

CASE STUDY - HSC CARTER HOLT HARVEY, HAUL ROAD NORTHLAND, NZ

HSC – HYGROSCOPIC SOIL CEMENT STABILIZER



PRODUCT HSC – HYGROSCOPIC CEMENT STABILIZER

ENGINEER NOT REQUIRED

CLIENT CARTER HOLT HARVEY MILL

CONTRACTOR HARRISON CONTRACTORS

LOCATION WHANGAREI, NORTHLAND, NEW ZEALAND

WHERE SCIENCE



MEETS THE EARTH

PROJECT- Improve the performance of the Failing Flexing Peat Subgrade

Purpose: Stabilization/Dust Suppressant

Prior to treatment aggregate consumption on this haul road was very heavy. Using the insitu material on site for this installation, imported aggregates were reduced to nil. Over summer, the client had a water cart working daily for dust suppression and locking up the loose aggregates and, in winter months some trucks had to be towed up the hill with a grader. Following application of the HSC the pavement was strong, well bound and dust suppressed.

DESIGN

Application Rate: 8kgs HSC per sqm

Method: Grade and Wet Roll

Purpose: Stabilization/Depth 150mm

Expectations: 12 months soil stabilization with the added benefit of a dust suppressed pavement

INSTALATION

Equipment used: Pulverize -Grader, 8 ton Roller, Water Cart, Powder Spreader Truck

Weather on the date of application: Fine

Comments: The job was trafficked while application was completed

BENEFITS TO THE PROJECT:

- No imported aggregate was used in the installation of this pavement – insitu material was stabilized allowing significant savings on resources and construction costs for the Customer.
- Road construction was rapid and the road was able to be trafficked during the installation – no disruption to business.
- HSC increased the CBR strength of the weak subgrade giving the client a strong pavement which has the ability to be ripped and regraded if and when required.
- Two months following installation there was 363mm of rainfall in five days. The pavement had minor damage but self-healed.
- Substantial reduction was noted in maintenance issues such as grading, potholes, corrugations, washboards, watering and gravel replacement on this project.



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