APPENDIX II

Logs of Boreholes

LOG OF BOREHOLE

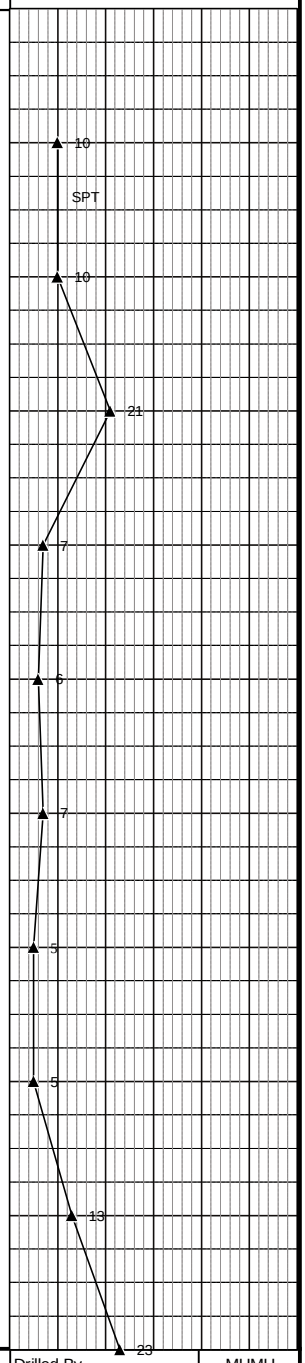
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 1 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 1
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	24.75
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	3.76	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	401030.819 N	**DATE COMMENCED**	23/3/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494492.525 E	**DATE COMPLETED**	29/3/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	γ - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
0.00	3.76				GROUND LEVEL									
0.30	3.46	0.30			SILTY SAND, dark brown, fine to medium grains, occasional gravel with garbage, moist (fill)	SM								
1.00					SILTY SAND, yellowish brown, fine to medium grains with little amount of clay and occasional aggregate particles, MEDIUM DENSE, moist (lateritic fill)	SM		1.45m GWL, 29/3/2013		1.00	5	5	5	10
2.00										2.00	4	5	5	10
3.00	0.76	2.70			SAND with aggregates, grey, fine to medium grains, poorly graded, MEDIUM DENSE, moist (lateritic fill)	SP				3.00	11	11	10	21
4.00	-0.24	1.00			PEAT, black, amorphous with plastic fines, FIRM, moist	Pt				4.00	4	4	3	7
5.00										5.00	4	3	3	6
										UDS (5.50-6.00)				
6.00										6.00	3	4	3	7
										UDS (6.50-7.00)				
7.00										7.00	3	2	3	5
8.00	-4.24	4.00			CLAY, dark grey, high plastic, with organic matters, FIRM, moist	CH				8.00	3	3	2	5
9.00	-5.24	1.00			CLAY, yellowish grey to reddish grey, fine to medium sand grains, high plastic, occasional gravel, STIFF to VERY STIFF, moist (laterite)	CH				9.00	3	6	7	13
10.00														

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
W - Wash sample
SPT - SPT Sample
- Undisturbed sample

Drilled By	MHMH
Logged By	KSH
Date	01/04/2013

LOG OF BOREHOLE

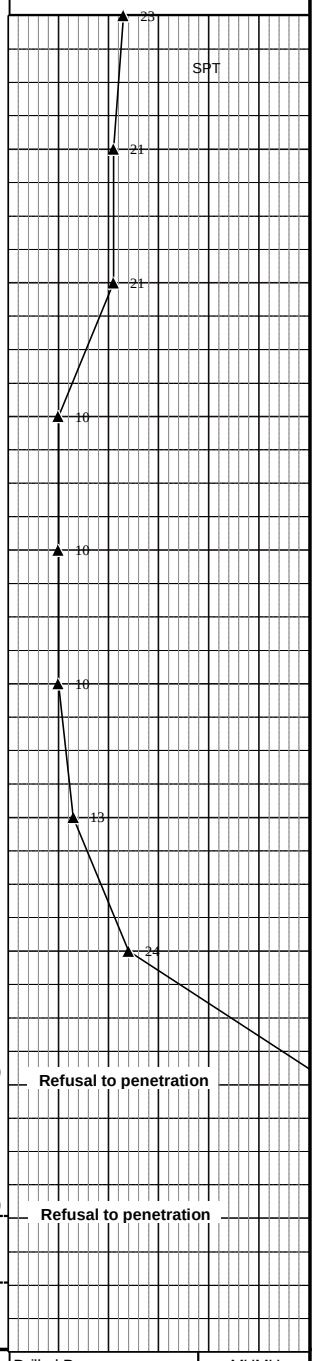
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 2 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 1
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	24.75
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	3.76	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	401030.819 N	**DATE COMMENCED**	23/3/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494492.525 E	**DATE COMPLETED**	29/3/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
10.00						CH		1.45m GWL, 29/3/2013		10.00	9	11	12	23
11.00	-7.24	2.00								11.00	8	10	11	21
12.00					CLAY, pinkish mottled with dull white, high plastic, pockets of keolinitic clay with traces of medium to coarse sand grains and occasional gravel, VERY STIFF, moist (laterite)	CH				12.00	8	11	10	21
13.00	-9.24	2.00								13.00	5	5	5	10
14.00					SILT, yellowish brown, traces of fine to medium with pockets of angular quartzitic sand grains and keolinitic clay fines, low plastic, MEDIUM DENSE, moist (laterite)	ML				14.00	7	5	5	10
15.00	-11.24	2.00								15.00	4	5	5	10
16.00					SILT, yellowish brown, traces of fine to medium sand grains and low plastic clay fines with presence of mica, MEDIUM DENSE, moist (laterite)	ML				16.00	5	6	7	13
17.00	-13.24	2.00								17.00	7	10	14	24
18.00					SILTY SAND, dull white to yellowish brown, fine to medium sand grains, MEDIUM DENSE to VERY DENSE, moist (completely weathered rock)	SM				18.00	11	19	36/12	>50
19.00										19.00	60/7	-	-	>50
19.40	-15.64	2.40			**Rock Level**					Core Depth m	Core Recovery %	RQD %	Return of Water %	
20.00					Hornblende biotite gneiss, dark grey, medium grained, slightly weathered, moderately strong, highly fractured	Rock				19.40 20.20	95	Nil		

MOISTURE CONTENT - %
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm
10 20 30 40 50 60



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	01/04/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 3 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 1
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	24.75
DRILING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	3.76	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / **CASING SIZE** NX	**CO-ORDINATES**	401030.819 N	**DATE COMMENCED**	23/3/2013
VANE SIZE [mm*mm]	- / **UDS SAMPLER SIZE [mm]** -		494492.525 E	**DATE COMPLETED**	29/3/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1 / 2 / 3, FOR 30cm	Core Depth m	Core Recovery %	RQD %	Return of Water %
20.00						Rock									
20.50	-16.74	1.10								20.20					
										21.50					
21.00															
										21.50					
					Biotite granitic gneiss, pinkish grey, medium to coarse grained, moderately to slightly weathered, moderately strong, highly fractured, highly faulted	Rock		1.45m GWL, 29/3/2013		22.20					
22.00															
										22.20					
										23.40					
23.00															
										23.40					
23.70	-19.94	3.20								24.75					
24.00					Hornblende biotite gneiss, dark grey, medium grained, slightly weathered, moderately strong, slightly faulted	Rock									
24.75	-20.99	1.05													
25.00					Borehole terminated at 24.75m depth										
26.00															
27.00															
28.00															
29.00															
30.00	-26.24														

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)

Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	01/04/2013
Checked By	JU

LOG OF BOREHOLE

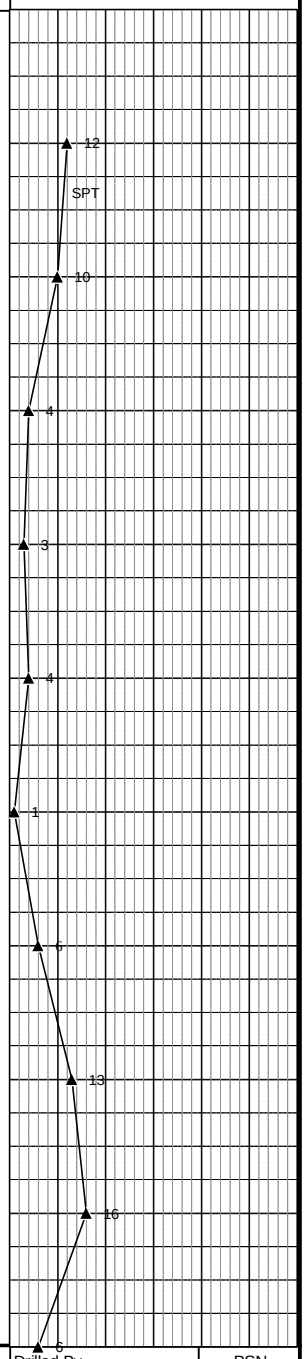
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 1 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 2
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	25.00
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	3.75	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	400911.329 N	**DATE COMMENCED**	20/4/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494527.962 E	**DATE COMPLETED**	24/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
0.00	3.75				GROUND LEVEL									
0.10	3.65	0.10			Road pavement surface									
1.00					SILTY SAND, brick red, fine to medium grains with plastic fines, MEDIUM DENSE, moist (lateritic fill)	SM				1.00	5	6	6	12
2.00										2.00	4	5	5	10
2.90														
3.00	0.85	2.80						3.35m GWL, 24/4/2013		3.00	2	2	2	4
4.00					SILT/CLAY, yellowish reddish brown, pockets of keolinitic clay fines, high plastic, traces of fine to medium sand grains, VERY LOOSE, moist (lateritic fill)	MH/CH				4.00	2	1	2	3
5.00										5.00	2	2	2	4
6.00										6.00	2	1	0	1
6.20	-2.45	3.30												
7.00					PEAT, black, with partially decomposed vegetation, traces of sand, VERY SOFT to STIFF, moist	Pt				7.00	2	3	3	6
8.00										8.00	7	5	8	13
8.90														
9.00	-5.15	2.70								9.00	7	8	8	16
10.00					SAND, black, fine to medium grains with presence of organic matters, well graded, MEDIUM DENSE to LOOSE, moist	SW								

