Schindler Lifts (Singapore) Pte Ltd v Paya Ubi Industrial Park Pte Ltd and Another [2004] SGHC 34

Case Number : Suit 457/2002

Decision Date : 24 February 2004

Tribunal/Court : High Court

Coram : Judith Prakash J

Counsel Name(s) : Paul Wong and Loh Jen Wei (Rodyk and Davidson) for plaintiff; Stanley Wong (Jing Quee and Chin Joo) for first defendant; Christopher Chuah and Michael Chia (Drew and Napier LLC) for second defendant

Parties : Schindler Lifts (Singapore) Pte Ltd — Paya Ubi Industrial Park Pte Ltd; Tekken Corporation

Building and Construction Law – Sub-contracts – Novation – Whether implied novation possible.

Building and Construction Law – Sub-contracts – Whether "pay when paid" term in sub-contract applied to the release of retention monies.

Building and Construction Law – Building and construction contracts – Main contract ended and contractor absolved from liability for defects – Whether deductions from contract price could be made for defective work – Whether failure to comply with contractual specifications amounted to "defective work".

24 February
2004
Judgment reserved.

Judith Prakash J:

Introduction

1 This suit is between various parties who were involved in the development of a construction project known as the Paya Ubi Industrial Park. The developer of the project was Paya Ubi Industrial Park Pte Ltd ("Paya Ubi") and it appointed Tekken Corporation ("Tekken") as the main contractor. The plaintiff in this action, Schindler Lifts (Singapore) Pte Ltd ("Schindler"), was the nominated sub-contractor for lift installation. The project involved the construction of four multi-storey blocks of flatted industrial buildings at Ubi Avenue 1.

2 The main contract between Tekken and Paya Ubi ("the Main Contract") incorporated the Articles and Conditions of Building Contract issued by the Singapore Institute of Architects (Lump Sum Contract, 5th Ed) ("the Main Contract Conditions"). The sub-contract between Tekken and Schindler ("the Sub-Contract") was made in March 1999 and it incorporated the Conditions of Sub-Contract for use in conjunction with the Main Contract issued by the Singapore Institute of Architects ("the Sub-Contract Conditions").

3 During the course of the project, various disputes arose between Paya Ubi and Tekken. As a result, Tekken commenced legal proceedings against Paya Ubi in the High Court. By a settlement agreement made on 21 August 2000 ("the Settlement Agreement"), Tekken and Paya Ubi settled all their disputes. Consequentially, Tekken stopped working on the project and demobilised its staff. Schindler's works were not completed at that time and Schindler remained at the site and continued work for some time thereafter. The intention of Tekken and Paya Ubi had been that contracts between Tekken and nominated sub-contractors like Schindler would be novated to Paya Ubi.

Although some efforts were made in this direction, in the event, no formal novation agreement was signed between Tekken, Paya Ubi and Schindler in respect of the Sub-Contract. In practice, on the site, Paya Ubi's representatives gave directions to Schindler on the lift installation work.

4 On 1 September 2000, the project architect ("the Architect") issued the completion certificate for the project. The relevant temporary occupation permits for the project were obtained in two phases: the first on 23 September 2000 and the second on 1 February 2001. The final certificate for the project ("the Final Certificate") was issued on 17 December 2002.

5 In the meantime, a certain percentage of the value of the lift installation works completed had been held back as retention moneys. The total amount retained was $550,000. The first half (*ie* $275,000) was released to Schindler at or about the time the project was completed. Under the Sub-Contract Conditions, the second half of the retention moneys was to be released upon the expiry of the maintenance period.

6 The Final Certificate certified that:

(a) the remaining half of the retention moneys was released;

(b) the final Sub-Contract sum for the lift installation was $11m less two sums:

(i) $847,750 for work that was omitted; and

(ii) $607,948.19 being deductions for alleged non-performance of maintenance work or for defective works.

There was no dispute that $847,750 had to be deducted for work that was omitted. Taking this deduction into account meant that the final Sub-Contract sum was reduced to $10,152,250. As $9,855,000 had been certified and paid to Schindler prior to the issue of the Final Certificate, this meant that a balance of $297,250 remained unpaid. Schindler did not accept that $607,948.19 had to be deducted from the Sub-Contract sum.

7 Schindler commenced this action against both Tekken and Paya Ubi on 18 March 2002 to recover $275,000 plus goods and services tax ("GST") being the balance of the retention moneys and $34,423.20 (plus GST) being amounts due for variations and outstanding works. Schindler alleged that there had been a novation of the Sub-Contract to Paya Ubi and that Paya Ubi had assumed all liabilities and benefits of the Sub-Contract in place of Tekken. Alternatively, if there had been no novation of the Sub-Contract to Paya Ubi, Tekken remained liable to Schindler under the Sub-Contract for the amounts claimed.

8 Paya Ubi's defence was straightforward: there was no novation of the Sub-Contract and therefore no privity of contract between itself and Schindler. In the alternative, if the court found that such a novation had taken place, then Paya Ubi was entitled to set off against Schindler's claim the various deductions in relation to the lift installation works that had been certified by the Architect in the Final Certificate. Paya Ubi also contended that Schindler was not entitled to make a claim for the replacement of certain batteries. It made a counterclaim for the amount by which the deductions certified by the Architect exceeded Schindler's claim.

9 Tekken's position was more complicated. It pleaded that the contractual documents provided that certain conditions precedent had to be met before payment was due from Tekken to Schindler.

These conditions precedent had not been met because the Architect had not issued the necessary certificates and therefore no payment was yet due to Schindler. On the basis that it might be found liable to Schindler, Tekken made a counterclaim against Paya Ubi to recover from the latter any sums that it might have to pay Schindler.

10 Following the issue of the Final Certificate on 17 December 2002, Tekken instituted a counterclaim against Schindler to recover certain amounts that had been deducted from the certificate on account of Schindler's actions. Tekken also instituted a counterclaim against Paya Ubi in relation to the Final Certificate. At this time too, Schindler instituted a counterclaim to counterclaim against Tekken asking for an order, in the alternative, that it was entitled to certain payments based on the Final Certificate.

11 Various issues arise out of these various claims, counterclaims and counter-counterclaims. It would be confusing to set them out here and I will deal with them in context as this judgment proceeds.

Schindler's claim against Paya Ubi

12 Schindler's case against Paya Ubi is that there had been an implied novation of the Sub-Contract such that Paya Ubi stepped into the shoes of Tekken and came into a direct contractual relationship with Schindler. Schindler said this case was supported by the following facts:

(a) After Tekken stopped work on the project and immobilised its staff, it sought to procure Schindler's signature on a novation agreement that would put Paya Ubi into its place. The negotiations carried out did not, however, result in a novation agreement being signed.

(b) Although no novation agreement was signed, Paya Ubi started to deal directly with Schindler on all matters relating to the Sub-Contract and Schindler performed the Sub-Contract pursuant to Paya Ubi's directions. Such performance included acting on Paya Ubi's directions in relation to lift installation, breakdown of lift units, handover of lifts, and on defects and outstanding works.

(c) On 23 August 2000, Tekken assigned to Paya Ubi the performance bond that Schindler had provided to Tekken pursuant to the terms of the Sub-Contract.

