[2007] EWHC 145 (TCC)

IN THE HIGH COURT OF JUSTICE No HT-04-314

QUEEN'S BENCH DIVISION

TECHNOLOGY AND CONSTRUCTION COURT

St Dunstan's House

133-137 Fetter Lane

London EC4A 1HD

Wednesday, 31st January 2007

Before:

MR JUSTICE JACKSON

BETWEEN:

MULTIPLEX CONSTRUCTIONS (UK) LIMITED

Claimant/Part 20 Defendant

-v-

CLEVELAND BRIDGE UK LIMITED

First Defendant/Part 20 Claimant

-and-

CLEVELAND BRIDGE DORMAN LONG ENGINEERING LIMITED

Second Defendant

(No. 2)

MR ROGER STEWART QC and **MR PAUL BUCKINGHAM** (instructed by Clifford Chance LLP) **appeared on behalf of the Claimant** .

MR ADRIAN WILLIAMSON QC and MS LUCY GARRETT (instructed by Reid Minty LLP) **appeared on behalf of the Defendants.**

J U D G M E N T

(As Approved)

MR JUSTICE JACKSON:

1. This judgment is in seven parts, namely:

Part 1: introduction.

Part 2: the facts.

Part 3: the proceedings in respect of issue 11.

Part 4: the claimant's evidence.

Part 5: the defendant's evidence.

Part 6: analysis of issue 11.

Part 7: conclusion.

Part 1: Introduction

2. This is the trial of the eleventh preliminary issue in litigation between Multiplex Constructions (UK) Limited ("Multiplex") and Cleveland Bridge UK Limited ("CB"). CB's parent company, Cleveland Bridge Dorman Long Limited, is the second defendant.

3. I gave judgment on 5th June last year, in relation to the first 10 preliminary issues. I shall take that judgment as read. I adopt but do not repeat the background facts set out in that judgment and also the summary of the present litigation set out in that judgment. I shall use the same abbreviations in this judgment as I did in the first judgment.

4. The 11th preliminary issue has been listed for trial at the request of both parties, in order to determine which party was responsible under the terms of the Supplemental Agreement for the cost of temporary works for the stadium roof. I have expressed some concerns as to whether it is appropriate for me to determine issue 11 at a time when my judgment on issues 1-10 is under appeal. However, both parties have asked me to give my decision on issue 11 now, without waiting for the Court of Appeal's judgment. Accordingly, I shall do so.

5. The witnesses who have given oral evidence at this trial are Mr Muldoon, Mr McGregor, Mr Rogan, Mr Underwood and Mr Child. All of those witnesses gave evidence at the trial last year. Their respective roles on the Wembley project have been set out in Part 4 and Part 5 of the first judgment and need not be repeated.

6. The temporary works for the roof are steel structures which are constructed to facilitate the erection of the roof. One important function of these structures is to provide support for the roof until such time as the various members are in place and the roof is supported by the permanent structure of the stadium. Once the roof is complete, the temporary works are removed. The general design of the roof has been summarised in paragraph 5 of the first judgment.

7. Now let me turn to the arch. It will be recalled that the arch was constructed at ground level and then had to be raised to an angle of 112 degrees. Five turning struts were used for the operation of raising the arch. The middle sections of these turning struts were triangular trusses. These triangular trusses resembled (at least in their shape) a well known confectionery product. Accordingly they were referred to as "toblerone sections" or "toblerones". I shall adopt the same terminology.

8. CB formed the very sensible plan of re-using the toblerones after the arch had been raised. Part of the temporary works for the roof would be a number of temporary towers. CB proposed to modify the toblerones so that they could form the central sections of some of those temporary towers.

9. Now let me turn to the position of CB. It will be recalled that CB fabricated some of the steelwork required for Wembley Stadium at CB's factory in Darlington. CB also arranged for fabrication and

design work to be undertaken by CB's sub-contractors. CB used the term "buyouts and sub-contracts" to refer to materials, items or services which CB procured from third parties.

10. Let me turn next to the documents. The documentation used for the present trial comprises part of last year's trial bundle and an additional bundle assembled for the purpose of issue 11. In addition, Mr Rogan attaches four important documents as exhibits to his witness statement. Mr Rogan's first exhibit is a schedule of buyouts and sub-contracts which are described as category 1. I shall refer to this as "the category 1 schedule". Mr Rogan's second exhibit is a schedule of buyouts and sub-contracts which are described as category 2. I shall refer to this document as "the category 2 schedule". Mr Rogan's third exhibit is a spreadsheet which has to be read sideways. In his witness statement, Mr Rogan refers to this document as "the landscape spreadsheet". I shall use the same terminology.

11. Mr Rogan's fourth exhibit is a single sheet of paper giving information about steelwork for the bowl. There is a dispute about whether this document was given or shown to Multiplex at the time when the Heads of Agreement and Supplemental Agreement were being negotiated. I shall refer to this document as "sheet 4".

12. The category 1 schedule, the category 2 schedule and the landscape schedule all feature in bundle C2 of the present trial bundle and in bundle C10 of last year's trial bundle. There is also a document which comprises the top half only of the landscape spreadsheet. This document is only to be found in bundle C10 of the old trial bundle. It has been referred to during the trial as "the top half schedule". I shall use the same term.

13. Mr Rogan's sheet 4 does not feature in any trial bundle because it has not previously been disclosed.

14. That completes my introductory remarks. I must now turn to the facts.

Part 2: The Facts

15. As set out in the previous judgment, in early 2004 discussions were taking place between Multiplex and CB which eventuated in the Heads of Agreement signed on 18th February 2004. For present purposes it is necessary to review certain of the meetings during that period and the documents passing between the parties in rather more detail.

16. On 4th February 2004, Mr Grant of CB wrote as follows to Mr Stagg of Multiplex:

"Towards the end of yesterday's meeting you made a proposal centered on taking a major portion of the fabrication from Cleveland Bridge to subcontractors of your choice. We instinctively suggested that you take the site erection as well, as we could not be exposed to the fabrication deliveries of you and your subcontractor.

"We also identified practical issues related to such a transfer of fabrication and the benefits of maintaining a certain level in our Darlington facility.

"We have been reflecting on the merits and elements of such an approach and will come to Friday's meeting with our ideas on how we might build on this to achieve an optimal solution for all parties. As I have said before, this can best be achieved by us working together."

17. On 5th February, Mr Rogan prepared a document entitled "Supplementary Agreement Proposal". This proposal contained two important elements. First, that part of the fabrication of steel should be

taken over by Multiplex. Secondly, that site works and erection should be done by CB on a cost plus basis, until such time as a new fixed price for everything might be agreed. Each of these steps would have the effect of substantially reducing (a) the scope of CB's lump sum contract and (b) the amount of the lump sum price. Mr Rogan's proposal envisaged that CB would still carry out the design of the roof temporary works within the scope of the new reduced lump sum contract.

18. It is CB's case that late on 5th February or early on 6th February Mr Rogan was instructed that the design of the roof temporary works should not form part of CB's proposal for a new lump sum contract.

19. On Friday, 6th February there was a meeting between representatives of Multiplex and CB. At that meeting, Mr Grant tabled a document headed "Proposal". This document asserted that CB's costs to date were £40 million of which £26 million had been paid and £14 million were still outstanding. The document proposed a new lump sum price of £10.8 million in respect of the following items:

“5,000 tonnes fabrication cost only.

“Complete all shop drawings for fabrication.

“Complete subcontractor shop design for defined scope per original contract.

“Bought outs/subcontracts - CB/MPX to agree scope (£1.2m incl'd above)."

