EDINBURGH TRAM NETWORK

ADJUDICATION.

DELAYS RESULTING FROM INCOMPLETE MUDFA WORKS

This adjudication is concerned with a dispute which has broken out between tie and the JV about whether or not the JV is entitled to be awarded extensions of time within which to complete four of the Sections of the Edinburgh tram network, and, if it is so entitled, the length of the extension of time to which it is so entitled. The JV claims to be entitled to such an extension on account of delays to the MUDFA works.

In the course of the adjudication, two preliminary issues arose which, if both decided in favour of tie, would have obviated the need to decide on the merits of the JV's claim to extension of time. I therefore decided to hear evidence in connection with those issues in advance of any hearing on the merits of the JV's claim to be awarded an extension of time and to consider whether they would indeed dispose of the dispute referred to me. I heard that evidence in May, and on 1st June, I intimated to the parties that in my opinion only one of the issues fell to be decided to be decided in tie's favour, and that in order to decide the dispute between the parties it would therefore be necessary to go on and consider the merits of JV's claims. As had been foreseen in discussions which I held with the parties' solicitors at an earlier stage, the evidence on the merits was rather more extensive than that which had been led on the preliminary issues, and I heard that evidence over three days, from 16th to 18th June. At the conclusion of the evidence, submissions were made to me by Mr McMillan on behalf of JV and Mr Bentley on behalf of tie.

In the notice of referral, I was asked to give reasons for my decision on the dispute, and I record here the reasons on account of which I arrived at the decision I intimated to the parties on 16th July. In drafting these reasons, I have assumed that the reader is familiar with the terms of the Note of Reasons I issued earlier in connection with the preliminary issues and I have used the same defined terms herein as I adopted in the earlier note.

In my previous Note of Reasons, I dealt with a number of the issues which arise in this adjudication, and by the time of the second hearing, there were two main issues which remained outstanding: an argument about the significance (if any) of sub-clause 18.1.2 of the Infraco Contract (and any infraction thereof that may have occurred) for the claim made by the J.V. for a declarator, and, upon the assumption that the JV was entitled to an extension of time, the length of the extensions to the several Sections of the Infraco Works which should be awarded. Both of these issues had more than one facet, and to some extent the two issues overlapped.

The Evidence

Evidence was led before me from two witnesses, Mr Sharp and Mr McAllister, each of whom was an expert in the field of contract programming and whose career histories showed them to have had many years of experience in the construction industry. Unsurprisingly, given that I was hearing professional witnesses, I had no reason to believe that the evidence of either of them was other than credible. As in the previous hearing, some of the evidence strayed into the inadmissible, as the witnesses explained what they believed clauses of the contract to mean, and that evidence, obviously, I discounted. Their evidence on the particular issues I thought to be of most significance I deal with below in the main body of the text.

In addition to the oral (and, in the case of tie's expert, Mr McAllister, written) evidence given by these gentlemen, there was laid before me by tie a witness statement with appended photographs from one of their staff, Mr Thomas Hickman. This statement was initially relied on by tie for certain evidence it gave about work in Leith Walk, but it was later conceded by tie that Mr Hickman's evidence on this score was mistaken, and so I have disregarded it. In the event, I have relied on Mr Hickman's evidence only for the material therein concerning the geography, and particularly the length, of intermediate sections of the Works.

Sub-Clause 18.1.2 of the Infraco Contract.

In his submissions at the hearing on evidence, Mr Bentley, who appeared on behalf of tie, opened his arguments with the contention that the case made by the JV was irrelevant because it was based upon a breach of sub-clause 18.1.2 of the contract. That sub-clause afforded the JV an exclusive licence to occupy any Designated Working Area for the period in which, pursuant to the Programme

then in place under Schedule 15 to the contract (at all material times, Rev.1 of that Programme), it would require to occupy that area in order to execute whatever part of its works needed to be carried out therein. A breach of that sub-clause was not, he contended, the proper subject of a claim to extension of time under a Notified Departure. Such a breach, if it afforded the JV the right to an extension of time at all, would do so under clause 65 of the contract, not clause 80, which was the clause apposite to Notified Departures.

He also argued that no breach of sub-clause 18.1.2 was in any event made out because the JV had sought to demonstrate that it had been kept out of the exclusive possession of intermediate sections of the Works, and that was not the subject of sub-clause 18.1.2. The JV was, as it were, shooting at the wrong target. It had wrongly equiparated a Designated Working Area with an intermediate section, whereas in truth, the phrase, "Designated Working Area" – which was that to which sub-clause 18.1.2 related- was a defined term under the Infraco Contract, and meant something different from, and, it was to be expected, given the length of some intermediate sections, an area smaller than, an intermediate section. It would not do to show that MUDFA works were in progress at one end of an intermediate section and claim that that amounted to a breach of sub-clause 18.1.2: the JV might very well be able to work at the opposite end unimpeded by the MUDFA contractor. Yet the JV appeared to have created its delay analysis on the basis of the assumption that it did not need to work in an intermediate section if there was a MUDFA contractor working anywhere along its length. That amounted to evidence of a failure to mitigate, and, more fundamentally, demonstrated that the whole claim was miscalculated. Appendix D to the Estimate, he argued, measured the delay claimed for by reference to the time between the date on which the JV should have been able to start work on an intermediate section as shown on the Programme and the date on which it got, or expected to get, exclusive occupation of that section. That was not a calculation of the claim one might legitimately advance under clause 80 (the delay in being able to start on a Designated Working Area because MUDFA Works were in the way), but was rather indicative of a claim for breach of the contractual obligation to give exclusive access to an intermediate section, *i.e.*, a claim for being forced to work alongside others.

