



18 May 2010

Keith Kilburn  
DLA Piper Scotland LLP  
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**BY EMAIL & POST**

and

Louise Forster  
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**BY EMAIL & POST**

Dear Sirs

**EDINBURGH TRAM NETWORK  
AGREEMENT BETWEEN tie LIMITED AND BILFINGER BERGER (UK) LIMITED/SIEMENS  
PLC/CONSTRUCCIONES Y AUXILIAR DE FERROCARRILES DELIVERY CONSORTIUM  
["INFRACO"]  
DISPUTE RESOLUTION PROCEDURE - ADJUDICATION - TOWER BRIDGE**

I enclose my final decision in respect of the above adjudication.

If I do not hear otherwise from the parties within 28 days from the date of this letter the papers submitted in this adjudication will be destroyed.

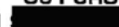
Yours faithfully


  
JOHN HUNTER

CC: Steven Bell – Edinburgh Trams  
Martin Foerder – Bilfinger Berger

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CEC00373726\_0001

**Adjudication**

**Between**

**TIE LIMITED (“the Referring Party”)**

**and**

**BILFINGER BERGER CIVIL UK LIMITED, SIEMENS PLC and CONSTRUCCIONES Y  
AUXILIAR DE FERROCARRILES S.A. (“the Responding Party”)**

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**Adjudicator’s Decision and Reasons**

**Tower Place Bridge**

**18 May 2010**

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John Hunter BSc FRICS MCI Arb MAPM of Hunter Consulting, Suite 1, Kirk House, 4 Kirk Road, Bearsden, Glasgow G61 3RG.

**CEC00373726\_0002**

## 1. INTRODUCTION

- 1.1 This adjudication concerns a dispute over matters arising under a contract for the provision of work associated with a new tram network for the City of Edinburgh. In particular this dispute relates to one element of the work, Tower Place Bridge, and whether changes have occurred between the Base Date Design Information (BDDI) upon which the parties contracted and the Issued For Construction information (IFC) and the evaluation of those changes to the extent that such changes amount to a Notified Departure as defined in the contract.

## 2. THE PARTIES

- 2.1 TIE LIMITED is a company incorporated under the Companies Acts (Company No SC230949), and having its registered office at City Chambers, High Street, Edinburgh, Midlothian EH1 1YJ (“the Referring Party”)
- 2.2 BILFINGER BERGER CIVIL UK LIMITED (formerly known as Bilfinger Berger UK Limited), a company incorporated under the Companies Acts (Company No 02418086), and having its registered office formerly at 150 Aldershot Street, London EC1A 4EJ and now at 7400 Daresbury Park, Warrington, Cheshire WA4 4BS and SIEMENS PLC is a company incorporated under the Companies Acts (Company No 00727817), and having its registered office at Faraday House, Sir William Siemens Square, Frimley, Camberley, Surrey GU16 8QD and CONSTRUCCIONES Y AUXILIAR DE FERROCARRILES S.A. is a company registered in Spain and having its registered office at J.M.Iturrioz 26, 20200 Beasain, Spain referred to in the contract as “Infraco”. (“the Responding Party”)

## 3. THE WORKS

- 3.1 The works, referred to as the Infraco Works are defined on page 257 of the contract as “the EAL Works and all or any of the works to be constructed and completed and/or services to be provided and/or the plant, machinery and

equipment to be supplied and installed by the Responding Party and which are necessary to deliver the Edinburgh Tram Network and to subsequently maintain it, all in accordance with this Agreement and the Employer's Requirements".

#### 4. THE DISPUTE

- 4.1. On or around 11 December 2008, the Responding Party served on the Referring Party a notification of tie Change number 230 dated 11 December 2008 in terms of which the Responding Party advised the Referring Party of its opinion that the following had occurred, and amounted to a tie Change pursuant to the Infraco Contract:

"Schedule Part 4, Pricing Assumption, paragraph 3.4.1.1, assumes that the Issued for Construction Drawings do not differ from the base Infraco proposals, Appendix A of 12/05/2008 other than design development, as the IFC drawings [ULE90130-01-BRG-00081 to ULE90130-01-BRG-00123] for Tower Bridge differ to a greater extent and complexity than design development, the foregoing results in a Notified Departure."

- 4.2. "Tower Bridge" is a reference to an existing bridge structure known as Tower Place Bridge, the alterations to which form part of the Infraco Works.
- 4.3. The term "Notified Departure" is defined under Clause 2.8 of Schedule Part 4 (Pricing) to the Infraco Contract as "where now or at any time the facts or circumstances differ in any way from the [Base Date Design Information, the Base Tram Information, the Pricing Assumptions and the Specified Exclusions] save to the extent caused by a breach of contract by the Infraco, an Infraco Change or a Change in Law".
- 4.4. Correspondence and communications then passed between the Referring Party and the Responding Party in terms of which the Referring Party requested that the Responding Party provide further and better particulars in connection with the matters set out in the Infraco Notification of tie Change, and invited the Responding Party to submit its estimate for the purposes of Clause 80 of the Infraco Contract

Conditions in respect of the matters set out in the Infraco Notification of tie Change for consideration by the Referring Party.

- 4.5. On or around 28 July 2009, the Responding Party submitted to the Referring Party an estimate in respect of the matters set out in the Infraco Notification of tie Change. The Estimate submitted for the purposes of Clause 80 of the Infraco Contract Conditions was in the amount of £595,358.21 exclusive of Value Added Tax.
- 4.6. Correspondence and communications then passed between the Referring Party and the Responding Party in terms of which the Referring Party requested that the Responding Party provide further and better particulars in connection with the matters set out in the Infraco Notification of tie Change and the Estimate.
- 4.7. On or around 9 October 2009, the Responding Party by letter submitted to the Referring Party supplementary information in connection with the Estimate, in terms of which the valuation of the items of work contained in the Estimate was revised to £435,519.46 exclusive of Value Added Tax (which applying the percentage allowances provided for under Appendix G of Schedule Part 4 (Pricing) to the Infraco Contract results in a total value of £543,961.81 exclusive of Value Added Tax).
- 4.8. Further correspondence then passed between the Referring Party and the Responding Party in terms of which the Referring Party requested that the Responding Party provide further and better particulars in connection with the revised Estimate.
- 4.9. On or around 15 January 2010, the Referring Party by letter advised the Responding Party, inter alia, that:

"Following further internal review and with reference to Pricing Assumption 19 we have amended our assessment of the change from BDDHFC, revised measurement breakdown / summary attached"