13 Schindler also argued that its maintenance obligations under the Sub-Contract were part of Tekken's maintenance obligations under the Main Contract. It submitted that its maintenance obligations arose from Tekken's maintenance obligations. Tekken's maintenance obligations were extinguished under the terms of the Settlement Agreement. As a consequence, Schindler's maintenance obligations under the Sub-Contract were also extinguished. Therefore when Paya Ubi started giving instructions to Schindler in respect of the maintenance obligations under the Sub-Contract and Schindler accepted these instructions, there arose an implied novation in which Paya Ubi took over the Sub-Contract from Tekken and revived Schindler's maintenance obligations under the Sub-Contract. This new contractual relationship had to be premised on the Sub-Contract since that was what the parties were relying on to govern their relationship.

14 I cannot accept Schindler's submissions on implied novation. The novation of a contract is a matter that has to be established by clear evidence of consent and agreement to the changes in the obligations and rights of various parties *inter se*. Such consent is usually evidenced by a written novation agreement especially in a case like the present where the contract to be novated is

complex. Whilst a novation agreement can be concluded orally, clear evidence is needed to establish this fact.

15 Subsequent to Tekken's discharge, negotiations did take place in respect of a novation agreement to be signed by all the parties but these negotiations did not result in a signed agreement. That absence is itself significant. Tekken could only be discharged from its obligations to Schindler if Schindler expressly agreed to such discharge. I cannot accept that Schindler's agreeing to take instructions on site from Paya Ubi amounted to an agreement to discharge Tekken as its contractual counter-party and to accept Paya Ubi in its place as a contractual counter-party. There was no evidence that Schindler only took instructions from Paya Ubi on condition that Paya Ubi agreed to be directly responsible for payments due under the Sub-Contract. Nor could the giving of instructions alone on the part of Paya Ubi amount to an assumption of direct liability to Schindler. The Settlement Agreement contemplated that, despite the parties' intentions that the various sub-contracts be novated, in some cases, novation might not succeed. In that event, payment to those sub-contractors whose sub-contracts had not been novated was to remain in accordance with the terms of the Main Contract and the respective sub-contracts. Since the Settlement Agreement also provided for Paya Ubi to either communicate directly with the nominated sub-contractors or, at its option, to channel such communications through Tekken, direct communications in themselves did not mean that the sub-contracts concerned had been novated. Which course Paya Ubi chose would simply be a matter of convenience with no legal implication.

16 Further, as late as 18 October 2000, some months after Tekken left the site and Schindler started taking instructions directly from Paya Ubi, both parties made a significant statement relating to novation. In a letter of that date, they acknowledged that novation negotiations were then in hand to release Tekken from the obligation to make payment to Schindler under the Sub-Contract, on the basis that Paya Ubi would become liable to Schindler for all such payments. The parties further acknowledged that, as of that date, those negotiations remained pending and incomplete. In that same letter, Tekken acknowledged Schindler's continuing right to require Tekken to make payment of sums stated as being due to Schindler in interim certificates issued by the Architect. As of 18 October 2000 therefore, both parties recognised that no novation had occurred. Nothing that happened after that date changed the position.

17 Next, the assignment of the performance bond by Tekken to Paya Ubi was a step that was expressly provided for under the Settlement Agreement. This was an obligation that Tekken had to fulfil irrespective of whether the Sub-Contract was novated. There was no contractual provision in the Sub-Contract itself preventing such assignment and Tekken was free to assign the bond to whomever it chose at whatever stage it chose to do so. Such assignment cannot be taken as evidence of a novation agreement.

18 Finally, Schindler's submission that its maintenance obligations under the Sub-Contract depended entirely on Tekken's maintenance obligations under the Main Contract and were extinguished when Tekken's obligations were extinguished under the terms of the Settlement Agreement is not legally sound. Schindler owed Tekken an independent obligation to carry out certain work on the project. The fact that Tekken itself was originally obligated to carry out such work and then came to an agreement with Paya Ubi whereby it was released from such obligation, did not affect Schindler's obligation to Tekken under the Sub-Contract. Whilst the Sub-Contract concerned certain work that Tekken was originally obliged to perform under the Main Contract, legally it was an independent and separate contract and the obligations that Schindler owed Tekken under it would continue unless the Sub-Contract was terminated or frustrated. The termination of the Main Contract did not frustrate any of the nominated sub-contracts because the position of the sub-contractors

was provided for and it was agreed that they should continue the various sub-contract works. This was not a case where the sub-contractors were shut out from the site and not allowed to do the sub-contract works.

19 In my judgment, there was no novation of the Sub-Contract between Schindler and Tekken so that it became a contract between Schindler and Paya Ubi. Accordingly, Schindler's claim against Paya Ubi must be dismissed.

Schindler's claim against Tekken

The claim in the original action

20 As an alternative to the novation agreement, Schindler contended that the sums claimed in the action were due and payable by Tekken. Tekken's defence was that at the time the action was started, the Architect had not certified the payment claimed. Furthermore, Tekken said that there was a "pay when paid" provision in the Sub-Contract and Paya Ubi had not in fact paid Tekken.

21 Schindler conceded that Tekken's defence afforded a defence against it for the balance of the Sub-Contract sum of $22,250 and for the replacement of certain automatic rescue device ("ARD") batteries. However, it submitted that its claim for the balance of the retention moneys (*ie* $275,000) was neither subject to certification nor the "pay when paid" clause. In this part of the judgment, therefore, I shall deal with Schindler's case for the release of the retention moneys.

22 The submissions on this part of the case are based on the provisions of the Sub-Contract and the Main Contract and the effect on these provisions of the Settlement Agreement. It is therefore necessary to set out some of these provisions.

23 First, the initial terms and conditions of Schindler's appointment were set out in Tekken's letter of award to Schindler dated 13 July 1998. This letter was specifically made an integral part of the Sub-Contract documents. Clause 4 of the letter as far as is relevant provided:

> **4.0 CONDITIONS OF NOMINATED SUB-CONTRACT**
>
> You are to enter into a Sub-Contract with us under the SIA Conditions of Sub-Contract, First Edition, 1980 (Reprint April 1990). In addition, you shall comply fully with all the terms and conditions as set out in the Main Contract, in particular, Clause 28 and 29 which relate specifically to Nominated Sub-Contracts. Your attention is drawn to the following stipulations:-
>
> 4.1 **TERMS OF PAYMENT**
>
> Progress payments will be made under normal monthly interim valuations through us, in accordance with the Main Conditions of Contract.
>
> …
>
> 4.3 **PERIOD OF HONOURING PAYMENT**
>
> 14 days after payment or deemed payment to us by the Employer following certification by the Architect.
>
> 4.4 **RETENTION**

10% for work done and 20% for unfixed materials on site.

…

4.6 **MAINTENANCE PERIOD**

Twelve (12) months from the Completion Date as stated in the Main Contract Completion Certificate.

4.7 **RELEASE OF RETENTION MONIES**

Upon issuance of the Main Contract Completion Certificate, one half of the retention monies will be released. The remaining unpaid balance of the retention monies will be released at the end of the Main Contract Maintenance Period or after the issuance of the Main Contract Maintenance Certificate whichever is the later.

24 Also relevant is condition 13.1 of the Sub-Contract Conditions dealing with payment to the sub-contractor:

The Sub-Contractor will (unless the Schedule hereto provides to the contrary) be paid within 14 days after payment or deemed payment of the Main Contractor by the Employer following certification by the Architect of the amounts paid or deemed to be paid to the Main Contractor and accordingly due to the Sub-Contractor in all respects in accordance with clauses 30(1) and (2) and 31 of the Main Contract Conditions.

