



Turner & Townsend

Julian Weatherley
Director

Turner & Townsend Project Management Limited
Osborne House
1 Osborne Terrace
Edinburgh
EH12 5HG

t: +44 (0)131 [REDACTED]
e: david.fox@turntown.co.uk
w: turnerandtownsend.com

Edinburgh Tram Project
Progress Report No. 3
(9 Nov to 8 Dec 2011)

December 11



CEC01891191_0001

Contents

| | | |
|----|------------------------------|----|
| 1 | Executive Summary | 3 |
| 2 | Health, Safety & Environment | 5 |
| 3 | Client Decisions | 7 |
| 4 | Commercial | 8 |
| 5 | On Street Enabling Works | 17 |
| 6 | On Street Main Works | 18 |
| 7 | Off Street Works | 21 |
| 8 | Trams | 24 |
| 9 | Assurance | 25 |
| 10 | Red Flag Items | 27 |

- Appendix 1 – Dashboard
- Appendix 2 – Health, Safety & Environment
- Appendix 3 – High Level Programme
- Appendix 4 – Cost Report and Contingency Analysis
- Appendix 5 – Change Log
- Appendix 6 – Risk Register
- Appendix 7 – Utilities
- Appendix 8 – Route Map

| Rev | Originator | Approved | Date |
|---|---------------------|-------------------|------------|
| 0 | Shirley-Anne Collin | Julian Weatherley | 05/12/2011 |
| 1 | Shirley-Anne Collin | Julian Weatherley | 06/12/2011 |
| <p>© Turner & Townsend insert company. All rights reserved December 11. This document is expressly provided to and solely for the use of Client Name and must not be quoted from, referred to, used by or distributed to any other party without the prior consent of Turner & Townsend insert company who accept no liability of whatsoever nature for any use by any other party.</p> | | | |
| DOCUMENT4 | | | |

1 Executive Summary

This report covers progress made during the period from 9 November 2011 to 8 December 2011. It incorporates progress reported within Infraco and CAF Progress Reports No. 4-9 to 12 November.

There were no reportable accidents during the period and the rolling 13 Period AFR remains at 0.00. Nine minor incidents occurred during the period. Detailed reports into recent service strikes have identified a number of shortcomings and the need for corrective actions. The project on call and incident escalation procedure has been updated.

The Section completion dates for all four Sections (A to D) remain on programme. This is confirmed by Infraco within their latest Progress Report for period 4-9.

Production of an initial Master Schedule has been completed by Turner & Townsend. This shows a date for the commencement of tram operations of 28 September 2014, excluding the impact of the Quantative Schedule Risk Analysis (QSRA) analysis. A Quantative Cost Risk Analysis (QCRA) has been undertaken on T&T's project risk register.

Over 90 utility conflicts at Haymarket and Shandwick Place have been resolved. The total number of known utility conflicts remains circa 820. A total of 1645 utility issues have been identified. This figure includes un-verified potential clashes and legacy utility issues, largely associated with Scottish Water.

Haymarket 1 has been cleared of utilities and the site handed back to Infraco on 21 November 2011. Infraco have advised of a 29 day delay (the end of period 4-9) to works at Haymarket as a result of the requirement for utility diversions. Turner & Townsend are assessing the validity of this assessment.

On Street Advance Utilities works were temporarily suspended on 23 November to comply with the Christmas embargo. Localised Works will re-commence on 3 January. Traffic Management for Advance works will re-commence in St Andrew Square and Shandwick Place on 7th and 14th of January respectively.

20% of the permanent Princes Street remedial works were completed prior to the Christmas embargo. Works to the 500mm dia. water main are ongoing under local traffic management. Completion by 22 December remains possible but tight. Contingency arrangements for temporary re-instatement are being put in place, to ensure carriageway reinstatement, in the event of further frustrations.

Progress through the rail corridor continues to be hampered by slow progress in the production, review and approval of Network Rail construction documentation. A co-located team comprising BBS, T&T and NwR has been assembled in order to "free up" NwR approval through the rail corridor.

Five trams in total have now been delivered to the depot. Static commissioning and supplier training have progressed well. CAF have proposed the early delivery of the next five trams.

Works to the mini test track are now scheduled for completion by 9 December 2011. Section A handover remains on programme for 16 December 2011.

Approved Changes to 3rd December amount to £0.75M. Changes in Progress amount to £7.1M (the £4.7M cost impact from the delay in signing is included here). Anticipated Changes total £17.4M. This includes £7.8M for Infracore Works and £9.6M for Utilities Diversions (Shandwick Place to York Place). This results in a residual contingency of £7.0M.

A draft QCRA has been issued to CEC for comment, the impacts for delay and future risk significantly exceed the current residual contingency available. Greater emphasis is required to secure both programme and value engineering opportunities going forward.

2 Health, Safety & Environment

2.1 Incident reporting

There were no reportable accidents during the period. The rolling 13 Period AFR remains at 0.00, better than the benchmark KPI of 0.24 for the project.

There were 9 no incidents during the period. These related to:

- 5no near misses.
- 3no minor injuries.
- 1no service damage. (Service damage related to minor damage to a gas main).

