



Reinforced Soil Wall integrates new highway drainage design

ROADWORKS & REINFORCED SOIL WALL (RSW)

REF No. E/RW-1087N

Client: Roads and Traffic Authority NSW
Location: Erina Heights, NSW
Project: 170m Reinforced Soil Wall

The Roads and Traffic Authority NSW engaged EarthTEC to design, supply and install an approved 170m long Reinforced Soil Wall (RSW) as part of the Central Coast Highway Upgrade.

The wall design required careful consideration of existing land contours, ground conditions and traffic loads as some sections of the wall footing would be in uncontrolled fill zones.

These zones needed removal and replacement and a cement stabilised material was used to provide a suitable base for the wall which had high bearing pressures to exert on the foundation.

In addition, the RSW design needed to incorporate a large existing block retaining wall located behind the backfill zone of the new wall.

The challenge was to ensure that drainage from the existing block wall outlets was captured and integrated into the new RSW drainage design to flow out of the backfill zone, relieving any pore water pressure that would otherwise affect the new Reinforced Soil Wall face.

We achieved this by using a series of strip drains running behind the reinforced fill zone and connecting to inlet pipes from the existing wall to outlet pipes installed under the new RSW.

to site and compacted (equivalent to 100 truck deliveries per day)! Quality, safety and environmental controls were adhered to throughout.

Up to 3,000 tonne of material were delivered to site (equivalent to 100 trucks per day)

To finalise the design and meet the criteria of urban designers EarthTEC recommended to change the original idea of finishing the panel faces in 'exposed aggregate' to a more visually pleasing and cost effective 'Sicilian panel design finish.

During construction 1190m² of face panel was installed with over 3,000 straps placed into the reinforced fill zone comprising of 16,000m³ of select fill material.

A coordinated effort from the select fill suppliers and EarthTEC site representatives allowed up to a staggering 3,000 tonne of material to be delivered

Please contact our Sydney head office to meet with an EarthTEC representative in your state to discuss your project:

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