



Minutes of BBS Technical Meeting

Date: 12th July 2007

Time: 9am

Venue: MacAdam Room, Citypoint

In attendance

- David Powell – tie
- Bruce Ennion - SDS
- Alan Dolan - SDS
- Toby Kliskey – TSS
- Andy Steel – TSS
- Michael Jesuarul - tie
- Jim Harries - Transdev
- Bob Dawson – tie (part – to item 6)
- Goeran Wendt - Siemens
- Michael Muller - Siemens
- Guido do Bakker - Siemens
- Detlef Derwenskus - Siemens
- Stephen Wright - Siemens
- Scott McFadzen - Bilfinger Berger
- Bernhard Brauns - Siemens
- Georg Thal - Siemens
- Nigel Baskerville - Siemens
- Paris Lappas - Siemens
- Peter Showell - Siemens
- Richard Shaw - Siemens

Item	Comment	Action
1.0	Introductions	
	<ul style="list-style-type: none"> • DP outlined current status of the project with support from the Scottish Parliament and funding allocated. Noted that tie team will start to evolve into a delivery team to work with. • Meeting delegates introduced themselves. 	
2.0	Consortium Structure	
	<ul style="list-style-type: none"> • Non incorporated JV lead by Bilfinger Berger. • Joint and several liability • PCG available with bonds 	Noted

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5.0	Health & Safety	
	<ul style="list-style-type: none"> • First item on meetings agenda. • AFR target of 0.25 is achievable if everyone works hard on the same issue. • Incentive schemes will be used but public safety is paramount. • Considerate Constructors Scheme is included. • Best Practice environmental and sustainability will be used. Re-use of equipment such as traffic signals will be achieved where possible (currently priced within a Provisional Sum). 	
6.0	Programme	
	<ul style="list-style-type: none"> • 3 month mobilisation, 2.5 years for 1a construction represents £8m per month on average. • Will do a full P3e including all of the different suppliers and contractors. • Time/chainage only developed as graphical representation of P3e. • Schedule will be cost loaded and used as main Earned Value Analysis (EVA) and performance analyses. • Will use appropriate graphical tools to allow site staff to understand the delivery needs. • 40 hour standard week used for programming although a 65 hour week will be worked on site. This allows for non-productive activities such as breaks, transport, weather etc. • Constraints such as junction & rail possessions are not included in current programme. • Uses industry norms for durations of activities. • Scope as per tender documents. • MUDFA diversions completion is used as the kick-off dates for work sections. • Seasonal work such as tree clearance may have an affect on the programme if there is slippage of contract award. • Expectation that all SDS detail design will be complete by contract award date. • Programme tries to provide some linear continuity of work activities for both civils and E&M work. • Needs about 15 work fronts at any one time in order to achieve the required output. • Considered some detailed programme examples such as Leith Docks, Picardy Place. • Track installation lengths normally defined by the junctions location. Need full TROs in place to remove traffic from specific work site locations. • Programme assumes early demolition of all structures and it may be advantageous to add them into the Advance Works. • Resource levelling will be required on intensive sections of the route. • Some road closures will be needed at defined locations and the programme assumes these can be achieved to suit the BBS 	

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	<p>programme.</p> <ul style="list-style-type: none"> Off-street track route will need to be achieved in a linear manner with access only from key points whereas on-street sections can be accessed from one side all along the section. Phase 1b access points and working constraints are very difficult but BBS have recognised this in the programme and bid. Sub-station civils work may be done early but modular units and commissioning will take about 6-8 weeks each with some further testing thereafter. 	
7.0	Risk Management	
	<ul style="list-style-type: none"> Risk schedule will be developed and maintained by dedicated Risk Manager on a 4 weekly cycle. Major risks are CEC interface, Network Rail and Scottish Power. No particular tool is used. BB quite happy with their Excel spreadsheet. BBS will share visibility of risk management with tie 	
8.0	Management of SDS	
	<ul style="list-style-type: none"> BBS very keen to fully integrate the SDS team into the consortium with an understanding of deliverables and division of scope between PB/Halcrow and others. BBS will consider passing design delivery to in-house teams and additional external consultants if need be but needs detailed discussion with PB first. BBS to provide an indication of which disciplines they will have designed by others and those where there is no point in PB continuing to develop detail designs. PB noted that redesign of key elements is likely to be subject to Planning Constraints. 	BBS
9.0	Management of Tramco	
	<ul style="list-style-type: none"> BBS willing to reconsider the best contractual way to integrate the Tramco into the team both for capex and maintenance contracts. tie described the Tramco/Infraco integration matrix and asked BBS to advise if there is any other data needed to confirm the bid. 	BBS
10.0	Interaction with Third Parties	
	<ul style="list-style-type: none"> BBS recognise the considerable number of parties to be dealt with. A detailed meeting on Operations integration with Transdev will be arranged in due course. 	tie
11.0	Trackwork	
	<ul style="list-style-type: none"> Noted the different forms as ballasted track, direct fixation, Green track (Sedra SDS or CDM) and Street track. 	

