



**Transport Edinburgh**  
**Trams for Edinburgh**  
**Lothian Buses**

# MUDFA Sub Committee Report Papers For Meeting 6<sup>th</sup> June 2007

## Distribution

Willie Gallagher  
Matthew Crosse  
Susan Clark  
Graeme Barclay  
Suzanne Waugh  
Mike Connelly  
Steven Bell

Stewart MCgarrity  
Tom Condie  
Miriam Thorne  
Keith Rimmer  
Andy Malkin  
Alan Dolan  
Tom Clark

Lorna Davis  
John Ramsay  
Duncan Fraser  
Bill Campbell



## **Agenda**

### **Sub-Committee Meeting**

**to be held at MUDFA Project Office, Leith**

**on Wednesday 6 June 2007 at 1pm**

1. Actions from previous minutes.
  
2. Construction Director's Report
  - Executive Summary
  - HSE
  - Progress (period)
  - Programme (next period)
  - Commercial
  - Risk
  - Traffic Management
  - Communications
  
3. AOB



## MUDFA Sub-Committee Meeting

### AGENDA ITEM NO 1

Actions from Previous Minutes

# tie Limited

## Minutes of Sub-Committee Board Meeting

**Date:** 4 April 2007

**Time:** 11am

**Venue:** Board Room, Verity House

In attendance	Willie Gallagher	<b>WG</b>
	Susan Clark	<b>SC</b>
	Graeme Barclay	<b>GB</b>
	Suzanne Waugh	<b>SW</b>
	Mike Connelly	<b>MC</b>
	Steven Bell	<b>SB</b>
	Tom Condie	<b>TC</b>
	Andy Malkin	<b>AM</b>
	John McAloon	<b>JM</b>
	Miriam Thorne	<b>MT</b>
	Keith Rimmer	<b>KR</b>
	Lorna Davis	<b>LD</b>
	Tom Clark	<b>TCL</b>
	Bill Campbell	<b>BC</b>
	Duncan Fraser	<b>DF</b>
Apologies	Matthew Crosse	<b>MC</b>
	Alan Dolan	<b>AD</b>
Circulation	As above. MUDFA Team	

1.0	ACTIONS	ACTION BY	DATE DUE
1.1	Review agenda and structure of sub-committee meeting. Report to be in Project Directors Report format.	GB/TE	<b>COMPLETE</b>
1.2	[1.17] Wide Area Signage scope of costs. Will be completed once AMIS programme finalised.	AM	<b>09/05/07</b>
1.3	[1.20] VE Workshop – MC to update at the next meeting.	MC	<b>09/05/07</b>
1.4	[1.22] Trial Site Lessons Learned. Meeting to be set up. Attendees to be AM/GB/DF/SW/MC/AD.	GB	<b>COMPLETE</b>
1.5	[1.23] Operator Licence – will be completed end of April.	PD	<b>COMPLETE</b>

1.6	Design Progress Tracker – Awaiting input from SDS. GB to arrange for Jim Johnston and Allan Hill of MUDFA Team to raise with SDS	GB	COMPLETE UPDATED MONTHLY
1.7	RATS – tie/AMIS to confirm areas where we can progress ahead of programme in areas of minimal risk outwith the road.	GB/AM	COMPLETE
1.8	Organogram – Profile of roles and responsibility to be put together for the MUDFA team to give the team a clear understanding of what is expected from each team member.	GB	COMPLETE
1.9	Constitution Street – works outside that street – will be done in two phases. Can we look at putting utilities into different ground and not back onto street? Meeting to be arranged to look at this.	WG/KR	27/04/07
1.10	Mabey Bridges – Look at normal solution of keeping traffic moving in key hotspots along the route – AMIS Further meeting with Mabey to come to solution.	AM	27/04/07
1.11	[9.2] Traffic Management - Can BTO work in line with our programme? Need to elevate this to put in pressure at senior level.	WG	27/04/07
1.12	Virgin Media agreement is still not signed. Senior decision to be made on this.	WG	27/04/07
1.13	Traffic Management Programme - TCL and KR to arrange meeting re developments, planning, utilities, building repairs. Paper to be prepared for the next meeting.	KR/TCL	COMPLETE
1.14	Cost reporting system to be put in place for future costing.	GB/MH	COMPLETE
1.15	Separate commercial meeting to be put in place for review of budgets and profiling trends.	GB/MH	COMPLETE
1.16	Communications - Paper required for next meeting from Steve Gorry (SG) working with CEC and partners to cover KPIs etc.	SG	COMPLETE
1.17	Fencing/Netting – we should look at sites individually as to fencing requirements rather than the same requirement for all.	AM/GB	COMPLETE

