



EARTH ENVIRONMENTAL  
& GEOTECHNICAL

## Earth Environmental & Geotechnical Ltd

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## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

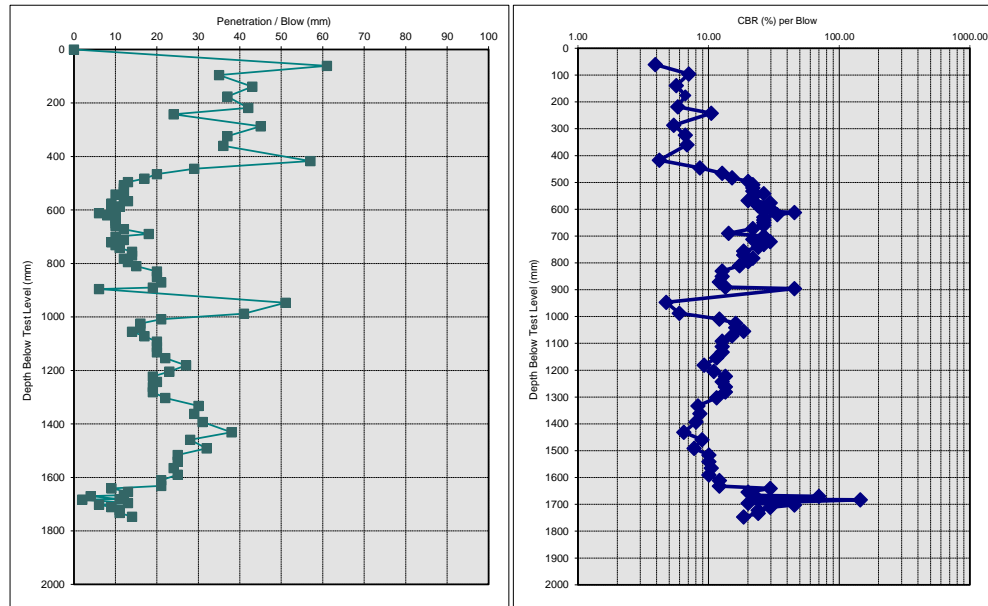
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference: WS01  
Date of Test: 16 August 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 50  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter  
  
Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)  
  
DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
(after TRL Road Note 8 & CS 229)

Remarks:



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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
50	496	0	11	41	6.03	55.59
496	1353	11	65	16	16.25	104.84
1353	1682	65	77	27	9.12	72.43
1682	1797	77	89	9.583333333	27.70	147.48



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## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

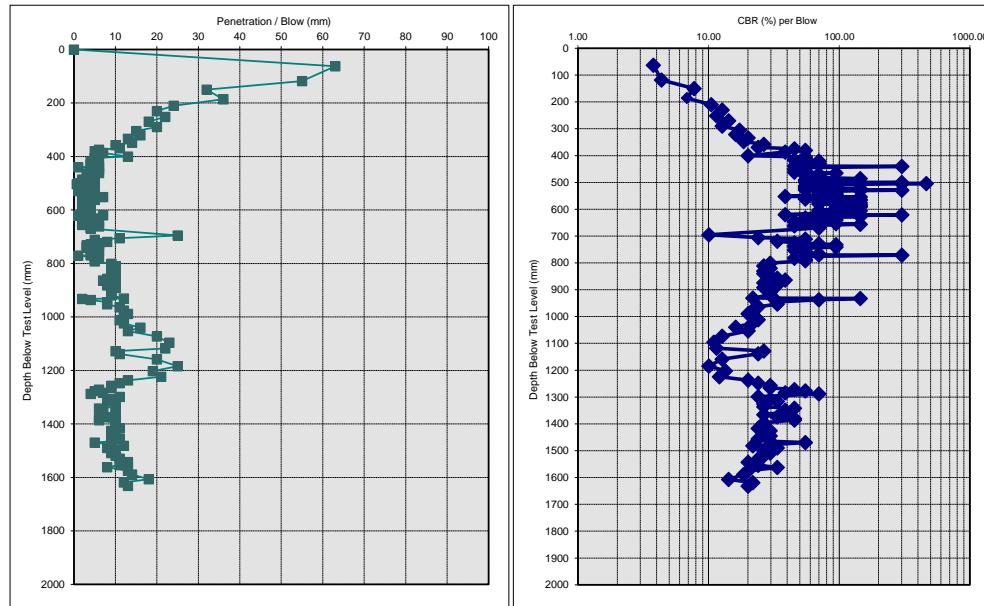
Location Reference: WS02  
Date of Test: 16 August 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 110  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter

Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)

DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
110	479	0	15	25	10.23	77.94
479	1134	15	141	5	52.88	223.07
1134	1376	141	156	16	15.97	103.68
1376	1742	156	195	9	28.32	149.59



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## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

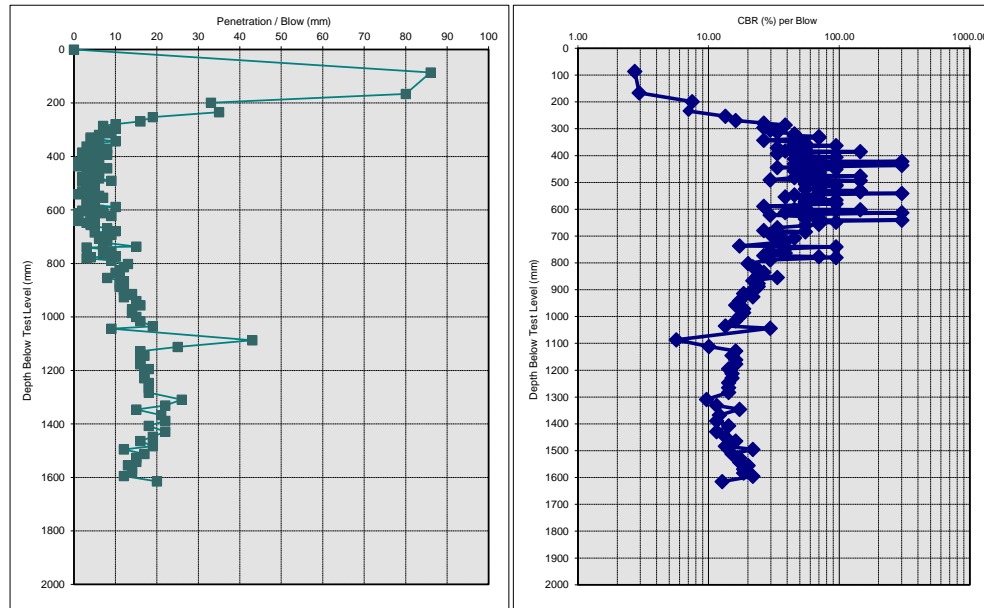
Location Reference: WS03  
Date of Test: 16 August 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 131  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter

Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)

DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
131	400	0	6	45	5.42	51.93
400	933	6	107	5	52.05	220.81
933	1175	107	126	13	20.51	121.66
1175	1746	126	157	18	13.89	94.79



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## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

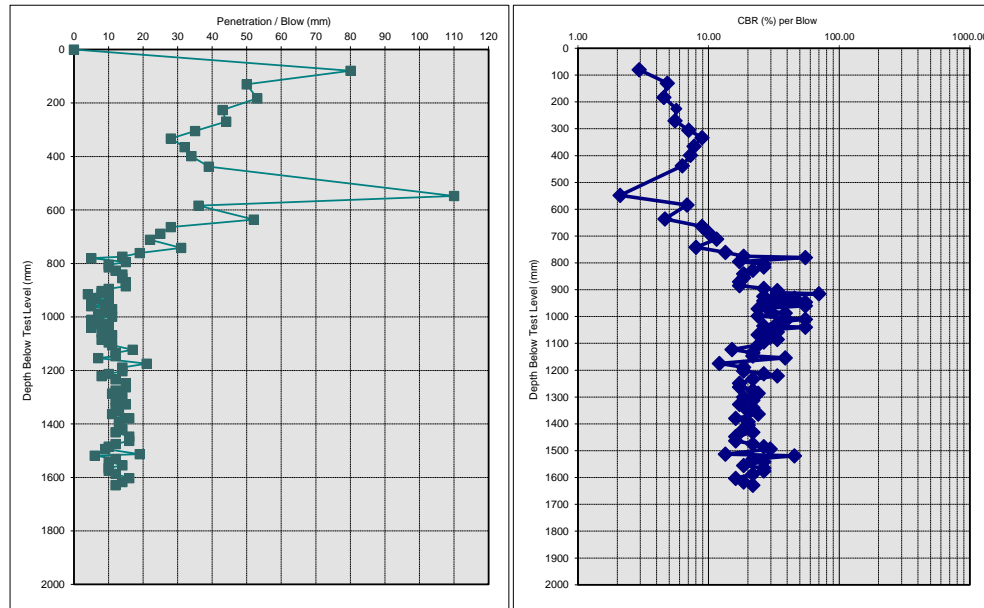
Location Reference: WS04  
Date of Test: 16 August 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 120  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter

Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)

DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
120	558	0	10	44	5.56	52.76
558	784	10	14	57	4.25	44.41
784	895	14	19	22	11.40	83.55
895	1749	19	96	11	23.74	133.60



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(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

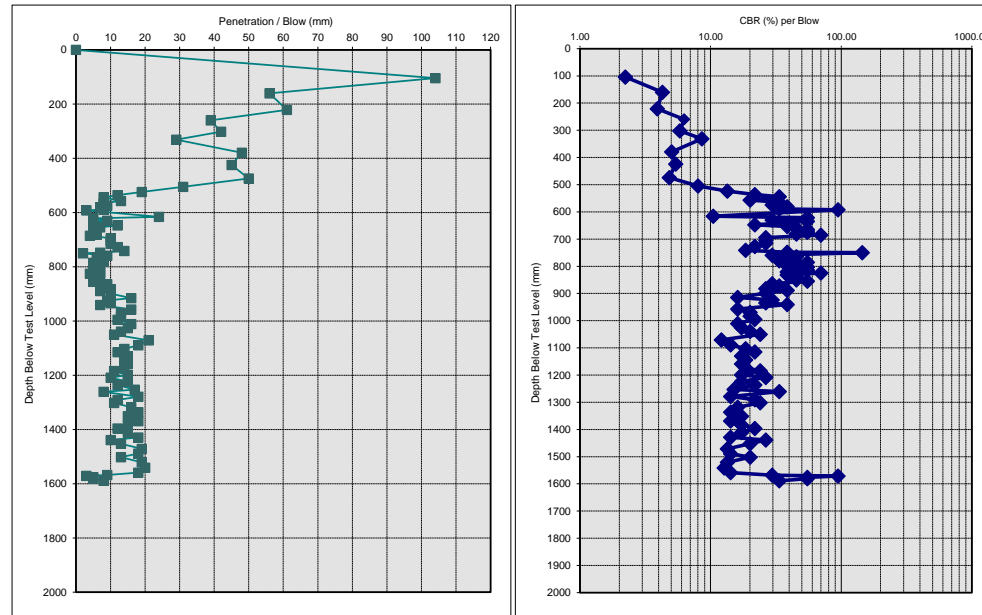
Location Reference: WS05  
Date of Test: 16 August 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 131  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter

Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)

DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
131	655	0	11	48	5.09	49.84
655	1690	11	106	11	24.19	135.22
1690	1720	106	111	6	45.45	202.45



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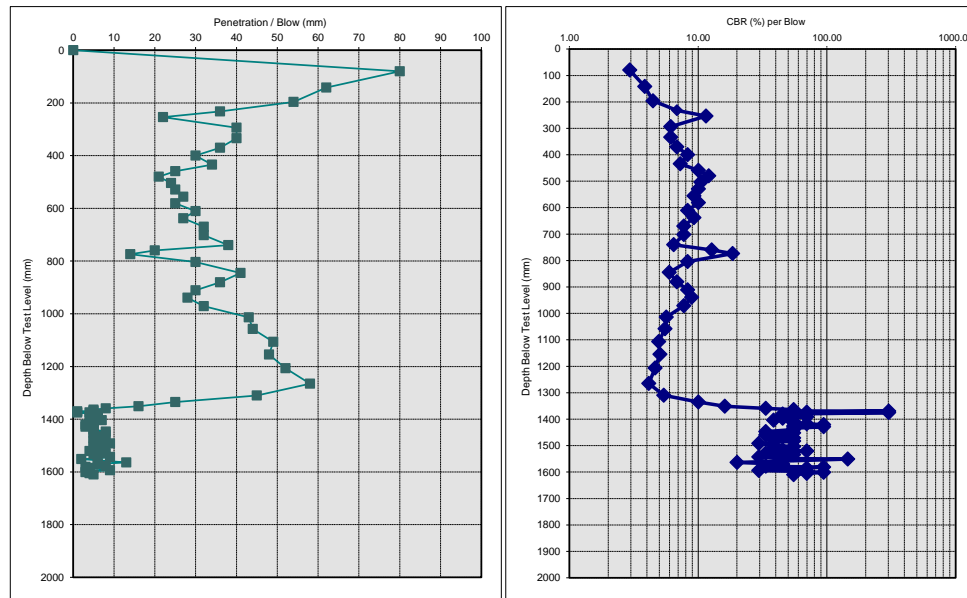
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference: WS06  
Date of Test: 16 August 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 130  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter  
  
Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)  
  
DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88



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## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

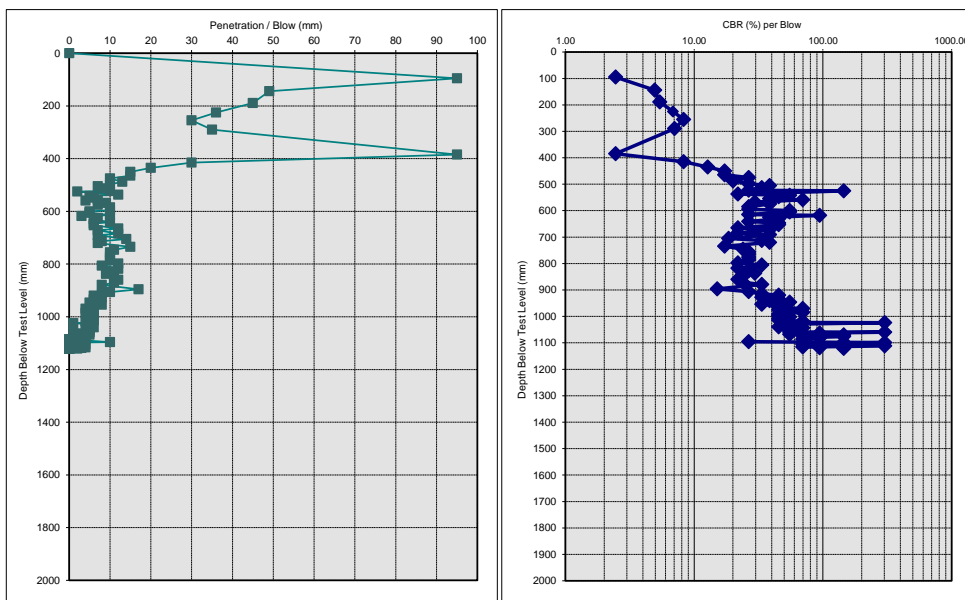
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference: WS07  
Date of Test: 30 August 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 115  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter  
  
Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)  
  
DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88



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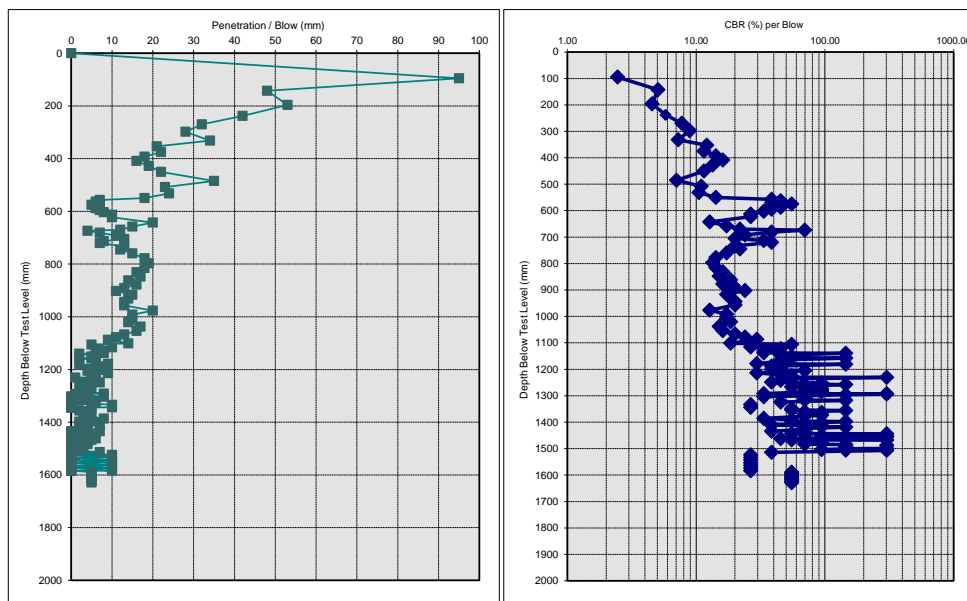
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference: WS08  
Date of Test: 30 August 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 115  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter  
  
Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)  
  
DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88





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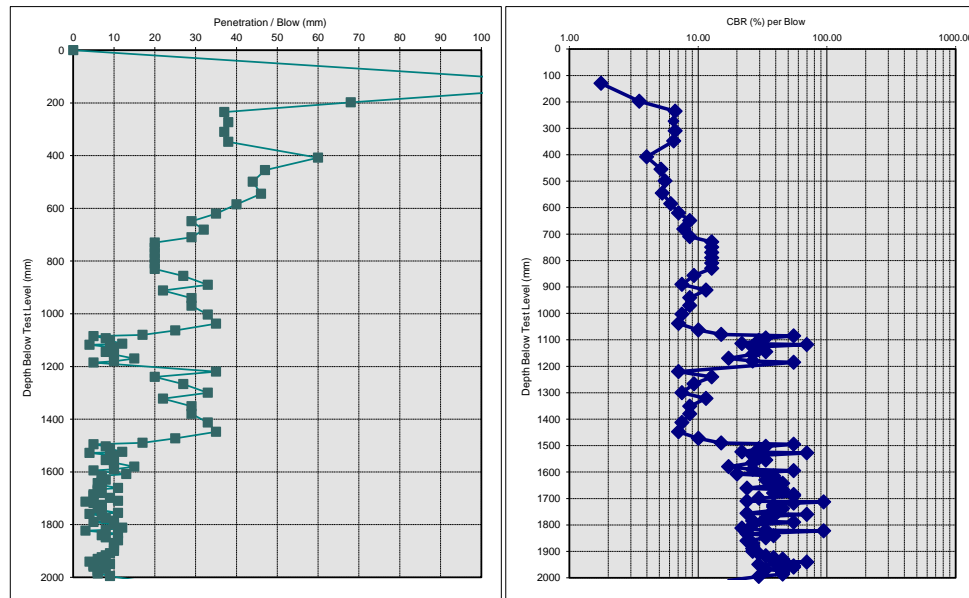
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference: WS09  
Date of Test: 30 August 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 115  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter  
  
Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)  
  
DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88



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## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

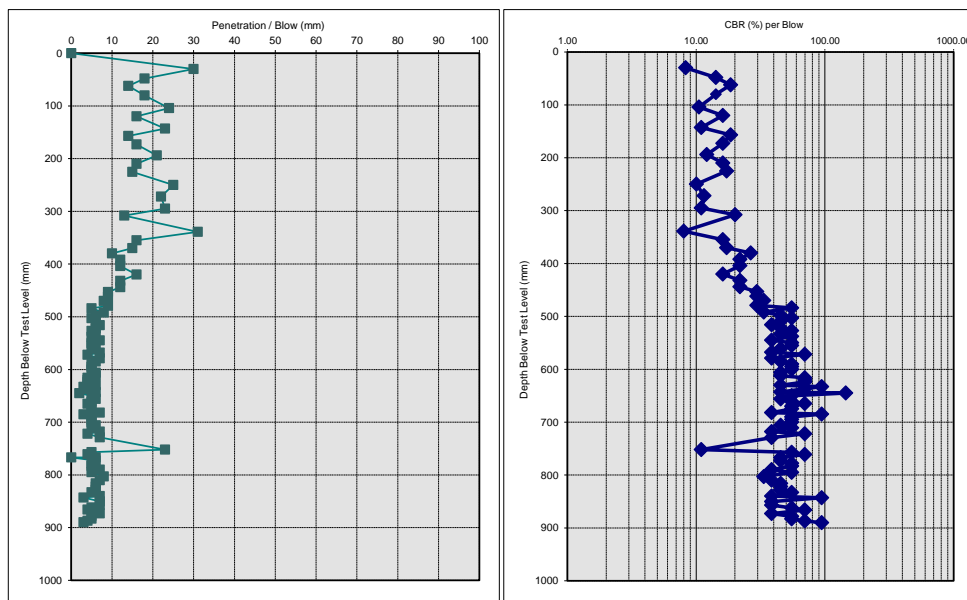
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference: WS10  
Date of Test: 06 September 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 50  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter  
  
Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)  
  
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Top	Base	Top	Base			
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362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
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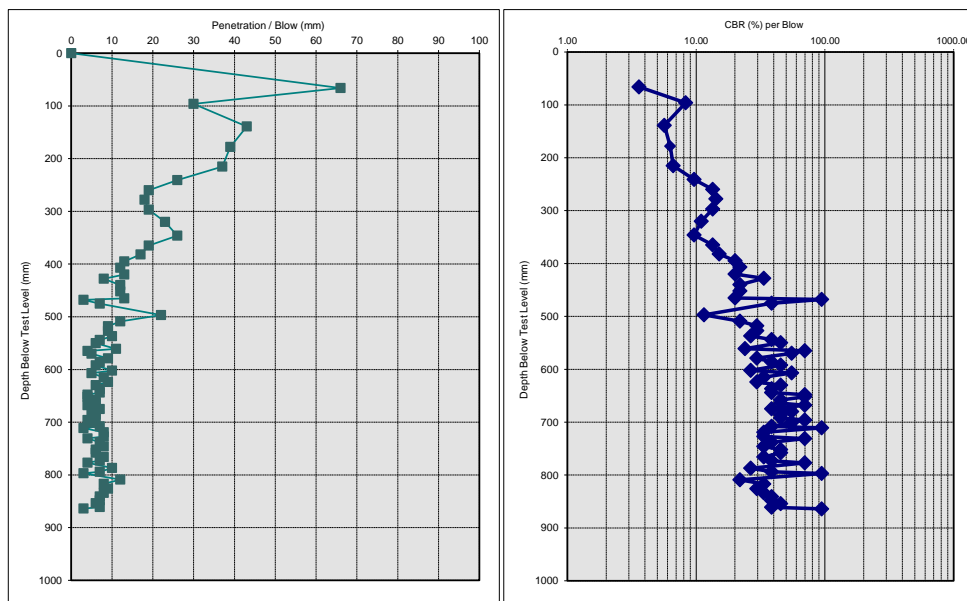
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference: WS11  
Date of Test: 06 September 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 76  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter  
  
Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)  
  
DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
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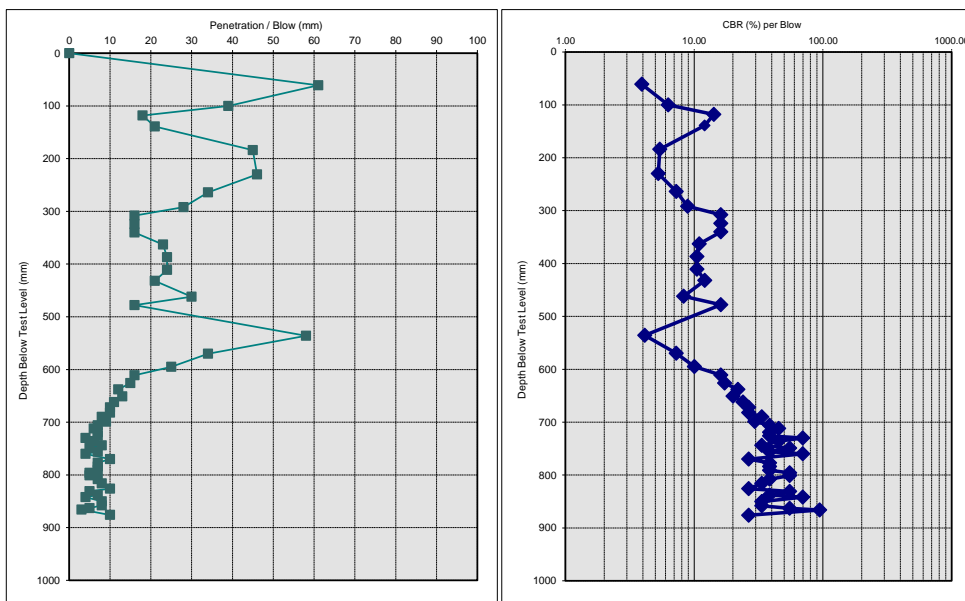
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference: WS12  
Date of Test: 06 September 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 64  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter  
  
Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)  
  
DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
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362	870	4	21	30	8.33	68.33
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1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88