25 Turning to the Main Contract Conditions, the relevant provisions are:

30 PAYMENT OF NOMINATED SUB-CONTRACTORS AND SUPPLIERS

30(1)(a) Interim certificates of the Architect in favour of the Contractor under clause 31 of these Conditions shall state separately the amounts in each certificate due to each individual Nominated Sub-Contractor or Supplier (or to Designated Sub-Contractors or Suppliers whose work or materials or goods are the subject of a P.C. Item) as the value of their work, goods or materials carried out or delivered at the relevant date under that clause, which amounts shall be paid by the Contractor to such Nominated or Designated Sub-Contractors or Suppliers, less retention monies or any set-off or counterclaim to which the Contractor may be entitled, within 14 days of receipt by the Contractor from the Employer of the amounts so due under the certificate of the Architect.

…

31 PAYMENT OF CONTRACTOR AND INTERIM CERTIFICATES

31(1) On the dates or at the stages for issuing Interim Certificates named in the Appendix hereto the Architect shall (subject to the provision of adequate vouchers and information by the Contractor) issue Interim Certificates for payment to the Contractor, who shall be entitled to payment of any sum stated therein as due to the Contractor within the Period for Honouring Certificates stated in the Appendix following receipt of the Certificate or a copy of the Certificate by the Employer.

…

31(6) The percentages not paid pursuant to sub-clause 31(5) hereof shall be known as "Retention Monies", but shall be subject to the sum or percentage (if any) stated as the

Limit of Retention in the Appendix hereto. On this limit being reached, any further balance of Retention Monies calculated pursuant to clause 31(5) shall be payable to the Contractor,

…

31(8) Subject to any special deduction under clause 27(4) of these Conditions, any remaining unpaid balance of the Retention Monies shall be certified and paid to the Contractor under a further Interim Certificate issued by the Architect at the expiry of the Maintenance Period for the whole work or upon the issue of the Maintenance Certificate under clause 27(5) of these Conditions, whichever is the later.

26 Having regard to the foregoing contractual provisions, Tekken's submissions were as follows:

(a) The payment machinery under the Main Contract Conditions and the Sub-Contract was regulated by payment certificates issued by the Architect for the project. Clause 31(8) expressly provided that the remaining unpaid balance of the retention moneys was to be "certified and paid to [Tekken] under a further Interim Certificate" issued by the Architect. Thus, the release of the retention sum of $275,000 had to be first certified by an architect's payment certificate issued under the Main Contract.

(b) Secondly, under cl 13.1 of the Sub-Contract Conditions, Tekken was only required to make payment to nominated sub-contractors like Schindler within 14 days after Tekken had been paid or was deemed to have been paid by Paya Ubi. Clause 4.7 of Tekken's letter of award to Schindler must be construed in the context of other provisions of the Sub-Contract and that clause did not operate in isolation in dealing with the release of the retention moneys.

27 Tekken submitted that under the Singapore Institute of Architects Conditions of Contract, whether these related to a main contract or a nominated sub-contract, payment was regulated by certificates issued by the Architect and payment to the sub-contractor was dependent on receipt of payment by the main contractor from the employer. Further, in this case, Tekken and Schindler had agreed to a "domestic final account" which was to include all moneys due to Schindler from Tekken and from Tekken to Schindler that had not been or would not be stated as being due to Schindler in the Architect's interim certificates in favour of Tekken. This account was agreed to on 18 October 2000. It was agreed that Tekken owed Schindler $140,000 pursuant to the "domestic final account" but that the agreement on this sum was without prejudice to Schindler's continuing right to require Tekken to make payment to it of "any sums stated in interim certificate issued from time to time by the Architect as due to Schindler and Tekken shall continue to make such payments, *including but not limited to retention moneys* as they become due under the terms of Sub-Contract" [emphasis added]. Tekken contended that this was an acknowledgement that payment of retention moneys was conditional on the issue of the interim certificate by the Architect.

28 Tekken pointed out that it had made progress payments to Schindler which were in accordance with the Sub-Contract requirements. In particular, payment under interim certificate no 27 dated 14 November 2000 (which included the release of the first half of the retention moneys) was dependent on the issue of the Architect's certificate and receipt of payment by Tekken. As far as the balance of the retention moneys was concerned, the Architect had not, up to the date of the issue of the amended writ (1 August 2002), issued a certificate stating that these moneys were payable to Schindler and, up to that date, Tekken had not received these moneys from Paya Ubi. Tekken contended that holding it, an innocent middleman, liable to pay Schindler, would be tantamount to rewriting the terms of the Sub-Contract and to relocating the risk of payment.

29 Schindler's submission was that in light of the events that had occurred, the only contractual provision that was relevant to the release of the second half of the retention moneys was cl 4.7 of the letter of award. Schindler contended that no certification by the Architect was required. Further, the "pay when paid" provisions did not apply to this release.

30 The argument was that cl 4.7 expressly provided that the second half of the retention moneys was to be released "at the end of the Main Contract Maintenance Period or after issuance of the Main Contract maintenance certificate whichever is later". Under cl 27 of the Main Contract Conditions, the Architect was entitled to give Tekken a list of defects to be rectified at the end of the maintenance period. Under cl 27(5), once these defects had been rectified the Architect would issue the maintenance certificate. The operation of these provisions was nullified by the Settlement Agreement. Clause 4 of the Settlement Agreement extinguished Tekken's maintenance obligations under the Main Contract. Once it was signed, the Architect could not issue any maintenance certificate under cl 27(5) as Tekken was no longer obliged to make good any defects notified by the Architect.

31 Schindler submitted that in these circumstances, the only way to apply the provisions of cl 4.7 of the letter of award with regard to the second half of the retention moneys was for these sums to be released once the Main Contract maintenance period expired. No certification was required because cl 4.7 was the only provision that dealt with the release of retention moneys and it did not require the release to be based on certification.

32 Schindler's argument on the time of payment was an attractive one. However, it still had to overcome the hurdle of the "pay when paid" provision. Schindler endeavoured to do this by contending that cl 4.3 of the letter of award applied to certification of interim monthly payments and did not apply to the release of the second half of the retention moneys. As for cl 13.1 of the Sub-Contract Conditions which also embodied the "pay when paid" provision, Schindler contended that that provision was limited to certified payments. Since release of the second half of the retention moneys was not dependent on certification, cl 13.1 did not apply to the same. Further, cl 31 of the Main Contract Conditions which dealt with the release of the unpaid balance of the retention moneys was, Schindler submitted, applicable only to retention moneys due to the Main Contractor and not to those due to nominated sub-contractors like Schindler.

