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Progress Report
Edinburgh Tram Project

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0	Tony Wager	Julian Weatherley	07/11/2011
1	Tony Wager	Julian Weatherley	08/11/2011
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1 Executive Summary

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 3 incidents during the period, one of which related to an 11kV cable. This is currently subject to an investigation by the Principal Contractor & Contractor. There were no reported incidents involving members of the public.

Mobilisation of Turner & Townsend's team is nearing completion with all team leaders now in place. Focus has now turned to mitigating project sources of delay and critical issues within the on Street and Off Street works, the improvement of governance arrangements with outside parties, particularly Network Rail, Forth Ports and Scottish Water.

Reconfiguration of the Edinburgh Park offices to accommodate the new team has commenced and will be complete by 11 November.

Delays have occurred to the On Street Works at Haymarket1 as a result of utility clashes with Overhead Line Electrification bases (OLE bases) and the discovery of BT fibre optic cables in the proposed location of the track slab. Infraco have formally advised of three Pricing Assumption Variations. Mitigation measures have been agreed with Infraco and utility providers. Communications with Infraco are ongoing in respect of the cost and programme impact of these clashes.

A number of historical design issues within the Haymarket to York Place section of the route have the potential to impact the construction programme in the new year. A series of work streams are being developed by Turner & Townsend in order to bring these issues to a conclusion.

Princes Street remedial works are progressing well with approximately one quarter of the new track slab re-instated at the time of writing. A carriageway reinstatement detail, for the Christmas embargo period, has been trialled and accepted and installation has commenced.

In response to concerns raised by Network Rail in relation to project governance and delivery of construction documentation, a series of improvement measures have been put in place. Whilst progress is being made, there remains concern over the potential for this relationship to negatively impact on the project programme. Network Rail's approval of a number of critical path submissions remain outstanding.

Infraco's preliminary cost assessment for the incorporation of the Edinburgh Gateway works are likely to be excessive. T&T are drafting an options paper setting out the potential ways forward.

Good progress has been made to the Depot Works during with period. Three trams have now been delivered and static testing has commenced. Infraco have reported a potential delay of 5 days to the completion of the mini test track by 2 December 2011. Steps are being taken to bring these works back on programme.

A safety validation review has been undertaken with the Independent Competent Person (John Dolan). A formal presentation was made to Murray Proven (HSE Principle Inspector) on 7 November to brief recent changes to the project's governance structure.

£0.3m of changes to the Infraco contract have been instructed this period. A number of these relate to the instruction of historical design solutions. A transfer of funds from the operational

readiness budget is required for the Maintenance Mobilisation and Spare Parts. Also an omission for the works at Forth Ports is required. These costs are built into the Contract Sum. The Anticipated Final Cost is currently £511M assuming no drawdown of contingency. A project wide review of risk is currently underway with a view to informing the adequacy of the project contingency. Turner & Townsend are also supporting CEC's review of potential Value Engineering opportunities.

18 non conformances were raised during the period and 38 were closed out. 26 open non conformances are greater than 6 months old. Turner & Townsend are working with Infracore to close these out.

2 Health and Safety

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 3 no incidents during the period, one of which related to a cable strike on an 11KV cable. This is currently subject to an investigation by the Principal Contractor & Contractor.

There were no reported Member of Public incidents during the period.

2.2 Management arrangements

An updated on-call process has been initiated for contractors / Turner & Townsend staff to report incidents.

2.3 CDM Regulations

The transition of CDM duty holders took place on the 28/10/11, with the City of Edinburgh Council undertaking the role of CDM client and Turner & Townsend undertaking the role of CDM Co-ordinator. Updated F10 notifications have been raised on the issued to the Health and Safety Executive database.

A meeting was held with BBS and the Health and Safety Executive on the 27th October. A subsequent meeting was held with the Health and Safety Executive on the 07th November at which the revised organisational structure and methodology for health and safety was presented. This was well received.

The identification of the information required for the Health & Safety File for the depot has commenced.

3 Client Decisions

A number of items have been identified which require City of Edinburgh Council input as part of their resolution. These are noted below:

- Street Lighting, Road Sign & Bus Stop connections/disconnections: BB do not believe they are responsible for these works. The Way forward to be included as an agenda item at the next Construction Control Meeting
- Independent Certifier assessment of Infraco obligations in respect of Utilities, following submission of Turner & Townsend report on 4 November 2011.
- Clarity of scope for Edinburgh Gateway works
- Clarity of scope for On Street public realm works
- Independent Certifier assessment of T&T paper on Prelims on SDS changes
- Support to early decision making in respect of traffic modelling of junctions.
- Confirmation of OCIP insurance cover extension beyond October 2011.
- Confirmation of scope and funding allocation for St Andrew Square public realm works

4 Commercial

4.1 Contingency Position

The specified risk allowance included in the budget for the Infraco, Utilities and Trams elements amounts to £32.7M.

£0.276M has been drawn down from the contingency budget for legacy design changes which were not included in the Settlement Agreement, refer section 4.2 below.

A total value of £18.69M of risks items not included within the Infraco or Utilities contract sum has been identified as required. An initial review of these items indicates that the values can be mitigated to reduce this sum to £14.4M. The Quantitative Cost and Schedule Risk Analyses will enable comparison of the estimated cost impacts with the risk allowances included in the budget.

- The Contingency drawdown is within the specified risk allowances
- Meetings have taken place to review the mitigation measures for the Utilities at St Andrews Sq where the road levels need to be lowered. £0.5M has been included in the current contingency analysis for a concrete bridging structure however an engineering solution and detailed estimate is required.
- There are currently 792Nr Utility conflicts identified. The estimated cost for Haymarket 1 is £1.1M compared with a budget for all On street utilities of £1.9M. The estimated projected cost for all On street sections, if all utilities require to be diverted, are estimated to be £8.6M however mitigation measures are being developed to minimise the cost impact.
- Further mitigation measures are taking place for conflicts such as OLE foundations where mini-piles are required owing to the congestion of utilities in these positions. The full cost of mini-piles, mitigation measures and contractual liabilities are not yet established and are not included in the current summary.
- Infraco has submitted costs associated with the delay in contract signing to mid September. A meeting is scheduled for 7 November to review entitlement.
- There is a potential cost impact associated with street sign conflicts, estimated in the order of £4M. In addition Scottish Water have claimed £1.6M of staffing costs compared to the £0.5M contained within the estimate. Initial assessment of these issues indicates that these costs can be mitigated however this will require Scottish Water to take a reasonable position.

4.2 Change

Infraco

Approved Changes: £0.3M

- A number of historical design changes had not been included within the Settlement Agreement and were required to be actioned. Approval has been secured for the following:
 - Hawthornvale Cycle Link: £20,020
 - Ocean Drive Footway: £10,030
 - Blenheim Place right turn: £46,247
 - Cycle Path at the Mound/Princes Street: £9,436
 - St Andrews Square Public Realm: £135,438
 - Eastfield Avenue Tram Crossing at Edinburgh Airport: £10,025
 - Modifications to the road design at Ocean Terminal: £54,819

Anticipated Changes: £15.6M

- Remaining legacy design changes identified in Schedule E – Exclusions to the Settlement Agreement (York Place turnback, Floating slab to reduce vibration, Unsuitable building fixings Section 1A, SDS alignment update to match built structures): £1,700,000
- Road lowering / utilities mitigations at South St Andrews Sq, York Place and Shandwick Place). Order of cost c. £500,000, subject to technical solution and method of work.
- Contract signing delay, four weeks delay in contract commencement which has an overall impact of seven weeks owing to embargo/traffic management constraints. Infraco has submitted an estimate in the sum of £4,759,661.
- On-street Utilities conflicts, diversions and mitigations for Shandwick Place to York Place. Costs include the contractor's permanent management team, standby squads, diversions and Utility company design and management teams. £8,610,000

Risks: £4.3M

- There are approximately 330Nr conflicts resulting from the position of street signs etc. It is likely that the majority of these can be mitigated.

- Scottish Water has submitted proposals for their management staff and engineering resource amounting to £1.6M. Justification of this level of resource has been requested, £0.5M has been included in the estimate included within the Anticipated Change section.

4.3 Opportunities

The budget for the On-street works was formed from initial tender returns and estimates. It also assumed that opportunities would be gained from the reduction of capping layers within the road construction. The budget is £38.8M compared with a final contract price from Infracore at £47.3M giving £8.6M of savings to be secured. A Value Engineering workshop is planned for 10 November 2011 to confirm the anticipated and additional savings.

A summary of the Opportunities are provided below.

Opportunity	£M
Shandwick Place – tree felling and planting by CEC (say)	0.2
Omit road repairs to South St Andrews Sq and public realm designs	0.7
Full closure of St Andrews Square to York Place	t.b.c
Bring forward Shandwick Place works in 2012	t.b.c
Part road reconstruction outwith track form in lieu of full reconstruction. (based upon notional 5m wide either side of track form, detailed exercise underway):	
- 150mm deep only; OR	1.6
- 290mm deep only; OR	0.7
- 490mm deep only	0.5
Contribution from RBS to Tramstop	0.4
Sub-total (assuming 150mm deep road re-construction)	2.9
Total opportunity value to be secured	8.6
Further opportunities to be identified	5.7

4.4 Certified vs. Milestones

A summary of the certified amounts are provided below.

