

**Stanley and Partners**Pty Ltd  
A/N: 910 017 213

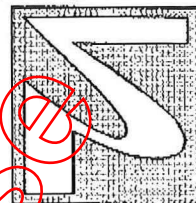
Consulting Engineers

First Floor

74 Old Cleveland Road

(PO Box 533)

CAPALABA Q 4157

**FAX** (Page 1 of 6)**OUR REF:** 936-154**YOUR REF:** SB431201

17 May 2001

F 34

**TO: Graham BARR****ORGANIZATION: Redland Shire Council****FROM: Russ NICOL****RE: Sandy Cove Estate - Stage 1 - Serpentine Creek Road  
Redland Bay**

Attached are copies of the soaked CBR test results for the subgrades for Stage 1 - Roads 1A and 2A

The attached geotechnical CBR results for both Roads 1A and 2A indicate CBR values of 1 (I have disregarded the CBR 14 result). Whilst this would give us a pavement depth of 640mm, it was decided to excavate to -400mm below lip level and then inspect the subgrade. This was done for Road 1A and the subgrade material was of quite a good quality. I then decided to import subgrade replacement material (CBR 15) and bring the subgrade back up to -250mm below lip, where we would then have Council carry out the subgrade inspection. This is to be the same for Road 2A.

The proposed pavement design for both Roads is as follows:

Roads 1A and 2A (ESA 5x10)

Total Length - both Roads

25mm AC

100mm Base course (CBR 60)

125mm Sub base course (CBR 35)

150mm Select Fill (CBR 15)

Side drains will be installed under the K&C to both sides of the roads once Council has passed both the subgrades.

Council's approval to these designs is requested subject to a satisfactory proof roll of the subgrade.

Thanks

Russ Nicol

SENT TO FAX NO: 3829 8765

# **B BOWLER** **GEOTECHNICAL** PTY LTD

Geotechnical Engineering Consultants  
Soils Laboratory Services

Environmental Consultants  
ABN 49 050 401 771

7-98 Anzac Ave

Hillcrest 4118

Office: Ph 3800 6446 Fax: 3800 0816

Lab: Ph 3800 3832 Fax: 3800 7928

email: lab@bowlergeotechnical.com.au

Facsimile to:

STANLEY AND PTNS.

Fax No.

Attention:

ROSS NICOLS

From:

M.J. SANDILANDS

RE:

SERPINTINE ROAD

DATE

09.05.01

Reference:

REPORTS 1 TO 4

No of pages (includes this page)

5

This facsimile may contain privileged and/or confidential information intended for the addressee only. If you have received this facsimile in error please notify us immediately by phone. You may not copy or deliver this message to anyone else. If there is any difficulty reading this message or any problems with the transmission please contact us on (07) 3800 3832.

**NOTE: THESE TESTS (MEET/DON'T MEET) THE LOCAL AUTHORITY SPECIFICATION AS SUPPLIED IN RESPONSE TO BOWLER GEOTECHNICAL QUESTIONNAIRE (NOV 00), OR THE SITE SPECIFICATION**

B.C.C. L.C.C. I.C.C. REDLAND SHIRE G.C.C.C. SITE SPEC

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BEAUDESERT SHIRE

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ROSS

AS DISCUSSED, I HAVE SOME CONCERNS OVER THE LOW CBR RESULTS ACHIVED COMPARED TO THE MDD AND OMC'S AS WELL AS THE RANGE OF CBR VALUES COMPARED TO THE MDD AND OMC'S.

INDERCATATIONS ARE THAT THE INSITU MATERIAL REFLECT THE CBR RESULTS, HOWEVER THE RESULTS ARE NOT WHAT I WOULD HAVE EXPECTED .

