

**EDINBURGH TRAM NETWORK PHASE 1B**

Detailed Comparison between Phase 1b Price (September 2007) and Proposed Phase 1b Price (December 2008)

No	Item	Civil			System			TOTAL	Comments
		September 2007	December 2008	Difference	September 2007	December 2008	Difference	Difference	
<b>1.1</b>	<b>Track and Formation; Highways</b>	<b>£7,848,771</b>	<b>£18,634,771</b>	<b>£10,786,000</b>				<b>£10,786,000</b>	
	Sub-Section 3A <sup>1)</sup>	£3,925,446	£10,691,431	£6,765,985				£6,765,985	The new earthwork quantities for excavation and fill are 6 times higher than the old once. Construction has to consider that parallel works with other trades, particularly with the soil nailing works, cannot be performed. Consequently several mobilisation and demobilisation activities are necessary and the duration of the works is much longer. The price increase is affected by higher quantities and higher unit rates caused by less effective performance. The clarification clauses 1.28, 2.1, 2.7, 2.11, 2.14, 2.15 and 2.16 as well as 3.5, 3.7 and 3.9 in the September submission have been deleted regarding the quantities, but not the items 1035, 1037 and 1081.  Additional costs have been considered for the permanent and temporary measures for the protection of badgers according to the "Badger Mitigation Plan".
	Sub-Section 3B	£1,894,412	£4,636,720	£2,742,308				£2,742,308	Increased scope for drainage works and the other details (track system) have affected the working sequence and the duration of the works. Working restrictions at land access points have been considered. The clarification clauses 1.28, 2.1, 2.7, 2.11, 2.14, 2.15 and 2.16 as well as 3.5, 3.7 and 3.9 in the September submission have been deleted regarding the quantities, but not the items 1035, 1037 and 1081.
	Sub-Section 3C	£2,028,913	£3,306,621	£1,277,708				£1,277,708	
<b>1.2</b>	<b>Retaining Walls and Pile Foundation</b>	<b>£2,058,889</b>	<b>£12,307,889</b>	<b>£10,249,000</b>				<b>£10,249,000</b>	
	Sub-Section 3A	£148,855	£793,032	£644,177				£644,177	
	Sub-Section 3B	£62,521	£187,244	£124,723				£124,723	
	Sub-Section 3C	£75,969	£243,535	£167,566				£167,566	
	W100 Roseburn Corridor Retaining Walls	£1,771,544	£11,084,078	£9,312,534				£9,312,534	The old price was based on a provisional quantity (m <sup>2</sup> ) of non-defined retaining structures. The new price is based on the available design comprising bored pile walls, soil nails and gravity walls. The high price is affected by the relatively low performance rates in the narrow corridor and the necessary temporary works. Clause 3.3 of the clarifications is deleted.
<b>1.3</b>	<b>Structures</b>	<b>£4,329,874</b>	<b>£12,032,874</b>	<b>£7,703,000</b>				<b>£7,703,000</b>	
	S1 Roseburn Terrace Bridge	£530,105	£864,566	£334,461				£334,461	The foundation piles are substantially longer and all other quantities have been increased by more than 15%.
	S2 Colt Bridge Viaduct	£981,390	£4,457,999	£3,476,609				£3,476,609	To make a comprehensive offer BBS has investigated whether it would be possible to perform the construction without supporting the arches of the viaduct. This should be part of the original design process! The result was that a structural support of the arches during the construction of the strengthening measures of the viaduct is necessary and this is the main issue for the price increase. Installation and dismantling of the heavy steel arches (in total more than 250 t of structural steel) require heavy tower cranes on both ends of the viaduct. The construction time is heavily extended. Other prices are affected by design changes (e.g. McAlloy bars instead of normal bolts)
	S3 St Georges School Access Bridge	£235,028	£386,801	£151,773				£151,773	
	S4 St Georges School Footbridge	£17,220	£257,190	£239,970				£239,970	
	S5 Ravelston Dykes Bridge	£63,958	£284,857	£220,899				£220,899	
	S6 Craighleith Drive Bridge	£138,831	£342,271	£203,440				£203,440	
	S7 Holiday Inn Access Bridge	£331,753	£369,736	£37,983				£37,983	
	S8 Queensferry Road Bridge	£196,865	£738,527	£541,662				£541,662	
	S9 Groathill Road South Bridge	£159,228	£389,066	£229,838				£229,838	
	S10 Telford Road Bridge	£138,530	£499,006	£360,476				£360,476	
	S11 Drylaw Drive Bridge	£14,783	£44,767	£29,984				£29,984	
	S12 (W2) Crewe Road Gardens Bridge and Ferry Road Retaining Wall	£1,522,183	£3,398,087	£1,875,904				£1,875,904	The retaining wall is completely new designed and consists of bored piles. The lengths of the piles have been optimized according the assumed level of the rock surface. Variation of this assumption would change the costs according the provided provisional unit rates.

