No.

AGÊNCIA DE COOPERAÇÃO
INTERNACIONAL DO JAPÃO (JICA)

CONSELHO MUNICIPAL DE MAPUTO
CIDADE DE MAPUTO
REPÚBLICA DE MOÇAMBIQUE

ESTUDO SOBRE PLANO DIRECTOR E ESTUDO DE VIABILIDADE PARA O DESENVOLVIMENTO DE ESTRADAS DA CIDADE DE MAPUTO NA REPÚBLICA DE MOÇAMBIQUE

RELATÓRIO FINAL

APÊNDICE

Outubro de 2001

Oriental Consultants Company Limited

Japan Engineering Consultants Company Limited

SSF
JR
01-140(5/5)

AGÊNCIA DE COOPERAÇÃO
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RELATÓRIO FINAL

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Investigação Geotécnica

15.1 Registros de Furos de Sondagem

15.2 Análise de Estabilidade de Encosta

15.3 CBR / Levantamento de Estrutura do Pavimento

15.4 Resultados de Teste de Solo

Apêndice 15.1 Registros de Furos de Sondagem

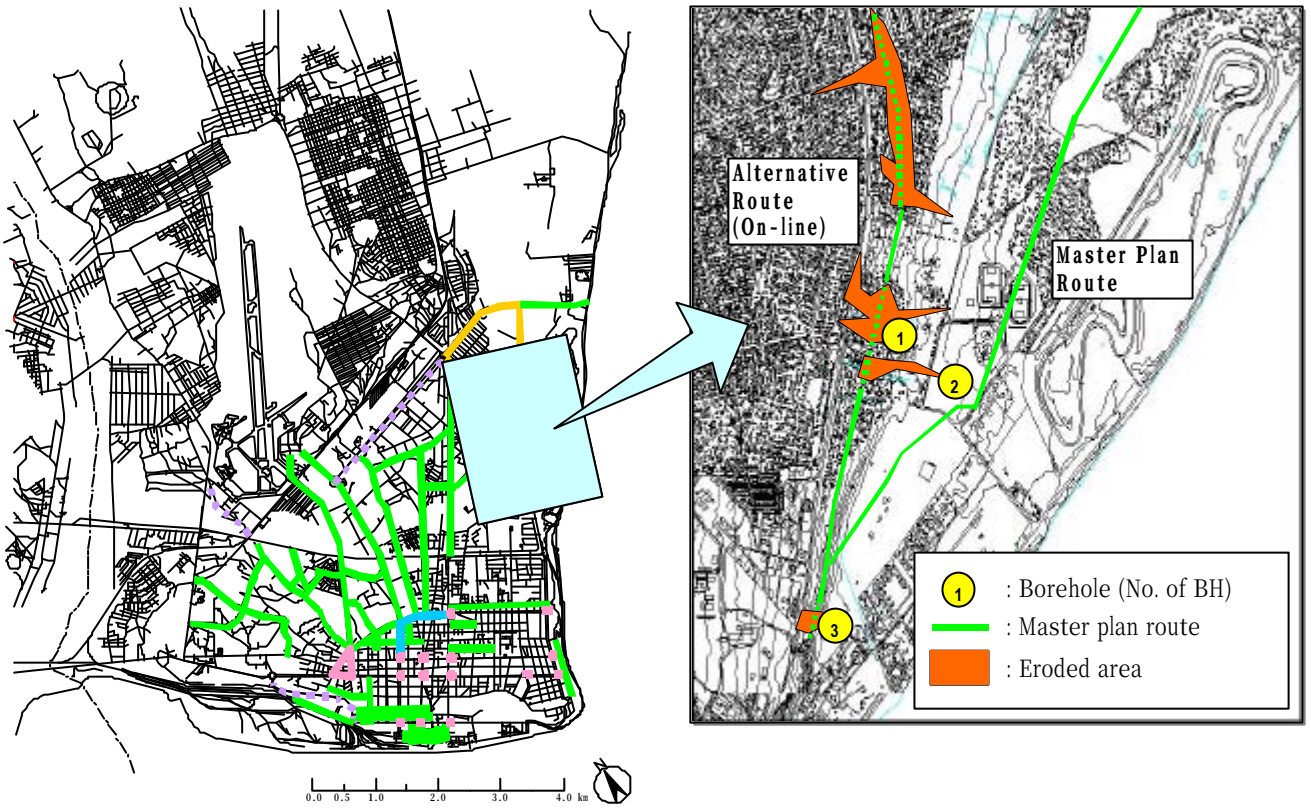

Figure Location of Borehole

Sumário do Registro de Perfuração

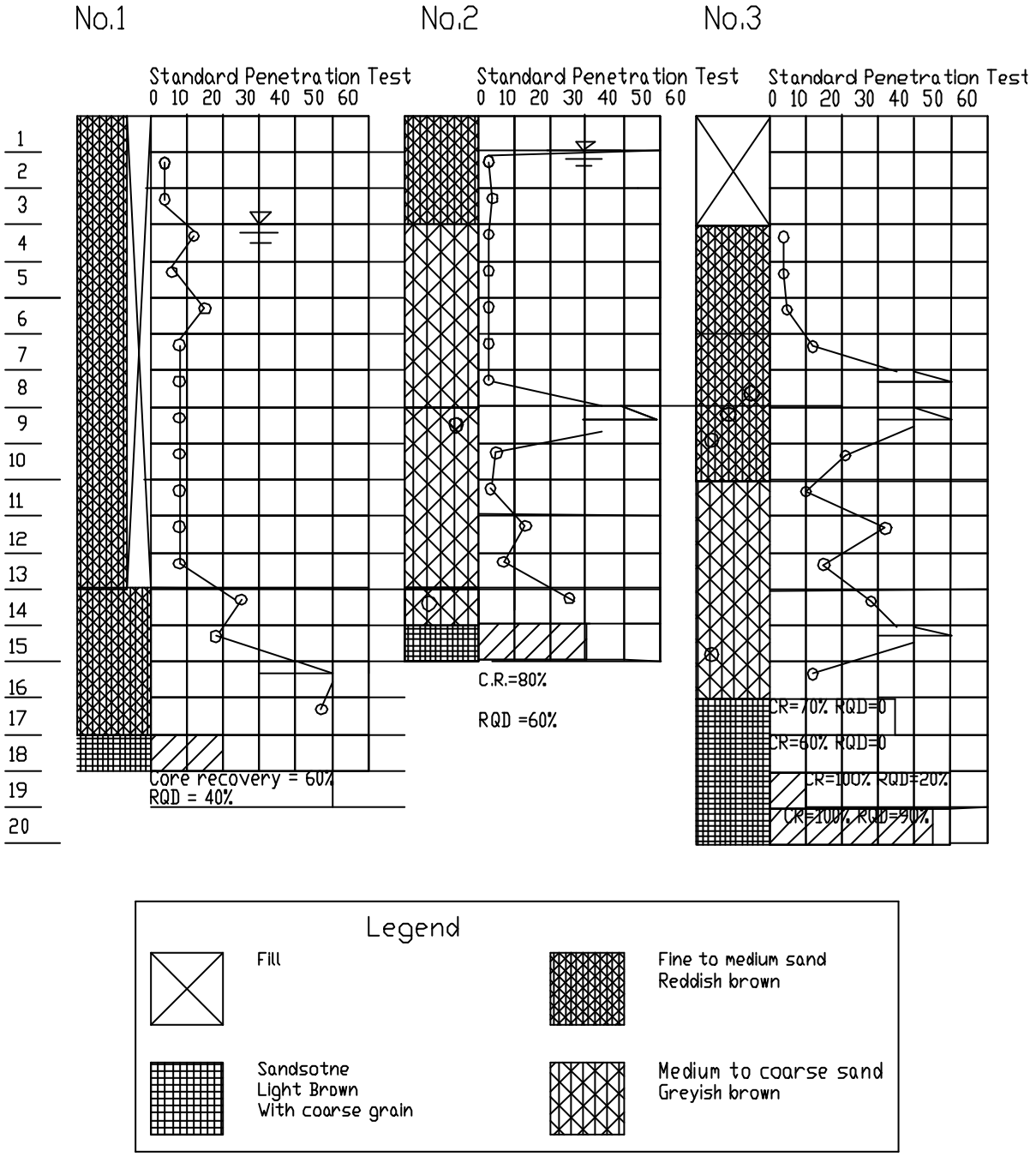

Figure Drilling Logs

MAPUTO ROADS
BOREHOLE LOG

HOLE No: BH 1
Sheet 1 of 1

JOB NUMBER: 03-1060

Scale 1:150

DRILL METH	% CORE REC.	% RQD	FRAQ FREC	SPT N
Wash Bore				4, 4, 12, 6, 15, 8, 8, 8, 8, 8, 8, 8, 27, 8, 61, 39, 35
NWD4	57	32	>20	

Depth	Description
