Edinburgh Tram Project

# Assessment of Extension of Time Entitlement (21 August 2009)

(The reader is cautioned that this set of presentation slides contains selective extracts from contract clauses. In the interest of brevity and to facilitate discussion, a précis of the full wording has often been used. For this reason, the wording used in these slide should not be relied upon in forming opinion on any of the Contract provisions and mechanisms discussed herein.)

EXPERTS IN CONSTRUCTION PLANNING PROGRAMMING AND THE COMMERCIAL TRANSACTION



# Pertinent Infraco obligations re. time and associated costs

- Mutual co-operation and apply expertise (clause 6.1 Partnering)
- Approach all Permitted Variations on a collaborative and Open Book Basis (clause 6.3.1)
- Take reasonable steps to mitigate any foreseeable losses and liabilities (clause 6.3.5)
- Take all reasonable steps to manage, minimise and mitigate all costs (clauses 6.3.6 & 7.5.5)
- Progress the Infraco Works with due expedition and in a timely and efficient manner without delay, to achieve timeous delivery and completion ... (clause 60.1 – Programme)

# **Contract provisions for EoT**

- Clause 64 Relief Event
- Clause 65 Compensation Events
  - Includes:
    - tie breach
    - late delivery of SDS design and SDS breach
- Clause 8o tie Change
  - tie Change
  - Mandatory tie Change
  - Notified Departures



#### **Relief Events**

- Clause 64
  - serve notice as soon as practicable, and in any event within 20 business days
    - full details of the nature of the event
    - the date of occurrence and likely duration
    - likely effect upon the Programme or adverse effects on performance of obligations
    - mitigation measures adopted and why unsuccessful
    - any acceleration or other measures which Infraco could take to mitigate the effects of such delay .... and an estimate of the costs thereof
  - if continuing effect and unable to determine ....
    - provide reasons, interim particulars and further particulars as soon as reasonably practicable.

#### Relief Events (continued)

- Clause 64 (continued)
  - Demonstrate to the reasonable satisfaction of tie that:
    - Infraco could not reasonably have avoided such occurrence or consequences
    - the Relief Event is the direct cause of the delay
    - Infraco is using reasonable endeavours to perform its obligations
    - tie shall, in assessing any delay, EoT or relief:
      - not take into account any event or cause of delay which is caused by negligence, default or breach by Infraco
      - take into account events only if Infraco establishes to the satisfaction of tie that it has used its reasonable endeavours to adjust the order and sequence in which the Infraco proposes to execute the Infraco Works to minimise the effects of the delay ....

#### Relief Events (continued)

- Clause 64 (continued)
  - The Infraco shall not be entitled to EoT in respect of any failure by Infraco to:
    - identify any long lead times
    - identify any enabling works required in order to commence
    - manage interface with CEC and Approval Bodies
    - Identify any instruction which are required from tie in order to progress the Works in accordance with the Programme, providing ...
  - tie shall, in assessing any delay, EoT or relief:
    - not take into account any event or cause of delay which is caused by negligence, default or breach by Infraco
    - take into account events only if Infraco establishes to the satisfaction of tie that it has used its reasonable endeavours to adjust the order and sequence in which the Infraco proposes to execute the Infraco Works to minimise the effects of the delay ....

# **Compensation Events**

- Clause 65
  - If a Compensation Event :
    - is the direct cause of a delay in achievement of the issue of a Certificate of Sectional Completion and/or;
    - directly and adversely affects Infraco's ability to perform its obligations
    - causes Infraco to incur cost beyond that reasonably anticipated but for the Compensation Event

then Infraco shall be entitled to EoT

the Infraco's sole right to EoT is as set out in Clause 65



- Clause 65 (continued)
  - To obtain EoT Infraco must as soon as practicable, and in any event within 20 Business Days:
    - notify tie of claim with full details of the nature of the CE, date of occurrence and likely duration
    - likely effect of delay on the Programme or the adverse effects on performance
    - details of the costs or losses.
    - mitigation measures adopted and why unsuccessful
    - any acceleration or other measures Infraco could take to mitigate delay etc. and an estimate of the costs thereof;
  - providing that where CE has continuing effect or Infraco is unable to determine whether the effect of the CE will actually cause delay etc., Infraco shall submit:
    - a statement to that effect with reasons, together with interim written particulars;
       and
    - further written particulars until the actual delay caused etc. is ascertainable, ...
  - and



- Clause 65 (continued)
  - Demonstrate to the reasonable satisfaction of tie that:
    - Infraco could not reasonably have avoided such occurrence or consequences by steps which they might reasonably be expected to have taken;
    - the CE is the direct cause of the delay, etc.
    - Infraco is using reasonable endeavours to perform its obligations under this Agreement.



- Clause 65 (continued)
  - tie shall review notifications and submissions and shall notify Infraco within 20 Business Days:
    - its agreement or otherwise on whether a CE has occurred;
    - its agreement or otherwise regarding the EoT etc. sought and where tie does not agree such matters, tie's assessment in relations to Infraco's entitlement;
  - In the event that Infraco has complied with its obligations under Clause 65.2.2 (provision of full details):
    - the key dates shall be postponed
    - Infraco shall be given relief from performance of its obligations as shall be reasonable for such a Compensation Event and Infraco shall revise the Programme in accordance with Clause 60.2 to 60.5

- Clause 65 (continued)
  - In the event that the information required by Clause 64.2 (typo? 65.2?) is provided after the dates referred to in that clause, Infraco will not be entitled to any relief in respect of or during the period for which the information is delayed.
  - Infraco shall notify tie if at any time it receives or becomes aware of any further information relating to the CE, giving details to the extent it is new or renders previous submission materially inaccurate or misleading.



