

8.0 COST ENGINEERING

A clear indication of the collaborative working was the joint Cost Engineering Initiative, led by CEC. The Contractors participated fully in this Initiative and real benefits have been, and continue to be, delivered. Those benefits are managed by way of the attached Trackers.

- 9th November 2011 Tracker
- 9th January 2012 Tracker

**Edinburgh Tram Project
Cost Engineering Meeting – 9th November 2011
Action Sheet and CEC Tracker**

No.	Proposer	Proposal	Issues Raised	Action by:	Update as at 12/12/11	Target to Present Proposal
1	Bilfinger Berger	Relaxation of traffic management and embargoes	<ul style="list-style-type: none"> • Need for CEC to be comfortable with traffic diversions/flow • Stakeholder opinion • Bus Station and St James Centre Car Park access 	BBS to draft a proposed traffic management plan for discussion	Proposal to be ready for discussion w/c 12/12/2011 a) TM Plan expected from BBS in w/c 12/12 to be interrogated. b) T&T (planning) assessment of programme benefit – of several scenarios/ timings etc over “on-street” length, not just York Place c) £30k modelling to be commissioned by CEC, focusing just on York Place closure question? – need to ensure this “joins up” with the various scenarios. d) BMcC seeking CEC (HoT etc) “informal” approvals or otherwise of future embargos, St A’s Sq bus station temp relocation options etc	24/11/11

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1 ctd.	Bilfinger Berger	Relaxation of traffic management and embargoes cont'd			<p>e) Needs workshop discussion with CEC / T&T/ BBS, preferably prior to Xmas</p> <p>Bus station closure and relocation would need to be approved. Relocate to Waterloo Place?</p> <p>HGV access to Multrees Walk required (check autotracking).</p>	
2	T&T / TS	OLE Foundations	<ul style="list-style-type: none"> • Design requirements • Possible use of mini piling • Time required for design changes • Staff resources being taken up 	T&T to lead a team investigating design of OLE bases	<p>a) Foundations commencing early 2012 Haymarket – Shandwick PI, opportunity for saving not there.</p> <p>b) York Place solution to be confirmed- but currently seems little potential for VE.</p> <p>c) Programme benefit to be assessed by T&T (planning).</p>	24/11/11

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3	Bilfinger Berger	Edinburgh Gateway Retaining Wall	<ul style="list-style-type: none"> • Programme critical in Jan 2012 • Possible impact on enabling works • Possibility of minimising work under the tram contract 	T&T to define red line boundary and report on options next week	Draft options report on way forward will be prepared for 18/11/11. Meeting with TS and NwR to review requirements of interchange 18/11/11. Final report (following TS meeting) to be issued w/c 21/11/11. Decision required by 09/12/11. a) No apparent VE to CEC. b) Check Transport Scotland/Network Rail etc make timeous decisions (this week?) which avoid adverse affect on overall project?	24/11/11

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4	TS	Track Slab	<ul style="list-style-type: none"> • Performance specifications do not allow for re-design • Specifications are minimum requirements for health and safety 	T&T to check applied load factors	Load factor review near completion. Cost potential saving from deleting slab £1.3m - £2m (depends on extent of excavation) for Haymarket to York Place (plus potential programme /derisking benefit). Programme decision timings to be confirmed by T&T (planning) this week.	24/11/11
5	Bilfinger	Non-use of Setts	<ul style="list-style-type: none"> • Visual Impact • Suitable alternatives • Delineation requirements • Planning/Historic Scotland requirements • Possible £1m saving 	CEC (Bob McCafferty) to investigate alternatives to setts for delineation purposes with Planning and Historic Scotland	CEC (BMcC) to confirm after discussing with Planning, including alternatives such as imprinted concrete. Potential cost saving Planning, Historic Scotland and Edinburgh World Heritage want to retain the setts. Meeting required with Head of Planning.	24/11/11

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5 ctd.	Bilfinger	Non-use of Setts cont'd			A change to the materials would require Prior Approval and would likely take 3 – 6 months to complete.	
6	Bilfinger	Public Realm Works	<ul style="list-style-type: none"> • Planning requirements 	T&T to review design of street furniture	a) Potential £700k saving from leaving repair work to western side of St A's Square until a future CEC project. b) Minimum work for tie-ins being concluded. c) Other public realm, reduced spec – cost Would require revised approvals to be submitted once design completed – likely take 3 – 6 months.	24/11/11
7	CEC	Third Party Relationships	<ul style="list-style-type: none"> • Time taken to gain third party agreements 	CEC (Alan Coyle) to look at financial opportunities	Recovery from third parties is confined to New Ingliston Limited and RBS c£600k CEC action (AC, AS) – others potentially Henderson Global? AS forwarded spreadsheet to T&T.	24/11/11

