

Kowloon-Canton Railway Corporation

Review of Payments to Contractors for the West Rail Project

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April 2002

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1. INTRODUCTION

1.1 Background

- 1.1.1 West Rail Phase I (“West Rail”) is a 30.5 kilometre railway with nine stations, a maintenance centre and headquarters building housing a central operations control centre.
- 1.1.2 The route commences in the south at Nam Cheong Station in Sham Shui Po, follows the West Kowloon Expressway northwards and enters Mei Foo Station in Lai Chi Kok Park. It then continues through the Kwai Tsing Tunnels and enters Tsuen Wan West Station.
- 1.1.3 The route continues northwestwards into the Tai Lam Tunnel, enters the Kam Tin Valley, and then curves slightly to the west to enter the elevated Kam Sheung Road Station. Crossing Route 3, the railway heads for Yuen Long Station, and follows northwards to Long Ping Station. It remains elevated before reaching Tin Shui Wai Station. Finally turning south, the route heads for Siu Hong Station, and then Tuen Mun Station, which is the northern terminus of West Rail.
- 1.1.4 The original budget for the construction of West Rail, which amounted to HK\$64 billion, was approved by the Executive Council in September 1998. However, the current final cost is now estimated to be approximately HK\$46.4 billion.
- 1.1.5 The principal cost savings have come from reduced land acquisition costs, more competitive construction contract pricing, a lower inflation rate, and reduced financing costs due to the downturn in the economic environment. Benefits have also been achieved from value engineering.
- 1.1.6 The construction of West Rail has been funded by an equity injection from the Government into KCRC of HK\$29 billion, from external borrowings of HK\$5.5 billion, and with the balance being generated from KCRC’s internal cashflows.
- 1.1.7 On 28 January 2002, a number of articles appeared in the local newspapers, which disclosed details of a supplemental agreement that KCRC had entered into with Siemens involving an additional payment of HK\$100 million.
- 1.1.8 Following these articles, there was further coverage in the press, which raised concerns over a number of other supplemental agreements that KCRC had executed in relation to West Rail.
- 1.1.9 In response to questions in the Legislative Council, KCRC revealed that it had executed 27 supplemental agreements to make additional payments to various contractors on the West Rail project. The additional payments amounted to approximately HK\$1.6 billion.
- 1.1.10 In order to address public concern about these supplemental agreements, KCRC sought an independent review by a firm of certified public accountants, of the circumstances relating to the supplemental agreements.

1.2 Terms of reference

- 1.2.1 In early February 2002, KCRC appointed KPMG to carry out a review of the supplemental agreements. However, after five weeks of work, KPMG withdrew because KCRC was not able to come to an agreement with them on the terms of their engagement.
- 1.2.2 Following the withdrawal of KPMG, on 8 March 2002 Ernst & Young were engaged by the Managing Board of KCRC to complete the review within six weeks using the same terms of reference as those agreed with KPMG.
- 1.2.3 As part of our terms of reference, the Steering Committee decided that three contracts, for which supplemental agreements had been signed, should be selected for review. The contracts selected by the Steering Committee were as follows:
- Contract No. DB-1500 for the Telecommunications System;
 - Contract No. CC-213 for the civil construction of the Tuen Mun Station; and
 - Contract No. CC-404 for the civil construction of the Mei Foo Station.
- 1.2.4 In general terms, we were asked to determine whether KCRC's procedures and practices in the tender, negotiation and conclusion of contracts had been followed in respect of the three selected contracts.
- 1.2.5 Furthermore, we were asked to consider whether KCRC had followed normal and appropriate procedures in monitoring the performance of the three contracts, and in negotiating the supplemental agreements, which came into existence at a later date.
- 1.2.6 Our terms of reference were to conduct our review on the basis of KCRC's own records. Further details of our terms of reference are set out in Appendix I.

1.3 Our Approach

- 1.3.1 Following our appointment, we met with KPMG to gain an understanding of the work that they had performed over the previous five weeks. KPMG briefed us on the areas that they had covered and provided us with copies of the documentation that they had gathered to date.
- 1.3.2 In order to obtain the necessary technical expertise to perform the review of the supplemental agreements, KPMG had appointed a quantity surveyor and a lawyer specialising in major construction contracts,
- 1.3.3 The two experts who had been selected were:
- Quantity surveyor – Mr. Bruce Humphrey of Bruce Humphrey Consultants Limited; and
 - Lawyer - Mr. Glenn Haley of Deacons.

