

**Chapters 21 to 28 cover our review of Contract No. CC-404  
for the civil construction of Mei Foo Station**

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**Review of Payments to Contractors for the West Rail Project**  
**April 2002**

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**21. BRIEF OUTLINE OF THE CONTRACT AND THE SUPPLEMENTAL AGREEMENT**

- 21.1 Contract No. CC-404 (“CC-404”) comprises the works for the construction of the underground station at Mei Foo, including building services and the architectural and builders work, KCRC’s portion of the interchange link with MTRC, the north and south ventilation buildings, the port rail terminal spur, landscaping and traffic and utility diversion works.
- 21.2 CC-404 is a lump sum contract without price adjustment for escalation. The contract has provisions that allow for the re-measurement of the piling works. The contract duration is 51 months. Since the estimated value of the contract exceeds HK\$50 million, the provisions of the World Trade Organisation Government Procurement Agreement apply.
- 21.3 Advertisements requesting expressions of interest for 12 Civil and Building Works Construction Contracts, including CC-404, were published on 2 and 3 July 1998 in the local newspapers and on 10 July 1998 in the Government Gazette. In addition to public advertising, the advertisements were also sent to various trade commissions and/or foreign consulates resident in Hong Kong to ensure the widest distribution of the request for expressions of interest.
- 21.4 11 companies expressed their interest for CC-404.
- 21.5 After the pre-qualification evaluation process, on 16 December 1998, the Corporate Tender Board approved a list of ten tenderers for CC-404. Tenders were invited on 5 March 1999 with the tender closing date on 21 May 1999.
- 21.6 Between January and March 1999, three tenderers withdrew. The tender return date was extended to 9 June 1999 following approval by the Corporate Tender Board on 22 April 1999. The tender validity period was 26 weeks and expired on 8 December 1999.
- 21.7 In total, seven conforming tenders and two alternative tenders were received by 12pm on 9 June 1999.
- 21.8 A preliminary tender assessment report was presented to the Tender Review Panel on 17 June 1999. The Tender Review Panel approved the performance of detailed tender evaluations on the three lowest priced conforming tenders.
- 21.9 The three lowest priced conforming tenderers submitted programmes to demonstrate how they would achieve the key dates, their detailed method statements and resource plans for management, labour and plant.
- 21.10 Following the completion of the detailed tender evaluation process, one of the tenders was considered technically non-compliant due to the lack of development of construction methods, the relative inexperience of management, the absence of tender advice from a traffic management specialist and the consequent lack of detail related to the Ching Cheung Road traffic management scheme. The remaining two tenders were determined to be conforming and technically compliant.

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- 21.11 At the Corporate Tender Board meeting on 7 July 1999, the Board resolved to endorse the recommendation to award CC-404 to the Kier-Zen Pacific Joint Venture, which had tendered the lowest conforming and technically compliant offer in the sum of HK\$1,203.87 million, plus a provisional sum of HK\$39 million; as such, the contract sum was HK\$1,242.87 million. The Engineer's estimate was HK\$1,727.58 million.
- 21.12 On 19 July 1999, the Managing Board approved the award of CC-404 to the Kier-Zen Pacific Joint Venture.
- 21.13 The works commenced on 2 August 1999. The Engineer for CC-404 is Hyder (Asia) Ltd.
- 21.14 During the construction of foundation works, a number of events occurred that combined to delay the works by up to 20 weeks, of which 12 weeks were assessed as a critical path delay. These events were mainly attributable to unexpected ground conditions adversely affecting the contractor's ability to progress his works at or around obstructions such Ching Cheung Road, the Lai Chi Kok Bridge and the MTRC Tsuen Wan railway line.
- 21.15 The unforeseen ground conditions provided the contractor with an entitlement for extension of time and additional money to overcome such conditions. In order to ensure West Rail would be completed on time, KCRC decided to buy back part of the extension entitlement using a supplemental agreement.
- 21.16 At the Managing Board Meeting on 18 June 2001, the Members approved that KCRC enter into a supplemental agreement with the Kier-Zen Pacific Joint Venture for an amount of HK\$100 million.
- 21.17 A memorandum dated 30 July 2001 shows that the Senior Review Panel members endorsed a supplemental agreement with a settlement amount of HK\$103 million.
- 21.18 There was a HK\$3 million difference against the amount approved by the Managing Board on 18 June 2001 of HK\$100 million. The HK\$3 million was determined by the Engineer in respect of specific delay recovery instructions for obstructions at the Ching Cheung Road area.
- 21.19 The supplemental agreement was to buy back 12 weeks delay entitlement, and to extinguish the contractor's claims for a 20-week delay and about HK\$255 million in additional payments.

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- 21.20 The major terms of the supplemental agreement were as follows:
- KCRC to pay additional consideration of HK\$103 million including an interim payment of approximately HK\$3 million previously certified by the Engineer and paid by KCRC in respect of specific delay recovery measures, instructed by the Engineer, at Ching Cheung Road;
  - All terms of the original contract to stand except where supplemented by the supplemental agreement;
  - Schedules for key dates, liquidated damages, work program, interim payment, milestone and access dates have been revised;
  - The consideration covered full and final settlement of all measures taken or to be taken to recover delays to the progress or completion of works, the cause of which delay has occurred or commenced at any time up to and including 21 April 2001;
  - The consideration covered full and final settlement of all present or future claims, rights or entitlements to extensions of time and additional payment or other financial compensation for substantial completion of the works;
  - The consideration covered all costs, losses and expenses incurred in re-organising, rescheduling and/or re-sequencing the activities comprising the works to achieve the requirements of the revised works programme;
  - The contractor delivered to KCRC a duly executed retention bond, the value of which is equivalent to the value of the balance of the retention monies held by KCRC. KCRC has to release to the contractor retention monies as are currently held by KCRC, prior to the time the contractor is entitled to receive the same, subject to and conditional upon the provision of such bond; and
  - The value of piling works, including the valuation of the contractor proposed variations and the value engineering scheme agreed at a sum of HK\$192.67 million, does not form part of the consideration.
- 21.21 The supplemental agreement was drafted by West Rail's in-house counsel.
- 21.22 The supplemental agreement was signed by Samuel Lai, SDF and David Fleming, CS-GC on behalf of KCRC, David J. Durey on behalf of Kier Hong Kong and David Howard Gem on behalf of Zen Pacific Civil Contractors Ltd on 16 August 2001.

## **22. CONTRACT PERFORMANCE AND MONITORING**

### **22.1 Scope of our work**

22.1.1 We are requested to consider the following:

*When did KCRC become aware of the fact that the contractor was not performing and what steps were taken at that time?*

22.1.2 In this Chapter, we have sought to provide the reader with an overview of the management procedures established by the West Rail Division in respect of civil construction contracts.

22.1.3 We have then summarised the progress of CC-404 as shown on the Situation Reports before providing a more detailed analysis of the performance of and problems arising on CC-404.

### **22.2 Description of contract monitoring procedures – civil construction contracts**

22.2.1 As a civil construction contract, CC-404 is subject to the same management and monitoring processes as CC-213, details of which are summarised in Section 14.2.

### **22.3 The Situation Reports**

22.3.1 Situation Reports were prepared weekly up to 20 May 2000 and fortnightly thereafter. The progress of CC-404 is summarised in the Situation Reports and the weekly Performance Indicator Report Summary Sheets for the period from 25 September 1999 to 9 March 2002 as follows:-

<b>Information extracted from the Situation Report</b>			<b>Weekly PIR Summary Sheet</b>
<b>Date of Report</b>	<b>Status</b>	<b>Comments</b>	
25 Sep 1999	On Target	Contract is on programme.	Note
2 Oct 1999	Amber, -1 week	Initial delays to piling mobilisation.	Note
9 Oct 1999	Amber, -1 week	Initial delays to piling mobilisation.	Note
16 Oct 1999	Amber, -1 week	Initial delays to piling mobilisation.	Note
23 Oct 1999	Amber, -2 weeks	Initial delays to piling, pending Environmental Protection Department approval. Recovery programme proposed.	Note
30 Oct 1999	Amber, -3 weeks	Major piling works commenced on 30 October.	Note
6 Nov 1999	Amber, -3 weeks	Major piling works commenced on 30 October.	Note
13 Nov 1999	Amber, -3 weeks	Piling progressing.	Note
20 Nov 1999	Green, -3 weeks	Piling progressing.	Note
27 Nov 1999	Green, -4 weeks	Piling progressing.	Note
4 Dec 1999	Green, -5 weeks	Piling not progressing in accordance with programme.	Note
11 Dec 1999	Green, -6 weeks	First piles have been concreted.	Note
18 Dec 1999	Green, -6 weeks	Piling progress slower than programmed.	Note

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Information extracted from the Situation Report			Weekly PIR Summary Sheet
Date of Report	Status	Comments	
1 Jan 2000	Green, -7 weeks	Piling progress slower than programmed.	Note
8 Jan 2000	Green, -8 weeks	Piling progress slower than programmed.	Note
15 Jan 2000	Green, -8 weeks	Piling production has improved	Note
22 Jan 2000	Green, -8 weeks	Piling production improving, recovery programme under review.	Note
29 Jan 2000	Green, -7 weeks	Works proceeding in accordance with revised programme, which is under review.	Note
4 & 11 Feb 2000	Green, -7 weeks	Works proceeding in accordance with revised programme, which is under review.	Note
19 Feb 2000	Green, -7 weeks	Works proceeding in accordance with revised programme, which is under review.	Note
26 Feb 2000	Green, -7 weeks *	Works proceeding in accordance with revised programme, which is under review.	Note
4 Mar 2000	Green, -7 weeks **	Works proceeding in accordance with revised programme, which is under review.	Note
11 Mar 2000	Green, -7 weeks ***	Works proceeding but not in accordance with revised programme, which is under review.	Note
18 Mar 2000	Green, -7 weeks #	Works proceeding but not in accordance with revised programme, which is under review.	Note
25 Mar 2000	Green, -7 weeks ##	Works proceeding but not in accordance with revised programme, which is under review.	Note
1 Apr 2000	Green, -8 weeks	Revised programme, including Ching Cheung Road, to be submitted.	Note
8 Apr 2000	Amber	Revised programme, including Ching Cheung Road, to be submitted.	Note
15 Apr 2000	Amber	Revised programme, including Ching Cheung Road, to be submitted. Temporary footbridge erection commenced on 9 April.	Note
22 Apr 2000	Amber	Revised programme, including Ching Cheung Road, to be submitted. Temporary footbridge erection commenced on 9 April.	Note
29 Apr 2000	Amber	Revised programme acceptable. Minor delays to Ching Cheung Road crossing.	Note
6 May 2000	Amber	Revised programme acceptable. Minor delays to Ching Cheung Road crossing.	Note
13 May 2000	Amber	Revised programme acceptable. Minor delays to Ching Cheung Road crossing.	Note
20 May 2000	Amber	Revised programme acceptable. Minor delays to Ching Cheung Road crossing.	Note
3 Jun 2000	Amber	Delays to Ching Cheung Road crossing.	Note
17 Jun 2000	Amber	Delays to Ching Cheung Road crossing.	Green, -4 weeks



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<b>Information extracted from the Situation Report</b>			<b>Weekly PIR Summary Sheet</b>
<b>Date of Report</b>	<b>Status</b>	<b>Comments</b>	
1 Jul 2000	Green	Delays to Ching Cheung Road crossing / northern site area.	Green, -4 weeks
15 Jul 2000	Amber	Delays to Ching Cheung Road crossing / northern site area.	Amber, -5 weeks
29 Jul 2000	Amber	Delays to Ching Cheung Road crossing / northern site area.	Amber, -5 weeks
12 Aug 2000	Amber	Delays to Ching Cheung Road crossing / northern site area, re-sequencing is being carried out.	Amber, -6 weeks
26 Aug 2000	Amber	Delays to Ching Cheung Road crossing / northern site area, re-sequencing is being carried out.	Amber, -6 weeks
9 Sep 2000	Amber	Delays to Ching Cheung Road crossing / northern site area, re-sequencing is being carried out.	Amber, -6 weeks
23 Sep 2000	Amber	Delays to Ching Cheung Road crossing / northern site area, re-sequencing is being carried out.	Not prepared
7 Oct 2000	Amber	Delays to Ching Cheung Road crossing / northern site area, re-sequencing is being carried out.	Amber, -7 weeks
21 Oct 2000	Amber	Delays to Ching Cheung Road crossing / northern site area, re-sequencing is being carried out.	Amber, -7 weeks
4 Nov 2000	Amber	Delays to Ching Cheung Road crossing / northern site area, re-sequencing is being carried out.	Not prepared
18 Nov 2000	Amber	Delays to Ching Cheung Road crossing / northern site area, and revised programme being implemented.	Amber, -6 weeks
2 Dec 2000	Amber	General Station Structure progress must improved	Not prepared
16 Dec 2000	Amber	General Station Structure progress must improve.	Amber, -5 weeks
30 Dec 2000	Amber	General Station Structure progress must require improvement.	Amber, -5 weeks
13 Jan 2001	Amber	General Station Structure progress required improvement. Ching Cheung Road traffic diverted on 13 January.	Amber, -5 weeks
27 Jan 2001	Amber	General Station Structure progress required improvement. Ching Cheung Road footbridge removed on 21 January.	Not prepared
10 Feb 2001	Amber	General station structure progress requires improvement.	Amber, -7 weeks
24 Feb 2001	Amber	General station structure progress requires improvement.	Amber, -6 weeks
10 Mar 2001	Amber	General station structure progress requires improvement. Ching Cheung Road Stage 2 TTA due by 25 Mar.	Amber, -6 weeks
24 Mar 2001	Amber	General station structure progress requires improvement	Amber, -6 weeks

