

**A REPORT ON THE
TREATMENT
OF A
BASE WITH SPORTCRETE ®**

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CLIENT

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PROJECT

Seamists Drive
MAIN RIDGE

COMMISSION

Carry out appropriate tests to determine the effects that the application of SPORTCRETE ® has on the conventional crushed rock base of a newly constructed base.

INTRODUCTION:

At Seamists Drive in Main Ridge, a bunker base was constructed using a crushed rock base course. SPORTCRETE ® had on the crushed rock in terms of bearing capacity/hardness and density.

INVESTIGATION:

On 2 June, 1995, the density of the crushed rock base was measured using a nuclear density/moisture gauge in four locations after the crushed rock had been compacted. The locations of these tests are shown on the attached plan. The bulk density values ranged from 1.85t/m³ to 2.02 t/m³ with moisture contents between 7.0% and 9.5% measured at the surface. The test methods used essentially follow AS1289, E8.1.

At the same time, the California Bearing Ratio CBR value was measured using the test method outlined in AS1289m F1.1. it was felt that this test method was the most appropriate to measure hardness or bearing capacity as the test method requires measuring the load needed to penetrate the surface with a cylindrical piston. Whilst the CBR value given us arbitrary number and is not really correlated to bearing capacity or hardness, it will give a reliable difference in penetration resistance between, before and after treatment with SPORTCRETE ®.

Before the treatment was applied, the CBR values at the two locations as shown on the attached plan were 9.5 and 10.0.

On 5 June, 1995, after the crushed rock surface had been treated with SPORTCRETE ®, the tests mentioned above were repeated. The densities on the occasion were between 1.97 t/m³ and 2.02 t/m³ with moisture contents between 8.0% and 8.5%. The CBR values were 27.5 and 26.5 after being treated with SPORTCRETE ®

CONCLUSION

It was concluded that application of SPORTCRETE ® to the surface of a crushed rock base will not significantly alter the density of the crushed rock layer but it will increase the strength or hardness of the surface by over 2.5 times of that of untreated crushed rock.

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REF: sdb/jf

AMENDMENT:

This report was first issued on 29 June, 1995. Sections of this report were amended on 13 October, 1999 and consequently this revised report now takes precedence over any previously dated report.

13 October, 1999

TEST RESULTS

DENSITY

Before Treatment with SPORTCRETE ®

	t/m³	Moisture Content %
Site 1	2.02	8.0
Site 2	2.01	8.5
Site 3	1.85	9.5
Site 4	1.96	6.8

After Treatment with SPORTCRETE ®

	t/m	Moisture Content
Site 1	1.97	8.5
Site 2	2.02	8.0
Site 3	1.99	8.0
Site 4	1.88	8.5

CALIFORNIA BEARING RATIO

Before Treatment with SPORTCRETE ®

	CBR Value
Site 1	10.0
Site 2	9.5

After Treatment with SPORTCRETE ®

	CBR Value
Site 1	27.5
Site 2	26.5

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