



Transport Edinburgh
Trams for Edinburgh
Lothian Buses

MUDFA Sub Committee Report Papers For Meeting 26 September 2007

Distribution

Willie Gallagher
Matthew Crosse
Tom Condie
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Pat Diamond
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Tom Clark
Miriam Thorne
Keith Rimmer
Bill Campbell
Bill Nicholls

Jason Chandler
Alan Dolan
Andy Malkin



Agenda

Sub-Committee Meeting

to be held at MUDFA Project Office, Leith

on Wednesday 26 September 2007 at 2pm

1. Actions from previous minutes.

2. Construction Director's Report

- Executive Summary
- Safety
- Progress (period)
- Commercial
- Operations (next period)
- Initiatives
- Key Issues/Blockers
- Recommendations

3. Appendices

- Appendix 1: Progress Performance Curve – S1A
- Appendix 2: Trial Holes Progress Curve – S1B
- Appendix 3: Progress Performance Curve – S5A
- Appendix 4: Progress Performance Curve – Overall Performance
- Appendix 5: SDS Design Status – September 2007
- Appendix 6: Comms: Monthly Contacts
- Appendix 7: Commercial: Master Schedule
- Appendix 8: Forecast Design Issue - October 2007
- Appendix 9: Primary Risks
- Appendix 10: SDS Programme for IFC Drawing Issue

4. AOB



MUDFA

Sub-Committee Meeting

AGENDA ITEM NO 1

Actions from Previous Minutes

tie Limited

Minutes of Sub-Committee Board Meeting

Date: 29 August 2007

Time: 10.00

Venue: Kingdom Brunel, CityPoint II

In attendance Willie Gallagher WG
Matthew Crosse MC
Steven Bell SB
Graeme Barclay GB
Mike Connelly MC
Tom Condie TC
Pat Diamond PD
Keith Rimmer KR
Tom Clark TCL
Bill Nicholls BN
Andy Malkin AM
Alan Robertson AR
Jason Chandler JC

Apologies Susan Clark SC
Stewart McGarrity SM
Alan Dolan AD
Duncan Fraser DF
Bill Campbell BC

Circulation As Above
MUDFA Team

	ACTIONS	ACTION BY	DATE DUE
1.1	[1.2] Constitution Street – works outside that street. Can we look at putting utilities into different ground and not back into the street – ongoing	AD	26.09.07
1.2	[1.5] GB to give full view of performance status. GB to present this at next Sub-Committee Meeting	GB	26.09.07 Completed
1.3	[1.7] Hoarding Boards – MC and AM to have discussion regarding who can do what.	MC/AM	12.09.07
1.4	[1.9] Comms/ Stakeholder team to meet and brief Clarence Team	MC	26.09.07
1.5	[1.11] Formalise changes for Rev 6	GB	02.10.07

1.6	tie and AMIS to rigorously reinforce communications protocol to all project staff. All enquiries on progress etc to be forwarded to Comms/Stakeholder team.	GB/AM	07.09.07 Completed
1.7	Traffic Management Plan for Gogarburn Depot to be completed by next meeting.	AM	26.09.07
1.8	Potential opportunity to bring forward some work packages (particularly off street work sections) must be diligently managed with consultation with the major stakeholders.	GB	24.10.07
1.9	Agreement of Gogar watermain design with Scottish Water to be finalised. Meeting 31/8/07 – written agreement by 26.09.07	GB	26.09.07 Completed
1.10	Draft proposal to Scottish Gas for the development of a sub-committee to authorise approvals under a certain limit with referral to their Investment Committee for approvals over that limit.	GB	26.09.07 Completed
1.11	BT Openreach meeting with WG – 03.09.07 to push for recovery of BT design programme.	GB/WC	03.09.07 Completed
1.12	A list of the key SDS personnel required to remain on the project to be drawn up with a letter of commitment signed by Directors.	MC	26.09.07
1.13	Construction Directors' report going forward to show the progress and performance of each section with a summary at project level.	GB	26.09.07 Completed
1.14	A monthly schedule of man-hours worked and production output to be set up to enable information/statistics to be available to demonstrate positive ratio to avoid the situation at Leith Walk from recurring.	GB	26.09.07 Ongoing
1.15	A schedule of terminology to be included in future reports.	GB	26.09.07 Completed
1.16	AMIS Supervisors' numbers capabilities need to be revisited to ensure correct skills base to support AMIS staff and sub contractors	AM	26.09.07
1.17	A visit by external auditors is to be scheduled for October	PD	30.10.07



MUDFA

Sub-Committee Meeting

AGENDA ITEM NO 2

Construction Director's Report

- **Executive Summary**
- **Safety**
- **Progress (period)**
- **Commercial**
- **Operations (next period)**
- **Initiatives**
- **Key/Issues/Blockers**

Edinburgh TRAM Project

Paper to : **Utility Sub-Committee**

Subject : **Construction Director's Report**

Date : **26 September 2007**

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).

Late 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.

See Appendix 1 – Progress Performance Curve (S1A)

Section 1B

Diversions works commenced 3rd 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 10th 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.

See Appendix 2 – Progress Trial holes (S1B)

Section 5A

Works progressing well despite exposing 132KV Transmission lines during investigatory work on locating Telecom chambers at road crossing positions. Works temporarily halted whilst investigations were ongoing. 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 4th September 2007. Progress has been good despite this initial setback.

See Appendix 3 – Progress Performance Curve (S5A)

Section 6 (Utilities)

Preparatory works to allow slewing of the 700lm 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 250 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 saving 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 m³ 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.

