

14 March 2023  
Job No: 0053246.9000

Beach Road Estates Limited  
28B Moorhouse Ave  
PO Box 2056  
shanef@momentumprojects.co.nz  
Christchurch 8140

Attention: Shane Fairmaid

Dear Shane

## **Beach Grove Subdivision, Kaiapoi**

### **Scala Penetrometer Testing Stage 5A-B**

#### **1 Introduction**

This letter presents the results of the bearing capacity tests undertaken by Tonkin & Taylor Ltd (T+T) on the engineered hard fill prepared for Stage 5A-B lots 215 to 220, 226 to 228, 234 to 240, 254 to 267, 285 to 302, 387 and 388, Beach Grove subdivision, Beach Road, Kaiapoi. The work described in this document was commissioned by Beach Road Estates Ltd and was completed in accordance with the terms and conditions which are outlined in T+T's Variation No. 24 dated 13 May 2022, under project No. 53246.9000.

#### **2 Scala penetrometer results**

50 Scala penetrometer tests were carried out on the Stage 5A-B lots on 18 November 2022 and 9 March 2023. One Scala penetrometer test was completed on each lot. The locations of the Scala tests are shown on Figure 1, Appendix A.

The results of the Scala penetrometer logs are attached in Appendix C.

#### **3 Summary of Scala penetrometer testing and indicated bearing capacity**

The bearing capacity assessed from the Scala penetrometer test results show that the lots tested meet the intent for a TC2 equivalent complying foundation, such as a rib-raft or similar.

All Scala penetrometer testing and fill testing during construction indicated that all fill placed on site met the requirements of the specification.

Once the building foundation excavations have been carried out, the exposed subbase surface should be observed and tested by a suitably competent geo-professional to verify the building foundation conditions are consistent with the bearing capacity described in this letter report.


## 4 Applicability

This report has been prepared for the exclusive use of our client Beach Road Estates Ltd, with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement.

It is important that Tonkin & Taylor Ltd be immediately contacted if there is any variation in subsoil conditions from those which are described in this letter report.

Tonkin & Taylor Ltd

Report prepared by:



Peter Lee  
Geotechnical Engineer

Authorised for Tonkin & Taylor Ltd by:



Grant A. Lovell  
Project Director

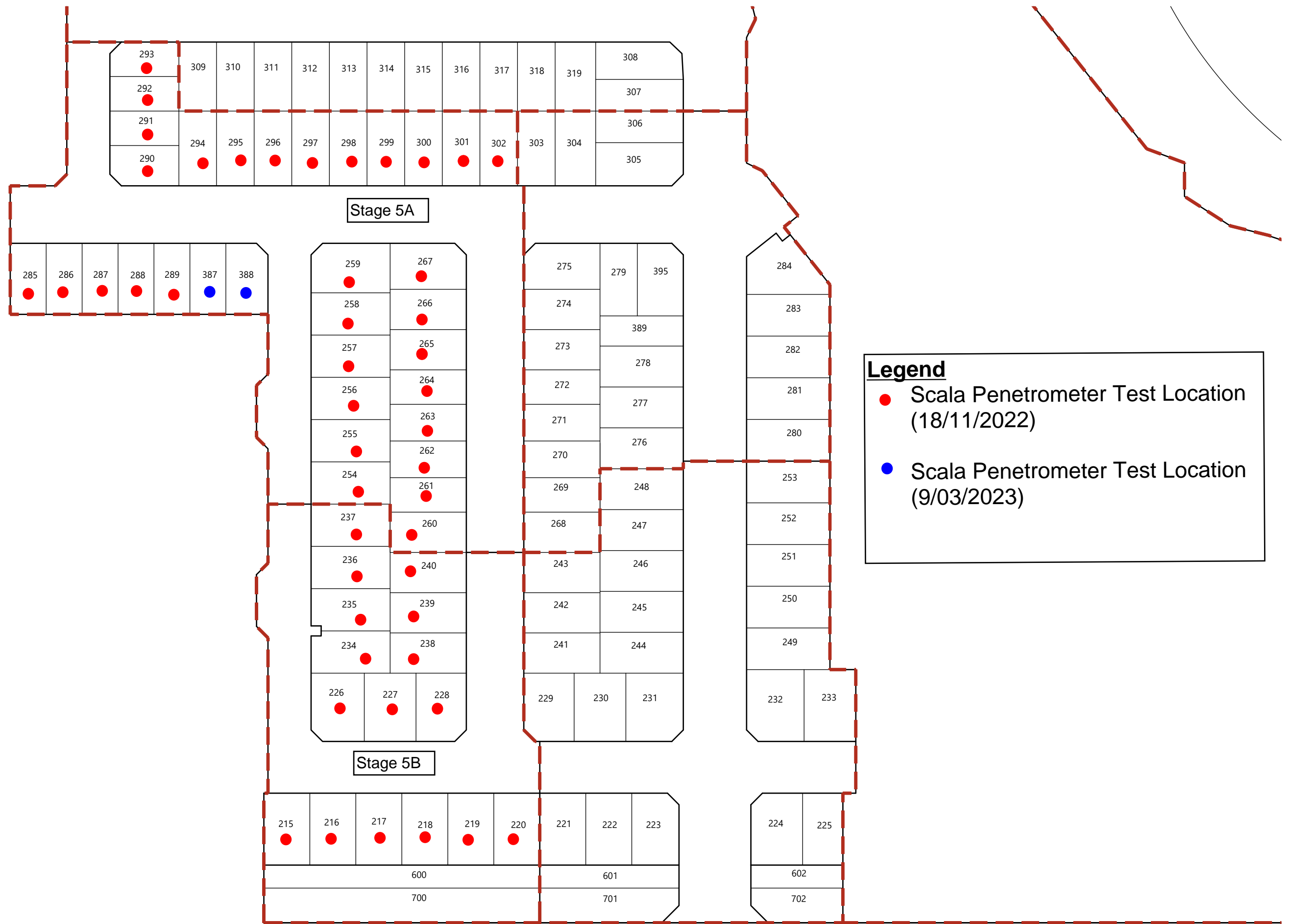
14-Mar-23

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<b>Appendix A</b>	<b>Site plan</b>
<b>Appendix B</b>	<b>Table of indicative bearing capacity</b>
<b>Appendix C</b>	<b>Scala test results</b>

## **Appendix A    Site plan**

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**Legend**

- Scala Penetrometer Test Location (18/11/2022)
- Scala Penetrometer Test Location (9/03/2023)

REVISION DETAILS	INT	DATE	SURVEYED
			DESIGNED
			DRAWN
			CHECKED
			APPROVED

BEACH ROAD  
KAIAPOI 7630



**BEACH GROVE - STAGES 5A & 5B**

STATUS	REV
SCALE	
COUNCIL	WAIMAKARIRI DISTRICT
DWG NO	

## **Appendix B      Table of indicative bearing capacity**

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<b>Lot number / Scala ID</b>	<b>Scala penetration into fill (mm)</b>	<b>Average number of blows per 50 mm over top 300mm or refusal depth</b>	<b>Allowable bearing capacity (kPa)</b>	<b>ULS bearing capacity (kPa)</b>	<b>Geotechnical ultimate bearing capacity (kPa)</b>
215	100	6.0	270	540	810
216	200	4.8	260	520	780
217	150	4.7	260	520	780
218	250	5.4	260	520	780
219	150	4.7	260	520	780
220	200	4.3	210	420	630
226	200	5.5	260	520	780
227	250	4.4	260	520	780
228	250	4.2	210	420	630
234	200	4.8	260	520	780
235	150	5.0	260	520	780
236	200	4.5	260	520	780
237	300	5.0	260	520	780
238	250	5.2	275	550	825
239	200	6.5	280	560	840
240	150	6.0	270	540	810
254	200	5.5	260	520	780
255	250	6.2	270	540	810
256	200	4.5	260	520	780
257	400	4.5	260	520	780
258	250	6.0	270	540	810
259	200	6.0	270	540	810
260	150	5.0	260	520	780
261	200	4.8	260	520	780
262	250	4.2	210	420	630
263	150	6.3	280	560	840
264	250	4.6	250	500	750
265	300	4.0	210	420	630
266	250	6.0	270	540	810
267	200	5.8	270	540	810
285	250	4.6	250	500	750
286	150	4.7	260	520	780
287	100	5.5	260	520	780
288	150	6.3	280	560	840
289	200	6.3	280	560	840
290	350	6.3	280	560	840

<b>Lot number / Scala ID</b>	<b>Scala penetration into fill (mm)</b>	<b>Average number of blows per 50 mm over top 300mm or refusal depth</b>	<b>Allowable bearing capacity (kPa)</b>	<b>ULS bearing capacity (kPa)</b>	<b>Geotechnical ultimate bearing capacity (kPa)</b>
291	200	4.8	200	400	600
292	200	5.0	260	520	780
293	300	5.7	270	540	810
294	200	6.3	280	560	840
295	150	5.3	275	550	825
296	200	4.8	240	480	720
297	150	4.7	260	520	780
298	200	5.8	270	540	810
299	250	5.4	255	510	765
300	200	5.0	260	520	780
301	150	4.7	260	520	780
302	100	6.0	270	540	810
387	200	5.3	275	550	825
388	250	6.2	280	560	840

## **Appendix C    Scala test results**

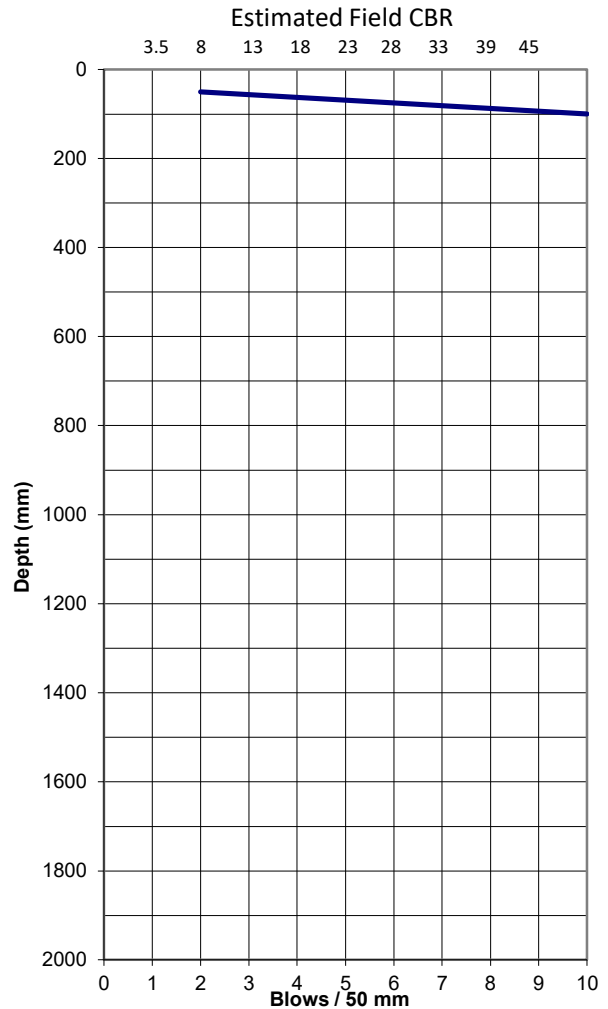
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**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 215</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	2	1050	
100	10	1100	
150		1150	
200		1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



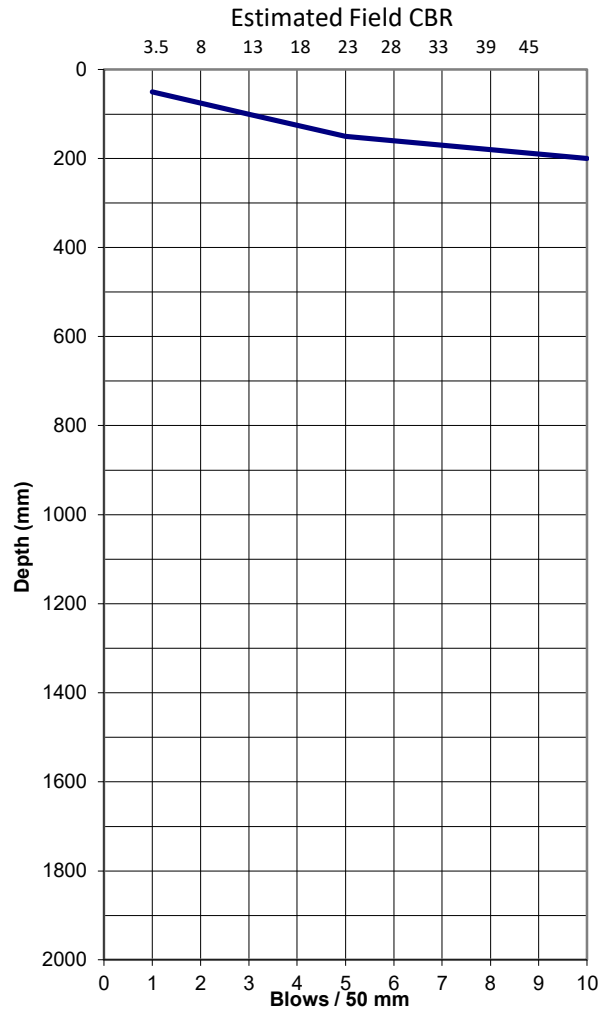
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 216</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	1	1050	
100	3	1100	
150	5	1150	
200	10	1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



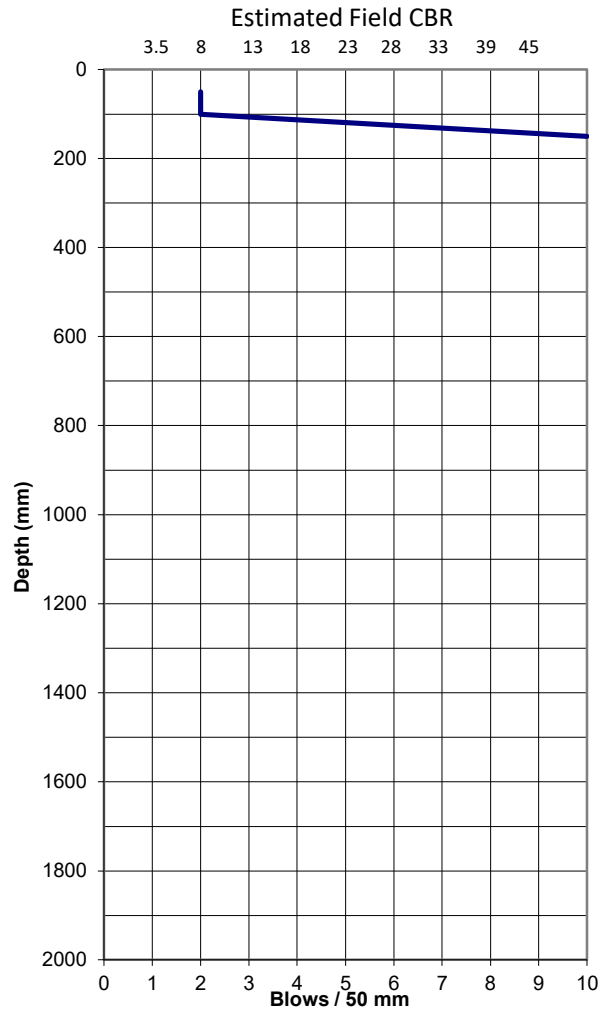
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 217</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	2	1050	
100	2	1100	
150	10	1150	
200		1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



