JUDGMENT : MR JUSTICE JACKSON : TCC. 5th June 2006.

1. This judgment is in 16 parts, namely:

PART I : Introduction

2. This is the trial of ten preliminary issues concerning the steelworks subcontract for the new National Stadium at Wembley. The claimant is Multiplex Constructions UK Limited, to whom I shall refer as Multiplex. The first defendant is Cleveland Bridge UK Limited, to whom I shall refer as CB. CB is part of a group of companies known as the Cleveland Group of companies. The second defendant is Cleveland Bridge Dorman Long Technology Ltd, which is the holding company for that group.

3. The new National Stadium at Wembley is oval in shape, the main length of the stadium lies on an east-west axis. The structural frame of the stadium is steelwork. Vertical steel columns rise from the ground and support each level of the stadium.

4. As the columns step back from the centre they become progressively taller. Sloping members are attached to the columns and support the banks of seats. These sloping members are known as rakers. The entire structure which accommodates spectators is referred to as "the bowl". Around the top of the bowl there runs a ring of steelwork known as the perimeter prismatic truss; this is generally abbreviated to PPT.

5. A fixed roof runs along the northern side of the stadium. Another fixed roof runs along the southern side of the stadium. There are movable roofs which can be slid into position at the east end and the west end. A huge steel arch stands above the bowl on an east-west axis at an angle of 112 degrees. Cables run downwards from the arch and are attached to the north roof. In effect, the arch supports part of the north roof and the weight of the north roof provides restraint for the arch.

6. At regular intervals along the arch there are circular rings known as diaphragms. Between each diaphragm and the next there are hollow pieces of steel which are referred to as cords or members. Each end of the arch rests on a massive base which is constructed of concrete, steel and lead. The arch could not, of course, be constructed in situ. Therefore it had to be assembled on the ground and then hoisted upwards into position.

7. The stadium is now nearing completion. It will have a capacity of about 90,000 seats. The stadium will be used for Association Football and Rugby League events. It will also be used for all types of concerts. The stadium will have extensive, high quality corporate hospitality facilities and an area for the press with state-of-the-art communication systems. The Wembley arch, which was constructed and erected by CB, is already a feature of the London skyline.

8. Having recently visited the stadium accompanied by representatives of both parties, I have no doubt that it will be a world class sports stadium. Long after the present problems have been forgotten, all parties to this litigation can take pride in what they have created.

9. Now, however, I must turn to the present problems. Multiplex is constructing the stadium as main contractor employed by Wembley National Stadium Limited. CB was the steelwork subcontractor from September 2002 to August 2004. There are three contracts between the parties, namely the original subcontract, an agreement entitled Heads of Agreement dated 18th February 2004 and a Supplemental Agreement dated 16th June 2004.

10. I shall refer to the period between the Heads of Agreement and the Supplemental Agreement as "the interregnum".

11. Let me now say a little more about the parties. Multiplex is the UK subsidiary of a group of companies based in Australia. Mr John Roberts is the chairman of the group and his son, Mr Andrew Roberts, is chief executive. Mr Matthew Stagg was at the material time the director in charge of the UK subsidiary.

12. Let me now turn to CB. As previously mentioned, CB is part of the Cleveland Group of companies. The ultimate holding company of this group is Al Rushaid Investment Corporation, a company incorporated in the Kingdom of Saudi Arabia. Sheikh Abdullah Al Rushaid is the chairman and controlling shareholder of that company.

13. I should now mention other companies which feature in this case. The structural engineer for the project is Mott MacDonald Limited, together with related companies. I shall refer to the engineer as "Mott". The concrete subcontractor employed by Multiplex was PC Harrington, sometimes referred to as "PCH". CB also employed a number of subcontractors, in particular Oakwood Engineering Services, to whom I shall refer as "Oakwood". Oakwood did some design work. Shanghai Grand Tower ("SGT"), which operates in China, did some of the fabrication. The WT Partnership, to whom I shall refer as "WT", are a firm of quantity surveyors who advised both parties on valuation matters during the interregnum. Hollandia BV, to whom I shall refer as "Hollandia", is a Dutch steelwork company.

14. After these introductory remarks, I must now turn to the facts.

Part 2. THE FACTS

15. By a subcontract dated 26th September 2002, based upon JCT Dom 2, CB agreed with Multiplex to design, fabricate, supply, deliver and erect the structural steelwork for the new Wembley Stadium. The subcontract sum was £60 million, subject to adjustment in accordance with the terms of the subcontract.

16. Clause 4.1.1 of the subcontract conditions states: *"The Sub-Contractor shall for the consideration payable in accordance with clause 21 carry out and complete the Sub-Contract Works and perform all its other Sub-Contract Obligations in compliance with the Sub-Contract Documents and the Contract [and for that purpose shall complete the design for the Sub-Contract works including the selection of materials, goods and workmanship to be used in the construction of the Sub-Contract Works] and in conformity with all reasonable directions and requirements of the Contractor (so far as they may apply) regulating for the time being the due carrying out of the works."*

17. Clause 11.1 of the subcontract provides: *"The Sub-Contractor shall carry out and complete the subcontract works in accordance with the details in Appendix Part 4 and reasonably in accordance with the progress of the Works but subject to receipt of the notice to commence work onsite as stated in Appendix Part 4 and the operation of clauses 11 and 38A and/or 38C and any revision to the period or periods for the completion of the Sub-Contract Works in respect of a Variation for which a Variation Notice has been issued."*

18. Clause 11 also contains provisions for extension of time. Clause 12.2 of the subcontract conditions provides: *"The aggregate monetary liability of the Sub-Contractor under this sub-Contract for each right or remedy to the Contractor for any matters arising in connection with the performance of its obligations under the Sub-Contract shall not exceed £6 million (Six million pounds) and the Contractor releases the Sub-Contractor from any liability in excess thereof."*

19. Clause 13 enables the subcontractor to recover loss and expense, if delay or disruption has been caused to the subcontractor.

20. Clause 21 sets out the procedure for interim payments. Clause 21 is supplemented by a Pricing Document, which forms volume 3 of the subcontract package.

21. The appendix part 4 of the subcontract provides: *"The programme contained within volume 2 of the numbered documents listed as item p in Appendix Part 2 hereof is provided for information only, to indicate anticipated sequence of the subcontract works and interface with other subcontract packages. Dates and the sequence contained within the programme do not form part of the subcontract.*
"(1) Date for commencement of the subcontract works onsite will be:
"between 7th July 2003.
"and 10th August 2003.
"(2) Period(s) for carrying out and completion of the subcontract works onsite:
"81 No. calendar weeks.
"(3) Period required for notice(s) to commence work onsite:
"2 No. calendar weeks.
"(4) Period required for subcontract works off site and prior to commencement onsite:
"44 No. calendar weeks."

22. The programme referred to in part 4 of the appendix is a restraint schedule. This states that construction information for the arch will be released within two weeks of notification of the award and that construction information for the bowl will be released progressively between 2 and 14 weeks from notification of the award.

23. By an agreement dated 14th October 2002 Oakwood agreed with CB to carry out drafting and detailing services in relation to the structural steelwork.

24. Problems arose at an early stage of the project because the design of the stadium was incomplete. Mott was late in releasing design information showing what structural steelwork was required. There was also a substantial number of variations. This in turn delayed CB in designing and fabricating the individual pieces of steel which were required.

25. Starting in October 2002, and continuing through 2003, CB sent a number of letters to Multiplex protesting at late design information or design changes, and asserting that their own works had been delayed and disrupted. These letters, or some of them, would appear to constitute notices under clause 11 of the subcontract conditions (in respect of extension of time) and under clause 13 (in respect of loss and expense).

26. Whether these letters, or some of them, provide the detailed substantiation and particulars which are required under clauses 11 and 13 is an issue between the parties, although not for resolution today.

27. In February 2003, a document entitled "Valuation Procedures" was agreed between Multiplex and CB. This supplemented the provisions of the Pricing Document and gave further details as to how interim payments should be assessed.

28. In March and April 2003, CB proposed acceleration measures which it might take in order to overcome the delays that had occurred. On 15th April 2003, Multiplex sent a letter to CB which included the following passage:
"Whilst we cannot agree at this stage to all the contents of your letters and the quantum of your claim we do agree in principal [sic] that you are entitled to an extension of time and that we have instructed you to proceed with acceleration measures in order to mitigate the delay to both the arch and bowl structures.
We will also work with you to agree a revised cash flow as discussed. In order to progress and agree your entitlement to an extension of time and the cost of the acceleration measures it is essential to receive the information as requested in our letter dated 11th April 2003, reference 000240 as soon as possible."

29. During the summer of 2003, issues arose between the parties. There was a dispute as to the allocation of design responsibility for the arch. Also, Multiplex became concerned about what it perceived as poor performance and delay by CB in the design and fabrication of steelwork. In short, Multiplex took the view that CB was blaming all the problems on late or varied design information, when in truth CB bore the responsibility for significant delays. Multiplex also pressed CB to provide full details and substantiation of the loss and expense which CB was claiming.

30. By a letter dated 12th September 2003, CB claimed 30 weeks extension of time on the grounds of late release of bowl information.

31. By a letter dated 15th September, Multiplex agreed to "cashflow" any acceleration measures agreed as being required on condition that substantiation was forwarded within two months.

32. On 22nd September, CB commenced erecting steelwork for the bowl on site. By letter dated 23rd September Multiplex agreed to pay, and thereafter did pay, approximately £2.8 million to CB on a "cashflow" basis only.

33. Work proceeded through October 2003. On 29th October CB sent to Multiplex a spreadsheet indicating that the minimum final cost of CB's works would be £86,954,719.

34. During November 2003 relations between CB and Multiplex worsened, with each party blaming the other for delays which had occurred. CB informed Multiplex that it was suffering losses on the project which it could not sustain. Accordingly, either there had to be a substantial payment for variations or alternatively the contract between the parties should switch to cost plus.

35. On 5th December 2003, CB wrote to Multiplex claiming an extension of time of 50.5 weeks. In that letter, CB protested at the extent of the changes being made to the steelwork. In the last paragraph of that letter, CB stated: *"It is our opinion, therefore, that the steelwork package subcontract is now without any effective contractual control. As a consequence we consider the subcontract, in terms of its time for completion and its valuation, to be at large."*

36. In a second letter of the same date, CB asserted that it was necessary to move to a new contractual arrangement.

37. By letter dated 10th December 2003, CB wrote to Multiplex contending that Multiplex had failed to honour its commitments in relation to cash neutrality, cessation of change and review of issues. CB stated that with effect from 17th December it would revert to normal working in relation to drafting, design and fabrication.

38. Multiplex took considerable exception to CB's letters dated 5th and 10th December. Multiplex considered that CB's claims were unjustified and that CB was responsible for substantial delays.

39. On 15th December 2003, there was a meeting between John Roberts (chairman of Multiplex, who was in the UK on a visit from Australia) and Roderick Grant (the recently appointed chief executive of Cleveland Group). A number of issues were discussed. It was agreed that the two chairmen, namely John Roberts and Sheikh Abdullah, would meet in January.

40. On 23rd December Multiplex issued certificate 15, which included contracharges of approximately £1.6 million in respect of various facilities and services provided by Multiplex to CB. CB took exception to these contracharges and Multiplex reinstated half of the sum deducted in certificate 16 issued on 12th January. Mr Muldoon (of Multiplex) maintains that the explanation for certificate 16 is that Multiplex agreed to take the contracharges in two tranches in order to assist CB's cashflow.

41. After the Christmas and New Year holiday, hostilities resumed between the parties. CB expressed concern about the continuing flow of variations and late information; Multiplex expressed concern about CB's delays in fabrication and erection. Multiplex were particularly concerned about delays to the arch. This needed to be raised, not only as a visible sign of progress (for the sake of public relations) but also to free up areas of the site where the arch was currently lying on the ground.

42. On 23rd January 2004, CB wrote to Multiplex suggesting that the arch did not need to be raised until 1st November 2004. Multiplex took considerable exception to this suggestion.

43. Also on 23rd January, Multiplex issued certificate 17. This certificate clawed back the sum of £2.8 million which had previously been paid to CB on account of variations, acceleration, loss and expense. CB took considerable exception to this deduction.

44. On 27th January 2004, a meeting took place between the two chairmen, Mr John Roberts and Sheikh Abdullah, accompanied by senior staff on both sides. The opposing views of Multiplex and CB were ventilated. One outcome of this meeting was an agreement that Multiplex would value variations on the basis of current information within the next week.

45. By letter dated 4th February 2004, Multiplex sent to CB variation notice 399, in which Multiplex valued change notices numbers 1 to 720 at £2,884,712. This valuation excluded change notice 597 (variation to craneage system) and change notice 541 (changes to arch, supply and fabrication). It was not possible at that stage to value the arch variations because the allocation of design responsibility for the arch was the subject of adjudication.

46. In early February the parties were discussing the possibility of outsourcing part of the fabrication. CB was not averse to the proposal that part of the fabrication should be removed from its subcontract. The parties were also seeking to negotiate an overall settlement of the differences between them.

47. On 11th February 2004, Cleveland Group held a board meeting. The minutes of this meeting include the following passage:
"It was RESOLVED that legal advice be taken as to MPX's behaviour in administering the contract with a view to establishing whether MPX could be deemed to have repudiated the contract.

Response to Cleveland Bridge's proposal was awaited. It was noted that Cleveland Bridge's options were as follows:
"1. Take/negotiate fair deal with MPX; failing that;
"2. Subject to suitably strong legal advice, stop work on the basis that MPX have repudiated the contract and that the contract is at large.
"3. Negotiate an orderly withdrawal from the contract after a minimum of, say three months; or
"4. Continue to work under the existing contract to a January 2006 finish.

"Shekhar Shetty outlined that Option 4 did not have the support of the principal shareholder, leaving only options 1-3 ...

"[Post Meeting Note: Sheikh Abdullah Al Rushaid confirmed that funding for only Option 2, essentially a four week period, would be available, and no funding should be directed specifically to Wembley. This decision was made on the basis that MPX could be shown to have repudiated the contract. Under these circumstances it was concluded that only options 1 and 2 remain and legal advice should be sought as a matter of urgency.]

"It was FURTHER RESOLVED that a business plan for option 2 be developed over the next 10 days to manage the business, and maximise asset valuation ...

"It was FURTHER RESOLVED that Roddy Grant plan how to handle the media, government and local MPs and staff for any actions contemplated.

"It was RESOLVED that such a plan be code named PROJECT TRAFALGAR."

48. Multiplex contends that CB's conduct since 11th February 2004, including its stance in the present litigation, constitutes the implementation of Project Trafalgar. CB denies that this is the case. CB contends that Project Trafalgar came to an end on 18th February 2004 when the parties reached agreement on their differences.

49. In early 2004 another plan was being developed. This was the "Armageddon plan". The Armageddon plan was Multiplex's plan to replace CB with another steelwork subcontractor and to pursue substantial financial claims against CB. Whether the Armageddon plan became Multiplex's sole objective or merely remained one option is a matter which has been fiercely contested at the present trial.

50. The negotiations between Multiplex and CB in February 2004 had a successful outcome. On 18th February 2004 a written agreement entitled "Heads of Agreement" was signed by the parties. The Heads of Agreement provided as follows:

"HEADS OF AGREEMENT

Preamble

(A) CBUK have claimed 1 year EOT for late delivery of design information. Multiplex dispute the extent of the claim, however late changes to the PPT design has delayed the project. Any delay is unacceptable to Multiplex.

(B) CBUK have offered to settle the EOT claim by altering the contract to cost reimbursable. This alteration of the risk profile is not acceptable to Multiplex.

(C) MPX and CBUK have agreed to settle the Claim as described below. This proposal allows for acceleration of fabrication, the ability for MPX to accelerate erection and reversion to a fixed price.

The deal

1. The current CBUK contractual responsibilities remain untouched except for outsourcing of certain future fabrication (including cost and delivery) and the cost of erection including certain bought out items and subcontracts.

2. Intent of the parties is that a Supplemental Agreement (formally adjusting contract), with an effective date of 15 February 04, incorporating the points below be concluded by end February.

3. Settlement of all claims and disputes to date. The only exception is a dispute as specifically contemplated by Clause 11.

4. Future Fabrication is to be outsourced by MPX as per schedules handed by B Rogan (BR) to A Muldoon (AM) on 11/02/04 with any changes to be agreed by them. CBUK value rates to be taken out of existing contract value with an extra/over costs incurred by MPX in outsourcing as per the existing contract to be the responsibility of MPX.

5. CBUK retain responsibility for remaining fabrication as per the contract, subject to Items 7 & 9.

6. CBUK retain responsibility for design and fabrication drawings, Bought Out Materials and Subcontracts according to schedule handed by BR to AM (11/02/04), with any changes to be agreed by them.

7. CBUK new fixed price in respect of items 1,5-6 above from 15 February is GBP12 million, based on design status as at 15/02/04 and subject to any changes agreed by BR/AM - following a detailed review of the schedule handed by BR to AM on 11-02-04.

8. MPX to re-imburse CBUK (weekly/monthly on a basis to be agreed) at cost for erection and site-works (site staff, direct labour, cranes and other site-related costs) for period of three months; i.e. ending 15/05/04. Plus £80,000 per month for off-site administration and overheads.

9. During these three months CBUK is to complete the works in accordance with the attached programme (named: projected CBUK programme) and complete the raising of the arch by 21st April 2004 (subject to EOT's). In addition MPX/CBUK will re-programme erection works beyond the 3 months, and determine a new fixed price and programme for completion (price to include 10% contribution to CBUK overheads and profit).

10. If at the end of these three months, no agreement to fixed price and/or programme, CBUK to agree orderly handover with no premium or additional cost to MPX. Four weeks notice will be given to CBUK. This notice can be given up to 2 weeks in advance of 15-05-04.

11. A valuation will be compiled up to 15-2-04, (After which the arrangements described in the foregoing will apply). Including £25k for overtime for week ending 15-02-04. This valuation will be checked by an independent QS. Payment will be made on the basis of this valuation, less paid to date. The valuation will include an appropriate deduction for site office rent. Should CBUK dispute any deductions made by MPX, in this valuation, then the value of the deduction, only, may be referred to Dispute Resolution.

12. MPX to make payments to CBUK of GBP 4 million on execution of this Heads of Agreement, an additional GBP 1.25 million on completing the lifting of the Arch and a further GBP 0,5 million if a fixed price arrangement, as detailed in Item 9, is entered into with CBUK.

13. Payment to CBUK of all costs (the sum of £75,000) is included in respect of the Provisional Sum, for painting, is included above.

14. CBUK warrant that they have paid (or will Pay) for all works done or materials purchased up to 16-2-04, including settlement of any outstanding disputes or claims.

15. If CBUK provide an acceptable unconditional BG, for the retention sum, then MPX will release the cash retention.

16. Both parties agree to ensure that the content of this agreement is strictly confidential. Disclosure has to be agreed with both parties.

Agreed on 18th February 2004."

51. In relation to clause 4 of the Heads of Agreement, it should be noted that the fabrication to be outsourced comprised the steelwork for the PPT and the roof and part of the steelwork for the bowl. The Heads of Agreement, amongst other matters, resolved the ongoing dispute between the parties concerning delay caused by lack of design information for the arch. Accordingly, the adjudication concerning that matter was terminated without the adjudicator being required to issue a decision.

52. Following the execution of the Heads of Agreement, Multiplex duly paid to CB the sum of £4 million, referred to in clause 12. Multiplex also proceeded to reimburse to CB its onsite costs. These payments can be seen in a number of interim certificates. The practice was established that CB submitted weekly applications in respect of onsite costs. Multiplex paid the onsite costs every second week.

53. One problem which had emerged before the signing of the Heads of Agreement was that some of the arch members, as fabricated by CB, deviated from straightness. There is an issue between the parties as to what the proper tolerance was and how many members were outside that tolerance. However, the practical problem which was being addressed on site in early 2004 was not a contractual issue, but an engineering issue, namely which arch members required replacement.

54. On 3rd March 2004 Mott produced a report identifying members which were "working hard" or "working very hard". Discussions continued between CB, Multiplex and Mott. The upshot of the various investigations and discussions was that CB replaced 24 arch members between 27th March and 28th April.

55. A separate problem affecting the arch concerned the arch bases at the east and west ends. Multiplex's concrete subcontractor, PCH, used the incorrect grade of concrete in the foundations for those bases. Multiplex became aware of this in early March and required PCH to remove the top part of the concrete and repour. Additional reinforcement was added to the top section of the bases. This remedial work was completed when the newly laid concrete had gained sufficient strength and when the strengthening works to the bases had been carried out.

56. In the event, the arch could not be lifted by 21st April, the date stated in clause 9 of the Heads of Agreement. The lifting of the arch was delayed by approximately two months. There is a dispute between the parties as to whether this delay was caused by PCH's errors (for which Multiplex is responsible) or by CB's errors.

57. Let me turn now to the valuation exercise required by clause 11 of the Heads of Agreement.

58. WT were instructed to perform the role of independent quantity surveyor envisaged by that clause. CB maintains that WT were not truly independent, by reason of their previous work for Multiplex. There was a wide gulf between the parties concerning the correct valuation of CB's works as at 15th February 2004.

59. CB contended (in revised application 18) that the value of its works as at 15th February was £38,457,601. This produced a net figure of £36,534,721 after deducting a 5 per cent retention. Multiplex contended that the correct valuation was substantially lower than that.

60. The first valuation produced by WT was seen only by Multiplex. Multiplex maintains that its failure to pass a copy to CB was an oversight. Multiplex sent comments to WT on this valuation, which Multiplex did not share with CB.

61. On 19th March 2004, WT produced their "initial valuation" which they sent to both parties. In this valuation WT produced two alternative figures, namely £30,294,651 (calculated in accordance with the Pricing Document for interim valuations) and £30,052,606 (based upon the actual works carried out up to 15th February).

62. Both parties were dissatisfied with the valuations produced by WT. Nevertheless, Multiplex agreed to use WT's higher figure in interim payments. The first interim certificate which Multiplex issued after receipt of WT's report was certificate 22, dated 22nd March. It can be seen that this certificate proceeds on the basis that the value of CB's works up to 15th February was £30,294,651.

63. On 24th March there was a meeting between Multiplex, CB and WT to discuss valuation issues. This meeting did not result in agreement. Minutes of the meeting were circulated and various amendments were proposed.

64. On 20th April, Multiplex sent to WT and CB a commentary on WT's valuation. Multiplex's paper on valuation issues, dated 20th April, concludes that the correct figure as at 15th February is £25,458,949. After deduction of sums due to Multiplex, that produced a net figure of £24,770,895.

65. CB responded to this paper on 27th April, contending (a) that Multiplex were backtracking on matters previously agreed and (b) that on the basis of matters previously agreed the correct figure should be £34,155,612.

66. On 30th April WT's services were dispensed with. CB contends that following the departure of WT, the valuation required by clause 11 of the Heads of Agreement was agreed orally in the sum of £32.66 million at a meeting between Mr Stagg of Multiplex and Messrs Grant, Rogan and Child of CB on 14th May. Multiplex denies that a final valuation of the works was agreed on 14th May, but accepts that an interim valuation in that sum was agreed.

67. Following the meeting on 14th May, there were discussions between Mr Cursley of Multiplex and Mr Underwood of CB as to how a valuation in the sum of £32.66 million should be made up. Mr Cursley then prepared a draft certificate of payment, which included a valuation of CB's works at 15th February in the sum of £32.66 million. Mr Stagg gave this draft certificate to Mr Child at a meeting on 3rd June. However, no formal certificate including this valuation was issued until after the signing of the Supplemental Agreement.

68. Throughout the interregnum, disputes on other fronts continued between Multiplex and CB. Multiplex complained that CB was slow and inefficient in preparing shop drawings and fabricating steel, that deliveries of steel to site were out of sequence and incomplete, and that erection rates were unacceptably low.

69. CB complained that the volume of variations and design changes was unacceptable and that Multiplex, as main contractor, was causing delays by the manner in which it was managing the project.

70. Multiplex complained that CB's labour force was too large and was under-employed. CB denied this and blamed Multiplex for those occasions when the men had insufficient work.

71. On occasions CB's men were asked by Multiplex to do work outside the steelwork subcontract. Since CB was operating on the basis of reimbursable costs, CB complied with such requests.

72. Another source of difficulty during the interregnum concerned certain steel which CB had sent to China to be fabricated by SGT. For reasons which are in dispute, SGT was unable to fabricate part of that steel in time for erection in accordance with the programme attached to the Heads of Agreement. Accordingly, it was necessary for some raw steel to be shipped back from China for fabrication in the UK. This did not prove to be an easy operation. There were problems in organising transportation. There were also problems in obtaining the necessary permits. The Chinese authorities were puzzled by the fact that a large quantity of steel was shipped halfway round the world to China for fabrication and then shipped back to the UK untouched. Multiplex sent a representative, Mr Perkins, to Shanghai to assist CB in resolving the situation. According to Mr Perkins' reports, the Chinese Ministry suspected a smuggling operation.

73. In due course the problems in Shanghai were resolved and the steel was shipped back to England. The fabrication costs in England were higher than in China and the question arose of who should bear the extra cost. This was resolved by a separate agreement between Multiplex and CB, recorded in writing, whereby Multiplex bore £2 million of the additional costs.

74. Clause 2 of the Heads of Agreement stated that a Supplemental Agreement would be concluded by the end of February. This was not achieved. The negotiations concerning the terms of the Supplemental Agreement continued until mid-June. Both parties took legal advice during the course of these negotiations. CB contends that Multiplex spun out the negotiations for tactical reasons. Multiplex denies this allegation. Be that as it may, the Supplemental Agreement was finally signed by both parties on 16th June. That agreement reads as follows:

"THIS AGREEMENT is made 16th day of June 2004

BETWEEN:

(1) MULTIPLEX CONSTRUCTIONS (UK) LIMITED (Company Number 03808946) whose registered office is situated at Mayfair Place, 8th Floor, 50 Berkeley Street, London W1J 8BY ("the Contractor")

(2) CLEVELAND BRIDGE UK LIMITED (Company Number 03749601) whose registered office is situated at Cleveland House, PO Box 27, Yarm Road, Darlington Co Durham DL1 4DE ("the Sub-Contractor")

(3) THE CLEVELAND GROUP OF COMPANIES LIMITED (Jersey Company Number 75906) whose registered office is situated at PO Box 478, St Helier, Channel Islands, JE2 5SL ("the Guarantor")

WHEREAS;

(A) By a sub-contract ("the Sub-Contract") dated 26 September 2002 made between (1) the Contractor and (2) the Sub-Contractor, the Contractor engaged the Sub-Contractor to carry out the fabrication and erection of structural steel in connection with the design and construction of Wembley National Stadium.

(B) The original Sub-Contract Sum (stated in Article 2.1 of the Sub-Contract) was £60,000,000 and original the period for the carrying out and completion of the Sub-Contract Works (stated in Appendix - Part 4 to the Articles of Agreement) was 81 No. calendar weeks, which period commenced on 8 June 2003.

(C) The Sub-Contractor has made certain claims under the Sub-Contract and certain disputes have arisen between the Contractor and the Sub-Contractor under and in connection with the Sub-Contract.

(D) It has been agreed to resolve and settle all claims and disputes between the Contractor and the Sub-Contractor existing on or before 15 February 2004, and to make consequential amendments to the Sub-Contract on the terms set out in this Agreement.

(E) By a deed of guarantee ("the Guarantee") dated 26 September 2002 made between (1) the Guarantor and (2) the Contractor, the Guarantor agreed to guarantee to the Contractor the performance by the Sub-Contractor of the Sub-Contract and the Guarantor hereby consents to the terms of this Agreement.

(F) By a performance bond ("the Performance Bond") dated 27 November 2002, Gulf International Bank B.S.C. London ("the Surety") agreed, also, to guarantee to the Contractor the performance of the obligations of the Sub-Contractor under the Sub-Contract, with a maximum aggregate liability of the Surety under the Bond of £6,000,000 and the Surety has consented to the terms of this Agreement and has confirmed that the Performance Bond shall continue in full force and effect in relation to the Sub-Contract as varied by this Agreement.

NOW IT IS HEREBY AGREED as follows:-

1. Unless the context otherwise requires, or this Agreement specifically otherwise provides, words and phrases used in this Agreement shall have the meanings (if any) give or ascribed to them by the Sub-Contract.

2.1 Subject to Clause 2.2, the provisions of this Agreement are in full and final settlement of all disputes between the Contractor and the Sub-Contractor and all and any claims by the Sub-Contractor to the Contractor and by the Contractor to the Sub-Contractor existing on or before 15 February 2004 under or in connection with the Sub-Contract whether for extension of time, direct loss and/or expense, Variations, other adjustments to the Sub-Contract Sum, damages for breach of contract or otherwise or howsoever arising. Neither the Contractor nor the Sub-Contractor shall be entitled or permitted to make or pursue any claims against the other for any matter arising from any event or circumstance occurring up to and including 15 February 2004 (whether or not known to the Sub-Contractor).

2.2 Clause 2.1 shall not apply to any claim that the Contractor might have for design workmanship or materials not being in accordance with the Sub-Contract.

3.1 The Sub-Contract Works shall be varied post 15 February 2004 only by the omission of the fabrication and supply to the Site of the items specified in Schedule 3, Part A.

3.2 Notwithstanding Clause 3.1, the Sub-Contractor shall retain responsibility under the Sub-Contract for all design and fabrication drawings. In addition, the Sub-Contractor shall retain responsibility under the Sub-Contract for bought out materials and sub-contracts remaining in its scope after execution of this Agreement.

3.3 The Sub-Contract Works shall be completed in accordance with the revised programme contained in Schedule 4.

4. Save as may be subsequently adjusted in accordance with the terms of the Sub-Contract (any such adjustment being subject to Clause 2.1 above), it is agreed that (taking account of all the matters referred to in Clauses 2.1, 3.1 and 3.2) the adjusted Sub-Contract Sum (exclusive of Value Added Tax) shall be as specified in Schedule 1.

5. The Sub-Contractor hereby warrants to the Contractor that it has discharged or will discharge all payment obligations to its sub-contractors and suppliers in respect of work performed and materials supplied up to and including 15 February 2004.

6.1 In consideration of the above, the Contractor has paid to the Sub-Contractor prior to the date of this Agreement the sum of 4,000,000 (exclusive of Value Added Tax).

6.2 In addition, the Contractor shall pay to the Sub-Contractor the sum of £1,250,000 (exclusive of Value Added Tax) within 14 days following completion of the lifting of the steel arch (forming part of the Sub-Contract Works) to the position referred to in Schedule 1, paragraph (e).