20. It was agreed that there would be a further meeting between Mr Muldoon of Multiplex and Mr Rogan of CB to go into the details of these matters. That meeting took place on the morning of 11th February. It is common ground that during the course of that meeting Mr Rogan gave to Mr Muldoon copies of the category 1 schedule and the category 2 schedule.

21. The category 1 schedule listed project buyouts and sub-contracts which would fall within CB's new lump sum price. The following items were listed as category 1:

" Project Buyouts

"Audit of Far East Fab Shops

"Bolts

"Cables (For & Back Stays & Catenary)

"Roof rods and Bars

"Roof Castings

"PPT Truss and Roof Pins

"Bowl Pins

"Arch Bearings

"Bowl Metal Decking

"Grouting

"Ledger Angles

"Temp Works - Arch Temporary Workshops

"Temp Works - Arch Assembly Stillages

"Temp Works - Struts

"Temp Works - Anchors

"Temp Works - Strut Bases

"Temp Works - Pin Assemblies

"Arch Base - Cast-ins

"Temp Works - Cable & strand handling

"Temp Works - Bowl

"Cat 3 Check

"Arch Maintenance System

" Project Subcontracts

"CHINA Fabrication Sub Contract

"CHINA Materials

"CHINA Shipping

"CHINA Management

"Far East Marshalling yard

"Transport M Yard to site

"Repair and topcoat to Far East steel."

22. To the right of that list of items, the category 1 schedule has four numbered columns with the following headings: (1) Cumulative Actual Costs to End Jan '04; (2) Cumulative Actual Costs to 13 Feb '04; (3) Forecast Against Supplemental Agreement; (4) Balance To Pay. Cost figures are entered against each item in each column.

23. The category 2 schedule listed project buyouts and subcontracts which would not fall within CB's new lump sum price. The following items are listed as category 2:

" Project Buyouts

"Holding Yard Wembley

"Shunting

"Roof Expansion joints

"Roof Articulation joints

"Site Electrodes

"Cat walks

"Temp Works - Roof Props

"M&E Package for moving roof

"Cleats 18Te

"Tube trusses - 45te

"Cruciform 10te

"Fire protection

"3,500 square metres paint

" Project Subcontracts

"Site touch up - Labour

"Site touch up - Plant

"Site touch up - Materials

"In-situ machining

"Strand Jacking Equipment

"Strand Jacking Supervision."

24. To the right of that list of items, the category 2 schedule has four numbered columns with the following headings: (1) Cumulative Actual Costs to end Jan '04; (2) Cumulative Actual Costs to 13 Feb '04; (3) Forecast against Supplemental Agreement; (4) Revised required if Cat 2 changes to Cat 1.

25. Cost figures are entered against each item in the first three columns. Column 4 of the category 2 schedule only has four entries, which are as follows: Site electrodes, 130; temp works - roof props, 3,053; M&E Package for moving roof, 3,225; tube trusses, 45te, 261.

26. All of the entries in these schedules are in units of thousands of pounds. It can therefore be seen that in column 4 of the category 2 schedule CB was saying that if site electrodes were to become part of the lump sum work, the lump sum would have to increase by £130,000; if temp works - roof props were to become part of the lump sum work, then the lump sum would have to increase by £3,053,000; if M&E package for moving roof were to become part of the lump sum, then the lump sum would have to increase by £3,225,000; if the tube trusses, 45Te, were to become part of the lump sum works, then the lump sum would have to increase by £261,000.

27. There is a dispute about what was said and about what other documents were produced at the meeting of 11th February. I shall revert to this issue in part 6 of the judgment after I have reviewed the evidence.

28. The next two meetings between the parties occurred on the afternoon of 11th February and on 12th February 2004. During the course of the present trial, it became common ground that CB produced copies of the landscape spreadsheet during the meeting on 12th February 2004.

29. On 18th February, the parties executed the Heads of Agreement. I have set out the text of that agreement at paragraph 50 of the previous judgment. For present purposes, I shall simply call attention to the following provisions:

"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...

"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 any 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 GBP12million, 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 a period of three months, i.e. ending 15/05/04. Plus £80,000 per month for off-site administration and overheads."

30. During the interregnum, which followed the signing of the Heads of Agreement, CB proceeded with fabrication of that part of the permanent steelwork which it retained. CB also proceeded with erection work on site, for which it was paid on a cost plus basis. The cost plus payments, which CB sought and received, included sums for temporary works. A very small part of those sums was attributable to the roof temporary works. During this period CB also sought instructions in relation to the roof temporary works, which were duly given by Multiplex.

31. On 16th June 2004, the parties executed the Supplemental Agreement. I have set out the terms of that agreement in paragraph 74 of the first judgment. For present purposes, I shall call attention to the following clauses of the Supplemental Agreement:

"3.1. The sub-contract works shall be varied post-15th February 2004 only by the omission of the fabrication and supply to site of the items specified in Schedule 3, Part A.

"3.2. Notwithstanding clause 3.1, the subcontractor shall retain responsibility under the subcontract for all design and fabrication drawings. In addition the subcontractor shall retain responsibility under the subcontract for bought out materials and subcontracts remaining in its scope after execution of this agreement...

"4. Save as may be subsequently adjusted in accordance with the terms of the subcontract (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 subcontract sum (exclusive of Value Added Tax) shall be as specified in schedule 1."

32. Schedule 1 to the Supplemental Agreement includes the following provisions:

"The adjusted subcontract sum shall comprise...

"(b) a fixed, lump sum of £12,000,000 for the completion of all remaining works, services and other obligations under the subcontract (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 subcontract; and

"(c) all costs reasonably and properly incurred by the subcontractor from 15th 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 15th February 2004 subject to the deduction of retention and other deductions permitted under the subcontract..."

33. Part A of schedule 3 to the Supplemental Agreement provides:

"The Contractor will carry out the following subcontract 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 Subcontract Works Part A - Document 2'."

34. The document referred to in subparagraph (i) is a schedule of permanent steelwork to be manufactured by Multiplex. The document referred to in sub-paragraph (ii), namely document 2, listed the following items:

" Project Buyouts

"Holding Yard Wembley

"Shunting

"Roof Expansion Joints

"Roof Articulation Joints

"Site Electrodes

"Cat Walks

"Temp Works - Roof Props

"M&E Package for moving roof

"Cleats 18Te

"Tube Trusses - 45te

"Cruciform 10te

"Fire protection

"3,500 square metres paint

" Project Subcontracts

"Site touch up - Labour

"Site touch up - Plant

"Site touch up - Materials

"In-situ machining

"Strand Jacking Equipment

Strand Jacking Supervision."

35. It will be noted that the list of items in document 2 is identical to the list of items which previously appeared in the left-hand column of the category 2 schedule.

36. Part B of schedule 3 to the Supplemental Agreement provides:

"The responsibilities retained by the subcontractor shall be as those arising from the primary subcontract save as amended by this agreement."

37. The sequence of events which occurred after the execution of the Supplemental Agreement has been recited in the first judgment and need not be repeated. One matter which should be mentioned is that Multiplex's Certificate 35 (issued on 25th June 2004) disallowed the design costs of temporary works as part of the reimbursable costs. CB took issue with this deduction in a fax dated 2nd July 2004.

38. After CB's departure from site on 2nd August 2004, protracted legal proceedings ensued between the parties. The course of those proceedings was outlined in Part 3 of the previous judgment. One feature which should be noted about those proceedings is that Multiplex made no claim against CB based upon the proposition that, prior to repudiation, CB had been obliged to carry out the roof temporary works as part of the lump sum price. Indeed, up to the trial last year, the damages claimed by Multiplex for repudiation were relatively modest, namely £3,114,905.

