

Our ref: 25.1.201/WIM/3230

6th August 2009

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Date Sent	6 th AUG 2009: bww
File Number	
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For the attention of Steven Bell – Tram Project Director

Dear Sirs,

Edinburgh Tram Network Infraco
Estimate in Respect of Notice of tie Change Number 429
MUDFA programme Revision 08 – Delay and Disruption Resulting From Incomplete Utility Works

We refer to Infraco Notification of tie Change No. 429 dated 08 July 2009 (Ref. 25.1.201/MRH/3016) and provide herewith the resulting Estimate pursuant to Clause 80 of the Infraco Contract.

This Estimate addresses in isolation the time element of the delay and disruption arising from incomplete Utility Works, and Infraco hereby requests an extension of time to each respective Planned Sectional Completion Date as follows:

- Planned Sectional Completion Date for Section A: 187 Calendar Days
- Planned Sectional Completion Date for Section B: 185 Calendar Days
- Planned Sectional Completion Date for Section C: 251 Calendar Days
- Planned Sectional Completion Date for Section D: 257 Calendar Days

Infraco is not in a position at this stage to quantify its reasonable opinion of the increase or decrease in sums due to be paid to Infraco under the Infraco Contract. There are outstanding issues of principle between Infraco and tie in relation to the valuation of changes and the valuation of the sums to be paid to Infraco will be dependent on the duration of the agreed extension of time. Infraco therefore propose that the details of the increase or decrease in the sums to be paid to Infraco are submitted following the agreement of the quantum of the extension of time applicable to each of the Planned Sectional Completion Dates. Any other approach would not result in Infraco being able to give its opinion (acting reasonably) as required by Clause 80.4.

Pursuant to Clause 80.4.1, we confirm that Infraco will require relief from its obligations in respect of the completion date of 30 June 2011 nominated in the Asset Protection Agreement together with any other such text reflective of the agreement for extension of time whether or not specifically mentioned herein.

Pursuant to Clause 80.4.2, we confirm that we do not perceive that the subject delays will result in any detrimental impact to the ultimate performance of the system.

Pursuant to Clause 80.4.3, we confirm that the delays have had, and continue to have a significant impact on the Programme, and have addressed these impacts under Appendix A attached hereto.

Pursuant to Clause 80.4.4, we confirm that we do not perceive any revisions to or additional consents are required for which Infraco is responsible. We note for assistance only that given the quantum of

delay experienced, there is potential for those rights obtained by the Infraco to occupy lands (for the purpose of construction) to have lapsed or been otherwise adversely affected. In these instances, we have assumed for the purpose of this Estimate that any such issues will be resolved so as not to impact this proposed programme.

Pursuant to Clause 80.4.5, we confirm that we do not perceive that any new agreements will be required with third parties as a result of the delays.

Pursuant to Clause 80.4.6, we confirm that the Planned Sectional Completion Dates, Reporting Period End Dates and Milestones in Schedule Part 5 will have to be updated to reflect the amended Programme agreed as a result of the Notified Departure to which this Estimate relates, together with any other extensions of time consequential on the amended Programme.

At this stage it is not possible to confirm the extent of the extension to the Key Subcontracts that will be required. Infraco proposes for reasons of expedience, given the reasons referred to above, that the details or any changes required to Key Subcontracts are provided to the following agreement of the quantum of extension of time.

Pursuant to Clause 80.4.7, we confirm that the proposed method of delivery of the Infraco Works has not materially changed, save for any revisions to the sequencing of construction activities as addressed in Appendix A.

Pursuant to Clause 80.4.8, we confirm that the proposals to mitigate the delay are described in detail in Appendix A.

Pursuant to Clause 80.4.9, we again confirm that the Planned Sectional Completion Dates, Reporting Period End Dates and Milestones in Schedule Part 5 will have to be updated to reflect the amended Programme agreed as a result of the Notified Departure to which this Estimate relates, together with any other extensions of time consequential on the amended Programme.

Pursuant to Clause 80.4.10, we confirm that the subject delay has caused an increase in sums due to be paid to Infraco. Infraco proposes for the reasons referred to above, in the interest of expedience that these sums be detailed, submitted and agreed with the following agreement of the quantum of extension of time applicable to each of the Planned Sectional Completion Dates.

Pursuant to Clause 80.5.1.1, we confirm that it is not possible, given the reasons referred to above, to confirm whether any net increase or decrease in labour resources or management time required for each affected maintenance element of the Infraco Works will be required.

Pursuant to Clause 80.5.1.2, we confirm that we do anticipate consequential increases in materials, plant or equipment, but that it is not possible at this stage to quantify such increases. These shall be detailed fully following agreement of the quantum of extension of time.