See Appendix 4 – Progress Performance Curve (Overall)

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)
- No September IFC drawing dates achieved.
- 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 to integrate into alignment in plate 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 2007. 83 trial holes are programmed along the length of Leith Walk; these works are programmed to be completed by mid 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

See Appendix 6 - Monthly Contacts

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 (Extract)

- 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 (25th September 2007) to discuss issues raised.

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

See 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 20th 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 3rd party claims post MUDFA and INFRACO.
- RATs proposal put forward for section 7 – presently under review.

6.0 Key Issues/Blockers

- **See Appendix 9 - Primary Risk Register**
- 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.
- BT Openreach to programme works 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.

Proposed	Graeme Barclay Construction Director	26 September 2007
Recommended	Matthew Crosse Project Director	26 September 2007



MUDFA

Sub-Committee Meeting

AGENDA ITEM NO 3

Appendices

- **Appendix 1: Progress Performance Curve – S1A**
- **Appendix 2: Trial Holes Progress Curve – S1B**
- **Appendix 3: Progress Performance Curve – S5A**
- **Appendix 4: Progress Performance Curve – Overall**
- **Appendix 5: SDS Design Status – September 2007**
- **Appendix 6: Comms: Monthly Contacts**
- **Appendix 7: Commercial: Master Schedule (extract)**
- **Appendix 8: Forecast Design Issue – October 2007**
- **Appendix 9: Primary Risks**
- **Appendix 10: SDS Programme for IFC Drawing Issue**



