

## Edinburgh TRAM Project

**Paper to** : **Utility Sub-Committee**

**Subject** : **Construction Director's Report**

**Date** : **26 September 2007**

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### Executive Summary

#### Section 1A

Works on road sections recommenced with the lifting of the August embargo.

Multi utility trenching (common trenching) adopted within the Casino Square section to minimise multiple excavation and programme duration. Road crossings at roundabout section ongoing for completion by October 12 2007 – commencement of Forth Port Winter embargo (October 13 2007 – End of January 2008).

Recent realignment of tramline at bottom Constitution Street has resulted in redesign requirements in this area. Construction within this area has been stopped. No abortive works incurred but do not anticipate recommencement in this area prior to February'08.

**(Refer Appendix 1 for progress)**

#### Section 1B

Diversions works commenced 3<sup>rd</sup> September 2007 on McDonald Road to Iona Street section, Northbound carriageway, Leith Walk. Trial holes continuing along Southbound carriageway. Works to temporary divert water mains complete releasing section for diversions works. McDonald Road Eastbound section closed off 10<sup>th</sup> September 2007 for 3 weeks for associated diversion tie-ins. Experiencing problems obtaining sufficient space for diverted utilities within McDonald Road due to level of services encountered. Delivery team reassessing design requirements for this section.

**(Refer to Appendix 2 for progress – trial holes)**

#### Section 5A

Works halted within section due to exposure of 132KV Transmission lines during investigatory work on locating Telecom chambers at road crossing positions. Subsequent site inspection by Scottish Power confirmed no damage to cables and following satisfactory protection measures, confirmed works could proceed. This however was not permitted until an internal investigation was carried out and an action plan implemented to prevent recurrence. This was led by the Construction Director due to the extreme nature of the incident. Works recommenced 4<sup>th</sup> September 2007. Progress has been good despite this initial setback.

**(Refer to Appendix 3 for progress)**

## Section 6 (Utilities)

Preparatory works to allow slewing of the 700m section of C&W cable/ducting has been complete. Slewing operation due to commence Wednesday 19 September 2007. This operation will last 3 days. Revised 250mm diameter water main diversion has been accepted, in principle, which reduces diversion significantly. 800mm diameter single water main diversion has also been accepted by Scottish Water. This obviates the need for an alternative A8 crossing (potential cost avoidance of £1M) in addition to reducing material quantities by almost 50%.

## Section 6 (Gogar Depot)

Phase II of advance earthwork operations progressing well and initial stage of the works are complete i.e.; the works required to allow the utility diversions to commence (noted above). Earthwork operations during the service diversions will be minimised and exportation off-site will be temporarily suspended. Volume of material removed within Phase II to date – 57,400 m<sup>3</sup> excavated to date (Phase II).

Position of depot has been amended to reflect the removal of the piled retaining wall adjacent to the A8. Some abortive earthworks has occurred (Phase I), but this is a minimum and has been restricted to the SW corner of the site.

## (Refer to Appendix 4 – Overall MUDFA Progress)

### 1.0 Safety

- There were no accidents reported this period. The accident frequency rate (AFR) remains 0.00.

Three incidents occurred as follows:

Damage to street lighting cable 5A, Incident Investigation Review, completed 11/09/07

Damage to 4" water main 1A, Incident Investigation Review, completed 11/09/07

Near miss 132 KV Cable, Incident Investigation Review, completed 12/09/07. Actions noted from review implemented with immediate effect.

- Four site inspections were undertaken in the period as follows:

Two inspections at Gogarburn depot; AMIS completed phase 1 works, site agent has reviewed/updated bulk earthworks method statement/risk assessments and the document now reflects current earthworks (4 metre dig). Trench being excavated at Gogar depot site for cable and wireless slew.

Two site inspections carried out at utilities diversions as follows:

Inspection 1 carried out 16/08/07 8 x Actions identified, all actions closed out by 24/08/07.

Inspection 2 carried 25/08/07 4 x Actions identified 4 x observations made Meeting arranged to close out actions 13/09/07. 1 x NCR raised (carriage of tool and equipment); contractor H&S inspections remain a concern issue being discussed at HSQE level.

- Three safety tours were completed.

