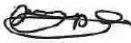

	<b>EARTH INVESTIGATION LABORATORIES</b> Plot 209 Tienie Street, Andeon AH, Zandfontein, 0183 P.O. Box 2856, Rosslyn, 0200 Tel: +27 (0)12 372 3023 Fax: +27 (0)86 241 3304 e-mail: admin@earthinv.co.za		
		<b>TEST REPORT</b>	
		<b>REPORT #</b>	EIL 324_4

CLIENT INFORMATION			
Client Name:	MMK	Client Number:	398
Address:	Suite 11, Hillcrest Park 2 Old Main Hillcrest	Project Name:	Work Package 4 ( High Wycombe Road to Roger Shishi Road )
Primary Contact Person:	Sachin Kistasamy	Telephone Number:	031 765 7752
Primary Contact email:	sachin.kistasamy@mmkengineers.co.za	Fax Number:	0

SAMPLES/JOB INFORMATION			
Date Sampled:	03-Nov-23	Date Received:	03-Nov-23
Sampler:	EIL	Date Tested:	03-Nov-23
Sample Location:	Wycombe Road - Roger Shishi Road	Date Reported:	18-Mar-24
Sample Method:		Tests Conducted At:	On Site
Sample Condition:		Report Status:	Final

TEST RESULTS SUMMARY			
Test (s) Methods References	Test Method(s) Description (s)	Qty	Test Conducted by.
TMH 6 ST6#	Measurement of the insitu strength of soils by dynamic cone penetrometer(DCP)	5	Earthinv Main Lab
-			-
-			-
-			-
-			-
-			-
-			-
-			-

TEST RESULTS NOTES
<p><b>Tests Deviations and Subcontracting</b> - Test deviations indicated if any on the report and clearly communicated to Client.</p> <p><b>Documents Reproduction</b> - If a report is published or reproduced by the client, it will be done in full, without any ommittance.</p> <p><b>Report Status</b> - Only final status results are to be good for publication.</p> <p><b>Samples Received and Results Relation</b> - Test results relate to sample received and to conditions thereof on receipt</p> <p><b>Samples Retainment</b> - If not specified by the Client, samples will be disposed off as per the Laboratories discretion</p> <p><b>Opinions &amp; Recommendations:</b> Opinions &amp; recommendations do not form part of the Labs accreditation schedule</p>
 <div>Page 1 of 6</div>

 <b>Earth Inv Lab</b> <b>FINAL REPORT</b> <b>DYNAMIC CONE PENETROMETER</b>			
<b>Project Name:</b>	Work Package 4 ( High Wycombe Road to Roger Shishi Road )	<b>DCP No.</b>	DCP1 0.0 Km
<b>Client Ref No:</b>	398	<b>Area:</b>	Wycombe Road to Roger Shishi Road
<b>Client Name:</b>	MMK	<b>Position:</b>	DCP1 0.0 Km
<b>Report No:</b>	EIL 324_4	<b>Start Depth</b>	0
<b>Report Date:</b>	03-Nov-23	<b>Blow/ Reading</b>	5

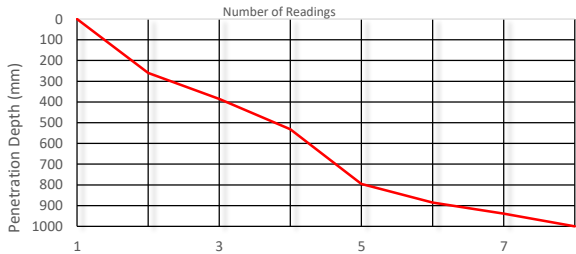
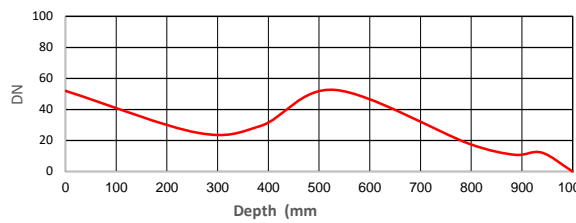
  

