

Underground Cable Link

132 kV and 11 kV Ma Wan & Kap Shui Mun Cables Channel Crossing



Cable data

Voltage	132 kV, 11 kV AC
Power	155 MVA, 7 MVA
Length	22 000 m, 13 000 m
Conductor	1000 mm ² , 3x400 mm ² Cu
Insulation	XLPE
Weight	20 kg/m, 22 kg/m
Customer	Skanska Civil Engineering AB in Hong Kong
Year	2000

Project content

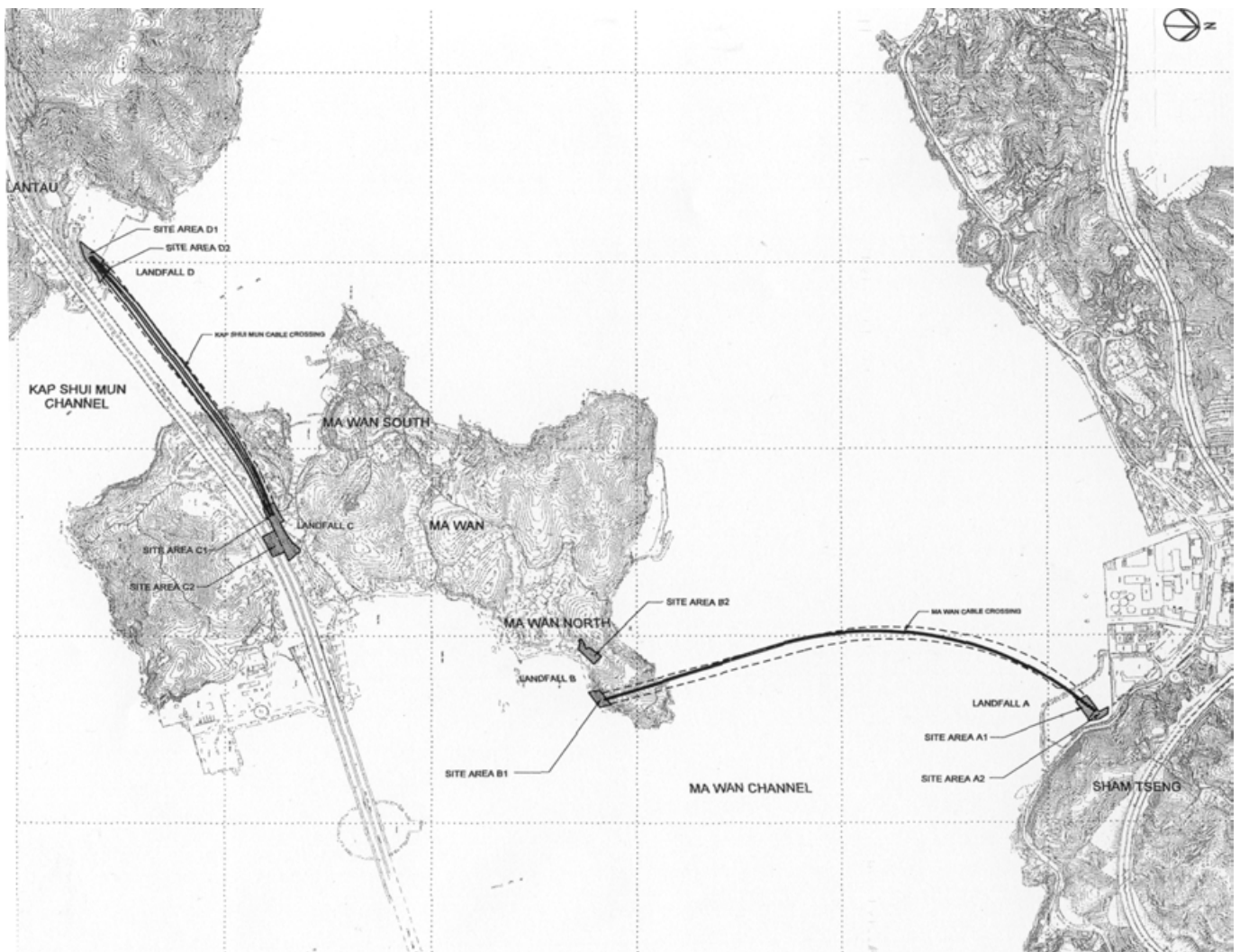
XLPE cables, joints and terminations
Optical fibres
Cable system design
DTS equipment
Installation and testing

In May 2000 ABB signed a contract for design and build terms with SKANSKA in Hong Kong for the supply of combined underground and subsea 132 kV & 11 kV cable systems. Installed in one of the major marine traffic routes in Hong Kong, the system will link Ma Wan Island to substations on Lantau and in Sham Tseng. The project contains a high level of sophistication with horizontal directional drilling methods and cable laying in ducts. An advanced control system for monitoring and diagnosis of the operation of the power system will be installed.

Due to congested traffic in the channels, CLP Power has also forgone conventional submarine and underground installation methods for the 132 kV and 11 kV systems. The problem is now being solved by drilling under the seabed and bed-rock, as well as installing ducts through which the cables will be pulled. This method has the advantage of allowing upgrades to be carried out in the future. The method also reduces the size of the drill hole and the amount of excavation waste and there is no disturbance to the seabed or to surrounding marine life.

With a total cable length of 22 km 132 kV and 13 km 11 kV, this is one of the world's longest Horizontal Directional Drilling (HDD) power cable installation projects. AJ Lucas, a distinguished Australian contractor, is executing the drilling works.

"This latest HDD project is in line with our objective to help create a 'green power network for Hong Kong'" says Michael Price, President and CEO of CLP Power.



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