	Certified	Planned	Comment
Infraco	£217.1M	£227.0M	Delays at: Haymarket Corridor, Earthworks at Balgreen Rd to Edinburgh Park Station, Gogar to Edinburgh Airport Earthworks
Utilities	£0.0M	£0.0M	Reporting periods for the McNicholas Contract now aligned with the Infraco Contract dates, first application due 12 th November 2011.
Trams	£53.1M	£53.1M	

4.5 Commercial Issues

A small number of commercial issues have arisen in the last period and a summary is 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. Sign off by CEC is required.
OLE Foundations	Infraco is obliged to minimise diversions and select appropriate foundations.	T&T consider that piling solutions contained within the On Street Design Information should have been selected and costs are not due as a result of negligence, omission or breach. A report has been submitted to the Independent Certifier who will provide feedback 9 November 2011.
Power to Bus Trackers	Infraco claim that diversions/connections for power cables to Bus Trackers is not within their scope.	It is considered that Site clearance is within the Infraco scope and that these power cables do not fall within the definition of Utilities. T&T is yet to submit a response to Infraco.

5 Progress

5.1 Summary

Infraco have advised that up to 15 October 2011 there are no delays to Section Completion Dates in respect of the Revision 4 Programme.

The On Street works at Haymarket (H1) have experienced some delay as a result of the discovery of utilities within the footprint of seven OLE bases. Turner & Townsend are progressing mitigating measures with McNicholas to minimise delays. Princes Street works are progressing to Programme. Haymarket Yards are delayed but the delay is not critical and Infraco are addressing the delays.

In the Off Street section, work continues between Haymarket and the Airport at the following locations; Russell Road Bridge (S20), Russell Road Retaining Walls (W4), Murrayfield Tram Stop Retaining Wall (W18), Water of Leith Bridge (S21E), Gyle Tram Stop Retaining Wall (W16), AB Underpass (W2B), Mini Test Track, Depot, EAL works. In a few locations the commencement of construction has been frustrated by a failure to obtain Network Rail's approval to the project Track Monitoring Plan. This is being resolved.

5.2 Key Achievements:

In the period to 15th October the main achievements were:

- Section 6: Successful Delivery of Tram 1&2 achieved by 18th October 2011
- Section 6: Successful commencement of Tram 1 static commissioning on 21st October 2011
- Section 5C: AB Underpass: Phase 3 piling works commence on 21st October 2011.
- Section 7: Temporary sheet piling for retaining wall W14 commenced in period.
- Section 2A, Balbirnie Place retaining walls completed.
- Russell Road Bridge, Scottish Power cable plot 96/97 due to be completed within week of 24th October 2011
- Water of Leith Bridge (Murrayfield) , Construction of the temporary piling platform for the centre pier complete.
- Utility Conflict Database is now live and used for reporting.
- Utility Team is up to full strength with everyone mobilised (T&T, Contractor, Utility Providers Reps, Cost Management support)

- Slit trenching, validation/proving of dead utilities at Haymarket 1 is complete with site handed back to BB
- McNicholas work order system, and the protocol for undertaking spot checks of cost records established.
- Prince Street remedial works is progressing to schedule - to be completed end November.

5.3 Key Issues :

The following key issues are being addressed

- Infraco notification of On Street works discovery of utilities within OLE base excavations. The use piled solutions in place of spread footings has been agreed in principle.
- Unexpected discovery of BT ducts within the track slab envelope at Haymarket 1. This relates to incomplete MUDFA works. Agreement has been reached with Infraco on a solution to expose the ducts prior to slewing by McNicholas.
- St Andrew Square Road Level & Pavement Conflicts, BB vertical alignment reduces the depth of cover of the utilities. Turner & Townsend are assessing the likely mitigation actions together with the resulting time and cost impacts.
- Railway Corridor, Letter received from Network Rail 20th October 2011 with issues to be addressed. A number of actions have been agreed with Network Rail in order to provide increased confidence going forward.
- Section 5C, Edinburgh Gateway: Agreement is required on the scope of works to be undertaken by Infraco. Turner & Townsend are preparing an options paper for submission to CEC in order to inform the decision on the way forward.
- Section 5C, Edinburgh Gateway: Section 21 legal agreement with SW resolution is required by 11 January 2012. There is a potential delay to commencement of the Edinburgh Gateway Works.

5.4 Key Milestones

Description	Baseline by Date	Latest Forecast Date	Variance
Section Completion A - Depot	16/12/2011	16/12/2011	0.00
Section Completion B - Test Track	08/03/2013	08/03/2013	0.00
Section Completion C - Construction	09/04/2014	09/04/2014	0.00
Section Completion D - Open for Revenue Service	08/07/2014	08/07/2014	0.00
Haymarket 1 Plane Carriageway	14/10/2011	18/10/2011	4.00
Utilities (BT Slew, OLE Bases)	28/10/2011	11/11/2011	14.00
Section 5C: Clancy Dowcra to complete 250 water main remedials	18/11/2011	18/11/2011	0.00
Princes Street Embargo in Place	23/11/2011	23/11/2011	0.00
Section 6: Tram 1-5 Static Commissioning	24/11/2011	24/11/2011	0.00
Section 6: Overhead Catenary Completed	24/11/2011	24/11/2011	0.00
Structures SRU Corridor (Approval of Ground Improvements)	30/10/2011	25/11/2011	26.00
Section 5C: Completion of SAT/SIT on MTT	02/12/2011	02/12/2011	0.00
Section 5C: Completion of Mini Test Track	02/12/2011	07/12/2011	5.00
York Place Terminal Point Design	14/12/2011	14/12/2011	0.00
Section 7: Gogar Landfill completion of soil nailing	16/01/2012	16/01/2012	0.00
St Andrews Square Plane Carriageway	15/02/2011	15/02/2011	0.00
Shandwick Place - Trees Removal	14/03/2011	14/03/2011	0.00

6 On Street Works

6.1 Street Running

The full T&T management team for the on street section of the project is in place with the section lead joining the team on 1st November. The most urgent Issues relate to: the clearance of utilities for track construction and Overhead Line Equipment (OLE) bases; the Issues Tracker; traffic modelling; public realm improvements at St Andrews Square; the temporary terminus at York Place; OLE locations at either end of Princes Street; and legacy issues to the north east of York Place.

Key inputs are required from CEC in addition to continued focused support with regards to utility diversionary works. In addition there is the need for CEC decisions to be made on commercial matters in relation to the OLE bases and the traffic modelling of junctions. Finally there is the need for CEC input into discussions with BB/S in relation to the Issues Tracker.

Key Achievements:

- Database for tracking all utility issues is now complete and being used to prioritise and track all utility diversions;
- Full team is now in place;
- Site works in Haymarket 1 are progressing;
- Critical Issues have been identified and work streams formed.

6.2 Critical Issues

A table displaying Critical Issues identified by the Project Manager for resolution with CEC

Issue	Description	Area	Resolution by Date	Potential Impact
Utility Conflicts	There are currently 1128 conflicts of which 811 are "live" - Cost, risk and programme reports are being prepared and the database which will be used to manage these conflicts is now up and running.	On Street	On-going	Significant impact on project programme and overall project cost
Piled bases	The utility companies have signed off in principle on the piled base solution through the TQ process although this needs to be formalised in the coming days. BB/S has written to T&T stating	On Street	9th November 2011.	Significant impact on project programme and overall project cost

Issue	Description	Area	Resolution by Date	Potential Impact
	<p>that a Pricing Assumption Variation has occurred in relation to the OLE bases and has sought formal instruction to adopt the piled foundation approach. Meetings were held in early November between T&T, Infracore and the Independent Certifier and at the request of the Independent Certifier formal submissions were made on 4th November 2011.</p> <p>T&T is continuing to pursue the piled options and the advanced works scope reflect this approach.</p>			
Issues Tracker (Instructions, Clarifications, Changes etc.)	<p>There are a number of outstanding matters to resolve on the Issues Tracker.</p> <p>A meeting took place between T&T, Infracore and CEC on Friday 4th November 2011 wherein a process for resolving outstanding matters was agreed.</p> <p>It is anticipated that a number of issues will be resolved by mid November and a route map agreed for resolution of other matters.</p>	Project	Programme being developed	Delay to programme and potential knock on cost impact
Traffic Modelling	<p>Resolution of junction modelling issues is critical if Infracore is to maintain momentum. There are a number of historical issues that need to be closed out and to this end a workshop has been arranged for 10th November 2011.</p> <p>T&T is currently scoping out the issues with CEC and will develop a programme for closing out issues.</p>	Project	Urgent	Delay to programme and potential knock on cost impact
Shandwick	The OLE base advanced works will mean having to fell three or	On Street (Shandwick)	18 Nov	Public Relations & Lothian Buses

Issue	Description	Area	Resolution by Date	Potential Impact
Place	<p>four semi-mature trees in Shandwick Place. The number of trees will be kept to a minimum but there are potential negative public relations issues that will need to be managed by CEC.</p> <p>A proposal has also been put forward to bring the Traffic Management forward to January to enable the validation and proving of utilities/abandonments conflicting with the Track Construction.</p>	Place)		being diverted 1mth early.
Public Realm Improvements at St Andrews Square	A meeting took place on 3rd November 2011 attended by T&T, CEC and BB/S wherein it was confirmed that the contract price contains repairs to South St Andrews Square as a result of kerbs associated with traffic management. There may be an opportunity to integrate these works with the Urban Realm.	On Street (St Andrews Square)		
York Place temporary terminus	<p>The current design of the temporary terminus stop at York Place is giving rise to a number of technical issues that are likely to have a commercial impact in the future.</p> <p>T&T is currently compiling a short report for discussion with CEC on the issues associated with the York Place design. This will include a narrative on the costs associated with the design and other commercial matters.</p>	On Street (York Place)	Tbc	Tbc
Forth Ports	<p>T&T has developed a tracker form for the Forth Ports design issues. SDS and CEC have inputted status and agreed actions to close out the 32 items identified.</p> <p>Agreement required with Forth</p>			

Issue	Description	Area	Resolution by Date	Potential Impact
	<p>Ports to the SMART actions proposed and timescales associated as such the updated tracker is to be issued to Ian Kerr w/c 07 November.</p> <p>The completion of the design will be undertaken in line with the design production priorities of the project.</p> <p>This tracker will support the overall strategic position being reached with Forth Ports.</p>			
<p>OLEs in Princes Street</p>	<p>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. A meeting was held on 4th November 2011 to discuss the issues and BB/S has agreed to provide an options analysis report for each location.</p> <p>An instruction has also been issued to BB/S to construct OLE bases in the centre median adjacent to St John's to ensure the current Princes Street works are not delayed. T&T will need to discuss the commercial implications of this instruction with BB/S.</p>	<p>Off Street (Princes Street)</p>	<p>End November</p>	<p>Potential delay to completing the Princes Street works</p>

7 Off Street Works - Sections 2A/5A/5B/5C1

7.1 Network Rail

The Overarching Track monitoring action plan has been approved by Network Rail. BBS have confirmed site specific track monitoring plans will be available by 7th November 2011. Assuming the quality of Plan submission is satisfactory then approval by NWR is achievable by 14th November 2011.