- Clause 65 (continued)
  - tie shall, in assessing any delay, EoT, etc.:
    - not take into account any event or cause of delay, etc.
       which is caused by any negligence, default of breach of contract or breach of statutory duty of Infraco;
    - take into account an event or cause etc. only if and to the extent that Infraco establishes to the reasonable satisfaction of tie that Infraco has used its reasonable endeavours to adjust the order and sequence in which Infraco proposes to execute the Works in such a manner as to minimise the effects of the delay in, or if possible to avoid altogether any delay in, the progress if the Works and mitigate the costs.

- Clause 65 (continued)
  - Infraco shall not be entitled to EoT in respect of any failure by Infraco to:
    - identify any long lead times
    - identify any enabling works required in order to commence
    - manage interface with CEC and Approval Bodies
    - the Compensation Event is the direct cause of the delay
    - identify any instructions which are required from tie in order to progress the Works in accordance with the Programme



# Notification of other delays

- Clauses 64.9 (Relief Events) & 65.10 (Compensation Events)
  - If the Works are delayed in circumstances other than those entitling Infraco to EoT for Relief Events or Compensation Events, Infraco shall inform tie at the earliest opportunity and shall give an estimate of the likely effect upon the Programme. In such circumstances, Infraco at its own expense shall take such acceleration measures as are necessary to achieve the requirements of the Programme.



# tie Change

- Clause 8o tie Change applies to;
  - tie Change tie instructed change
  - Mandatory tie Change as noted in the Contract
  - Notified Departures facts or circumstances differ in any way from the Base Case Assumptions save to the extent caused by a breach of contract by Infraco, an Infraco Change or a Change in Law



# tie Change

- Clause 8o Process
  - tie Notice of Change
    - Notified Departure = Mandatory tie Change = deemed issue of "tie Notice of Change"
  - Infraco Estimate
    - Provide within 18 business days, or advise within 5 business days that more time is required to prepare the estimate.
  - tie and Infraco discuss and agree the issues set out in the Estimate as soon as reasonably practicable
  - If the parties cannot agree the contents of the Estimate, either party pay refer the Estimate to the DRP.



# tie Change (continued)

- Clause 80 (continued)
  - The Estimate shall include the opinion of Infraco on:
    - any requirements for relief from obligations under the Agreement
    - any impact on the Programme and requirement for EoT
    - the proposed method of delivery
    - proposals to mitigate delay
    - any increase or decrease in any sums due
  - Infraco shall include in the Estimate <u>evidence demonstrating</u> that:
    - Infraco has used <u>all reasonable endeavours to minimise any increase in</u> <u>costs</u> and maximise any reduction of costs
    - Infraco has investigated how to mitigate the impact of the tie Change
    - the tie Change will, where relevant, be <u>implemented in the most cost</u> <u>effective manner.</u>

# tie Change (continued)

- Clause 80 (continued)
  - Infraco shall not commence work in respect of a tie Change until instructed through receipt of a tie Change <u>unless</u> <u>otherwise directed by tie.</u>
  - Where an Estimate has been referred to the DRP, but it is deemed by tie (acting reasonably) that the proposed tie Change is urgent and/or has a potential significant impact on the Programme, ..... tie may instruct Infraco to carry out the proposed tie Change prior to the determination or agreement of the Estimate by issuing a tie Change Order to that effect.



# tie Change – Notified Departures

- Clause 80.24
  - removes the provisions of clause 80.19 from the assessment of Notified Departures
- Clause 80.19 Restrictions on Entitlement to Relief for tie
   Change
  - Infraco shall not be entitled to EoT etc. in respect of any tie Notice of Change affecting the construction of the Works ... if and to the extent that it would be reasonable to expect Infraco to have prevented or materially reduced the requirement for such tie Change, given the information known to Infraco at the time ....

#### Infraco recent EoT submissions

- Entitlement Programme
  - "as-planned" impacted with actual/forecast dates for MUDFA, IFC, etc.
  - No meaningful attempt at mitigation
  - Infraco seeking EoT for all delay to date on a global basis. (No culpability on its part)
  - Submitted under Clause 6o
- Proposed Rev. o2 Programme
  - An alternative to the Entitlement Programme prepared on a similar basis but with some mitigation.
  - Submitted under Clause 6o
- MUDFA 8
  - "as-planned" programme impacted only with what are claimed to be the actual and projected MUDFA dates as shown on Rev.o8 of the MUDFA programme.
  - Submitted under Clause 8o