39. In August 2006, following its success on preliminary issues 1-10, Multiplex served amended Scott schedules claiming vastly increased damages for repudiation. These damages were quantified in the sum of £25,406,798. That claim includes £11,101,741 in respect of fabrication of temporary works and £5,169,693 in respect of designing temporary works. Thus the total sum claimed by Multiplex, in respect of temporary works, undertaken by Hollandia is £16,271,434. Multiplex contends that all of this work fell within the scope of CB's £12 million lump sum works and would, but for the repudiation, have been performed by CB. Out of the total figure of £16,271,434 approximately £15 million is attributable to temporary works for the roof.

40. I say approximately £15 million, because that is the figure put forward by counsel on both sides. I have not personally trawled through the Scott schedules in order to add up each item and quantify the precise amount which is attributable to the roof as opposed to other temporary works.

41. Multiplex accepts that its claim for damages is capped at £6 million. The strategy behind Multiplex's recent amendment, about which Multiplex has been quite open, is to demonstrate that on any view Multiplex's entitlement to damages reaches the limit of the £6 million cap.

42. Unsurprisingly, CB was aggrieved by a late amendment advancing such a huge claim in respect of temporary works. CB also disputed the legal basis of that claim. Accordingly, a new stage of these proceedings began which has culminated in issue 11.

Part 3: The Proceedings in Respect of Issue 11

43. At a case management conference on 20th October 2006, counsel for CB proposed that there should be an 11th preliminary issue, in order to establish the legal basis, if any, for Multiplex's claim for damages in respect of temporary works undertaken by Hollandia. Multiplex agreed that there

should be such a preliminary issue. Accordingly, I gave directions for pleadings and exchange of witness statements in respect of that issue.

44. On 30th October 2006, CB served a pleading setting out its case in respect of temporary works. The essence of CB's case is that under the Supplemental Agreement, the design and fabrication of temporary works formed part of the works which CB was carrying out on a cost plus basis. Accordingly, Multiplex was obliged to pay whatever the proper cost of those temporary works turned out to be. Therefore, Multiplex cannot claim as damages for repudiation the costs which Multiplex has incurred through having temporary works carried out by Hollandia, rather than by CB.

45. On 7th November 2006, Multiplex served its pleading in reply to CB's case on temporary works. Multiplex contends that under the original subcontract, the design and fabrication of all temporary works was CB's responsibility (a proposition which CB does not dispute). The only element of temporary works removed from CB's responsibility was the item described in Part A of schedule 3 to the Supplemental Agreement as "temp works - roof props". Factual matrix evidence will show that this item refers only to onsite modifications to the arch lift turning struts, so that they could be re-used as props for the roof. Accordingly, subject to that one exception, all design and fabrication of temporary works fell within the scope of the work which CB had agreed to carry out for £12 million.

46. It is common ground that Part A of schedule 3 to the Supplemental Agreement is a list of items cut and pasted from the category 2 schedule. It is also common ground that the category 2 schedule was handed by Mr Rogan to Mr Muldoon during the course of a meeting on the morning of 11th February 2004. Accordingly, both parties have served witness statements concerning events on and around 11th February 2004. Both parties regard this factual matrix evidence as an important aid to interpreting the relevant part of the Supplemental Agreement.

47. The trial of preliminary issue 11 commenced on Monday, 15th January and lasted for five days. Mr Roger Stewart QC and Mr Paul Buckingham represent Multiplex. Mr Adrian Williamson QC and Ms Lucy Garrett represent CB. The precise formulation of issue 11 was still in contention at the start of the trial. During the course of the trial the wording was agreed. The final version of issue 11, as formulated by counsel on Day 4 of the trial, reads as follows:

"In the period post 15 February 2004, did

"(i) the design and drafting, and

"(ii) the fabrication

"of some or all temporary works relating to the bowl, the arch and/or the roof fall within:

"a) 'all remaining works' (in paragraph (b) of Schedule 1 to the Supplemental Agreement); and/or

"(b) 'erection and site works' (in paragraph (c) of Schedule 1 to the Supplemental Agreement); and/or

"(c) 'temp works - roof props' (in Schedule 3 Part A to the Supplemental Agreement)?"

48. Unfortunately, problems came to light concerning CB's disclosure. Mr Rogan's sheet 4 had not previously been disclosed. Further new documents were disclosed by CB during the course of the trial. At the end of the trial, Mr Stewart reserved the right to seek to recall witnesses, in the event that this was appropriate in the light of the new documentation. Shortly afterwards, however, Multiplex's solicitors indicated that no such application would be pursued. Accordingly, the evidence is complete and this court can now give judgment.

49. Before tackling the questions raised by preliminary issue 11, I must first review the evidence which has been called.

Part 4: The Claimant's Evidence

50. In this part of the judgment I shall summarise the claimant's evidence. In doing so, I shall weave together the gist of each witness' written statement and oral evidence

ASHLEY MULDOON

51. Until February 2004 CB was responsible for the design, drafting, fabrication, erection and erection methodology of all structural steelwork – both the permanent works and the temporary works. By February 2004 the arch steelwork was substantially erected; the bowl steelwork was partially erected; the erection of roof steelwork had not been started.

52. In early February discussions were taking place between Multiplex and CB concerning a possible reduction of the scope of CB's contract and a partial change to cost plus. One proposal developed was that there should be a new fixed price for part of CB's scope of works.

53. Mr Muldoon has no note in his diary of a meeting on 6th February, but he accepts that there was a meeting on that day. It could be that the lump sum price was proposed at that meeting, but it was not discussed in any detail. The package of matters to be agreed was coming together at that stage. One consequence was that Mr Rogan and Mr Muldoon were to meet the following week, in order to work out what was going to be carved out of CB's works.

54. It was important to establish precisely what was being carved out, because Multiplex would be assuming responsibility for that. CB put forward the fixed price of £12 million. Multiplex was not given much room to negotiate on that figure.

55. A number of documents prepared by CB in early February refer to tonnages which CB would fabricate. Mr Muldoon cannot say if these tonnages all referred to permanent works.

56. On 9th February CB sent to Multiplex a copy of the proposal which they had presented on 6th February. The proposed lump sum price for future works in that document was £10.8 million. That included £1.2 million in respect of "bought outs/ subcontracts".

57. Mr Muldoon had a meeting with Mr Rogan on the morning of 11th February. The relevant page in Mr Muldoon's diary has the heading "10", but that is probably an error for 11 (i.e. 11th February).

58. On 11th February Mr Rogan handed over the category 1 and 2 schedules. CB were proposing to retain responsibility for the category 1 items under the lump sum agreement (i.e. work to be done for the lump sum of £12 million), whereas Multiplex would become responsible for the cost of category 2 items. Mr Muldoon agrees that the total of future project buyouts shown in the category 1 schedule is £2.495 million (whereas previously CB's figure had been £1.2 million). This figure was not discussed in any detail at the meeting, because the focus of discussion was on the work being "carved out" to be done by Multiplex.

59. The category 2 items were to be done by CB for Multiplex on a cost plus basis. Mr Rogan and Mr Muldoon went through the category 2 schedule in detail.

60. The category 1 and 2 schedules both include reference to temporary works. The category 1 schedule refers to the temporary works generally. The category 2 schedule includes an item "temporary works – roof props". Mr Muldoon understood this to refer to work to the toblerone

sections (steelwork from arch turning struts to be re-used for propping towers for the roof). Multiplex had already paid for these items. The modifications would necessarily have to be done on site. Mr Rogan never proposed that Multiplex should take away from CB the entire fabrication or design of the temporary works for the roof.

