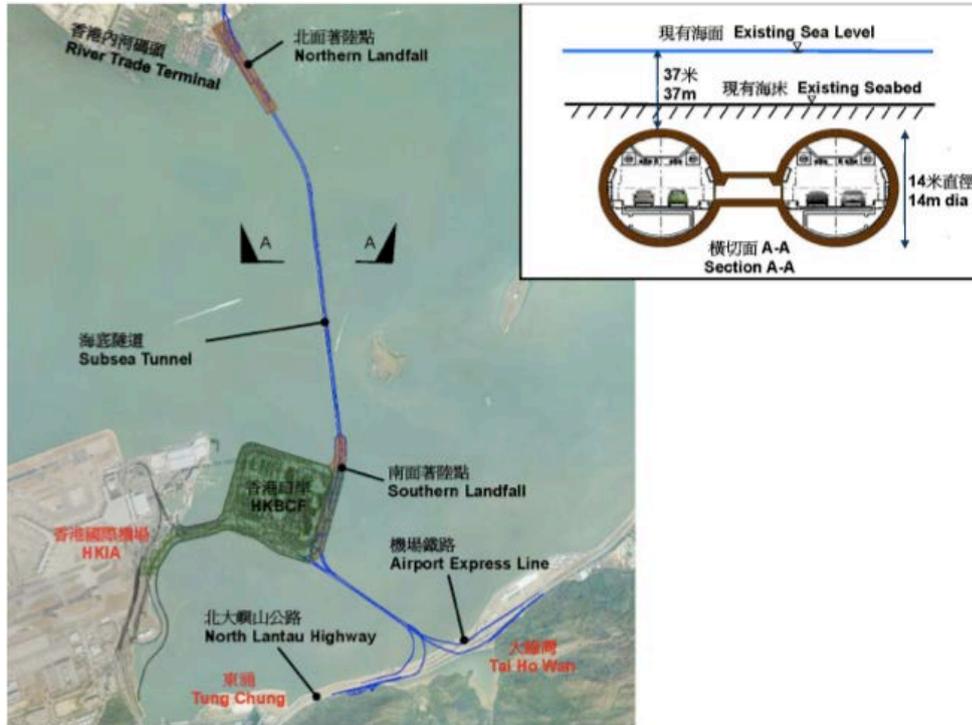


Project identification

Tuen Mun-Chek Lap Kok Link

Type of project

Bored tunnel



Client

OHL (Spain) / Samung (S. Korea) / Chunwo (Hong Kong)

In co-operation with

Meinhardt Infrastructure and Environment Ltd.

Project assignment

Technical tender design

Country

China

Location

Hong Kong

Project duration

2012

Project phase

Tender design

Construction cost

N.A.
(excl. VAT)

Consultancy fee

€ 170.000
(excl. VAT)

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Project identification

Tuen Mun-Chek Lap Kok Link

Type of project

Bored tunnel

Project description

The project comprises the tender design of a 15 m diameter approximately 6 km twin bored sub sea tunnel between Chek Lap Kok Airport on Lantau Island, Hong Kong and the City of Tuen Mun on China Mainland. The Tuen Mun – Chek Lap Kok Link (TM-CLKL) sub-sea tunnel will be the longest and largest tunnel ever built in Hong Kong, posing unprecedented challenges. The use of large-diameter TBMs, operating under high water pressures, calls for a robust design, the most experienced personnel and fit-for-purpose equipment. The tunnel starts and ends at artificial islands yet to be constructed and is connected by cross passages every 100 m. The tunnel is both positioned in hard rock and soft soil and passes an array of subsea cables.

Scope of work

A JV consisting of OHL (Spain)/Samung (S. Korea)/Chunwo (Hong Kong) have instigated a design team consisting of Meinhardt (Hong Kong) and TEC to provide a tender design for the TM-CLKL project. The services of Meinhardt-TEC JV consisted of;

- Optimization of tunnel cross section based on local requirements
- Determination of optimal tunnel alignment
- Structural calculations and tender design segmental tunnel lining
- Structural calculations and tender design cross passages
- Optimization and design of start and entry shaft
- Geotechnical risk assessment
- Face stability calculations
- Risk analysis
- Settlement risk assessment and monitoring plan of subsea cables
- Risk analysis and consulting regarding mechanized tunneling concept
- Durability assessment concrete structures
- Cost estimates, Value Engineering