



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

# MUDFA Sub Committee Report Papers For Meeting 24 October 2007

## Distribution

Willie Gallagher  
Matthew Crosse  
Tom Condie  
Steven Bell  
Susan Clark  
Graeme Barclay  
Mike Connelly

Pat Diamond  
Duncan Fraser  
Tom Clark  
Miriam Thorne  
Keith Rimmer  
Bill Campbell  
Bill Nicholls

Jason Chandler  
Alan Dolan  
Andy Malkin



## **Agenda**

### **Sub-Committee Meeting**

**to be held at Kingdom Brunel Room, Citypoint II**

**on Wednesday 24 October 2007 at 2pm**

**1.** Actions from previous minutes.

**2.** Construction Director's Report

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

**3.** Appendices

- Appendix 1: Progress Performance Curves
- Appendix 2: Communications; Enquiries by Contact
- Appendix 3: Communications; Contact Summary Sheet
- Appendix 4: Forecast Design Issue October 2007

**4.** AOB



## MUDFA Sub-Committee Meeting

### AGENDA ITEM 1

#### Actions from Previous Minutes

tie Limited

**Minutes of Sub-Committee Board Meeting**

**Date:** 26 September 2007

**Time:** 14.00

**Venue:** Kingdom Brunel, CityPoint II

<b>In attendance</b>	Willie Gallagher Matthew Crosse Steven Bell Graeme Barclay Tom Condie Keith Rimmer Steve Gorry Tom Clark Duncan Fraser Bill Campbell Andy Malkin Steve Hudson Alan Dolan Jason Chandler	WG MC SB GB TC KR SG TCL DF BC AM SH AD JC
<b>Apologies</b>	Mike Connelly Pat Diamond Bill Nicholls	MC PD BN
<b>Circulation</b>	As Above MUDFA Team	

	<b>ACTIONS</b>	<b>ACTION BY</b>	<b>DATE DUE</b>
1.1	[1.3] Hoarding Boards – This should be finalised next week.	MC/AM	02.10.07
1.2	[1.5] Programme - formalise changes for Revision 6 – First draft will be ready 02.10.07. Final draft will be ready 26.10.07	GB GB	Complete 26.10.07
1.3	[1.16] AMIS Supervisors' numbers capabilities need to be revisited to ensure correct skills base to support AMIS staff and sub contractors. SB/GB/TC to sit down with AMIS to validate resources. GB/AM to carry out joint overview of resource levels.	GB/AM	25.10.07
1.4	Outstanding Drawings – go through by section and look at issues involved with those drawings with resolution options.	GB/AD/JC	25.10.07

1.5	<p>DRAWINGS – Dates for Issue by SDS</p> <p>S1B – Plates 22-26 15.10.07</p> <p>S1C – Plates 45-48 05.10.07 Plates 42-43 19.10.07</p> <p>S1D - Plates 47-48 (rescheduled date tbc)</p> <p>S5A - Plates 4-5 12.10.07</p> <p>AD to review status of drawings on a daily basis – with instruction to Chris Reid to chase SUs.</p> <p>Weekly update on drawing status to go to WG.</p>	<p>AD/JC</p> <p>AD/JC AD/JC</p> <p>AD/JC</p> <p>AD</p> <p>SB</p>	<p>Complete</p> <p>Complete Complete</p> <p>Complete</p> <p>12.10.07</p>
1.6	Issue with Traffic Management on S1C (St Andrew's Square) – TRO should be in place prior to starting work.	GB/KR	25.10.07
1.7	Resources – Tram Helpers- do we require more support? Recruitment to be carried out in good time to allow for full training prior to going out on site.	SG/AM	25.10.07
1.8	Trench Reinstatement – potential to use foam concrete as backfill. Plan of action to be agreed.	GB/AM	25.10.07
1.9	Report on programme required for next meeting.	GB/AM/AD	25.10.07



## MUDFA Sub-Committee Meeting

### AGENDA ITEM 2

#### Construction Director's Report

## Edinburgh TRAM Project

Paper to : Utility Sub-Committee

Subject : Construction Director's Report

Date : 24 October 2007

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### Executive Summary

#### High Level View

- Progress

Period 07 2007/08 from 15-Sep-07 to 12-Oct-07					Overall Performance to Date		
PLANNED					PLANNED		
ACTUAL					ACTUAL		
Variance					Variance		
TOTAL	Metres	984	1789	805	2713	3084	371
	Chambers	5	8	3	10	14	4

\*Approximately 500m of Cable & Wireless cable successfully slew at Gogar ahead of programme.

- **Costs** - Overall MUDFA Utility costs for the TRAM Project are currently on target and in line with current final account expectations
- **H&S** - The accident frequency rate (AFR) remains 0.00. There were no accidents but 6 incidents reported this period which are summarised as follows:
  - 3 No cable strikes – AMIS MUDFA reviewing their procedures and holding H&S day workshops and events
  - 2 No live water mains struck – 1 No Scottish Water failed to isolate valves correctly leading to a failure, Scottish Water to resolve as they control the valve shutdown procedure
  - 1 No incident of subsidence of temporary road surface.

We await investigation reports from AMIS on each of these incidents. Immediate actions were identified and implemented accordingly.

There was one planned audit carried out, TQA 07.07, on AMIS. A summary will be included in the next report.

One site inspections was undertaken in the period. Leith Walk, 02/10/07 - Score of 95%, 2 minor actions identified, 3 observations made. Actions closed out.

- Programme

Revision 06 of the MUDFA Programme is currently being finalised by tie/AMIS

There are a number of key issues requiring resolution which will affect the Rev 06 Programme as follows :

- BT design and cabling programme – working with BT to explore ways of reducing the impact including BT working 24/7.
  - Key Stakeholder Issues related to St. Andrews Sq streetscape works and Piccardy Place final alignment
- **Key Stakeholder Issues:**
    - Revision 06 of the MUDFA Programme is currently being finalised – BT design, St. Andrews Sq streetscape works and Piccardy Place final alignment are major issues which may affect the delivery to the Rev 06 Programme
    - Removal of central reserve along Leith Walk is ongoing
    - Jane Street Road closure commences 15/10/07 for 12 weeks
    - Princes St utility crossings at Fredrick & Castle St will be carried out between 12/11/07 and 30/11/07
    - Trial holes are approved by the Traffic Management Panel for the East bound carriageway on Shandwick Place
    - Access agreements for SUC's apparatus which remains within the DKE to be agreed between SUC and with both TEL and CEC for Constitution St, Shandwick Place and Haymarket.