<p><b>1.18</b></p> <p><b>1.19</b></p> <p><b>1.20</b></p>	<p>Incident Management Protocol has been agreed internally. Copies of incident cards to be distributed to Transport Scotland.</p> <p>Programme presentation. Paper to be presented to Tram Project Board. Needs to be more strategic in terms of Traffic Management issues and implications of wider programme and budget of MUDFA.</p> <p>Communication of the programme. Needs to be looked at. Need more detail of how we progress on the sections of Leith Walk and exact location of works. SW to look at maps that Alasdair Sim has developed from modelling and take to the project board.</p>	<p>TC</p> <p>WG/GB</p> <p>SW</p>	<p>27/04/07</p> <p>COMPLETE</p> <p>13/04/07</p>
<p><b>2.0</b></p>	<p>Next Meeting to be held Wednesday 9 May 2007 at 2pm, MUDFA Project Office, Leith</p>		



## MUDFA Sub-Committee Meeting

### AGENDA ITEM NO 2

#### Construction Director's Report

## Edinburgh TRAM Project

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

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

**Date** : **6 June 2007**

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### Executive Summary

- Two number incidents to report in this period
  - Heras fence blew down due to debris netting on perimeter fence at Gogar
  - Access complaint from farmer adjacent to Gogar site
- Trial Site second phase completed on time, end of first week in May
- Advanced Earthworks at Gogar progressing well during favourable weather condition. Approximately 14,000m<sup>3</sup> removed to date (target for period 13,500m<sup>3</sup>)
- Final drawings issued out to SUC's for RAT's 1A/1 and section 1A – IFC issue due w/c 04.06.07
- Ingliston Temporary Car Park tenders issued – due back 28.05.07.
- Release of design information IFC (Issue for Construction) still a major concern and impacting significantly on the programme. Ratification of full impact being assessed.

### 1.0 Safety

- 1.1 There were two incidents that occurred during the reporting period. Incident One (ref AIIR 0009) related to Heras Fencing being blown down due to high winds at Gogar Depot. This has been actioned and closed. Incident Two (ref AIIR0008) referred to a complaint from a farmer not being able to access his land at Gogar due to a gate being locked. This is still under investigation.
- 1.2 A site inspection was undertaken at Gogar which highlighted a number of issues concerning site supervision and control. Actions have been agreed and these have been closed out.
- 1.3 A site safety inspection was undertaken at Casino Square and a number of minor points highlighted concerning calibration certificates and fire extinguishers. Actions have been agreed and these have been closed out.



- 1.4 MUDFA Utility Diversion Trial Works at Casino Square in Leith have now been completed. An audit to determine compliance with the processes and procedures of the trial works is planned for the next reporting period
- 1.5 The revised AMIS MUDFA Business Management System documentation was expected early May. A revised date is to be advised.
- 1.6 No new NCR's were raised. Previous NCR (No. 006) regarding the treatment of unidentified services was actioned and subsequently closed.
- 1.7 The Archaeological Strategy has been drafted for line 2 and is under review by the CEC Archaeologist. This will cover the excavation work at Gogar Depot. A Written Scheme of Investigation has been provided and accepted by the CEC Archaeologist.

## **2.0 Progress Period**

### **2.1 Summary Progress**

- 2.1.1 The Trial site restarted on Monday 23 April 07 with the commencement of the road crossing for a new BT Duct, the connection into an existing BT manhole and the reinstatement of the roads, footpaths and Casino Car Park as a result of the whole of the works.
- 2.1.2 At Gogar, the depot works started with the erection of site fencing, de-vegetation, carried out before the commencement of the bird nesting season and moved on through the clearance of "fly tipped" material, erection of an exclusion fence to protect a High Pressure gas main, construction of two wheel washes, installation of the site offices and welfare facilities. This culminated in the start of the removal of spoil that forms four bunds to the North side of the A8. During the first week of operation approximately 7000m<sup>3</sup> of spoil was removed against a target of 6000m<sup>3</sup>. The target for this, the second week of operation is 7500m<sup>3</sup>.