7. The parties shall use reasonable endeavours to agree to re-programme the completion of the Sub-Contract Works and to agree a fixed lump sum and/or reimbursable Sub-Contract Sum for the completion of Sub-Contract Works (to incorporate the reimbursable cost items referred to in Schedule 1, paragraph (c), an additional lump sum payment of £500,000 and a 10% contribution to overheads and profit), and to enter into a further supplemental agreement, recording the agreement contemplated by this Clause 7, on or before 29 June 2004 (or other such extended date as agreed in writing between the

Contractor and the Sub-Contractor). The said additional lump sum payment of £500,000 will be paid on execution of the further supplemental agreement described in this Clause 7.

8. *In the event that the parties fail to reach such agreement in accordance with Clause 7 on or before 29 June 2004 (or other such extended date as agreed in writing between the Contractor and the Sub-Contractor), the Contractor shall be entitled to give 28 days written notice (or other such extended notice period as agreed in writing between the Contractor and the Sub-Contractor) to the Sub-Contractor further varying the Sub-Contract Works to remove from the Sub-Contract the unperformed reimbursable cost items referred to in Schedule 1, paragraph (c). It is noted in this regard that the Sub-Contractor issued HR1 notices in respect of its Site employees on 30 April 2004.*

9. *In the event that the unperformed reimbursable cost items (referred to in Schedule 1, paragraph (c)) are removed from the Sub-Contract Works in accordance with Clause 8, it is agreed that:*

9.1 *the parties will liaise during the 28 day notice period with a view to securing alternative employment for as many of the Sub-Contractor's Site employees as possible and ensuring an orderly handover of the works with due respect for consultation and notice requirements; and*

9.2 *there shall be no adjustment to the Sub-Contract Sum or other payment to the Sub-Contractor arising for such Variation other than the additional payment referred to in Clause 9.3; and*

9.3 *the Contractor and/or his sub-contractors and/or his or their agents may enter upon the Sub-Contract Works and use for a consideration of £500,000 all temporary buildings, plant, tools, equipment and temporary works necessary for the carrying out and completion of the unperformed reimbursable cost items provided that where the aforesaid temporary buildings, plant, tools, equipment and temporary works are not owned by the Sub-Contractor, the Sub-Contractor shall use all reasonable endeavours to ensure that the benefits of all hire agreements and the like in respect of such temporary buildings, plant, tools, equipment and temporary works are fully assigned to the Contractor for the completion of the unperformed reimbursable cost items. The aforesaid consideration will be paid within 14 days of the Sub-Contractor complying with this Clause 9 and leaving the Site; and*

9.4 *the adjusted period for the carrying out and completion of the whole of the Sub-Contract Works shall be 26 weeks commenting on 15 February 2004, as described in Schedule 4.*

10. *The Sub-Contract shall be amended in accordance with the provisions of Schedule 2 and, save as amended by this Agreement, the Sub-Contract shall continue in full force and effect.*

11. *The Guarantor hereby consents to the terms of this Agreement and confirms that the Guarantee will continue in full force and effect in relation to the Sub-Contract as varied by this Agreement.*

12. *The parties hereto shall treat the existence and contents of this Agreement as strictly private and confidential between the parties and the parties to this Agreement shall not disclose to any other person the existence or contents of this Agreement, except as may be required by law or in connection with pursuing claims against third parties.*

13. *Any Dispute arising under or in connection with this Agreement shall be dealt with in accordance with Articles 3 and 4 of the Articles of Agreement as if it was a Dispute under or in connection with the primary Sub-Contract save that the Mediation Period contemplated by the primary Sub-Contract need not apply.*

IN WITNESS whereof this Deed has been executed by the parties hereto and is intended to be and is hereby delivered the year first before written.

SCHEDULE 1
(Sub-Contract Sum)
The adjusted Sub-Contract Sum shall comprise:-

(a) *the gross valuation as a [sic] 15 February 2004 of work properly completed on Site and goods and materials brought onto the Site by the Sub-Contractor and Off-Site Materials in accordance with the provisions of the Sub-Contract, subject to the deduction of Retention and other deductions permitted under the Sub-Contract; and*

(b) *a fixed, lump sum of £12,000,000 for the completion of all remaining works, services and other obligations under the Sub-Contract (save for those reimbursable cost items referred to in paragraphs (c) and (f) below and those lump sum items referred to in paragraphs (d) and (e) below) subject to the deduction of Retention and other deductions permitted under the Sub-Contract; and*

(c) *all costs reasonably and properly incurred by the Sub-Contractor from 15 February 2004, in connection with the erection and site works (being site staff, direct labour, cranes and other site related costs), plus a fixed amount for off-site administration and overheads at a rate of £80,000 per month from 15 February 2004, subject to the deduction of Retention and other deductions permitted under the Sub-Contract; and*

(d) *a fixed, lump sum of £4,000,000 previously paid as consideration for this Agreement (as referred to in Clause 6.1 above) not subject to the deduction of Retention;*

(e) *a fixed, lump sum of £1,250,000 following completion of the rotation of the steel arch to its parked, temporarily restrained position prior to load transfer (as referred to in Clause 6.2 above) not subject to the deduction of Retention; and*

(f) *the costs reasonably incurred by the Sub-Contractor in purchasing steel (as directed by the Contractor) that are not included in the gross valuation as at 15 February 2004, subject to the deduction of Retention and other deductions permitted under the Sub-Contract. The Contractor has, prior to the execution of this Agreement, directed that all steel required for these Works is purchased by the Sub-Contractor, but the Contractor reserves the right to alter this direction for subsequent purchases.*

Payment of the adjusted Sub-Contract Sum shall be made, monthly, in accordance with the payment provisions of the Sub-Contract save as to the items referred to at paragraph (c) above which shall be paid by the Contractor to the Sub-Contractor at two week intervals. An Application for Payment in respect of the items referred to at paragraph (c) above may be made in accordance with clause 21.3 of the Sub-Contract at two week intervals and clause 21 of the Sub-Contract shall be construed accordingly with the necessary changes made.

If the Contractor proposes to issue a Certificate of Payment for an amount that is less than the amount claimed by the Sub-Contractor in an Application for Payment, Mr M Stagg (or if unavailable, Mr B Sheppard) of the Contractor shall first consult with Mr R Grant (or if unavailable, Mr J Child) of the Sub-Contractor before such Certificate of Payment is issued.

(All costs associated with the painting for which a provisional sum was included in the Sub-Contract are deemed to be included in the lump sum referred to at paragraph (b) above. For the avoidance of doubt all costs associated with the expenditure of the Provisional Sum for Fire Protection is not included in the lump sum referred to at paragraph (b) above. Such expenditure will be recovered by the Sub-Contractor monthly and in addition to the draw down on the lump sum at paragraph (b)).

SCHEDULE 2
(Consequential amendments to the Sub-Contract)
The Sub-Contract Conditions shall be amended as follows:-
Articles of Agreement
Appendix - Part 4:
Remove programme referred to and replace with programme contained in Schedule 4 to this Agreement.

Sub-Contract Conditions

Clause 1.3:
The definition of Sub-Contract, after "the Appendix", insert "the Supplemental Agreement"

Clause 2.2
Before "1. Articles of Agreement" insert "1A. Supplemental Agreement"

Insert new definition after "Sub-Contractor Training Vacancies List" as follows:-

"Supplemental Agreement: The agreement dated 16th June 2004 made between the Contractor, the Sub-Contractor and the Guarantor, supplemental to the Sub-Contract."

Clause 39.5: Delete and replace with:-
"In the event that the Sub-Contractor elects the option to provide to the Contractor a Retention Bond in lieu of the Retention, the Sub-Contractor shall procure and deliver to the Contractor a Retention Bond for an amount equivalent to 5% of the Sub-Contract Sum, reducing to 2.5% of the Sub-Contract Sum at Practical Completion, in the form attached in Appendix - Part 23 to the Articles of Agreement, to be issued by a bondsman previously approved by the Contractor and following receipt of the Retention Bond duly executed by the bondsman, the Retention deducted by the Contractor from payments shall be paid to the Sub-Contractor."

SCHEDULE 3
VARIED SUB-CONTRACT WORKS
Part A
(Agreed omissions to the Sub-Contract Works)

The Contractor will carry out the following Sub-Contract Works:
(i) Attached A4 Schedule (2 pages) entitled "Schedule 3 MPX Fabrication responsibility including MPX sublet, China steel returned unmade and 667T CBUK sublets";
(ii) Attached A4 Schedule entitled "Schedule 3 varied Sub-Contract Works Part A - Document 2..."

SCHEDULE 3
VARIED SUBCONTRACT WORKS PART A - DOCUMENT 2
Project Buyouts
Holding Yard Wembley
Shunting
Roof Expansion Joints
Site Electrodes
Cat Walks
Temp Works - Roof Props
M&E Package for moving roof
Cleats 18Te
Tube Trusses 45te
Cruciform 10te
Fire Protection
3500m² paint

<u>Project Subcontracts</u>
Site touch up - labour
Site touch up - Plant
Site touch up - Materials
In-situ machining
Strand Jacking Equipment
Strand Jacking Supervision

Part B
(Responsibilities retained by Sub-Contractor)

The responsibilities retained by the Sub-Contractor shall be as those arising from the primary Sub-Contract save as amended by this Agreement.

SCHEDULE 4
(Replacement Programme)

The programmes are:
(i) Attached A3 Programme WS05-V1 Acceleration (Sub-Let fabrication listing), Rev. 0, 11-Feb-04;
(ii) Attached A4 Projected CBUK Programme (incorporating CBUK Design & Fabrication Dates as at 06/02/04) Rev CBDP..."

75. Following the execution of the Supplemental Agreement, Multiplex issued payment certificate number 35, dated 25th June. That certificate included the sum of £32.66 million as representing the value of works up to 15th February. Somewhat

confusingly, the figure of £32.66 million is not expressly shown in the build-up attached to the certificate. However, if one draws a line across the page below the 17th entry and adds up all figures above that line, it can be seen that the subtotal at this point in the calculation is £32.66 million. Below that line, various figures are added for work done and material supplied after 15th February.

76. The total value of the certificate (including the £4 million lump sum agreed in the Heads of Agreement and allowing for certain adjustments which were made by amendment to certificate 35) is £52,656,727. After giving credit for previous payments, the net sum shown as due in certificate 35 is £1,684,386. That sum was duly paid by Multiplex to CB.

77. Clause 7 of the Supplemental Agreement provided that the parties should use reasonable endeavours to agree by 29th June (a) a new programme for the completion of the steelwork and (b) a fixed price or cost plus subcontract for the outstanding work. No such agreement was reached by 29th June and there was no agreement to extend that date.

78. Multiplex contends that the negotiations came to nothing because CB failed to put forward any sensible proposals for carrying out the remainder of the steelwork. CB contends that insofar as Multiplex took part in any negotiations during this period such participation was a sham; Multiplex had made up its mind before entering into the Supplemental Agreement that it would serve notice under clause 8 removing all onsite erection from CB; this was part of the Armageddon plan, which Multiplex had by then decided to implement.

79. Another important event occurred in the latter part of June. That was the lifting of the arch to the requisite angle of 112 degrees. CB contends that lifting was completed on 22nd June. Multiplex contends that because of adjustments made on 29th June, that is the date when lifting was completed.

80. On 30th June Multiplex wrote to CB giving 28 days notice, pursuant to clause 8 of the Supplemental Agreement, that all remaining onsite erection work would be removed from CB's subcontract. The service of this notice constituted the first stage of implementing the Armageddon plan. Multiplex contends that the decision to serve the notice was taken on 29th June.

81. On 6th July, Multiplex wrote to CB stating that it would not pay the £1.25 million bonus due on the lifting of the arch. The grounds stated for withholding payment were that Multiplex had a counterclaim for (a) CB's fabrication of more than 100 arch members out of tolerance and (b) CB's delay in raising the arch. The service of this withholding notice was the next step in implementing the Armageddon plan.

82. On 16th July, Multiplex issued certificate 37, which revalued CB's works downwards by a very large sum. This certificate showed the valuation of steelwork as at 15th February to be £23,973,208. A deduction for inefficient working since 15th February was made in the sum of £3,529,904. A sum of £1,580,446 was deducted because of misalignment of arch members and consequential delay to the raising of the arch.

83. The bottom line of certificate 37 was that CB owed to Multiplex the sum of £12,410,251 plus VAT.

84. On the same day Multiplex also issued certificate 38. This certificate valued CB's works in the fortnight ending 2nd July at £535,751. Thus the sum shown as due from CB to Multiplex in certificate 38 was £11,874,500 plus VAT.

85. The only consultation which occurred before the issue of these two certificates was a telephone call from Mr Stagg to Mr Grant on the afternoon of 16th July. The two certificates, together with an invoice in the sum of £11,874,500 plus VAT, were sent by fax from Multiplex to CB later that afternoon.

86. CB protested in strong terms about the deductions and contracharges which were made in certificates 37 and 38. The issues were discussed at a meeting between the parties on 21st July. Later that day, Clifford Chance, Multiplex's solicitors, sent a notice to CB referring the disputes concerning certificates 37 and 38 to adjudication.

87. On 23rd July CB wrote to Multiplex asserting that Multiplex was in repudiatory breach of contract on the following grounds:
"1. In breach of clause 4 and Schedule 1(a) of the Supplemental Agreement you have sought to revalue the agreed gross valuation of 15th February 2004 and purported to make deductions from that revaluation.
"2. In breach of clause 7 of the Supplemental Agreement you have failed to use reasonable endeavours to agree a new programme and price for the completion of the Sub-Contract Works. As set out in correspondence between us, this is most clearly evident from the fact that you had already engaged other contractors to take over our erection and site works before 29th June 2004.
"3. Consistently and without proper reason under certifying and/or making arbitrary deductions from our interim applications.
"4. Failure to make payment of £1.25 million within 14 days of the completion of the lifting of the steel arch pursuant to clause 6.2 of the Supplemental Agreement.
"5. A persistent failure to properly consult before issuing a Certificate of Payment for an amount that is less than the amount claimed in our application for payment pursuant to schedule 1 of the Supplemental Agreement."

88. By that letter, CB gave to Multiplex a period of seven days to rectify the breaches of contract, failing which CB would cease work.

89. On 26th July, Clifford Chance responded to CB's letter denying the alleged breaches of contract.

90. On 2nd August CB wrote to Multiplex stating that CB accepted Multiplex's repudiation and accordingly would carry out no further work on the project. On the same day CB stopped work on the Wembley project.

91. Multiplex responded on 5th August, asserting that CB had thereby repudiated the contract. In the meantime Hollandia, which had already taken over some of the steel fabrication, was engaged as steelwork subcontractor in place of CB.

92. Thereafter, five adjudications followed between the parties. The same adjudicator, Mr David Miles of Glovers, dealt with all five matters. In summary his conclusions were as follows:
(i) The completion of lifting the arch occurred on 29th June 2004. Therefore, Multiplex's withholding notice served on 6th July was valid.
(ii) The gross valuation of CB's works as at 15th February 2004 for the purpose of paragraph (a) of schedule 1 to the Supplemental Agreement was £32.66 million.
(iii) CB's reimbursable costs for the period after 15th February should be reduced by 15 per cent because the loss of tags from steel members caused disruption on site.

(iv) The concrete subcontractor was the effective cause of delay to the lifting of the arch. This delay was not a breach of contract by CB.
(v) Multiplex was entitled to recover contracharges totalling £293,516 in respect of the defects found in arch members.

93. The overall result of these findings, together with further findings on specific issues between the parties, was that Multiplex owed to CB sums totalling £5,952,194 inclusive of VAT and interest. Multiplex duly paid the sums awarded by the adjudicator.

94. Each party was aggrieved by the conduct of the other. Neither party treated the adjudicator's decisions as the final resolution of the disputes between them. Accordingly, both parties commenced the present proceedings.

Part 3. THE PRESENT PROCEEDINGS

95. On 2nd August 2004, CB issued a claim form against Multiplex in the Technology and Construction Court, claiming damages for misrepresentation and breach of contract. On 21st October 2004, Multiplex issued a claim form against CB in the Technology and Construction Court, claiming damages for breach of contract. Both parties served particulars of claim in their respective actions in early November 2004.

96. By order dated 10th December, the two actions were consolidated. In the consolidated action, Multiplex became claimant and CB became defendant. Multiplex served its consolidated particulars of claim on 23rd December 2004. CB served its consolidated defence and counterclaim on 28th January 2005. Further pleadings followed and both parties made amendments to their statements of case.

97. In brief outline, Multiplex's pleaded case in the consolidated proceedings is as follows:
(i) CB was in breach of contract or negligent by designing, fabricating and constructing the arch with defective members.
(ii) CB was in breach of contract by failing to raise the arch by 21st April 2004 as specified in clause 9 of the Heads of Agreement.
(iii) CB was in breach of contract or negligent by fabricating and erecting defective steelwork for the bowl.
(iv) CB was in breach of contract or negligent by producing defective drawings for the steelwork which was fabricated by Hollandia.
(v) CB was in breach of contract by causing the Bridon cable connections for the arch to be twisted.
(vi) By reason of those breaches of contract or negligence Multiplex is entitled (as an alternative to damages) to an abatement of the price payable to CB for the works. The claim for abatement is not subject to the £6 million cap imposed by clause 12.2 of the subcontract.
(vii) The Supplemental Agreement had retrospective effect as from 15th February 2004. It superseded any terms of the Heads of Agreement which were inconsistent with the Supplemental Agreement.
(viii) CB failed ever to propose a price or programme for completing the steelwork as envisaged by the Heads of Agreement and the Supplemental Agreement. Multiplex lawfully removed onsite erection from the scope of CB's works pursuant to clause 8 of the Supplemental Agreement.
(ix) The revaluation of CB's works and the deductions made in certificates 37 and 38 were lawful and in accordance with the subcontract and the Supplemental Agreement.
(x) CB was in breach of the Supplemental Agreement in that it failed to complete the design, drafting, fabrication and transport of steel in accordance with the programme contained in schedule 4 to the Supplemental Agreement.
(xi) CB was in breach of contract or negligent in that it failed to erect bowl steelwork in accordance with the programme attached to the Heads of Agreement and/or at the average rate of 400 tonnes per week.
(xii) CB repudiated the subcontract by its letter dated 2nd August 2004 and by ceasing work on that date.
(xiii) Multiplex is entitled to recover from CB the sums which it has overpaid and also damages for breach of contract.

98. In brief outline, CB's pleaded case in the consolidated proceedings is as follows:
(i) CB's entitlement to reimbursement of costs under the Heads of Agreement was not subject to those costs being reasonably or properly incurred. CB was not required to execute the works with such diligence and expedition as was required to meet the programme attached to the Heads of Agreement.
(ii) The Supplemental Agreement did not have retrospective effect or supersede the Heads of Agreement.
(iii) The programme attached to the Heads of Agreement did not have contractual effect.
(iv) Although CB replaced 24 arch members at the instigation of Mott, it is denied that those or any other arch members were out of tolerance. CB was not in breach of contract or negligent in designing or erecting the arch members.
(v) The delay in raising the arch from 21st April to 22nd June was not a breach of contract, because the Supplemental Agreement superseded clause 9 of the Heads of Agreement. Furthermore, the effective cause of delay to the arch was PCH using the wrong grade of concrete for the bases. Accordingly, CB was entitled to an extension of time for the arch on that and other grounds.
(vi) Any claim for defects in the arch members was compromised by clause 2.1 of the Supplemental Agreement.
(vii) The defects which are alleged in the bowl steelwork are denied. The problem with Bridon cables was resolved. The alleged defects in drawings for steelwork are denied. Multiplex cannot circumvent the £6 million limit set out in clause 12.2 of the subcontract by presenting these matters as claims for abatement.
(viii) In June 2004 Multiplex, in breach of the Supplemental Agreement, made no proper attempt to agree with CB a price and programme for completing the steelwork. CB did attempt to reach such agreement.
(ix) Certificates 37 and 38 were gross under-valuations. CB was entitled to receive the sums claimed in its valuations preceding those certificates.
(x) The Supplemental Agreement did not impose upon CB the obligation to complete sections of work in accordance with the programme contained in schedule 4.
(xi) CB's average steelwork erection rate between 15th February and 30th June 2004 was 202 tonnes per week. This was a proper rate in the circumstances and did not put CB in breach of any contractual obligation.
(xii) In any event, CB's liability to Multiplex is limited to £6 million by clause 12.2 of the subcontract.
(xiii) The gross valuation of CB's works as at 15th February for the purposes of the Supplemental Agreement was agreed in the sum of £32.66 million. Multiplex is estopped from contending otherwise.
(xiv) Multiplex was in breach of contract by reneging on the valuation agreement, failing to pay the arch bonus, grossly under-valuing CB's works in certificates 37 and 38, failing to consult before issuing those certificates, and implementing the Armageddon plan.

(xv) Multiplex's breaches of contract amounted to repudiation, which CB accepted.
(xvi) CB is entitled to the arch bonus of £1.25 million, the various sums claimed in CB's July 2004 applications and substantial damages.

99. The above is a very brief summary of allegations which span some 240 pages of pleadings and several ring files of schedules.

100. At a case management conference on 5th December 2005, I discussed with counsel the most cost-effective manner in which to progress this complex litigation. A consensus emerged at that hearing that the determination of certain issues may be critical to the resolution of this whole litigation. Those issues concern the interpretation of the Heads of Agreement, the interpretation of the Supplemental Agreement, whether £32.66 million was the finally agreed value of CB's work up to 15th February 2004, and who repudiated the subcontract. Accordingly, with the consent of both parties, I made an order for the trial of preliminary issues concerning those matters.

101. The precise formulation of the preliminary issues has continued to evolve since 5th December, as both parties made certain concessions and refined their respective cases. The final version of the preliminary issues which the court is called upon to decide reads as follows:

"**ISSUE NUMBER 1: Supplemental Agreement**

1. Is the Supplemental Agreement effective with retrospective effect from 15 February? If so, did clause 3.3 and/or 9.4 of the Supplemental Agreement supersede clause 9 of the Heads of Agreement with retrospective effect from 15 February 2004?

ISSUE NUMBER 2: Heads of Agreement

2. Does the Heads of Agreement, on a proper construction in the circumstances in which the Heads of Agreement was made, or as a matter of common intention or as matter of law provide that CBUK was obliged to execute the Sub-Contract Works with such diligence and expedition as were reasonably required in order to meet the dates of the projected CBUK programme which was attached? (APC §11C(ii); ADCC §11C(ii)).

ISSUE NUMBER 3: Programme

3. On a proper construction in the circumstances in which the Heads of Agreement was made did clause 9 of the Heads of Agreement:
   (a) Oblige CBUK to complete the Sub-Contract Works in accordance with the Projected CBUK Programme (APC §65A)?
   (b) Require CBUK to carry out the Sub-Contract Works in the sequence set out in sequence set out in the Projected CBUK Programme but not to complete any particular activity by a particular date? (ADCC §65A.1(b))
   (c) Require CBUK to complete Phases 11 to 18 of the bowl steelwork by 26 July 2004? (APC §65A; ADCC §65A.1(d))
   (d) Permit CBUK to apply for an extension of time within which it was required to complete Phases 11 to 18 of the bowl steelwork (by 26 July 2004) and to raise the Arch (by 21 April 2004)?
   (e) Place CBUK under an obligation to achieve an average on-site steelwork erection rate between 15 February and 26 July 2004 of 400 tonnes/week? (APC §65B; ADCC §65B).

ISSUE NUMBER 4: Settlement of Variations

4. Was the effect of the Supplemental Agreement in relation to pre-15 February variations:
   (a) That insofar as such variations were disputed, the costs of carrying out the varied elements of the works after 15 February 2004, whether off site or on site, were compromised by the terms of the Supplemental Agreement? or
   (b) (i) The costs of the varied elements of such works on the off site before the 15 February 2004 were compromised by inclusion within the agreed sum of £32.66 million
   (ii) The cost of the varied elements of such works off site (drawing, design and fabrication) carried out post 15 February 2004 was included in the agreed sum of £12 million.
   (iii) The cost of the varied elements of such works on site carried out post 15 February 2004 were paid on a costs reimbursable basis.

ISSUE NUMBER 5: Effect of Clause 2 of the Supplemental Agreement

5. Do clauses 2.1 and 2.2 of the Supplemental Agreement, on a proper construction in the circumstances in which the Supplemental Agreement was made, prevent Multiplex from making claims for design, workmanship or materials not being in accordance with the Sub-Contract in relation to matters which were known to it at 15 February 2004? (ADCC §35.1; ARDCC §16)

ISSUE NUMBER 6: Valuation Agreement

6.(a) Did Mr Matthew Stagg orally agree that the final valuation of the work undertaken by CBUK to 15 February 2004 would be £32.66 million? (the "Valuation Agreement")? (ADCC §85.1(4)(d); ARDCC §34(4)), if so
(b) Is the Valuation Agreement binding on Multiplex? (ARDCC §36A(2))

ISSUE NUMBER 7: Entire agreement

7.(a) Was the effect of clause 4 and Schedule 1(a) of the Supplemental Agreement and the Valuation Agreement that the valuation to 15 February 2004 of £32.66 million became part of the adjusted sum payable under the Amended Sub-Contract? (ADCC §87; ARDCC §36)
(b) Is the effect of clause 1.8.1 of the Amended Sub-Contract that the Amended Sub-Contract sets out the entire agreement between the parties so that CBUK is not entitled to rely on the Valuation Agreement? (ADCC §87B; ARDCC §36(c) and 36B), if so
(c) Is Multiplex estopped and precluded from contending that the alleged Valuation Agreement did not become a term of the Supplemental Agreement and from relying on clause 1.8.1 of the Sub-Contract? (ADCC §87A; ARDCC §36A)

ISSUE NUMBER 8: Repudiation

8. Which party was in repudiatory breach of contract, in particular:
   (a) Was Multiplex in repudiatory breach by:
   (i) Refusing to make payments of CBUK based on the agreed valuation of £32.656 million?
   (ii) Refusing to make the payment of £1.25 million within 14 days of the rotation of the Arch to its parked temporarily restrained position?

(iii) Refusing to pay sums applied for by CBUK in respect of costs reimbursable to 2 July 2004?
(iv) Failing and refusing to cooperate with CBUK in seeking to agree a new programme and price for completion of the Sub-Contract Works?
(v) Failing to consult CBUK before issuing certificates of payment for amounts less than the amounts claimed in the application for payment? (ADCC §§93; ARDCC §48).

If not,
(b) Was CBUK in repudiatory breach by giving notice on 2 August that it would no longer carry out any further work under Sub-Contract? (APC §§68; ADCC §68).

ISSUE NUMBER 9: Damages claim

9. Is CBUK's claim for damages for the loss of the sums which it would have made on the negotiation of the reprogramming of the completion of the Sub-Contract Works sustainable in law? (ADCC §97(3))

ISSUE NUMBER 10: Abatement

10. (a) Are the claims in Schedule 1A to 1E and item 16 of Schedule 3 claims for an abatement?
(b) If so, what is the proper measure of the abatement?"

The trial of the preliminary issues commenced on Tuesday, 25th April and lasted for a month. The senior management teams of both parties gave evidence about the history of events during 2003 and 2004. At the end of the hearing I said that I would consider the evidence and submissions over the vacation week and give judgment on Monday 5th June. This I now do.

Part 4. MULTIPLEX'S EVIDENCE

102. In this part of the judgment I shall summarise the evidence given by Multiplex's witnesses, in so far as appropriate. I shall weave together what appears in the witness statements and what the witnesses said in oral evidence. In respect of each witness, I will attempt to set matters out in a convenient order.

ASHLEY MULDOON

103. Mr Muldoon was appointed Multiplex's construction manager on the Wembley project in April 2003 and became the project director in May 2003. Problems had developed at Wembley and Mr Muldoon was required to get the project back on track. There were a number of issues which Mr Muldoon had to address. These included the performance of Mott and the performance of CB.

104. Mr Muldoon's predecessor had acknowledged that CB had been delayed by late and incomplete design information and had asked CB to accelerate, on the understanding that CB would be paid for acceleration. In Mr Muldoon's view CB never properly substantiated any claim for acceleration costs.

105. On 4th June Mr Muldoon attended a meeting with Mr Rogan of CB. At this meeting Mr Rogan claimed substantial sums and extension of time on the basis of design changes. Mr Muldoon was sceptical about these claims, but he was still investigating. Mr Muldoon considered that CB had acted sensibly in employing a retro squad to deal with design changes.

106. On a number of occasions Mr Whalley of Multiplex told CB how their claims for variations, extension of time, loss and expense should be presented. This was set out, for example, in Multiplex's letters to CB dated 1st July, 9th December and 10th December 2003. Unfortunately CB never set out their claims properly. Mr Muldoon regarded the paperwork as important.

107. During the course of 2003 there were more and more problems with CB's performance. CB's workforce was unmotivated and unproductive. CB's design and fabrication processes were badly managed and slow. CB devoted insufficient resources to these operations. Multiplex inspected CB's Darlington premises in September and found that only one bay was allocated to Wembley. That bay was entirely used for the arch steelwork. In order to overcome some of their difficulties and to reduce costs, CB sent some of their steel to be fabricated in China by Shanghai Grand Tower.

108. When CB started erecting steel on site, their progress was slow and they fell far short of 500 tonnes per week (the rate expected by Multiplex).

109. CB sought to blame all delays on Mott's design changes and delays, but Mr Muldoon did not think that this was justified. Multiplex certainly was dissatisfied with Mott and expressed this dissatisfaction in some strongly worded letters to Mott. Nevertheless Mr Muldoon considered that the impact on CB's progress was limited.

110. CB were responsible for producing AFC drawings for the arch, and there were difficulties with the arch which were of CB's making.

111. In September both by letter and at a meeting CB claimed a 30 week extension of time. This claim surprised Mr Muldoon and he did not think it was justified.

112. During the autumn Mott made changes to the design of the PPT. These could have had a very serious effect on CB's work, but in fact they did not. The problem here was that two different offices of Mott had worked on the PPT design and there was an imbalance of forces operating on the PPT. CB needed to spend 2-3 weeks checking and analysing the effects of this. Happily the outcome was that physical changes were only required to very few members that had been fabricated. Mr Muldoon considered that this matter only caused a 3 week delay to work on the PPT. It did not affect the roof at all, because CB did not start roof work until early 2004.

113. In November CB asserted that the estimated total cost of their works was £83,294,645. This was substantially in excess of the agreed fixed price of £60 million. CB attributed the cost increase to variations and said that the arch in particular had become more complex.

114. On 28th November Mr Rogan telephoned Mr Muldoon and said that he had been to a meeting with Sheikh Abdullah. Sheikh Abdullah was not prepared to cashflow the deficit on the project. As a result there were only two ways forward. Either Multiplex had to issue variations for £23 million or they would have to move to a cost plus contract. Unless something changed CB would be negative £9 million by January and CB would be "done for". CB's overtime working would have to cease immediately.

115. On 5th December Mr Rogan wrote to Mr Muldoon stating that CB were entitled to an extension of 50.5 weeks. This was a 20 week increase from the claim made in September. Mr Muldoon noted that there was plenty of work available for CB to do in

the period between September and December. He did not believe that this increased claim could be justified. CB failed properly to substantiate their claims for extension of time, as required by the subcontract. The difficulty was that CB, instead of producing a properly formulated claim, simply lumped together every RFI and every letter and said that all these matters had caused delay.