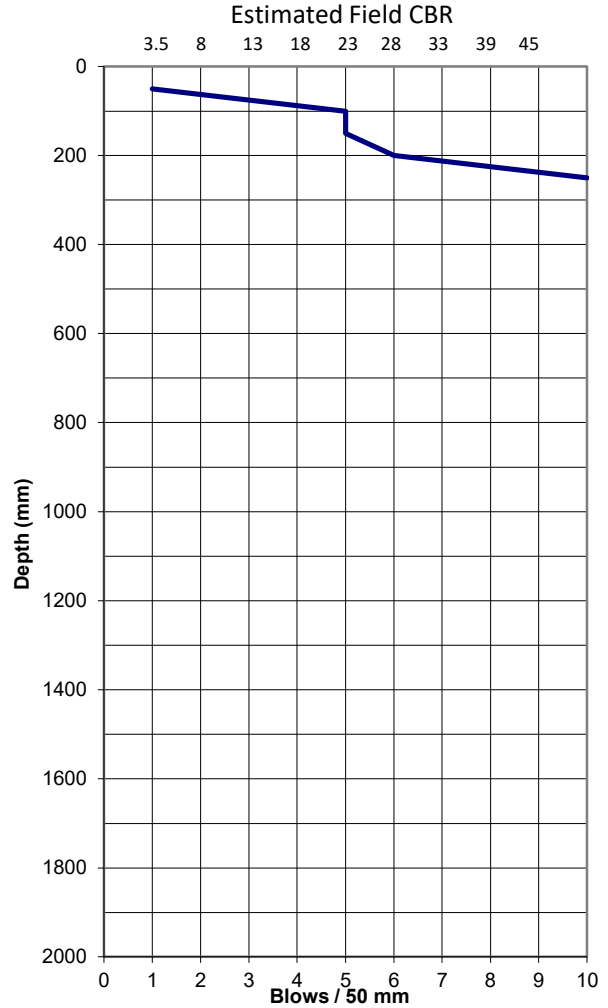
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 218</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	1	1050	
100	5	1100	
150	5	1150	
200	6	1200	
250	10	1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



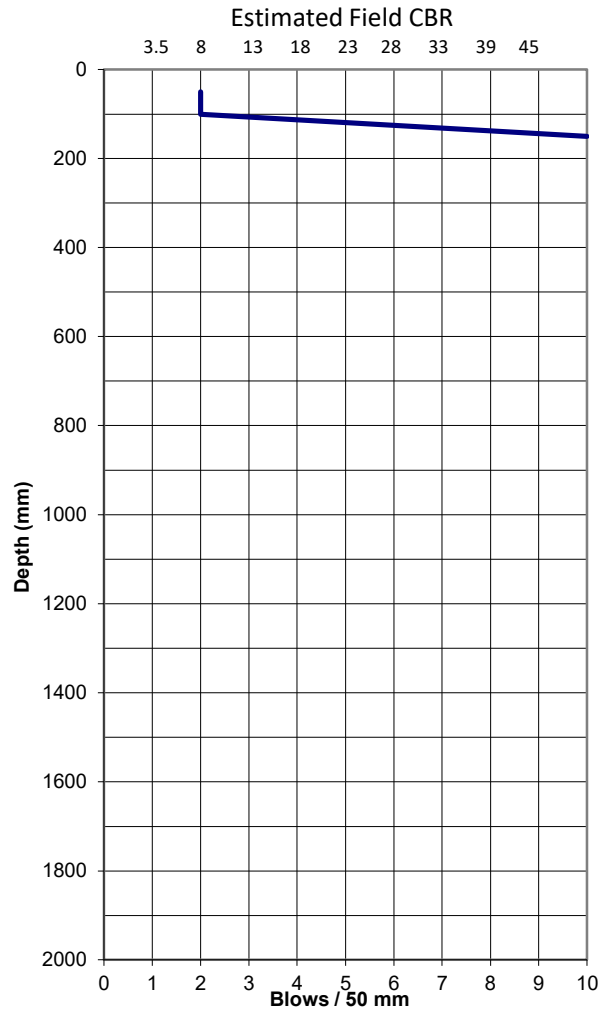
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 219</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	2	1050	
100	2	1100	
150	10	1150	
200		1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



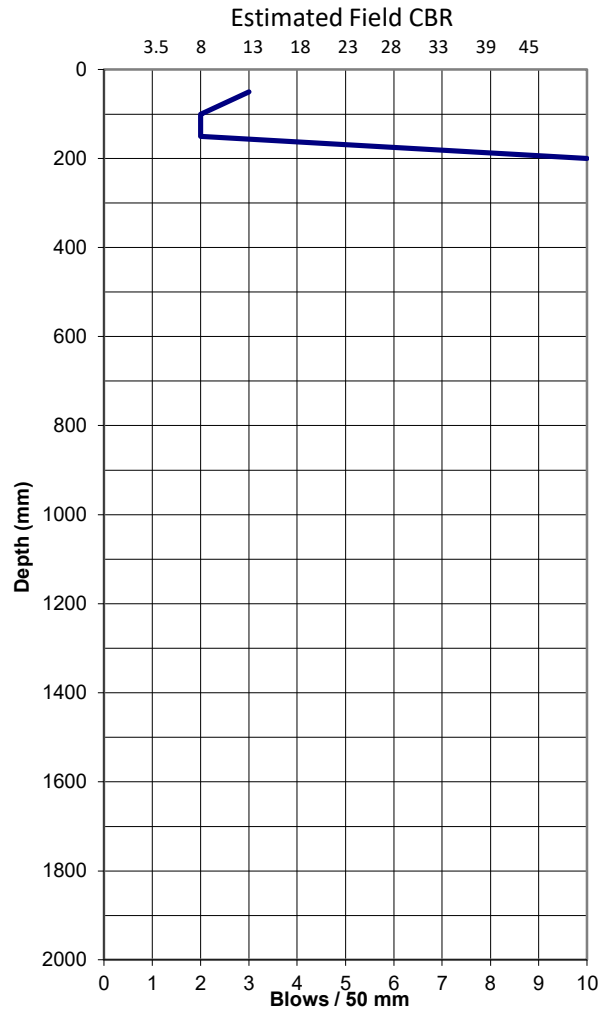
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 220</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	3	1050	
100	2	1100	
150	2	1150	
200	10	1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

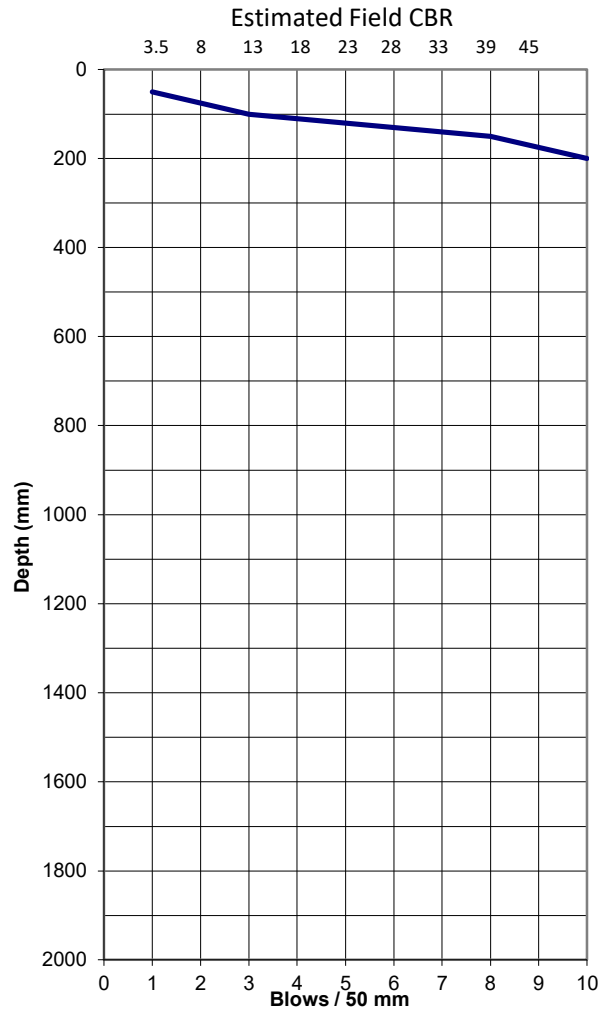
Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer



**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 226</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	1	1050	
100	3	1100	
150	8	1150	
200	10	1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



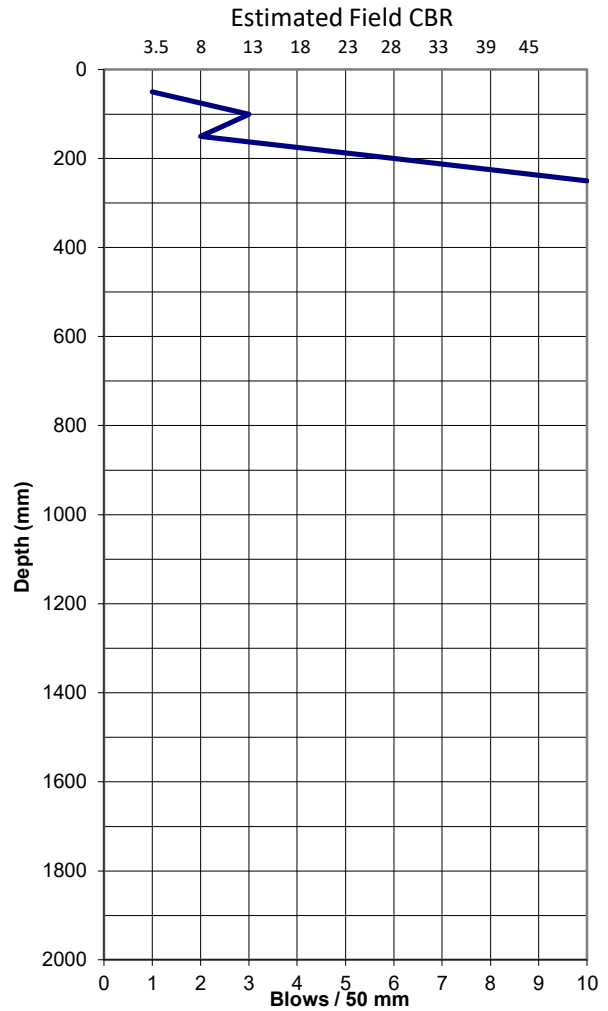
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 227</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	1	1050	
100	3	1100	
150	2	1150	
200	6	1200	
250	10	1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

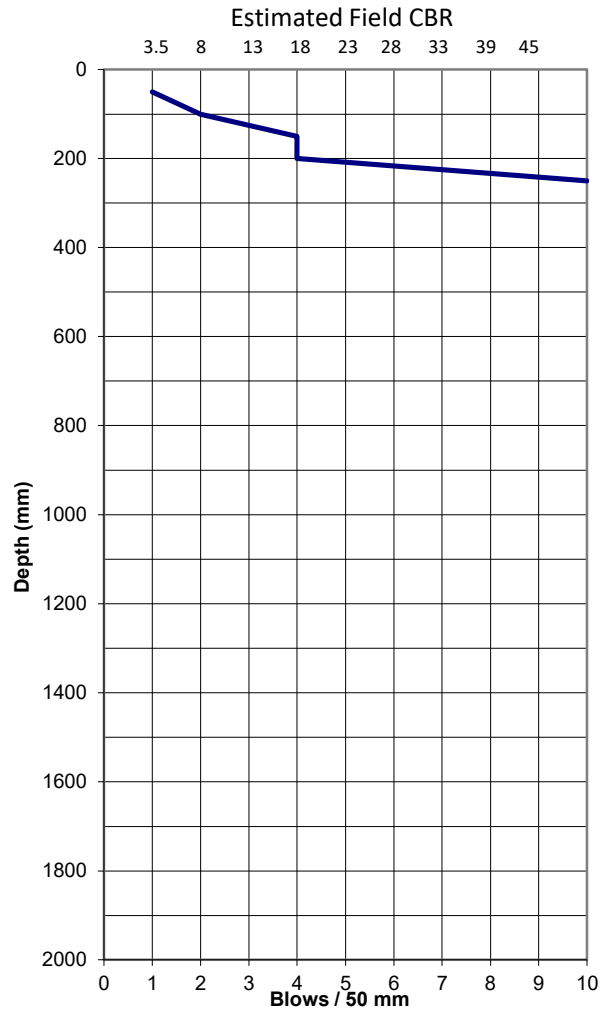
Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer



**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 228</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	1	1050	
100	2	1100	
150	4	1150	
200	4	1200	
250	10	1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