### **2.2 AMIS**

- 2.2.1 The AMIS MUDFA Accident Frequency Rate (AFR) remains at zero and within the reporting period a near miss was formally reported in relation to the perimeter fence at the Gogar Depot on Sunday 6<sup>th</sup> May 2007 (Wind and sail effect due to green netting).
- 2.2.2 **tie** Limited and Stakeholder Imposed Programme updated in April 2007 and re-issued at Rev 05. Programme currently under review due to the lack of availability of Issued for Construction (IFC) utility design drawings and Bill of Materials (BOM's) to meet the requirements of the

agreed work ordering process. The next generation MUDFA construction services programme should take into full consideration any independencies with INFRACO to mitigate any cost implications to **tie** Limited

- 2.2.3 AMIS has completed gas and water Thumbnail Utility Design Sketches (TUDS) for Sections 1A, 1A/North, 1B, 1C, 1D, 2, 3A, 3B, 3C, 5B, 6 (Based on preliminary design) complete with Bill of Materials (BOM's) for review and consideration by SDS Provider.
- 2.2.4 AMIS work orders progressing for utility construction services at work sites 1AWSI003/002, 1AWSI004/001 & 1AWSI004/002 (1<sup>st</sup> Phase, Ocean Drive) and 1AWSI005/001, 1AWSI005/002 & 1AWSI006/001 (2<sup>nd</sup> Phase – Ocean Terminal frontage). The AMIS MUDFA team are conducting a state of readiness review and await permission to carry out letter drops to approximately 340 No. apartments at Ocean Terminal.
- 2.2.5 Traffic management plans completed for Section 1A and draft Traffic Management Plans have been completed and issued for Section 1B (Leith Walk)
- 2.2.6 2.1.6 Trial site at Casino Square utility diversions have been successfully completed on schedule and the Casino car park has been reinstated on a temporary basis awaiting BT utility design drawings for the outer roundabout section of the MUDFA construction works. There have been no public or stakeholders concerns reported within the reporting period.
- 2.2.7 Site fencing and netting will be used for specific sites throughout Edinburgh city centre to curtail wind blown dust from the public and to ensure good aesthetic site appearance. Edinburgh Tram graphics printing will be used following joint review and agreement
- 2.2.8 AMIS proposes co-location of SUC's, **tie** Limited, SDS Provider and AMIS utility specialists to focus jointly on technical and operational issues, assessment and resolution of key design issues and validation of cost proposals
- 2.2.9 AMIS MUDFA still remain concerned in relation to the planned availability of detailed designs at IFC issue and Bills of Materials (BOM's) to support work order production and purchasing of materials in advance of operations. In addition, AMIS MUDFA are currently considering subcontract labour to compensate for the availability of AMIS direct labour being diverted to other projects as a result of the delayed start to the MUDFA Construction Services works.

- 2.2.10 AMIS MUDFA RAT 1A/1 Revision 01 (Revision 02 Now Required) proposals remain on hold. AMIS MUDFA and Jacobs Engineering have jointly commenced work on the EARL element of the MUDFA construction services work.
- 2.2.11 **tie** Limited and AMIS MUDFA held a commercial review meeting on Wednesday 23<sup>rd</sup> May 2007 and have agreed in principle a way ahead to safeguard the MUDFA project in commercial and contractual terms.
- 2.2.12 The AMIS MUDFA Gogar Depot mass excavation works are proceeding to plan with A8 carriageway being actively managed by the site team.
- 2.2.13 AMIS MUDFA payment applications to date total £1,418,063.23 with an actual certified value of £1,343,375.86 (£74,687.37 at variance)

### **3.0 Design**

- 3.1 During the period SDS has submitted two further sections of utility design work to the Statutory Utility Companies (SUC's). The Sections delivered are as follows;
- Section 7A on 14<sup>th</sup> May 2007
  - Section 1A/2 on 15<sup>th</sup> May 2007
- 3.2 Following the issue of the revised MUDFA Construction Programme Version 5 and the issue to SDS of buildability documentation from the MUDFA Contractor the SDS Utility Design Team have engaged with the SUC's in order to gain approvals on the basis of the MUDFA worksite breakdown structure.
- 3.3 Re-work for SW to Section 1A (and the re-coordination of composite drawings for all SUC's) was carried out during this period. SDS immediately responded to the SW change in requirement in order to allow the design to be inserted into the MUDFA Work Packages ready for the construction start date of 2<sup>nd</sup> July 2007. The sign off target from the SUC's is 30<sup>th</sup> May and IFC Drawings 31<sup>st</sup> May. This refers to the first three "tiles" in section 1a. SW would not agree to the proposed diversion which showed their water main located under BT ducts.
- 3.4 SDS has diverted design manpower resource onto the first four sections of MUDFA construction activities (following priority instruction from **tie**) in order to support the MUDFA Construction Programme. The design deliverables have been broken down into smaller design sections to interface with the construction sequencing of MUDFA worksites. The SUC's have advised **tie** that the smaller design sections

may be easier to resource than the full Infrastructure Scheme Sections previously provided. The response time from the SUC's is still a concern by SDS. See paragraph 4.