The investigation into the 11kV cable strike has been concluded. Actions being taken by BBS include:

- Training on safe digging practices and location of services aided by SP Energy Networks.
- Additional Cable Avoidance training for BB Engineers / Foremen.

2.2 Safety Initiatives

The on-call process has been revised during the period. A meeting has been held with CEC Communications and Transport Scotland Communications to develop the process for the escalation of incidents to CEC and Transport Scotland. This will now be rolled out to the wider Project Team.

A programme of Joint Themed Inspections is being developed to address issues such as:

- Location of services.
- Temporary works.

2.3 CDM Regulations

The review of the information to be provided for the Health & Safety File for the depot is being progressed.

The Network Rail 365 safety Bus visited the project (Russell Road site and Project Office). The principal subjects covered related to the role of Network Rail on the project, temporary works and underground services.

2.4 Environmental

T&T are currently awaiting the issue of the updated BBS Environmental Management Plan; changes have been made in line with contract changes. Ongoing bi weekly meetings are

being held with BBS Environmental. These were deemed necessary; these meetings include a site inspection. The last meeting held took place on Thursday 17th November 2011 with an inspection of works currently being carried out at BAA; all works are currently being carried out in accordance with the requirements of the CAR Licence with ongoing inspections being carried out by the ecological clerk of works regarding the conditions of the otter Licence.

BBS currently have an Archaeological Watching Brief in place for the earthworks taking place in Edinburgh Park. To date no issues have been identified. A meeting was held with John Lawson CECAS to discuss ongoing utilities works and the remaining archaeological implications (1/12/11). No new issues were identified during the discussion.

BAA has raised concerns with regard to potential flooding within the area of the Gogar Burn this is in light of the installation of the temporary works. Discussions are currently taking place between T&T/BAA/CEC in order to reach a resolution.

2.5 CoCP

Whilst site checks on CoCP compliance have continued to be undertaken, issues have been raised with regard to lack of customer signage, discussions are currently ongoing with all relevant contactors. This CoCP process will be extended during Period 10 to include participation of T&T project management personnel. All relevant staff are to be briefed on the requirements of the CoCP, and the CoCP Relaxation process. The first briefing has taken place on Monday 5th December 2011.

3 Client Decisions

Items identified which require input by The City of Edinburgh Council as part of their solution are noted below:

- Confirmation of on OCIP Insurance cover/extension beyond the 8TH December 2011
- Confirmation of procurement route for the resolution of legacy utilities snagging works
- Decision on the instruction of Edinburgh Gateway enabling and main works

4 Commercial

4.1 Budget, Contingency and Risk

The original project budget amounts to £776m of which £500.1m relates to work covered by this report (Infraco, post settlement utilities and Tramco). This includes a total contingency of £32.7m (out of the total budget contingency of £34.5m). At present, identified change (approved, in progress and anticipated) has reduced the contingency by £25.7m resulting in a remaining contingency allowance of £7m. The QCRA which is currently being developed will evaluate the risk profile and budget requirements. However, initial analysis, which model the main risks, indicate that £7m is not sufficient for the project at this stage.

The base budget assumes an £11m saving on the Infraco contract price which represents the omission of £2.4m of works at Forth Ports and £8.6m for the difference in the On-Street Works Price and the initial sub-contract tender returns. This saving also assumes that savings will be realised in the volume of capping layers within the road reconstruction. These savings are yet to be fully validated.

The current forecast makes allowance for a total change value of £25.2m (£22.7m last period). This includes £0.7m of Approved Change (£0.3m last period), £7.1m of Changes in Progress (£7.1m last period) and £15.3m of Anticipated Change (£17.3m last period). We have excluded a further £3.6m of forecast utilities costs on the basis that they can be mitigated by modifying the permanent work design. Further work is required to confirm this. Details of the changes is included elsewhere in this section and in the attached cost report.

4.2 Risk Management

A complete risk register has been created for the full project and used as a basis for both cost and schedule risk analysis and for pro active management and mitigation of risk. An initial Quantative Cost Risk Analysis (QCRA) has been completed and the draft report issued within the project team and to CEC (Alan Coyle) for comment before formal issue to the wider client team. A Quantative Schedule Risk Analysis (QSRA) will be completed by 16th of December which will determine the likely extent of overall project delay. This will provide confidence levels of meeting key milestones and project an estimated over all project delay. This will then be quantified in accordance with contract delay costs and added to the draft QCRA in order to provide a full QRA by late December.