0.00	Moist, dark reddish brown, very loose, fine to medium grained slightly silty SAND. Estuarine.
5.00	Moist, dark reddish brown speckled grey, medium dense, fine to medium grained slightly silty SAND. Estuarine.
6.00	Moist, dark reddish brown, loose, fine to medium grained, SILTY SAND. Estuarine.
12.00	Moist, dark reddish brown, medium dense, fine to medium grained, slightly silty CLAYEY SAND. Estuarine.
15.00	Moist, dark reddish brown, dense to very dense, coarse grained, SAND. Estuarine.
17.90	Light greyish yellow speckled grey and stained orange, medium weathered, fine through to coarse grained, closely jointed, soft rock SANDSTONE.
19.00	

NOTES

1) End of borehole at 19.00m.

CONTRACTOR : GEO PRACTICA
MACHINE : TONE
DRILLED BY :
PROFILED BY : C. CANAHAI
TYPE SET BY : B. NEWTON
SETUP FILE : BH.SET

INCLINATION : VERTICAL
DIAM :
DATE : JUNE 2001
DATE : JUNE 2001
DATE : 25/06/01 15:48
TEXT : C:\DOTPLOT\03-106~2.TXT

ELEVATION :
X-COORD :
Y-COORD :

HOLE No: BH 1

C02E dot.PLOT 3041 J&W Inc

Drilling Log

The study on the Master Plan and Feasibility Study for the Road Development of the City of Maputo
Borehole No. 1
Ground level EL+ m
Groundwater level : GL-3m