We met with Messrs. Humphrey and Haley in order to agree their scope of work and the progress that they had made to date.

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- 1.3.4 To complete the panel of technical experts, we arranged for the appointment of Mr. Niels Kraunsoe, who has addressed the engineering aspects of our review. The appointment of all three experts was subsequently approved by the KCRC General Counsel.
- 1.3.5 Details of the relevant expertise and experience of Messrs. Humphrey, Haley and Kraunsoe are attached in Appendix II.
- 1.3.6 Having gained an understanding of the work that had been done to date, we developed a work plan based upon each of the questions to be addressed under our terms of reference. Responsibility for addressing different issues under each question was allocated amongst and agreed with the technical experts and ourselves.
- 1.3.7 KCRC undertook to provide us with all the documentation that they considered to be relevant, and during the course of our work we reviewed this and held a number of meetings with various KCRC personnel. We have no reason to believe that documents relevant to our review have been withheld from us.
- 1.3.8 To confirm and expand our understanding of the procedures and facts identified from our review of the documentation, we have also held meetings with the following KCRC personnel:
- Mr. K Y Yeung Chief Executive Officer
 - Mr. Vincent Lo Member of the Managing Board
 - Mr. Nicholas Ng Member of the Managing Board
 - Mr. Denys Connolly Member of the Managing Board
 - Ms. Denise Yue Member of the Managing Board
 - Mr. Tim Chung Member of the Managing Board
 - Mr. James Blake Senior Director, Capital Projects
 - Mr. Ian Thoms Director, West Rail
 - Mr. David Fleming Company Secretary and General Counsel
 - Mr. Alan Donnet General Manager, Project Support
 - Mr. Jaya Jesudason General Manager, Construction
 - Mr. Siddarth Patel Construction Manager, Rail Systems
- 1.3.9 The panel of technical experts and ourselves conducted a physical inspection of West Rail, which included visits to the sites of the Tuen Mun, Siu Hong, Kam Sheung Road, Mei Foo and Nam Cheong Stations, and the Pat Heung Maintenance Centre. During each stop, we were provided with the opportunity to discuss the progress of work and the major issues encountered with site personnel.

1.4 Interaction with the Steering Committee

- 1.4.1 KCRC has established a Steering Committee comprising of:
- Mr. Michael Tien
 - Sir John Swaine
 - Mr. Brian Stevenson (Resigned upon our appointment)
 - Professor Lee Chack Fun
 - Mr. Denis Levett

1.4.2 The Steering Committee's functions, as determined by the Managing Board of KCRC, are:

- To oversee and guide the E&Y investigation;
- To ensure that the E&Y investigation covers all aspects of its instructions; and
- To study the E&Y final report and, in the light of E&Y's findings and recommendations, either advise the KCRC Board to accept those recommendations or offer alternative actions for the Board to pursue.

1.4.3 At the end of March, we met with the Steering Committee to inform them of our progress and findings, and to satisfy them that the scope of our investigation did cover all aspects of our instructions.

1.4.4 During the meeting, we provided a report on the work that had been performed during the two week period commencing 11 March 2002 and an overview of our preliminary concerns in relation to general matters and the Siemens contract. We also discussed and agreed on the KCRC personnel with whom we would hold meetings.

1.5 Structure of our Report

1.5.1 Following this Introduction is an Executive Summary, which provides a high level overview of our findings and recommendations arising from our review. This includes key conclusions arising from our review of the three contracts plus a number of more general comments on management structure and on monitoring procedures.

1.5.2 Chapters 3 and 4 contain our review of corporate governance and the contracts process, including our review of KCRC's contract philosophy and strategy, its procurement policies and how these compare with industry norms.

1.5.3 Chapters 5 to 12 contain our review of Contract No. DB-1500 with Siemens for the Telecommunications System, and our conclusions.

1.5.4 Chapters 13 to 20 contain our review of Contract No. CC-213 for the civil construction of Tuen Mun Station, and our conclusions.

1.5.5 Chapters 21 to 28 contain our review of Contract No. CC-404 for the civil construction of Mei Foo Station, and our conclusions.

1.5.6 Chapter 29 contains our review of the further supplemental agreements currently under consideration.

1.5.7 We have attached a number of appendices, which contain our terms of reference, details of the expertise and experience of the technical experts who have assisted us in carrying out the engagement and the abbreviations used in this report.