MUDFA Sub-Committee Meeting

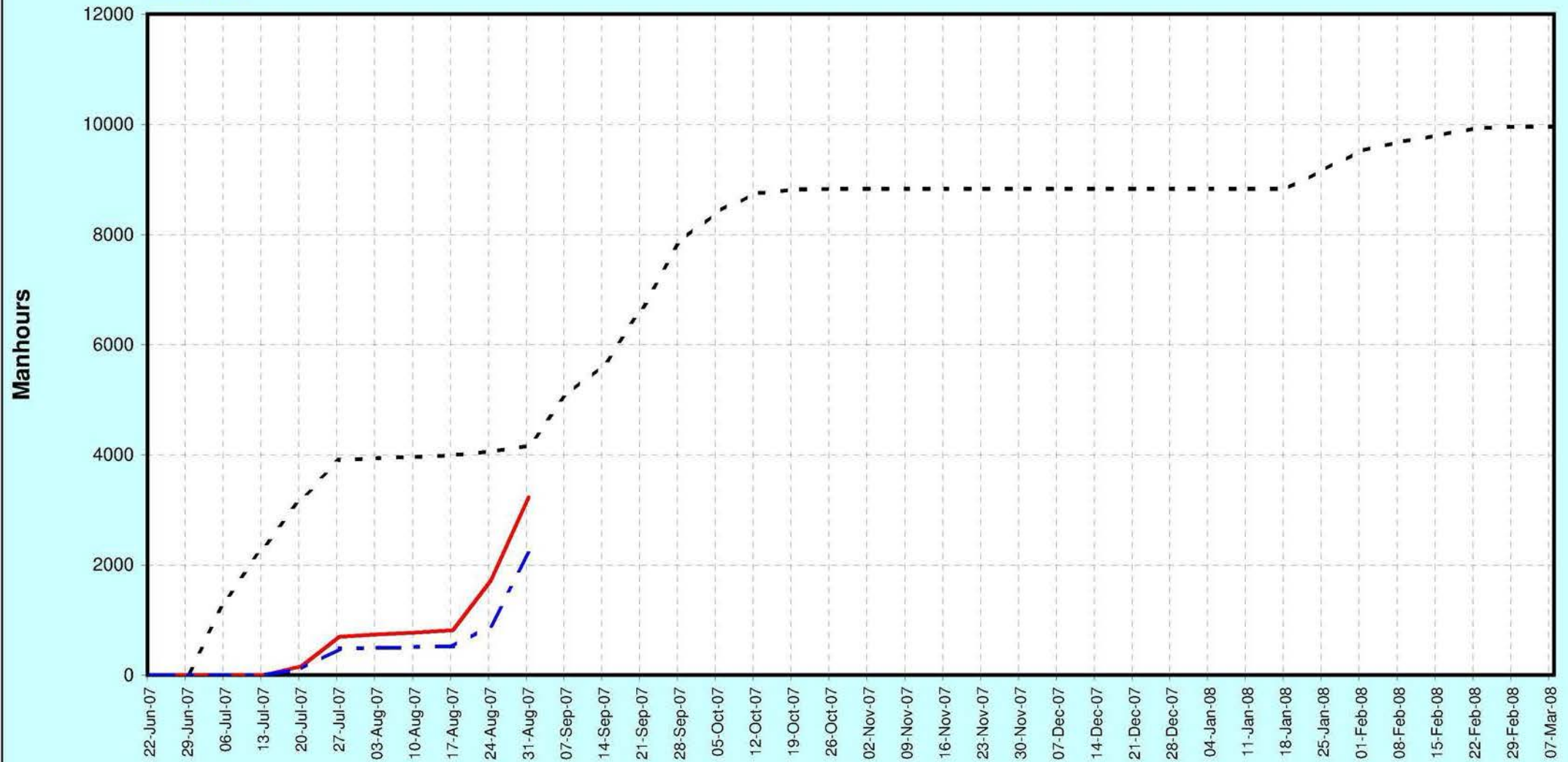
APPENDIX 1

Progress Performance Curve Section 1A



**Worksite Area 1AWSI/003/001 - Tower Street to Commercial Wharf
All Utility Diversions
Progress Performance Curve**

---	BL Project
---	Earned Value
-.-	Actual



	22-Jun-07	29-Jun-07	06-Jul-07	13-Jul-07	20-Jul-07	27-Jul-07	03-Aug-07	10-Aug-07	17-Aug-07	24-Aug-07	31-Aug-07	07-Sep-07	14-Sep-07	21-Sep-07	28-Sep-07	05-Oct-07	12-Oct-07	19-Oct-07	26-Oct-07	02-Nov-07	09-Nov-07	16-Nov-07	23-Nov-07	30-Nov-07	07-Dec-07	14-Dec-07	21-Dec-07	28-Dec-07	04-Jan-08	11-Jan-08	18-Jan-08	25-Jan-08	01-Feb-08	08-Feb-08	15-Feb-08	22-Feb-08	29-Feb-08	07-Mar-08			
--- BL Project	0	0	1389	2343	3212	3908	3937	3964	3992	4064	4161	5090	5651	6677	7882	8424	8750	8819	8833	8833	8833	8833	8833	8833	8833	8833	8833	8833	8833	8833	8833	8833	8833	8833	8833	8833	8833	8833	8833	8833	8833
---	0	0	0	0	165	695	737	778	819	1717	3232																														
-.- Actual	0	0	0	0	118	481	498	515	531	903	2204																														

Week Ending



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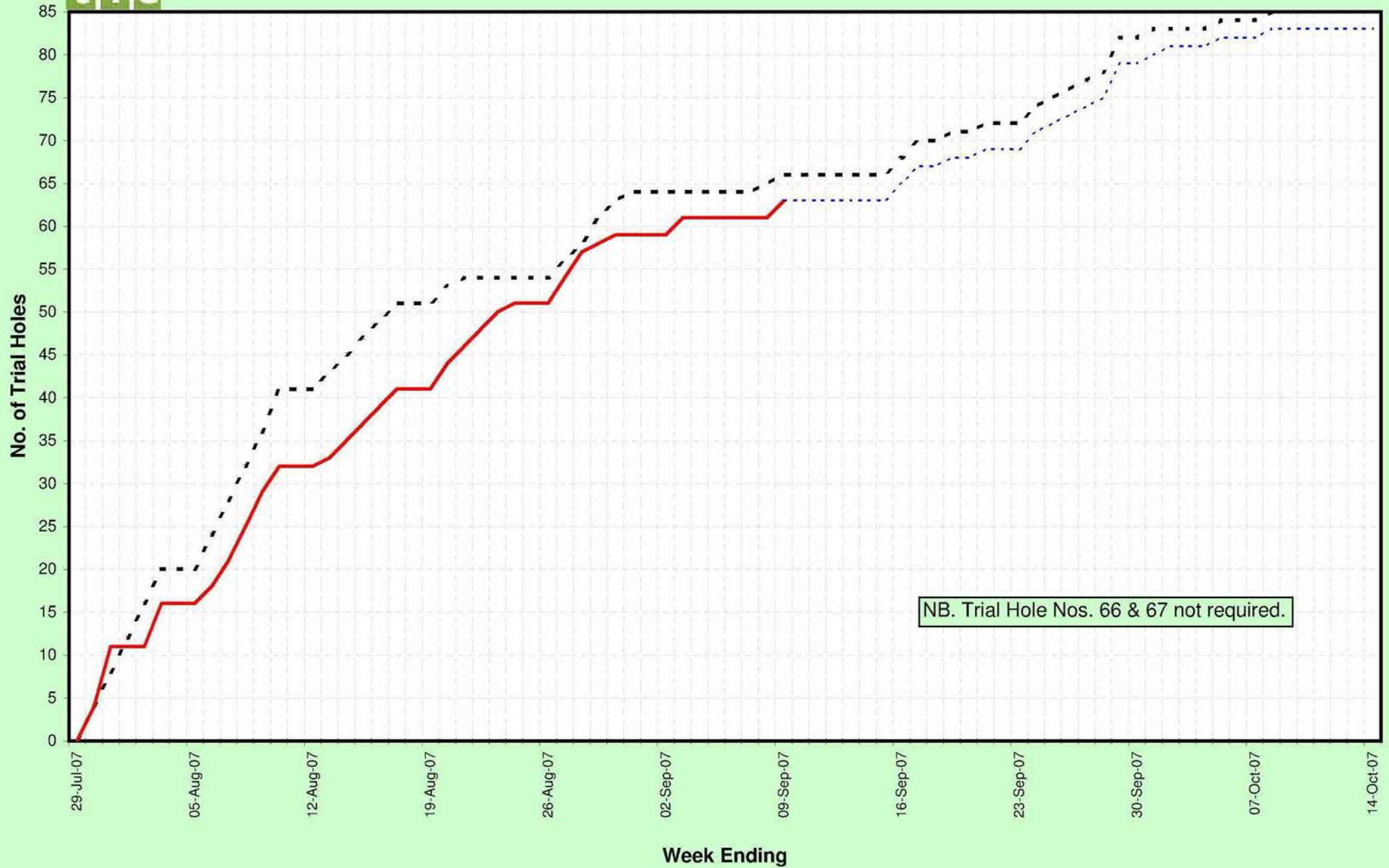
APPENDIX 2

Trial Holes Progress Curve Section 1B



Leith Walk - Traffic Management Related Trial Hole Programme Progress Curve (Progress to 09th September 2007)

- Planned Cum (66)
- Actual Cum (63)
- Forecast To Completion (20)



NB. Trial Hole Nos. 66 & 67 not required.