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial
W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	PSN
Logged By	KSH
Date	26/04/2013
Checked By	JU

LOG OF BOREHOLE

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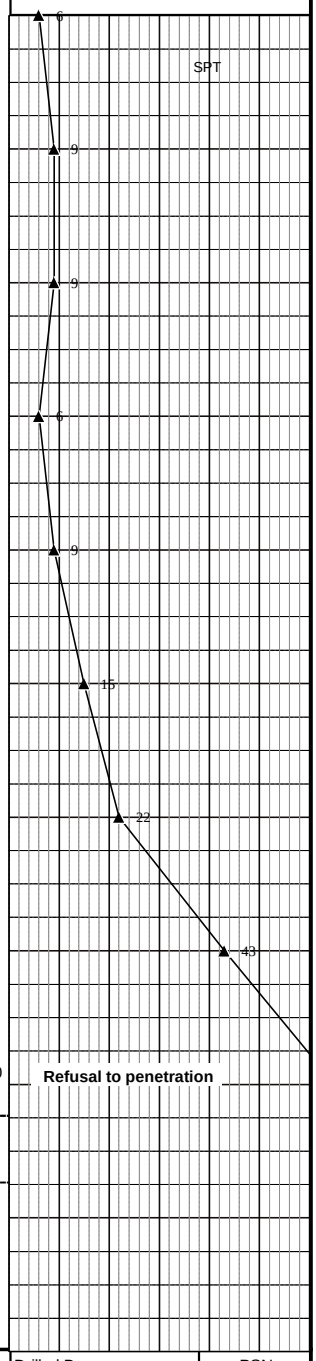
99/1, Jawatta Road, Colombo 05.

SHEET NO. 2 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 2
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	25.00
DRILING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	3.75	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / **CASING SIZE** NX	**CO-ORDINATES**	400911.329 N	**DATE COMMENCED**	20/4/2013
VANE SIZE [mm*mm]	- / **UDS SAMPLER SIZE [mm]** -		494527.962 E	**DATE COMPLETED**	24/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
10.00										10.00	5	3	3	6
					SW									
11.00										11.00	5	4	5	9
11.60	-7.85	2.70												
					PEAT, black, with partially decomposed timber, STIFF, moist	Pt								
12.00		0.50								12.00	4	5	4	9
12.10	-8.35				SANDY CLAY, yellowish brown, medium to coarse sand grains with high plastic clay fines, occasional gravel, LOOSE, moist	CS		3.35m GWL, 24/4/2013						
13.00	-9.25	0.90								13.00	5	3	3	6
					SILT, yellowish brown to reddish brown, with traces of fine sand and occasional gravel, low plastic, LOOSE, moist	ML								
14.00										14.00	6	4	5	9
15.00										15.00	4	5	10	15
15.75	-12.00	2.75												
16.00										16.00	18	10	12	22
					SILTY SAND, greenish grey mottled with dull yellowish brown, fine to medium sand grains with presence of mica, MEDIUM DENSE to VERY DENSE, moist (completely weathered rock)	SM								
17.00										17.00	20	20	23	43
18.00										18.00	23	51	-	>50
											Core Depth m	Core Recovery %	RQD %	Return of Water %
19.00	-15.25	3.25			**Rock Level**					19.00	90	55	80	
					Hornblende biotite gneiss, light grey, medium to coarse grained, moderately weathered, moderately strong, slightly fractured	Rock				20.70				
19.50	-15.75	0.50												
20.00					Hornblende biotite gneiss, light grey, medium to coarse grained, moderately weathered to fresh, strong to very strong	Rock								

MOISTURE CONTENT - %
10 20 30 40 50 60
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm
10 20 30 40 50 60



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial
W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	PSN
Logged By	KSH
Date	26/04/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 3 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 2
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	25.00
DRILING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	3.75	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / CASING SIZE: NX	**CO-ORDINATES**	400911.329 N	**DATE COMMENCED**	20/4/2013
VANE SIZE [mm*mm]	- / UDS SAMPLER SIZE [mm]: -		494527.962 E	**DATE COMPLETED**	24/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm	Core Depth m	Core Recovery %	RQD %	Return of Water %
20.00																		
										20.70						86	55	80
21.00										22.20								
					Hornblende biotite gneiss, light grey, medium to coarse grained, moderately weathered to fresh, strong to very strong	Rock		3.35m GWL, 24/4/2013										
22.00										22.20						90	25	70
										23.50								
23.00																		
										23.50						100	90	80
24.00										25.00								
25.00	-21.25	5.50																
					Borehole terminated at 25.00m depth													
26.00																		
27.00																		
28.00																		
29.00																		
30.00																		

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)

Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	PSN
Logged By	KSH
Date	26/04/2013
Checked By	JU

LOG OF BOREHOLE

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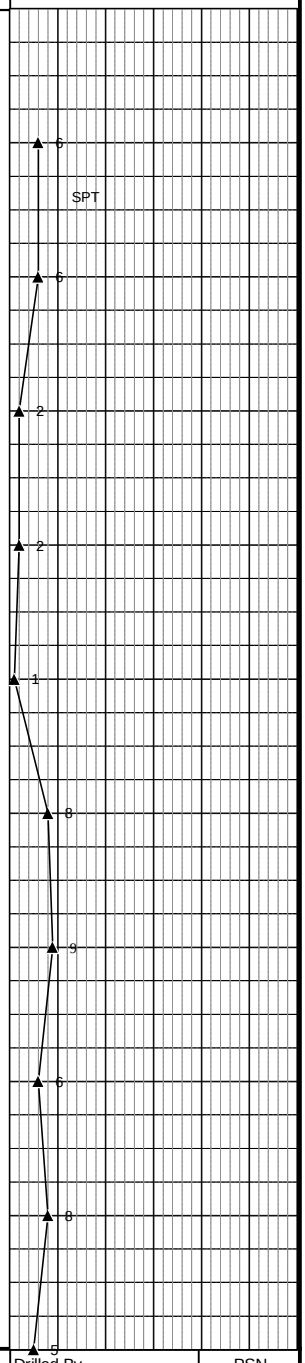
99/1, Jawatta Road, Colombo 05.

SHEET NO. 1 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 3
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	27.80
DRILING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	4.05	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / **CASING SIZE** NX	**CO-ORDINATES**	400769.417 N	**DATE COMMENCED**	26/4/2013
VANE SIZE [mm*mm]	- / **UDS SAMPLER SIZE [mm]** -		494548.492 E	**DATE COMPLETED**	1/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
0.00	4.05				GROUND LEVEL									
0.40	3.65	0.40			SILTY SAND, black, fine to medium sand grains with gravel, moist (lateritic fill)	SM								
1.00					SANDY SILT, red brown, with plastic fines, fine to medium sand grains and occasional gravel, LOOSE, moist (lateritic fill)	MS				1.00	5	3	3	6
2.00	2.05	1.60			GRAVELLY SILT, reddish brown, with high plastic fines, LOOSE, moist (lateritic fill)	MG				2.00	1	3	3	6
3.00								3.00m GWL, 1/5/2013		3.00	1	1	1	2
3.50	0.55	1.50			SILT/CLAY, brownish grey, traces of fine to medium sand grains, intermediate plastic clay fines, VERY LOOSE, moist	MI/CI								
4.00										4.00	1	1	1	2
5.00	-0.95	1.50			SILTY SAND, brownish grey, fine to medium sand grains with plastic fines, VERY LOOSE to LOOSE, moist	SM				5.00	1	1	0	1
6.00										6.00	3	3	5	8
6.75	-2.70	1.75			SAND, blackish grey, medium to coarse grains with angular to subangular gravel mixed with partially decomposed organic material, poorly graded, LOOSE,moist	SP								
7.00										7.00	4	5	4	9
8.00										8.00	4	3	3	6
9.00										9.00	4	4	4	8
10.00														

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
W - Wash sample
SPT - SPT Sample
- Undisturbed sample