### **Section 1A**

Casino Square works - road crossings at roundabout and the associated works completed on the 12<sup>th</sup> October 2007 as planned for the commencement of Forth Ports Winter embargo on the 13<sup>th</sup> October 2007 which ends at end of January 2008.

Following expiry of the embargo period three Scottish Water connections will be completed to finalise the works section.

### **Section 1B**

The utility diversion works and associated road closure to McDonald Road were completed on Monday 8<sup>th</sup> October 2007 as planned.

The centre reservation along Leith Walk is being removed and temporary road reinstatement installed to provide a greater working area for the utility diversions and greater flexibility with traffic management along Leith Walk to facilitate achieving the Rev 06 Programme. Removal of the centre reservation is required for INFRACO works. All the proposals have been discussed and agreed with the Traffic Management Panel prior to implementation with local business' and stakeholders informed.

Jane Street road closure commences on the 15<sup>th</sup> October 2007 for twelve weeks.

### **Section 1C**

A series of trial hole investigations along Princes Street are planned in the next period to inform design/construction and potentially reduce any delays to programme. The works have Traffic Management Panel approval and AMIS have taken account of the pending city centre embargoes.

A proposal to undertake the utility road crossings in Princes Street at the junctions of Fredrick Street and Castle Street has been agreed by the Traffic Management Review Panel and will commence week beginning 12 November 2007 with targeted completion prior to the embargo at start of December.



## **Section 1D**

A series of trial holes requested by EICC in Morrison Street are proposed mid/late November 2007 – these are non-MUDFA works and will be scheduled not to impact on the MUDFA programme.

Proposals to undertake a series of trial holes to inform construction along Shandwick Place in the next period are being submitted to the Traffic Management Review Panels on the 15<sup>th</sup> and 22<sup>nd</sup> October 2007.

## **Section 5A**

The MUDFA works available within this Work Section were completed by 5<sup>th</sup> October 2007 this amounted to 70% of the utility diversions required in this area. The remaining 30% of utility diversions are being transferred to the INFRACO Contractors scope.

## **Section 7A & 7B**

AMIS have submitted proposals for the utility diversions associated with the above two sections to be commenced as RATS (Risk And Trade). The submissions are currently under review and tie has arranged meetings with the affected SUC's and BAA to discuss and agree.

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

### **See Appendix 1 – Progress Performance Curves**

## **2.1 Construction**

- Works progressing on 5 no fronts – Sections 1A (connections in verges), 1B, 1C, 6 (Depot) and 6 (Utilities).
- Trial Holes ongoing in Section 1B and 1C.

## **2.2 Design**

- During the period SDS submitted the following IFC submissions to tie;

Section 1C plates 45-48 on 5<sup>th</sup> October 2007  
Section 1B plates 22-26 on 12<sup>th</sup> October 2007

Work packs including the above IFC drawings have been issued to AMIS.

- During October SDS prioritised the utility design deliverables to protect the programme of IFC deliverables and ensure IFC submissions are available to the MUDFA Contractor to keep the on-site production team working. As a result the IFC drawings were prioritised which may have detrimental affects on future anticipated IFC deliverables. In light of the above the following IFC submissions are anticipated;
  - Section 1C plates 42-44 on 19<sup>th</sup> October 2007
  - Section 5B plates 6-13 on 19<sup>th</sup> October 2007
- Late response from SUC's and/or acceptance to utility design deliverables by the SUC's had a potentially delaying effect to the SDS IFC Deliverables programme. However, during October the Client Utility Team and the SDS Utility Design Team have promoted a continuous working engagement with

the SUC's and a progressive lobbying exercise is now in place to confirm acceptance to the utility design deliverables which resulted in all IFC dates in the period being met.

- Drawings for approval which should have been delivered are:

Section 1A (16-21) SDS have re-forecast from 21<sup>st</sup> September to 19<sup>th</sup> October  
Section 1D (49-51) & Section 1D (52-56) SDS have re-forecast all these details from 12<sup>th</sup> October to the 19<sup>th</sup> and 26<sup>th</sup> October.

Section 1C (32-38) SDS have re-forecast from 12<sup>th</sup> October to 26<sup>th</sup> October due to Picardy Place alignment being unresolved – tie have re-confirmed the existing alignment to be designed and issued.

Section 1C (39-41) SDS have re-forecast from 12<sup>th</sup> October to 2<sup>nd</sup> November for re-alignment issue to be resolved by SDS.

- During this period tie has instructed SDS to work to a new reduced review process. The new process identifies tie and the SUC's reviewing SDS utility designs in parallel. Fully defined process will be addressed in the next period.

### 2.3 Traffic Management

- From the 8<sup>th</sup> of October, for a period of one week, it is proposed to close Lane 1 Northbound and Lane 2 Southbound on Leith Walk to allow the removal of the central reserve between McDonald Rd and Balfour St. The additional lane provided will allow bus stop, loading/unloading bay, emergency stop provision, flexible traffic management capability to open up large area's for utility works to be undertaken as efficiently as possible which may reduce the costs and the opportunity to meet the Rev 06 Programme. The Traffic Management Review Panel (TMRP) has approved these actions.
- From the 15<sup>th</sup> of October a contra-flow will be installed on the Southbound lane of Leith Walk between McDonald Rd and Dalmeny Street. This, in conjunction with the removal of the central reservation, will allow the closure of both Northbound lanes in the section. Access to and from Pilrig Street will be sisted apart from buses turning right from Pilrig Street heading north into Leith Walk. Suitable pedestrian provision will be maintained throughout the length of the works.
- Jane Street, at the junction with Leith Walk to the north end, will be closed to allow the carrying out of BT works for a period of 12 weeks from the 15<sup>th</sup> of October. The one-way provision currently in place will be revoked under the TTRO and access will be permitted to Jane Street from Tennants Street. The Traffic Management Review Panel (TMRP) has approved these TM provisions.
- Trial Holes are programmed and approved by the TMRP on the eastbound carriageway on Shandwick Place to determine the existing utilities locations.
- Trial Holes are programmed to commence on Princes Street, between Waverley and Castle Street, on the 10<sup>th</sup> of October 2007. There are 32 trial holes proposed along this length of carriageway and footway. The Trial Holes are due to be completed by 30<sup>th</sup> November 2007. The Traffic Management Review Panel (TMRP) has approved these TM provisions.