61. Mr Muldoon notes that in the category 2 schedule CB were proposing a lump sum price of £3.053 million for "temporary works – roof props", if CB were to assume responsibility for this item. Mr Muldoon denies that this made it obvious that the item referred to much more than the work to the toblerones. CB were simply treating this as an opportunity to get more money. It was not unusual for CB to put forward prices which were out of this world. Furthermore, as can be seen from column 3, Mr Rogan was predicting that that work would only cost multiplex £600,000.

62. Mr Rogan and Mr Muldoon did not discuss the temporary works for the roof in any detail either before or at the meeting of 11th February. There was no need to, as this remained within CB's responsibility. Mr Muldoon was not aware how extensive the temporary works for the roof would be.

63. The discussion on 11th February concentrated on what was being carved out. Mr Rogan did not go into details of what was comprised in the items of design, drawings and fabrication which CB was retaining. Mr Muldoon was seeking to identify what was being carved out of CB's works. This needed to be defined with clarity and this was the focus of discussion on 11th February.

64. Mr Rogan produced steelwork schedules on 11th February. These schedules showed the tonnages of steel which were going to be carved out. Multiplex would assume responsibility for fabricating that steel. Mr Muldoon does not refer to these schedules in his statement, because they related entirely to permanent works. These steelwork schedules were subsequently incorporated into the Supplemental Agreement, even though the tonnages changed somewhat. They were included in the supplemental agreement, in order to ensure that Multiplex received drawings by the dates shown in the "drawings available" column.

65. Mr Rogan did not produce the landscape spreadsheet or the top half of the landscape spreadsheet at the meeting on the morning of 11th February. There was no discussion about that spreadsheet at the meeting. Mr Rogan's witness statement is wrong about these matters.

66. Mr Muldoon's note of the meeting on the morning of 11th February is incomplete, but he noted some of the items discussed. Mr Rogan's sheet 4 was not produced at that meeting. Mr Muldoon has never seen this document until a few days before the start of the present trial.

67. On the afternoon of 11th February there was another meeting with CB. Mr Muldoon and Mr Stagg attended for Multiplex. Messrs Grant, Rogan and possibly Nightingale attended for CB. Mr Grant tabled a note. That note appears to show that the lump sum has increased from £10.8 million to £12 million because buyouts and subcontracts have increased from £1.2 million to £2.4 million.

68. Mr Muldoon attended a meeting with CB at Berkeley Square on 12th February, in order to finalise the deal. This meeting was attended by Mr Stagg and Mr Muldoon of Multiplex and Messrs Grant, Rogan and Child of CB. The landscape spreadsheet was produced by CB at this meeting. There was no discussion about temporary works. The reference in Mr Muldoon's witness statement to Mr Roberts attending this meeting is a mistake. Mr Muldoon met Mr Roberts later in the day and reported back to him.

69. Mr Muldoon saw the top half schedule at some point before the supplemental agreement was signed. He assumes that the £12 million comes from there.

70. The Heads of Agreement was drawn up between Mr Stagg and Mr Grant on around 16th February. Mr Muldoon was not involved in the drafting. He was sent a copy after it was signed and he noted the reference in clause 7 to the category 1 and category 2 schedules.

71. After the signing of that agreement, Mr Muldoon instructed his team that CB's on-site erection costs should be paid on a cost reimbursable basis, and that off-site works would continue to be covered by a lump sum agreement. Mr Muldoon gave copies of the category 1 and category 2 schedules to his team, to enable them to value CB's applications from 15th February onwards.

72. In so far as Multiplex certified sums as payable to CB for roof temporary works on a cost reimbursable basis, that was a mistake. CB's early applications during this period had relatively little substantiation. Mr Muldoon told his team to take these applications at face value and pay them reasonably quickly, so that that CB had cash flow. All of these payments were made on account and subject to adjustment later. Mr Muldoon does not dispute the details of the payments made, as set out in the schedule agreed between counsel.

73. Subsequently Mr Muldoon told his team to review the applications more carefully. As a result CB's claims for design work in respect of roof temporary works were rejected in the June and July certificates.

74. Mr Muldoon cannot be certain where Mr Cursley obtained the information which appears in certain of his later notes relating to valuation. The figure of 5,508 tonnes in those notes may be a reference to permanent works. It may be that someone at CB (possibly Mr Underwood) told Mr Cursley that the value of those 5508 tonnes was £7.19 million. Indeed, it appears from the various manuscript notes put in re-examination that Mr Underwood gave the relevant information to Mr Muldoon on 4th March 2004.

75. What Mr Muldoon told Mr Cursley was that £12 million was the lump sum price for CB's continuing obligations, after the works for which Multiplex assumed responsibility had been carved out.

76. There was correspondence in April and May, in which CB sought instructions from Multiplex in respect of ordering materials and fabrication for temporary works. This did not mean that Multiplex were responsible for the cost of temporary works. It was simply that CB were building a claim for delay in respect of temporary works.

77. During this period Hollandia was "in the frame" as the contractor which might take over erection works from CB. On 22nd April Multiplex sent a table of responsibilities to Hollandia. In that table there is not a tick indicating that CB were responsible for "fabrication and supply of temporary works". That omission may have been an error.

78. The correspondence shows that two options were under consideration in the event that Hollandia stepped in. Hollandia might take over CB's erection methodology. Alternatively, Hollandia might devise its own erection methodology. By mid-May the second option was in contemplation. By July it was becoming clear that Hollandia would take over responsibility for roof temporary works. During July CB made it clear that they would not take responsibility for those temporary works. So CB decided to transfer all the roof temporary works to CB.

79. If CB had remained as contractor for the lump sum work, than the £12 million lump sum would have had to be adjusted in respect of those temporary works which were being removed from CB's scope of works and transferred to Hollandia.

RANALD McGREGOR

80. As project manager, Mr McGregor was concerned with the erection of steel on site. Mr McGregor was not involved on the commercial side.

81. Mr McGregor was not involved in negotiating the Heads of Agreement. He saw the document after it was signed, but was not given a copy. Mr Muldoon explained to Mr McGregor the principal provisions of the Heads of Agreement.

82. Turning struts were used for the arch lift. These turning struts contained triangular sections, known as toblerones.

83. The temporary works for the roof comprised fifteen separate elements as set out in paragraph 11 of Mr Mcgregor's statement. These included towers to support the roof during erection. It was planned to re-use the toblerone sections from the turning struts as central sections for some of the towers.

84. The fixed roof weighs approximately 4,500 tonnes and the moving roof weighs approximately 1,250 tonnes. Approximately 5,500 tonnes of temporary steel was required for the purpose of erecting the fixed and moving roof. In early 2004 Mr McGregor was not aware how extensive the roof temporary works would be.

85. It was Mr McGregor's understanding that the design, drafting and fabrication of temporary steel remained CB's responsibility under the Heads of Agreement and the Supplemental Agreement. Because of this belief, Mr McGregor did not seek regular meetings with the designers of temporary works who were working for CB (DLT and Tony Gee & partners).

86. The correspondence shows that CB sought instructions in respect purchasing materials and fabrication in respect of the temporary works. Mr McGregor was willing to give such instructions in order to maintain progress. Mr McGregor was not involved in the decisions as to who would pay for these matters. The commercial department sorts out what items are within a subcontract and what items are extra.

87. Mr McGregor had a meeting with Mr Laskey of CB on 24th April, in order to understand what was entailed in the roof temporary works. Mr McGregor gained a better understanding as a result of this meeting. However, Mr McGregor did not appreciate the full extent of the roof temporary works until late 2004 or early 2005.

88. It is true that Mr McGregor suggested that Multiplex should enter into direct contracts with the fabricators of temporary works. Mr McGregor was acting on instructions. Also CB could not be relied upon.