116. In December CB declared that they would no longer accelerate, but would return to "normal working". Mr Rogan told Mr Muldoon that CB were in financial difficulties and may become insolvent if their parent company withdrew support. Also in December Multiplex issued a certificate, which clawed back monies previously paid to assist cashflow. This was because CB had not complied with the conditions of the cashflow advance, agreed between Mr Whalley and Mr Rogan.

117. In January there were further delays by CB in fabricating and delivering the steelwork for the arch. A dispute about the extent of CB's responsibilities in respect of the arch was referred to adjudication. However, before the adjudication was concluded this matter was settled by the Heads of Agreement.

118. Multiplex imposed a design freeze in January. They instructed Mott that changes should only be made to drawings if absolutely necessary. As the documents show, Multiplex were seriously dissatisfied with Mott and took a tough line with them in correspondence.

119. During January CB expressed a wish to outsource some of the steel fabrication, because of the limited capacity of their own Darlington factory. Mr Muldoon discussed with Mr Rogan whether Multiplex could help. It might be easier if Multiplex made any approach to CB's competitors, which was necessary. Accordingly Multiplex had discussions with other steelwork companies about the possibility of them taking over the fabrication of steel for the roof and part of the bowl.

120. During January Mr Muldoon discussed a number of scenarios with Mr McGregor and these can be seen in Mr McGregor's notes of that period. Mr Muldoon thought that the most prudent way forward was to continue with CB. The problem was getting them to perform.

121. On 27th January there was a top level meeting between CB (represented by Sheikh Abdullah, Mr Grant and Mr Nightingale) and Multiplex (represented by Messrs Roberts, Stagg and Muldoon). CB asserted that the total cost of the works would now be £91 million. Mr Grant proposed moving to cost plus for four months while a new programme was prepared. He said that if this proposal was not acceptable, CB would take Multiplex to adjudication for ever.

122. Since CB had not properly quantified their variations claim, Mr Roberts told Multiplex's staff to carry out their own valuation exercise. They did so and the outcome was the letter sent by Mr Muldoon to CB on 4th February. In this letter Multiplex valued change notices 1 – 720 (excluding variations to the arch and craneage system) at £2.8 million odd.

123. CB also had claims for extension of time, acceleration and mitigation, but these were not substantiated.

124. Negotiations leading up to the Heads of Agreement continued through early February. Mr Muldoon recalls a telephone conversation with Mr Stagg on 17th February in which he was asked for the value of work done in January and up to 15th February. He does not think that this conversation was on 13th February (as suggested in cross-examination). Mr Muldoon told Mr Stagg what CB had claimed, but he could not say what they would get, because the commercial department had not yet done the assessment. Mr Rogan then came onto the phone and Mr Muldoon said the same thing to him.

125. Mr Muldoon was not involved in finalising the Heads of Agreement.

126. Following the Heads of Agreement CB brought in Richard Thomas. Mr Muldoon understood that this was intended to revitalise the site team and provide a new leader. Unfortunately CB's work was slow and inefficient during the period after the Heads of Agreement. This problem was aggravated because steel was coming to site in the wrong order and not properly tagged. Throughout the period February to June erection rates were unacceptably low. On a number of occasions Mr Muldoon complained to CB about the large number of men on site, the slow progress and the general lack of efficiency. However, Mr Muldoon does not recall any occasion during this period when he said that Multiplex would take back monies paid on the grounds of inefficiency.

127. During this period it was CB, not Multiplex, who dragged their feet in negotiations. Also CB sought to change the deal. In particular, they sought to make Multiplex bear the additional costs attributable to China steel. These costs arose, because Shanghai Grand Tower could not fabricate all the steel by the required dates. So some steel had to be brought back to England and fabricated at higher cost. In the result the cost of this was shared equally between CB and Multiplex. In Mr Muldoon's view, CB held a gun to Multiplex's head in respect of the China steel and Multiplex took a commercial decision to move matters forward.

128. The Heads of Agreement contemplated a final valuation of work as at 15th February being carried out. WT were instructed to do this. Mr Muldoon regarded WT as independent, even though Multiplex had previously employed them to do a cost plan for fitting out. WT came up with two different figures in their report, namely £30,294,651 (assuming maximum entitlement for off-site materials and preliminaries) and £30,052,606 (on the basis of actual works carried out). Mr Muldoon agreed to pay the higher figure on a cashflow basis. The WT valuation included variations which Mr Muldoon believed were covered by the Heads of Agreement. Mr Muldoon was prepared to pay on an interim basis for variations which he did not think were justified.

129. On 24th February Mr Muldoon learnt from Mr Petaccia that 141 arch members fabricated by CB were more than 25 millimetres out of tolerance. After that Mott did an extensive exercise to assess which of those members would need to be modified or replaced and which could remain as they were. CB identified 9 further arch members which required replacement.

130. There was a separate problem with the arch bases. CB had failed to put enough holes in the cast-in cans. In order to remedy this it was necessary, to put Macalloy bars in the bases and to raise the grade of concrete from grade 40 to grade 60. Unfortunately PCH put concrete grade 40 into the bases. There were also some voids in the concrete under the can. This necessitated further remedial work, namely removing the top sections of concrete, putting in additional reinforcement and then pouring on concrete grade 60. Mr Muldoon agreed with Mr Rogan that CB could put in bearings for the arch after the rectification work to the concrete was complete. He also said that there were many other issues with the arch which needed to be resolved, in addition to the bearings.

131. In the event, the lifting of the arch was delayed from 21st April (the date in the Heads of Agreement) to 29th June. Mr Muldoon did not concede that the concrete defects were the dominant cause of the arch delay. Indeed he did not think that this

was the case. In Mr Muldoon's view the defective arch members were more of an issue. However, he did not make a final judgment about this at that time.

132. Throughout the costs reimbursable period CB worked inefficiently. They had many men on site who were doing nothing. Mr Muldoon believed that CB were abusing the cost-plus arrangement.

133. At some time in 2004, probably after the Heads of Agreement, Mr Muldoon started discussing the Armageddon plan with his colleagues. This was a worst case scenario, in which CB left the job and Hollandia took over the whole steelwork contract. Mr Muldoon and his colleagues also looked at other scenarios. These scenarios are set out in the attachments to various emails sent by Mr Ong. Mr Muldoon was cross-examined about these scenarios at some length. Hollandia's figure of £14 million for roof work was included in many of the options, simply because CB had not quoted any figure for that item.

134. Mr Muldoon's email exchanges of 4th-5th May are part of the process of examining the options. The reference to "hoping they fall over under the pressure" was a reference to getting a reasonable way forward with CB. The phrase "fall over" did not mean become bankrupt.

135. Mr Muldoon's briefing note for a meeting with his colleagues on 6th May identifies all possible options. The reference to "be nice to CB" refers to the period after giving notice under clause 8 of the Supplemental Agreement. It would be an awkward period while Hollandia was taking over erection from CB and Mr Muldoon wanted the handover to be amicable. Multiplex would subsequently revalue CB's work to what Multiplex believed to be the correct figure and Multiplex expected an adjudication to follow.

136. Mr Muldoon maintained that during May and June (before 29th June) Multiplex had not definitely made up its mind to get rid of CB. On the contrary it was examining all the options with care and in detail. For example, the attachment to Mr Ong's email of 9th June showed two plan As, two plan Bs and also a plan D. These options included the following:
- CB continue with erection and with the existing fabrication (i.e. that not outsourced pursuant to the Heads of Agreement).
- CB cease erection work, but continue with the existing fabrication.
- CB leave the job altogether.

137. The complete departure of CB was a worst case scenario ("Armageddon"), because it would be a massive operation to transfer the steelwork to a new sub-contractor in the middle of the job. Furthermore, Hollandia were only prepared to step in on a cost plus basis. So a complete switch from CB to Hollandia was not something which Mr Muldoon desired. Mr Muldoon's primary aim was to have the right sub-contractor going forward in the right mindset.

138. Although Armageddon was just one option, it required detailed advanced planning and preparation. This explains the numerous detailed notes about how Armageddon would be implemented. It also explains why Mr Muldoon had detailed discussions with Hollandia from March 2004 onwards.

139. As time went on, however, it became increasingly likely that Armageddon would be the outcome. This was because, despite repeated requests, CB never produced a price and programme for completing the works after expiry of the costs reimbursable period. In the absence of such a price and programme, Multiplex would have to serve notice under clause 8 of the Supplemental Agreement (removing erection works). Thereafter Multiplex would revalue CB's works to what Multiplex regarded as the proper figure. This may well prompt CB to walk off site.

140. The revaluation of CB's works which Mr Muldoon had in mind comprised the following:
- Revaluing CB's works as at 15th February to what Multiplex regarded as the proper figure;
- Withholding payment of the arch bonus by reason of CB's breaches of contract, if legal advice supported this course;
- Making a 50% deduction from payments for the costs reimbursable period, to reflect inefficiency and lack of productivity.

141. Mr Muldoon believed that each of these steps was justified and was prepared to defend Multiplex's position in adjudication.

142. In early June John Roberts (the chairman of CB) and Andrew Roberts (the chief executive) visited the UK. Mr Muldoon and Mr Stagg met them on 10th June to discuss Wembley. The only decision made at that meeting was that Multiplex would sign the Supplemental Agreement.

143. In June Multiplex set about instructing expert witnesses to act for them in the anticipated adjudication.

144. The Supplemental Agreement went through many drafts before it was finally signed. It was Mr Muldoon's understanding that at that stage no final valuation had been agreed for CB's works up to 15th February. He understood from Mr Stagg that the sum of £32.66 million had only been agreed as an interim figure.

145. Both parties wanted to sign the Supplemental Agreement before the arch was lifted.

146. CB only became willing to put proposals for going forward after the Supplemental Agreement was signed. Even at this stage CB only put forward proposals based on cost plus. Furthermore CB were proposing that Hollandia should manage CB's staff on site. This proposal that Hollandia should actually manage CB on site went beyond Mr Muldoon's earlier suggestion that Hollandia might assist CB. Mr Muldoon discussed CB's proposals with Mr Rogan at a meeting on 14th June. Mr Muldoon found those proposals to be completely unacceptable.

147. On 16th June Mr Muldoon attended a Multiplex board meeting at which the signing of the Supplemental Agreement was noted. The June board report (which appears in the trial bundle immediately after the June board minutes) was not in fact prepared for the board until July. Mr Muldoon denies that he was initially confused about the date of the June board report or that he tried to trim his witness statement to overcome a perceived difficulty in Multiplex's case. It was true both in June and in July that a smooth transition was required for whatever works were transferred to Hollandia.

148. On 22nd June Mr Muldoon received a document from CB, setting out the cost to completion. This was on a cost plus basis. Mr Muldoon had further meetings with CB on 22nd and 23rd June. Mr Rogan stated that there was no point in putting forward a fixed priced figure, because that would be too high.

149. On 24th June Mr Muldoon telephoned Mr Rogan and asked him to put forward a price and a programme. Mr Muldoon confirmed this request in a letter of the same date. Mr Rogan replied in a letter dated 28th June, which proposed sharing pain and gain. After receiving this letter Mr Muldoon reached a firm decision not to go ahead with CB. Mr Muldoon then spoke to

Mr Stagg, who agreed with that decision. Accordingly, on 29th June Multiplex gave notice to CB under clause 9 of the Supplemental Agreement.

150. The process of transferring erection work to Hollandia over the next few weeks was a massive operation and gave rise to substantial problems.

151. On the 6th July Multiplex sent a letter to CB withholding payment of the £1.25 million arch bonus. Mr Muldoon cannot recall any earlier occasion when Multiplex said that they would withhold the arch bonus. He had legal advice that this was the appropriate time to inform CB.

152. On 16th July Multiplex issued certificates revaluing CB's work. This was not part of a strategy to make CB insolvent. Multiplex knew that CB's performance bond was available to be called upon. They also knew that the retention bond and the bank guarantees in respect of off-site materials would not benefit Multiplex.

MATTHEW STAGG

153. Mr Stagg, a very senior employee in the Multiplex group of companies, was construction director of the English subsidiary, Multiplex Constructions (UK) Ltd, from August 2003 to the autumn of 2004.

154. From August 2003 onwards Mr Stagg devoted about 1 to 2 days per week to Wembley and the rest of his time to other projects. Mr Stagg was aware that there were difficulties with the steelwork package. He was party to the decision to replace the previous project director and to appoint Mr Muldoon.

155. So far as Mr Stagg recalls, his first meeting with CB was in October 2003. However, it is possible that his recollection is mistaken and that his first meeting with CB was in August, as Mr Rogan asserts.

156. In September 2003 Multiplex agreed to pay £2.8 million to CB to assist their cashflow, but this was subject to substantiation by CB within two months. CB were accelerating at this stage. However, they never did provide substantiation for their acceleration claim.

157. In the autumn of 2003 CB had a claim for extension of time plus loss and expense, by reason of late design changes. Multiplex thought that three weeks delay had been caused, but CB were claiming 50 weeks.

158. In Mr Stagg's view CB were harming the project by their conduct in the latter half of 2003. They sent a barrage of correspondence. They made numerous spurious claims. They were demanding to change their sub-contract to cost plus. They asserted that time was at large, which meant that they were refusing to work to any programme. Then they stopped working overtime. CB's attitude throughout was that everything was somebody else's fault.

159. It is true that several times Multiplex promised a design freeze to CB. However, on a project like this there always have to be some changes.

160. By the end of 2003 CB were entitled to be paid substantial sums for variations, but they never properly quantified or proved what their entitlement for variations was. Mr Cursley and Mr Whalley had discussed at length with CB what they needed to do in this regard.

161. In December 2003 Multiplex decided to deduct from CB's certificates certain contra-charges. These included craneage costs and fees for a finite element analysis of the arch undertaken by Mott at CB's request.

162. On 15th December Mr Stagg and John Roberts had a meeting with Mr Grant and Mr Nightingale. Mr Roberts raised the responsibilities of CB's directors for trading while insolvent. It was decided at this meeting that Multiplex and CB would have an adjudication in order to determine who was responsible for the arch connections. Multiplex needed more information in respect of the other variation claims. It was also agreed that Multiplex's contra-charges would be deducted in two instalments rather than one. Finally, it was agreed that there would be a chairmen's meeting in January. The two chairmen knew each other.

163. In January CB advised Multiplex that the arch was going to be further delayed. By letter dated 23rd January CB suggested that the arch should not be erected until November. Multiplex did not welcome this suggestion. They regarded the arch as important for two reasons. First, it was important from a public relations perspective for the arch to be lifted. Secondly, while the arch was lying on the ground, it restricted movement around the site and prevented work from being carried out on critical parts of the bowl. In Mr Stagg's view, CB's letter dated 23rd January was written to exert commercial pressure on Multiplex and to retaliate.

164. Also on 23rd January Multiplex issued certificate 17 in a negative sum. Multiplex decided that since CB were taking a particular line, then they would play in accordance with the sub-contract.

165. On 27th January the meeting between the two chairmen took place. John Roberts, Mr Muldoon and Mr Stagg attended on behalf of Multiplex. Sheikh Abdullah, Mr Grant and Mr Nightingale attended on behalf of CB. Mr Grant began by making a presentation, but Mr Roberts did not let him get very far. Mr Stagg said that Mr Grant was doubling or tripling the numbers by counting every piece of paper rather than each real variation.

166. Mr Grant said that CB were suffering substantial losses on the contract. Sheikh Abdullah said that he was only prepared to continue with the contract if it moved to cost-plus. Mr Roberts rejected this proposal. Mr Grant said that unless the parties reached a compromise, they would be involved in adjudications "for ever". Mr Grant also said that CB would work to a programme one year late. That would make the stadium one year late. Mr Stagg and his colleagues viewed this behaviour in a poor light.

167. The meeting did, however, have a good outcome in respect of variations. Mr Roberts asked why these had not been paid. Mr Stagg and Mr Muldoon explained that they had not been properly costed. Mr Roberts then instructed Mr Stagg and Mr Muldoon to determine their value.

168. During the meeting Mr Stagg did not accept that the variations were significant in terms of causing delay. A lot of the variations were simply additional tonnage. This was because steel members in the bowl had been enlarged.

169. On 3rd February Mr Stagg and Mr Muldoon had a meeting with Mr Grant. At this meeting Mr Stagg offered to take all or some of the fabrication away from CB. Mr Stagg made this offer because of what CB were saying about their fabrication

difficulties and also because of what Multiplex had seen of CB's factory organisation at Darlington. Mr Grant was dismayed by the suggestion that all fabrication should be taken away from CB, but was receptive to the idea that some fabrication should be done by others. Multiplex were genuinely trying to solve the problems between themselves and CB. They agreed to meet again on 6th February.

170. Mr Stagg, Mr Muldoon and Mr Grant duly met on 6th February. Mr Grant put forward a proposal for "drawing a line in the sand" and settling the various claims which existed. An accelerated programme would be put in place. Multiplex would arrange for the fabrication of 6,200 tonnes of steel, but CB would remain responsible for fabricating the other 5,000 tonnes. A lump sum would need to be agreed for this fabrication. CB would remain responsible for design and drawings. CB would also carry out the erection and site works, but under a new cost-plus arrangement. Mr Grant's proposals were sensible.

171. At a meeting on 11th February Mr Grant proposed £12 million for the lump sum element, i.e. in respect of the drawings and fabrication retained by CB. On the same day Mr Rogan handed a set of schedules to Mr Muldoon. The last two pages of these schedules became incorporated into the Supplemental Agreement.

172. At this time Mr John Roberts was concerned that CB would leave site if no deal was made.

173. In respect of the arch, Multiplex were concerned from a public relations point of view that it should be erected. However, Mr Stagg was much more concerned about the effect of the arch upon the whole project. Whilst it was lying down it had a significant impact upon other trades.

174. On 12th February Mr Stagg and Mr Muldoon attended a meeting with Mr Grant, Mr Rogan and Mr Child. Mr Stagg remembers that CB mentioned a "line in the sand". Mr Muldoon left the meeting after a sharp exchange with Mr Grant.

175. According to Mr Stagg's witness statement, he put forward his written proposal entitled "The Deal" at the meeting on 12th February. But Mr Stagg cannot recall whether in fact this was put forward on 13th February, as Mr Tomlinson suggested. The 3 month costs reimbursable period proposed was a cooling off period. It suited both parties. Although the deal envisaged that Multiplex could require CB to leave site at the end of the three month period, Mr Stagg indicated that he regarded it as inconceivable that they would go ahead without CB.

176. Mr Grant was concerned that the figures which Multiplex were offering did not get close enough to meeting his £14 million gap (the difference between £40 million expended and £26 million received).

177. Mr Grant wanted £6 million to settle CB's claims up to that date. They finally agreed on £5.25 million, structured as a £4 million payment plus a £1.25 million bonus on the lifting of the arch.

178. Mr Stagg recalls telephoning Mr Muldoon about the figures for January and the first half of February. Mr Muldoon gave some numbers which Mr Stagg passed on to Mr Grant by telephone.

179. Negotiations continued leading up to the Heads of Agreement. The 15th February valuation which was being discussed in these negotiations was a progress payment (i.e. an interim valuation), not a final account.

180. Mr Stagg signed the Heads of Agreement on behalf of Multiplex. Mr Stagg regarded this as binding, but he understood that it needed to be converted into a more formal Supplementary Agreement.

181. WT were instructed as the independent valuers. Their function was to produce an interim valuation, not a final account. On 19th March WT produced a report with two different valuation figures. Mr Stagg does not recall whether he saw that report at the time. WT's two valuations were somewhere in the middle between Multiplex's figure (£24 to £25 million) and CB's figure (£39.9 million). That may indicate that they were acting independently. Neither CB nor Multiplex were satisfied with WT's work. In the end Mr Grant and Mr Stagg both decided that WT should be dismissed.

182. The negotiations for the Supplemental Agreement took a long time. There was a hiccup at the beginning, in that Multiplex delayed sending to CB the first draft of the Supplemental Agreement. But after that both parties got on with the negotiations.

183. Mr Stagg had a number of meetings with Mr Grant during March, April and May. On many occasions Mr Stagg expressed concern about CB's erection rates. The Supplemental Agreement went through many drafts. Mr Grant repeatedly tried to change the Heads of Agreement. For example Multiplex ended up paying £2 million for the fabrication of the China steel. Mr Grant also asked that the costs-plus period be pushed back beyond the 15th May, and Mr Stagg agreed to this. Mr Grant also insisted on being paid £500,000 upon the signing of the Supplemental Agreement.

184. During this period Multiplex developed a contingency plan, "the Armageddon Plan", which they intended to implement if it became necessary to bring in a new steelwork sub-contractor. This was a worst case scenario, which Mr Stagg very much hoped would not happen. There are many notes, emails and documents in the bundle, through which Mr Stagg was taken in cross-examination. Mr Stagg accepts that these documents were detailed. They needed to be, because changing sub-contractor was a major operation. Nevertheless this was still only a contingency plan or "plan B". "Plan A" was always to go forward with CB. The Armageddon Plan contained the following elements:
    - Give notice to CB removing on-site erection from their sub-contract after the arch had been lifted. Transfer on-site erection to Hollandia.
    - Withhold payment of the arch bonus on the basis of a cross-claim.
    - On 16th July issue a certificate reducing the 15th February valuation of CB's works to what Multiplex regarded as the proper figure.
    - Reduce payments for the cost-plus period by about 50% on the grounds of CB's inefficiency.
    - Bring in Hollandia to take over all the steelwork, in the event that CB withdrew altogether.
    - Launch immediate adjudications in order to establish that Multiplex's various valuations and cross claims were valid.

185. The bundle contains numerous spreadsheets looking at cost-savings which the Armageddon plan might bring. Mr Stagg took all these figures with a grain of salt. He knew from experience that replacing a contractor always generated much higher costs and much more delay than anybody ever expected. Accordingly Mr Stagg's strong preference was to go forward with CB. He refers to this option at item 7 of his note dated 10th May. Mr Stagg's email of 5th May ("Plan B. CBUK fixed and fuck them later") did not reflect what Mr Stagg wanted to happen. He was being very emotional when he wrote this.

186. On 14th May Mr Stagg met Mr Grant, Mr Rogan and Mr Child in a coffee shop. This venue was chosen because it enabled Mr Stagg to smoke. The Supplemental Agreement was discussed. In relation to valuation, Mr Stagg offered to pay £32.66 million

on an interim basis. Mr Stagg never said that the valuation was final or binding. On the contrary he said that it was an interim payment to assist cashflow.

187. On being pressed about this in cross-examination, Mr Stagg said that he could not remember the actual words used at the meeting. Nevertheless he was adamant that at the meeting he was only ever talking about an interim valuation. No-one talked about a "final and binding" valuation.

188. The words attributed to Mr Stagg by CB's witnesses, namely "yes tick", do sound like what Mr Stagg would say.

189. There was discussion about whether the figure should go into the Supplemental Agreement. Mr Stagg said that it could not, but he certainly did not say that this was for internal reasons. His superiors knew exactly what was going on.

190. Mr Tomlinson suggested that there was an analogy between China steel and the valuation figure. They were both agreed, but were nevertheless omitted from the Supplemental Agreement. Mr Stagg disagreed. China steel was different. That matter was so complicated that Mr Stagg had proposed dealing with it separately.

191. There was an exchange of letters between Mr Grant and Mr Stagg on 17th and 18th May. In this exchange both men were talking about the sum of £32.7 million being a cash payment or a progress payment, not a final valuation. On 18th May Mr Stagg deleted reference to £32.7 million from the amended draft supplemental agreement sent by CB. Mr Stagg offered to produce a certificate showing what CB would get.

192. On the 20th May Mr Stagg had a further discussion with Mr Grant. This was by telephone, not at a meeting. Mr Grant said that he wanted the figure put into the Supplemental Agreement. Mr Stagg said he could not do this. He had been advised that if the figure went into the Supplemental Agreement, then he could not claw the money back in a disaster scenario. Mr Stagg cannot remember the exact words used. He thinks it more likely that he said "disaster" than "catastrophe". Mr Stagg did not mention the arch falling down. Mr Grant may have mentioned that as an example. During a discussion with Mr Grant earlier in May Mr Stagg had said that it would be a disaster if Multiplex did not go forward with CB.

193. Mr Grant rang back later. He said that he did not agree with what Mr Stagg had said. Nevertheless Mr Grant would agree to leave the number out of the Supplemental Agreement.

194. A number of matters were being settled as at 15th February. These included CB's claims for extension of time and variations. But the final valuation of CB's work as at 15th February was not one of the matters being settled. The agreed figure of £32.66 million was simply a cash sum which CB were being paid at that stage and which Multiplex could revisit later if necessary.

195. The negotiations about the terms of the Supplemental Agreement continued through May and June. So did Multiplex's internal discussions about the Armageddon plan. Although much detail about what was going to happen appears in the meeting notes and emails, nevertheless the Armageddon plan remained a contingency plan. Mr Stagg hoped that they would not have to change subcontractor. In cross-examination Mr Stagg was somewhat ambivalent as to when the Armageddon plan would start. On one view it was the date when Multiplex served notice under clause 8 of the Supplemental Agreement. On another view it was the date when Multiplex issued certificates revaluing CB's works. However, Mr Stagg made the point that the two events were linked, as night follows day.

196. Mr Stagg recalls the meeting in June with John Roberts, Andrew Roberts and Mr Henderson. The purpose of the meeting was to gain approval for the Supplemental Agreement. Mr Stagg was asked a number of questions about Mr Muldoon's notes of that meeting. He had not seen those notes before. Both in cross-examination and in re-examination he could only give limited assistance about what those notes meant.

197. Mr Stagg insisted that the programme as at 15th February should go into the Supplemental Agreement. He told CB that he was not aware of Multiplex having claims against CB for delay. This was because Mr Stagg had not looked into the matter. He was not telling a lie.

198. Mr Stagg signed the Supplemental Agreement on behalf of Multiplex on 16th June.

199. Both Mr Stagg and Mr Muldoon pressed CB to provide a price and programme for going forward, but they never did so. The only offers which CB put forward were cost plus, with zero risk to CB. The programme which CB offered was meaningless.

200. In late June Mr Stagg and Mr Muldoon had a meeting with Mr Grant and Mr Rogan. When asked why the erection rate was low, Mr Grant said that steel was coming to site unlabelled. This meant that the steel could not be put up. That was the fault of CB or their subcontractor.

201. On 29th June Mr Stagg and Mr Muldoon finally decided to remove erection work from CB. There is no document recording this decision. That is because at the end of the day there was nothing to consider. Multiplex had only received a totally unacceptable offer from CB.

202. It is true that Hollandia only offered cost plus. But Multiplex thought that Hollandia's management was more capable.

203. Accordingly Multiplex gave notice under clause 8 of the Supplemental Agreement. Multiplex did not seek to extend the period for giving notice under clause 8 notice, because they felt that would be a waste of time.

204. After giving notice, Mr Stagg did not speak to Mr Grant again until the telephone conversation on 16th July. This was a short conversation. Mr Stagg advised Mr Grant of Multiplex's intention to revalue CB's works. Mr Grant said that he did not agree and this was not consultation. By then Multiplex and CB had effectively parted company. Mr Stagg saw no point in having a meeting over the weekend, as Mr Grant proposed.

205. Multiplex issued their two valuation certificates on 16th July. The figures in these certificates were not designed to achieve targets. Those figures were put in because Multiplex's commercial people believed that they were correct.

206. Mr Stagg called a meeting with CB on 21st July. The objective of this meeting was to set up a dispute for the purposes of adjudication.

207. In late July CB made serious allegations against Multiplex, to which Mr Stagg responded in correspondence. Multiplex maintained that they had acted lawfully and in accordance with their obligations under the subcontract and Supplemental Agreement.

DAVID WATKINS

208. Mr Watkins was Multiplex's site manager at Wembley from July 2003 until December 2005.

2003

209. Delays occurred on the steelwork during 2003. There were two causes of delay, namely (i) design changes and late information from Mott and (ii) poor performance by CB. As to the first matter, some design information for the bowl was many months late. These issues mainly affected the upper bowl. There were hundreds of tonnes of extra steel, but the effect of that depends upon where the extra steel was. As to the second matter, Mr Watkins thought that poor performance by CB was the main cause of delay.

210. CB had separate teams dealing with the arch and the bowl.

211. The arch was delayed because of CB's problems in sourcing materials for the pencil ends and other elements. This meant that CB devoted more resources to the arch, in order to make up for the delay.

212. Fabrication of steel for the bowl was delayed because CB's men in Darlington only worked 4.5 days per week. Furthermore the steel sent to site was often missing crucial pieces (meaning it could not be erected) or else was untagged (with the consequence that site staff could not identify the relevant pieces of steel). Sometimes the pieces of steel were fabricated incorrectly.

213. In relation to work on site, CB commenced erecting the bowl in the week of 22nd September 2003. CB began with phases 11 and 15 (upper levels on the north and south sides of the stadium). Because of the fabrication problems mentioned above, erection of the bowl proceeded slowly. By the end of 2003 CB had started to assemble the arch (lying on the ground) on site.

2004

214. At the beginning of February Mr Watkins discussed with Mr Muldoon how much steel CB should be erecting per week. Mr Watkins suggested that a reasonable average figure would be 400 tonnes. This was based upon 1 tonne of steel per crane per hour and a deduction of 33% for lost production time.

215. Soon after 18th February Mr Muldoon asked Mr Watkins to review the productivity of CB's men on site. Mr Watkins noticed that CB were running out of steel on the south side and also that CB were being held up because they were missing specific beams. Soon afterwards Mr Watkins noticed delays because steel was not being delivered in erectable sequence.

216. In March Mr Watkins had two concerns about CB's men on site. First, there were not enough men to achieve an average of 400 tonnes per week. Secondly, the actual production rate was too low for the number of men who were on site. Mr Watkins does not accept that these two complaints were incompatible.

217. CB's progress reports each week show the planned and actual tonnage for erection. The planned erection tonnage is quite low in early 2004, but rises much higher after the anticipated date for lifting the arch. Although 400 tonnes per week was reasonable as an average, in the early period (before lifting the arch) CB could only erect less than 400 tonnes per week.

218. CB had the habit of retrospectively changing both the planned and actual erection tonnages in the course of their progress reports.

219. Multiplex only provided 9 tower cranes, rather than 10 as should have been provided. However, CB also had a number of crawler cranes available. CB could not erect any steel in the week of 15th March because the tower cranes were out of action. There were other times when CB could not erect because their own cranes had broken down.

220. The arch had the potential to delay bowl erection, because the arch lay on the ground, blocking parts of the bowl. In fact, however, the delayed arch lift did not cause delay. This was because at all times before the arch lift, there were substantial amounts of bowl steel on site which could be erected despite the arch lying on the ground.

