

Appendix I
Terms of Reference

TERMS OF REFERENCE

In respect of the Contract DB-1500 for the Telecommunications System, and Contracts No. CC-213 and CC-404 for the civil construction of the stations at Tuen Mun and Mei Foo, respectively, in respect of which supplemental agreements have been entered into by KCRC for the West Rail Project:

1. Were KCRC's procedures and practices in the invitations to tender:
 - (a) Appropriate having regard to industry practice and the nature of the work envisaged; and
 - (b) Did KCRC follow these procedures and practices?
2. Were KCRC's procedures and practices in the tender evaluations:
 - (a) Appropriate having regard to industry practice and the nature of the work envisaged; and
 - (b) Did KCRC follow these procedures and practices?
3. Were KCRC's procedures and practices in the negotiation and conclusion of contracts, particularly the terms of any liquidated damage clauses:
 - (a) Appropriate having regard to industry practice and the nature of the work envisaged; and
 - (b) Did KCRC follow these procedures and practices?
4. Were KCRC's procedures and practices in the contractual performance monitoring:
 - (a) Appropriate having regard to industry practice and the nature of the work envisaged; and
 - (b) Did KCRC follow these procedures and practices?
5. When did KCRC become aware of the fact that the contractors were not performing and what steps were taken at that time?
6. Were KCRC's procedures and practices in considering amendments to the original contracts by way of Supplemental Agreements or otherwise:
 - (a) Appropriate having regard to industry practice and the nature of the work envisaged; and
 - (b) Did KCRC follow these procedures and practices?
7. When did KCRC determine that a supplemental agreement was appropriate and what processes were followed in order to finalise an agreement?

TERMS OF REFERENCE

8. What factors were taken into account by KCRC in coming to a conclusion that the contractor should be paid additional monies?
9. 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?
10. What procedures were in place to override the internal assessment of the maximum amount payable and were these procedures being followed in these cases?
11. Did KCRC give due consideration to other alternatives?
12. Were KCRC's procedures and practices in monitoring the Supplemental Agreements:
 - (a) Appropriate having regard to industry practice and the nature of the work envisaged; and
 - (b) Did KCRC follow these procedures and practices?
13. What measures were put in place in the Supplemental Agreements or thereafter to ensure that the contractor shall meet its obligations under the original contract and the supplemental agreement?
14. In addition to the 27 Supplemental Agreements already signed with various sub-contractors which results in additional payments totalling HK\$1.6 billion, are there any further outstanding issues with sub-contractors relating to the West Rail Project which may give rise to further Supplemental Agreements involving additional payments and if so, what are the relevant details?
15. Is KCRC's contract strategy and administration (as set out in its internal policy documents on the subject) comparable to industry norms?
16. Was KCRC's Managing Board informed of all the relevant factors in determining the tender and any subsequent significant developments and, if so, were they informed on a timely basis?

Additional procedures in respect of the DB-1500 contract with Siemens were:

1. Was KCRC aware that the tendered bid was unusually low?
2. Was KCRC's Managing Board aware of the risks and implications of accepting an unusually low tender?
3. Having accepted a very low bid, what measures did KCRC take to ensure that the contractor would perform in accordance with its contractual obligations?

Appendix II

Experience and Expertise of the Technical Experts

EXPERIENCE AND EXPERTISE OF THE TECHNICAL EXPERTS
GLENN HALEY

Glenn Haley is partner of Deacons. He has lived and worked in Hong Kong for 12 years and is widely acknowledged as one of the top construction lawyers in Hong Kong, with extensive experience in all aspects of the construction industry throughout the Asia Pacific region. His strength in this area is often recognised in independent surveys, the most recent being the Asia Law Leading Lawyers Survey 2002, where Glenn was voted by his peers as one of Asia's leading lawyers in Construction.

He has acted for all parties in transactions - owners, financiers, contractors etc - in project structuring, contract drafting and negotiation, implementation advice and dispute resolution.

Glenn has particular expertise advising and representing government and semi-government organisations on major infrastructure projects and financial disputes including the Chek Lap Kok new airport project.

Glenn is often invited to talk and write on issues relevant to major projects, infrastructure developments and construction law.

He is also an active member on various local industry bodies, including sitting the Hong Kong General Chamber of Commerce's Environment Committee and is the Chairman of the Building Appeals Tribunal.