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<b>Information extracted from the Situation Report</b>			<b>Weekly PIR Summary Sheet</b>
<b>Date of Report</b>	<b>Status</b>	<b>Comments</b>	
7 Apr 2001	Amber	General station structure progress requires improvement. Ching Cheung Road Stage 2 and 3 rock excavation is progressing.	Amber, -5 weeks
21 Apr 2001	Amber	General station structure progress requires improvement. Ching Cheung Road Stage 2 and 3 rock excavation is progressing.	Amber, -5 weeks
5 May 2001	Amber	General station structure progress requires improvement. Track access to be revised by supplemental agreement	Amber, -5 weeks
19 May 2001	Amber	General station structure progress requires improvement. Track access to be revised by supplemental agreement	Amber, -5 weeks
2 Jun 2001	Amber	General station structure progress requires improvement. Ching Cheung Road excavation has been completed.	Amber, -5 weeks
16 Jun 2001	Amber	General station structure progress gaining momentum.	Amber, -5 weeks
30 Jun 2001	Amber	General station structure progress requires momentum be maintained.	Amber, -5 weeks
14 Jul 2001	Amber	General station structure progress requires momentum be maintained.	Amber, -5 weeks
28 Jul 2001	Amber	General station structure progress requires momentum be maintained.	Amber, -5 weeks
11 Aug 2001	Green	Continue works on the freight and Ching Cheung Road Tunnel.	Amber, -1 week
25 Aug 2001	Green	All CLP transformer room structures complete. Freight Tunnel excavation.	Green, -1 week
8 Sep 2001	Green	All CLP transformer room structures complete. Freight Tunnel excavation in progress.	Green, -2 weeks
22 Sep 2001	Green	Water-proofing and E & M works in Passenger Tunnel and soldier piles installation for Freight Tunnel continue.	Green, -2 weeks
6 Oct 2001	Green	Water-proofing and E & M works in Passenger Tunnel and soldier piles installation for Freight Tunnel continue.	Green, -3 weeks
20 Oct 2001	Green	Work on walls for north ventilation building is in progress. Formwork for beams at MTRC interlink is in progress.	Green, -4 weeks
3 Nov 2001	Green	Completed structural works for passenger Tunnel (except works train opening).	Green, -4 weeks
17 Nov 2001	Green	No Comments.	Green, -4 weeks
1 Dec 2001	Amber	E & M progress in station requires improvement.	Amber, -5 weeks
15 Dec 2001	Amber	Works commenced in the Signalling Equipment Room.	Amber, -5 weeks
12 Jan 2002	Amber	KD 6A & 7A (access to station rooms) projected late – affects DB-1300 works in Signalling Equipment Room.	Amber, -5 weeks

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Information extracted from the Situation Report			Weekly PIR Summary Sheet
Date of Report	Status	Comments	
26 Jan 2002	Amber	Achieved KD 6A (Cat. 3 Completion of required station rooms).	Not prepared
23 Feb 2002	Amber	ABWF and E&M works are being expedited to meet ROS dates.	Amber, -7 weeks
9 Mar 2002	Amber	ABWF and E&M works are being expedited to meet Project Contractor requirements.	Amber, -7 weeks
23 Mar 2002	Amber	ABWF and E&M works are being expedited to meet Project Contractor requirements.	Amber, -7 weeks

Note: The Weekly Performance Indicator Report Summary Sheet was not prepared prior to 17 June 2000. The Summary Sheets may not be prepared if there are holidays before or after the date for the preparation of the report. In such cases, only the Weekly Performance Indicator Reports are prepared.

The following comments have been extracted from the “Significant Issues” section of the Situation Reports:

\* *“The contractor is substantially achieving the piling production recovery programme. Details of the recovery programme are to be agreed within the coming six weeks.”*

\*\* *“The contractor is substantially achieving the piling production recovery programme. Full working details of the recovery programme are to be agreed within the next five weeks.”*

\*\*\* *“The contractor continues to make reasonable progress against the piling production recovery programme. Full working details of the recovery programme are to be agreed within the next four weeks.”*

# *“The contractor continues to make reasonable progress against the piling production recovery programme. Full working details of the recovery programme are to be agreed within the next three weeks.”*

## *“The contractor continues to make improved progress against the piling production recovery programme, achieving the highest weekly production of any WR Contractor to date, 21 piles. Full working details of the recovery programme are to be agreed within the next two weeks. Focus of attention is now on specific piles required to permit commencement of subsequent structural works.”*

22.3.2 The site for Mei Foo Station is an awkward one to work on. There are two principal roads; one is Lai Chi Kok Bridge, which runs over the site, and the other is Ching Cheung Road, which is at the northern end of the site. KCRC had structures to build south of Lai Chi Kok Bridge, under Lai Chi Kok Bridge, north of Lai Chi Kok Bridge and also under the Ching Cheung Road.

22.3.3 A further complication is the MTRC Tsuen Wan line, which runs under the site. This placed various constraints on the manner in which construction work could be performed.

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- 22.3.4 Early in the contract, there were issues relating to piling due to the ground conditions, unforeseen utilities and road diversions that had to be done on Ching Cheung Road.
- 22.3.5 During the period from 2 October to 13 November 1999, the contract status was changed to “amber”. This was mainly due to the piling progress, which had not reached the production levels required. The contractor brought in additional piling resources and submitted a delay recovery programme in December 1999. As a result of these actions, the status improved to “green” since 20 November 1999.
- 22.3.6 Since 8 April 2000, the status changed from “green” to “amber”. This status had remained in place largely until 28 July 2001. This was due to the fact that the progress on the bored piling still remained less than satisfactory. In addition, the Ching Cheung Road cut-and-cover tunnels, delays at the Northern Ventilation Building and the station concrete works were a matter of concern.
- 22.3.7 The contractor submitted a recovery programme incorporating mitigation measures on 20 September 2000. The contractor submitted another revised programme on 7 May 2001, which was finally fine-tuned to be in line with the supplemental agreement.
- 22.3.8 There was also the problem that a permanent footbridge ran across the site from Ching Lai Court to Lai Chi Kok Park. As the permanent footbridge obstructed the station construction, it had to be demolished and be replaced with a temporary steel footbridge.
- 22.3.9 The contractor made the case claiming that the temporary footbridge was on the critical path. He could not progress the fabrication of the footbridge as he would have liked as he had arguments with the Engineer regarding the design of the temporary footbridge. In addition, public consultation had to be sought in relation to the footpath diversion.
- 22.3.10 The contractor presented the current progress on the contract to KCRC senior management on 28 January 2000. The contractor said that the contract was showing a delay of 8-12 weeks especially with regard to bored piling works. He then set out the measures that would be implemented to recover the delays. For example, additional piling plant was mobilised with immediate effect.
- 22.3.11 The contractor made another presentation on 1 October 2000. At that stage, the contractor proposed various delay recovery measures that he wanted to implement including increased direct labour and staff.
- 22.3.12 Further presentations were made by the contractor in November and December 2000 updating KCRC’s management on the progress on the contract and the contractor’s difficulties. At the presentation, the contractor put forward his detailed particulars, which set out his full recovery programme and his consolidated claim for extension of time and additional payment.
- 22.3.13 Based upon this information, KCRC started discussions with the contractor.

22.3.14 By 24 February 2001, the contractor's claims for delay costs, delay recovery measures and additional piling costs amounted to HK\$227 million, including financing costs.

22.3.15 No serious delays have occurred since 30 June 2001 and KCRC now consider that the contract will be completed on target.

#### **22.4 Analysis of the contractor's performance**

22.4.1 The following analysis of the performance of CC-404 is divided into eight calendar quarters. For each quarter, we have provided a summary of the progress made and the problems encountered during the quarter, and the action that was taken.

22.4.2 We have highlighted the weeks behind programme based on the Performance Indicator Reports. Finally, we have provided extracts from the various reports and from the discussions held at the various monthly progress and quarterly review meetings in order to provide more detail of the problems encountered and how they were dealt with.

22.4.3 We have only summarised the performance of CC-404 up to the end of 30 June 2001 as, thereafter, CC-404 did not encounter any significant delays.

#### **22.5 Period to 30 September 1999**

##### *Summary of progress for the third quarter of 1999*

22.5.1 CC-404 was awarded on 19 July 1999 and the contract commencement date was 2 August 1999.

22.5.2 In September 1999, the contractor considered the contract to be two to three weeks behind programme on main activities such as the Ching Cheung Road traffic diversion, pre-boring, installation of the geotechnical instrumentation and the fabrication of the temporary footbridge.

22.5.3 There were delays in the endorsement of the drawings by Hyder in respect of public consultation for the Ching Cheung Road diversion and there was a further delay due to Tropical Storm Cam.

22.5.4 In addition, the Police required that the initial stage of the Ching Cheung Road traffic diversions must be undertaken on a Sunday, when the traffic volumes were lower. There were delays in implementing these initial diversions which impacted on the commencement of the related construction work.

##### *The West Rail Construction Monthly Report*

22.5.5 There were no significant issues in the West Rail Construction Monthly Report for August 1999.

22.5.6 The following points were noted in the report for September 1999:

*“The Contractor is now considered to be two to three weeks behind programme on main activities such as the Ching Cheung Road Traffic Diversion, Pre-boring, Geotechnical Instrumentation and fabrication of the Temporary Footbridge. However, redesign of the footbridge will correct the situation for Ching Cheung Road and Temporary Footbridge.”*

*“... however delays in the endorsement of the drawings by RDO/HyD in respect of public consultation meant that the commencement of the diversion was delayed - beyond 19 Sept. This was further delayed beyond 26 Sept due to Typhoon Signal No 8. The HKPF has decreed that the initial stage must be undertaken on Sunday, when they state traffic volumes are lower.”*

*“... and pre-drilling exercise commenced on 27 Sept and is considered to be two to three weeks behind programme.”*

***The CRE Monthly Progress Report***

22.5.7 The following points were noted in the CRE Monthly Progress Report for August 1999:

*“There is a concern that the Contractor is behind programme in respect of the Baseline Monitoring Report and therefore affecting their ability to commence any major works when programmed to do so.”*

22.5.8 The following points were noted in the report for September 1999:

*“The Contractor is about three weeks behind in commencing preboring activity.”*

***The Quarterly Review Meeting***

22.5.9 The following points were noted in the minutes of the Quarterly Review Meeting on 22 September 1999:

*“2.4 CRE stated that the programme for CC404 was very tight and requested the contractor to expedite mobilization...”*

*“2.7 JL expressed concern in possible delays imposed by objections from the residents of Ching Lai Court to the temporary footpath diversion adjacent to the swimming pool in Lai Chi Kok Park. RL stated that, unfortunately, the proposed footpath diversion had to go through public consultation (CCLG) before acceptance by the SLG. The Public Affairs Department of KCRC was doing everything they could to mitigate objections raised by the public.”*

**22.6 Three months to 31 December 1999**

*Summary of progress for the fourth quarter of 1999*

- 22.6.1 In October 1999, there were restrictions on the progress of works pending submission and acceptance of the Environment Baseline Monitoring Report together with the Waste Management Plan from the Environmental Protection Department. Therefore, no major construction activity was able to take place during the month.
- 22.6.2 There were also problems regarding installation of the Automatic Data Management Systems (“ADMS”) in the MTRC tunnels which run under the site and the associated interface with the MTRC Railway Protection Department.
- 22.6.3 MTRC imposed constraints to available working areas for piling both for the station and for the temporary footbridge over Ching Cheung Road. KCRC was to approach MTRC with a view to securing early approval to install ADMS instrumentation.
- 22.6.4 In November 1999, the contractor reported that piling at the south of the Lai Chi Kok Bridge was around three to four weeks behind programme. The contractor stated that this delay could be offset by the value engineering scheme being undertaken in respect of piling below the Lai Chi Kok Bridge. Bored piling for the temporary footbridge could not commence because of MTRC restrictions
- 22.6.5 Hyder expressed concern in respect of the contractor’s piling progress and production rates, and requested that the contractor give confirmation that the plant available on site would meet the required production rates.
- 22.6.6 In addition, the contractor had also experienced problems in respect of the installation of the geotechnical instrumentation. They stated that they had had a meeting with their subcontractor in order to resolve the concerns. Moreover, installation of instrumentation within the MTRC tunnels had commenced but was incomplete pending full approval from MTRC.
- 22.6.7 By November 1999, the overall progress was considered to be one month behind schedule. The delay was particularly in relation to the piling works. The contractor agreed to locate additional piling resources and had undertaken to submit a delay recovery programme by 21 December 1999.
- 22.6.8 The casting of piles commenced in December 1999. However, the associated rate was significantly below that required by the programme. The overall progress was about two months behind schedule.
- 22.6.9 During the quarter, the contractor also discovered an old seawall bund that traversed the site north of Lai Chi Kok Bridge which affected the Ching Cheung Road diversion and piling progress. The contractor had submitted proposals to overcome the problem and claimed additional resources.

- 22.6.10 In December 1999, the contractor produced and submitted a delay recovery programme for bored piling including the Ching Cheung Road piling. In this respect, two additional rigs were mobilised during the month with a further rig being assembled for use under the Lai Chi Kok Bridge.