Drilled By	PSN
Logged By	KSH
Date	06/05/2013

LOG OF BOREHOLE

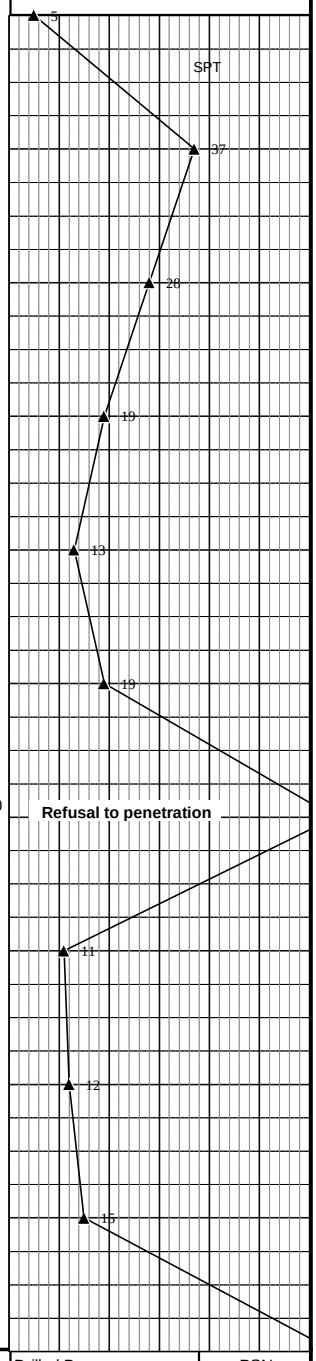
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 2 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			CLIENT	ORIENTAL CONSULTANT COMPANY LTD.	BOREHOLE NO	BH 3
LOCATION	PELIYAGODA			CONTRACT NO	30/24318	DEPTH OF HOLE (m)	27.80
DRILING METHOD	CORE DRILLING			ELEVATION (m MSL)	4.05	CHAINAGE / OFFSET	-
CORE SIZE [mm]	54	CASING SIZE	NX	CO-ORDINATES	400769.417 N	DATE COMMENCED	26/4/2013
VANE SIZE [mm*mm]	-	UDS SAMPLER SIZE [mm]	-		494548.492 E	DATE COMPLETED	1/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
10.00						SP		3.00m GWL, 1/5/2013		10.00	3	2	3	5
11.00	-6.95	4.25								11.00	18	16	21	37
12.00					GRAVELLY SAND, yellowish brown to yellowish grey, medium to coarse sand grains with sub angular gravel and plastic fines, DENSE to MEDIUM DENSE, moist	SG				12.00	22	15	13	28
13.00										13.00	10	11	8	19
14.00										14.00	7	8	5	13
15.00	-10.95	4.00								15.00	5	6	13	19
16.00					SILTY SAND, brick red, fine to medium with occasional sub angular grains, plastic clay fines, MEDIUM DENSE to VERY DENSE, moist	SM				16.00	38	20/5	-	>50
17.00	-12.95	2.00								17.00	6	5	6	11
18.00					SILT, greenish grey mottled with dull white, intermediate plastic fines, traces of sand and presence of mica, MEDIUM DENSE to VERY DENSE, moist (completely weathered rock)	MI				18.00	7	4	8	12
19.00										19.00	7	8	7	15
20.00														

MOISTURE CONTENT - %
10 20 30 40 50 60
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm
10 20 30 40 50 60



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	PSN
Logged By	KSH
Date	06/05/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 3 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 3
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	27.80
DRILING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	4.05	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / **CASING SIZE** NX	**CO-ORDINATES**	400769.417 N	**DATE COMMENCED**	26/4/2013
VANE SIZE [mm*mm]	- / **UDS SAMPLER SIZE [mm]** -		494548.492 E	**DATE COMPLETED**	1/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm	Core Depth m	Core Recovery %	RQD %	Return of Water %
20.00						MI		3.00m GWL, 1/5/2013		20.00	45	-	-	>50				
21.00	-16.95	4.00			SILTY SAND, greenish grey mottled with dull white, fine to medium sand grains with presence of mica, VERY DENSE, moist (completely weathered rock)	SM				21.00	45/10	-	-	>50				
21.80	-17.75	0.80			**Rock Level**													
22.00					Garnet biotite gneiss, light grey, fine to medium grained, moderately weathered, moderatly strong, highly fractured	Rock				21.80	95	25		90	21.80	95	25	90
23.00	-18.95	1.20								23.50								
24.00					Garnet biotite gneiss, light grey, fine to medium grained, fresh, very strong, highly to moderately fractured	Rock				23.50	97	32		90	23.50	97	32	90
25.00										25.00								
26.00										25.00	97	87		80				
27.00										26.80								
27.80	-23.75	4.80								26.80	100	90		80				
28.00					Borehole terminated at 27.80m depth					27.80								
29.00																		
30.00																		

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)

Refusal to penetration

Refusal to penetration

Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	PSN
Logged By	KSH
Date	06/05/2013
Checked By	JU

LOG OF BOREHOLE

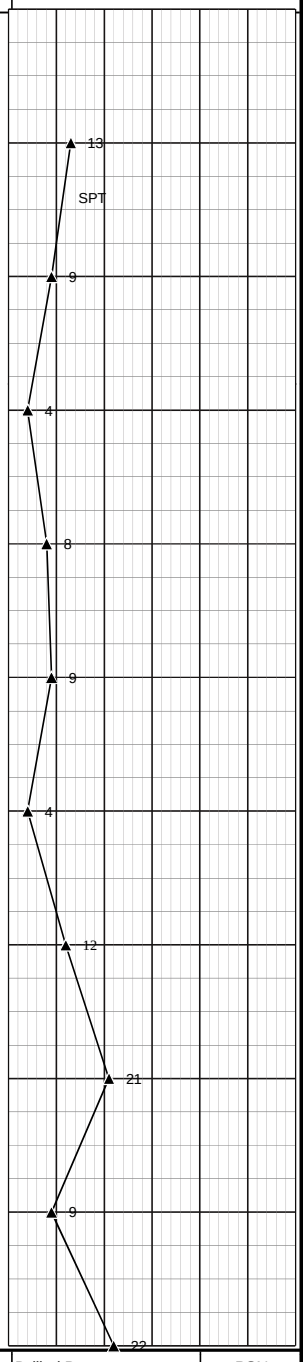
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 1 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 4
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	21.00
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	2.60	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	400643.136 N	**DATE COMMENCED**	4/5/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494599.559 E	**DATE COMPLETED**	10/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	γ - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
0.00	2.60				GROUND LEVEL									
1.00					SILTY SAND, greyish brown, fine sand grains with aggregates, occasional plant roots, MEDIUM DENSE, moist (recent deposit)	SM		2.30m GWL, 10/5/2013		1.00	3	6	7	13
2.00					Concrete at 4.00m depth					2.00	7	6	3	9
3.00										3.00	3	1	3	4
4.00										4.00	3	4	4	8
4.80	-2.20	4.80												
5.00					Partially decomposed timber logs, blacl, with peat, moist					5.00	2	2	7	9
6.00										6.00	3	2	2	4
7.00	-4.40									7.00	5	4	8	12
8.00					SILTY SAND, reddish grey, medium to coarse sand grains with gravel and plastic fines, MEDIUM DENSE, moist	SM				8.00	7	12	9	21
8.75	-6.15													
9.00					CLAYEY SAND, pinkish to light grey, medium to coarse sand grains, very high plastic clay fines, LOOSE, moist	SC				9.00	2	3	6	9
10.00														

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	PSN
Logged By	KSH
Date	10/05/2013
Checked By	JU

LOG OF BOREHOLE

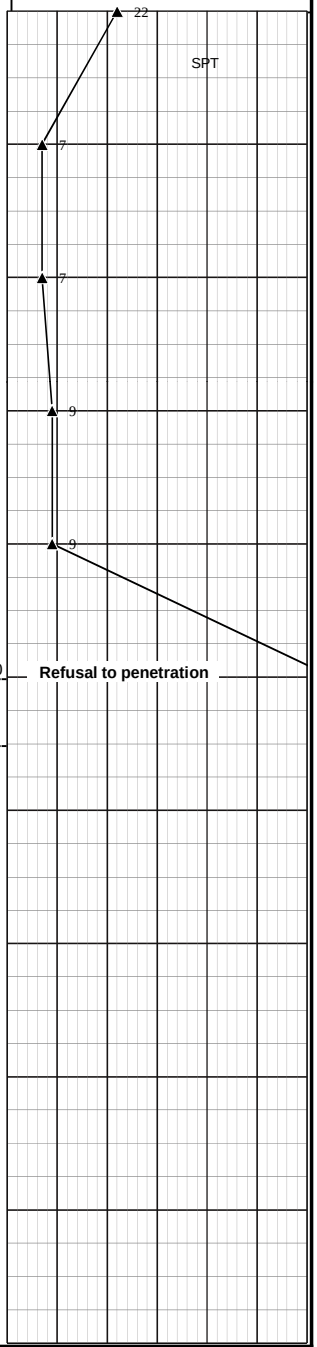
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 2 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 4
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	21.00
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	2.60	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	400643.136 N	**DATE COMMENCED**	4/5/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494599.559 E	**DATE COMPLETED**	10/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
10.00	-7.40	1.25				SC		2.30m GWL, 10/5/2013		10.00	10	9	13	22
					CLAY, light grey, very high plastic clay fines with traces of fine to medium sand grains, MEDIUM DENSE, moist	CV								
10.80	-8.20	0.80												
11.00					SILT, brick red mottled with white, high plastic fines, pockets of keolinitic clay with traces of sand, LOOSE, moist	MH				11.00	3	3	4	7
12.00										12.00	4	4	3	7
13.00	-10.40	2.20								13.00	2	5	4	9
					SILT, grey brown mottled with yellow, fine sand grains, low plastic, with presence of mica, LOOSE, moist (completely weathered rock)	ML								
14.00										14.00	2	5	4	9
15.00	-12.40	2.00								15.00	23	20/5	-	>50
15.20	-12.60	0.20			SILTY SAND, grey mottled with yellow, fine to medium sand grains with presence of mica, VERY DENSE, moist (completely weathered rock)					Core Depth m	Core Recovery %	RQD %	Return of Water %	
15.45	-12.85	0.25			**Rock Level**					15.20	80	55	90	
16.00					Charnockitic biotite gneiss, light grey, medium grained, moderately weathered, moderately weak, moderately fractured	Rock				16.50				
										16.50	97	69	70	
17.00										18.00				
					Charnockitic biotite gneiss, grey, medium grained, slightly weathered to fress, moderately strong to strong, moderately fractured to slightly fractured	Rock								
18.00										18.00	100	60	70	
19.00										19.50				
										19.50	100	88	90	
20.00										21.00				