EXPERIENCE AND EXPERTISE OF THE TECHNICAL EXPERTS
BRUCE HUMPHREY

Qualifications

- Fellow of the Royal Institution of Chartered Surveyors
- Fellow of the Hong Kong Institute of Surveyors
- Fellow of the Chartered Institute of Arbitrators
- Fellow of the Hong Kong Institute of Arbitrators
- Member of the Academy of Experts
- Holder, CI Arb Diploma in International Commercial Arbitration

Experience

- Practised in contractual analysis of construction projects and project documentation
- Practised in supervision and management of contract documentation on major Government and private sector construction projects
- Arbitrator and mediator in building and civil engineering disputes
- Practised in dispute resolution and advice on the avoidance of contractual disputes
- Thirty years' experience in quantum analysis in construction claims and disputes
- Fifteen years' experience as quantum expert in arbitration and litigation
- Adviser on preparation of Design and Build project documents for Government, Hospital Authority and major developers
- Adviser on preparation of B.O.T. project documentation on bidding for Western Harbour Crossing, Route 3 Country Park Sector and infrastructure projects in China
- Adviser on contract procedures on a wide variety of projects in Civil Engineering, Building and Process Engineering
- Adviser on the proper implementation of contract and project documentation
- Adviser on the avoidance and/or resolution of account disputes
- Adviser on the avoidance and/or resolution of delay and disruption disputes
- Appointed as arbitrator on 30 occasions
- Mediator on two occasions, one public and one private sector
- Appointed as quantum expert in arbitration and litigation on 35 occasions

EXPERIENCE AND EXPERTISE OF THE TECHNICAL EXPERTS
BRUCE HUMPHREY

Career History

- 1992 - Present Bruce Humphrey Consultants, Hong Kong – Managing Director
- Operating principally in the field of project implementation negotiations, dispute resolution and avoidance, preparation and advice on contractual and project documentation
 - Key appointments include arbitrations; expert (quantum) evidence in disputes; post-construction settlement of accounts; DRA appointments; coordination of Design and Build and B.O.T. projects; coordination and monitoring of process engineering project
- 1990 - 1992 MDA Hong Kong Limited, Hong Kong – Managing Director
- Responsible for all aspects of a sizeable quantity surveying consultancy
 - Appointments in dispute resolution as expert witness, arbitrator and mediator in private sector and public sector disputes
- 1981 - 1990 Rawlinson, Russell & Partners, Hong Kong – Partner
- Responsible, as partner, for regular quantity surveying work on a wide range of private and public sector projects
 - Expert witness (quantum) in disputes, including well-known cases of Wharf v. Eric Cumine and Mitsui v. Attorney General
 - Appointments as arbitrator
- 1972 - 1980 Tillyard & Partners, Middle East – Practice Manager
- Responsible for cost aspects of major projects in Libya, Sudan and Egypt
 - Involved in international arbitrations on Middle East projects
- 1965 - 1971 John Laing Construction, England – Quantity Surveyor
- Responsible for preparation of detailed claims and other quantity surveying duties on projects in Northwest England and Wales

EXPERIENCE AND EXPERTISE OF THE TECHNICAL EXPERTS
NIELS KRAUNSOE

Qualifications

- Panel member of HKIAC Mediation Council (Chairman 1995-99)
- Panel member of American Arbitration Association
- Registered Professional Engineer (Civil)
- Registered Structural Engineer (Hong Kong)
- Member of the Chartered Institute of Arbitrators
- Fellow of the Institution of Water and Environmental Management
- Fellow of the British Institute of Management
- Fellow of the Hong Kong Institute of Engineers (President 1988-89)
- Fellow of the Institution of Civil Engineers (United Kingdom)
- Fellow of Engineering (Hong Kong) of the Hong Kong Academy of Engineering Science
- Distinction (1976), Diploma in Management Studies, Hong Kong University
- MA (Economics), Trinity College, Dublin (1970)
- First Class Hons (1966), BAI (Civil Engineering), Trinity College, Dublin

Experience

- Mediation, facilitation and dispute resolution – Expert advice with evidence
- Multi-disciplinary project management and systems - Facility planning, procurement and management
- Commercial and development management consultancy – Infrastructure with New Town development
- Change management/organisational development – Facilities and systems in the public/private sector interface