*The West Rail Construction Monthly Report*

- 22.6.11 The following points were noted in the West Rail Construction Monthly Report for October 1999:

*“... redesign of the footbridge (elimination of central pier support at Ching Cheung Road) will correct the situation for Ching Cheung Road and Temporary Footbridge.”*

*“...Pre-drilling exercise carried out on South of LCK Bridge, North Vent. Building, temporary Footbridge and Ching Cheung Road Tunnel area and is considered to be two weeks behind programme.”*

*“Works have not yet commenced in Area 2 under LCK Bridge; planned start date for Area 2 was 18 September. The Contractor is awaiting pile setting out details from Hyder.”*

*“.... However, the contractor is unable to start pre-drilling in this location without coordinates of the piles. This time saving is being reduced. Moreover, the contractor is unable to start until its alternative design is approved by HyD. Discussions on this issue are in progress.”*

*“MTRC has raised a concern that the MTRC tunnel as-built location, is not as shown correctly on the Contract drawings, being up to 500mm difference. They have indicated that some of the permanent and temporary footbridge piles are inside the three-metre reserve and they will not allow these to be constructed in their present location. This has been referred to the Hyder’s design office.”*

- 22.6.12 The following points were noted in the report for November 1999:

*“Overall progress is considered to be some six weeks behind programme. Progress during this month has been disappointing particularly in relation to the piling works, which should have been gathering pace following EPD’s acceptance of the environmental base-line monitoring report and waste management plan in end October.”*

*“Piling continued in Area 3A and commenced in Area 1A at least 30m away from the MTRC tunnel. Piling has been delayed by obstructions encountered, plant breakdown and poor performance of the chisel to form the bell out.”*



- 22.6.13 The following points were noted in the West Rail construction monthly report in December 1999:

*“Overall progress during this month has again been most disappointing particularly in relation to the piling works. The casting of piles commenced this month with the associated rate being significantly below that required by the programme.”*

*“Overall progress is considered to be around eight weeks behind programme.”*

*“The Contractor has submitted a “recovery” programme and this is under review.”*

***The CRE Monthly Progress Report***

- 22.6.14 The following points were noted in the CRE Monthly Progress Report for October 1999:

***3.3.2 Location of the MTRC Tunnels***

*MTRC have raised a concern that the MTRC tunnel as-built location is not as shown on the Contract drawings, being up to 500mm different. They have indicated that some of the permanent and temporary footbridge piles are inside the 3 metre reserve and they will not allow these to be constructed in their present location. This has been referred to the design office.”*

- 22.6.15 The following points were noted in the report for November 1999:

***1.4 Key Issues and Critical Items***

*Although bored piling activity only commenced around the beginning of the month, a less than satisfactory first month’s work in available working areas is a matter for concern.*

*The Contractor is searching the market for additional piling resources and has undertaken to submit a ‘recovery’ programme by 21st December 1999.*

*Available working areas for the bored piling activity have been limited as a result of problems associated with ADMS installations within the MTRC tunnels and the installation of geotechnical instrumentation elsewhere.*

*General progress in respect of steelwork fabrication, resolution of technical queries and foundation piling for the temporary footbridge over Ching Cheung Road is of concern. The issues have however been identified and are being resolved.”*

- 22.6.16 The following points were noted in the CRE's Monthly Progress Report in December 1999:

*“Although progress this month in respect of bored piling works has shown an improvement over the previous month, overall progress nevertheless continues to be the main issue at this time. The Contractor advises that resources are being increased in line with the requirements of the “recovery” programme which was submitted during the month. In this respect, it is noted that two additional rigs were mobilised during the month with a further rig being assembled for use under the Lai Chi Kok Bridge.”*

*“Available working areas for the bored piling activity have been limited as a result of problems associated with ADMS installations within the MTRC tunnels. However, MTRC permission to access the tunnels to complete installation of the ADMS is expected shortly.”*

*“General progress in respect of steelwork fabrication, resolution of technical queries and foundation piling for the temporary footbridge over Ching Cheung Road continues to be of concern. The issues have however been identified and are being resolved.”*

***The Quarterly Review Meeting***

- 22.6.17 The following points were noted in the minutes of the Quarterly Review Meeting on 8 December 1999:

*“2.3 The Contractor expressed their concern in delays in installation of the ADMS within MTRC tunnels. The Contractor requested KCRC to assist. (post meeting note: meeting between KCRC/MTRC Railway Protection Dept. was held on 17 December 1999. MTRC agreed to expedite approval procedures whenever possible.)”*

*“2.5 There was a lengthy discussion regarding the slow progress in piling works. It was agreed by the meeting that the Contractor should source for additional resources in the market to mitigate any further delays. A recovery works programme was requested by KCRC and the CRE.”*

*“3.1 Targets set in the previous quarter were discussed. Completion of 20% of total number of bored piles was not achieved.”*

**22.7 Three months to 31 March 2000**

***Summary of progress for the first quarter of 2000***

- 22.7.1 During the quarter, a number of difficulties concerning conflicts between permanent works and existing utilities/structures at the works interface with Ching Cheung Road were encountered. There were also delays in piling work due to the discovery of unforeseen utilities in Ching Cheung Road. The contractor proposed to re-locate some of the bored piles that were obstructed by utilities.

- 22.7.2 A meeting was held between the Engineer and the contractor on 14 January 2000 during which the Engineer set out his concerns over the poor progress being achieved on the bored piling works. The contractor provided details of measures intended to be taken to bring progress back into line with the programme requirements.
- 22.7.3 These measures included additional resources provided by the piling subcontractor together with the employment of a second piling subcontractor. However, the contractor was not able to locate a second piling subcontractor and therefore decided to review other areas of the works programme to see where delays could be recovered.
- 22.7.4 A further piling recovery programme was submitted by the contractor to KCRC on 24 January 2000. This programme was presented to KCRC management on 18 February 2000 along with the contractor's strategy for follow-up excavation and associated temporary works activities.
- 22.7.5 The contractor made a presentation of its revised station strategy on 17 February 2000 which essentially entailed advancing excavation and associated temporary works activities to mitigate the effects of delays already experienced in the piling work.
- 22.7.6 By March 2000, the overall piling progress had continued to improve and bored pile installation was about 40% complete. However, the weekly bored pile production rate was still 25% lower than its revised planned rate.

***The West Rail Construction Monthly Report***

- 22.7.7 The following points were noted in the West Rail Construction Monthly Report for January 2000:

*“Overall progress continues to be disappointing particularly in relation to the piling works. Additional resources have been mobilised and the rate of casting of piles has improved during the month although still below that required by the programme.”*

*“Overall progress is considered to be around ten weeks behind programme.”*

*“Following unsuccessful negotiations with prospective additional piling contractors, the Contractor has decided to further review his programme with the intention of advancing excavation activities to mitigate delay in the piling work. The Contractor will make a presentation of its revised station strategy on 17 February at KCRC's City Link Office.”*

22.7.8 The following points were noted in the report for February 2000:

*“Overall progress has improved somewhat this month although still remains less than satisfactory. Additional resources continue to be mobilised and whilst the rate of casting of piles has further improved, there still remains a shortfall against the programmed rate. Note that some 135 No. piles were cast by the end of February 2000 of which 56 No. were cast during February.”*

*“Overall progress is considered to be around up to 12 weeks behind programme, although it has to be noted that the programme is based on the conforming piling layout and therefore does not recognise the time savings expected as a result of the Contractor’s alternative foundation designs.”*

*“The Contractor made a presentation of its revised station strategy on 17 February 2000 at KCRC’s City Link Office. This essentially entails advancing excavation and associated temporary works activities to mitigate the effects of delays already experienced in the piling work.”*

*“Piling progress continues to give cause for concern as the Contractor is not reaching the required production levels to stay on programme or recover lost time.”*

*“Some concrete cubes have not achieved the required strength and the Contractor has proposed taking cores and testing them from the piles that are affected.”*

22.7.9 The following points were noted in the report for March 2000:

*“Overall progress with respect to bored piling has continued to show an improvement although still remains less than satisfactory. Additional resources continue to be mobilised and whilst the rate of casting piles has further improved, there still remains a shortfall against that programmed...”*

*“Overall progress is considered to remain at around 12 weeks behind programme, although it is noted that the programme is based on the conforming piling layout and therefore does not recognise the time savings expected as a result of the Contractor’s alternative foundation designs.”*

*“Following many presentations and meetings during the past several weeks, expectation were high that the Contractor would submit during March a revised Works Programme incorporating both alternative foundation designs and revised station construction strategy. However, what the Contractor actually submitted, on 29 March 2000, was a document described as a ‘Target Programme’ that is “without prejudice to any entitlement that we may possess in relation to claims” and that “progress will continue to be monitored against the Detailed Works Programme dated 10 December 1999 until such time that the Engineer grants an extension of time for the Works or instructs us otherwise”. This is most disappointing since it does not formally regularise the current position regarding progress/alternative designs and moreover may demonstrate a lack of commitment.”*

*“Piling Progress continues to give cause for concern as the Contractor is not reaching the required production levels to stay on programme or recover lost time.”*

*“Lai Chi Kok Bridge has moved up to 12mm, however movement seems to have slowed. Investigations and meetings with the Contractor are ongoing in order to investigate the reasons for this. The HyD has been informed. AAA values required from Design Team.”*

*“Ching Cheung Road progress has become a major issue of concern. The Contractor has stated that due to conflicts (1) between Piles P601 to 603/adjacent slab and the crib wall on CCR and (2) existing utilities and permanent pile locations, there could be delays to Key Date 6.”*

***The CRE Monthly Progress Report***

22.7.10 The following points were noted in the CRE Monthly Progress Report for January 2000:

*“Although progress this month in respect of bored piling works has shown an improvement over the previous month, overall progress nevertheless continues to be the main issue at this time. A meeting was held between the Engineer and Contractor on 14th January 2000 during which the Engineer set out his concern over the poor progress being achieved on the bored piling works. The Contractor provided details of measures intended to be taken to bring progress back into line with the programme requirements. These measures included additional resources by the piling subcontractor together with the employment of a second piling subcontractor. However, negotiations with prospective second piling subcontractors proved unsuccessful leading to the Contractor to review his strategy. An outline of his revised strategy was presented on 24th January 2000. The Contractor essentially seeks to mitigate the effect of delays experienced with the piling works by advancing subsequent excavation activities. Additional piling resources were also proposed. The Contractor will present its revised planning strategy on 17th February 2000 at KCRC’s City Link Offices.*

*Issues in relation to the temporary footbridge over Ching Cheung Road have largely been resolved. Bored piling work has now commenced for the footbridge foundations.”*

22.7.11 The following points were noted in the report for February 2000:

*“Although progress this month in respect of bored piling works has shown an improvement over previous months, overall progress nevertheless continues to be the main issue at this time.”*

*“Design issues in relation to the temporary footbridge over Ching Cheung Road have largely been resolved.”*

*“A number of difficulties have been identified concerning conflict between permanent works and existing features (mainly utilities) at the Works interface with Ching Cheung Road. These difficulties are being addressed at meetings specifically set up for the purpose and attended by the Contractor, RSS and the design consultant.”*

22.7.12 The following points were noted in the CRE report for March 2000:

*“Although progress this month in respect of bored piling works continues to show improvement over previous months, overall progress nevertheless continues to be of concern.”*

*“The absence of alternative design submissions from the Contractor, for both the station foundations under Lai Chi Kok Bridge and the Northern Ventilation Building is hindering orderly administration/supervision of the works.”*

*“A number of difficulties have been identified concerning conflict between permanent works and existing utilities/structures at the Works interface with Ching Cheung Road. The Contractor is addressing these difficulties, in conjunction with Hyder design office, by way of amendments to the permanent works design with early resolution necessary if delays to works progress are to be avoided.”*

***The Quarterly Review Meeting***

22.7.13 The following points were noted in the minutes of the Quarterly Review Meeting on 28 March 2000:

*“1.3 The Contractor were considering in proposing to re-locate some of the bored piles that were obstructed by utilities. Hyder would assist.”*

*“1.4 For alternative foundation design for LCK Bridge Section, a meeting with HyD would be arranged by Hyder to wrap up all outstanding issues.”*

*“3.2 Contractor expressed some difficulties encountered in excavation for bell-outs in some of the bored piles. The solution would be to fill up the collapsed bell-out zone with lean concrete and re-excavate. The other alternative would be to increase the length of the rock socket.”*

*“3.4 Obstruction in bored piling due to the existing seawall was not in the critical path. Sufficient resources had been deployed by the Contractor to overcome the problem.”*

**22.8 Three months to 30 June 2000**

***Summary of progress for the second quarter of 2000***

22.8.1 During the quarter, work was expanding across the site at a number of locations with overall progress remaining at around thirteen weeks behind programme (based on the conforming piling layout and not recognising the time savings expected as a result of the contractor’s alternative foundation designs).

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22.8.2 By June 2000, bored piling was estimated to be four weeks behind target programme. Progress had slipped somewhat in June 2000 to around 15 piles per week. This was below the programmed rate and was unlikely to improve to any significant degree given the reducing number of piles remaining and the increasing congestion of general activity on site.

22.8.3 Alternative design submissions from the contractor, for both the station foundations under Lai Chi Kok Bridge and the Northern Ventilation Building were still not yet formally in place and this continued to hinder orderly administration and supervision of the works.

*The weekly Performance Indicator Report Summary Sheets*

22.8.4 The weekly Performance Indicator Report Summary Sheets indicate the following:

Date of Report	Issues		Status	Comments
	Major Items	% Completion to Date		
18 June 2000	Pile installation	65%	Green, -4 weeks	Delays to Ching Cheung Road crossing

*The West Rail Construction Monthly Report*

22.8.5 The following points were noted in the West Rail Construction Monthly Report for April 2000:

*“Progress with respect to bored piling has stabilised at around 15 no. per week on average with this being somewhat less than programmed...”*

*“Work is expanding across the site at a number of locations with overall progress remaining at around twelve weeks behind programme. It is noted that the current Reviewed-Without-Objection programme is based on the conforming piling layout and therefore does not recognise the time savings expected as a result of the Contractor’s alternative foundation designs.”*

*“Piling Progress continues to give cause for concern as the Contractor is not reaching the required production levels to stay on programme or recover lost time.”*

*“Lai Chi Kok Bridge has moved up to 14mm, however movement seems to have slowed. Investigations and meetings with the Contractor are ongoing in order to investigate the reasons for this. The Highways Department has been informed.”*

*“Ching Cheung Road progress has become a major issue of concern. The Contractor has stated that due to conflicts between (a) Piles P601 - 603/adjacent slab and the crib wall on CCR and (b) existing utilities and permanent pile locations, there may be delays to Key Date 6”.*

22.8.6 The following points were noted in the report for May 2000:

*“Work continued to expand across the site at a number of locations with overall progress around 13 weeks behind programme...”*

*“...bored piling is assessed to be some four weeks late with activities elsewhere being up to 8 weeks late.”*

*“Piling Progress continues to give cause for concern as the Contractor is not reaching the required production levels to stay on programme or recover lost time.”*

*“Lai Chi Kok Bridge has moved up to 14mm, but movement now seems to have slowed. Investigations and meetings with the Contractor are ongoing in order to investigate the reasons for this. The Highways Department has been requested to provide previous monitoring results.”*

*“Ching Cheung Road progress has become a major issue of concern. The Contractor has stated that due to conflicts between (a) Piles P601 - 603/adjacent slab and the crib wall on CCR and (b) existing utilities and permanent pile locations, there may be delays to Key Date 6. The contractor has proposed design changes to the permanent works.”*