89. On the 8th July Mr McGregor sent an email to Mr Muldoon recommending that Multiplex take over from CB a contract for the fabrication of temporary steel "since we are paying for it anyway". Nevertheless it was not the case that Mr McGregor understood temporary works to be part of the cost plus arrangement. He did not make the commercial decisions.

90. Once it became likely that Hollandia would take over roof erection, Mr McGregor thought it best for Hollandia to do the roof temporary works. Mr McGregor's main concern was to ensure that the job kept moving forward.

91. Mr McGregor has never before known it to happen that one party erects steelwork, while another party provides the temporary works and erection methodology. On the other hand this was a very unusual situation.

92. Mr McGregor believed that CB had a responsibility for the erection engineering, even though Hollandia would have to satisfy themselves that it was correct.

93. Mr McGregor cannot explain why it is that Multiplex first advanced its claim against CB in respect of roof temporary works in August 2006.

Part 5: The Defendant's Evidence

94. In this part of the judgment I shall summarise the defendant's evidence. In doing so, I shall weave together the gist of each witness' written statement and oral evidence.

BRIAN ROGAN

95. Temporary works are necessary solely for the purpose of erecting the steelwork. They provide stability and support, whilst each portion of the structure is being constructed.

96. The temporary works for Wembley Stadium were more complicated and extensive than on any other project in which Mr Rogan has been involved. There were many different ways to erect the roof. Each one would require different temporary works. The method chosen by Hollandia was completely different from the one which CB had intended to use.

97. As a matter of practicality, whoever erects the steelwork must be responsible for the temporary works.

98. Mr Rogan prepared a written "Supplementary Agreement Proposal" on the 5th February 2004. Section 2 of this document ("design") stated that CB would complete the design of the bowl, roof, PPT and temporary works. Section 4 of the document ("fabrication") related entirely to the fabrication of permanent works. Section 7 of the document ("erection") proposed that CB should carry out site-works on a cost plus basis. The fabrication of temporary works fell within this section, because temporary works are a function of erection. This would be apparent to anyone experienced in the steelwork industry. Mr Rogan wrote this document for internal debate within CB.

99. Either on the 5th February or early on the 6th February, Mr Grant and Mr Child said that design of temporary works should not be included in Mr Rogan's proposal, because they did not want to take that risk.

100. On 6th February Mr Rogan, together with Mr Grant, attended a meeting with Mr Stagg and Mr Muldoon of Multiplex. He took with him the proposal document and a spreadsheet (C10/41 in the previous trial bundle) which was an early version of the top half schedule.

101. In the course of the meeting on 6th February Mr Rogan did not expressly state that CB's costs going forward did not include any element of temporary works design or fabrication.

102. Mr Grant's three-page document headed "Proposal" was produced at the meeting. This document proposed that Multiplex should procure the fabrication of 6,200 tonnes and CB should fabricate 5,000 tonnes of permanent steel. One line reads "erection and site works at cost plus". That must include temporary works fabrication. The third page proposes a new lump sum price of £10.8 million. It also includes the transfer to Multiplex of "all items outside the new scope of 5,000 tons".

103. Mr Rogan attended a meeting with Muldoon on the morning of 11th February (the "morning meeting"), a meeting with Mr Muldoon and others from CB and Multiplex on the afternoon of 11th February (the "afternoon meeting") and a meeting with Mr Muldoon and others from CB and Multiplex on 12th February.

104. At the morning meeting Mr Rogan produced copies of the top half schedule, the category 1 schedule, the category 2 schedule and "sheet 4". The top half schedule shows the headline figures, set out in nine lines. The category 1 and 2 schedules provide a breakdown of the figures in line 5 for buyouts and subcontracts. Sheet 4 (which had been prepared by Mr O'Neill) provides a breakdown of the figure in line 3 for CB's future fabrication, namely £7.19 million. (In his August 2004 adjudication witness statement Mr Rogan did not mention having or producing sheet 4 at this meeting.)

105. In the top half schedule the costs to date of designing temporary works are included in line 1. The costs to date of fabricating steel for temporary works are included in line 5. However, the future costs attributable to temporary works are not included in the column headed "forecast against supp agree scope". Thus the figure of £3.675 million in that column at line 1 does not include the future design cost of temporary works. Nor does the total figure of some £12 million at the foot of that column include future temporary works. Mr Rogan explained this to Mr Muldoon at the morning meeting (even though CB's pleading says that temporary works were not discussed at the meeting).

106. Mr Rogan and Mr Muldoon agreed the lump sum price of some £12 million and they agreed the scope of work which CB would do for that sum. They went through lines 1 to 9 of the top half schedule, showing the build up of that sum. During this exercise they went through the category 1 schedule, since the future buyouts and subcontracts listed in the category 1 schedule (£12.688 million minus £10.467 million = £2.421 million) formed part of the £12 million total.

107. The category 2 schedule, setting out buyouts and subcontracts which were to be part of the cost plus arrangement (i.e. not within the £12 million lump sum), was discussed more briefly. The temporary works for the roof were included in the category 2 schedule under the description "temp works – roof props". Mr Rogan did not explain the meaning of this phrase to Mr Muldoon. The roof temporary works had not been designed in February, so the extent of roof temporary works fabrication was unknown.

108. The turning struts for the arch were due to be raised between 16th February and 17th March. These towers were visible on site in February. However, no-one looking at the category 2 schedule could interpret the phrase "temp works – roof props" as a reference solely to converting the toblerone sections of those towers for re-use in the roof temporary works. It can be seen from column 4 of the category 2 schedule that CB required to be paid an additional £3.053 million if they were going to take on that item as part of the fixed price.

109. The figures in column 3 of the category 2 schedule are a mixture of (i) the amounts of money remaining from the original contract sum for items and (ii) estimates of costs going forward. The figure of £600,000 in column 3 for "temp works - roof props" falls into the first group. Mr Rogan did not explain to Mr Muldoon how the figures in column 3 of the category 2 schedule were compiled.

110. At the morning meeting Mr Rogan produced a schedule showing the 5,508 tonnes of permanent steel which CB would fabricate. (In his adjudication statement of October 2004 Mr Rogan referred to the wrong schedule in this regard, namely a schedule showing 5,168 tonnes.)

111. About midday on 11th February Mr Rogan had a discussion with Mr Child and explained what had been agreed at the morning meeting.

112. At the afternoon meeting between Multiplex and CB representatives Mr Rogan once more presented and went through the top half schedule. (Paragraph 58 of Mr Rogan's third witness statement says that he presented the landscape spreadsheet at the afternoon meeting. That was an error.) During the afternoon meeting Mr Grant and Mr Stagg agreed to round the figure of £12.045 million down to £12 million. Multiplex wanted to know what the total cost of everything would be. Accordingly Mr Grant instructed Mr Rogan to add this to the top half schedule. Mr Rogan duly did so overnight and thus produced the landscape spreadsheet.

113. The lower box of the landscape spreadsheet shows costs for which Multiplex would be responsible under the proposed supplemental agreement. The second line in the lower box ("costplus buyouts /subcons: 5,477") includes the design of future temporary works.

114. Mr Rogan prepared the lower box of the landscape spreadsheet in some haste. The figure of £5.477 million was simply taken from the bottom of column 3 on the category 2 schedule.

115. Mr Rogan presented the landscape spreadsheet at the meeting between Multiplex and CB on the 12th February.

116. Thereafter the scope of work which it was agreed that CB should undertake for the £12 million lump sum remained unchanged. Both the Heads of Agreement and subsequently the Supplemental Agreement were signed on that basis. It can be seen that the list of items in the category 2 schedule were cut and pasted into schedule 3 part A of the Supplemental Agreement.

DON UNDERWOOD

117. Mr Underwood prepared the category 1 and category 2 schedules in early February 2004. "Buyouts" and "subcontracts" are terms used in those documents to denote items or services procured by CB from third parties.