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7a	CEC	Forth Ports		CEC (Colin Smith) to finalise Minute of Understanding	Points agreed in principle, with the exception of one item, which is under a fresh proposal, exchanged on 16/11/11 CEC action (AC, AS).	24/11/11
7b	Bilfinger	Tram kiosk at airport	<ul style="list-style-type: none"> Possible requirement of BAA 	CEC (Bob McCafferty/ Alistair Sim) to check if kiosk arises from third party agreement	<p>Kiosk is included in the BAA agreement.</p> <p>Kiosk required for revenue protection and welfare for drivers etc.</p> <p>Rough cost £350k for kiosk plus canopy – majority of this could be saved. Needs to be discussed with CEC (AS/BMc) as there would be operational issues in changing.</p> <p>This was a full Planning Application considered by Councillors and there was a lot of debate about the quality of design.</p>	24/11/11

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No.	Proposer	Proposal	Issues Raised	Action by:	Update as at 12/12/11	Target to Present Proposal
7b ctd.	Bilfinger	Tram kiosk at airport cont'd			Reduced quality would unlikely be approved and would take approximately 6 -9 months to complete (plus building warrant).	
8	Bilfinger	Need for tram stop at York Place	<ul style="list-style-type: none"> • Revenue impact • Number of stops 	CEC (Alan Coyle) to investigate revenue benefits of stop	Assumed that Stop is required for revenue benefit reasons – initial spec/ cost review suggests could save £30k with reduced spec, on basis that Stop is “temporary”. CEC discussion/decision.	24/11/11
9	Bilfinger/ CEC	Sale of surplus trams		CEC (Alan Coyle/ Colin Smith) to investigate the market for any possible sale	Contact made with possible provider of opportunity leads. CEC action (AC).	24/11/11

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No.	Proposer	Proposal	Issues Raised	Action by:	Update as at 12/12/11	Target to Present Proposal
10	Bilfinger/ CEC	Cost Transfers	<ul style="list-style-type: none"> • Agreements already in place 	David Gough to provide cost estimate for RBS Gogarburn stop. CEC (Alan Coyle) to investigate possible commercial aspects of tram works CEC (Alistair Sim) to check on possible cost transfer involving Network Rail in regard to bridge deck at Balgreen	Cost estimate will be provided w/c 09/01/2012 RBS – potential review of costs/spec in case RBS funding reduction. CEC (AS) to update on RBS status and others (eg. NIL meeting 20 Dec?) No ability to recover costs in current agreement, and any attempt to re-open this would be very protracted and would likely lead to NR adding in additional issues that we have already negotiated out. Very unlikely to make any savings.	24/11/11
11	Bilfinger	Historic Wall – Shandwick Place		T&T to investigate design as part of street furniture review	Potential saving from not rebuilding £400k to be verified (related to nos. 2 & 16). Potential to also reduce alterations to curved ends (for footpath)? – current costs £290k.	24/11/11

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11 ctd.	Bilfinger	Historic Wall – Shandwick Place cont'd			We are not planning on removing the wall, but it will require protection during pilling works, but that cannot be avoided .	
12	CEC	Track (Materials)	<ul style="list-style-type: none"> • Storage costs • Cancellation costs • Copper wire (security) 	Siemens to provide a proposal detailing options and costs to CEC	Data received from suppliers and is being reviewed. Siemens to provide update by 24/11 Storage issue – see no. 19.	24/11/11
13	Siemens	Omit works at Tower Place and Victoria Docks Bridge	<ul style="list-style-type: none"> • Possible saving of £0.25m 	Siemens to provide proposal to CEC	Data received from suppliers and being reviewed. Siemens to provide update by 24/11 CEC action re agreements with Forth Ports and others eg. Lindsay Rd retaining wall (AC/AS) – potential to reduce works and also take outwith BBS's scope for others to do Remedial work will likely be required to reinstate the bridge as part of the Forth Ports agreement.	24/11/11

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14	CEC	Minimise Client Overhead costs as much as possible	None	All client team members manage overheads efficiently	CEC action (BMc) – ongoing.	24/11/11
15	Bilfinger	Use of recovery vehicle in city centre	<ul style="list-style-type: none"> • Possible saving of £0.6-0.7m • Lothian Buses contract already in place • Possibility of having vehicle on an 'on call' basis 	CEC (Alan Coyle) to investigate and discuss issue with Lothian Buses	<p>Contact made with LB, Ian Craig currently looking at potential cost of extending LB arrangements to examine financial benefit of change.</p> <p>Decision made on recovery vehicle made by City Wide Traffic Management Board.</p> <p>CEC action (AC) appears good opportunity to save costs.</p> <p>(need to discuss with Marshall Poulton).</p>	24/11/11
16	T&T	Road Reconstruction		T&T to Extend and roll out to whole project with this specification approach	<p>New approach agreed - Significant cost/programme saving (after T&T – cm and planning review of this week's BBS drawing). Direct cost saving estimate:</p> <p>150mm deep c £2m; 490mm deep c £0.7m saving.</p>	24/11/11