22.8.7 The following points were noted in the report for June 2000:

*“Progress with respect to bored piling has slipped somewhat this month to around 15 nos. per week. This is below the programmed rate and moreover unlikely to improve to any significant degree given the reducing number of piles remaining and the increasing congestion of general activity on site.”*

*“...Against this programme, bored piling is assessed to be some 6 weeks late with activities elsewhere, including works associated with Key Dates KD3, 4, 5 & 6, being 10 to 11 weeks late.”*

*“Two of the LCK pile caps are not located as shown on the contract drawings which may conflict with the permanent works. The Contractor has carried out a survey.”*

*“Piling Progress continues to give cause for concern as the Contractor is not reaching the required production levels to stay on programme or recover lost time.”*

*“Ching Cheung Road progress has become a major issue of concern. The Contractor has stated that due to conflicts between (a) Piles P601 - 603/adjacent slab and the crib wall on CCR and (b) existing utilities and permanent pile locations, there may be delays to Key Date 6. The contractor has proposed design changes to the permanent works and scheme has been prepared by Hyder Design Team.”*



***The CRE Monthly Progress Report***

- 22.8.8 The following points were noted in the CRE Monthly Progress Report for April 2000:

*“The absence of Value Engineering alternative design submissions from the Contractor, for both the station foundations under Lai Chi Kok Bridge and the Northern Ventilation Building is hindering orderly administration/supervision of the works.”*

*“The previously reported difficulties concerning conflict between permanent works and existing utilities/structures at the Works interface with Ching Cheung Road are being addressed by the Contractor in conjunction with Hyder design office. Early resolution is necessary if delays to works progress are to be avoided.”*

- 22.8.9 The following points were noted in the report for May 2000:

*“The continued absence of alternative design submissions from the Contractor, for both the station foundations under Lai Chi Kok Bridge and the Northern Ventilation Building is hindering orderly administration and supervision of the works although there are signs that progress in this regard will be made during the coming month.”*

*“The previously reported difficulties concerning conflict between permanent works and existing utilities/structures at the Works interface with Ching Cheung Road are being addressed by the Contractor in conjunction with Hyder design office. Progress in this respect has been satisfactory this month.”*

- 22.8.10 The following points were noted in the report for June 2000:

*“Alternative design submissions from the Contractor, for both the station foundations under Lai Chi Kok Bridge and the Northern Ventilation Building are still not yet formally in place and this continues to hinder orderly administration and supervision of the works.”*

*“Increasing lateness against the ‘Target’ programme at Ching Cheung Road cut-and-cover tunnels and at the Northern Ventilation Building (NVB) is a matter of concern since access for the CC1810 track-laying Project Contractor (Key Dates KD3 & KD4) is at risk. The Contractor is looking closely at his planning for both locations and with particular respect to the NVB, is examining the feasibility of removing it from the path of activities critical to the achievement of KD4. The Contractor has also instituted limited 24 hr. working at certain locations.”*

*The Quarterly Review Meeting*

22.8.11 The following points were noted in the minutes of the Quarterly Review Meeting on 28 June 2000:

“2.3 The Contractor stated that more resources would be deployed in demolition of the existing footbridge and retaining wall along Ching Cheung Road.”

“2.4 The CRE reminded the Contractor to finalize remedial measures for rectifying defects in bored piles. A total of 52 non-conformities in various degrees needed to be rectified.”

**22.9 Three months to 30 September 2000**

*Summary of progress for the third quarter of 2000*

22.9.1 Further problems and delays were encountered at the Ching Cheung Road cut-and-cover tunnels and at the Northern Ventilation Building. The rock level under Ching Cheung Road was found to be too high which made the piling work difficult.

22.9.2 Following a review of the planning at these locations, the contractor had submitted a delay recovery programme on 19 July 2000. This submission comprised a description of the measures together with drawings, programmes and details of associated costs.

22.9.3 Further to the proposed recovery measures referred above, the contractor had prepared a revised programme to incorporate these measures along with the resequencing of the remainder of the site to take account of current works progress.

22.9.4 By September 2000, the bored pile installation was about 98% complete. Good progress was made during the month on excavation of station and this work was about 60% complete. However, the overall progress was 12 weeks behind the target programme.

22.9.5 The contractor had submitted a recovery programme incorporating mitigation measures on 20 September 2000.

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*The weekly Performance Indicator Report Summary Sheets*

22.9.6 The weekly Performance Indicator Report Summary Sheets indicate the following:

Date of Report	Issues		Status	Comments
	Major Items	% Completion to Date		
30 Jul 2000	Pile installation	78%	Amber, -5 weeks	Delays to Ching Cheung Road crossing/northern site area, resequencing is being carried out
27 Aug 2000	Station concrete (excl. piles)	0%	Amber, -6 weeks	Delays to Ching Cheung Road crossing/northern site area, resequencing is being carried out
10 Sep 2000	Station concrete (excl. piles)	0%	Amber, -6 weeks	Delays to Ching Cheung Road crossing/northern site area, resequencing is being carried out

*The West Rail Construction Monthly Report*

22.9.7 The following points were noted in the West Rail Construction Monthly Report in July 2000:

*“Progress with respect to bored piling continues to slip and has averaged this month at around 9 no. per week. This is below the programmed rate and unlikely to improve to any significant degree given the reducing number of piles remaining and the increasing congestion of general activity on site. However, the piling activity, with the odd exception, is no longer on the critical path with activity at the north end of the site having taken its place.”*

*“The site is a busy one. Overall progress continues to be maintained at around 14 weeks behind the current, albeit out-of-date, Detailed Works Programme.”*

*“Against the ‘Target Programme’, submitted informally by the Contractor on 29 March 2000, progress continues to slip with the most serious delays being experienced on works associated with Key Dates KD3, 4, 5 & 6 where around 15 weeks lateness is evident. The Contractor has however recently submitted proposals to redress this situation with particular emphasis on the provision of access for the CC-1810 Project Contractor i.e. Key Dates KD3 & 4...”*

*“Two of the LCK pile caps are not located as shown on the contract drawings and may conflict with the permanent works. The Contractor has carried out a survey and the effect on the permanent works is being assessed.”*

*“Lai Chi Kok Bridge has moved up to 18mm, but movement has been slowed down. The Contractor has been provided with AAA values. Design Team has forwarded larger AAA values to HyD for comment.”*

*“Ching Cheung Road progress has become a major issue of concern. The Contractor has stated that due to conflicts between (a) Piles P601 - 603/adjacent slab and the crib wall on CCR and (b) existing utilities and permanent pile locations, there may be delays to Key Date 6. The contractor has proposed design changes to the permanent works and scheme has been prepared by Hyder Design Team.”*

22.9.8 The following points were noted in the report in August 2000:

*“Productivity on the bored pile activity continues to decline and has averaged this month at around four per week. This is below the programmed rate and likely to further decline given the reducing number of piles remaining and the increasing congestion of general activity on site. However, the piling activity, with the odd exception, is no longer on the critical path with activity at the north end of the site having taken its place. It is further noted that a number of bored piles have been replaced by socketed H-piles.”*

*“The site is becoming increasingly active. Overall progress is estimated to be around 15 weeks behind the current, albeit out-of-date, Detailed Works Programme.”*

*“Against the ‘Target Programme’, submitted informally by the Contractor on 29 March 2000, further slippage has occurred. The most significant delay continues to be in relation to Key Dates KD3, 4, 5 & 6 where over 14 weeks lateness is evident. The Contractor has previously submitted proposals to redress this situation with particular emphasis on the provision of access for the CC-1810 Project Contractor i.e. Key Dates KD3 & 4.”*

*“Further to the proposed recovery measures referred to above, which have received general acceptance, the Contractor has prepared a revised programme to incorporate these measures along with resequencing of the remainder of the site to take account of current works progress. This programme, which is referred to as a “Recovery Programme” is under final review by the Contractor prior to issue.”*

*“Lai Chi Kok Bridge has moved up to 21mm, but movement now seems to have slowed. The Contractor has been provided with AAA values. Contractor now designing props to place between pilecaps.”*

*“Ching Cheung Road progress remains a major issue of concern. The Contractor has submitted a revised sequence of working in the NVB and CCR areas to expedite progress but this will require further refinement before implementation.”*

22.9.9 The following points were noted in the report in September 2000:

*“Progress but this will require further refinement before implementation.”*

*“Activity continued on construction of outstanding piling. This work is essentially no longer critical.”*

*“The site is becoming increasingly active. Overall progress is estimated to be around 16 weeks behind the current, albeit out-of-date, Detailed Works Programme.”*

*progress but this will require further refinement before implementation.”*

*“Lai Chi Kok Bridge has moved up to 21mm, but movement now seems to have slowed down. The Contractor has been provided with AAA values. The Contractor has designed props to place between pilecaps”.*

*“Ching Cheung Road progress remains a major issue of concern. The Contractor has submitted a revised sequence of working in the NVB and CCR areas to expedite progress and this is being implemented.”*

*“The existing CCR retaining wall has now settled by 40mm, and a meeting has been arranged between Contractor/RSS/HCL Design office to discuss solutions to prevent further movement.”*

*“The diversion of the Towngas main at Ching Cheung Road will not be possible under the current completion window. KCRC and HCL have held discussions with Towngas to provide ‘T’ branches for diversion work at a later date, and work is now in progress.”*

***The CRE Monthly Progress Report***

22.9.10 The following points were noted in the CRE Monthly Progress Report for July 2000:

*“Alternative design submissions from the Contractor, for both the station foundations under Lai Chi Kok Bridge and the Northern Ventilation Building are still not yet formally in place.”*

*“Increasing lateness against the ‘Target’ programme at Ching Cheung Road cut-and-cover tunnels and at the Northern Ventilation Building (NVB) is a matter of concern since access for the CC1810 track-laying Project Contractor (Key Dates KD3 & KD4) is at risk. Following a review of the planning at these locations, the Contractor has submitted what are referred to as “measures to recover delay under GCC Cl. 47.3”. This submission comprises a description of measures together with drawings, programmes and details of associated costs. The measures themselves provide for removing the NVB structural work from the relevant ‘critical path’ together with working a second front of tunnel construction from the interface with DB320 north of Ching Cheung Road. According to the accompanying programme, adoption of these measures will secure achievement of Key Dates KD3 & 4 as required by the Employer i.e. by 6 July 2001.”*

22.9.11 The following points were noted in the report for August 2000:

*“Alternative design submissions from the Contractor, for both the station foundations under Lai Chi Kok Bridge and the Northern Ventilation Building are still not yet formally in place.”*

*“The Contractor’s submission of proposed so-called “measures to recover delay under GCC Cl. 47.3” have been declared as appropriate to deal with lateness being experienced at Ching Cheung Road cut-and-cover tunnels and at the Northern Ventilation Building (NVB). According to the Contractor, adoption of these measures will secure achievement of Key Date KD3 by the original contract date (i.e. 6 July 2001) and Key Date KD4 one week later than the original contract date with this being at the expense of Key Date KD6 which is forecast to be some 6 weeks late. The Contractor has advised that an amended programme, incorporating the revised planning, is about to be submitted.”*

22.9.12 The following points were noted in the report for September 2000:

*“Alternative design submissions from the Contractor, for both the station foundations under Lai Chi Kok Bridge and the Northern Ventilation Building are not yet formally in place.”*

*“Diversion of the 600 mm dia. gas mains has recurred as an issue due to revised planning by HKCGC. However, the Contractor identified a scheme whereby this diversion may be removed from the critical path by the adoption of additional junctions. The necessary additional materials have been secured and associated civil works now proceeding.”*

#### ***The Quarterly Review Meeting***

22.9.13 The following points were noted in the minutes of the Quarterly Review Meeting on 20 September 2000:

*“1.1 Recovery Programme was submitted by the Contractor on 20 September 2000, incorporating mitigation measures. This Programme, however still showed a 7-day delay in meeting KD4 and a 6-day delay in meeting KD6.”*

*“2.1 On 20 September 2000, an 8-day delay had already been incurred against the latest Recovery Programme.”*

*“2.2 Progress in remedial works related to deficiencies in bored piles was causing increasing concern. The Contractor had prepared a summary of current progress status (see attached). CRE would arrange separate meeting with the Contractor to dissolve the situation.”*

**22.10 Three months to 31 December 2000**

*Summary of progress for the fourth quarter of 2000*

- 22.10.1 Measures to address delays at Ching Cheung Road and the North Ventilation Building submitted by the contractor on 19 July 2000 were confirmed by way of letter from Hyder dated 4 September 2000.
- 22.10.2 There was noticeable progress on construction of basement slabs, generally in those areas immediately to the north and south of Lai Chi Kok Bridge. Slab construction was also in progress for the passenger and freight tunnels beneath the Bridge. Overall progress on structural concrete work was nevertheless still behind programme.
- 22.10.3 The delay in the Ching Cheung Road cut and cover tunnel and station concrete works continued to be a major concern and the overall progress was three weeks behind. The traffic diversions at Ching Cheung Road were more difficult than expected which caused delay to its implementation.
- 22.10.4 In November 2000, the contractor had problems with finding dimensions on structural drawings and had raised a large number of Requests For Instructions. The contractor was concerned that this would be an on-going problem which might cause delays to works progress.
- 22.10.5 By December 2000, the bored pile installation was substantially complete. The construction of basement slabs to the main station was some 45% complete and platform slabs were some 15% complete
- 22.10.6 The overall progress in December 2000 had reached 29.5% completion compared to a target of 31.5%.