- 3.5 Following a request and proposal from **tie** and in addition to the alignment of the SDS Programme with the MUDFA Construction Programme, SDS provided a break down from SDS Infrastructure Scheme Sections (13 Number) to the MUDFA Worksite Sections (116 Number). This design change proposal was presented and accepted in principle. This was agreed on 22<sup>nd</sup> May.
- 3.6 RATS risk review was carried out on 14<sup>th</sup> May 2007 on Section 1A/1 with caution advised by SDS. The proposals being forwarded by MUDFA did not allow for the re-design to the alignment within the Forth Ports Area. **tie** have been advised that following alignment design review and acceptance of the tram alignment between CEC and Forth Ports a further review of RATS be provided such that the MUDFA RATS Work Packages are made ready for the construction start date of 2<sup>nd</sup> July 2007.
- 3.7 The Trial Site lessons learned exposed a weakness in the Utility Strategy which showed that in order for a more immediate design response time, a full time SDS presence was required during MUDFA Construction Works, in order to mitigate time delays and demobilisation of the MUDFA Contractor when unidentified services are uncovered. This problem will increase as the MUDFA worksites start to duplicate. There is a possibility of seven work sites being open at one period of time. The response time of site information and design decision making will be a major contributing factor to the success and economies of the MUDFA Contract. Discussions between SDS and **tie** are ongoing at senior level on this subject.

#### **4.0 Programme (Next Period)**

##### **4.1 Design & Buildability**

- 4.1.1 During the next Period 03 running from 27th May to 23rd June inclusive the main deliverables in terms of Design and Buildability are as follows
  - Completions of Handover of Temporary Traffic Regulations Orders for MUDFA from SDS to AMIS
  - Section 6 - (Depot) - Issue of Utility Construction Drawings
  - Section 7 (Gogarburn - Airport) - Utilities Drawings Issued to SUC's
  - Section 5c (Edinburgh Park - Gogarburn) - Utilities Drawings Issued to SUC's
  - Section 1a (Newhaven Road - Foot of the Walk) - preparation of thumbnail sketches by Amis

- Section 1a (Newhaven Road - Foot of the Walk) - compilation / Issue of Work orders
- Section 1a (Newhaven Road - Foot of the Walk) - Utilities Drawings Issued to SUC's
- Section 1b (Foot of the Walk to MacDonald Rd) - Issue of Utility Construction
- Section 1c Utilities Drawings Issued to SUC's - St Andrew's Square & York Place only
- Section 1d (Princes St. West to Haymarket) - Utilities Drawings Issued to SUC's

## **5.0 Commercial**

- 5.1 Proposals to resolve the shortcomings and omissions in the MUDFA contract documentation has been agreed in principle and will be re-executed in period 3
  
- 5.2 Proposals for a negotiated commercial and contractual resolution to the delay in release of design is ongoing with AMIS
  
- 5.3 A proposal for incentivisation of the works orders and preliminaries has been discussed and agreed in principle with AMIS. A detailed proposal reflecting the agreed principles will be issued to AMIS in period 3 for formal acceptance.
  
- 5.4 Change orders and change notices are being issued to cater for contract additions (See Appendix 1 – Change Order/Notices Master Schedule)
  
- 5.5 A tender package has been issued to selected pre-qualified tenders for the Ingliston Park and Ride extension. The tender package was issued approximately two weeks late due to late receipt of design information and we currently await issue of design/specification for the street lighting element of the works. A provisional sum allowance of £22k, advised by the designers, has been made in the tender package. The works are required to commence in early June 2007 and this is still the target however the street lighting element of the works maybe delayed.
  
- 5.6 The outline Cost Report requires a number of budgets and the spend to date figures to be validated with finance department to facilitate a full report in the next period.
  
- 5.7 Weekly commercial meetings are taking place between tie and AMIS
  
- 5.8 A training session for tie site personnel on the use of the ARM risk software was held in the period.

- 5.9 An initial meeting to review the project risk and management of the tie / AMIS MUDFA project risks was held and subsequent meetings are planned to establish and agree joint risk owners and mitigation plans.

## **6.0 Risk**

- 6.1 See Appendix 2 – Risk Register

## **7.0 Traffic Management**

- 7.1 Section 1A Traffic Management - All Work Sites, A150/WO/1A/0001, proposals are currently under consideration by the Traffic Management Review Panel (TMRP). The sign off of the Traffic Management proposals in this Section will commence on the 21<sup>st</sup> May 2007 at the on site Table Top meeting. The Stakeholders to the Tram project have had extensive liaison regarding the proposals in this Section and it is anticipated that there will be no issue delaying the acceptance of the proposals by the Stakeholders. Lothian Buses have accepted in principle the proposed TM provision in front of Ocean Terminal.