In his submissions on behalf of the JV, Mr McMillan made little reference to clause 18 of the Infraco Contract, treating it as a matter which went to the question of mitigation. It was not to be regarded as a step necessary to achieving the mitigation of one's losses that one give up one's contractual

rights, he said, and those, in this case, included exclusive access to the areas in which the JV was, from time to time, bound to carry out its work. He stressed that the ruling Programme in the Infraco Contract was no mere planning tool, but a source of contractual obligation; hence the importance of the exclusive licence granted to the JV in sub-clause 18.1.2 of the Infraco Contract.

Although Mr McMillan made little of the issues about clause 18 in his submissions in the hearing on evidence, I do not think that Mr Bentley can be criticised for raising them at the outset of his. In no fewer than four places in the Referral, the JV places some importance on its right to exclusive possession of the Designated Working Areas, and in paragraph 5.19, it makes the point that this quality of possession underlies the logic of its programming and, ultimately, its price. Most tellingly, in a section of the Referral headed "Basis for Claim", the JV appears in paragraph 5.44 to assert that it has been prevented from working to programme by the want of exclusive possession under its exclusive licence to occupy the Designated Working Areas through the presence of a MUDFA contractor finishing his works. The point is rammed home in the last sentence of that paragraph with the words, "tie is thus in breach of its obligations pursuant to Clause 18.1.2 of the Infraco Contract" (my emphasis). This reads as though the claim is being advanced on account of the breach of sub-clause 18.1.2.

That said, I think that the JV's case may have been re-focussed during the course of the adjudication. In this regard, I note the comments made by the JV in its Reply to the Response, and in particular, paragraphs 4.4 to 4.8 thereof. I accept that, despite the impression which might be given by paragraph 5.44 of the Referral, the claim pursued in this adjudication was ultimately presented under the aegis of clause 80 of the Infraco Contract, and in respect of a Notified Departure. It follows that I accept also the JV's contention that the averments made by tie in paragraph 5.18 of the Response setting forth reasons why the JV's claim would fail under clause 65 of the Infraco Contract are not of any moment in this adjudication. I agree, too, for reasons I explained in the section of my earlier Note dated 4th June under the heading "The Significance of Clause 65", that the JV has not elected, and could not have elected, to present a Notified Departure claim under clause 65. Clause 80 and clause 65 are mutually exclusive routes to a remedy for the JV, and so a Notified Departure claim, being directed by sub-clause 80.24 to proceed under clause 80, cannot be the subject of procedure under clause 65. For that to which it applies, clause 65 provides that it affords the sole remedy.

By the same token, however, the terms of sub-clause 18.18 of the Infraco Contract, which declare that a delay caused to the Infraco Works by a failure on the part of tie to give possession in accordance with the terms of clause 18 shall be a Compensation Event to which the terms of clause 65 will apply, exclude any claim under clause 80 for breach of sub-clause 18.18. Under the contractual scheme, the sole remedy for Compensation Events is, as noted above, that afforded by clause 65, and other remedies, including common law ones, are excluded. Mr Bentley is therefore correct when he submits that a claim for breach of clause 18.18 through being required to work alongside the MUDFA Contractor in a Designated Working Area (whatever that be) could not be pursued under clause 80. The Infraco Contract should be construed as a coherent whole, if that be possible, and the express reference to clause 65 as the sole mode of recovery for breach of the exclusive licence given by clause 18 therefore means that an Estimate under clause 80 should not include any entries seeking compensation in either time or money for delays caused by a breach of the exclusive licence. Such delays are the province of clause 65 and subject to its notification regime. Sub-clause 18.18 and clause 65, read together, are about providing a contractual equivalent to damages remedies apt to breach events, whereas clause 80 is to be equiparated to a variations clause.

Furthermore, it does not seem to me to follow that the mere fact that a Notified Departure has occurred through the falsification of a pricing assumption will give rise to a breach of sub-clause 18.1.2. Indeed, it seemed to me that there lurked an inconsistency in the position of the JV here: if, as Mr McMillan submitted, the JV was not obliged to undertake, as a matter of mitigation, any step which was a unilateral abandonment of its contractual rights, I find it hard to see how it can be said that a Notified Departure, and consequent tie Change, could occasion a breach of sub-clause 18.1.2. Though obliged to take steps to mitigate under sub-clause 80.7, the JV would be entitled to decline to work with others in any given Designated Working Area (as, in the light of Mr Sharp's evidence about how it found working alongside MUDFA contractors in Leith Walk to be "a financial disaster", it presumably would), and so a breach by force of the occurrence of the Notified Departure would not occur. If the JV were to be instructed so to work (in order to expedite the completion of the project, for example), then the delay engendered by any subsequent conflicts in working arising from the congestion of the worksite, etc., would be attributable to the later instruction, not the underlying Notified Departure.