33 Having considered these submissions carefully, I have concluded that Schindler cannot escape from the "pay when paid" structure of the Sub-Contract. This provision that Tekken would only be liable to pay Schindler once it had received payment from Paya Ubi was such an integral part of the Sub-Contract that it was mentioned not only in the letter of award (cl 4.3), but also in the Sub-Contract Conditions (cl 13.1) and the Main Contract Conditions (cl 30(1)(a)). Whilst the conclusion of the Settlement Agreement might have meant that no maintenance certificate under the Main Contract was to be issued by the Architect, it did not mean that the whole structure of certification of payments collapsed. It is notable that under cl 31(8) of the Main Contract Conditions, the remaining balance of the retention moneys is to be certified and paid either upon the issue of the maintenance certificate or under a further interim certificate. Thus, as far as retention moneys are concerned, even if the contractor's maintenance obligations are extinguished or waived, certification is contemplated. I do not agree that cl 31(8) of the Main Contract Conditions applied only to Tekken and not to Schindler. The wording of cl 4.7 of the letter of award dealing with the release of the balance of the Sub-Contract retention moneys tracks the wording of cl 31(8) of the Main Contract Conditions and this provision is also imported into the Sub-Contract by cl 13.1 of the Sub-Contract Conditions.

34 I therefore find that at the date the original action was started, Schindler was not entitled to the release of the second half of the retention moneys since the same had not been paid or was not deemed to have been paid to Tekken.

Schindler's claim against Tekken by way of counterclaim

35 In the course of these proceedings, the Architect issued his Final Certificate for the project. Schindler then filed a counterclaim to Tekken's counterclaim on the basis that under the Final Certificate Tekken owed it $297,250.

36 The Final Certificate stated:

> Pursuant to Clause 31(10) of the Conditions of Contract, I hereby issue this Final Certificate and the balance due under the Contract is as follows:
>
> Gross Measurement and Valuation of Works in accordance with the attached Schedule S$100,624,636.79
>
> Less
>
> Sums deductible under the terms of contract;
>
> (i) Non-rectification of works done not in accordance with the Contract as per attached Appendix 1 (S$400,180.00)
>
> (ii) Partial non-performance of lift maintenance and partial non-rectification of lift defects as per attached Appendix 2 (S$607,948.19)
>
> Final Measurement and Valuation of Works S$99,616,508.60
>
> Less
>
> Sums previous certified up to and including Interim Certificate no MO/27 taking into consideration of Settlement Agreement dated 21 August 2000 (S$99,456,581.95)
>
> Final Balance S$159,926.65
>
> INDICATIVE GST (3%) payable by the Employer S$4,797.80
>
> and I accordingly certify that there is now due and owing by the Employer to the Contractor the sum of S$159,926.65 … (excluding GST).

37 The attachments to the Final Certificate showed that because of the second set of deductions totalling $607,948.19 made in relation to the lift installation works, the total value of Schindler's works was $9,544,301.81. Before the issue of the Final Certificate, these works had been valued and certified at $9,855,000 and therefore Schindler had been overpaid by some $310,698.19. If it had not been for the deductions, Schindler's work would have been valued at $10,152,250 and the amount due to Schindler after deduction of the previous valuation of $9,855,000 would have been $297,250. Schindler's position was that the deductions were wrong, it did not owe Tekken

$310,698.19 as shown in a schedule to the Final Certificate and that the Final Certificate should not only have shown this but should also have certified that a further sum of $12,173.20 was payable to Schindler for the ARD batteries. Schindler sought a declaration to this effect.

38 Tekken, relying on the Final Certificate, counterclaimed the sum of $320,019.14 (being $310,698.19 plus GST) from Schindler. Paya Ubi also relied on the deductions by way of set-off and counterclaim against Schindler in the event that Schindler succeeded on the implied novation claim.

39 The following issues therefore have to be decided:

(a) whether Schindler is entitled to be paid $12,173.20 for the ARD batteries;

(b) whether it was correct to make a deduction of $607,948.19 in respect of lift maintenance and rectification works which in turn means a consideration of the following sub-issues:

(i) whether the deduction of $511,548 for alleged non-maintenance of lifts is correct;

(ii) whether the deduction of $82,090 for partial non-rectification of lift defects is correct;

(iii) whether the deduction of $3,900 for replacement of oil seals due to oil leaks is correct; and

(iv) whether the deduction of $10,410.19 for damage to lift cards is correct.

The claim for the ARD batteries

40 Mr Teng Wing San, a senior manager in Schindler's project department, gave evidence that in February 2001, Paya Ubi shut down the power supply to the lift motor room for blocks C and D of the project. This affected the life span of the ARD batteries as those batteries required constant charging. Schindler discussed the matter with Paya Ubi and it was agreed that the output of the batteries would be shut off. Schindler informed Paya Ubi that it would check the working condition of the batteries after the power supply had been restored. If the batteries failed to perform, Schindler would need to replace them. In that event, the cost of replacement would be charged to Paya Ubi.

41 In a letter dated 26 February 2001, Alpha Engineering Consultant ("Alpha"), Paya Ubi's electrical and mechanical consultant for the project, informed Schindler that all batteries provided should be fit for their purpose. Alpha was of the opinion that the batteries should be designed such that they would be able to operate in the event of prolonged power failure. In reply, Schindler informed Alpha that the batteries provided were in accordance with the specifications set out in the Sub-Contract. Subsequently, Schindler had to replace 86 ARD batteries. It charged $12,173.20 for these replacements.

42 Tekken's submission was that it did not have to pay for these batteries for two reasons. First, no payment was due until Tekken itself had received payment from Paya Ubi for the batteries. Secondly, in any case, no liability arose because Tekken had not requested the replacement of the batteries and the Architect had not issued any variation order under cl 12(1) of the Main Contract Conditions requiring the supply of the replacement batteries. Since Schindler had dealt directly with Paya Ubi and Alpha on the replacement, its claim should be made against Paya Ubi.

43 Paya Ubi submitted that the key question was whether Schindler was required to supply and install ARD batteries with over-discharge protection. Mr Goh Soon Huat from Alpha was involved in the project on Alpha's behalf. He testified that the specifications exhibited as 2AB296 required over-discharge protection for the batteries. Specification 6.10 provided that the emergency power supplies for the ARD were to be as described in cl 6.9 of the specifications. The relevant portions of specification 6.9 read:

> Each lift shall be provided with an emergency power supply unit …
>
> The emergency power supply units shall consist of constant voltage float charge[r]s, 12 volt nickel cadmium or nickel alkaline batteries …
>
> The batteries shall be housed in a self-contained, free standing cabinet …
>
> The chargers shall be electronic constant voltage float type complete with all HRC fuses or MCCBs, over-discharge protection, ammeter to read the d.c. charging and load current …

44 Paya Ubi submitted that each emergency power supply unit had two components, *ie* a charger and a battery. The charger was obviously the device through which the battery was charged. The charger had to transform alternating current from the mains to direct current ("d.c.") and to step down the voltage so that the (d.c.) battery could be charged. The charger itself would have had no use for over-discharge protection as it was not the charger that stored and discharged power. Obviously, the charger was connected to the battery, and through it power flowed into the battery to charge the latter and out of the battery to the load. In other words, the charger was the interface between the battery and the rest of the circuitry. This was why it was the charger, not the battery, which was required to have "ammeter to read the d.c. charging". Since the charger itself did not supply d.c., the ammeter was to read the state of charge of the d.c. battery. By the same reasoning and on a balance of probability, the over-discharge protection was located in the charger but was really for the protection of the battery to which the charger was connected. It followed that Schindler was obliged by the specifications to install ARD batteries with over-discharge protection although the latter was housed in the charger.