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	PSN
Logged By	KSH
Date	10/05/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 3 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 4
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	21.00
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	2.60	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	400643.136 N	**DATE COMMENCED**	4/5/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494599.559 E	**DATE COMPLETED**	10/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm	MOISTURE CONTENT - % (10 20 30 40 50 60) / UNDRAINED SHEAR STRENGTH - kN/m² / SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)
20.00						Rock									
21.00	-18.40				Borehole terminated at 21.00m depth			2.30m GWL, 10/5/2013							
22.00															
23.00															
24.00															
25.00															
26.00															
27.00															
28.00															
29.00															
30.00															

Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	PSN
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Date	10/05/2013
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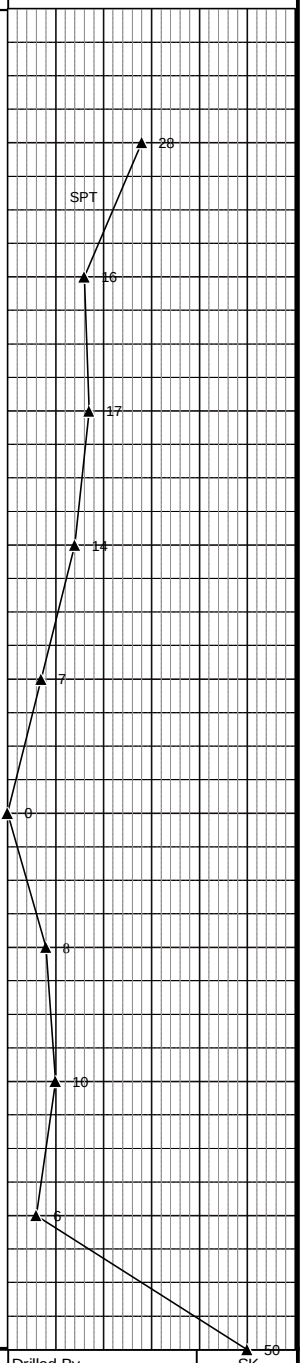
LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 1 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 5
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	29.15
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	3.40	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	400509.400 N	**DATE COMMENCED**	11/5/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494640.988 E	**DATE COMPLETED**	17/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
0.00	3.40				GROUND LEVEL									
1.00					SILTY SAND, coffee brown. fine to medium grains, MEDIUM DENSE, moist (fill)	SM				1.00	11	12	16	28
1.60	1.80	1.60						2.30m GWL, 17/5/2013						
2.00					SILTY SAND, reddish brown, fine to medium grains with occasional gravel, MEDIUM DENSE, moist (lateritic fill)	SM				2.00	7	7	9	16
3.00										3.00	13	8	9	17
3.30	0.10	1.70												
4.00					SILTY SAND, greyish brown, medium to coarse grains, MEDIUM DENSE, moist	SM				4.00	9	8	6	14
5.00										5.00	6	4	3	7
5.70	-2.30	2.40												
6.00										6.00	1	0	0	0
										UDS (6.50-7.00)				
7.00					PEAT, black, with partially decomposed vegetation, impregnated with sand, VERY SOFT to FIRM, moist	Pt				7.00	3	4	4	8
8.00										8.00	4	4	6	10
9.00										9.00	4	3	3	6
10.00														



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression

W - Wash sample
SPT - SPT Sample
- Undisturbed sample

Drilled By	SK
Logged By	KSH
Date	16/05/2013

LOG OF BOREHOLE

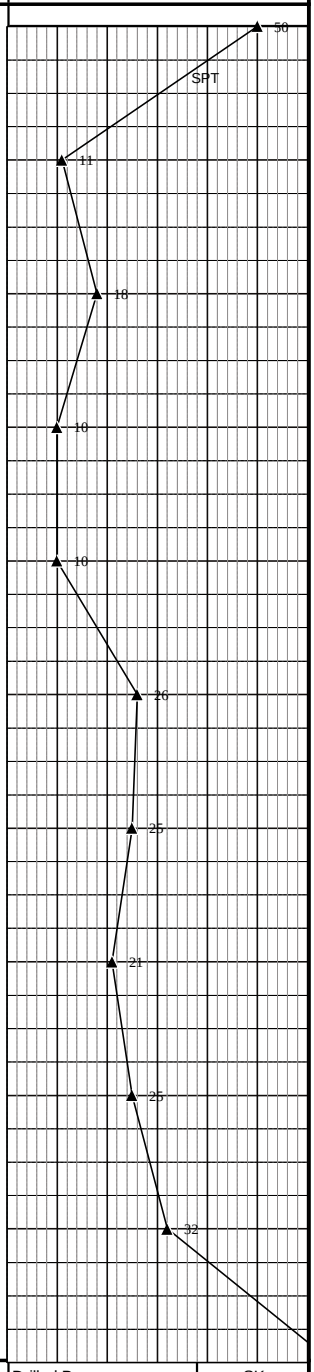
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 2 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 5
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	29.15
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	3.40	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	400509.400 N	**DATE COMMENCED**	11/5/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494640.988 E	**DATE COMPLETED**	17/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
10.00	-6.60	4.30				Pt				10.00	13	26	24	50
					SILTY SAND, reddish brown, medium to coarse sand grains with gravel, VERY DENSE, moist	SM								
11.00	-7.60	1.00								11.00	6	5	6	11
					CLAY/SILT, grey mottled with red, high plastic with traces of sand, STIFF to VERY STIFF, moist	CH		2.30m GWL, 17/5/2013						
12.00										12.00	7	9	9	18
13.00	-9.60	2.00								13.00	5	5	5	10
					SILT, yellowish brown to light grey, with traces of clay and sand, low plastic, MEDIUM DENSE, moist	ML								
14.00										14.00	5	6	4	10
14.70	-11.30	1.70												
15.00					SILTY SAND, dull white, medium to coarse sand grains, plastic clay fines, MEDIUM DENSE, moist	SM				15.00	7	9	17	26
16.00										16.00	14	13	12	25
17.00	-13.60	2.30								17.00	4	9	12	21
					SANDY SILT, pink grey mottled with white, pockets of coarse sand grains and keolinitic clay, MEDIUM DENSE, moist (completely weathered rock)	MS								
18.00										18.00	9	13	12	25
18.80	-15.40	1.80												
19.00					SILTY SAND, yellowish brown, fine to medium sand grains with presence of mica & plastic fines, DENSE to VERY DENSE, moist (completely weathered rock)	SM				19.00	16	15	17	32
20.00														

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial
W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	SK
Logged By	KSH
Date	16/05/2013
Checked By	JU

LOG OF BOREHOLE

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99/1, Jawatta Road, Colombo 05.

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PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 5
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	29.15
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	3.40	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	400509.400 N	**DATE COMMENCED**	11/5/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494640.988 E	**DATE COMPLETED**	17/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm	MOISTURE CONTENT - % / UNDRAINED SHEAR STRENGTH - kN/m² / SPT RESISTANCE - Blows/30 cm
20.00										20.00	33	34/10	-	>50	Refusal to penetration
21.00						SM				21.00	24/10	-	-	>50	Refusal to penetration
22.00										22.00	15/5	-	-	>50	Refusal to penetration
22.40	-19.00	3.60			**Rock Level**			2.30m GWL, 17/5/2013		Core Depth m	Core Recovery %	ROD %	Return of Water %		
23.00					Highly weathered rock					22.40 23.15	Nil	Nil	80		
23.15	-19.75	0.75								23.15 24.65	90	50	80		
24.00					Garnet biotite granitic gneiss, grey, medium to coarse grained, slightly to moderately weathered, strong to modarately strong, moderately fractured	Rock									
25.00										24.65 26.15	93	34	90		
25.85	-22.45	2.70													
26.00										26.15 27.65	100	90	100		
27.00					Garnet biotite granitic gneiss, grey, medium to coarse grained, fresh, strong	Rock									
28.00										27.65 29.15	100	90	100		
29.00															
29.15	-25.75	3.30			Borehole terminated at 29.15m depth										
30.00															

Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	SK
Logged By	KSH
Date	16/05/2013
Checked By	JU

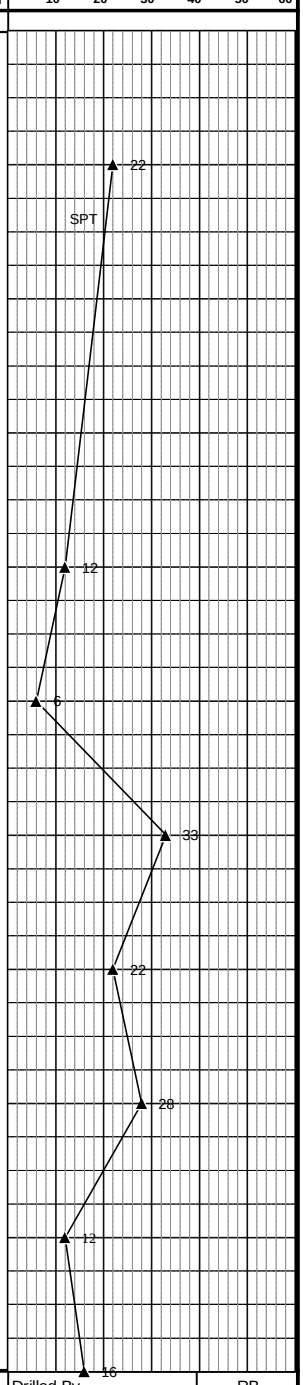
LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 1 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE		**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO** BH 6
LOCATION	PELIYAGODA		**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)** 28.10
DRILING METHOD	CORE DRILLING		**ELEVATION (m MSL)**	3.40	**CHAINAGE / OFFSET** -
CORE SIZE [mm]	54	**CASING SIZE** NX	**CO-ORDINATES**	400526.203 N	**DATE COMMENCED** 18/5/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]** -		494659.319 E	**DATE COMPLETED** 22/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	γ - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
0.00	3.40				GROUND LEVEL									
0.40	3.00	0.40			SILTY SAND, dark brown, fine to medium grains with occasional gravel, occasional plant roots, moist (lateritic fill)	SM								
1.00					SILTY SAND, yellowish brown, medium to coarse grains with occasional gravel and little amount of fines, MEDIUM DENSE, moist (lateritic fill)	SM		2.20m GWL, 22/5/2013		1.00	4	3	19	22
1.80	1.60	1.40												
2.00					Concrete debris with building materials (fill)									
3.00														
3.40	0.00	1.60												
4.00					SAND, brown, medium to coarse grains, poorly graded, MEDIUM DENSE to LOOSE, moist	SP				4.00	3	6	6	12
5.00										5.00	4	4	2	6
5.80	-2.40	2.40												
6.00					SILTY GRAVEL, reddish brown, medium to coarse grains with plastic clay fines, DENSE, moist (laterite)	GM				6.00	6	9	24	33
6.70	-3.30	0.90												
7.00					CLAY/SILT, reddish brown, high plastic clay fines, traces of sand and gravel, VERY STIFF, moist (laterite)	MH/CH				7.00	10	11	11	22
8.00										8.00	11	14	14	28
8.50	-5.10	1.80												
9.00					SILT/CLAY, pinkish grey to yellowish brown, high plastic, MEDIUM DENSE to LOOSE, moist	MH/CH				9.00	5	5	7	12
10.00														