Track monitoring is 70% installed along NWR corridor. Installation is due to be completed on 7th November 2011 with baseline readings due to commence 9th November 2011.

A Network Rail letter was received on 20th October raising concerns over; staircase being removed at Scotrail Depot prior to Form C being in place, failure of the electronic gates at the Scotrail Depot car park and the removal of the Interceptor at the Russell Road Bridge. A meeting was held with NWR on 31st October 2011 and reached agreement on measures to be implemented by BBS to ensure no further incidents. The formal response to the NWR letter was issued by T&T on 3rd November 2011.

7.2 Scotrail

BBS to ensure access is maintained for Scotrail Depot refuelling during construction works. Meeting arranged for 7th November 2011 to review and resolve this key interface.

7.3 Section 2A

7.3.1 Haymarket Yards – Road Closure

Black concrete pour completed successfully to first section at Haymarket.

OHL mast construction commenced.

7.3.2 Russell Road Bridge

Soil Nail works completed. Piling platform to commence 7th November 2011 with piling to commence 9th November 2011.

Scottish Power cable plot 96/97 commenced 2nd November 2011 with completion due by 5th November 2011.

Interceptor design being progressed by SDS. Temporary Interceptor installed while permanent works solution agreed with NWR.

7.4 Section 5A

7.4.1 Russell Road Retaining Wall W4

Soil nail slope stability works around the existing gas governor complete.

Temporary soil nailing progressing well to panels 21-29

Sheet piling completed with augered piling due to commence to units 1-9.

Piling rig being mobilised for 17th November 2011.

7.4.2 Roseburn Street Viaduct

Ramp/platform formation for sheet piling completed below the Scotrail depot.

Meeting arranged for 7th November 2011 to agreed working methodology that allows existing services to be diverted without impacting on refuelling of Scotrail Depot.

7.4.3 Murrayfield Retaining Walls & Underpass

Ground improvements need to be completed prior to construction of the retaining walls and underpass - trials stone columns due to commence 7th November 2011 to ascertain real-time vibration information for the works which will inform the design and determine the likely impact on the operational railway.

Following completion of trial stone column vibration monitoring, ground improvement scheme can be finalised and Network Rail WPP/Form C reissued for approval.

7.4.4 Water of Leith Bridge

Trial of mini pile completed and SDS are reviewing ahead of commencement of piling works.

7.4.5 Baird Drive Retaining Wall

Track monitoring to be completed by 7th November 2011 to allow baseline survey data to be established.

7.4.6 Balgreen Road Bridges

Balgreen Bridge piling platform WPP (A2) has been with BBS for resubmission since 2nd November 2011. It is programmed to be issued on 7th November 2011 to allow works to commence by 12th November 2011 (subject to agreement on track monitoring).

Balgreen Bridge piling works WPP (A2) due to be issued by BBS on 7th November 2011.

7.5 Section 5B

7.5.1 Balgreen Road to Carrick Knowe

Track drainage works continuing with good progress being made.

Archaeological investigation ongoing by Guard/ Headland in area of Saughton landscaping without impact on BBS construction works.

7.5.2 South Gyle Access Bridge

Bored Piling – WPP issued to BBS with NWR comments 29th October 2011. BBS reply is unsatisfactory and requires change to format/level of information of WPP to obtain NWR approval. BBS to use package contractor Grahams format which has previously been approved by NWR for Russell Road bridge.

Piling works due to commence 23rd November 2011 utilising piling rig from A8 Underpass Phase 3 works (assuming WPP approved by NWR).

7.6 Section 5C

South Gyle Tram Stop

Temporary sheet piling to the tram stop is now completed. Surrounding earthworks ongoing.

7.7 Key Achievements:

- Agreement reached with NWR regarding response to their letter of 20th October 2011 relating to recent incidents by BBS.
- Russell Road Bridge piling works to commence in period.
- Trial mini piles completed at Water of Leith Bridge.

7.8 Critical Issues

Issue	Area	Resolution by Date	Potential Impact
Track Monitoring site specific plan to be agreed with NWR	Railway corridor	14/11/2011	Network Rail do not allow works to commence.
Agreement to be reached with Scotrail regarding access for refuelling depot while construction works progressed by BBS.	Scotrail Depot	7/11/2011	Scotrail do not allow works to commence in area of Roseburn Street Viaduct

8 Off Street Works - Section 5C, 6&7

8.1.1 Section 5C:

The Mini Test Track is currently scheduled for completion by 2/12/11. BBS are planning nightshift working w/c 14/11 for overhead line installation. Without the mobilisation of additional resource this date would have been at significant risk.

A8 Underpass on schedule with critical phase 3 piling works commencing on 21st October 2011.

Edinburgh Gateway: Design being progressed for issue to CEC to obtain technical approval. This is due to be completed by 11th November 2011. BBS are to confirm when the Estimate will be available for discussion with Transport Scotland. Key risks include the cost and programme impact of current Edinburgh Gateway scheme. T&T are preparing an options report for discussion with CEC. This report is expected to be available for 18th November 2011.

8.1.2 Section 6:

The Depot commissioning/construction is on target for handover on 16th December 2011 (Section a completion). A Key risk is successful completion of outstanding Testing and Commissioning by BBS and compilation/acceptance of key documentation. A series of T&T audits are being carried out on all levels of documentation to determine any issues for resolution.

8.1.3 Section 7:

Progress is on schedule with respect to the critical Gogar Landfill and retaining wall W14 areas at Edinburgh Airport. A Key risk is the EAL concern of increased flood risk with respect to the impact of the temporary sheet piled wall (required for construction of retaining wall W14).

8.2 Key Achievements:

- Section 6: Successful Delivery of Tram 3 achieved on 31st October 2011
- Section 6: Successful completion of Tram 1 static commissioning on 4th November 2011.
- Section 6: Tram 4 due for delivery on 14th November 2011.
- Section 5C: A8 Underpass: Phase 3 piling works progressing well and due for completion 23rd November 2011.
- Section 7: Temporary sheet piling for retaining wall W14 completed to phase 1
- Section 7: Trail soil nailing successfully completed on 31st October 2011.

8.3 Critical Issues

The table below sets out the Critical Issues identified by the Project Manager for resolution with CEC

Issue	Description	Area	Resolution by Date	Potential Impact
Edinburgh Gateway: Section 21 legal agreement with SW	Edinburgh Gateway: Section 21 legal agreement with SW	Section 5C	11/01/12	Delay to commencement of Edinburgh Gateway
Edinburgh Gateway: Technical approval of retaining walls.	Edinburgh Gateway: Technical approval of retaining walls.	Section 5C	25/11/11. This is dependent on issue by Infraco to CEC 11/11/11.	Delay to commencement of Edinburgh Gateway
Edinburgh Gateway: Agreement of Estimate with Transport Scotland	BBS Estimate very likely to be higher than anticipated by Transport Scotland. T&T to provide briefing paper by 18/11/11 which recommends options to be discussed further with TS.	Section 5C	18/11/11	Delay to commencement of Edinburgh Gateway

8.4 Project Managers Key Project Milestones

M/S	Description	Baseline by Date	Latest Forecast Date	Schedule location
1	Section 5C: Clancy Dowcra to complete 250 water main remedials	18/11/11	18/11/11	CDL Programme
2	Section 6: Tram 1-5 Static Commissioning	24/11/11	24/11/11	CAF Programme
3	Section 5C: Completion of SAT/SIT on MTT	2/12/11	2/12/11	Infraco T&C Programme Rev 3

Progress Report



4	Section 5C: Completion of Mini Test Track	2/12/11	7/12/11	Infracore Rev 4
5	Section 6: Overhead Catenary Completed	24/11/11	24/11/11	Infracore Rev 4
6	Section 6: Section A Completion	16/12/11	16/12/11	Infracore Rev 4
7	Section 7: Gogar Landfill completion of soil nailing	16/1/12	16/1/12	Infracore Rev 4

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9 Trams

9.1 Executive Summary

Good progress has been achieved in the period with the delivery of the first three trams and the start of static commissioning of the trams inside the Gogar Depot workshop. After a slow start the supplier training is now looking in good shape. A good team spirit and working relationships are starting to form across the organisations present in the Gogar Depot.