45 I find it difficult to accept Paya Ubi's submissions. It is not apparent from the face of the specifications that the over-discharge protection for the charger was in fact meant for the batteries. Paya Ubi did not lead any technical evidence to this effect. Schindler's evidence was that the batteries had complied with the specifications and Mr Goh did not physically check the batteries so he was in no position to deny that evidence. His assertion that the batteries did not meet the specifications was based solely on the fact that they went flat after a prolonged power shutdown.

46 The evidence before me establishes that it was Paya Ubi that wanted to turn off the power even though it was warned of the consequences on the batteries. The specifications did not clearly require the batteries to have over-discharge protection and Paya Ubi was told that the batteries could not be left without power for a prolonged period. Unfortunately, 86 batteries were damaged by the power shut-off and new batteries were supplied by Schindler. Paya Ubi has had the benefit of the replacement batteries. I accept Schindler's submission that, in effect, there was a variation order for the supply. As it pointed out, under cross-examination, the Architect, Mr Song Yew Kee, admitted that he left mechanical and electrical matters to Alpha. Alpha would issue instructions to Schindler and copy the instructions to him. If he did not agree, he would object. Otherwise he would concur with Alpha. Mr Song further testified that he was aware of the exchange of correspondence between Alpha and Schindler on the ARD battery issue and that he understood that Schindler was instructed to replace the ARD batteries if they were damaged by the prolonged shutdown. He did not object to

these instructions. It would therefore appear that Schindler had been instructed by the Architect (albeit though Alpha) to replace the ARD batteries if they were damaged after the prolonged shutdown.

47 By this reasoning, since the instruction for the replacement of the batteries was deemed to have been made by the Architect, the Architect should have included the cost of the replacement in the Final Certificate. If that had been done, Paya Ubi would have been liable to pay Tekken for the same and Tekken in turn would have been liable to pay Schindler. I therefore find in favour of Schindler as against Tekken on this issue.

Objections in principle to the deduction of $607,948.19

48 Schindler's first submission on these deductions was that in principle, the Architect was not entitled to make any of them. Schindler submitted that the Architect and the quantity surveyor had given different justifications for the deductions. The Architect's justification as stated in Mr Song's affidavit was:

> These deductions were not to take [Tekken] to task for defects or failure to maintain. Rather, determining whether any and how much deduction were to be made was an exercise in determining the value of the work delivered by the nominated Sub-Contractor and therefore the amount to be paid to [Tekken] for the nominated Sub-Contractor's work.

In other words, the Architect's basis for the deductions was a reduction of the value of the works arising from evaluating the actual value of the work done.

49 On the other hand, the quantity surveyor, Mr Loh Kwi Leong, had testified that the deductions were made pursuant to cl 27(4) of the Main Contract Conditions. This clause gave the Architect power, in a situation where he had found defects in the work caused by a breach of contract by the contractor or sub-contractor, to give a direction that such defects need not be remedied but that instead there should be a reduction in the contract sum to be assessed by the quantity surveyor as representing the reduced value of the work to the employer. In other words, Schindler said, the quantity surveyor's basis for the deductions was a reduction in the value of the works done because of a breach of the Sub-Contract namely a failure to carry out defects rectification or maintenance obligations.

50 Schindler submitted that both bases were contractually untenable. The quantity surveyor's basis was contrary to cll 3 and 4 of the Settlement Agreement which expressly discharged Tekken from its defects rectification and maintenance obligations. In that situation a deduction based on cl 27(4) could not be sustained legally. On the other hand, it was wrong of the Architect to effect the deduction as a reduction in the value of the works carried out by Tekken after subsequent evaluation. This was because Art 2(a) of the Main Contract Conditions provided that the contract was a lump sum contract and the price was a fixed price not subject to re-measurement or re-calculation except in regard to variations.

51 Tekken's position was that cll 3 and 4(a) of the Settlement Agreement exonerated Tekken in respect of any alleged non-performance by Schindler. The deduction by the Architect was not in accordance with the Settlement Agreement. Secondly, the quantity surveyor had testified that the deductions in relation to Schindler's work had been evaluated by the mechanical and electrical engineer. Tekken submitted that this practice was not allowed under cl 27(4) of the Main Contract Conditions and therefore the deductions should not be allowed. Alternatively, if Paya Ubi was entitled

to the deduction of the sum of $607,946.19 or any part thereof, Tekken was entitled to recover the overpayment of $320,019.14 or any part thereof from Schindler.

52 I am not convinced by the above arguments. Whilst the Settlement Agreement released Tekken from the obligation to perform maintenance obligations in respect of the project and discharged it from liability for defects, it was at all times understood that the nominated sub-contractors would continue to meet their obligations under their respective sub-contracts and would be paid accordingly, either directly by Paya Ubi if a sub-contract was novated or by Tekken if it was not. In the latter case, payment provisions would remain in accordance with the terms of the Main Contract and the relevant nominated sub-contract. In this case, the Sub-Contract was not novated. Thus, the terms of the Main Contract regarding payment remained relevant and applicable notwithstanding the execution of the Settlement Agreement.

53 Clause 31(10)(a) of the Main Contract Conditions gave the Architect the power to issue a final certificate showing his final measurement and valuation of the works and setting out all permitted deductions. This final measurement had to be done notwithstanding that the contract was a lump sum contract and the price was a fixed price. The argument that the Architect was not entitled to make any deductions in respect of the sub-contractors' work because the Settlement Agreement discharged Tekken from liability for defects was a non-starter. The Settlement Agreement, as I will discuss later, did discharge Tekken from certain maintenance and defects liability but it did not affect the obligations of the sub-contractors whose work was continuing at that time. Clause 5 of the Settlement Agreement expressly excluded all nominated sub-contractors' works from the completion certificate that was to be issued in respect of Tekken's work. The Settlement Agreement did not finalise Paya Ubi's obligations in respect of the works of the nominated sub-contractors nor did it release those sub-contractors from any responsibility in relation to those works.

54 I accept Paya Ubi's submission that the absence of a novation agreement meant that the Architect still had to value Schindler's work to determine the amount, if any, to be paid by Paya Ubi to Tekken for Schindler's work. In valuing Schindler's work, any failure to rectify defects or discharge maintenance obligations on the part of Schindler would reduce the value of Schindler's work and therefore the amount to be paid in respect of such work. Therefore, even though the Architect might have been making deductions for defects and failure to maintain, he was engaged in a valuation exercise which the Main Contract required him to do.

55 In principle, the Architect was entitled to make deductions in respect of any failure on the part of Schindler to observe its maintenance and defects rectification obligations. Whether the actual deductions made were justified is another issue and I will therefore have to examine each deduction in turn. Tekken did not make any submissions on the deductions. It left it to Paya Ubi to support the validity of the same.

The deduction of $511,548 for alleged non-maintenance of lifts

56 The deduction of $511,548 for non-maintenance of lifts was obtained by multiplying the sum of $188 by 2,721. The sum of $188 was taken to be the monthly cost of servicing one lift and the figure of 2,721 was the number of lift- maintenance months when such servicing had not been done. Schindler's position is that the deduction was premised on two basic assumptions that were wrong, namely that monthly servicing of the lifts was a contractual requirement and, secondly, that the maintenance period for block 53 was from February 2001 to January 2002.