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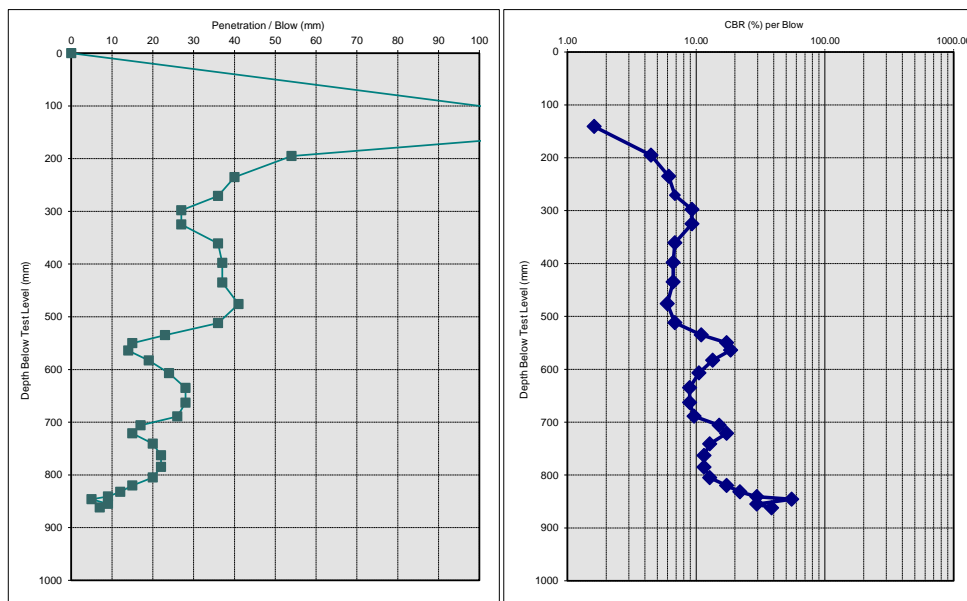
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference: WS13  
Date of Test: 06 September 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 88  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter  
  
Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)  
  
DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
(after TRL Road Note 8 & CS 229)

Remarks:



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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88



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## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

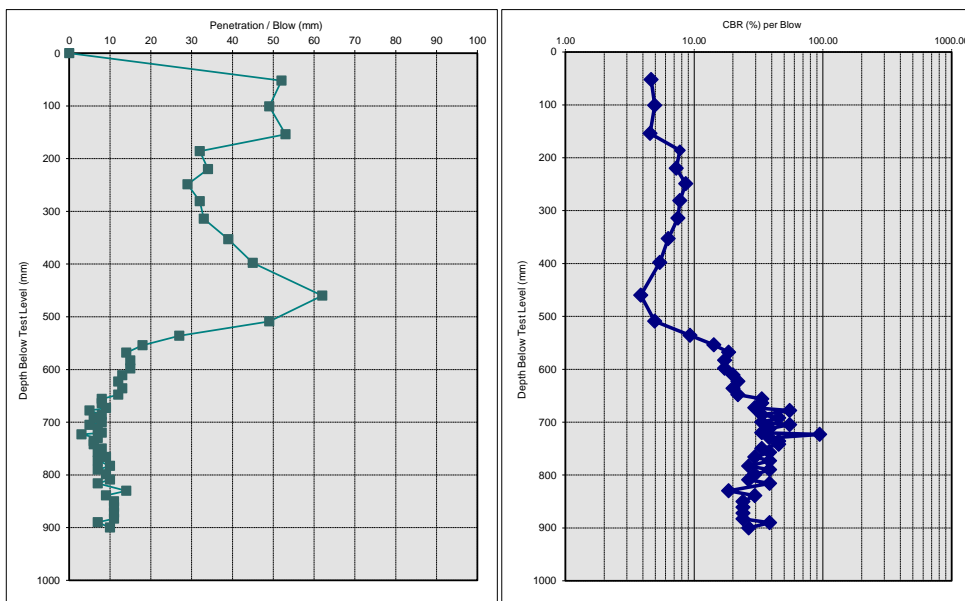
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference: WS14  
Date of Test: 06 September 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 40  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter  
  
Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)  
  
DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88



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## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

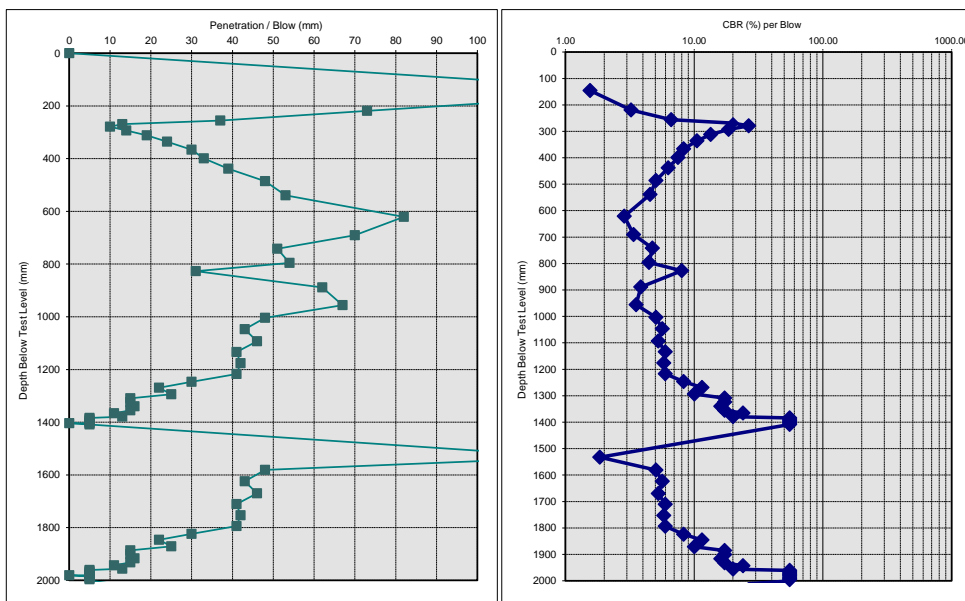
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference: WS15  
Date of Test: 30 August 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 94  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter  
  
Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)  
  
DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88



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## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

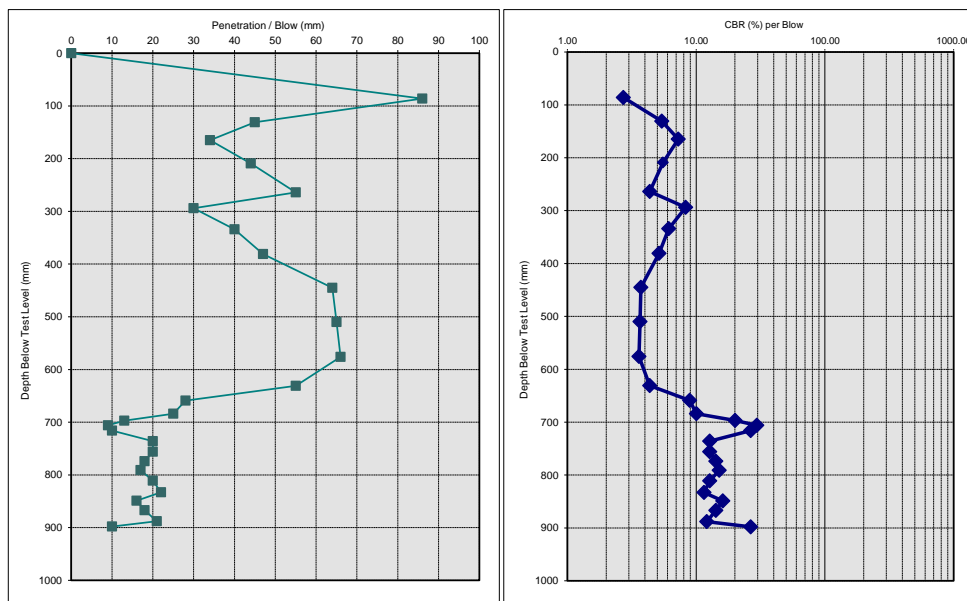
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference: WS16  
Date of Test: 06 September 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 52  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter  
Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)  
DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
(after TRL Road Note 8 & CS 229)

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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88





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## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