## **2.0 Progress Period (End of August)**

### **2.1 Construction**

- Works now progressing on 5 no front – Sections 1A, 1B, 5A, 6 (Depot) and 6 (Utilities). Diversionary works progressing in Sections 1A, 1B and 5A.
- Trial holes ongoing in section 1A.
- Phase II earthworks ongoing during period in Section 6.
- CCTV works on programme and due for completion mid October 2007 (excluding Constitution Street)

### **2.2 Design**

- IFC Drawings and work packs have now been forwarded to AMIS for Section 1a, (13-15), 1b (27-31), 5a (1-3)
- Drawings for approval have been issued for 1b (22-26), 1c (22-44), 1c (45-48), 5b (6-13)
- Drawings for approval which should have been delivered are; Section 1a (16-21), (Constitution Street) SDS now require AS laid drawings from plates 14-15 this to integrate into alignment in 16.
- Trial hole investigations are being programmed throughout the currency of the project and used to inform the design prior to IFC issue.

**See Appendix 5 – SDS Design Status September 2007**

### **2.3 Traffic Management**

- Initial works are to be undertaken to carry out the cross carriageway ducting of McDonald Road. This will involve the partial closure of McDonald Road W/B for a week commencing 10 September 2007 and then the further 2-week full closure of McDonald Road from 17 September 2007. The emergency services in the vicinity to these works have been contacted and suitable provision has been made to allow access as required. The Traffic Management Review Panel (TMRP) has approved these provisions in principle.
- The Traffic Management proposals for all Trial Holes required on Leith Walk, to determine the location and depth of the existing services, have been agreed by the Tram Project Stakeholders. These works commenced the

week starting 30 July 2207. 83 trial holes are programmed along the length of Leith Walk; these works are programmed to be completed at start of October 2007.

- The CCTV surveys works required throughout the length of the tramline are ongoing. The remaining surveys that require to be undertaken are on Constitution Street, Princes Street and Leith Walk. However, there will also be the need to revisit a number of the sites to complete the surveys. AMIS have been instructed to carry out CCTV survey works in Section 3A, 3B and 3C; the Traffic Management required for these works has yet to be raised at the TMRP.
- The Notification of Alterations to Traffic Management Procedure has been prepared and accepted in principle by the Stakeholders. The document is currently going through the tie approval process prior to adoption.

## **2.4 Communications & Stakeholder**

### **Media**

- Thanks to the ongoing efforts of the stakeholder liaison team in keeping local businesses and residents informed of planned construction work and traffic management, there has been no media coverage regarding disruption being caused by MUDFA work.
- Major communications effort is now focusing on the imminent announcements of TRAMCO preferred bidder, INFRACO preferred bidder and submission of Final Business Case to CEC.

### **Site works**

- Communications and Stakeholder Management activity remains ongoing in support of both live and planned work.

### **Incident Response**

- Communications and Stakeholder staff have been on call 24/7 since the start of the MUDFA works.

### **Customer Interaction Cycle**

- Major activity is now in progress to communicate with the areas affected by the initial MUDFA works. The following customer packs and notification letters have been issued:-

## Work Area Communications

<u>Work Area</u>	<u>Nos. of Packs</u>	<u>Date Issued</u>
Tower St. to Commercial Wharf	300	28/6/07
McDonald Road to Iona Street	800	10/7/07
Princes St./ The Mound (investigation work)	50	18/7/07
Russell Road to Balgreen Road	700	24/7/07
Constitution Street	100	29/7/07
Princes St./ The Mound	75	01/8/07
Jane St. road closure	75	02/8/07
Constitution Street	100	13/8/07
Casselbank Street road closure	200	21/8/07
Gayfield Square	130	31/8/07
Ocean Drive extension of work period	275	03/9/07
McDonald Road./ Brunswick Road.	150	10/9/07
Constitution St.	225	10/9/07

### Stakeholder Activity Reports

Monthly Contacts

**See Appendix 6**

### **3.0 Commercial**

- A proposal for incentivisation of the Works Orders and preliminaries has been discussed and agreed with AMIS. The final wording is being prepared and **tie** is currently considering how this will be formalised and incorporated in the MUDFA Agreement.
- Change orders and change notices are being issued to cater for contract additions.