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No.	Proposer	Proposal	Issues Raised	Action by:	Update as at 12/12/11	Target to Present Proposal
16 ctd.	T&T	Road Reconstruction cont'd			Programme saving and utilities de-risking to be assessed. Agreed in principle – need to review protocol currently being prepared by BBS/T&T	
17	T&T	Re-use materials (setts and kerbs)	<ul style="list-style-type: none"> • Possible free issue from CEC 	CEC (Bob McCafferty) to check Council stocks of appropriate kerbs and setts	Small quantities can be obtained, but there is a cost of around £29/m for cleaning, sorting and palleting. CEC action (BMc), also link with no. 5 if relaxation on setts permitted.	24/11/11
18	TS	Challenge design	<ul style="list-style-type: none"> • Any benefit to BBS • Time for design changes passed 	All – T&T to organise design challenge session	General ongoing requirement, but needs to consider decision timings. Initial issues raised: <ul style="list-style-type: none"> • Alternative off-street track design (say £400k based on approx 1,600m length) 	24/11/11

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18 ctd.	TS	Challenge design cont'd			<ul style="list-style-type: none"> • Stop the design York Place – Newhaven (£100k?) • Archaeology protocols (mitigates a large potential additional delay risk cost) Need to be mindful of the timescales to obtain approvals – building warrants, planning and technical approvals, Scottish Water consents.	•
19	CEC	Storage of Materials	<ul style="list-style-type: none"> • Broxburn contract recently extended for 2 years • Broxburn facility used as a workshop 	T&T to review current storage usage compared to requirements CEC (Bob McCafferty to circulate tie report on storage)	Significant cost negotiation with BBS required on potential cancellation/resale of Future Storage items – feeds into (political) decision on whether CEC definitely wish to store materials for future phase. CEC Property considerations too – this phase	24/11/11

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19 ctd.	CEC	Storage of Materials cont'd			(current storage facility leases at Broxburn & Leith expire prior to 2014 completion) and future phase storage costs (lease, security, etc). Potential loss of fixed costs if do not take future phase materials in early 2012.	
20	CEC	Freight Tram	<ul style="list-style-type: none"> Additional opportunity to utilise "spare" trams, cut carbon footprint and increase utilisation 	CEC (Alan Coyle/Colin Smith) to research other freight tram schemes and report	First meeting held with consultants. Preliminary discussions initiated. CEC (AC/CS) action.	16/12/11

Key to Updates:

Updates in Red – Bilfinger Berger

Updates in Green – Turner & Townsend

Updates in Blue - CEC

Edinburgh Tram Project - Cost Engineering Meeting – 9th January 2012
 CEC Tracker Summary and PM Recommendation

Item No.	Project Team Recommended Proposal as at 9 th January 2012	Proposer	Benefit / Value	Apportionment	Funding Contribution	Turner & Townsend PM Recommendation to Implement
1a	Relaxation of embargoes	BB				✓
1b	No bus lane – Princes Street - TM	BB				✓
1c	Shandwick Place - TM	BB				✓
1d	York Place - TM	BB				✓
2	Edinburgh Gateway Recommendation to provide minimum interface scope which aims to: protect the Rev 4 programme; and future proofs the delivery of the Edinburgh Gateway	BB				✓
3	Non use of Setts - Stamped Concrete in lieu or Contribution from Public Realm Fund	BB				✓
4	De-scope Public Realm works at SAS	BB				✓
5	Financial Recovery from 3 rd Party Agreements <ul style="list-style-type: none"> • New Ingliston • RBS • Henderson Global • CEC • TS • Others 	CEC				✓

Edinburgh Tram Project - Cost Engineering Meeting – 9th January 2012
CEC Tracker Summary and PM Recommendation

Item No.	Project Team Recommended Proposal as at 9 th January 2012	Proposer	Benefit / Value	Apportionment	Funding Contribution	Turner & Townsend PM Recommendation to Implement
5a	De-scope Forth Ports	CEC				✓
5b	Delete Tram Kiosk at Airport	BB				✓
6	Temporary Tram Kiosk presently excluded from Project, £50K to be allowed in client budget	BB				✓
7	Re-deployment of Trams	CEC				✓
8	Track Materials	Siemens				✓
9	Omit works at Tower Place and Victoria Docks	Siemens				✓
10	T&T and CEC to confirm “capped resource” as a blended team. This item to be reported direct to CEC finance teams	CEC				✓
11	Promote shared facility of recovery vehicle, localised at St Andrew Square, or contribution from Lothian Buses	CEC				✓
12	Road Reconstruction Depth	T&T				✓
13	Concept design York Place to Newhaven complete – Design detailing postponed	TS				✓
14	Reduce requirement storage for materials	CEC				✓

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CEC Tracker Summary and PM Recommendation

Item No.	Project Team Recommended Proposal as at 9th January 2012	Proposer	Benefit / Value	Apportionment	Funding Contribution	Turner & Townsend PM Recommendation to Implement
15	Removal of traffic management hire charges at Leith	CEC/BB				✓
16	Cladding at underpass Roseburn Viaduct	BB				✓