- 4.10. On or around 18 February 2010, the Responding Party by letter advised the Referring Party, inter alia, that it did not agree with the Referring Party's position as outlined in the Referring Party's letter of 15 January 2010, and provided supplementary information in connection with the Estimate, in terms of which the valuation of the items of work contained in the Estimate was further revised to £364,997.25 exclusive of Value Added Tax (which applying the percentage allowances provided for under Appendix G of Schedule Part 4 (Pricing) to the Infraco Contract results in a total value of £455,881.56 exclusive of Value Added Tax).
- 4.11. On or around 25 February 2010, the Referring Party gave notice to the Responding Party that the Dispute was to be referred to the Internal Dispute Resolution Procedure.
- 4.12. On or around 2 March 2010, the Referring Party by letter provided inter alia copies of drawings ULE90130-01-BRG-00076 Revision 1 and ULE90130-01-BRG-0085 Revision 1, which in the opinion of the Referring Party comprised part of the Base Date Design Information relevant to Tower Place Bridge.
- 4.13. On or around 8 March 2010, as part of the Internal Dispute Resolution Procedure, the Referring Party served on the Responding Party a position paper, in terms of which the Referring Party confirmed its position that, in respect of the matters depicted on the Issued for Construction Drawings numbered ULE90130-01-BRG-00081 to 00108 inclusive and ULE90130-01-BRG-00110 to 00123 inclusive in respect of "Section IA Tower Place Bridge" to which the Estimate (as revised) relates:
- a Notified Departure has occurred on the basis of Pricing Assumption 3.4.19 in respect of the structure known as Tower Place Bridge (the "Tower Place Bridge Notified Departure"); and
  - the true and proper valuation of the items of work which relate to the Tower Place Bridge Notified Departure (on the basis that those items of work constitute a Notified Departure in terms of Pricing Assumption 3.4.19 of Schedule Part 4 (Pricing) to the Infraco Contract) is NEGATIVE THREE HUNDRED AND FIFTEEN THOUSAND SIX HUNDRED AND EIGHTY SEVEN

POUNDS AND SEVENTY EIGHT PENCE [-£315,687.78] STERLING EXCLUDING VAT.

4.14. On or around 8 March 2010, as part of the Internal Dispute Resolution Procedure, the Responding Party served on the Referring Party a position paper, in terms of which the Responding Party, inter alia, confirmed its position that:

"1. The correct valuation of the Notified Departure is as per the Estimate submitted under cover of letter dated 18 February 2010 (Ref 25.1.201/SK/4723) in the V.A.T exclusive amount of £455,881.56."

4.15. Following the exchange of the position papers, the Referring Party, it having reserved its right to do so, revisited and amended its valuation of certain items of work which relate to the Tower Place Bridge Notified Departure as set out in the tie Position Paper, thereby resulting in a valuation of [£369,040.97] excluding VAT, which is the valuation referred below.

4.16. As a result of the refusal or failure by the Responding Party to agree the true and proper valuation of the items of work which relate to the Tower Place Bridge Notified Departure, taking into account the whole of the Infraco Contract, the Referring Party was compelled to refer the Dispute to Adjudication.

4.17. The Dispute has crystallised in the exchange of correspondence and communications in the period up to March 2010.

## 5. THE ADJUDICATION

5.1 The Referring Party issued a Notice of Adjudication on 31 March 2010. I was provided with a copy of that notice and advised by the Referring Party that my name was set out as one of a list of Adjudicators named for dispute resolution purposes in the contract executed by the parties.

- 5.2 On 7 April 2010, following my agreement to act in this dispute, the Referring Party requested me to act.
- 5.3 The referral notice was delivered to me on 7 April 2010 and in subsequent correspondence I set a timetable for the adjudication and agreed with the parties that my decision would be issued on 5 May 2010.
- 5.4 On 19 April 2010 the Responding Party submitted their response.
- 5.5 The Referring Party replied to this response on 28 April 2010 and on 7 May 2010 I received a rejoinder from the Responding Party.
- 5.6 I met with the parties on 11 May 2010 and conducted a hearing where I took evidence from both parties.
- 5.7 Subsequent to the meeting I received further submissions from the parties on 12 and 13 May 2010 as directed.

## 6. PARTIES' CONTENTIONS

- 6.1. It is accepted by the Referring Party that a Notified Departure has occurred on the basis of *Pricing Assumption 3.4.19 of Schedule Part 4 (Pricing)* to the Infraco Contract in respect of the structure known as Tower Place Bridge.
- 6.2. The Dispute concerns the valuation of the items of work particularised in the Estimate [as revised by the Responding Party's letters dated 9 October 2009 and 18 February 2010] which relate to the Tower Place Bridge Notified Departure, on the basis that those items of work constitute a Notified Departure in terms of Pricing Assumption 3.4.19 of Schedule Part 4 (Pricing) to the Infraco Contract.
- 6.3. The Referring Party in these proceedings submit that the true and proper valuation of the items of work which relate to the Tower Place Bridge Notified Departure (on the basis that those items of work constitute a Notified Departure in terms of Pricing Assumption 3.4.19 of Schedule Part 4 (Pricing) to the Infraco Contract) is



NEGATIVE THREE HUNDRED AND SIXTY NINE THOUSAND AND FORTY POUNDS AND NINETY SEVEN PENCE (-£369,040.97) STERLING EXCLUDING VAT. It being the case that the valuation of the items of work which relate to the Tower Place Bridge Notified Departure set out in the tie Position Paper has been revisited and amended by the Referring Party, the Referring Party having reserved its right to do so.

- 6.4. In the case of the structure known as Tower Place Bridge, the relevant difference in facts and circumstances is the difference in the scope of works which the Responding Party is to carry out as provided for in the Issued for Construction Drawings applicable to this element of the works, compared to that encapsulated in the Base Date Design Information which Pricing Assumption 3.4.19 envisages is to be the extent of the scope of the works to which the Construction Works Price relates. Therefore the operation of the Notified Departure mechanism, as it relates specifically to the Tower Place Bridge Notified Departure, calls for a comparison between, the works which are described in, depicted on and/or required by the Base Date Design Information relevant to Tower Place Bridge and the works which the Responding Party is obliged to carry out as described in, depicted on and/or required by the Issued for Construction Drawings relevant to Tower Place Bridge and, subject to various exceptions, it is the differences revealed by that comparison, which differences are further particularised below, which constitute the Tower Place Bridge Notified Departure.
- 6.5. The Referring Party say that clause 2.3 of Schedule Part 4 (Pricing) to the Infraco Contract defines Base Date Design Information as "the design information drawings issued to Infraco up to and including 25th November 2007 listed in Appendix H to this Schedule Part 4." In turn, Appendix H (Base Date Design Information) to Schedule Part 4 (Pricing) to the Infraco Contract provides "All of the Drawings available to Infraco up to and including 25th November 2007."
- 6.6. It is the Referring Party's position that drawings ULE90130-01-BRG-00065 Revision 1; 5.14.2 ULE90130-01-BRG-00066 Revision 1; 5.14.3 ULE90130-01-BRG-00076 Revision 1; and ULE90130-01-BRG-0085 Revision 1 comprise Base Date Design Information relevant to the structure known as Tower Place Bridge.