Date 29 May 2001 - 31 may 2001

Scale 0m	Legend	Depth	Thick-ness	Eleva-tion	Description	Standard Penetration Test (0 10 20 30 40 50 60)
1					Secondary deposited to GL-13m	
2					Fine to medium sand	4
3		3.00	3.00		Very loose to loose	4
4					Fine sand	12
5					Reddish brown	6
6					Loose to medium	15
7					Encountered plastic	8
8					tube at GL-7m	8
9						8
10						8
11						8
12						8
13		13.00	10.00			8
14					Original ground	25
15		15.00	2.00		Fine to medium sand Reddish brown	18
16					Fine to melum sand	>50
17		17.00	2.00		Dense to very dense	43
18		18.00	1.00		Sandstone,light brown With coarse grain	
19						Core recovery = 60% RQD = 40%
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

0 1 2 3 4 5 6

1 2 3 4 5 6 7

7 8 9 10 11 12 13 14 15

8 9 10 11 12 13 14 15

Photo Drilling Core at Borehole Bo.1

Photo Drilling Rig at Borehole No.1 and Accommodation

MAPUTO ROADS
BOREHOLE LOG

HOLE No: BH 2
Sheet 1 of 1

JOB NUMBER: 03-1060

Scale 1:150

DRILL METH	% CORE REC.	% RQD	FRAQ FREC	SPT N
Wash Bore				4
				5
				4
				4
				4
				4
				4
				6
				4
				14
				8
				26
NWD4	80	60	7	R

0.00 Moist, dark reddish brown, loose, fine to medium grained, slightly silty SAND. Estuarine.

4.00 Very moist, greyish brown, loose, fine to medium grained, slightly silty SAND. Estuarine.

5.00 Moist, light greysih brown, loose, medium to coarse grained, SAND containing shell fragments. Estuarine.

8.17 Moist, light yellowish brown, loose becoming medium dense, fine grained SAND with gravel at base of horizon. Estuarine.

14.00 Light yellow banded orange, medium weathered, fine to medium grained, soft rock SANDSTONE containing shell fragments.

15.00

NOTES

1) End of borehole at 15.00m.

CONTRACTOR : GEO PRACTICA
MACHINE : TONE
DRILLED BY :
PROFILED BY : C. CANAHAI

TYPE SET BY : B. NEWTON
SETUP FILE : BH.SET

INCLINATION :
DIAM :
DATE : JUNE 2001
DATE : JUNE 2001

DATE : 25/06/01 15:48
TEXT : C:\DOTPLOT\03-106~2.TXT

ELEVATION :
X-COORD :
Y-COORD :

HOLE No: BH 2

C02E dot.PLOT 3041 J&W Inc

Drilling Log

The Study on the Master Plan and Feasibility Study for the Road Development of the City of Maputo
Borehole No. 2
Elevation: EL+ m
Groundwater table: GL- 1m
Driller: Geotechnical Services Pty Ltd
Date 31 May 2001 - 3 Jun 2001

Scale 0m	Legend	Depth	Thick-ness	Eleva-tion	Description	Standard Penetration Test 0 10 20 30 40 50 60
1, 2, 3		3.00	3.00		Fine to medium sand Reddish brown Very loose to loose	4, 5
4, 5, 6, 7, 8		8.00	5.00		Medium to coarse Beach sand with a trace of shell fgragment brownish grey Very loose	4, 4, 4, 4, 4
9, 10, 11, 12, 13		13.00	5.00		Mmedium to coarde sand Brownish grey Residual soil Occasionally with sandstone fragment	Refusal, 6, 4, 14, 8
14, 15		14.00	1.00		Coarse sand Decomposed sandstone	26
16, 17		15.00	1.00		Sandstone, light brown Moderately weathered	C.R.=80% RQD =60%
18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30						

Photo Drilling Cores at Borehole No.2

Photo Drilling Rig at Borehole No.2 with Close-up View

MAPUTO ROADS
BOREHOLE LOG

HOLE No: BH 3
Sheet 1 of 1

JOB NUMBER: 03-1060

Scale 1:150

DRILL METH	% CORE REC.	% RQD	FRAQ FREC	SPT N	Depth	Description
					0.00	Moist, dark reddish brown, fine to medium grained, SAND containing builders rubble. Fill
					2.00	Moist, dark reddish brown, loose, fine to medium grained, SAND. Estuarine.
Wash Bore				4		
				4	5	
				5		
				12		
					6.00	Moist, dark reddish brown, medium dense, fine to medium grained CLAYEY SAND. Estuarine.
					8.00	Moist, dark reddish brown, dense, SILTY SAND. Estuarine.
NWD4					10	
				21	10.00	Moist, dark reddish brown, medium dense, fineto medium grained, slightly silty CLAYEY SAND. Estuarine.
				8		
Wash Bore				32		
				11		
				18	14.00	Moist, reddish brown, medium dense, fine through to coarse grained SAND containing Sandstone cobles and boulders. Estuarine.
					15	
				12		
	92	0	>20		17.00	Light yellow brown speckled orange, highly weathered with intercalations of unconsolidated sand, fine to medium grained, very soft rock, SANDSTONE.
NWD4	57	0	>20			
	67	59	4		20	
	100	22	0		21.00	Light yellow brown mottled orange, medium weathered, fine to medium grained, soft to medium hard rock, SANDSTONE with shell fragments.
					22.00	

NOTES

1) End of borehole at 22.0m.