Career History

- | | |
|-------------|---|
| 2000 - 2001 | Hong Kong Airport Authority – Director, Special Duties <ul style="list-style-type: none">• Special assignment to resolve commercial, contractual and organisation issues at conclusion of US\$6 billion new airport development project |
| 1999 - 2000 | Self-employed Management Consultant <ul style="list-style-type: none">• Corporate, facilitation and dispute avoidance |

EXPERIENCE AND EXPERTISE OF THE TECHNICAL EXPERTS
NIELS KRAUNSOE

Career History (Continued)

- | | |
|-------------|---|
| 1995 - 1999 | Hong Kong Trade Development Council – Chief Executive, Hong Kong Convention & Exhibition Centre <ul style="list-style-type: none">• Overall responsibility for 3 msf facility, including development of US\$620 million extension used for Hong Kong hand-over ceremony and World Bank/IMF meetings in 1997 |
| 1991 - 1995 | Hong Kong Hospital Authority – Deputy Director <ul style="list-style-type: none">• Responsible for all capital facilities (41 hospitals) and new projects (HK\$2 billion per annum) |
| 1989 - 1991 | Self-employed Management Consultant in Project Chambers |
| 1984 - 1989 | High Point Plc. International Consultancy Group – Regional Director <ul style="list-style-type: none">• Director of local/regional operations in development, management, project and engineering consultancy |
| 1979 – 1984 | Hong Kong Resort Co. Ltd. – Developer – Project Director <ul style="list-style-type: none">• Overall head of multi-disciplinary team responsible for planning, design and construction from inception of HK\$2 million private new town for 25,000 population |
| 1972 – 1979 | Binnie & Partners (HK) – Consulting Engineers – Chief Engineer <ul style="list-style-type: none">• Section head responsible for private client work• Senior Engineer in process plan team |
| 1970 – 1972 | China Light & Power Co. – Public Utility – Project Engineer <ul style="list-style-type: none">• Head of civil/structural design team for new power station |
| 1968 – 1970 | Nuclear Power Group Ltd – Assistant Resident Engineer |
| 1966 – 1968 | W. S. Atkins & Partners – Engineering Graduate Trainee |

Appendix III
Abbreviations

Kowloon-Canton Railway Corporation
Review of Payments to Contractors for the West Rail Project
April 2002

ABBREVIATIONS – INDIVIDUALS MENTIONED IN THE REPORT

Name	Position	Abbreviation
Akber Khan	Senior Corporate Affairs Manager	-
Alan Donnet	General Manager, Project Support	GM-WP
Albert Chui	Rolling Stock Manager	-
Andreas Holst	Siemens, Project Director	AH
Arthur Ho	Deputy Secretary for Transport	-
Bevan Wong	Siemens, Project Manager	BW
C S Chang	Control Systems Manager	-
C.N. Fung	Project Manager - Southern Section	PM - S
Christine Iu	Telecommunications Manager	CI
Clement Chiu	Previous Director – Property, and Member of the Corporate Tender Board	-
Daniel Lam	Director, Property	DPM
David Fleming	Company Secretary and General Counsel and Member of the Corporate Tender Board	CS-GC
David Howard	Representative of Zen Pacific Civil Contractors Ltd	-
David J Durey	Lawful Attorney of Kier Hong Kong Ltd	-
Denis Levett	Member of the Steering Committee for E&Y's investigation	-
Denise Yue	Secretary for the Treasury, and Member of the Managing Board	-
Denys Connolly	Member of the Managing Board	-
Edmond Lau Ting-Chung	Member of the Managing Board	-
Edwin Szeto	Senior Telecommunications Engineer	ES
Elley Lau	Senior Telecommunications Engineer	EL
Esther Chan	General Manager, Human Resources	-
Frank Pong Fai	Member of the Managing Board	-
Gregory Yuen	Project Manager - Northern Section	PM - N
Hans Dieter Bott	Vice President, Siemens AG	Bott
Henry Liu	Project Manager, Lok Ma Chau	PM-LMC
Herbert Steffen	President of Transportation Systems Group, Siemens AG	

Kowloon-Canton Railway Corporation
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ABBREVIATIONS – INDIVIDUALS MENTIONED IN THE REPORT

