Appendix II

Donkerhoek

DONKERHOEK TEST PIT PROFILE

TP1		
	0 - 0,2	Slightly moist, brown, loose, open, sandy SILT. Colluvium. Roots.
	0,2 - 0,82	Dry, grey brown, stiff, intact, sandy silty CLAY. Colluvium.
	0,82 - 1,60	Dry, yellow olive brown with grey blotches, stiff to very stiff, slickensided, silty CLAY. Colluvium.
	1,60 - 1,80	Yellow brown with grey and white blotches, completely weathered soft rock SHALE. Residual shale.
		Notes:
		Refusal on completely weathered shale.
		No water.
		Undisturbed sample at: 1,1 m.
		Disturbed sample at: 1,1 m.

TP2		
	0 - 0,25	Dry, light brown, medium dense, intact, sandy SILT. Colluvium. Roots.
	0,25 - 0,8	Dry, yellow brown with grey and orange blotches, stiff, shattered, sandy silty CLAY. Colluvium. Elluviated at top of layer.
	0,8 - 1,5	Slightly moist, yellow with grey and black and orange blotches, stiff to very stiff, slickensided, silty CLAY. Colluvium.
		Notes:
		Refusal.
		No water.
		Disturbed sample at: 1,1 m.

TP3		
	0 - 0,3	Dry, light brown, medium dense, intact, sandy SILT. Colluvium. Roots.
	0,3 - 1,0	Dry, yellow brown with grey and orange blotches, stiff, shattered, sandy silty CLAY. Colluvium. Elluviated at top of layer.
	1,0 - 1,5	Slightly moist, yellow brown with grey and black and orange blotches, stiff to very stiff, slickensided, silty CLAY. Colluvium.
		Notes:
		Refusal.
		No water.
		Undisturbed sample at: 1,1 m.
		Disturbed sample at: 1,1 m.

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FACSIMILE TRANSMITTAL SHEET

TO: Leon Croucamp	FROM: Zelda Smit
FAX NUMBER: 012 841 1148	DATE: 2003-01-28
COMPANY: Council for Geoscience	TOTAL NO. OF PAGES INCLUDING COVER:
PHONE NUMBER:	SENDER'S REF NO.: S03-036
RE / PROJECT: *Results*	

☐ URGENT ☑ FOR REVIEW ☐ PLEASE REPLY

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SOIL ANALYSIS BY ..... : SOILLAB (Pty) Ltd - Pretoria
Lab reference No. : S03-036

Page : 1
Date Printed : 2003-01-28

Customer ..... : COUNCIL FOR GEOSIENCE
Job Description ..... : DONKERHOEK
Road Number ..... :

Job Number ..... : S03-036
Contract Number ..... :
Date ..... : 2003-01-15

SAMPLE DESCRIPTION						
Sample Number	07461	07462	07463			
Sample Position	TP 1	TP 2	TP 3			
Sample Depth (mm)	1200	1100	1100			
Material Description	LIGHT OLIVE CLAY	DARK YELLOW CLAY	LIGHT BROWN CLAY			
Max size of boulder (mm)	-	-	-			
SCREEN ANALYSIS (% PASS)						
75,00 mm	100	100	100			
63,00 mm	100	100	100			
53,00 mm	100	100	100			
37,50 mm	100	100	100			
26,50 mm	100	100	100			
19,00 mm	100	100	100			
13,20 mm	100	100	100			
4,750 mm	100	100	100			
2,000 mm	99	100	99			
0,425 mm	95	98	95			
0,075 mm	73	83	77			
SOIL MORTAR						
Coarse Sand 2,000-0,425	5	2	4			
Coarse Fine Sd 0,425-0,250	8	5	7			
Medium Fine Sd 0,250-0,150	7	5	6			
Fine Fine Sand 0,150-0,075	6	5	5			
Material <0,075	74	83	78			
CONSTANTS						
Grading Modulus	0.33	0.19	0.29			
Liquid Limit	34	36	38			
Plasticity Index	13	13	15			
Linear Shrinkage (%)	6.0	6.0	7.0			
Sand Equivalent						
Classification - TRB	A-6 (9)	A-6 (9)	A-6 (10)			
Classification - TRH14						
CBR / UCS VALUES						
MOD. AASHTO						
Max Dry Density (kg/m³)						
Optimum Moisture Cont (%)						
Moulding Moisture Cont (%)						
Dry Density (kg/m³)						
% of Max Dry Density						
100% Mod CBR/UCS						
% Swell						
NRB						
Dry Density (kg/m³)						
% of Max Dry Density						
100% NRB CBR/UCS						
% Swell						
PROCTOR						
Dry Density (kg/m³)						
% of Max Dry Density						
100% Proc CBR/UCS						
% Swell						
CBR / UCS VALUES						
100% Mod AASHTO						
98% Mod AASHTO						
97% Mod AASHTO						
95% Mod AASHTO						
93% Mod AASHTO						
90% Mod AASHTO						