## **2.4 Communications & Stakeholder**

### **2.4.1 Media**

- It has been another quiet period in the media as far as MUDFA is concerned; thanks to all who have helped to contain and resolve emerging issues. One letter appeared in the Evening News from a businessman complaining about disruption, but even this gave credit to tie's staff and acknowledged wide support within Edinburgh for the tram project. Stakeholder team pie chart graphic.
- Beyond MUDFA the tram project has enjoyed a great deal of positive coverage regarding the recommendation of CAF as preferred bidder for TRAMCO, increased funding for the Open for Business marketing campaign and evidence that developers are beginning to seek planning permissions for investments along the tram route.
- The communications team is extremely busy working on upcoming news regarding submission of the Final Business Case to the City of Edinburgh Council and recommendation of preferred bidder for INFRACO; two of the project's major milestones.
- During this period the Government also confirmed that the Edinburgh Airport Rail Link will not go ahead and instead proposed the construction of a new station at Gogar on the Edinburgh-Fife line so that passengers can switch from train to tram for connection to the airport.

### **2.4.2 Site works**

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

### **2.4.3 Incident Response**

- Communications and Stakeholder staff have been on call 24/7 since the start of the MUDFA works. Summary of issues to be provided from team.

## **2.5 Customer Interaction Cycle**

### **2.5.1 Enquiry Demand**

- **See Appendix 2 – Enquiries by Contact**

## **2.6 Stakeholder Engagement Activity Reports**

### **2.6.1 Contacts**

- **See Appendix 3 – Contact Summary Sheet**

## **2.7 Commercial**

- The Final Account for Gogar Depot Phase I mass excavations was agreed with AMIS.
- All the potential issues related to the delayed commencement of the AMIS MUDFA utility diversion works have been discussed in detail with AMIS resulting in an agreed way forward and agreement in principle between the parties.

- The potential issue associated with the access to the SU apparatus which will remain within the DKE, specifically along Constitution Street and Shandwick Place is being progressed. Tie met with TEL representative to define access parameters and these are being communicated to the affected SU for approval/comment prior to incorporation into formal legal agreements. Awaiting confirmation from CEC re working hours for planned maintenance
- Road reinstatement issue and potential revised specification based performance. AMIS/CEC issue.

### **3.0 Operations Next Period**

#### **3.1 Construction**

- Continuation of ongoing works to central reserve – Leith Walk
- Works in Jane St – BTO main exchange chamber demolition/new build
- Continuation of ongoing diversionary works, Leith Walk - North McDonald rd to railway bridge
- Trial holes Shandwick place (31no) 23/10 – 8/11
- Princes Street road crossings commencing 12/11 (5no – 3 weeks), prior to Xmas embargo.
- St Andrew sq trial holes (2no) completion
- Trial holes NR bridge
- Gogar depot (utilities) – 33kv jointing, 250 mm & 800mm commencement under RATs.

#### **3.2 Design**

- **See Appendix 4 – Forecast Design Issue October 2007**
- IFC's for 19<sup>th</sup> and 26<sup>th</sup> appear to be on target as a result of adjustment/re-prioritising IFC deliverables. The adjustments/re-prioritisation undertaken to meet IFC deliverables on the 19<sup>th</sup> and 26<sup>th</sup> may have a detrimental affects on future anticipated IFC deliverables.

#### **3.3 Programme**

- Revision 06 has been produced in draft and will be reviewed jointly by tie/AMIS and finalised by the 19<sup>th</sup> October subject to final consultation with key stake holders. St Andrews sq and BT issues in 1C
- Continued development of Key Performance Indicators for individual sections.
- Complete production of detailed construction programmes – sections 1B, 1C, 1D, 6, 7A, 7B and Morrison Street (EICC) trial holes.

#### **4.0 Initiatives**

- Review of service utility diversions requirements based on revised depth and protection. Area of review 600 – 1200 depth range below FRL. Detail if 600mm underside of slab & how will this be implemented.
- 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's advice/input. Awaiting Corduroys formal proposal and in discussions with SUC's to have Berkeley's as their representative to reduce

the number of interfaces. Also considering a BT specialist to join the MUDFA team for a short period of time to assist in the design and C4 implications related to betterment/deferment etc.

- Provision of an independent survey team to carryout dilapidation surveys along the tram route (SDS responsibility) – protect tie's position from potential 3<sup>rd</sup> Party claims post MUDFA & INFRACO.
- RATs proposal put forward for section 7
- Review of construction and related process' including site assurance issues, hand over, testing etc
- Work section approval process review.
- Retrospective review of work sections to be undertaken
- Dilapidation surveys are proposed for all existing structures along the route. A proposal has been issued to the OCIP insurers for comment/approval prior to paper submission for approval of the works. It is tie's view that these works are covered under the scope of SDS and tie have written accordingly.

## 5.0 Key Issues/Blockers

- Section 2A issue final ratification of Rev 06 programme to ensure taken account of.
- SGN review at technical level ongoing and commercial issues to be resolved.
- Stake holder help/issues – BAA fence etc
- BT issue re programme

## 6.0 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	24 October 2007
<b>Recommended</b>	Mathew Crosse Project Director	24 October 2007



