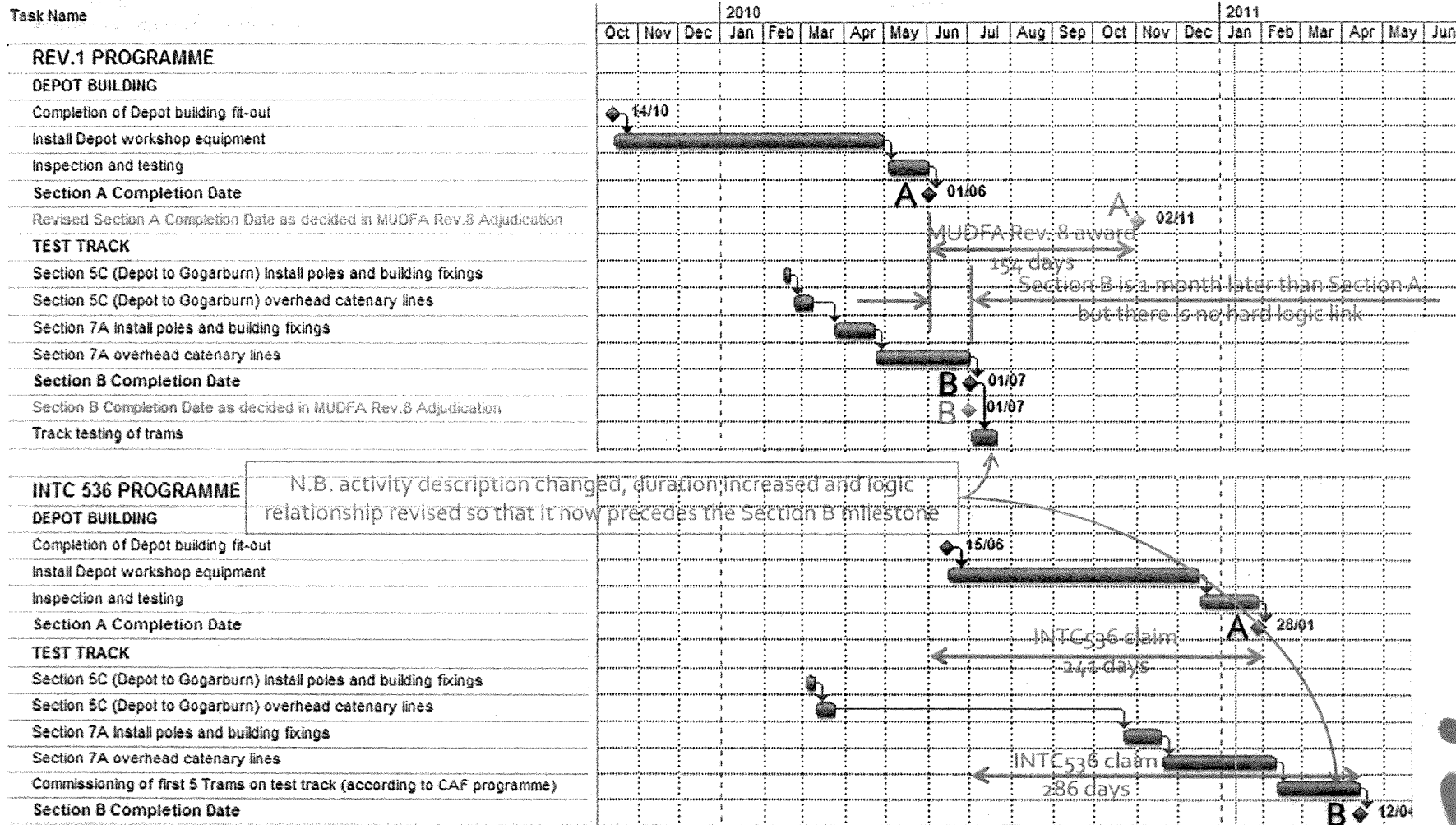


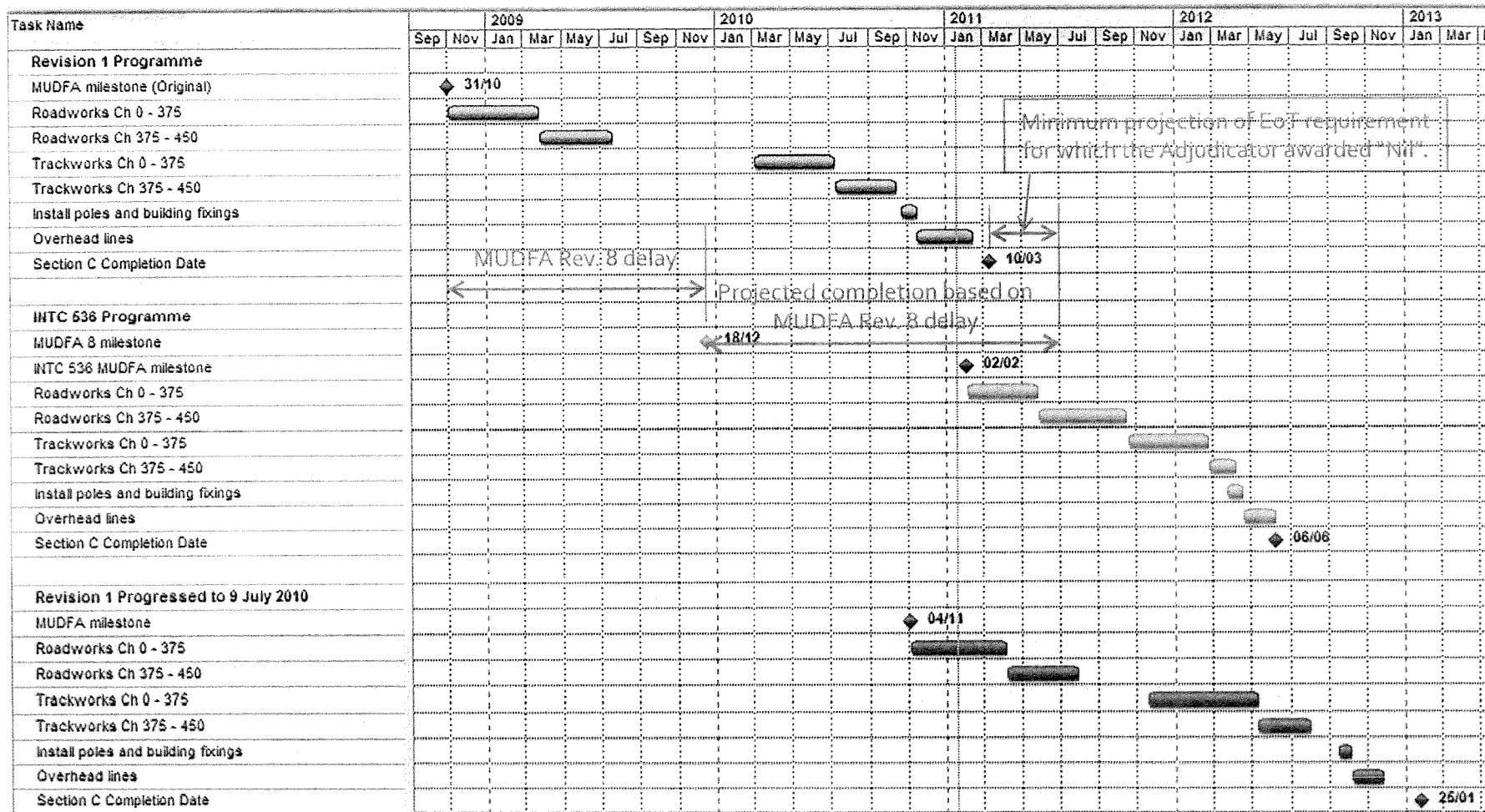
MUDFA Rev. 8 decision and the relationship between Section A & B Completion Dates



