

TH/SCS 13-Jan-09

As part of the exercise to prepare a robust and achievable programme to completion of the Edinburgh Tram Project a number of outstanding issues still need to be resolved to ensure that the activities and logic contained in the programme reflects the total recognised remaining workscope and identifies all the construction and other constraints to successful achievement.

The intent is to create from first principle an integrated programme of fresh and tested logic in a sequential fashion working through each intermediate section in isolation to obtain the best possible Open for Revenue Service date for Edinburgh Tram.

The programmes for each intermediate section will then be logically “knitted” together whilst recognising and maintaining, where possible, acceptable resource profiles and construction constraints.

To achieve the above aim, the following issues will have to be resolved or alternatively assumptions made until the required information is available.

The accuracy of the final programme output will be dependent on the number and quality of remaining assumptions.

#### **Full Programme Issues**

- MUDFA Realistic de-scoped and achievable programme identifying all Telecoms and other associated works .
- SDS realistic and achievable IFC programme complete with all required approvals and consents.
- Consortium integrated design programme identifying inter-relationship with construction activities.
- NR possession programme
- NR notification and approval periods – Form “C” etc
- Generic Notice Periods – WPP preparation and submission, method statements, Stakeholder notifications etc
- Recognised Embargos and challenges of same
- NATO Conference
- CocP – challenges to?
- 3<sup>RD</sup> Party Issues
  - BAA – Burnside Rd, Kiosk etc
  - Forth Ports – various issues and approvals
  - SRU – Access and event timetables.
- MUDFA Scope transferred to Infracore
- Potential requirements for programme prioritisation i.e. Haymarket to Airport as quickly as possible?
- Engineering solution to abandoned services – Methodology - material build up following removal of services or re-inforced slab over top of abandoned – general concept?

- Siemens
  - Integrated design programme
  - Further detail on design, procurement and commissioning of all packages i.e. signalling, comms etc
  - Installation methodology – OHL and track together?
- Changes required to the programme brought about by the integrated design e.g. OHLE currently programmed at Intermediate section level but terminations not designed at same level.
- Programme alterations required through design development from Nov 2007 base to date.
- Other Misalignment issues
- Potential other semi-recognised design issues i.e. S21B Murrayfield Stadium RW is under re-design which will affect S21D Murrayfield Pitches RW but S21D not identified as requiring re-design as yet. Other potentials such as S26 South Gyle Access bridge, W11 Bankhead Drive RW.
- Incorporation of existing agreed programmes e.g. Princes Street
- Other developments
  - Gogarburn Interchange
  - Princes Street – Demolition and New Developments
  - Haymarket Station
  - Include 3<sup>rd</sup> Party Project Conflict Matrix (Note only)
- Traffic Management constraints – confirmation of what is and what is not acceptable?
  - 2 out of 3 to remain open (Lothian Rd, Mound, Waverley bridge)
  - 2 out of 3 to remain open (Russell Rd, Roseburn Street, Balgreen Rd)
- Production rates
  - Track and OHL
  - Others?
- Construction Resources
- Resource continuity workscopes
- Procurement of materials
- Change Notices – how many?
- Commissioning Strategy – does it fit with construction sequencing?
- Shadow running requirements – remains as is?
- Tram delivery and storage should Depot be unavailable
- E&M systems Design – Immunisation
- Scottish Water Consents
- Demarcation between tram and general roadway
- Building Fixings
- Final Mobilisation
- Requirement now identified in design for a starter layer for trackwork – locations?
- Removal of redundant programme activities i.e. A8 Retained Wall
- Correcting programme activities and logic to reflect detail in IFC drawings
- Utilities that were originally identified as not being able to be done prior to Infracore. Where do they sit?

- Requirement or not for junction at 1a/1b interchange for future works.
- Line 1b Programme – assessment of impact on resource profiles if in similar timescale.
- Scottish Power connections to sub-stations
- Testing and commissioning of sub-stations
- Timescale between TTRO and final scheme TRO – what are limitations?