- 6.7. The Referring Party contends that the words in Appendix H (Base Date Design Information) to Schedule Part 4 (Pricing) to the Infraco Contract fall to be construed in light of the "factual matrix" at the time the Infraco Contract was entered into. In that regard, prior to the execution of the Infraco Contract, design information drawings which had been prepared in connection with the Infraco Works were made available to the Responding Party in different ways.
- 6.8. Design information was uploaded to an electronic data room, which electronic data room gave named personnel of the Responding Party access to live design information; and
- 6.9. In addition copies of certain design information which had already been uploaded to the electronic data room were also provided to the Responding Party on compact disc.
- 6.10. That arrangement was then reflected in the drafting of Clause 2.3 of Schedule Part 4 (Pricing) of the Infraco Contract.
- 6.11. The Referring Party contend that Tower Place Bridge BDDI Drawings were uploaded to the electronic data room (to which the Responding Party had access) on 14 September 2007 and were thereby issued and/or available to the Responding Party prior to 25 November 2007 and thus form part of the Base Date Design Information and fall to be considered for the purposes of the operation of the Notified Departure mechanism, as it relates specifically to the Tower Place Bridge Notified Departure.
- 6.12. The Issued for Construction Drawings relevant to the Tower Place Bridge Notified Departure are ULE90130-01-BRG-00081 to 00108 inclusive and ULE90130-01-BRG-00110 to 00123 inclusive. These drawings are not disputed.
- 6.13. The Referring Party submits that the true and proper valuation of the items of work which relate to the Tower Place Bridge Notified Departure is to be arrived at by valuation (in accordance with the valuation rules prescribed by the Infraco Contract) of the differences between:

the works which are described in, depicted on and/or required by the Base Date Design Information relevant to Tower Place Bridge, including the Tower Place Bridge BDDI Drawings; and

the works which the Responding Party is obliged to carry out as described in, depicted on and/or required by the Tower Place Bridge IFC Drawings.

- 6.14. The respective positions of each of the Referring Party and the Responding Party as to those items of work which relate to the Tower Place Bridge Notified Departure are summarised in the spreadsheet produced as Referring Party's Production 72 as follows:

Items	Description	Referring Party's valuation of the differences from BDDI - IFC	Responding Party's valuation of the differences from BDDI - IFC	Difference £
1 – 15	Piling	[-406,543.14]	138,587.09	545,130.23
33, 37 and 38	Concrete Overlaps	22,962.40	39,679.15	16,716.75
55 - 57	Hydro demolition	0.00	76,076.64	76,076.64
62, 137 and 138	Bridge parapet	11,082.86	112,682.89	101,600.03
98 - 106	Temporary Works	0.00	81,927.78	81,927.78
	Other Works	[-11,738.94]	[-6,068.88]	5,670.06
	Total			827,121.50

- 6.15. The basis of the Referring Party's valuation of each section is addressed by me within my findings.

- 6.16. In terms of the valuation rules which are to apply, Clause 80.24 of the Infraco Contract Conditions provides that:

"Where pursuant to paragraph 3.5 of Schedule Part 4 (pricing) pursuant to Clause 14 (tie Obligations), tie is deemed to have issued a tie Notice of Change as a result of the occurrence of a Notified Departure, the provisions of this Clause 80 (tie Changes) other than Clause 80.19 shall apply."

6.17. On the basis that the items of work which relate to the Tower Place Bridge Notified Departure constitute a Notified Departure in terms of Pricing Assumption 3.4.19 of Schedule Part 4 (Pricing) to the Infraco Contract (and therefore the Referring Party are deemed to have issued a tie Notice of Change as a result of the occurrence of such a Notified Departure), the items of work particularised in the Estimate (as revised by the Responding Party's letters dated 9 October 2009 and 18 February 2010) which relate to the Tower Place Bridge Notified Departure fall to be valued in accordance with Clause 80.6 of the Infraco Contract Conditions, which provides:

"80.6 The valuation of any tie Changes made in compliance with this Clause 80 (tie Changes) shall be carried out as follows:

80.6.1 by measurement and valuation at the rates and prices for similar work in Appendix F to Schedule Part 4 (Pricing) or Schedule Part 7 (Maintenance Contract Price Analysis) as the case may be in so far as such rates and prices apply;

80.6.2 if such rates and prices do not apply, by measurement and valuation at rates and prices deduced therefrom insofar as it is practical to do so;

80.6.3 if such rates and prices do not apply and it is not practicable to deduce rates and prices therefrom, by measurement and/or valuation at fair rates and prices in accordance with Appendix G Schedule Part 4 (Pricing) and Appendix F Schedule Part 7 (Maintenance Contract Price Analysis);

80.6.4 if the value of the tie Change cannot properly be ascertained by measurement and/or valuation, the value of the resources and labour employed thereon, as appropriate and in accordance with Appendix G to Schedule Part 4 (Pricing) and Appendix F to Schedule Part 7 (Maintenance Contract Price Analysis);

provided that where any tie Change would otherwise fall to be valued under Clauses 80.6.1 and 80.6.2 above, but the instruction therefor was issued at such a time or was of such content as to make it unreasonable for the alteration or addition to be so valued, the value of the tie Change shall be ascertained by measurement and/or valuation at fair rates and prices."

- 6.18. By way of explanation, in order to operate the mandatory valuation rules prescribed under Clause 80.6 of the Infraco Contract Conditions, the parties are first required, in the event of a tie Change, to consider Appendix F to Schedule Part 4 (Pricing) to the Infraco Contract in order to ascertain whether the rates and prices contained therein can be applied or rates and prices can be deduced therefrom for the purposes of valuation of the tie Change.
- 6.19. These contractual provisions are not disputed by the Responding Party.

**Redress Sought**

- 6.20. The Referring Party requests me to find and declare that, in respect of the matters depicted on the Issued For Construction Drawings numbered ULE90130-01- BRG-00081 to 00108 inclusive and ULE90130-01-BRG-00110 to 00123 inclusive in respect of "Section IA Tower Place Bridge" to which the Estimate (as revised) relates:
- 6.21. A Notified Departure has occurred on the basis of Pricing Assumption 3.4.19 in respect of the structure known as the Tower Place Bridge (the "Tower Place Bridge Notified Departure"); and
- 6.22. The true and proper valuation of the items of work which relate to the Tower Place Bridge Notified Departure is NEGATIVE THREE HUNDRED AND SIXTY NINE THOUSAND AND FORTY POUNDS AND NINETY SEVEN PENCE (-£369,040.97) STERLING EXCLUDING VAT or such other sum as the Adjudicator considers is the true and proper valuation of the items of work which relate to the Tower Place Bridge Notified Departure (on the basis that those items of work constitute a Notified Departure in terms of Pricing Assumption 3.4.19 of Schedule Part 4 (Pricing) to the Infraco Contract) taking into account the whole of the Infraco Contract.
- 6.23. The Referring Party also requests me to order that the Responding Party is liable for the whole cost of the Adjudicator's fees and expenses in relation to the Adjudication as determined by me, or such other sum as I consider that the Responding Party is liable for.

6.24. The Referring Party requests that I provide reasons for my Decision.

**The Responding Party's Contentions**

6.25. It is accepted that the dispute concerns the valuation of the Responding Party's estimate for Tower Place Bridge, and the operation of Pricing Assumption 3.4.19. It is also accepted that fundamental to a true and proper valuation of the Estimate is the identification of the drawings which constitute the Base Date Design Information for this structure.