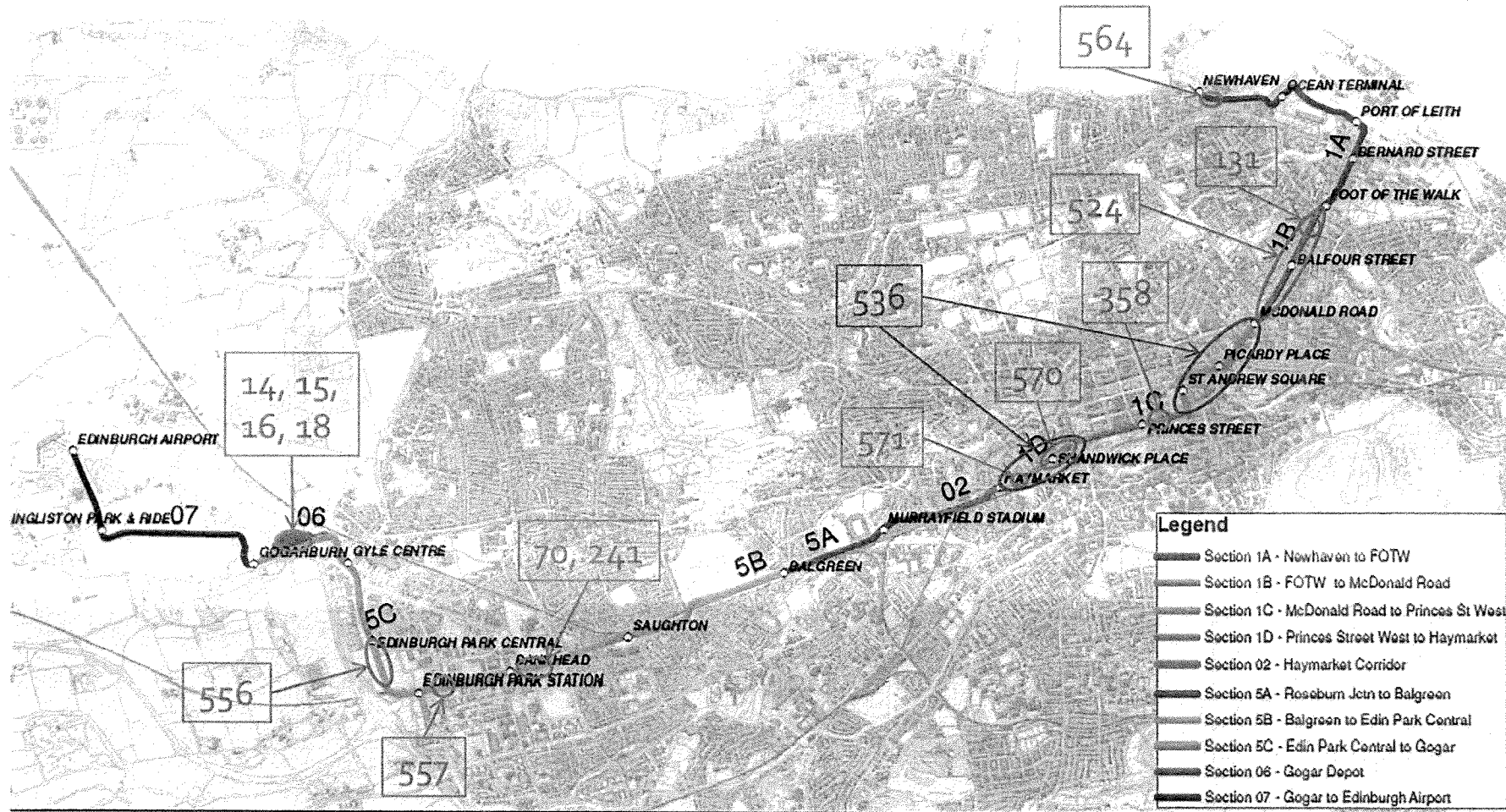
Privileged and confidential – prepared in contemplation of mediation
FOISA exempt