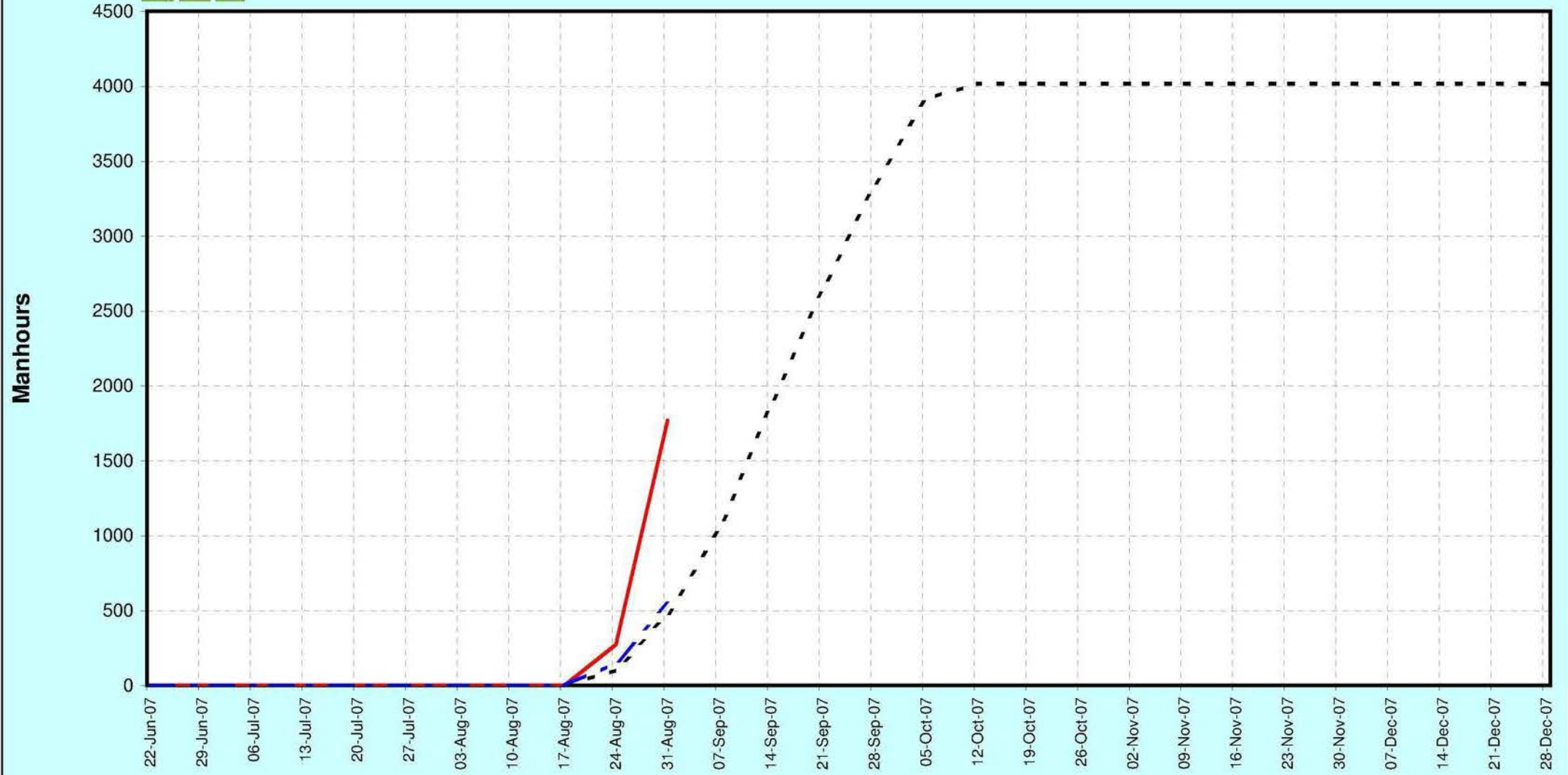
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APPENDIX 3

Progress Performance Curve Section 5A



Worksite Area 5AWSI/008/002 - Roseburn Street to Russell Road All Utility Diversions Progress Performance Curve



	22-Jun-07	29-Jun-07	06-Jul-07	13-Jul-07	20-Jul-07	27-Jul-07	03-Aug-07	10-Aug-07	17-Aug-07	24-Aug-07	31-Aug-07	07-Sep-07	14-Sep-07	21-Sep-07	28-Sep-07	05-Oct-07	12-Oct-07	19-Oct-07	26-Oct-07	02-Nov-07	09-Nov-07	16-Nov-07	23-Nov-07	30-Nov-07	07-Dec-07	14-Dec-07	21-Dec-07	28-Dec-07
BL Project	0	0	0	0	0	0	0	0	0	102	474	1039	1870	2643	3341	3917	4018	4018	4018	4018	4018	4018	4018	4018	4018	4018	4018	4018
Earned Value	0	0	0	0	0	0	0	0	0	274	1770																	
Actual	0	0	0	0	0	0	0	0	0	150	546																	