#### **See Appendix 7 - Master Schedule Change Orders**

- Scottish Power (SP) have issued a revised draft of the proposed Agreement with **tie**, amending the contractual responsibility for carrying out and completing the required cable jointing works from SP to **tie**. This issue is being discussed between Directors of SP and **tie** with a view to resolution as soon as possible.
- Scotia Gas Network (SGN) have intimated that the MUDFA rates and prices are greater than they had expected, as a result the approval of the proposed gas diversion designs may be delayed or withheld. The issue is being discussed between Directors of SGN and **tie** with a view to resolution as soon as possible. A formal, agreed and signed SGN Agreement is in place for the works and **tie** have complied with the Agreement. The Agreement contains Dispute Resolution Procedures if required. Meeting arranged with SGN

Network Director and Willie Gallagher to discuss issues raised 25<sup>th</sup> September.

#### 4.0 Operations Next Period

##### 4.1 Construction

- Completion of road diversions section 1A -Ocean drive prior to commencement of embargo 12th October 2007. (3 month embargo)
- Completion of diversionary works within McDonald Road in Leith Walk. Commencement South of junction.
- Completion of diversionary works within section 5A , Russell Road to Roseburn Street.
- Completion of C&W diversion in section 6
- Completion of all trial holes in Leith Walk.

##### 4.2 Design

Refer to Appendix 8 – Forecast Design Issue October 2007

##### 4.3 Programme

- Development of Revision 06 draft by end of September 2007 for review.
- Continued development of Key Performance Indicators for individual sections.
- Complete production of construction programmes – sections 1A, 1B, 5A and 6.

##### 4.4 Commercial

- A MUDFA Procurement Process has been prepared and will be issued for comment/approval prior to implementation – anticipated implementation date is 21 September 2007.
- A review of the current formal Statutory Utility processes, to meet the requirements of the NRSWA, in conjunction with Corduroy, is proposed for the next period. A paper will be prepared and submitted seeking approval for the limited involvement of Corduroy.
- There is a significant potential issue, between CEC/**tie**/SU's/TEL, related to access to SU apparatus which will remain within the DKE, specifically along Constitution Street. This issue is being explored with the SU's and **tie**'s legal representatives are reviewing the Agreements to establish the current legal position. A paper will be produced by **tie** as a basis for discussion with the affected parties – **tie** is working towards reaching an agreement in principle by 28 September 2007.

#### 5.0 Initiatives

- Review of service utility diversions requirements based on revised depth and protection. Area of review 600-1200 depth range below FRL. Potential 10% saving in measured works (approx £1m).
- Co-location of SDS designer at MUDFA offices to initiate prompt response to technical issues/queries – minimise time delay. In place 13 August 2007.
- Maximise recovery of costs associated with SUC C4 estimates via specialist consultant advice/input (Berkeleys/Corduroys). Meeting set up 20<sup>th</sup> September with Corduroys.
- Provision of foam concrete in lieu of traditional backfill – additional cost of concrete set off against time savings in labour, plant and programme overall.
- Provision for independent survey team to carry out dilapidation survey along tram route (SDS responsibility) – protect tie's position from potential 3<sup>rd</sup> party claims post MUDFA and INFRACO.
- RATs proposal put forward for section 7 – presently under review.

## 6.0 Key Issues/Blockers

- **Refer to Appendix 9** for primary risks
- SDS programme for IFC drawing issue – significant risk to maintaining continuity of work for MUDFA team. **Refer to Appendix 10**
- SGN issues relating to works outwith LOD.
- Design works outside LOD
- Section 1A redesign – bottom Constitution Street and Ocean Terminal to Newhaven.
- Provision of temporary pedestrian crossings along route during construction.
- BTOpenreach programme works to deliver to suit tie needs, specific issue with cabling programme.

## 7.0 Recommendations

DPD is requested to:

- Note the contents of this paper
- Note challenges and workload entailed in the delivery of the MUDFA Programme and associated works and actions/mitigation measures being implemented to minimise costs and delays.

<b>Proposed</b>	Graeme Barclay Construction Director	26 September 2007
<b>Recommended</b>	Matthew Crosse Project Director	26 September 2007