221. Design problems continued to cause some delays during 2004. For example, there was a clash of certain columns and the core walls. However, CB had a measure of responsibility in this regard, since CB were obliged to co-ordinate with other subcontractors.

222. At a number of Multiplex internal meetings Mr Watkins' colleagues expressed frustration at CB's delays and slow progress. In progress reports CB sometimes admitted their shortcomings.

223. Another problem was that the site was littered with random pieces of steel that had been delivered in the wrong order. Also a significant quantity of steel was sitting on trailers adjacent to the site or around the perimeter.

224. In April and May Mr Watkins put his concerns to CB about falling behind programme and low output. On many occasions Mr Watkins complained to CB about their failure to achieve 400 tonnes per week. Mr Watkins does not accept that this is something which he made up later.

225. At a meeting in June Mr Allison of CB said that he wanted to get rid of certain staff and managers on site. He also said that he had problems with deliveries. This confirmed what Mr Watkins believed was the position for some months.

226. In July Mr Ong asked Mr Watkins about CB's performance on site. Mr Watkins considered that CB ought to have erected 400 tonnes per week on average, whereas in fact they had erected about 200 tonnes per week. On the basis of this crude, but conservative, calculation Mr Watkins estimated CB's efficiency at 50%.

RANALD McGREGOR

227. Mr McGregor was Multiplex's project engineer from July to November 2003 and thereafter was project manager. He has a degree in construction management, but is not a qualified engineer.

228. CB were responsible for producing all connection designs for the steel. They sub-contracted most of the bowl connection design to Oakwood Engineering Ltd ("Oakwood"). Oakwood produced their drawings using a three-dimensional drawings programme, X-steel. Oakwood devoted insufficient resources to their work. This led to delay on all subsequent stages of CB's work.

229. Mr McGregor accepts that there were many design changes emanating from Mott and these also caused delay, but CB did not deal with these difficulties properly. CB did not increase resources on key elements. CB set up a retro squad to deal with

these changes. But this squad worked inefficiently. It often did not get round to making the necessary changes to drawings before fabrication commenced. Also the retro squad used a different programme from X-steel.

230. Bowl fabrication work at Darlington was a constant concern to Mr McGregor. Mr McGregor visited Darlington several times. Also he employed Gordon Davies, who was very experienced in steel fabrication and who lived near Darlington, to monitor progress. Mr Davies sent regular reports, which gave a fair picture. Those reports record many problems with the fabrication process. One major problem was that the bowl fabrication team only worked 4.5 days per week. They finished at midday on Fridays. There was no night or weekend working, as there should have been. Also insufficient factory space was devoted to bowl fabrication and there were not enough men on this task. There was always sufficient design available from Mott to allow more fabrication than occurred.

231. According to Mr Davies' reports, the average fabrication rate over the period 24th October to 30th January was 289 tonnes per week. Mr McGregor maintains that CB should have done even better than that.

232. CB sub-let some fabrication to SGT in China. Mr~McGregor visited their factory in November. SGT were concerned about late drawings release from CB.

233. The design problems from Mott continued through 2003 and into 2004. The bowl design was pretty well complete by the end of 2003. On 18th December Multiplex instituted a design freeze, which was intended to reduce dramatically the number of changes. Nevertheless there is always an iterative process between engineers throughout the project.

234. When pressed in cross-examination, Mr McGregor agreed that there was fault on both sides – Multiplex's side (including Mott) and CB's side. In his witness statement Mr McGregor has concentrated on CB's faults.

235. In relation to the PPT, a serious problem emerged in December. This resulted from a lack of co-ordination between Mott's Australia and UK offices. Mr McGregor took this up with senior people at Mott and devoted much effort to resolving the problem as soon as possible. This problem was dealt with during December, January and early February. In December Mr McGregor wrote a note extremely critical of Mott. Looking back at that note now, he does not agree with all of it. Once the PPT design problem had been resolved, it did not in fact cause delay. When the PPT steel arrived on site, it sat in storage, waiting for the remainder of the bowl structure to be erected.

236. In December and January the relationship between CB and Multiplex deteriorated badly. This was due in particular to two letters from CB:
- CB's letter dated 5th December 2003, claiming a 50.5 week extension of time (this would delay the stadium by one year);
- CB's letter dated 23rd January 2004, threatening to delay raising the arch until November 2004.

237. Mr McGregor made notes in January about possible scenarios to deal with the problem, in particular by bringing in another steelwork contractor. These were Mr McGregor's own thoughts. It was not for him to make the decisions.

238. The difficulties which had arisen between the parties up to January and February 2004 were resolved by the Heads of Agreement. Mr McGregor prepared the programme attached to the Heads of Agreement. The bars which he has coloured in red show the critical path.

239. Mr McGregor calculated that CB would need to erect on average 400 tonnes per week, in order to adhere to that programme. It is a coincidence that Mr Watkins has come to the same figure by a different route.

240. Once the PPT design problem had been resolved, it did not in fact cause delay. When the PPT steel arrived on site, it sat in storage, waiting for the remainder of the bowl structure to be erected.

241. Not all the steel sent to China could be fabricated in time to comply with the programme annexed to the Heads of Agreement. So the China steel was shipped back to England. Some was fabricated, some was partially fabricated and some was not fabricated at all. Mr McGregor thought that this situation was ludicrous. In Mr McGregor's view, if CB had dealt with the matter competently, all that steel would have been fabricated in China. There were delays in shipping the steel back and there were problems with the Chinese Government in getting the necessary permits. All these matters were within CB's responsibility.

242. Between March and June Mr McGregor had many meetings with Hollandia and related companies. Hollandia did an audit of the roof. Mr McGregor discussed with Hollandia the possibility of them taking over all the steelwork. During this period Mr McGregor was alarmed by the slow progress of CB and the continuing slippages. Mr Davies' reports continued to record fabrication delays and problems at Darlington.

243. Mr McGregor raised his concerns with CB at meetings, for example the meeting on 30th March.

244. Mr McGregor's diary during this period contains many notes about the Armageddon plan. Mr McGregor was cross-examined in some detail about these notes. He was adamant that the Armageddon plan was just one option. It needed to be planned in detail, because changing subcontractor was such a massive operation. Mr McGregor also pointed to some brief references in his notes to going forward with CB. The actual decision was going to be made above his head by more senior people. Nevertheless Mr McGregor needed to be ready to implement that decision. The notes show that after Armageddon Mr McGregor anticipated "war with CBUK". This was because adjudications are very unpleasant. In May/June Mr McGregor discussed with Hollandia the contingent plan to bring them in. He concentrated on getting Hollandia up to speed, in case they were required to take over, rather than pressing them for a programme.

245. Mr McGregor's personal view was that the best course would be to stick with CB (if that was possible) but to bring Hollandia in to help with the roof. He also thought that this was the most likely scenario. Hollandia had experience of moving roofs. Mr McGregor did not expect CB to retain the entirety of the erection (i.e. including the roof).

246. Mr McGregor remembers a meeting around 8th – 10th June with Mr Muldoon and Mr Cursley. However, it is not the case that the Armageddon plan was definitely decided upon at that meeting. That remained a contingency.

247. Mr McGregor's notes of a meeting on 20th June include the entries:
"X Steel model must get it"
"GET X STEEL MODEL as it is today for entire roof. Absolutely critical! We need it so Hollandia can start preparing for future works and planning fab. MUST GET IT BY TOMORROW"

248. By this stage Mr McGregor was aware that discussions at a higher level were not going well. Mr McGregor had to be ready, because the likelihood that Multiplex may not agree a way forward with CB was increasing.

249. In June Mr Muldoon instructed Mr McGregor to move a large quantity of steel which was in storage near Scunthorpe to yards near the Wembley site. Mr McGregor made a note not to talk to people about this.

250. On 29th June (and not before) Mr McGregor was told of the decision to transfer all erection work to Hollandia.

251. In late June or early July Mr Ong asked Mr McGregor to give an estimate of the amount of designs and drawings that CB had completed. This was a difficult task. Mr McGregor reviewed all the material available and then suggested that the figure was 70%.

252. Mr McGregor advised Mr Ong that in his view the design of temporary works by Dorman Long Technology Ltd fell within the work covered by the lump sum of £12 million.

KEES VAN ROOIJEN

253. Mr Van Rooijen is employed by Hollandia BV and is currently project director for the Wembley project.

254. In January 2004 ZNS, Hollandia's sister company, was invited to tender for fabricating some of the Wembley steel. On 2nd March ZNS was awarded the contract for fabricating (i) the PPT steel and (ii) about 1,000 tonnes of the bowl steel.

255. In late February Multiplex asked Hollandia to review the work done by CB on the fixed roof and moving roof. The meeting between Hollandia and Multiplex on 4th March was solely concerned with the roof. Hollandia duly carried out the roof audit. This included preparing a budget price for roof erection.

256. In May Hollandia's subsidiary company, Bailey, was asked to quote for the M and E package for the moving roof. In due course Bailey was awarded that work.

257. In mid-May there was a meeting between Hollandia and Multiplex at which the possibility of Hollandia taking over all the erection (not just the roof) was discussed. This was not a strong possibility in Mr Van Rooijen's mind. Nevertheless by mid-May Hollandia and Multiplex were having serious and detailed discussions about Hollandia taking over all erection. Hollandia did not know enough about the job to prepare a programme.

258. Mr Van Rooijen's witness statement (which makes no mention of such discussions in May) is not misleading. Mr Van Rooijen had forgotten this matter when making his statement.

259. Hollandia did not tell CB about their discussions with Multiplex concerning the possible takeover of erection. Mr Van Rooijen understood that the question of Hollandia taking over all erection would only arise if Multiplex's discussions with CB did not go well. Hollandia did not know the state of those discussions and was not involved in them.

260. The discussions about taking over some or all of the erection continued through late May and early June. On 10th June Mr Van Rooijen attended a meeting with Mr McGregor and Mr Muldoon. It was not a done deal by then that Hollandia would take over all erection. However, they discussed the probability that Hollandia would take over roof erection and the possibility that Hollandia would take over the other erection. Mr Van Rooijen did not favour the latter course. In relation to the bowl and PPT, the job was partially done. It is difficult to take over a job half way through. CB were not prepared to quote a fixed price for this work.

261. On 28th June Mr Muldoon rang Mr Van Rooijen and asked Hollandia to take over all erection work. This was the first time that decision had been conveyed to Hollandia. On 30th June Multiplex issued a press notice about the handover of erection work. That press notice was inaccurate in what it said about Hollandia's past involvement.

262. Hollandia duly took over all on-site erection, as requested. On 2nd August CB withdrew altogether. Thus Hollandia took over the entirety of the remaining steelwork package. Hollandia encountered immense difficulties after stepping in. Hollandia did most of their work on a cost plus basis. The total payment which Hollandia has received from Multiplex is well over £100 million.

STUART CURSLEY

263. Mr Cursley is a quantity surveyor and was Multiplex's commercial director for the Wembley Stadium project from May 2003 to January 2006. Mr Cursley reported to Mr Muldoon, the project director. Mr Cursley was assisted by Mr Ong, the commercial manager, and also by staff dedicated to the steelwork package (including Stephen Goulding).

264. By the time Mr Cursley arrived, a cashflow procedure or protocol had been agreed with CB for the purpose of interim valuations. In Mr Cursley's view, this was front loaded. In other works CB would be paid generously for early work, but less generously for later work.

265. During 2003 Mr Whalley and others dealt with CB's claims for extension of time plus loss and expense or acceleration costs. It was Mr Cursley's understanding that CB did not provide the detailed substantiation required by clauses 11 and 13 of the subcontract. A number of CB's letters in 2003 (which were put to Mr Cursley in cross-examination or re-examination) appeared to be inadequate for that purpose. Mr Whalley spelt out what was required in correspondence with CB. It is true that CB opened their books to Multiplex and that Mr Whalley went up to Darlington, in order to verify actual costs. However, this did not enable Multiplex to assess what costs CB would have incurred absent the events complained of, or what impact those events had on the critical path or on costs incurred.

266. In late January/ early February 2004 Mr Cursley and Mr Goulding undertook the exercise of valuing CB's variations. Of the 270 variations claimed by CB only 98 had merit. Most of the items were either omissions or zero value. No proper substantiation had been submitted by CB. Mr Cursley and Mr Goulding did an evaluation on the basis of such material as they had and came to the figure of £2.8 million.

267. Mr Cursley was not involved in negotiating the Heads of Agreement. However, he was given a copy and he made his own interpretation of the quantity surveying items. He inferred that this agreement was intended to draw a line in the sand. As a quantity surveyor, Mr Cursley interpreted the phrase "all claims" in clause 3 as including loss and expense flowing from delay or disruption, acceleration costs and so forth, but as not including the value of variations.

268. Pursuant to clause 11 of the Heads of Agreement, Mr Cursley appointed WT as independent quantity surveyors to value CB's works up to 15th February 2004. WT had previously been employed by Multiplex to do a cost planning exercise in respect of the finishing packages. Mr Cursley discussed with Chris Peyman, a director of WT, whether WT would be able to accept the role of "independent" QS.

269. Mr Cursley did not review the draft Supplemental Agreement which was being negotiated with CB during this period.

270. The first application for payment which CB submitted after the signing of the Heads of Agreement was application 18. This wrongly included items for acceleration, delay and disruption (all of which had been settled by the Heads of Agreement). CB submitted a revised version of application 18 on 8th March. This application valued CB's works up to 15th February at £36,534,721 (after deducting the 5% retention).

271. On 19th March WT sent their preliminary valuation to Multiplex. Mr Cursley did not send that valuation to CB, as requested by WT. That was an oversight. However, Mr Cursley did send to WT his own comments on that valuation. Mr Cursley does not accept the suggestion made in cross-examination that he was deliberately trying to influence WT without letting CB in. CB had ready access to WT. Both CB and WT had office space at Elvin House (Multiplex's office block at the Wembley site).

272. On 19th March WT sent their "initial valuation" to both Multiplex and CB. That initial valuation contained two different figures, namely £30,294,650 and £30,052,606. Although the two figures were close, they were arrived at by separate methodologies. WT mention in their letter of 19th March the question of whether CB's entitlement in respect of off-site materials was limited to £9 million (the current value of their bond), but that was a separate issue. That issue does not explain the difference between WT's two valuation figures. Attached to WT's initial valuation was a memorandum of understanding, setting out how WT interpreted clause 11 of the Heads of Agreement.

273. Mr Cursley was very disappointed with WT's initial valuation. He considered that they had grossly overvalued CB's work. That is still Mr Cursley's opinion.

274. On 22nd March Multiplex agreed to pay WT's higher figure in the next interim valuation. This payment was made on account and whilst reserving Multiplex's position. It can be seen that in certificate 22 (the first certificate issued after WT's valuation) Multiplex paid £30,294,650 in respect of works up to 15th February and £750,000 on account in respect of the costs reimbursable period. In subsequent interim certificates Multiplex paid CB's actual on-site costs without any deduction for inefficiency or low productivity. Multiplex also paid the £4 million lump sum (as stipulated in the Heads of Agreement) as well as appropriate instalments of the £12 million fixed price for off-site design and fabrication.

275. On 24th March Mr Cursley attended a meeting between Multiplex, CB and WT at which WT's initial valuation was discussed. The main issue of principle between Multiplex and CB was how a final valuation of the works as at 15th February should be achieved. Mr Cursley maintained that this should be done by reference to the actual value of work performed on and off site. CB maintained that the valuation should be done by reference to the subcontract protocol for cashflow and the passage of time. Mr Cursley thought that CB's approach was wrong. Furthermore it would produce too high a sum, since the protocol for cashflow was heavily front loaded. Multiplex were prepared to pay the sums sought by CB for the purposes of cashflow, but not as a final account valuation. These discussions were made more difficult by the fact that WT had put forward two different figures and two different methodologies. Minutes of the meeting on 24th March were circulated and various amendments were made, but those minutes were never finalised.

276. On 21st April Multiplex sent to WT and CB a paper prepared by Mr Cursley, setting out Multiplex's contentions as to the correct valuation on 15th February. Multiplex maintained, and Mr Cursley believed, that the correct figure was £24,770,895. Mr Cursley regarded this figure as the equivalent of a final account as at 15th February.

277. Mr Cursley's figure of £24,770,895 included a modest sum for variations. This was much lower than the 4th February figure of £2.8 million for a number reasons, in particular:
- Some of the variation work valued on 4th February was carried out after 15th February.
- A large part of the £2.8 million assessed on 4th February was in the nature of loss and expense and therefore compromised by clause 3 of the Heads of Agreement.
- The additional steel (which was part of the variations) should be picked up in the measured work or in the valuation of materials off site.

278. CB wrote to WT on 27th April setting out their views on valuation. So two months into the process there was still a wide gap between the parties. WT's services were dispensed with. The valuation exercise which was to be conducted with the input of independent quantity surveyors was never concluded and it did not result in a final valuation of the subcontract works as at 15th February.

279. Two spreadsheets were prepared showing:
- A comparison between the predicted steelwork costs at 15th February and at 29th April;
- How substantial reductions might be made in the currently predicted costs if CB were removed from site and their works were revalued.

280. These two spreadsheets were loose in Mr Cursley's site diary and duly disclosed in the present litigation. Mr Cursley did not prepare these spreadsheets and he does not know who put them in his diary. He and Mr Ong were asked to produce numerous scenarios. He did not know what they were used for. The plan to get rid of CB and revalue CB's work (the Armageddon plan) was a fallback plan, in case Multiplex were unable to agree a way forward with CB. It is not right that the Armageddon plan was the only course of action which Multiplex had in mind. Nor was the Armageddon plan the only way Multiplex could achieve its targets.

281. Mr Cursley made notes in his diary of a briefing meeting with Mr Muldoon on 6th May. This sets out details of the Armageddon plan.

282. On 13th May Mr Stagg sent an email to Mr Cursley including the following: *"The intent is that I meet with them tomorrow to execute. I will need the schedules, price, programme and a 15/2/04 valuation at £32.6 m (i.e. WT high valuation including items missed)."*

283. Mr Cursley did not infer from this email that Mr Stagg was overruling him and agreeing a final valuation as at 15th February in the sum of £32.66 million. On the contrary, he thought that Mr Stagg was asking him to produce an interim valuation certificate in that sum.

284. Mr Cursley complied with that instruction. It was not difficult to build up an interim valuation of £32.66 million, if one took WT's valuation of £30,294,650 (with which Mr Cursley disagreed) as a starting point. By 13th May it had already been agreed that the WT figure required the following adjustments:
- £1,833,732 needed to be added for materials off site, because the value of CB's bond had been increased.
- £354,726 needed to be added for steel which was off site. WT had correctly deducted this sum from the valuation of works on site, but had inadvertently failed to add it back as off site materials.

285. So Mr Cursley only had to find variations worth £176,890, in order to produce the interim certificate which Mr Stagg required, together with supporting build up.

286. In order to identify variations of the requisite value, Mr Cursley had a meeting with Mr Underwood of CB on (he thinks) 25th May. At that meeting Mr Underwood produced a list of unambiguous variations. One item on this list was described as "Hotel and office side letter", to which £400,000 had been attributed. Mr Cursley and Mr Underwood agreed to attribute the requisite sum (namely £176,890) to this item. It was quite a short meeting. They were each advising their executive directors and they only had one item to close out. During the meeting Mr Underwood said that he had been told that £32.66 million was a finally agreed figure. Mr Cursley did not agree with this proposition. Mr Cursley regarded the valuation which he had been asked to prepare as an interim valuation. In other words, it was simply a payment on account.

287. In an email to Mr Muldoon dated 28th May Mr Cursley said he had been told that £32.66 million was agreed. This was a reference to his conversation with Mr Underwood. Mr Cursley denies that he was party to, or aware of, any scheme to make CB think that £32.66 million was an agreed figure and then go back on it. He also denies that Multiplex were doing this in order to lure CB into signing the Supplemental Agreement.

288. Following the meeting with Mr Underwood Mr Cursley produced a draft certificate, showing the valuation of works at 15th February as £32.66 million. Mr Cursley gave the draft certificate to Mr Stagg. He does not know what Mr Stagg did with it. Mr Cursley did not know that the draft certificate would be given to CB, in order to encourage them to sign the Supplemental Agreement. The build up which was attached to that draft certificate justified the figure of £32.66 million on the basis of a process which Mr Cursley disagreed with.

289. Various scenarios concerning the Armageddon plan continued to be prepared and circulated within Multiplex in late May. Mr Cursley is not sure whether he saw certain of the scenarios put to him in cross-examination.

290. Mr Cursley did not attend the meeting on 8th June with John and Andrew Roberts. After that meeting Mr Muldoon gave Mr Cursley a briefing, which Mr Cursley recorded in his site diary. This briefing included Mr Muldoon's instruction that CB's reimbursable costs should be reduced by half in the planned revaluation. It was Mr Muldoon's habit to make various statements, indicating his views of what should be done.

291. On the 9th June Mr Ong produced a spreadsheet of five scenarios. These included continuing with CB and replacing CB with Hollandia. Mr Cursley maintains that Multiplex was looking at various options, because it had to be ready for the eventuality that it could not secure a position with CB.

292. After the Supplemental Agreement was signed, Multiplex issued certificate 35. This certificate included a valuation of CB's work up to 15th February at £32.66 million. It also included appropriate payments in respect of work on site and off site since that date. The make up of the £32.66 million can be discerned from a careful reading of the sheet attached to certificate 35.

293. At the end of June Mr Muldoon took the decision to remove CB from site. The decision was taken because Multiplex had become frustrated with CB and no information had been received from CB. It is not the case that Multiplex took the decision because it had no alternative scenario by which it could get the steelwork cost down to £75 million.

294. Following the lifting of the arch on 29th June, the payment of the arch bonus would fall due. Multiplex served a withholding notice on 6th July. The basis of this notice was that CB had fabricated more than 100 members defectively. This had caused delay to the arch lift and had generated extra costs. Mr Cursley did not mention to CB before 6th July Multiplex's plan to offset contra charges against the arch bonus, but he denies that this constituted contra charges by ambush.

295. Expert witnesses were instructed and with their assistance the revaluation of CB's works was prepared. Mr Cursley and Mr Ong concluded that the correct value of CB's works on 15th February was £23,975,207. This was slightly lower than the figure set out in Mr Cursley's paper of 21st April.

296. Mr Ong and Mr Cursley discussed appropriate deductions from the reimbursable costs to reflect CB's productivity. They decided that 400 tonnes per week was reasonable as an average. This took into account the fact that more steel per week could be erected after the arch lift than before. This led to a reduction of 50% for productivity. It is a coincidence that this was the same figure as Mr Muldoon had instructed in early June. Mr Ong and Mr Cursley were hampered by lack of proper records from CB.

297. Mr Cursley did not discuss the proposed revaluation with CB. However, he attended Multiplex's head office on 16th July, the day when the revaluation certificate was to be issued. Mr Stagg telephoned Mr Grant and said that he was going to raise a negative certificate. Mr Stagg said that Mr Cursley was in the room and would be able to explain the principles behind the reductions being made. Mr Grant denied that this telephone conversation constituted proper consultation.

298. Certificate 37 showing a negative valuation was duly issued on 16th July. Mr Cursley denies that the aim was to produce a valuation which was as low as possible. He maintains that the figures in that certificate were based on the subcontract, the Supplemental Agreement and quantity surveying practice. He denies the suggestion that this was sharp quantity surveying practice.

299. Mr Cursley was cross-examined about the individual deductions made in certificate 37. He maintains that each was justified and that substantiation was not available, even if not enclosed with the certificate.

CHRISTOPHER ONG

300. Mr Ong was Multiplex's commercial manager for the Wembley project from July 2003 until 2005. Mr Ong was asked to become involved with the steelwork package at the end of April 2004. Mr Cursley told Mr Ong that the WT valuation of £30,294,651 was being used for interim valuations, but was not acceptable to Multiplex.

301. Mr Ong was copied into part of the exchange of emails on 4/5th May, but this did not make much sense to him. At this stage he was new to the issues. Mr Ong was involved in meetings within Multiplex and with Hollandia during May. These are noted in his site diary. Mr Ong understood that Hollandia may take over erecting the steelwork for the bowl and PPT. On instructions, Mr Ong prepared spreadsheets for various scenarios. These included CB remaining on site and CB leaving.

302. A repeated problem with CB was that they failed to provide proper back up information to support their applications. At a meeting on 19th May Mr Ong warned Mr Underwood that in future he would make reductions against certain items, if CB failed to provide better substantiation of works completed. As a reminder of this he put note on the back up sheet for certificate 33 "MPX have not applied deduction this month".

303. Mr Ong produced a number of final costs forecasts, based on a variety of scenarios. Mr Ong was a fairly junior employee. He produced and costed these various scenarios in accordance with instructions given to him. In response to an email from Mr Stagg dated 24th May, Mr Ong produced a scenario showing how Multiplex could get the steelwork down to a target cost £75 million if CB were removed from site. Mr Ong understood that "Armageddon" referred to a situation in which CB left site or Multiplex exercised its contractual right to remove CB. Within a week or two, it became clear that £75 million was not achievable and the figure was adjusted.

304. On 25th May Mr Ong emailed a document to Mr Sheppard and Mr Collins, showing that the forecast cost to complete with CB was £69,878,382. This document included the following note: *"After negotiation with CBUK agreement was reached for a valuation of the works up to 15/2/2004 and this valuation included all materials and was a Final Account for all issues to the date of 15/2/2004."*

305. This note was based upon what Mr Underwood of CB had told him, not upon information from Mr Muldoon. Mr Ong did not discuss the matter with Mr Muldoon. Mr Ong spoke to Mr Cursley about this. Mr Cursley was a bit unsure about the situation. Mr Ong denies that he is deliberately lying, in order to cover up the fact that he knew agreement was reached on a final account basis.

306. Mr Ong produced a number of scenarios in June, which he was taken through in cross-examination. For example, the second June spreadsheet shows (a) signing the Supplemental Agreement and then removing erection from CB; (b) holding CB to the original Subcontract (CB possibly becoming insolvent is shown as an advantage, but the two question marks indicate that CB's insolvency may not be an advantage); (c) terminating the subcontract under clause 31.

307. Another spreadsheet was prepared showing five scenarios, namely A1, A2, B1, B2 and D. Option A2 shows CB continuing to erect, but with Hollandia management. Mr Ong recollects tabling this spreadsheet at a meeting which he attended with Andrew Roberts, Noel Henderson, Mr Muldoon and Mr Cursley.

308. Mr Ong did not attend the meeting which was held with both Andrew and John Roberts. Mr Ong does not remember a briefing meeting shortly after that event, and such a meeting does not feature in his notebook. Mr Cursley did not instruct Mr Ong that half CB's cost plus payments should be deducted.

309. On 17th June Mr Ong attended a meeting with Mr Muldoon, Mr McGregor and Mr Cursley to discuss CB's costs to complete. Mr Muldoon asked Mr Ong to contact Mr Underwood, to get a price going forward. Mr Rogan had said that he had an electronic version of the budget to complete. Mr Ong's note records various steps to be taken in implementation of the Armageddon plan. However, this remained a contingency plan to deal with a worst case scenario.

310. On 21st June Mr Underwood sent the back up documents. On 25th June Mr Ong attended a meeting with Mr Underwood to discuss the figures. This meeting did not provide clarification. Mr Underwood said that the budget price shown in his print out was not fixed. This was an internal document which his superiors were discussing with Multiplex. It was based on what CB knew at the time. The figures could change. Mr Ong gained the impression that CB would not provide a lump sum price going forward. Mr Ong reported back to Mr Muldoon.

311. During June Mr Ong was involved in the preparation of certificate 35. He discussed the individual items in this valuation with Mr Jones and Mr Underwood of CB. Mr Ong also set out in the back up sheet to certificate 35 how the 15th February figure of £32.66 million was made up. This can be seen from the top right hand section of the back up sheet of certificate 35 and from a comparison between that sheet and certificate 34.

312. In early July, after erection had been removed from CB, Mr Ong was instructed to do a complete revaluation of CB's account and he duly did so. This resulted in certificate 37. In relation to reimbursable costs, Mr Ong considered what CB had achieved and what they ought to have achieved. Having discussed the matter with Mr Watkins, Mr McGregor and Mr Gettins, he concluded that CB ought to have achieved an average of 400 tonnes per week. This produced an efficiency ration 50.45%. Mr Ong calculated that figure independently and it took him some time. He was not simply coming up with a figure which he had been instructed to produce.

313. In cross-examination Mr Ong was taken to his one page calculation which resulted in 50.45%. He was asked where and how he had made allowance in that calculation for the work which CB's men had done on site, other than steelwork. Mr Ong gave no satisfactory answer to that question.

314. On 26th July Mr Ong sent an email to Mr Watkins about this calculation. At the end of his email Mr Ong wrote "I am sure your statement will back this up". Mr Ong wrote this because his calculation was based upon information previously given to him by Mr Watkins and others.

315. In relation to the value of works as at 15th February, Mr Ong did a bottom up revaluation. This was Mr Ong's own calculation. He had input from Mr Goulding, Mr Papai and Mr West. Mr Ong did not discuss the calculation with Mr Muldoon. Nor did he discuss it with Mr Ennis of Northcrofts. Mr Ong does not recall talking to Northcrofts before late July. Mr Ong denies that he was simply trying to achieve Multiplex's targeted cost for the steelwork project.

316. In preparing certificate 38, Mr Ong calculated deductions from reimbursable costs for weeks 91 and 92 under ten separate headings. These deductions totalled £1,051,232. Mr Ong did not apply the efficiency ratio of 50.45% in relation to this certificate.

317. On 16th July Mr Ong attended a meeting in Multiplex's head office to explain the basis of certificate 37. After that meeting Mr Ong faxed the certificate to CB and raised an invoice showing that CB owed Multiplex £14,582,042.

318. Mr Ong remained willing to discuss his calculations leading to certificates 37 and 38, and to make adjustments if any error was shown. However, Mr Stagg and Mr Muldoon made it clear at the meeting on 21st July that there would be no movement by Multiplex.

MULTIPLEX WITNESSES WHO DID NOT GIVE ORAL EVIDENCE

319. Ms Munoz, Mr Watson and Mr Theos are Multiplex package managers, each of whom describes how CB's poor performance delayed and disrupted the areas of work for which they were responsible.

320. Mr Petaccia was a Multiplex site manager with responsibility for the structural steelwork elements. In particular he was concerned with the arch. Mr Petaccia describes in some detail the defects in the arch members, as fabricated by CB. He expresses the view that, on a proper interpretation of the specification, the tolerance for member straightness was plus or minus 10 millimetres.

321. Mr Petaccia had a meeting with Mr Baron of CB on 24th February 2004. Mr Baron stated that of the members surveyed by CB, 39% deviated from straightness by more than 25 millimetres. There were subsequent meetings and Mott did investigations. A limited number of members requiring replacement were identified, and CB dealt with this work. CB did not claim from Multiplex the costs of the arch remedial works, as part of their reimbursable costs.