Week Ending



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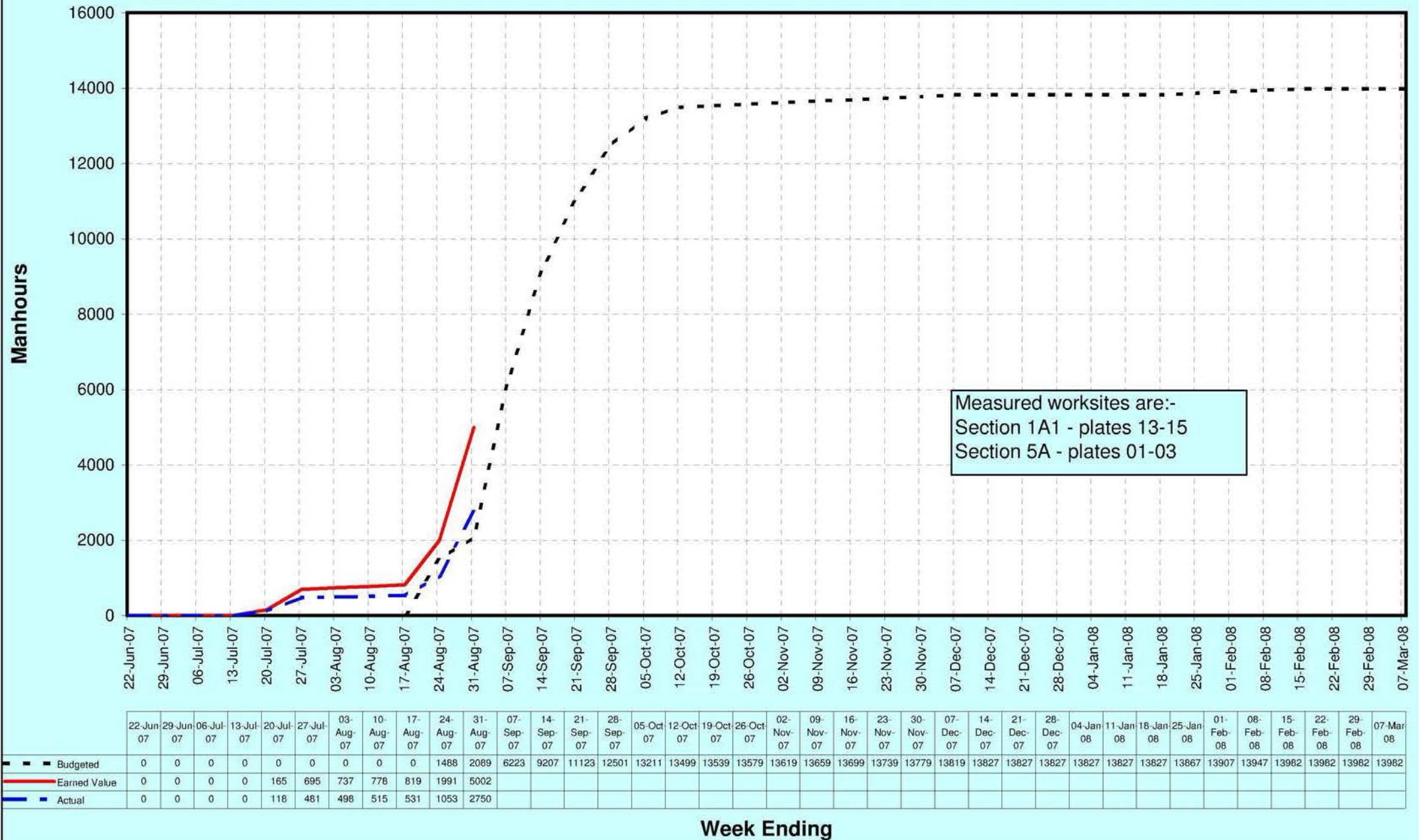
APPENDIX 4

Progress Performance Curve Overall Performance



MUDFA Construction Programme - ALL Opened Worksites All Utility Diversions Progress Performance Curve