15

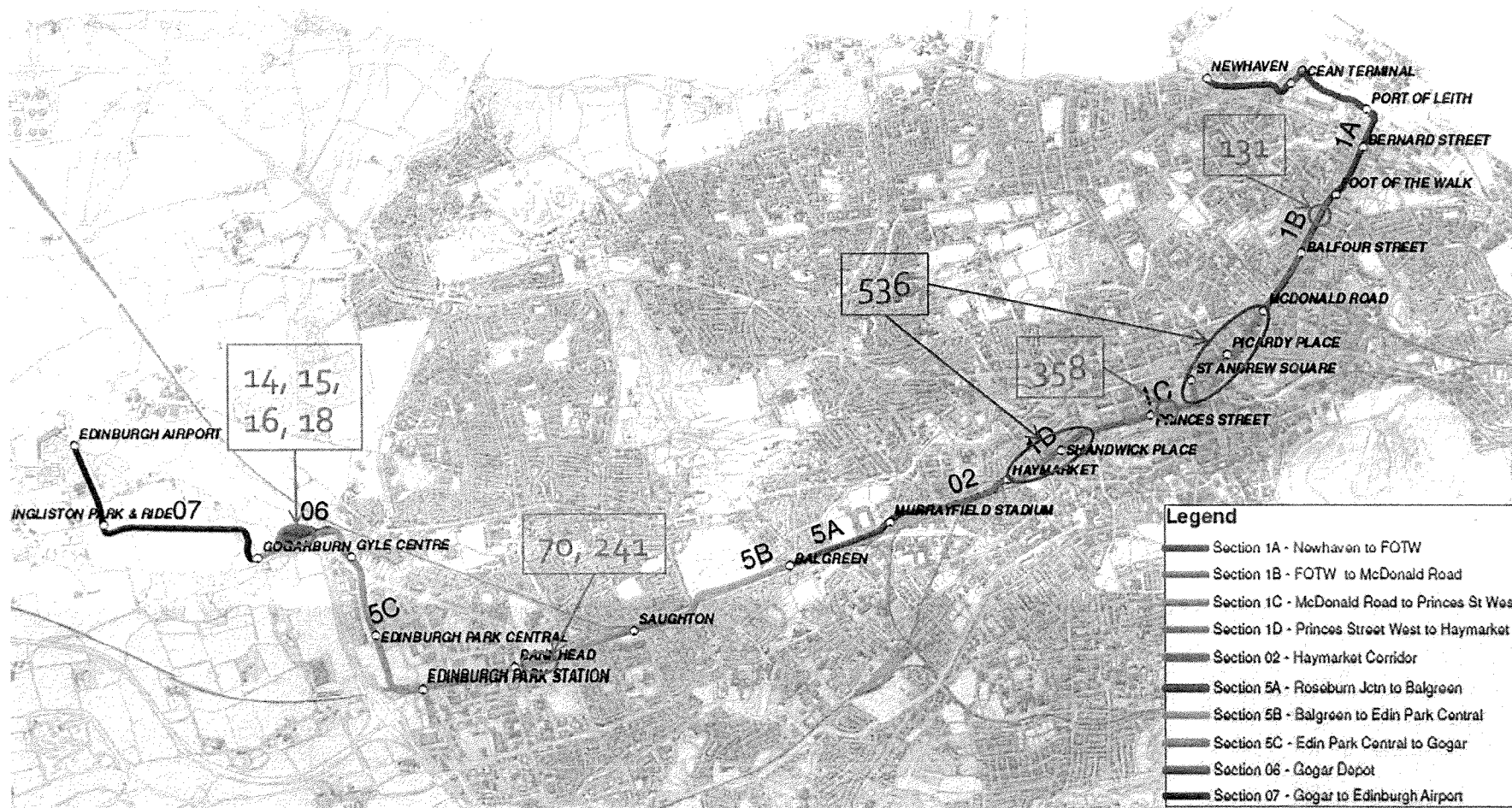
1C - London Road / Picardy Place



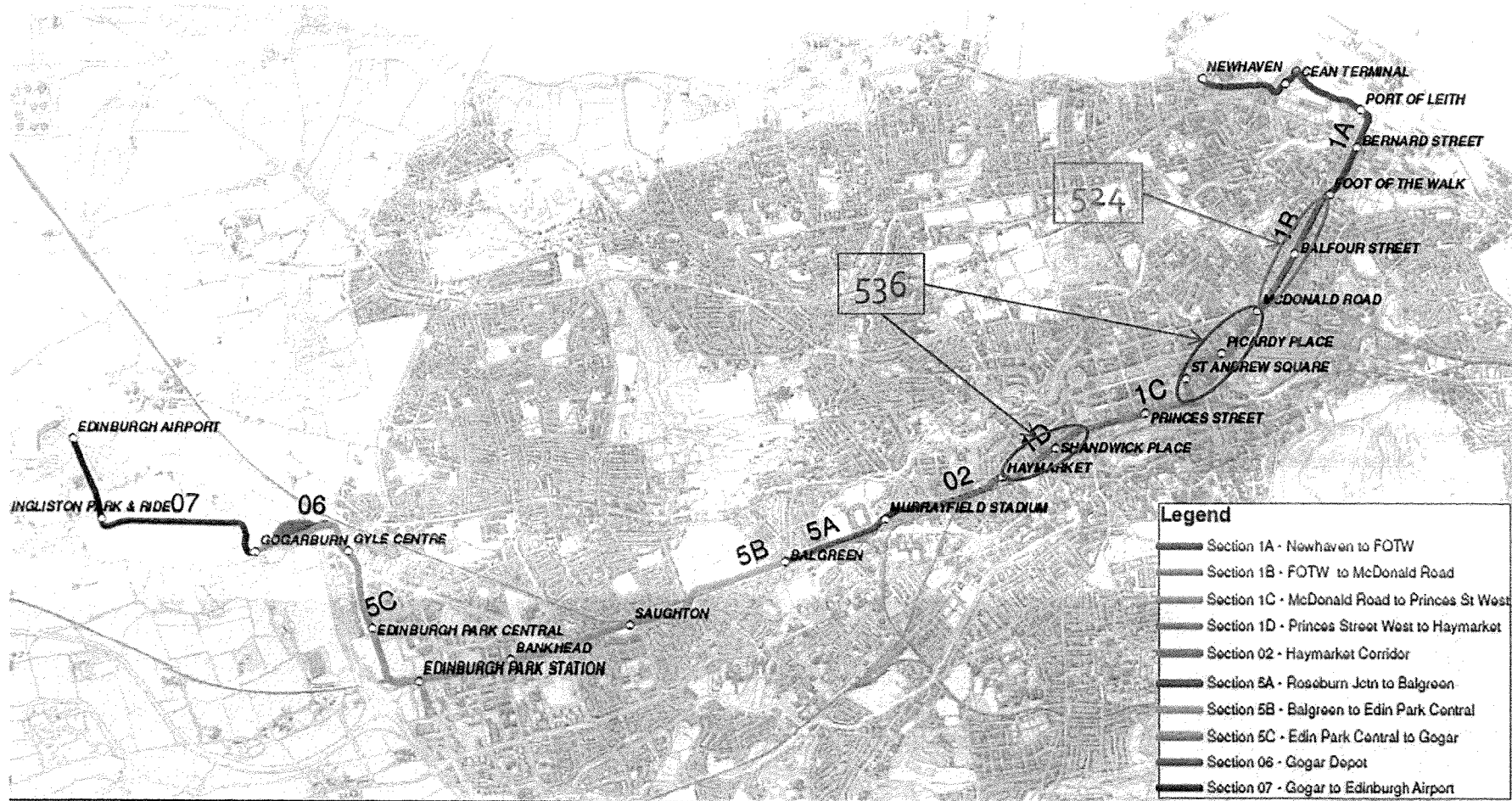
Scope of INTCs



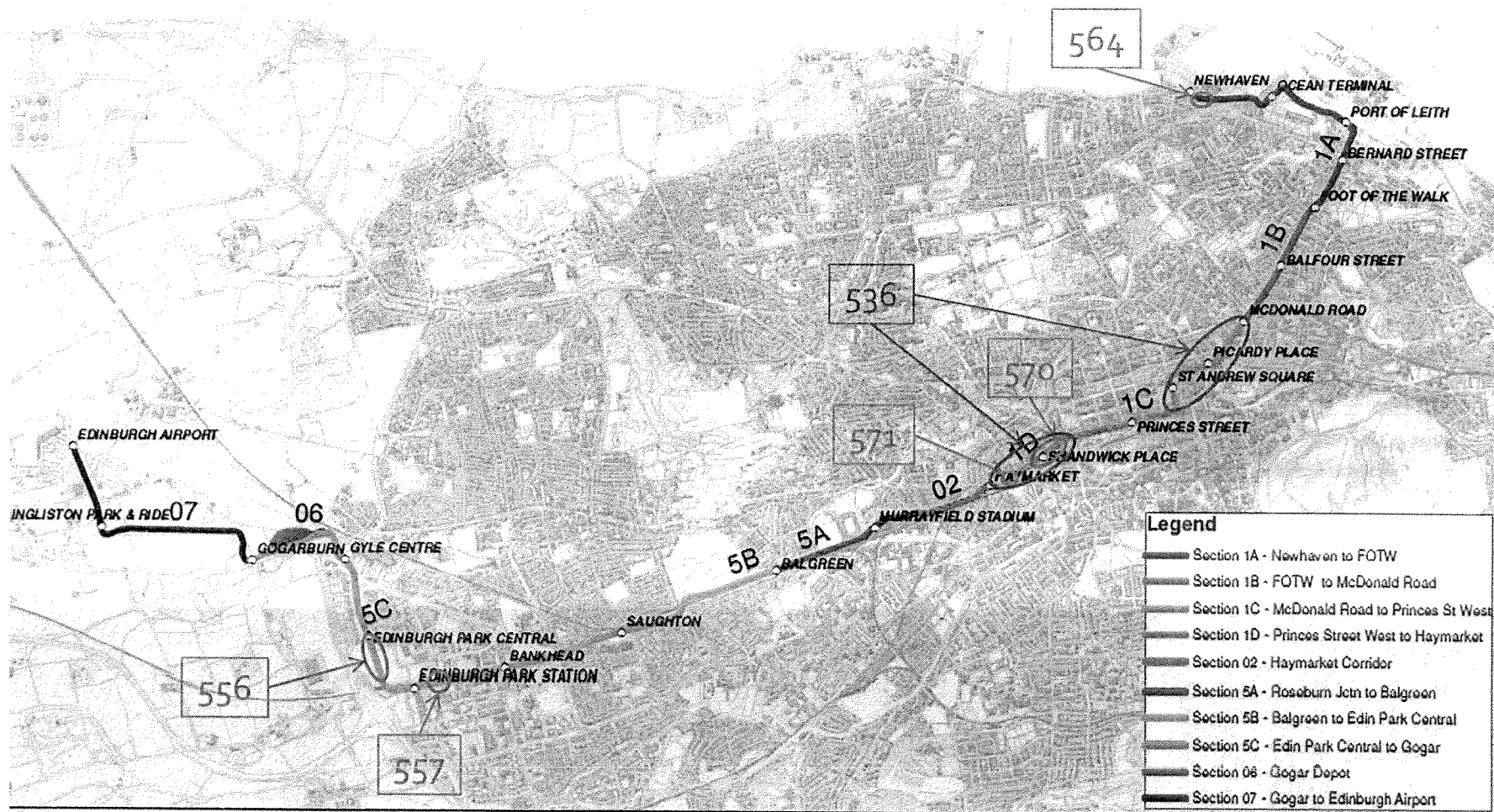
Scope of INTCs that pre-date INTC 429 (MUDFA Rev.8)