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*The weekly Performance Indicator Report Summary Sheets*

22.10.7 The weekly Performance Indicator Report Summary Sheets indicate the following:

Date of Report	Issues		Status	Comments
	Major Items	% Completion to Date		
29 Oct 2000	Station concrete (excl. piles)	6%	Amber, -7 weeks	Delays to Ching Cheung Road crossing/northern site area, revised programme being reviewed
19 Nov 2000	Station concrete (excl. piles)	9%	Amber, -6 weeks	Delays to Ching Cheung Road crossing/northern site area, revised programme being implemented.
31 Dec 2000	Total concrete (incl. piles)	25%	Amber, -5 weeks	General station structure progress requires improvement

*The West Rail Construction Monthly Report*

22.10.8 The following points were noted in the West Rail Construction Monthly Report for October 2000:

*“This month has seen noticeable progress on construction of basement slabs, generally in those areas immediately to the north and south of Lai Chi Kok Bridge. Slab construction is also in progress for the passenger and freight tunnels beneath the Bridge. Overall progress on structural concrete work is nevertheless still behind programme.”*

*“Work continued on Stage 1 of the Ching Cheung Road cut-and-cover tunnels. The roof slab to the passenger tunnel has been cast with work proceeding on the cantilevered utilities trough extension. Progress on the freight tunnel however is somewhat in arrears as a result of delayed completion of temporary works and associated excavation.”*

*“The Site is becoming increasingly active. Overall progress is estimated to be around 15 weeks behind the current, albeit out-of-date, Detailed Works Programme. This represents around one week’s recovery since last month.”*

*“...overall progress against this programme is assessed to be some 2 to 3 weeks late.”*

*“Lai Chi Kok Bridge has moved up to 26mm. The Contractor has been provided with AAA values and it will install temporary props between pilecaps.”*



*“Ching Cheung Road progress remains a major issue of concern. The Contractor’s revised sequence of working in the NVB and CCR areas to expedite progress has been implemented”.*

*“The existing CCR retaining wall has now settled by 38mm, and a meeting was arranged between Contractor/RSS/HCL Design office to discuss solutions to prevent further movement. Contractor has taken remedial action and, settlement has now stabilised.”*

*“The diversion of the Towngas main at Ching Cheung Road will not be possible under the current completion window. KCRC and HCL have held discussions with Towngas to provide ‘T’ branches for diversion work at a later date and work now continues.”*

22.10.9 The following points were noted in the report for November 2000:

*“Work continues on Stage 1 of the Ching Cheung Road cut-and-cover tunnels. The main elements of the passenger and freight tunnels, necessary to achieve the next stage of traffic diversion, have been cast with work continuing towards completion of the cantilevered utilities trough. Progress has been disappointingly slow however.”*

*“The site is becoming increasingly active. Overall progress is estimated to be around 17 weeks behind the current, albeit out-of-date, Detailed Works Programme. This implies some programme slippage since last month. The Contractor has increased his labour resources and the programme situation should improve in the coming months.”*

*“Overall progress has now reached 22% completion compared to a target of 29% in the Delay Recovery Programme. See below.”*

*“The Contractor’s “Delay Recovery Programme (404Q)” submitted on 15 September 2000 and showing achievement of all specified Key Dates except for KD4 (1 week late) and KD6 (6 weeks late) has now been reviewed. This programme was not submitted formally under the Contract provisions. However, the review report together with a proposed letter of response to the Contractor has been forwarded to KCRC for comment. Overall progress against this programme is assessed to be some 4 weeks late.”*

*“Lai Chi Kok Bridge has moved up to 29mm. The Contractor has been provided with AAA values and has installed temporary props between pilecaps and will backfill completed works to stabilise bridge movement.”*

*“Ching Cheung Road progress remains a major issue of concern. The Contractor’s revised sequence of working in the NVB and CCR areas to expedite progress has been implemented but is still behind programme.”*

22.10.10 The following points were noted in the report for December 2000:

*“Progress continues to be made on construction of basement slabs to the main station with some 45% being completed as at end of month. In addition, progress is now being made on construction of platform slabs with these being some 15% complete. Overall progress on structural work, in terms of concrete placed, was quite reasonable during the early part of the month but fell away towards the end. This work is currently six weeks late against ‘late’ dates and 10 weeks late against ‘early’ dates”.*

*“Work continues on Stage 1 of the Ching Cheung Road cut-and-cover tunnels. The main elements of the passenger and freight tunnels have been cast with work proceeding on minor retaining works and backfilling with a view to implementing the next stage of traffic diversion on 14 January 2001. Progress has been disappointingly slow however.”*

*“The site continues to increase in activity. Overall progress is estimated to be around 19 weeks behind the current, albeit out-of-date, Detailed Works Programme. This implies further programme slippage since last month.”*

*“Overall progress has now reached 29.5% completion compared to a target of 31.5% in the Delay Recovery Programme. See below.”*

*“The Contractor’s “Delay Recovery Programme (404Q)” submitted on 15 September 2000 and showing achievement of all specified Key Dates except for KD4 (1 week late) and KD6 (6 weeks late) has been reviewed. This programme was not submitted formally under the Contract provisions. However, the review report together with a proposed letter of response to the Contractor was previously forwarded to KCRC for comment. Overall progress against this programme is assessed to be some six weeks late. For Key Dates due to be achieved during 2001, progress with respect to KD2 is currently on schedule, KD3 is around six weeks late, KD4 around nine weeks late and KD5 around two weeks late. Key Date KD6, scheduled for achievement early 2002 is presently running some 13 weeks late.”*

*“Lai Chi Kok Bridge has moved up to 31mm. The Contractor has been provided with AAA values and has installed two temp. props between pilecaps and will backfill completed works to stabilise bridge movement.”*

*“CCR progress remains a major issue of concern. The Contractor’s revised sequence of working in the NVB and CCR areas to expedite progress has been implemented but work is still behind programme.”*

*“Pile P604, the last remaining station pile will entail boring through rock and will take 2-3 weeks. The Design Team has investigated the possibility of raising the founding level and confirmed that this is feasible; details on new founding level have been forwarded to the Contractor.”*

*The CRE Monthly Progress Report*

- 22.10.11 The following points were noted in the CRE Monthly Progress Report for October 2000:

*“Alternative design submissions from the Contractor, for both the station foundations under Lai Chi Kok Bridge and the Northern Ventilation Building are still not yet formally in place.”*

*“Diversion of the 600 mm dia. gas mains along Ching Cheung Road, previously identified as an issue following revised planning by HKCGC, has been resolved by implementation of a strategy involving the adoption of additional branches thereby providing flexibility for the gas diversion itself. Civil works in this connection has been completed by the Contractor.”*

- 22.10.12 The following points were noted in the report for November 2000:

*“Alternative design submissions from the Contractor, for both the station foundations under Lai Chi Kok Bridge and the Northern Ventilation Building are still not yet formally in place.”*

*“Design amendments, proposed by the Contractor, deemed technically acceptable and already under construction on Site, continue to be formally incorporated into the Contract, albeit slowly.”*

- 22.10.13 The following points were noted in the report for December 2000:

*“Alternative design submissions from the Contractor, for both the station foundations under Lai Chi Kok Bridge and the Northern Ventilation Building are still not formally in place.”*

*“Lai Chi Kok Bridge has moved up to 31mm. The Contractor has been provided with AAA values and has installed 2 temporary props between pilecaps and will backfill completed works to stabilise bridge movement.”*

*“Ching Cheung Road progress remains a major issue of concern. The Contractor’s revised sequence of working in the NVB and CCR areas to expedite progress has been implemented but work is still behind programme.”*

*“Pile P604, the last remaining station pile will entail boring through rock and will take 2-3 weeks. The Design Team has investigated the possibility of raising the founding level and confirmed that this is feasible; details on new founding level have been forwarded to the Contractor.”*

*The Quarterly Review Meeting*

22.10.14 The following points were noted in the minutes of the Quarterly Review Meeting on 13 December 2000:

“1.2 The Contractor opined that they would be about 4 weeks late in meeting KD4.”

“2.1 The Contractor stated that additional resources would be deployed to mitigate delays.”

“2.2 The Contractor claimed that labour force had been increased by about 50% from 250 no. to 375 no. in the past 3 months. Further increase in labour force to about 400 to 450 would be implemented to catch up time lost.”

3.2 Stage 4 CCR traffic diversion slipped further behind and would not be implemented till mid-Jan, 2001. This would push lateness in meeting KD4 to a total of 5 weeks.”

**22.11 Three months to 31 March 2001**

*Summary of progress for the first quarter of 2001*

22.11.1 During this quarter, all piles within the main station site had been installed. In January 2001, the overall progress on structural work, in terms of concrete placed, was quite reasonable during the early part of the month but fell away towards the end.

22.11.2 Following completion of Stages 1 & 4 of the Ching Cheung Road cut-and-cover tunnels and implementation of associated traffic diversions on 14 January 2001, work had been proceeding on excavation, together with installation of temporary works for Stages 2 & 3. Progress was generally in line with expectation.

22.11.3 In March 2001, work continued on excavation and associated temporary works installation of the Ching Cheung Road cut-and-cover tunnels. Rock excavation was well advanced for the passenger tunnel. Stage 1 traffic diversion was completed on 25 March 2001.

22.11.4 The overall progress had reached 35% completion compared to a target of 38% in the Delay Recovery Programme.

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*The weekly Performance Indicator Report Summary Sheets*

22.11.5 The weekly Performance Indicator Report Summary Sheets indicate the following:

Date of Report	Issues		Status	Comments
	Major items	% Completion to Date		
21 Jan 2001	Total concrete (incl. piles)	31%	Amber, -6 weeks	General station structure progress requires improvement. Ching Cheung Road footbridge removed on 21/01/01.
25 Feb 2001	Total concrete (incl. piles)	34%	Amber, -6 weeks	General station structure progress requires improvement.
25 Mar 2001	Total concrete (incl. piles)	39%	Amber, -6 weeks	General station structure progress requires improvement. Ching Cheung Road Stage 2 temporary traffic arrangement due by 25 Mar 01.

*The West Rail Construction Monthly Report*

22.11.6 The following points were noted in the West Rail Construction Monthly Report for January 2001:

*“Overall progress on structural work, in terms of concrete placed, was quite reasonable during the early part of the month but fell away towards the end. This work is currently seven weeks late against ‘late’ dates and 11 weeks late against ‘early’ dates.”*

*“Following completion of Stages 1 & 4 of the Ching Cheung Road cut-and-cover tunnels and subsequent implementation of associated traffic diversions on 14 January 2001, a start was made on the installation of temporary works together with excavation for Stages 2 & 3 construction.”*

*“The site continues to increase in activity. Overall progress is estimated to be around 21 weeks behind the current, albeit out-of-date, Detailed Works Programme. This implies further programme slippage since last month.”*

*“Overall progress has now reached 31.5% completion compared to a target of 34.0% in the Delay Recovery Programme.”*

*“The Contractor’s “Delay Recovery Programme (404Q)” submitted on 15 September 2000 and showing achievement of all specified Key Dates except for KD4 (1 week late) and KD6 (6 weeks late) has been reviewed. This programme was not submitted formally under the Contract provisions. However, the review report together with a proposed letter of response to the Contractor was previously forwarded to KCRC for comment. Overall progress against this programme is assessed to be some eight weeks late. For Key Dates due to be achieved during 2001, progress with respect to KD2 is currently a few days late, KD3 is around seven weeks late, KD4 around nine weeks late and KD5 around three weeks late. Key Date KD6, scheduled for achievement in early 2002, is presently running some 15 weeks late.”*

*“Lai Chi Kok Bridge has moved up to 30mm. The Contractor has been provided with AAA values and has installed two temporary props between pilecaps and will backfill completed works to stabilise bridge movement. No further movement recorded this month.”*

*“Ching Cheung Road progress remains a major issue of concern. The Contractor’s revised sequence of working in the NVB and CCR areas to expedite progress has been implemented but work is still behind programme.”*

22.11.7 The following points were noted in the report for February 2001:

*“Work continues on excavation and associated temporary works installation for Stages 2 & 3 of the Ching Cheung Road cut-and-cover tunnels. Soil excavation is well advanced and a start has been made on rock excavation.”*

*“The Site continues to increase in activity. Overall progress is estimated to be around 22 weeks behind the current, albeit out-of-date, Detailed Works Programme. This implies further programme slippage since last month.”*

*“Overall progress has now reached 33% completion compared to a target of 36% in the Delay Recovery Programme.”*

*“The Contractor’s “Delay Recovery Programme (404Q)” submitted on 15 September 2000 and showing achievement of all specified Key Dates except for KD4 (1 week late) and KD6 (6 weeks late) has been reviewed. This programme was not submitted formally under the Contract provisions. However, the review report together with a proposed letter of response to the Contractor was previously forwarded to KCRC for comment. Overall progress against this programme has slipped around 1 week during the month and is now assessed to be some 9 weeks late. For Key Dates due to be achieved during 2001, progress with respect to KD2 is currently 3 weeks late, KD3 is around 8 weeks late, KD4 around 7 weeks late and KD5 around 6 weeks late. Key Date KD6, scheduled for achievement early 2002 is presently running some 19 weeks late.”*

*“Lai Chi Kok Bridge has moved up to 30mm. The Contractor has been provided with AAA values and has installed 2 temporary props between pilecaps and will backfill completed works to stabilise bridge movement. No further movement recorded this month.”*

*“Ching Cheung Road progress remains a major issue of concern. The Contractor’s revised sequence of working in the NVB and CCR areas to expedite progress has been implemented but work is still behind programme.”*

22.11.8 The following points were noted in the report for March 2001:

*“Activity continues to expand across the site with overall progress slipping a little further behind programme.”*

*“Work continues on excavation and associated temporary works installation for Stages 2 & 3 of the Ching Cheung Road cut-and-cover tunnels. Rock excavation is now well advanced for the passenger tunnel. Stage 1 traffic diversion was completed on 25 March 2001 thereby providing access to the final portion of the Stages 2 & 3 freight tunnel”.*

*“The site continues to increase in activity. Overall progress is estimated to be around 24 weeks behind the current, albeit out-of-date, Detailed Works Programme. This implies further programme slippage since last month”.*

*“Overall progress has now reached 35% completion compared to a target of 38% in the Delay Recovery Programme.”*