- - - Budgeted
 — Earned Value
 - - - Actual





MUDFA Sub-Committee Meeting

APPENDIX 5

SDS Design Status
September 2007

MUDFA Design Tracker
SDS Design Status @ 20th September 2007

Section	Drawing Nos	Issue to SUC's for Approval			SUC Approval			Issue Approved IFC Package			IFC to Const'n Start	MUDFA Revision 05 Construction Start		Remarks
		PLANNED	SDS F'CAST	ACTUAL	PLANNED	tie F'CAST	ACTUAL	PLANNED	tie F'CAST	ACTUAL	DAYS	PLANNED	ACTUAL	
1A	plates 1-12	26-Oct-07	30-Nov-07		09-Nov-07	14-Dec-07		23-Nov-07	11-Jan-08		125	10-Sep-07		Revised Road & track alignment issued. Requires formal agreement with Forth Ports & CEC before Utility design can commence. Forecast Issue to SUC for Approval of 30th November 2007 (based on SDS target of all designs out to SUC's by end November 2007). Requires re-programme of construction works.
1A	plates 13-15	04-May-07	01-Jun-07	01-Jun-07	11-May-07	22-Jun-07	22-Jun-07	25-May-07	03-Jul-07	03-Jul-07	31	02-Jul-07	09-Jul-07	Works commenced on-site 09th July 2007 after political approval for Tram Project.
1A	plates 16-21	14-Sep-07	19-Oct-07		21-Sep-07	02-Nov-07		05-Oct-07	16-Nov-07		117	05-Nov-07		BT C4 for outside LOD not due from BT until 05th Oct 2007. Alignment Changes in plates 16 & 17 will effect plate 15. **Diversion currently underway plate 15** As-built drawings for plate 14 & 15 required to be submitted to SDS by 05th Oct 2007 at the latest.
1B	plates 22-26	31-Aug-07	07-Sep-07	18-Sep-07	07-Sep-07	01-Oct-07		21-Sep-07	15-Oct-07		14	29-Oct-07		Plate 22 will be clouded due to interface with Constitution Street design.
1B	plates 27-31	06-Jul-07	09-Jun-07	09-Jun-07	13-Jul-07	21-Aug-07	21-Aug-07	27-Jul-07	31-Aug-07	31-Aug-07	85	06-Aug-07	05-Sep-07	
1C	plates 32-38	12-Oct-07	12-Oct-07		19-Oct-07	26-Oct-07		02-Nov-07	09-Nov-07		150	07-Apr-08		Placidity Place alignment not resolved - SDS asked to submit proposal prior to meeting SP regarding Scottish Power Tunnel. SDS to confirm programme dates for this area.
1C	plates 39-41	12-Oct-07	12-Oct-07		19-Oct-07	26-Oct-07		02-Nov-07	09-Nov-07		199	26-May-08		St Andrew Square alignment not yet resolved. Final resolution by 14th September. Design work will commence thereafter. SDS require to issue revised alignment to BT for re-design. SDS to confirm date for delivery of revised BT design.
1C	plates 42-43	14-Sep-07	12-Sep-07	12-Sep-07	21-Sep-07	26-Sep-07		05-Oct-07	10-Oct-07		19	29-Oct-07		
1C	plate 44	14-Sep-07	08-Oct-07		21-Sep-07	22-Oct-07		05-Oct-07	05-Nov-07		63	07-Jan-08		Plate 44 requires further trial hole investigations programmed Sun 23rd September. Drawing was issued clouded to SUC's on 12-Sep-07.
1C	plates 45-48	31-Aug-07	03-Sep-07	10-Sep-07	07-Sep-07	17-Sep-07		21-Sep-07	01-Oct-07		98	07-Jan-08		
1D	plates 49-51	28-Sep-07	12-Oct-07		05-Oct-07	26-Oct-07		19-Oct-07	09-Nov-07		56	04-Jan-08		UTL Meeting 12/09/07:- SDS reported BT to provide full design by 13th Sep 2007. Design on target to issue to SUC's on 28th Sept 2007 provided BT info arrives as programmed. ***tie update 13-Sep-07 from BT for Section 1D C4 duct design forecast now 27/09/07.***
1D	plates 52-56	28-Sep-07	12-Oct-07		05-Oct-07	26-Oct-07		19-Oct-07	09-Nov-07		227	23-Jun-08		UTL Meeting 12/09/07:- SDS reported BT to provide full design by 13th Sep 2007. Design on target to issue to SUC's on 28th Sept 2007 provided BT info arrives as programmed. ***tie update 13-Sep-07 from BT for Section 1D C4 duct design forecast now 27/09/07.***
2A	plates 1-3	14-Sep-07	30-Nov-07		21-Sep-07	14-Dec-07		05-Oct-07	11-Jan-08		46	26-Nov-07		IFC date dependent on outcome of BT design. BT Design scheduled to complete 26th October 2007. Forecast based on this design date. SDS to confirm dates.
5A	plates 1-3	01-Jun-07	12-Jul-07	12-Jul-07	04-Aug-07	10-Aug-07	10-Aug-07	18-Aug-07	10-Aug-07	10-Aug-07	10	20-Aug-07	20-Aug-07	IFC package issued 10th August 2007 excluding SGN & SW.
5A	plates 4-5	10-Aug-07	28-Sep-07		24-Aug-07	12-Oct-07		17-Sep-07	26-Oct-07		3	29-Oct-07		Indications are there are no diversion requirements in this area. SP diversion will be INFRACO works and there is a requirement for BT to reduce height of poles alongside Baird Drive gardens.
5B	plates 6-13	22-Jun-07	22-Jun-07	22-Jun-07	13-Aug-07	28-Sep-07		14-Sep-07	12-Oct-07		3	15-Oct-07		Awaiting SUC Approvals for SP (21-Sep-07), CW (28-Sep-07). IFC Package forecast for issue on 12th Oct 2007.
5B	plates 14-20	03-Aug-07	28-Sep-07		17-Aug-07	12-Oct-07		14-Sep-07	26-Oct-07		11	15-Oct-07		Scottish Power to issue more accurate information on depth and location of transmission cables. Issue for approval with exceptions for those trying to be designed out (plates 17 & 18). (Plates 17 & 18 will be issued to SUC's on 12th Oct 2007 - IFC target 09th Nov 2007)
5C	plates 21-24	13-Jul-07	08-Oct-07		27-Jul-07	22-Oct-07		10-Aug-07	05-Nov-07		85	15-Oct-07		SDS:- BT Design will be delivered 14th September. ***tie update 13-Sep-07 from BT for Section 5C C4 duct design forecast now 24/09/07 which extends SDS latest forecast for IFC issue from 26/10/07 to 05/11/07. ***
6A	plates 1-2	28-Sep-07	19-Oct-07		19-Oct-07	09-Nov-07		02-Nov-07	23-Nov-07		96	20-Aug-07		800 & 250 water main diversion drwg to be tabled at SW meeting 12th September. tie forecast dates for 800 water main. RATS proposals for other service diversions.
7A	plates 1-6	24-Aug-07	02-Nov-07		07-Sep-07	16-Nov-07		21-Sep-07	30-Nov-07		101	10-Mar-08		***Notional forecast dates*** Change request in relation to EARL with tie, once signed off revised alignment and earthworks required prior to utilities design commencing. AMIS propose RATS initiative for this area.
7B	plates 7-9	01-Feb-07	01-Feb-07		15-Feb-08	15-Feb-07		29-Feb-08	29-Feb-08			01-Oct-07		AMIS Outline Programme of Design is Prelim Design Nov-Dec 2007 & 2 stage Detailed Design period of Jan-Apr 2008. Construction programmed Non critical diversions April to May 2008 & Critical Systems May to August 2008.
3A		26-Oct-07	30-Nov-07		02-Nov-07	14-Dec-07		16-Nov-07	11-Jan-08		220	18-Aug-08		
3B		09-Nov-07	30-Nov-07		16-Nov-07	14-Dec-07		30-Nov-07	11-Jan-08		311	17-Nov-08		
3C		09-Nov-07	30-Nov-07		16-Nov-07	14-Dec-07		30-Nov-07	11-Jan-08		325	01-Dec-08		

