



# RIVERSIDE WAREHOUSES

## ROCKLOK™ TRENCH ROCK SALT

### PROJECT

The Riverside Warehouses is the latest industrial development as part of the Highbrook Business Park, a world-class business park developed on Auckland's Waiouru Peninsula. This 107-hectare estate includes warehousing and distribution facilities, commercial offices, hospitality options, convenience retail stores, among others.

The Riverside Warehouses specifically is a carbon neutral development situated in a prime location that will offer a total size of 2,097 - 3,586 square metres of high-profile warehouses. Among the many design considerations, the Rocklok retaining wall at the entryway had to be consistent with the look obtained on previous developments and to guarantee a level of quality and aesthetics as it was going to be facing Highbrook Park and the Tamaki River area.

### DESIGN

The client and their engineer's, Initia, were looking for a robust and small block retaining wall that could provide a long-term design life and withstand heavy loads from vehicles accessing the area.

Similar retaining wall systems with comparable facing options were evaluated at the preliminary design stage. After evaluating costs, contractor comfortableness with the system, and mainly the most recent connection data and Quality Assurance testing, the Rocklok Retaining Wall System was finally selected. In this case, the Rocklok Trench unit, which provides a nominal face angle of 89.1° and incorporates a mechanical polymeric connector that creates a positive connection between the modular block and the HDPE geogrid.

The final design entailed a 3.6 metres high curved retaining wall along the development entryway.

### INSTALLATION

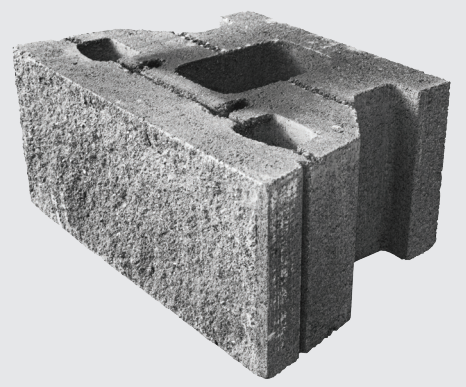
The retaining wall installation was carried out in conjunction by ICB Retaining & Piling. Installation was smooth, taking 3 to 4 weeks even when COVID-19 restrictions were already in place. As usual, the Bowers technical team visited the project on numerous occasions to ensure both the contractor and sub-contractors were satisfied with the product and to solve any issues if they arose.

The HDPE geogrid reinforcement vertical spacing was 400 millimetres, which reduces potential future settlement and provides a tighter knit structure. On the geogrid elevations, the Rocklok orange moulded connector, which is an evolution of similar connectors, were used to engage with the HDPE geogrid and to provide a "positive" mechanical connection between geogrid and modular block units. As best practices recommend, the backfill was a compacted GAP65 and the Rocklok units and the drainage column were formed by a well-graded drainage metal.

The top of the retaining wall was capped off with the standard moment concrete slab, an impact/safety barrier, before the entry road was paved.

### The Rocklok™ Retaining Wall System provided the following benefits to the project:

- ☑ An aesthetically appealing retaining wall that equates such a high quality warehouse development
- ☑ A positive connection between the HDPE geogrid and the modular blocks
- ☑ A connector that does not disengage from the geogrid when the grid rolls over or someone steps on it



**CONTRACTOR**  
Mundy Construction

**SUB-CONTRACTOR**  
ICB Retaining & Piling

**ENGINEER**  
Initia

**CLIENT**  
Goodman

**LOCATION**  
Corner Highbrook Drive and Business Parade North, Highbrook Business Park

**PRODUCT USED**  
Rocklok Retaining Wall



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