I should add, in passing, that sub-clause 4.3 of the Infraco Contract does not cut across this analysis. In its Reply to the Response, the JV seeks to rely upon clause 4.3 in order to exclude clause 65 as a possible limiting factor on the ambit of clause 80 as a mechanism for seeking additional relief or payment pursuant to Part 4 of the Schedule. That, in my view, is to misapply sub-clause 4.3. It appears in a hierarchy clause which subordinates parts of the Schedule to provisions in the Contract itself in case of conflict. Where no conflict arises – which, as I sought to show in my previous Note of Reasons, is the case when delimiting the respective spheres of operation of clauses 65 and 80 –sub-clause 4.3 does not apply, as there is no subordination effected by the earlier sub-clauses of clause 4 for it to qualify.

I therefore accept that, if, on analysis, the claim is indeed a claim for breach of sub-clause 18.1.2, it is irrelevant in law as Mr Bentley submits, and a claim for an extension of time on that basis should form no part of the Estimate. But if Mr McMillan correctly characterises the JV's ultimate use of clause 18 as a "shield, not a sword", it being no more than a defence to the charge that the JV has not complied with the duties incumbent upon it under clause 80 in relation to mitigation, the claim cannot be dismissed without further consideration.

Mitigation.

The evidence of Mr Sharp and Mr McAllister illustrated again the difference of view between the parties which had already been seen in the evidence of the witnesses at the hearing in May as to whether the admitted obligation of the JV in relation to mitigation required it to present in the Estimate given to tie for the purposes of clause 80 acceleration measures, if the taking of those measures had not already been instructed by tie. The JV is firmly of the view that this is not required, whilst tie, following Mr Bell's description of accelerative measures as "mitigation with cost", took exactly the opposite view. It is accepted by the JV that if such measures had already been instructed by tie under clause 61, the Estimate had to take account of them (Reply, paragraph 4.43), and, indeed, it asserts – and tie does not appear to dispute – that Appendix D to the Estimate has included within it certain accelerative instructions earlier given by tie (Referral, paragraph 5.61.8 and Appendix A of the Estimate of 6th August, 2009)(Referring Party's Production 16).

The dispute between the JV and tie about mitigation goes wider than that, however. Tie argues that the "mitigation" described in clause 80 was neither a defined term nor a term of art. It was not limited to that for which the JV contended, namely expediting measures which did not involve the party taking them in additional cost. The phrase, it was pointed out, was used elsewhere in the contract, and in particular, it was used in sub-clause 65.2.2.4, where one would find reference to "acceleration or other measures which the Infraco could take to mitigate the effects of delay". This, Mr Bentley argued, showed that in the Infraco Contract the concept of mitigation was seen as encompassing acceleration measures. As it was to be expected that the same word would be used throughout the contract in the same way, one could infer that where clause 80 used the word "mitigate", it intended to encompass within that acceleration measures. Unless that were so, tie contended, one would not be able to operate the provisions of sub-paragraph 80.7.4, which call for the production with the Estimate of evidence to show that the proposed tie Change will "be implemented in the most cost-effective manner". Cost-effectiveness implied a consideration both of direct cost incurred and time-related costs saved, and, absent proposals for acceleration being presented, *the most cost-effective* solution could not be identified.

The argument for the JV was, of course, to a quite different effect. Under reference to views expressed in Keane & Caletka, "Delay Analysis in Construction Contacts", pp.220-222 and the decision in **Ascon Contracting Ltd v Alfred McAlpine Construction Isle of Man Ltd, 19th October, 1999**, it was submitted that acceleration measures were ones which were intended to speed up progress and entailed the expenditure by the contractor of his own monies, thereby requiring him to finance for some period of time, the taking of the measure in question. The latter characteristic they did not share with mitigation measures, whether those were called for under the general law or under the Infraco Contract. Mitigation did not involve the contractor in any requirement to spend his own money or abandon his contractual rights in order to improve the position of the other contracting party. Hence the significance in the present case of clause 18 and the exclusive licence it gave the JV. The benefit of that exclusivity of possession did not have to be given up in order to arrive at a fully mitigated programme, and the JV was therefore entitled to delay the start of its work in a given Designated Working Area until the MUDFA contractor had finished. If tie had wanted accelerative measures to be taken, it would have had to have had recourse to clause 61 of the contract, which was directed to that very subject. The fact that clause 65 referred to acceleration measures to mitigate delay did not mean that the reference to mitigating the impact of a tie Change in clause 80 imported that accelerative measures had to be offered in the Estimate. To the contrary,

the contrast between the absence of reference to acceleration in clause 80 and the existence of such references in clauses 64 and 65 was telling: the omission of the phrase in clause 80 meant that one did not have to offer acceleration measures in the Estimate.

