

WEST RAIL, KOWLOON, HONG KONG

OVERVIEW

LOCATION: KOWLOON/NEW TERR.
SCOPE: INTER-URBAN
TRANSPORT MODE: RAIL
PRINCIPAL CONSTRUCTION:
VIADUCT/TUNNEL
NEW LINK: YES

PRINCIPAL OBJECTIVES

REGIONAL TRANSPORT LINK
ACCESSIBILITY
REGIONAL DEVELOPMENT

PRINCIPAL STAKEHOLDERS

CLIENT:
KOWLOON-CANTON RAIL COMPANY
FUNDER: HONG KONG GOVERNMENT
PROJECT MANAGEMENT:
KCRC/PACIFIC BECHTEL

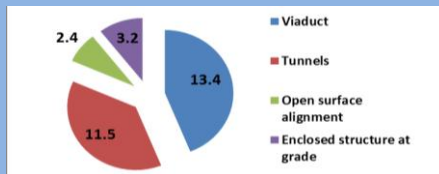
PLANNING AND IMPLEMENTATION

PLANNING START DATE: 05/1989
CONSTRUCTION START DATE: 10/1998
OPERATION START DATE: 12/2003
MONTHS IN PLANNING: 113
MONTHS IN CONSTRUCTION: 62
PROJECT COMPLETED: ON SCHEDULE

COST (IN 2010 USD)

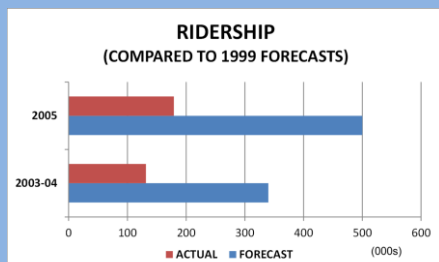
PREDICTED COST: 7.97BN
ACTUAL COST: 5.85BN
PROJECT COMPLETED:
27% UNDER BUDGET
FUNDING: 100% PUBLIC

INFRASTRUCTURE QUANTITIES (KM)



COST PER KM (2010 USD): 0.19BN

PATRONAGE



INTRODUCTION

West Rail is a passenger railway line, 30.5km in length, linking Kowloon to the new towns of Hong Kong's Northwest New Territories. It opened in December 2003.

West Rail forms Phase 1 of the Western Corridor scheme: Phase 2, consisting of a freight line and a cross-border line, is yet to be built.

Of nine stations on the line, two are interchanges with the Hong Kong metro and four with light rail services in the New Territories. Nine sites have been identified for associated developments, with completion of the first expected in 2013. These represent a total floor area of 1.5m square metres including 18,000 housing units.

BACKGROUND

The main objective of the project was to cater for projected population growth and travel demand, improving transport links to the New Territories and facilitating further development in the region in the longer term.

Based on an initial concept proposed in the 1989 Comprehensive Transport Study, the project was recommended in Hong Kong's first Railway Development Strategy of 1994. It was promoted by the government-owned operator, Kowloon-Canton Rail Company (KCRC). The Legislative Council played a key role in assessing the project on behalf of the government. A series of ordinances passed by the government gave KCRC powers of land acquisition and the power to construct and operate new railways, and enabled the government to inject equity funding into KCRC.

ERM conducted an environmental impact assessment, and the report was endorsed by the Advisory Council on the Environment in 1998. Mitigation measures included noise barriers and replacement of wetland habitat. Local community interests were represented by district councils, although these had limited power. A community liaison office was opened in 1999, and community outreach programmes were introduced shortly before opening in 2003.