tie Forecast dates are based on 2 weeks for SUC approval from SDS Issue to SUC's.

tie Forecast dates are based on 2 weeks for Issue Approved IFC Package from SUC approval.

IFC to Construction Start days: - Less than 28 days critical RED, 28-42 days AMBER



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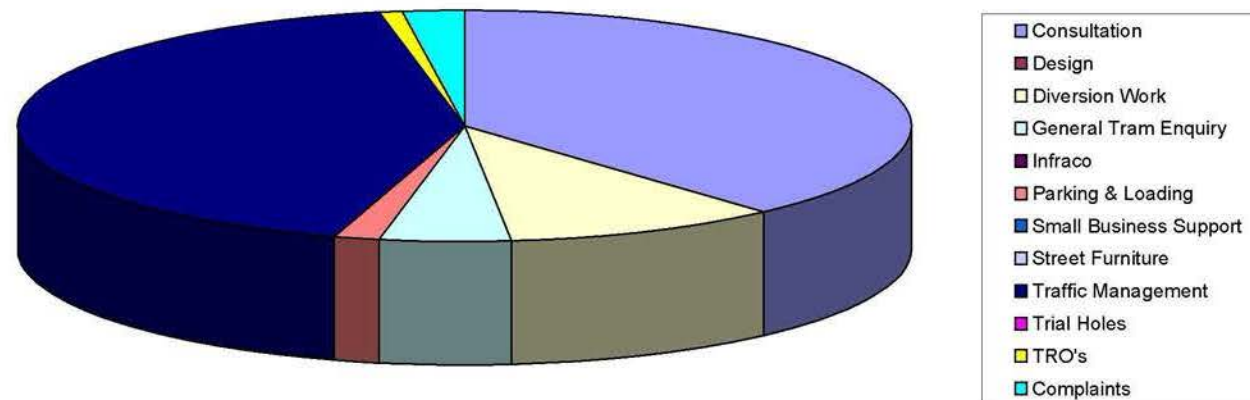
APPENDIX 6

Communications Monthly Contacts

Summary Sheet (Contacts)

Nature of Visit	Total	Business	%	Community	%	%
Consultation	49	12	24.49%	37	75.51%	38%
Design	0	0	0.00%	0	0.00%	0%
Diversion Work	13	13	100.00%	0	0.00%	10%
General Tram Enquiry	6	0	0.00%	6	100.00%	5%
Infraco	0	0	0.00%	0	0.00%	0%
Parking & Loading	2	2	100.00%	0	0.00%	2%
Small Business Support	0	0	0.00%	0	0.00%	0%
Street Furniture	0	0	0.00%	0	0.00%	0%
Traffic Management	54	54	100.00%	0	0.00%	42%
Trial Holes	0	0	0.00%	0	0.00%	0%
TRO's	1	1	100.00%	0	0.00%	1%
Complaints	3	3	100.00%	0	0.00%	2%
Total	128	85	66.41%	43	33.59%	100%

Stakeholder Engagement Summary





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APPENDIX 7

Commercial Master Schedule (Extract)



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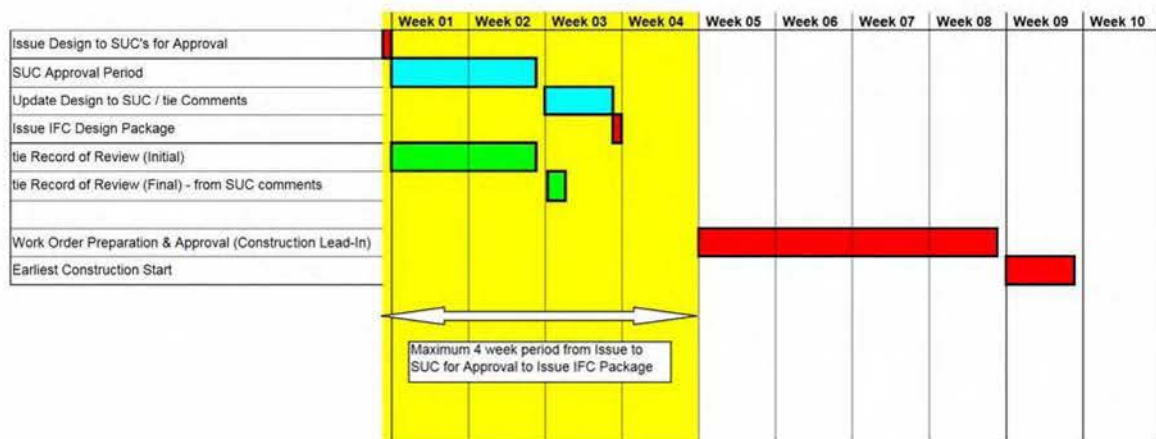
APPENDIX 8