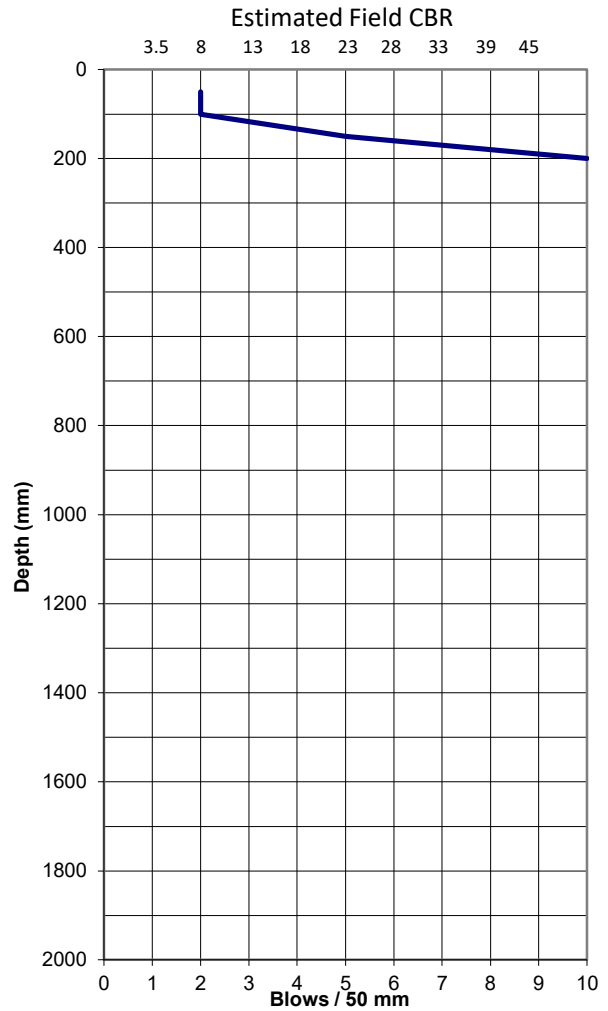
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000 Project: Beach Grove Stage 5A & 5B Location: Beach Grove, Kaiapoi RL: Unknown	Date: 18/10/2022 Operated by: PELE Logged by: PELE Checked by: MACR	<b>Test No. 234</b>  Sheet of 1
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mm Driven	No. of Blows	mm Driven	No. of Blows
50	2	1050	
100	2	1100	
150	5	1150	
200	10	1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



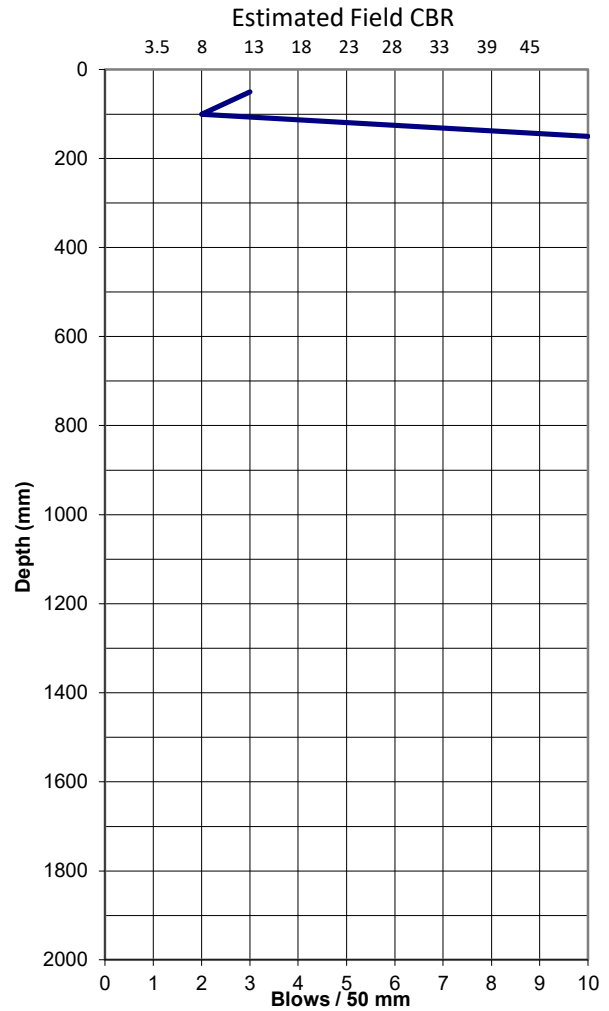
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 235</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	3	1050	
100	2	1100	
150	10	1150	
200		1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



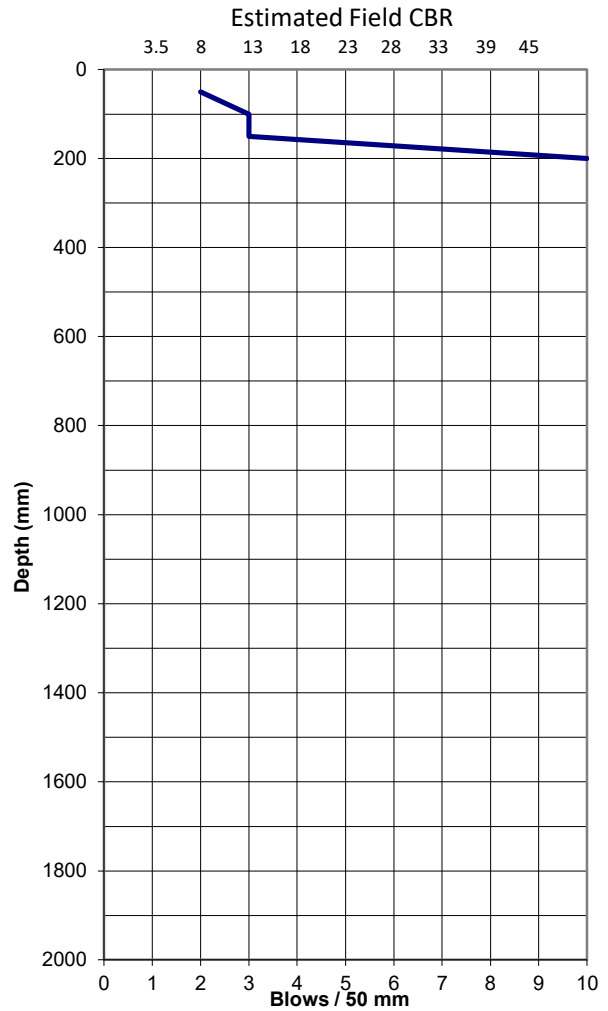
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 236</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	2	1050	
100	3	1100	
150	3	1150	
200	10	1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



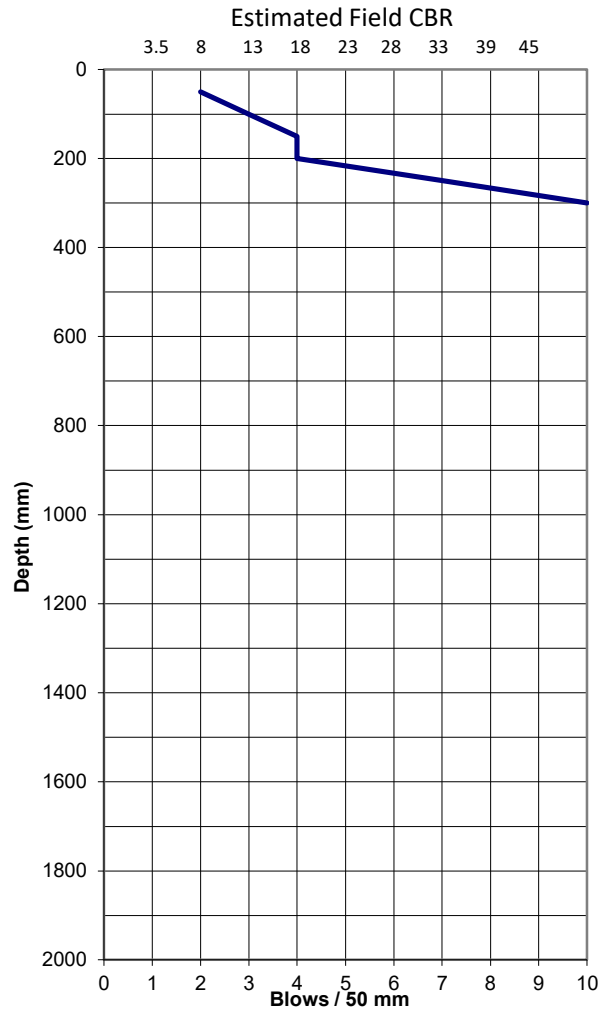
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 237</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	2	1050	
100	3	1100	
150	4	1150	
200	4	1200	
250	7	1250	
300	10	1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



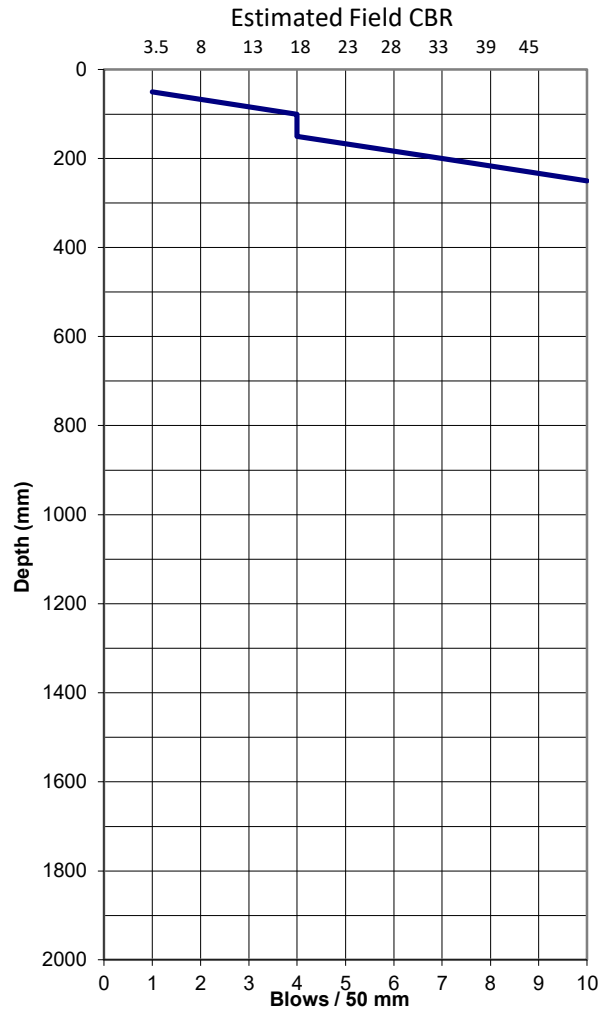
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 238</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	1	1050	
100	4	1100	
150	4	1150	
200	7	1200	
250	10	1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



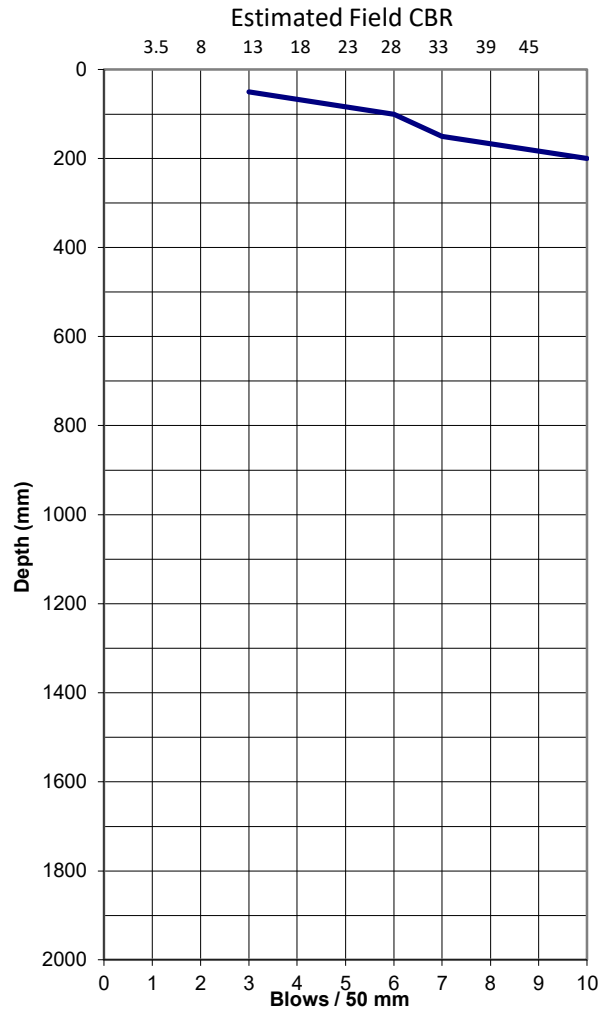
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 239</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	3	1050	
100	6	1100	
150	7	1150	
200	10	1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



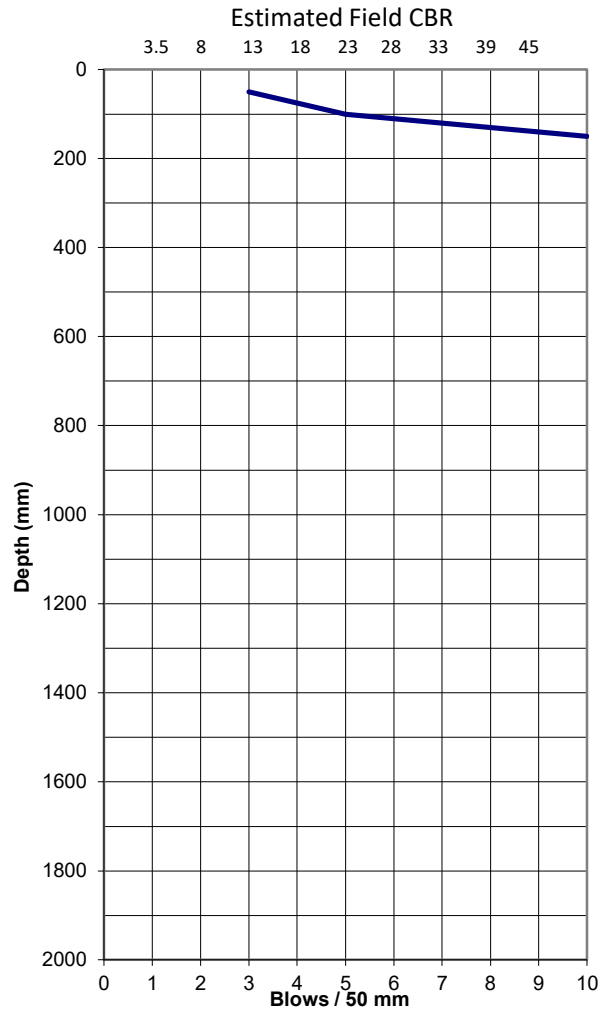
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 240</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	3	1050	
100	5	1100	
150	10	1150	
200		1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