1.6 Limitations in Scope

- 1.6.1 Our review of the three contracts has been based solely on the documentation that has been provided to us by KCRC and on the interviews with KCRC personnel. We have, therefore, relied upon KCRC to ensure that the documentation provided to us is complete.
- 1.6.2 We have not had access to the documentation maintained in respect of the three contracts by the relevant contractors, nor have we discussed these contracts with personnel from those contractors.
- 1.6.3 The findings and recommendations contained in this report reflect the perspective and views of the contractors in so far as they are identifiable from the documents we have reviewed and the meetings we have conducted.
- 1.6.4 We believe that we have presented as balanced a view as possible with the information and documents available to us.
- 1.6.5 We have only considered whether the three contracts selected comply with the policies and procedures of KCRC. Accordingly, it should not be assumed that our findings and recommendations in respect of the review of these three contracts can be extrapolated to all contracts managed by KCRC in respect of West Rail.
- 1.6.6 We have performed our review over a period of six weeks, but nevertheless believe that the depth and detail of our review is sufficient to support our findings and recommendations.

1.7 Confidentiality

- 1.7.1 In the General Conditions of each of the three contracts and in the supplemental agreements, which for this purpose adopt the General Conditions, there is a prohibition against KCRC divulging any information provided by the contractor in accordance with the contract or supplemental agreement. This is an obligation owed by KCRC to its various contractors.
- 1.7.2 In performing our review, we have considered documentation and information provided to us by KCRC. We do not express any view on whether that information or documentation is covered by the confidentiality provisions of the contracts. We understand that KCRC is obtaining its own legal advice about confidentiality issues.

2. EXECUTIVE SUMMARY

2.1 Introduction

2.1.1 In this executive summary, we have sought to provide the reader with a broad overview of our findings, and to put these into perspective we have included comments on the West Rail project and its impact on KCRC.

2.1.2 We have also included comments on KCRC's contract philosophy for West Rail because it is important to understand the effect that such a philosophy has had on the way that KCRC has managed the project.

2.1.3 We have provided comments on the role and composition of the Managing Board in relation to the West Rail project, and on the way that they interact with senior management and on the flow of information which they receive.

2.1.4 We have included general comments on the quality and operation of the processes established for the management and monitoring of the project as a whole.

2.1.5 We have also provided an overall assessment of how supplemental agreements came to be negotiated on the three contracts which were selected for our review (the Siemens telecommunications contract and the contracts for the construction of stations at Tuen Mun and Mei Foo).

2.1.6 We would like to emphasise that our comments and findings are principally based on our review of the documents provided by KCRC and on a series of meetings which we held with some members of the Managing Board and of the senior management. We have not talked to the relevant contractors who are involved in the three selected contracts and have not had any access to their records or documentation. It is possible that some of our conclusions on the three contracts might be different if we had had access to the personnel and records of the relevant contractors.

2.1.7 However, we believe that we have presented the contractors' position as far as possible based on the documents we have reviewed and the meetings we have conducted with KCRC personnel.

2.2 The West Rail project

2.2.1 In order to understand the rationale for the decisions taken by the Managing Board and senior management in relation to contractual issues on West Rail, it is important for the reader to understand the size and complexity of the project being undertaken.

2.2.2 West Rail entails the construction of a railway line, stations and related railway infrastructure through difficult terrain and in densely populated areas at a cost of about HK\$46.4 billion, and in order to carry out the project over 50 contracts have been awarded.

- 2.2.3 These contracts are complex, for large amounts of money, and require the different contractors to carry out their work in a relatively short timescale. Furthermore, many of the contracts are interrelated such that delays which are incurred on one contract are likely to have a consequential impact on a number of other contracts.
- 2.2.4 Thus, in determining the appropriate course of action to be taken in resolving the problems on any one contract, KCRC management cannot consider that contract in isolation. Consideration must also be given to the impact which the problems on that particular contract may have on other contracts, and senior management has to arrive at the best solution to the problem from the perspective of the project as a whole.
- 2.2.5 There are a number of similarities between the MTRC, the Airport Authority and KCRC as they have all been involved in the construction and management of major infrastructure projects. However, one obvious and major distinction is that the Airport Authority and the MTRC started life as development / major project companies, which then became operational after their construction phase was completed.
- 2.2.6 This does not apply to KCRC because it was already established as a railway operating company, which then took on a massive construction project.
- 2.2.7 This project has had to be handled and managed while the normal operations of the railway have continued. It has therefore been necessary for senior management to establish new systems and procedures, and to recruit additional management resources with the necessary experience of construction and major infrastructure project management.
- 2.2.8 The development of West Rail has also provided substantial additional responsibilities and challenges for the Managing Board. A whole range of new problems have had to be addressed for a period of years during the construction of West Rail, and these are not directly related to the day-to-day operations of a railway.
- 2.2.9 In major construction projects, it is generally recognised that there are three key factors which have to be addressed and balanced at all times. These are achieving