BBS have flagged that there is a risk to the completion date of the Mini-test track but are taking 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 the resulting impact on CAF.

Next liaison meeting with the ICP is scheduled for the 23/11/11 to go through the final arrangements for the Mini-test track.

9.2 Key Achievements:

- Three trams delivered on schedule to Gogar Depot.
- Agreement of training schedule for depot, depot workshop equipment and trams.
- Commencement of static commissioning testing of tram 277.
- Agreement with Infracore that next test and commissioning milestone for the combined team to aim for is extension of the mini-test track to Ingliston by August/September 2012.

9.3 Critical Issues

A table displaying Critical Issues identified by the Project Manager for resolution with the client

Issue	Description	Area	Resolution by Date	Potential Impact
Risk of delay to completion of the mini test track	BBS have flagged risk of up to 12 day delay	Section 5C	02/12/11	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	Infracore Agreement	02/12/11	Risk of contractual issue with BBS

been sought			
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9.4 Project Managers Key Project Milestones

Description	Baseline by Date	Latest Forecast Date
First Tram Delivered 277	17/10/11	17/10/11A
Second Tram Delivered 252	18/10/11	18/10/11A
Third Tram Delivered 276	31/10/11	31/10/11A
Fourth Tram Delivered	11/11/11	14/11/11
Fifth Tram Delivered	24/11/11	27/11/11
Start of Dynamic Tram Testing	02/12/11	05/12/11
Section A Completion	16/12/11	16/11/11
First Five Trams Dynamically Commissioned	23/02/12	23/02/12

STATUS:

- 3 Trams Delivered.
- Start Commissioning
- Integration with Depot Workshop Equip
- Next tram Mon. 14/11.
- Fifth. Thurs. 24/11

CAF Programme. • January 2013 All 27 Trams Commissioned.

BBS Programme • Minimum of 5 Trams Commissioned. February 2013.

Master Programme

- CAF recruited 4 Technicians
- Energisation Testing 24/25/11
- BBS have flagged the risk on Test Track start but working nights to mitigate.

(perhaps) 16/11/11
 CEC
 34.5 total
 making the difference
 T&T 32.7

Gary - does not include Rev 3a. => Rev 4 for CAF
 note - we will have to evaluate

10 Assurance

A review meeting was held with Network Rail on 31st October 2011 to address concerns raised with site activities. Ongoing actions were agreed and formal proposals have been issued to Network Rail for comment.

A safety validation review has been completed with all immediate actions closed out.

Fortnightly review meetings with CAF, BBS, ETL have been established in respect of Section A completion (Depot). Note that ETL ongoing role has still to be defined.

An initial meeting was held with Murray Proven (HSE Principle Inspector) on 7 November 2011 to set out the changes in the project structure and governance.

10.1 Key Achievements:

- Section A completion. The deliverables tracker has been agreed with all parties, BBS have also agreed to provide draft documentation for comment by 2nd December, 2 week prior to final hand over. Technical resource has been agreed with TSS to support this review process.
- Initial discussions held regarding the Network Rail Asst Protection Agreement further meetings to be arranged by Alasdair Sim.
- Appointment of new 3rd Party Network Rail representative Ian Muir.
- Project Review with CEC insurers completed on 3rd November, 13 Items to be closed out.
- Good progress has been made with EAL and Haymarket Scottish Power Wayleaves on track for agreement in November.

10.2 Critical Issues

No critical issues identified for next 4 week period.

10.3 Project Managers Key Project Milestones

Action	Description	Due by Date
SGN Wayleave	Gain Approval	November 11
Power Wayleave EAL	Gain Approval	November 11
Haymarket substation Wayleave	Gain Approval	November 11

10.4 Quality

10.4.1 NCRs

25 NCRs were raised during the period to 2nd November 2011 and 44 NCRs were closed out during the period. 26 no open NCRs are greater than 6 months old. A summary of NCRs by section is detailed below.

10.5 Environment

Infraco organised a spill response training session for Infraco staff and some subcontractors representatives.

GUARD Archaeologists carried out a site walk around at the A8 Underpass site to determine any potential archaeological issues. No features or deposits of archaeological significance were identified. A second visit will be carried out once the two tunnels are joined together early next year.

Progress Report



Appendix 1 – Dashboard

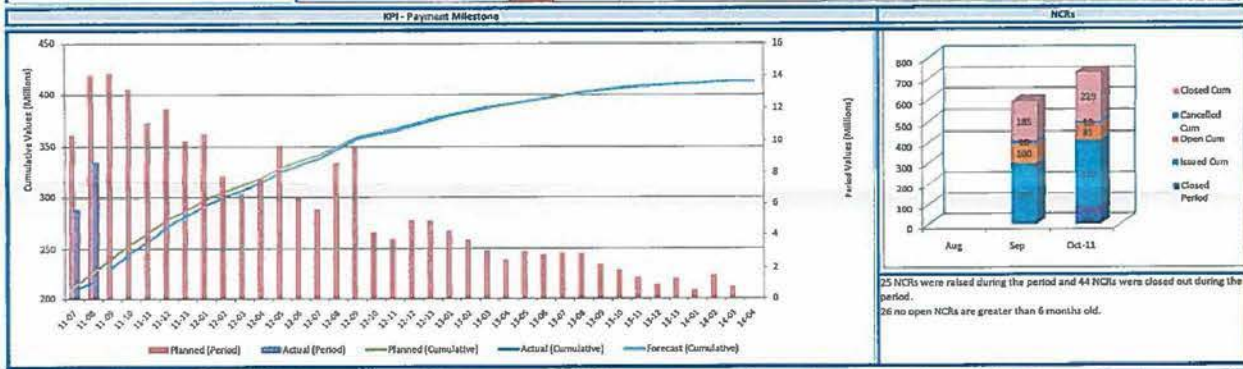
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Produced by Checked by Approved by Status	John Irving & Tony Wager Gary Easton David Fox DRAFT	Issued By Address	Turner & Townsend Project Management Limited 1st Floor, Osborne House, Osborne Terrace, Edinburgh, EH12 5HG	Employer Address	City of Edinburgh Council Waverley Court, Edinburgh, EH8 8BG
Issue Date	18/11/2011	Project	Edinburgh Tram Network		
Confidential - Legally Privileged and FOI(S)A Exempt					
Executive Summary:	Key Achievements:	Key Issues:	City of Edinburgh Council - Actions		
<p>1. There were no reportable accidents during the period.</p> <p>2. Mobilisation of Turner & Townsend's team is nearing completion with all team leaders now in place.</p> <p>3. Reconfiguration of the Edinburgh Park offices to accommodate the new team has commenced and will be complete by 13 November.</p> <p>4. Delays have occurred to the On Street Works at Haymarket as a result of utility clashes with Overhead Line Electrification bases (OLE bases) and the discovery of BT fibre optic cables in the proposed location of the track slab.</p> <p>5. Prince Street remedial works are progressing well with approximately one quarter of the new track slab re-installed.</p> <p>6. In response to concerns raised by Network Rail in relation to project governance and delivery of construction documentation, a series of improvement measures have been put in place.</p> <p>7. T&T are drafting an options paper setting out the potential ways forward for Edinburgh Gateway.</p> <p>8. Three trams have now been delivered and static testing has commenced.</p> <p>9. £0.3m of changes to the Infraco contract have been instructed this period.</p> <p>10. The forecast outturn cost of the project overall is now £511,712k.</p>	<p>1. Turner & Townsend Lead Team mobilised.</p> <p>2. Utility Conflict Database is now live and used for reporting.</p> <p>3. Utility Team is up to full strength with everyone mobilised (T&T, Contractor, Utility Providers Reps, Cost Management support)</p> <p>4. Site trending, validation/proving of dead utilities is complete with site handed back to BB.</p> <p>5. McNicholas work order system, and the protocol for undertaking spot checks of cost records established.</p> <p>6. Prince Street remedial works progressing to schedule - to be completed end November.</p> <p>7. Section 2A, Balmorie Place retaining walls completed.</p> <p>8. Russell Road Bridge, Scottish Power cable plot 96/97 due to be completed within week of 24th October 2011.</p> <p>9. Water of Leith Bridge (Murrayfield), Construction of the temporary piling platform for the centre pier complete.</p> <p>10. Section 5C A8 Underpass: Phase 3 piling works commence on 21st October 2011.</p> <p>11. Section 6: Successful Delivery of Tram 1&2 achieved by 18th October 2011</p> <p>12. Section 6: Successful commencement of Tram 1 static commissioning on 21st October 2011.</p> <p>13. Section 7: Temporary sheet piling for retaining wall W14 commenced in period.</p>	<p>1. Four number Pricing Assumptions Variations, have been issued by Infraco in respect of the On Street Works.</p> <p>2. Infraco notification of On Street works discovery of utilities within OLE base excavations. Unlikely that all can be diverted, design solutions being explored.</p> <p>3. Unexpected discovery of BT ducts within the track slab envelope at Haymarket 1. This relates to incomplete MUDFA works. These cables can be diverted.</p> <p>4. SAS Road Level & Pavement Conflicts, BB vertical alignment reduces the depth of cover of the utilities resolution by 4/11/2011 time and cost impacts.</p> <p>5. Railway Corridor, Letter received from Network Rail 20th October 2011 with issues to be addressed, resolution by 31/10/2011.</p> <p>6. Section 7 EAL Klask/Canopy Building Warrant approval, resolution required by 28/10/11.</p> <p>7. Section 5C, Edinburgh Gateway: Technical approval of retaining walls resolution required by 18/11/11 This is dependent on issue by Infraco to CEC 4/11/11 - Potential Impact Delay to commencement of Edinburgh Gateway.</p> <p>8. Section 5C, Edinburgh Gateway: Section 21 legal agreement with SW resolution by 11/01/2012 Potential Impact Delay to commencement of Edinburgh Gateway.</p>	<p>1. Street Lighting, Road Sign & Bus Stop consequential discontinuations,</p> <p>2. BB Contractual Obligations in respect of UTILITIES, a paper was submitted on 4th November 2011 for assessment by the Independent Certifier.</p> <p>3. Clarity of Scope for Edinburgh Gateway Works.</p> <p>4. Clarity of Scope for On Street Public Realm Works.</p> <p>5. Independent Certifier assessment of T&T paper on prelims on SDS Changes.</p> <p>6. Support to early decision making in respect of traffic modelling of junctions.</p> <p>Confirmation of OCIP Insurance cover extension beyond October 2011.</p> <p>7. Scope and Funding for St Andrews Square.</p>		