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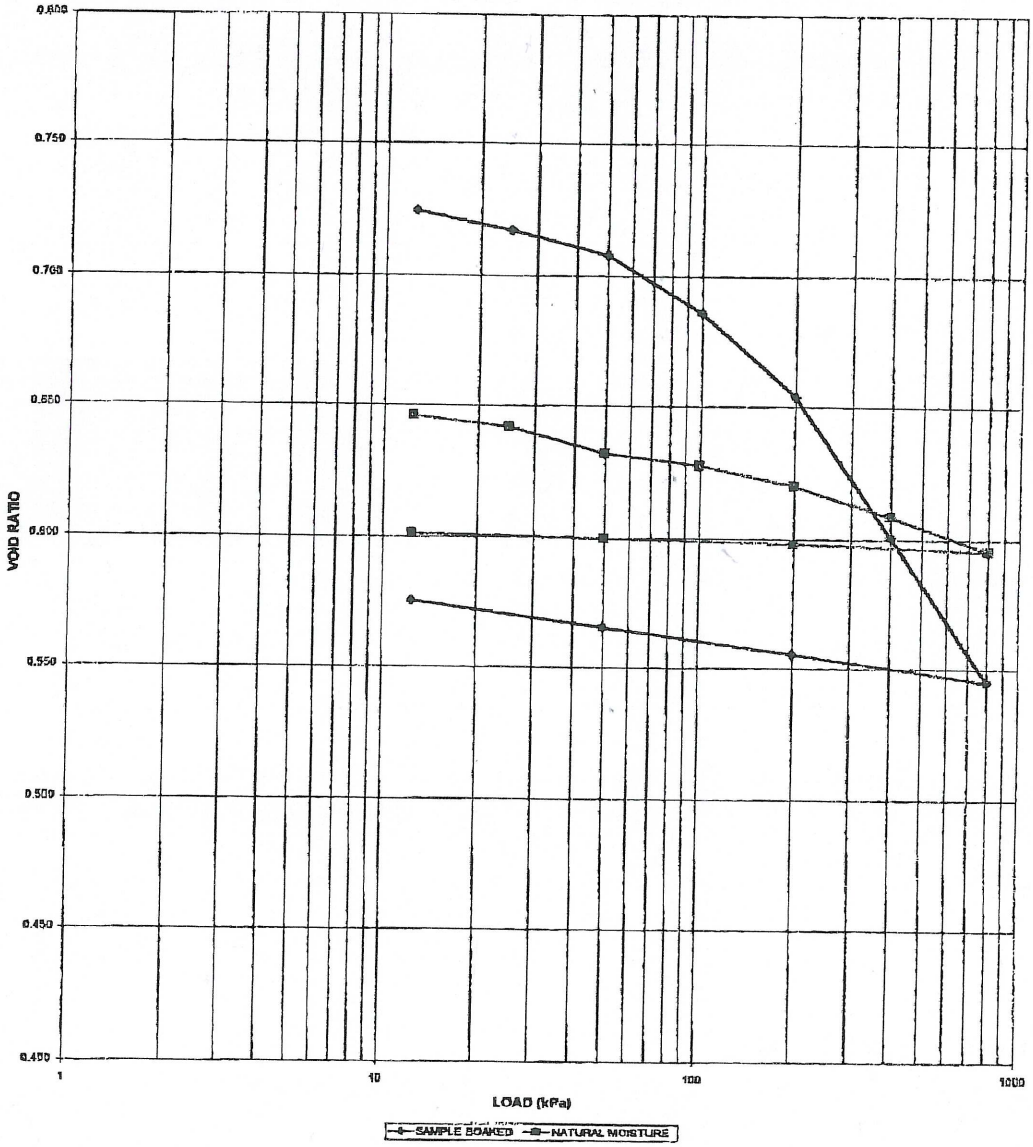
DOUBLE CONSOLIDATION TEST