# **Sectional Completion Dates**

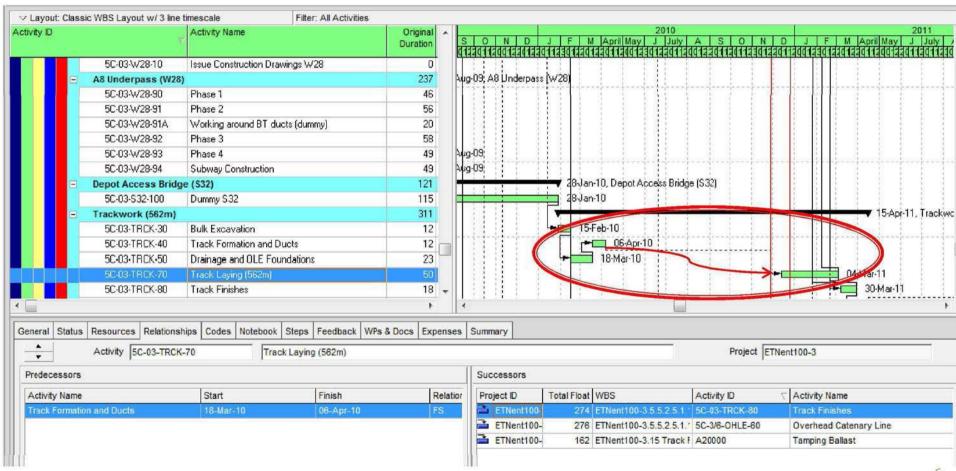
	Current (Rev.o1)	Entitlement Programme	EoT 2 claim (Rev. 02)	MUDFA 8	Comment
Α	1 June 2010	15 June 2011	23 June 2011	13 Dec. 2010	Completion of the Depot so that it may receive trams.
В	1 July 2010	18 July 2011	16 Aug. 2011	10 Jan. 2011	Section B date is 28 days after the Section A date, assuming sufficient track is laid away from the Depot.
C	10 Mar. 2011	24 July 2012	5 April 2012	22 Nov. 2011	Completion of all Infraco construction works other that the final two phases of Picardy Place.
D	6 Sept. 2011	20 Jan. 2013	2 Oct. 2012	20 May 2012	Section D date is 6 months after the Section C date.

#### Significant programme constraints

- TM constraints as per the Contract
- Embargos as per the Contract
- Max. 3 No. track gangs
- Max. 2 No. OLE gangs
- No re-ordering or re-scheduling if it causes Infraco to incur <u>any</u> additional cost
- No additional resources (if it causes Infraco to incur <u>any</u> additional cost?)
- Infraco consider this any action that incurs costs to be acceleration and therefore <u>requires tie</u> <u>instruction.</u>

# **Assessment of MUDFA 8 Claim** EXPERTS IN CONSTRUCTION PLANNING PROGRAMMING AND THE COMMERCIAL TRANSACTION

# Resource driven programme

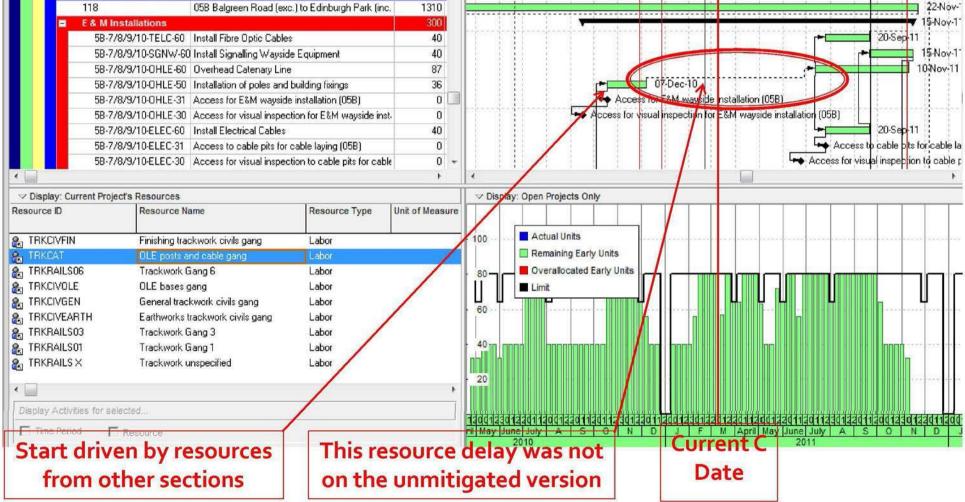


Physical logic links "Track formation and ducts" to "Track Laying" in a finish to start relationship "Track Laying" appears to be delayed by another constraint – availability of resources.