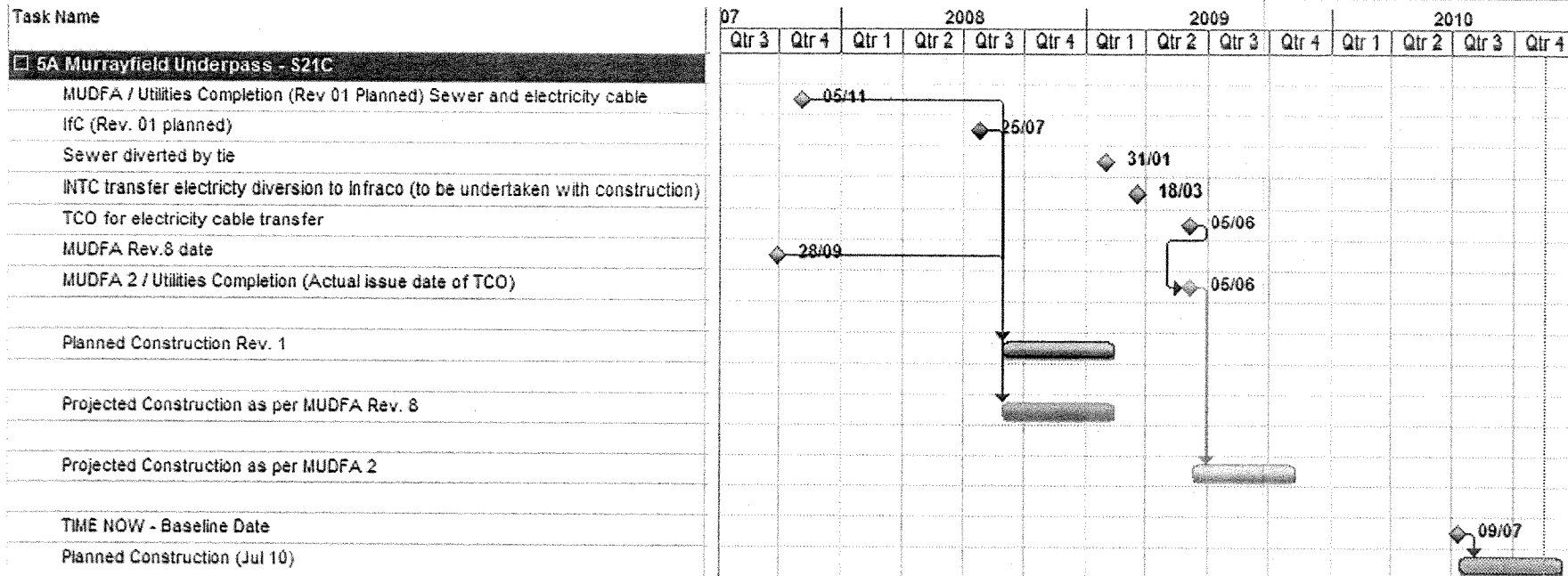
Scope of INTCs that post-date INTC 429 (MUDFA Rev.8) but pre-date INTC 536



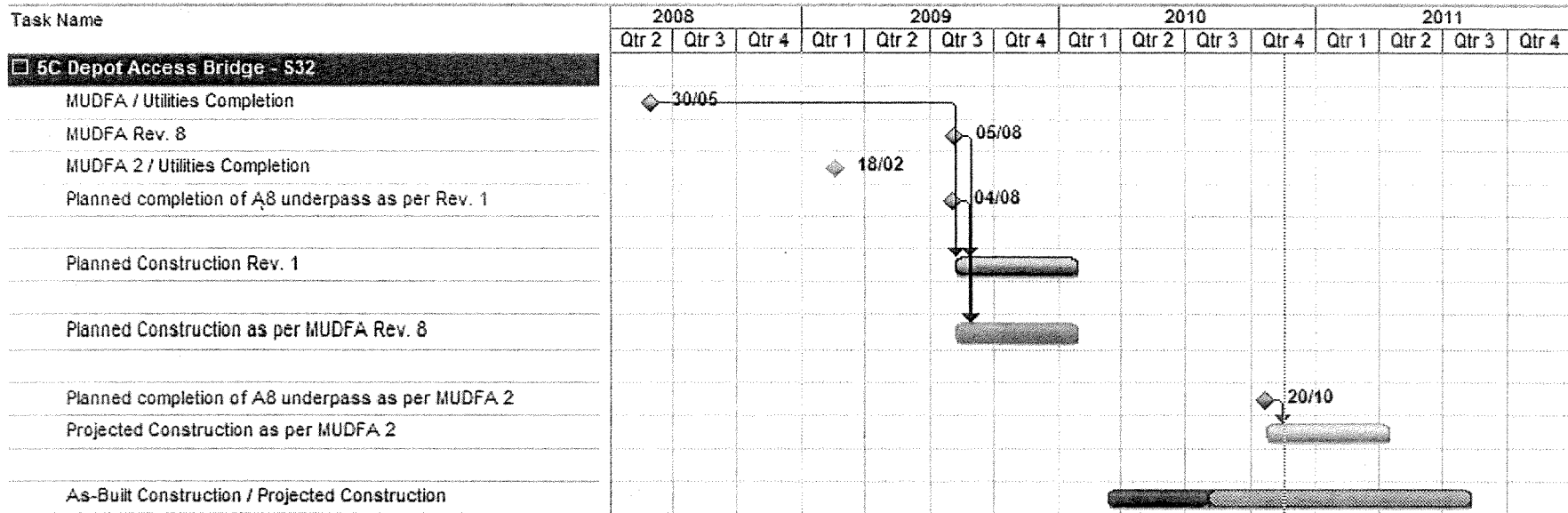
Scope of INTCs that post-date INTC 536



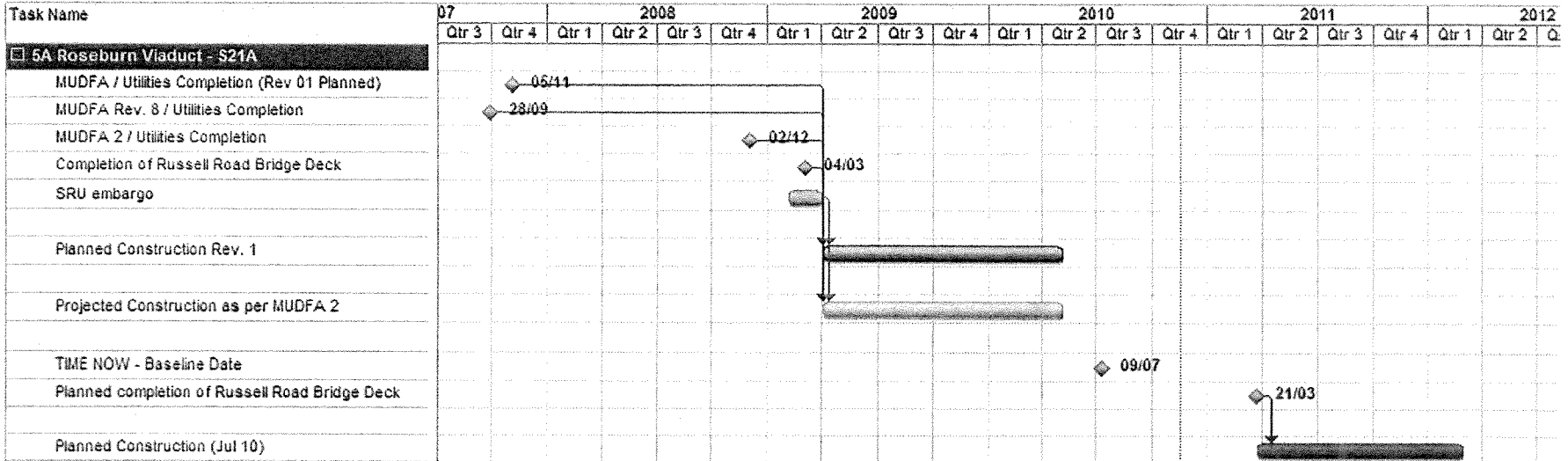
Murrayfield Underpass



Depot Access Bridge



Roseburn Viaduct



Timing and scope of INTC 536

Task Name	2009				2010				2011									
	May	Jul	Sep	Nov	Jan	Mar	May	Jul	Sep	Nov	Jan	Mar	May	Jul	Sep	Nov	Jan	
Infraco Construction Programme (Rev.0) - Contract Award	◆ 15/05																	
Infraco Construction Programme (Rev. 1)				◆ 14/11														
INTCs 2 to 428	← 427 other INTCs →																	
MUDFA Rev. 8 (INTC 429)								◆ 08/07										
INTC 429 - MUDFA Rev. 8 base data					◆ 31/03													
MUDFA Rev. 8 Estimate								◆ 06/08										
MUDFA Rev. 8 Adjudication Decision																		◆ 16/07
INTCs 430 to 535	← 106 other INTCs →																	
INTC 536																		◆ 22/01
INTC 536 base data																		◆ 31/07
INTC 536 Estimate																		◆ 17/09
INTCs 537 to 800+	← over 250 more INTCs →																	