In my opinion, what is demanded of a valid Estimate by clause 80 is a matter of construction of the Infraco Contract, and little assistance in that regard is to be gained from a detailed consideration of the common law on mitigation of loss in breach of contract. As Mr Bentley rightly observes, the word "mitigate" is not a defined term in the contract, and so one would expect that its use in the contract would be that to which it is put in ordinary English. No more is it a term of art, though it may be pertinent to note, given its use in a building contract, that the Society for Construction Law Protocol, reflecting what I have understood to be its normal signification in the context of building contracts, states that, absent special wording, the word "mitigate" does not imply any obligation in him who is called upon to do so to employ extra resources or work outside planned hours.

It seems to me that the word is used in clause 80 as a synonym for words such as "reduce", "restrict" or "limit", and as applying to the length of the delay or other results wrought by the tie Change in question. I do not find any real assistance from the reference to acceleration measures in clauses 64 and 65. The sub-clauses there which mention acceleration are distinguishing between what has already been done and that yet to be attempted. On the question whether the taking of acceleration measures is inherent in the notion of mitigation for the purposes of this contract, that is neutral.

Of more assistance is the existence of the special procedure in clause 61 for instructing acceleration measures, and the inter-relationship between that clause and clauses 60 and 80. I think that the JV is right when it argues that the Programme in this case is a contractual document to which it is bound (and, as the other side of that coin, entitled) to work. I note that there is imposed on the contractor by sub-clause 60.9 a general obligation to mitigate delay, and that this obligation is unqualified in its terms. The way in which the word mitigate is there used is similar to the way in which it is used in clause 80, and, on the usual assumption of contractual construction that drafting is intended to be consistent, I would expect "mitigate" to mean the same thing in each clause. More importantly, given that the obligation to mitigate for which sub-clause 60.9 provides is unqualified, it is obviously intended to be general in scope and to apply of its own force, without more, in all

circumstances from which it is not expressly or impliedly excluded. One such circumstance would be that of the tie Change to which clause 80 applies, and clause 80 does not exclude mitigation- to the contrary, it assumes the existence of the obligation by calling for evidence of mitigation to be shown. Clause 80 does not itself impose any obligation to mitigate: consistently with the unqualified drafting in sub-clause 60.9, it operates on the basis that that obligation has already been imposed elsewhere in the contract. The place where that imposition was made is sub-clause 60.9.

The importance of this lies in the fact that clause 61 sets out a special procedure for acceleration measures, which, unlike the generally applicable *ab initio* requirement for mitigation imposed by sub-clause 60.9 (reflected and applied to a particular case as it is by the references to mitigation in clause 80), has to be triggered by a special procedure, and can be halted on reasonable objection by the JV. Acceleration pursuant to clause 61 therefore could not be encompassed within the general obligation to mitigate in clause 60, for it would make the special procedure otiose were it so comprehended. Furthermore, by virtue of sub-clause 61.2, acceleration of the variety for which clause 61 provides is available in circumstances which could include a delay caused by a Notified Departure, since sub-clause 61.2.2 can operate following "delays...to Programme for whatever reason" (my emphasis). Clause 61 therefore appears to be conceived of as being of general application to accelerative measures. All this, in my view, allows the reader to conclude that the obligation on the JV to bend its mind to mitigation measures when putting forward an Estimate under clause 80 does not involve it in presenting to tie an accelerative measure which has not already been instructed by tie and put through the clause 61 procedure.

I do not think it matters for the purposes of that conclusion whether or not a measure involves the expenditure of the JV's money in order to put it into effect – the appearance of the words "any additional cost..." in sub-clause 61.5.1 presupposes that a measure may count as "acceleration" rather than "mitigation" even though it entails the JV in spending no more money. The crucial distinction, as it seems to me, is between a measure which, without increase of overall resources applied to the works or the abandonment of a party's contractual rights, limits an over-run on the Programme on the one hand and a measure which increases the rate of progress to pull back an already mitigated delay on the other. The former is mitigatory, the latter accelerative.

No more do I think my conclusion undermined by the provisions of sub-clause 80.7.4 which call for the production of evidence that the tie Change will be implemented in "the most cost-effective manner". The argument advanced by tie that this implies the presentation of proposals to take accelerative measures under the heading of mitigation, for otherwise the best method of effecting the tie Change could not be identified, itself assumed that the phrase "the most cost-effective manner" referred to that which, in an absolute sense, was *the* optimum mode of implement of the tie Change. Literally, it would so refer, but the context in which the phrase appears shows that it cannot here mean what literally it says. Sub-clause 80.7.4 is concerned with the evidence to be adduced by the JV along with the Estimate. If the optimum solution escaped the JV, but was no more thought of by tie, would that make the Estimate non-compliant and preclude a sub-clause 80.9 meeting? How would the parties know that that had happened? A construction which would bring about such results would seem to be less than businesslike, and to be unlikely to represent the parties' intention in drafting clause 80. When the provisions of clause 80 are read as a whole, however, a more reasonable and businesslike construction suggests itself. Sub-clauses 80.4.7 and 80.4.8 require that the JV set forth what one might term a "recommended solution" to the issues raised by the Change, being that which it would be minded to adopt (the "proposed method of delivery") as well as "proposals to mitigate the impact of the ...Change". The latter will be the other possible solutions discarded by the JV because, in its opinion, the proposed solution is the best. What sub-clauses 80.7.3 and 80.7.4 call for is the supporting evidence which shows that the JV has indeed bent its mind to mitigation, and that the proposed method is indeed the best, as the most cost-effective method of achieving that which has to be achieved. Sub-clause 80.7.4 is therefore contemplating a comparative exercise which will identify the most cost-effective among the proposals considered by the JV, not the most cost-effective of *all possible* proposals. It is realistic to expect the JV provide evidence about the former, but not of the latter. If this construction of clause 80 be adopted (as I think it correct to do), then sub-clause 80.7.4 carries no implication as to whether or not accelerative measures have to be offered as part of a scheme of mitigation.