The proposed TM for Leith Walk is currently under preparation by AMIS.

- 7.2 The TMRP are currently sitting on a weekly basis at the MUDFA office in Leith. This allows the Table Top meeting following the TMRP to progress to site in Section 1A.
- 7.3 On **tie's** approval of AMIS MUDFA programme, Version 5, a meeting was held between **tie** and the Traffic Consultants employed to prepare the scoping of the Wider Area Signage. It was decided that the modelling exercise would have to be completed to allow the scoping of the Wider Area Signage to be progressed. It is anticipated that the modelling exercise will be completed by the end of the week starting 21<sup>st</sup> May. And that the scoping for the Wider Area Signage will be completed for the 8<sup>th</sup> of June
- 7.4 The works are currently ongoing on the CCTV surveys required throughout the length of the tramline. To date there has been the requirement for Traffic Management to undertake this task in Section 1A(1) and 1A(2). The traffic management proposals to undertake these works have been assessed and accepted by the TMRP as appropriate. The CCTV works were undertaken either in day or night time working hours on recommendation from the TMRP.

The proposed night works in Section 1B, Leith Walk, were delayed by the TMRP as a result of concern raised by a party, regarding noise interference, when the works were ongoing in Constitution Street.

- 7.5 A **tie** Communications representative who is responsible for the public's interests attends the TMRP. This has allowed the COMs issue to progress and the required information is now available to allow the Stakeholders to fulfil their obligations.
- 7.6 CEC have accepted in principle a sequence of works presented by **tie** for the MUDFA, Streetscape, traffic signalling alterations on the west side and Infracore works in St. Andrews Square. The timescales defined in the AMIS MUDFA programme, Version 5, can therefore be advanced. However, CEC have raised concern regarding the demarcation of the Streetscape and MUDFA works and the difficulty of transfer of SEEL funding, should this be required, during the works. Further liaison will be required between CEC and **tie** to resolve this issue.

## **8.0 Communications**

### **8.1 Media**

- 8.1.1 Tram featured in the vast majority of the media from the end of April to date, with all of the coverage relating to the election. Before polling day, coverage centred on the projects place in the party election manifestos.

Following 3 May, Tram has been a hot topic across the print and broadcast media, with speculation on what place the project would have in either a minority or coalition government. Notably Kenny Macaskill made the project personal with his commitment that the project would be cancelled via the Evening News post election

### **8.2 Site Works**

- 8.2.1 Work at Gogar Depot continues with minimal coverage. Hoardings are currently being designed for this site; however nothing will be produced until clarity is received on the future of the project.

### **8.3 Helpline**

- 8.3.1 The tram helpline number is 0131 623 8726, and although the system is in operation, as work is limited the calls have slowed down. A maximum of 5 calls a week are being received and answered.

### **8.4 Incident Response**

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

## **8.5 Correspondence Flow**

- 8.5.1 Steve Gorry continues to work with our partner organisations to deliver the customer care package. A detailed report on the customer flow and KPI's is included in this month's papers. Steve will continue to report back on progress and deliverables against targets.

## **8.6 Customer Interaction Cycle**

- 8.6.1 Following last months comment, we have now received proofs of the 8 week newsletter from AMIS. Changes are being fed back to AMIS and we will work with them to finalise any changes needed prior to sending for approval.

## **8.7 Site Information**

- 8.7.1 We still await feedback from AMIS on the use of debris netting at each site, although we note it is currently being used at Gogar.

## **8.8 Launch of programme and customer support following elections**

- 8.8.1 Following approval of the MUDFA programme and clarity on the future of the project it will be necessary to launch both the MUDFA programme and the customer support and communication initiatives surrounding the project.

## **8.9 Decision(s)/ Support Required**

- 8.9.1 None, for information only

## **8.10 Update on Communications Strategy – Customer Management**

The objective of this report is to update the sub-committee with the progress in developing the customer management elements of the Trams for Edinburgh communications and stakeholder strategy

## **8.11 Background**

On 20<sup>th</sup> March a consultancy project was set up to deliver the following elements of the communications and stakeholder strategy:-

- Establish a customer handling framework
- Establish the customer handling capability
- Establish a monitoring and measurement framework

- 8.12 Ensure fitness for purpose throughout all customer management activities in support of Trams for Edinburgh



### **8.13 Current Status**

The attached report (Appendix 3) contains the latest status against each of the key deliverables. The key features of the report are as follows:-

### **8.14 Achievements**

- Branding agreed
- Telephony platform built, tested and working
- Email platforms (road works and information) built (sign off subject to automatic acknowledgement from road works being confirmed)
- Customer handling processes drafted
- Customer management processes drafted
- Customer database final version signed off and training database, version 1 available
- Operational KPI framework drafted
- Customer satisfaction strategy drafted

### **8.15 Planned Deliverables over the next month**

- Customer handling and customer management processes signed off and implemented
- Customer escalation process drafted and signed off
- Customer impact assessment, contact demand forecast and resourcing profile agreed
- Phase 1 KPIs agreed
- Phase 1 Customer satisfaction proposals agreed
- Workshops are being scheduled (24/5 and 29/5) to conclude sign off of customer handling and customer satisfaction monitoring proposals

### **8.16 Future reporting**

It is proposed that the status checklist attached will be produced monthly as a series of project deliverables.