DCP Readings		Blows per reading:					5
no.	mm	no.	mm	no.	mm	no.	mm
1	0	11	21	31	41		
2	260	12	22	32	42		
3	385	13	23	33	43		
4	532	14	24	34	44		
5	795	15	25	35	45		
6	885	16	26	36	46		
7	939	17	27	37	47		
8	1000	18	28	38	48		
9		19	29	39	49		
10		20	30	40	50		

DCP number (mm/Blow) DN							
DN	mm	DN	mm	DN	mm	DN	mm
52,0	0						
25,0	260						
29,4	385						
52,6	532						
18,0	795						
10,8	885						
12,2	939						
	1000						

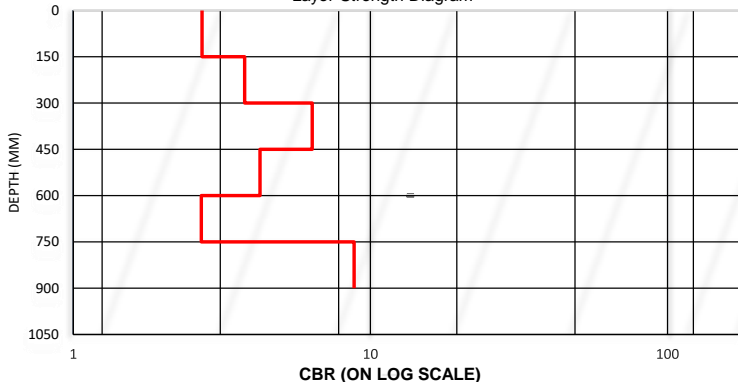



Layer	Depth (mm)		Thickness (mm)	Penetration Rate DN (mm/blow)	CBR (%)	Blows/mm		UCS (kPa)	Bearing Capacity
	from	to				150mm	300mm		
1	0	150	150	52,0	2,7	2,9	6,6	39	63
2	151	300	149	40,1	3,8	3,7		52	82
3	301	450	149	26,6	6,4	5,6	9,7	81	125
4	451	600	149	36,5	4,3	4,1		57	91
5	601	750	149	52,2	2,7	2,9	10,1	39	63
6	751	900	149	20,6	8,8	7,2		107	162

Layer Strength Diagram





DEPTH (MM)

CBR (ON LOG SCALE)

Note:  
No DCP refusal



 <b>Earth Inv Lab</b> <b>FINAL REPORT</b> <b>DYNAMIC CONE PENETROMETER</b>			
<b>Project Name:</b>	Work Package 4 ( High Wycombe Road to Roger Shishi Road )	<b>DCP No.</b>	DCP2 2.0 Km
<b>Client Ref No:</b>	398	<b>Area:</b>	Wycombe Road to Roger Shishi Road
<b>Client Name:</b>	MMK	<b>Position:</b>	DCP2 2.0 Km
<b>Report No:</b>	EIL 324_4	<b>Start Depth</b>	0
<b>Report Date:</b>	03-Nov-23	<b>Blow/ Reading</b>	5

DCP Readings		Blows per reading:					5		
no.	mm	no.	mm	no.	mm	no.	mm	no.	mm
1	0	11	300	21	520	31	820	41	
2	45	12	330	22	540	32	850	42	
3	85	13	345	23	570	33	880	43	
4	120	14	360	24	600	34	920	44	
5	150	15	390	25	620	35	940	45	
6	160	16	415	26	650	36	970	46	
7	180	17	440	27	670	37	1000	47	
8	200	18	460	28	700	38		48	
9	230	19	480	29	740	39		49	
10	270	20	500	30	770	40		50	