CONTRACTOR : GEO PRACTICA
MACHINE : TONE
DRILLED BY :
PROFILED BY : C. CANAHAI
TYPE SET BY : B. NEWTON
SETUP FILE : BH.SET

INCLINATION :
DIAM :
DATE : JUNE 2001
DATE : JUNE 2001
DATE : 25/06/01 15:48
TEXT : C:\DOTPLOT\03-106 ~2.TXT

ELEVATION :
X-COORD :
Y-COORD :

HOLE No: BH 3

C02E

dot.PLOT 3041 J&W Inc

Drilling Log

The Study on the Master Plan and Feasibility Study for the Road Development of the City of Maputo
Borehole No.3
Elevation: EL+ m
Groundwater Table : GL-3m
Driller : Geotechnical Services Pty Ltd
Date : 4 June 2001 - 7 June 2001

Scale 0m	Legend	Depth	Thick-ness	Eleva-tion	Description	Standard Penetration Test (0 10 20 30 40 50 60)
1, 2, 3		3.00	3.00		Fill with boulders Fine to coarse grain Light brown	
4, 5, 6		6.00	3.00		Fine to medium sand Reddish brown	4, 4, 5
7, 8, 9, 10		10.00	4.00		Fine to medium sand reddish brown with some gravels of sandstone	12, Refusal, Refusal, 21
11, 12, 13, 14, 15, 16		16.00	6.00		Medium sand Greyish brown Residual soils from sandstone Medium dense	10, 32, 15, 28, Refusal, 12
17, 18, 19, 20		20.00	4.00		Sandsotne,light brown Containing fragment of Igneous rocks Completely fractured at top portion	CR=70% RQD=0; CR=60% RQD=0; CR=100% RQD=20%; CR=100% RQD=90%
21, 22, 23, 24, 25, 26, 27, 28, 29, 30						

0 1 2 3 4 5 6

1 2 3 4 5 6 7

7 8 9 10 11 12 13 14 15 16

8 9 10 11 12 13 14 15 16 17

17 18 19

18 19 20

Photo Drilling Cores at Borehole No.3

Photo Drilling at Borehole No.3 and SPT Scene

Apêndice 15.2 Análise de Estabilidade de Encosta

1. Back Calculation of C and φ

Following parameter were chosen for slope stability analysis:

1) Fill : c=0, φ=30°
2) Cut slope : c=25kN/m^2, φ=30°

Back-calculated assuming vertical slope with a height of 10m, no groundwater and no crack

Apparent Cohesion* C, kN/m^2	Internal friction φ,	Unit weight γ, kN/m^3	Safety Factor	
50	0	17	1.128	
40	10	17	1.076	
30	20	17	0.991	
25	30	17	1.001	Employed in following analysis
20	40	17	0.999	

2. Safety Factor for Proposed Embankment

Embankment	C, kN/m^2	φ,	V, m	H, m	Top clay, m	Length of horizontal drain, m	Safety factor	Case Number	Judgement
Fill	0	30	15	15	3	0	0.595	1	
						10	1.014*	2	
				22.5	3	0	0.655	3	
						8	1.154	4	
						10	1.244	5	OK
				30	3	0	0.744	6	
						7	1.239	7	OK
			10	10	3	0	0.803	12	
						6	1.174*	13	
				15	3	0	0.861	14	
						4	1.217	15	OK
				20	3	0	0.960	16	
						3	1.244	17	OK
Cut	25	30	15	15	-	0	1.055	8	
						3	1.243	9	OK
				22.5	-	0	1.226	10	OK
			10	10	-	0	1.404	18	OK
Minimum safety factor required							1.2		

*Additional measures are required to obtain the minimum safety factor of 1.2.

