



West Coast Road, Araparera



Location: West Coast Road, Araparera New Zealand
Client: Kiwi Forestry
Installation date:
5/6/2012



Gravel Lock
Stabilization & dust control
products. Supplying the Roding
industry with innovative solutions
to real problems

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**TO BUILD A ROAD USING HSC TO EQUAL
BUDGET OF EXISTING CONSTRUCTION METHOD**



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Application Rate: 10 kgs HSC per sqm

Purpose: Stabilization/Depth 150mm

Expectations: 12 months/100,000 tons

Application Method: pulverization

**Note: Road construction priced at equivalent to
standard COSTS and construction methods being used**

Equipment used: Pulveriser, Grader, 10 ton Roller, Water Cart, Powder Spreader Truck

Weather on the date of application: Fine

Gravel added: 75mm

Gravel depth: 200mm

Depth Treated: 150mm

Comments: Aggregate was not favourable to our products. 100-150 mm overlayed with 70mm of gap 65mm

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Disclaimer

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Why HSC® was selected

Features & Benefits

- **Stabilizes all materials**
- **Keeps road moist**
- Flexible yet strong
- **Re-healing**
- The gravels are held tightly bound
- Minimises potholes
- Minimises corrugations
- Minimises washboards
- **Reduces maintenance**
- Can be ripped & re-graded
- Controlled setting times
- Controlled set strengths

WHAT DOES HSC® DO ?

HSC is an excellent solution for dust control and soil stabilization problems. When you apply HSC® to roads and bare soil areas it immediately goes to work by providing lower Maintenance Costs and superior strength.

- 1) **In the forestry market:** Roads are quicker to construct and less aggregate is required, resulting in dramatic reductions in maintenance, & greatly improved productivity (time to get the logs out)
Overall result is less downtime for forestry crews and owners.
- 2) An inexpensive, strong solution which increases vehicle productivity, decreases fuel consumption.
- 3) Less aggregate needed in the building process, resulting in less overall wear and destruction of the road, especially when large amounts of aggregate are needed to bridge low CBR's during the construction process. On this road, aggregate quantities were reduced by 40%.
- 4) Reduced maintenance **such as grading, watering and gravel replacement.** HSC ® improves the engineering properties of soil and aggregates and is proven to eliminate the cost of grading and re-sheeting with aggregate-unpaved roads for extended periods.



Application method

Apply powder, pulverize shape and wet roll



HOW to GET THE BEST RESULTS using HSC

HSC® in forestry performs best when pulverised into soil or gravel to the design construction depth. The road should be finished with a Grader and wet rolled and slurried.

DURABILITY & STRENGTH

Designed just strong enough so it can be re-worked. The ultimate strength, dust control, and flexibility of HSC is directly related to the mixing, compaction and finishing processes but we would expect 12 months of a maintenance free road.

WHAT IS THE APPLICATION SELECTED

We recommend applying HSC PRE MIX from 10 kgs @ 150mm deep square metre. Other application rates can be used for greater strength. The basic rate usually provides six months of dust control and stabilization for 12 to 24 months without reapplication, the more traffic the road gets the better it performs . Our HSC maintenance programme will prevent loss of the fine grained soil particles and protect your investment in HSC road surfacing. Gravel Lock NZ can assist in the selection of application rates to suit different traffic loading and weather conditions.

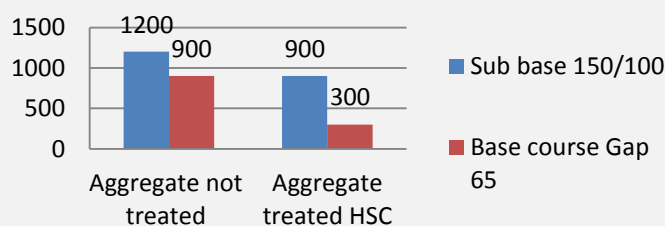
HOW MUCH AGGREGATE DOES HSC SAVE

Per kilometre 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.

HSC method used 900 cubic metres of 100-150 aggregate in the sub-base and was overlaid with 300 cubic metres of GAP 65

HSC- had savings 900 Cubic meters of aggregate and 112 truck movements

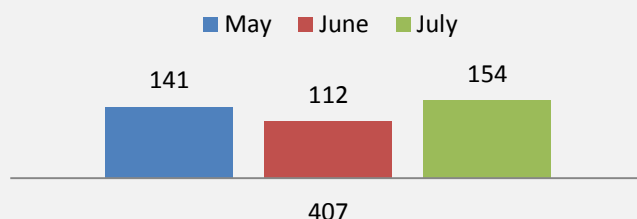
Aggregate Savings



HOW DOES IT PERFORM in wet weather

This road has experienced over 1200mm of Rain
Information collected from NIWA

Rainfall data mm



Performance over 3 months – 35,000 tons



10 days old - Road view



10 days old close up of open pavement



Road at 10,000 tons



22 days Close up pavement self healed



Road at 35,000 tons



Close up of pavement -tightly bound

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Treated HSC at 30,000 tons

Untreated section



HSC

Build stronger roads for the same
budget – save on maintenance

Gravel Lock



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