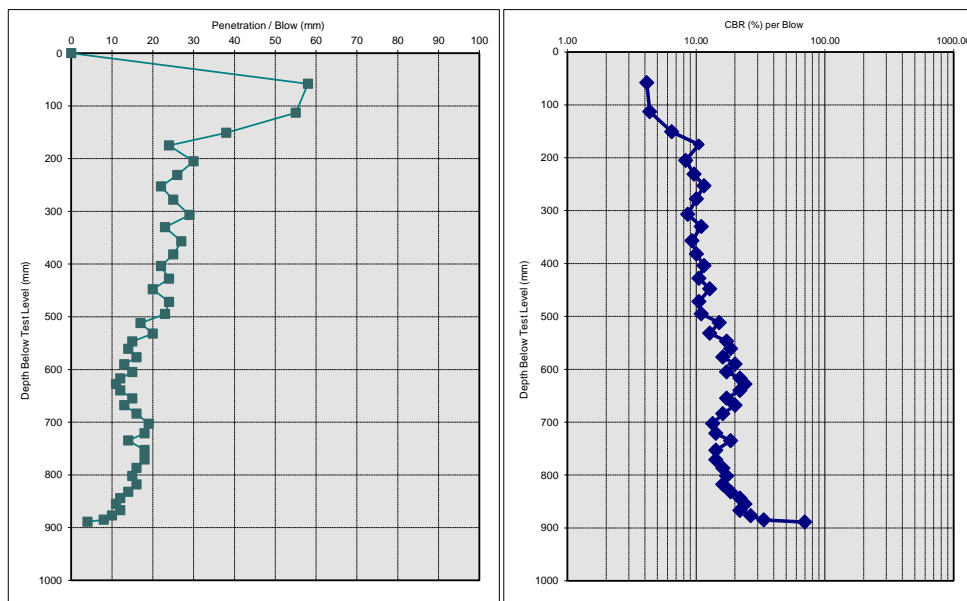
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference: WS17  
Date of Test: 06 September 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 65  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter  
Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)  
DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88



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## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

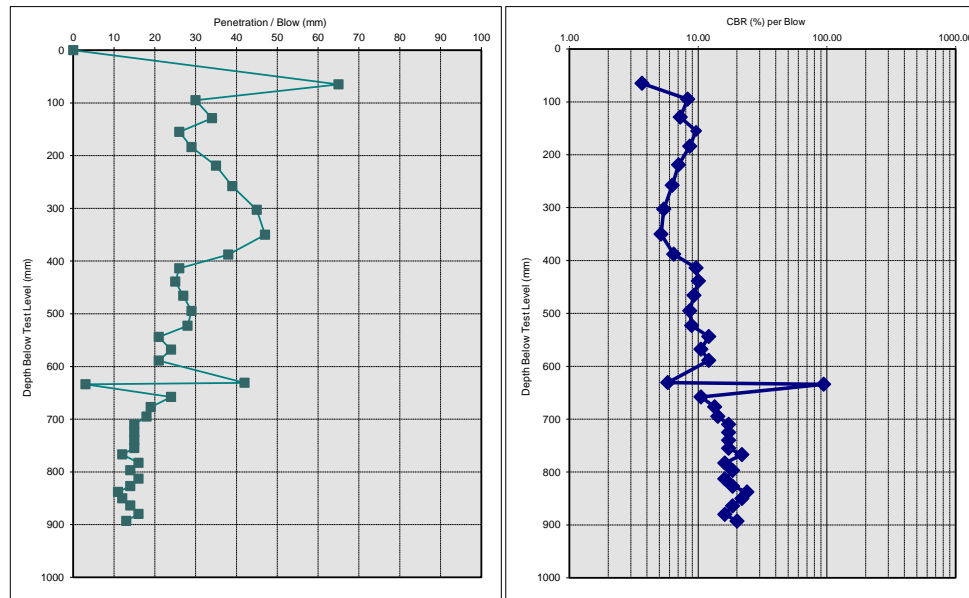
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference: WS18  
Date of Test: 06 September 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 57  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter  
Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)  
DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88



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## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

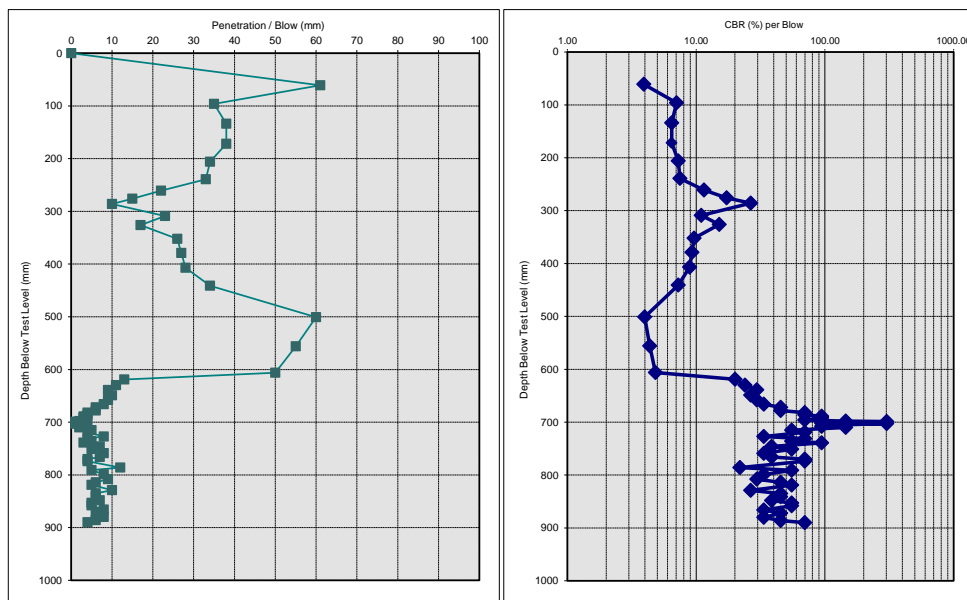
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference: WS19  
Date of Test: 06 September 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 54  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter  
Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)  
DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
(after TRL Road Note 8 & CS 229)

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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88



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## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

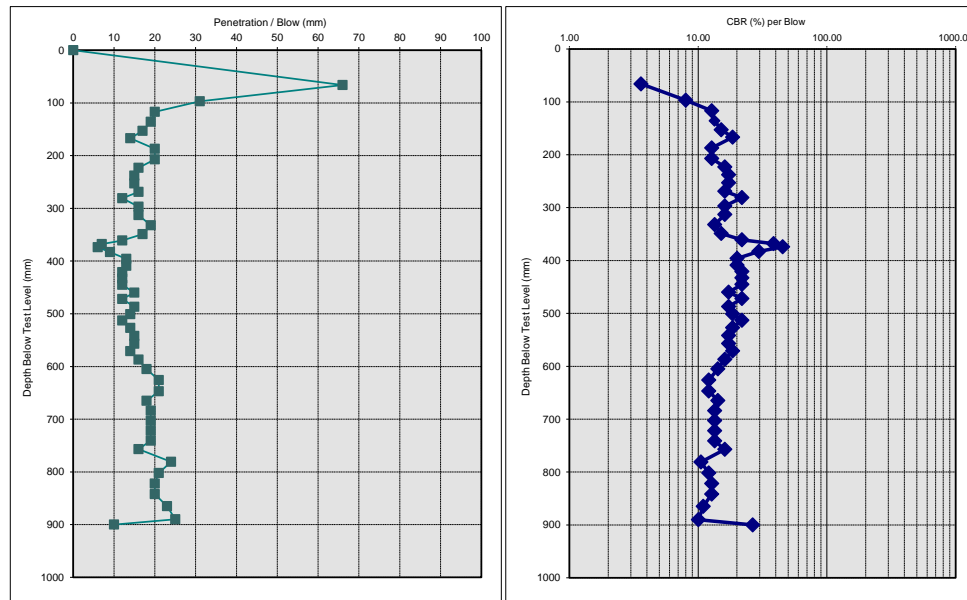
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference: WS20  
Date of Test: 06 September 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 50  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter  
  
Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)  
  
DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88



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## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

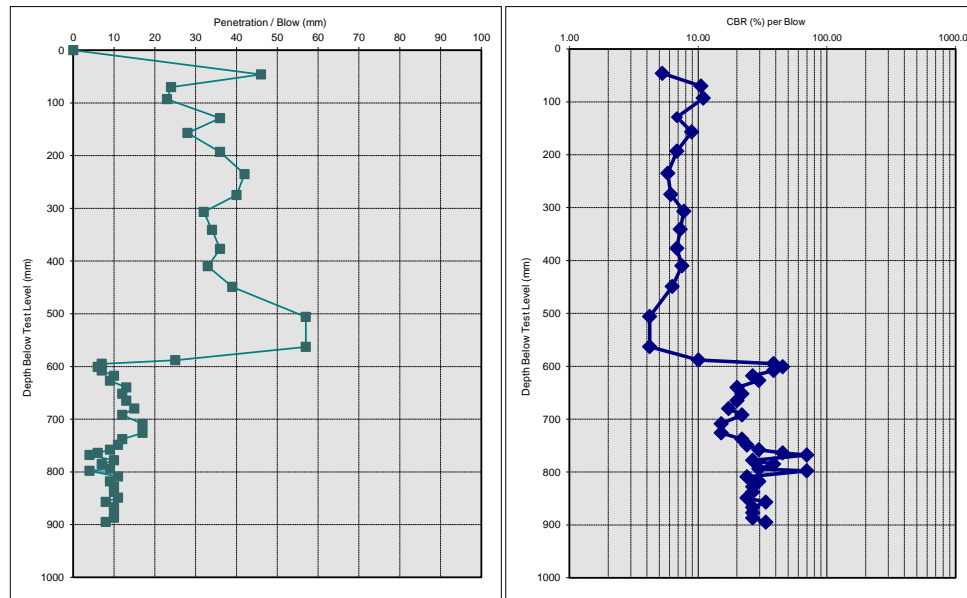
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference: WS22  
Date of Test: 06 September 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 55  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter  
Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)  
DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
(after TRL Road Note 8 & CS 229)