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression

W - Wash sample
SPT - SPT Sample
- Undisturbed sample

Drilled By	RB
Logged By	KSH
Date	22/05/2013

LOG OF BOREHOLE

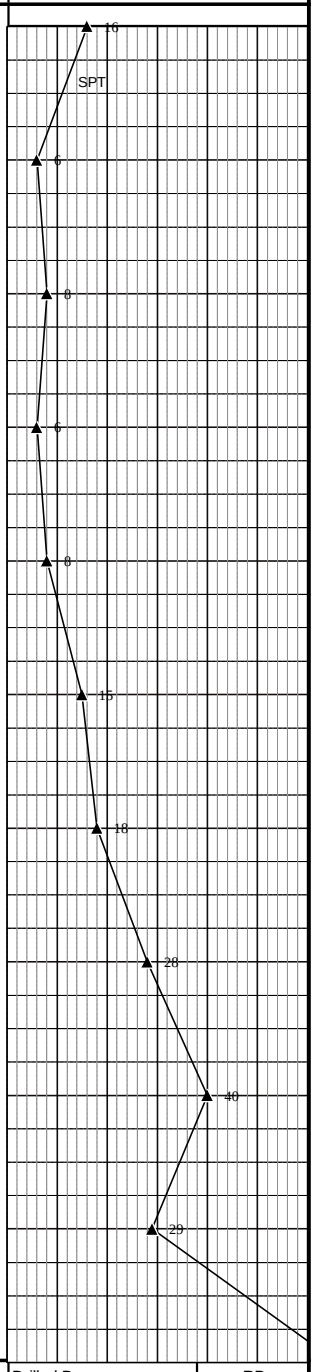
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 2 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 6
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	28.10
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	3.4	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	400526.203 N	**DATE COMMENCED**	18/5/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494659.319 E	**DATE COMPLETED**	22/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
10.00										10.00	11	8	8	16
11.00						MH/CH				11.00	2	3	3	6
12.00								2.20m GWL, 22/5/2013		12.00	5	4	4	8
13.00	-9.60	4.50								13.00	2	3	3	6
14.00					SANDY SILT, grey mottled with dull white, pockets of keolinitic clay fines, high plastic, with presence of mica, LOOSE, moist	MS				14.00	4	4	4	8
15.00	-11.60	2.00								15.00	5	7	8	15
16.00					SILTY SAND, grey mottled with dull white, fine to medium grains with presence of mica, MEDIUM DENSE, moist (completely weathered rock)	SM				16.00	9	7	11	18
17.00										17.00	15	12	16	28
18.00	-14.60	3.00								18.00	11	19	21	40
19.00	-15.60	1.00			SANDY SILT, light grey, fine to medium grains, plastic fines, DENSE, moist (completely weathered rock)	SM				19.00	15	14	15	29
20.00					SILTY SAND, pinkish grey mottled with dull white, fine to medium grains with presence of mica, MEDIUM DENSE to VERY DENSE, moist (completely weathered rock)	SM								

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial
W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	RB
Logged By	KSH
Date	22/05/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 3 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	CLIENT	ORIENTAL CONSULTANT COMPANY LTD.	BOREHOLE NO	BH 6
LOCATION	PELIYAGODA	CONTRACT NO	30/24318	DEPTH OF HOLE (m)	28.10
DRILING METHOD	CORE DRILLING	ELEVATION (m MSL)	3.4	CHAINAGE / OFFSET	-
CORE SIZE [mm]	54 / CASING SIZE: NX	CO-ORDINATES	400526.203 N	DATE COMMENCED	18/5/2013
VANE SIZE [mm*mm]	- / UDS SAMPLER SIZE [mm]: -		494659.319 E	DATE COMPLETED	22/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm	MOISTURE CONTENT - % / UNDRAINED SHEAR STRENGTH - kN/m² / SPT RESISTANCE - Blows/30 cm
20.00										20.00	19	18	48	66	Refusal to penetration
						SM									
21.00										21.00	19/10	-	-	>50	Refusal to penetration
22.00								2.20m GWL, 22/5/2013		22.00	30/10	-	-	>50	Refusal to penetration
22.10	-18.70	3.10			**Rock Level**										
					Highly weathered rock	Rock				Core Depth m	Core Recovery %	RQD %	Return of Water %		
										22.10	50	Nil	90		
23.00	-19.60	0.90								23.60					
					Hornblende garnet biotite gneiss, light grey, medium grained, moderately weathered, moderately weak to moderately strong, highly fractured	Rock				23.60	55	42	80		
24.00										25.10					
25.00										25.10	99	62	90		
25.40	-22.00	2.40								26.60					
26.00					Hornblende garnet biotite gneiss, light grey, medium grained, fresh, very strong, slightly fractured	Rock				26.60	93	92	95		
27.00										28.10					
28.00															
28.10	-24.70	2.70			Borehole terminated 28.10m depth										
29.00															
30.00															

Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	RB
Logged By	KSH
Date	22/05/2013
Checked By	JU

LOG OF BOREHOLE

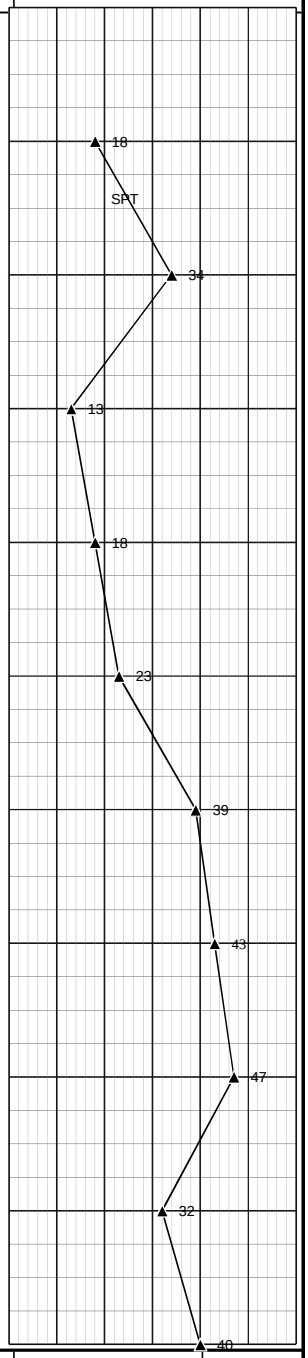
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 1 of 2

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 7
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	17.90
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	3.15	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	400396.203 N	**DATE COMMENCED**	15/5/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494729.280 E	**DATE COMPLETED**	16/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	γ - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
0.00	3.15				GROUND LEVEL									
1.00					SILTY SAND, brown, fine to medium grains with gravel, MEDIUM DENSE, moist (fill)	SM		2.25m GWL, 16/5/2013		1.00	20	10	8	18
1.95														
2.00	1.20	1.95								2.00	25	24	10	34
					SILTY SAND, grey, medium to coarse grains, little amount of fines, DENSE, moist (fill)	SM								
3.00	0.15	1.05								3.00	8	7	6	13
					SILTY SAND, greyish brown, fine to medium grains with gravel, MEDIUM DENSE, moist (fill)	SM								
3.75	-0.60	0.75												
4.00					PEAT, black, impregnated coarse sand grains, VERY STIFF, moist	Pt				4.00	1	1	17	18
4.50	-1.35	0.75												
5.00										5.00	8	10	13	23
6.00										6.00	9	19	20	39
					SILT/CLAY, reddish brown to greyish brown, high plastic clay fines, traces of sand with gravel, MEDIUM DENSE, moist (laterite)	MH/CH								
7.00										7.00	14	18	25	43
8.00										8.00	25	22	25	47
9.00										9.00	11	13	19	32
10.00														

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial
W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	GRKS
Logged By	KSH
Date	21/05/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 2 of 2

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 7
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	17.90
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	3.15	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	400396.203 N	**DATE COMMENCED**	15/5/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494729.280 E	**DATE COMPLETED**	16/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm	Core Depth m	Core Recovery %	RQD %	Return of Water %
10.00										10.00	16	18	22	40				
						MH/CH												
10.85		6.35																
11.00	-7.70				SILTY SAND, yellowish brown, fine to medium sand grains with weathered rock fragments, VERY DENSE, moist (completely weathered rock)	SM				11.00	13	42	-	>50				
11.80	-8.65	0.95			**Rock Level**													
11.90	-8.75	0.10								11.80	100	82		100				
12.00					Biotite charnockitic gneiss, grey, medium grained, slightly to moderately weathered, moderately strong to strong, slightly fractured	Rock		2.25m GWL, 16/5/2013		13.40								
13.00																		
										13.40	100	83		100				
										14.90								
14.00					Biotite charnockitic gneiss, grey, medium grained, fresh, strong	Rock												
15.00										14.90	100	100		100				
										16.40								
16.00																		
										16.40	100	90		100				
17.00										17.90								
17.90																		
18.00	-14.75	6.00																
					Borehole terminated at 17.90m depth													
19.00																		
20.00																		