118. The term in the category 2 schedule "temp works – roof props" was used by Mr Underwood to denote all the roof temporary works. [By agreement between counsel, this and similar evidence was admitted de bene esse. However, since Mr Underwood did not explain his thought processes to Multiplex, I do not regard this evidence as admissible in relation to the interpretation of the phrase.]

119. After 15th February 2004 CB sought and obtained instructions from Multiplex in respect of temporary works. Requests for instructions were sent to Mr McGregor, whom CB regarded as the appropriate person at Multiplex for this purpose.

120. From April 2004 onwards CB applied for payments on a cost plus basis in respect of temporary works and Multiplex duly paid. In relation to the design of temporary works, CB's first application for payment was not submitted until late May or early June. This was because DLT (who did much of the temporary works design) only claimed from CB on a monthly basis. Through oversight CB did not include this item in its April applications. Multiplex subsequently disputed CB's claim in respect of those design costs.

JAMES CHILD

121. Mr Rogan's document of 5th February included the proposal that CB should design future temporary works. Mr Grant instructed Mr Rogan that the cost of designing temporary works should not be included in the fixed price.

122. Mr Child, together with Mr Grant and Mr Rogan, attended a meeting on 6th February with Mr Stagg and Mr Muldoon of Multiplex. At this meeting they discussed CB's proposed new lump sum price of £10.8 million. A spreadsheet (not now available) showed the build up of this sum. The detail was left for subsequent discussion between Mr Rogan and Mr Muldoon.

123. On the 11th February, after attending a Cleveland Group board meeting, Mr Child had a discussion with Mr Rogan. Mr Rogan explained that he had met Mr Muldoon that morning and that they had agreed the scope of CB's potential new contract. Mr Rogan went through the top half schedule, the category 1 schedule and the category 2 schedule. He said that temporary works for the roof (including design) were excluded from the lump sum price and would be Multiplex's responsibility. Mr Child checked how the figures in the schedules fitted together. He noted the item "temp works – roof props" in the category 2 schedule. He understood that this item included everything to do with the roof temporary works. There was a spreadsheet showing the build-up of this figure, prepared by CB's people in Darlington. (This spreadsheet was identified and added to the bundle at the end of Mr Child's evidence.) Mr Child made no note of this meeting.

124. Paragraph 9 of Mr Child's witness statement, which deals with this meeting, erroneously refers to the landscape spreadsheet, whereas it ought to refer to the top half schedule.

125. On the afternoon of 11th February Mr Child, Mr Grant, Mr Rogan and Mr Nightingale of CB had a meeting with Mr Stagg and Mr Muldoon of Multiplex. Mr Grant produced an agenda for the meeting, which included the entry "only change is £1.2 million for changed buyout scope." This explained the increase in the lump sum from £10.2 million (proposed at the 6th February meeting) to £12 million (agreed that morning between Rogan and Muldoon). A summary of each party's position was put up on the whiteboard in Multiplex's conference room (which Mr Child copied down and subsequently reproduced in his typed note marked "12/02/2004: 15.43"). Mr Child cannot say where precisely future temporary works are in those figures. Temporary works were not mentioned during this meeting. However, there was an understanding between Mr Grant and Mr Stagg that CB would finish off the temporary works which they had done to date [i.e. bowl and arch] within their scope; but the future temporary works, including the roof, would be part of the go-forward work. Multiplex wanted to have control of that portion of the works which may be transferred to another contractor.

126. If one looks at the comparison of the parties' positions, the first entry ("cost to date") shows Multiplex's figure of £26 million and CB's figure of £40 million. That £40 million included a £2 million "hit" on temporary works to date, which CB had accepted.

127. On the afternoon of 12th February Mr Grant, Mr Rogan, Mr Child and Mr Nightingale had a "premeeting", at which they discussed the landscape spreadsheet prepared by Mr Rogan. This showed a breakdown of the total cost which Multiplex was likely to incur on the steelwork, namely £88 million. Mr Grant, Mr Rogan and Mr Child then proceeded to Multiplex's offices for a meeting with Mr Stagg and Mr Muldoon. A copy of the landscape spreadsheet was handed over to Multiplex. Mr Stagg acknowledged that Mr Muldoon and Mr Rogan had agreed what was and was not included in the £12 million scope of works. The details of where temporary works were included in the landscape spreadsheet were not discussed. This meeting covered all the commercial issues around the Wembley project, of which temporary works were one small part. Mr Child's notes of that meeting only record matters which were in dispute (viz the cost of work to date and future erection costs).

128. At a board meeting on 7th May 2004 the board discussed the substantial overspend on temporary works (including roof temporary works) and resolved to research whether a PI claim could be made against DLT, the subcontractors for design work. The Supplemental Agreement had not then been signed and CB believed that Multiplex may not be willing to bear the cost of future temporary works. At the date of the board meeting Mr Child believed that CB had not yet off-loaded responsibility for temporary works to Multiplex.

ALLAN MANN

129. Mr Mann's evidence was given in writing, since Multiplex did not require to cross-examine him.

130. Mr Mann is a civil/ structural engineer with over 40 years experience. At the relevant time he was employed by Babtie, the firm of engineers whom CB employed as third party checker at Wembley Stadium. Subsequently CB was employed by Hollandia in the same capacity. Both CB and Hollandia are very good designers, fabricators and erectors of complex structural steel constructions.

131. The temporary works for the arch and roof of the stadium were immensely complicated. The design and implementation of these temporary works required a high degree of skill. The main challenge for the steel erectors was to build the structure in such a temporary alignment that, after completion, the structure would adopt the intended design state under gravity loading.

132. Temporary works design is not intrinsically linked to permanent works design. There are a number of ways of constructing steelwork to a given design. There is considerable scope for the ingenuity of different teams over how such erection will be achieved. In relation to temporary supports, different teams will have their own preferences, partly dependent on the equipment available to them.

133. Therefore temporary works are generally inseparable from permanent works. This was especially so on the Wembley project, where the temporary works required were extraordinarily complicated.

Part 6: Analysis of Issue 11

134. It is necessary, at the outset, for me to make some factual findings about the crucial events of 11th February 2004. I have carefully considered the documentary evidence and the oral evidence and I make the following findings of fact.

135. Mr Rogan and Mr Muldoon had a meeting on the morning of 11th February. Mr Rogan brought with him a number of documents including the top half schedule, the category 1 schedule, the category 2 schedule, and schedules of permanent steelwork. Mr Rogan did not bring with him sheet 4. Sheet 4 has been disclosed late in the day. Mr Muldoon has no recollection of seeing that document before. Mr Rogan is mistaken in his recollection that sheet 4 was produced or discussed on 11th February 2004.

136. I accept the evidence of Mr Rogan and Mr Underwood as to how, as a matter of historical fact, the figures in the top half schedule, the category 1 schedule and the category 2 schedule were built up and as to how the figures in those three schedules interrelate. The top half schedule sets out the items of work which it was proposed that CB would carry out (insofar as that work was not already carried out) within the scope of the new lump sum contract. The column headed "Balance to Pay" sets out the figures attributable to each item of future work resulting in a total of £12.045 million. This total figure comprises £1.138 million in respect of design of steel for permanent works, £541,000 in

respect of drawings for that steel, £7.19 million in respect of fabricating that steel and £2.421 million in respect of buyouts and subcontracts.

137. Line 5 of the top half schedule is derived from the category 1 and category 2 schedules. If one adds up all of the figures in numbered column 2 of those two schedules, the total is £10.467 million. This figure appears in line 5 of the top half schedule under the heading "Cumulative Actual Cost to 13 February '04". The total at the foot of numbered column 3 of the category 1 schedule, namely £12.888 million, is likewise carried across to line 5 of the top half schedule. The difference between £12.888 million and £10.467 million is £2.421 million. That is the portion of the proposed £12 million lump sum which CB attributed to future buyouts and subcontracts.