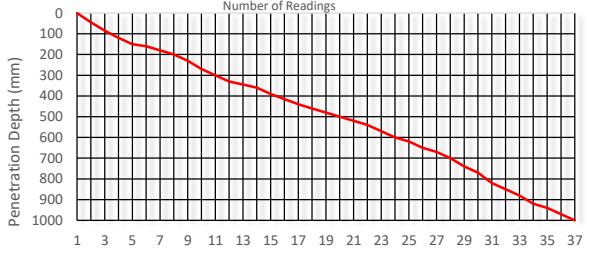
  

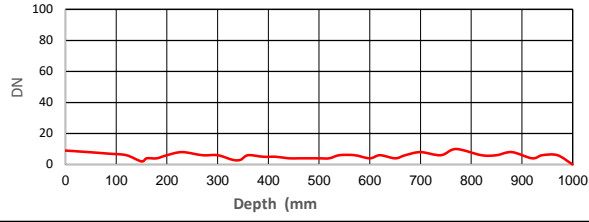
DCP number (mm/Blow) DN							
DN	mm	DN	mm	DN	mm	DN	mm
9,0	0	6,0	300	4,0	520	6,0	820
8,0	45	3,0	330	6,0	540	6,0	850
7,0	85	3,0	345	6,0	570	8,0	880
6,0	120	6,0	360	4,0	600	4,0	920
2,0	150	5,0	390	6,0	620	6,0	940
4,0	160	5,0	415	4,0	650	6,0	970
4,0	180	4,0	440	6,0	670		1000
6,0	200	4,0	460	8,0	700		
8,0	230	4,0	480	6,0	740		
6,0	270	4,0	500	10,0	770		

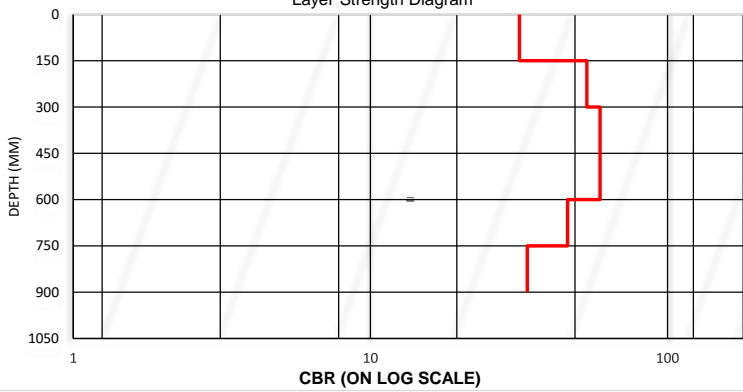
Layer	Depth (mm)		Thickness (mm)	Penetration Rate DN (mm/blow)	CBR (%)	Blows/mm		UCS (kPa)	Bearing Capacity
	from	to				150mm	300mm		
1	0	150	150	7,5	31,7	20,0	50,0	323	448
2	151	300	149	5,0	53,6	30,0		505	679
3	301	450	149	4,6	59,3	32,5	65,0	552	736
4	451	600	149	4,6	59,3	32,5		552	736
5	601	750	149	5,6	46,1	26,7	47,5	445	603
6	751	900	149	7,2	33,7	20,8		340	470







**Layer Strength Diagram**


**DEPTH (MM)**

**CBR (ON LOG SCALE)**

**Note:**  
No DCP refusal





Earth Inv Lab

FINAL REPORT

DYNAMIC CONE PENETROMETER

Project Name:

Work Package 4 ( High Wycombe Road to Roger Shishi Road )

DCP No.

DCP4 1.0 Km

Client Ref No:

398

Area:

Wycombe Road to Roger Shishi Road

Client Name:

MMK

Position:

DCP4 1.0 Km

Report No:

EIL 324\_4

Start Depth

0

Report Date:

03-Nov-23

Blow/ Reading

5

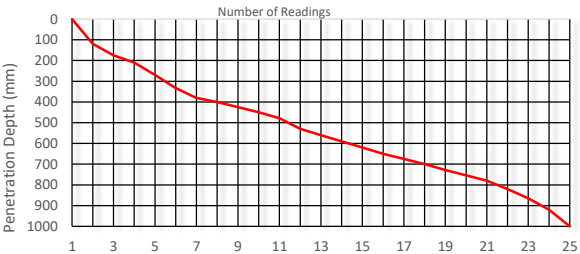
DCP Readings

Blows per reading:

5

no.	mm	no.	mm	no.	mm	no.	mm	no.	mm
1	0	11	478	21	780	31		41	
2	120	12	530	22	820	32		42	
3	175	13	560	23	865	33		43	
4	210	14	590	24	920	34		44	
5	270	15	620	25	1000	35		45	
6	333	16	650	26		36		46	
7	380	17	675	27		37		47	
8	400	18	700	28		38		48	
9	425	19	728	29		39		49	
10	450	20	754	30		40		50	

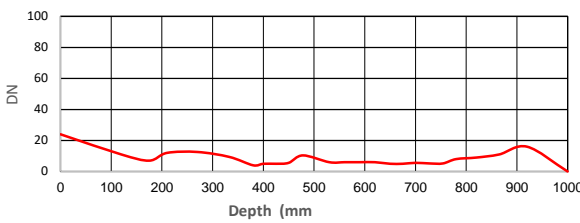
Penetration Depth (mm)



DCP number (mm/Blow) DN

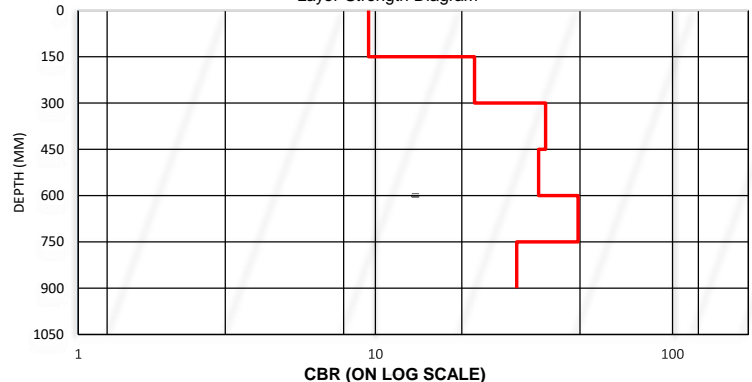
DN	mm	DN	mm	DN	mm	DN	mm	DN	mm
24,0	0	10,4	478	8,0	780				
11,0	120	6,0	530	9,0	820				
7,0	175	6,0	560	11,0	865				
12,0	210	6,0	590	16,0	920				
12,6	270	6,0	620		1000				
9,4	333	5,0	650						
4,0	380	5,0	675						
5,0	400	5,6	700						
5,0	425	5,2	728						
5,6	450	5,2	754						

DN



Layer	Depth (mm)		Thickness	Penetration Rate	CBR	Blows/mm		UCS	Bearing
	from	to	(mm)	DN (mm/blow)	(%)	150mm	300mm	(kPa)	Capacity
1	0	150	150	19,4	9,5	7,7	22,4	114	171
2	151	300	149	10,2	21,6	14,7		231	329
3	301	450	149	6,6	37,4	22,6	44,3	372	510
4	451	600	149	6,9	35,4	21,7		355	489
5	601	750	149	5,4	48,1	27,6	46,5	461	623
6	751	900	149	7,9	29,9	19,0		306	427

Layer Strength Diagram




Note:

No DCP refusal



Page 4 of 6

 <b>Earth Inv Lab</b> <b>FINAL REPORT</b> <b>DYNAMIC CONE PENETROMETER</b>			
<b>Project Name:</b>	Work Package 4 ( High Wycombe Road to Roger Shishi Road )	<b>DCP No.</b>	DCP5 1.25 Km
<b>Client Ref No:</b>	398	<b>Area:</b>	Wycombe Road to Roger Shishi Road
<b>Client Name:</b>	MMK	<b>Position:</b>	DCP5 1.25 Km
<b>Report No:</b>	EIL 324_4	<b>Start Depth</b>	-10
<b>Report Date:</b>	03-Nov-23	<b>Blow/ Reading</b>	5

