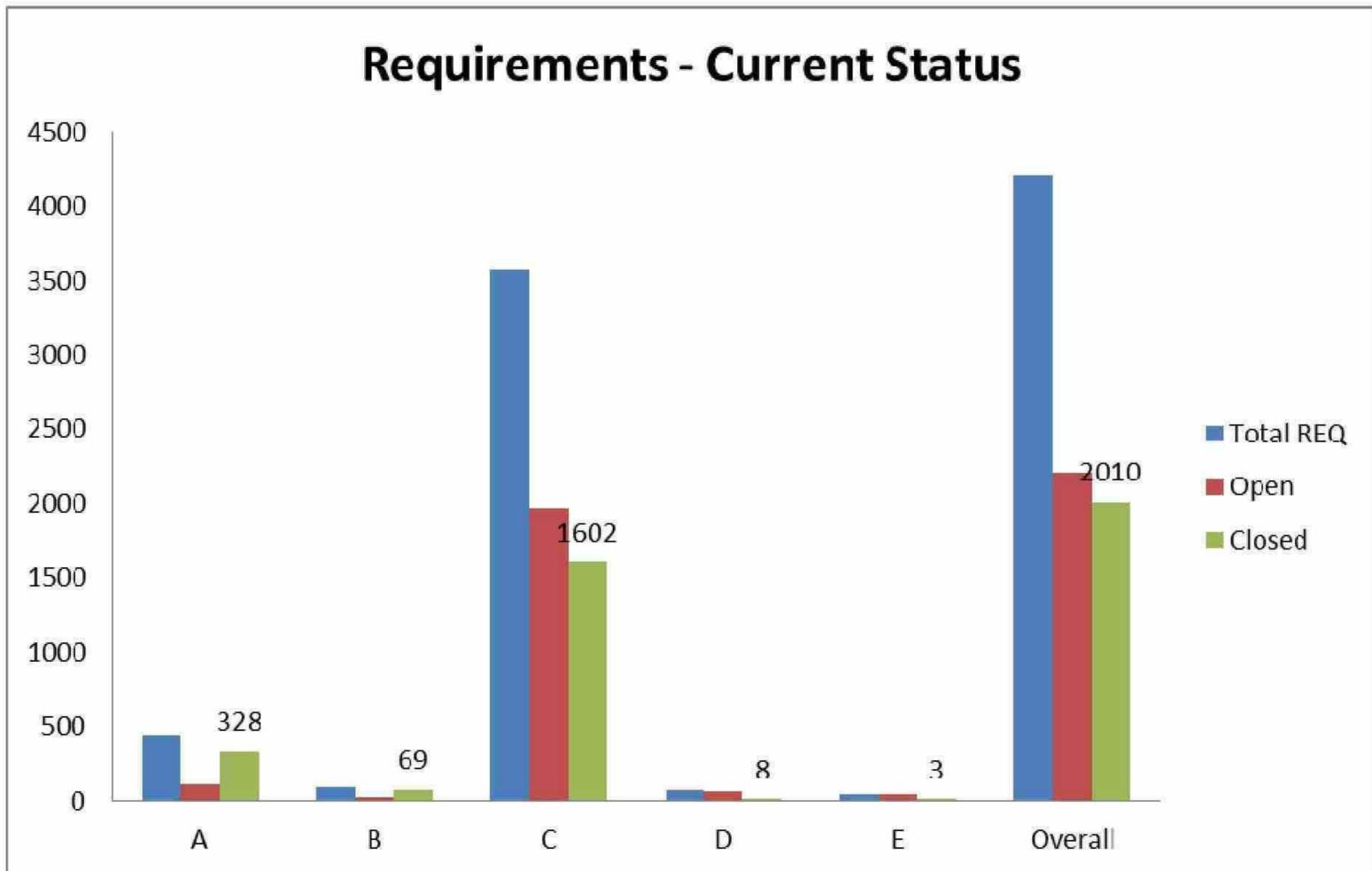
7.0 Requirements Management

- The Overall number of requirements is 4272; however 59 have been agreed as deleted, and 2010 have been deemed compliance confirmed. Thus the total number of requirements to close is 2203.
- A large number of the outstanding requirements for Section A will be closed upon receipt of the updated Infraco Maintenance Plan, which is outstanding from last period thus the total remains at 75% compliance confirmed. The total percentage of Section B requirements deemed 'compliance confirmed' remains at 79%.
- In total 2010 requirements are now deemed 'compliance confirmed', 47%.
- Regular meetings with Infraco continue to take place though progress of the closure of the requirements is now dependant on works progressing to completion.

Requirements Overview:

| | A | B | C | D | E | OVERALL |
|-------------------------------------|-----|----|------|----|----|---------|
| Total Requirements for Period 7 | 438 | 87 | 3572 | 73 | 44 | 4214 |
| Total Requirements for Period 8 | 438 | 87 | 3571 | 73 | 44 | 4213 |
| Total Compliance Confirmed Period 7 | 328 | 69 | 1602 | 8 | 3 | 2010 |
| Total Compliance Confirmed Period 8 | 328 | 69 | 1602 | 8 | 3 | 2010 |
| Percentage Complete Period 7 | 75 | 79 | 45 | 11 | 7 | 47 |
| Percentage Complete Period 8 | 75 | 79 | 45 | 11 | 7 | 47 |
| Percentage Variation | 0% | 0% | 0% | 0% | 0% | 0% |

❖ Current status highlighted in Green. Section E is defined as all works after Section D.



*Deleted Without Section defined as a result of either concessions or Mediation results