138. The category 2 schedule sets out works which it was proposed that CB should carry out on a cost plus basis. In other words, these buyouts and subcontracts fell outside the scope of the proposed £12 million lump sum contract. The seventh entry in this schedule is "temp works - roof props." The fourth numbered column indicates that CB would require the lump sum to be increased by £3.053 million if that item were to be included in the proposed new lump sum contract. The figure of £3.053 million was built up by adding together the estimated costs of all the roof temporary works, including design. Subsequent events have shown this figure to be an underestimate. The third numbered column of the category 2 schedule contains the figure £600,000 in respect of "temp works - roof props". This figure represents the amount of the original subcontract price attributable to roof temporary works which remained unspent by CB.

139. During the course of the meeting on the morning of 11th February, Mr Rogan and Mr Muldoon agreed that the new lump sum figure would be £12.045 million, possibly rounded down to £12 million. It was agreed that the scope of the works to be done by CB for the new lump sum would be as indicated on the schedules produced by Mr Rogan. Those schedules comprise the top half schedule, the category 1 schedule, the category 2 schedule and the steelwork schedules. The steelwork schedules indicated which permanent steelwork would be fabricated by Multiplex and which permanent steelwork would be fabricated by CB. Those steelwork schedules did not include Mr Rogan's sheet 4.

140. In the course of his oral evidence, Mr Rogan said that during the meeting he explained how future temporary works were dealt with in the various schedules. In my judgment, that evidence was mistaken. The true position was as pleaded by CB in paragraph 5 of its statement of case on this issue, namely that temporary works were not discussed. Mr Muldoon did not ask for an explanation of this matter. Mr Rogan did not volunteer such an explanation.

141. The lump sum figure agreed between Mr Rogan and Mr Muldoon on the morning of 11th February was some £1.2m higher than the figure previously discussed at the meeting on 6th February, namely £10.8 million. The reason for this change was that buyouts and subcontracts had increased from about £1.2m to about £2.4 million as set out in the top half schedule.

142. I accept the evidence of Mr Rogan and Mr Child as to the gist of the conversation which they had at about midday on 11th February.

143. At the afternoon meeting on 11th February, between representatives of Multiplex and CB, the upshot of the morning meeting was briefly reported. The rounding down of £12.045 million to £12 million, which had been canvassed at the morning meeting, was confirmed. The same schedules were available in the afternoon as in the morning. During the course of the afternoon meeting, Multiplex requested additional information about estimated future costs outside the scope of the proposed lump

sum agreement. This request led to the production by Mr Rogan of the landscape spreadsheet overnight. This document was given to Multiplex at the meeting on 12th February.

144. I find that at no point during the meetings on 11th or 12th February was there any specific discussion about where temporary works for the roof fitted into the various schedules. The representatives of Multiplex did not ask for such an explanation. The representatives of CB did not volunteer such an explanation. This is understandable, because at each of the three meetings, a wide range of important and contentious matters were being debated. Neither party specifically focused upon the roof temporary works.

145. The various schedules given by Mr Rogan to Mr Muldoon on 12th February became contractual documents because they were referred to in clauses 4, 6 and 7 of the Heads of Agreement. Furthermore, the list of items in the category 2 schedule was copied out verbatim in Part A of schedule 3 to the Supplemental Agreement. In those circumstances, it is necessary for me to determine objectively the meaning of those parts of the schedules which are in controversy.

146. Let me turn first to the category 1 schedule. The temporary works items in this schedule read as follows:

"Temp works - arch temporary work shops

"Temp works - arch assembly stillages

"Temp works - struts

"Temp work - Anchors

"Temp works - strut bases

"Temp works - pin assemblies...

"Temp works - cable and strand handling

"Temp works - bowl."

147. When this list of items is interpreted in the context of the situation existing in February 2004, it is clear that this list embraces the design, drafting and fabrication of all temporary works relating to the bowl and the arch. CB had already completed much of these temporary works. What remained would form part of the lump sum works.

148. I turn next to the category 2 schedule. This only contains one item relating to temporary works, namely "temp works - roof props". When this phrase is read in context it means, and can only mean, the design, drafting and fabrication of all temporary works for the roof. Within that package one relatively modest part would be the conversion of the toblerone sections for re-use in the temporary towers.

149. I am reinforced in my interpretation of the phrase "temp works - roof props" by five considerations:

(i) Temporary works for the roof are not included in the category 1 schedule. Therefore one would expect to find them in the category 2 schedule

(ii) The quotation of £3.053 million in the category 2 schedule must relate to all of the roof temporary works. In the circumstances existing in February 2004, it would have been nonsensical to interpret this sum as a quotation for converting the toblerone sections.

(iii) The design, drafting and fabrication of temporary works for the roof could not sensibly be divorced from the process of erecting the roof. Whoever erected the roof would have to decide what temporary works were required for their chosen method of erection. It would not make commercial sense for one contractor to erect the roof and for a different contractor to undertake the temporary works. The deal which was being made between Multiplex and CB specifically contemplated that a contractor other than CB might undertake roof erection.

(iv) One major function of roof temporary works is to prop up the roof, whilst its component parts are being placed in position. The phrase 'roof props', although over-simplistic, is a convenient shorthand for roof temporary works.

(v) It would be bizarre to treat design of the roof temporary works as being included within the lump sum, but fabrication of the roof temporary works as being within the cost plus works and potentially transferable to another contractor. The most obvious and natural interpretation of the category 2 schedule is to read the phrase "temporary works - roof props" as including both design and fabrication.

150. Let me now turn to the Heads of Agreement. Although issue 11 is concerned with the proper interpretation of the Supplemental Agreement, nevertheless it is permissible to have regard to a concluded antecedent agreement where that antecedent agreement gives clear guidance on the point in issue. See the third edition of Lewison on the Interpretation of Contracts, paragraph 3.05 and **Ladbroke Group plc v Bristol City Council** [1998] 1 EGLR 126 at page 129, column 1.

151. The Heads of Agreement refers to certain schedules which are not annexed to it. The schedules referred to in clauses 4, 6 and 7 of the Heads of Agreement must be the top half schedule, the category 1 schedule, the category 2 schedule and the schedules showing permanent steelwork to be fabricated by Multiplex and CB respectively. The effect of clause 7 of the Heads of Agreement was that buyouts and subcontracts listed in the category 1 schedule were included within the £12 million lump sum, but buyouts and subcontracts listed in the category 2 schedule were not. Accordingly, under the Heads of Agreement, the design and fabrication of roof temporary works did not fall within the scope of the £12 million lump sum.

152. The conduct of the parties during the interregnum was consistent with a common understanding that temporary works for the roof were not included within the scope of the lump sum works. For example, CB sought approval and instructions in respect of those temporary works. Multiplex expressed a preference for contracting direct with the fabricators of temporary works for the roof.

153. On 16th June 2004, Multiplex and CB executed the Supplemental Agreement. The Supplemental Agreement superseded the Heads of Agreement with retrospective effect. See this court's decision on preliminary issue number 1 (which is not the subject of appeal). As previously mentioned, the list of items in Part A of schedule 3 is word for word the same as the list of items in the category 2 schedule. Accordingly, the parties must have intended the phrase "temporary work - roof props" to have the same meaning that it had in the category 2 schedule. Therefore, that phrase refers to all of the temporary works for the roof, not just the toblerone sections.

