Arup – Advising the construction of Bangladesh’s first underwater tunnel

Arup, an international firm of designers, planners, engineers, consultants and technical specialists offering a broad range of professional services, has been active in Hong Kong for more than four decades. The firm recently worked with China Communication Construction Company Ltd. (CCCC) to conduct an economic and engineering investigation to examine the economic viability and technical feasibility for the construction of the Karnaphuli River-crossing Tunnel, Bangladesh’s first underwater tunnel that connects the two halves of the commercial city of Chittagong.

The consortium comprising CCCC and Arup achieved the highest technical and commercial scores in the international procurement process for the feasibility study and preliminary design package, giving confidence to the project sponsor that the scheme would be viable.

Arup’s Hong Kong Geotechnics Group took the leading role in socio-economic impact assessment, finance modelling, procurement strategy, operation and maintenance plan, environmental impact assessment and resettlement plan. The group was also responsible for all documentation and reporting.

Located at the estuary of the Karnaphuli River, the proposed 3.5km, dual two-lane shield-driven tunnel will serve both urban and transit traffic and will relieve the traffic pressure on the existing two bridges. It will also help expedite the industrial growth and urbanisation on the east side of the river. The Chinese President Xi Jinping attended the inauguration during his visit to Bangladesh in October 2016. The project began construction in 2017 and is expected to complete in 2022.

**Market(s)**
South Asia

**Sector(s)**
Infrastructure

**Country(ies) / Region(s)**
Bangladesh