Forecast Design Issue
October 2007

IFC drawing plate packages forecast for issue during October 2007.
 (Based on latest SDS/tie forecast dates @ 18th September 2007)

Section	Drawing Plate Nos.	SDS / AMIS Latest Forecast IFC Dates	Construction Start (Revision 05)
1A	None	16-Nov-07 (16-21) & 11-Jan-08 (01-12)	02-Jul-07
1B	22,23,24,25,26	15-Oct-07	29-Oct-07
1C	42,43,45,46	10-Oct-07 (42-43) & 01-Oct-07 (45-46)	29-Oct-07
1D	47,48	01-Oct-07	07-Jan-08
2A	None	11-Jan-08	26-Nov-07
3A	None	11-Jan-08	18-Aug-08
3B	None	11-Jan-08	17-Nov-08
3C	None	11-Jan-08	01-Dec-08
5A	04,05	12-Oct-07	29-Oct-07
5B	06,07,08,09,10,11,12,13,14,15,16,19,20	12-Oct-07 (06-13) & 26-Oct-07 (14-16 & 19-20) & 09-Nov-07 (17-18)	15-Oct-07
5C	None	05-Nov-07	15-Oct-07
6A	None	23-Nov-07	20-Aug-07
7A	None	30-Nov-07	10-Mar-08
7B	None	28-Apr-07	01-Oct-07

Proposed Process / Timescales for Turn-around of Utility Design





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APPENDIX 9

Primary Risks

ARM Risk ID	Risk Description			Risk Owner*	Significance	Black Flag	Treatment Strategy	Treatment Status		Date Due	Action Owner
	Cause	Event	Effect					Previous	Current		
21	Design constraints e.g. presence of other utilities, proximity of LoD boundary, diversion technical requirements etc.	Design requires that Utilities are diverted outside of LoD	Additional design; additional land purchase required and consequent contact with landowners; design may result in increased work quantities due to extent of diversions; potential increased duration of works.	T Glazebrook	19	None	GIS used to identify diversions outwith LoDs and respective landowners	On Programme	On Programme	31-Aug-07	E Cropley
							SDS to aim to design diversions within LoD	On Programme	On Programme	28-Dec-07	T Glazebrook
							SDS to undertake design checks to ensure diversion in LoD	On Programme	On Programme	28-Dec-07	T Glazebrook
							AMIS to seek to divert under Statutory Utility powers where outwith LoD	Complete	Complete	28-Dec-07	G Barclay
139	Utilities diversion outline specification only from plans	Uncertainty of Utilities location and consequently required diversion work/ unforeseen utility services within LoD	Increase in MUDFA costs or delays as a result of carrying out more diversions than estimated	G Barclay	25	None	In conjunction with MUDFA, undertake trial excavations to confirm locations of Utilities and inform designer	On Programme	On Programme	19-Oct-07	A Hill
164	Utilities assets uncovered during construction that were not previously accounted for; unidentified abandoned utilities assets; asbestos found in excavation for utilities diversion; unknown cellars and basements intrude into works area; other physical obstructions; other contaminated land	Unknown or abandoned assets or unforeseen/contaminated ground conditions affect scope of MUDFA work.	Re-design and delay as investigation takes place and solution implemented; Increase in Capex cost as a result of additional works.	I Clark	25		Identify increase in services diversions. MUDFA to resource/re-programme to meet required timescales.	On Programme	On Programme	19-Oct-07	J McAloon
							Carry out GPR Adien survey	On Programme	Complete	31-Oct-07	J Casserly
342	Tram alignment at A8 crossing at Gogar co-incides BT data nests/cable (main coms link between Glasgow and Edinburgh)	A8 crossing tunnel requires special design or BT data nest/cables require to be moved	Capex cost to cover BT data nest/cable move; additional design costs; delay while works to undertake move are carried out; additional tunnelling costs.	I Clark	25	None	Confirmation of BT requirements to tie	On Programme	On Programme	15-Oct-07	I Clark
911	Scottish Power own and maintain a cable tunnel in the vicinity of Leith Walk that may or may not interfere with Tram construction and operation; exact location and depth of tunnel is unknown; condition of tunnel is unknown.	Presence of Scottish Power tunnel in Leith Walk requires radical solution	Tunnel may have to be decommissioned and re-laid in a more suitable location; tram alignment may require to be adjusted; special foundation solution e.g. cantilever may be required; increased capex; potential for tunnel collapse during operation and consequent disruption for tram.	M Blake	24	None	Scottish Power to establish exact location of tunnel	Complete	Complete	02-Apr-07	J Casserly
							tie to undertake engineering feasibility study	Complete	Complete	02-Apr-07	J Casserly

ARM Risk ID	Risk Description			Risk Owner*	Significance	Black Flag	Treatment Strategy	Treatment Status		Date Due	Action Owner
	Cause	Event	Effect					Previous	Current		
							SDS to try and ensure tram alignment footprint is outwith Scottish Power alignment	On Programme	On Programme	28-Dec-07	T Glazebrook
914	Required approval/acceptance turnaround time does not reflect SUC standard practice; SUCs do not have enough resource or process capability to achieve 20 day turnaround	Statutory Utility Companies unable to meet design approval/acceptance turnaround time to meet programme	Additional period required for design approval/acceptance turnaround	T Glazebrook	20	None	SDS to obtain consent for design in accordance with programme requirements	On Programme	On Programme	30-Dec-07	J Johnstone



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APPENDIX 10

SDS Programme for IFC Drawing Issue

