

Carillion Utilities Services

MUDFA Project

Schedule 4 Rates and Prices Submission Road Map

For the meeting between tie and CUS on the 03rd September 09

Summary to Date

The MUDFA project has progressed through many phases none of which align to that originally envisaged.

The six months Pre-Construction Services (PCS) period was intended to value engineer the design, minimise out-turn cost etc. During this period we were also to collaborate with all parties and stakeholders to establish integrated management systems and build a platform for success in advance of construction, i.e.,

- Development of a robust and sustainable Construction Programme
- Interaction with Statutory Utility Companies
- Traffic Management and TTROs
- Pricing and Cost Control
- Communications and Stakeholder Management
- Advance / Enabling Works
- Risk Management
- HAZID / HAZOP review and input

This was based on receipt of all Issued For Construction (IFC) Designs, all Traffic Management Designs and Temporary Traffic Regulation Orders (TTROs) being made available by tie Limited in late December 2006 / early January 2007. PCS was to run between October 2006 and March 2007, with Construction Services duration of April 2007 to May 2008, with a Longstop Date of 30th September 2008.

Whilst PCS commenced on programme, construction only commenced in earnest late summer, early autumn 2007. This was a consequence of a number of factors delaying commencement, primarily:

- Parliamentary approval for the Edinburgh Tram Project following formation of the SNP Government, and
- Availability and quality of IFC Designs

Following the delays in commencement, Revision 06 Programme, was adopted in October 2007 and showed a revised completion date of December 2008. Of the 29 Notes and Assumptions accompanying the programme, a key and critical element was that it was based on the *“current and best information”*, since at that stage circa 83% of the IFC Designs were still not available.

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A commercial settlement was made in respect of delays suffered to that point, with payment of £991k being made in December 07. This also included agreement of an improved framework for incentivisation.

However, significant delays continued to be incurred on the Rev 06 Programme due to:

- Late IFC Designs
- Stakeholder requirements
- Growth in work scope (continual change)
- Traffic Management restrictions

Discussions and negotiations commenced on Revision 07 of the Programme in May 2008 as dates slipped on an ongoing basis through the lack of IFC Designs; there was a substantial percentage of the IFCs still outstanding and significant areas where design changes were underway.

This led to a further commercial settlement of £2m finalised in September 2008 which adopted the Rev 7.09 programme showing completion at end of April 09. At this time the way forward for measurement of future delay and disruption was also tentatively agreed.

Since September 2008 we have continued to suffer significant delays to the programme through reduced outputs as a consequence of continued difficulties due to;

- Inadequate and late design issue
- Change to scope of works
- No revisions to IFC's following change
- Traffic Management Restrictions

The current completion date is anticipated to be the 14th December 2009, this was corresponded to tie letter Ref; CUS/tie/letter/SB/Projects/2672 dated 25th August 2009.

With in excess of circa 1,600 Technical Queries and 3,700 Change items raised to date and based on our projections to completion we anticipate a Final Account Value in excess of £70m.

It was agreed that in order to assess the value of any future entitlements post September 2008 then full and detailed particulars would need to be provided. The following is an overview of these particulars.

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Overview of Documentation Provided

The submissions provided for each Work Section contain the following headings the contents of which are narrated briefly in this paper to assist **tie** in their reasonable assessment and evaluation of CUS entitlement:

1. Introduction

- 1.1. Sets out what **tie** will comprehend (and hopefully agree) when reviewing the following sections:
- 1.2. In particular it summarises what the Contractor priced for i.e. compliance with the Agreement, Schedule 8 Programme or any subsequent revisions, tender drawings, quantities outlined in schedule 4, accurate and robust IFC drawings, provide all approved and integrated TM.
- 1.3. It summaries the contents of the submission and outlines that the Contractor based on factual evidence will demonstrate that **tie** failed to manage the Works timeously, provided late information and resolution, was unable to manage and coordinate stakeholders and failed to timeously respond to important correspondence, queries and requests for information and were unable to provide the required TM.
- 1.4. It also states that **tie** did not properly administer the Agreement in particular clause 8 by failing to agree Work Order Confirmations but in effect varied the procedure.
- 1.5. It also states that **tie** generally failed to provide completed IFC drawings.
- 1.6. Finally it summaries the sum of money being requested for each Work Section