☒

REPORT AUTHORISED TO BE FAXED



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## CALIFORNIA BEARING RATIO REPORT SHEET

CLIENT: COSMOPOLITAN CONSTRUCTIONS QLD  
 PROJECT: SANDY COVE ESTATE

JOB No.: 4283  
 REPORT No.: 2

ROAD: ROAD 1A  
 SAMPLE DEPTH (m): -0.3  
 SAMPLE LOCATION: -

CHAINAGE: CH 160  
 OFFSET:  
 SAMPLE NO: 35465

SOIL DESCRIPTION & COMMENTS: SANDY SILT  
 BROWN

MAXIMUM DRY DENSITY (t/m<sup>3</sup>): 1.62  
 OPTIMUM MOISTURE CONTENT (%): 11.0

CONDITION OF SPECIMEN

SURCHARGE (g)

SOAKED (4 DAYS)

4500

PERCENTAGE RETAINED 19mm  
 (Not Included in Sample)

0

MOISTURE CONTENT OF TOP 30mm (%)

37

SWELL/CONSOLIDATION (%)

11.4

LABORATORY MOISTURE RATIO %

105

LABORATORY DENSITY RATIO:

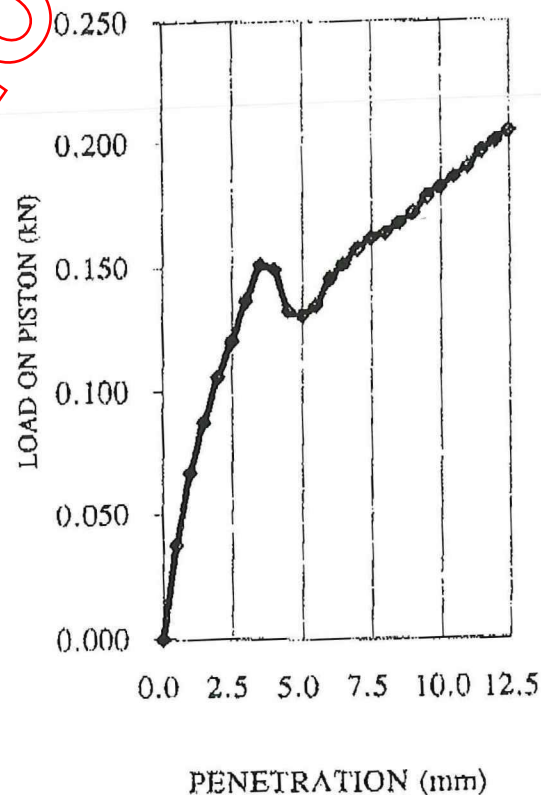
100

CBR PENETRATION IN mm

2.5

CBR VALUE %

1



TESTED BY:  
 REPORTED BY:  
 TEST PROCEDURES:

KT  
 MJS  
 AS 1289 1.2.1, 6.1.1 & 5.1.1 (STANDARD)

DATE: 08.05.01  
 DATE: 09.05.01

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**CALIFORNIA BEARING RATIO REPORT SHEET**CLIENT: COSMOPOLITAN CONSTRUCTIONS QLD  
PROJECT: SANDY COVE ESTATE

JOB No.: 4283

REPORT No.: 4

ROAD: ROAD 2A  
SAMPLE DEPTH (m): 0.6-0.9  
SAMPLE LOCATION: -CHAINAGE: CH. 260  
OFFSET: -  
SAMPLE NO: 35468SOIL DESCRIPTION & COMMENTS: SILTY SAND  
BROWNMAXIMUM DRY DENSITY (t/m<sup>3</sup>): 1.71

OPTIMUM MOISTURE CONTENT (%): 11.5

## CONDITION OF SPECIMEN

SURCHARGE (g)

SOAKED (4 DAYS)

4500

PERCENTAGE RETAINED 19mm

(Not Included in Sample)

MOISTURE CONTENT OF TOP 30mm (%)

26

SWELL/CONSOLIDATION (%)

5.6

LABORATORY MOISTURE RATIO %

100

LABORATORY DENSITY RATIO:

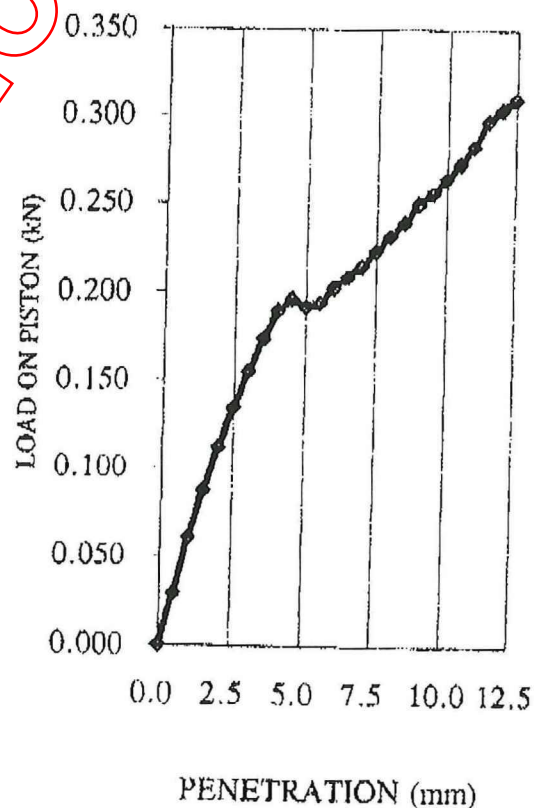
99

CBR PENETRATION IN mm

5

CBR VALUE %

1



TESTED BY:

KT

DATE:

08.05.01

REPORTED BY:

MJS

DATE:

09.05.01

TEST PROCEDURES:

AS 1289 1.2.1, 6.1.1 &amp; 5.1.1 (STANDARD)

Also at Gold Coast, Geelong, Sunshine Coast, Gladstone, Rockhampton, Mackay, Townsville, Cairns, Mt Isa, Bendigo (Vic)  
Associated Offices in Sydney, Melbourne, Adelaide, Perth, Papua New Guinea, Vietnam

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 CLIENT: COSMOPOLITAN CONSTRUCTIONS QLD  
 PROJECT: SANDY COVE ESTATE

 JOB No.: 4283  
 REPORT No.: 3

 ROAD: ROAD 2A  
 SAMPLE DEPTH (m): 0.6-0.9  
 SAMPLE LOCATION: -

 CHAINAGE: CH. 140  
 OFFSET: -  
 SAMPLE NO.: 35466

 SOIL DESCRIPTION & COMMENTS: SILTY CLAY  
 PALE GREY

 MAXIMUM DRY DENSITY (t/m<sup>3</sup>): 1.69  
 OPTIMUM MOISTURE CONTENT (%): 11.0

CONDITION OF SPECIMEN

SURCHARGE (g)

SOAKED (4 DAYS)

4500

 PERCENTAGE RETAINED 19mm  
 (Not Included in Sample)

MOISTURE CONTENT OF TOP 30mm (%)

12

SWELL/CONSOLIDATION (%)

7.9

LABORATORY MOISTURE RATIO %

97

LABORATORY DENSITY RATIO:

100

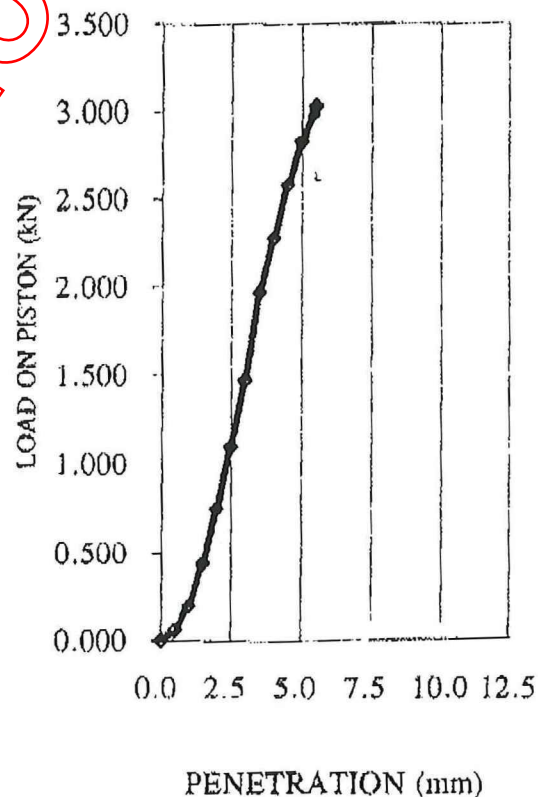
CBR PENETRATION IN mm

5

CBR VALUE %

14

MAXIMUM READING AT 5.5mm


 TESTED BY:  
 REPORTED BY:  
 TEST PROCEDURES:

 KT  
 MJS  
 AS 1289 1.2.1, 6.1.1 & 5.1.1 (STANDARD)

 DATE: 08.05.01  
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# CALIFORNIA BEARING RATIO REPORT SHEET

 CLIENT: COSMOPOLITAN CONSTRUCTIONS QLD  
 PROJECT: SANDY COVE ESTATE

 JOB No.: 4283  
 REPORT No.: 1

 ROAD: ROAD 1A  
 SAMPLE DEPTH (m): 0.7-0.9m  
 SAMPLE LOCATION:

 CHAINAGE: CM 80  
 OFFSET:  
 SAMPLE NO: 35454

 SOIL DESCRIPTION & COMMENTS: SANDY SILT  
 BROWN

 MAXIMUM DRY DENSITY (t/m<sup>3</sup>): 1.69  
 OPTIMUM MOISTURE CONTENT (%): 9.5

CONDITION OF SPECIMEN

SURCHARGE (g)

SOAKED (4 DAYS)

4500

 PERCENTAGE RETAINED 19mm  
 (Not Included in Sample)

0

MOISTURE CONTENT OF TOP 30mm (%)

28

SWELL/CONSOLIDATION (%)

5.4

LABORATORY MOISTURE RATIO %

97

LABORATORY DENSITY RATIO:

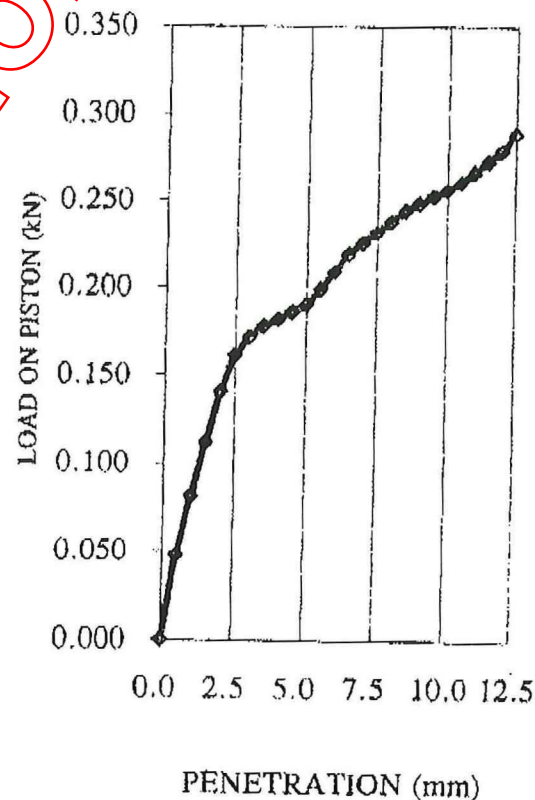
99

CBR PENETRATION IN mm

5

CBR VALUE %

1


 TESTED BY:  
 REPORTED BY:  
 TEST PROCEDURES:

 KT  
 MJS  
 AS 1289 1.2.1, 6.1.1 & 5.1.1 (STANDARD)

 DATE: 08.05.01  
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