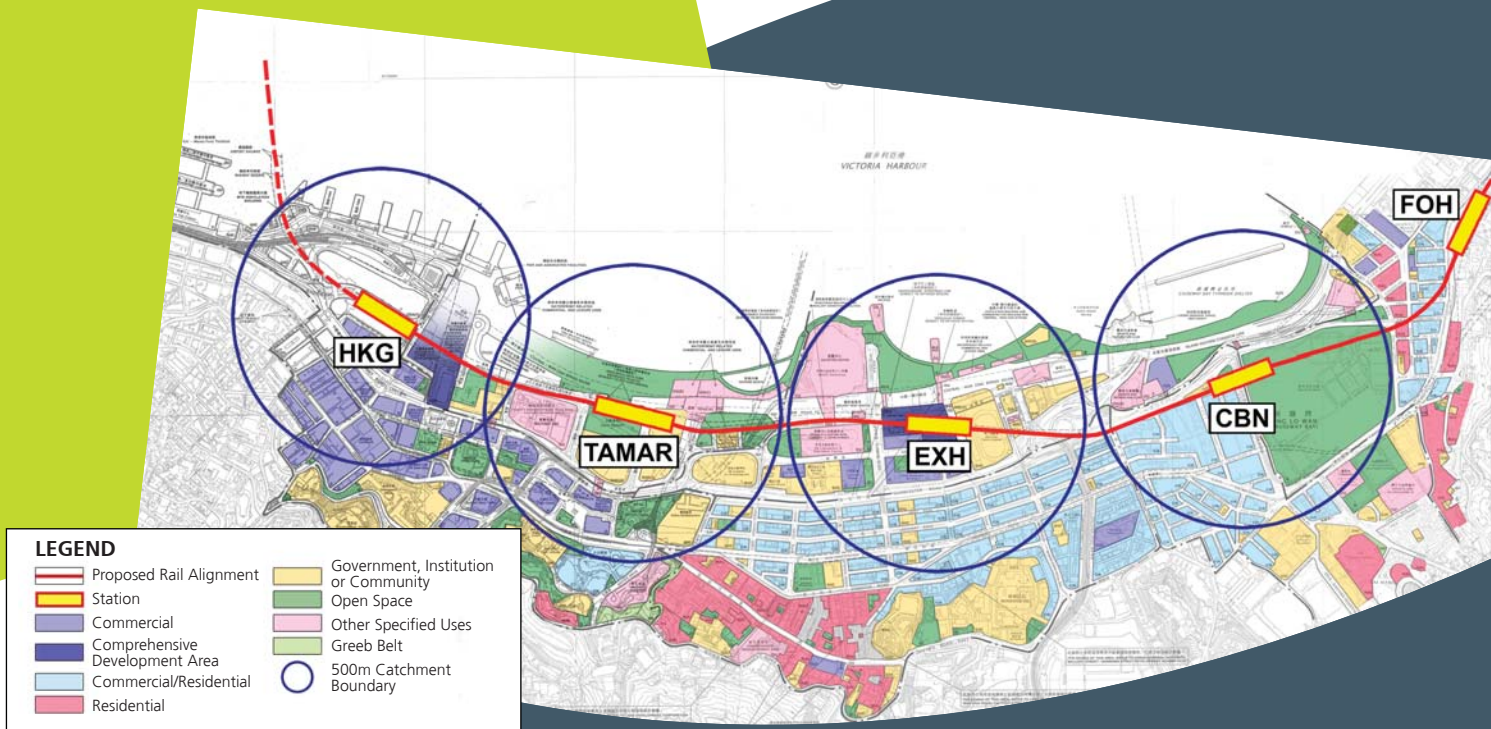


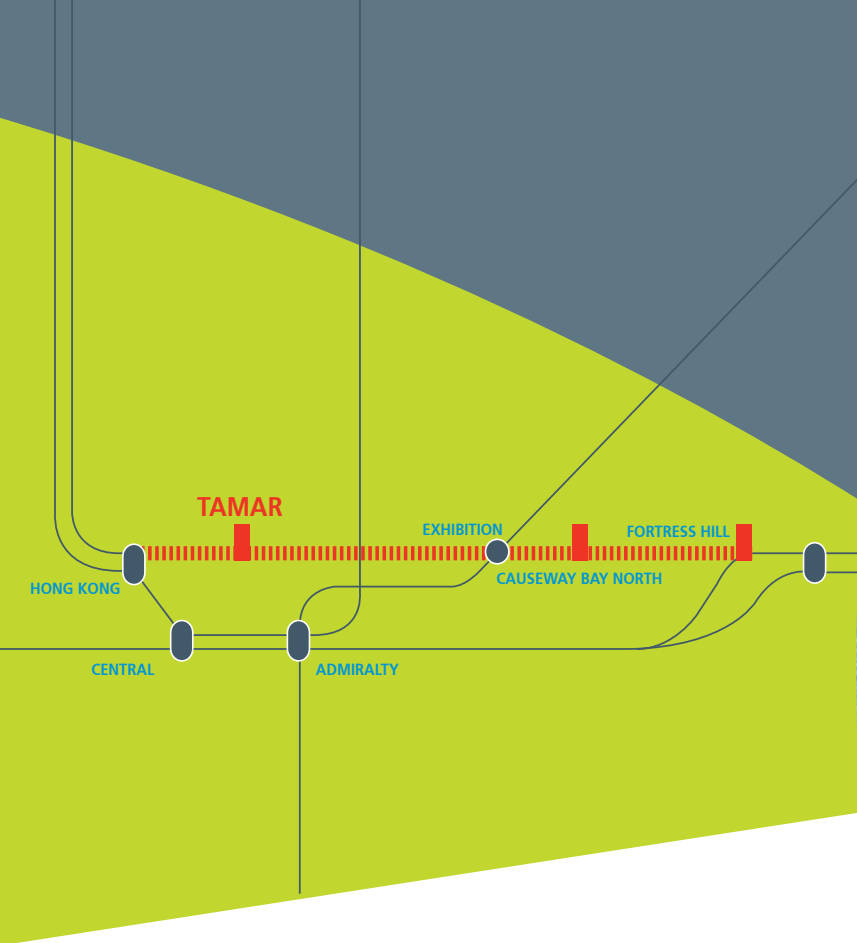
# North Island Line : NEX2401 Engineering Review of North Island Line

## INTRODUCTION

The North Island Line (NIL) project will extend the Tung Chung Line (TCL) for 3.5km from Hong Kong Station (HKG) to Fortress Hill Station (FOH). The NIL will provide much needed relief to the existing Island Line at its critical section and provide new stations at Tamar (TAM), Exhibition (EXH) and Causeway Bay / Victoria Park.

Atkins was commissioned by MTRC to undertake an engineering review of the Preliminary Design of the NIL to identify protection works thought necessary to safeguard the future construction of the NIL along the alignment it shares with the future Shatin to Central Link (SCL), which will be constructed in advance. Account was also taken of additional interfaces with the Central Wanchai Bypass and Wanchai Reclamation Phase II. In addition, as part of this review, a preferred scheme for the station in Causeway Bay, to be located to the west of its previous location in Victoria Park, was developed as well as a preliminary alternative alignment for the NIL and an associated update of the Preliminary Design cost estimate.





## OUR APPROACH

Atkins' approach to this assignment recognised the key challenge of ensuring the viability and buildability of the NIL in the future, whilst also ensuring that it may be approved by stake holders, including the public.

A value engineering workshop was held to generate a range of options for Causeway Bay North Station (CBN), which were then studied in some detail and recommendations made for consideration by MTRC.

## OUTCOMES

For CBN station, a stacked platform arrangement was developed to tie in with a similar configuration at EXH and to limit the horizontal extent of cut and cover construction. Potential impacts to Victoria Park and Tung Lo Wan Garden were assessed and re-provisions at each with enhanced features were proposed.

Also, impacts to existing flyovers and drainage culverts were assessed and associated temporary traffic measures developed to deal with anticipated traffic impacts.

At Tamar Station, the major constraints presented by cooling water mains and other utilities were investigated along with the disruption to the Tamar Government Complex and Central Reclamation Phase III.

A review of bored tunnel options was undertaken with particular regard to the availability of sites that can accommodate TBM launches and retrievals.

Finally, a review of cut and cover tunnel section requirements in light of the constraints posed by Central Reclamation III was undertaken to provide a preliminary assessment of engineering viability, programme and cost.