6.26. The Responding Party does not accept that the valuation of the Notified Departure would be the same whether the BDDI drawings are those relied upon by the Referring Party or the Responding Party.

6.27. The Responding Party further contends that on 15 January 2010, the Referring Party produced a valuation which accorded with the Responding Party's position (on the BDDI drawings relied upon by the Responding Party), that the length of the piles were to be taken as being 10 metres. Only once the Referring Party "found" the drawings that it now relies upon, did it adopt the new position that the BDDI drawings relied upon by the Responding Party, revealed that the piles at BDDI were 21 metres in length.

6.28. The Responding Party's position on the main difference between the parties' respective valuations of the Notified Departure can be summarised as follows:

6.29. The Responding Party does not accept that "the data room was a primary means by which the parties had agreed that design information drawings would be made available" and that it (the data room) "was set up solely for this purpose".

6.30. It is the position of the Responding Party that in reality the "factual matrix" reveals that there was no agreement at all that BDDI would be whatever was in the data room at 25 November 2007. Had that been the case, reference would have been made specifically to the electronic data room or to Share Point, within the Infraco Contract. There is no such reference within the Infraco Contract and so the

Responding Party contend that the electronic data room has no contractual significance.

- 6.31. Further, the failings and shortcomings in the Share Point system were such that the parties implemented alternative means of issuing drawings such as by CD. There would have been no need to issue information by CD if, as the Referring Party suggest, any agreement has been reached that the data room was the “primary means by which the parties had agreed that design information drawings would be made available”.
- 6.32. As a result of the way in which design was issued to the Responding Party, and given the definition of BDDI within the Infraco Contract, it is necessary to consider whether particular drawings form part of the BDDI on a drawing by drawing basis. When this exercise is carried out the Responding Party aver that it is clear that the drawings referred to by the Referring Party as the “Tower Place BDDI Drawings” were not issued to, nor were they available to the Responding Party. The Responding Party’s list of drawings available as at 22 and 27 November 2007 do not include the so called “Tower Place BDDI Drawings”. According to the Responding Party they were neither issued nor were they “available” to the Responding Party.
- 6.33. Further, the Responding Party contend that the demonstration of the operation of the data room at the meeting on 11 May 2010 is of no assistance. They say that the Share Point system has been upgraded since 2007 and as such, the demonstration does not assist in demonstrating the operation of the system as it existed in 2007.
- 6.34. With regard to the evaluation the Responding Party asserts that the scope of works associated with piling changed fundamentally between BDDI and IFC, not only in number but also in length and specification.
- 6.35. The Concrete Overlaps and Hydro-demolition does not concern the method of measurement and valuation of temporary works as asserted by the Referring Party but a clear change in the scope and methodology of works prescribed by the design.

- 6.36. The revision of the parapet specification resulted in both parties applying a rate from a similar structure for a parapet which carried out a similar function. On further investigation, it is accepted that there is an alternative method of valuation more aligned with the revised specification and the Responding Party have addressed this in its submission.
- 6.37. The Responding Party contend that the principle that the additional piling requirements take longer to complete means the temporary works associated with this activity have to remain in place for a longer period of time. The cost of the time related elements such as labour and plant therefore increase accordingly.

## 7. ADJUDICATOR'S FINDINGS

- 7.1 It is accepted by both parties that a notified departure has occurred on the basis of Pricing Assumption 3.4.19 of Schedule Part 4 (pricing) to the Infraco contract in respect of the structure known as Tower Place Bridge, the subject of this adjudication.
- 7.2 The parties are, however, at issue over a number of issues of fact particularly in relation to drawings issued or made available by tie to Infraco in the period up to 25 November 2007 which constitutes the point at which the parties make reference to the Base Date Design Information upon which they both seek to rely. The significance of this is that the Base Date Design Information is the starting point for assessment of a Notified Departure as defined in the contract executed on 14 May 2008.
- 7.3 The contractual definition of the Base Date Design Information as set out at clause 2.3 of Schedule Part 4 (pricing) is as follows:

"The design information drawings issued to Infraco up to and including 25 November 2007 listed in appendix H to this Schedule Part 4".



- 7.4 Both parties agree that no appendix H list was ever produced but that they agreed to insert the following phrase into appendix H “all of the drawings available to Infraco up to and including 25 November 2007”
- 7.5 The parties are at issue over what constitutes issued and/or alternatively available drawings and this is of significance in this adjudication as the parties are at odds as to what drawings were issued and available in respect of Tower Place Bridge at 25 November 2007. This confusion arises from the fact that drawings were loaded onto an electronic system known as the data room at various points up to 25 November 2007 and drawings were also issued on a number of CDs to Infraco in the same period. Infraco have relied upon a set of drawings made available to them on CD around October 2006. Whilst tie say a later version of these drawings was available in the data room at 14 September 2007.
- 7.6 The Referring Party’s contention can be summarised on the basis that if a drawing was in the data room it was available to Infraco and therefore it forms part of the definition of the BDDI drawings.
- 7.7 The Responding Party’s position is that the Referring Party are unable to definitively establish that certain drawings were in the data room at 25 November 2007 and even if they were the material contained within the data room was firstly, unreliable to the extent that it could not be firmly established specifically for the purposes of the categorisation of Base Date Design Information and secondly, the content of the data room is not referenced in the contract documents.
- 7.8 Several matters flow out of the exchanges between the parties on these points.
- 7.9 Firstly, I must establish whether the drawings relied upon by the Referring Party as the BDDI drawings for Tower Place Bridge were in the data room at 25 November 2007 and secondly, if they were then can they be relied upon as being available to Infraco and thus fall within the definition of BDDI. Further, if they were included in the CDs issued to The Responding Party then they would fall within the BDDI definition as having been issued to The Responding Party.

- 7.10 I see the foregoing points as the starting point for establishing what drawings must be referred to in addressing the respective evaluations of the parties in reaching a conclusion as to the value that should be attached to the Notified Departure referred to me in this adjudication.
- 7.11 The Referring Party contends that the data room was set up with the sole purpose of providing information to The Responding Party and whilst there are criticisms of certain operational aspects of the data room the information contained therein is essentially sound and could be relied upon by The Responding Party in its deliberation over setting a price for the works.
- 7.12 The Referring Party has also provided evidence upon which it relies to demonstrate that, from its perspective the drawings which it considers to be BDDI drawings, were uploaded to the electronic data room on 14 September 2007 and were thereby issued and/or available to The Responding Party prior to 25 November 2007. The Referring Party say that the uploading of drawings to the electronic data room on this date is confirmed by logs of the electronic data room and the Referring Party say that these drawings should be compared and contrasted to the issued for construction drawings relevant to the Tower Place Bridge. There is no disagreement over the issued for construction drawings and the disagreement relates to the BDDI drawings.
- 7.13 The Responding Party contend that the four drawings relied upon by the Referring Party are not part of the Base Date Design Information because The Responding Party say these drawings were neither issued to them as at 25 November 2007 nor proven to have been available to them as the design for Tower Place Bridge, at that time, was at a very early stage of detailed design and the drawings which the Referring Party rely upon had not been issued to the Referring Party by the SDS provider and thus had no formal status whatsoever.
- 7.14 The Referring Party argue that it was precisely because of the difficulties created by the Referring Party's electronic data room and the constantly evolving design that The Responding Party requested a design freeze and confirmation of any additional drawings which were to form the Base Design for the purposes of pricing.