Apêndice 15.3 CBR / Levantamento de Estrutura do Pavimento

15.3.1 Levantamento de CBR

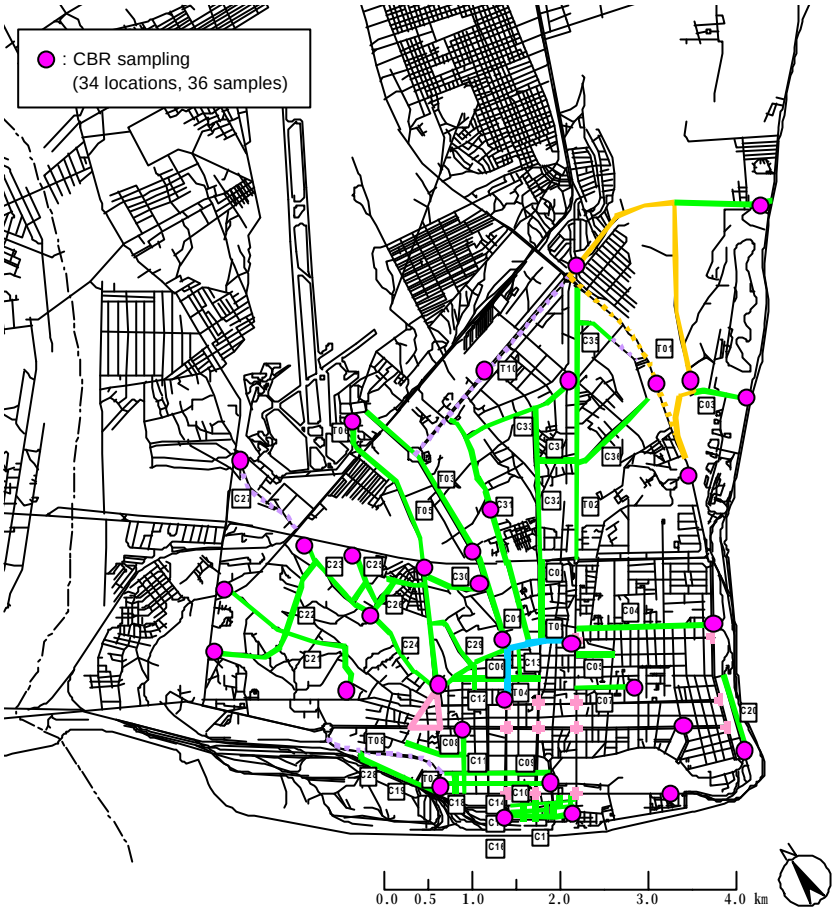

Figure Location of CBR Sampling

MAPUTO ROADS
TRIAL PIT LOG

HOLE No: Av.24
Sheet 1 of 1

JOB NUMBER: 03-1060

Scale 1:10

0.00 Dry, dark red brown, medium dense, slightly silty, fine and medium grained SAND. Fill.

0.85

CONTRACTOR :
MACHINE : HAND EXCAVATION.
DRILLED BY :
PROFILED BY : J. NORRIS
TYPE SET BY : B. NEWTON
SETUP FILE : TP.SET

INCLINATION :
DIAM :
DATE :
DATE : 5-06-2001
DATE : 12/06/01 11:42
TEXT : C:\DOTPLOT\03-106~1.TXT

ELEVATION : +-36m
GEO-COORD : 25d 58' 28" S
GEO-COORD : 32d 35' 19" E

HOLE No: Av.24

C02E dot.PLOT 3041 J&W Inc

HOLE No: Av.25
Sheet 1 of 1

MAPUTO ROADS
TRIAL PIT LOG

JOB NUMBER: 03-1060

Scale 1:10

0.00 Slightly moist, dark red brown blotched black, medium dense, SILTY, fine and medium grained SAND. Fill.

0.60 ASH. Fill.

0.80 Slightly moist to moist, dark red brown, medium dense, slightly silty, fine and medium grained SAND.

1.20

CONTRACTOR :
MACHINE : HAND EXCAVATION.
DRILLED BY :
PROFILED BY : J. NORRIS
TYPE SET BY : B. NEWTON
SETUP FILE : TP.SET

INCLINATION :
DIAM :
DATE :
DATE : 5-06-2001
DATE : 12/06/01 11:55
TEXT : C:\DOTPLOT\03-106~1.TXT

ELEVATION : +-5m
GEO-COORD : 25d 58' 47" S
GEO-COORD : 35d 34' 01" E

HOLE No: Av.25

C02E dot.PLOT 3041 J&W Inc

MAPUTO ROADS
TRIAL PIT LOG

HOLE No: C03
Sheet 1 of 1

JOB NUMBER: 03-1060

Scale 1:10

0.00 Dry, dark orange brown, medium dense, RUBBLE and FILL in a silty sand matrix. Fill.

0.70 Slightly moist, light brown, loose, fine and medium grained SAND. Estuarine.

1.10

CONTRACTOR :
MACHINE : HAND EXCAVATION.
DRILLED BY :
PROFILED BY : J. NORRIS

TYPE SET BY : B. NEWTON
SETUP FILE : TP.SET

INCLINATION :
DIAM :
DATE :
DATE : 5-06-2001

DATE : 12/06/01 11:41
TEXT : C:\DOTPLOT\03-106~1.TXT

ELEVATION : +-6m
GEO-COORD : 25d 56' 54" S
GEO-COORD : 32d 36' 59" E

HOLE No: C03

C02E

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HOLE No: C04
Sheet 1 of 1

JOB NUMBER: 03-1060

MAPUTO ROADS
TRIAL PIT LOG

Scale 1:10

0.00	Dry, grey brown, medium dense, SILTY, fine grained SILTY SAND. Fill.
0.10	Slightly, moist, dark red brown, loose to medium dense, slightly silty, fine and medium grained SAND.
0.90	