Name	Position	Abbreviation
Ian Peterson	Deputy Company Secretary, Special Assistant to the Chairman and Chief Executive	DCS/SA/CCE
Ian Thoms	Director, West Rail, and Member of the Corporate Tender Board	DWR
Irene Yau	General Manager, Corporate Affairs	-
J R Lang	Project Manager, Kier-Zen Pacific Joint Venture	JL
James Blake	Senior Director, Capital Projects, and Member of the Corporate Tender Board	SDP / SDCP
Jayananda Jesudason	General Manager, Construction	GM-CN
Jimmy Leung	General Manager, Procurement	GM-PT
John Swaine	Member of the Steering Committee for E&Y's investigation	-
Johnny Tam	Procurement Manager, East Rail Extensions	PRTM
Jonathan Yu	Director, Light Rail, and Member of the Corporate Tender Board	DLR
Josephine Basilio	Programme Engineer	JB
KC Tusi	Project Manager, Railway Systems	-
Keith Lam Hon Keung	Member of the Managing Board	-
Kenneth Aubrey	Vice President and General Manager, Siemens AG	KA
Kenneth Leung	Director, New Railway Projects, and Member of the Corporate Tender Board	DNR
KK Lee	Director, East Rail Extensions, and Member of the Corporate Tender Board	DEX
KY Yeung	Chairman and Chief Executive Officer (before December 2001), and Chief Executive Officer (after December 2001), Member of the Managing Board and the Corporate Tender Board	CCE
Lee Chack Fun	Member of the Steering Committee for E&Y's investigation	-
Leo Mak	General Manager, Railway Systems (Acting)	GM-RS (Acting)
Lisa Szeto	General Manager, Finance and Support	-
Long Xingbang	Representative of Hong Kong Ace JV	-

Kowloon-Canton Railway Corporation
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Name	Position	Abbreviation
Martin Glass	Deputy Secretary for the Treasury	-
Michael Arnold	Deputy Company Secretary, Special Assistant to the Chairman and Chief Executive	DCS/SA/CEO
Michael John Kennedy	Representative of Hong Kong Ace JV	-
Michael Tien	Chairman of the Managing Board and of the Steering Committee for E&Y's investigation	-
Mike Randall	In-house Counsel of KCRC West Rail Division	CLC-C
Nicholas Ng	Secretary for Transport, Member of the Managing Board	-
Paul Andersen	General Manager, Railway Systems before August 2001	GM-RS
Peter Fedderson	Siemens, Design Manager	PF
Raymond Chan	Senior Manager, Financial Services	SM-FS
Raymond Lau	Senior Administration and Security Manager	SASM
Remy Luk	Construction Manager-Area 1	RL
Robert Whitehouse	Contracts Formation Manager	-
Samuel Lai	Senior Director, Finance and Management, and Member of the Corporate Tender Board	SDF
Shirley Wong	Assistant Company Secretary	-
Sid Maier	Siemens, Design Team Leader for Public Address System and Passenger Information Display System	SM
Siddharth Patel	Construction Manager, Railway Systems	CM-RS/ SP
SM Li	General Manager, Property Services	-
Stephen Schneider	Siemens, Vice President and Chief Finance Officer	-
Tim Chung Shui-ming	Member of the Managing Board	-
Vincent Cheng Hoi-chuen	Member of the Managing Board	-
Vincent Lo Wing-sang	Member of the Managing Board	-
Wolfgang Heck	Siemens, Project Manager	WH
Wilhelm Gatteringer	Siemens, President and Chief Executive Officer	-

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Name	Position	Abbreviation
Y T Li	Director, East Rail, and Member of the Corporate Tender Board	DER

ABBREVIATIONS – JOB TITLE

Job Title	Position	Name
CCE	Chairman and Chief Executive (before December 2001), and Chief Executive Officer (after December 2001)	KY Yeung
CLC-C	Corporate Legal Counsel - Construction	Mike Randall
CM-RS	Construction Manager, Railway Systems	Siddharth Patel
CRE	Chief Resident Engineer	-
CS-GC	Company Secretary and General Counsel	David Fleming
DEX	Director, East Rail Extensions	KK Lee
DNR	Director, New Railway Projects	Kenneth Leung
DWR	Director, West Rail	Ian Thoms
GM-CN	General Manager, Construction	Jayananda Jesudason
GM-PT	General Manager, Procurement	Jimmy Leung
GM-RS	General Manager, Railway Systems	Leo Mak
GM-WP	General Manager, Project Support	Alan Donnet
SDF	Senior Director, Finance and Management	Samuel Lai
SDP	Senior Director, Capital Projects	James Blake

