



## GEOFABRICS CASE STUDY



# BUILD STRONGER PILING PLATFORMS WITH TRIAXIAL GEOGRID

## PRODUCTS USED

### Triaxial Geogrid

- A multi-axial geogrid made from punched polypropylene sheets, forming a unique hexagonal structure with triangular apertures that confine and interlock with aggregate for soil stabilisation and ground improvement
- Reduces aggregate layer thickness by up to 50% without compromising performance, lowering excavation and fill costs
- Enhances layer stiffness to allow the use of lower-quality or recycled fill materials, reducing material costs
- Speeds up installation, offering a fast, cost-effective stabilisation solution for roads, working platforms and heavy-vehicle pavements

### Similar Product

Geofabrics® Geogrid™ Triaxial

## PROJECT DESCRIPTION

The Baypark to Bayfair upgrade project improves safety by separating local traffic from the state highway and rail corridor, providing safer walking and cycling connections, and completing the State Highway to Eastern Corridor for the Bay of Plenty.

Geofabrics was already supplying geosynthetic products to this development when CPB Contractors reached out to our team with a new request, requiring assistance with the modelling and construction of a cost-effective and strong piling platform. This project design was critical as the piles are built as the foundation for two bridge overpasses, at one of the busiest parts of the road network.

## OUR SOLUTION

Geofabrics prepared a preliminary evaluation for the piling platform. Triaxial geogrids provided a stabilisation function where the aggregate particles within the granular layer interlock with the geogrid and subsequent particle confinement inhibits deformation.

The original design concept incorporated a 40kN biaxial geogrid to be used in the platform. Geofabrics' application of triaxial geogrid resulted in a reduction of an additional 100mm thick pavement layer, saving \$10,000 in aggregate costs, despite it being a small 1,000m<sup>2</sup> area.



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Sustainable solutions

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