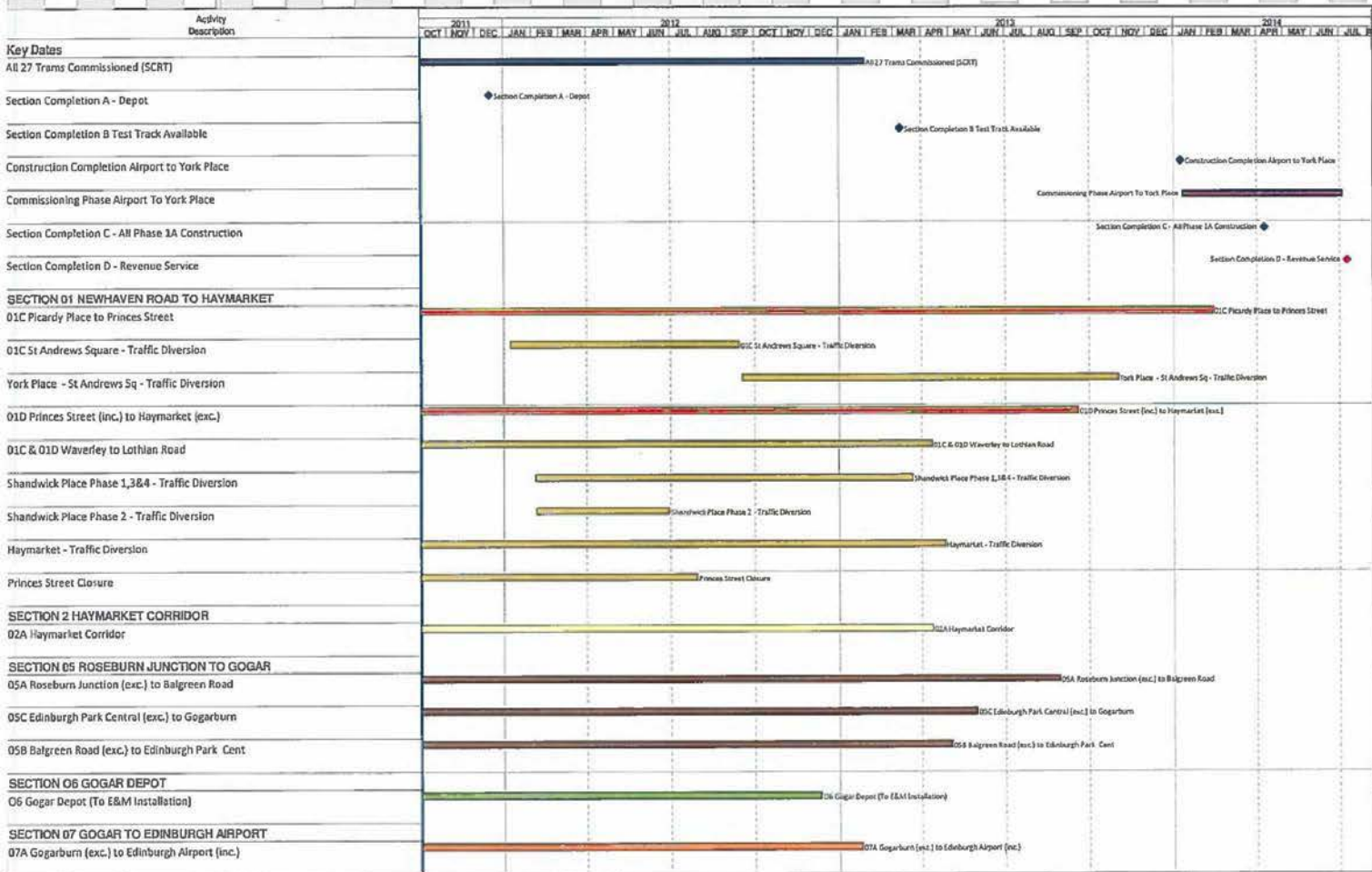
Cost Status - Prior to Reallocation of Risk Allowance

	Budget Information			Forecast										Actuals	
	Original Budget	Budget Variance	Current Budget	Original Contract Value	Approved Contract Changes	Current Contract Value	Opportunities	Target Contract Value	Estimated Changes	Risk / Mitigated	Anticipated Final Cost	Budget Variance (Value)	Budget Variance (%)	Certified to Date	Outstanding Amount
Edinburgh Tram Programme	496,936	3,218	500,154	477,702	276	477,978	-1,000	466,978	9,734	23,442	500,154	0	0.00%	270,992	224,396
Infraco	398,877	3,218	402,095	413,102	276	413,378	-1,000	402,378	2,224	4,759	409,361	7,266	2%	217,092	187,503
Utilities	2,912	0	2,912	2,200	0	2,200	0	2,200	7,510	0	9,710	6,798	233%	0	9,710
Tram vehicles	62,400	0	62,400	62,400	0	62,400	0	62,400	0	0	62,400	0	0%	53,900	8,500
Specified Risk Allowance	32,747	0	32,747	0	0	0	0	0	18,683	18,683	-14,064	-43%		18,683	

Possible Project Opportunities	Top Risks				Assurance
	Risk	Level	Owner	Comments	Incident reporting
1. Decomposing of Public realm works, deletion from Infraco Contract.	Risk that utilities fail to be verified and mitigated through design in advance of contractor works	RED	Steven Linnick	Conflict Schedule and Utilities and enabling works contractors in place Utility companies engaged and joint working group mobilised	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 3 no incidents during the period
2. Tree Planting by CEC not Infraco	Risk that project delivery team fails to deliver against the Contract Programme Narrative	RED	Julian Weatherley	Mitigation plan to be developed for each assumption Master Schedule to incorporate the dependencies against which the Programme Narrative assumptions are defined	Two minor and One was classified as a serious incident. This related to a cable strike on an 11kV cable. This is currently subject to an investigation by the Principal Contractor & Contractor (Gallagher Brothers).
3. Full Closure of St Andrews Square to York Place	Risk that project delivery team fails to communicate the evolving impact of the risk profile to the client team	RED	Tony Wager	Clear clarity on client/contract delivery team governance and structure Review of project stakeholder management arrangements Project operation plan to capture above outcomes	The transition of CDM duty holders took place on the 28/10/11. Updated F10 notifications have been raised on the Health and Safety Executive database.
4. Bringing forward Shandwick Place Works in 2012	Tram (CAF) / Infrastructure (Infraco) integration risk	RED	Alexander Robinson	Refresh project management / assurance structure to accommodate new contractual arrangements Mapping out programme interfaces between Infraco	
5. Part road re-construction out with tram track slab zone versus full road construction	Risk of further breakdown in client / contractor relationship	RED	Julian Weatherley	Central meetings in place, Full time independent certifier, joint working group in place Weekly project directors informal meeting	Deliver a Safe Tram
	Risk of delay due to failure to obtain HR approval to build	RED	Shelley Mauch	Appointment of HR Inspector Obtain HR agreement on proposals for interface management Detailed review of identified delayed activities Issue contractor reproduction of a detailed plan for the production and administration and approval of HR approval documentation	1. Meeting held with Network Rail, agreement has been reached on outstanding actions and formally confirmed. 2. Section A completion. The deliverables tracker has been agreed with all parties, BBS have also agreed to provide draft documentation for comment by 2nd December, 2 week prior to final hand over. Technical resource has been agreed with TSS to support this review process. 3. ICP report - 4 open RFI's (1 on hold), 3 open RFO and 1 open ANC, now being reviewed by SDS. 4. Initial discussions held regarding the Network Rail AS Protection Agreement further meetings to be arranged by Alastair Sim 6. New HR 3rd Party Rep approved by NRI, now completing handover period. 7. Project Review with CEC Insurers completed on 3rd November, 13 items to be closed out. 8. Good progress has been made with EAL and Haymarket Scottish Power Wayleaves on track for agreement in November. 9. Continuity staff contracts agreed and transferred into the team. 10. Safety validation review complete. No immediate actions required. £.6m review now planned. 11. Briefing meeting held 7th November with Murray Proven from HSE, well received.
	Risk that programmes do not integrate and align	RED	Tony Wager	Integrated Master Schedule to be completed Master Schedule to be tested and agreed with BBS & CAF	
	Unable to confirm suitability of design & review the agreed process, therefore unable to complete hand over	RED	Martin Arns	Co-ordination spreadsheet developed & to be agreed between stakeholders SAs to provide consolidated program to support the delivery	
	Disputed interpretation of contract and valuation of estimates submitted for potential changes	RED	Gary Easton	Mobilise specialist contract resources to support early dialogue on interpretation of contract & communicate to the team Developing a joint programme with Infraco Brief teams on commercial provisions on the contract	
	Poor installation or latent defects occur during or after Infraco maintenance period	RED	Julian Weatherley	Maintenance period to be identified now that delay has occurred (No DPA)	