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	<ul style="list-style-type: none"> Bid is based on Sedra SDS. ERs request an encapsulated rail system which CDM achieves. BBS to supply cross section of the grass track use of Sedra and identify how drainage works Track installation will be procured through a subcontract from Siemens. There is no stray current watt or collector wire. 385mm total depth of construction. BBS to provide a dimensioned drawing (1.2.5). BBS have no known concerns with the wheel/rail interface report from SDS. 	<p>BBS</p> <p>BBS</p>
12.0	OLE	
	<ul style="list-style-type: none"> Standard Siemens systems to be used adapted to meet the specific application in ETN. Providing standard materials allows excellent availability. Trolley wire in town and catenary over off-street route. tie noted that pole isolators will not be acceptable to CEC Planners. BBS to reprice their bid to provide the specified OLE installation. tie will find out if the catenary system can be used from Haymarket Yards to Airport. tie will reissue a clarification question to give guidance. BBS to advise if any building fixings are likely to be moved from the SDS proposals. tie to ask a further question regarding auto tension or fixed termination OLE. 	<p>BBS</p> <p>tie</p> <p>BBS</p> <p>tie</p>
13.0	Substation	
	<ul style="list-style-type: none"> Again using all standard, tried and tested Siemens systems. Continuous stray current monitoring. No need for Russell Road Paralleling hut. Cable cross sections have been sized according to the Siemens Simulation. BBS to identify if there are any differences in the Simulation from SDS. 	BBS
14.0	Signalling & Comms	
	<ul style="list-style-type: none"> BBS described the Signalling and Communications architecture system diagram. There is a provisional sum included to replace <u>some</u> UTC traffic controllers. BBS to clarify. Conventional loops used to create TPDS signals. Operational Data Network. tie advised that the ERs may be relaxed to allow a reduced number of frames per second recording for CCTV. The number of cameras will also be reduced. tie noted the restructuring of the ERs to be issued next week. 	<p>BBS</p> <p>tie</p> <p>tie</p>

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15.0	Other LV Supplies	
	<ul style="list-style-type: none"> Mostly provided from local Scottish Power distribution network. 4 hour UPS back-up will be provided. Separate LV supply to 110V DC rectifier & battery charging. Costs are included with caveat to detail survey of availability. Substation domestic power will come from the separate LV feed (not from the 11kV supply). 	
16.0	TVM	
	<ul style="list-style-type: none"> tie advised that TVM will now be supplied by CEC/TEL. 	
17.0	Depot Equipment	
	<ul style="list-style-type: none"> Noted that extensive TQ reply has now been submitted. tie requested detailed cost information against all pieces of equipment so that evaluation against the Tramco bids could be made. BBS will consider offering alternative procurement for the depot equipment (leases etc.). 	BBS BBS
18.0	RAMS	
	<ul style="list-style-type: none"> Expectation of the RAMS figures requirements will be calculated and specified at the equipment purchasing stage. BBS seem to be happy to comply with the RAMS targets in ERs. BBS to confirm. 	BBS
19.0	Systems Integration	
	<ul style="list-style-type: none"> BBS explained the V-concept graphic contained in the bid documentation. Testing and Commissioning cycle explained as following the tie requirements. 	
20.0	ROGS	
	<ul style="list-style-type: none"> Competent Person (John Dolan - Interfleet) has been appointed. 	
21.0	Approvals	
	<ul style="list-style-type: none"> SDS requested to provide a Schedule of Approvals that they expect to provide and current status. 	tie
22.0	Interaction with MUDFA	
	<ul style="list-style-type: none"> Trying to keep the Infraco and MUDFA separated. 	

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23.0	AOB	
	<ul style="list-style-type: none"> • BBS to issue the ERs Compliance Matrix. Advise where standard BBS solutions are at variance to ERs. • tie is arranging a separate workshop on roads and highways work. • BBS are pricing a 10 year maintenance period with an indication for a 20 year period. • Maintenance price covers both preventative and corrective maintenance. • Proposals required for providing standard rates against graffiti, vandalism and accident damage repair. • BBS identifies current maintenance contracts for rolling stock and infrastructure delivered in different contractual arrangements. • BBS will revise their proposal for maintenance. • tie noted that the issue of the Roads Demarcation Agreement is imminent. • tie to identify the point in the Infraco contract when the maintenance contract is activated. • BBS to confirm where the spares have been priced within the bid and what is on the list. 	<p>BBS</p> <p>tie</p> <p>BBS</p> <p>BBS</p> <p>BBS</p> <p>BBS</p> <p>tie</p> <p>tie</p> <p>BBS</p>

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