

# 9060139 - CRL Underpinning of CPO Building

Auckland, NEW ZEALAND



### General contractor

Downer Soletanche Bachy Joint Venture

### Customer/Owner

City Rail Link Limited

### Engineer

Aurecon / Mott McDonald

### Freyssinet subsidiary

Freyssinet New Zealand Ltd

### Works period

Start date: February 2018

End date: October 2019



## PROJECT DESCRIPTION

In Central Auckland, the Freyssinet teams along with the main contractors – Downer Soletanche Bachy Joint Venture carried out the underpinning of the century old Central Post Office building which hold a heritage structure status in New Zealand. The underpinning work was required to accommodate twin railway tunnel to be built directly underneath the building for the new rail loop around the city’s central business district. Once completed, the building will house the country’s busiest central railway station.

## FREYSSINET MISSION

The underpinning work involved transferring the weight on the building columns and façade through steel and/or concrete underpinning beams onto the tunnel Diaphragm walls constructed by Soletanche Bachy. Freyssinet’s various strand and bar Post-Tensioning systems were adopted in the design to build the underpinning structures.

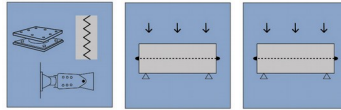
Freyssinet’s ‘Flatjack’ system was then used to simultaneously lift multiple columns at a time as well as entire façades at a time in a controlled manner while maintaining the heritage structure’s structural integrity.

The load transfer was completed by Freyssinet teams on Wednesday 3 October 2018, enabling the excavation works to take place under the whole building. The second phase of the project consisting in transferring the loads back onto the new tunnel roof was completed in October 2019.





**FREYSSINET**



**New Structures**

**Flat Jacks - C range - Freyssibar**

Historical monuments

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### **KEY SUCCESS FACTORS**

Client loyalty, Quality, Reactivity (in tender and/or intervention deadlines), Technical added value