CONTRACTOR :
MACHINE : HAND EXCAVATION.
DRILLED BY :
PROFILED BY : J. NORRIS
TYPE SET BY : B. NEWTON
SETUP FILE : TP.SET

INCLINATION :
DIAM :
DATE :
DATE : 5-06-2001
DATE : 12/06/01 11:41
TEXT : C:\DOTPLOT\03-106~1.TXT

ELEVATION : +-10m
GEO-COORD : 25d 57' 58" S
GEO-COORD : 32d 35' 52" E

HOLE No: C04

C02E dot.PLOT 3041 J&W Inc

MAPUTO ROADS
TRIAL PIT LOG

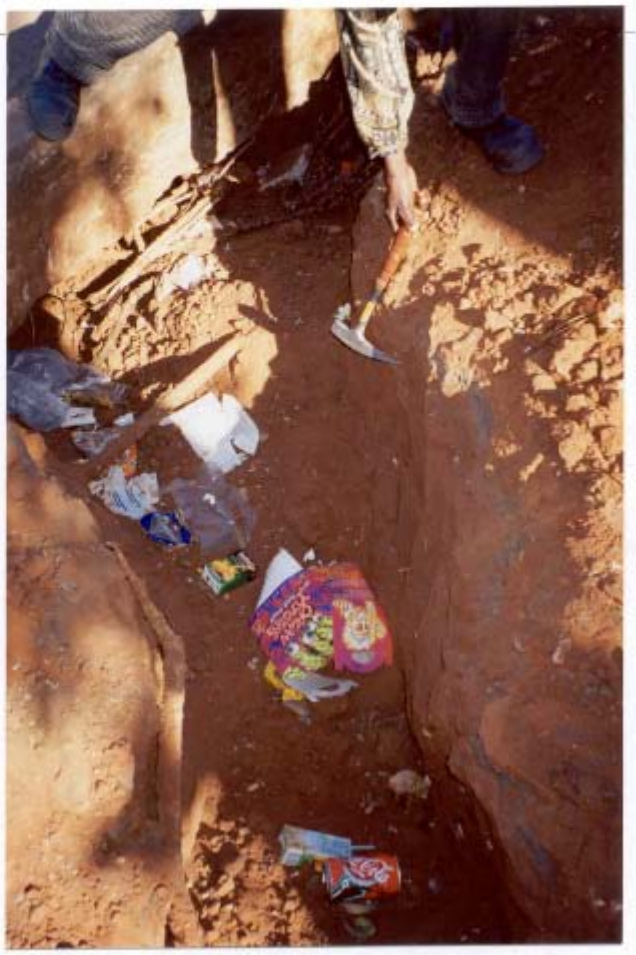
HOLE No: C07
Sheet 1 of 1

JOB NUMBER: 03-1060

Scale 1:10

0.00 Dry, dark red brown, medium dense, SILTY SAND intermixed with builders rubble. Fill.

0.70



CONTRACTOR :
MACHINE : HAND EXCAVATION.
DRILLED BY :
PROFILED BY : J. NORRIS
TYPE SET BY : B. NEWTON
SETUP FILE : TP.SET

INCLINATION :
DIAM :
DATE :
DATE : 5-06-2001
DATE : 12/06/01 11:41
TEXT : C:\DOTPLOT\03-106~1.TXT

ELEVATION : +-32m
GEO-COORD : 25d 58' 05" S
GEO-COORD : 32d 35' 11" E

HOLE No: C07

C02E dot.PLOT 3041 J&W Inc

HOLE No: C10
Sheet 1 of 1

JOB NUMBER: 03-1060

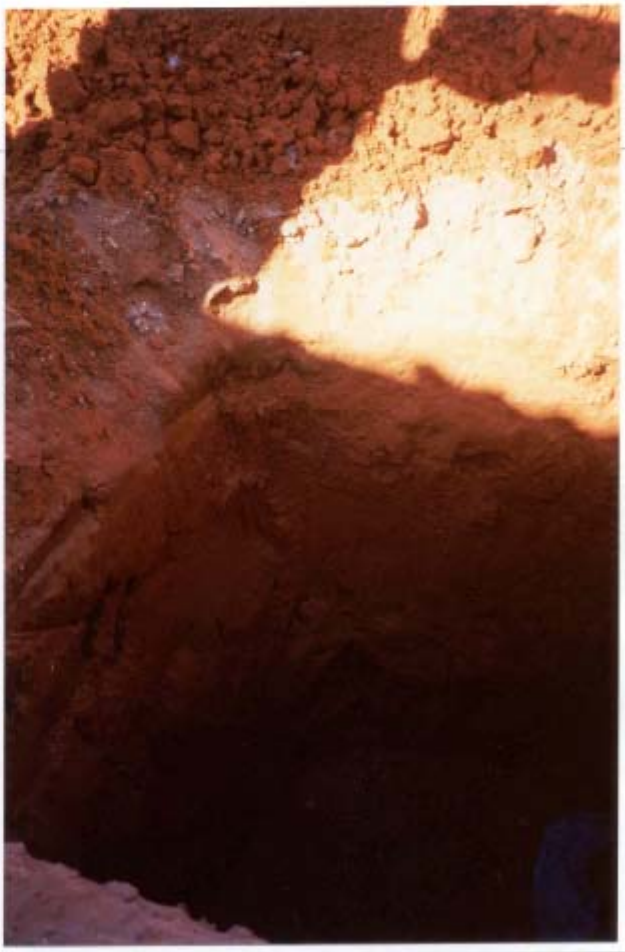
MAPUTO ROADS
TRIAL PIT LOG

Scale 1:10

0.00 Dry, light grey brown, medium dense, slightly silty, fine grained SAND.

0.15 Slightly moist to moist, dark red brown, medium dense, slightly silty, fine and medium grained SAND.

0.90



CONTRACTOR :
MACHINE : HAND EXCAVATION.
DRILLED BY :
PROFILED BY : J. NORRIS
TYPE SET BY : B. NEWTON
SETUP FILE : TP.SET

INCLINATION :
DIAM :
DATE :
DATE : 5-06-2001
DATE : 15/06/01 15:11
TEXT : C:\DOTPLOT\03-106~1.TXT

ELEVATION : -3m
X-COORD : 25d 58' 17" S
Y-COORD : 32d 34' 27" E

HOLE No: C10

C02E

dot.PLOT 3041 J&W Inc

HOLE No: C11
Sheet 1 of 1

JOB NUMBER: 03-1060

MAPUTO ROADS
TRIAL PIT LOG

Scale 1:10

0.00 Dry, light grey, medium dense, fine grained SANDY GRAVEL. Pavement.

0.10 Moist, dark red brown, loose, to medium dense, fine to medium grained SAND.

1.00

CONTRACTOR :
MACHINE : HAND EXCAVATION.
DRILLED BY :
PROFILED BY : J. NORRIS
TYPE SET BY : B. NEWTON
SETUP FILE : TP.SET

INCLINATION :
DIAM :
DATE :
DATE : 5-06-2001
DATE : 12/06/01 11:41
TEXT : C:\DOTPLOT\03-106 "1.TXT

ELEVATION : +-21m
GEO-COORD : 25d 57' 41" S
GEO-COORD : 32d 33' 58" E

HOLE No: C11

C02E dot.PLOT 3041 J&W Inc

HOLE No: C16/1
Sheet 1 of 1

JOB NUMBER: 03-1060

MAPUTO ROADS
TRIAL PIT LOG

Scale 1:10

0.00 Dry, light grey brown, medium dense, SILTY, fine and medium grained SAND and RUBBLE. Fill.

0.20 Slightly moist, dark red brown, medium dense to dense, SILTY, fine grained SAND.

0.80

CONTRACTOR :
MACHINE : HAND EXCAVATION.
DRILLED BY :
PROFILED BY : J. NORRIS
TYPE SET BY : B. NEWTON
SETUP FILE : TP.SET