the necessary quality of construction, within a satisfactory timescale, and within a reasonable budgeted cost. If any serious problems arise with any of these three factors, there is a consequential impact on the other two.

- 2.2.10 Based on our work, it is clear that the dominant factor for KCRC has been to complete and open the railway on time in September 2003.

2.3 Contract Philosophy

- 2.3.1 KCRC is a body corporate, having been set up by the Kowloon-Canton Railway Corporation Ordinance (Cap 372). Under Section 12 of that Ordinance, KCRC is expressly obliged to conduct its business “according to prudent commercial principles”.

- 2.3.2 In order to implement and observe this overriding statutory obligation, KCRC has developed a contract philosophy which reflects current international best practice in contract management and dispute avoidance. It has therefore adopted an approach whereby it seeks to work in partnership with its contractors as far as possible on the basis of mutual co-operation, and this approach to date has generally appeared to work quite well.
- 2.3.3 One of the features of the philosophy was that KCRC decided to take the risk of unforeseen ground conditions on the civil engineering contracts. This means that it would set out in the tender documents the ground conditions that the contractor could expect to encounter in the performance of the contract based upon KCRC's own site investigation. As noted in a recent industry report commissioned by the HKSAR Government, KCRC's philosophy in this respect is consistent with international practice.
- 2.3.4 If ground conditions were discovered to be different during the performance of the contract, the contractor would be entitled to additional compensation depending on the conditions encountered and the delays that might be caused.
- 2.3.5 In the circumstances of large complex contracts in difficult locations such as the Tuen Mun nullah and Lai Chi Kok bay, it could be considered almost inevitable that problems outwith the contractors' responsibilities under the contract would arise.
- 2.3.6 These would be to KCRC's account, but it should be noted that, in accepting this risk and the likely additional costs thereof, KCRC could have expected to receive considerably lower tenders from the contractors.
- 2.3.7 Major employers such as KCRC take on risk such as unforeseen ground conditions because they should be better able to manage such risks and their resultant costs. If all such risks were passed to contractors, they would normally have to make substantial provisions in their tenders leading to higher tender prices.
- 2.3.8 After the contractor has commenced his work, the nature of the ground conditions would become clear. In many cases, such conditions would cause additional work and a delay in the contractor's work programme.

2.3.9 Resolution of the financial impact of these two issues would need to be agreed. The favoured and efficient mechanism for recording the resolution of these issues is the supplemental agreement. This mechanism is favoured because it avoids prolonged and costly disputes on the project, but also it allows the project team to ensure that there remains in place a set of completion dates by which the contractor is bound. This second advantage often can be secured only through the use of a supplemental agreement.

2.3.10 The use of supplemental agreements is favoured by recent industry reports. The use of supplemental agreements is not confined to Hong Kong. Experienced practitioners in the United Kingdom regard interim (timely) settlement of disputes to be a desirable aspect of project management. Practitioners in the US also regard “change orders” to be part and parcel of almost any construction project. In Australia, the term “supplemental agreement” is not widely used, but experienced practitioners regard the implementation of timely, ad hoc agreements as being good management practice and common sense.

2.3.11 Accordingly, it was almost inevitable that a large number of supplemental agreements would need to be negotiated with contractors, but it would not necessarily mean that the existence of such agreements represented higher overall costs to KCRC.

2.4 Role and composition of the Managing Board

2.4.1 Our comments in respect of the role and composition of the Managing Board are limited to their involvement in the West Rail project, as it is outside our terms of reference to review how they perform their duties as a whole.

2.4.2 From our review of the existing available documents and following the meetings held with some members of the Managing Board, it became clear to us that they see their role in relation to West Rail as one whereby they seek to monitor what the KCRC management is doing and, where appropriate, to provide approval for major decisions, in particular whenever this involves the spending of sums in excess of HK\$50 million.