- 7.15 The Responding Party say that the design freeze was agreed and the five CDs which were issued together with design information which had already been issued to the Responding Party contained the relevant drawings which the responding party was to price. The last of these were delivered on shortly before 25 November 2007, the delivery of which is significant in timing terms as evidencing the The Responding Party contention that the five CDs, and not the content of the data room, should be relied upon as being the Base Date Design Information.
- 7.16 My finding is that I have been unable to establish with certainty that the data room was set up as the Referring Party contend "with the sole purpose of providing information to Infraco". My reason for this finding is that the data room appeared to have a number of uses and a number of different areas and I am satisfied that The Responding Party did not have access to all of those areas.
- 7.17 My further finding is that I have been unable to establish that the drawings upon which the Referring Party rely as BDDI drawings were issued to The Responding Party on 14 September 2007. I reach this finding on the basis that the Referring Party have not produced the covering email that they say would be issued to The Responding Party when such drawings were uploaded onto the system as they say that the system does not make provision for retention of such emails. Further, I have seen no evidence to demonstrate that the tie BDDI drawings in question were forwarded to Infraco on the CDs delivered shortly before 25 November 2007 and thus there is no record of actual issue of these drawings being issued to The Responding Party.
- 7.18 Further, at the hearing with the parties I was able to establish that both parties were rather unclear as to why appendix H had not been populated with a definitive list of drawings or a reference to the data room.
- 7.19 My further finding is that I have been unable to establish that the BDDI drawings upon which the Referring Party rely were available to The Responding Party prior to 25 November 2007 for the reasons set out hereafter.
- 7.20 I was provided with useful evidence from the parties in relation to the operation of the electronic data room. The conclusion that I have drawn from the evidence is

that a definitive position is difficult to establish as the electronic data room is not sufficiently sophisticated in providing a reliable audit trail for drawing issues and revisions thereto. The information upon which the Referring Party rely in the form of a snapshot from the data room dated 12 December 2007 refers in each case to what appears to be the relevant drawings having been put onto the system as a PDF on 14 September 2007 but I am unable to establish a status for the first entry of that date.

- 7.21 The Responding Party have presented evidence to me that suggests that the electronic data room was unreliable and whilst they stop short of suggesting that the Referring Party in any way have tampered with the records contained within the electronic data room they have highlighted the fact that the various snapshots of information simply capture the position at a specific point in time without any opportunity to track backwards or forwards from that position through a proper audit trail or indeed to establish if they had that area of the data room available to them.
- 7.22 In summary my finding is that having carefully considered all of the conflicting evidence in relation to the operation of the operation of the electronic data room I am unable to conclude with certainty either that those drawings were in the system and available to The Responding Party on the date upon which the Referring Party rely or that the whole content of the electronic data room constitutes information issued to or made available to The Responding Party.
- 7.23 I reach this conclusion from the lack of detail contained in production 29 and having regard to the other evidence that has been presented to me that supports The Responding Party's contention as follows.
- 7.24 Firstly, The Responding Party contend that the SDS provider has no formal record of these drawings ever being transmitted to the Referring Party and that at the time of creating these drawings the SDS provider was considering a variety of options for many of the detail design solutions for the various structures.
- 7.25 Secondly, I have been unable to establish from the evidence presented to me that there was any formal agreement that the whole content of the data room was to be

considered as information available to The Responding Party for the purposes of interpretation of the contract. I support this conclusion having regard to the fact that if this were the case then I wonder why there was any need for the five CDs to be issued precisely at the time when the line was to be drawn in the sand regarding the BDDI position. I have considered that the Referring Party's explanation of the issue of the CDs for the purposes of the speed of transmittal of that information was the real reason for the issue of the CDs but I have been unable to find any evidence to support this contention. On balance I have concluded therefore that for the purposes of this adjudication the drawings in question should be considered on a drawing by drawing basis.

7.26 In conclusion whilst the Referring Party contend that the drawings in the electronic data room constitute drawings made available to The Responding Party I have to express surprise that if the matter was so simple then I would have expected that the parties would simply have defined the BDDI by reference to the electronic data room but they did not. Following questioning on this point in the hearing neither party was able to explain adequately to me why a list of the data room information was not simply provided and entered into the contract and this point tips the balance in favour of The Responding Party's assertions in this area particularly given the fluid matter in which the design was being prepared at the time.

7.27 A further point also needs to be addressed. The Responding Party argue that following the original Infraco notice of tie change on 11 December 2008 the Referring Party engaged in negotiations and valuations for a period of almost 15 months before revising its position on 2 March 2010, two days after the issue of the notice of dispute. At no stage prior to this did the Referring Party allege the existence of the alternative Base Date Design Information drawings. In one respect this is a forceful argument. However, it is equally plausible that the Referring Party were simply mistaken in their reference to the drawings put forward by The Responding Party as they were responding to a submission made by The Responding Party.

7.28 I am satisfied by the explanation from the Referring Party that it was only when they investigated matters further that they became aware of the drawings upon which they now rely. My finding is therefore that there is insufficient evidence to lead me to

the conclusion that the drawings relied upon by the Referring Party were not in the system at the time they say.

- 7.29 Having established that I cannot rely upon the BDDI drawings advanced by the Referring Party I now make reference to the BDDI drawings referred to by The Responding Party being drawings ULE-90130-01-BRG-00062 rev D, 00064 rev A and 00065 rev A. As stated before the issued for construction drawing list is not disputed. I have taken note that in addition to the BDDI drawing other information was also issued to The Responding Party prior to 25 November 2007 as particularised in paragraph A3 in appendix A to the response to the referral dated 19 April 2010. I turn now to the issues flowing from the comparison of the drawings and the other information available to The Responding Party.

#### **Depth and Type of Piling**

- 7.30 The Responding Party maintains that the BDDI information specifies 10m long piles whilst the Referring Party states that the BDDI information specifies 21m long piles. It is accepted by the parties that information such as piling type, diameter and length is not shown on the Infraco BDDI drawings but drawing 00062 rev D states that "this drawing is to be read in conjunction with the relevant specification and civil engineering requirements specification document reference ULE-90130-SW-SW-SPN-009V2. The references contained within that specification do not inform or define the pile size, depth or length of the piling or the geotechnical conditions likely to be encountered at the Tower Place Bridge site.
- 7.31 I was referred to the pricing and milestone payment instructions volume 6, section 6 and to items 4 and 6 of that schedule which makes reference to piling to piers and water and piling to abutments being 350mm diameter steel piles with a length assumed at 10m.
- 7.32 The Responding Party have pointed me to the borehole information in which they say that glacial till was reached at 8.5m, 8.3m and 8.1m in boreholes 11, 1 and 9 respectively and I have considered the comments that glacial till was of sufficient bearing capacity.