INCLINATION :
DIAM :
DATE :
DATE : 5-06-2001
DATE : 12/06/01 11:41
TEXT : C:\DOTPLOT\03-106~1.TXT

ELEVATION :
GEO-COORD : 25d 58' 21" S
GEO-COORD : 32d 33' 57" E

HOLE No: C16/1

C02E dot.PLOT 3041 J&W Inc

HOLE No: C16/2
Sheet 1 of 1

JOB NUMBER: 03-1060

MAPUTO ROADS
TRIAL PIT LOG

Scale 1:10

0.00 Dry, light grey, medium dense, SILTY, fine grained SAND and RUBBLE. Fill.

0.15 Slightly moist, dark red brown, medium dense, fine grained SAND.

0.90

CONTRACTOR :
MACHINE : HAND EXCAVATION.
DRILLED BY :
PROFILED BY : J. NORRIS
TYPE SET BY : B. NEWTON
SETUP FILE : TP.SET

INCLINATION :
DIAM :
DATE :
DATE : 5-06-2001
DATE : 12/06/01 11:41
TEXT : C:\DOTPLOT\03-106 "1.TXT

ELEVATION : -6m
GEO-COORD : 25d 58' 32" S
GEO-COORD : 32d 34' 21" E

HOLE No: C16/2

C02E dot.PLOT 3041 J&W Inc

HOLE No: C20
Sheet 1 of 1

JOB NUMBER: 03-1060

MAPUTO ROADS
TRIAL PIT LOG

Scale 1:10

0.00 Dry, dark red brown, medium dense, SILTY, fine grained SAND with occasional sandstone boulders. Fill.

0.90

CONTRACTOR :
MACHINE : HAND EXCAVATION.
DRILLED BY :
PROFILED BY : J. NORRIS
TYPE SET BY : B. NEWTON
SETUP FILE : TP.SET

INCLINATION :
DIAM :
DATE :
DATE : 5-06-2001
DATE : 12/06/01 11:41
TEXT : C:\DOTPLOT\03-106~1.TXT

ELEVATION : +-16m
GEO-COORD : 25d 58' 50" S
GEO-COORD : 32d 35' 35" E

HOLE No: C20

C02E

dot.PLOT 3041 J&W Inc

HOLE No: C21/1
Sheet 1 of 1

MAPUTO ROADS
TRIAL PIT LOG

JOB NUMBER: 03-1060

Scale 1:10

0.00 – 0.10	Dark grey, medium dense to dense, GRAVEL, CRUSHER RUN/PAVEMENT.
0.10 – 0.50	Dry to slightly moist, light brown to light grey, medium dense, fine to medium grained GRAVELLY SAND. Fill.
0.50 – 0.70	Dry to slightly moist, dark brown becoming yellow orange, medium dense, fine to medium grained SAND. Fill.
0.70 – 0.95	Dry, dark grey, medium dense ASH. Fill.

CONTRACTOR :
MACHINE : HAND EXCAVATION.
DRILLED BY :
PROFILED BY : J. NORRIS
TYPE SET BY : B. NEWTON
SETUP FILE : TP.SET

INCLINATION :
DIAM :
DATE :
DATE : 5-06-2001
DATE : 12/06/01 11:41
TEXT : C:\DOTPLOT\03-106~1.TXT

ELEVATION : +-31m
GEO-COORD : 25d 56' 2" S
GEO-COORD : 32d 33' 3" E

HOLE No: C21/1

C02E dot.PLOT 3041 J&W Inc

HOLE No: C21/2
Sheet 1 of 1

JOB NUMBER: 03-1060

MAPUTO ROADS
TRIAL PIT LOG

Scale 1:10

0.00	CONCRETE PAVEMENT.
0.08	Bricks and rubble.
0.10	Moist, light brown to light yellow orange, loose to medium dense, fine to medium grained slightly silty SAND. Estuarine.
1.10	

CONTRACTOR :
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DATE :
DATE : 5-06-2001
DATE : 12/06/01 11:41
TEXT : C:\DOTPLOT\03-106~1.TXT