Key Project Milestones							Change Register - Approved Changes	
M/S	Description	Baseline by Date	Latest Forecast Date	Variance	Critical Path	Comments		
1	Section Completion A - Depot	13-Dec-11	16-Dec-11	0.00	Y	Infraco Rev 6	Approved Changes: £0.3M (in Period)	
2	Section Completion B - Test Track	08-Mar-11	08-Mar-11	0.00	Y	Infraco Rev 6	Hawthornvale Cycle Link: £20,020	
3	Section Completion C - Construction	09-Apr-14	09-Apr-14	0.00	Y	Infraco Rev 6	Ocean Drive Footway: £10,030	
4	Section Completion D - Open for Revenue Service	08-Jul-14	08-Jul-14	0.00	Y	Infraco Rev 6	Blenheim Place right turn: £46,247	
5	Haymarket 1 Plane Carriageway	14-Oct-11	18-Oct-11	4.00	Y	Infraco Rev 6	Cycle Path at the Mound/Princes Street: £8,436	
6	Linlithgow (BT Show, OLE Bases)	29-Oct-11	11-Nov-11	24.00	Y	T&T Pre-Realisation	St Andrews Square Public Realm: £135,438	
7	Section 5C (CAF) Delivery to complete 200 water main	18-Nov-11	18-Nov-11	0.00	N	CAF Programme	Eastfield Avenue Tram Crossing at Edinburgh Airport: £10,025	
8	Princes Street Embargo in Place	23-Nov-11	23-Nov-11	0.00	Y	T&T Pre-Realisation	Modifications to the road design at Ocean Terminal: £54,819	
9	Section 6/Tram 3-3 Static Commissioning	24-Nov-11	24-Nov-11	0.00	N	CAF Programme	Anticipated Changes: £15.6M (Total)	
10	Section 6: Overhead Canopy Completed	24-Nov-11	24-Nov-11	0.00	Y	Infraco Rev 4	Total opportunity value to be secured: £8.6m	
11	Structures 3RU Corridor (Approval of Ground Improvements)	30-Oct-11	23-Nov-11	20.00	Y	T&T Pre-Realisation	Further opportunities to be identified: £5.7m	
12	Section 5C Completion of 147/17 on MTT	01-Dec-11	02-Dec-11	0.00	N	Infraco T&C Programme Rev 3		
13	Section 5C Completion of 147/17 on MTT	02-Dec-11	02-Dec-11	0.00	N	Infraco Rev 4		
14	York Place Terminal Paint Design	14-Dec-11	14-Dec-11	0.00	N	T&T Pre-Realisation		
15	Section 7- Design Landfill completion of soil filling	16-Jan-12	16-Jan-12	0.00	N	Infraco Rev 4		
16	St Andrews Square Plane Configuration	15-Feb-12	15-Feb-12	0.00	Y	Infraco Rev 4		
17	Shandwick Place - Trees Removal	14-Mar-12	14-Mar-12	0.00	N	Infraco Rev 4		



Progress Report



Appendix 3 – Contingency Analysis

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Ref	Description	Contingency to Completion			Actual		
		A Contingency at MOV5 Signing	B Approved Contingency	C Available Contingency	D Contingency required	E Contingency post mitigation	F Contingency less Mitigation
1	Design Development (York Place etc)	6,275	276	5,999	2,000	2,000	4,275
2	Time delay Impact	11,610		11,610	4,759	4,759	6,851
3	Utilities: Haymarket to York Place	2,000		2,000	11,084	6,798	-4,798
4	Utilities: Off Street	400		400	0	0	400
5	Blockade and Possession Costs	250		250	0	0	250
6	Routine Maintenance	500		500	0	0	500
7	Relaxation of time constraints	300		300	0	0	300
8	Specified Construction Risks	7,212		7,212	500	500	6,712
9	Land Purchase	150		150	0	0	150
10	Traffic Management	200		200	0	0	200
11	Move to Cost reimbursable Contract	3,300		3,300	0	0	3,300
12	Procurement	250		250	0	0	250
13	Exceptionally Adverse Weather	300		300	0	0	300
Totals		32,747	276	32,471	18,343	14,057	18,690
		A	B	C=A-B	D=B+RISKS	E=D-MITIGATIONS	F=A-E

Infraco Contract
Change Control Register

TNC No	Location	Description	Date Estimate Due	Date Estimate Received	Estimate Change Value £	Time Implications	Date Issued to CEC	Approved By CEC/T&T	Date Approver Rejected	Agreed Cost for Approved Contract Change £	Agreed Cost for Contributions £	Infraco P/CC No	1% Change Order No	Date ICO Issued	Comments
501	Leithonessvale Cycle Link	Change the design to widen the footway alongside the south side of Leithway Road	N/A	09/04/2011	£30,020.51			CEC	20/10/2011			PMC-001	ICO-502	24/10/2011	Previously PWTNC-001
502	Ocean Drive Footway	Amend the design of Ocean Drive to reinstate the footpath to the north of Ocean Drive	N/A	11/08/2011	£10,130.82			T&T	24/10/2011			PMC-002	ICO-508	26/10/2011	Previously PWTNC-002
503	Depot Access Bridge	Amend the design of the OLE at the Depot Access Bridge to enable construction of the Depot	N/A	04/08/2011	£59,123.43							PMC-003			Previously PWTNC-003
504	Newkirk Place	Review of the banned right turn into Blesheim Place as part of the design for Section 1&2 roads	N/A	05/08/2011	£40,747.09			CEC	20/10/2011			PMC-004	ICO-506	24/10/2011	Previously PWTNC-004
505	Tork Place Terminal Point	Production of a feasibility report, initial feasibility design for option 2, run lane construction etc	11/08/2011									PMC-005			Previously PWTNC-005
506	The Mound	Design for providing a new cycleway from the Mound to Princes Street	N/A	05/08/2011	£1,436.99			CEC	20/10/2011			PMC-006	ICO-503	24/10/2011	Previously PWTNC-006
507	St Andrew's Square	Provide a clarification report and completion of the St Andrew's Square Public Realm design	N/A	23/08/2011	£110,548.00			CEC	20/10/2011			PMC-007	ICO-504	24/10/2011	Previously PWTNC-007
508	Eastfield Avenue	Obtain EIL approval for the highways design drawings at Eastfield Avenue tram crossing	04/08/2011	05/08/2011	£10,065.09			CEC	20/10/2011			PMC-013	ICO-507	24/10/2011	Previously PWTNC-008
509	Cathedral Lane Substation	Design of Cathedral Lane Substation	02/08/2011									PMC-008			Previously PWTNC-009
510	Murrayfield	Murrayfield Accommodation Works										PMC-011			Withdrawn
511	Gogar Lane	Storm Water Connection from Gogar Lodge to the landowners new house/pond	N/A	05/08/2011	£4,740.95							PMC-010			Previously PWTNC-011
512	Ocean Terminal	Re-design of Ocean Terminal Bypass Road	N/A	29/08/2011	£54,819.31			CEC	20/10/2011			PMC-012	ICO-505	24/10/2011	Previously PWTNC-012
513	Various	Revised design to minimise utility diversions / conflicts - used for site trenching and test holes	Various									PMC-015			Previously PWTNC-013 - Estimates requested and instructions issued for A, B, C, D and E
514	Various	Utility Mapping	17/08/2011									PMC-016			Previously PWTNC-014
515	Edinburgh Gateway	Edinburgh Gateway 33KV Cable Protection	26/08/2011									PMC-014			Previously PWTNC-015
516	Depot & Mini Test Track	Additional Workman requirements at Depot and Mini Test Track	04/10/2011												
517	Depot & Mini Test Track	Additional BF Ducts at Depot and Mini Test Track	04/10/2011												
518	The Mound	Design & installation of a new cycleway through the Mound / Spenser Street junction													Previously PWTNC-017 - Withdrawn (Duplicates 506)
519	Tork Place	Design of a temporary tram stop at Tork Place													Previously PWTNC-019 - Withdrawn (Duplicates 505)
520	Depot	Valve chamber access and alteration works to 600mm water main at the Depot	11/06/2011									PMC-009			Previously IHC-137
521	Haymarket	Temporary Accommodation	01/11/2011												
522	Haymarket 3	Road Reconstruction	02/11/2011												
523	Haymarket 3	Foundational CBS / Plate Testing	02/11/2011												
524	Airport to Gyle	WIL Design Finalisation	24/10/2011									PMC-019			
525	Airport to Gyle	Site Access for Remedial Works	26/10/2011												
526	Airport to Gyle	Tram Delivery Temporary Works	02/11/2011												
527	Inglislie	Reburialment of Cows and directly to SGN for the diversion of approximately 120m of 15" steel IP gas main to accommodate the new Edinburgh Tram at Inglislie													
528	Haymarket 3	301 trench excavation to validate utilities	11/11/2011					T&T	18/10/2011				ICO-501	18/10/2011	
529	Section 5C - Gogar Castle Access Road	Design Gogar Castle Access Road tram crossing and approaches	N/A	14/10/2011	£31,307.66							PMC-022			Previously issued as TNC 129
530	Section 6 - Depot Access Road	Amend the design of the Depot Road turning head as per RDC191, Drive 2	N/A	10/11/2011	£10,434.40							PMC-023			Previously issued as TNC 130
531	Edinburgh Gateway	Advance temporary works design	23/11/2011									PMC-014			
532	Princes Street	Temporary traffic management design													
533	Princes Street	500mm Water Main Diversion	24/10/2011		£40,644.00		28/10/2011	CEC	21/10/2011						Approval/AC/TH e-mail
534	IP Insurance Ducts	Install insurance ducts at locations and in formations and sizes as specified													
535	Princes Street	500mm Water Main Diversion - rev 3 draw	24/11/2011				08/11/2011	T&T							Clarification to IHC 533
536	System Wide	Tramstop Cabinets - reduction in 10 years maintenance 540-day	17/11/2011		-56,061.42		08/11/2011								
537	Haymarket 1	Additional rev of Var planer to facilitate slewing of BF ducts	28/11/2011				08/11/2011								
539	System wide	Delay in signing - impact on commencement and completion	28/10/2011		Confidential		28/10/2011								Meetings held 28 Oct, 7 Nov