## MUDFA Sub-Committee Meeting

### AGENDA ITEM 3

#### Appendices



# MUDFA Sub-Committee Meeting

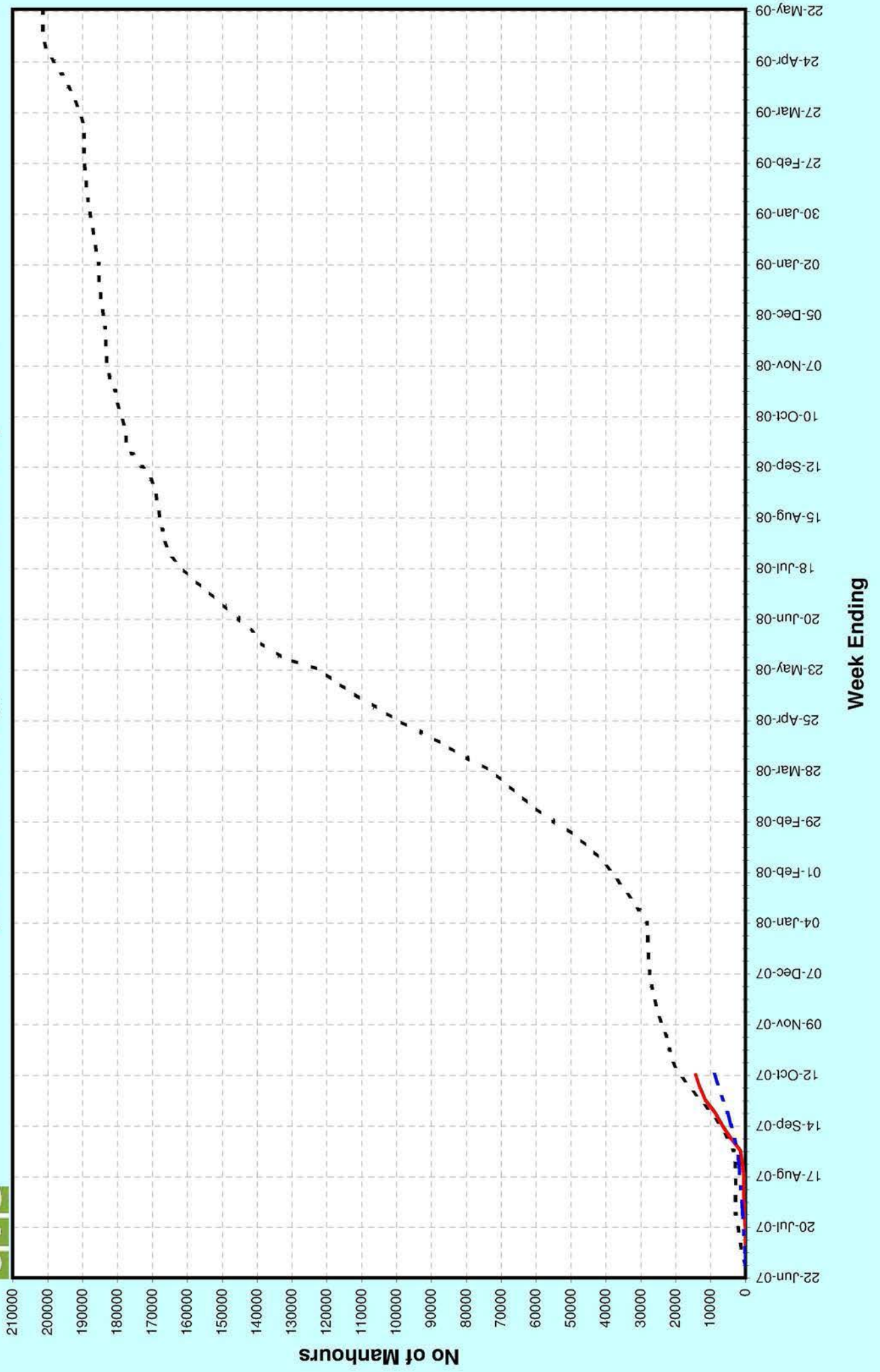
## APPENDIX 1

### Progress Performance Curves



**Edinburgh Tram Project**  
**MUDFA - Overall Manhour Progress**  
**(Baseline based on Approved WO Measure + AFA)**

- - - Cum Budget Hours: 18892  
— Cum Earned Value Hours: 14283  
- - - Cum Actual Hours: 8919