ELEVATION : +-20m
GEO-COORD : 25d 57' 07" S
GEO-COORD : 32d 33' 24" E

HOLE No: C21/2

C02E dot.PLOT 3041 J&W Inc

HOLE No: C22
Sheet 1 of 1

JOB NUMBER: 03-1060

MAPUTO ROADS
TRIAL PIT LOG

Scale 1:10

0.00 Dry to slightly moist, light brown mottled grey, medium dense, fine to medium grained, GRAVELLY SAND. Fill.

0.20 Moist, light yellow orange, loose to medium dense, fine to medium grained, slightly silty SAND. Estuarine.

1.30

CONTRACTOR :
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DIAM :
DATE :
DATE : 5-06-2001
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TEXT : C:\DOTPLOT\03-106~1.TXT

ELEVATION : +-37m
GEO-COORD : 25d 56' 22" S
GEO-COORD : 32d 32' 44" E

HOLE No: C22

C02E dot.PLOT 3041 J&W Inc

MAPUTO ROADS
TRIAL PIT LOG

HOLE No: C23
Sheet 1 of 1

JOB NUMBER: 03-1060

Scale 1:10

0.00	Slightly moist, red, loose to medium dense, fine to medium grained SAND. Estuarine.
0.30	Dark grey ASH.
0.35	Slightly moist, red, loose to medium dense, fine to medium grained SAND. Estuarine
0.40	Dry to slightly moist, light greyish brown, medium dense, fine to medium grained SAND and ASH. Fill.
0.80	Slightly moist, light yellow orange, loose to medium dense, fine to medium grained SAND. Estuarine.
1.20	

CONTRACTOR :
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SETUP FILE : TP.SET

INCLINATION :
DIAM :
DATE :
DATE : 5-06-2001
DATE : 12/06/01 11:41
TEXT : C:\DOTPLOT\03-106~1.TXT

ELEVATION : +-34m
GEO-COORD : 25d 56' 07" S
GEO-COORD : 32d 33' 44" E

HOLE No: C23

C02E

dot.PLOT 3041 J&W Inc

HOLE No: C24
Sheet 1 of 1

JOB NUMBER: 03-1060

MAPUTO ROADS
TRIAL PIT LOG

Scale 1:10

0.00	Moist, dark brown to reddish brown, medium dense, fine to medium grained GRAVELLY SAND. Fill.
0.30	Moist, dark grey, medium dense, ASH.
0.40	Moist, light yellow orange, loose to medium dense, fine to medium grained slightly silty SAND. Estuarine.
1.30	

CONTRACTOR :
MACHINE : HAND EXCAVATION.
DRILLED BY :
PROFILED BY : J. NORRIS
TYPE SET BY : B. NEWTON
SETUP FILE : TP.SET

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TEXT : C:\DOTPLOT\03-106~1.TXT

ELEVATION : +-30m
GEO-COORD : 25d 56' 42" S
GEO-COORD : 32d 33' 55" E

HOLE No: C24

C02E

dot.PLOT 3041 J&W Inc

HOLE No: C25
Sheet 1 of 1

MAPUTO ROADS
TRIAL PIT LOG

JOB NUMBER: 03-1060

Scale 1:10

0.00 Dry, light grey, medium dense, fine grained slightly gravelly SAND. Fill.

0.10 Dry to slightly moist, white (insitu) on one half of TP orange (fill) on other half, medium dense, fine to medium grained, slightly silty SAND.

1.00

CONTRACTOR :
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SETUP FILE : TP.SET

INCLINATION :
DIAM :
DATE :
DATE : 5-06-2001
DATE : 12/06/01 11:42
TEXT : C:\DOTPLOT\03-106~1.TXT

ELEVATION : +-27m
GEO-COORD : 25d 56' 19" S
GEO-COORD : 32d 34' 01" E

HOLE No: C25

C02E dot.PLOT 3041 J&W Inc

HOLE No: C27
Sheet 1 of 1

MAPUTO ROADS
TRIAL PIT LOG

JOB NUMBER: 03-1060

Scale 1:10

0.00 Dry to slightly moist, light yellowish brown, medium dense, fine to medium grained SAND containing some gravel. Fill.

0.30 Dry to slightly moist, light yellowish brown to light yellow orange, medium dense, fine grained slightly silty SAND. Estuarine.

1.20

CONTRACTOR :
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SETUP FILE : TP.SET

INCLINATION :
DIAM :
DATE :
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DATE : 12/06/01 11:42
TEXT : C:\DOTPLOT\03-106~1.TXT

ELEVATION : +-38m
GEO-COORD : 25d 55' 22" S
GEO-COORD : 32d 33' 41" E

HOLE No: C27

C02E dot.PLOT 3041 J&W Inc

MAPUTO ROADS
TRIAL PIT LOG

HOLE No: C30
Sheet 1 of 1

JOB NUMBER: 03-1060

Scale 1:10

0.00	Moist, greyish brown, medium dense, fine to medium grained, SAND. Fill.
0.15	Moist, dark red, medium dense, fine to medium grained, GRAVELLY SAND. Fill.
0.25	Moist, brown speckled dark grey and yellow, medium dense, fine to medium grained SAND. Fill.
0.70	Very moist, brown, medium dense, fine to medium grained, slightly silty SAND. Estuarine.
1.10	

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TEXT : C:\DOTPLOT\03-106 "1.TXT

ELEVATION : +-21m
GEO-COORD : 25d 56' 56" S
GEO-COORD : 32d 34' 40" E

HOLE No: C30

C02E

dot.PLOT 3041 J&W Inc