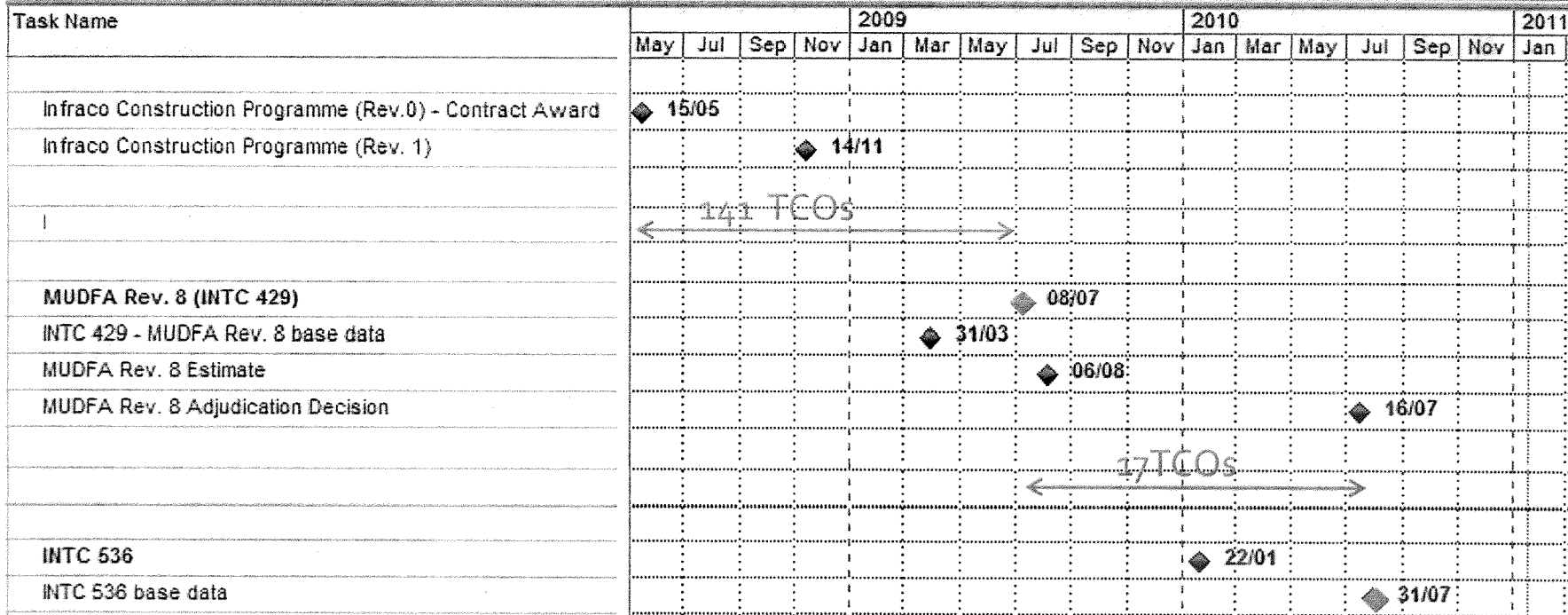
Quote from INTC 536 Estimate - "As this INTC takes account of the information available to Infraco as at 31 July 2010, it supersedes INTC's 14, 15, 16, 18, 70, 131, 241, 358, 524, 556, 557, 564, 570, 571 which addressed the information known as earlier dates."

Timing and scope of INTC 536

Task Name	2009											2010				2011	
	May	Jul	Sep	Nov	Jan	Mar	May	Jul	Sep	Nov	Jan	Mar	May	Jul	Sep	Nov	Jan
Infraco Construction Programme (Rev.0) - Contract Award	◆ 15/05																
Infraco Construction Programme (Rev. 1)				◆ 14/11													
INTCs 2 to 428	← XXX other CEs →																
MUDFA Rev. 8 (INTC 429)																	
INTC 429 - MUDFA Rev. 8 base data						◆ 31/03											
MUDFA Rev. 8 Estimate																	
MUDFA Rev. 8 Adjudication Decision																	
INTCs 430 to 535																	
INTC 536																	
INTC 536 base data																	
INTC 536 Estimate																	
INTCs 537 to 800+																	

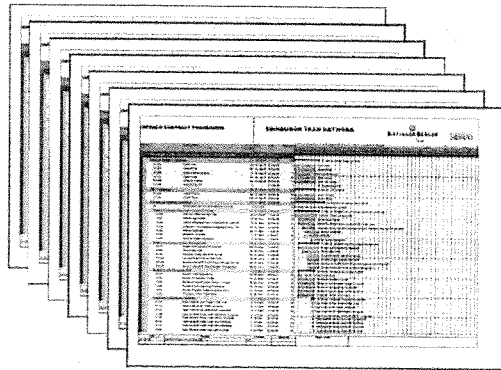
XX
 CCCCCCCCCCCCCCCCCCCCCC

Timing of other TCOs relative to INTC 536

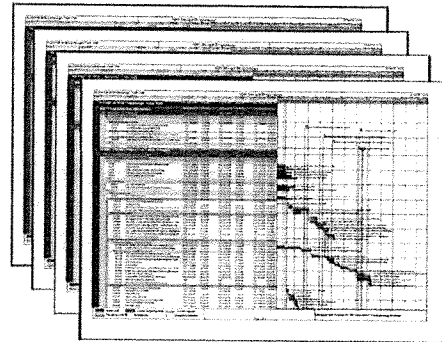


This chart identifies the number of tie Change Orders that have been issued during the periods associated with INTC 429 and INTC 536 Estimates. Only TCO No. 1 has been incorporated into the programme used in the Estimates produced for INTC 429 and INTC 536.

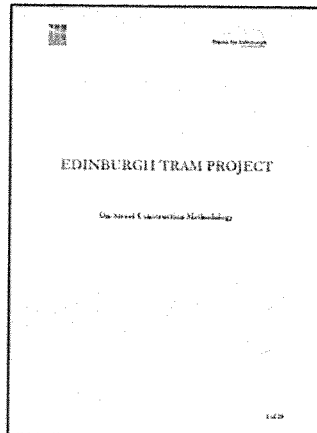
The Programme (as defined by Schedule Part 15)



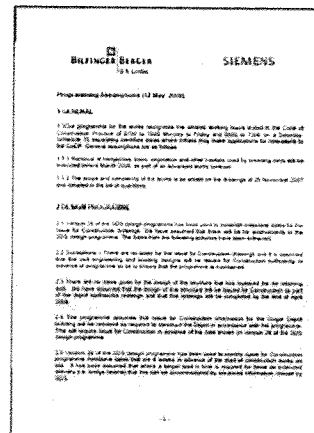
Infraco Construction Programme



SDS Design Delivery Programme



On Street Construction Methodology



Programming Assumptions (12 May 2008)