- 7.33 The parties are at issue as to whether bearing piles of this nature should bear upon bedrock or suitable bearing material.
- 7.34 Looking at the borehole information to which I was directed during the hearing it becomes apparent that in respect of boreholes 1 and 9 obstructions were encountered at depths much less than 21m but through rotary boring bedrock was encountered around this level.
- 7.35 It is in this latter respect that I consider that a key part of the evaluation of this matter turns.
- 7.36 My finding is that taking all of the information available to them it was not reasonable for The Responding Party to conclude a depth of 10m when all of the information available to it is taken into account particularly in circumstances where we are looking at founding piles for a bridge over the water of Leith whereby a heavy engineering application such as the running of trams is involved.
- 7.37 My reason for this is that it has not been established that the glacial till was of sufficient bearing capacity and ultimately the engineering design in taking the piles to bedrock supports the conclusion that the glacial till was not of sufficient capacity. This is an important point and the evidence provided by the Responding Party on this point was insufficient to persuade me on this matter.
- 7.38 Further, I find that there is conflicting evidence in relation to the information presented to me in appendix A to the response the referral and in particular the evidence presented in paragraph A9 to A11 where the pricing and milestone payment instructions volume 6, section 6 makes reference to 350mm diameter steel piles with length assumed 10m whereas the AIP document reference ULE-90130-SW-SREP-00026V3 makes reference to the existing structure consisting of 750mm diameter piles to abutments and 600mm diameter piles to piers.
- 7.39 I find that I am persuaded by the argument of the Referring Party that the 350mm diameter piles relate to an option 3 for a new footway bridge. My finding is that the information contained in the pricing volume cannot be relied upon to sustain Infraco's argument regarding pile depths as my conclusion is that it may be the

case that a footbridge would require piles of a lesser depth than the much more substantial loading potentially required upon piles for the tram line itself. In any event my finding is that the schedule of rates does not define the scope requirement.

7.40 My finding is supported by the fact that the engineer in developing the necessary drawings subsequently reached his own conclusion that 21m piles were appropriate as evidenced by the drawings referred to by the Referring Party of 22 March 2007.

7.41 Whilst I have concluded that the drawings subsequently developed by the engineer are not BDDI drawings it is significant that armed with the same information as the contractor had been provided with earlier in the process the engineer reached a different conclusion from the contractor regarding the pile depths presumably by reference to the same borehole information as was available to the Responding Party at the outset. I have to say that on balance I find this to be significant and my conclusion is therefore that the starting point for comparison is from piles of 21m length. In this regard therefore I concur with the approach of the Referring Party in using 21m long piles and I will apply this rationale in my evaluation.

#### **Proof Loadings and Testing**

7.42 The parties are in agreement.

#### **Cofferdams for Piers**

7.43 There is a difference of opinion between the parties as to how many cofferdams are implied by the BDDI drawings. The Responding Party consider that there are six, three on the north and three on the south locations which require cofferdams and that the IFC drawings indicate that extension to the piers are only required to the south side of the bridge which means that three cofferdams are required and this is what the Responding Party included in its estimate. From the hearing it appears that the issue revolves around the interpretation of the wording of the item in the schedule of rates in respect of a cofferdam. The issue is whether the item refers to a cofferdam per pier or to a cofferdam per pile.

7.44 My finding on this matter is that on balance I am with The Responding Party and their explanation of the item that they priced. It became apparent in exploring this



issue in the hearing that in the absence of the availability of a detailed analysis of the rates inserted for cofferdams a simple logic has to be applied to this adjustment. I have difficulty with the speculative nature of the Referring Party's analysis making use of figures such as say £15,000 and applying a saving of 50%. I have no difficulty with the approach from a quantity surveying perspective but the difficulty here is that the Referring Party are forming a view which is disputed by The Responding Party leaving the matter unclear. My finding is therefore that the cofferdam should be reduced in number consistent with The Responding Party's approach, but that no adjustment to the rate is required on the basis that I have already concluded that an allowance for 21m piles was always necessary and this is the approach that I have used in my evaluation.

#### **Rates for Valuation of Cofferdams for IFC**

- 7.45 Having concluded that The Responding Party are not entitled to an adjustment in respect of what they consider to be longer piles it is not appropriate to adjust the rate for cofferdams in the manner that they suggest and my finding is that the agreed BDDI rate should be applied.

#### **Concrete Overlaps – Hydro Demolition**

- 7.46 The parties at the meeting agreed to consider this matter further and by letter of 13 May 2010 the Referring Party confirmed that The Responding Party's valuation of the work items listed under the heading of concrete overlaps is accepted in the sum of £39,679.15 and that The Responding Party's valuation of those items of work listed under the heading of hydro demolition is accepted in the sum of £76,076.64 strictly on the basis that the tie valuation of the credit due in respect of construction joints required by the Base Design Information in the amount of £21,588.89 is accepted by The Responding Party. In summary this means that the nett agreed valuation of the items of work listed under the headings of concrete overlaps and hydro demolition is £94,166.90 and I have reflected these values in my summary.

#### **Diaphragm Walls**

- 7.47 This is included in the item above.

**Parapet Barriers**

- 7.48 The matter at issue here relates to the new rate that should be applied for the barriers that are being constructed.
- 7.49 The difference between the parties is the rate that should be applicable to the revised N1 specification which replaces the N2 specified parapet within the BDDI. My finding is that there is no agreed rate for an N1 type parapet in Schedule 4 and therefore the parapet rate from the only other road bridge has to be considered. My finding is that the Referring Party's approach is a logical one and the only issue appears to be whether the weld mesh panels, excluded by the Referring Party, should be included within the calculation. The Referring Party contend that mesh should always have been allowed whilst the Responding Party argue that prefabricated weld mesh panels were not part of the N1 specification. My finding is that I concur in this respect with the Responding Party and I therefore apply the principles set out by the Responding Party in paragraph 5.28.1 of the rejoinder.

**Temporary Works**

- 7.50 The temporary works flow from any change that will occur in the length and specification of the piling and having concluded that no substantial change in the length occurred I conclude that no additional temporary works are therefore required with regard to the pile lengths.
- 7.51 Having considered the content of the further submissions on the temporary works dated 12 and 13 May 2010 I find that the Responding Party have not presented sufficient evidence to justify any further sums in this respect.

**Other Works**

- 7.52 The parties have agreed upon a value for this item in their correspondence of 12 and 13 May 2010.