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)

40
SPT
Refusal to penetration

Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	GRKS
Logged By	KSH
Date	21/05/2013
Checked By	JU

LOG OF BOREHOLE

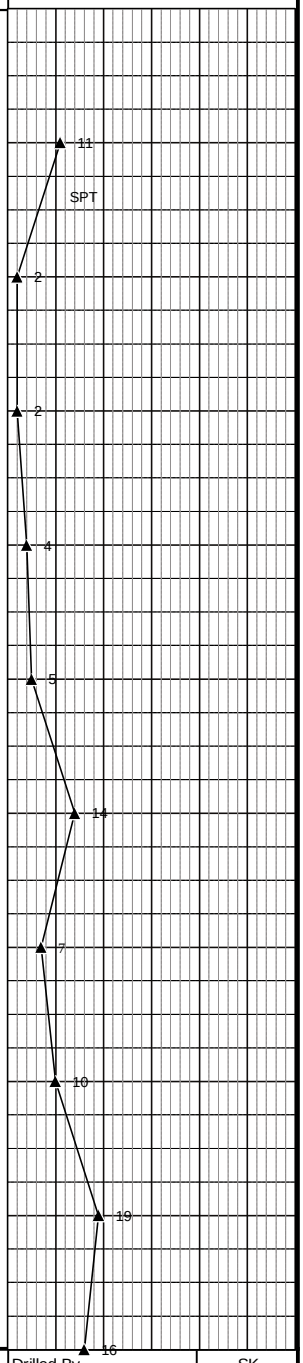
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 1 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 8
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	33.60
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	3.36	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	401045.413 N	**DATE COMMENCED**	20/4/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494133.457 E	**DATE COMPLETED**	25/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
0.00	3.36				GROUND LEVEL									
					SAND, dark grey, fine grains, poorly graded, occasional plant roots and little amount of fines, moist	SP		2.10m GWL, 25/4/2013		1.00	6	5	6	11
1.00	2.36	1.00												
					CLAY/SILT, reddish brown, traces of medium to coarse sand grains with gravel, high plastic, FIRM to SOFT, moist (lateritic fill)	CH/MH				2.00	2	1	1	2
2.00														
3.00										3.00	3	1	1	2
3.75	-0.39	2.75												
4.00					PEAT, black, with partially decomposed vegetation, traces of sand, FIRM to STIFF, moist	Pt				4.00	1	1	3	4
5.00										5.00	2	2	3	5
6.00										6.00	7	7	7	14
6.35	-2.99													
7.00					SILT/CLAY, reddish brown, intermediate plastic clay fines, traces of fine to medium sand grains with partially weathered gravel, LOOSE to MEDIUM DENSE, moist (laterite)	MI/Cl				7.00	4	3	4	7
8.00										8.00	5	5	5	10
9.00	-5.64	2.65								9.00	6	6	13	19
					CLAY, reddish grey to grey, high plastic, traces of sand and partially weathered gravel, VERY STIFF to HARD, moist (laterite)	CH								
10.00														

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
W - Wash sample
SPT - SPT Sample
- Undisturbed sample

Drilled By	SK
Logged By	KSH
Date	26/04/2013

LOG OF BOREHOLE

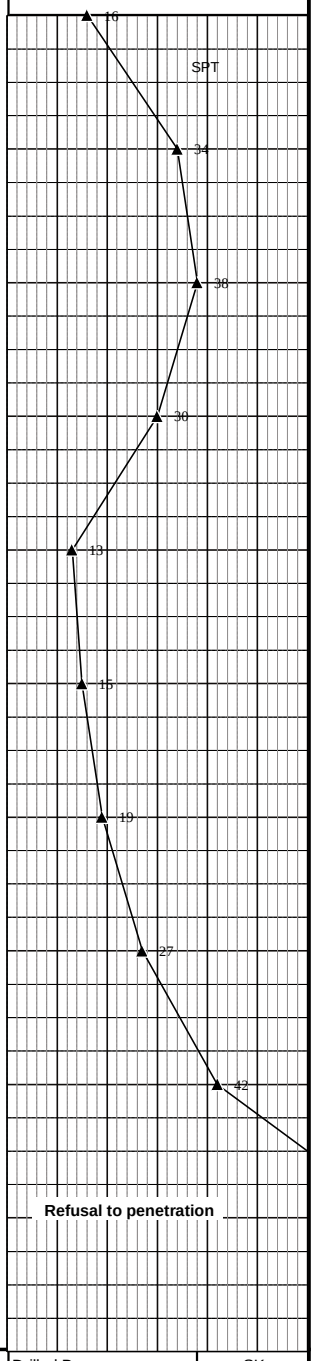
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 2 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	CLIENT	ORIENTAL CONSULTANT COMPANY LTD.	BOREHOLE NO	BH 8
LOCATION	PELIYAGODA	CONTRACT NO	30/24318	DEPTH OF HOLE (m)	33.60
DRILING METHOD	CORE DRILLING	ELEVATION (m MSL)	3.36	CHAINAGE / OFFSET	-
CORE SIZE [mm]	54 / CASING SIZE: NX	CO-ORDINATES	401045.413 N	DATE COMMENCED	20/4/2013
VANE SIZE [mm*mm]	- / UDS SAMPLER SIZE [mm]: -		494133.457 E	DATE COMPLETED	25/4/2013

DEPTH [m]		LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
10.00										10.00	2	6	10	16
11.00						CH		2.10m GWL, 25/4/2013		11.00	14	16	18	34
12.00										12.00	7	20	18	38
13.00										13.00	13	15	15	30
14.00	-10.64	5.00								14.00	3	6	7	13
15.00					CLAY/SILT, pale brown, intermediate plastic fines, traces of fine to medium sand grains, STIFF, moist (laterite)	CI/MI				15.00	6	7	8	15
16.00	-12.64	2.00								16.00	7	9	10	19
17.00					SANDY CLAY, yellowish brown, traces of fine sand, low plastic, VERY STIFF to HARD, moist (laterite)	CS				17.00	14	14	13	27
18.00										18.00	11	17	25	42
18.60	-15.24	2.60												
19.00					SILT, brown to dark grey, traces of fine sand, low plastic fines with presence of mica, VERY DENSE, moist (completely weathered rock)	ML				19.00	15	29	49	78
20.00														

MOISTURE CONTENT - %
10 20 30 40 50 60
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm
10 20 30 40 50 60



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial
W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	SK
Logged By	KSH
Date	26/04/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 3 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 8
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	33.60
DRILING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	3.36	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / CASING SIZE: NX	**CO-ORDINATES**	401045.413 N	**DATE COMMENCED**	20/4/2013
VANE SIZE [mm*mm]	- / UDS SAMPLER SIZE [mm]: -		494133.457 E	**DATE COMPLETED**	25/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm	MOISTURE CONTENT - % / UNDRAINED SHEAR STRENGTH - kN/m² / SPT RESISTANCE - Blows/30 cm
20.00										20.00	41/10	-	-	>50	Refusal to penetration
21.00						ML				21.00	28/10	-	-	>50	Refusal to penetration
22.00								2.10m GWL, 25/4/2013		22.00	13/5	-	-	>50	Refusal to penetration
23.00										23.00	39/10	-	-	>50	Refusal to penetration
										Core Depth m	Core Recovery %	RQD %	Return of Water %		
23.65	-20.29	5.05			**Rock Level**					23.65	8	Nil	-		
24.00					Highly weathered rock (gross)	Rock				24.50					
24.50	-21.14	0.85								24.50	67	27	-		
25.00										25.80					
26.00										25.80	95	25	-		
27.00					Hornblende biotite gneiss, pinkish grey, medium to coarse grained, moderately weathered to fresh, moderately strong to srong, slightly fractured	Rock				27.20					
28.00										27.20	71	28	-		
29.00										28.80					
30.00										28.80	50	10.6	-		
										30.40					

Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	SK
Logged By	KSH
Date	26/04/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 3 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 8
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	33.60
DRILING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	3.36	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / **CASING SIZE** NX	**CO-ORDINATES**	401045.413 N	**DATE COMMENCED**	20/4/2013
VANE SIZE [mm*mm]	- / **UDS SAMPLER SIZE [mm]** -		494133.457 E	**DATE COMPLETED**	25/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1 / 2 / 3; FOR 30cm	MOISTURE CONTENT - % / UNDRAINED SHEAR STRENGTH - kN/m² / SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)
30.00										Core Depth m / Core Recovery % / RQD % / Return of Water %		
										30.40 / 32.00	26 / 6 / -	
31.00					Hornblende biotite gneiss, pinkish grey, medium to coarse grained, moderately weathered to fresh, moderately strong to srong, slightly fractured	Rock		2.10m GWL, 25/4/2013				
32.00										32.00 / 33.60	36 / Nil / -	
33.00												
33.60	-30.24	9.10										
34.00					Borehole terminated at 33.60m depth							
35.00												
36.00												
37.00												
38.00												
39.00												
40.00												

Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	SK
Logged By	KSH
Date	26/04/2013
Checked By	JU