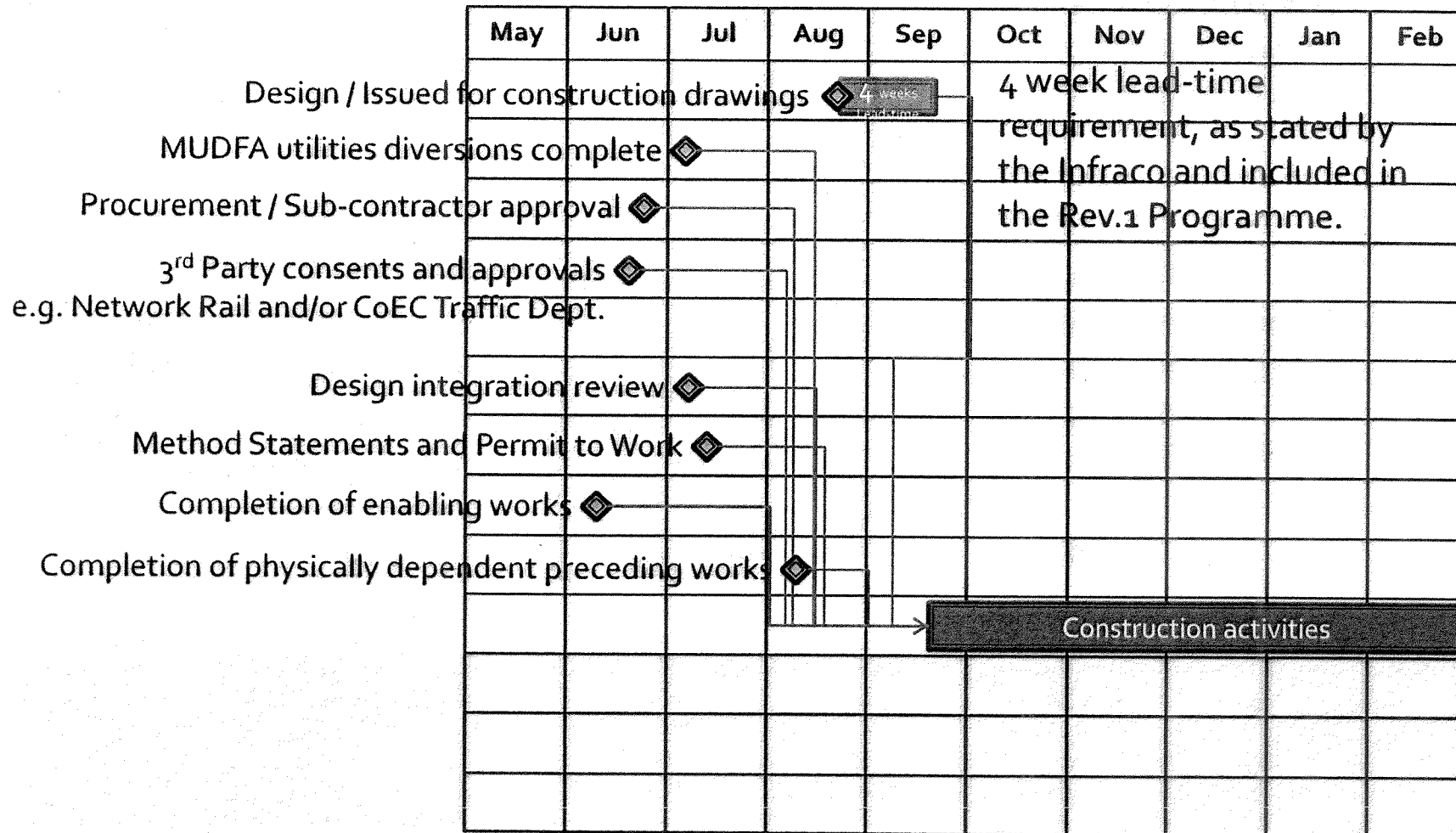
Plus:-

SDS Consents Programme derived from SDS Design Delivery Programme

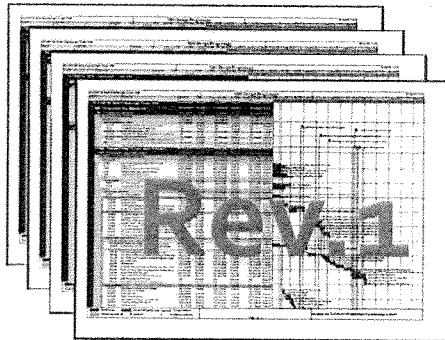
and

Relaxations to CoCP constraints as annotated and agreed with tie

Pre-requisites to start of a set of construction activities

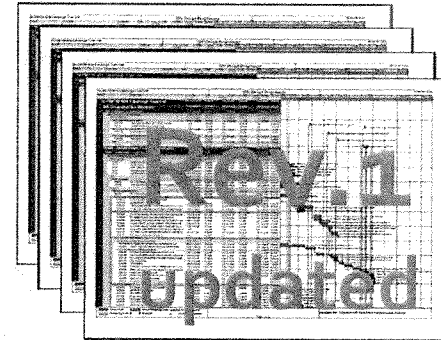


What is the "Programme" against which to assess the impact of a tie Change?

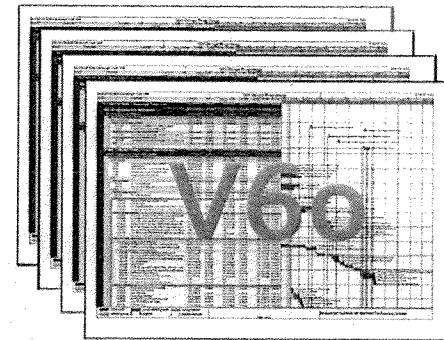


Current version of Infraco construction Programme produced and agreed as part of tie Change Order No.1, (i.e. to reflect the V31 SDS design delivery programme)

or



Infraco construction programme (Version current at 31 July 2010)



SDS design delivery programme (Version current at 31 July 2010)

Updated Programme elements not in alignment and not taken into account in the INTC 536 Estimate

Extract from SDS design delivery programme – July 2010 (“Ver. 60”)

Modification to S21B Murrayfield Stadium Retaining Wall		107	10-May-10 A	11-Oct-10
VO87430	Detailed Design & Check (started at risk)	46	10-May-10 A	30-Jul-10
VO87450	Issue Detailed Design & Check Certificates to CEC & Network Rail	0		30-Jul-10
VO87460	CEC & Network Rail Approval Period	38	30-Jul-10	27-Sep-10
VO88050	IDC	9	30-Jul-10	13-Aug-10
VO88060	Incorporate IDC Comments	9	13-Aug-10	27-Aug-10
VO87470	Receive CEC Approval for Detailed Design	0		27-Sep-10
VO87480	Incorporate CEC Comments & Prepare IFC Drawings	9	27-Sep-10	11-Oct-10
VO87530	Receive Network Rail Technical Approval for Form B	0		27-Sep-10
VO87490	Issue Construction Drawings - Murrayfield Stadium RW	0		11-Oct-10

Extract from updated Infraco construction programme – July 2010 (updated “Rev.1”)

Murrayfield Retaining Walls (S21B)		10-Nov-08 A	26-Apr-11
110	Site Clearance	10-Nov-08 A	05-Oct-10
10760	Murrayfield Stadium Accomodation Works	12-Apr-10 A	01-Oct-10
10700	Issue Construction Drawings		27-Aug-10*
197	Demolition	24-Sep-10	08-Oct-10
378	Foundations	08-Oct-10	29-Oct-10
388	Reinforced Earth Wall	22-Oct-10	21-Mar-11
400	Coping	21-Mar-11	12-Apr-11
410	Handrail	12-Apr-11	26-Apr-11

Updated SDS design delivery programme not in alignment with the updated Infraco construction programme

Extract from Infraco INTC 536 delay analysis programme – base date 31 July 2010

(N.B. Milestone for “Issue Construction Drawings” has been removed from the INTC 536 delay analysis programme)