**EVALUATION****The piles to the piers**

- 7.53 The Tower Place Bridge BDDI Drawings depict that the bridge is to be widened along both the east and west sides of the bridge.
- 7.54 The Tower Place Bridge BDDI Drawings identify three piers - a west bridge pier, a central bridge pier and an east bridge pier.
- 7.55 The Tower Place Bridge IFC Drawings indicate that only the east side of the bridge is to be extended. Accordingly, the piling to the west side of the bridge is omitted from the Tower Place Bridge IFC Drawings. This is shown on Tower Place Bridge IFC Drawing ULE90130-01-BRG-0092 Revision 7, which depicts 6 number pier piles. My finding is therefore that the Referring Party is entitled to the saving resulting from the reduction from 12 to 6 number piles.
- 7.56 The items on the Piling Valuation Summary which relate to the pier piles are items 3, 5, 9 and 10.
- 7.57 With regard to item 3 ("the establishment of piling plant 610 x 25mm tubular steel piles in main piling") it is the Referring Party's opinion that a piling rig was always envisaged and would have been required for the work depicted on the Tower Place Bridge BDDI Drawings. There is therefore no change to be valued. Accordingly, regardless of the amount of the Responding Party's valuation based on the Tower Place Bridge BDDI Drawings (the figure at line 3, column L of the Piling Valuation Summary), the same value would necessarily apply in relation to the Tower Place Bridge IFC Drawings valuation (at line 3, column O), resulting in a nil increase / decrease in value.
- 7.58 With regard to item 5 of the valuation ("moving piling plant for 610mm diameter tubular steel piles in main piling"), as a result of the changes the required number of moves for the pier piles reduces from 11 moves to 5 moves. Appendix F to Schedule Part 4 (Pricing) provides a suitable rate for measuring such moves at item D, page 86 of 147. The rate is £0.00 per move. Accordingly, the value of the moves is nil (as shown in Referring Party's valuation at line 5, column I of the Piling Valuation Summary).

- 7.59 Items 9 and 10 of the valuation ("610mm diameter steel piles, 12no with length assumed 10 metres" and "610mm diameter steel piles, 12no with length assumed 21 metres" respectively) relate to the driving of the piles. The total measured pile length derived from the Tower Place Bridge BDDI Drawings is 252 metres (12 piles of 21 metres length). The total measured pile length depicted on the Tower Place Bridge IFC Drawings is 126m (6 piles of 21 metres length). The Referring Party is therefore entitled to a saving of 50% of the value of the work relating to the driving of the piles as depicted on the Tower Place Bridge BDDI Drawings.
- 7.60 The Responding Party have applied a rate of £1,397.31 per metre, taken from item F, page 86 of 147 of Schedule Part 4 (Pricing). However, this rate is for "610mm diameter steel piles, 12no, with length assumed 10m". This does not reflect the works that can be derived from the Tower Place Bridge BDDI Drawings, which I have concluded that should be driven pile lengths of 21 metres. There being no rates and prices for similar work in Appendix F to Schedule Part 4 (Pricing), the applicable rate falls to be deduced from such rates and prices in accordance with Clause 80.6.2 of the Infraco Contract Conditions. The unit rate applied by the Referring Party is the rate proposed by the Responding Party as contained in its letter dated 9 October 2009 being a rate of £1,782.31 per metre deduced from item F, page 86 of 147 of Schedule Part 4 (Pricing) and inserted at line 10, columns D, G and M of the Piling Valuation Summary and I agree with this approach as representative of the workscope.

#### **The piles to the abutments**

- 7.61 The Tower Place Bridge IFC Drawings indicate that only the east side of the bridge is to be extended. Accordingly, the piling to the west side of the bridge is omitted from the Tower Place Bridge IFC Drawings. This is shown on Tower Place Bridge IFC Drawing ULE90130- 01-BRG-0092 Revision 7, which depicts 2 number abutment piles. The Referring Party is entitled to the saving resulting from the reduction from 4 to 2 number piles.
- 7.62 The Tower Place Bridge IFC Drawings also show a change in specification from a 750mm diameter precast concrete pile to an 864mm diameter steel pile.

- 7.63 The items on the Piling Valuation Summary which relate to the abutment piles are items 1, 4, 13, 14 and 15.
- 7.64 The same principles apply to the evaluation of these piles as set out above.
- 7.65 I therefore agree with the position of the Referring Party for the evaluation of this section.
- 7.66 Items 13, 14 and 15 of the valuation ("750mm diameter insitu concrete piles, 8no with length assumed 10 metres", "750mm diameter precast concrete piles, 8no with length assumed 21 metres" and "864mm piles 17.5m length" respectively) relate to the driving of the piles. The total measured pile length derived from the Tower Place Bridge BDDI Drawings is 84 metres (4 piles of 21 meters length). The total measured pile length depicted on the Tower Place Bridge IFC Drawings is 42m (2 piles of 21 metres length). The Referring Party is therefore entitled to a saving of 50% of the value of the work relating to the driving of the piles as derived from the Tower Place Bridge BDDI Drawings.
- 7.67 The Responding Party has applied a rate of £697.50 per metre, taken from item I, page 86 of 147 of Schedule Part 4 (Pricing). However, this rate is for "750mm diameter concrete piles, 8no, with length assumed 10m". This does not reflect precast piles with driven lengths of 21 metres. There being no rates and prices for similar work in Appendix F to Schedule Part 4 (Pricing), and it not being practicable to deduce rates and prices therefrom, it is the Referring Party's position that this item of work falls to be valued using fair rates and prices in accordance with Clause 80.6.3 of the Infraco Contract Conditions. It is the Referring Party's opinion that it is fair to value the precast pile as a steel pile.
- 7.68 The Responding Party proposes a rate of £1,782.31 per metre for a 610mm diameter steel pile driven 21 metres (line 10, column M of the Piling Valuation Summary), and a rate of £2,466.36 per metre for an 864mm diameter steel pile driven 21 metres (line 15, column M of the Piling Valuation Summary). The Responding Party provided rate build-ups in support of these rates in its letter dated 9 October 2009. The Referring Party consider that a fair rate for a 750mm

diameter precast pile driven to 21m should be pro-rated from the rates for 610mm and 864mm piles, calculated as follows:

- 7.69 [a] the rate per cross section area of the 610mm pile is [ $\pounds 1,782.31 / (3.14 \times 0.305 \times 0.305)$ ]  $\pounds 6,101.74$  per metre squared the rate per cross section area of the 864mm pile is [ $\pounds 2,466.36 / (3.14 \times 0.432 \times 0.432)$ ]  $\pounds 4,195.44$  per metre squared the average rate is [ $(\pounds 6,101.74 + \pounds 4,195.44) / 2$ ]  $\pounds 5,148.59$  per metre squared therefore the rate for a 750mm diameter pile is [ $\pounds 5,148.59 \times 3.14 \times 0.375 \times 0.375$ ]  $\pounds 2,274.42$  per metre squared.
- 7.70 The Referring Party's assessment of the value of this item of work on (line 14, column F of the Piling Valuation Summary) is therefore based on a unit rate of  $\pounds 2,274.42$  to a quantity of 84 metres. I concur with this analysis.
- 7.71 With regard to item 15, the Referring Party accepts that the abutment piles are to be driven to 21 metres each (a total length of 42 metres) and that the abutment piles have increased in diameter from 750mm to 846mm. The Referring Party's valuation of this item of work is contained at line 15, columns G and I of the Piling Valuation Summary. The unit rate used is that proposed by the Responding Party and described in its letter dated 9 October 2009.

