

## ***Construction of the CPR1 Bridge over the Highway, West Rail, and Light Rail using the Balanced Cantilever Cast-in situ Method.***

Bridge CPR1 forms part of the Deep Bay Link Northern Section at the Lam Tei end of the project, this structure crosses the existing Castle Peak Road, KCRC West Rail, and KCRC Light Rail and as such needed to be designed and built with these constraints in mind. The structure consists of 6 spans each comprising 4 decks with a typical span of 75m. Given the site constraints the designer chose to detail these as cast insitu cantilevers.



To achieve the programme requirements VSL designed and manufactured 4 pairs of twin box formtravellers (i.e. 16 Formtravellers in all), with each individual traveller weighing 48tonnes.

Typically it takes 2 weeks to set up the 4 travellers on a pier head ready to start operation and thereafter an average cycle of 6 days per segment was achieved.

Due to the fact that the construction is carried out above live roads and railways special consideration was given to the protection systems on the forms with heavy duty sheathing and netting for the standard areas and custom made waterproof containment boxes for the crossing of the West Rail and Light Rail sections.



Erection work over the West Rail and Light Rail sections was also constrained by the need to carry out certain operations such as launching and setting of the forms during possession periods which were limited to 1:30 am to 4:30 am on certain nights.



Construction of CPR1 is currently ongoing having started in December 2004 and completion is expected in December 2005.





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