

CASE STUDY

WAIOMU VALLEY ROAD THAMES COAST

DURAMESH® MSE SYSTEM



CONTRACTOR	OnTrack Contracting Limited
ENGINEER	Llandem Consulting Engineers
CLIENT	Waikato Regional Council
LOCATION	60 Waiomu Valley Road, Waiomu
PRODUCTS USED	DuraMesh MSE System & FlexiFlume Culvert Flume

**ADVANCED
GEOSYNTHETIC
SOLUTIONS**

PROJECT

The Waiomu Valley Road is the route that connects Waiomu with the Waiomu Kauri Grove, a 2-hour return walk that submerges trekking enthusiasts to one of the Coromandel Peninsula's finest remaining kauri stands. At the same time, this road is the only access to an old farm track that creates an entry way for an upcoming new subdivision. The purpose of this project was to reconstruct and stabilise the old farm track with a retaining wall after it failed and collapsed.

DESIGN

Although the first option considered by the project engineer was a timber pole retaining wall, the geotechnical investigation concluded that this alternative was going to be both impractical and very expensive due to the required size of the poles and the amount of rock underneath the structure that could not be easily drilled. After evaluating different options, a DuraMesh MSE wall was chosen. As experts on the system, the Cirtex technologies team worked hand in hand with Llandem Consulting Engineers, providing a concept design, a global stability analysis and optimising the geogrids needed in the reinforced soil structure.

INSTALLATION

The contractor, OnTrack Contracting Limited, was already familiar with the DuraMesh MSE system, so their experience helped to complete the 4.5 metre high MSE wall in approximately two weeks. Due to the presence of a high ground water table, the retaining wall was built on top of a 1 metre deep drainage rock bench. The access to materials to fill the reinforced area of the wall was not an obstacle as aggregates were easily available from a quarry close by. A FlexiFlume PVC fabric was also installed in the middle of the retaining wall to collect, divert and shift water away from a culvert on the other side of the track.

The products used provided the following benefits to the project:

- A green face that blended and camouflaged within the natural surroundings
- A better and stable bench for the road on top of the MSE wall
- A cost-effective and easy to install proven solution
- Reduced the susceptibility to future erosion and scour



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