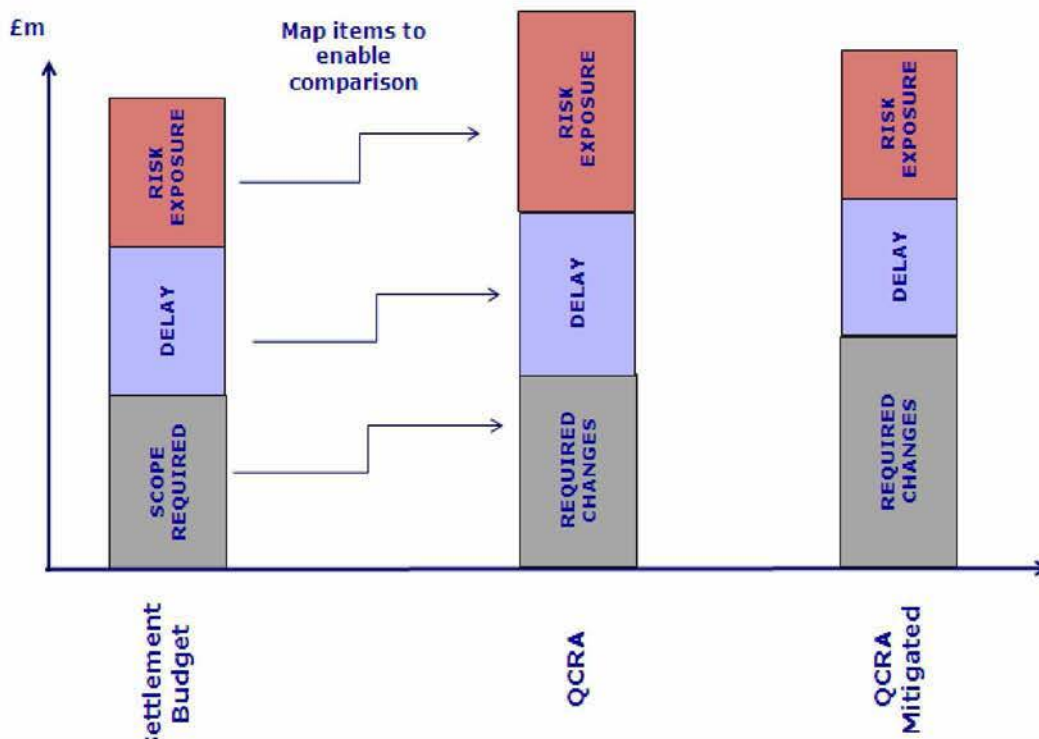
The specified risk allowance included in the budget for the Infraco, Utilities and Trams elements was £32.7M. This budget included for the following items:

- Project scope change – e.g. York Place Tram Stop and Design Exclusions (Refer Schedule E – Settlement Agreement). Some of these items are required scope to complete the project and therefore the probability is 100% and the costs will vary subject to agreement of final scope. These items are being treated as Changes, Anticipated

Changes and Pricing Assumptions which should have been included within the Base Cost for the project.

- Delay – provision was made within the settlement budget for delay risk: 38 weeks @ £0.3m per week at a 90% probability. (Note: Infraco negotiated fixed delay costs at c. £0.7m per week in the Settlement Agreement); The 'most likely' cost in the QCRA produced by F&G in the settlement budget was £11.6M. Infraco has submitted a proposal for £4.7m to account for the delay in signing the Settlement Agreement which resulted in recommencement of the works on the 3rd of October 2011 compared with the planned date of 2nd September 2011. This four week delay to the start also caused a further 3 week delay to the completion date owing to the sequence of works in the Christmas embargoes. This anomaly means that the contract price was based upon the previous Rev 3A programme rather than the contract programme Rev 4.
- Risk exposure – items which may or may not occur and where the cost impact is variable.

The proposal is to map items in the settlement budget and its components with the risk analysis broken into the same components. This has been done in draft format in the QCRA report but will be completed in the full QRA report to be issued in late December. The diagram below demonstrates the approach.



4.3 Change

The following table provides a summary of change included in the current forecast:

| Description | Design / Contract Exclusions | Off Street Construction | On Street PAVs | Total |
|---|------------------------------|-------------------------|----------------|---------------|
| Approved Changes to last reporting period | 286 | 0 | 0 | 286 |
| Approved changes this period | 462 | 0 | 0 | 462 |
| Sub total - approved change | 748 | 0 | 0 | 748 |
| Changes in progress | 5,960 | 76 | 1,038 | 7,074 |
| Anticipated future changes | 7,582 | 0 | 9,799 | 17,381 |
| Total Change | 14,290 | 76 | 10,837 | 25,203 |

4.4 Infraco Change

The following table provides details of changes introduced into the cost report during the current reporting period:

| Description | £K |
|---|------------|
| Total Change (Approved, Estimates in Progress and Anticipated Change) | |
| Last report (24 November 2011) | 22,671 |
| Approved Changes in the Period (total £0.75m, last report £0.29m) | |
| Amend Design to reinstate footpath at Ocean Drive (Settlement Agreement Design Exclusion). | 10 |
| York Place Terminal Point (Settlement Agreement Design Exclusion). | 229 |
| New cycleway at the Mound | 9 |
| St Andrews Square – feasibility report for integration of Public Realm (Settlement Agreement Design Exclusion, also funding transfer required from Public Realm budget) | 136 |
| Strom water connection for Gogar Lodge to landowners septic tank | 6 |
| Capital cost for the extension to the Edinburgh Park Site Offices (CEC/TS, etc) | 160 |
| Total approved changes in period | 550 |
| Change in Progress (£7.11m (previously £7.08m)) | |
| Airport to Gyle – potential disruption to provide site access to the Depot for Scottish Water main. | 50 |
| Haymarket to 1 – slit trenches to validate utilities | 10 |
| Depot Tramwash – continuous mode and additional lance washers | 25 |
| Increased number of drainage boxes (specified exclusion from the Settlement Agreement) | 56 |
| St Johns Church, Princes St – design costs for the relocation of OLE foundations in central reservation (under challenge, may be design error) | |
| Princes Street track infill's temporary surfacing | 300 |
| Princes Street BT diversion at junction with South St. David Street | 40 |
| SDS to provide dedicated resource to mitigate Infraco OLE foundation re-designs owing to utility conflicts | 75 |
| Total changes in progress during period | 556 |
| Anticipated Changes and Pricing Assumption Variations: £7.84m (previously £7.78m) | |
| Settlement Agreement Exclusions not authorised (items 7,8,10,11,12,14 now included in Change in Progress). | -43 |
| Increased rent for extended office at Edinburgh Park | 102 |
| Total anticipated changes during period | 177 |

The following table identifies the key pricing assumption variations included within the forecast and their estimated value. Actual cost will be based on agreed on street works estimates produced in accordance with the requirements of Schedule Part 45 of the contract.

| | | |
|-----|--|-----|
| 514 | Utility Mapping | 85 |
| 533 | Princes Street - 500mm Water Main Diversion | 40 |
| 543 | Haymarket H1 - Utilities affecting the construction of OHLE foundations | 147 |
| 545 | Site Wide - Power to bus trackers affecting the ability to remove site clearance items | 200 |
| 547 | Haymarket H1 - Third Party (McNicholas) affecting ability to progress the works | 30 |
| 548 | Haymarket H1 - BT Fibre Optic Service requires diverting | 150 |
| 551 | Princes Street - 2011 Christmas Embargo - Temporary Surfacing of Track Infill's | 300 |
| 552 | Princes Street - BT diversion @ junction of Princes Street and South St. David Street | 40 |

4.5 Utilities Change

Budget

The original tie estimate for the On-street utilities conflicts was £1.9M. Turner & Townsend produced an initial estimate in September 2011 based upon the emerging conflicts schedule amounting to £1.1m for Haymarket and £7.5m for the remaining sections to York Place. A further £3.5m for conflicts yet to be categorised was also identified, however it was considered that the majority of these could be mitigated and this sum was not included in the overall forecast. With the addition of the original tie estimate at £1.1m for the Leith Walk remedials the last report provided an Anticipated Final Cost of £9.7M.

It was agreed with CEC that the existing budget of £1.9M, excluding Leith Walk Remedials, would be used to fund Haymarket and any advance works at Shandwick Place and St Andrews Square. Cost forecasts would be produced to seek drawdown from risk when the budget of £1.9m would be exceeded.

A copy of the current forecast is included in Appendix 4 dated 1 December 2011

Approved Changes

An NEC change order system is being used to govern instructions and orders to the contractor within the pre-defined budget limit for Haymarket.

Changes in Progress

The works cost for diversions at Haymarket has reduced owing to mitigation strategies however client and utility company management and design costs are being developed and finalised prior to governance through the change control process. Current changes in progress include:

The following table shows a summary of change in period and a look ahead:

| Description | £K |
|--|----------------|
| Anticipated Final Cost last report | 9,710 |
| Changes in the period | |
| CAD design resource to produce utility diversion designs for McNicholas Contractor (parallel working required for Haymarket, Shandwick Place and St Andrews Square) | 250 |
| McNicholas management and supervision costs (numbers of resources needed to work in parallel across the three main sections, Haymarket, Shandwick Place and St Andrews Square) | 650 |
| Accommodation costs for utility companies at Torphichen Street | 65 |
| Net impact of actual diversion rates based on experience at Haymarket compared to the initial estimate in September 2011 | -350 |
| bt works not completed during the original diversions programme when the MUDFA works were being executed (these costs represent a transfer from the old T18 budget). | 350 |
| Further provision for Scottish Water Management costs, £500k included in the initial estimate, Scottish Water have estimated a total requirement of £1,600K. Current provision now £750K within the forecast, balance covered in the QCRA. Scottish Water maintain there overall estimate includes On and Off Street. Clarification required from CEC regarding provision within Infracore budget for Off-Street scope within the Settlement Agreement | 250 |
| Total | £11,005 |

4.6 Tram Vehicles

The budget for Tram Vehicles is £62.4M. This is a reduction of £1.25m from what was included in the previous report which assumed a budget transfer from the DPOFA (Preparing for Operations) budget.

There is no change to the forecast of £63.6m during the period. However, the variance between budget and forecast has increased as a consequence of the lower budget described above.

4.7 Opportunities

The base budget assumes an £11m saving on the Infraco contract price which represents the omission of £2.4m of works at Forth Ports and £8.6m for the difference in the On-Street Works Price and the initial sub-contract tender returns. This saving also assumes that savings will be realised in the volume of capping layers within the road reconstruction. These savings are yet to be fully validated.