LOG OF BOREHOLE

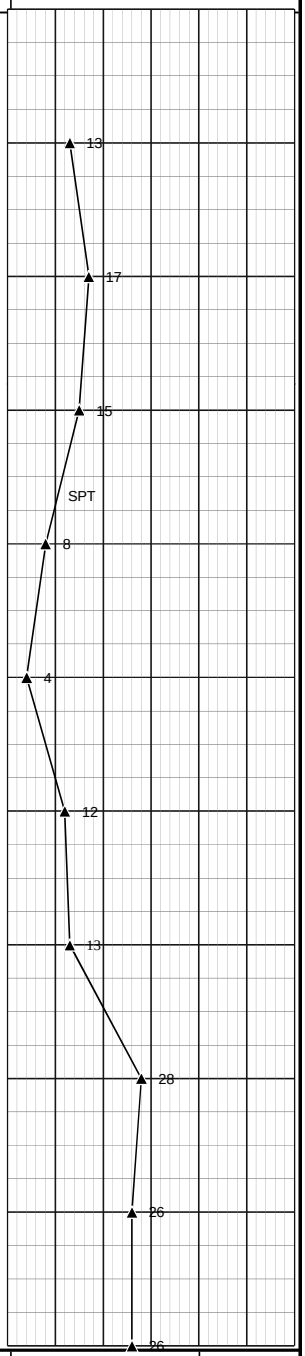
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 1 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 9
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	40.00
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	2.80	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	401089.949 N	**DATE COMMENCED**	6/4/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494257.453 E	**DATE COMPLETED**	10/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	γ - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
0.00	2.80				GROUND LEVEL									
					SILTY GRAVEL, reddish brown, fine to medium sand grains (fill)	GM								
0.80	2.00	0.80												
1.00					SILTY GRAVEL, reddish brown, fine to medium sand grains with plastic fines, MEDIUM DENSE, moist (lateritic fill)	GM		2.30m GWL, 10/4/2013		1.00	6	6	7	13
2.00										2.00	8	9	8	17
3.00	-0.20	2.20								3.00	6	8	7	15
					CLAYEY GRAVEL, reddish brown, fine to medium sand grains with intermediate plastic clay fines, MEDIUM DENSE, moist (lateritic fill)	GC								
4.00	-1.20	1.00								4.00	8	6	2	8
4.25	-1.45	0.25			SILTY SAND, grey, fine to medium grains with gravel, LOOSE, moist	SM								
5.00					SANDY CLAY, yellowish brown, high plastic, medium to coarse sand grains, SOFT to STIFF, moist (laterite)	CS				5.00	3	2	2	4
6.00										6.00	8	6	6	12
7.00	-4.20	2.75								7.00	6	7	6	13
					CLAY, reddish brown mottled with grey, very high plastic, traces of sand, VERY STIFF, moist	CV								
8.00										8.00	9	13	15	28
9.00										9.00	8	12	14	26
10.00														

MOISTURE CONTENT - %
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm
10 20 30 40 50 60



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial
W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	11/04/2013
Checked By	JU

LOG OF BOREHOLE

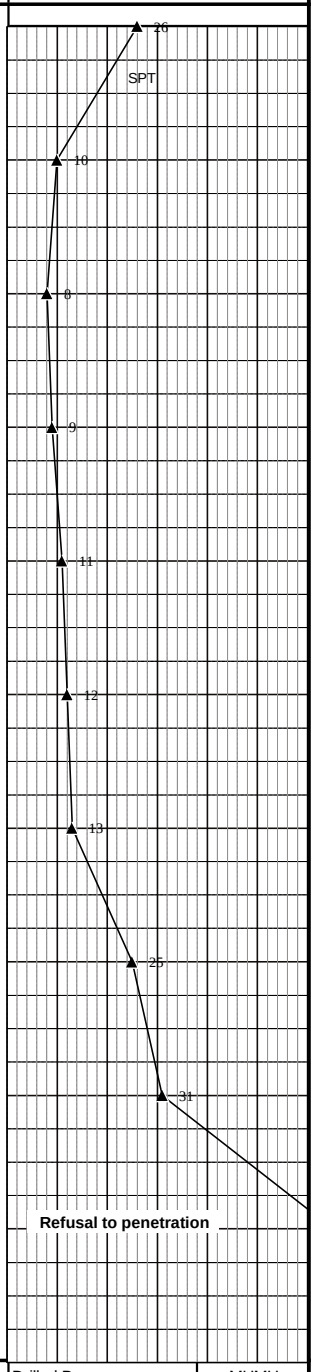
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 2 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			CLIENT	ORIENTAL CONSULTANT COMPANY LTD.	BOREHOLE NO	BH 9
LOCATION	PELIYAGODA			CONTRACT NO	30/24318	DEPTH OF HOLE (m)	40.00
DRILING METHOD	CORE DRILLING			ELEVATION (m MSL)	2.8	CHAINAGE / OFFSET	-
CORE SIZE [mm]	54	CASING SIZE	NX	CO-ORDINATES	401089.949 N	DATE COMMENCED	6/4/2013
VANE SIZE [mm*mm]	-	UDS SAMPLER SIZE [mm]	-		494257.453 E	DATE COMPLETED	10/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
10.00						CV		2.30m GWL, 10/4/2013		10.00	8	12	14	26
11.00	-8.20	4.00			SANDY CLAY, greyish pink, high plastic, fine to medium sand grains, STIFF, moist	CS				11.00	5	4	6	10
12.00	-9.20	1.00			CLAY, grey, high plastic, STIFF, moist	CH				12.00	4	4	4	8
13.00										13.00	5	5	4	9
14.00	-11.20	2.00			CLAY, black, with organic matters, high plastic, STIFF, moist	CH				14.00	5	5	6	11
15.00										15.00	5	6	6	12
15.50	-12.70	1.50			SANDY CLAY, grey, high plastic, fine sand grains, STIFF, moist	CS				16.00	7	7	6	13
16.00														
17.00	-14.20	1.50			SILTY SAND, grey mottled with dull white, fine to medium grains with presence of mica, MEDIUM DENSE to VERY DENSE, moist (completely weathered rock)	SM				17.00	8	12	13	25
18.00										18.00	11	15	16	31
19.00										19.00	20	40/8	-	>50
20.00														

MOISTURE CONTENT - %
10 20 30 40 50 60
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm
10 20 30 40 50 60



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial
W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	11/04/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 3 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 9
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	40.00
DRILING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	2.8	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / CASING SIZE: NX	**CO-ORDINATES**	401089.949 N	**DATE COMMENCED**	6/4/2013
VANE SIZE [mm*mm]	- / UDS SAMPLER SIZE [mm]: -		494257.453 E	**DATE COMPLETED**	10/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm	Core Depth m	Core Recovery %	RQD %	Return of Water %
20.00			⊠			SM				20.00	85/12	-	-	>50				
															Core Depth m	Core Recovery %	RQD %	Return of Water %
21.00	-18.20	4.00			**Rock Level**					21.00	Nil	Nil		70				
								2.30m GWL, 10/4/2013		23.30								
22.00																		
23.00																		
										23.30	Nil	Nil		70				
					Biotite granitic gneiss, pinkish grey, medium to coarse grained, highly weathered, very weak (washed sample)	Rock				24.80								
24.00																		
25.00										24.80	Nil	Nil		70				
										26.30								
26.00																		
										26.30	Nil	Nil		70				
										27.80								
27.00																		
28.00										27.80	Nil	Nil		65				
										29.30								
29.00																		
29.30	-26.50	8.30								29.30	20	6.7		-				
					Biotite granitic gneiss, pinkish grey, medium to coarse grained, highly to moderately weathered, weak to very weak, highly fractured	Rock				30.80								
30.00																		

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)

Refusal to penetration

Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	11/04/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 4 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 9
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	40.00
DRILING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	2.8	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / **CASING SIZE** NX	**CO-ORDINATES**	401089.949 N	**DATE COMMENCED**	6/4/2013
VANE SIZE [mm*mm]	- / **UDS SAMPLER SIZE [mm]** -		494257.453 E	**DATE COMPLETED**	10/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	γ - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm	MOISTURE CONTENT - % / UNDRAINED SHEAR STRENGTH - kN/m² / SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)
30.00	-27.20					Rock				Core Depth m / Core Recovery % / RQD % / Return of Water %					
30.80	-28.00	1.50								30.80	Nil	Nil		-	
31.00										32.30					
32.00					Biotite granitic gneiss, pinkish grey, medium to coarse grained, highly weathered, very weak (wash sample)	Rock		2.30m GWL, 10/4/2013		32.30	Nil	Nil		-	
33.00										33.80					
33.80	-31.00	3.00								33.80	13.9	Nil		-	
34.00										35.30					
35.00															
36.00					Biotite granitic gneiss, pinkish grey, medium to coarse grained, highly to moderately weathered, weak to very weak, highly fractured, high amount of slicon slide	Rock				35.30	37	Nil		-	
37.00										36.80	20	Nil		-	
38.00										38.30					
39.00										38.30	20	Nil		-	
40.00	-37.20	6.20			Borehole terminated at 40.00m depth					39.80					

Natural moisture content, Atterberg Limits (LL, PL) — γ –Wet unit weight — W - Wash sample
SPT 'N', blows/ft — G -Grainsize Analysis — SPT - SPT Sample
Vane shear strength, peak — U - Unconfined compression — Undisturbed sample
Vane shear strength, residual — CU - Consolidated undrained triaxial — Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	11/04/2013
Checked By	JU