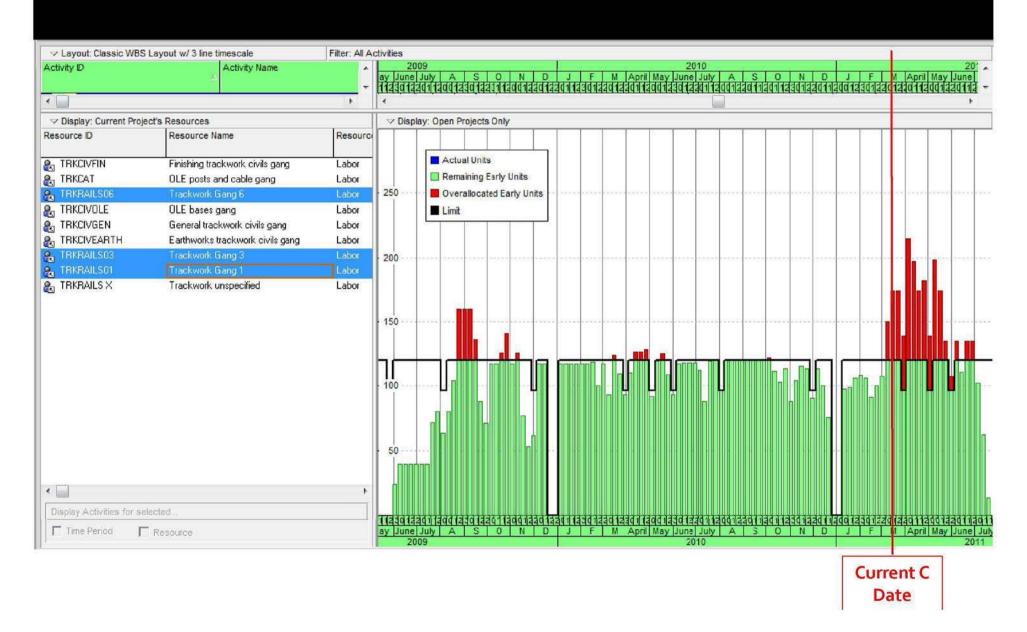


#### Resource driven programme Filter: All Activities w Layout: Classic WBS Layout w/ 3 line timescale Original Duration 05B Balgreen Road (exc.) to Edinburgh Park Central (inc.) 916 05B Balgreen Road (exc.) to Edinburgh Park (inc. 1310 F & M Installations 5B-7/8/9/10-TELC-60 Install Fibre Optic Cables 40 58-7/8/9/10-SGNW-60 Install Signalling Wayside Equipment 40 87 58-7/8/9/10-OHLE-60 Overhead Catenary Line 36 58-7/8/9/10-OHLE-50 Installation of poles and building fixings M wayside installation (05B) 0 58-7/8/9/10-OHLE-31 Access for E&M wayside installation (05B) Access for visual inspection for E&M wayside installation (058) 5B-7/8/9/10-OHLE-30 | Access for visual inspection for E&M wayside inst-0 5B-7/8/9/10-ELEC-60 Install Electrical Cables 40 0 58-7/8/9/10-ELEC-31 Access to cable pits for cable laying (058) 5B-7/8/9/10-ELEC-30 | Access for visual inspection to cable pits for cable 0