A Value Engineering workshop was held on 9 November 2011 to explore potential areas of savings and risk mitigations - these may be direct cost savings and/or benefits to programme or risk. The areas discussed are now being investigated in detail (along with some additional areas), with the current position summarised in the table below for those areas considered most likely to yield a benefit. It should be noted that further discussions are currently being sought with CEC on several of the key items detailed. Several related exercises are planned for the next few weeks to allow further definition on these potential opportunities.

A summary of the Opportunities are provided below.

| Ref | Opportunity | Potential Direct Cost Benefit (small; medium; large) | Programme/Risk Benefit (small; medium; large) |
|-----|--|---|--|
| 1 | Relaxation of traffic management and embargoes | Green | Red |
| 2 | OLE Foundations | Green | Green |
| 6 | Public Realm Works | Green | Green |
| 7a | Forth Ports | Green | Green |
| 7b | Tram kiosk at airport | Yellow | Green |
| 8 | Need for tram stop at York Place | Green | Green |
| 9 | Sale of surplus trams | Red | White |
| 10 | Cost Transfers | Yellow | White |
| 11 | Historic Wall – Shandwick Place | Yellow | Green |
| 12 | Track (Materials) | Yellow | Yellow |
| 13 | Omit works at Tower Place/ Victoria Docks Bridge | Yellow | Green |
| 15 | Use of recovery vehicle in city centre | Yellow | White |
| 16 | Road Reconstruction | Red | Red |
| 19 | Storage of Materials | Red | White |
| 21 | Ballast in lieu of Grass for off-street sections | Yellow | Yellow |
| 23 | Archaeology Protocols | White | Red |

KEY
 Small = < £100k or < 1 week
 Medium = < £1m or < 1 month
 Large = > £1m or > 1 month"

4.8 Certified vs. Milestones

A summary of the certified amounts are provided below.

| | Certified | Planned | Comment |
|-----------|-----------|-----------|---|
| Infraco | £227,667K | £241,207K | Delays at: Haymarket Corridor, Earthworks at Balgreen Rd to Edinburgh Park Station, Gogar to Edinburgh Airport Earthworks |
| Utilities | £300K | £300K | Reporting periods for the McNicholas Contract now aligned with the Infraco Contract dates. First certificate Value equals £238K. Additional £62K for Utility Companies. |
| Trams | £53,441K | £53,441 | Payments in accordance with milestone schedule. Includes £481k in Period 9 for depot equipment. |

4.9 Commercial Issues and Pricing Assumption Variations

A summary of the commercial issues are provided below:

| Topic | Issue | Status |
|---|--|--|
| Prelims | Infraco claiming prelims on SDS changes | Definitions in Settlement Agreement include Civil Engineering Works and Works/Services managed by BBUK. T&T consider that entitlement is likely and a note has been submitted to the Independent Certifier. Agreement has been obtained from CEC. |
| OLE Foundations (PMC 025) | Infraco is obliged to minimise diversions and select appropriate foundations. | The independent certifier has determined that the pricing assumption variation has occurred. T&T have written to the Certifier requesting clarification on a number of points and will then consider advice to be provided to CEC. OLE locations and foundation re-design and construction costs will have a significant cost and time impact. This is being reviewed. |
| Power to Bus Trackers (PMC 032) | Infraco claim that diversions/connections for power cables to Bus Trackers is not within their scope. | T&T have written to Infraco to suggest that clearance is within the Infraco scope and that these power cables do not fall within the definition of Utilities. Infraco has stated at the Design Consents and Commercial Meeting that comments made at mediation and contract negotiation override the Settlement Agreement. A meeting with CEC project team is required to agree policy on this as it is normal practice for the Settlement Agreement to be the only reference point. |
| Scottish Water main Princes St (PMC 040) | Infraco claim that the connection of the Scottish Water main is outwith the scope of the Princes St remedials works. | Turner & Townsend have received background information that the diversion was installed by Infraco previously as the OLE foundation had been installed in the wrong position over an existing water main. Turner & Townsend have written to Infraco and as above Infraco believe the discussions at mediation and contract negotiation take precedence over any facts relating to the works. A meeting is required with CEC. |
| OLE positions St Johns Church Princes St (PMC 38) | (Full background to be established, issue relates to the need to move the OLE into the central reservation. The issue relates to duty of care regarding design taking into account site constraints and planning requirements) | |

5 On Street Enabling Works

5.1 Progress in Period

Turner & Townsend's recommendation to bring forward traffic management in Shandwick Place and St Andrews Square have been approved and the On Street team has been strengthened to ensure works can commence in early January 2012.

The utility conflict database has been developed further and Turner & Townsend is working towards publishing the database on a project extranet site early in the New Year. A presentation of the database will be provided at the CEC progress meeting on 8 December 2011. Over 90 utility conflicts in Haymarket 1 have now been resolved.