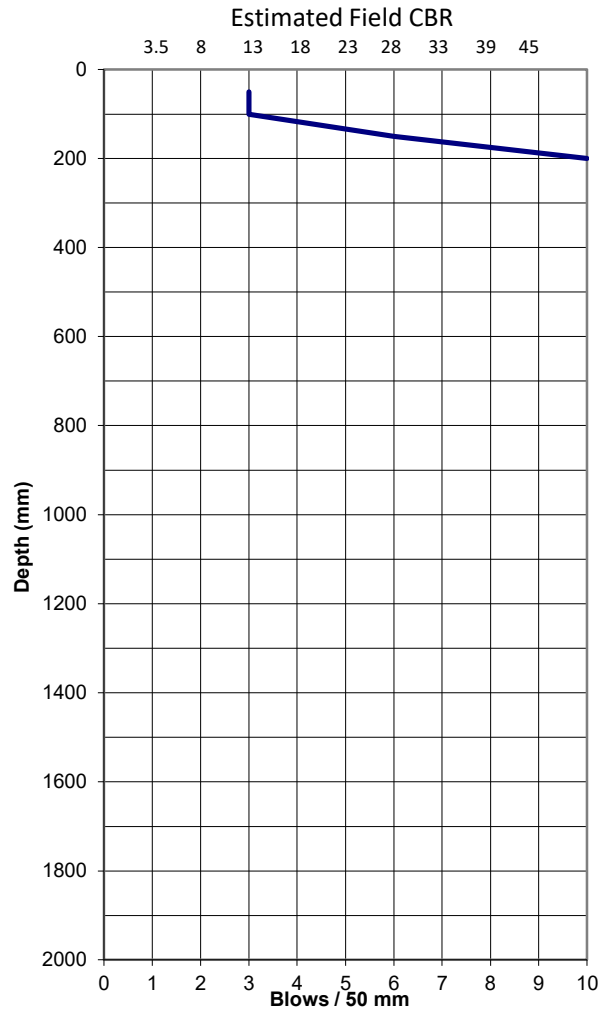
Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer



**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 254</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	3	1050	
100	3	1100	
150	6	1150	
200	10	1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



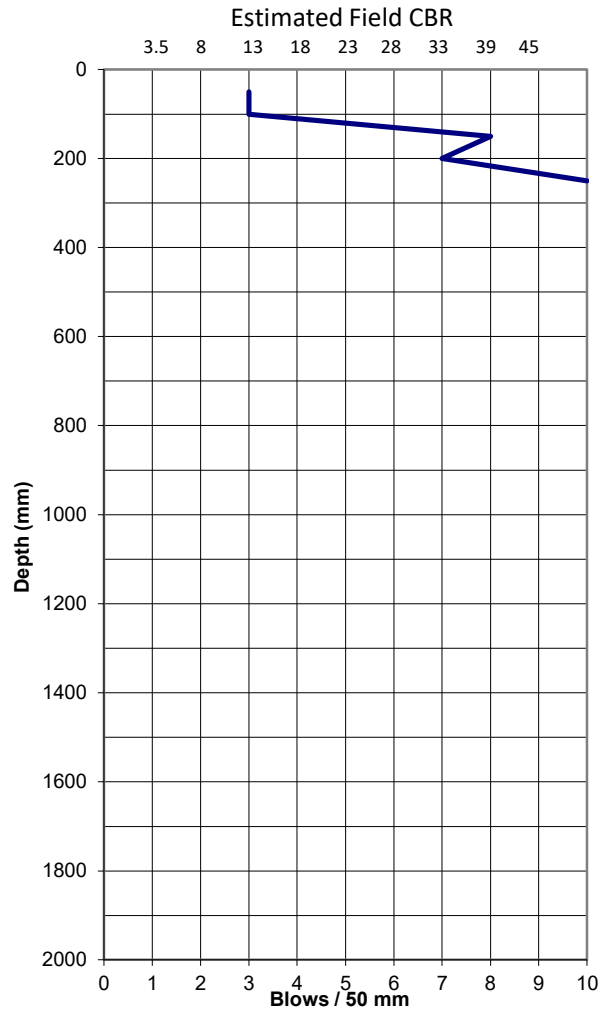
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 255</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	3	1050	
100	3	1100	
150	8	1150	
200	7	1200	
250	10	1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



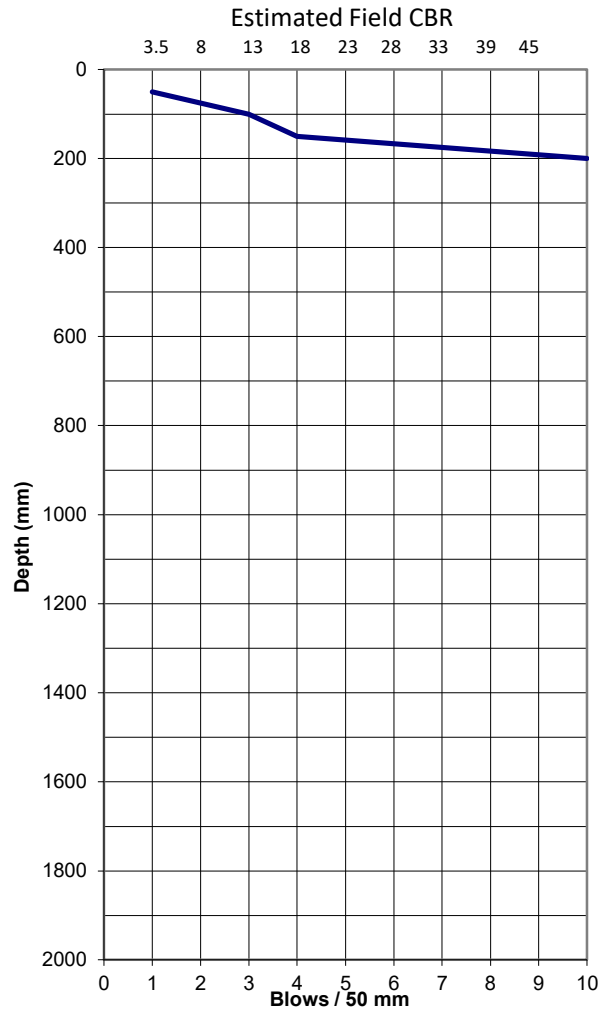
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 256</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	1	1050	
100	3	1100	
150	4	1150	
200	10	1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



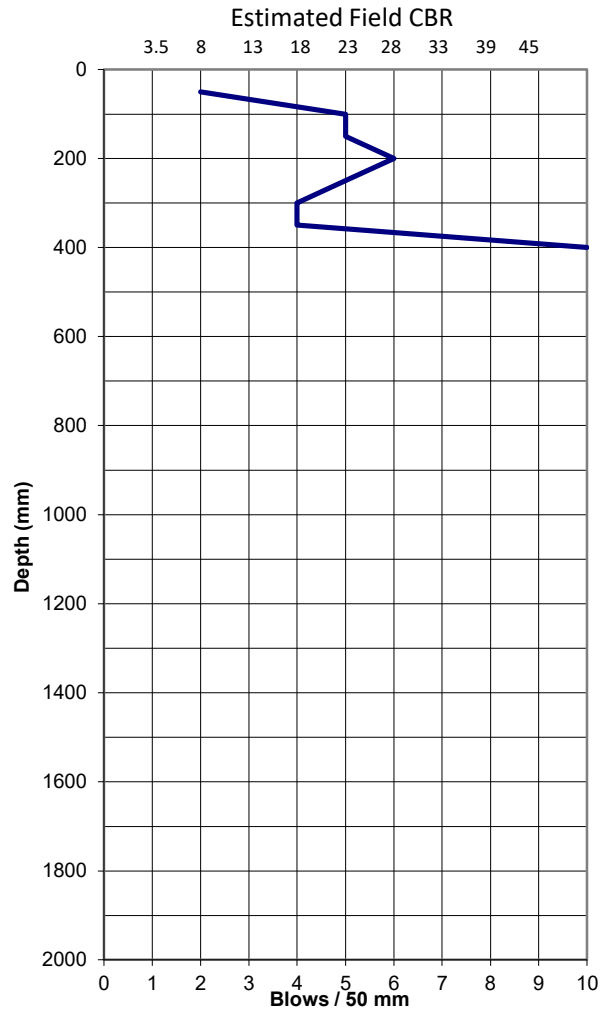
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 257</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	2	1050	
100	5	1100	
150	5	1150	
200	6	1200	
250	5	1250	
300	4	1300	
350	4	1350	
400	10	1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



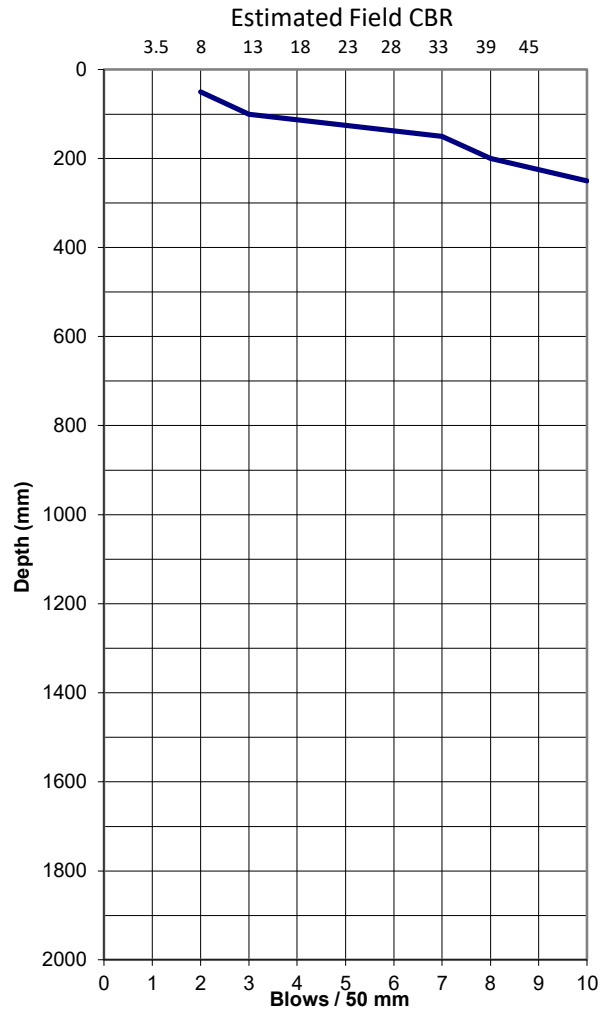
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 258</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	2	1050	
100	3	1100	
150	7	1150	
200	8	1200	
250	10	1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



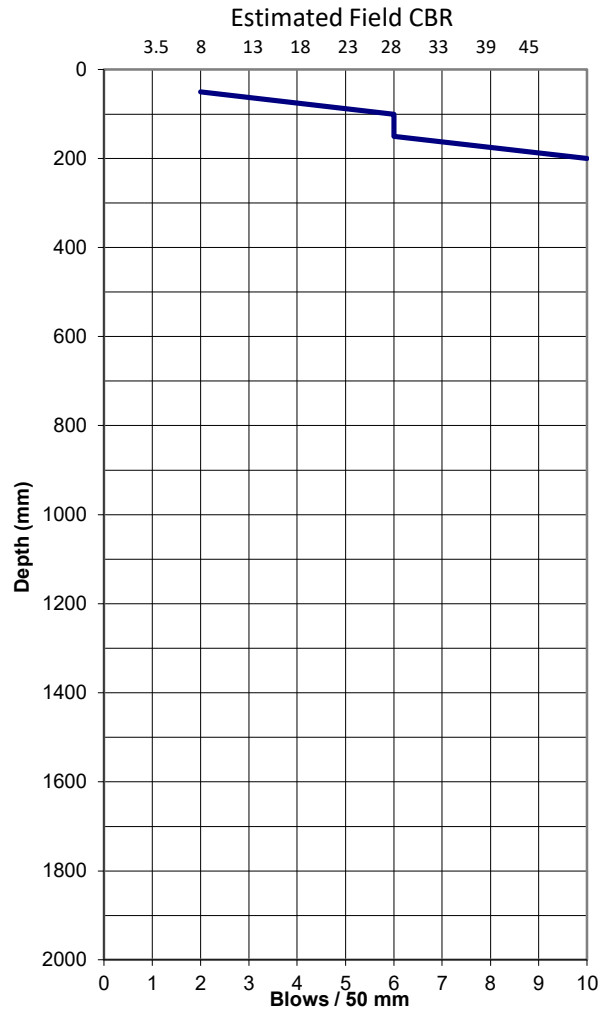
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 259</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	2	1050	
100	6	1100	
150	6	1150	
200	10	1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



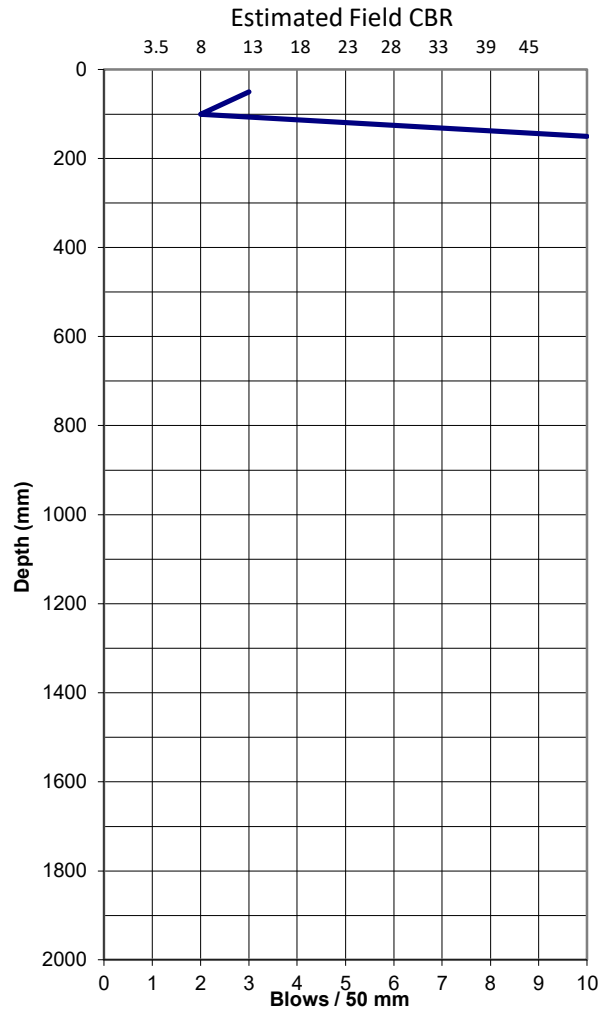
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 260</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	3	1050	
100	2	1100	
150	10	1150	
200		1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