Progress Report



Appendix 5 – Risk Register

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Original ID	Original Owner	T&T Risk ID	Category	Contract Programme Narrative	Assumptions do not reflect actual conditions on site	Risk Description	Client / Report	Risk Owner (Programme)	Risk Owner (Contract)	Status	Level	RISK ANALYSIS - Pre Mitigated					Risk Score	Risk Level	RISK RESPONSE PLANNING			ADDITIONAL INFO	
												Stability - Cost		Risk Impact - Current					Existing controls	Mitigating Actions	Action Owner		Due Date
												Probability Score	Cost Impact Score	Time Impact Score	Reputation Impact								
4	T&T	PR027	Programme	Contract Programme Narrative	Assumptions do not reflect actual conditions on site	Risk that project delivery team fails to deliver against the Contract Programme Narrative	Potential compensation event trigger if a commitment to work within designated working areas	TAT	Julian Wetherley	Active	Programme	3	4	3	3	33	RED	Assumption review completed	1. Migration plans to be developed for web assumption 2. Master schedule to incorporate the dependencies against which the Programme Narrative assumptions are based	1. Section Leads 2. Tony Wagar	1. 11/11/11 2. 11/11/11		
			Interface	project controls not set up to control methods Lack of clarity of lines of communication	Risk that project delivery team fails to communicate the evolving impact of the risk profile to the client team	damage to 3rd party stakeholder relationships / reputation		TAT	Tony Wagar	Active	Programme	4	2	3	3	29	RED	CoCP Assurance team	1. Gain clarity on subcontract delivery time governance and objectives 2. Discuss with project management / CEC / T1 in view of programme information 3. Review of project stakeholder management arrangements 4. Project execution plan to capture above outcomes	1. David Fox 2. Julian Wetherley 3. Rowena Martin 4. Tony Wagar	1. 11/11/11 2. Ongoing 3. 20/11/11 4. 14/12/11	CEC Risk as well	
11	TAT	PR022	Interface	Removal of CAF from funding offering as part of settlement agreement. Infraco do not take on integration responsibility	Team (CAF) / Infrastructure (Infraco) integration risk	Infrastructure and Tram meet the employers requirements but are incompatible such that system is inoperable		SDS	Alexander Richards	Active	Programme	4	4	4	4	30	RED	Infraco integration manager (Alexander Richards) appointed	1. Review project management / assurance structure to accommodate new contractual arrangements 2. Map out programme interfaces between Infraco and CAF programmes. Develop detailed mitigation strategies for programme interface through points	1. Julian Wetherley 2. Martin Arnes	1. 11/11/11 2. 20/11/11		
7	TAT	PR024	Interface	1. TIE perception that IIR is guaranteed in release of key project info. 2. Current contractor claims from Infraco 3. A weekly progress meetings have broken down and no longer take place	Risk of further breakdown in client / contractor relationship	1. Difficult working relationships with a lack of trust and sharing of knowledge and expertise 2. Cannot accurately monitor progress without an open and honest relationship 3. Lack of joined up approach to problem solving		TAT	Julian Wetherley	Active	Programme	4	4	3	3	26	RED	Control meetings in place Full time independent contact Daily new relationship to "keep side clear" and build new relationship Joint working groups in place Weekly project directors internal meeting	1. Generate Teams building activities at all levels	1. David Fox	1. Ongoing		
12	TAT	PR020	Network Rail	Non delivery of key documents/agreements for IIR approval on time or poor planning or quality of documentation requiring rework and approval	Risk of delay due to failure to obtain IIR approval to build	Delay to all street works		TAT	Shirley Maahat	Active	Programme	5	4	4	3	26	RED	3rd party not approved by IIR Meetings ongoing with IIR	1. Accredit IIR Inspector 2. Obtain IIR agreement on proposals for interface management 3. Detailed review of identified delayed activities 4. Award contractor to production of a detailed plan for the production and submission and approval of IIR approval documentation	1. Martin Arnes 2. Shirley Maahat 3. Shirley Maahat 4. Shirley Maahat	1. 30/11/2011 2. 11/11/11 3. 04/11/11 4. Ongoing		
9	TAT	PR020	Programme	Due to number of different programmes.	Risk that programmes do not integrate and align	disruption to delivery and associated delays		TAT	Tony Wagar	Active	Programme	3	3	4	4	18	RED		1. Integrated Master Schedule to be completed 2. Master Schedule to be tested and agreed with SDS & CAF	1. Tony Wagar 2. Tony Wagar	1. 17/12/11 2. 17/12/11		
14	TAT	PR010	Assurance	1. Due to the lack of stability provided in clearing out routes to SDS 2. Non availability of completed documentation (design assurance statements) 3. Lack of structured responsibility in SDS start	Unable to confirm suitability of design & review the agreed process, therefore unable to complete hand over	1. Works not being accepted 2. Delay to the project 3. Key statements being missed		SDS	Martin Arnes	Active	Project	4	3	3	2	12	RED	Section project managers co-ordinating deliverable documents 2 weekly review meetings monitoring progress	Coordination spreadsheet developed & to be agreed between stakeholders SDS to provide co-ordinated program to support the delivery	???	Over Due	Assurance	
1047	Infraco	PR014	Commercial	Unassessable behaviour in relation to commercial disagreements by any party	Delayed interpretation of contract and / violation of warranties submitted for potential changes	Programme delays while disputes regarding estimates are resolved		TAT	Gary Easton	Active	Programme	3	4	3	4	12	RED	"Adviser guide" to key clauses of contract	1. Mobilise specialist contract resource to support early dialogue on interpretation of contract & communicate to the team 2. Developing a joint programme with Infraco	1. Dave Williams 2. Tony Wagar 3. Gary Easton	1. Ongoing 2. 11/11/11 3. 11/11/11		
75	TAT	PR018	Construction	Poor quality we knowlidge	poor installation or latent defects occur during or after release maintenance period	additional costs & delays		TAT	Julian Wetherley	Active	Programme	3	4	4	3	12	RED	TAT PM's to provide regular feedback on progress, workmanship and quality on site	Maintenance period to be identified now that delay has occurred (N/A D Fee)	Shirley Maahat			
2	TAT	PR019	Design	1. Design requirements not clearly defined and understood by all partners. 2. Design has been subject to repeated variation. 3. Uncontrolled change with inadequate change control 4. Significant number of on agreed client changes in the pipeline	Risk that design fails to be adequately defined and scope understood by all stakeholders	1. Further uncontrolled change on the scheme 2. Lower number of costs and programme. 3. Claims and contractor disputes 4. Risk not factored into change decision process - is change justifiable and appropriate?		TAT	Julian Wetherley	Active	Programme	2	3	3	3	19	AMBER						
71	TIC	PR027	Funding	CEC do not agree funding and contingency on time	Full funding and contingency not available on time for key payment milestones	Additional costs, delays and legal claims		CEC	Julian Wetherley	Active	Programme	2	3	3	4	12	AMBER						
13	TAT	PR022	Assurance	Lack of construction installation certificates Evidence & support Site Acceptance tests etc	Insufficient documentation to meet tenderer requirements	Works to not being accepted Handover deadline not achieved Delay Re-work		SDS	Martin Arnes	Active	Programme	3	3	2	2	8	AMBER	Section project managers co-ordinating deliverable documents 2 weekly review meetings monitoring progress	Coordination spreadsheet developed & to be agreed between stakeholders SDS to provide co-ordinated program to support the delivery	???	Over Due	Assurance	
1023	Infraco	PR021	Commercial	Delay to or lack of agreed formal Variation Instructions.	Variation Instructions not issued timously	Delay to related works and Programme		TAT	Julian Wetherley	Active	Programme	4	2	3	3	8	AMBER		Formal Instructions required for Variations identified to date Process required to formalise future proposals prior to programme construction				
1040	Infraco	PR022	Commercial	Client's failure to authorise interim payments to Infraco	Delayed interim certification and/or payment of Contract sums	Late or non-payment may lead to suspension of work by Infraco		CEC	Julian Wetherley	Active	Programme	2	1	3	2	8	AMBER		Ensure that all payment applications are processed and agreed within Contract timescales				
1026	Infraco	PR023	Project Management	Partial and/or stakeholder objectives change or require design changes	Amendments to design scope from agreed baseline	Programme delay and cost impact		TAT	Julian Wetherley	Active	Programme	2	2	2	2	8	AMBER		CEC to monitor potential changes.				
1025	Infraco	PR024	Contract	Scope of works relating to Wide Area Shielding have not been agreed with SDS	Uncertainty over contractual obligations	Potential additional construction costs		SDS	Julian Wetherley	Active	Programme	2	2	2	1	8	AMBER		Agree Scope of works relating to Wide Area Shielding with SDS				
72	TIC	PR028	CAF	Financial issues not controlled by project	CAF fail to deliver on time due to financial reasons and potential insolvency	Non delivery of items, delays and costs to programme		CEC	Julian Wetherley	Active	Programme	1	3	3	3	8	AMBER						Could convert R021 and this into 17
												Please note that risk identification and analysis workshops are ongoing for each Infraco sector of the project as per the TAT risk management plan. This is the output from the programme level workshop and should not be taken as the final and full risk register.											

