



ALBION PARK BYPASS

SOIL NAIL WALL & SHOTCRETE WALL

A project with it all—at the mercy of a tough dig, an evolving, intricate design requiring works at heights, but ultimately an opportunity to showcase RIX' matchless expertise and standing as market leaders in ground stabilisation. For the APRB project, we were given a unique opportunity to put shotcrete front and centre, the results speaking for themselves!

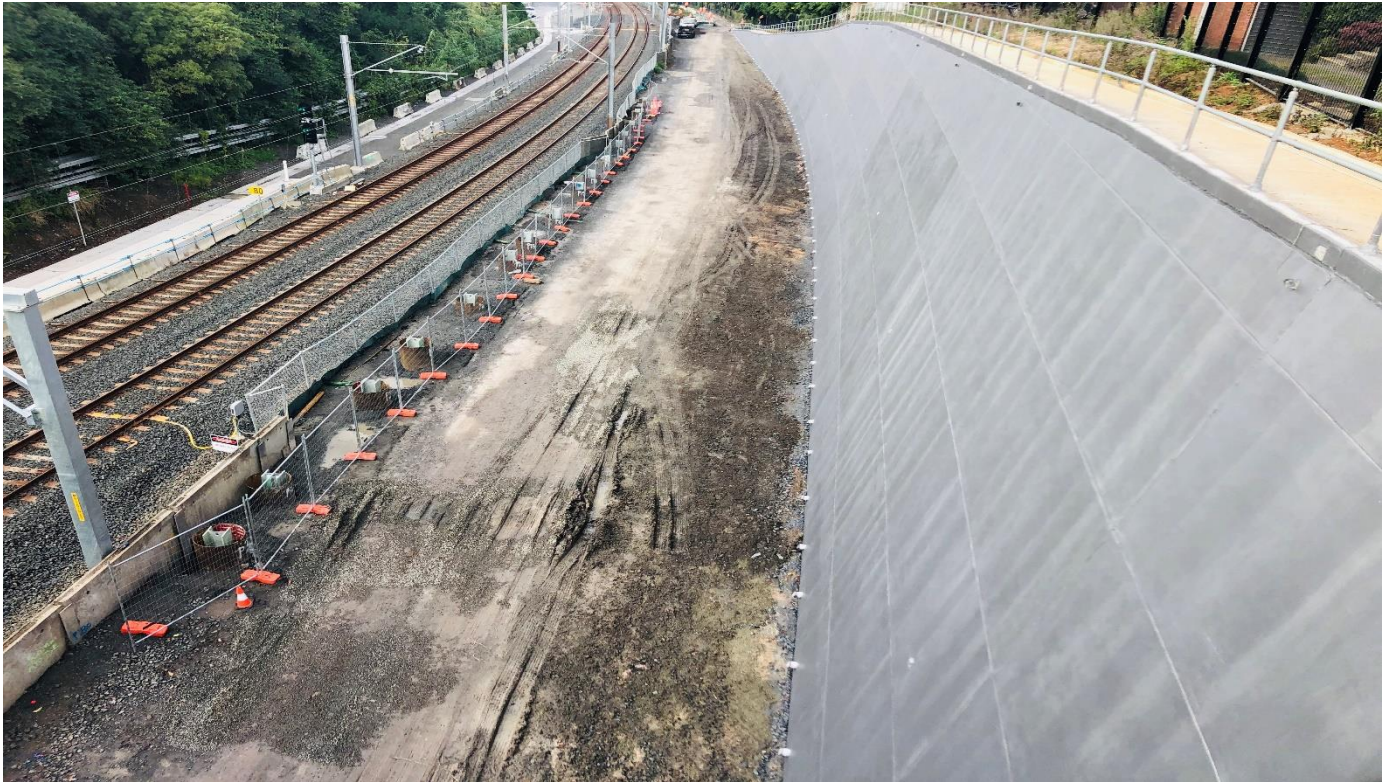
Whilst there are no “typical” projects, what began in initial talks for the Albion Park Rail Bypass as a traditional top-down anchoring and shotcrete package transformed into a cohesive and complete ground stabilisation solution. The challenging rock profile and ground conditions meant a long-term monitor and inspection period for our Client—where precast façade panels would require regular removal and reinstatement, RIX, working closely with our Client and the project’s numerous key stakeholders including Geotechnical partners, RMS approving body and the locality’s urban design body, developed a solution that incorporated a top-down structural layer (drainage, soil nails, and steel-reinforced shotcrete, finished with and a bottom-up full-height architectural front layer that can be monitored with ease, and an aesthetic that challenges any off-site pre-cast panelling system. The results have garnered tremendous attention from all parties—Client, RMS, and local community—and flaunts the often-overlooked and under-appreciated potential of shotcrete, and RIX' distinct ability to deliver complex, end-to-end, striking projects of this nature.

CLIENT: Fulton Hogan

LOCATION: Albion Park Bypass

SCOPE: 1000m² of finished staggered pattern walls

COMPLETION: June 2021



CHATSWOOD NORTHERN CORRIDOR RETAINING WALL

SOIL NAIL AND SHOTCRETE WALL

Sydney Metro is Australia's biggest public transport project and RIX Group has been a part in delivering new station boxes between Chatswood and Sydenham. Transport NSW defines the project and the works were carried out for the joint Venture of John Holland CPB Ghella (JHCPBG). In this particular section permanent soil nails and shotcrete retaining wall was constructed to allow for 400m of track widening for tunnel portal next to live trains in Chatswood

The work includes:

- Erosion and sedimentation control;
- Preparation of batter slope (scaling removal of loose rock);
- Installation of rock fall mesh to prevent any debris and loose rock to fall off on live track
- Installation of permanent soil nails and application of structural shotcrete works, including drainage;
- Installation of 22 strands permanent anchors and
- Installation of galvanised double mesh with spider plates

CLIENT: JHCPBJH JV

LOCATION: Chatswood Northern Corridor

SCOPE: 1,500m² of wood float sponge shotcrete
1,500m² of SL81 double mesh with spider plates
10,000lm of soil nails;
1,500m² of rock fall mesh
8,000lm of Strip drains

VALUE: \$2.2 Million

COMPLETION: 2020

The main challenges in the project:

- Tight space under the bridge, 22 strands 32m long anchors with height restriction, working next to live rail way corridor with tight working platform
- Latent ground condition, lot of testing of soil nails with R64 spec
- Only one way and tight access, every single delivery needed to be co-ordinated
- Works over a 15m high batter, works on EWP and rope access.
- Ensuring the quality control for a project with a large variety of stabilisation requirements;
- Working concurrently in various locations;
- Management several changes in the design and mitigating the financial risk to our client due to the design changes;
- Dust sensitive area as the residents in close proximity
- Working under highest safety requirements; i.e., crane, rope access, live trains, etc.

