

Organisations Category

Project Owner (Public Sector)

Merit Award

**Major Works Project Management Office,
Highways Department**



Central Kowloon Route

Central Kowloon Route (CKR) is a 4.7km long dual 3-lane trunk road connecting the West Kowloon and Kai Tak to relieve the traffic congestion in existing major east-west corridors in central Kowloon. The sustainability construction achievements are summarised as below:

- Green building design for administration building of CKR
- Cultural & Heritage Preservation
- Re-provision of public facilities before construction
- Multiple digitalisation technologies with CDE adoption
- Digital Fabrication for Bridge Construction
- Skidding Mega Truss Shoring System
- For more details, please visit CKR website.

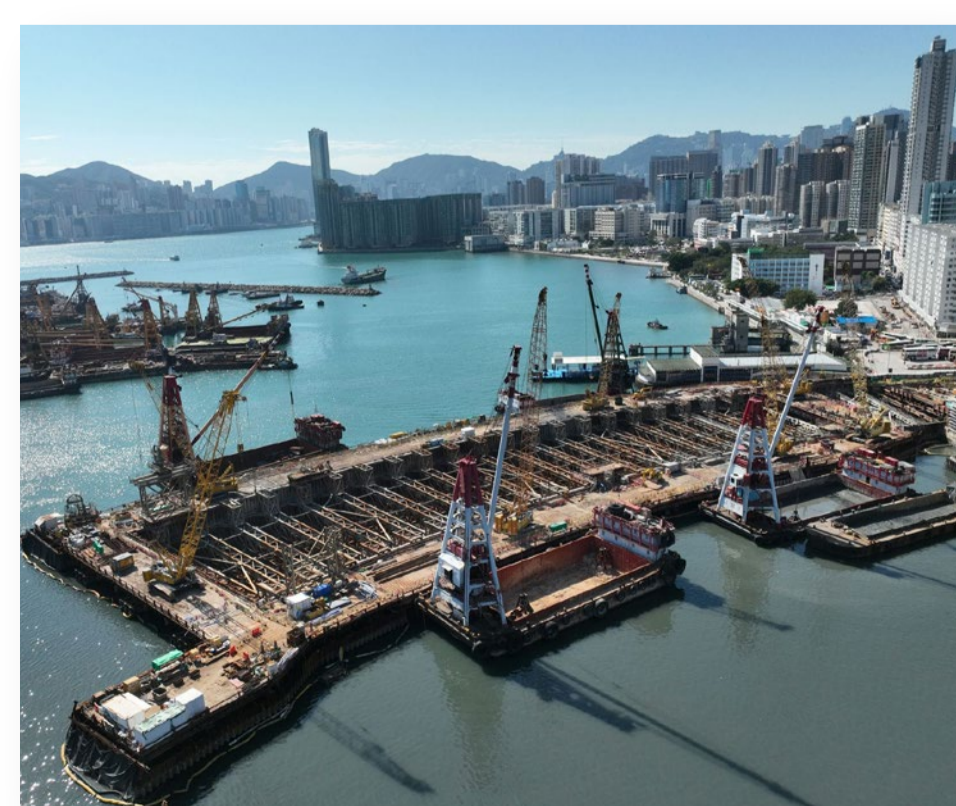
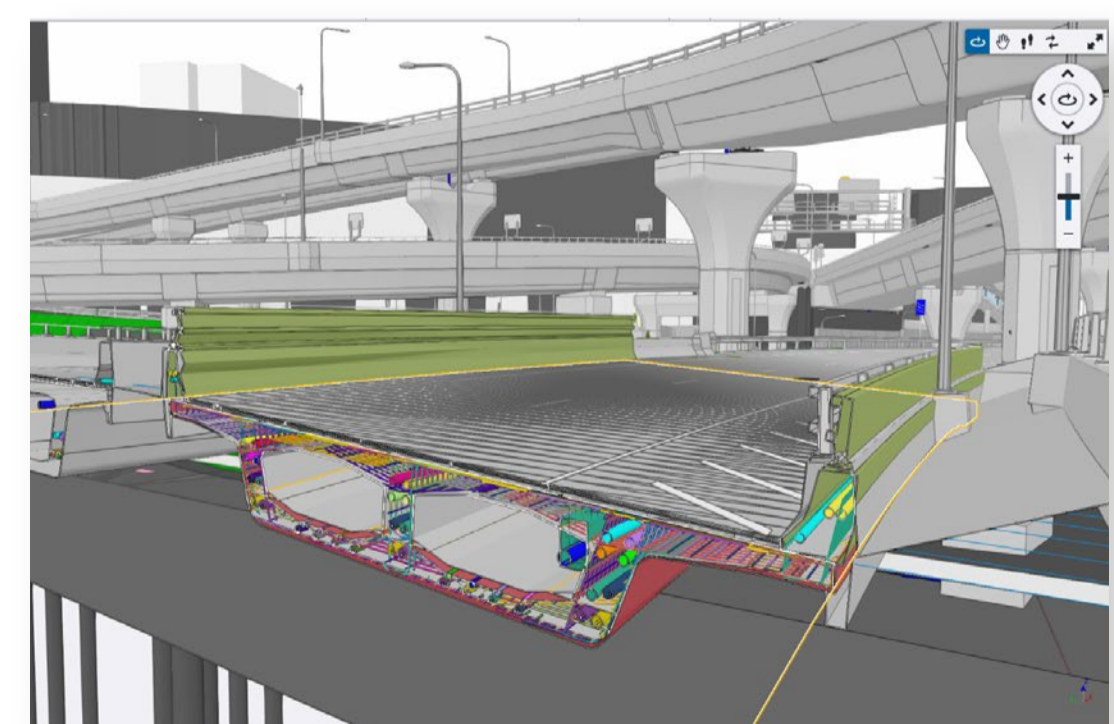


Sustainable Best Practice 1

CKR adopted a Centralised Management Platform known as Smart Site Management Hub (SSMH) as CDE with synergy of more than forty numbers of individual sub-systems, sensors and innovative technologies to synchronise and consolidate data across contracts for safety, quality, progress and environmental monitoring. Daily data is also collected for big data analysis so that all parties are able to review timely and implement effective policy to enhance the productivity, safety and sustainability of project.

Sustainable Best Practice 2

CKR introduces BIM for digital fabrication in bridge construction from design to construction down to fabrication level. Compared to traditional rebar prefabrication based on manually-prepared bar bending schedule (BBS), adoption of this BIM technology provides an integrated workflow engaging rebar fixers and prefabrication yard at an early stage with automated generation of BBS. The technology also facilitates checking of rebar details and visualisation of potential clashes. This application enhances cost-effectiveness, reduces wastage and alleviates manpower shortage.



Sustainable Best Practice 3

Skidding mega truss shoring system is adopted to construct marine cut and cover tunnels in CKR to substantially reduce marine ecological and environmental impact with lessened temporary reclamation and noise/air/water pollution compared to traditional method. All the mega trusses are skidded by the hydraulic jacks along the rails on the cofferdam wall until their final position. This increases the productivity and cost effectiveness of ELS works and also reduces the safety risks and complexity of erecting steel works above water.