*“The Contractor’s “Delay Recovery Programme (404Q)” submitted on 15 September 2000 and showing achievement of all specified Key Dates except for KD4 (one week late) and KD6 (six weeks late) has been reviewed. This programme was not submitted formally under the Contract provisions. However, the review report together with a proposed letter of response to the Contractor was previously forwarded to KCRC for comment. Overall progress against this programme has apparently slipped around two weeks during the month and is now assessed to be some 11 weeks late. For Key Dates due to be achieved during 2001, progress with respect to KD2 is currently five weeks late, KD3 is around 13 weeks late, KD4 around eight weeks late and KD5 around ten weeks late. Key Date KD6, scheduled for achievement early 2002 is presently running some 21 weeks late. The Contractor’s report for March 2001, gives a more pessimistic review of progress.”*

*“Ching Cheung Road progress remains a major issue of concern. The Contractor’s revised sequence of working in the NVB and CCR areas to expedite progress has been implemented but work is still behind programme.”*

***The CRE Monthly Progress Report***

- 22.11.9 The following points were noted in the CRE Monthly Progress Report for January 2001:

*“Alternative design submissions from the Contractor, for both the station foundations under Lai Chi Kok Bridge and the Northern Ventilation Building are still not formally in place.”*

*“No ‘Buildings Department’ test coring has been carried out to date with this continuing to be a potentially serious issue given the significant progress now made on station construction. Previously instructed load testing to two piles (one mini and one socketed H-pile) has yet to be carried out.”*

*“General progress on those critical Stages, due for achievement during 2001, continues to fall short of programme requirements and this must be a matter for concern.”*

- 22.11.10 The following points were noted in the report for February 2001:

*“Alternative design submissions from the Contractor, for both the station foundations under Lai Chi Kok Bridge and the Northern Ventilation Building are still not formally in place although progress is being made.”*

*“No ‘Buildings Department’ test coring has been carried out to date. Preparatory works is in progress for test loading to one pile. The load test will commence early March 2001.”*

*“General progress on those critical Stages, due for achievement during 2001, has remained steady in relation to Key Dates KD3 and KD4 but continues to slip for others and this must be a matter for concern.”*

- 22.11.11 The following points were noted in the report for March 2001:

*“Alternative design submissions from the Contractor, for both the station foundations under Lai Chi Kok Bridge and the Northern Ventilation Building are still not formally in place. Employer’s Directions are awaited.”*

***The Quarterly Review Meeting***

- 22.11.12 The following points were noted in the minutes of the Quarterly Review Meeting on 27 March 2001:

*“5.1 The Contractor had reviewed their current progress and stated that some of the rooms might not be completed on time as stipulated by KD6 and KD7”*



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**22.12 Three months to 30 June 2001**

*Summary of progress for the second quarter of 2001*

22.12.1 Work generally progressed satisfactorily during the quarter and by June 2001, the overall progress had reached 39% completion compared to a target of 41% in the revised works programme.

22.12.2 Station slab construction in June 2001 was about 50% complete. The concrete production rate in that month was about 1,150 cu.m, which was lower than the planned rate due to frequent heavy rains in the month. The overall progress was 12 weeks behind the mitigation program. The revised programme was in line with the Supplementary Agreement and was used as new baseline for monitoring of site progress.

*The weekly Performance Indicator Report Summary Sheets*

22.12.3 The weekly Performance Indicator Report Summary Sheets indicate the following:

Date of Report	Issues		Status	Comments
	Major Items	% Completion to Date		
29 Apr 2001	Total concrete (including piles)	45%	Amber, -5 weeks (will be reset after finalisation of the supplemental agreement)	General station structure progress requires improvement. Ching Cheung Road Stage 2 and 3 rock excavation is progressing
27 May 2001	Total concrete (including Piles)	50%	Amber, -5 weeks (will be reset after finalisation of the supplemental agreement)	General station structure progress requires improvement. Track access to be revised by the supplemental agreement.
24 Jun 2001	Total concrete (including Piles)	54%	Amber, -5 weeks (will be reset after finalisation of the supplemental agreement)	General station structure progress requires maintaining of momentum. Ching Cheung Rd stage 2/3 tunnel box concreting in progress.

*The West Rail Construction Monthly Report*

- 22.12.4 The following points were noted in the West Rail Construction Monthly Report for April 2001:

*“Activity continues across the site with little or no further overall loss against the so-called “Delay Recovery Programme.”*

*“...Overall progress on structural work, in terms of concrete placed, has slipped somewhat this period and is now some 9 weeks late against the “Delay Recovery Programme.” “*

*“Work continues on excavation for Stages 2 & 3 of the Ching Cheung Road cut-and-cover tunnels. Rock excavation has now advanced to base slab level for the passenger tunnel.”*

*“The site continues to increase in activity. Overall progress is estimated to remain at around 24 weeks behind the current, albeit out-of-date, Detailed Works Programme.”*

*“Overall progress has now reached 37% completion compared to a target of 41% in the delay Recovery Programme.”*

*“The Contractor’s “Delay Recovery Programme (404Q)” submitted on 15 September 2000 and showing achievement of all specified Key Dates except for KD4 (one week late) and KD6 (six weeks late) remains as the reference programme for monitoring purposes. Although this programme was not formally submitted under the Contract provisions, a review report together with a proposed letter of response to the Contractor was nevertheless forwarded to KCRC for comment. Overall progress against this programme has been maintained during the month and remains therefore to be some 11 weeks late. For Key Dates due to be achieved during 2001, progress with respect to KD2 is currently one week late (reduced from five weeks last month following revision to programme logic), KD3 is around 14 weeks late, KD4 around nine weeks late and KD5 around 10 weeks late. Key Date KD6, scheduled for achievement early 2002 is presently running some 22 weeks late.”*

*“During recent months, the Contractor has been working in anticipation that the revised key dates and descriptions for works Stages, which are apparently under discussion with the Employer as part of on-going commercial negotiations, will be formally incorporated into the Contract. In the event that such key date revisions are not formally incorporated, serious contractual difficulties will ensue.”*

*“Ching Cheung Road progress remains a major issue of concern. The Contractor’s revised sequence of working in the NVB and CCR areas to expedite progress has been implemented but work is still behind programme.”*

22.12.5 The following points were noted in the report for May 2001:

*“Work continues on excavation for Stages 2 & 3 of the Ching Cheung Road cut-and-cover tunnels. Rock excavation has now been completed for the passenger tunnel with work now in progress on construction of the associated base slab.”*

*“The Site continues to increase in activity. Overall progress is estimated to remain at around 24 weeks behind the current, albeit out-of-date, Detailed Works Programme (404N).”*

*“Overall progress has now reached 39% completion compared to a target of 44% in the Delay Recovery Programme (404Q).”*

*“The Contractor’s “Delay Recovery Programme (404Q)” submitted on 15 September 2000 and showing achievement of all specified Key Dates except for KD4 (1 week late) and KD6 (6 weeks late) remains as the reference programme for monitoring purposes. Although this programme was not formally submitted under the Contract provisions, a review report together with a proposed letter of response to the Contractor was nevertheless forwarded to KCRC for comment. Overall progress against this programme continues to be some 11 weeks late. For Key Dates due to be achieved during 2001, KD2 was not achieved (due by 31 May 2001, although it is understood that the date will be revised significantly following negotiations between Employer and Contractor), KD3 is around 13 weeks late, KD4 around 10 weeks late and KD5 around 10 weeks late. Key Date KD6, scheduled for achievement early 2002 is presently running some 21 weeks late.”*

*“By way of letter dated 7 May 2001, the Contractor submitted revised Works Programme (404R). The submission contains numerous unacceptable qualifications, assumptions and conditions. These together with significant unauthorised changes to current Key Dates are such that it is not possible for the Engineer to give the programme anything other than a “Rejected” status. The programme may however reflect provisional agreements made during recent commercial negotiations between Employer and Contractor, in which case it would be desirable to give the programme some form of recognition to enable realistic progress monitoring and reporting to be implemented. The Engineer’s review of this programme has been completed and is being forwarded to KCRC with a request for an early Employer’s Direction. Such a Direction should be given as soon as possible as the Contractor has already abandoned progress reporting against programme 404Q in favour of the revised version, 404R.”*

22.12.6 The following points were noted in the report for June 2001:

*“Work continues on excavation for Stages 2 & 3 of the freight tunnel at Ching Cheung Road crossing. The base slab has now been completed for the passenger tunnel with work continuing on construction of the associated walls.”*

*“The site continues to increase in activity. Overall progress has slipped further to around 26 weeks behind the current, albeit out-of-date, Detailed Works Programme (404N).”*

*“Overall progress has now reached 39% completion compared to a target of 47% in the Delay Recovery Programme (404Q) and a target of 41% in Works Programme 404R.”*

*“The Contractor’s “Delay Recovery Programme (404Q)” has now been abandoned in favour of the Contractor’s latest Works Programme 404R, submitted on 7 May 2001. Overall progress against this programme is around 2 weeks late. For Key Dates (as amended) due to be achieved during 2001, KD2 is on target, KD3 is around 4 weeks late, KD4 around 3 weeks late and KD5 around 7 weeks late. Key Dates KD6 & KD7, scheduled for achievement early 2002, are presently running up to 6 & 8 weeks late respectively.”*

*“With regard to revised Works Programme (404R), submitted under cover of letter 7 May 2001, and following referral to KCRC, the Contractor has been notified by way of letter dated 21 June 2001 that the numerous qualifications, assumptions and conditions, together with the changes to current Key Dates contained therein, are such that it is not possible for the Engineer to give the programme any formal status under the Contract. Notwithstanding this, the programme itself is reasonable and correctly anticipates proposed changes to Key Dates (KD2, 3, 4, 5, 6, 7, 8, 9, 14, & 15) due to be formalised via a Supplemental Agreement. Accordingly, the programme is acceptable as a revised baseline programme for monitoring site progress.”*

***The CRE Monthly Progress Report***

- 22.12.7 The following points were noted in the CRE Monthly Progress Report for April 2001:

*“Alternative design submissions from the Contractor, for both the station foundations under Lai Chi Kok Bridge and the Northern Ventilation Building are still not formally in place. Employer’s Directions are awaited.”*

- 22.12.8 The following points were noted in the report for May 2001:

*“Alternative Value Engineering design submissions from the Contractor, for both the station foundations under Lai Chi Kok Bridge and the Northern Ventilation Building are still not formally in place. Employer’s Directions are awaited.”*

- 22.12.9 The following points were noted in the report for June 2001:

*“Alternative Value Engineering design submissions from the Contractor, for both the station foundations under Lai Chi Kok Bridge and the Northern Ventilation Building are still not formally in place. Employer’s Directions are awaited. It is however understood that this matter will be closed out under the provisions of proposed Supplemental Agreement No.1.”*

*The Quarterly Review Meeting*

22.12.10 The following points were noted in the minutes of the Quarterly Review Meeting on 12 June 2001:

*“1.2 The Contractor had proceeded to re-submit a revised programme, withdrawing all qualifications, and incorporate all amended Key Dates as per draft agreement of the S.A. No. 1 under CC404.”*

*“2.1 The CRE commented that as at end of May, overall progress was about 10 to 12 days late compared to the newly agreed KD3 and KD4.”*

**22.13 Period subsequent to 30 June 2001**

22.13.1 Details of the current status of the CC-404 are summarised in Section 26.3.

**23. IDENTIFYING THE NEED FOR A SUPPLEMENTAL AGREEMENT**

**23.1 Scope of our work**

23.1.1 We are requested to consider the following:

*“When did KCRC determine that a Supplemental Agreement was appropriate and what processes were followed in order to finalise an agreement?”*

23.1.2 In this chapter, we have provided the reader with a summary of the procedures that KCRC has in place in respect of supplemental agreements and an overview of the rationale for and the uses of supplemental agreements.

23.1.3 We have then explained the processes followed by the senior management and the Managing Board for entering into the supplemental agreement.

**23.2 Background**

23.2.1 Please refer to Section 7.2 for an overview of the procedures followed by KCRC in entering into supplemental agreements.

**23.3 Documents circulated to the senior management**

23.3.1 The first time that a supplemental agreement for CC-404 was formally proposed was in June 2001.

23.3.2 A Paper titled “Proposal to enter into a Supplemental Agreement” was circulated for endorsement by the Senior Review Panel, comprising SDF, SDP and CS-GC by GM-WP on 8 June 2001.

23.3.3 The Paper sets out the discussions held with the contractor with the objective of concluding an agreement to recover delay and to resolve all outstanding contractual matters that have arisen or could have arisen up to 21 April 2001 and to seek endorsement to proceed with a supplemental agreement.

23.3.4 The paper notes that:

*“7. Ad referendum discussions have taken place to review the contractor’s claims for both time and money and to seek a mutually acceptable compromise to achieve the Corporation’s objective of programme security for least cost, thereby obtaining value for money. It is believed by management that this has been achieved and in doing so a balance has been maintained between time and cost whereby some costs of delay recovery have been saved by allowing less critical dates, mainly to do with the freight tunnel, to be extended.”*

- “8. *It is, therefore, proposed that the scope of the agreement will cover-*
- (a) the retention of the most critical key dates, but the extension of some less critical dates;*
  - (b) amendments to the Milestone and Interim Payment Schedules;*
  - (c) the settlement of all claims for time and money to 21 April 2001, except that where a claim relates to a variation and the Engineer certifies as such the direct costs of those variations occurring after 30 November 2000 will be measured and valued in accordance with the contract;*
  - (d) a commercial consideration for the contractor in respect of the settlement of claims and for the risks in accepting the provisions of the supplemental agreement;*
  - (e) release of retention against the provision of a bond upon the provision of track access planned for September 2001”.*

23.3.5 The paper also states that it is normal practice to enter into a supplemental agreement for changes in original contract:

23.3.6 “9. *Legally changes to the terms of a contract must be agreed between the parties, and it is normal to achieve this via a supplemental agreement. Notwithstanding that the matter relating to claims could be resolved by the Engineer under the contract, where the contractor is willing as in this case it can be mutually beneficial to come to a full and final settlement, up to a point in time, of all matters where disputes may arise because:*

- (a) it provides certainty for the Corporation as to both programme and cost;*
- (b) experience suggests that it will be economic and it obviates the need for any costly dispute resolution; and*
- (c) it reinforces the joint approach to problem solving and partnership, which in this case is important as the contractor has introduced delay recovery measures in good faith.”*

23.3.7 The paper goes on to explain that the contractor had lodged various claims for disruption, delay recovery measures and prolongation of HK\$255 million. KCRC had estimated that such claims could be settled for HK\$100 million.