154. Clause 3.1 of the Supplemental Agreement presents a conundrum. In the course of argument neither Mr Stewart nor Mr Williamson found it easy to reconcile this clause with their respective cases. It is quite clear that it was not the intention of the parties that the items listed in part A of schedule 3 should be omitted altogether from the subcontract works. Nevertheless, that is the literal meaning of the clause.

155. In interpreting clause 3.1, I must follow the guidance given by Lord Hoffmann in **Investors Compensation Scheme Limited v West Bromwich Building Society** [1998] 1 WLR 896 at pages 912-913. The following passage is apposite:

"I think I should preface my explanation of my reasons with some general remarks about the principles by which contractual documents are nowadays construed. I do not think that the fundamental change which has overtaken this branch of the law particularly as a result of the speeches of Lord Wilberforce in **Prenn v Simmonds** [1971] 1 WLR 1381, 1384-1386 and **Reardon Smith Line Limited v Yngvar Hansen-Tangen** [1976] 1 WLR 989, is always sufficiently appreciated. The result has been, subject to one important exception, to assimilate the way in which such documents are interpreted by judges to the common sense principles by which any serious utterance would be interpreted in ordinary life. Almost all the old intellectual baggage of 'legal' interpretation has been discarded. The principles may be summarised follows:

"(1) Interpretation is the ascertainment of the meaning which the document would convey to a reasonable person having all the background knowledge which would reasonably have been available to the parties in the situation in which they were at the time of the contract...

"(4) The meaning which a document (or any other utterance) would convey to a reasonable man is not the same thing as the meaning of its words. The meaning of words is a matter of dictionaries and grammars; the meaning of the document is what the parties using those words against the relevant background would reasonably have been understood to mean. The background may not merely enable the reasonable man to choose between the possible meanings of words which are ambiguous, but even (as occasionally happens in ordinary life) to conclude that the parties must for whatever reason have used the wrong words or syntax: see **Mannai Investments Co Limited v Eagle Star** [1997] AC 749.

"(5) The 'rule' that words should be given their 'natural and ordinary meaning' reflects the common sense proposition that we do not easily accept that people have made linguistic mistakes, particularly in formal documents. On the other hand, if one would nevertheless conclude from the background that something must have gone wrong with the language, the law does not require judges to attribute to the parties an intention which they plainly could not have had. Lord Diplock made this point more vigorously when he said in **Antaios Compania Naviera S.A. v Salen Rederierna AB** [1985] AC 191, 201:

'If a detailed semantic and syntactical analysis of words in a commercial contract is going to lead to a conclusion that flouts business common sense, it must be made to yield to business common sense'."

156. Similar guidance was given by Lord Steyn in **Sirius International Insurance Co (Publ) v FAI General Insurance Limited** [2004] UKHL 54; [2004] 1 WLR 3251 at pages 3257-3258.

157. It follows from the guidance given by the House of Lords that I must attribute to clause 3.1 the meaning which that clause would convey to a reasonable person having the background knowledge which was available to Multiplex and CB at the relevant time. In my judgment a reasonable person,

equipped with such background knowledge, would interpret clause 3.1 as meaning that fabrication work in respect of the items listed in Part A of schedule 3 was not included in the lump sum price of £12 million.

158. The effect of clause 3.1 is that the fabrication referred to in that clause is not excluded altogether from the subcontract works. On the contrary, that fabrication work is to remain part of the subcontract works, but is to be paid for on a cost plus basis until such time as a new contract is agreed between the parties or, alternatively, Multiplex serves notice under clause 8.

159. Let me turn now to clause 3.2. If the phrase "all design and fabrication drawings" includes design and fabrication drawings for temporary works, then the clause makes perfectly good sense. CB retains responsibility for all designs and fabrication drawings, even though certain of those drawings are to be paid for on a cost plus basis. Alternatively, the phrase "all design and fabrication drawings" may be a somewhat clumsy reference to all design and fabrication drawings for the permanent works. However clause 3.2 is interpreted, it is not inconsistent with the conclusion that the design of roof temporary works falls outside the scope of the lump sum works.

160. Let me now turn to schedule 1 to the Supplemental Agreement. Clause (c) of schedule 1 begins with the words "all costs reasonably and properly incurred by the subcontractor from 15th February 2004 in connection with the erection and site works (being site staff, direct labour, cranes and other site related costs)". This formulation is not limited to costs incurred on site. It also includes costs incurred in connection with erection and costs incurred in connection with site works. The words in brackets appear to be illustrative of the preceding phrase rather than words of limitation. The phrase "other site related costs" is a broad one. It is not limited to costs incurred on site.

161. The first question which I must address in relation to schedule 1 is whether the fabrication of roof temporary works falls within paragraph (b) or paragraph (c). I conclude that this fabrication work falls within paragraph (c) for three reasons:

(i) The fabrication of temporary works (even though carried out off site) is intimately connected with the process of erecting the roof. Therefore, this activity falls within the terms of paragraph (c).

(ii) Pursuant to clause 3.1 of the Supplemental Agreement, fabrication of roof temporary works falls outside the scope of the works covered by the lump sum price of £12 million. Therefore, this activity cannot fall within paragraph (b).

(iii) The effect of the Heads of Agreement, which was a concluded antecedent agreement, was that the fabrication of roof temporary works fell outside the scope of the lump sum works.

162. The second question which I must address in relation to schedule 1 is whether the design and drafting of roof temporary works falls within paragraph (b) or paragraph (c). I conclude that this activity falls within paragraph (c) for four reasons:

(i) The design of temporary works (even though carried out off site) is intimately connected with the process of erecting the roof. Therefore this activity falls within the terms of paragraph (c).

(ii) It would be a bizarre and impractical arrangement for the design of roof temporary works to be part of the lump sum works, while the fabrication of those temporary works was not. In that event, the fabrication would be transferable to another contractor, but the design would remain with CB. CB would then be required, for a fixed price, to carry out design work of unknown scope to suit the future erection methodology of some other contractor.

(iii) As a matter of commercial common sense, whoever erects the roof must also be responsible for the design and fabrication of the temporary works. None of the witnesses who gave evidence at this trial has ever known the arrangement to be otherwise.

(iv) The effect of the Heads of Agreement, which was a concluded antecedent agreement, was that the design of the roof temporary works fell outside the scope of the lump sum works. That is relevant to the interpretation of the Supplemental Agreement: see Lewison paragraph 3.05 and **Ladbroke Group plc** .

163. Let me now draw the threads together. For the reasons set out above, my answer to preliminary issue 11 is as follows: In the period post-15th February 2004 the design, drafting and fabrication of temporary works relating to the bowl and the arch fell within "all remaining works" in paragraph (b) of schedule 1 to the Supplemental Agreement. The design, drafting and fabrication of temporary works relating to the roof fell within "erection and site works" in paragraph (c) of schedule 1 to the Supplemental Agreement and within "temp works - roof props" in Part A of schedule 3 to the Supplemental Agreement.

Part 7: Conclusion

164. For the reasons set out in Part 6 above, CB succeeds in its contentions as to the responsibility for payment in respect of the roof temporary works under the Supplemental Agreement.

165. It may be said that this outcome is highly beneficial to CB, which has successfully off-loaded onto Multiplex the costs of, and risks inherent in, the roof temporary works. I do not deny that. The Supplemental Agreement was a sophisticated package of provisions, which as a whole suited the commercial interests of both parties. The particular feature of the Supplemental Agreement which has come under scrutiny in issue 11 was of substantial commercial benefit to CB.

166. As on previous occasions, I express my thanks to the solicitors and counsel on both sides for the efficient preparation and clear presentation of this case.

167. In relation to preliminary issue 11, this court will make an order in the terms indicated above. I invite counsel to agree the precise wording of the order.