PROJECT:	DONKERHOEK	INITIAL DRY DENSITY (kg/m3):	1632	
SAMPLE NO:	TP 9		SAMPLE SOAKED	NATURAL MOISTURE
DEPTH (m):	1.1	INITIAL MOISTURE CONTENT (%):	18.5	17.9
INITIAL HEIGHT OF SAMPLE (mm):	19.4	MOISTURE CONTENT AFTER TEST (%	22.2	16.2
SAMPLE STATE:	UNDISTURBED	RELATIVE DENSITY:	2.696	
		INITIAL VOID RATIO:	0.652	
		VOID RATIO AFTER SOAKING:	0.728	

LOAD (kPa):	0	W	12.5	25	50	100	200	400	800	200	50	12.5
HEIGHT (mm):	19.40	20.30	20.25	20.17	20.06	19.80	19.42	18.80	18.15	18.27	18.39	18.50
VOID RATIO	0.652	0.728	0.724	0.717	0.708	0.686	0.654	0.601	0.545	0.556	0.566	0.575

LOAD (kPa):	0	12.5	25	50	100	200	400	800	200	50	12.5
HEIGHT (mm):	19.10	19.03	18.98	18.87	18.82	18.73	18.60	18.45	18.48	18.50	18.51
VOID RATIO	0.652	0.646	0.642	0.632	0.627	0.620	0.608	0.595	0.598	0.600	0.601