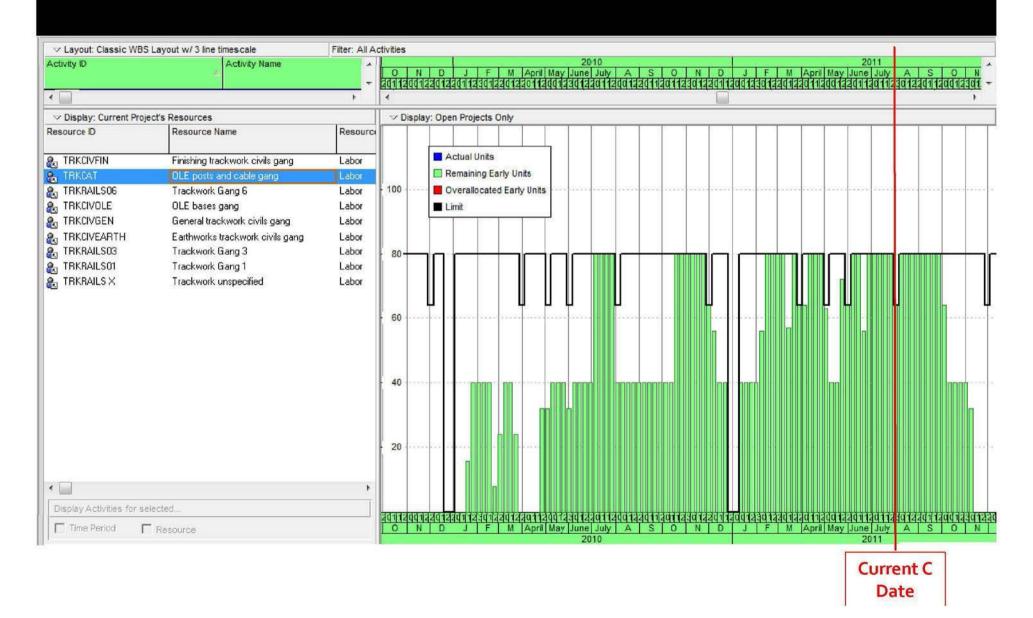
Activity ID



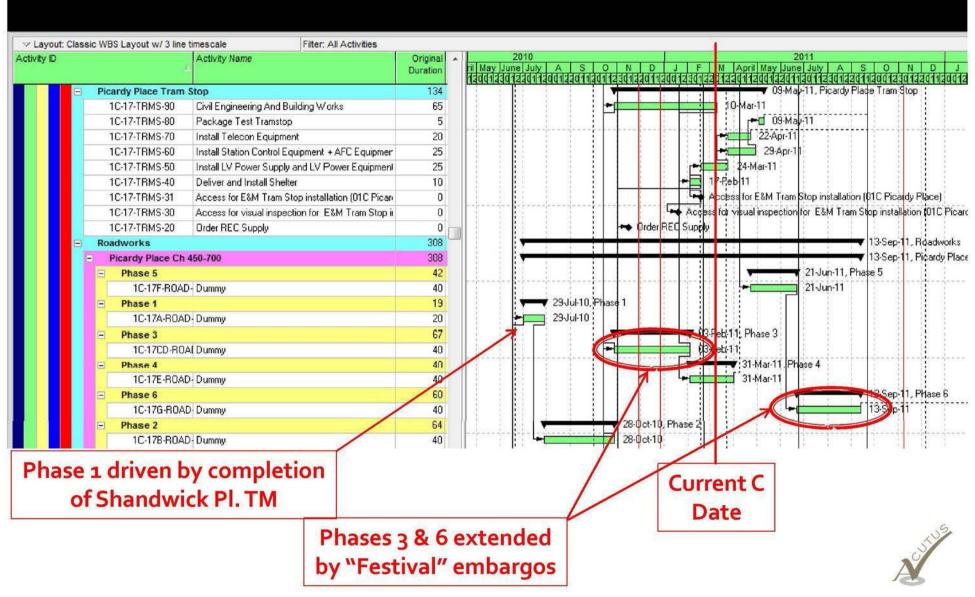
#### Resource driven programme – Track gangs



#### Resource driven programme – OLE gangs



# Embargo driven programme



# **MUDFA 8 Assessment**

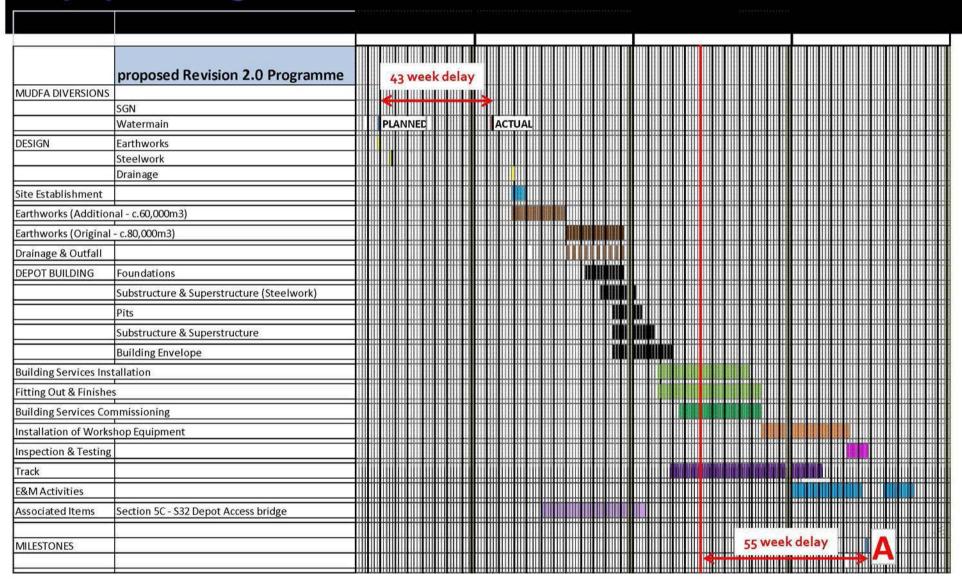
	Current (Rev.o1)	MUDFA 8 Claim	tie unmitigated assessment	tie mitigated assessment	Comment
A	1 June 2010	13 Dec. 2010	138 days delay 17 Oct. 2010	78 days delay	Mitigation of 30 days saving on building works plus 30 days overlap of equipment installation
В	1 July 2010	10 Jan. 2011	138 days delay	78 days delay	Section B date is 28 days after the Section A date, assuming sufficient track is laid away from the Depot.
С	10 Mar. 2011	22 Nov. 2011	151 days delay 3 Aug.2011	128 days delay	23 days mitigation as Infraco claim appears to over-estimate MUDFA completion date. Leith Walk is the primary driver of delay.
D	6 Sept. 2011	20 May 2012	151 days delay	128 days delay	Section D date is 6 months after the Section C date.

# Assessment of EoT2 EXPERTS IN CONSTRUCTION PLANNING PROGRAMMING AND THE COMMERCIAL TRANSACTION

current Programme ("Rev. 01")

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	Pits				9.01					Ш																					
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proposed Programme ("Rev. 02")