322. The arch lift commenced on 22nd May and was completed on 29th June. An adjustment made to the arch on 29th June means that the arch lift could not be considered as complete on 22nd June. Mr Petaccia advised Mr Muldoon and Mr Stagg that 29th June was the operative date.

Part 5. CB'S EVIDENCE

323. In this part of the judgment I shall summarise the evidence given by CB's witnesses, in so far as appropriate. I shall weave together what appears in the witness statements and what the witnesses said in oral evidence. In respect of each witness, I will attempt to set matters out in a convenient order.

STEPHEN BARON

324. Mr Baron is a chartered civil engineer. Since 2000 he has been employed by Dorman Long Technology Ltd ("DLT"), which is an engineering consultancy service provider and a sister company of CB. DLT has a secondment arrangement with CB, whereby DLT provides staff to CB. CB pays to DLT the cost of those staff plus an agreed percentage for profit.

325. Mr Baron was project engineering manager for the Wembley project. He joined post contract and was not involved at tender stage. Christopher Wilkinson of DLT assessed the tender. Mr Baron has not reviewed the tender assumptions. No detailed engineering programme had been done at the time of tender. Mr Baron understands that there was no time for this at tender stage.

326. Mr Baron was responsible for connection designs for the bowl steel. He was not involved in fabrication. The beam and column structure of the bowl is similar to many other projects CB works on.

327. There was a problem from the start of late, inadequate and erroneous design information coming from Mott. Nevertheless the suggestion in paragraph 5 of Mr Baron's statement that bowl steel information should have come within two weeks of commencing the project is not correct. Mr Baron accepts that it appears from the passages put in cross-examination that the dates in the restraint schedule were not contractual, and in any event the restraint schedule provided up to 14 weeks for bowl steel design information. However, Mr Baron is not an expert in contractual matters.

328. Mr Baron drafted the engineering sections of CB's monthly progress reports and he contributed to the summary sections. The February 2003 report contains an entry "Proposals submitted 10/12/02 pending MSC design output on nodes arch rings". The problem here was that CB could not do a finite element analysis for the arch nodes until load information had come from Mott. However, there was a dispute between the parties as to whether this loading information should be produced by Multiplex (via Mott) or by CB. This dispute ultimately went to adjudication in January 2004.

329. The problems of late information were compounded by the number and frequency of design changes. CB had to and did substantially increase the bowl connection design team. Multiplex promised design freezes in July 2003 and again in December 2003. Nevertheless changes kept coming.

330. In November 2003 CB was preparing a claim submission. Mr Baron sent an email to staff asking for evidence. Mr Scott, a junior administrative assistant, photocopied the relevant files. Mr Baron was never asked to review any claim for extension of time based on late information. Mr Baron was not asked to compare the original tender assumptions with what was now being done.

331. Fabrication of steel for the arch was delayed by late information. In particular there was a lack of information about loads, but the responsibility for producing this design information was in dispute.

332. In the summer of 2003 there were emails within CB which indicate concern about whether they could fabricate arch members within the tight tolerance set out in the specification. Mr Baron denies that this was a matter of real concern between July and September 2003. At this stage, as he interpreted the specification and given the length of arch members, the maximum deviations from straightness permitted were plus/minus 10 millimetres. However, as time went on, Mr Baron grew away from the feeling that it was possible to achieve this.

333. By November CB had survey information on arch members, as fabricated. Mr Baron could see from a quick look through that some members were outside the 10 millimetres tolerance. At this stage Mr Baron and Mr Petaccia were interpreting the specification in the same way. Mr Baron sent an email about this to Mr McHugh. Mr Baron did not expect Mott to relax the requirement, because they were becoming very pedantic about things.

334. On 19th December 2003 Mr Baron sent RFI A48, seeking clarification of the contractual tolerances. This was not an attempt to secure a relaxation. Having looked at BS 5950, Mr Baron concluded that the tight tolerances specified did not apply to the arch members. Mr Baron denies that he was trying to argue a case in this RFI. He was genuinely seeking clarification.

335. By late December the arch members were substantially manufactured. Thereafter CB undertook a full as-built survey, to establish the exact extent to which they deviated from straightness. This was completed in early February and the results were circulated. By then Mr Baron took the view that, on a proper reading of the specification and BS 5950, the arch members were not out of tolerance.

336. Mr Baron recalls a meeting with Mr Petaccia on 24th February 2004. Mr Baron denies saying that 39% of members deviated from straightness by more than 25 millimetres. However, he did make his point about BS5950 and the correct interpretation of the tolerances. Mr Baron appreciated that this was an issue between the parties. It would have to be resolved before the necessary approvals could be obtained for the erection of the arch.

337. Mr Baron knew that the arch was on the critical path, but he did not believe that CB had a serious problem in this regard.

338. Mott carried out an investigation to ascertain whether the arch members, despite deviating from straightness, would perform satisfactorily. This investigation took a long time. Mr Baron cannot say whether this was because Mott were being slow. The upshot of this investigation was that Mott produced a list of members which required replacement. CB did this work. They replaced a total of 24 members.

339. Mr Baron does not believe that the problem with arch members caused delay. This was because the effective cause of delay to the lifting of the arch was the need for remedial works to the arch bases. The arch bases were not complete until well into May 2004, whereas the defective arch members had all been replaced by the end of April.

340. Mr Baron was not involved in preparing the programme annexed to the Heads of Agreement. He does not remember anyone asking him whether the activities shown on that programme could be completed by the dates shown.

ANDREW HALL

341. Mr Hall was CB's project manager at Wembley for the bowl. He became involved in January 2003. Mr McHugh was project manager. He had overall responsibility for the site. Mr McHugh concentrated more on the arch, while Mr Hall looked after the bowl.

342. The Wembley project was a large operation. As planned, it involved the design and fabrication of approximately 22,000 tonnes of steel. The project was bedevilled by delays in supply of design information and design changes on a scale which Mr Hall has never encountered before. This interfered with the ordering of steel from Corus and the ordering of specialist tube steel from Dillinger in Germany.

343. The criticisms of CB made by Mr Muldoon and Mr McGregor in their witness statements are unfounded. The establishment of a retro squad was an acceleration measure necessitated by the volume of design changes. Retrofit work is time intensive and less efficient than normal production. The retro squad in this case worked extremely hard. They used an appropriate computer package. Because of the nature of the variations, they did not need to use "X steel".

344. The reason why fabrication drawings did not reach SGT in China at the appropriate time was Mott's delay in providing design information, coupled with the high volume of design changes.

345. CB provided additional draftsmen and Oakwood increased their resources, in an effort to keep pace with the design changes. An additional problem was that when Mott changed drawings, they did not indicate the changes in clouds. This made the changes difficult to spot.

346. To accommodate the design changes, CB increased the manpower in its factory. However, design changes made production slower, because the steelwork was becoming more complex (for example the connections between rakers and columns). The factory was not working short hours. It worked for as many hours as the flow of design information permitted. Also CB sub-contracted much fabrication work to other steelwork companies.

347. (Mr Hall goes into all the above matters in great detail in his statement. The details were not explored in oral evidence. I note those details, but do not set them out in this summary.)

348. CB had wanted to maintain a buffer of 3,000 tonnes of steel. That was generally stored at CB's Darlington yard. Some was on trailers. CB's haulier had 40, later 80, trailers and these could each carry about 20 tonnes, depending on the shape of the steel pieces.

349. Because of late design information, when CB started erection in September 2003 the steel buffer was much lower than planned – hundreds rather than thousands of tonnes.

350. From September 2003 onwards frequent criticism is made by some of CB's site staff of the factory's performance. This is because some site staff were unaware of the variations and late design changes.

351. The programme annexed to the Heads of Agreement would seem reasonable on the basis of information available in mid February 2004. Mr Hall and his colleagues produced their own programme, which was much more detailed than the programme annexed to the Heads of Agreement.

352. Mr Green was the construction manager for the bowl, in effect a general foreman. His diary in the period after 15th February 2004 contains some harsh comments about the steel deliveries (late, missing steel, out of sequence etc). Mr Hall knew that the causes of these problems were design changes. Mr Green did not know this. Mr Hall accepts, however, that some of the problems may be due to errors on CB's part.

353. The contract required "just in time" delivery, but this was not practicable owing to the design changes. Multiplex in fact allowed CB some lay down space at Wembley.

354. It is true that occasionally the tags identifying steelwork were blown off during the painting process. This problem was no worse than would be expected.

355. CB's progress report 18 includes the entry "If bowl erection output is to increase dramatically next period as anticipated, we need to monitor carefully the sorting, loading and delivery of steel to site". This is a reference to some of the problems on CB's side.

356. Mr Hall's email of 10th May suggests that CB have lost some pieces of steel. Mr Hall accepts that there were some inefficiencies on CB's part. But these were not as great as the design changes. During this period CB were having to do large amounts of retrofit work to fabricated steel on site because of design changes.

357. Because CB were working on a cost reimbursable basis during this period, Mr Hall was told that it was no longer necessary to prepare delay notices. However, Mr Hall and his colleagues continued to maintain the same records of works done, change notices, RFIs etc. On instructions from Multiplex CB did much work other than erecting steel, for example putting gutter brackets on rakers, welding work to arch bases, erecting precast concrete planks etc. CB had about 150 men on site.

358. Until late April CB erected steel at roughly the rate which had been planned. In week 77 (15th – 21st March) CB only erected 46 tonnes, because of the HSE's prohibition notice on all tower cranes.

359. While the arch was lying on the ground, several sections of the bowl were sterilised. The aerial photograph of the site taken in June 2004 shows several sections of the bowl not erected. These are the areas which had been sterilised. During this period CB erected as much steel per week as was practicable. The delayed lifting of the arch meant that before late June CB could not achieve the high rates which had been planned to follow the arch lift.

360. Many matters delayed CB, which were Multiplex's responsibility. For example:
- Interface with concrete;
- Only 9 tower cranes instead of 10;
- Continuing design changes (although Mr Hall accepts that some of the 862 design changes referred to in his witness statement were completely irrelevant to the steelwork);
- Lack of sufficient lay down areas and poor site conditions.

361. Mr Hall was very disappointed by Multiplex's decision at the end of June to remove on-site erection from CB. He considered that CB had worked hard to overcome numerous problems which were of Multiplex's making.

362. When CB left site at the start of August, they had erected just under half the bowl steel (about 6,000 tonnes out of 14,000 tonnes).

MARK ALLISON

363. Mr Allison was CB's construction manager at Wembley from October 2003 onwards. Initially he was responsible for the arch, but after 15th February he had responsibility for the whole site.

364. When Mr Allison arrived, he noted that site conditions were very poor. There was heavy mud; plant and pedestrian routes were not clearly defined; and so forth.

365. The CB team dedicated to the arch was working long hours, including night shifts. The arch was due to be lifted in January and was on the critical path for the project. Mr Allison was involved in designing the temporary works for the arch. It was planned to re-use and adapt these, so far as possible, as temporary works for the roof.

366. CB's progress report for October 2003 (into which Mr Allison had no input) indicated that lifting of the arch in January (as programmed) would be achievable.

367. In November 2003 there were construction problems to be resolved between CB and Multiplex. These concerned catenary nodes, cables, arch bearings, respective responsibilities re arch suspension, foundation loads, pencil end fabrication (delayed by the insolvency of CB's subcontractor, Hartlepool Fabrications Ltd), additional third party checks, arch logistics and arch base stillages. Many of these would delay the arch lift. CB did a complete analysis and set out the results in its December progress report. This report indicated a delay in assembly of the arch. However, at this stage the interface with the concrete was driving the arch completion. The arch lift was now forecast for mid-January.

368. In his witness statement Mr Allison recounts in great detail the story of delays to the arch lift, in particular the problems with defective concrete in the arch bases and the misaligned arch members. In his oral evidence, he accepted that CB were responsible for the member defects and CB bore the cost of rectification works to those members. A substantial amount of work had to be done in checking those members. The arch could not be erected until three parties had signed them off, namely Mott, Babtie and CB. This occurred on Friday 21st May. On Saturday 22nd May the arch lift began. It was completed on 22nd or 29th June, depending upon what view one takes of certain work which was done on 29th June. Mr Allison considers that the lift was complete on 22nd June.

369. Mr Allison strongly disagrees with Multiplex's criticisms of CB's productivity during the period after 15th February. Problems with deliveries from the factory were caused by the soft start in September (when CB had insufficient steel fabricated), numerous variations and problems with the concrete interface. Problems with metal tags missing from steel were minor and rare. As to erection rate, Multiplex's demand for 500 tonnes per week could not be achieved before the arch was lifted. Erection rates were delayed by poor site conditions, the provision of only 9 tower cranes (not 10) and fetters on the use of those cranes, the closure of those cranes in the week of 15th March following an accident, bad site co-ordination by Multiplex and lack of laydown areas. These matters provide the answers to Mr Watkins' criticisms of CB. Mr Watkins cannot genuinely have believed that CB was only working to 50% of its efficiency.

BRIAN ROGAN

370. Mr Rogan was operations director of CB from 2000 to October 2004. Since then he has been managing director.

371. It is his practice to make few notes and to destroy such notes as he makes after they have been actioned. He sends few emails. That is why in this litigation CB has disclosed no handwritten notes made by Mr Rogan and only sixteen emails sent by him.

372. CB's tender figure for this project in 2002 assumed costs of about £54 million and a margin of about £6 million. This calculation assumed that some of the steel would be fabricated in China. In preparing its tender CB relied upon Multiplex's assurance that the design was complete. CB did not under-tender. Mr Rogan strongly denies that CB "bought" the contract.

373. Mr Rogan was not aware that the pricing document (prepared by CB and annexed to the subcontract) was front loaded. The figure allowed for erection (£131 per tonne) was not absurdly low. On the other hand he would not say that the figure suggested in cross-examination (£200 per tonne) was ridiculously high. Mr Rogan agrees that the actual cost of procuring steel would be much less than the allowance in the pricing document (£509 per tonne). However, that figure also had to cover processing and add-ons.

374. The allowance for temporary works in the pricing document was much less than the actual cost. This difference was due, at least in part, to acceleration costs and variations. The pricing document only allows 2,550 tonnes of steel for temporary works supporting the arch and the roof. However, some of the arch temporary works steel would be re-used for the roof temporary works. It is true that according to board minutes of May 2004 Mr Grant said that there was a £6 million overspend on temporary works, and that he regarded project management and design errors as major contributory factors. However, the minutes may be wrong. Mr Rogan thinks that £6 million was the total cost of temporary works, not the overspend. He acknowledges that CB may have underestimated the cost of temporary works.

375. It is true that CB's accounts showed a £4 million loss for Wembley as at 31st December 2002, but this was because of certain accounting rules which CB decided to adopt in 2003. As at 31st December 2002 CB was not anticipating a £4 million loss on the project. A note to the accounts states that provision is made for losses in the year in which they are foreseen, but Mr Rogan does not agree that that is correct. The accounts also show that CB was suffering very substantial losses across the whole of its operations at this time. Throughout 2002 and 2003 CB relied upon the support of its ultimate parent company, Al-Rushaid Investment Company.

376. Late delivery of design information was a problem from the early days of the contract. In January CB gave notice of 7 weeks delay to the arch, 11 weeks delay to the PPT and 5 weeks delay to the roof. At Multiplex's request CB proposed acceleration measures.

377. On 28th March 2003 Multiplex visited CB's Darlington factory in order to verify CB's claim for acceleration costs. Multiplex wanted to see the detailed build-up of CB's tender, but CB decided that it was not necessary to provide the tender build-up in support of the acceleration claim. This decision was taken by the board of directors. The reason for the decision was not an awareness that CB had under-priced the contract.

378. By an email of 10th April and a letter of 11th April Multiplex asked CB for the build-up of CB's tender and also the baseline programme showing the same level of detail as the mitigation programme. CB did not provide this information.

379. By letter dated 15th April Multiplex acknowledged that CB was entitled to an extension of time and asked CB to accelerate. Multiplex also asked CB to provide the information previously requested. This was the third request for the tender build-up and the baseline programme.

380. CB duly took steps to accelerate. Oakwood engaged more draftsmen and started working overtime. CB's Darlington factory started to work longer hours, including nights and weekends. More fabrication work was sub-contracted. However, CB refused to provide the tender build-up and baseline programme which had been requested. This was a decision of the board members.

381. By this stage Mr Rogan thought that the contract was out of control and it should move to cost plus. That was his personal opinion.

382. On 17th June Cleveland Group had a board meeting. According to the minutes, it was planned to enlist the support of Alan Milburn and Tony Blair, in order to bring political pressure on Multiplex to resolve CB's claim. However, Mr Rogan was not aware of any plan to use political pressure.

383. On 25th June there was a meeting between CB and Multiplex to discuss engineering issues, design responsibilities and so forth. Following this meeting Mr Whalley of CB sent a letter dated 1st July, requesting detailed information to support CB's financial claim. Mr Rogan did not understand this letter and does not recall whether a reply was sent.

384. In about July Mr Rogan met Mr Stagg in a coffee shop. They agreed to work through contractual issues amicably; that CB would accelerate; and that Multiplex would keep CB cash neutral until the end of March 2004.

385. The minutes of a CB board meeting on 30th July refer to a claim of £15 million against Multiplex. Mr Rogan was present at that board meeting, but he cannot now say where the £15 million figure comes from. It was resolved that Mr Rogan would spend more time on site. It was decided that CB would "continue to achieve optimum performance on the project despite the extent of change and disruption and make progress until such a time as Multiplex take an unreasonable position in terms of payment and our entitlement".

386. CB hired two people from High Point Rendel (an engineering consultancy in the same group of companies as CB, which handled claims) to help CB prepare its claim for extension of time, variations, loss and expense. They became part of CB's commercial team.

387. On 5th September Mr Muldoon wrote to Mr Rogan chasing up information (previously requested) supporting the acceleration and delay claims. This letter probably concerned Mr Rogan at the time. However, within ten days Mr Whalley agreed to pay £2.8 million in respect of those claims.

388. On 22nd September CB commenced erection on site. By a letter dated 23rd September Mr Whalley agreed to pay an extra £2.8 million on a "cashflow" basis. This sum was duly paid.

389. On 30th September Mr Rogan gave an updated programme to Mr Muldoon and said that CB would be subletting further fabrication. Mr Rogan also said that CB was entitled to an extension of time of about 30 weeks.

390. The strategy of CB from September 2003 to the end of the year was to demonstrate its entitlement to extension of time plus loss and expense, so that Multiplex would come to the table and reach a sensible conclusion. In an email dated 12th June 2004 Mr Rogan described the strategy adopted in September 2003 as follows: *"The strategy AN, Alan Carson and myself came up with in September last year … has worked. We have ended up on virtually all cost plus with no risk."*

391. On 29th October 2003 CB held a board meeting, attended by Mr Rogan, Sheikh Shetty (who reported to the main board) and others. The board minutes include the following: *"It was noted that Multiplex is undertaking an IPO in Australia. As part of*

the Australian Stock Exchange requirements, all claims will be disclosed. It was RESOLVED that claims be maximised and submitted to assist in the company's commercial position."

392. Mr Rogan understood that the IPO meant that Multiplex was going public in Australia.

393. On the same day (29th October) Mr Rogan sent to Multiplex a spreadsheet, based on the accelerated programme, showing a minimum final account of £86,954,719. Mr Rogan noted a marked hardening of attitudes, particularly from Ashley Muldoon, after the despatch of this letter. On 19th November CB tabled a cost forecast based on the accelerated programme in the sum of £83 million. As explained in cross-examination, there is a difference between value (i.e. what the customer pays) and cost.

394. CB's cash position deteriorated. By the end of November CB was £1.5 million cash negative. On 28th November Mr Rogan attended a meeting in Knightsbridge with Sheikh Abdullah. The Sheikh wanted a briefing about why Wembley was in the shape that it was. He asked where the extra costs came from. Mr Rogan said that the majority were Multiplex's problems. The Sheikh said that he would not bank roll Multiplex.

395. Mr Rogan returned from Knightsbridge to Wembley and told Mr Muldoon about the meeting with the Sheikh. Mr Rogan did not say that there would be a £9 million deficit in January, but he did say that cost plus needed to be considered. He also said that Multiplex must deal with the variations properly. That might generate £23 million. At that stage CB had given notice of 800 variations with an estimated value of £20-30 million, although CB had only justified £7.6 million worth of variations.

396. On 5th December Mr Rogan sent two letters to CB drafted by Mike Ritchie of High Point Rendel. The first letter said that this was the last point to move to a new form of contractual arrangement. The second letter said that time was now at large in terms of valuation and time. The programme annexed showed the arch lift being put back to September/October 2004. This letter was intended to bring Multiplex to the table and it worked.

397. Despite Multiplex's request in a letter dated 9th December, CB still was not prepared to disclose its tender. In Mr Rogan's view, Multiplex was putting every possible obstacle in CB's way.

398. By December 2003 CB had applied for £1.59 million in respect of temporary works. That left about £600,000 to claim in respect of temporary works – subject to CB's claims for acceleration, loss and expense. The actual cost of the remaining temporary works would substantially exceed £600,000. CB hoped to recover some or all of the excess through its claims.

399. A cashflow forecast circulated by Mr Child in December 2003 shows that a loss of £5 million was anticipated for Wembley, even including unagreed income (i.e. money expected to be received from claims). However, Mr Rogan took a more sanguine view. He thought that after big fights and claims, CB would either make a profit on Wembley or, at worst, break even.

400. During December Mr Muldoon asked Mr Rogan if CB was insolvent. Mr Rogan said that the directors believed that CB was not insolvent now, but would be in January if things were not resolved and if Sheikh Abdullah decided not to support the business. Mr Rogan also said that he was fed up with the conflict between Multiplex and CB, and that he was considering quitting.

401. Mr Rogan and Mr Muldoon agreed to refer the dispute about the arch to adjudication. Mr Rogan said that CB would not commence the adjudication before Christmas. CB kept that promise. It provided the notice of adjudication in draft to Multiplex during December and commenced the reference in January 2004. This adjudication (known as "adjudication 0") was limited to disputes concerning the arch, although on the basis of its contentions about the arch CB was claiming extension of time, loss and expense. The adjudicator was being asked to decide questions of principle only, since CB and Multiplex expected to agree matters of quantum. The adjudication was later withdrawn because of the Heads of Agreement.

402. On 12th January Mr Rogan talked to Mr Stagg about deductions of £1.6 million, which Multiplex were making from sums due to CB. Mr Stagg agreed to, and did, add back half of that sum in certificate 16.

403. On 23rd January Mr Rogan sent a letter to Mr Muldoon, suggesting that the arch lift might be postponed from February to November 2004. There were safety reasons for this proposal. It was put forward as a matter for discussion. It was not intended to be provocative. On the same day Multiplex issued certificate 17, which contained a negative valuation in the sum of £1,114,608. Mr Rogan responded by informing Mr Muldoon that CB would cease accelerating and would revert to normal working. It was against this background that the chairmen's meeting took place on 27th January and the negotiations leading up to the Heads of Agreement followed.

404. In his witness statements and in cross-examination Mr Rogan traced the history of the negotiations leading to the Heads of Agreement and his understanding of what that agreement meant. This evidence is admissible by way of background to issue 6, but inadmissible in relation to issues 2 and 3. I take that evidence into account, but need not recite it. Mr Rogan denies that CB grossly under-estimated the on-site erection costs, in order to induce Multiplex to do a deal. Mr Rogan accepts that CB were very keen to get the £4 million payment which was provided for in the Heads of Agreement.

405. On the 11th February there was a group board meeting. Mr Rogan was present in the building, but did not attend the meeting. Afterwards he was told that Sheikh Abdullah was not prepared to fund £23 million to finish the project. However, by that date Mr Rogan, Mr Grant and Mr Child were extremely confident that they would be able to do a deal with Multiplex.

406. At the time of the Heads of Agreement there was not a quantified claim by CB for extension of time, loss and expense. The agreement reached was a commercial settlement.

407. The programme attached to the Heads of Agreement would be difficult to achieve. CB intended to do their best to comply with that programme, but could not guarantee to do so. Mr Rogan does not recall telling Mr Muldoon that they may not be able to achieve the programme.

408. After the Heads of Agreement CB submitted application 18 and amended application 18. Mr Rogan discussed the application with Mr Thomas. At this stage Mr Rogan was by no means clear as to what had and what had not been settled by the Heads of Agreement.

409. There was a debate about the approach to the valuation as at 15th February. CB were saying that their works should be valued in accordance with the protocol. Multiplex were saying that it was necessary to see what work had actually been done on 15th February. Multiplex agreed to pay WT's higher valuation figure for cashflow purposes, although Mr Cursley wrote to say that he disagreed with the method of getting to that higher valuation. Mr Rogan understood from Mr Muldoon that

Multiplex's paper of 21st April (proposing a valuation of £25.4 million) was tabled so that Mr Grant's negotiations with Mr Stagg would not start from too high a figure.

410. There was also a problem about China steel. Mr Rogan accepted at the time that he had made a mistake. During the negotiations leading to the Heads of Agreement he had overlooked the extra over costs of fabricating the China steel in the UK.

411. In his two witness statements Mr Rogan deals with the story of the arch lift (and the question of who was responsible for the delay between April and June) in broadly similar terms to the other CB witnesses. Mr Rogan also deals with CB's productivity during the costs reimbursable period. He recalls that on 17th March Mr Muldoon told him that there was no need for EOT claims during that period.

412. On the 14th May Mr Rogan, Mr Child and Mr Grant attended a meeting with Mr Stagg. Mr Rogan only went there to discuss steel issues. He was told before the meeting that Mr Stagg was not prepared to put the figure of £26 million into the Supplemental Agreement for his own reasons. During the meeting Mr Stagg said that he was not prepared to put the figure into the Supplemental Agreement for political reasons. Mr Rogan would have preferred to see the figure written into the agreement, because he personally did not trust Multiplex. Mr Rogan said words to the effect of – "let's be clear Matt, it is a finally agreed number". Mr Stagg said "yes, tick" and he ticked the piece of paper in front of him.

413. Mr Rogan accepts that in his statement for the adjudication, where he describes that meeting, there is no reference to "finally". His memory would have been better in 2004 than it is now.

414. Mr Rogan does not know why there is no reference to the valuation agreement made on 14th May in CB's progress reports for May and June 2004. The summary paragraphs in those reports are inaccurate in relation to that.

415. Mr Rogan was not involved in the negotiations leading to the Supplemental Agreement. However, he recalls that CB were keen to sign that agreement.

416. There was an informal or gentleman's agreement that Multiplex would engage CB to fabricate 1,000 tonnes of roof steel, which had been removed from the sub-contract by the Heads of Agreement. Multiplex went back on that agreement. On 12th June Mr Rogan sent an email to Mr Grant expressing his distress about this. Nevertheless, Mr Rogan still thought that it was beneficial for CB to sign the supplemental Agreement. That remains his view.

417. After the 16th June Mr Rogan was responsible for discussing the go forward strategy with Multiplex, as envisaged by clause 7 of the Supplemental Agreement. Mr Rogan was "convinced" that Multiplex and CB would reach an agreement. This was essentially because of the difficulties which Multiplex would be likely to encounter in changing to a new steelwork subcontractor (see paragraphs 97-99 of his first witness statement).

418. Mr Grant told Mr Rogan that he should not put forward a price and programme for going forward until after the Supplemental Agreement had been signed. He had agreed this course with Mr Stagg.

419. The first meeting with CB on this matter was on 14th June. On that occasion Mr Rogan did not put forward a fixed price and programme, but a proposal which preceded that. He handed to Mr Muldoon a cost forecast of £28.896 million, to which there would have to be added a sum for risk, overheads and profit. That additional sum was to be discussed between Mr Grant and Mr Stagg. So Mr Rogan did not make an offer capable of being accepted. Indeed CB never offered to Multiplex a complete price for which it was prepared to carry out the remainder of the works.

420. At the 14th June meeting Mr Muldoon asked Mr Rogan to prepare a separate cost plus proposal. Mr Muldoon duly prepared a draft heads of agreement under which CB would complete the works on a cost plus basis and with Hollandia management.

421. On 21st June Mr Rogan attended a meeting with Hollandia. Mr Jongejan said that Hollandia had been offered the erection work at Wembley some weeks previously. Mr Van Rooijen said that Hollandia would prefer just to erect the PPT and roof, not the bowl.

422. Mr Muldoon had a meeting with Mr Muldoon on 22nd June. Mr Rogan handed over the draft heads of agreement for cost plus (as requested on 14th June). At this meeting Mr Muldoon raised the question of pain/gain.

423. As requested on 22nd June, Mr Rogan produced a draft heads of agreement for completion of the steelwork on a pain/gain basis. The risk which CB would assume under this agreement was only £250,000. Mr Rogan thought that this was a sensible figure at which to start negotiations. It is not the case that he thought CB was in a commercially strong position and therefore he was unwilling for CB to accept any serious risk. Mr Rogan handed this draft heads of agreement over to Mr Muldoon at a meeting on 23rd June. This meeting was brief. Mr Muldoon said that he had a decision to make and would do so by 29th June.

424. On 24th June Mr Muldoon telephoned Mr Rogan and said that Multiplex wanted to go forward with CB. He was going to send a letter with certain terms and conditions. This telephone call surprised Mr Rogan. By now he thought that Multiplex had decided to get rid of CB. Mr Muldoon's letter came later that day. The letter asked for (a) a programme in line with that annexed to the Heads of Agreement and (b) a lump sum or cost plus proposal, linked to the original sub-contract rates (subject the recent wage agreement etc). This was unrealistic.

425. Mr Rogan sent a letter in reply on 28th June and met with Mr Muldoon on the afternoon of 29th June. This meeting was very short. Mr Muldoon was just play acting. He said that CB's letter of 28th June did not meet Multiplex's requirements and Multiplex was going to give 28 days notice under the Supplemental Agreement. Mr Muldoon said that he expected CB to act professionally to ensure an orderly handover. Mr Rogan said that they would, and they expected Multiplex to do the same.

RICHARD THOMAS

426. Mr Thomas is project manager with long experience of the construction industry, although his experience of steel erection is more limited. Between 16th February and 30th September 2004 he was employed as project director at Wembley.

427. Before starting at Wembley, Mr Thomas received various briefings about which he jotted notes. He has some difficulty now in interpreting those notes. However, he was probably told that the contract price was £60 million and that this had been or would be substantially exceeded. He was told that High Point Rendel was involved. Mr Thomas also made notes about what needed to be done to get the project back on track. He was told the gist of the Heads of Agreement.

428. A couple of days after starting on site Mr Thomas became aware that CB had committed itself to the programme contained in the Heads of Agreement.

429. Mr Thomas was introduced to Multiplex's senior management on site. Mr Muldoon said that Multiplex were looking for a minimum erection rate of 550 tonnes per week.