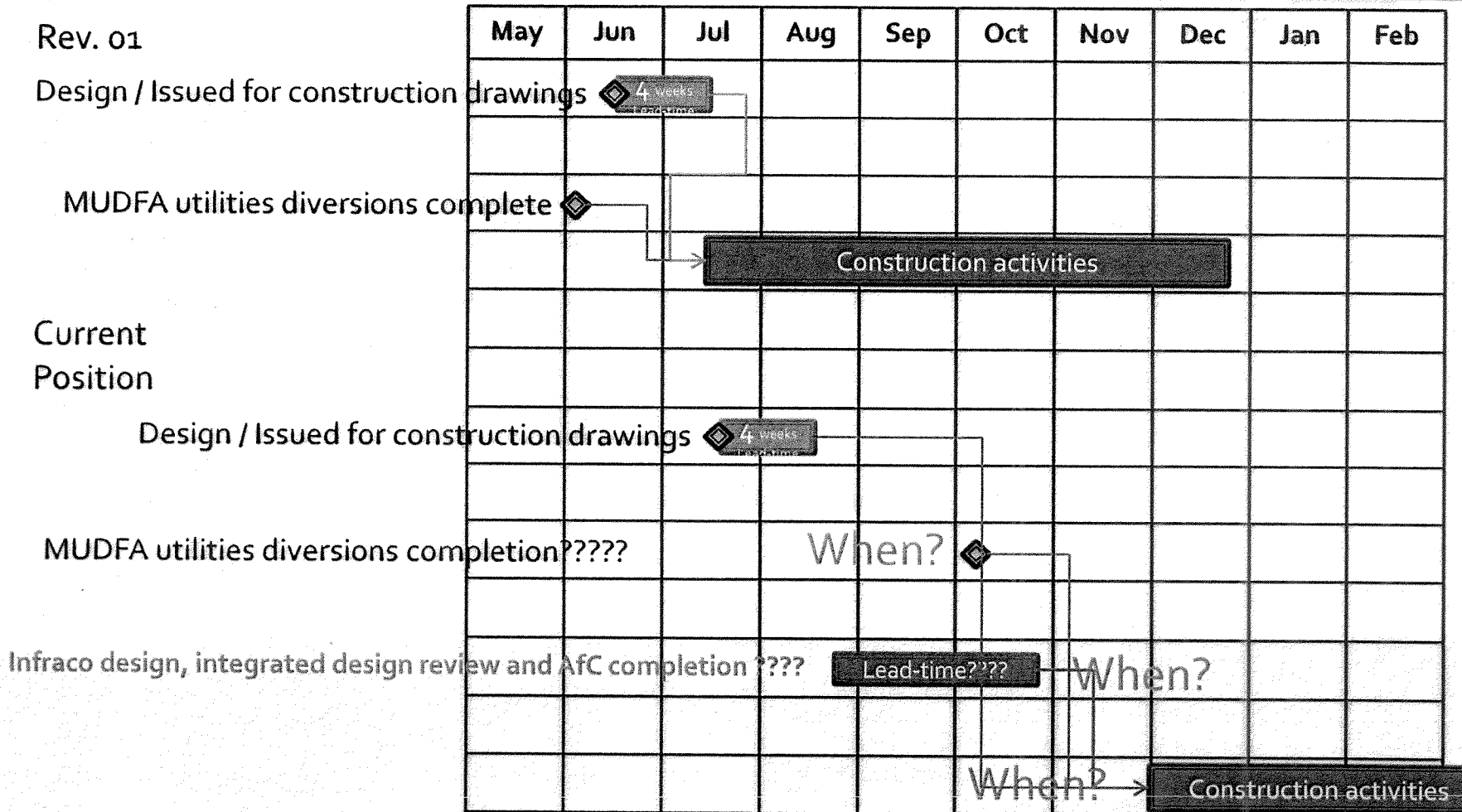
Murrayfield Retaining Walls (S21B)		172	02-Jun-08	07-Apr-09
5A-11-S21	Murrayfield Stadium Accomodation Works	60	02-Jun-08*	25-Aug-08
5A-11-S21	Site Clearance	20	26-Aug-08*	22-Sep-08
5A-11-S21	Demolition	10	09-Sep-08	22-Sep-08
5A-11-S21	Foundations	15	23-Sep-08	13-Oct-08
5A-11-S21	Reinforced Earth Wall	95	07-Oct-08	03-Mar-09
5A-11-S21	Coping	15	04-Mar-09	24-Mar-09
5A-11-S21	Handrail	10	25-Mar-09	07-Apr-09

INTC 536 delay analysis programme shows this structure complete over 2 years earlier than the updated Infraco construction programme.

Programme not updated for changes to the Infraco's proposed order and manner for delivering the Infraco Works – (example shown is part of Section 1B)

Task Name	Text1	2010												2011												2012												2013											
		A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M												
- Infraco construction programme (rev 1) updated																																																	
Issue Construction Drawings																																																	
- Roadworks - Leith Walk																																																	
Chainage 0 - 100																																																	
Chainage 100 - 350																																																	
Chainage 350 - 800																																																	
- Trackwork - Leith Walk																																																	
Chainage 0 - 100	Phase 1																																																
Chainage 0 - 100	Phase 2																																																
Chainage 0 - 100	Phase 3																																																
Chainage 100 - 350	1st Half																																																
Chainage 100 - 350	2nd Half																																																
Chainage 350 - 800	1st Half																																																
Chainage 350 - 800	2nd Half																																																
- Rev 3 programme																																																	
- Roadworks - Leith Walk																																																	
TTM Phase 10-1	Outbound Roadworks																																																
TTM Phase 10-1	Inbound Roadworks																																																
TTM Phase 10-2	Outbound Roadworks																																																
TTM Phase 10-3	Outbound Roadworks																																																
TTM Phase 10-3	Inbound Roadworks																																																
Chainage 80 - 350	Phase 1 Northbound (Leith)																																																
Chainage 80 - 350	Phase 2 Southbound (City)																																																
Chainage 80 - 350	Phase 3 tramway and Central Reserve																																																
Chainage 80 - 350	Phase 4 Wearing course and Finishes																																																
Chainage 350 - 830	Phase 1 Northbound (Leith)																																																
Chainage 350 - 830	Phase 2 Southbound (City)																																																
Chainage 350 - 830	Phase 3 tramway and Central Reserve																																																
Chainage 350 - 830	Phase 4 Wearing course and Finishes																																																
- Trackwork - Leith Walk																																																	
TTM Phase 10-1	Outbound Trackworks																																																
TTM Phase 10-1	Inbound Trackworks																																																
TTM Phase 10-3	Outbound Trackworks																																																
TTM Phase 10-3	Inbound Trackworks																																																
Chainage 80 - 350	Inbound track																																																
Chainage 80 - 350	Outbound Track																																																
Chainage 350 - 830	Inbound track																																																
Chainage 350 - 830	Outbound Track																																																

What is the dominant cause of delay?



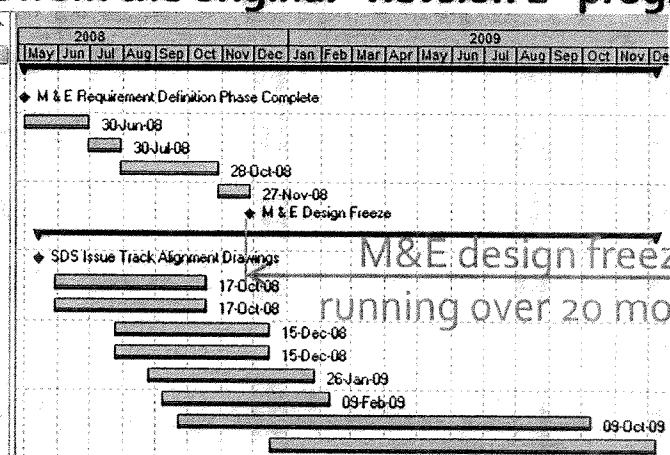
Criticality of MUDFA Works?

- Cause of EoT from Rev. 0 to Rev. 1 was design delay, therefore design must be driving the critical path. MUDFA Works appear to be off the planned critical path.
- The actual critical path appears to be driven by *inter alia* design delivery and design change. Whether they have been completed, MUDFA Works appear to be off the actual critical path. Where they are yet to be completed it is, as yet, unclear if they will prove to be critical. Current indications are that they will not.