#### **Proof loading and testing**

- 7.72 The parties are in agreement on this point.

#### **The cofferdams for the piers**

- 7.73 The Referring Party contends that item 11 of the Piling Valuation Summary relates to cofferdams for the piers. As described above, the Tower Place Bridge BDDI Drawings show three piers. Schedule Part 4 (Pricing) provides a rate for a cofferdam for a pier of  $\pounds 13,880.59$ . Therefore the valuation of the work required for the cofferdams as depicted on the Tower Place Bridge BDDI Drawings is [ $3 \times \pounds 13,880.59$ ]  $\pounds 41,641.77$ .

7.74 Also as described above, the Tower Place Bridge IFC Drawings show that new piling is only required to the east side of the bridge, resulting in a reduction in the number of new piles from 12 to 6. There is, therefore, a corresponding reduction in the required size of the cofferdams. The Referring Party values the resulting saving as follows:

the total value of all work required for 3 number large cofferdams based on the Tower Place Bridge BDDI Drawings is £41,641.78

deducting set-up and removal costs for plant (which would be required regardless of the size of the cofferdams) which the Referring Party estimates to be £15,000.00 results in a construction cost figure of £26,641.78

applying a saving of 50% due to the reduction in the construction cost for the smaller cofferdams provides a revised value for the construction cost of [£26,641.78 x 50%] £13,320.89

adding back the amount of £15,000 for set-up and removal costs for plant results in a total revised value for all the work required in connection with the smaller cofferdams of [£13,320.89 + £15,000] £28,320.89.

7.75 The figure of £28,320.89 is the amount included by the Referring Party in the Piling Valuation Summary as a lump sum at line 11, column I.

7.76 My finding is that I do not concur with the Referring Party's analysis. My reason for this is that there is no evidence to support what was contained within the rates in Schedule Part 4 (pricing).

7.77 I read item G to mean that the rate of £13,880.59 is a rate per cofferdam. The number of cofferdams required is unclear as the wording could be taken to mean that the rate is for one cofferdam for all of the piers relating to the Tower Place Bridge. If this were the case I would expect the unit to be an item and not a number. Therefore my conclusion is that it is anticipated that more than one cofferdam would be required and my reading of this is that a cofferdam per pier is the ordinary meaning of this particular item.

- 7.78 Having concluded my findings from my own reading of the item my conclusion is therefore that the rate is for each cofferdam and that the best interpretation of this is that applied to each pier extension and that as a result the number of cofferdam is to be reduced from 6 to 3.
- 7.79 My finding is that I am unable to establish that there should be a rate increase in respect of the cofferdam as there is nothing to suggest that the cofferdam itself is linked to the bearing point of the driven piles.
- 7.80 My conclusion is therefore that 6 cofferdams at £13,880.59 should be reduced to 3 which would result in a value against this item of £41,641.77. As far as I can see the adjustment brought out by the Referring Party is £28,320.89 which in turn means that the Referring Party's negative adjustment for piling reduces by the further sum of £41,641.77 minus £28,320.89 = £13,320.88 bringing out a revised value for the piling of -£406,543.13 plus £13,320.88 = -£393,222.25.

#### **Valuation of items of work which relate to concrete overlaps**

- 7.81 In their letter to me of 13 May 2010 the Referring Party confirmed agreement of this issue in the sum of £39,679.15 meaning that a nett adjustment of £21,588.89 is brought out if I have correctly understood the content of the letters from the parties on 12 and 13 May 2010.

#### **Valuation of items of work which relate to demolition and hydro demolition**

- 7.82 In their letter to me of 13 May 2010 the Referring Party accepted a value of £76,076.64 against this item.

#### **Parapet Works**

- 7.83 For the reasons set out in my findings in relation to the principle on this matter I have accepted the rate of £449.67 advanced by the Responding Party as set out hereafter. This means that I accept the Responding Party's value of £112,682.16 being the adjustment in respect of the bridge parapet for this item based upon the following rate build up.



<b>Schedule 4 rate for an N2 Parapet is £307.67</b>	<b>£307.67</b>
Add increase in height from 1150mm to 1400mm	£65.00
Add horizontal member	£50.00
Add prefabricated Weldmesh Panels (item excluded by Referring Party)	£35.00
Deduct Reduction in Post Specification	-£3.00
Deduct Reduction in Post Anchors	-£5.00
<b>TOTAL</b>	<b>£449.67</b>

#### **Valuation of Temporary Works**

- 7.84 This item relates to the scope of the piling works and as I have found that the allowance should have been for 21m long piles rather than 10m long piles I concur with the Responding Party's evaluation of this item.

#### **Valuation of items of Work which relate to other Works**

- 7.85 The parties have now agreed this in the sum of £2,835.40.

## Summary

7.86 Taking the foregoing into account the adjustments are as follows:

Infraco Items	Tie Items	Description	Infraco Valuation of BDDI to IFC	Tie Valuation of BDDI to IFC	Adjudicator's Value
3 - 14	1 - 15	Piling	£141,667.59	-£406,543.13	-£393,222.25
55, 61 & 65	33, 37 & 38	Concrete Overlaps	£39,679.31	£22,960.79	£21,588.89
45, 46 & 47	57 - 59	Hydro Demolition	£76,076.64	£0.00	£76,076.64
68, 70 & 71	62, 137 & 138	Bridge Parapet	£112,682.16	£11,082.13	£112,682.16
116 - 121 & 123 - 129	98 - 106	Temporary Works	£81,927.79	£0.00	£0.00
		Other Works	£17,593.92	-£11,923.13	£2,835.40
		Total (£)	£469,627.41	-£384,423.34	-£180,039.16

## Adjudicator's Fees

7.87 My finding is that each party should bear responsibility for 50% of my fee.

## 8. THE DECISION

8.1 Having considered all of the submissions and on the basis of the evidence that I have seen my decision is:

8.2 I find and declare that, in respect of the matters depicted on the Issued For Construction Drawings numbered ULE90130-01- BRG-00081 to 00108 inclusive and ULE90130-01-BRG-00110 to 00123 inclusive in respect of "Section IA Tower Place Bridge" to which the Estimate (as revised) relates:

8.3 A Notified Departure has occurred on the basis of Pricing Assumption 3.4.19 in respect of the structure known as the Tower Place Bridge (the "Tower Place Bridge Notified Departure"); and

8.4 The true and proper valuation of the items of work which relate to the Tower Place Bridge Notified Departure is -£180,039.16 (negative one hundred and eighty

thousand and thirty nine pounds and sixteen pence) taking into account the whole of the Infraco Contract.

8.5 I hereby order that notwithstanding the joint and several liability of the parties each party shall bear responsibility for 50% of my fees and expenses.

Adjudicator  
John Hunter

[Redacted Signature]

Date

18 MAY 2010

Witness

[Redacted Signature]

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