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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88



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## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

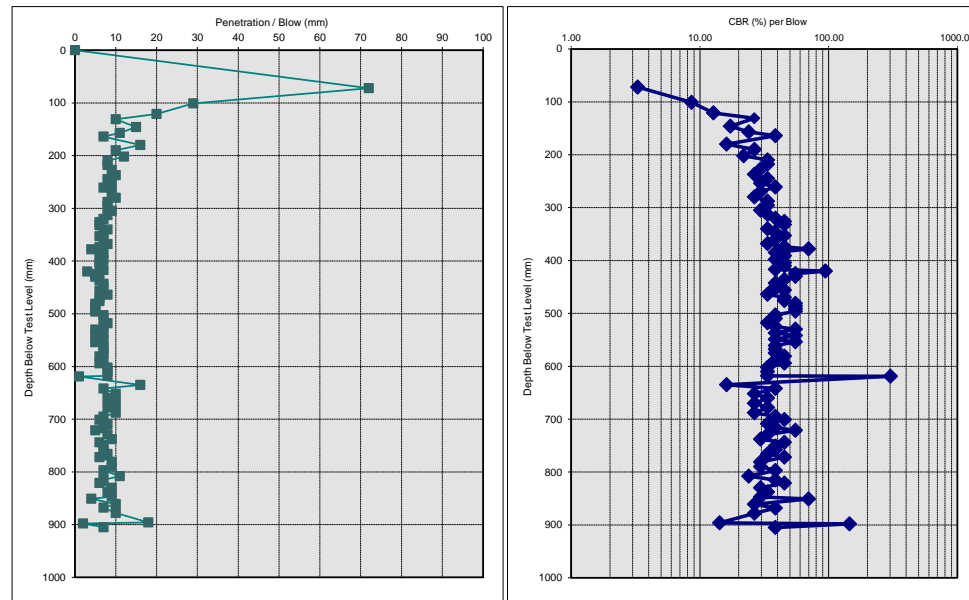
Location Reference: WS23  
Date of Test: 06 September 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 42  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter

Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)

DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
(after TRL Road Note 8 & CS 229)

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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88



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Email: [adam@earthenvironmental.co.uk](mailto:adam@earthenvironmental.co.uk)

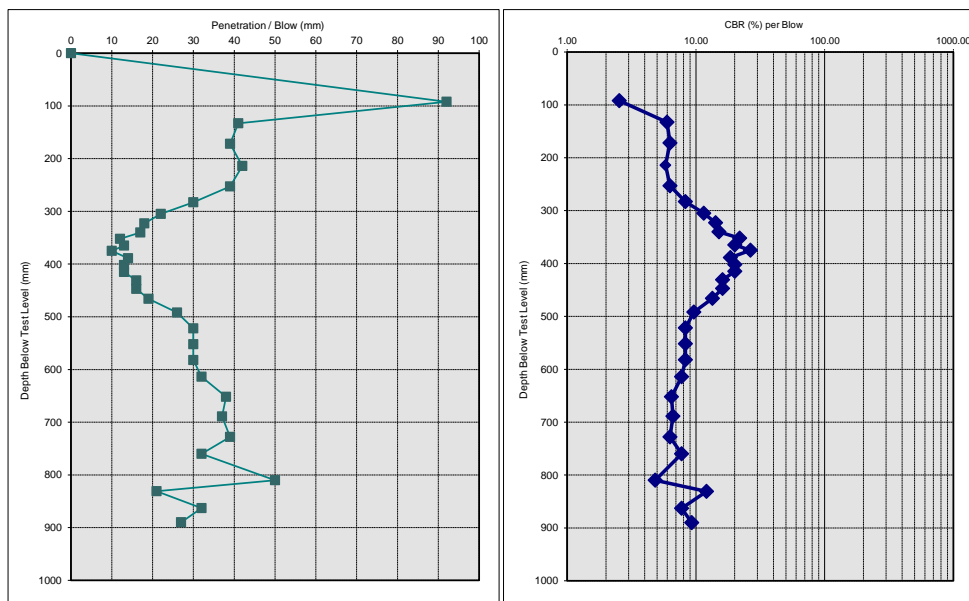
## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

(To: Transport Research Laboratory Road Notes 8 & 31)

**Job No:** A5487  
**Site:** Kronospan North Access Road  
**Client:** Kronospan

<b>Location Reference:</b>	WS25
<b>Date of Test:</b>	06 September 2023
<b>Material at Surface / Subgrade:</b>	Made Ground
<b>Depth of test start (mm):</b>	Ground level.
<b>Starting measurement (mm):</b>	50
<b>Anticipated Depth to Subgrade (mm):</b>	
<b>Weight (kg):</b>	8
<b>Drop Height (mm):</b>	575
<b>Cone:</b>	60 degrees; 20mm diameter
<b>Test Procedure &amp; Specification:</b>	TRL Road Notes 8 & 3 TRL Dynamic Cone Penetrometer, Information Note (1986) CS 229 Data for Pavement Assessment (2020)
<b>DCP / CBR Relationship:</b>	$\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$ (after TRL Road Note 8 & CS 229)

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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88

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## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

(To: Transport Research Laboratory Road Notes 8 & 31)

**Job No:** A5487  
**Site:** Kronospan North Access Road  
**Client:** Kronospan

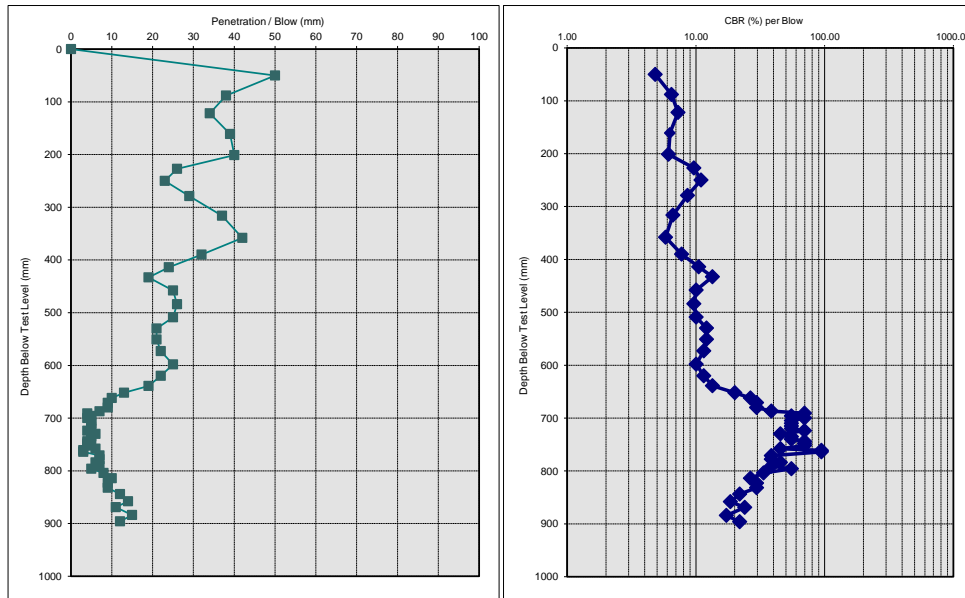
**Location Reference:** WS26  
**Date of Test:** 06 September 2023  
**Material at Surface / Subgrade:** Made Ground  
**Depth of test start (mm):** Ground level.  
**Starting measurement (mm):** 52  
**Anticipated Depth to Subgrade (mm):**

**Weight (kg):** 8  
**Drop Height (mm):** 575  
**Cone:** 60 degrees; 20mm diameter

**Test Procedure & Specification:** TRL Road Notes 8 & 3  
 TRL Dynamic Cone Penetrometer, Information Note (1986)  
 CS 229 Data for Pavement Assessment (2020)