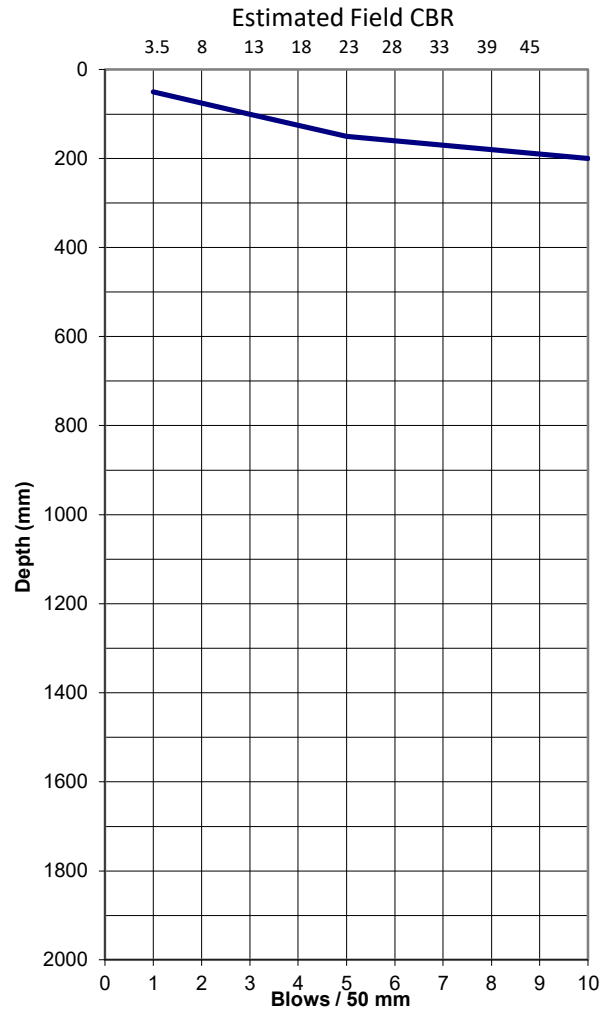
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 261</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	1	1050	
100	3	1100	
150	5	1150	
200	10	1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

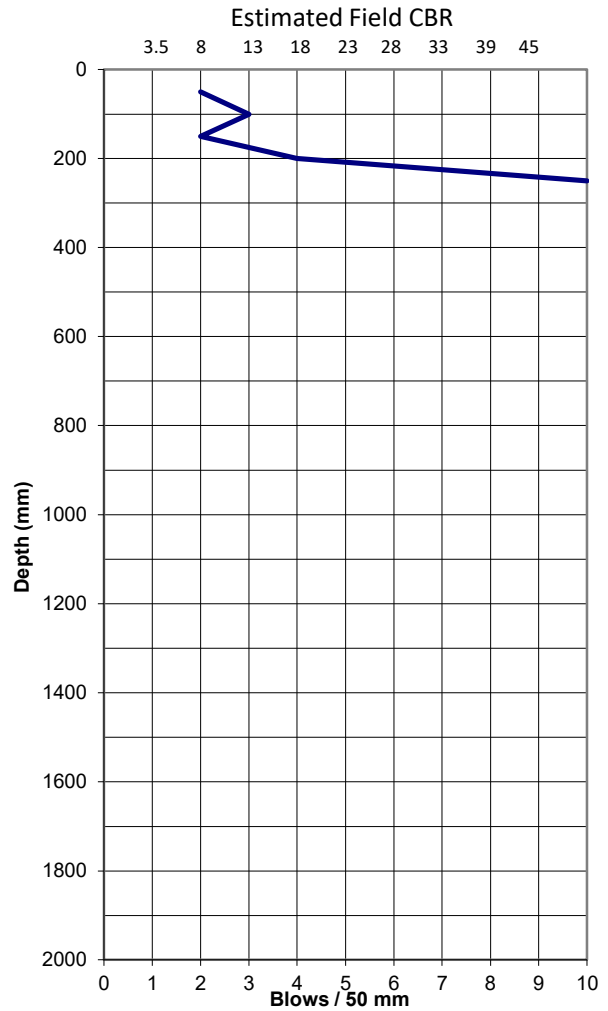
Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer



**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 262</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	2	1050	
100	3	1100	
150	2	1150	
200	4	1200	
250	10	1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



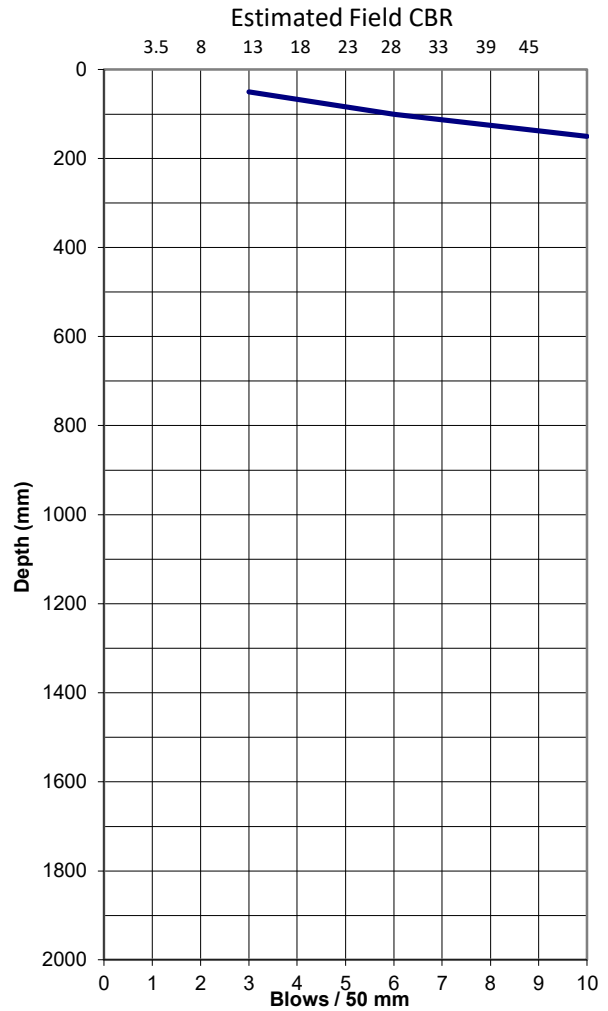
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 263</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	3	1050	
100	6	1100	
150	10	1150	
200		1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



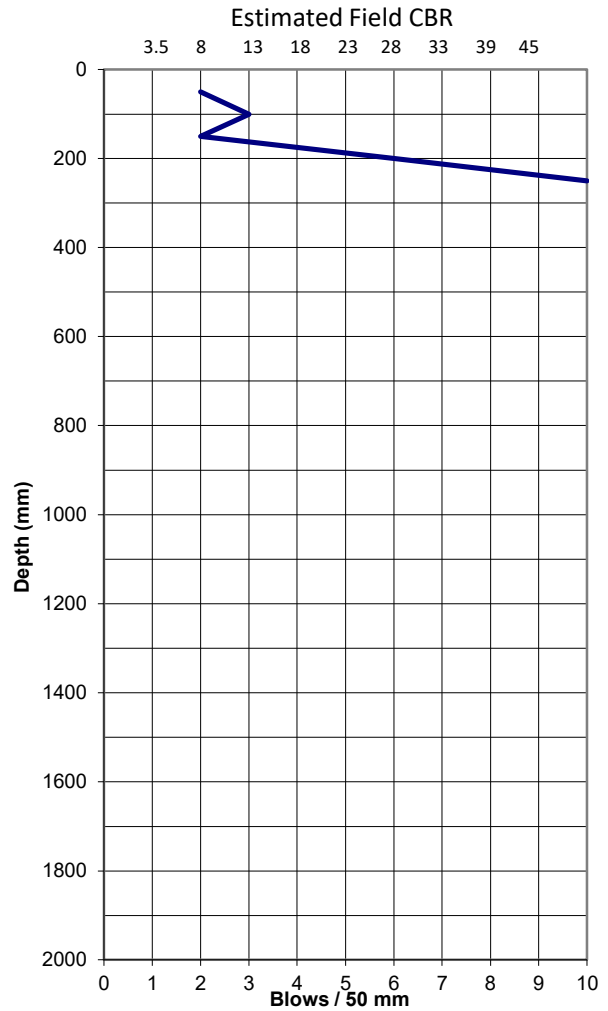
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 264</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	2	1050	
100	3	1100	
150	2	1150	
200	6	1200	
250	10	1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



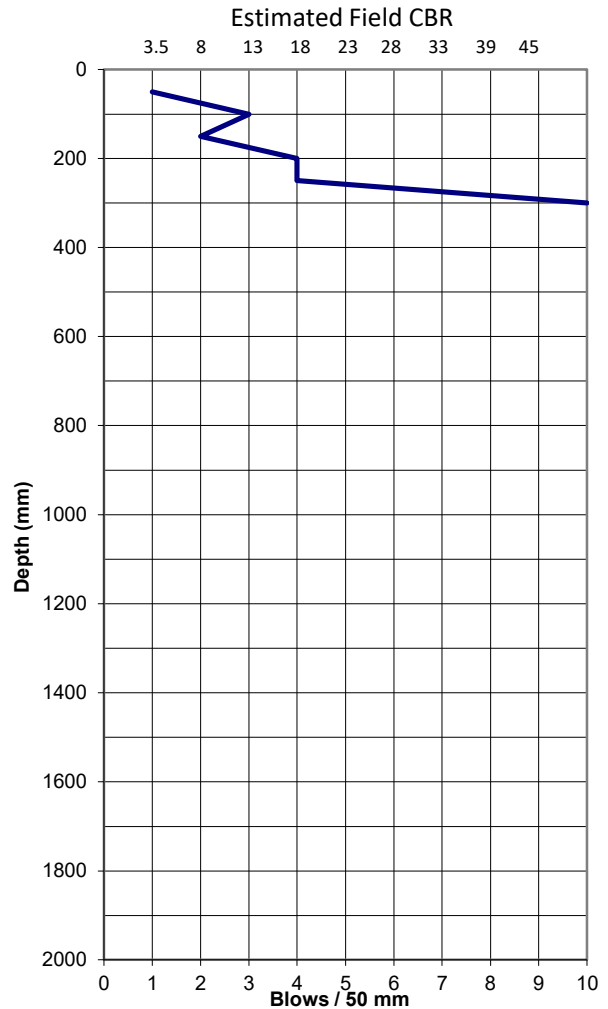
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 265</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	1	1050	
100	3	1100	
150	2	1150	
200	4	1200	
250	4	1250	
300	10	1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



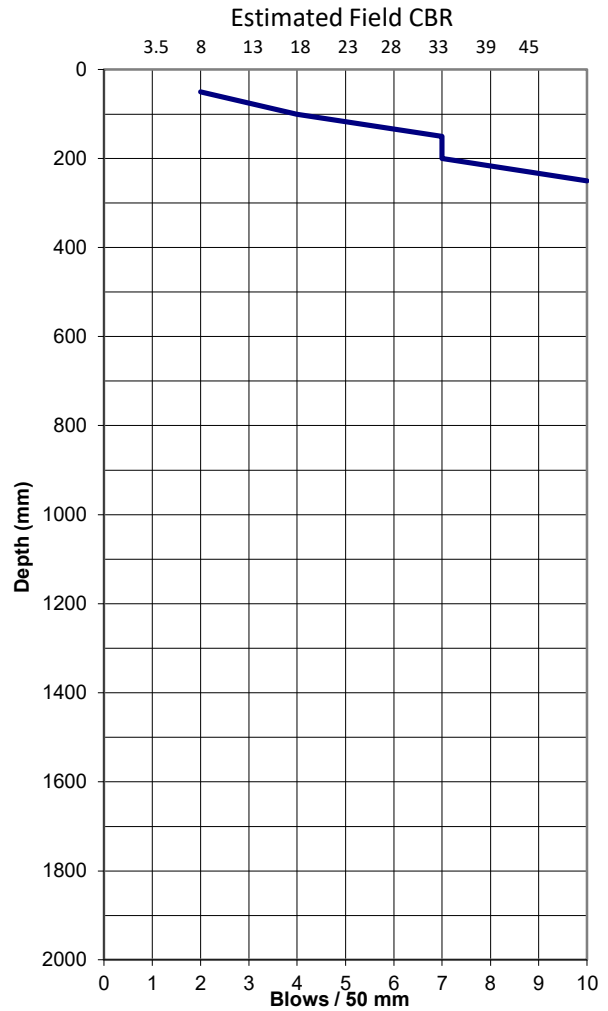
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 266</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	2	1050	
100	4	1100	
150	7	1150	
200	7	1200	
250	10	1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



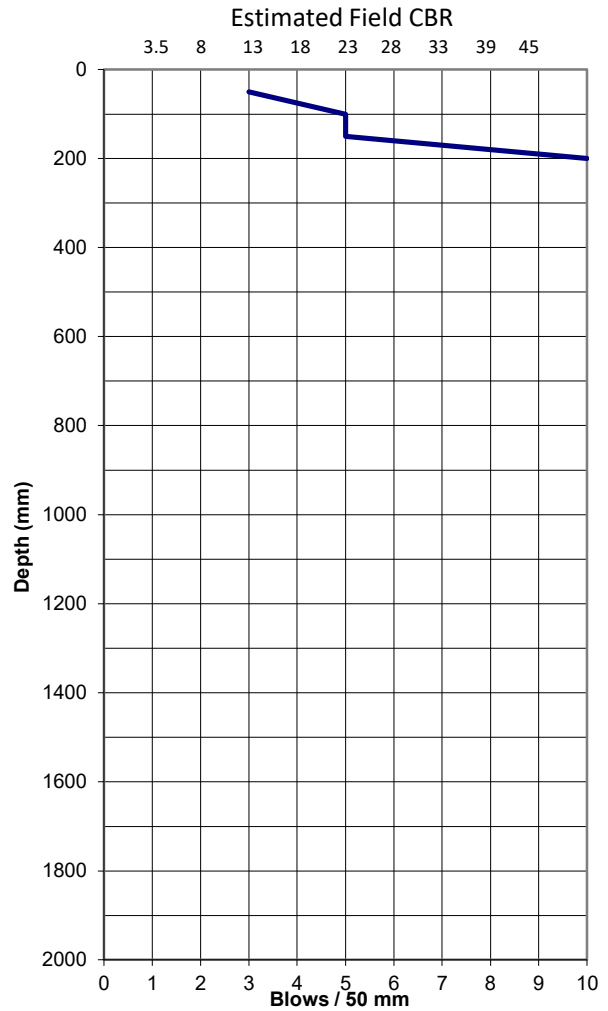
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 267</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	3	1050	
100	5	1100	
150	5	1150	
200	10	1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