Pursuant to Clause 80.5.2.1, we confirm that we do anticipate net increases in the scope of required renewals work or services, or the frequency of renewals, but that it is not possible at this stage to quantify such increases. These shall be detailed fully following agreement of the quantum of extension of time.

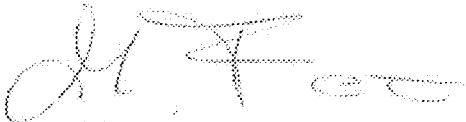
Pursuant to Clause 80.5.2.2, we confirm that we do anticipate net increases in labour resources and management time required for renewals work, but that it is not possible at this stage to quantify such increases. These shall be detailed fully following agreement of the quantum of extension of time.

Pursuant to Clause 80.5.2.3, we confirm that we do anticipate consequential increases in materials, plant or equipment required to affect the renewals, but that it is not possible at this stage to quantify such increases. These shall be detailed fully following agreement of the quantum of extension of time.

Please note that this Estimate is limited solely to the Notified Departure narrated in Appendix A and those impacts resulting from delays to the completion of the Utility Works as set out in the MUDFA programme Revision 8. It does not take into account any failure by tie or their agents to complete the Utility Works in accordance with the MUDFA programme Revision 8 which would be subject to a further Notified Departure and process. Infraco has made tie aware of other delays to the Infraco Works resulting from events for which tie is responsible including *inter alia* the belated provision of the SDS Design, Utility Works performed by Infraco and increases to the scope of the Infraco Works. These changes have been notified under separate cover and shall be subject to independent Estimates, valuation and agreement pursuant to the relevant provisions of the Infraco Contract. Nothing in this Estimate shall prejudice any rights to entitlement to compensation or relief by Infraco under said separate processes.

Please confirm your receipt of this Estimate and pursuant to Clause 80.9, your acceptance of the proposed method of agreeing the Estimate.

Yours faithfully,



M Foerder
Project Director
Bilfinger Berger Siemens CAF Consortium

cc J Donaldson
S Sharp
D Gough
W Mellier

APPENDIX A

Impacts on Programme Pursuant to Clause 80.4.3

Introduction

To enable the Infracore Works to be constructed all service utilities that conflict with either the works to be built or with the operation of the tram need to be diverted. It was thus agreed between the Parties that these diversion works were to be undertaken by the MUDFA Contractor and the Statutory Authorities in advance of Infracore. The Base Case Assumptions and Infracore Programme therefore reflect the agreement that the Infracore Works could be undertaken in a manner free from disruption by the MUDFA and Utilities Works in Schedules Part 4 and 15 of the Infracore Contract respectively.

This agreed logic ensured that not only would the physical Infracore Works and MUDFA Works not conflict, but also for the avoidance of clashes between traffic management schemes, difficulties of working around live services, access conflicts, congestion of contractors vehicles, space for storage of materials, responsibility and ownership of the sites in respect of HSE and other such factors that could either reduce productivity or suspend the works. As a result of this agreement efficiencies assumed in the Programme Revision 0 and associated cost savings were made possible.

Programme Revision 1

The Programme Revision 1 is the version currently accepted by the pursuant to Clause 60.4, and as such forms the platform for the analysis herein.

The Programme Revision 1 has 10 milestones, each representing the date for which MUDFA were assumed to be completed in each Intermediate Section. Without modification to the agreed logic in the Programme, these dates constitute the start milestones for the Infracore Works in the corresponding Intermediate Section.

It is further noted that these dates are also listed in the Programming Assumptions document bound into Schedule Part 15 of the Infracore Contract and were not changed from Programme Revision 0 to the current Programme Revision 1.

Initial Analysis

The MUDFA programme Revision 8 provided by the indicates forecast completion dates of the MUDFA Works to each of the respective Intermediate Sections. The dates therein differ to those agreed and forming the basis of the Programme.

In this initial analysis pursuant to Clause 80.4.3, the agreed original logic and sequences has been maintained, and the new completion dates forecast by the MUDFA programme Revision 8 have been substituted for the original milestones in the Programme. This revised unmitigated programme has then been run to schedule with a data date of 27 September 2007 (the same as the Programme Revision 1). The resulting effect on each of the Milestones is shown below:

	Revision 1	Unmitigated
Section A	01 Jun 2010	13 Dec 2010
Section B	01 Jul 2010	30 Jun 2011
Section C	10 Mar 2011	15 Mar 2012
Section D	06 Sep 2011	11 Sep 2012

Corrected Logic to the Programme Revision 1

EOT1 – SDS programme V31 had the effect of delaying the resource constrained track laying activities on the Programme Revision 0 to a greater extent than the accompanying road work activities. The effect on some sections of the works was for the schedule to show the establishment of traffic management and commencement of road works too far in advance of the track laying activity. To overcome this problem in the Programme Revision 1, a start finish link was introduced between the track laying and establishment of traffic management.