**EoT2 Assessment - Unmitigated** 

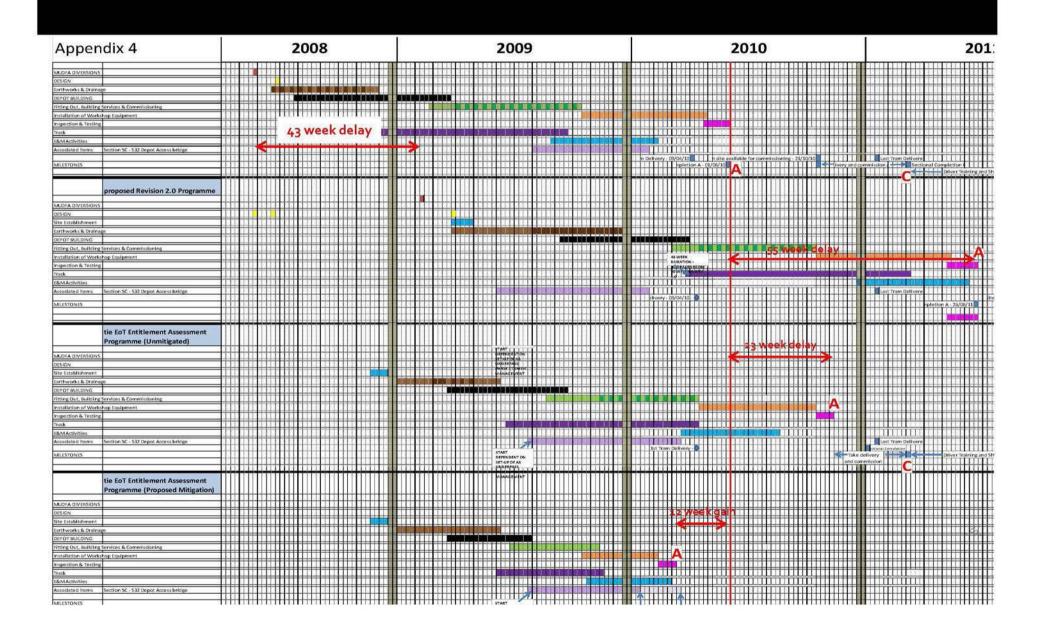
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EoT<sub>2</sub> Assessment - Mitigated

		2008								2009										2010										
	tie EoT Entitlement Assessment Programme (Proposed Mitigation)																													
MUDFA DIVERSIONS									░																					
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#### Section 6 – Gogar Depot Summary



#### Section 7 – Tram Test Track

current Programme ("Rev. 01")

		2008	2009	2010
Section 7 Gogarburn to Airport	Revision 1.0 Programme			
MUDFA DIVERSIONS		PLANNED		
DESIGN				
	S29 Gogarburn bridge	ACTUAL		
	S30 Culvert No.1	ACTUAL PLANNED		
	Track	PLANNED		
	IPR TS	PLANNED	ACTUAL	
	W14/15 Gogarburn RWs	PLANNED	ACTUAL	
	S31 Culvert No.2	ACTUAL PLANNED		
	S34 Culvert No.3	PLANNED ACTUAL		
	AIRTS	PLANNED	ACTUAL	
Enabling Works				
S29 Gogarburn bridge	Treat area of contaminated Land			
	Bridge construction			
S30 Gogar Culvert No	0.1			
Track (1750m)				
IPR Tram Stop				
IPR Sub-Station				<b>M</b> illion Bridge
Test Track Tram				
Enabling Works	·			
W14/W15 Gogarburn	RWs			
S31 Gogar Culvert No	5.2			
S34 Gogar Culvert No	5.3			
Track (833m)				
Airport Tram Stop				
E&M Works				

### Section 7 – Tram Test Track

proposed Programme ("Rev. 02")

	2008	2009	2010	2011
proposed R Section 7 Gogarburn to Airport Programme				
Enabling Works				
S29 Gogarburn bridge Treat area of co				
Bridge constru				
S30 Gogar Culvert No.1				
Track (1750m)		HAUL ROAD		
IPR Tram Stop				
IPR Sub-Station				<u> </u>
Test Track Tram				
Enabling Works				8 week delay
W14/W15 Gogarburn RWs				
S31 Gogar Culvert No.2	P	RE-CAST		
S34 Gogar Culvert No.3	DIVERT FLOWS - EXCAVATE - P	PRE-CAST		
Track (833m)				
Airport Tram Stop				
E&M Works				



### Section 7 – Tram Test Track

#### **EoT2 Assessment - Unmitigated**

		2008 2009	2010
Section 7 Gogarburn to Airport	tie EoT Entitlement Assessment Programme - Unmitigated		
Enabling Works			
S29 Gogarburn bridge	Treat area of contaminated Land		
	Bridge construction		
S30 Gogar Culvert No	.1		
Track (1750m)		CIV	ILS TRACK
IPR Tram Stop			
IPR Sub-Station			B III
Test Track Tram			
Enabling Works		learance and vegetation	H.
W14/W15 Gogarburn	RWs		7 week delay
S31 Gogar Culvert No	.2		
S34 Gogar Culvert No	.3		
Track (833m)		TR	RACK CIVILS TRACK
Airport Tram Stop			
E&M Works			