There are a number of legacy issues in relation to the utility diversions and abandonments carried out under the MUDFA contracts and in relation to snags associated with previous Infraco works. The vast majority of these relate to Scottish Water and are broadly split between those needing resolution to ensure Infraco can construct its works and those required to enable CEC to complete reinstatement works, particularly in the environs of Leith Walk.

Turner & Townsend is currently prioritising the works needed to facilitate Infraco and these will be carried out by McNicholas in the New Year. Turner & Townsend will allow future work package scope can be finalised and a detailed programme developed. A decision will then be required from CEC on how it wishes procure the works. A dedicated project manager has been appointed to deal with these legacy issues and the scope and programme exercise will be complete before Christmas 2011.

5.2 Key Issues

The utility clashes in Shandwick Place and St Andrews Square account for almost 50% of the clashes currently identified on the project. While Turner & Townsend is preparing a robust plan for enabling works to be carried out in the New Year it is not until the works commence that the magnitude of the problems likely to be encountered can be fully quantified. The discovery of the BT cables in Haymarket for example was the key contributor to the delays reported below and this may also be the case in Shandwick Place and/or St Andrews Square.

5.3 Look Ahead

Detailed planning of enabling works in Shandwick Place and St Andrews Square is underway and due to be completed in the period. This planning will include contingency measures and where possible will be coordinated with Infraco main works to ensure works are carried out as efficiently as possible. Legacy works planning is well underway and due to be completed before the end of the year. Plans for works commencing in the New Year are set out below in section 6.3 of this report.

6 On Street Main Works

6.1 Progress in Period

Due to utility clashes at Haymarket 1 reported previously the On Street Works have been delayed. Infraco has carried out a preliminary assessment of this delay in its payment application for the period ending 12 November 2011. This assessment indicates a delay of 29 calendar days up to the period end. The site was handed back to Infraco on 21 November 2011 so it is likely additional time will be claimed at the next period end. Turner & Townsend is currently assessing the impacts of the delay and will engage with Infraco when this assessment is complete.

Princes Street temporary reinstatement works were completed and the site returned to CEC before the embargo on 24 November 2011. Just over 20% of the permanent reinstatement works are now completed.

Repairs to the 500mm dia. water main in Princes Street and the re-routing of a bank of BT ducts are progressing with completion targeted for 22 December 2011. In the event that the works are not complete the area will be backfilled and returned to CEC. If works need to recommence after the Christmas shutdown the traffic management switch into St Andrews Square may be delayed.

At three areas within the Princes Street area OLE poles need to be re-located to avoid basements and/or utilities, these are at Waverley Mall, Hanover Street and St John's Church. An options report relating to all the above clashes is being prepared by Infraco for discussion with CEC and Historic Scotland.

Turner & Townsend has developed a tracker for the Forth Ports design issues and this now needs to be finalised to ensure it is consistent with parallel discussions that have been ongoing with Forth Ports at a senior level. Once this has been done the tracker will be issued to Forth Ports.

The St Andrews Square public realm design has commenced and the preliminary planning design is due to be issued to CEC in mid January. Prior to this however Turner & Townsend will meet with Infraco's designers and endeavor to provide a preliminary analysis of the options available for construction.

Resolution of junction modeling issues is critical if Infraco is to maintain momentum. An agreed way forward between CEC and Infraco has been reached and it is currently anticipated that modeling work will be complete by the end of the year; this meets the requirements of Infraco.

6.2 Key Issues

A total of 13Nr. Pricing Assumption Variations have been issued by Infraco in respect of the On Street Works. The Independent Certifier's adjudication on the first of these in relation to OLE foundation bases was received on 21 November 2011; CEC have offered a meeting to provide a briefing on what was agreed at the mediation and the contract negotiations in relation to the key provision that Infraco will not be required to divert utilities. Turner & Townsend is currently reviewing the implications of this assessment and will report back when this review is complete and the CEC briefing has been provided. It should be noted however that the assessment finds in favour of Infraco and the consequential costs to the project are likely to be significant.

6.3 Look Ahead

Haymarket 1

Work is due to finish for the Christmas shutdown on 22 December 2011 with the main Infraco works recommencing on 03 January 2012

Shandwick Place

Works finished in accordance with the embargo on 24 November 2011 and are due to recommence on 03 January 2012. At this time Infraco will be commencing its traffic management enabling works and Turner & Townsend is seeking to commence some minor localised slit trenching works to prove OLE design at Atholl Crescent although separate approvals will need to be applied for through CEC and the traffic forum. A CCTV survey of a sewer also needs to commence on 03 January 2012 although again this will require prior approval through CEC and the traffic forum.

Thereafter works will commence on clearing utilities for OLE bases in two locations on 05 January 2012.

Princes Street

With the exception of the Scottish Water works and BT ducts at the east end of Princes Street all other works finished in accordance with the embargo on 24 November 2011 and are due to recommence on 03 January 2012 with the reinstatement of traffic management.

St Andrews Square

Works finished in accordance with the embargo on 24 November 2011 and are due to recommence on 03 January 2012. At this time Infraco will be commencing its traffic management enabling works. Thereafter works will commence on lining manholes on 05 January 2012.