CHARACTERISTICS

Earlier proposals including Phases 1 and 2 were the subject of escalating cost estimates. The 1998 project agreement for Phase 1

TIMELINE

CONCEPTION: 1989: INITIAL CONCEPT IN COMPREHENSIVE TRANSPORT STUDY
CONCEPTION: 1994: WESTERN CORRIDOR RECOMMENDED IN RAILWAY DEVELOPMENT STUDY
INCEPTION: 1995: KCRC SUBMITS PROPOSAL TO GOVERNMENT
CONTROVERSY: 1996: GOVERNMENT INVESTIGATES KCRC'S PROCUREMENT PRACTICE. CONTRACTS RE-TENDERED
DELAY: 1996: GOVERNMENT ANNOUNCES FREEZE ON PHASE TWO
INCEPTION: 1997: ORDINANCE PASSED, GIVING KCRC AND GOVERNMENT LAND ACQUISITION POWERS
CONTEXT: 1997: SOVEREIGNTY TRANSFERS TO CHINA. GOVERNMENT APPROVAL OF PROJECT EXPECTED
INCEPTION: 1998: AGREEMENT BETWEEN KCRC AND GOVERNMENT. ORDINANCES PASSED, EMPOWERING KCRC TO CONSTRUCT AND OPERATE NEW RAILWAYS, AND GOVERNMENT TO INJECT EQUITY OF HKD 29BN
INCEPTION: 1998: ENVIRONMENTAL IMPACT ASSESSMENT REPORT ENDORSED BY ADVISORY COUNCIL
INCEPTION: 1998: DETAILED DESIGN CONTRACTS AWARDED
CONSTRUCTION: 1998: FIRST CONSTRUCTION CONTRACT AWARDED – TAI LAM TUNNEL. CONSTRUCTION STARTS
CONSTRUCTION: 1999: CONTRACTS AWARDED FOR TSUEN WAN RECLAMATION, TRAINS AND SIGNALING, CIVIL WORKS
FUNDING: 1999: SECOND GOVERNMENT EQUITY INJECTION. KCRC LAUNCHES NOTES ISSUANCE PROGRAMME
CONSTRUCTION: 2000: CONTRACT AWARDED FOR VENTILATION SYSTEM
CONTROVERSY: 2002: INDEPENDENT INVESTIGATION INTO CONTRACT OVERRUNS
DELIVERY: 2003: CONSTRUCTION COMPLETE. OPERATION BEGINS

estimated the cost at HKD 64bn (USD 7.97bn in 2010 prices¹), although both capital and financing costs were substantially reduced in later estimates (the latter from 8% of total costs in 1998 to 1% in 2001). The final project cost, at HKD 40.4bn (USD 5.85bn), was substantially lower again.

Somewhat controversially, KCRC employed large numbers of consultants, mainly from Pacific Bechtel, to supplement its own project management staff. Many other consultancies were involved in line alignment and detailed design, including Parsons Brinckerhoff, Atkins China, Maunsell, Ove Arup and Halcrow. Construction contracts went to Amec, Balfour Beatty and 13 other contractors. Hong Kong Shanghai Banking Corporation provided financial advice.

In 1996 concerns arose over KCRC's practice of awarding contracts without an open tender process. After a government report recommending some changes to procurement processes, and reflecting the progression from technical studies to detailed design, contracts were re-tendered. KCRC's management of the contract with Siemens, the telecommunications contractor, also caused public concern and was investigated by KPMG and Ernst & Young.

The government carried out related works including provision of feeder roads and public transport interchanges, and reclamation.

TIMELINE ISSUES

Despite delays in land acquisition and the telecommunications contract, construction was completed several months before the forecast date of September 2003 and operation began as scheduled in December.

FUNDING

The government injected HKD 29bn of equity into KCRC, in return for new shares. KCRC's two notes issuance programmes raised HKD 11.9bn, and its internal funds from property development and interest income provided the balance.

Shortly before the service opened, KCRC responded to the economic downturn of the time by announcing discounts on fares. No data on actual or forecast revenue are available, although actual ridership numbers have been significantly below forecasts.

KCRC merged with the Mass Transit Railway Corporation Ltd in 2007.

¹ Costs have been converted to USD at 2010 prices, using historic inflation rates and current exchange rates, to allow comparison between projects.