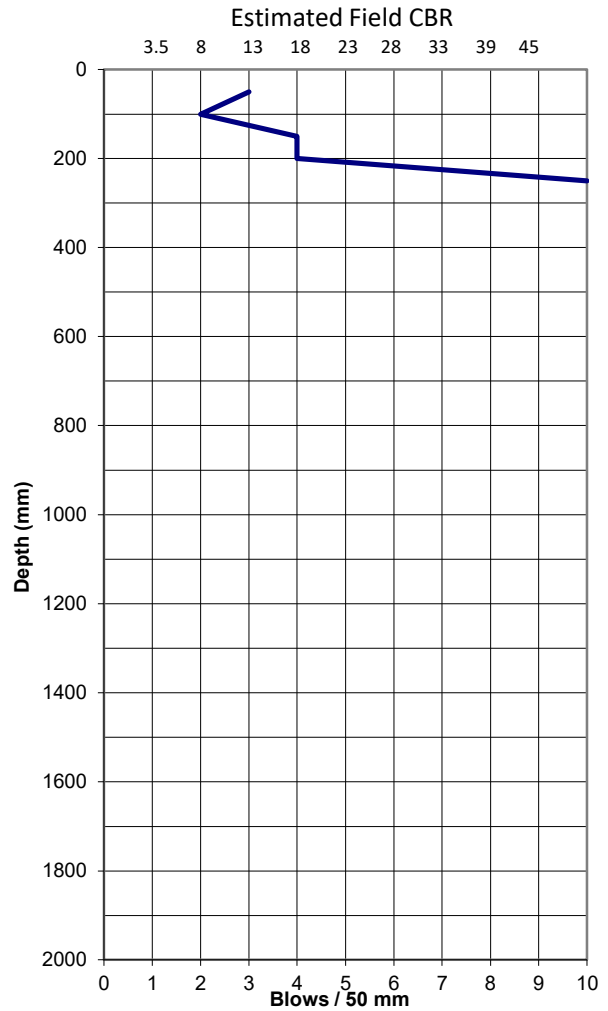
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 285</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	3	1050	
100	2	1100	
150	4	1150	
200	4	1200	
250	10	1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



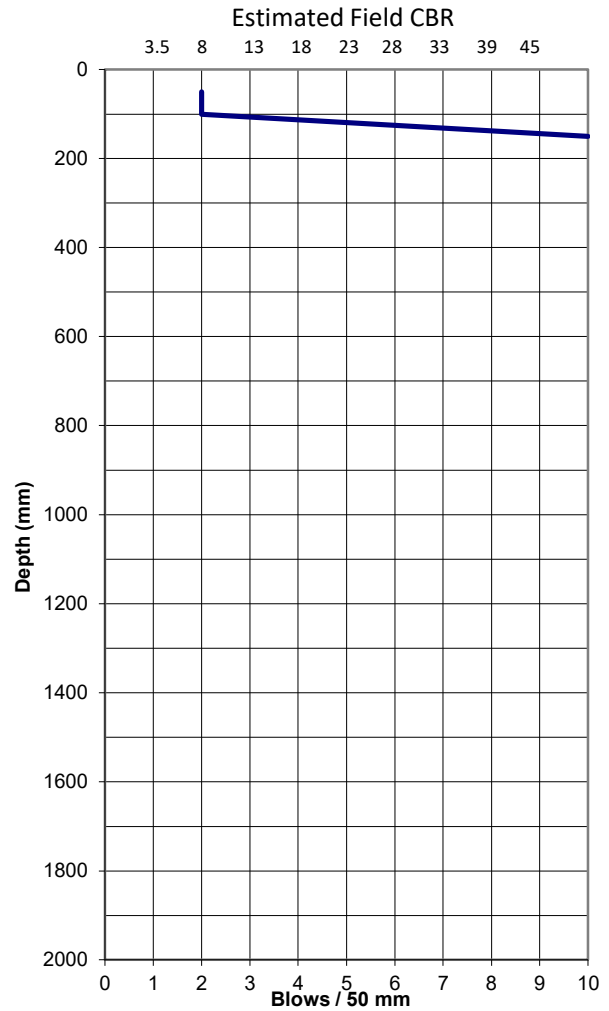
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 286</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	2	1050	
100	2	1100	
150	10	1150	
200		1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

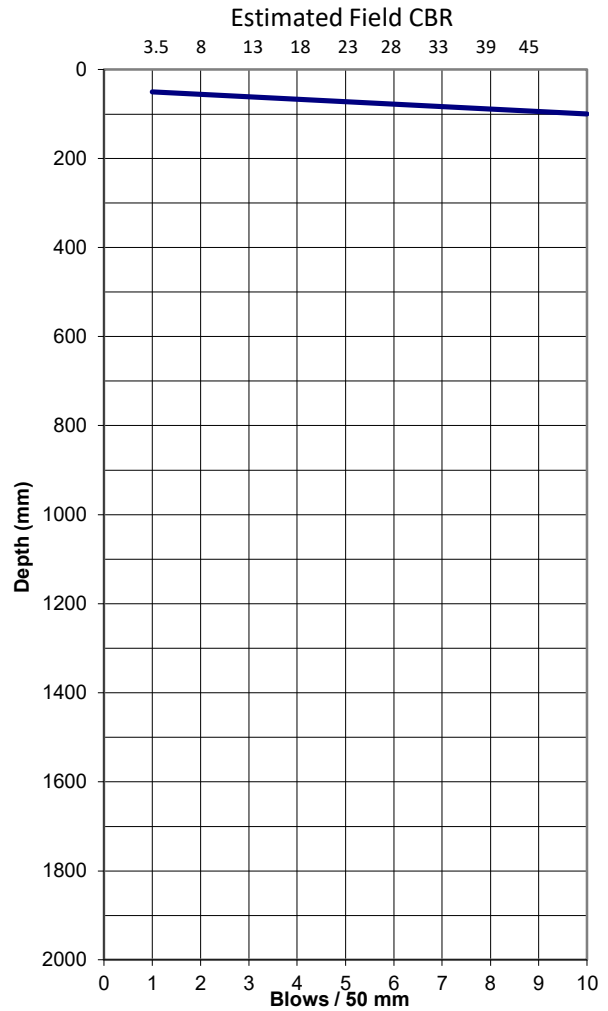
Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer



**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 287</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	1	1050	
100	10	1100	
150		1150	
200		1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



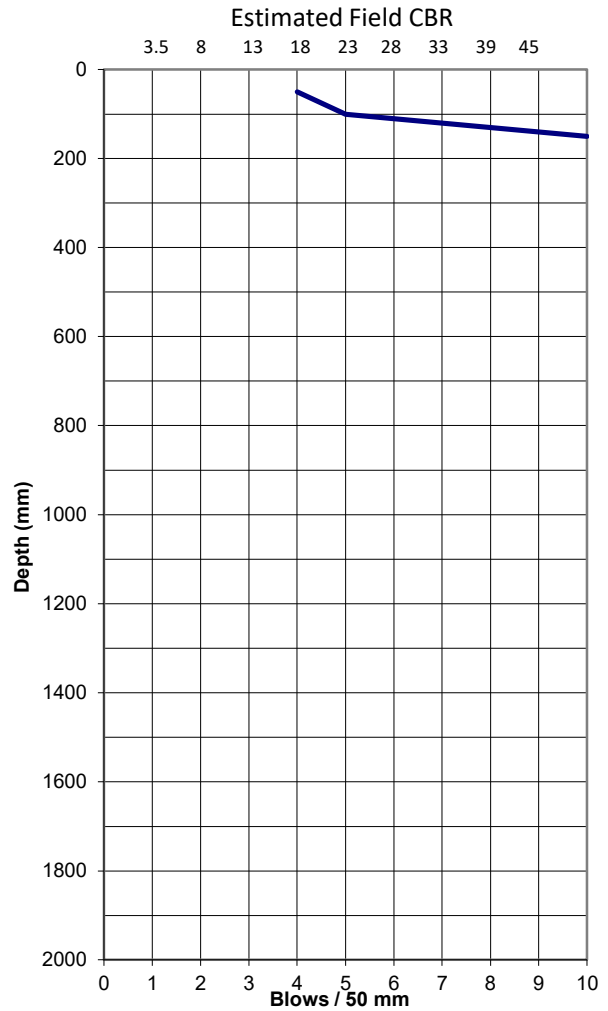
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 288</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	4	1050	
100	5	1100	
150	10	1150	
200		1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



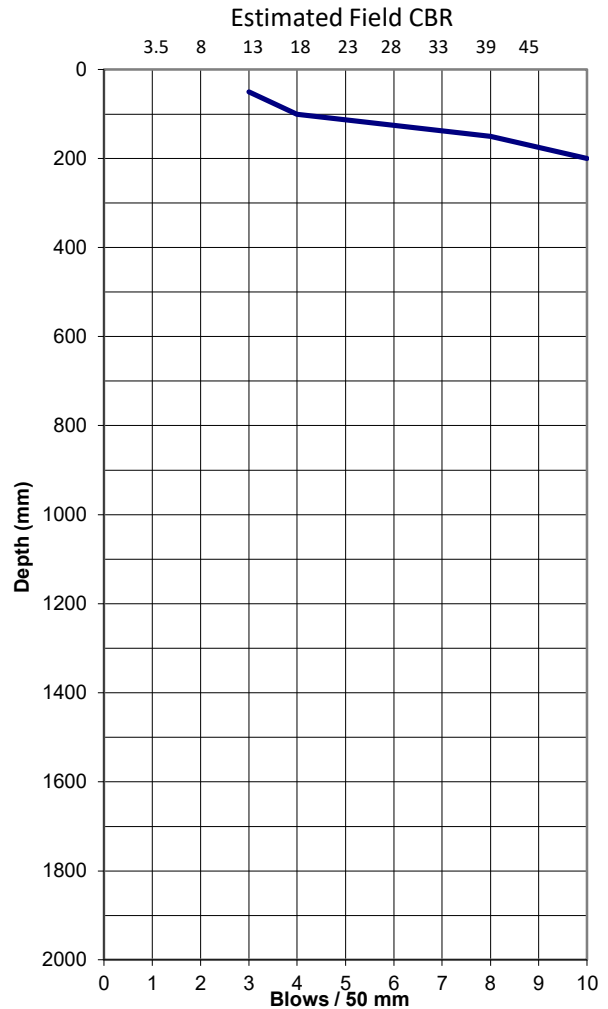
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 289</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	3	1050	
100	4	1100	
150	8	1150	
200	10	1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



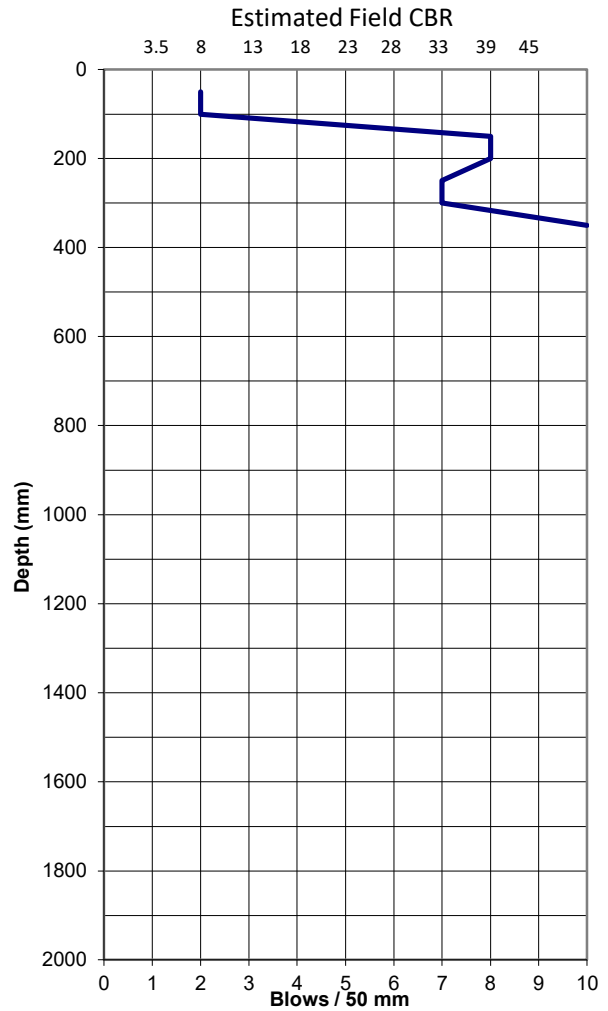
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 290</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	2	1050	
100	2	1100	
150	8	1150	
200	8	1200	
250	7	1250	
300	7	1300	
350	10	1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



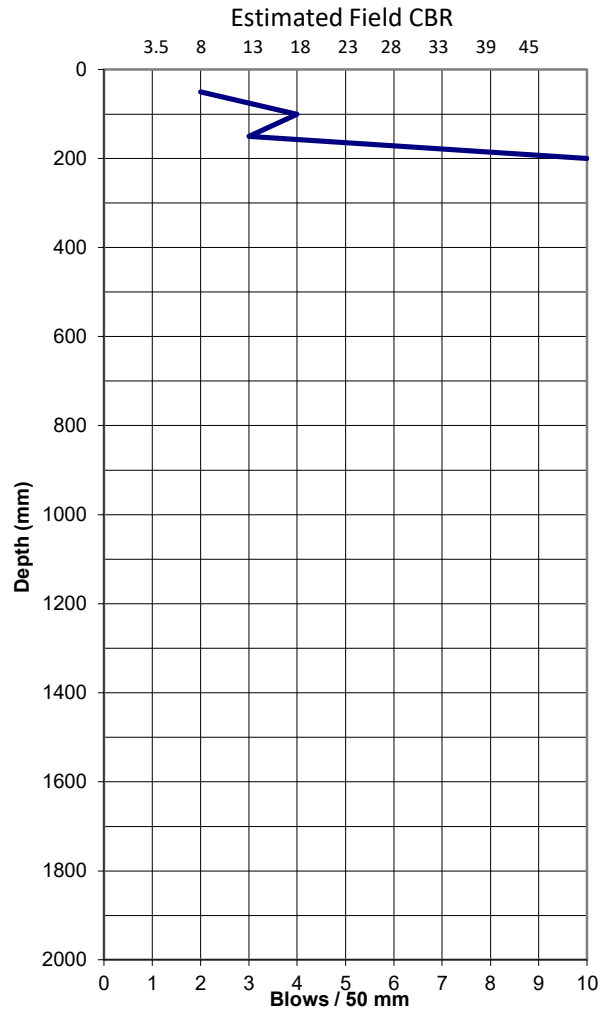
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 291</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	2	1050	
100	4	1100	
150	3	1150	
200	10	1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