As will have been evident from an earlier comment, I am also of the view that the concept of mitigation under clause 80 does not require the JV to give up any of its contractual rights. As in the common law, mitigation in the Infraco Contract requires only the taking of "reasonable steps" to mitigate delay (sub-clause 60.9). That would not, in my view, include having to abandon valuable contractual rights (which the existence of clause 65 shows the JV's rights under clause 18 to be) in order to reduce the extent of the loss sustained, or the payment to be made by the other party.

That is not demanded by the common law, and I do not consider that it is required here. I am therefore of opinion that Mr McMillan can legitimately have recourse to sub-clause 18.1.2 of the contract as a shield in order to establish that a given delay is both fully mitigated and attributable to the deemed tie Change, because he is entitled to argue that even if the JV could have worked alongside MUDFA contractors, it is not contractually obliged so to do, and so the delay attributable to the failure timeously to complete MUDFA works continues until the JV has exclusive possession of the relevant Designated Working Area. By declining to work alongside such contractors, of course, the JV obviates any breach of sub-clause 18.1.2, and therefore the occurrence of any Compensation Event to which clause 65 could apply.

The rather misleading paragraph 5.44 of the Referral notwithstanding, therefore, I think that the JV's claim is to be seen as being a claim for that for which Mr Bentley accepted it could in principle claim: the period of delay which sets in through the falsification of the Pricing Assumptions – and in particular, Pricing Assumption 3.4.24 – and which holds back the start (and thus the expected date of completion) of the Infraco Works, rather than a delay engendered by conflicts arising from a need to work alongside, and around, MUDFA contractors. It is not, therefore, irrelevant; but that is not to say that it is well-founded. And Mr Bentley argues that it is not.

Appendix D to the Estimate.

The claim for an extension of time which the JV puts before me is based upon Appendix D at the end of the formal Estimate which the JV submitted to tie on or about 6th August, 2009. During the first two days of the hearing, Mr Sharp gave both a presentation and evidence about how Appendix D was devised. The Appendix was vigorously challenged by tie, its expert witness, Mr McAllister, giving evidence for a day about what he considered to be serious deficiencies in it. In his evidence, and in section 6 of his report, Mr McAllister also offered an alternative assessment of the length of the extension of time to which the JV would be entitled on account of the MUDFA delays after due account had been taken of measures which Mr McAllister considered to be mitigatory but which the JV had failed to adopt in its analysis, and of delays which he considered to be attributable to logic links in the JV's programming which he believed to be the product of commercial decisions about resourcing levels taken by the JV, rather than consequences of the delay in the completion in the MUDFA Works. That length was, in fact, nothing. Mr McAllister's views were set out in a report

lodged as tie's Production No.1. By way of rejoinder, the JV appended to its Reply to the Response, a critique of Mr McAllister's report, and that was in turn replied to by tie in its Retort.

For obvious reasons, I heard a lot of detailed evidence about programming and various areas of the works affected by delays which the JV believed to have been caused by the delayed completion of the MUDFA Works and the resulting Notified Departure. However, certain matters of principle arose about the approach taken by the JV in attempting to establish the length of the delay properly to be attributed to the Notified Departure, and it seems to me that these should be considered in advance of the merits of the JV's claims in relation to individual areas of the Works.

Appendix D was criticised by tie because it did not provide a full retrospective delay analysis, showing the effect of the Notified Departure, as opposed to other causes, on the overall delay to the Works. In essence, an objection not dissimilar to the familiar global claim objection was being advanced. The JV replied to that criticism by pointing out that the Estimate calls for a Prospective analysis of the likely delay, and so, in the nature of things, precluded any retrospective delay analysis from which one could derive final and correct answers to questions of causation, critical paths and so forth. Therefore, argued the JV, the criticisms advanced by tie in relation to these matters are ill-founded.

On this question, I agree with the JV. Clause 80 requires that the JV will, within 18 business days of its receipt of a tie Notice of Change (or its deemed receipt of a deemed Notice in the case of a Notified Departure), issue an Estimate containing its reasonable opinion about, *inter alia*, "any impact on the Programme and any requirement for an extension of time". The Estimate is also to show how it is proposed to mitigate the impact of the "proposed tie Change" (sub-clause 80.4.8), and sub-clause 80.7.4 speaks of the implement of the proposed tie Change in the future tense. It is, it seems to me, quite clear that even in the case of a mandatory tie Change which cannot be withdrawn, the programming analysis, and the agreement as to any necessary extension of time to which sub-clause 80.9 looks forward, is a prospective one, as the JV argues. It follows from that that it will not be possible to determine an ultimately correct critical path, and that it may be difficult, if not impossible, to determine the dominancy among concurrent causes, because actual events which occur in the future and their effects will inevitably be unknown. The description of the Appendix D

exercise advanced by tie, namely, that it is a "theoretical exercise", may therefore be correct, but it is not a valid criticism.