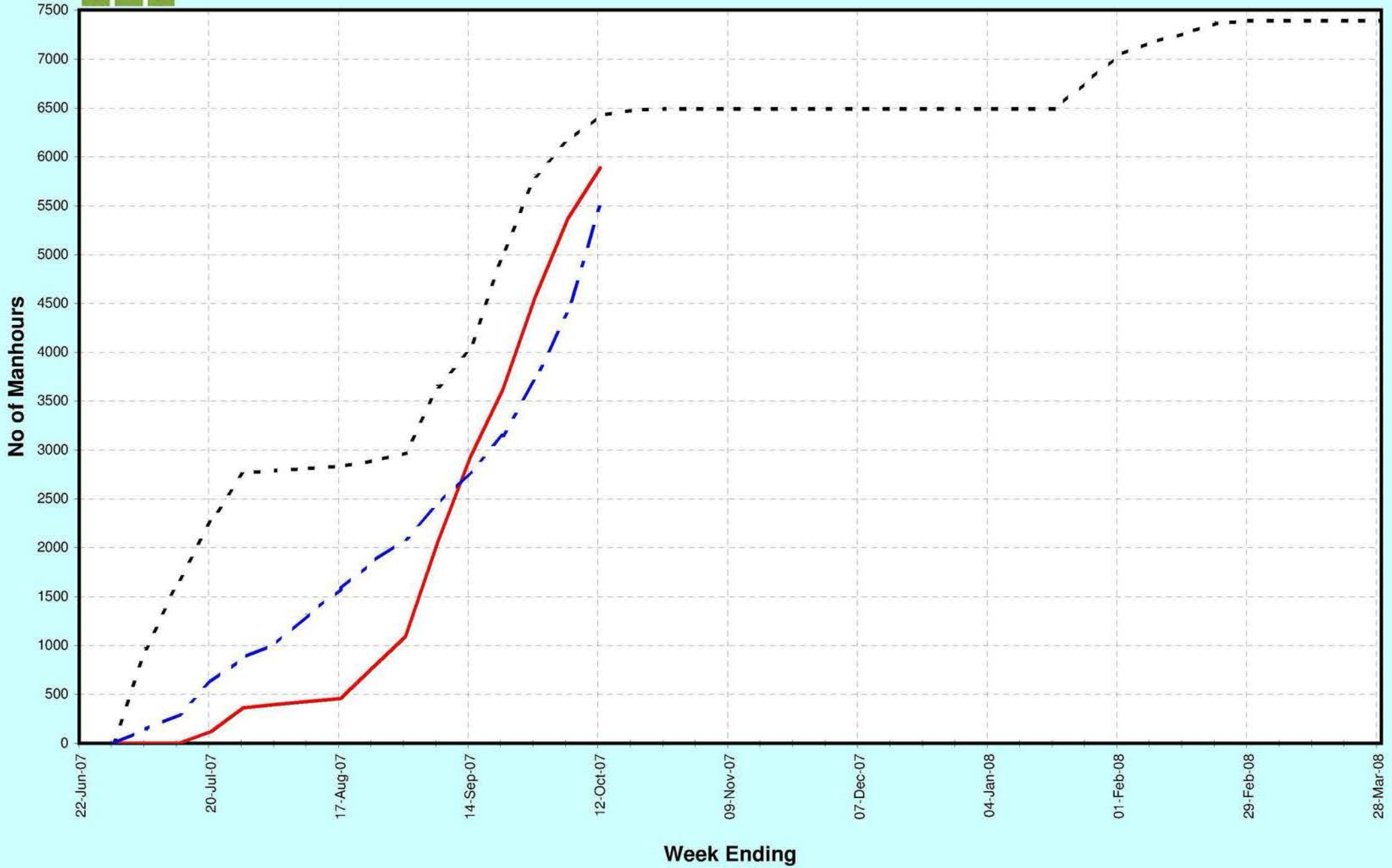


# Edinburgh Tram Project

## MUDFA - WO 1AWSI003/001 - Tower Street to Rennie's Isle Bridge

(Baseline based on Approved WO Measure)

- - - Cum Budget Hours: 6423
- Cum Earned Value Hours: 5889
- - - Cum Actual Hours: 5497



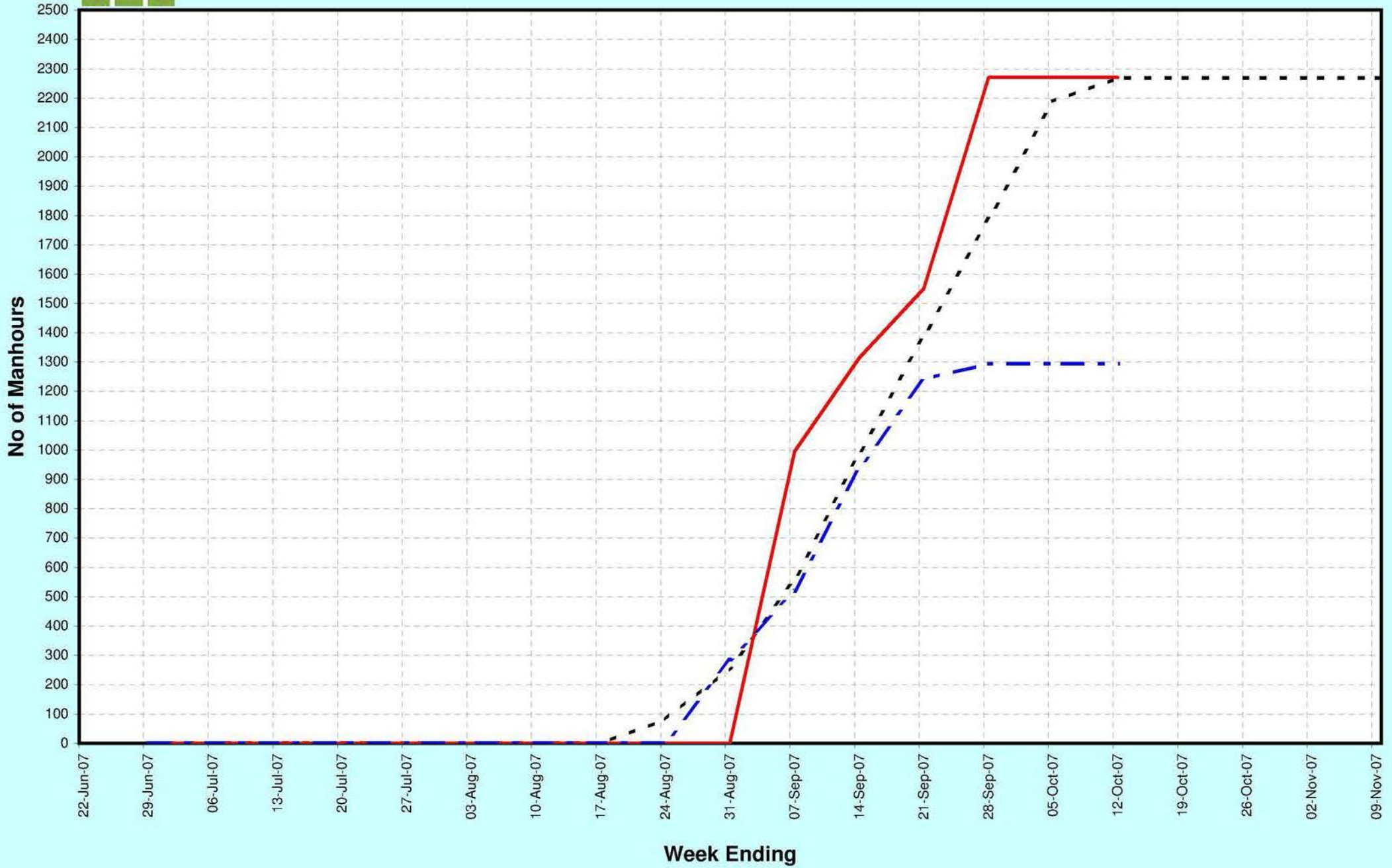


# Edinburgh Tram Project

## MUDFA - WO 5AWSI008/002 - Russell Road to Roseburn Street

(Baseline based on Approved WO Measure)