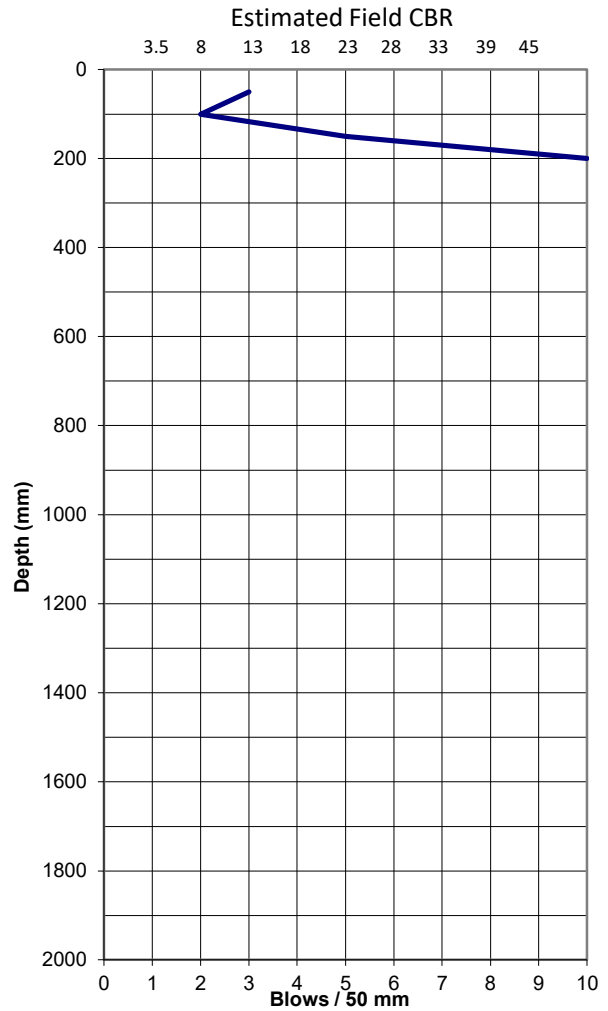
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 292</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	3	1050	
100	2	1100	
150	5	1150	
200	10	1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



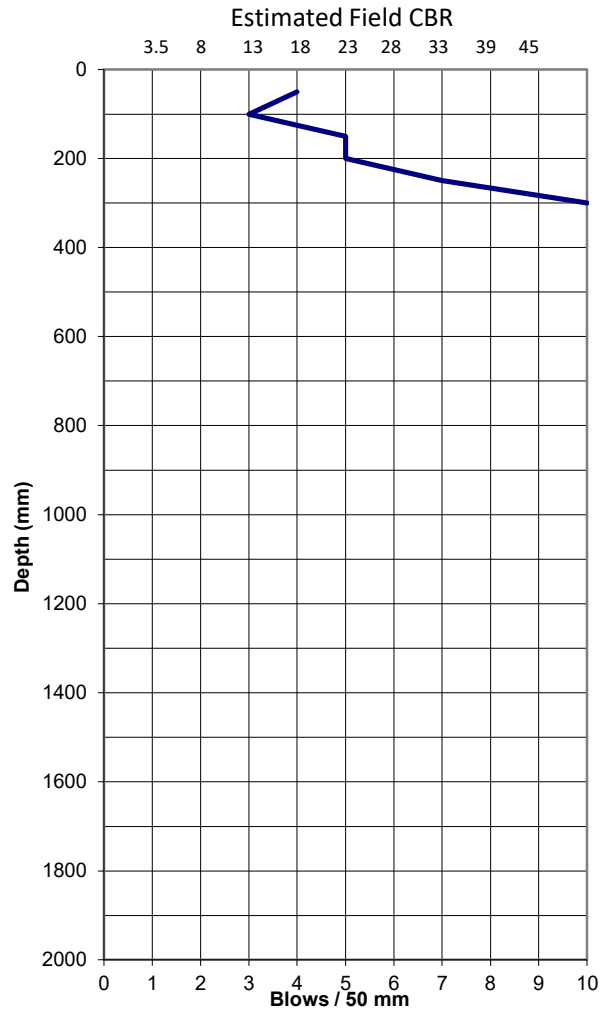
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 293</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	4	1050	
100	3	1100	
150	5	1150	
200	5	1200	
250	7	1250	
300	10	1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



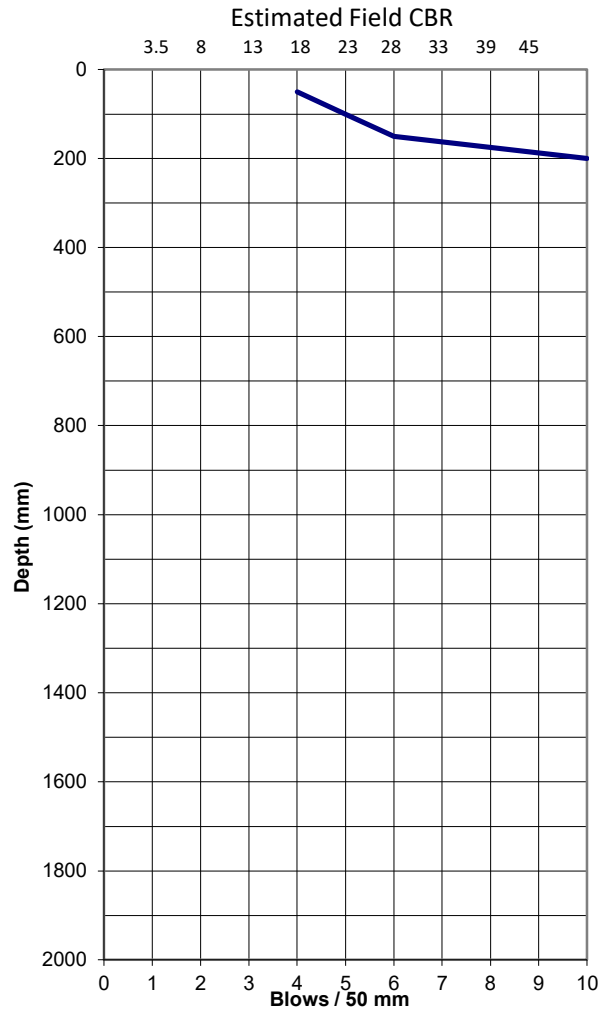
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 294</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	4	1050	
100	5	1100	
150	6	1150	
200	10	1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

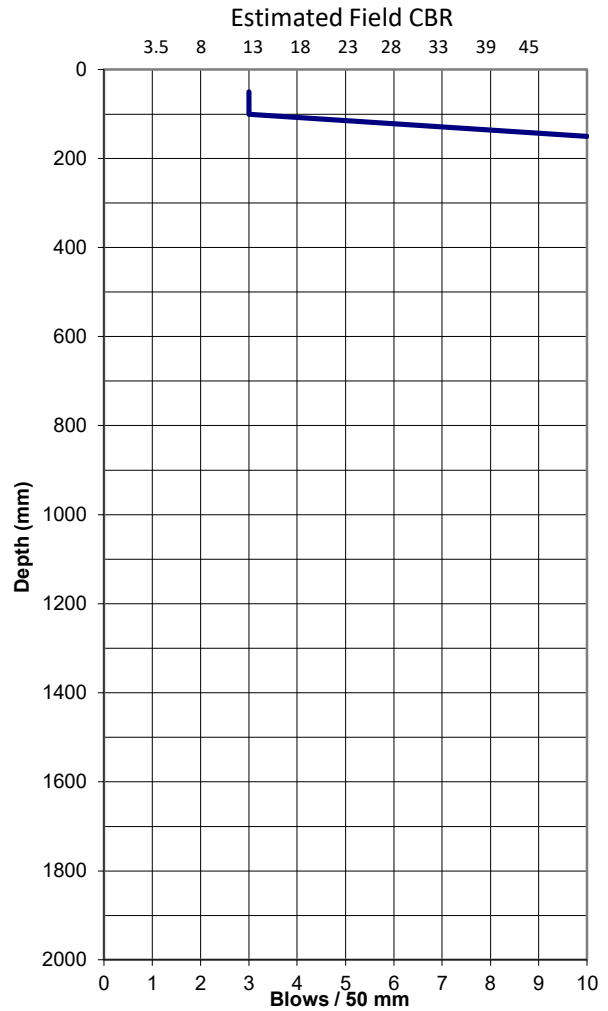
Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer



**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 295</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	3	1050	
100	3	1100	
150	10	1150	
200		1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



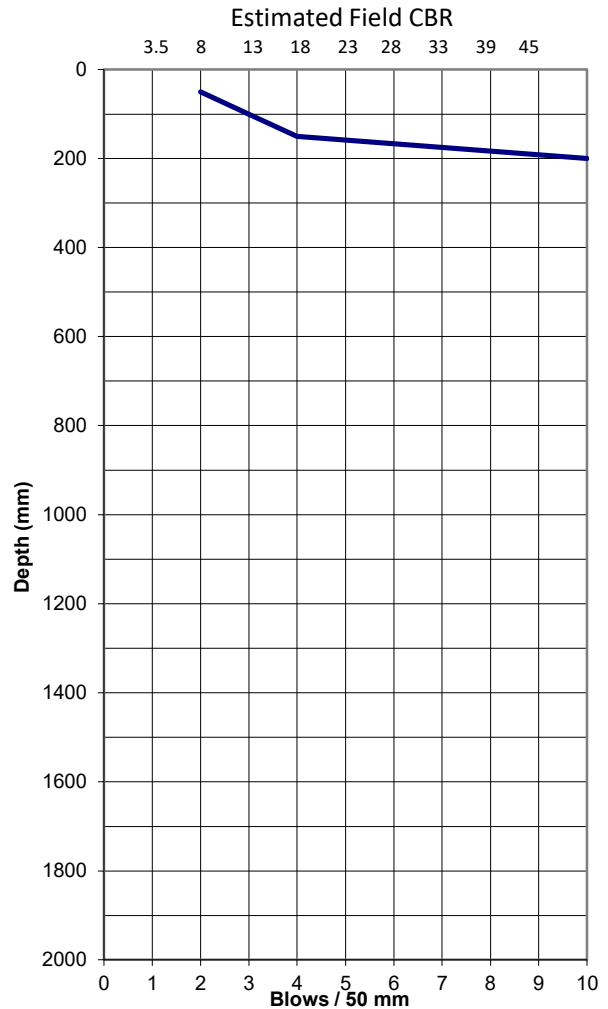
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 296</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	2	1050	
100	3	1100	
150	4	1150	
200	10	1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



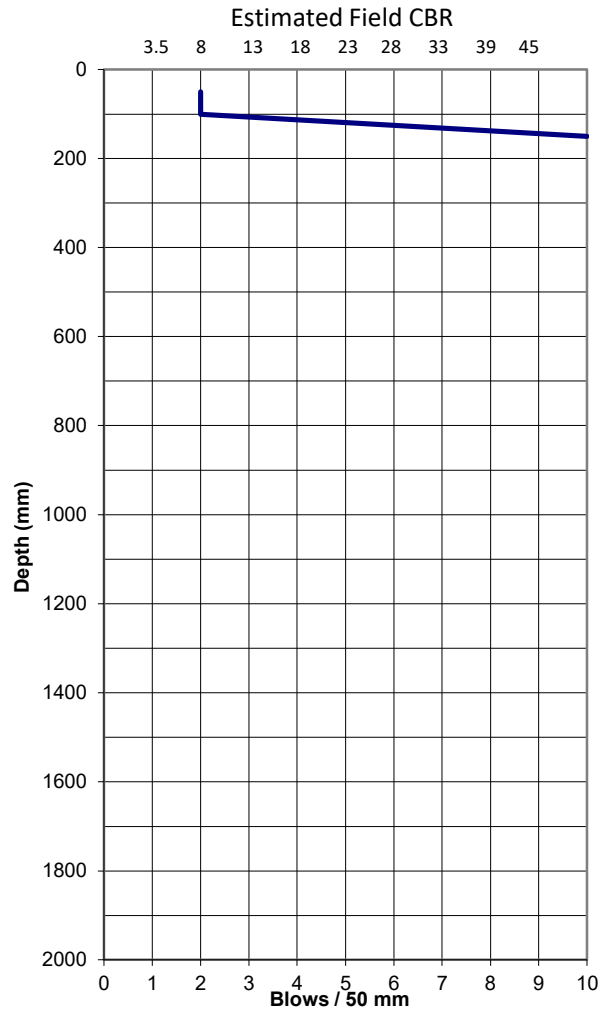
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 297</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	2	1050	
100	2	1100	
150	10	1150	
200		1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



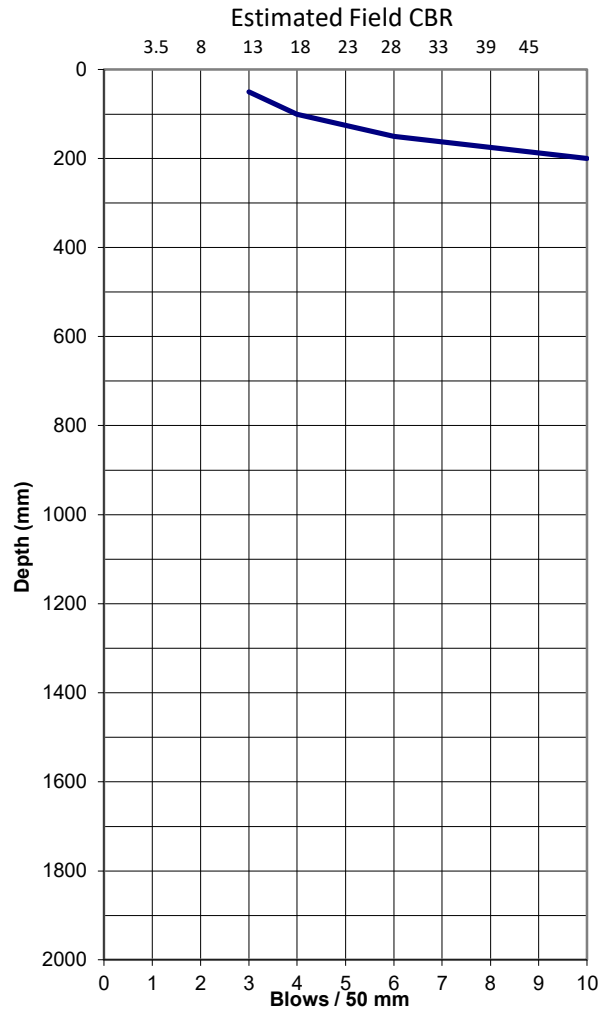
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 298</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	3	1050	
100	4	1100	
150	6	1150	
200	10	1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