430. During the time he was on site Mr Thomas found Mr Muldoon's demands to be inconsistent. On the one hand Mr Muldoon was pressing for higher erection rates. On the other hand he was pressing for a major reduction in CB's staff, labour and plant on site. It was not feasible to make staff and labour redundant and subsequently to replace them, as the level of work went up and down. On a complex construction project it is not possible for all members of the workforce to be fully occupied all of the time.

431. CB were unable to achieve high erection rates because of the large volume of design changes. Mr Thomas has never known anything like this before. He estimates that 25-30% of the changes to the bowl came after 16th February. The design changes led to delays in the "X steel" drafting and to deliveries of steel out of sequence. Sometimes it was necessary to make changes to steel already fabricated.

432. CB's employees were sometimes asked to do work outside the scope of the steelwork contract. The biggest example of this was remedial work to the arch bases. Factors which impacted upon CB's steelwork erection rates were: a crane prohibition notice (following the accident on 15th March), weather, design changes and variations, site conditions, out of sequence working, problems with the embedment plates, problems with the core tops and lack of adequate lay down areas. In relation to the core tops, it was suggested in cross-examination that CB should have inspected the core tops in advance and raised the problem early with Multiplex. Mr Thomas believed that CB did not have time to do this.

433. Mr Thomas did not become aware of concern about CB's budget for temporary works. As far as Mr Thomas was concerned there was no budget for CB's works. He was looking forward from 15th February.

434. Mr Thomas was careful to exclude the arch remedial works from CB's weekly reimbursable costs claims.

435. Mr Muldoon did ask for a cost to complete on a number of occasions. Mr Thomas looked at possible ways of tackling the future work and jotted down notes about this, some of which he deciphered in cross-examination. In Mr Thomas' view, there was no reason at all why CB could not have put forward a fixed price for which it was prepared to complete the steelwork.

436. Mr Thomas was aware of the debate about the 15th February valuation. He understood that the final figure of £32.66 million was agreed in mid-May. Mr Grant told him this by telephone.

437. Mr Thomas was responsible for CB's May and June progress reports. The fact that £32.66 million had been finally agreed was not included in the summary sections of those reports, because Mr Thomas missed it.

438. On the 16th July certificates 37 and 38 arrived, revaluing downwards the entirety of CB's work. Mr Thomas was flabbergasted and regarded it as an ambush by Multiplex.

439. On 21st July Mr Thomas attended the meeting with Multiplex at their offices in Berkeley Street. Mr Muldoon demanded to know when Multiplex would get their cheque. The whole atmosphere was hostile and overbearing. Mr Thomas believes that CB said at the meeting that the valuation of £32.66 million had been finally agreed. However, this fact is not mentioned in his witness statement.

JAMES CHILD

440. Mr Child was the finance director and company secretary of CB from its formation until December 2004. He was also a member of the Group Board.

441. On the Wembley project (as on other projects) the project team prepared white cards every month, to monitor the progress of the sub-contract. Mr Child reviewed these.

442. During 2003 the level of forecast costs for Wembley rose above the forecast value to complete. Mr Child became concerned about the high estimated value of variations and claims. In the August white card this figure was £7.69 million. There was a modest increase in the September white card and then a dramatic increase in the October white card, which showed a figure of £22.737 million for unagreed income. This figure came from the commercial team.

443. The October management accounts for the Cleveland Group showed a difficult financial position for the group as a whole, within which Wembley was of particular concern. Mr Child was very concerned about the effect of Wembley on the group as a whole, but he did not regard Wembley as a "hopelessly loss-making contract" (as suggested in cross-examination). During this period the Cleveland Group was planning to downsize its operations in Darlington and to expand in China.

444. In about October 2003, when CB's statutory accounts for 2002 were being prepared, the directors decided (in conjunction with the auditors, Ernst & Young) to show the Wembley project at December 2002 as likely to result in a £4.2 million loss. The reasoning process was that it was not possible to tell at such an early stage whether the project was likely to make a profit or a loss, therefore it should be treated as breaking even. The £4.2 million represents under-recovery of overheads. This £4.2 million loss was material, but not highly material. It did not need to be shown as an exceptional item, in the accounts.

445. The total operating loss shown in the profit and loss account for the year ended 31st December 2002 was £5.3 million. £4.2 million of that loss is Wembley. Nevertheless Mr Child does not regard that as highly material. The loss on Wembley and the fact that the £4.2 million is under-recovery of overheads is not specifically mentioned in the accounts. It did not need to be.

446. In December 2003 Mr Child instructed Mr Underwood to change the December 2002 white card retrospectively, in order to show the loss of £4.2 million. This was in order to accord with the opinions of the auditors.

447. In December 2003 cash was extremely tight in the Cleveland Group. The group had borrowing facilities up to about £15 million. A cashflow forecast prepared in December 2003 shows that the Tinsley contract was very profitable, but that a large deficit was forecast on Wembley and lesser deficits were forecast on certain other projects. Mr Child and his colleagues discussed Wembley at group level, because it was a major problem.

448. The difficulties of CB continued into 2004. According to the January board minutes, the total figure for creditors was £9 million. Of that £5-6 million was overdue to creditors. The company needed £4 million from Al Rushaid before the end of January in order to meet its obligations. However, it was not part of CB's strategy with Multiplex to threaten insolvency.

449. Mr Child prepared various typed notes in early 2004, which set out the financial position on Wembley and were used in negotiating the Heads of Agreement. Mr Child attended meetings with Multiplex during this period.

450. At a meeting on 12th February Mr Stagg produced a piece of paper headed "THE DEAL". The proposal was that Multiplex would pay £4 million to CB and would reimburse CB on a cost plus basis for a period of three months while the problems were resolved. At the end of that period either there would be an agreement as to price and programme or Multiplex could ask CB to leave site. At this time CB's costs to date were approximately £40 million. Just over £28 million had been certified for work done to the end of December. During the meeting Mr Stagg made a telephone call and ascertained that CB's payment for January was likely to be £4 million and that the payment for the first half of February was likely to be £2 million. The total of all those figures was £38 million, which was close to the figure which CB were looking for.

451. Mr Child attended a group board meeting on 11th February 2004, at which Mr Grant reported on the negotiations with Multiplex. Mr Child made it clear to the board that shareholder support was required for the business to continue as a going concern, with £4 million being required over the next few weeks. The minutes are an accurate summary of what was discussed. Sheikh Abdullah was not prepared to fund option 4 (carry on with the existing contract and make claims). The Sheikh's position, as reported by Mr Shetty (the Sheikh's man in the Cleveland Group), was that there had to be a solution on Wembley. Mr Child and his colleagues knew that if they did not do a deal on Wembley, they would have to take advice on whether CB was insolvent. Nevertheless they were confident of doing a deal with Multiplex.

452. "Project Trafalgar", which is mentioned in the board minutes of 11th February, was a plan for dealing with the media, politicians and the unions, in the event that CB had to make redundancies or wind down its business. Project Trafalgar was not pursued because the Heads of Agreement were concluded on 18th February.

453. Following the board meeting the directors of CB sought advice from KPMG on the insolvency aspect. However, KPMG's work was stopped in March because of the Heads of Agreement and also because Mr Shetty said that the Sheikh would continue putting money in.

454. In late February, after the Heads of Agreement were signed, a project white card was produced for December 2003. This white card reflects the deal done.

455. In March 2004 the management accounts for December 2003 were prepared. These take into account the Heads of Agreement and show a loss on Wembley of £1.2 million. The thinking here was that the effect of the Heads of Agreement was to generate a loss of £1.2 million. However, CB expected to make a profit from the go forward agreement. Therefore it was not necessary to make allowance for future under-recovery of overheads.

456. Clause 11 of the Heads of Agreement required a valuation of CB's works as at 15th February to be established. Mr Child was not involved in the discussions with WT about valuation. He was aware of the Multiplex paper of 21st April concerning valuation. He did not read that paper. He believed that it was a game (in the same way that CB's first application 18 had been a game).

457. Mr Child met Mr Stagg on a number of occasions and discussed a variety of matters, including the terms of the Supplemental Agreement. On the valuation issue, CB originally thought that £38 million was correct, but they forewent approximately £6 million in order to strike a deal. CB certainly believed that they were entitled to £32.66 million and that was what they agreed. Mr Stagg said at meetings that the difference between £32.66 million (CB's figure originally tabled on 31st March) and £30.3 million (WT's valuation) was relatively small and could be bridged.

458. On 14th May Mr Child, together with Mr Grant and Mr Rogan, attended a meeting with Mr Stagg at Multiplex's office in Berkeley Street. Mr Grant produced a typed agenda, on which Mr Child made notes during the meeting. Item 3 of the typed agenda reads: *"FEB 15 VALUATION*
"Essential to have the figure referenced in S.A. as agreed, as well as the actual valuation document."

459. When this item was reached, Mr Grant asked for the figure of £32.66 million to be included in the Supplemental Agreement. Mr Stagg said something like it did not need to be. Mr Child does not recall him giving any explanation. Mr Rogan interjected and asked if the number was a finally agreed number. Mr Stagg responded "Yes, tick". Mr Child noted in manuscript on his copy of the agenda "No. OK". The meeting then turned to other matters, principally China steel and temporary works.

460. On 20th May Mr Child attended another meeting with Mr Stagg. Mr Child took with him a draft of the Supplemental Agreement previously prepared by CB, not the more recent version proposed by Mr Stagg. This did not matter, as the object of the meeting was not to discuss the detailed wording of the agreement. Mr Child made notes of the meeting on the draft Supplemental Agreement which he had brought. He subsequently (and incorrectly) wrote on this document "Notes of meeting May 14". During this meeting Mr Stagg said that the £32.66 million figure did not need to go into the Supplemental Agreement, because it would be dealt with in the valuations and would be covered by clause 2.1. Mr Stagg also said that in a disaster situation Multiplex would want to claw the money back. He was referring to clause 2.2.

461. Mr Child had heard the phrase "Armageddon" before 14th May. He understood it to refer to a disaster scenario, where CB and Multiplex were not able to agree a solution under the Supplemental Agreement. Mr Stagg had used that phrase.

462. Mr Child met Mr Stagg on 3rd June in a coffee shop. Mr Stagg handed over a draft payment certificate in the sum of £32.66 million.

463. The minutes of the board meeting on 8th July refer to a funding gap of approximately £10 million. This was because the directors had been alerted to the fact that Multiplex was looking to make large offsetting deductions against CB. Mr Child prepared a spreadsheet setting out payments which Multiplex might withhold, which he sent to Mr Shetty and Mr Grant on 8th July. In his covering email Mr Child said that if there was likely to be a large funding shortfall from the Al Rushaid Group, then perhaps he should continue discussions with KPMG to consider administration for CB.

464. In those circumstances CB were not surprised when Multiplex made deductions from the July certificates. However, Mr Child was surprised that deductions were made from the 15th February valuation. Mr Child regarded that as binding.

465. At the board meeting on 23rd July, it was reported that the costs to complete were then £7.7 million. Since only £5.9 million remained to be paid of the £12 million lump sum, it was suggested in cross-examination that the sub-contract (as it had become by July 2004) was unprofitable. Mr Child did not agree. The £7.7 million included sums due to sub-contractors, any remaining China steel payments and other matters. Mr Rogan advised, and it was Mr Child's understanding, that the remaining work under the amended sub-contract would be profitable (i.e. if the remaining sums due were paid by Multiplex).

466. At the board meeting on 23rd July it was resolved to allege repudiation. At this meeting (as at the February board meeting) it was important to have a media and government strategy. This was because CB's actions would have a major impact on jobs in the north east.

467. In July the last white card (the June white card) was prepared for the project. It shows the detailed position in respect of the fixed price elements and China steel.

468. Mr Child resigned from the Cleveland Group in December 2004. At that time the 2003 accounts had still not been prepared and were two months late. The outstanding issues did not concern Wembley.

RODERICK GRANT

469. Mr Grant was chief executive of the Cleveland Group from 3rd December 2003 until March 2005. On joining the group Mr Grant expected to be principally involved in expanding operations in North America and China. However, it rapidly became clear that CB (the group's operating company in the United Kingdom) faced a looming crisis on the Wembley project. There was a serious and widening gap between costs incurred and agreed value. Mr Grant was told by the management team that the problems had arisen because of late information and design changes.

470. On 15th December 2003 Mr Grant and Mr Nightingale attended a meeting with John Roberts and Matt Stagg of Multiplex. Before the meeting Mr Grant prepared manuscript notes of what he wanted to say. These notes included CB's three options:
- carry on as before (which was not acceptable);
- walk off site and take a £6 million hit (this was a reference to the cap in clause 12.2 of the subcontract);
- work together to sort out a new plan.

471. Mr Grant did not get a chance to say all that he had planned, because Mr Roberts dominated the meeting. Mr Roberts acknowledged that there were problems with Mott's design, but said that the arch delay was entirely CB's responsibility. Mr Grant said that CB was going for adjudication on the arch, and proposed a three month resolution period for all issues during which Multiplex kept CB cash neutral. During the meeting Mr Grant said that Sheikh Abdullah was not prepared to bank roll Multiplex. At this stage Mr Grant was worried about the position of the Cleveland Group as a whole, but he did not threaten insolvency to exert pressure on Multiplex.

472. On the following day Mr Roberts telephoned and asked Mr Grant not to issue the arch adjudication until the new year. Mr Grant agreed. In return Multiplex did not claw back the £2.8 million paid on account of claims in September, but they did make other deductions. Mr Grant saw nothing wrong with adjudication as a method of resolving disputes, but he understood from High Point Rendel that adjudication would be expensive and time consuming.

473. Mr Grant had two telephone conversations with Mr Stagg on 9th January 2004. Mr Grant made it plain that the Sheikh was not prepared for CB to continue with acceleration measures until they were paid for the work done. Quite possibly Mr Grant said something which accords with Mr Stagg's note "Sheikh has said no $ no work". Mr Stagg said that this was blackmail. Mr Grant said that the cause of the problem was late and incomplete information from Mott.

474. On 27th January there was a meeting between John Roberts, Mr Stagg and Mr Muldoon of Multiplex and Sheikh Abdullah, Mr Nightingale and Mr Grant of CB. Before the meeting Mr Grant prepared a presentation and also private notes of what he wanted to say. Mr Grant's notes included various cost plus options. The notes also included a suggestion that CB should contribute £2 - 3 million for temporary works and some or all of their £4 million margin. In making these notes Mr Grant recognised that CB was not absolutely without fault. At the meeting matters became heated and Mr Grant was not able to complete his presentation. CB emphasised the large number of design changes. Mr Stagg said that CB could not make a claim for every RFI. Mr Roberts accepted that late design information had caused delays to the bowl and the PPT. He said that CB would be paid for these delays, when evaluated, and for variations.

475. During January Mr Grant was worried about the possibility of insolvency and the position of the directors. However, he did not say anything to Mr Stagg about going into administration or insolvency.

476. At a meeting on 3rd February Mr Stagg proposed that fabrication be taken away from CB. Mr Grant replied that CB would consider the proposal, but would have to retain some fabrication at Darlington.

477. Design changes continued despite Multiplex's promise of a design freeze. These had a considerable impact on productivity. It was because of the disruption caused by design changes that CB were prepared to release part of the fabrication work contained in their contract.

478. Negotiations (which are traced in some detail in Mr Grant's two witness statements) continued through early February and resulted in the Heads of Agreement, which Mr Grant signed on behalf of CB on 18th February. During the negotiations CB did not represent to Multiplex that CB's on-site costs during the interregnum would be £2.6 million. The programme attached to the Heads of Agreement was broadly in line with CB's then current acceleration programme. It was envisaged that CB would be able to erect about 250 tonnes per week up to the end of April and about 500 tonnes per week after the arch had been lifted. The Heads of Agreement provided for the arch to be lifted by 21st April, subject to EOT. Mr Grant did not investigate whether, if there were no delaying events, the arch could be lifted by that date.

479. Mr Grant attended the board meeting on 11th February at which the various options open to CB were considered. It was made plain that Sheikh Abdullah was not prepared to bank roll Multiplex. However, "Project Trafalgar" (referred to in the minutes) was a plan to deal with the media and others in the event that large scale redundancies became necessary in Darlington.

480. After the Heads of Agreement had been signed there were prolonged negotiations concerning the Supplemental Agreement. Mr Grant attended a series of meetings to resolve matters with Matt Stagg. Mr Grant and Mr Stagg got on well. They agreed that they both had difficult chairmen. Mr Grant did not take legal advice in relation to the Supplemental Agreement and he

was not aware that Mr Carson (who dealt with the detailed wording of the Supplemental Agreement) was taking legal advice. Mr Grant did not at the time see certain emails indicating that Mr Carson was taking legal advice from Walker Morris on the terms of the Supplemental Agreement. There was a further board meeting on 18th February to approve the signing of the Heads of Agreement. At this meeting Mr Grant was cautious in the figures which he presented to the board. During the meeting Mr Grant referred to the possibility of alleging repudiation. He raised this matter, to protect his own back, because one board member (Mr Fletcher) was keen on the idea. It was not Mr Grant's intention to allege repudiation.

481. In relation to China Steel (which was estimated to cost £4 million), Mr Grant proposed that Multiplex pay £2 million, which would be added to the £12 million lump sum. Mr Stagg eventually agreed to pay the £2 million but required that this be dealt with by a side order.

482. Mr Grant was aware that there was a dispute between CB and Multiplex about how variations should be dealt with. However, he did not go into that level of detail.

483. Mr Grant discussed the valuation issue with Mr Stagg at a number of meetings. At a meeting on 1st April Mr Grant proposed a figure of £32.66 million (being £2 million for China steel and a valuation figure of £32.66 million). No agreement was reached at this stage and the discussions continued. Mr Grant viewed Multiplex's paper of 21st April (proposing a valuation figure of £24,770,895) as mere manoeuvring.

484. Mr Grant was cross-examined in some detail about his manuscript notes relating to a meeting in late April. These notes can be roughly dated because they refer to "539 tonnes last week" – that is clearly a reference to the week of 19th – 23rd April. The notes record that Mr Grant could not give a price for going forward. This was because Mr Grant considered that matters such as the 15th February valuation, China steel etc had to be agreed first. The notes also record that Mr Grant did not trust Mr Muldoon and that Mr Grant wanted to get away from arguments every fortnight about deductions which Multiplex were seeking to make from CB's certificates. Despite one entry in the notes ("Sh Abdullah – don't lift arch until settled") Mr Grant did not use the arch lift as a bargaining counter. Nor did he let anyone else in CB do so.

485. The term "Armageddon" came up a few times in Mr Grant's discussions with Mr Stagg. It referred to the problems which would arise if CB were unceremoniously removed from the contract. It was the opposite of an orderly handover. Mr Stagg said that because of the difficulties of effecting a handover, it was inconceivable that CB would not be asked to continue with the steelwork. Both Mr Grant and Mr Stagg wanted to avoid Armageddon. There is a reference to Armageddon in Mr Grant's notes of his meeting with Mr Stagg on 1st April.

486. Mr Grant was pleasantly surprised when Mr Stagg stated that WT had "gone". He took this as a sign that the figure of £32.66 million was essentially agreed.

487. On the 14th May 2004 Mr Grant, Mr Child and Mr Rogan attended a meeting with Mr Stagg at his office. Mr Grant had prepared a typed agenda in advance. When the meeting reached item 3 (valuation) Mr Grant said that it was essential to have the figure in the Supplemental Agreement. Mr Stagg said that he agreed the number, but he did not want it in the document. He referred to internal reasons. Mr Rogan chipped in and asked if it was a finally agreed number. Mr Stagg said something like "I agree the number" or "yes". Mr Grant was not comfortable at the end of the meeting, but there was no way Mr Stagg would agree to the number going into the agreement.

488. On 17th May Mr Grant wrote to Mr Stagg enclosing a revised draft Supplemental Agreement. He inserted in paragraph (a) of schedule 1 that the gross valuation as at 15th February was £32.7 million. He had rounded the figure up to make the numbers simpler and because in the context of what they were talking about £40,000 was nothing. He made a number of other amendments to the draft agreement, for example in relation to payment for temporary works if CB left site.

489. Mr Stagg replied by email on 18th May attaching a further draft Supplemental Agreement. In this draft the figure of £32.7 million was deleted and reference to valuation "under the subcontract" was reinstated. In the email Mr Stagg wrote: *"Schedule 1. we will give valuation cert, at execution. the subcontract, in total (i.e. as amended by variations and this SA)."*

490. Mr Grant replied on the same day asking to see the documentation, adding "we do not want the 15 February valuation figure to be in any doubt". He wrote this because he wanted to see £32.66 million confirmed as a line in the sand.

491. On 20th May Mr Grant (together with Mr Child) met Mr Stagg in a coffee shop. He is certain that he and Mr Stagg met on that day, as opposed to talking by telephone, even though that meeting is not shown in his appointments diary. Mr Grant asked how he could be sure that Multiplex would not change the figure later, if it was not in the agreement. Mr Stagg said that clause 2.1 meant Multiplex could not change the figure, but that clause 2.2 enabled Multiplex to claim in the event of a catastrophe or disaster (Mr Stagg might have used either word). Mr Grant chipped in – something like the arch falling down – and Mr Stagg said yes. It was agreed that the figure would not be included in the Supplemental Agreement, but that Multiplex would issue a certificate for that amount.

492. On the 3rd June CB received a draft valuation certificate in the sum of £32.66 million. After briefly checking, Mr Grant thought that this confirmed the agreement as to valuation.

493. Mr Grant had further meetings with Mr Stagg to resolve other matters. The Supplemental Agreement was finally signed on 16th June. Mr Grant was keen to sign the Supplemental Agreement. Indeed if CB had not signed the Supplemental Agreement, it is unlikely that the company would have survived.

494. After the Supplemental Agreement had been signed, Mr Grant turned his attention to the next phase. He fully expected that CB would be able to negotiate a go forward price with Multiplex. On 21st June Mr Grant attended a meeting with Hollandia to discuss the proposal that Hollandia subcontract back to CB 1,000 tonnes of fabrication. Mr Jongejan said that Hollandia had already been offered the on-site work at Wembley. Mr Grant was concerned by these comments, but he trusted Mr Stagg's assurances that Multiplex would not switch to other subcontractors.

495. On 22nd June the arch lift was completed and everyone at CB was very proud.

496. During this period Mr Rogan was having discussions with Mr Muldoon about payment for the remaining works. However, CB did not put forward a complete offer of a fixed price for those works. The estimated cost was known. The margin and contribution to overheads were set out in the Supplemental Agreement. The real issues were risk and contingency. These issues

needed to be discussed between Mr Grant and Mr Stagg. Mr Grant was not prepared to authorise Mr Rogan to discuss this aspect with Mr Muldoon.

497. The programme which CB put forward during this period was hastily prepared. The maximum penalty for delay which CB offered to accept in correspondence was £500,000. This figure was small, but it was an opening shot in negotiations. Mr Grant expected to agree a larger figure with Mr Stagg.

498. Mr Grant made repeated attempts to telephone Mr Stagg in order to discuss and agree with him a fixed price for completing the works. Unfortunately Mr Stagg never returned Mr Grant's phone calls. Mr Grant did not make notes of his unanswered calls. Mr Grant did not before 29th June send any letters or emails to Mr Stagg, saying that they needed to sit down and discuss the matter. Mr Grant believed that the date of 29th June (specified in clause 7 of the Supplemental Agreement) would be extended.

499. Mr Grant was surprised and concerned to receive Multiplex's notice under clause 8 on the 29th June. This ran entirely contrary to what Mr Stagg had said about Multiplex's intentions. Mr Grant was also concerned about Multiplex's failure to pay the arch bonus. He arranged for a meeting of the group board to consider the situation on 8th July.

500. On 13th July Mr Grant went to see Alan Milburn at the House of Commons and informed him about developments at Wembley.

501. Mr Grant was horrified to receive certificates 37 and 38 on 16th July. These involved a flagrant breach of the agreement concerning the 15th February valuation, which CB had previously reached with Mr Stagg. There was no consultation about the drastic reductions which Multiplex were making to CB's applications for payment. The brief telephone call which Mr Stagg made to Mr Grant on 16th July was the first time Mr Stagg had spoken to Mr Grant since the signing of the Supplemental Agreement (apart from a meeting on site with Mr Stagg, Mr Muldoon and others on 22nd June to discuss issues affecting progress on site).

502. Mr Grant did not think that there was a contractual dispute with real issues. In his view Multiplex were having a go at CB, possibly with a view to putting the company into liquidation. The prospect of trying to adjudicate the events of July seemed totally impracticable, because of the substantial costs and delay which would be involved.

503. Mr Grant did not attend the meeting with Multiplex on 21st July, because he was not invited. Indeed he was out of town that day and did not hear about the meeting until afterwards.

504. The Cleveland Group board met on 23rd July and took the view that Multiplex was in repudiatory breach of contract. The letter which Mr Grant sent to Multiplex that day was drafted with the help of Mr Scott of Walker Morris. In that letter Mr Grant asserted that the valuation agreement was made on or about 3rd June. This was a reference to the date when Mr Stagg handed over the draft certificate to Mr Child.

505. By late July Mr Grant had given up and had put matters in the hands of the lawyers.

MR DONALD UNDERWOOD

506. Mr Underwood is the commercial manager of CB and a quantity surveyor of long experience. Mr Underwood was not involved in the preparation of CB's tender for Wembley, but he checked the tender after financial closure and found it to be satisfactory. Mr Underwood was assigned full time to the Wembley project in October 2002 and was on site from about April 2003. In the early months he believed that the project would be profitable for CB.

507. The pricing programme contained in the subcontract contains a neutral cashflow procedure, which was the basis for interim payments. As envisaged by the neutral cashflow procedure, Mr Underwood (together with Mr Long of Multiplex) developed a document entitled "Valuation Procedures". This provided for payment to be made in respect of off site materials, subject to production of supporting documents.

508. Mr Underwood prepared the white cards, using information obtained from others in the project team. Mr Underwood cannot explain the discrepancies between (a) the white cards in the trial bundle and (b) the white cards + supporting documents disclosed in the fourth week of the trial.

509. From the outset the steelwork was subject to an enormous number of changes. Multiplex failed to acknowledge the variations or make any payment for them until 4th February 2004, when they issued a valuation for change notices 1 – 720 (with two exceptions) in the sum of £2,884,712. Mr Underwood considered this figure too low.

510. There was a continuous problem of late, incomplete and erroneous design information. This problem, coupled with the numerous and extensive variations, caused delay and extra cost. In 2003 Multiplex made two payments to CB in respect of acceleration costs. First there was a payment of £580,000. Then in September Multiplex paid £2,803,604, which was described as a payment on account.

511. Mr Underwood was responsible for the formulation of CB's claims. He considers that these were properly presented. For example, there were four ring files in respect of CN 402. CB's programmes were provided to Multiplex. CB did not deliberately avoid particularising their claims, although Mr Underwood accepts that CB did not provide full details of their loss and expense claims. The sheer volume of changes made the formulation of claims (linking cause and effect) more difficult.

512. CB refused to provide their tender breakdown to Multiplex. This was a decision of the directors. The decision was not taken because any insufficiency in the allowance for temporary works.

513. The deductions made by Multiplex from interim certificates issued in December 2003 and January 2004 were unwarranted.

514. During the costs reimbursable period Mr Underwood dealt with CB's applications for reimbursement of on-site costs. He agreed the administrative arrangements with Mr Cursley. Mr Underwood made it clear in the documentation submitted that CB was not claiming the costs of arch remedial works. At no stage did Multiplex's surveying team suggest that the payment of CB's on-site costs was tied to productivity. Furthermore CB's productivity was significantly affected by variation work which Multiplex instructed, including:
    - Strengthening works to the top of the core.
    - Work relating to out of tolerance embedments.
    - Welding work to arch bases.

- Fitting gutters and brackets to rakers.
- Ongoing variation and retrofit work.

515. This variation work was not separately recorded and charged for in the weekly valuation submissions, since CB was being paid on a cost reimbursable basis.

516. Following the Heads of Agreement, Mr Underwood prepared valuation 18. (CB refers to its applications for payment as "valuations".) Mr Underwood accepts that a number of items in this valuation were incorrect, hence it was revised downwards. Mr Underwood accepted that even in CB's revised valuation 18 certain items may be the subject of legitimate disagreement.

517. A separate exercise, which had to be done after the Heads of Agreement, was the valuation of CB's works up to 15th February. Here there was a disagreement of principle between CB and Multiplex. In respect of a number of items, CB were claiming on a time elapsed basis, whereas Multiplex were saying that the starting point should be the proportion of measured work which CB had achieved by 15th February. Mr Underwood considers that Multiplex's approach to the 15th February valuation and Multiplex's methodology were wrong.

518. Mr Underwood strongly disagrees with Mr Cursley's paper dated 21st April 2004. For example he has allowed far too low a sum for variations. Mr Underwood was aware that discussions were taking place at director level about agreeing a final figure for the 15th February valuation. In mid-May Mr Child and Mr Rogan told Mr Underwood that a lump sum of £32.66 million had been agreed with Mr Stagg as the 15th February valuation. Mr Underwood was not entirely happy with this figure, which he regarded as too low.

519. On 24th May Mr Underwood was asked to contact Mr Cursley and give him details of uncontested or undervalued variations, which had not been incorporated in WT's valuation of £1,239,000 for variations. This was because Multiplex needed to add about £177,000 in respect of additional work, in order to achieve a build-up of £32.66 million for internal purposes. Mr Underwood telephoned Mr Cursley, who confirmed that £32.66 million had been agreed and that he was going to prepare an appropriate certificate. Mr Underwood met Mr Cursley on 25th May and gave him a one page document listing variations, from which Multiplex could make their selection. In early June Mr Child handed to Mr Underwood the draft certificate which Multiplex had promised to issue after the signing of the Supplemental Agreement. This incorporated an item of £176,890 taken from the list which Mr Underwood had given to Mr Cursley on 25th May.

520. The Supplemental Agreement was signed on 16th June. The next certificate after that (number 35) included an item of £32.66 million described as "WT + MPX revaluation".

521. Mr Underwood prepared the document headed "Estimate to completion from 28th June 2004", which Mr Rogan gave to Mr Muldoon on 14th June. This shows a total cost of £28.896 million and is a fully detailed build-up, which Mr Underwood and his team had been preparing since April or early May. Mr Underwood forwarded this document to Mr Ong. On 25th June Mr Underwood met Mr Ong and explained that this was a cost build-up, not a fixed price going forward.

522. Mr Underwood was horrified to receive certificate 37 on 16th July. The deductions in that certificate were excessive and unwarranted. In particular, the agreement as to the 15th February valuation had been ignored and the £32.66 million had been drastically reduced. Likewise the reductions in respect of reimbursable costs were unjustified. Mr Underwood took the view that the supporting calculation was contrived. CB were shocked by the contents of certificate 37 and indeed certificate 38. Nevertheless, very fairly, Mr Underwood was prepared to accept in cross-examination that there was scope for legitimate disagreement about some of the items in CB's July application for payment.