Kowloon-Canton Railway Corporation
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ABBREVIATIONS – OTHERS

Abbreviation	Name
ABWF	Architectural Builders' Works and Finishes
ADMS	Automatic Data Management Systems
AP	Assessment Panel
APCO 25	Association of Public Safety Communication Officials Project 25
APE	Approved Project Estimate
ASD	Architectural and Services Department of the HKSAR
BD	Building Department of the HKSAR
C	Contractor
CA	Contractor Administrator
CA Paper	Change Authorisation Paper
CC	Chairman 's Circulars
CC Contracts	Building Works Construction Contracts
CCC	Cost Centre Controller / Cost Control Committee
CCR	Ching Cheung Road
CCTV	Closed Circuit Television System
CLP	China Light and Power
CM	Construction Manager
CNP	Construction Noise Permits
CRE	Chief Resident Engineer
CSD	Combined Services Drawing
CTB	Corporate Tender Board
DAN	Drawing Amendment Notification
DIDs	Detailed Interface Documents
RMs	Delay Recovery Measures
DSD	Drainage Services Department of the HKSAR
DVT	Design Verification Table
E & M	Electrical and Mechanical
E&Y	Ernst & Young
ECS	Environmental Control System
EMC	Electromagnetic Compatibility
EOT	Extension of time
EPD	Environmental Protection Department of HKSAR
ER	Engineer's Representative of Contractor

ABBREVIATIONS – OTHERS

Abbreviation	Name
FAT	Factory Acceptance Test
FOTS	Fiber Optic Transmission System
FWP	Full Works Programme
GCC	General Conditions of Contract
HCL	Hyder Consulting Limited
HFT	Ho Fuk Tong (School)
HK ACE JV	Hong Kong Ace JV
HKCGC	Hong Kong and China Gas Company Limited
HyD	Highways Department of the HKSAR
ICE	Independent Check Engineer
IMPs	Interface Management Plans
IOW	Inspector of Works
JV	Joint Venture
KCRC	Kowloon - Canton Railway Corporation
KD	Key Date
KSR	Kam Sheung Road Station
K-ZPJV	Kier-Zen Pacific Joint Venture
LCK	Lai Chi Kok
LCSD	Leisure and Cultural Services Department of the HKSAR
LOC	Letter of Clarifications
LRT	Light Rail Transit
MAN	Metropolitan Area Network System
MB	Managing Board
MCAL	Maunsell Consultants Asia Limited
MMI	Man Machine Interface
MTRC	Mass Transit Railway Corporation
MTTR	Mean Time To Restore
NNO	Notice of No Objection
NNSC	Notice of No Objection, subject to "Comments".
NVB	Northern Ventilation Building
ONL	Optical Network Limited

ABBREVIATIONS – OTHERS

Abbreviation	Name
PAS	Public Address System
PBA	Parson-Brinkershoff Asia (Consultant)
PIDS	Passenger Information Display System
PM	Procurement Manual
PMC	KCRC Pat Heung Maintenance Centre
PS	Project Specifications
QRM	Quarterly Review Meeting
RAMS	Reliability, Availability, Maintainability and Safety
RDO	Railway Development Office
RFI	Request for Information
RFS	Radio Frequency System GmbH
RP	Review Panel
RSE	Resident Structural Engineer
RSS	Resident Site Staff
SA	Supplemental Agreements
SAR	Special Administrative Region
SDR	Special Drawing Right
SE	Senior Engineer
SEM	Structural Electrical and Mechanical Drawings
SEM(E)	Structural Electrical and Mechanical Drawings Engineer
Siemens	Siemens Limited (Hong Kong - based subsidiary of Siemens AG)
SIOW	Senior Inspector of Works
SIU	Siu Hong
SMG	Senior Management Group
SQAP	Software Quality Assurance Plan
SRE	Senior Resident Engineer
STE	Singapore Technologies Electronics Limited
TDMP	Temporary Drainage Management Plan
TEL	Telephone System
TEP	Tender Evaluation Plan
TETRA	Terrestrial Trunked Radio
TST	Tsim Sha Tsui
TTA	Temporary Traffic Arrangement

ABBREVIATIONS – OTHERS

Abbreviation	Name
TUM	Tuen Mun Station
UK	United Kingdom
West Rail	West Rail Phase I
WRB	West Rail Building