Delays to the M&E Design

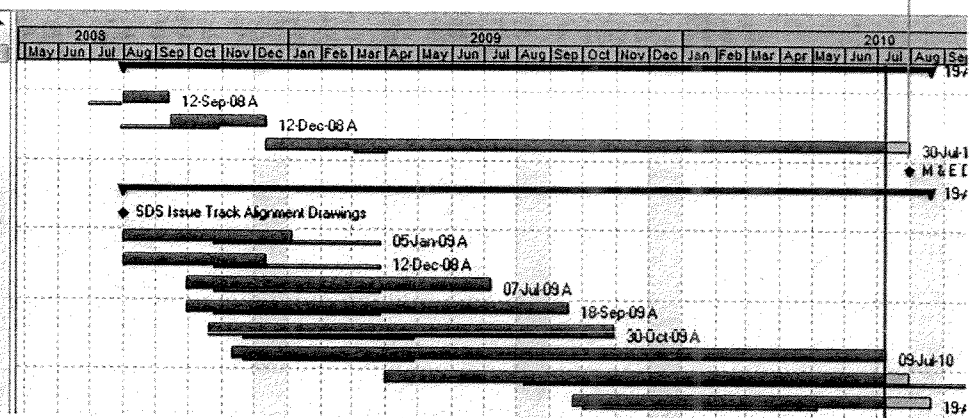
Extract from Infraco INTC 536 delay analysis programme – base date 31 July 2010
 (this is the same as the equivalent extract from the original “Revision 1” programme.)

Activity ID	Activity Name	Original Duration	Start	Finish
M & E Design				
740	M & E Requirement Definition Phase Complete	0	01-May-08	07-Dec-09
750	M & E Preliminary Design Phase	60	01-May-08	30-Jun-08
760	M & E Review of Preliminary Design	30	30-Jun-08	30-Jul-08
770	M & E Detail Design Phase	90	30-Jul-08	28-Oct-08
780	M & E Review of Detailed Design	30	28-Oct-08	27-Nov-08
790	M & E Design Freeze	0		
Railway Electrification				
A17080	SDS Issue Track Alignment Drawings	0	14-May-08	07-Dec-09
A17090	Basic Design TPS	100	30-May-08	17-Oct-08
A17110	Basic Design OCS	100	30-May-08	17-Oct-08
A17100	Detail Design TPS	100	25-Jul-08	15-Dec-08
A17120	Detail Design OCS	100	25-Jul-08	15-Dec-08
A17130	Procurement	100	25-Aug-08	26-Jan-09
A17160	SDS Design DLE Foundations	100	08-Sep-08	09-Feb-09
A17140	Manufacturing	260	22-Sep-08	09-Oct-09
A17150	Dispatch	240	16-Dec-08	07-Dec-09



Extract from the Infraco construction programme – July 2010 (updated “Rev.1”)

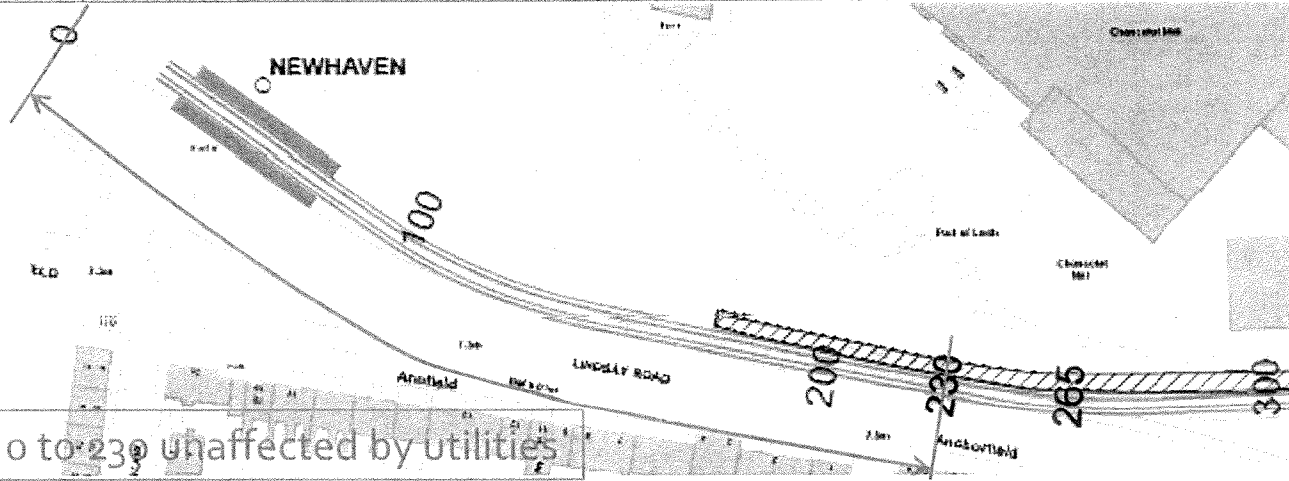
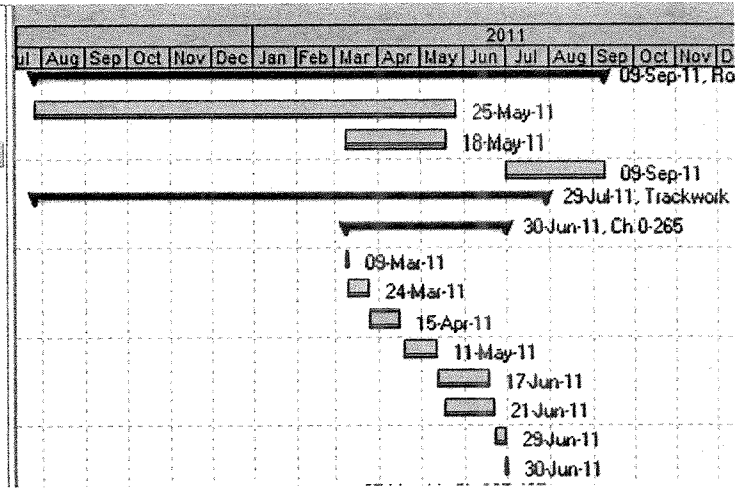
Activity ID	Activity Name	Original Duration	Start	Finish
M & E Design				
760	M & E Review of Preliminary / Basic Design	30	01-Aug-08 A	12-Sep-08 A
770	M & E Detail Design Phase	90	15-Sep-08 A	12-Dec-08 A
780	M & E Review of Detailed Design	30	12-Dec-08 A	30-Jul-10
790	M & E Design Freeze	0		
Railway Electrification				
A17080	SDS Issue Track Alignment Drawings	0	01-Aug-08 A	19-Aug-10
A17090	Basic Design TPS	100	01-Aug-08 A	05-Jan-09 A
A17110	Basic Design OCS	100	01-Aug-08 A	12-Dec-08 A
A17100	Detail Design TPS	100	29-Sep-08 A	07-Jul-09 A
A17120	Detail Design OCS	100	29-Sep-08 A	18-Sep-09 A
A17130	Procurement	100	20-Oct-08 A	30-Oct-09 A
A17160	SDS Design DLE Foundations	100	10-Nov-08 A	09-Jul-10
A17140	Manufacturing	343	01-Apr-09 A	30-Jul-10
A17150	Dispatch	141	22-Sep-09 A	19-Aug-10



Use of construction programme Activity Descriptions to define DWAs and dictate sequencing

Extract from Infraco INTC 536 delay analysis programme – base date 31 July 2010

Activity ID	Activity Name	Original Duration	Start	Finish
-	Roadworks	222	27-Jul-10	09-Sep-11
1A-24C-RC	CH 0700 to 0850	203	27-Jul-10	25-May-11
1A-24B-RC	CH 0300 to 0700	50	08-Mar-11	18-May-11
1A-24A-RC	CH 0000 to 0300	50	01-Jul-11	09-Sep-11
-	Trackwork	212	27-Jul-10	29-Jul-11
-	Ch 0-265	80	08-Mar-11	30-Jun-11
1A-24A	Establish Traffic Management & Temp. Fencing	2	08-Mar-11	09-Mar-11
1A-24A	Excavate box	11	10-Mar-11	24-Mar-11
1A-24A	Excavate, lay and concrete ducts	16	25-Mar-11	15-Apr-11
1A-24A	Excavate and construct OLE bases	16	18-Apr-11	11-May-11
1A-24A	Set Track (265m)	26	12-May-11	17-Jun-11
1A-24A	Place upper concrete and cure	25	17-May-11	21-Jun-11
1A-24A	Street Surface finishes	6	22-Jun-11	29-Jun-11
1A-24A	Remove fencing and Traffic Management	1	30-Jun-11	30-Jun-11



Chainage 0 to 230 unaffected by utilities