523. Mr Underwood attended the meeting with Multiplex on 21st July. This meeting came out of the blue. He was in Mr Thomas' room on 21st July, when Mr Muldoon's secretary telephoned Mr Thomas and asked him to go to a meeting in Berkeley Street. At Mr Thomas's request, Mr Underwood accompanied him to the meeting. One of the first questions asked by Multiplex at the meeting was why Mr Grant was not there. Mr Underwood asked for an explanation of the revaluation of CB's works. Mr Muldoon said that this arose out of the Supplemental Agreement. In answer to Multiplex, Mr Thomas confirmed that the revaluation was not agreed. The atmosphere was extremely tense. Mr Muldoon demanded to know when Multiplex would get their cheque.

524. Although Mr Underwood's oral evidence was confined to one afternoon, his two witness statements are long and detailed. In all they run to 56 pages. Although I bear in mind that detailed evidence, I do not traverse all of it in this summary.

Part 6. ISSUE 1

525. Clause 2 of the Heads of Agreement specifically contemplated the execution of a Supplemental Agreement which would formally amend the subcontract. In accordance with that provision (albeit after some delay) the Supplemental Agreement was duly executed with an effective date of 15th February. The terms of the Supplemental Agreement are clearly built upon and developed from the terms of the Heads of Agreement. The two agreements are so closely linked that it was obviously the intention of the parties that the various provisions of the Supplemental Agreement should replace the corresponding terms of the Heads of Agreement.

526. In **Greswolde-Williams v Barneby** [1901] LT 708 at 711 Mr Justice Wills formulated the relevant principle of law in these terms:

527. *"It appears to me that the result is that this case is an illustration of a broad principle of law which is perfectly well known and is constantly acted upon, namely, that where a preliminary contract of any description, whether verbal or written, is intended to be superseded by, and is in fact superseded by, one of a superior character, then the later contract -- the superior contract -- prevails, and the stipulations in the earlier one can no longer be relied upon. That proposition is laid down with great distinctness in the case of **Leggott v Barrett**, which really points to this, that as regards a preliminary contract which is naturally covered by the subsequent contract, the terms of the subsequent contract are to prevail."*

528. In my view, that principle of law is correctly stated and is applicable in the present case. In the construction sector, contracts are frequently intended to have retrospective effect. This is because the parties get on with the building project whilst the formalities are being attended to. See, for example, **Trollope & Colls Limited v Atomic Power Constructions Limited** [1963] 1WLR 333 at 339.

529. In the present case, the controversy between the parties which issue 1 encapsulates has been progressively narrowed. It is now common ground that clauses 2.1 and 2.2 of the Supplemental Agreement supersede clause 3 of the Heads of Agreement with retrospective effect from 15th February 2004. It is now common ground that schedule 1, paragraph (c) of the Supplemental Agreement supersedes clause 8 of the Heads of Agreement with retrospective effect from 15th February 2004.

530. The one live issue is whether clauses 3.3 and 9.4 of the Supplemental Agreement supersede clause 9 of the Heads of Agreement with retrospective effect from 15th February 2004.

531. Mr Hugh Tomlinson QC, for CB, contends that clauses 3.3 and 9.4 do indeed have that effect. Mr Roger Stewart QC, for Multiplex, was initially minded to concede this point: see paragraph 31 of his opening note. During the trial, however, Mr Stewart withdrew that concession and was emboldened to argue the contrary.

532. On this issue, I am quite satisfied that Mr Stewart's first thoughts and Mr Tomlinson's submissions are correct.

533. The Supplemental Agreement formally amended the subcontract and defined CB's obligations in respect of progress and completion: see schedule 2 and schedule 4 to the Supplemental Agreement. One consequence of these amendments is that the hierarchy of contractual documents as set out in clause 2.2 of the subcontract conditions has been subverted. The Supplemental Agreement prevails over all other contractual documents.

534. It is true that clauses 3.3 and 9.4 of the Supplemental Agreement are less onerous than clause 9 of the Heads of Agreement. On the other hand, clauses 3.3 and 9.4 of the Supplemental Agreement fit neatly with the scheme of the original subcontract (for example, part 4 of the appendix). Furthermore, clauses 9.3 and 9.4 of the Supplemental Agreement were the product of prolonged negotiation. They were entered into at a time when it was obvious that the rate of progress envisaged by clause 9 of the Heads of Agreement could not be achieved, for reasons which were in dispute.

535. For all these reasons, my conclusions in relation to issue 1 are as follows: First, the Supplemental Agreement was effective with retrospective effect from 15th February 2004. Secondly, clauses 3.3 and/or 9.4 of the Supplemental Agreement supersede clause 9 of the Heads of Agreement with effect from 15th February 2004.

536. In the result, therefore, my answer to issue 1 is: yes.

Part 7. ISSUE 2

537. The Heads of Agreement was in its day a binding agreement. It imposed contractual obligations upon both parties during the interregnum period. It can be seen that during this period both Multiplex and CB acted with reference to the Heads of Agreement, even though they did not achieve full compliance with its provisions. As the interregnum period wore on, however, the parties increasingly had regard to the emerging terms of the Supplemental Agreement. Finally, on 16th June the Supplemental Agreement was executed and its provisions superseded those of the Heads of Agreement.

538. In those circumstances, a close analysis of the obligations which were once imposed by clause 9 of the Heads of Agreement and by the programme referred to in that clause would seem to be of academic interest only. Nevertheless, I address issue 2 because it has been argued on both sides and the parties wish to have the court's decision.

539. The programme attached to the Heads of Agreement is a single sheet of paper which lists 38 activities. Against each activity there is marked a start date, a finish date and which company was responsible for performing it. On the right-hand side is a bar chart showing the period for each activity. As explained by Mr McGregor (the author of this programme) the red bars indicate activities on the critical path, the green bars indicate other activities.

540. This single page programme was based upon CB's programme, WS05-V1, dated 11th February 2004. That underlying programme comprises 34 sheets and is very much more detailed. Of the 38 activities shown on the single sheet programme, five were removed from CB's scope of work by clause 4 of the Heads of Agreement. Two further activities (relating to China steel) were later removed from the scope of the Heads of Agreement and dealt with by a side order. Most of the activities shown on this programme had completion dates well beyond the three-month period referred to in clause 9 of the Heads of Agreement.

541. There were, however, nine activities which were retained by CB and which were due for completion within the three-month period. These were:

1. Bowl phases 11 to 18 drafting.
5. Bowl phases 21 to 28 drafting.
7. Bowl phases 31 to 38 design.
9. Bowl phases 31 to 38 drafting.
19. PPT design.
20. PPT drafting.
300. North roof design.
312. South roof design.
322. East-west roof design.

542. Clause 9 of the Heads of Agreement imposed upon CB an obligation to complete each of those nine activities by the specified dates, subject to any entitlement to extension of time which may accrue after 15th February.

543. What then is the position in relation to activities which were due for completion after 15th May? Clause 9 imposed no express obligation in respect of these activities. In those circumstances, submits Mr Stewart, there must be an implied obligation upon CB to execute the works with such diligence and expedition as were reasonably required in order to meet the dates of the programme.

544. Mr Tomlinson, on the other hand, submits that there is no such implied term.

545. Both counsel accept that the appropriate tests for the implication of such a term are the five tests set out in **BP Refinery Pty Limited v President, Councillors and Ratepayers of Shire of Hastings** [1978] 52 ALJR 26 (Privy Council) and substantially adopted by the Court of Appeal in **Philips Electronique v British Sky Broadcasting** [1995] EMLR 472 at 480 to 482. I agree that these tests are appropriate in the present case.

546. There are six reasons why I do not think that those tests are satisfied and why I am not prepared to find the implied term for which Multiplex contends.

(i) The subcontract itself does not contain any express term that CB shall execute the works with diligence and expedition. Instead, there are a series of express terms whereby Multiplex can regulate the progress of CB's works: see, for example, appendix part 4 and section 3 of the special conditions.

(ii) Clause 9 of the Heads of Agreement expressly provided that CB's activities, which were currently due for completion after 15th May, would be reprogrammed. I find it impossible to imply a term that CB would adhere to a programme which everybody knew was going to be changed.

(iii) The dates set out in the restraint schedule incorporated into the original subcontract were not binding. CB had no obligation to endeavour to achieve those dates. In those circumstances, it would be contrary to the scheme of the subcontract for the Heads of Agreement to require CB to direct its endeavours to a new set of programme dates extending 16 months into the future.

(iv) The parties specifically turned their minds to CB's obligation as to progress. They specified a date of 21st April 2004 for lifting the arch. They specified the precise extent of CB's obligations in relation to programme. If they had intended to supplement CB's duty to achieve the ten fixed dates specified with some further and more general obligation of diligence and expedition, they would have said so.

(v) Clause 9 of the Heads of Agreement makes perfectly good sense as it stands. The proposed implied term is not necessary to give business efficacy to the contract. It is certainly not obvious that this was or should have been intended by either party.

(vi) The reasoning in **GLC v Cleveland Bridge and Engineering Company Limited** [1986] 34 BLR 50, upon which Mr Stewart relies, is inapplicable to the circumstances of the present case. Furthermore, the general principles enunciated in Hudson's Building and Engineering Contracts (11th edition) at paragraphs 9-032 to 9-033, do not impact upon the Heads of Agreement, which was negotiated at a time of crisis for a specific purpose and for a limited period.

547. In the result, therefore, my answer to issue 2 is: no.

Part 8: ISSUE 3

548. Issue 3 covers much of the same ground as issue 2. Although Mr Tomlinson has valiantly argued that the parties cannot have intended what clause 9 of the Heads of Agreement plainly says, I regret that I am not persuaded. The answers to questions (a), (b), (c) and (d) of issue 3 flow from the express words of clause 9 and from the analysis of that clause set out in part 7 above.

549. In relation to question (e), however, there are further matters to consider. Mr Stewart contends that an average erection rate of 400 tonnes per week was necessary if phases 11 to 18 of the bowl were going to be completed by the specified date, namely 26th July 2004. As a matter of arithmetic, no doubt Mr Stewart is right. However, this particular activity (activity 21) had a programmed completion date outside the three-month period specified by clause 9. Accordingly, clause 9 of the Heads of Agreement did not oblige CB to complete this task by any particular date.

550. In my judgment, whatever may be CB's obligations under other contractual provisions, it is quite impossible to derive from clause 9 of the Heads of Agreement an obligation to erect the bowl steelwork at an average rate of 400 tonnes per week. In the result, therefore, my answers to the five questions contained in issue 3 are as follows:
(a) Yes, but only in respect of activities 1, 5, 7, 9, 19, 20, 300, 312 and 322.
(b) No.
(c) No.
(d) No in respect of the bowl steelwork, but yes in respect of the arch.
(e) No.

Part 9. ISSUE 4

551. The formulation of issue 4 changed radically during the course of the trial. Therefore, the parties' closing written and oral submissions are more directly in point than their opening submissions. Nevertheless, I bear in mind all the arguments which have been directed to issue 4 in its various manifestations.

552. Multiplex contends that the sums totalling £5.25 million which were payable under section 6 of the Supplemental Agreement were in settlement of inter alia all disputed variations. CB contends that this is not so and that substantial additional payments are due in respect of variations.

553. In order to understand Multiplex's case more fully, I asked Mr Stewart (a) which were the disputed variations that on his analysis were settled by the Supplemental Agreement and (b) which were the undisputed variations that were not so settled. In answer to this question, Mr Stewart said that the variation in respect of the vomitory was agreed and therefore fell into the latter category. He then turned to the batch of variations which Multiplex valued at £2,884,712 on 4th February 2004. He pointed out, correctly, that Mr Underwood regarded that valuation as too low. However, Mr Stewart also accepted, on checking Mr Underwood's oral and written evidence, that Mr Underwood's discontent was not conveyed to Multiplex. After some further research, Mr Stewart submitted that two variation items in the 4th February batch were disputed, namely arch lighting bracketry (which Multiplex had assessed at £170,304) and drawing rework (which Multiplex had assessed at £343,680). The documents support that submission. However, the remaining variations in that batch (valued at £2,370,728) were not disputed. Mr Stewart accepts that this is the position on the evidence before the court: see Day 16, page 96.

554. I shall therefore proceed on the basis that the undisputed variations were all of the 4th February batch except arch lighting bracketry and drawing rework. The disputed variations were arch lighting bracketry, drawing rework, and all variations instructed before 15th February but not included in the 4th February assessment.

555. It is against this factual background that I must address the two rival interpretations of clause 2.1 of the Supplemental Agreement which are put forward.

556. Mr Stewart contends that the effect of clause 2.1 is that CB compromised its claim in respect of disputed pre-15th February variations. Accordingly, sums attributable to those variations should be left out of account in determining the gross valuation of the steelwork as at 15th February (as required by schedule 1, paragraph (a)). Also, sums attributable to those variations should be left out of account in determining what reimbursement is due to CB under schedule 1, paragraph (c), for fabrication and retrofit work done onsite after 15th February.

557. Mr Stewart accepted, however, in his oral submissions (although not in his written submissions or in his formulation of issue 3, paragraph (a)) that payment for erection and erection related work should not be reduced on this account. In other words, CB should be reimbursed for its costs of erecting steelwork after 15th February whether or not that steelwork had been varied by an instruction given before 15th February: see Day 16, page 141.

558. Mr Tomlinson, on the other hand, accepts only that CB's loss and expense claims attributable to pre-15th February variations were compromised by the Supplemental Agreement. Mr Tomlinson submits that the measured value of the varied work was not so compromised. Accordingly, the measured value of the pre-15th February variations fell to be included in the valuation of the steelwork as at 15th February (required by schedule 1, paragraph (a) of the Supplemental Agreement). The costs of all fabrication and retrofit work done onsite after 15th February should be reimbursed under paragraph (c) of schedule 1, whether or not that fabrication and retrofit work was attributable to pre-15th February variations. Mr Tomlinson accepts, however, that the lump sum of £12 million agreed for off site work in schedule 1, paragraph (b) does take into account pre-15th February variations.

559. Both parties contend that their respective interpretations of the Supplemental Agreement are in line with the earlier Heads of Agreement. Although arguments of great subtlety were advanced by both counsel about the true meaning of the Heads of Agreement in this regard, I shall not venture into that arena. It is common ground that the Supplemental Agreement superseded the Heads of Agreement for this purpose. Furthermore, the formidable battery of questions which counsel have set for me to answer does not include any question about the true meaning of the now superseded clause 3 of the Heads of Agreement. Suffice it to say that both of the rival interpretations of clause 3 of the Heads of Agreement urged by Mr Tomlinson and Mr Stewart respectively seem to me to be arguable. In my view, resolution of this question sheds no light on the true meaning of clause 2.1 of the Supplemental Agreement in relation to variations.

560. I have also heard evidence about how Multiplex and CB dealt with pre-15th February variations or attempted to deal with them during the interregnum. It is abundantly clear from this evidence that there was considerable confusion within both camps about what had been settled and what had not been settled by the Heads of Agreement. It was against this background that each party was seeking to negotiate the most favourable possible deal in the Supplemental Agreement. I have come to the conclusion that the parties' conduct during the interregnum, even if admissible as part of the factual matrix, sheds no light on the true meaning of clause 2.1 in relation to variations. Accordingly, I must tackle issue 4 simply by reading the words of the Supplemental Agreement and deciding what they mean.

561. Having performed this exercise, I have come to the conclusion that Multiplex's interpretation as modified by Mr Stewart in his closing speech, is correct. I reach this conclusion for six reasons:

(i) Clause 2.1 states that the provisions of the Supplemental Agreement are in full and final settlement of all disputes and claims existing on or before 15th February "whether for extension of time, direct loss and/or expense, variations, other adjustments to the subcontract sum, damages for breach of contract or otherwise". This is an all-encompassing list of the financial disputes between the parties. I find it impossible to read into this list some such phrase as "except the measured value of variations".

(ii) The sums totalling £5.25 million payable by Multiplex to CB under section 6 of the Supplemental Agreement are "in consideration of the above". That must be a reference to the preceding provisions, in particular clause 2.1.

(iii) Clause 4 of the Supplemental Agreement says that the adjusted contract sum shall be as specified in schedule 1. Clause 4 also includes the phrase "taking account of all the matters referred to in clauses 2.1, 3.1 and 3.2". In my view, this indicates that the computation exercises required by schedule 1 shall be performed without including those matters which have been settled by clause 2.1 or omitted from CB's scope of work by clause 3.1. Any alternative reading of clause 4 would lead to an absurd result.

(iv) CB's interpretation leads to the anomaly that the measured value of pre-15th February variations is included in paragraph (a) of schedule 1, excluded from paragraph (b) and included in paragraph (c). Such a reading of schedule 1 is bizarre. Furthermore, it would mean that CB could at whim increase its remuneration by shifting work from paragraph (b) to paragraph (c). This could be achieved by transferring fabrication work from Darlington to Wembley.

(v) Multiplex's interpretation of schedule 1, paragraph (c) fits with the language of that provision, once one takes into account the concession made by Mr Stewart in his closing speech at Day 16, page 141. On this interpretation, CB will recover all costs reasonably and properly incurred in connection with erection after 15th February. It can be seen from the structure of the Supplemental Agreement as a whole that onsite erection is the principal focus of schedule 1, paragraph (c).

(vi) On this interpretation of the Supplemental Agreement, CB recovers some £2.37 million in respect of variations which were not disputed as at 15th February, plus £5.25 million in respect of loss and expense, acceleration measures and disputed variations. These two figures total approximately £7.62 million. Having regard to the claims and issues which were being debated during the interregnum, I see nothing surprising or untoward in this figure. Neither party can say that those figures are so high or so low that this outcome cannot possibly have been intended.

562. Let me now draw the threads together. Despite the industry of leading and junior counsel, issue 4 still does not quite encapsulate the real dispute between the parties. Subparagraph (a), which is meant to represent Multiplex's case, does not include Mr Stewart's concession in respect of erection costs. Subparagraph (b) which is meant to represent CB's case presupposes that CB will win issue 6. I believe that subparagraph (b) should really be focused upon the 15th February valuation, whatever that may turn out to be after the court has decided issue 6.

563. I therefore propose to respond to issue 4 not with "yes" or "no" answers, but with the following formulation which I hope will be of greater assistance to the parties:

564. "Insofar as such variations were disputed, the costs of designing and fabricating the varied elements of the work after 15th February 2004, whether off site or on site, were compromised by the terms of the Supplemental Agreement."

Part 10. ISSUE 5

565. Clause 2.1 of the Supplemental Agreement provides: *"Subject to clause 2.2, the provisions of this agreement are in full and final settlement of all disputes between the contractor and the subcontractor and all and any claims by the subcontractor to the contractor and by the contractor to the subcontractor existing on or before 15th February 2004 under or in connection with the subcontract whether for extension of time, direct loss and/or expense, variations, other adjustments to the subcontract sum, damages for breach of contract or otherwise or howsoever arising. Neither the contractor nor the subcontractor shall be entitled or*

permitted to make or pursue any claims against the other for any matter arising from any event or circumstance occurring up to and including 15th February 2004 (whether or not known to the subcontractor)."

566. Clause 2.2 provides: *"Clause 2.1 shall not apply to any claim that the contractor might have for design workmanship or materials not being in accordance with the subcontract."*

567. Absent clause 2.2, the effect of clause 2.1 would be to shut out all claims by Multiplex against CB for defects existing on 15th February 2004. However, clause 2.1 is expressly stated to be subject to clause 2.2. Clause 2.2 expressly preserves claims of that character.

568. Mr Tomlinson contends that clause 2.2 is limited to latent defects. He submits that the phrase "might have" means "might have but does not know about". In support of this argument, Mr Tomlinson relies on two authorities, namely **Kitchen Design and Advice Limited v Lea Valley Water Company** [1989] 2 Lloyd's Law Reports 221 and **Line Trust Corporation v Fielding** (Court of Appeal transcript 26th July 1999).

569. In **Kitchen Design**, Mr Justice Phillips considered the meaning of a discharge of claims that insurers "have or may have". He construed those words as covering both current claims and future claims. In **Line Trust** the Court of Appeal was dealing with a Tomlin order which included the provision "All parties ... release all claims which they or any of them have or may have". It was held that the words "may have" embraced future claims. Mr Tomlinson submits that the phrase "might have" in clause 2.2 should be construed in the same way as "may have" in **Kitchen Design** and **Line Trust**.

570. I do not accept this submission. The decision of Mr Justice Phillips in **Kitchen Design** and the decision of the Court of Appeal in **Line Trust** are both readily understandable, given the context in which the phrase "may have" appeared in those two cases. In the present case, however, the phrase "any claim that the contractor might have" is clearly used to denote any present or future claim by Multiplex against CB. Clause 2.2 in the supplemental agreement is preserving claims, not releasing them. The clause contains no restriction to future claims or to unknown claims.

571. In my view, the interpretation of clause 2.2 for which CB contends is contrary to the clear language of the clause. Furthermore, that interpretation would have the consequence that every defects claim would be preceded by an enquiry about Multiplex's state of knowledge on 15th February 2004. No such intention can be discerned from the language of the Supplemental Agreement. Nor, in my view, can any such restriction be read into clause 2.2, either by reason of the circumstances in which the Supplemental Agreement was made or by reason of the purpose which the Supplemental Agreement was intended to serve.

572. A further difficulty in CB's path is that clause 2.1 includes the phrase "whether or not known to the subcontractor". Therefore, this was a topic to which the parties expressly turned their minds. If they had intended to restrict clause 2.2 to claims which were not known at the time, they would have said so in terms. For all these reasons my answer to issue 5 is: no.

Part 11. ISSUE 6

573. It is CB's case that on 14th May 2004 an oral agreement was made between Mr Stagg of Multiplex and Messrs Rogan, Child and Grant of CB that the final valuation of CB's works up to 15th February was £32.66 million.

574. It is Multiplex's case that no such oral agreement was made. On the contrary, what Mr Stagg agreed was that an interim valuation certificate would be issued valuing CB's works to 15th February at £32.66 million. Accordingly, that valuation (like all valuations in interim certificates) could be revised later.

575. The factual history leading up to the meeting on 14th May and the evidence of both parties have been narrated in parts 2, 4 and 5 of this judgment. In particular, clause 11 of the Heads of Agreement provided: *"A valuation will be compiled up to 15-2-04 (after which the arrangements described in the foregoing will apply) including £25K for overtime for week ending 15-2-04. This valuation will be checked by an independent [quantity surveyor]. Payment will be made on the basis of this valuation, less paid to date. The valuation will include an appropriate deduction for site office rent. Should CBUK dispute any deductions made by MPX in this valuation, then the value of the deductions, only, may be referred to dispute resolution."*

576. Pursuant to that provision, WT were appointed to perform the function of independent quantity surveyor. WT produced a report containing two alternative figures, neither of which was acceptable to the parties. By letter dated 22nd March, Multiplex agreed to make an interim payment on the basis of WT's higher figure, namely £30,294,651. Discussions with WT and between the parties continued through March and April, but did not result in any valuation being agreed. At the end of April, WT's services were dispensed with.

577. In parallel with the discussions about valuation, the draft Supplemental Agreement was being negotiated between the parties. The provision in that draft agreement corresponding to clause 11 of the Heads of Agreement was schedule 1, paragraph (a).

578. During this period there were many bones of contention between the parties including, for example, China steel and what should be done about temporary works if CB left the site. During the course of negotiations it became CB's position that the valuation as at 15th February should be £32.66 million and that this figure should be written into schedule 1, paragraph (a) of the Supplemental Agreement. Mr Grant proposed at a meeting on 1st April that the 15th February valuation should be £32.66 million and that £2 million should be paid for China steel. CB continued to argue for these figures over the next six weeks.

579. On Friday, 14th May Mr Stagg, Mr Rogan, Mr Child and Mr Grant gathered for a meeting in Mr Stagg's office. Mr Grant's typed agenda for the meeting included the following as item 3: *"FEB 15 VALUATION.*
- Essential to have the figure referenced in SA as agreed, as well as the actual valuation document."

580. There is a conflict of evidence as to what was said in the course of that meeting about item 3. That evidence is summarised in parts 4 and 5 above. I have carefully considered the witness statements and the oral evidence of the four persons who were present, the contemporaneous notes which they made, the documents which they wrote following the meeting and the evidence given in the adjudication. Having done so, I conclude that £32.66 million was agreed as a figure which Multiplex was prepared to pay in its regular valuation certificates, but not as a final valuation for the purposes of schedule 1, paragraph (a) of the Supplemental Agreement. I reach this conclusion for eight reasons:

(i) On this crucial issue, I find Mr Stagg to be an honest and reliable witness. If Mr Stagg had agreed £32.66 million as a final valuation for the purposes of schedule 1, paragraph (a), he could hardly (given the subsequent history of events)

have forgotten that fact. I am quite satisfied that Mr Stagg was not deliberately lying in the witness box about this matter.

(ii) The figure of £32.66 million was not included in schedule 1, paragraph (a) of the Supplemental Agreement. Mr Grant pressed for the inclusion of this figure both at the meeting on 14th May and subsequently, but always without success. If the figure of £32.66 million had been agreed as the valuation for the purposes of schedule 1, paragraph (a), I believe that the figure would have been set out in that paragraph. It does not make sense for two major construction companies entering into a formal agreement, which was of grave importance to both companies, deliberately to omit a crucial term upon which they were agreed.

(iii) During the preceding one and a half years relations between CB and Multiplex were acrimonious to say the least. One of the many causes of acrimony was that Multiplex sometimes threatened to deduct from valuations or actually deducted from valuations monies previously certified as payable. CB did not trust Multiplex. If the directors of CB had negotiated the oral agreement which is alleged, they would have insisted that it be recorded in the supplemental agreement. Multiplex would have had no grounds to resist this. I do not accept that Mr Stagg had or put forward any internal or political reasons for not formally recording whatever was agreed between the parties.

(iv) The references in the evidence of Mr Rogan, Mr Child and Mr Grant to a "finally agreed number" are, in my view, reconstruction. I do not suggest that those witnesses are dishonest. In my view, their recollection of the crucial meeting has been coloured by what they were hoping to achieve.

(v) The notes made by participants during the meeting do not support the contention that £32.66 million was agreed as a final and binding valuation up to 15th February.

(vi) The letters and e-mails passing between the parties after 14th May are not, in my view, consistent with a final and binding valuation having been agreed on that date. On the contrary, CB was still pressing for this. Indeed, in his letter dated 17th May Mr Grant was pressing for a slightly higher figure.

(vii) The progress reports sent by CB to Multiplex for May and June 2004 do not refer to the valuation agreement. In my view, if such an important matter had been agreed it would have been recorded in the summary section of those reports. Mr Rogan was unable to explain this omission. The explanation given by Mr Thomas is unsatisfactory.

(viii) Whether the contact between the parties on 20th May was by telephone or at a meeting may not be important. What is striking, however, is that Mr Stagg, Mr Grant and Mr Child all recall Mr Stagg saying that Multiplex may want to claw the money back in a disaster or catastrophe situation. In previous discussions with CB, Mr Stagg had referred to the removal of CB from site as a disaster or Armageddon situation: see the evidence of Mr Stagg, Mr Child and Mr Grant.

581. Mr Tomlinson places heavy reliance on internal documents of Multiplex, in particular Mr Ong's e-mail of 25th May and Mr Cursley's e-mail of 28th May. I see the force of Mr Tomlinson's points. On the other hand, neither Mr Ong nor Mr Cursley were present at the crucial meeting on 14th May. Mr Cursley said that he gained his understanding about these matters from what Mr Underwood said at a meeting on 25th May. Mr Ong gained his understanding from Mr Cursley. I have come to the conclusion that this explanation is probably correct. In any event, those two e-mails from Mr Cursley and Mr Ong cannot possibly tip the balance in favour of CB, in view of the other matters mentioned earlier.

582. Let me now draw the threads together. For the reasons set out above, my answers to issue 6 are as follows: (a), no; (b), this question does not arise.

Part 12. ISSUE 7

583. In view of my findings of fact in part 11 above, issue 7 does not arise. Nevertheless, in view of the legal arguments which have been developed, I should give a short summary of my conclusions and reasoning in relation to issue 7.

584. The Supplemental Agreement is a formal agreement which amends the subcontract. Certain amendments to the subcontract are to be found in schedule 2 to the Supplemental Agreement. When I refer to provisions of the subcontract in this part of the judgment, I shall incorporate the amendments made by that schedule.

585. Clause 1.3 of the articles of the subcontract provides: *"The subcontract comprises the conditions together with any special conditions annexed hereto (collectively referred to as the 'subcontract conditions'), the Appendix, the Supplemental Agreement and the Articles of Agreement..."*

586. Clause 2.2 of the subcontract conditions provides: *"If any conflict appears between the conditions and/or the appendix and/or the numbered documents and/or the special conditions the foregoing shall take precedence in the following order:-*
"1A. Supplemental Agreement.
"1. The Articles of Agreement.
"2. The Appendix.
"3. The Conditions.
"4. The Special Conditions.
"5. The Numbered Documents."

587. Thus it can be seen that as from 16th June 2004 the Supplemental Agreement takes its place at the top of the pyramid and prevails over the other subcontract documents.

588. Clause 1.8.1 of the subcontract conditions provides: *"The Sub-Contract constitutes the entire agreement between the parties and supersedes all prior negotiations, commitments, representations, communications and agreements relating to the Sub-Contract either oral or in writing except to the extent they are expressly incorporated herein. The Sub-Contractor confirms that it has not relied upon any representation inducing it to enter into the Sub-Contract (whether or not such representation has been incorporated as a term of the Sub-Contract) and agrees to waive any right which it might otherwise have to bring any action in respect of such representation. The Sub-Contractor further confirms that there is not in existence at the date of the Sub-Contract any collateral contract or warranty of which the subcontractor is the beneficiary which might impose upon the Contractor obligations which are in addition to or vary the obligations expressly contained in the subcontract and which relate in any way to the subject matter of the Sub-Contract. The Sub-Contractor's only rights arising out of, or in connection with, any act, matter or thing said, written or done, or omitted to be said, written or done, by or on behalf of the contractor (or any agent, employee or subcontractor of the Contractor) in negotiations leading up to the Sub-Contract or in the performance or purported performance of the Sub-Contract or otherwise in relation to the Sub-Contract are the rights to enforce the express obligations of the Contractor contained in the Sub-Contract and to bring an action for breach thereof. Nothing in this clause 1.8 is intended to exclude liability of the contractor for fraud or fraudulent misrepresentation."*

589. The subcontract, which is referred to in this clause, by definition includes the Supplemental Agreement. Accordingly, no oral representation or agreement which was made by either party in the course of negotiations can be relied upon, unless it is expressly incorporated into the contractual documents. I therefore come to the conclusion that even if (contrary to my findings of fact in part 11 above) the alleged oral valuation agreement was made, nevertheless it is of no effect because it was not recorded in the contractual documents. Furthermore, the latter part of clause 1.8.1 shuts out CB's proposed argument based upon estoppel.