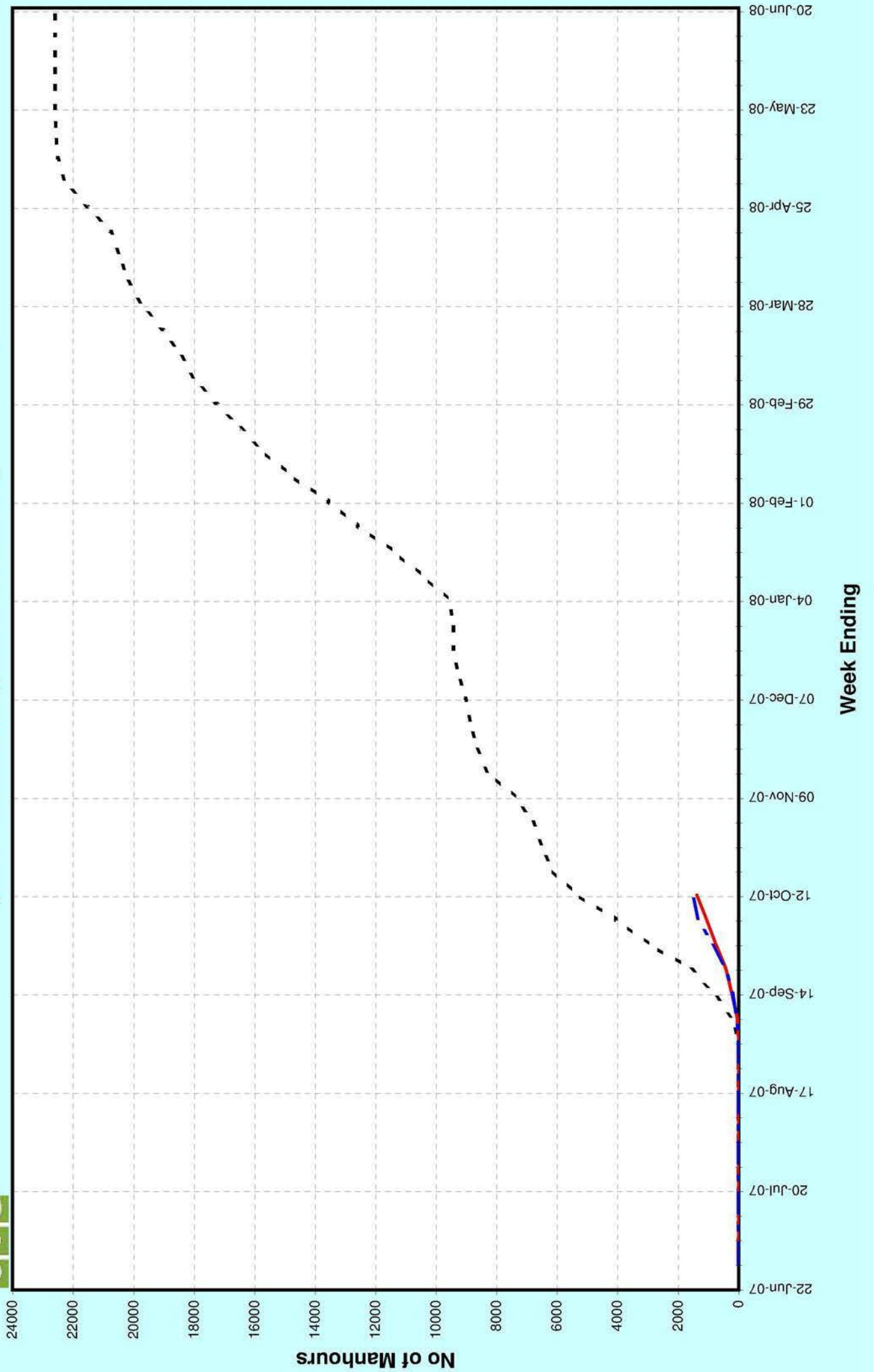
- - - Cum Budget Hours: 2270
- Cum Earned Value Hours: 2270
- . - Cum Actual Hours: 1294





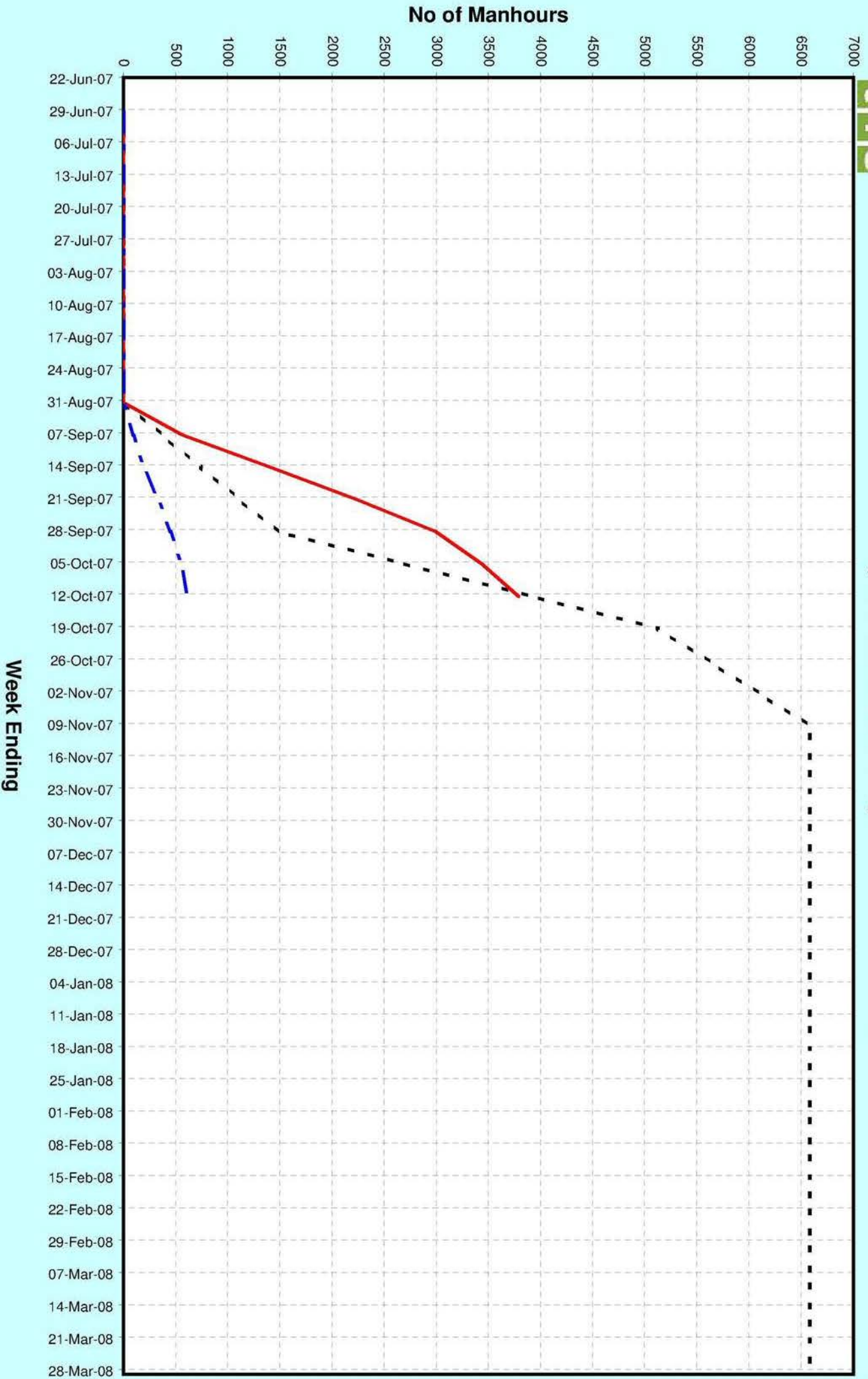
**Edinburgh Tram Project**  
**MUDFA - WO 1BWSI001/001 - McDonald Road to Balfour Street**  
(Baseline based on Approved WO Measure)