KONS/KONSOLIDASIE-DUBBEL/03-02

UNIVERSITEIT VAN PRETORIA
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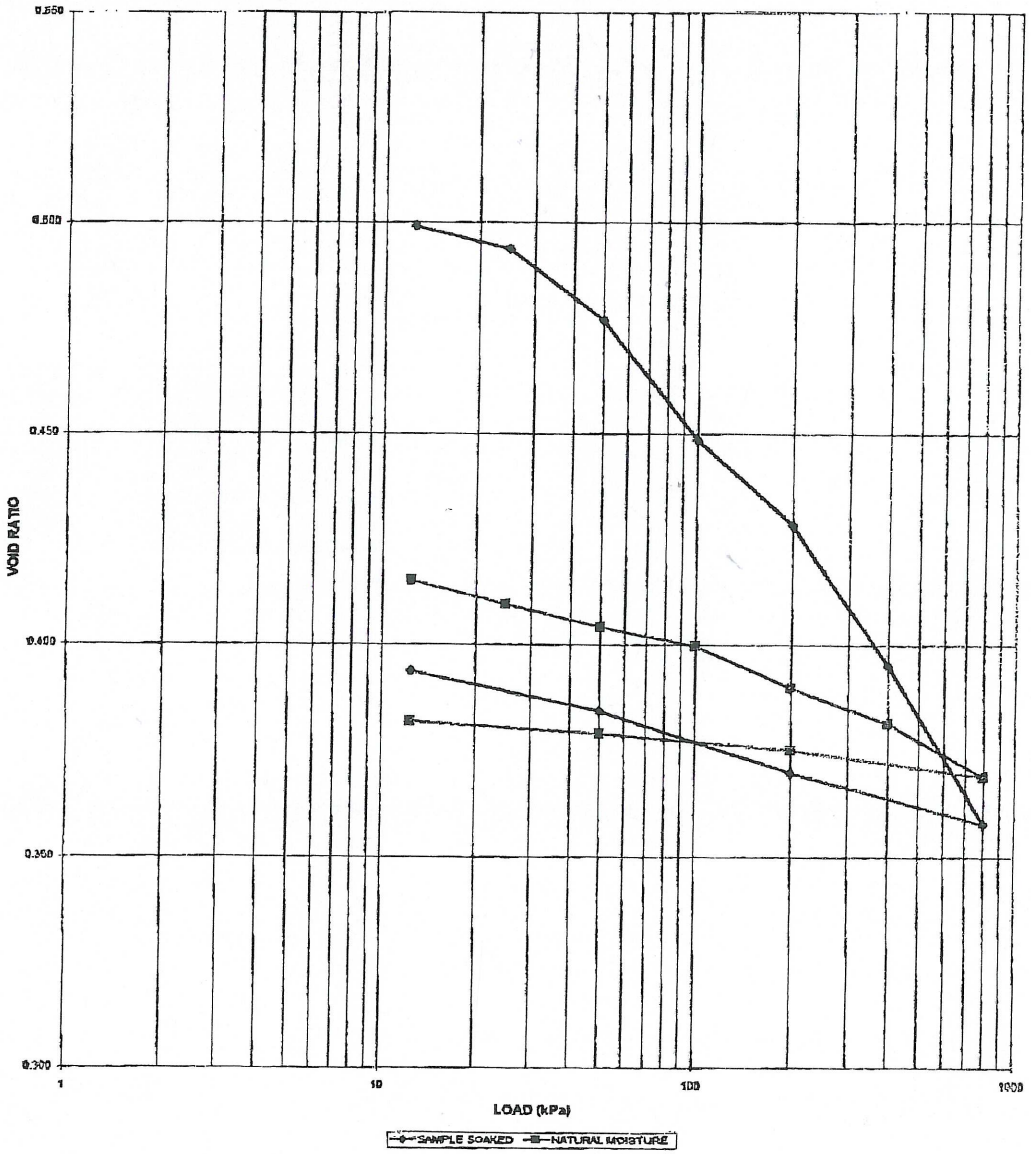
YUNIBESITHI YA PRETORIA

DOUBLE CONSOLIDATION TEST

PROJECT:	DONKERHOEK	INITIAL DRY DENSITY (kg/m3):	1835	
			SAMPLE SOAKED	NATURAL MOISTURE
SAMPLE NO:	TP 1	INITIAL MOISTURE CONTENT (%):	12.5	11.8
DEPTH (m):	1.1	MOISTURE CONTENT AFTER TEST (%	17.6	10.1
INITIAL HEIGHT OF SAMPLE (mm):	19.4	RELATIVE DENSITY:	2.599	
		INITIAL VOID RATIO:	0.416	
SAMPLE STATE:	UNDISTURBED	VOID RATIO AFTER SOAKING:	0.508	

LOAD (kPa):	0	W	12.5	25	50	100	200	400	800	200	50	12.5
HEIGHT (mm):	19.40	20.66	20.54	20.46	20.37	19.84	19.57	19.11	18.60	18.77	18.96	19.09
VOID RATIO	0.416	0.508	0.499	0.494	0.487	0.449	0.429	0.395	0.358	0.370	0.384	0.394

LOAD (kPa):	0	12.5	25	50	100	200	400	800	200	50	12.5
HEIGHT (mm):	19.50	19.49	19.41	19.34	19.27	19.14	19.02	18.85	18.94	18.99	19.03
VOID RATIO	0.416	0.415	0.410	0.404	0.400	0.390	0.382	0.369	0.375	0.379	0.382



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