2.4.3 We noted that the composition of the Managing Board includes only one executive director (the Chief Executive), and this board generally meets on a monthly basis. Given the size and complexity of the issues which the Board is required to consider for KCRC as a whole, we do not believe that, under the existing structure, they have adequate opportunity to assess and discuss specific problems arising on individual contracts that form part of the West Rail project.

2.4.4 We also believe that consideration could be given to appointing one or two non-executive directors with specific knowledge and experience of major projects. This would usefully complement the existing board's knowledge and experience.

2.4.5 We recognise that a West Rail Steering Committee was originally set up comprising the Chief Executive and a number of board members. Its terms of reference and title has subsequently been expanded so that it is now called the New Railway Projects Steering Committee.

2.4.6 Unfortunately, this Committee at present only meets generally on a quarterly basis. However, we believe that it could meet much more regularly and could also have a

number of members who could be drawn from outside KCRC and who could have appropriate technical skills such as expertise in construction, engineering and legal issues.

2.4.7 This Committee would provide a forum at which the senior management could present problems arising on individual contracts in more detail together with alternative courses of action. It would then be able to consider and recommend appropriate solutions, and where the financial impact was large enough these solutions could be passed for approval to the Managing Board.

2.4.8 This could reduce the huge volume of papers on the West Rail project which the Managing Board have to consider before each of their meetings. It would also mean that the solutions being proposed by senior management to address problems arising on individual contracts could be properly discussed by the Steering Committee, with the Managing Board considering the solutions proposed by the Committee.

2.4.9 The greater involvement of the Steering Committee would in turn enable the Board to receive a brief report each month from the Committee on the problems being encountered on contracts and the proposed solutions. Based on that report and their confidence in the Committee's work, the Managing Board could then concentrate on critical issues relating to the project.

2.4.10 In summary, our concerns about the role and composition of the Managing Board in respect of the West Rail project could be largely addressed if the New Railway Projects Steering Committee was given additional resources with revised terms of reference and some delegated authority.

2.5 Monitoring and management procedures

2.5.1 Based on our review of the Procurement Manual, we are pleased to report that the detailed systems for the management of the West Rail project appear to be of a high standard and reflect current industry norms and practices.

2.5.2 We have reviewed the application of these procedures in the management of the three selected contracts and have found that the procedures adopted generally comply with those laid down in the Procurement Manual.

2.5.3 However, we have identified a number of areas where we believe improvements could be made to these procedures.

2.5.4 These improvements, which are described in detail in Chapter 4, relate to the number of pre-qualified tenderers, parallel technical and financial evaluations, liquidated damages, risk assessment of contractors' claims and independent review of commercial settlement calculations.

2.5.5 *[This paragraph in the original Report dealt with the issue of liquidated damages in KCRC's construction contracts. This paragraph has been deleted on the advice of KCRC's external legal advisers because of its commercially sensitive nature and because its disclosure would be prejudicial to the Corporation's interests].*

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- 2.5.6 With regard to the monitoring of the project, we believe it can be argued that in general senior management provide sufficient information prior to the Board Meetings to keep the Board informed. However, we believe that the reporting process, in terms of both format and timeliness, could be improved.
- 2.5.7 As noted earlier, we are recommending that the Steering Committee should have a greater involvement in the monitoring of the project and, if this recommendation is accepted, that would have an impact on the reporting process.
- 2.5.8 We recommend that greater use of summary and exception reports should be made and these could be considered in detail by the Steering Committee before any critical issues are presented to the Managing Board.

2.6 The Siemens Contract (DB-1500)

- 2.6.1 If one were to look at the circumstances related to the Siemens contract from the perspective of that contract alone, the approach taken by KCRC might have been different. For example, they might have decided to take a strictly “contractual” route, seeking to compel Siemens to meet the original terms and dates of the contract (notwithstanding that Siemens was alleging that it had some claims for additional time and money that needed to be addressed).
- 2.6.2 However, if they had taken that strictly “contractual” route, it appears that the Siemens contract would have fallen seriously behind schedule with consequent imposition of liquidated damages and disputes over variations and other claims.
- 2.6.3 Having reviewed the available information, we are of the view that termination of the Siemens contract (either under the contract or at common law) was not really a viable option. Indeed, our view is that, had KCRC purported to terminate the contract, it would not have been acting according to prudent commercial principles.
- 2.6.4 Since the Siemens contract is closely interrelated with a number of other West Rail contracts, we do not believe that it is appropriate to consider the actions that could have been taken to resolve the issues on the contract without considering the consequences on the project as a whole. In our view, had KCRC failed to take into account the consequences for the project as a whole, this would have been a failure to act according to prudent commercial principles.
- 2.6.5 KCRC management was very concerned about the impact that any delay on the Siemens contract could have had on the timely completion of the West Rail project as a whole, and was also concerned about the financial impact which such a delay was likely to have on a number of other West Rail contracts.
- 2.6.6 It is clear that the management was also concerned that, even if it had been possible to replace Siemens with another contractor, there would have been significant time and cost implications. Furthermore, the Siemens contract price had been much lower than both the second lowest bidder and the original amount anticipated by KCRC.