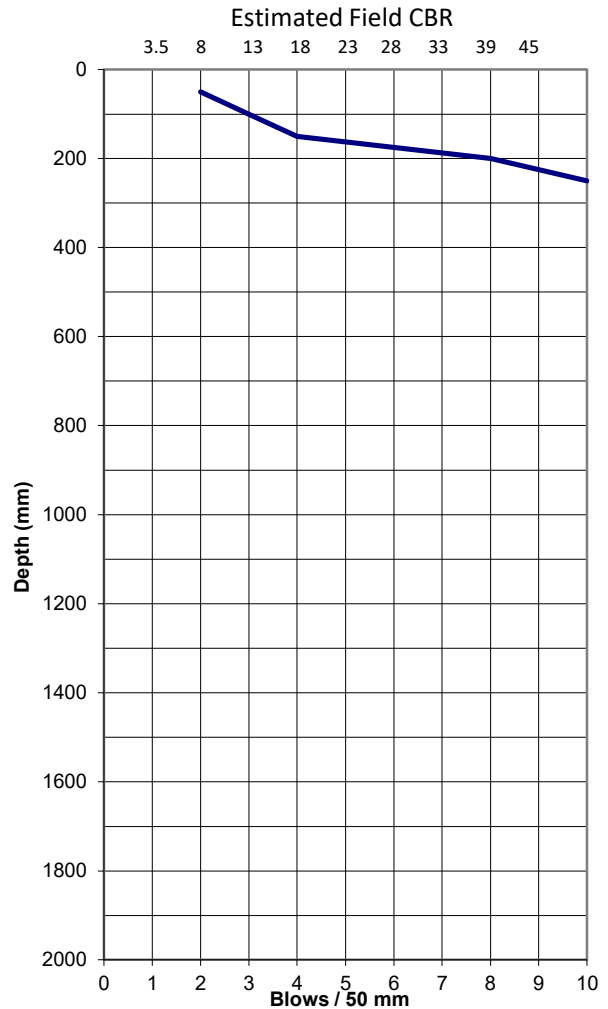
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 299</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	2	1050	
100	3	1100	
150	4	1150	
200	8	1200	
250	10	1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



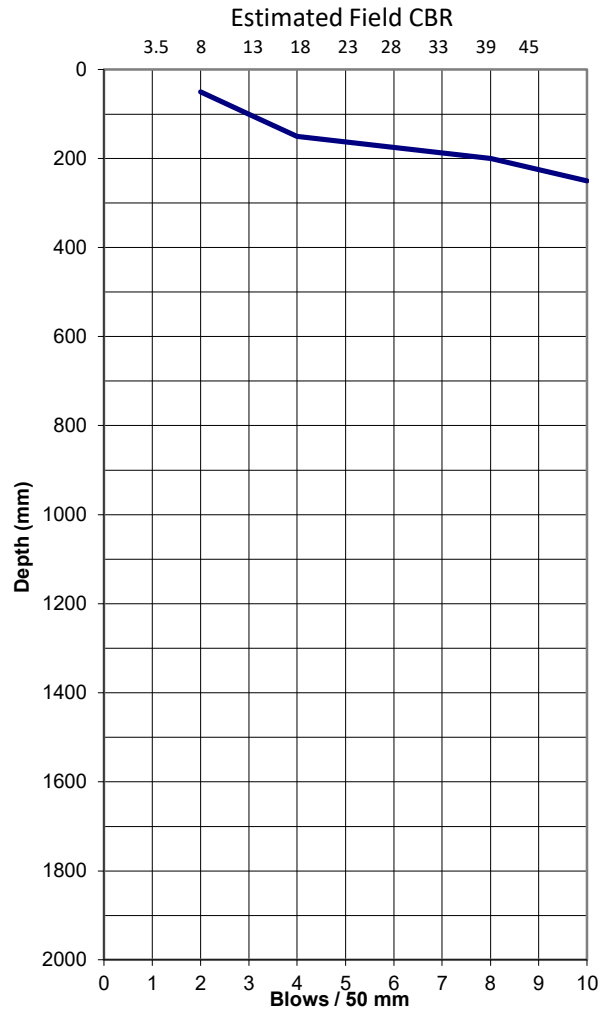
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 300</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	2	1050	
100	3	1100	
150	4	1150	
200	8	1200	
250	10	1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



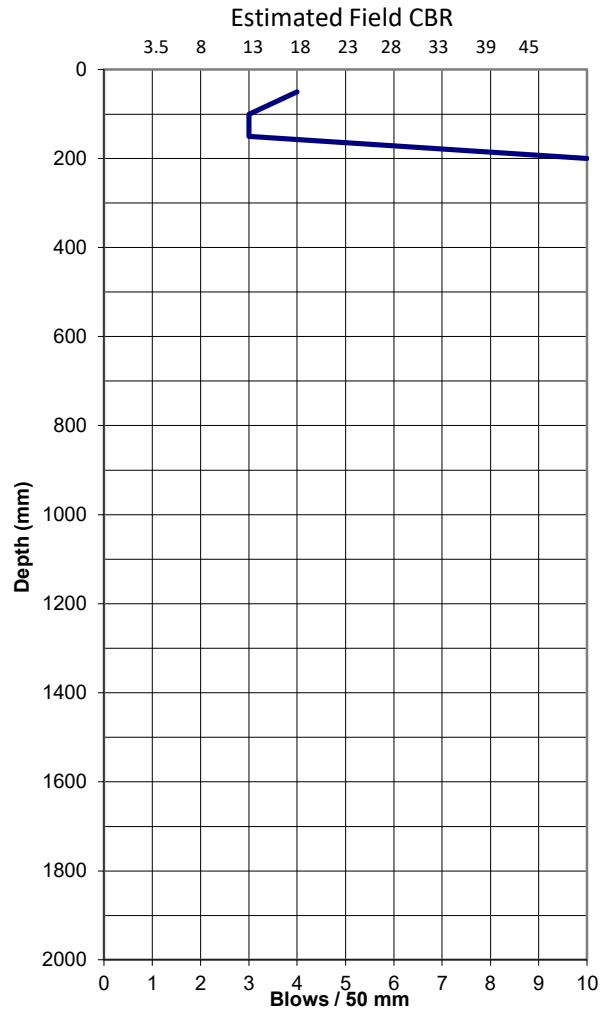
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 301</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	4	1050	
100	3	1100	
150	3	1150	
200	10	1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



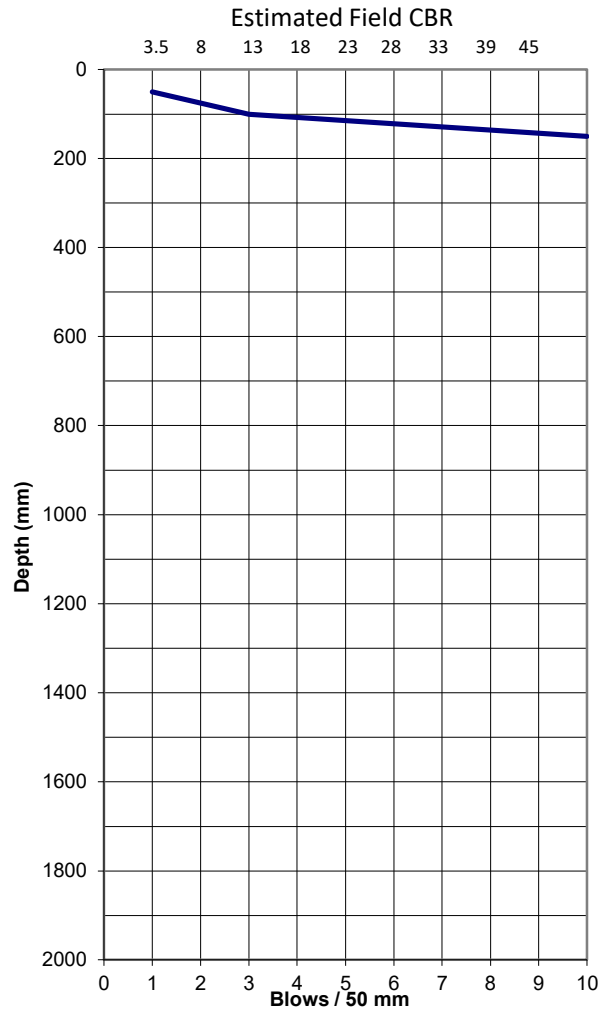
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 18/10/2022	<b>Test No. 302</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	1	1050	
100	3	1100	
150	10	1150	
200		1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

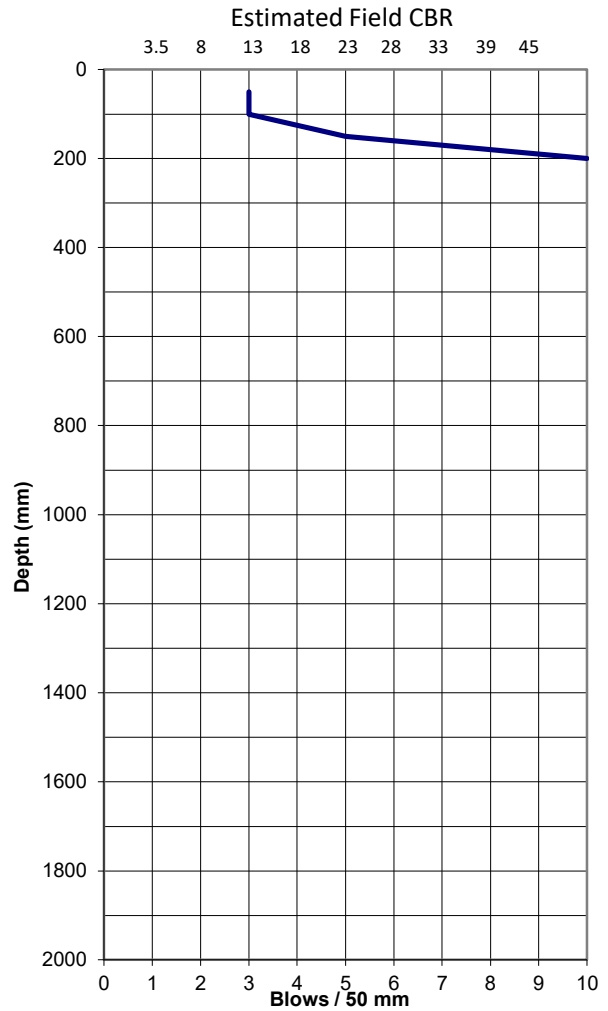
Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer



**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 9/03/2023	<b>Test No. 387</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	3	1050	
100	3	1100	
150	5	1150	
200	10	1200	
250		1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



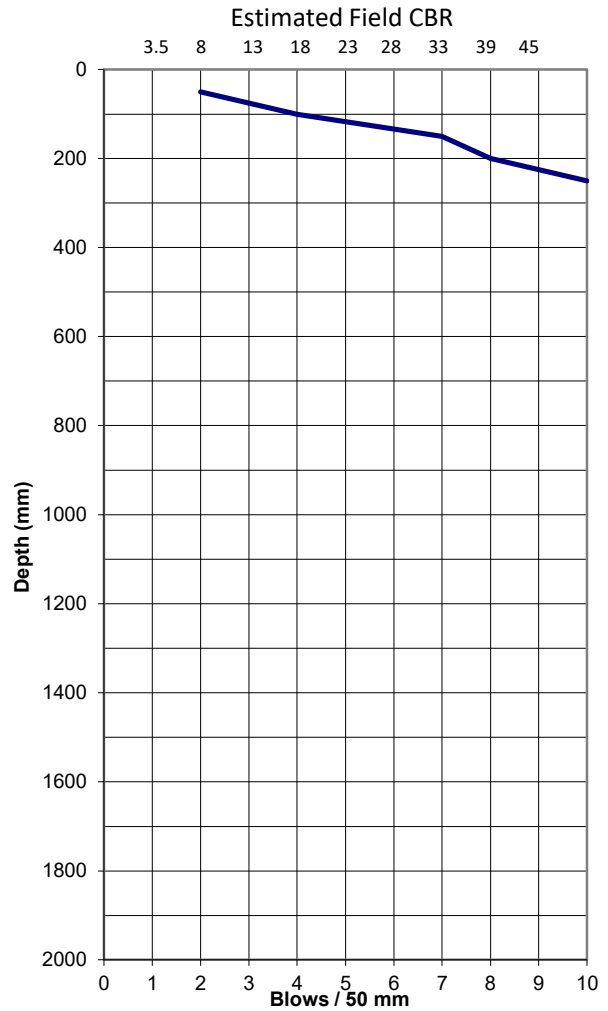
Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer

**SCALA PENETROMETER LOG**

Job No: 53246.9000	Date: 9/03/2023	<b>Test No. 388</b>
Project: Beach Grove Stage 5A & 5B	Operated by: PELE	<b>Sheet 1</b>
Location: Beach Grove, Kaiapoi	Logged by: PELE	<b>of 1</b>
RL: Unknown	Checked by: MACR	

mm Driven	No. of Blows	mm Driven	No. of Blows
50	2	1050	
100	4	1100	
150	7	1150	
200	8	1200	
250	10	1250	
300		1300	
350		1350	
400		1400	
450		1450	
500		1500	
550		1550	
600		1600	
650		1650	
700		1700	
750		1750	
800		1800	
850		1850	
900		1900	
950		1950	
1000		2000	



Note: The estimated CBR values are based upon Fig. 5, Correlation of Dynamic Cone Penetration and CBR AUSTROADS (1992) 'Pavement Design - A Guide to the Structural Design of Road Pavements'

Test Method Used: NZS 4402:1988 Test 6.5.2 Dynamic Cone Penetrometer