57 With respect to the first assumption, Schindler submitted that there was no provision in the

Sub-Contract that obliged it to carry out monthly servicing of the lifts during the maintenance period. The Architect's position as stated in court was that the lifts had to be serviced at least once a month during the maintenance period. Counsel for Schindler asked him to point out where in the Sub-Contract it was stated that the lifts had to be serviced monthly. He conceded that this was not expressly stated in the Sub-Contract but then asserted that it was an implied obligation of the lift supplier. Schindler submitted that that was a lame argument given the detailed provisions of the Sub-Contract. Such detailed provisions afforded very little room to argue that they were implied terms. In any event, Schindler said, there was no justification to imply such a term.

58 Paya Ubi submitted that since the ARD batteries did not have the benefit of over-discharge protection, this meant that they had to be checked once a month and that in turn meant lift maintenance at least once a month. I think this argument is overstating the case. Checking the batteries does not mean a full servicing of the lifts.

59 I accept Schindler's submission that the contract did not require it to carry out monthly servicing of the lifts. The Sub-Contract contained detailed specifications and if it was intended to require Schindler to maintain each lift once a month for a period of one year after handover of the same, it would have said so. Accordingly, the Architect was not entitled to make any deduction on account of non-servicing of the lifts. I would also add that the amount of $188 per service was not justified. It was based on what Schindler would charge for servicing under a maintenance contract and did not reflect the actual cost of such servicing. Therefore, it was wrong to reduce the value of the works by $188 per service that was not performed. In view of this conclusion I need not deal with the other points raised on this issue. I will say, however, that I accept Schindler's submissions in relation to the length of the maintenance period since this was specifically provided for in the Sub-Contract and that period could not be lengthened simply because the Settlement Agreement resulted in the Main Contract completion certificate being issued earlier than it would otherwise have been.

Deduction of $82,090 for partial non-rectification of lift defects

60 The sum of $82,090 was made up of two components. First, there was a sum of $32,090 being the estimated cost of repairing various defective items set out in a list issued by Alpha in January 2002. Secondly, the sum of $50,000 was set aside as a contingency sum to account for any other defects which might surface before the expiry of the maintenance period and also for those lifts which were not able to operate due to unknown causes.

61 Taking the second component of $50,000 first, Schindler submitted that this was not justified. In court, Mr Goh of Alpha testified that he had prepared the list in January 2002 at which time he had estimated the contingency sum. He agreed that when the Final Certificate was issued in December 2002, this $50,000 was still a contingency sum. When he was asked why after almost a year the cost of rectifying the "unknown causes" was still unknown, Mr Goh's reply was that he had not followed up and he did not know whether these lifts had been repaired and if so, at what cost. Schindler submitted that Paya Ubi had not shown that there was a need for the provision for $50,000 for contingency purposes or even that it knew what it was claiming for.

62 Paya Ubi submitted that the contingency sum had been provided because many lifts were not working for unknown reasons and the Architect was right to include this sum. The alternative was to ignore, to Schindler's benefit, the poor reliability and performance of the lifts. Considering that there had been a large number of breakdowns of the lifts within the first year of the installation and that 260 lifts had been installed, the estimate made by the Architect was not unreasonable.

63 Whilst in January 2002 there may have been some justification for estimating that it would cost $50,000 to repair the lifts in the course of the one-year maintenance period (assuming that maintenance period started in January 2002), by the time this matter came for trial in September 2003, that period was long over. Estimations were no longer sufficient. If the lifts had broken down during the one-year period and had had to be repaired, there would have been evidence by that time both of the breakdowns and of the cost of the repairs. That evidence was not produced. I can only deduce that the lifts did not break down or, if they did, no costs were incurred in repairing them. Paya Ubi has not been able to justify the deduction of $50,000 and that sum must be added back to the amount due to Schindler.

64 Moving to the balance of $32,090, this related to a list of defects prepared by Alpha. It was first furnished to Schindler in November 2001 and was the last of various lists of defects and outstanding work given to Schindler from time to time. It was also Alpha who estimated what the cost of rectifying the defects would be. The Architect, Mr Song, stated in his affidavit that the total sum of $32,090 was the valuation of repairs that were carried out by Elex Lifts Pte Ltd under a comprehensive service contract. In court, however, Mr Goh stated that the costs of the various repairs were estimates which he had made based on previous projects that he had done. He confirmed that he had no quotations to support these cost estimates and that the actual costs of rectifying the various defects could be higher or lower than his estimates.

65 In its closing submissions, Schindler contended that the estimate given was at times grossly inflated, for example, three items relating to the fan blower provided for replacement of parts whereas it would have been sufficient to clean the fan blower. Schindler, however, did not inspect these items to see whether indeed cleaning alone would have been sufficient. Schindler appears not to have paid much attention to the list once it left the site. It was therefore not really in a position to disprove the reasonableness of Mr Goh's estimations in general.

66 Schindler also made submissions on particular items. First, it dealt with missing parts covered by items 6, 7, 17, 29, 40, 43, 44 and 45. The estimated cost of rectification of these items was $3,730. It was Mr Teng's evidence that the missing items were installed in either controllers or cabins and could not drop off or they were screwed on tightly and should not drop off easily. Schindler submitted that as Mr Goh had conceded that these parts had not been missing when the lifts in question were handed over, their later loss had to be attributed to issues of security (*ie* the items were stolen or vandalised) over which Schindler had no control. The deduction was wrong and should not be allowed. I agree. Paya Ubi did not produce any evidence to controvert Mr Teng's testimony that the items in question could not have simply dropped off but must have been stolen or vandalised.

67 Secondly, $3,000 was deducted in respect of the fire rated duct in the lift motor room. Mr Goh confirmed that this duct was not part of the lift installation works. Accordingly, any rectification that needed to be done to the duct should not be charged to Schindler. This deduction was wrong.

68 There was a deduction of $780 for the leak of an oil seal in block 53 at unit 05-02. Mr Song admitted that this was a double claim. It must therefore be disallowed.

Deduction of $3,900 for replacement of oil seals

69 There was a deduction of $3,600 for replacement of five oil seals (at $780 per seal) which had leaked. Schindler objected to this deduction on two grounds. First, it stated it was only notified of one leak. It gave evidence that it had gone in to investigate this leak and found it to be due to fair

wear and tear. As regards Alpha's evidence that the seal must be defective because the leak arose five months after the lift was installed, Schindler pointed to the evidence of Mr Simon Thong. Mr Thong was Paya Ubi's representative who dealt with the contractor who replaced the oil seal. He confirmed that that contractor had only been willing to give a three-month guarantee for the replacement oil seal. In my judgment, there is insufficient evidence that the first leak was due to a defect in the oil seal. Secondly, in regard to the other four leaks, Schindler disputed liability on the basis that no notice of the same was given to it. Paya Ubi said that this was because Schindler had shown no interest in the first leak. That might have been so but in order to justify the deduction, Paya Ubi had to show that these four leaks were each due to defects rather than to fair wear and tear. No such evidence was produced. Accordingly, I disallow this item.