On the question of mitigation, it follows from the views I have expressed above that I do not accept the criticisms of Appendix D made by Mr McAllister which are based on either the notion that the JV should apply additional resources to the execution of the works, or the use within the computer programming which gave rise to Appendix D, of logic links which were manifestations of a commercial decision made by the JV to apply resource levelling when working out the mitigated Programme. These are in truth objections founded on the belief that in order to comply with the demands of clause 80 anent mitigation, the JV is obliged to offer tie measures which would amount to acts of acceleration as yet uninstructed . Since I have held that the JV does not have to take accelerative measures, it follows that I should reject these objections as being ill-founded. I likewise reject the criticism made by tie to the effect that the JV could, and should, have invited tie to withdraw the various embargoes on working which had been imposed in the Employer's Requirements to which the JV had to work (see, for example, items 18 and 21 in appendix 6/1 to Mr McAllister's report). Those embargoes were contractual restrictions on the JV which it had no right to remove. In my view, a plan of mitigation for the purposes of clause 80 would have to assume their continuance unless tie had already told the JV that it was lifting one or more of them. On the evidence, that had not happened. At the most, it would seem that tie may have indicated that it would be prepared to consider lifting embargoes were that to be requested of it.

That which the JV is called upon to prove, in my opinion, is the effect on the contractual programme of the falsification of the Base Case Assumptions which is the foundation of the Notified Departure. Read together, and omitting qualifications not relevant to the present dispute, the Assumptions in question are to the effect that the MUDFA Works will be completed to suit the requirements of the Programme, or, put another way, that those diversions which would conflict with the Infraco Works will be completed by the dates given in Programming Assumption 3.1 for the Intermediate Sections in which those diversions are respectively situated. As at the end of March, 2009, the diversions in question were not expected to be completed until the dates given therefor in the MUDFA Rev. 8 programme, and the Estimate would therefore have to provide the view that the JV had formed (having carried out the requisite exercise anent mitigation demanded of it by clause 80) on the consequential results for its own programme of such delays to the MUDFA works having occurred.

In doing that, it was entitled, as I have held, to maintain its contractual rights (such as the exclusive licence in clause 18) and obliged to assume the continuance of all the restrictions on its method of working imposed by the Employer's Requirements unless the latter, or any of them, were lifted by tie.

It is common ground between the parties that Appendix D proceeds on the hypothesis that the JV will not set out on its works in any given Intermediate section until the MUDFA Works in that section are completed. It appeared also to be common ground that, in some places at least, it would have been physically possible for the JV to have commenced work in one part of an intermediate section while the relevant MUDFA contactor was still working in another portion of it. In his evidence-in-chief, Mr Sharp referred to the Tower Place Bridge as an example of this, when he accepted some of Mr McAllister's criticisms of the sequencing of the work in the area of that bridge, but he pointed out that the "basic principle" was that the JV was not going to go into intermediate sections until all MUDFA work had been done, because it had been found, both in Sheffield and at earlier points in the Edinburgh contract itself, that it was a serious mistake from an economic point of view for the contractor to do so. Mr Sharp described the JV's avoidance of intermediate sections where the MUDFA contractors were still working as a "cornerstone" of the JV's pricing of the contract, and I gained the impression that the belief was held on the part of the JV that it was entitled to that avoidance as part of the exclusive possession afforded the JV by clause 18. I noted, for example, that the Referral and Reply moved from references to a Designated Working Area to an intermediate section with a facility which suggests that those terms were regarded as being synonymous. By way of confirmation of that impression, Mr Sharp stated this belief in terms in the course of his cross-examination.

That belief was criticised by Mr McAllister in paragraph 5.2.5 (c) of his report, and by Mr Bentley at the hearing on evidence. Mr McAllister's report had originally criticised only Appendix C in the sub-paragraph in question, but he had expanded that criticism in the course of his oral evidence to extend to Appendix D in addition. Mr McMillan rejected that criticism, submitting that the literal meaning of the definition accorded the phrase, "Designated Working Area" in the definitions schedule of the contract was nonsensical, and that working areas had therefore to be derived from the Programme. That in turn meant that intermediate sections were to be held to be synonymous with Designated Working Areas. Appendix D was, therefore, correctly framed.