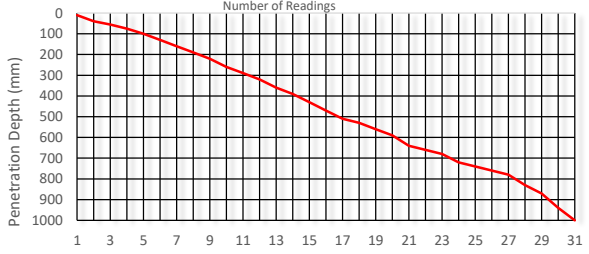
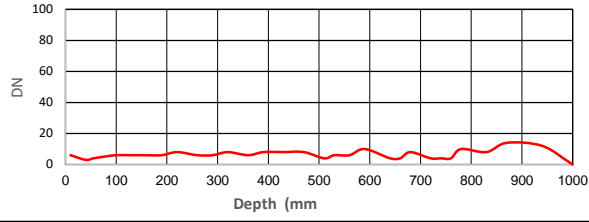
  

DCP Readings		Blows per reading:					5		
no.	mm	no.	mm	no.	mm	no.	mm	no.	mm
1	10	11	290	21	640	31	1000	41	
2	40	12	320	22	660	32		42	
3	55	13	360	23	680	33		43	
4	75	14	390	24	720	34		44	
5	100	15	430	25	740	35		45	
6	130	16	470	26	760	36		46	
7	160	17	510	27	780	37		47	
8	190	18	530	28	830	38		48	
9	220	19	560	29	870	39		49	
10	260	20	590	30	940	40		50	

DCP number (mm/Blow) DN							
DN	mm	DN	mm	DN	mm	DN	mm
6,0	10	6,0	290	4,0	640		1000
3,0	40	8,0	320	4,0	660		
4,0	55	6,0	360	8,0	680		
5,0	75	8,0	390	4,0	720		
6,0	100	8,0	430	4,0	740		
6,0	130	8,0	470	4,0	760		
6,0	160	4,0	510	10,0	780		
6,0	190	6,0	530	8,0	830		
8,0	220	6,0	560	14,0	870		
6,0	260	10,0	590	12,0	940		

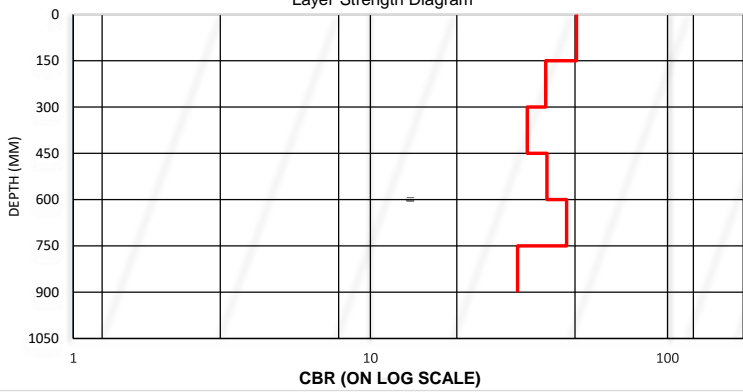
  

Layer	Depth (mm)		Thickness (mm)	Penetration Rate DN (mm/blow)	CBR (%)	Blows/mm		UCS (kPa)	Bearing Capacity
	from	to				150mm	300mm		
1	0	150	150	5,3	49,4	28,3	51,7	471	636
2	151	300	149	6,4	38,9	23,3		384	527
3	301	450	149	7,2	33,7	20,8	44,3	340	470
4	451	600	149	6,3	39,3	23,5		387	530
5	601	750	149	5,6	45,7	26,5	46,1	442	599
6	751	900	149	7,6	31,3	19,6		319	443


  