23.3.8 This Paper was duly endorsed by SDF, SDP and CS-GC.

**23.4 Documents presented at the Managing Board Meeting on 18 June 2001**

23.4.1 The five-page Managing Board Paper 01/69 entitled “Contract CC404 – Mei Foo Station, Approval to Enter into a Supplemental Agreement” was tabled at the 200<sup>th</sup> Managing Board Meeting held on 18 June 2001. The paper sets out the processes that were followed in order to finalise the supplemental agreement:

“8. *Members are asked to note that, even without a supplemental agreement, the contractor would still be entitled to an additional payment of about HK\$72 million, comprising HK\$42 million indirect costs for the claim events, plus an estimated HK\$30 million for prolongation costs arising from the related extensions of time. Additionally, the corporation would remain exposed to the risk that the contractor could prove further costs to those currently assessed. The Corporation would also remain exposed to the risk of either delay or the need to incur delay recovery costs, in respect of the follow-on trackwork and railway systems contracts estimated at about HK\$54 million. Management estimates that without a supplementary agreement the Corporation would be exposed to a total cost of about HK\$126 million, and completion of the project could set back by about five months*”

“9. *Management has thus held ad referendum discussions with the contractor to establish a settlement framework that would enable the recovery of all delays incurred to date and a resolution of all outstanding claims. The contractor has expressed willingness to accept a settlement of HK\$100 million, which is less than the Corporation’s currently estimated potential total commitment, as explained in paragraph 8 above. Management considers this to be fair and reasonable to the Corporation and Management therefore proposes that a supplemental agreement be concluded with the Kier-Zen Pacific Joint Venture with a value of HK\$100 million.*”

“10. *In fulfilling the objectives of the supplemental agreement as proposed at paragraph 8, the Corporation’s payment would-*

- (a) *settle 101 notifications for delay and disruption with an aggregate amount of HK\$255 million presently being claimed;*
- (b) *pay for the direct costs of implementing the delay recovery measures currently envisaged as necessary according to the recovery programme;*
- (c) *pay for the contractor’s future risks associated with the achievement of key dates relating particularly to the completion of builder’s works, finishes and building services in a shorter time compared to that originally available; and*
- (d) *remove the Corporation’s risk of consequential costs arising from delays to follow on project contractors.*”



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23.4.2 The paper concludes its findings and makes its recommendation accordingly. It states that:

“17. *Based upon the above the settlement amount can be considered as value for money. Reaching agreement with the contractor now rather than leaving the matter with the Engineer will also benefit the project by avoiding disputes, sustaining liquidated damages and reducing overall programme risk and cost.*”

“18. *It is recommended that a settlement be reached through a supplemental agreement, to be drafted by CLC-C, the terms of which will in accordance with the proposal and will be circulated for acceptance prior to execution.*”

23.4.3 The Managing Board duly approved the paper as follows:

“56. *The Board then APPROVED that-*

(a) *the Corporation enter into a supplemental agreement with the Kier-Zen Pacific Joint Venture to buy back the contractor’s entitlement for extension of time and to settle all claims to 21 April 2001 for an amount of HK\$100.0 million;*

(b) *the Approved Project Estimate and the contract sum for Contract CC404-Mei Foo Station both be increased from HK\$1,256.65 million by HK\$151 million to HK\$1,407.65 million; and*

(c) *a drawdown be made from the Programme Reserve of HK\$96 million.*”

23.4.4 The following Board Members were present at this meeting:

- K.Y. Yeung
- Edmond Lau Ting-chung
- Denise Yue
- Vincent Cheng Hoi-chuen
- Tim Chung Shui-ming,
- Keith Lam Hon-keung,
- Vincent Lo Wing-sang
- Kevin Ho

23.4.5 The minutes note that the following people also attended the meeting:

- David Fleming
- Shirley Wong
- James Blake
- Samuel Lai
- Jonathan Yu
- K.K. Lee
- Ian Thoms
- Daniel Lam
- Kenneth Leung
- Y.T. Li
- Irene Yau

23.4.6 The Supplemental Agreement was signed by Samuel Lai and David Fleming, on behalf of KCRC, David J. Durey on behalf of Kier Hong Kong and David Howard Gem on behalf of Zen Pacific Civil Contractors Ltd on 16 August 2001.

**24. HOW THE SUPPLEMENTAL AGREEMENTS WERE QUANTIFIED, NEGOTIATED AND APPROVED**

**24.1 Scope of our work**

24.1.1 We are requested to consider the following:

*“What factors were taken into account by KCRC in coming into a conclusion that the contractor should be paid additional monies?”*

*“What internal procedures were in place to determine the appropriate or maximum amount of the additional monies payable and were these procedures being followed in all cases?”*

*“What procedures were in place to override the internal assessment of the maximum amount payable and were these procedures being followed in these cases?”*

24.1.2 In this Chapter, we have provided an overview of the claims procedures followed by KCRC.

24.1.3 We have then commented on the manner in which the internal assessment of the maximum amount payable to the contractor under the supplemental agreement was quantified. Finally, we have commented on whether that amount was overridden.

**24.2 Background**

24.2.1 Please refer to Section 8.2 for background of internal procedures in place for addressing claims from contractors.

**24.3 The justification for payment of additional monies**

24.3.1 The Paper entitled “Contract CC404 – Mei Foo Station, Proposal to enter into a Supplemental Agreement” was circulated for endorsement to the Senior Review Panel, comprising SDF, SDP and CS-GC, by GM-WP on 8 June 2001. It states:

“5. *It has taken the contractor a considerable length of time to formulate the basis of his claims and to calculate an entitlement for time and money. He undertook two presentations to the senior manager’s briefing in November and December 2000. At that time he was claiming critical path delays for the important key dates 3 and 4 of up to 47 weeks and seeking about HK\$156.5 million in additional costs, comprising delay recovery and claim costs of HK\$71.4 million up to 30 November 2000 and HK\$85.1 million for delay recovery costs after 30 November 2000. Since that date he has submitted further particulars and by agreement the effective cut off date for agreement has been moved to 21 April 2001. His contemporary position was to obtain recovery of HK\$227.9 million, plus HK\$27.00 million for his building services specialist, in additional costs, see annex.”*

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“6. The Corporation’s project management team has assessed the contractor’s claims in conjunction with the RSS and has concluded that the Corporation would be at risk for 12 weeks and could be at risk for up to 20 weeks critical path delay to key dates 3 and 4 together with the associated additional costs. It is considered that such a delay is not acceptable and would impact upon overall project completion. It must, therefore, be recovered.”

24.3.2 The Paper further summaries the amounts of the claims from the contractor and the amounts at which KCRC believed that such claims could be settled:

“11. The annex provides a comparative assessment of the current positions pending a settlement agreement, a summary of which is tabulated as follows:“

<i>Item description</i>	<i>Contractor</i>	<i>Corporation</i>
<i>Claim for disruption</i>	82.05	29.13
<i>Specific delay recovery measures</i>	41.38	21.83
<i>General delay recovery measures</i>	92.43	32.99
<i>Prolongation of certain works</i>	10.0	6.00
<i>Financing</i>	2.00	0.00
<b><i>Sub total</i></b>	<b>227.86</b>	<b>89.95</b>
<i>Building services claims</i>	27.00	10.00
<b><i>Total</i></b>	<b>254.86</b>	<b>99.95</b>
<i>Say</i>		<b>100.00</b>

**24.4 The Quantification of the Additional Monies Payable to the Contractor**

24.4.1 In November and December 2000, the contractor made two presentations to KCRC seeking extensions of time of up to 47 weeks and recovery of additional costs incurred in the sum of HK\$156.50 million.

24.4.2 This comprised costs associated with delay recovery measures and claims up to 30 November 2000 of HK\$71.40 million, and delay recovery measures from 30 November 2000 of HK\$85.10 million.

24.4.3 Subsequently, the contractor was asked to address all matters up to a revised cut-off date of 21 April 2001 in respect of which he subsequently sought to recover HK\$254.90 million.

24.4.4 At the end of 2000, the contractor was claiming critical path delays of up to 47 weeks affecting Key Dates 3 and 4. There is no statement as to the contractor’s claimed delay position at the time he made his HK\$254.90 million presentation for matters up to the 21 April 2001 cut off date.

24.4.5 However, it is stated that KCRC, in consultation with the RSS, had assessed that KCRC would be at risk for 12 weeks and could be at risk for up to 20 weeks critical path delay to Key Dates 3 and 4 together with the associated additional costs.

- 24.4.6 It is assumed that this is to be interpreted as meaning that KCRC thought that they may potentially be liable to grant the contractor extensions of time for up to 20 weeks, but in any event definitely considered that they were liable for 12 weeks.
- 24.4.7 The Paper proceeds to note that, if a negotiated settlement was implemented, 101 claims would be disposed of. In the event that delay recovery measures were not agreed and implemented, it was noted that the contractor considered he would have an entitlement for a 20 weeks prolongation, the associated costs of which would be about HK\$30 million with the contingent risk to KCRC that he would be able to prove a longer entitlement at a later date.
- 24.4.8 In Section 24.3.2, there is a summary comparing the contractor and KCRC's assessed positions at commencement of negotiation of the supplemental agreement. Each of the values in KCRC's assessment is now considered in turn.

*Claims for disruption*

- 24.4.9 The amount initially claimed by the contractor in respect of this head of claim was HK\$82,053,359.
- 24.4.10 KCRC considered that the assessed value should comprise two allowances, being direct costs and Claim 21. Direct costs (excluding general disruption and Claim 21) are assessed at HK\$15,146,682. KCRC then allows the Engineer's Representative's assessment of costs associated with Claim 21 in the amount of HK\$11,980,000 and an allowance for general disruption to labour of HK\$2,000,000 to give a total allowance in respect of this item of HK\$29,126,680.

*Specific delay recovery measures*

- 24.4.11 The amount claimed by the contractor in respect of this head of claim amounted to HK\$41,378,446. A schedule comprising 21 items considered to be specific delay recovery measures has been provided and supporting documents providing build ups to the individual amounts are available.
- 24.4.12 The commentary states that additional measures were taken to recover delays. Delays measured against the initial works programme were recorded to be 20 weeks. Of these 20 weeks, the Employer considers that the contractor is responsible for 8 weeks.
- 24.4.13 KCRC's allowance in respect of these items has been calculated to be 12/20 of the amount claimed, being HK\$21,827,070. There is no indication that the assumptions and amounts "claimed" have been rigorously examined.

*General delay recovery measures*

- 24.4.14 The amount claimed by the contractor under this head of claim amounted to HK\$92,425,440. Under this head of claim, KCRC has considered the additional costs that the contractor has claimed to have incurred for site overheads, direct labour, plant and subcontractors.

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- 24.4.15 Review of the supporting information indicates that the contractor initially claimed costs for this item for the period from December 2000 to December 2002 inclusive including allowances for site establishment and running costs, head office overheads and profit, but making adjustment for overheads and profit recovered on specific delay recovery measures. The total amount initially claimed by the contractor in this respect was HK\$30,405,750.
- 24.4.16 Whilst it is not clearly explained, it is assumed that KCRC's opinion was that delay recovery measures were to be implemented between December 2000 and December 2001. The sum of the amounts claimed by the contractor for each of the months in this period is HK\$22,663,936.
- 24.4.17 Using the same methodology as the previous item, KCRC assesses an allowance for this item as 12/20 of the amount claimed in the period, being HK\$13,598,360.
- 24.4.18 The second part of this head of claim is for additional labour. Additional labour was supplied by the main contractor to supplement subcontract labour to expedite progress for the delay recovery period from February 2000 to December 2001.
- 24.4.19 A schedule summarising the number of operatives and additional costs incurred is provided. This indicates that the contractor was initially claiming HK\$23,755,691 for this item for costs incurred between August 2000 and December 2002.
- 24.4.20 In their assessment, KCRC have taken additional costs in the period from February 2000 to December 2001 which is assumed to have been the intended delay recovery period. These amount to HK\$12,654,359. Using the same methodology as previously explained, KCRC allows 12/20 of this amount in their assessment, being HK\$7,592,615.
- 24.4.21 A schedule has been provided indicating that the contractor was claiming HK\$20,646,272 in respect of additional plant costs. A handwritten note to this schedule records that, in a meeting on 15 April 2002, GM-CN stated that a HK\$13,000,000 cost allowance for this item was derived from the schedule detailing the contractor's claimed amount of HK\$20,646,272.
- 24.4.22 KCRC allows 12/20 of HK\$13,000,000 within the supplemental agreement build up resulting a sum of HK\$7,800,000.
- 24.4.23 Finally, with an allowance of HK\$2,000,000 each for additional subcontractor costs and unforeseen delay recovery measures, these items aggregate the allowance of HK\$ 32.99 million assessed by KCRC in respect of general delay recovery measures.

***Prolongation of certain works***

- 24.4.24 It is stated that the delaying events will result in the civil works being delayed by six months.

- 24.4.25 A handwritten note to the accompanying schedule indicates that, in a meeting on 15 April 2002, GM-CN had advised that site time-related costs were incurred at the rate of HK\$1,000,000 per month. This rate has been applied to the six months delay to give an allowance of HK\$6,000,000.

***Building services claims***

- 24.4.26 The allowance determined by KCRC for the settlement of the building service claims of HK\$10,000,000 comprised an amount of HK\$5,000,000 to settle building services claims of HK\$26.73 million and HK\$5 million for building services delay recovery measures.

**24.5 Overriding the Internal Estimate**

- 24.5.1 At its meeting on 18 June 2001, the Managing Board approved the supplemental agreement with a settlement amount of HK\$100 million. The final supplemental agreement was executed with a settlement amount of HK\$103 million.
- 24.5.2 The difference of HK\$3 million arises from an earlier interim assessment of the price of delay recovery measures directed under Engineer's Instruction number 466. These were valued at HK\$3,100,965, as recorded in Change Authorisation CC-404/081 (CA Nr. 5867).