**EDINBURGH TRAM NETWORK PHASE 1B**

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No	Item	Civil			System			TOTAL	Comments
		September 2007	December 2008	Difference	September 2007	December 2008	Difference	Difference	
<b>1.4</b>	<b>Tramstops and Substations</b>	<b>£1,478,878</b>	<b>£6,072,878</b>	<b>£4,594,000</b>				<b>£4,594,000</b>	
	Roseburn	£157,947	£1,118,135	£960,188				£960,188	The new design, particularly for the ramps and stairs require heavy temporary support structures.
	Ravelston Dykes	£156,504	£1,595,659	£1,439,155				£1,439,155	The new design, particularly for the ramps and stairs require heavy temporary support structures.
	Craighleith	£157,816	£263,248	£105,432				£105,432	
	Telford Road	£157,816	£287,329	£129,513				£129,513	
	Crewe Toll for Western General Hospital	£157,160	£235,663	£78,503				£78,503	
	West Granton	£157,160	£257,176	£100,016				£100,016	New quantities are measured according the design drawings and the requirements of the system are considered.
	Caroline Park	£157,159	£296,157	£138,998				£138,998	
	Saltire Square (Granton Waterfront)	£157,356	£312,323	£154,967				£154,967	
	Granton (Granton Square)	£98,073	£220,022	£121,949				£121,949	
	Craighleith Substation	£36,977	£457,018	£420,041				£420,041	The old price included the foundation works only.
	Granton Mains East Substation	£41,188	£469,150	£427,962				£427,962	Now the substations are designed by the Consortium to fulfil the requirements of the offered system. The prices include all internal and external works but excluding the system components.
	Granton Road Substation	£43,722	£561,000	£517,278				£517,278	
<b>1.5</b>	<b>System Works</b>				<b>£11,353,896</b>	<b>£13,803,896</b>	<b>£2,450,000</b>	<b>£2,450,000</b>	
	Track and Formation				£5,517,716	£7,242,716	£1,725,000	£1,725,000	Change from SEDRA to Rheda City, change of rail type, more transitions and fixations.
	Supervisory Control & Comms Systems				£1,776,265	£1,776,265	£0	£0	
	Tramstop Equipment				£557,683	£707,683	£150,000	£150,000	The CCTV frames per minute are upgraded in accordance with the current E.R 4.0.
	OHL & Sub-stations				£3,351,910	£3,926,910	£575,000	£575,000	This item includes: stray current protection for low bridges, 11kV Medium Voltage switchgear and increased number of poles (many junctions).
	Tram Supply (Operational Radio + Tram Detection Equipment)				£150,322	£150,322	£0	£0	
	Method Related Charges	<b>£11,983,688</b>	<b>£36,856,588</b>	<b>£24,873,000</b>	<b>£10,646,104</b>	<b>£33,386,104</b>	<b>£22,740,000</b>	<b>£47,613,000</b>	
<b>2</b>	<b>Project and Design Management Civil Part</b>	<b>£5,785,018</b>	<b>£15,319,018</b>	<b>£9,534,000</b>				<b>£13,934,000</b>	This item includes: a.) Staff costs for site supervision, design management and geotechnical support. The cost per capita have been increased caused by the lack of local engineers with the adequate qualification (accommodation, travel expenses, allowance). b.) Traffic Management costs, which are far higher than expected
<b>2</b>	<b>Project and Design Management System Part</b>				<b>£5,801,507</b>	<b>£10,201,507</b>	<b>£4,400,000</b>		Increase of project management costs due to substantially longer execution period for Phase 1b (44 months in total). Longer execution period as "stand-alone" project with no synergies with Phase 1a resources.
<b>3</b>	<b>Design Cost Civil Part</b>		<b>£3,822,000</b>	<b>£3,822,000</b>				<b>£6,322,000</b>	Geotechnical Design: Due to insufficient soil investigations made in advance all design work is based on assumptions which need to be verified and new calculations and new design drawing will be performed. Alignment Process: It is Infracos intention to perform the alignment process under ist own regime with a clear contractual relationship with the SDS provider. The costs for these design works are included.
<b>3</b>	<b>Design Cost System Part</b>				<b>£2,044,597</b>	<b>£4,544,597</b>	<b>£2,500,000</b>		System Design and System Integration at the BAFO stage were subject to due diligence (see Para. 1.18 of Schedule of Clarifications of the BAFO submission).
<b>4</b>	<b>Procurement Process (Splitted)</b>					<b>£2,880,000</b>	<b>£2,880,000</b>	<b>£2,880,000</b>	Loss of synergies in procurement activities and loss of economies of scale. Material cost increase.
<b>5</b>	<b>Mobilisation and Site Installation Civil Part</b>	<b>£2,998,570</b>	<b>£10,315,570</b>	<b>£7,317,000</b>				<b>£9,417,000</b>	A second mobilisation activity and the installation of new facilities caused an increase of the price. Included in this figure are the costs for temporary works design, costs for automobile for the staff (increase in number and duration), the running costs of the facilities with unproductive labour and the equipment costs not covered in the rates.
<b>5</b>	<b>Mobilisation and Site Installation System Part</b>					<b>£2,100,000</b>	<b>£2,100,000</b>		Price escalation of the systems element up to 13 February 2013.
<b>6</b>	<b>Escalation</b>				<b>£2,800,000</b>	<b>£5,800,000</b>	<b>£3,000,000</b>	<b>£3,000,000</b>	
<b>7</b>	<b>Discount on 1a</b>	<b>£3,200,000</b>	<b>£3,200,000</b>	<b>£0</b>				<b>£0</b>	
<b>8</b>	<b>Exchange Rate Civil Part</b>		<b>£4,200,000</b>	<b>£4,200,000</b>				<b>£12,060,000</b>	The Euro has gained more than 30% compared to the pound (from 0.70 to 0.93 GBP for 1 Euro)
<b>8</b>	<b>Exchange Rate System Part</b>					<b>£7,860,000</b>	<b>£7,860,000</b>		
	<b>Total Section 3</b>	<b>£27,700,000</b>	<b>£85,905,000</b>	<b>£58,205,000</b>	<b>£22,000,000</b>	<b>£47,190,000</b>	<b>£25,190,000</b>	<b>£83,395,000</b>	*) The amount of £947,141 representing the Provisional Sums was wrongly included in the submitted figure and it is now deducted.