That submission I do not accept. The exclusive licence afforded the JV in clause 18 is an exclusive licence to occupy, during a given period of time, the Designated Working Area. That is a defined term, which as written, is somewhat circular, since it appears to confer a licence to occupy that which the JV occupies. To that extent, I agree with Mr McMillan, but I think that the JV goes too far in arguing that a designated Working Area is to be equiparated to an intermediate section. Some intermediate sections are about a mile or so in length, and I expect from the photographs appended to Mr Hickman's Witness statement that several extend over some distance. As a matter of construction of the contract, a Designated Working Area has to be read as denoting so much of the land, worksite or public road as the JV requires to occupy at a given moment in order to carry out that part of the Infraco Works which, according to the Programme, it ought then to be executing there. *Prima facie*, sub-clause 18.1.2 is therefore to be read as giving to the JV an exclusive licence to occupy so much ground as it needs to do the relevant work safely and reasonably economically, without the difficulties of congestion and so forth to which the JV points in paragraph 5.19 of the Referral. A Designated Working Area may extend to cover longer stretches of road for traffic management reasons, however, or for other reasons such as enabling a reasonably smooth movement to neighbouring work if that is programmed to be done on completion of the portion of work presently in hand. The precise geographical limits of any given Designated Working Area are therefore a matter of fact, and I have not heard any evidence which indicates that the areas in question happen to equate to the intermediate sections. Standing the apparent length of the intermediate sections, one would expect that they would not do so, and Mr Sharp's evidence about Tower Place Bridge demonstrates that in that case at least, it did not. The general tenor of that evidence is also supported by the terms of Productions 12 and 13 laid before me by tie. I am therefore unpersuaded that, as a matter of construction or of fact, any Designated Working Area was co-extensive with any intermediate section.

It is to be noted, too, that the mere existence of MUDFA works in an intermediate section is not evidence of the occurrence of a Notified Departure, or even of the existence of a state of affairs which could ground one on notification thereof. Such a departure arises when works which, in the words of Programming Assumption 3.1, "would conflict with INFRACO operations" have not been completed by the dates given in that Assumption. So if, in a given section, MUDFA works were going on which would not conflict with programmed operations of the JV at the other end of the section, that would not give rise to a Notified Departure, and it would be wrong, in seeking to show the delay

resulting from incomplete MUDFA Works, to include any delay at all in that intermediate section, for the continuing MUDFA Works would not form part of the Notified Departure caused by late, but clashing, diversions in other sections.

For the above-mentioned reasons, the JV's approach to the assessment of unmitigated delay in Appendix C seems to me to be erroneous as a matter of construction of contract. Nor is it justified by evidence as to the actual extent of the Designated Working Areas to which it was entitled to exclusive access and on to which, therefore, it was not obliged even to enter whilst MUDFA Works remained to be finished there. *Quoad* Section C of the Infraco Works, it seems to me that the objection taken by Mr McAllister in paragraph 5.2.5 is generally well-founded: I do not know what the unmitigated delay caused by being kept out of Designated Working Areas – as opposed to intermediate sections – was, for, quite logically on the JV's view of the case, it has not worked that out so as to be able to present me with evidence thereanent, but has rather put forward a case based on intermediate sections instead.

Since both Appendix D and the claim made before me are based on the unmitigated delay set forth in Appendix C, it follows that what I consider to be the JV's mistaken approach of concentrating on intermediate sections rather than designated working areas affects the whole of the delay claim in respect of Sections B and C of the Infraco Works. Subject to one exception I mention below, I have no evidence on the basis of which I could assess the true length of the extension of time (if any) calculated by reference to Designated Working Areas to which the JV may be entitled in relation to those Sections. Since any extension of time for Section D would be dependent upon the extension awarded for Section C, it follows that I could not grant any extension of time for that Section if I could not make an award in respect of Section C.

In the case of Leith Walk, however, I consider that I do have evidence which overcomes the objection to the majority of the JV's case which I have just upheld. The correspondence of 24th March, 2009 about that street which was produced by the JV as Production 24 indicates that, for a period after the date of that letter, Leith Walk was to be barred to the JV. As Mr Sharp remarked in his evidence, the JV was "thrown off" Leith Walk. The letter in question seems to affect two intermediate sections, 1B and 1C, for I read its references to "Leith Walk" as excluding the Foot of the Walk. The critical passage in this letter is drawn in unusual terms. It reads, "...BSC should not be

given access to progress work at Leith Walk until September, 2009 at the latest, as any work carried out before then would not be an effective use of resource...". It blames the delay on four matters: three are to do with design, but the fourth is the late completion of the MUDFA utilities diversions. It notes a need to try to give the JV longer lengths of worksite, and states that tie will try to see if earlier access dates can be got.

I heard evidence about this letter from Mr Sharp, who said that he, like others within the JV, read it as meaning that at some time before September,2009 the JV would be allowed into Leith Walk, although he added that, in the event, it was not. If the letter was so read, it was, in my opinion, misread. The word "latest" in the quoted passage, as the immediately succeeding drafting about work done "*before* then" being wasted (my emphasis) betrays, is a mistake, and should read "earliest". As at the time of the Notified Departure, all Designated Working Areas (whatsoever they may have been) in Leith Walk were closed to the JV on account, *inter alia*, of MUDFA delays. According to Mr Sharp (whose evidence on this I do not think was subjected to cross-examination, and was, therefore, presumably accepted by tie), the dominant cause of the shutdown was the MUDFA delays. I think that that is likely to have been correct. Even if I assume that Leith Walk was re-opened to the JV on 1st September, a comparison with the Schedule Part 15 Programme shows that a delay of 137 days would have set in.