--- Cum Budget Hours: 5338  
— Cum Earned Value Hours: 1383  
- - - Cum Actual Hours: 1518





**Edinburgh Tram Project  
MUDFA - Gogar Depot  
(Baseline based on AFA)**



■■■ Cum Budget Hours: 3914  
 ■■■ Cum Earned Value Hours: 3792  
 ■■■ Cum Actual Hours: 611

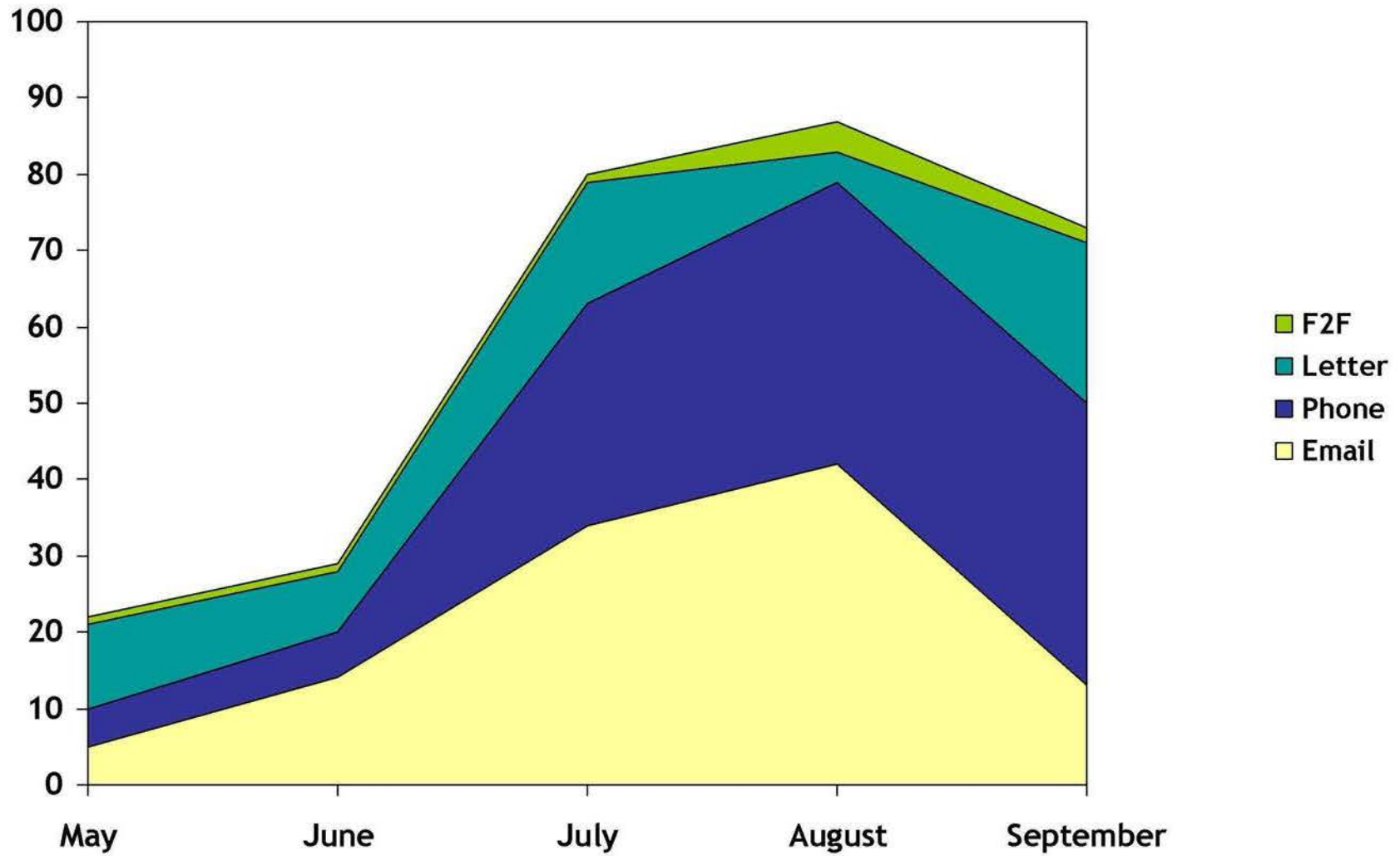


## MUDFA Sub-Committee Meeting

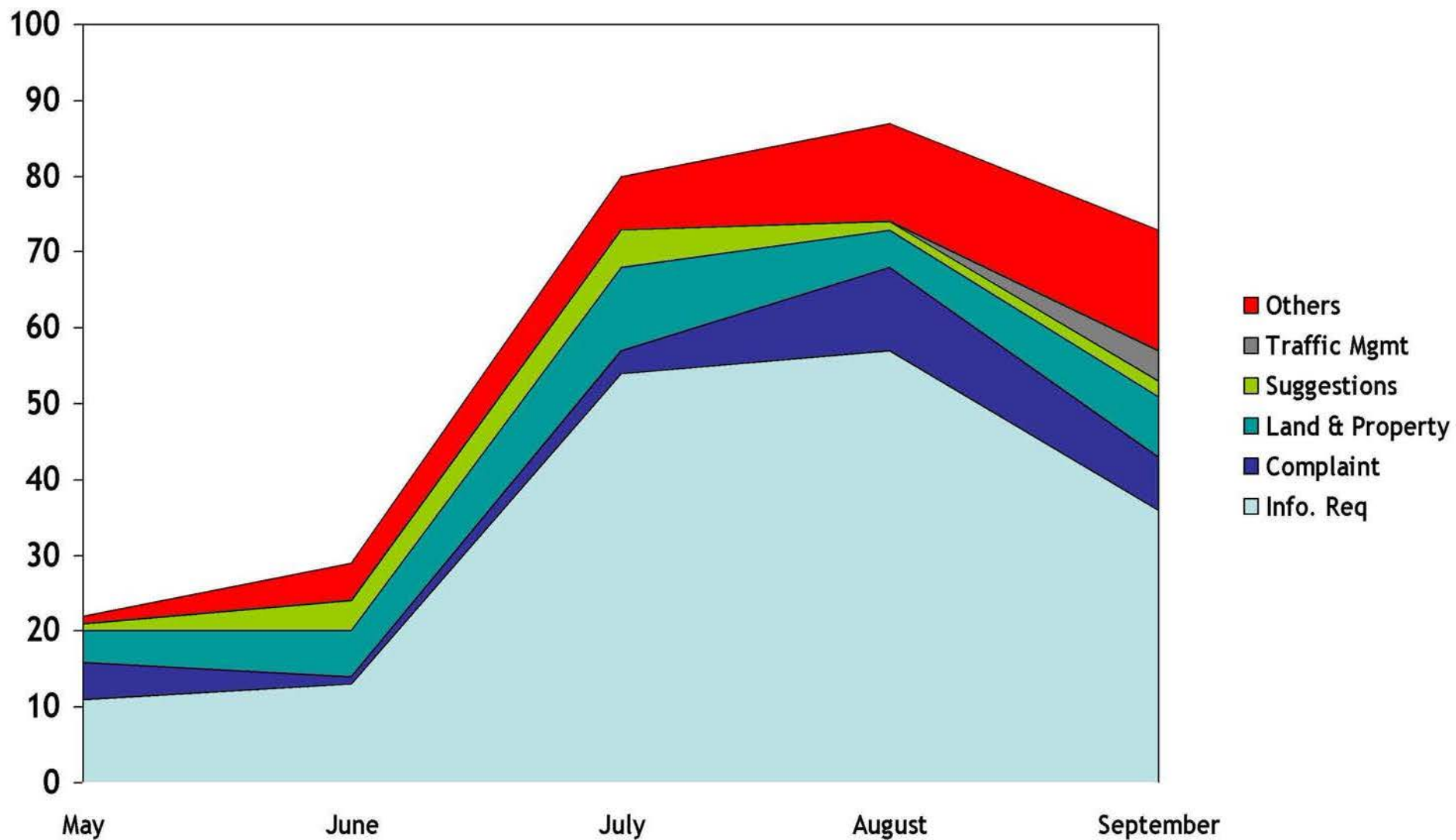
### APPENDIX 2

#### Communications: Enquiries by Contact

# Enquiries by Contact Type – (tie and AMIS) – period ended 15/9/07



Enquiries by Contact Reason – (tie and AMIS) – period ended 15/9/07



## Complaints Details period ended 15/9/07

Organisation	Issue	Resolution
Apollo Blinds Leith Walk	Broken Slab, poor reinstatement	BT problem. Advice given to customer. Customer satisfied.
Edinburgh Masonic Club Leith Walk	Access blocked due to works site in Leith Walk	Tram Helper engaged with customer, access restored.
Bills Tattoo Parlour Leith Walk	Poor quality reinstatement coupled with delay in putting right.	Reinstatement made to customer's satisfaction (6 days after initial complaint).
