

CASE STUDY - HSC HEAVY FOREST HAUL ROAD, NZ WEST COAST, KAIPARA HSC – HYGROSCOPIC SOIL CEMENT STABILIZER



PRODUCT	HSC – HYGROSCOPIC SOIL CEMENT
ENGINEER	NOT REQUIRED
CLIENT	KIWI FOREST
CONTRACTOR	SMITH AND DAVIES
LOCATION	ARAPARERA, WEST COAST, NORTHLAND, NZ

WHERE SCIENCE



MEETS THE EARTH

PROJECT-

To build a road using Gravel Lock's HSC to equal the budget of existing construction method

This forest road had a very weak subgrade – brown rock over burden quarry run – which was failing under the logging traffic. Per kilometre the standard construction on this road was using 1200 cubic metres of 100-150 aggregate in the sub-base and was overlaid with 900 cubic metres of gap 65.

DESIGN

Application Rate: 10 kgs HSC per sqm

Purpose: Stabilization/Depth 150mm

Expectations: 12 months soil stabilization

Pavement still performing 8 years on after an excess of 100,000 tons of logs excavated over the top of it

INSTALATION

Equipment used:

Pulveriser, Grader, 10 ton Roller, Water Cart, Powder Spreader Truck

Installation took 1 day with instant benefits to the Client.

BENEFITS TO THE PROJECT:

- On this road, aggregate quantities were reduced by 40% allowing significant savings on resources and construction costs for the Customer
- Road construction was rapid resulting in less downtime for forestry crews and stakeholders
- Greatly improved productivity for getting the logs harvested
- HSC increased the CBR strength of the weak subgrade giving the client a strong, durable pavement which has the ability to be ripped and regraded if and when required.
- Substantial reduction in maintenance issues such as grading, potholes, corrugations, washboards, watering and gravel replacement on the whole life of this project



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