That delay would, of course, have been subject to mitigation through the taking up of "float" and the making of the other changes which the JV made in moving from Appendix C to Appendix D. Unfortunately for the JV, I have no evidence as to the extent of the mitigation of the 137 days of delay which would have been able to be achieved under the programme of removal of logic links and so forth which converted Appendix C into Appendix D. I have no reason to believe that the percentage of reduction of delay achieved by that mitigation exercise which Appendix D shows to have been brought about on intermediate sections 1B and 1C would have been the same if Appendix C had proceeded on the basis of Designated Working Areas rather than intermediate sections, and so I do not feel entitled to apply that percentage (or some variant of it intended to account for the fact that Leith Walk spreads over two intermediate sections) to the 137 days so as to calculate an extension of time for Section C of the Works.

By contrast, as matters have turned out, the Designated Working Areas problem does not seem to affect the depot area which constitutes Section A of the Infraco Works. The delays to that section brought out in Appendices C and D to the Estimate seem to be a function of the physical logic links, the effects of the weather, resource levelling and the effects of the MUDFA completion delay which affected that Section (that to the diversion of the water main). There is a dispute as to when that main was in fact diverted. Mr McAllister asserts that completion occurred on 12th February, thirteen days earlier than the date given therefor in the Estimate, although there was oral evidence from Mr Sharp that the diversion of the main was not in fact finished until April, 2009. Each of these witnesses was, of course an expert, and was no doubt reliant on primary factual evidence from elsewhere to underpin his view. It may be that there is direct evidence of the date on which the diversion of the water main was completed, but if so, I was not favoured with it. I was initially inclined to prefer Mr Sharp's evidence on the matter, as he was more closely associated with the daily work on the project, but on reflection, I decided that even on his evidence there was more than a little doubt about the completion date, a fact which his calculation in the Estimate of a completion date in early March rather than in April seemed tacitly to acknowledge. In the end, I have taken the view that the evidence does not allow me to resolve this dispute, and so I have deducted the thirteen days from the JV's claim on the view that it has failed to prove a later date of completion.

A second criticism was made by Mr McAllister to the effect that 28 days of the delay to the depot work would have been obviated had the JV been willing to avail itself of access to work on earthmoving alongside the MUDFA contractor. Although this criticism was made in order to advance the more general complaint made by tie about the JV's failure to mitigate by working alongside the MUDFA contractors, paradoxically, it made good, *quoad* Section A, the defect in the JV's approach to calculating the unmitigated delay caused by the Notified Departure. For although Mr Sharp gave evidence to the effect that, as with the other sections of the works, the delay identified in relation to the depot works had been calculated on the erroneous basis that the JV need not enter on an intermediate section until the area was clear of MUDFA contractors and the MUDFA Works therein were complete, in contrast to the position which obtains in relation to Section C, *quoad* the depot works, Mr McAllister's assessment of the delay avoidable by working alongside MUDFA contractors seems to enable me to make a deduction from the JV's claim to make good the JV's said error in its approach to the calculation of unmitigated delay. I therefore propose to make a deduction of the whole of the 28 days in question from the JV's claim, so as to restore matters to the position which

would have obtained had the JV worked alongside MUDFA contractors whose incomplete work did not conflict with that which the JV was then programmed to carry out.

Mr McAllister's other criticisms of the JV's claim seem to me to be misplaced because they are based on views about the content of "mitigation " for the purposes of Clause 80 which I have already rejected.

As the Referral demonstrates, in the case of Section A, unlike the other Sections, the mitigation exercise which was carried out by the JV so as to derive Appendix D from Appendix C does not produce any reduction in the delay from that shown in Appendix C. As a result, the problem which beset the claim under Section C in relation to the 137 day delay in Leith Walk does not arise here. I therefore think it proper to grant an extension of time in relation to section A of 154 calendar days, that being the difference between the 195 days sought by the JV in the Referral (and which, on the terms on which it was claimed, seems to me to be reasonable) and the aggregate of 41 days I have thought it right to deduct therefrom on account of those of Mr McAllister's criticisms of the claims for an extension of time in relation to Section A which I have upheld.

A Last Argument.

Lest it otherwise be thought to have been overlooked, I should record that a final argument was advanced by Mr Bentley at the end of his submissions to the effect that the JV was not entitled to obtain the extensions of time it sought in the Referral on account of its failure to comply with its obligations in relation to the completion of the Estimate and the presentation of such a claim to tie. This argument, in my opinion, was simply another variant of the mutuality argument which was argued before me at the previous hearing. I opined on that argument in the Note of Reasons I issued in June, and as I rejected that argument then, so, for like reasons, do I reject the variant argument now.

Decision

I have accordingly decided that the only award of extension of time I can properly make is an extension of 154 calendar days for Section A of the Infraco Works. In respect of Sections B and C, I

find that the JV has failed to prove the length of any entitlement it may have to an extension of time because it has calculated its claim on a misapprehension of its contractual rights, as I have sought to set out above, and I have no evidence of the length of the delay to which the JV was exposed by reason of the Notified Departure when that delay is calculated on the correct basis. Since any award of extension of time for Section D is dependent on the award made for Section C, I make no award for that Section either.

In view of the mixed success enjoyed by tie and the JV in this adjudication, I decide that my fees and expenses therein (save in so far as I have already awarded them in relation to the preliminary issues) should be borne by the parties in equal shares of one-half.

[redacted]

Edinburgh,

26th July, 2010.