As the KPI and customer satisfaction proposals are rolled out, a structured reporting system will be produced covering all aspects of customer related performance on a monthly basis. The target date for the first report will be August.

## 9.0 Recommendations

DPD is requested to:

- Note the contents of this paper
- Note the challenges and workload involved in ensuring delivery of the MUDFA Programme and associated works and the actions being taken to mitigate costs and delays.

### Proposed

Graeme Barclay  
Construction Director MUDFA

Date 01/06/07

### Recommended

Matthew Crosse  
Project Director

Date 01/06/07



## MUDFA Sub-Committee Meeting

### APPENDIX 1

#### Change Order/Notices Master Schedule







# MUDFA Sub-Committee Meeting

## APPENDIX 2

### Risk Register

## Comments

Training briefings held with MUDFA staff regarding Risk Management Procedures and use of Active Risk Manager – Friday 11 May and Tuesday 15 May. The following people have access to ARM and can manage risks through direct use of the system:-

Graeme Barclay  
John Casserly  
Martin Hutchinson  
Phil Douglas  
John Low  
Jim Sneddon  
John McAloon  
Thomas Caldwell  
Iain Tod  
Lay San Kuak

A meeting was held with AMIS on Thursday 17 May in order to discuss key risks and a way forward for a con-joined approach to managing risk on the MUDFA project.

Ten risks have been added to ARM as a result of the Risk Workshop held on 24 April. They are currently Not Validated and ownership has been noted as G Barclay. Ownership now needs to be distributed to relevant people for assessment, treatment planning and management.

An additional two risks have been noted as having an impact on the MUDFA contract. These are both owned by A Sim.

There appears to have been little movement in risks, particularly those on the MUDFA Primary Register, since the update at the 24 April workshop. It should be noted that Risks 139 and 164 remain at a catastrophic level of significance 25.

ARM Risk ID	Risk Description			Risk Owner*	Significance	Black Flag	Treatment Strategy	Treatment Status		Date Due	Action Owner
	Cause	Event	Effect					Previous	Current		
139	Utilities diversion outline specification only from plans	PROJECT PRIMARY 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	Review design information and re-measure during design workshops with Utility Companies and MUDFA.		Behind Programme	30-Nov-06	M Hutchinson
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	PROJECT PRIMARY 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.	G Barclay	25	None	Develop PC Sums into quantified estimates.		Behind Programme	30-Nov-06	M Hutchinson
							In conjunction with MUDFA, undertake trial excavations to confirm locations of Utilities		On Programme	31-May-07	A Hill
	<b>RISKS 139 and 164 HAVE SAME TREATMENT PLAN</b>						Identify increase in services diversions. MUDFA to resource/re-programme to meet required timescales.		On Programme	31-Aug-07	G Barclay
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.	PROJECT PRIMARY 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.	J Low	24	None	Scottish Power to establish exact location of tunnel		Complete	02-Apr-07	J Low
							Scottish Power to undertake engineering feasibility study		Behind Programme	02-Apr-07	J Low
							Solution to be engineered - ACTION PLAN TO BE DEVELOPED ON COMPLETION OF FEASIBILITY		Pending	03-Mar-08	D Crawley