590. I have reached these conclusions simply on the basis of clause 1.3 of the articles of the subcontract and clauses 1.8.1 and 2.2 of the subcontract conditions, as amended by the Supplemental Agreement. These conclusions are, however, supported by the reasoning of the Court of Appeal in **Deepak Fertilisers and Petrochemical Corporation v ICI Chemicals and Polymers Ltd**, [1999] 1 Lloyd's Law Reports 387, the reasoning of Mr Justice Lightman in **Inntrepreneur Pub Co v East Crown Limited** [2000] 2 Lloyd's Law Reports 612 and the reasoning of Mr Justice Park in **Inntrepreneur Pub Co v Sweeney** [2002] EWHC 1060 (Chancery); [2002] EGLR 132.

591. Mr Tomlinson submits that whatever was said at the meeting on 14th May does not constitute *"prior negotiations"* for the purposes of clause 1.8.1. The whole of clause 1.8.1 is focused upon negotiations occurring and statements made before 27th September 2002. I am not persuaded by this submission. Clause 1 of the Supplemental Agreement provides: *"Unless the context otherwise requires, or this agreement specifically otherwise provides, words and phrases used in this agreement shall have the meanings (if any) given or ascribed to them by the subcontract."*

592. Clause 1.2 of the subcontract conditions provides: *"The subcontract is to be read as a whole and the effect or operation of any recital, article or clause in the subcontract must therefore unless otherwise specifically stated be read subject to any relevant qualification or modification in any other recital, article or clause in the subcontract."*

593. In my view, the combined effect of these provisions in conjunction with those mentioned above is to preclude reliance upon negotiations or statements made before 16th June 2004 for the purpose of displacing or qualifying any written provisions of the Supplemental Agreement.

594. I have dealt with issue 7 very briefly because, on the basis of my earlier findings of fact, this issue does not arise. Nevertheless, I hope it will assist the parties to have this short summary of my conclusions and reasons.

595. Let me now draw the threads together. My answers to issue 7 are as follows:
(i) This issue does not arise on the facts.
(ii) Even if the alleged oral valuation agreement had been made, nevertheless the answers to questions (a), (b) and (c) are: no.

Part 13. ISSUE 8

596. Multiplex and CB parted company on 2nd August 2004. It is common ground that one or other company was in repudiatory breach. The question arising under issue 8 is whether it was Multiplex or CB who repudiated the subcontract.

597. First, I must deal with some matters of background. As can be seen from parts 2, 4 and 5 above, during 2003 and the first six months of 2004 the steelwork fabrication and erection fell into serious delay. Both Multiplex and CB incurred substantial costs which had not been foreseen. Each company regarded the other as principally responsible for the problems which had accumulated.

598. Multiplex blamed CB for allocating insufficient resources to the project, slow design and fabrication of steelwork, fabrication errors, late and out of sequence deliveries, delaying the arch lift, low erection rates despite having a large number of men on site, blaming others for their own failings and making excessive unsubstantiated or unwarranted claims. CB blamed Multiplex for late and inadequate design information, numerous and substantial design changes (many at a late stage, requiring retrofit work at Darlington or on site), bad site organisation and refusal to make proper payment for variations, acceleration, disruption or delay costs. It was against this background of ill will and mutual recrimination that Multiplex and CB endeavoured to progress the construction of Wembley Stadium.

599. Both parties faced their own internal difficulties, with which they had to deal as best they could. Multiplex had entered into a fixed price contract with the employer and, therefore, the costs overrun on the steelwork directly impacted upon Multiplex's financial outcome. Multiplex had disputes with Mott about responsibility for design changes and late information. Furthermore, Wembley Stadium was and is a project of major national importance and the delays to that project became a matter of obvious concern.

600. Let me now turn to CB and the Cleveland Group of companies. These companies faced serious financial difficulties in late 2003 and early 2004. The financial viability of the group depended upon continuing financial support from Sheikh Abdullah and Al Rushaid Investment Corporation. CB was a major employer in the north east of England, and any large scale redundancies at CB's Darlington's works became a matter of public interest. In late 2003 and early 2004, insolvency was and was recognised as a real possibility by the group directors. The principal single cause of the Cleveland Group's financial problems was the potential losses which CB faced on the Wembley contract.

601. Insofar as CB had valid, unmet claims for variation, acceleration costs, delay, disruption, loss and expense, one obvious remedy was to pursue those claims in adjudication. However, CB did not take that course. CB's preferred option, no doubt for good commercial reasons, was to seek to renegotiate the contract and so far as possible to switch to cost plus.

602. Thus it can be seen that by early 2004 both companies were facing different but serious problems and were driven by their own commercial imperatives. Multiplex, consistent with its view that CB was inefficient and incompetent, was looking at the possibility of reducing or eliminating the involvement of CB in the Wembley project. CB, on the other hand, consistent with its view of Multiplex, was pressing to recoup its accrued losses and either to escape from a loss-making contract or, alternatively, to change the basis of future work to cost plus.

603. In these circumstances, it can be seen that the Heads of Agreement and subsequently the Supplemental Agreement suited the commercial interests of both parties. These agreements gave to each company at least part of what it was seeking.

604. Much has been made by Multiplex of a project initiated by the Cleveland Group board at its meeting on 11th February entitled "Project Trafalgar". There is nothing in this point. I accept CB's evidence that Project Trafalgar was a short-lived matter which came to an end on the signing of the Heads of Agreement.

605. Let me now turn to the Armageddon plan. This was a plan devised by Multiplex to deal with the situation in which onsite erection was removed from CB. Multiplex was quite entitled to have such a plan. One of the benefits which Multiplex had negotiated in the Heads of Agreement was an option to dismiss CB from site upon giving due notice at the end of the costs reimbursable period.

606. It is clear to me, both from the documents and from the oral evidence, that in the spring of 2004 the Armageddon plan was merely one option which Multiplex was examining. The Armageddon plan would bring two substantial benefits to Multiplex. First, it would enable Multiplex to remove a subcontractor whom, rightly or wrongly, it perceived to be incompetent. Secondly, it would enable Multiplex to claw back monies which, rightly or wrongly, Multiplex believed it had overpaid to CB. So long as CB was working onsite, it was not practicable for Multiplex to make swingeing deductions or claims against that company.

607. On the other hand, the removal of CB mid-contract would have an obvious downside. It would be extremely expensive and disruptive to bring in a new subcontractor to take over a part-completed but massive steelwork project.

608. For all these reasons, Multiplex had a difficult decision to make. It is unsurprising that the trial bundle contains many detailed documents and notes planning for Armageddon. Such a scenario required detailed planning. The existence of these documents does not mean that Armageddon was a foregone conclusion. Having studied the documents and considered the cross-examination of Messrs Muldoon, Stagg, McGregor, Cursley, Ong and van Rooijen, I have come to the conclusion that through March, April and May the Armageddon plan remained an option which was under serious consideration, but no more than that.

609. By early June, and particularly after the visit to the UK of Mr John Roberts and Mr Andrew Roberts, it had become a high probability but not a certainty, that Multiplex would implement the Armageddon plan. This remained the position on 16th June when the Supplemental Agreement was signed.

610. The reason why Multiplex made little serious effort to negotiate during the period 16th to 29th June was because Multiplex regarded it as highly improbable that any deal acceptable to Multiplex would be offered by CB or achieved.

611. The Armageddon plan was not kept entirely secret from CB. Mr Child and Mr Stagg discussed "Armageddon" as a disaster scenario in which CB and Multiplex parted company. Mr Stagg and Mr Grant in discussion used the term "Armageddon" in the same sense.

612. Multiplex recognised that one possible consequence, but by no means an inevitable consequence, of implementing the Armageddon plan, was the insolvency of CB. It is clear from the evidence that Multiplex regarded this eventuality as having both advantages and disadvantages. This was not an outcome which Multiplex was positively seeking to achieve.

613. Let me now turn to the specific breaches of contract which are set out in issue 10, question (a). The alleged breaches of contract are set out in five sub-paragraphs. I shall deal separately with each alleged breach.

BREACH (i)

614. The valuation of £32.66 million was not a final and binding valuation. It was simply a valuation included in interim certificates 35 and 36. Like any valuation in interim certificates, it was capable of being revised upwards or downwards in a later certificate. I readily accept in certificates 37 and 38 Multiplex made drastic reductions in that figure. Nevertheless, the subcontract contained a dispute resolution procedure for dealing with disputed valuations. Multiplex operated that procedure promptly and referred the disputed valuations to adjudication. In my view, such conduct does not amount to a repudiatory breach.

BREACH (ii)

615. There is a dispute between the parties as to whether the arch lift was completed on 22nd or 29th June. The evidence suggests that the correct date was 29th June, and this was the view taken by the adjudicator. However, neither party asks me to decide this issue now. I shall proceed on the assumption that either the arch lift was completed on 29th June or alternatively Multiplex reasonably believed that this was the case. On this basis, Multiplex cannot be criticised for serving its withholding notice on 6th July.

616. It is important to note that Multiplex never denied that the arch bonus became due and payable in accordance with clause 6.2 of the Supplemental Agreement. What Multiplex did was to set off against that payment sums allegedly due to Multiplex for CB's breaches of contract in fabricating defective members. The sum which Multiplex sought to set off was £1,580,445. That set off was disputed. The matter went to adjudication. The adjudicator concluded that Multiplex was only entitled to set off £293,516 in respect of this matter. Multiplex duly paid the outstanding balance in accordance with the adjudicator's decision.

617. The principal reason why the adjudicator dramatically reduced the arch counterclaim was because he took the view that breaches by PCH rather than breaches by CB were the effective cause of delay in raising the arch. Whether the adjudicator was right or wrong in that conclusion will fall to be decided at a later stage of this litigation. It is clear from the evidence which I have heard that this was a controversial question upon which different views were possible. Multiplex took one view, the adjudicator declared that view to be wrong, and Multiplex duly paid the balance. In my judgment it cannot be a repudiatory breach to operate the dispute resolution procedure in this manner.

BREACH (iii)

618. In certificate 37, Multiplex made a deduction of £3,529,904 for "inefficient site works". This was a deduction of approximately 50 per cent. The effect of this deduction was not that CB paid or repaid any part of that sum to Multiplex. The effect was that Multiplex made no further payments to CB until an adjudicator had determined the matter. When, in due course, the adjudicator dealt with this question, he held that the proper deduction was 15 per cent, not 50 per cent.

619. CB's entitlement to recover its onsite costs was subject to the proviso that those costs were reasonably and properly incurred; see schedule 1, paragraph (c) of the Supplemental Agreement. Therefore Multiplex was, in principle, entitled to make a deduction for inefficient working or lack of productivity. Nevertheless, Mr Ong's calculation, by which he arrived at the deduction made, is not impressive. It is not within the scope of the preliminary issues for the court at this stage to determine the correct deduction. Suffice it to say that in my view the correct deduction is likely to be less than 50 per cent.

620. In preparing his calculation, Mr Ong may well have been influenced by the consensus of opinion amongst Multiplex's senior management that a deduction of about 50 per cent was appropriate to reflect CB's poor performance and that such a

deduction could be justified in adjudication. Nevertheless, in performing this calculation Mr Ong was undertaking his own evaluation, he was not slavishly following an instruction from his superiors. He discussed the deduction with Mr Cursley and they both believed that it was appropriate. Whatever the correct deduction may ultimately prove to be, the issue of certificate 37 cannot amount to a repudiatory breach.

621. Both certificate 37 and certificate 38 made substantial reductions in the onsite costs which CB was claiming. However, these two certificates set out valuations which Multiplex, having taken professional advice, believed that it could defend in adjudication. Multiplex took prompt steps to refer both certificates to adjudication and Multiplex abided by the outcome of such adjudication.

622. In those circumstances, Multiplex's refusal to make further payments to CB in mid-July on the basis of certificates 37 and 38 was not a repudiatory breach of contract.

BREACH (iv)

623. The first question which arises is whether clause 7 of the Supplemental Agreement imposed any enforceable contractual obligation upon either party. For the reasons set out in part 14 below, my answer to this question is no.

624. Let me suppose, however, that my conclusions in part 14 of this judgment are held to be wrong. What then is the position? It seems to me that neither party made any serious effort to negotiate a new contract during the specified period, namely, 16th-29th June. That period was not extended and there was no obligation upon either party to agree to such extension. At no time during the relevant period did CB put forward any sensible proposals for a new contract going forward, which Multiplex could possibly be expected to accept. Likewise, Multiplex made little effort to negotiate a new contract. I do not consider that Mr Muldoon's letter to Mr Rogan dated 24th June contained the basis for a contract which CB was likely to accept.

625. The reality may be that by late June the parties were so far apart that neither party made the effort to negotiate seriously. For all these reasons, I find that breach (iv) is not established. Alternatively, any breach of clause 7 by Multiplex falls far short of being repudiatory conduct.

BREACH (v)

626. The penultimate paragraph of schedule 1 to the Supplemental Agreement provides as follows: *"If the contractor proposes to issue a certificate of payment for an amount that is less than the amount claimed by the subcontractor in an application for payment, Mr M Stagg (or if unavailable Mr B Sheppard) of the contractor shall first consult with Mr R Grant (or if unavailable Mr J Child) of the subcontractor before such certificate of payment is issued."*

627. This imposed upon Multiplex an obligation to consult with CB before issuing certificates 37 and 38. In order to demonstrate compliance with this obligation, Multiplex relies upon a short telephone call from Mr Stagg to Mr Grant made on 16th July, when Mr Grant did not have the relevant documents to hand. In my judgment, that telephone call did not constitute consultation and Multiplex was thereby in breach of contract.

628. This breach of contract cannot, however, be characterised as a repudiation. Multiplex had embarked upon a strategy which, although ruthless, was lawful. Multiplex was issuing certificates in the lowest sums which it believed it could properly defend in adjudication. The effect of those certificates was that no further payments would be made to CB and all financial disputes between the parties would go to adjudication.

629. Having embarked upon that strategy, it is inconceivable that Multiplex would have been deflected by any amount of consultation, however thorough.

630. I do not condone Multiplex's breach of contract on 16th July. On the contrary, I deplore it. However, that is a breach of contract which had no practical consequence and caused no loss. It is also relevant to observe that, by July, CB was well aware that drastic reductions would be made in the next certificate: see the minutes of the Cleveland Group board meeting on 8th July and Mr Child's evidence about those minutes as summarised in part 5 above.

631. Let me now draw the threads together. For the reasons set out above, I am quite satisfied that the matters relied upon by CB do not constitute repudiatory breaches of contract. Therefore my answer to issue 8, question (a) is no.

632. It follows from this conclusion that on 2nd August 2004, CB was not entitled to treat the subcontract (in its then attenuated form) as at an end. Therefore, CB was in repudiatory breach of contract by giving notice that it would stop work on 2nd August and by then stopping work. Accordingly, my answer to issue 8, question (b) is yes.

Part 14. ISSUE 9

633. Clause 7 of the Supplemental Agreement provides as follows: *"The parties shall use reasonable endeavours to agree to re-programme the completion of the subcontract works and to agree a fixed lump sum and/or reimbursable subcontract sum for the completion of subcontract works (to incorporate the reimbursable cost items referred to in schedule 1, paragraph (c), an additional lump sum payment of £500,000 and a 10 per cent contribution to overheads and profit), and to enter into a further supplemental agreement, recording the agreement contemplated by this clause 7, on or before 29th June 2004 (or other such extended date as agreed in writing between the contractor and the subcontractor). The said additional lump sum payment of £500,000 will be paid on execution of the further Supplemental Agreement described in this clause 7."*

634. The first issue which I must address is whether this provision imposed any enforceable obligation upon either party. In **Walford v Miles** [1992] AC 128, the plaintiff's claimed damages for a failure to negotiate in good faith. The House of Lords held that such a contractual term lacked certainty and was unenforceable. In **Little v Courage Ltd** [1995] CLC 164, Lord Justice Millett, giving the judgment of the Court of Appeal, said this at page 169: *"An undertaking to use one's best endeavours to obtain planning permission or an export licence is sufficiently certain and is capable of being enforced: an undertaking to use one's best endeavours to agree, however, is no different from an undertaking to agree, to try to agree, or to negotiate with a view to reaching agreement; all are equally uncertain and incapable of giving rise to an enforceable legal obligation."*

635. In **London & Regional Investments Limited v TBI plc**, [2002] EWCA Civ 355 it was held that an obligation to *"use reasonable endeavours to agree the terms of a joint venture regarding Cardiff and Belfast Airports"* was no more than an agreement to agree. It was therefore unenforceable.

636. I have come to the conclusion that the principle of law which formed the basis of those three decisions is directly applicable in the present case. The first sentence of clause 7 of the Supplemental Agreement contained a statement of aspirations. It is too uncertain to impose a contractual obligation and as such it is unenforceable.

637. I am reinforced in this conclusion by the decision of the Court of Appeal in **Phillips Petroleum Co UK Ltd v Enron** [1997] CLC 329. The court held that an obligation to use reasonable endeavours to agree did not preclude a party from refusing to reach agreement on grounds of commercial self-interest.

638. Mr Tomlinson, on behalf of CB, places reliance upon an obiter dictum of Lord Ackner in **Walford v Miles** at 138 C to D. However, that obiter dictum must be read in the light of the later authorities mentioned above. Mr Tomlinson also places reliance on the decision in Court of Appeal in **Rae Lambert v HTV Cymru (Wales) Ltd** [1998] FSR 874. That case, however, seems to me to be readily distinguishable from the present situation.

639. Let me now draw the threads together. Having reviewed the authorities relied upon by both parties I am quite satisfied that the first sentence of clause 7 of the Supplemental Agreement is unenforceable. Accordingly, my answer to issue 9 is no.

Part 15. ISSUE 10

640. My first task in relation to this issue must be to review the law on abatement. For this purpose, I shall summarise in chronological order every authority which has been relied upon by one party or the other. I shall then endeavour to derive the relevant legal principles and to apply those principles in answering issue 10.

641. In **Thornton v Place** [1832] 1M&R 218, the plaintiffs claimed monies due to them for slating work carried out. They were met with a defence of defective work. Parke J, directing the jury, held that the plaintiffs were entitled to recover the contract price subject to a deduction: *"The measure of that deduction is the sum which it would take to alter the work so as to make it correspond with the specification."*

642. In **Mondel v Steel** [1841] 8 M&W 858, the buyer of a ship pleaded breach of warranty in defence of an action for the price. The jury at the Liverpool Assizes accepted that there were defects in the ship and made an appropriate deduction from the price which the ship builder recovered. The ship made a return voyage to Australia and, because of the defects, required substantial repairs. The buyer commenced a second action, claiming the cost of those repairs as damages. The ship builder, on a demurrer, contended that the second action was barred. The Court of Exchequer, comprising Baron Parke, Baron Alderson, Baron Gurney and Baron Rolfe rejected that contention essentially because the defence of abatement in the first action and the claim for damages for breach of contract in the second action were different in their legal nature.

643. Baron Parke, delivering the judgment of the court, said this at pages 871-872: *"It must however be considered, that in all these cases of goods sold and delivered with a warranty, and work and labour, as well as the case of goods agreed to be supplied according to a contract, the rule which has been found so convenient is established; and that it is competent for the defendant, in all of those, not to set off, by a proceeding in the nature of a cross action, the amount of damages which he has sustained by breach of the contract, but simply to defend himself by showing how much less the subject matter of the action was worth, by reason of the breach of contract; and to the extent that he obtains, or is capable of obtaining, an abatement of price on that account, he must be considered as having received satisfaction for the breach of contract, and is precluded from recovering in another action to that extent; but no more.*

"The opinion, therefore, attributed on this record to the learned judge is, we think, incorrect, and not warranted by law; and all the plaintiff could by law be allowed in diminution of damages, on the former trial, was a deduction from the agreed price, according to the difference, at the time of delivery, between the ship as she was, and what she ought to have been according to the contract: but all claim for damages beyond that, on account of the subsequent necessity for more extensive repairs, could not have been allowed in the former action, and may now be recovered."

644. In **Davis v Hedges** [1871] 6 LR QB 687, a builder carried out works to a house in Oxfordshire and thereafter successfully sued in the Court of Common Pleas to recover the price of that work. The house owner subsequently brought a claim the Oxford County Court for damages for defects. The County Court judge non-suited the plaintiff. The Divisional Court of the Queen's Bench Division reversed that decision essentially on the grounds that the builder's breach of contract had not been raised in the first action. Mr Justice Hannen, giving the leading judgment, said this at page 691: *"Another inconvenience which would result from holding that the inferiority of the thing done to that contracted for must, if an action be commenced, be used by way of defence, is, that instead of furthering the object for which this defence was permitted, namely, the prevention of circuity of action, it would in many cases tend to complicate and increase litigation. The cases are, perhaps, rare in which the consequences of defective performance of work are limited to the depreciation of the value of the work done; they usually involve consequential damage by reason of the necessity of repairing the defective work; and for this the case of **Mondel v Steel** decides a separate action must be brought."*

645. In **Dakin v Lee** [1916] 1 KB 566 a builder claimed payment for works done to the defendant's house. An official referee dismissed the claim because in three respects the works did not comply with the specification. Both the Divisional Court and the Court of Appeal held that the official referee was wrong. The builder was entitled to recover payment, less an appropriate deduction. The appropriate deduction was the cost of remedial works; see Mr Justice Ridley at pages 571 to 573, Lord Cozens-Hardy MR at pages 579 to 580 and Lord Justice Pickford at pages 581 to 582.

646. In **Gilbert-Ash (Northern) Ltd v Modern Engineering (Bristol) Ltd** [1974] AC 689 it was held that a main contractor was entitled to set off its claim for defects and delays against sums certified as due to a subcontractor. At page 717 Lord Diplock restated the law on abatement as derived from **Mondel v Steel** and said that this principle applied to contracts for the sale of goods and to contracts for work and labour. In relation to sale of goods, that principle had subsequently been codified by section 53 of the Sale of Goods Act 1893 (now section 53 of the Sale of Goods Act 1979.)

647. In **Hutchinson v Harris** [1978] 10 BLR 19 the plaintiff recovered damages against her architect for professional negligence but the architect, by counterclaim, recovered the balance of her fees without any abatement. Although the claim for abatement failed on the facts, the Court of Appeal strongly doubted that the defence of abatement applied to a claim for professional services. In **Acsim (Southern) v Danish Contracting** [1989] 47 BLR 55 a contractor sought payment due on an interim application but the employer refused to pay because it had claims for defects. An official referee gave summary judgment for the contractor but this was reversed by the Court of Appeal. Lord Justice Neill said this at page 79: *"A claim that*

the work had not been completed was not a matter of set-off; it was a pure defence to a claim for payment for work done. Similarly, though this point is more controversial, an assertion that work had not been properly executed was capable of being a matter of pure defence rather than of counterclaim or set-off."

648. Lord Justice Slade said this at page 80: *"Subject to this, however, I see no reason why it should not be open to Dancon in the present case to complain that the work for which the claim for interim payment was demanded has not been properly executed, by way of defence in accordance with the principles recognised by Lord Diplock in* ***Modern Engineering v Gilbert-Ash*** *[1974] AC 689 at page 717. For the terms of the blue form contract themselves entitle Acsim to make a demand for interim payment only 'in respect of the total value of the subcontract works properly executed'."*

649. In **Duquemin Ltd v Raymond Slater** [1993] 65 BLR 124 a builder carried out refurbishment and extension works with a number of defects. The Arbitrator awarded to the employer a larger sum by way of abatement than the value of the contractor's claim. His Honour Judge Newey QC held that the Arbitrator had acted beyond his jurisdiction and that the greatest possible abatement was to reduce the contractor's claim to zero. Judge Newey in an obiter dictum said that when determining the diminution in value for the purposes of abatement, cost of repairs could not be taken into account. That obiter dictum is the subject of courteous criticism by the editors of the Building Law Reports at pages 126 to 128. I see force in that criticism. In the light of earlier authorities, it would be an overstatement to say that cost of repair can never be taken into account.

650. In **Foster Wheeler Wood Group Engineering v Chevron UK Limited** (29th February 1996) Judge Humphrey Lloyd QC held, with some reluctance but out of deference to the Court of Appeal in **Hutchinson v Harris**, that the defence of abatement does not apply in respect of contracts for professional services. He went on to hold that the contract for mechanical and electrical works in that case was not a contract for professional services.

651. In **Mellowes Archital Limited v Bell Projects Limited** [1997] 87 BLR 26, a subcontractor sought summary judgment in respect of sums due on an interim application. The Court of Appeal held that the main contractor was not entitled to rely on its delay claim as a matter of abatement and that the subcontractor was entitled to summary judgment. Lord Justice Buxton reviewed the law of abatement at length. He noted and approved a line of cases, in particular **Davis v Hedges**, in which the effect of **Mondel v Steel** was restricted to its proper bounds. Lord Justice Buxton noted that the measure of abatement must be limited to the difference in value of the thing itself. The cost of repairing damage to any item other than the thing itself is irrecoverable; see page 37. Lord Justice Hobhouse followed a similar line of reasoning. Lady Justice Butler-Sloss agreed with both judgments.

652. Although there is not a complete harmony of approach to be discerned from this line of cases, I derive seven legal principles from the authorities cited:
(i) In a contract for the provision of labour and materials, where performance has been defective, the employer is entitled at common law to maintain a defence of abatement.
(ii) The measure of abatement is the amount by which the product of the contractor's endeavours has been diminished in value as a result of that defective performance.
(iii) The method of assessing diminution in value will depend upon the facts and circumstances of each case.
(iv) In some cases, diminution in value may be determined by comparing the current market value of that which has been constructed with the market value which it ought to have had. In other cases, diminution in value may be determined by reference to the cost of remedial works. In the latter situation, however, the cost of remedial works does not become the measure of abatement. It is merely a factor which may be used either in isolation or in conjunction with other factors for determining diminution in value.
(v) The measure of abatement can never exceed the sum which would otherwise be due to the contractor as payment.
(vi) Abatement is not available as a defence to a claim for payment in respect of professional services.
(vii) Claims for delay, disruption or damage caused to anything other than that which the contractor has constructed cannot feature in a defence of abatement.

653. I must now apply these principles to schedules 1A to 1E and schedule 3. Schedule 1A comprises 90 claims in respect of defective steelwork. As formulated, schedule 1A does not set out a defence of abatement or a claim to recover monies overpaid in consequence of abatement. Schedule 1A sets out a conventional claim for damages for breach of contract. Accordingly, schedule 1A as presently formulated is not a claim for abatement. Nevertheless, schedule 1A could readily be amended in order to set out a claim for abatement. What Multiplex needs to do is expressly to set out in schedule 1A the diminution in value of the steelwork caused by the various alleged breaches of contract.

654. In the circumstances of this case, I consider that the best method of ascertaining diminution in value is by reference to the cost of the necessary works to remedy the defects. I reach this conclusion for two reasons:
(i) The partially completed steelwork of a national stadium which is under construction does not have a market value in the conventional sense. That steelwork only has a value to the main contractor who is under an obligation to produce a completed stadium.
(ii) From the point of view of the main contractor (who is the only interested party) the difference in value between the steelwork in its actual condition and the steelwork as it ought to be is the cost of remedial works.

655. Schedule 1A includes claims for Multiplex's overheads and insurance. In my view, these items can form no part of a claim for diminution in value and must be omitted.

656. Schedule 1B sets out 380 alleged defects in the steelwork. My conclusions in respect of schedule 1B are the same as my conclusions in respect of schedule 1A.

657. Schedule 1C is a claim for defective design work. This is a claim in respect of professional services. Accordingly, the defence of abatement is not available. Multiplex's only remedy for unsatisfactory drawings which required revisions or modifications is a claim for damages for professional negligence. However, if there are some drawings which were so unsatisfactory that they were discarded altogether and no use was made of them, in my view Multiplex could refuse to make any payment whatsoever in respect of those drawings. However, any defence on this basis or any claim for repayment on this basis would not be a plea of abatement. It would simply be a contention that no payment should be made at all for professional services which were worthless.

658. Schedule 1D sets out 259 alleged defects in the steelwork. My conclusions in respect of schedule 1D are the same as my conclusions in respect of schedule 1A.

659. Schedule 1E comprises two claims. First, there is a claim for the costs of employing Sandberg to identify defects. As Multiplex now concedes, this is not a claim for abatement and could not be converted into one.

660. The second claim is in respect of defectively installed Bridon cables. My conclusions about this part of schedule 1E are the same as my conclusions about schedule 1A.

661. I come finally to schedule 3. The only item relied upon is item 16. This is a claim in respect of low erection rates. In my view, item 16 is simply another way of expressing (a) Multiplex's claim for delay or (b) Multiplex's defence of inefficiency in respect of CB's claim for reimbursable costs. However this item is viewed, it cannot be characterised as an abatement and it cannot be pleaded on that basis.

662. I should finally refer to clauses 21.3.2.1 and 21.4.2 of the subcontract conditions upon which Multiplex relies. These provisions entitle CB to be paid in respect of works "properly completed". In my view, these provisions reinforce the proposition that a defence of abatement is available where steelwork has been fabricated or erected defectively. Nevertheless, these contractual provisions do not affect the correct approach to quantifying abatement.

663. Let me now draw the threads together. I have indicated above which parts of Multiplex's schedules could be converted into claims for abatement. However, my answers to issue 10 as formulated are (a) no, and (b) diminution in value.

Part 16. CONCLUSION

664. My decisions on the ten preliminary issues are as set out in parts 6 to 15 above. I request counsel for both parties jointly to draw up a suitable form of order giving effect to those decisions.

665. Next, may I pay tribute to the lawyers on both sides for the excellent service which they have given, both to their clients and to this court. An extremely sensible and user-friendly trial bundle, comprising about 100 ring files, has been prepared by the solicitors in a short space of time and with considerable industry. The witness statements on both sides are clear and helpful. The trial itself has been conducted by all counsel with great skill and economy.

666. Finally I wish to say something directly to the parties. It has been obvious to me that no settlement could be achieved whilst certain fundamental issues were unresolved. The present set of preliminary issues was drafted by counsel precisely in order to break that deadlock. Both parties have had a measure of success on the preliminary issues. Neither party has won an outright victory. With the assistance of this court's decision on the ten preliminary issues, it may now be possible for both parties to arrive at an overall settlement of their disputes, either through negotiation or else with the help of a mediator, who is unconnected with this court.

667. I commend this course to the parties, if only as a means of saving costs and management time. If, however, the parties would prefer the court to resolve all remaining issues, then so be it. This court encourages sensible commercial settlements, but nevertheless stands ready to determine every issue which the parties wish to litigate.

ROGER STEWART QC & PAUL BUCKINGHAM (instructed by Clifford Chance LLP)) appeared on behalf of the Claimant.
HUGH TOMLINSON QC, SIMON HARGREAVES & THOMAS GRANT (instructed by Walker Morris) appeared on behalf of the First and Second Defendants.