Risk Register is not complete as full analysis is still to be carried out

Unique Ref ID	Original Ref ID	T&T Risk ID	Category	Issue	Risk Description	RISK ANALYSIS - Pre Mitigation						RISK RESPONSE PLANNING				RISK ANALYSIS - Post Mitigation						ADDITIONAL INFO											
						Risk Chosen		Risk Owner		Status	Lead	Probability Score	Cost Impact Score	Time Impact Score	Reputation Impact	Risk Score	Risk Level	Existing Controls		Mitigating Actions			Action Owner	Due Date	Probability Score	Cost Impact Score	Time Impact Score	Reputation Impact	Risk Score	Risk Level			
						Proposed	Accepted	Proposed	Accepted									Responsible	Responsible	Responsible	Responsible												
F031	F031	CM002	Design	Final structure requirements	Lower requirements for steel levels at St Andrew's Sq and Sharnock place may require further relocation of utilities or design around	Additional time, design and costs	BDG	Active	Project - On Street	3	3	3	3	36	High												Conflicts and design risk - Covered by BUDGET1777						
PR030	T&T	PR030	Utilities	1. 50% of utilities currently not verified. 2. Current final design and utilities are verified. 3. Delay to verifications due to final machine. 4. Utilities companies not effectively engaged - no internal report with T&T. 5. Finalised access for investigations - London Buses to retain access to workings.	Risk that utilities not to be verified and mitigated through design in advance of contractor work. If utilities are not verified in time, it may result in: 1. In-house work to be delayed resulting in being changed the "Go Live" date. 2. Critical path activity delays. 3. Delaying during delivery - potential modification / scope creep. 4. Potential re-works/retakes, but would carry delay and warranty risk.		T&T	Stephen Lewcock	Active	Project - On Street	3	3	3	3	36	High	Conflicts Schedule Deployment of Microholes as utilities and existing works contractors Engagement of utility companies	1. Engage contractor to negotiate and seek agreement on a revised site handover condition 2. Engage CEC to negotiate route diversions / restrictions in line with phasing of works. 3. Mitigate impacts on in-house based on Lessons learned from ongoing conflicts 4. High time sensitive management of utilities companies	1. Stephen Lewcock 2. Section PM's 3. Section PM's 4. Stephen Lewcock			3	3	3	3	36	High	Cover all					
PR007 PR028	Infra	PR021	Construction	Due to legacy issues and unknown services	Discovery of Track construction conflicts (J&K)	Further diversions requirements Involvement of works contractors Delays to work Delays for approvals Additional costs	T&T	Stephen Lewcock	Active	Project - On Street	3	3	3	3	36	High	Utility workers providing live and dead drawings Building final into the programme to enable all trenching in advance of remedial works to early implementation of traffic management plan and utilising 2 week soft work SD bridging track from Lowland steering of track	Seek CEC approval for bringing TM on in sharnock place early Jan (TM needs to be in place 2nd Nov)	Rob Leach	14/11/2011	3	3	3	3	36	High							
PR007 PR028	Infra	PR022	Utilities	Due to legacy issues and unknown services	Discovery of Track construction conflicts (abandonments)	Infra stop work or seek further instruction Delays to work Delays for approvals Additional costs	T&T	Stephen Lewcock	Active	Project - On Street	3	3	3	3	36	High	Utility workers providing live and dead drawings Building final into the programme to enable all trenching in advance of remedial works to early implementation of traffic management plan and utilising 2 week soft work SD bridging track from Lowland steering of track																
CM012	T&T	CM012	Utilities	Due to design of OLE base locations	OLE bases conflict with existing unknown and known utilities	Infra stop work or seek further instruction Delays to work Delays for approvals Additional costs	T&T	Stephen Lewcock	Active	Project - On Street	3	3	3	3	36	High		Encouraging infra to redesign OLE base foundations to avoid conflicts	Stephen Lewcock	10/11/2011	3	3	3	3	36	High							
PR031	Infra	PR034	Design	Design not finished on time CEC do not approve design	Design approvals milestones are not met due to next programme	Infra unable to meet live programme Delay	CEC	Rob Leach	Active	Project - On Street	4	3	3	4	38	High	Utility workers providing live and dead drawings Building final into the programme to enable all trenching in advance of remedial works to early implementation of traffic management plan and utilising 2 week soft work SD bridging track from Lowland steering of track	regular design team meeting attended by all stakeholders															
PR027	T&T	PR027	Project Management	Delayed provision of permissions from Utility Companies	Legacy issues beyond York Place Delay to reviewing utility demands & acquisition requirements for work sequencing	Delay to construction works and Programme	CEC	Rob Leach	Active	Project - On Street	4	3	3	4	38	High																	
PR038	Infra	CM004	Utilities	Design not finished on time CEC do not approve design	Design approvals milestones are not met due to next programme	Infra unable to meet live programme Delay	T&T	Stephen Lewcock	Active	Project - On Street	4	4	4	4	38	High													Comments				
PR042	Infra	CM005	Project Management	Design not finished on time CEC do not approve design	Design approvals milestones are not met due to next programme	Infra unable to meet live programme Delay	CEC	Rob Leach	Active	Project - On Street	4	3	3	4	38	High																	
PR019	Infra	PR025	Construction	Design not finished on time CEC do not approve design	Design approvals milestones are not met due to next programme	Infra unable to meet live programme Delay	CEC	Rob Leach	Active	Project - On Street	3	3	3	3	36	High	Archaeological strategy in place Mapping of known sites Taking phasing for site operations, on operations and on-site plan																
PR003	Infra	PR017	Project Management	Design not finished on time CEC do not approve design	Design approvals milestones are not met due to next programme	Infra unable to meet live programme Delay	BDG	Active	Project - On Street	4	3	3	3	36	High																		
PR027	Infra	CM008	Construction	Design not finished on time CEC do not approve design	Design approvals milestones are not met due to next programme	Infra unable to meet live programme Delay	BDG	Active	Project - On Street	3	3	3	3	36	High	Design management process Advanced diversion work to ongoing survey/holding works from infra														based on F&D register			
PR022	Infra	PR042	Construction	Design not finished on time CEC do not approve design	Design approvals milestones are not met due to next programme	Infra unable to meet live programme Delay	BDG	Rob Leach	Active	Project - On Street	3	3	3	3	36	High	(1) Update initial Construction Health & Safety management system (2) Identify risks at Works Package Phase stage (3) Identify risks at Works Package Phase stage (4) Identify risks at Works Package Phase stage (5) Identify risks at Works Package Phase stage																
PR041	T&T	PR041	Construction	Design not finished on time CEC do not approve design	Design approvals milestones are not met due to next programme	Infra unable to meet live programme Delay	BDG	Rob Leach	Active	Project - On Street	3	3	3	3	36	High		Material inspection on on-going works															
PR015	Infra	CM007	Project Management	Design not finished on time CEC do not approve design	Design approvals milestones are not met due to next programme	Infra unable to meet live programme Delay	BDG	Active	Project - On Street	3	3	3	3	36	High	TM RP														F&D risk 15 - Merge with PR017 Section 15			
PR022	Infra	PR028	Construction	Design not finished on time CEC do not approve design	Design approvals milestones are not met due to next programme	Infra unable to meet live programme Delay	CEC	Rob Leach	Active	Project - On Street	3	3	3	3	36	High	Utility provider presence on site	Ensure robust sign off process with utility companies	Rob Leach	12/01/2012	3	3	3	3	36	High							
PR028	Infra	PR043	Construction	Design not finished on time CEC do not approve design	Design approvals milestones are not met due to next programme	Infra unable to meet live programme Delay	T&T	Rob Leach	Active	Project - On Street	3	3	3	3	36	High																	
CM011	T&T	CM011	Legal	Design not finished on time CEC do not approve design	Design approvals milestones are not met due to next programme	Infra unable to meet live programme Delay	T&T	Active	Project	3	2	2	2	24	Medium																		
PR018	Infra	PR043	Construction	Design not finished on time CEC do not approve design	Design approvals milestones are not met due to next programme	Infra unable to meet live programme Delay	T&T	Rob Leach	Active	Project - On Street	1	3	3	3	24	Medium		(1) Agreeable who necessary to be in place, based on security based assessment (2) Identify materials or works to be protected (3) Ensure call-out and emergency response plan to be in place and understood													Check back T&T and BDG		
PR018	Infra	PR044	Project Management	Design not finished on time CEC do not approve design	Design approvals milestones are not met due to next programme	Infra unable to meet live programme Delay	BDG	Rob Leach	Active	Project - On Street	1	2	2	2	24	Medium		(1) Effective workface communication/coordination, using existing workface communication process (2) Use of materials sub-contractors and labour resources (3) Identify risks at Works Package Phase stage (4) Identify risks at Works Package Phase stage (5) Identify risks at Works Package Phase stage															
CM010	T&T	CM010	Design	Design not finished on time CEC do not approve design	Design approvals milestones are not met due to next programme	Infra unable to meet live programme Delay	T&T	Opportunity	Project	1	1	1	1	1	1	Low																	
PR038																																	
PR039																																	

Risk Register is not complete as full analysis is still to be carried out