York Place

Works finished in accordance with the embargo on 24 November 2011 and are due to recommence on 03 January 2012 with the completion of three slit trenches in York Place and the completion of four slit trenches in Cathedral Lane. The commencement of these works however will be subject to separate approvals being granted by CEC and the traffic forum prior to works commencing.

7 Off Street Works

7.1 Progress in Period

Work has continued at the following locations:

Mini Test Track currently on schedule for completion by 9/12/11. The revised completion date is being discussed with CAF.

A8 Underpass on schedule with critical phase 3 piling works completed and deck slab progressing well.

Edinburgh Gateway: BBS are preparing an advanced works and full construction Estimate. Anticipated dates for delivery are 5th December 2011 and 10th February 2012 respectively. T&T are working up an overall budget to allow TS to consider an instruction for the advanced works ahead of receipt of the final Estimate. TS are also discussing options for de-scoping the BBS works in the event that the Estimate provided is prohibitive. These discussions will take place with NWR w/c 5th December 2011.

Section 6: Depot commissioning/construction on target for handover on 16th December 2011. Key risk is successful completion of outstanding Testing and Commissioning by BBS and compilation/acceptance of key documentation including design assurance statements/IDC certificate.

Section 7: Progress on schedule with respect to critical areas of Gogar Landfill and Retaining wall W14 at Edinburgh Airport. Increased EAL flood risk due to temporary works is now being dealt with by BBS. SGN are now fully engaged on the gas main diversion works with programme confirmation due imminently. EAL/SP HV way leave issue is being escalated within SP to reach resolution.

Works have also continued on the following areas during this reporting period:

Haymarket Yards road closure; Section 2A to Balbirnie; Russell road Bridge [S20]; Russell Road Retaining Wall [W4]; Murrayfield Tram Stop [W18]; Balgreen Road to Carrick Knowe - Drainage; Bankhead Drive Substation; the Busgate, Edinburgh Park earthworks and track drainage, Gyle Broadway enabling works and the Gyle tram Stop Retaining Wall [W16].

Site specific track monitoring work package plans which are critical to progressing the works adjacent to the operational railway are currently being developed by Infraco. The site Specific track monitoring work package plan for Baird Drive was approved by Network Rail 25 November 2011.

In the period to 02 December 2011 the main achievements were:

Installation of the permanent pile to the west abutment of Russell Road Bridge commenced during the period.

Russell Road Retaining Wall [W4] – installation of temporary sheet piling commenced;

Roseburn Street Structures – The piling rig to install the piles to Structures S502 and S504 mobilised week commencing 28 November 2011;

Water of Leith Bridge – Testing of test pile completed and results submitted to SDS.

Baird Drive Retaining Wall – vegetation clearance and topsoil strip works commenced during the period;

South Gyle Access Bridge – Piling to the west abutment was completed and piling to the east abutment commenced during week commencing 28 November 2011;

7.2 Key Issues

The following key issues are being addressed:

- Submission and approval of key documentation to maintain progress on the critical path along the railway corridor. CEC have made their meeting room available from 28 November up to Christmas 2011 to facilitate the co-location of key people in the review and approval process. The new streamlined process was implemented on 29 November 2011.
- Preparation and submission by Infracore of site specific track monitoring work package plans critical to progressing the works adjacent to the operational railway.
- Roseburn Street Structures – Design of sewer diversion is being progressed to facilitate construction of the piled foundations.
- Structures SRU Corridor – Design of the ground improvements is being progressed to facilitate construction of Murrayfield Stadium and Pitches Retaining Walls and Murrayfield Underpass.
- South Gyle Access Bridge - Design of the ground improvements is being progressed.
- Edinburgh Gateway - T&T are working up an overall budget to allow TS to consider an instruction for the advanced works ahead of receipt of the final Estimate. TS are also discussing options for de-scoping the BBS works in the event that the Estimate provided is prohibitive. These discussions will take place with NWR w/c 5th December 2011.
- Gogar Depot: Key risk is successful completion of outstanding Testing and Commissioning by BBS and compilation/acceptance of key documentation including design assurance statements/IDC certificate. Both issues are currently being progressed in time for handover on 16th December 2011.
- Section 7: Ingliston Park and Ride Substation: EAL/SP HV way leave issue is being escalated within SP to reach resolution.

7.3 Look Ahead

The following works are planned to commence in the next period:

- Section 2A to Balbirnie – track improvement layer;
- Russell Road Bridge – east abutment piling;
- Russell Road Retaining Wall W3 - site clearance and demolition;
- Russell Road Retaining Wall W4 – bored piling;
- Roseburn Street Structures – sewer diversion and bored piling;
- Murrayfield Stadium Retaining Wall – temporary sheet piles;
- Murrayfield Underpass - temporary sheet piles;
- Water of Leith Bridge – bored piling to centre pier;
- Baird Drive Retaining Wall – earthworks;
- Balgreen Road Bridges – installation of temporary works & bored piling.
- Gogar Depot handover 16th December 2011.
- Mini test Track Operations: 9th December 2011.
- Section 7: Track laying Gogarburn Bridge to Gogar Farm Road.