However, the introduction of the MUDFA programme Revision 8 had the opposite effect, namely it has delayed the road works more than the track laying. Accordingly in some instances, the introduction of the MUDFA programme Revision 8 resulted in track laying activities commencing before traffic management has been established. This was clearly incorrect and the logic has been corrected as part of this analysis.

Mitigation

Pursuant to Clause 80.4.8, mitigation of the delay can be achieved by modifications to sequence and logic in the Programme. Several measures were employed by Infracore with a view to reducing the overall delay resulting from the delayed completion of the Utility Works including the removal of resource constraints, the incorporation of instructed acceleration measures and re-running the resource levelling.

Removing Resource Constraints

The Programme is constrained by the track laying and Overhead Line Equipment (OHLE) resources. To maintain this restraint the activities for each gang are linked by finish start relationships. The reason for this preferred logic (as it has been termed) is that the production levels are based upon the resources having continuity of work. If this continuity is broken by an obstruction to progress and the resource has to be moved elsewhere on the project, a demobilisation / remobilisation period is experienced and production lost. Additional activities have been inserted into this proposed mitigated programme to allow for such disruption to production. The inability of the Primavera software to make allowance for this disruption has resulted in manual resource levelling being the preferred analysis option.

If the activity links which control the preferred logic for the track, OHLE, substations and tram stop gangs are removed the Planned Sectional Completion Date for Section D improves to 5 March 2012, although some new logic needs to be added specifically in the Depot and Section 2.

Instructed Acceleration

In two sections of the project, we have recognised the impact of the delays to critical areas and instructed Infracore pursuant to Clause 80 to enter into the Designated Work Areas in advance of the completion of the Utility Works. These instructions for both the Leith Walk (Intermediate Section 1B) and Princes Street (Intermediate Section 1C) have resulted in reduced production on site. In the case of Princes Street, the overall quantum of delay has been reduced by the performance of some of the Infracore Works concurrently with the Utility Works.

The actual performance of the Infracore Works ahead of the completion of the Utility Works is reflected in this proposed mitigated programme.

Intermediate Section 1B – Leith Walk

In the instance of Intermediate Section 1B – Leith Walk, Infraco commenced their programmed works in Leith Walk on 13 October 2008 despite the ongoing MUDFA Works. At that time only partial possession of the section of works (Ch 100 to 350) was granted by tie due to the ongoing presence of MUDFA. Little progress was achieved due to the disruption caused by MUDFA and the discovery of numerous live services that conflicted with the permanent works. The Infraco Works were suspended under further instruction for a Christmas Embargo from 12 December 2008 through 16 February 2009. Following this embargo imposed, it was agreed by tie that given the quantum of incomplete MUDFA Works and the loss of productivity experienced during the aborted acceleration attempt, Infraco would not remobilise until the MUDFA Works were completed.

This analysis assumes that the programmed Infraco Works for Intermediate Section 1B – Leith Walk will commence in full following the completion of the MUDFA Works.

Intermediate Section 1D – Princes Street

In the instance of Intermediate Section 1D – Princes Street, acceleration measures were instructed by tie whereby Infraco would work alongside MUDFA. Despite the works proceeding on a cost reimbursable basis the time effect of this disruption still has to be accounted for.

Due to the differing terms of agreement for these works, being a 7 day working week, it is reasonable for Infraco to depart from the durations shown in the Programme. As part of the ongoing works, Infraco has developed a construction programme for Princes Street now in revision D that more accurately reflects the accelerated nature of the works.

The durations of the track-laying activities in this programme have been extended to encompass (via a lagged finish-finish relationship) the belated completion dates of the Utility Works as shown in MUDFA programme Revision 8.

Though this treatment of the Princes Street area is sufficient for the purposes of this analysis, Infraco reserves the right to review the impacts on the Programme at Princes Street on an as-built basis. Given the nature of the works currently being performed, we trust this position is considered reasonable.

Intermediate Section 7A – Edinburgh Airport to Gogarburn

Following the discovery of a clash between the foundations to the Gogarburn Bridge and a sewer in Intermediate Section 7A – Edinburgh Airport to Gogarburn, tie instructed Infraco to perform the diversion upon completion of a suitable design solution.

The programmed interrelationship between MUDFA Works and the commencement of the Gogarburn Bridge has therefore been removed in this analysis.

Notwithstanding, it is noted that the activity descriptions in the MUDFA programme Revision 8 list Infraco as responsible for many of the remaining Utility Works. We note that Infraco has not received instruction in this respect, and are not aware of the scope or nature of these remaining activities.

Accordingly, excluding the aforementioned adjustment for Gogarburn Bridge, all other Infraco Works in this Intermediate Section 7A remain linked to the completion of Utility Works by others.