ARM Risk ID	Risk Description			Risk Owner*	Significance	Black Flag	Treatment Strategy	Treatment Status		Date Due	Action Owner
	Cause	Event	Effect					Previous	Current		
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.	J Low	23	None	Agree design with BT and SDS		Behind Programme	15-Mar-07	J Low
							Investigate the design of underpass such that duct banks are avoided by passing underneath		On Programme	31-Jul-07	D Crawley
							Ensure adequate protection of cables will be provided during construction		Pending	31-Oct-07	G Easton
							Undertake diversion and include costs in base estimate		Pending	30-Sep-08	G Barclay
926	Major single safety incident during construction	DETAIL RISK Safety incident during MUDFA Gas/Scottish Power Diversions	Delay (potentially critical) due to HSE investigation and rework. PR risk to tie and stakeholders.	G Barclay	22	None	Specific Gas/Scottish Power action plan to be developed by incoming PM - See also summary risk actions		Pending	29-Jun-07	G Barclay
168	Major single safety incident during construction	SUMMARY RISK Safety incident during MUDFA Utilities Diversions	Delay (potentially critical) due to HSE investigation and rework. PR risk to tie and stakeholders.	G Barclay	21	None	Site Supervisors to be appointed by tie		Complete	28-Feb-07	S Clark
							Develop and Implement Incident Management Processes		Complete	27-Apr-07	T Condie
							All Site Staff to get CSCS		On Programme	30-Apr-08	P Douglas
							Safety Induction to be carried out for all site staff		On Programme	31-Dec-10	J Sneddon
923	Tram crosses high voltage transmission cables in 4 areas (Leith Walk - 275kV; 2 times bridge abutment - 132kV; 275kV at Edinburgh Park)	Underground electricity transmission cables are encountered and damaged during MUDFA diversions	Potential to cause damage and consequent accident during work; Scottish Power delay works if cable struck; Significant injury (potential for multiple deaths) caused to workforce; Delay in project section.	J Low	21	None	Ensure AMIS understand and agree with construction requirements near to cables.		Complete	30-Apr-07	J Low
							Ensure method statements refer to and deal with very high voltage cables adequately		Complete	30-Apr-07	J Sneddon
							Ensure AMIS follow relevant safety procedures and method statements during construction		Pending	30-Sep-08	P Douglas
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	D Crawley	20	None	PLAN NOT AVAILABLE ON ARM				

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.	D Crawley	19	None	SDS to aim to design diversions within LoD		On Programme	29-Jun-07	D Crawley
							SDS to undertake design checks to ensure diversion in LoD		On Programme	29-Jun-07	D Crawley
							GIS used to identify diversions outwith LoDs and respective landowners		On Programme	31-Aug-07	E Cropley
							AMIS to seek to divert under Statutory Utility powers where outwith LoD		Pending	28-Dec-07	G Barclay
929	Ground conditions; space constraints; encountering uncharted services	MUDFA Contractor encounters other services/conditions that mean Utility Diversions cannot be constructed within LoD	Increase in Capex; delay during re-design and additional diversions	G Barclay	19	None	Develop and implement process to deal with diversion of utilities quickly		On Programme	30-Apr-07	J Johnston
							AMIS to seek to divert under Statutory Utility powers where outwith LoD		Pending	28-Dec-07	J Low
315	Contractors do not understand 3rd party obligations; construction methodology cause adverse impact and cost to 3rd parties; 3rd parties were not expecting construction to have an impact on them; Code of Construction Practice found to be inadequate; vibration and noise claims; claims as a result of proximity to buildings; physical damage from plant.	Significant number/magnitude of claims from 3rd parties received as a result of Utility Diversion activity	tie Project Management costs to deal with claims; negative PR	G Barclay	18	None	Appoint Site Inspectors		Complete	28-Feb-07	P Douglas
							Agree Site Checks		Complete	28-Feb-07	P Douglas
							Implement comms cycle and dedicated phone link		On Programme	31-Mar-07	S Waugh
							Ensure MUDFA contractors understand 3rd party obligations		On Programme	30-Apr-07	G Barclay
							Develop and implement 3rd Party Management system to deal with impacts		On Programme	30-Apr-07	M Connelly
							Implement Site Check documentation system		On Programme	30-Apr-07	P Douglas
							Ensure dilapidation surveys undertaken by SDS are suitable for expected work		On Programme	30-Apr-07	G Barclay

ARM Risk ID	Risk Description			Risk Owner*	Significance	Black Flag	Treatment Strategy	Treatment Status		Date Due	Action Owner
	Cause	Event	Effect					Previous	Current		
							Audit performance against obligations	On Programme		30-Sep-08	P Douglas
							Agree site specific hours of operation	On Programme		30-Sep-08	P Douglas