**DCP / CBR Relationship:**  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
 (after TRL Road Note 8 & CS 229)

**Remarks:**



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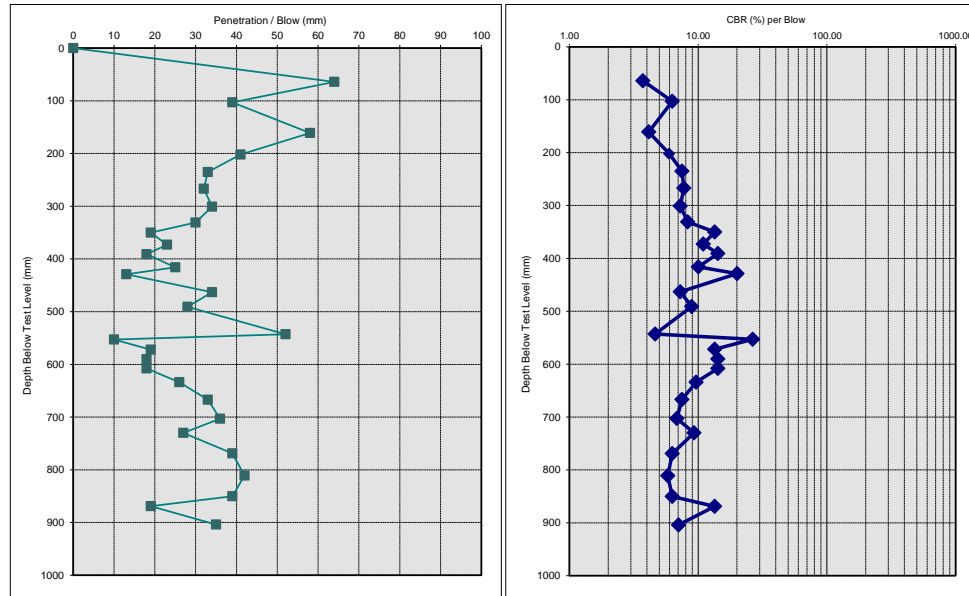
Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88



<b>Location Reference:</b>	TP01
<b>Date of Test:</b>	06 September 2023
<b>Material at Surface / Subgrade:</b>	Made Ground
<b>Depth of test start (mm):</b>	Ground level.
<b>Starting measurement (mm):</b>	51
<b>Anticipated Depth to Subgrade (mm):</b>	

<b>Weight (kg):</b>	8
<b>Drop Height (mm):</b>	575
<b>Cone:</b>	60 degrees; 20mm diameter
<b>Test Procedure &amp; Specification:</b>	TRL Road Notes 8 & 3 TRL Dynamic Cone Penetrometer, Information Note (1986) CS 229 Data for Pavement Assessment (2020)
<b>DCP / CBR Relationship:</b>	$\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$ (after TRL Road Note 8 & CS 229)

<b>Remarks:</b>
-----------------



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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88



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## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

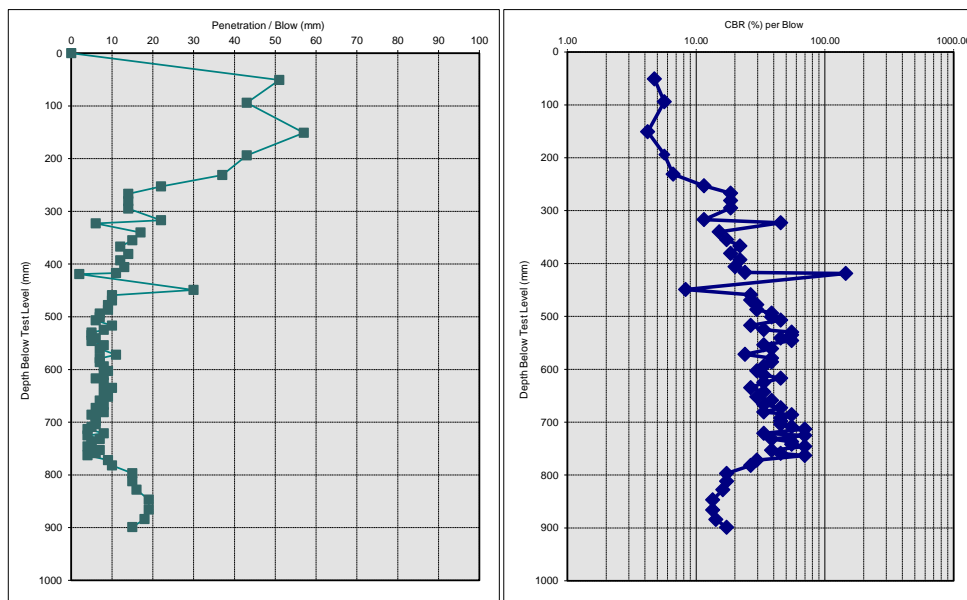
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference: TP02  
Date of Test: 06 September 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 51  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter  
  
Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)  
  
DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
(after TRL Road Note 8 & CS 229)

Remarks:



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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88



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## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

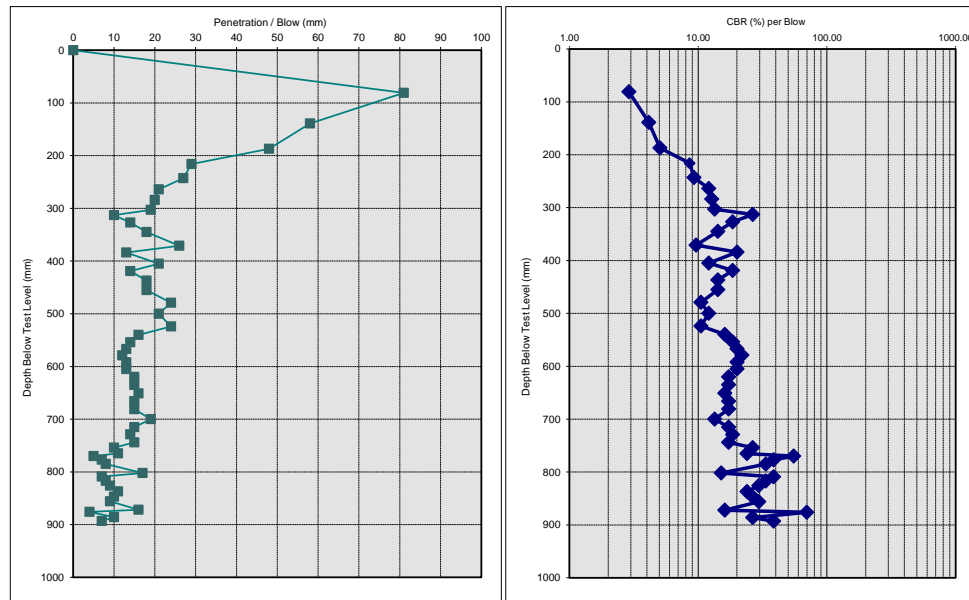
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference: TP03  
Date of Test: 06 September 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 57  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter  
  
Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)  
  
DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
(after TRL Road Note 8 & CS 229)

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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88



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## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

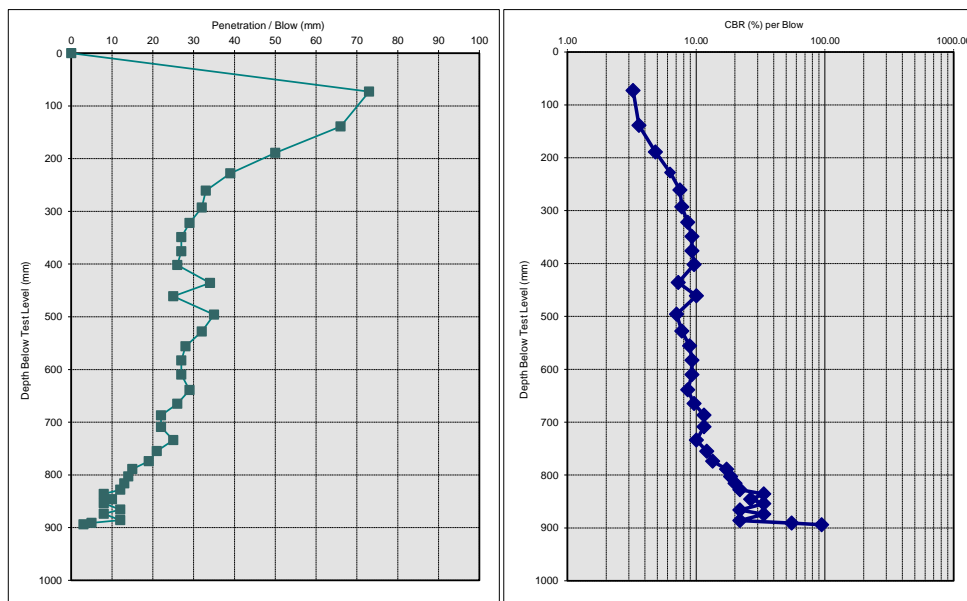
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference: TP04  
Date of Test: 06 September 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): Ground level.  
Starting measurement (mm): 54  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter  
  
Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)  
  
DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
(after TRL Road Note 8 & CS 229)

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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88



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## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

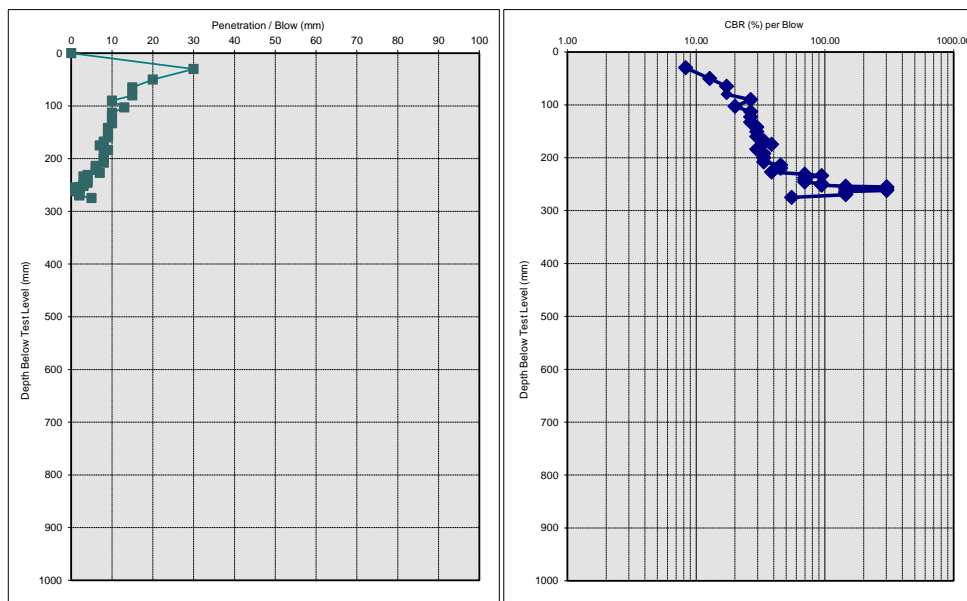
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference:	PC01
Date of Test:	24 September 2023
Material at Surface / Subgrade:	Made Ground
Depth of test start (mm):	680
Starting measurement (mm):	680
Anticipated Depth to Subgrade (mm):	

Weight (kg):	8
Drop Height (mm):	575
Cone:	60 degrees; 20mm diameter
Test Procedure & Specification:	TRL Road Notes 8 & 3 TRL Dynamic Cone Penetrometer, Information Note (1986) CS 229 Data for Pavement Assessment (2020)
DCP / CBR Relationship:	$\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$ (after TRL Road Note 8 & CS 229)

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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88



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## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

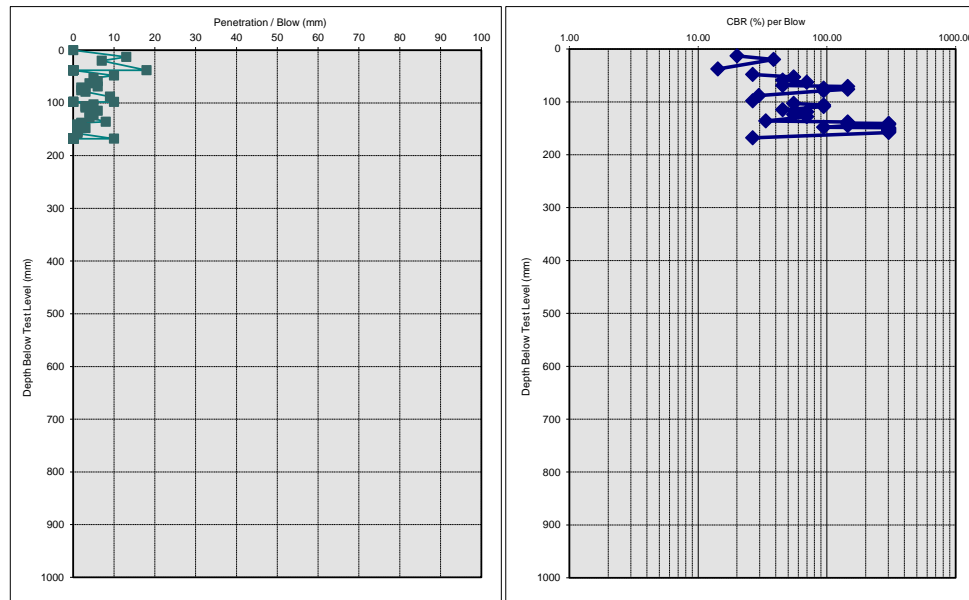
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference: PC02  
Date of Test: 24 September 2023  
Material at Surface / Subgrade: Made Ground  
Depth of test start (mm): 190  
Starting measurement (mm): 190  
Anticipated Depth to Subgrade (mm):

Weight (kg): 8  
Drop Height (mm): 575  
Cone: 60 degrees; 20mm diameter  
  
Test Procedure & Specification: TRL Road Notes 8 & 3  
TRL Dynamic Cone Penetrometer, Information Note (1986)  
CS 229 Data for Pavement Assessment (2020)  
  
DCP / CBR Relationship:  $\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$   
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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
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1489	1740	39	85	5	50.24	215.88



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## DYNAMIC CONE PENETROMETER - CBR RELATIONSHIP

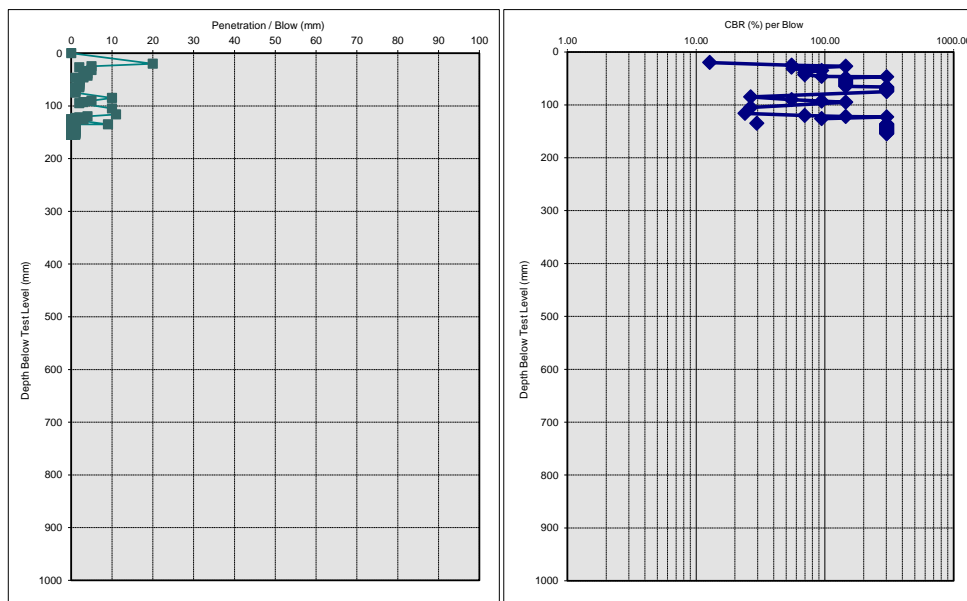
(To: Transport Research Laboratory Road Notes 8 & 31)

Job No: A5487  
Site: Kronospan North Access Road  
Client: Kronospan

Location Reference:	PC03
Date of Test:	24 September 2023
Material at Surface / Subgrade:	Made Ground
Depth of test start (mm):	485
Starting measurement (mm):	485
Anticipated Depth to Subgrade (mm):	

Weight (kg):	8
Drop Height (mm):	575
Cone:	60 degrees; 20mm diameter
Test Procedure & Specification:	TRL Road Notes 8 & 3 TRL Dynamic Cone Penetrometer, Information Note (1986) CS 229 Data for Pavement Assessment (2020)
DCP / CBR Relationship:	$\text{Log}_{10}(\text{CBR}) = 2.480 - 1.057 \times \text{Log}_{10}(\text{penetration} / \text{mm})$ (after TRL Road Note 8 & CS 229)

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Depth bgl (mm)		Blow No.		DCP Pen/blow	CBR%	Subgrade surface modulus
Top	Base	Top	Base			
130	362	0	4	58	4.13	43.63
362	870	4	21	30	8.33	68.33
870	975	21	25	26	9.55	74.59
975	1395	25	35	42	5.81	54.28
1395	1489	35	39	24	10.73	80.39
1489	1740	39	85	5	50.24	215.88