Resource Levelling

Following both the removal of the resource constraints and the introduction of the instructed acceleration measures detailed above, this proposed mitigated programme required resource levelling.

The Depot and Test Track facilities are required in advance of other areas of the project for the purposes of allowing sufficient time for the commissioning of trams ahead of active service. Accordingly, the track-laying and OHLE activities associated with these areas were allocated a 'high activity levelling' priority.

As a result of this, it was also necessary to introduce a new activity that maintained at least the same time duration between Section B (completion of test track) and Section C (general construction completion).

As a function of re-sequencing, the demobilisation and remobilisation activities had no links to correctly position themselves in the logic. Programme Revision 1 had 1194 days associated with track-laying and 78 associated with demob / remobilisation (6.5%). By increasing the track-laying activity durations by this percentage, we effectively corrected the outputs for the degree of disruption in this proposed mitigated programme.

Running the software to level resources (with *late finish* dates as the priority secondary to the Depot and Test Track facilities) produces a Planned Sectional Completion Date for Section D of 20 May 2012.

Critical Paths

The Planned Sectional Completion Date for Section D calculated by the programme analysis is 20 May 2012. The critical path driving this end date has been calculated by resource levelling. The print out of the Primavera Analysis attached to this document does not show the critical path with red activity bars. This is because the resource levelling has had to lengthen the path that is created by the fixed activity to activity links.

However, by inspection the critical path is easily identified as follows:

- * MUDFA Works completion Intermediate Section 1A;
- * Tower Place Bridge widening;
- * Road & Track works Rennie's Isle to Casino Square;
- * Victoria Dock Access Bridge and associated road and track work;
- * OHLE works to Intermediate Section 1A;
- * OHLE works to Intermediate Section 5B.

With prescribed Liquidated and Ascertained Damages (LAD's) applicable to the completion of Sections A and B under the agreement, it is axiomatic that an additional critical path exists through the completion of Intermediate Sections 6 and 7A. The critical path to the Planned Sectional Completion Date for Section A is as follows:

- * MUDFA Completion of water main at Depot;
- * Depot earthworks;
- * Foundations;
- * Building envelope;
- * Building services;
- * Fitout and finishes;
- * Install workshop equipment;

- inspection and testing.

The critical path to the Planned Sectional Completion Date for Section B is as follows:

- Completion of Section A;
- 28 Days to allow for the delivery and assembly of the first 6 trams by CAF.

It is also noteworthy that several additional near-critical paths have emerged as a result of the delay in completion of the Utility Works. The resource levelling of the 3 track-work gangs and the 2 OHLE gangs have effectively made critical any construction sequence concluding with track-laying or OHLE activities.

With criticality now inherent within almost every construction phase it is evident that the risk profile of the project far exceeds that upon which the tender was based. We invite proposal from the Client on how, pursuant to Clause 80.2.3 it is proposed that this particular impact of the Client Change be treated.

Conclusion

The effect of incorporating the revised information received from the Client in respect of the MUDFA programme Revision 8 into the Programme Revision 1 is a resulting Planned Sectional Completion Date for Section D of 11 September 2012 using the agreed logic prior to mitigation. This programme is provided as Appendix C hereto.

In anticipation of Infraco's obligations pursuant to Clauses 60.2 and 60.3, we further provide a proposed mitigated programme as Appendix D hereto incorporating those mitigation measures as detailed above and required by Clause 80.4.8 for acceptance by the Client.

A summary of each of the Unmitigated and Mitigated programmes and resulting Planned Sectional Completion Dates for each Section are provided in the table below:

	Revision 1	Unmitigated programme	Mitigated programme
Section A	01 Jun 2010	13 Dec 2010	13 Dec 2010
Section B	01 Jul 2010	30 Jun 2011	10 Jan 2011
Section C	10 Mar 2011	15 Mar 2012	22 Nov 2011
Section D	06 Sep 2011	11 Sep 2012	20 May 2012

Infraco wishes to reiterate that the extension of time associated herewith will be subject to subsequent adjustment in the event any of the dates nominated by the Client for completion of the MUDFA Works in the MUDFA programme Revision 8 are not met.

This analysis remains devoid of any consideration for the other forms of delay incurred on the project to date. It is understood and accepted that the impacts associated therewith shall be treated under separate process and that nothing in this Estimate shall prejudice Infraco's right to entitlement to compensation for extension of time or cost associated therewith.



SIEMENS



APPENDIX B

Increases in Sums Due to be Paid to Infracore Pursuant to Clause 60.4.10

To be confirmed following agreement in respect of extension of time.



APPENDIX C

Programme Revision 1 extended by MUDFA programme Revision 8

Original Logic and Sequencing



APPENDIX D

Programme Revision 1 extended by MUDFA programme Revision 8

Mitigated through Re-sequencing and Revised Logic