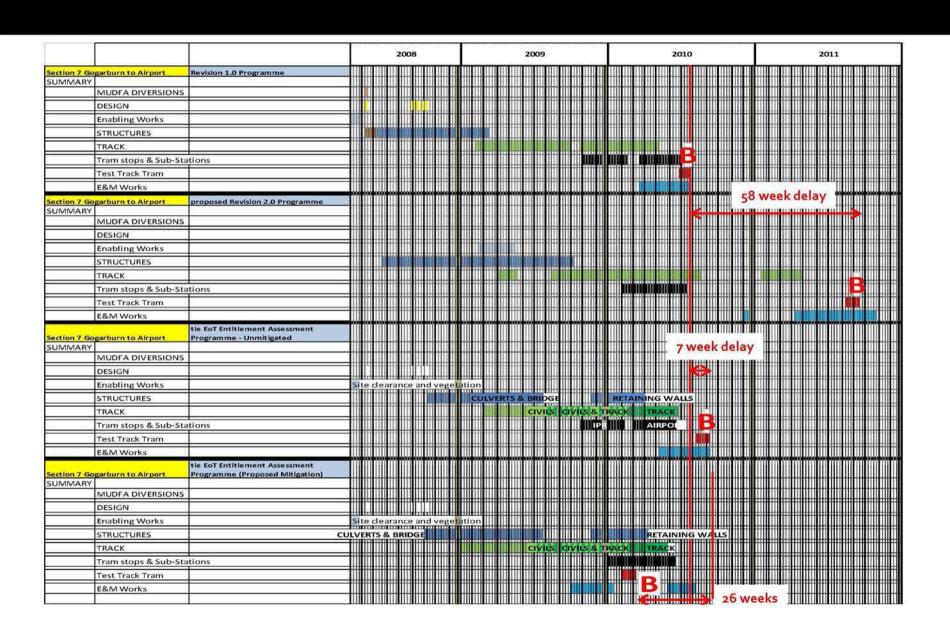
### Section 7 – Tram Test Track

EoT<sub>2</sub> Assessment - Mitigated

			20	08		2009	201	.0
Section 7 Gog		tie EoT Entitlement Assessment Programme (Proposed Mitigation)						
SUMMARY								
M	MUDFA DIVERSIONS							
D	ESIGN							
Er	nabling Works		Site clearanc	e and veget	ation			
ST	TRUCTURES		LVERTS & BRI	DGE			RETAININ	IG WALLS
TF	RACK					CIVILS CIVILS & T		
Tr	ram stops & Sub-Sta	tions						
Te	est Track Tram							
E8	&M Works							
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							19 weeks	



### Section 7 – Tram Test Track – Summary



### Section 1a – Lindsay Road

current Programme ("Rev. 01")

Appendix 1			2008	1								200	9							I							2	010														2	011						
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MUDFA DIVERSIONS	Revision 1.0 Programme							П	Ш		П	Ш		Ш		П		Ш	П	П	П			Ш		M		П		Ш	Ш	П	Ш				П	$\blacksquare$	П	Ш					П			П	Π
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### Section 1a – Lindsay Road

proposed Programme ("Rev. 02")

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## Section 1a – Lindsay Road tie EoT2 Assessment – (To be updated)

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1	Sub-base and drainage	₩	₩			Н	Щ	Ш	4	Щ	Н	Ш	Н	₩	H	Н	Щ	₩	Ш		H	₩	Н	H	4	Ш	₩	Щ	₩	ł	Ш	₩	Щ	Щ	Ш		Щ	Н	Ш	Н	₩	Ш	₩	Ш	₩	Ш	H	Щ	Щ	H	₩	- Carpenter
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### Section 1d – City Centre

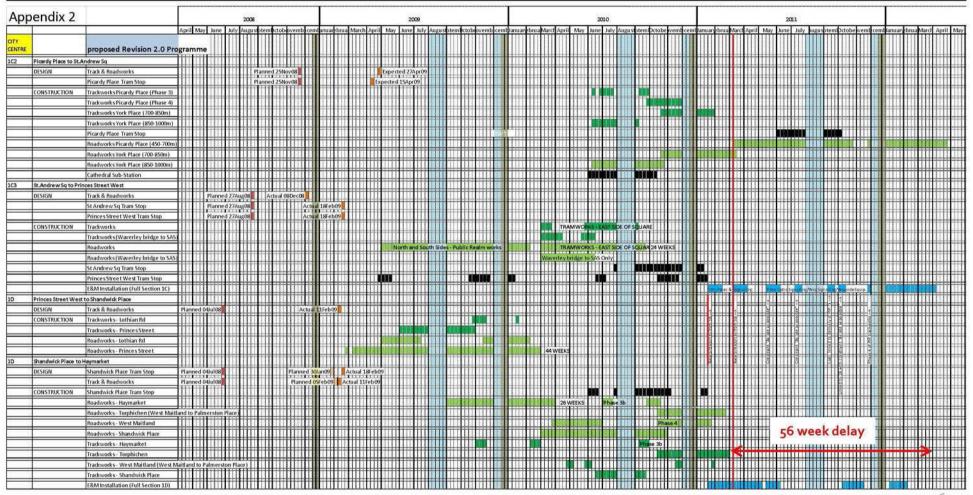
current Programme ("Rev. 01")