8 Trams

8.1 Progress in Period

Good progress has been achieved in the period with five trams in total now delivered and the static commissioning of the trams inside the Gogar Depot workshop. The supplier training has been progressing to plan so far and the CAF tram familiarisation course has been completed with the LB seconded staff and the locally recruited CAF maintenance technicians.

BBS have confirmed that the completion date of the Mini-test track has slipped 7 days to the 09/12/11, despite having taken steps to recover the programme including weekend and night working where practicable. The CAF test team are being kept informed on this in order to mitigate any resulting impact on CAF.

The ICP Liaison meeting was successfully held on the 23/11/11 to go through the final arrangements for the Mini-test track and powered tram movements within the Depot.

Testing and training on the tram vehicle, depot workshop equipment, power supply equipment and building services integration with the tram vehicles has continued to progress to plan.

Three and a half days of consistent live operation with one of the trams driven under its own power backwards and forwards the 130m length of track through the tramwash around 40 times.

Key Issues:

| <u>Issue</u> | <u>Description</u> | <u>Area</u> | <u>Resolution by Date</u> | <u>Potential Impact</u> |
|--|---|--|----------------------------------|--|
| Risk of delay to completion of the mini test track | BBS have flagged risk of up to 12 day delay | Section 5C | 09/12/11 | Potential delay cost liability for CEC |
| Tram Inspector Agreement | TSS have been reluctant to accept separate Agreement A further 2 proposals from alternative suppliers have been sought | Infraco Agreement | 12/12/11 | Risk of contractual issue with BBS |
| Depot sub-licence Agreement for CAF | BBS have asked for the pre-handover licence to be sub-licensed to CAF | Tram Supply Agreement and Tram Maintenance Agreement | 15/12/11 | Risk of contractual issue with BBS |

9 Assurance

9.1 Progress in Period:

The main focus for the project is on Section A completion (16 December 2011) and works related to the completion of the mini test track, both are progressing well.

Detailed meetings with Lothian buses have commenced, these meetings will agree the strategy for transition to their management in 2012, and the first step is to carry out a review of their statutory requirement.

Co-located team as been set up with the project and Network Rail to agree work Package plans moving forward.

Other key achievement includes:

- Section A completion. Joint inspection have been carried out to review documentation required for the handover TSS to support this review process.
- Additional TSS resource has been provided for Traffic and system wide reviews
- Project Review with CEC insurers completed. Report received and all actions now closed.

9.2 Key Issues

- Section A handover, documentation to be provided by BBS.
- Way leave for EAL and Haymarket now urgent.
- Operating agreement and energy supply agreements required with Lothian Buses

9.3 NCR's

347 NCR's were raised during the period to 12th November 2011 and 15 NCRs were closed out during the period. 11 open NCRs are greater than 6 months old. A summary of NCRs by section is detailed below.

| Section | Contractor |
|---------|------------|
| 5C | Expanded |
| 7 | Farrans |
| 5B | Crummock |
| 1 | Crummock |
| 5B | Expanded |
| 5B | Expanded |
| 6 | Barr |
| 6 | SDS |
| 6 | BARR |
| 6 | BARR |
| 1A | McKean |

10 Red Flag Items

10.1 Programme/ Risk Meeting

PROGRAMME

Item: CEC are looking at ways on how to maximise opportunities within the programme and are looking for ideas on how this can be achieved to ensure proactive management by all parties.

- Action: A cross party planners working group is being set up to challenge the existing programme assumptions, particularly in relation to existing traffic management constraints.

10.2 Combined Utilities & Princess Street & Construction Meeting

CONSTRCUTION UPDATE

Item: St John's CHURCH – Utility clashes – final conflict drawings still to be completed by SDS. Some paperwork is still to be completed.

- Action: Design/ Approvals process ongoing. Approval in principle with CEC Planning and Technical to be achieved before contacting Historic Scotland. Simon Nesbit advised that Area 4 areas (St John's Church, Waverly Mall, Hanover Street and Shandwick Place will be discussed with historic Scotland at same time).

Item: Site Specific Track Monitoring Action Plans – being progressed.

- Action: A co-located cross party team comprising BBS, Network Rail and Turner & Townsend has been assembled at Edinburgh Park in order to improve document planning, communication lines and resource efficiency.

10.3 Design & Consents & Commercial Meeting

Item: Traffic Modelling

- Action: An agreed way forward between CEC and Infraco has been reached and it is currently anticipated that modelling work will be complete by the end of the year; this meets the requirements of Infraco.

Item: Forth Ports design issues

- Action: Colin Smith to work with Andy Conway and Mike Ogden continue to work with Simon Nesbitt to clear tracker of remaining Forth Ports issues.

Item: Outstanding consents – Dublin Street Steps

- Action: Further design to be completed prior to formal submission to Historic Scotland for their approval following satisfactory response from CEC. BBS to confirm date for completion.

10.4 Tram Integration – Commissioning Meeting

Item: Signing of CAF Depot Sub Licence

Action: Sub licence now signed. Item closed