2. Synopsis of Events

- 2.1. The synopsis states:
- 2.2. a procedure that the Agreement envisaged which meant the Contractor prior to starting any Works would have received a fully compliant design (other than unforeseen obstructions) for which there would be an agreed price and Programme (revised to 7.9) finalised by the Works Order Confirmation Notice, failing which the Work Order would be withdrawn. **tie** has repeatedly failed to follow this procedure.
- 2.3. Because of the late design the Risk and Trade Off initiative was adopted by **tie** in order to allow some Works to progress (e.g.BT) a single utility design which in some Work Sections was instructed to proceed however when the Multi Utilities design could not be executed as designed this also resulted in conflicts with works already installed under RAT.
- 2.4. Central to the Contractor's efficient method of Working was the provision of accurate IFC drawings and fully configured and compatible TM as envisaged under the Provision of System Design Services, which in practice rarely happened, the most

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obvious examples are given which can be read in Section 4 below. Consequently the Contractor regular progress was delayed and disrupted by a design that was provided in a piecemeal fashion.

- 2.5. Summarised is the change in Work scope from that tendered
- 2.6. Outlined and summarised are also the Key events which delayed and disrupted the Contractor's regular progress of the Works read Section 4 below.
- 2.7. Footnotes provide supporting information

3. Contractual Entitlement

- 3.1. This sections states:
- 3.2. The Schedule 4 Rates and Prices were based on; the tender drawings and quantities with provision sums for the additional works, the potential for value engineering, the Schedule 8 Programme, Stakeholder constraints, all enabling works being carried out in advance and no later than the 31st March 2007, IFC drawings no later than the 21st December 2006 which would be robust, all TM design and orders approved by the 9th January 2007 and the operation of the Agreement.
- 3.3. Because of the reasons given in the submissions the Rates and Prices no longer hold good. Refer CUS letter AMIS/tie/letter/KAG/Projects/833 dated 11th March 2008
- 3.4. That clause 51 rates implicitly can be revised other than quantities alone and directs **tie** to clauses 2.36 of and 3.3 of Schedule 1. It goes on to say for reasons explained elsewhere that the Schedule 4 rates and prices fall to be revised.
- 3.5. Should the aforementioned not be contractually correct (which is denied) Clause 46 of the Agreement provides for any addition, modification, reduction, or omission to be valued as a Change.
- 3.6. Extensive changes have been instructed without the procedure being carried out by **tie** and in a number of instances they have simply sought to obviate the need for an estimate by applying clause 46.5.
- 3.7. None the less Changes are applied by valuing the Change under Clause 46 in particular 46.6.2, or 46.6.3 rates that are deduced or fair rates and prices.
- 3.8. Clause 46 opening paragraph envisages that there may be other means of agreeing Changes without operating the procedure as is a matter of fact by the way the Agreement has been operated in many instances, TQ's CVI', sketches etc.
- 3.9. In circumstances where the procedure has not been complied and the Contractor has no right under Clause 46 (which is denied) Clause 14.3 of the Agreement provides the Contractor with a right to be paid direct costs for delaying and

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disrupting its arrangements. Furthermore the clause provides if such instruction requires any variation then such instructions shall be given under clause 46 and valued in accordance with clause 46.6 of which there have been numerous instructions.

3.10 Finally Clause 10 provides for the payment of direct additional costs for artificial obstructions/adverse physical conditions.

4. Cause and Effect Analysis

4.1. Overview

4.2. The factual evidence summarised in this section and narrated chronologically hereafter is compelling proof that the Contractor was both delayed and disrupted by circumstances not of his making examples of which are:

4.3. St Andrew 1C 03 0 1

4.3.1. The actual Im (4,143) of diversion increasing over and above tender Im (2,614) by 59%

4.3.2. Cellars which pervaded the Work Section and the design took no account and required diversions shown in the footpath to be relocated in the street.

4.3.3. Side Entry manholes which delayed access to the central Work Site from the 01st October 08 until the 05th January 09.

4.3.4. Numerous uncharted services/obstructions which resulted from the re-design.

4.3.5. Conflicts with the RAT works that arose from the re-design.

4.4. Haymarket Terrace – Shandwick Place 1D 01 01

4.4.1. The actual Im (3,236) of diversion increasing over and above tender Im (1,729) by 87%

4.4.2. The re-alignment of the Developed Kinematic Envelope which caused a redesign of the services on the North side of Haymarket Terrace

4.4.3. **tie's** inability to liaise with the Taxi Company who would not move and caused a rescheduling of the works.