## **Sectional Issues**

### On-Street (Newhaven to Haymarket) General Items

- Abandoned services
- Soft formations
- Revised terminations for OHLE

### Section 1a Newhaven to Foot of the Walk

- Lindsay Road RW – Agreed route for utilities diversions and final designs.
- Ocean Terminal By-pass road
- Tower Place bridge – diversion of existing utilities
- Victoria Dock Entrance bridge – diversion of existing utilities
- Public realm works in Bernard Street
- Remaining archaeological works i.e. Constitution Street

### Section 1b Foot of the Walk to McDonald Road

- Changes to construction methodology due to CEC requirement to maintain greater than indicated in Chapter 8 running lanes. Not known at contract award.

### Section 1c McDonald Road to Princes Street West

- Picardy Place design / change notice – programme based on available design at Nov.07
- York Place based on design available at Nov.07
- (McDonald Rd to Picardy Place) Changes to construction methodology due to CEC requirement to maintain greater than indicated in Chapter 8 running lanes. Not known at contract award.
- St Andrew Square public realm works.

### Section 1d Princes Street West to Haymarket

- Use agreed programme
- Mis-alignment issues for road reconstruction from Shandwick to Haymarket junction.

### Section 2a Haymarket to Roseburn Junction

- S19 Haymarket viaduct – redesign of temporary works / RW at Bankseat 1
- Verity House Access Road

#### Section 5a Roseburn Junction to Balgreen Road

- Sequencing of structures based on latest design and access
- W3/W4 Russell Road RW – Sewer clash with wall foundation
- Scotrail Depot permanent car-park
- Underground petrol tank at NCR site
- NR Diesel tanks
- W18 Murrayfield TS RW redesign
- Instruct, estimate, Design and construction of Murrayfield accommodation works.
- SRU / Murrayfield recognised events
  - Heiniken Cup Final – May 2009?
  - Oasis concert – June 2009
- S21A Roseburn Street Viaduct VE design
- S21B Murrayfield Stadium RW – redesign due to S21A redesign
- S21D Murrayfield Pitches RW – redesign due to S21A redesign
- W8 Baird Drive RW – temporary works re-design
- S22A Balgreen Rd bridge - Development of programme based on known design and access
- S22B NR Balgreen Rd Access bridge - Development of programme based on known design and access
- W9 Balgreen Rdc RW - Development of programme based on known design and access

#### Section 5b Balgreen Road to Edinburgh Park Central

- Redesign of S26 South Gyle Access bridge.
- Redesign of W11 Bankhead Drive RW.
- S27 Edinburgh Park viaduct – VE resolved?
- Implementation of works to facilitate closure of guided busway.

#### Section 5c Edinburgh Park Central to Gogarburn

- A8 Underpass – Sewer diversion programme
- RBS Gogarburn Tramstop

#### Section 6a Gogar Depot

- Steelwork procurement

#### Section 7 Gogarburn to Edinburgh Airport

- Utility diversion programme between IPR and Airport.
- Resolution of 3<sup>rd</sup> Party issues at IPR and Edinburgh Airport.

### Indicative Timescales

- w/c 19<sup>th</sup> Jan – information gathering for Resolution of issues and agreement on assumptions
- w/c 26<sup>th</sup> Jan – (5 weeks) preparation of Intermediate Section programmes. Sequencing dependant on available information and recognised priorities.
- w/c 2<sup>nd</sup> March “Knitting” together of Intermediate sectional logic.
- w/c 9<sup>th</sup> March – 1<sup>st</sup> Draft available for review and comment
- w/c 16<sup>th</sup> March – inclusion of comments and sign-off.

The above timescales are heavily dependent on obtaining early resolution of the aforementioned issues.

As per Programme Analysis document of 15<sup>th</sup> December 2008 the focus of the compilation of the programme will be by BSC (Steve Sharp) 3 days per week with ongoing review carried out 2 days per week at **tie** Citypoint Office.

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