- 2.6.7 Management therefore concluded that the negotiation of a supplemental agreement with Siemens would provide the opportunity of getting the contract back on schedule, and this in turn would avoid the project as a whole being seriously delayed. Furthermore, the financial impact of the proposed supplemental agreement on the overall budget was relatively small.
- 2.6.8 Therefore, given all the factors mentioned above, the senior management decided to recommend to the Managing Board that a supplemental agreement with Siemens should be concluded. We believe that the decision to adopt this approach was the correct one in the circumstances.
- 2.6.9 This resulted in a commercial settlement which appears to have been in the best interests of KCRC because, following the execution of the supplemental agreement, most of the problems previously encountered are now being satisfactorily addressed and the contract is at present back on schedule.

- 2.6.10 While we believe that the strategy adopted by senior management was the right one in the circumstances, it is clear that the Managing Board were not made aware at a sufficiently early stage of the problems on the Siemens contract and the approach that senior management intended to adopt.
- 2.6.11 The first time that the Managing Board became aware of the severity of the problems was when they were informed of the negotiation plan for the proposed supplemental agreement.
- 2.6.12 We think that this is very unfortunate because although we do not believe that the Managing Board would have disagreed with the actions being proposed by senior management, they should have been properly informed. The problems were sufficiently large that they were in danger of jeopardising the timing of the West Rail project as a whole, and for this reason the Managing Board should have been made aware of the issues at an early stage.
- 2.6.13 Because the problems on the Siemens contract were only brought to the Managing Board's attention when they were informed of the proposed negotiation plan, it was already too late for them to consider any alternative course of action.
- 2.6.14 Two possible alternatives which senior management had already considered were to continue trying to compel Siemens to comply with the contract as negotiated or to replace Siemens with another contractor, but senior management concluded that negotiating the supplemental agreement was the appropriate course of action in order for the railway to open on time.
- 2.6.15 In Chapter 12, we have commented on a number of issues that arose during our review and have also included some recommendations on how these can be addressed.
- 2.6.16 These matters relate to the original contract strategy, the limited number of conforming tenders, the low tender price, the award of the contract, the management and monitoring of the contract, the quantification of the supplemental agreement and liquidated damages.

2.7 The Tuen Mun Station contract (CC-213)

- 2.7.1 As already described, KCRC had determined at the start of the West Rail project that it would take the risk of unforeseen ground conditions, on the civil engineering contracts. As a result, it set out in the tender documents the ground conditions that the contractor could expect to encounter in the performance of the contract based upon KCRC's own site investigation.
- 2.7.2 If ground conditions were discovered to be different during the performance of the contract, the contractor would be entitled to additional compensation and possibly also extensions of time to the completion date, depending on the conditions encountered and the delays that might be caused.
- 2.7.3 On the Tuen Mun contract, work on the foundations of the station, which were to be built in the Tuen Mun nullah, were restricted by the fact that such work could only be performed during the six month dry season between October and April of the following year.

- 2.7.4 Due to the fact that the ground conditions were found to be different from those anticipated, this delayed the progress of the foundation work that was planned during the first dry season. This delay then had a consequential impact on the construction work that was planned during the first wet season, resulting in the contract being some nine months behind schedule after fifteen months.
- 2.7.5 At this point, KCRC had the choice between allowing the contract to progress as best it could or to put in place a delay recovery programme to recover the lost time through the use of additional resources.
- 2.7.6 Had KCRC taken the first option, this would not only have had an impact on other related contracts, resulting in claims for additional delay-related compensation from other contractors, but would have also jeopardised the opening date of the entire West Rail project.
- 2.7.7 Therefore, KCRC decided to develop a delay recovery programme with the contractor in order to accelerate the progress of work on the site and thereby get the whole contract back on schedule.
- 2.7.8 The contractor had a contractual entitlement to be compensated for both the unexpected ground conditions as well as the cost of the additional resources that were required to accelerate the rate of work. Consistent with its contract philosophy and the objective of seeking to resolve disputes in a timely way, KCRC negotiated with the contractor and settled the contractor's claims. The settlement was documented by way of a supplemental agreement.
- 2.7.9 Clearly, on this particular contract, the question remains as to whether a more extensive site investigation would have identified more of the unforeseen ground conditions. Such an investigation would have involved additional expense in itself, and could have resulted in different and potentially higher tender prices.
- 2.7.10 We do not believe that it is possible to determine whether the overall cost of the contract, including the supplemental agreement, would have been different if a more extensive site investigation had been carried out by KCRC before the tender process.