## MUDFA Sub-Committee Meeting

### APPENDIX 3

#### Current Status – Customer Management

### Appendix 3

#### Current Status – Customer Management (as at 23<sup>rd</sup> April 2007)

	Deliverable	Planned	Actual	Forecast	Comments
<b>0</b>	<b>Branding</b>				
1	Brand Strategy agreed	w/c 26/3	w/c 26/3	N/A	<b>Trams for Edinburgh</b> agreed brand for all customer facing communications and response mechanisms
2	Segmentation agreed	w/c 26/3		w/c 23/4	Decision to be made re. structure of database (Options include main s/holder groups or SIC codes)
<b>0</b>	<b>Customer Handling Framework</b>				
1	Customer Handling - Telephony	w/c 16/4	w/c 16/4		Customer Handling Flows drafted for sign off
2	Customer Handling - Correspondence	w/c 16/4	w/c 16/4		Customer Handling Flows drafted for sign off
3	Customer Handling - Email	w/c 16/4	w/c 16/4		Customer Handling Flows drafted for sign off
4	Sign off customer handling framework	w/c 21/5	w/c 21/5		Workshop planned (24/5) <b>now 7<sup>th</sup> June (due to Matthew and Susan's diary)</b>
<b>0</b>	<b>Customer Management Processes</b>				
1	Document existing flows	w/c 9/4	w/c 9/4		Completed
2	Draft customer management processes	w/c 16/4	w/c 16/4		Completed
3	Sign off customer management processes	w/c 21/5		w/c 21/5	Workshop planned (24/5) <b>now 7<sup>th</sup> June (due to Matthew and Susan's diary)</b>
4	Define escalation processes	w/c 29/5		w/c 29/5	<b>In progress, on target</b>
5	Define compensation policy	w/c 29/5		w/c 29/5	<b>In progress, on target</b>
3	Sign off hierarchy and roles	w/c 29/5		w/c 29/5	Workshop to be scheduled w/c 29/5 <b>now 7<sup>th</sup> June (due to Matthew and Susan's diary)</b>
7	Develop Training Material	w/c 4/6		w/c 4/6	
3	Deliver Training (existing staff)	w/c 2/7		w/c 2/7	
<b>0</b>	<b>Resourcing</b>				
1	Customer Impact Analysis	w/c 23/4		w/c 23/4	<b>First draft completed</b>
2	Demand Forecast	w/c 14/5		w/c 14/5	<b>First draft completed, final proposal due w/c 28/5</b>
3	Recruitment Proposals	w/c 21/5		w/c 21/5	<b>Link to 4.2, due w/c 28/5</b>
4	Training and deployment of additional resources	w/c 2/7		w/c 2/7	
5	Customer database delivery (version 1)	w/c 16/4		w/c 16/4	<b>1<sup>st</sup> draft received, appraisal sessions held (22 and 23/5)</b>
3	Customer database (final version )	w/c 21/5		w/c 21/5	<b>Schedule sign off w/c 4/6</b>
7	Customer database training preparation	w/c 28/5		w/c 28/5	

3	Customer database training roll out	w/c 25/6		w/c 25/6	
9	Customer database roll out existing staff	w/c 25/6		w/c 25/6	
10	Customer database roll out new staff	w/c 2/7		w/c 2/7	
<b>0</b>	<b>Monitoring &amp; Measurement - KPIs</b>				
1	Draft KPI frame work – Phase 1	w/c 16/4		w/c 16/4	First draft linked to 2.1, 2.2 and 2.3 above
2	Phase 1 KPIs signed off	w/c 21/5		w/c 21/5	Workshop planned for 24/5 <b>Rescheduled for 7<sup>th</sup> June</b>
3	Phase 1 KPI reporting	monthly			Agree forum and reporting cycle
4	Phase 1 KPI Review / Phase 2 roll out	w/c 25/9		w/c 25/9	
5	Phase 2 KPI Reporting	w/c 1/10		w/c 1/10	
<b>0</b>	<b>Monitoring &amp; Measurement Customer Satisfaction</b>				
1	Customer Sat Strategy – 1st draft	w/c 9/4		w/c 9/4	Completed for appraisal and costing
2	Customer Sat Strategy Version 1 – outline proposal	w/c 16/4		w/c 16/4	Draft for discussion with Carole Millar Research
3	Customer Sat Phase 1 – detailed proposals and costing	w/c 30/4		w/c 30/4	Carole Millar Research proposal to Mike Connelly <b>Detailed proposal for sign at 7<sup>th</sup> June workshop</b>
4	Customer Sat Phase 1 - sign off	w/c 21/5		w/c 21/5	Workshop Planned (24/5) <b>Rescheduled to 7<sup>th</sup> June</b>
5	Phase 1 Rollout – Stakeholder Evaluation	w/c 18/6		w/c 18/6	
3	Phase 1 Rollout - Impression Cards	w/c 2/7		w/c 2/7	
7	Phase 1 Rollout - Non Contact Survey	w/c 23/7		w/c 23/7	
3	Phase 1 Reporting	w/c 3/9		w/c 3/9	Agree forum and reporting cycle
9	Phase 2 Proposals drafted (Contact Survey)	w/c 9/7		w/c 9/7	
10	Phase 2 Rollout (Contact Survey)	w/c 7/8		w/c 7/8	