Deduction of $10,410.19 for damage to lift cards

70 The final deduction in dispute was in respect of the damaged lift cards. This was in the amount of $10,410.19. In support of this deduction Mr Song tendered a tax invoice from Elex Lifts Pte Ltd for $7,860.19. Schindler submitted that the cards were replaced without obtaining the approval of Paya Ubi and that there was no evidence that the cards were damaged because they were defective. It pointed out that Mr Song testified that he had not inspected the damaged lift cards and that Mr Goh had admitted that although he had seen the cards, he could not tell whether they were damaged. Paya Ubi's position was that it relied on the judgment of the specialist lift contractor to decide that the cards were defective and that replacement was necessary. Paya Ubi and its consultants had no choice but to rely on this judgment as this issue was outside their scope of speciality. This is a question of the onus of proof. Paya Ubi had the burden of proving that the lift cards were damaged and that they were damaged because they were inherently defective. No one from Elex Lift Pte Ltd was called to testify on the matter and Paya Ubi did not discharge that burden. It therefore cannot recover $7,860.19. Neither can it recover the balance $2,550 which it has no invoice to support.

71 In total therefore I have disallowed $21,520.19 of the sum of $32,090. As far as the balance of that sum is concerned, I accept Mr Goh's evidence that his estimates fairly reflect the cost of rectifying the items concerned. These items were known to Schindler in November 2001 and it did not rectify the problems. Under the contract, it had a duty to remedy defects. It has challenged the estimates of these other items on the ground that such estimation should have been done by the quantity surveyor rather than by Alpha. Whilst cl 27(4) of the Main Contract Conditions does provide that the reduction in the contract sum should be assessed by the quantity surveyor, that clause does not state the manner in which such assessment should be made or that the quantity surveyor cannot have the help of an expert in the field in making his assessment. Alpha was the mechanical and electrical consultant for the project and Mr Goh's evidence was that his estimates were made on the basis of knowledge gained from previous projects he had worked in. The quantity surveyor was entitled to use Alpha's figures as the basis of his assessment.

Conclusion on deductions

72 In view of the findings set out above, I conclude that the Architect was only entitled to deduct $10,569.81 for defective works. The deduction of $607,948.19 was excessive. The Architect should also have certified the sum of $12,173.20 as being due to Schindler for the ARD batteries.

73 The above concludes my consideration of Schindler's claim against Tekken on the counterclaim. I have now to deal with Tekken's counterclaim against Paya Ubi.

Tekken's counterclaim against Paya Ubi

74 Tekken formulated the main issues arising from its counterclaim against Paya Ubi as follows:

(a) whether Paya Ubi was precluded by the Settlement Agreement from claiming against Tekken for the sum of $400,180 (excluding GST) for the alleged non-rectification of work that was not done in accordance with the Main Contract as per Appendix 1 attached to the Final Certificate;

(b) whether Paya Ubi was entitled to make a deduction of $607,948.19 (excluding GST) for the alleged non-maintenance of lifts and non-rectification of defects in the lifts;

(c) if sub-para (b) above was answered in the affirmative, whether Schindler was liable to indemnify Tekken in the sum of $320,019.14;

(d) whether Paya Ubi was liable to pay Tekken the sum of $159,926.65 plus GST in respect of the sum certified in the Architect's Final Certificate; and

(e) whether Schindler was entitled to claim a sum of $12,173.20 for the supply of ARD batteries to Paya Ubi.

75 I have already dealt with issue (b) and determined that Paya Ubi was only entitled to deduct $10,569.81. This means that issue (b) was, essentially, answered in the negative. Accordingly, issue (c) must also be answered in the negative. I have also dealt with issue (e) and found that Schindler is entitled to the amount claimed. I have now therefore to deal with issues (a) and (d).

76 Appendix 1 to the Final Certificate sets out what is termed "List of deductions for non-rectification of works done not in accordance with the Contract". Seven items are described under this heading and various sums are ascribed to each item as being the amounts by which the value of the works has been reduced. These sums totalled $400,180. In his affidavit, Mr Song stated:

> Appendix 1 deductions were made in respect of work done by the 2nd Defendant which were not in accordance with the Main Contract. These deductions are neither in respect of defective work nor maintenance.

77 Tekken's position was that pursuant to the terms of the Settlement Agreement:

(a) Tekken was discharged by Paya Ubi from all liability for defects, whether then existing or arising thereafter, in respect of the contract and/or the project; and

(b) All Tekken's maintenance obligations in respect of the contract and/or the project have been discharged.

78 The relevant clauses of the Settlement Agreement provide:

> 3. The parties agree that upon execution of this Agreement, Tekken shall be discharged from all liability for defects, whether present and/or arising in the future in respect of the Contract and/or the Project.
>
> 4. The parties agree that upon execution of this Agreement, PUIP shall:

(a) discharge Tekken from all its maintenance obligations in respect of the Contract and/or the Project ;and

(b) discharge Tekken from all present and future liability for liquidated damages or damages for delay for Phase I, II and III of the Project.

79 Tekken contended that cll 3 and 4 were included so that it would be discharged from all liability for defects, whether present or future, and also from all maintenance obligations under the Main Contract and/or at law. Further, in the Final Account for the Main Contract (Schedule A to the Settlement Agreement), there were deductions from the original contract sum in respect of alleged liquidated damages ($11m), alleged defects, present or arising in the future ($5m) and for maintenance obligations ($3m). These amounts totalling $19m were deducted from the settlement sum due and payable to Tekken upon execution of the Settlement Agreement. Thus, following the settlement, Tekken was not required to remedy any defect or to do any maintenance in respect of any part of the works including the lifts.

80 Tekken also pointed out that in para 4.1 of his affidavit, Mr Song, the Architect, stated that he had been advised by Paya Ubi that the Settlement Agreement did indeed release Tekken from all liability for defects and maintenance. Tekken relied on this statement as an admission on the part of Paya Ubi.

81 Tekken contended that the items described in Appendix 1 were either descriptions of defective work or descriptions of maintenance work. As these matters were covered by the Settlement Agreement, the Architect could not deduct them from the value of the works. According to Tekken the deduction had already been made and Appendix 1 was a double deduction.

82 The Architect justified the deductions on the basis that the various items referred to work that was not done in accordance with the contract. He said that such work was not defective work. When asked what he understood by defective work, Mr Song gave the following example:

> Paint work failure caused by poor workmanship such as no washing down of wall surfaces before wall painting is considered as a defect. However, paint work which is completed but found to be without a base coat that was specified in the specifications is considered work done not in accordance with the contract.

83 Since the Settlement Agreement did not give the terms "defects" and "defective work" any particular meaning, these terms must be construed in the ordinary way they are used in the construction industry. The meaning must be an objective rather than a subjective one. In *A Building Contract Dictionary* (2nd Ed, 1990) by Vincent Powell Smith and David Chappell, it is stated at 170:

> In the context of all standard forms of building contract defective work is work which is not in accordance with the contract. The architect may have a degree of discretion in accepting or rejecting work, but he has no power to insist upon higher standards than those laid down in the contract documents.

In cross-examination, Mr Song accepted that the standard of work to be achieved would be the standard set out in the contract. It would appear therefore that Mr Song had no quarrel with the definition of defective work given in the textbook cited above. I accept Tekken's submission that in determining whether work is defective, the starting point must be the standards or benchmark against which the work is measured or gauged. These standards or benchmark must necessarily be the

standards set out in the contract. *A fortiori*, it must follow that if work done falls short of contractual standards, it is work not done in accordance with the contract. Any work not done in accordance with the Main Contract must clearly be defective work caught under cl 3 of the Settlement Agreement.