- 2.7.11 However, we do believe that in future KCRC should reconsider the amount of site investigation work that is performed before the issue of tender documents, particularly in the case of those sites where major construction constraints, such as limitations of work to the dry season only, are known to exist.
- 2.7.12 While we believe that potentially damaging delays to the contract and to the project as a whole were avoided, we have similar concerns about whether the Managing Board was made aware of the problems on the contract at a sufficiently early stage.
- 2.7.13 Because this contract was being run in conjunction with CC-212, the amounts of money involved were sufficiently large that we believe the Managing Board should have been briefed on what was happening.
- 2.7.14 In the end, the settlement amounts in the supplemental agreements on CC-212 and CC-213 totalled HK\$430 million but we have seen no indication that the Managing Board were advised of the nature and gravity of the problems or of the proposed solutions in a timely manner.

- 2.7.15 Despite this, we believe that the strategy adopted by senior management was the right one in the circumstances and we do not believe that the Managing Board would have disagreed with the actions proposed.
- 2.7.16 In Chapter 20, we have commented on a number of issues that arose during our review and have also included some recommendations on how these can be addressed.
- 2.7.17 These matters relate to the pre-tender site investigation, the limited number of conforming tenders, the management and monitoring of the contract, and the quantification of the supplemental agreement.

2.8 The Mei Foo Station Contract (CC-404)

- 2.8.1 As noted earlier, KCRC took on the risk of problems in construction caused by unforeseen ground conditions.
- 2.8.2 Mei Foo Station is located within Lai Chi Kok bay in close proximity to the Ching Cheung road and Lai Chi Kok bridge and partially above existing MTR running tunnels. In addition, much of the area has been reclaimed at various stages over the years and underground conditions are therefore highly unpredictable.
- 2.8.3 Various problems and delays to the piling were caused by unexpected obstructions and underground conditions. Additionally, the contractor was requested to carry out additional testing, over and above that originally specified in the contract, and again this caused delay. Further, the progress of the work was impacted adversely by the stringent requirements imposed by and the unexpected delays in receiving the necessary approvals from various governmental bodies, in relation to the fact that the works were being carried out in close proximity to Ching Cheung road, Lai Chi Kok bridge and the Lai Chi Kok swimming pool complex.
- 2.8.4 As a result, progress on construction of the station fell about 16 weeks behind schedule by late 2000. Analysis of the reasons, including extension of time and claim submissions by the contractor, resulted in the recognition that KCRC would have to bear the financial impact of part of the delay.

- 2.8.5 KCRC management were concerned that, if this issue was not satisfactorily resolved, there would be a consequential impact on related contracts as well as potential delay to the entire project.
- 2.8.6 Eventually, a supplemental agreement was signed with the contractor resolving all claims up to an agreed cut-off date and buying back the delays for which the contractor might not be liable, while maintaining KCRC's rights to liquidated damages on the new agreed target dates.
- 2.8.7 We believe that KCRC's proactive resolution of the delay and claim issues in order to secure timely completion of Mei Foo Station was in the best interests of KCRC. Nevertheless we again have concerns about the timing when the Managing Board were made aware of the issues and the strategy proposed by senior management to address them.

2.8.8 In Chapter 28, we have commented on a number of issues that arose during our review and have also included some recommendations on how these can be addressed.

2.8.9 These matters relate to the management and monitoring of the contract, and the quantification of the supplemental agreement.

2.9 General

2.9.1 We would like to point out that this Executive Summary represents an overview of our conclusions developed from our work. The reader is encouraged to read the detailed conclusions provided at the end of Chapters 3 and 4 and in Chapters 12, 20 and 28, respectively.