**25. CONSIDERATION OF ALTERNATIVES TO A SUPPLEMENTAL AGREEMENT**

**25.1 Scope of our work**

25.1.1 We are requested to consider the following:

*“Did KCRC give due consideration to other alternatives?”*

25.1.2 In this Chapter, we have commented on the options considered by senior management and whether there were any other viable alternatives to a supplemental agreement.

**25.2 Documents circulated to senior management**

25.2.1 In the Paper titled “Contract CC404 – Mei Foo Station, Proposal to enter into a Supplemental Agreement” circulated for endorsement to the Senior Review Panel, comprising SDF, SDP and CS-GC, by GM-WP on 8 June 2001, consideration was given to the alternative to a supplemental agreement as follows:

*“Alternative to a commercial settlement*

13. *In reviewing the merits of the proposal the alternative to obtaining a commercial agreement should be considered. Of the above items the Engineer’s representative has already reviewed the direct costs of individual claims, excluding general disruption, and assessed the additional cost as HK\$41.95 million. The Employer’s assessment of delay recovery measures (essentially based upon actual costs proportioned according to responsibility for delay) and prolongation is HK\$62.80 million. If the agreement is implemented a total of 101 claims will be settled.”*

“14. *If delay recovery measures are not implemented the contractor would be entitled to prolongation costs, assessment of which becomes a matter of risk. The contractor’s position is that he would have an entitlement for a 20-week prolongation, the associated costs for which would be about HK\$30 million, and given time the contractor could, perhaps, demonstrate additional delay. The substantive risk would, therefore, be greater than HK\$30 million. As the delay is general to both the station and the track there would be significant impact upon consequent trackwork and railway systems contractors. This potential delay could result in additional cost either for compensation for delay or for delay recovery measures. This is assessed as being in the order of HK\$54 million”.*

“15. *The contractor has acted positively in seeking solutions to problems and in a number of cases has assumed responsibility for deriving solutions. In doing this he has incurred additional cost and it may be that if the issues are left with the Engineer to solve over considerable time there is a high probability that they would be taken to arbitration with its associated costs.”*

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“1.6 In summary the position is:

<i>Item</i>	<i>HK\$'million</i>	<i>HK\$'million</i>
<i>Settlement amount</i>		<i>100.00</i>
<i>Less-</i>		
<i>Contractors entitlement-</i>		
<i>Individual claims</i>	<i>31.95</i>	
<i>Building services</i>	<i>10.00</i>	<i>41.95</i>
<i>Balance</i>		<i>58.05</i>
<i>Less-</i>		
<i>Assessed risks-</i>		
<i>Prolongation</i>	<i>30.00</i>	
<i>Project contractors</i>	<i>54.00</i>	<i>84.00</i>
<i>Balance available to pay for dispute resolution</i>		<i>(25.95)</i>

25.2.2 Based on our review of the documentation and our meetings with the senior management, we believe that the only option or alternative to entering into a supplemental agreement was to leave until later the resolution of the outstanding claims.

25.2.3 However, this was not in fact a viable option / alternative. There were sound commercial and project management reasons for seeking to resolve matters at the time that the supplemental agreement was finalised. The situation on CC-404 was quite different to the situation on DB-1500.



**26. Monitoring of Contractor Performance under the Supplemental Agreement**

**26.1 Scope of our work**

26.1.1 We are requested to consider the following:

*“What measures were put in place in the Supplemental Agreement or thereafter to ensure that the contractor shall meet its obligations under the original contract and the Supplemental Agreement?”*

26.1.2 In this Chapter, we have commented on any measures put in place in the supplemental agreement to ensure that the contractor met its obligations, and on the performance of the contractor after the supplemental agreement was signed.

**26.2 The measures put in place in the supplemental agreement**

26.2.1 We have reviewed the supplemental agreement with a view to identifying whether it contains any “controls” for monitoring and / or regulating the contractor’s performance after the signing of the supplemental agreement.

26.2.2 We will discuss our findings shortly. Before doing so, however, we pause to make the following important point.

26.2.3 As we have noted previously in respect of CC-213, the supplemental agreement on CC-404 arose against a significantly different background to the supplemental agreement on DB-1500. On DB-1500, the view of KCRC’s project team was that the contractor was not performing, but that a supplemental agreement was needed anyway.

26.2.4 For this reason, it was necessary for there to be some “controls” for monitoring and/or regulating the contractor’s performance after the signing of the supplemental agreement.

26.2.5 On the other hand, there was no suggestion (of which we are aware) that the contractor on CC-404 was failing to perform. To the contrary, it seems to have been acknowledged that the contractor on CC-404 was doing its best, under difficult project conditions.

26.2.6 Given this important difference, there was no real imperative for the supplemental agreement on CC-404 to contain significant or special “controls” for monitoring and/ or regulating the contractor’s performance after the signing of the supplemental agreement.

**26.3 The contractor’s performance after signing the supplemental agreement**

26.3.1 The station was topped out at the end of March 2002.

26.3.2 Up to the end of March 2002, CC-404 was about 62% complete. The overall progress was two weeks behind the revised works programme set out in the supplemental agreement.

26.3.3 KCRC expect that the contract will be completed within the target date.

**27. INFORMATION PROVIDED TO THE MANAGING BOARD IN SUPPORT OF APPROVAL AND MONITORING OF CONTRACTS**

**27.1 Scope of our work**

27.1.1 We are requested to consider the following:

*“Was KCRC’s Managing Board informed of all the relevant factors in determining the tender and any subsequent significant development and, if so, were they informed on a timely basis?”*

27.1.2 In this Chapter, we have set out the documents that were submitted to the Managing Board at the time of award of CC-404 and what documents were provided subsequently for monitoring purposes.

**27.2 Documents provided to the Managing Board during the tendering process**

27.2.1 The four-page Managing Board Paper 99/78 titled “Approval to Award, Contract No. CC-404 – Mei Foo Station” was tabled at the 179<sup>th</sup> Meeting of the Managing Board on 19 July 1999. The ten-page Detailed Tender Assessment Report was annexed to the paper and GM-CN was to attend the meeting of the Managing Board to discuss the paper.

27.2.2 The paper summarises the tendering process and invites the members of the Managing Board to approve the award of CC-404 to Kier-Zen Pacific JV.

27.2.3 The paper contains the following information:

- A list of pre-qualified tenderers and their composition and joint venture share percentage;
- A summary of the tendering process;
- The findings of the Review Panel that two of the shortlisted tenderers were technically compliant and free of qualification;
- A summary of the detailed technical and financial assessments; and
- A conclusion and recommendation that the contract be awarded to Kier-Zen Pacific JV as the lowest conforming tender.

27.2.4 The Managing Board duly approved the paper as follows:

“59. *The Board then:*

- (a) *APPROVED that Contract CC404 – Mei Foo Station be awarded to the Kier-Zen Pacific JV in the sum of HK\$1,242.87 million, comprising the tender total of HK\$1,203.87 million plus a provisional sum of HK\$39.00 million;*

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- (b) *UPGRADED Contract 404 – Mei Foo Station, under Head 75000 – West Rail Division, to the status of an Approved Major Project with an Approved Estimated of HK\$1,242.87 million;*
- (c) *NOTED that the amount of HK\$577.70 million, being the difference between the approved project estimate and the project estimate included in the Approved 1999 Estimates of Revenue and Expenditure, will be transferred into the West Rail Programme Reserve, which was approved by Members on 17 May 1999 vide Paper 99/47; and*
- (d) *NOTED that the Corporation will recover the cost of the entrusted Essential Public Infrastructure Works from the Government as revenue based upon the apportioned cost in the order of HK\$41.47 million plus an agreed oncost charge of 16.5%.”*

27.2.5 The following Board Members were present at this meeting:

- K.Y. Yeung
- Denys E. Connolly
- Edmond Lau Ting-chung
- Vincent Cheng Hoi-chuen
- Tim Chung Shui-ming
- Denise Yue
- Kevin Ho

27.2.6 The minutes note that the following people also attended the meeting:

- David Fleming
- Ian Petersen
- James Blake
- Samuel Lai
- Clement Chiu
- Jonathan Yu
- Ian Thoms
- Y T Li
- Irene Yau

**27.3 Documents provided to the Managing Board during the Monitoring Process**

27.3.1 Prior to the monthly Managing Board meetings, members are provided with the following documents:

- Board agenda and papers;
- Minutes of the weekly directors’ meetings;
- The fortnightly Situation Report; and
- The Monthly Progress Report.

27.3.2 From the minutes of the Managing Board meetings, it was noted that, after the award of the contract to Kier-Zen Pacific JV in July 1999, there was no discussion of the performance of the contract until the meeting on 18 June 2001, at which the paper concerning the supplemental agreement was tabled.

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- 27.3.3 The fortnightly Situation Report provides a one page, A3 size summary of the progress of the construction on West Rail and the current status of each of the contracts. This report is explained in more detail in Sections 6.2.15 to 6.2.18.
- 27.3.4 The Situation Report shows the progress status by using a traffic light for each contract as follows:
- Green – activities are on programme or there are no significant delays;
  - Amber – activities are not on programme and are being closely monitored but are not critical to timely project completion; and
  - Red – activities are not on programme and are critical to timely project completion.
- 27.3.5 The progress status and the comments presented in the Situation Reports in respect of CC-404 are summarised in Section 22.3.1
- 27.3.6 In summary, the Situation Reports show the progress status for CC-404 as follows:
- |   |       |
|---|-------|
| • From 2 October 1999 to 13 November 1999 | Amber |
| • From 20 November 1999 to 1 April 2000   | Green |
| • From 8 April 2000 to 17 June 2000       | Amber |
| • 1 July 2000                             | Green |
| • From 15 July 2000 to 28 July 2001       | Amber |
| • From 11 August 2001 to 17 November 2001 | Green |
| • Since 1 December 2001                   | Amber |
- 27.3.7 We believe that the traffic lights and comments on the Situation Reports provide a fair reflection of the gravity of the problems being encountered on CC-404.

**28. CONCLUSIONS - CC-404 FOR MEI FOO STATION**

**28.1 Introduction**

28.1.1 In this Chapter, we have set out our overall conclusions developed principally from our review of the documentation in respect of CC-404 and our meetings with members of the Managing Board and senior management.

28.1.2 We have also provided some more detailed comments on a number of key matters that arose during our review.

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

**28.2 The management of the contract**

28.2.1 As a result of the processes put in place for the management of the contracts for the West Rail project, KCRC were aware from an early stage of the problems being encountered on CC-404.

28.2.2 From the documentation that we have reviewed and the meetings that we have held with senior management, we believe that the appropriate actions were taken to address the problems as they arose in a timely manner.

28.2.3 We also believe that the problems arising on the contract were brought to the attention of appropriate levels of KCRC management below Managing Board level in a timely manner such that more senior management resources were brought to bear on the problems as they became worse.

**28.3 The monitoring of the contract**

28.3.1 The primary document that is provided to the Managing Board to facilitate their monitoring of the various contracts on the West Rail project is the fortnightly Situation Report.

28.3.2 The one-page A3 size Situation Report provides, inter alia, an overall summary of the project progress, significant issues, key event indicators and the status of each awarded contract.

28.3.3 The status of each contract is indicated by a green, amber or red traffic light, which shows whether the contract is on schedule or not, and a brief one-line comment on any issues on the contract.

28.3.4 We believe that the traffic lights and comments set out in the Situation Report in respect of CC-404 provide a fair reflection of the gravity of the problems that were being encountered on this contract.

28.3.5 However, we have concerns about the use of this Situation Report.

- 28.3.6 Because of the manner in which the Situation Report is provided to the Managing Board, it was difficult for the members to identify the critical issues on each contract, especially bearing in mind the huge volume of papers which were provided to them before each meeting. At present, this report is circulated to the members at part of their preparatory reading, but is not formally presented or discussed at the meeting.
- 28.3.7 We believe that the members of the Managing Board would be better informed about the progress of the West Rail project and the problems being encountered on individual contracts, if the Situation Report were to be formally presented to the Managing Board by senior management and discussed at each monthly meeting.
- 28.3.8 To avoid unnecessary detail, we would stress that such presentation should focus on the significant problems on an exception basis rather than discussing each individual contract.
- 28.3.9 Had the members of the Managing Board been aware of the problems being encountered on CC-404 earlier, this would have provided them with the opportunity to consider the steps being taken by senior management to resolve the problems, although we do not think that they would have disagreed with the actions being proposed by senior management.

#### **28.4 The quantification of the supplemental agreement**

- 28.4.1 In reviewing the calculations prepared in relation to the settlement amount in the supplemental agreement, we found it difficult to determine how these figures had been developed from the records kept. However, from discussions with KCRC personnel, we could understand how the amounts were arrived at.
- 28.4.2 The sums claimed by the contractor have been used as the starting point for the calculations prepared by KCRC in support of the settlement amount, and this is normal practice.
- 28.4.3 It is unclear to what extent the sums put forward by the contractor have been challenged. We have seen evidence that the amount finally agreed in the supplemental agreement of HK\$103 million is substantially less than the contractor's original claims of HK\$254.9 million and is equal to KCRC's internal estimates of the value of the contractor's claims. It therefore appears that KCRC were successful in challenging the initial claims put forward by the contractor.
- 28.4.4 Overall, we believe that the quality of the supporting documentation and calculations in respect of the proposed settlement limit could have been improved. We recommend that in future such information should be prepared in a manner that allows for the information to be independently scrutinized.

#### **28.5 Liquidated damages**

- 28.5.1 *[These paragraphs in the original Report dealt with the issue of liquidated*  
28.5.2 *damages in KCRC's construction contracts. These paragraphs have been deleted on the advice of KCRC's external legal advisers because of their commercially sensitive nature and because their disclosure would be prejudicial to the Corporation's interests].*

**28.6 Overall conclusions**

- 28.6.1 As noted earlier, KCRC took on the risk of problems in construction caused by unforeseen ground conditions.
- 28.6.2 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.
- 28.6.3 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.
- 28.6.4 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.
- 28.6.5 KCRC management were concerned that, if this issue was not satisfactorily resolved, there would have been a consequential impact on related contracts as well as potential delay to the entire project.
- 28.6.6 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.
- 28.6.7 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.