84 Further, as Tekken submitted, if one is to look at the way in which the terms "defective work" and "defects" are used in the Main Contract Conditions in clauses like 11(2), 11(3), 11(4), 27(1), 27(2), 27(3), 27(4), 27(5), it is apparent that goods, materials or workmanship which do not comply with the contract would constitute defective work in respect of which the Architect can invoke the powers given to him under cll 11(2), 11(3) and 11(4). Under cross-examination, Mr Song also accepted that cl 11 set out the contractual standards against which materials supplied and workmanship effected by the contractor were measured. The marginal notes to these clauses also expressly referred to defects. Given that the powers vested in the Architect by cll 11(2), 11(3) and 11(4) were intended to deal with the matters falling within cl 11(1) it must have been the intention of the draftsman of the Main Contract Conditions to encompass breaches of cl 11(1) within the broad description "defects".

85 Clause 27(4) of the Main Contract empowered the Architect to deduct amounts from the contract sum to reflect the reduced value of the work to the employer arising out of defects in the work. The marginal notes to cl 27(4) read "allowance for defect". If the deductions in Appendix 1 were made by Mr Song pursuant to cl 27(4), there would be little doubt that these deductions were for defects. It was put to Mr Song that the only provision that empowered him to make deductions from the contract sum was cl 27(4). His answer was that cl 27(4) was one of the clauses he could use but in making the deductions he actually relied on cl 31(10)(a) as that clause allows him to certify the value of the work done in accordance with the contract. Having studied cl 31(10)(a), I think Mr Song's answer was disingenuous. Whilst the Final Certificate issued pursuant to that clause was to be supported by documents showing the Architect's final measurement and valuation of the works, such measurement had to be done in accordance with all the terms of the contract and could only set out "permitted deductions". Clause 31(10)(a) did not specify what such permitted deductions were. It was cl 27(4) that specifically authorised a deduction in the contract sum to represent the reduced value of the work to the employer arising from defects. Appendix 1 therefore must have been made pursuant to cl 27(4). The marginal note for that clause was "allowance for defect". It is clear that deductions were to be made only for defects. No deductions were permitted for items that cannot be classified as defects.

86 It is also significant that Mr Song agreed in court that his understanding of defects was not shared by all architects and that other architects might have their own interpretation of this term. He also agreed that he and one of the senior directors of the firm in which he worked did not share the same understanding of what constituted defective work. Mr Song's distinction did not have the support of his superiors nor any logical basis. I cannot accept it.

87 Looking at the Settlement Agreement, in the context of the Main Contract and the circumstances that existed at the time, the word "defects" in cl 3 must cover both inadequacies arising from poor workmanship and inadequacies arising from the failure of the contractor to follow contractual specifications. Referring to the Architect's example in his testimony, both paint work failure caused by an omission to wash the wall before painting and unacceptable paint work caused by an omission to apply a base coat would be defects. I do not accept that the first omission would result in defective work but the second one would not even though in each case the work would be liable to be rejected by the Architect.

88 In its closing submission, Paya Ubi said that the correct approach to this issue was to ask, in regard to each item in Appendix 1, whether it was an item in respect of which the parties had intended to exempt Tekken from liability under the Settlement Agreement. In so deciding, in respect of each item, one had to keep in mind that the Settlement Agreement was premised on Tekken having completed at least its own work in accordance with the Main Contract save for minor outstanding works.

89 There are six main items set out in Appendix 1. The first is stated to be "rainwater leakage through roof parapet walls due to improper plastering". Paya Ubi's case was that this item reflected a complete failure to cap the top of the parapet walls with plaster so that rainwater would drain off them rather than seep into the walls. Tekken submitted that this omission was plastering work that fell short of the standards set out in the contract or was improper plastering. Paya Ubi rejected that submission because of the extent of the omission and argued that the savings in costs and work resulting from this omission indicated that the omission was deliberate rather than negligent. There was, however, no actual proof that the failure to plaster the top of the walls was deliberate rather than the result of carelessness on the part of Tekken. In any case, I have accepted the position that when work is not done to the required standard, it is defective. This item cannot be classified in any other way.

90 The second item is "Non-compliance – with specification of roadside kerbs at entrance culvert". The complaint here is that Tekken failed to comply with the specifications in the Main Contract relating to the roadside kerbs. Such a failure would, as Tekken submitted, put it in breach of cl 11(1) and would be nothing more than a complaint of defective work. It is also telling that the Land Transport Authority wrote a letter asking that the various defects listed by it be rectified. A perusal of the "Defects Checklist" provided by the Authority shows the nature of the complaints. This item must also be considered to be defective work.

91 The third item is entitled "Subsidence of pre-mix driveways". There was some doubt as to the cause of this subsidence. Mr Loh Lean Chooi, the civil engineering consultant for the project, said that the settlement of the driveway occurred because the compaction of the soil was not carried out properly and also because of poor soil conditions. He also testified, however, that if the compaction did not meet the contract standard, then it would be regarded as a defect. If the subsidence was due to the soil conditions alone, then no deduction should be made in respect of this item. On the other hand, if the fault lay in the failure of Tekken to compact the soil properly (up to the 95% mark prescribed in the Main Contract), then the work was defective.

92 The fourth item was a complaint about there being excessive gaps between the fire rated metal door leaves and the door frames. Paya Ubi stated that over 200 doors were affected and these doors must have been installed by the same team(s) of workers. Merely installing the doors and then walking off without checking that the installation conformed to fire safety standards was more than just shoddy workmanship when this happened more than 200 times. I understand Paya Ubi's frustration at the low standard of workmanship of Tekken's employees. However, this is clearly a matter of defective workmanship leading to defective work.

93 The fifth item was that the piping system was choked with construction debris which Tekken had failed to clear. Paya Ubi said that delivering a choked piping system was work not in accordance with the contract. I would say it was defective work.

94 Finally, there were severe cracks on the façade brickwalls at roof level. The evidence was that these cracks were due to absence of stiffeners along all sections of the façade brickwalls at roof

level. Paya Ubi said this was not simply shoddy workmanship. That may be so. It may have been that Tekken's workers were not properly supervised or properly instructed in the standard practice of providing stiffeners for brickwalls. Whatever may have been the cause of the failure to provide the stiffeners, the result was defective work.

95 Having considered all the complaints, I accept Tekken's submission that these items (if proved) amounted to breaches of cl 11(1) of the Main Contract Conditions which required Tekken to provide materials, goods and workmanship which were the best of their described kinds and in exact conformity with any contractual description or specification and of good quality. Such breaches resulted in defects in the work. Tekken was released from liability for all defects, including these defects, by cl 3 of the Settlement Agreement. The Architect therefore was not entitled to deduct the costs of rectifying these defects from the contract sum. In fact Tekken had already paid for all defective work when it accepted the deduction of $5m from the contract sum. The parties had agreed on that figure after negotiation and it would not be right to allow Paya Ubi to get round that agreement by accepting its argument that the poor work in question did not constitute "defects".

96 In view of the decision above, I need not consider the other bases on which Tekken challenged the deductions.

97 As regards issue (d) there is a balance due to Tekken under the Final Certificate since I have disallowed most of the deductions made by the Architect. This sum must be re-calculated in accordance with my findings and the amount must then be paid to Tekken. Tekken in turn would have to pay Schindler the amount due to it as also re-calculated in accordance with my findings.

Conclusion

98 I have made my findings on the various issues raised by the pleadings. I will see the parties on the appropriate orders to be made to implement those findings. I will also hear arguments on costs.