Great Bikes, No Bull Leith Walk	Customer unhappy with works	Tram helper outlined duration, customer satisfied.
Scotrail Russell Road	Access to works entrance restricted, problems with deliveries.	Site Manager arranged removal of spoil to open up access. Issue resolved.
11 McDonald Road	Reported problems with cones outside property	Issue not tram related. closed





## MUDFA Sub-Committee Meeting

### APPENDIX 3

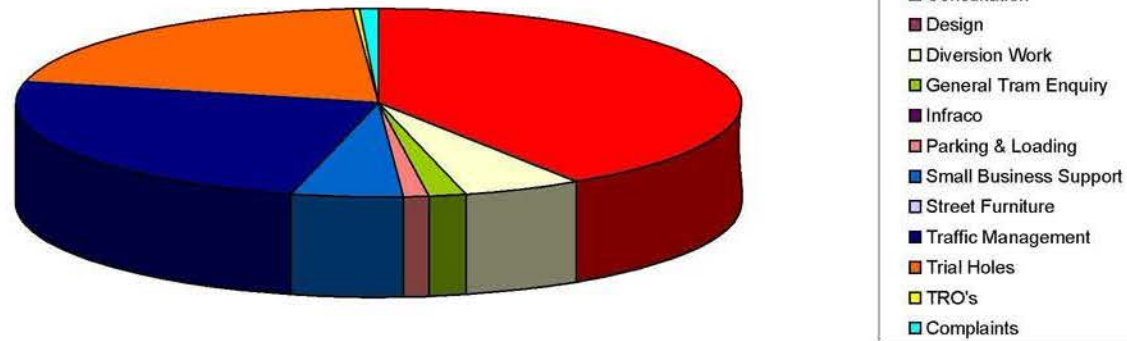
#### Communications: Contact Summary Sheet

### Summary Sheet

Nature of Visit	Total	Business	%	Community	%	%
Consultation	145	67	46%	78	54%	41%
Design	0	0	0%	0	0%	0%
Diversion Work	18	15	83%	3	17%	5%
General Tram Enquiry	6	0	0%	6	100%	2%
Infraco	0	0	0%	0	0%	0%
Parking & Loading	4	4	100%	0	0%	1%
Small Business Support	18	18	100%	0	0%	5%
Street Furniture	0	0	0%	0	0%	0%
Traffic Management	87	87	100%	0	0%	25%
Trial Holes	72	72	100%	0	0%	20%
TRO's	1	1	100%	0	0%	0%
Complaints	3	3	100%	0	0%	1%
<b>Total</b>	<b>354</b>	<b>267</b>	<b>75%</b>	<b>87</b>	<b>25%</b>	<b>100%</b>

Updated  
10/10/07

### Stakeholder Engagement Summary





## MUDFA Sub-Committee Meeting

### APPENDIX 4

Forecast Design Issue October 2007