Арр	endix 2		2008 2008 2008 2008 2008 2008 2008 2008	2009	2010  January lebruar March April May June July August otemb October overnhip combined in the combined of the	2011 Jacuary ebruar March April May June July Ausust atemb October averable com-
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2	Picardy Place to St.A.	ndrew Sq				
	DESIGN	Track & Rosdworks	Planned 25NovC8	Expected 24Aug09		
		Picardy Place Tram Stop	Planned 25Nov08	Expected 10Aug09		
	CONSTRUCTION	Trackworks Ploardy Place (Phase 3)				
		Trackworks Picardy Place (Phase 4)				
		Trackworks York Place (700-850m)				
		Trackworks York Place (850-1000m)				
		Picandy Place Tram Stop				
		Roadworks Picardy Place (450-700m)				48 WEEKS
		Roadworks York Place (700-850m)			15WEEKS	
	2	Roadworks York Place (850-1000m)			16WERKS	
	Ġ	Cathedral Sub-Station				
3	St. Andrew Sq to Prin	ces Street West				
	DESIGN	Track & Roadworks	Planned 27Aug08 Actual 08Dec08			
		St Andrew Sq Tram Stop	Planned 27Aug08 Adjust 18			
		Princes Street West Tram Stop	Planned 27Aug08 Asbust 18	SFeb00		
	CONSTRUCTION	Tradeworks			24 WEEK!	
	50,000,000	Roadworks				
	3	St Andrew Sq Tram Stop				
	3	Princes Street West Tram Stop				
	3	E&M Installation (Full Section 1C)				
6)	Princes Street West	to Shandwick Place				
	DESIGN	Track & Roadworks	Planned 04Jul 08 Actors 11Fe	eb09		
	CONSTRUCTION	Trackworks - Lothian Rd				
	(1	Trackworks - Princes Street				
		Roadworks - Lothian Rd		Phase 1-2-3	Phase 4a	
	8	Roadworks - Princes Street				
	Shandwick Place to F	laymarket				
	DESIGN	Shandwick Place Tram Stop	Planned 04Iul 08 Acqual 18	9Feb03		
$\neg$	and the last of th	Track & Roadworks	Planned 04Jul 08 Actus 11Fe	e509		
	CONSTRUCTION	Shandwick Place Tram Stop				
		Roadworks - Haymarke t	Phase	se 1 & 2 Phase 4 Phase 4b	Phase Sh & 7 26 WEEKS	
		Rosdworks - Torphichen				
		Roadworks - West Maitfand				
=		Roadworks - Shandwick Place				
		Trackworks - Haymarket				
		Trackworks - Torphichen				
	8	Trackworks - West Maltland				
$\neg$		Trackworks - Shandwick Place				
=		E&M Installation (Full Section 1D)				



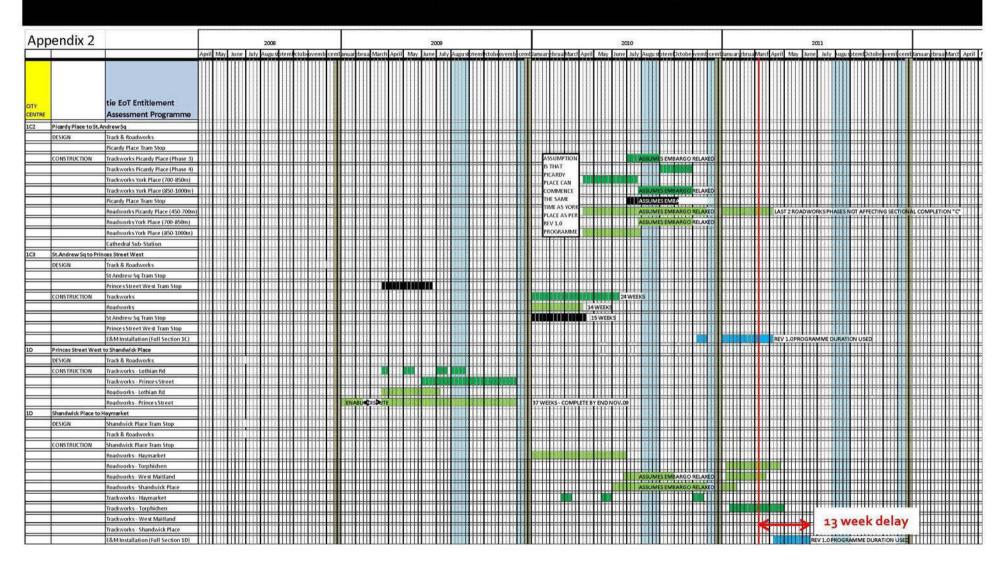
### Section 1d – City Centre

proposed Programme ("Rev. 02")





### Section 1d – City Centre tie EoT2 Assessment – (conditional on relaxations)



### **EoT2 Assessment**

	Current (Rev.o1)	EoT 2 claim (Rev. 02)	tie unmitigated assessment	tie mitigated assessment	Comment
A	1 June 2010	23 June 2011	161 days delay 30 Oct. 2010	71 days delay	Mitigation of 60 days saving on building works plus 30 days overlap of equipment installation.
В	1 July 2010	16 Aug. 2011	161 days delay	71 days delay	Section B date is 28 days after the Section A date, assuming sufficient track is laid away from the Depot.
С	10 Mar. 2011	5 April 2012	392 days delay	91 days delay	Assumes mitigation by relaxation of contract constraints and Infraco imposed resource limitations. May also require some acceleration.
D	6 Sept. 2011	2 Oct. 2012	392 days delay	91 days delay	Section D date is 6 months after the Section C date.

Edinburgh Tram Project

# Assessment of Extension of Time Entitlement (21 August 2009)

(The reader is cautioned that this set of presentation slides contains selective extracts from contract clauses. In the interest of brevity and to facilitate discussion, a précis of the full wording has often been used. For this reason, the wording used in these slide should not be relied upon in forming opinion on any of the Contract provisions and mechanisms discussed herein.)

EXPERTS IN CONSTRUCTION PLANNING PROGRAMMING AND THE COMMERCIAL TRANSACTION

