



Introduction

Tung Chung East reclamation project pioneers the Deep Cement Mixing (DCM) technique to an Excavation and Lateral Support system. This novel approach in Hong Kong has successfully fast-tracked the construction of a box culvert with substantial savings in time and cost, provided a safer working environment and reduced the nuisance to the public.



The DCM side walls act as a gravity retaining structure without struts. The design principle is based on well-established theories.



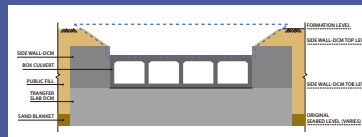
The application of DCM in the context of retaining system is extended to resist lateral earth loading, which is a pioneer in Hong Kong.



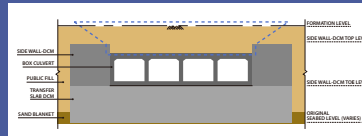
STAGE 1: Installation of DCM



STAGE 2: Excavation



STAGE 3: Construction of Box Culvert



STAGE 4: Backfilling with Construction and Demolition material



Outside the box innovation

Using DCM as retaining walls to facilitate box culvert construction brings remarkable benefits to the project as a whole.

Safety

- Safer working environment
- Simpler construction sequence
- Less high risk operations

Environmentally Friendly

- Less steelwork wastage
- Less vibration and noise

\$ Project Benefits

- 3-month savings in time
- 20% savings in cost