4.4.4. No account taken of cellars in West Maitland Street that caused the diversions in the South side to be relocated to the North side.

4.4.5. **tie's** instruction to use IFA drawings for the North side of West Maitland Street and their inability to obtain Statutory Authority approval timeously.

4.4.6. Cancelled TM for phase 3

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4.4.7. The numerous artificial obstructions including a service tunnel that was only recently required by tie to be surveyed.

4.5. Haymarket Yds 2A 01 01

4.5.1. **tie's** instruction to use IFA drawings when IFC drawings were not available in time for construction and because of numerous TQ's resulted in the works being suspended.

4.5.2. IFC drawings which took no account of the congested footpaths and resulted in instructions to re-locate the diversions in the verge.

4.5.3. An unforeseen brick structure that pervaded the Work section.

4.5.4. The re-routing of services to avoid the foundations of an existing wall.

4.6. Delay and Disruption Narrative

4.6.1. In a chronological narrative details all those events which have delayed and disrupted the Work Sections.

4.6.2. Footnotes provide supporting information

5. Explanation of Quantum Entitlement

5.1. The Contractor does not seek through this process a finding for Extension of time which has been separately submitted. The submissions concentrate on the available work fronts given the restrictions that were imposed on CUS by the failings of the design.

5.2. The evaluation is based on the disrupted resources that have been employed for each Work Section abated for the amount recovered through measure and change control.

5.3. Each of the Work Sections afforded the opportunity for multi front working and to some extent resource re-allocation between Work Sections; consequently the Works were to a large extent disrupted.

5.4. A common sense approach has been used in the evaluation seeking to evaluate only the apportionment of those amounts for which CUS consider tie are responsible.

5.5. The multi front working does not lend itself to critical path analysis or prolongation of the costs.

5.6. The method employed has been to compare the actual team days (excluding remedial works/Contractor's own responsibility) with the planned team days.

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5.7. **tie** has historically accepted that planned productivity rates were an accurate reflection of the tender see para 5.4.1.

5.8. As an adjunct to the calculation the Contractor has increased the rate for the price of labour because of the late design in 2007 which meant that CUS disbanded the labour force that was planned to be used and would have cost less.

5.9. The Contractor has also revised the planned productivity for the actual 10hr working day as opposed to the planned 8hr working day.

6. Glossary of Terms

Self explanatory

7. Appendices

A Schedule of Significant Matters

The contents of this appendix form the platform for the delay and disruption narrative and are uniquely referenced so each delay event can be identified in the chronological cause and effect narrative (section 4), diagrammatic map (appendix D) and the as-planned vs as-built programme (appendix G). The delay/disruption schedule contains the following information.

¹ Cause of delay	² Effectuated Activity ID	³ Effect on Progress of the Works	⁴ Start date of Delay	⁵ Finish date of Delay	⁶ Impact on Programme (Calendar days)	⁷ Comments	⁸ Document reference	⁹ Appendices A Page Number
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The headings give the following information:

- 1 Brief description of delaying/disruptive event,
- 2 Identification code for each diversion affected,
- 3 Brief description of the impact on the Works,
- 4 When the delay/disruption first impacted the Works,
- 5 When the delay/disruption ceased to impact the Works,
- 6 The assessment of the delay/disruption,
- 7 Further notes
- 8 Supporting documentation (correspondence , technical queries, CVI's photo graphs) for the delay/disrupting event which can be located in appendix A behind the tab with the numerical reference number located on the left hand side of the table for each event,
- 9 Appendix A page number for the first supporting document.

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B Correspondence Referred to in the Synopsis of Events

Supporting documentation referred in Section 2 not included in Appendix A

C Correspondence Referred to in the Cause and Effect Narrative

Further supporting documentation referred to in Section 4 not included in Appendix A

D Diagrammatic Delay Effects

Visual representation of delay/disrupting events described in Appendix A which have the unique reference number (from the left hand side of the delay/disruption schedule) shown for each event. A brief description of the event, start date and code of the affected diversion, additionally a key giving the type of event location.

E Drawings- Additional Utilities from Tender

Copies of the Tender drawings upon which the rates and prices were based and the comparative Information for Construction drawings.

F Quantum Entitlement Analysis**G As-Built Programme**

As built vs as planned representation of delay/disrupting events described in Appendix A which have the unique reference number (from the left hand side of the delay/disruption schedule) shown for each event. Code of the affected diversion and the same key used in Appendix D.