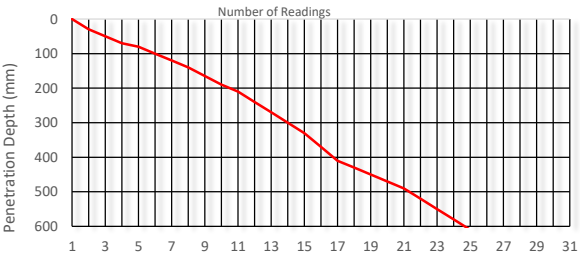
  

**Note:**  
No DCP refusal

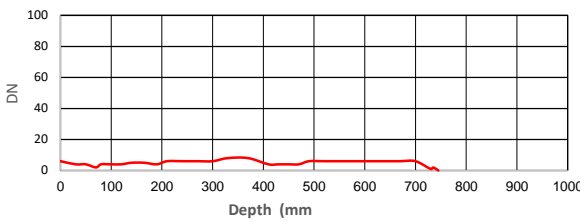


 EARTHINVLAB		<b>Earth Inv Lab</b> <b>FINAL REPORT</b> <b>DYNAMIC CONE PENETROMETER</b>							
<b>Project Name:</b>		Work Package 4 ( High Wycombe Road to Roger Shishi Road )				<b>DCP No.</b>		DCP6 1.55 Km	
<b>Client Ref No:</b>		398				<b>Area:</b>		Wycombe Road to Roger Shishi Road	
<b>Client Name:</b>		MMK				<b>Position:</b>		DCP6 1.55 Km	
<b>Report No:</b>		EIL 324_4				<b>Start Depth</b>		0	
<b>Report Date:</b>		03-Nov-23				<b>Blow/ Reading</b>		5	

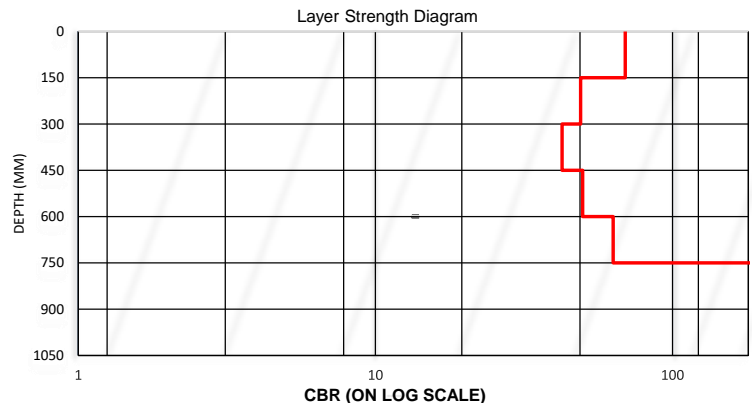
<b>DCP Readings</b>		<b>Blows per reading:</b>								5
no.	mm	no.	mm	no.	mm	no.	mm	no.	mm	
1	0	11	210	21	490	31	745	41		
2	30	12	240	22	520	32		42		
3	50	13	270	23	550	33		43		
4	70	14	300	24	580	34		44		
5	80	15	330	25	610	35		45		
6	100	16	370	26	640	36		46		
7	120	17	410	27	670	37		47		
8	140	18	430	28	700	38		48		
9	165	19	450	29	730	39		49		
10	190	20	470	30	735	40		50		



<b>DCP number (mm/Blow) DN</b>							
DN	mm	DN	mm	DN	mm	DN	mm
6,0	0	6,0	210	6,0	490		745
4,0	30	6,0	240	6,0	520		
4,0	50	6,0	270	6,0	550		
2,0	70	6,0	300	6,0	580		
4,0	80	8,0	330	6,0	610		
4,0	100	8,0	370	6,0	640		
4,0	120	4,0	410	6,0	670		
5,0	140	4,0	430	6,0	700		
5,0	165	4,0	450	1,0	730		
4,0	190	4,0	470	2,0	735		



Layer	Depth (mm)		Thickness (mm)	Penetration Rate DN (mm/blow)	CBR (%)	Blows/mm		UCS (kPa)	Bearing Capacity
	from	to				150mm	300mm		
1	0	150	150	4,1	69,3	37,0	65,0	631	833
2	151	300	149	5,3	49,1	28,0		469	633
3	301	450	149	6,0	42,5	25,0		53,3	414
4	451	600	149	5,3	49,8	28,3	191,7	475	641
5	601	750	149	4,4	63,2	34,2		582	774
6	751	900	149	0,9	439,9	157,5		3081	3624



Note:  
DCP refusal @ 745 mm