LOG OF BOREHOLE

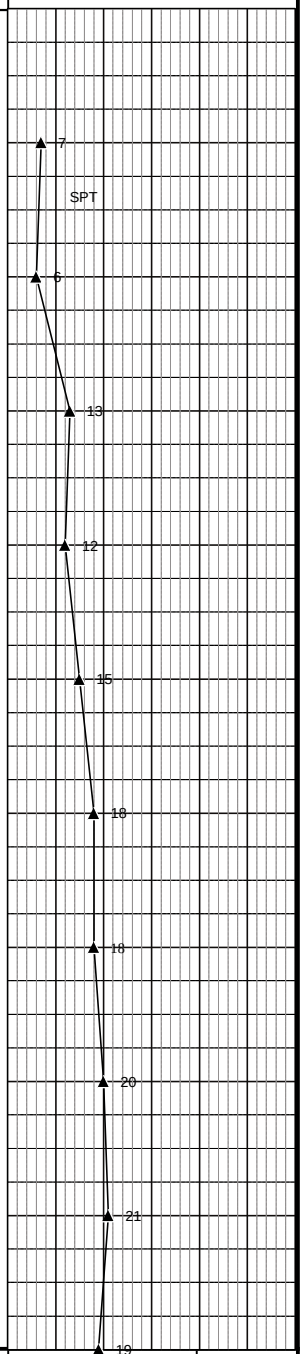
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 1 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE		**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO** BH 10
LOCATION	PELIYAGODA		**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)** 28.70
DRILING METHOD	CORE DRILLING		**ELEVATION (m MSL)**	2.40	**CHAINAGE / OFFSET** -
CORE SIZE [mm]	54	**CASING SIZE** NX	**CO-ORDINATES**	401090.530 N	**DATE COMMENCED** 12/5/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]** -		494328.241 E	**DATE COMPLETED** 16/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
0.00	2.40				GROUND LEVEL									
0.90					SILTY SAND, dark brown, medium to coarse grains, moist (fill)	SM								
1.00	1.50	0.90								1.00	3	4	3	7
					SILTY SAND, grey, medium to coarse grains with presence of clay, LOOSE, moist (lateritic fill)	SM		0.80m GWL, 16/5/2013						
2.00										2.00	3	3	3	6
2.75	-0.35	1.85												
3.00					SILT, reddish mottled with grey, traces of sand and gravel with high plastic clay fines, MEDIUM DENSE, moist (laterite)	MH				3.00	3	6	7	13
4.00										4.00	3	6	6	12
5.00	-2.60	2.25								5.00	3	7	8	15
					SANDY SILT, pinkish red mottled with grey, fine to medium sand grains with high plastic clay fines, MEDIUM DENSE, moist (laterite)	MS								
6.00										6.00	5	9	9	18
7.00	-4.60	2.00								7.00	6	8	10	18
					CLAYEY SAND, reddish mottled with grey, fine to medium grains with partially weathered gravel, high plastic clay fines, MEDIUM DENSE, moist (laterite)	SC								
8.00	-5.60	1.00								8.00	6	9	11	20
					SILTY SAND, reddish mottled with grey, medium to coarse grains with plastic fines, MEDIUM DENSE, moist (laterite)	SM								
9.00										9.00	6	10	11	21
10.00														

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
W - Wash sample
SPT - SPT Sample
- Undisturbed sample

Drilled By	MHMH
Logged By	KSH
Date	16/05/2013

LOG OF BOREHOLE

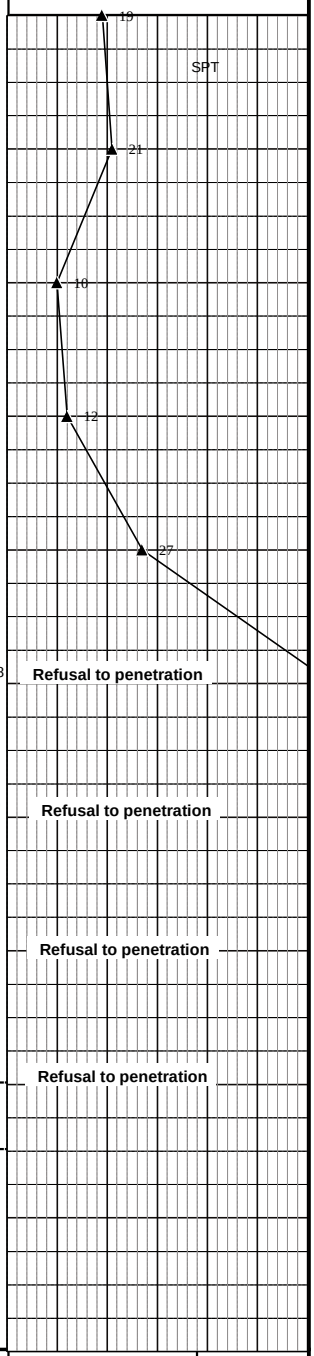
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 2 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 10
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	28.70
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	2.40	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	401090.530 N	**DATE COMMENCED**	12/5/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494328.241 E	**DATE COMPLETED**	16/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
10.00	-7.60	2.00				SM				10.00	6	8	11	19
11.00					CLAY/SILT, orange brown mottled with yellow and white, traces of sand, low plastic, VERY STIFF, moist (laterite)	CL/ML		0.80m GWL, 16/5/2013		11.00	7	10	11	21
12.00										12.00	4	5	5	10
13.00										13.00	5	6	6	12
14.00										14.00	8	13	14	27
15.00	-12.60	5.00								15.00	10	16	27/13	43/28
16.00					SILT, yellowish brown to grey, fine to medium sand grains with presence of mica, low plastic, VERY DENSE, moist (completely weathered rock)	ML				16.00	-	-	-	>50
17.00										17.00	-	-	-	>50
18.00										18.00	-	-	-	>50
18.70	-16.30	3.70			**Rock Level**					Core Depth m	Core Recovery %	RQD %	Return of Water %	
19.00					Highly weathered rock, yellowish grey, very weak to moderately weak	Rock				18.70 20.20	Nil	Nil	60	
20.00														

MOISTURE CONTENT - %
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm
10 20 30 40 50 60



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial
W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	16/05/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 3 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 10
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	28.70
DRILING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	2.40	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / **CASING SIZE** NX	**CO-ORDINATES**	401090.530 N	**DATE COMMENCED**	12/5/2013
VANE SIZE [mm*mm]	- / **UDS SAMPLER SIZE [mm]** -		494328.241 E	**DATE COMPLETED**	16/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm	Core Depth m	Core Recovery %	RQD %	Return of Water %
20.00																		
										20.20						Nil	Nil	-
						Rock				21.70								
21.00																		
								0.80m GWL, 16/5/2013		21.70	15	Nil	-					
22.00										23.20								
23.00																		
										23.20	23	Nil	-					
										24.70								
24.00																		
24.50	-22.10	5.80																
										24.70	34	12	-					
25.00										26.20								
26.00					Garnet hornblende granitic gneiss, pinkish grey, medium to coarse grained, moderately weathered, moderately strong, highly fractured	Rock												
										26.20	54	Nil	-					
										27.20								
27.00																		
										27.20	16	Nil	-					
										28.70								
28.00																		
28.70	-26.30																	
29.00					Borehole terminated at 28.70m depth													
30.00																		

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)

Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	16/05/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
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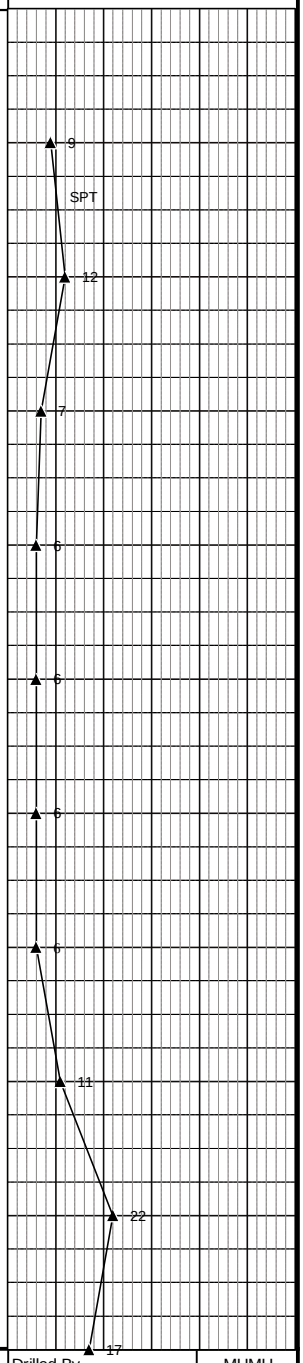
99/1, Jawatta Road, Colombo 05.

SHEET NO. 1 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 11
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	31.75
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	2.30	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	401093.414 N	**DATE COMMENCED**	27/4/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494428.739 E	**DATE COMPLETED**	2/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	γ - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
0.00	2.30				GROUND LEVEL									
0.30	2.00	0.30			SILTY SAND, dark brown, fine to medium grains with gravel, moist (surface fill)	SM								
1.00					SILTY SAND, reddish brown, medium to coarse grains with occasional gravel, LOOSE, moist (lateritic fill)	SM				1.00	4	5	4	9
1.70	0.60	1.40												
2.00								1.40m GWL, 2/5/2013		2.00	5	6	6	12
3.00					SAND, brownish grey to dark grey, fine to coarse grains with pockets of partially decomposed vegetation, well graded, MEDIUM DENSE to LOOSE, moist	SW				3.00	4	4	3	7
4.00										4.00	3	3	3	6
5.00										5.00	3	3	3	6
6.00	-3.70	4.30								6.00	3	3	3	6
7.00					PEAT, black, amorphous, FIRM, moist	Pt				7.00	2	3	3	6
8.00	-5.70	2.00								8.00	5	5	6	11
9.00					SANDY CLAY, greyish brown, fine to medium grains with high plastic clay fines, STIFF to VERY STIFF, moist (laterite)	CS				9.00	6	11	11	22
10.00														

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
W - Wash sample
SPT - SPT Sample
- Undisturbed sample

Drilled By	MHMH
Logged By	KSH
Date	11/04/2013

LOG OF BOREHOLE

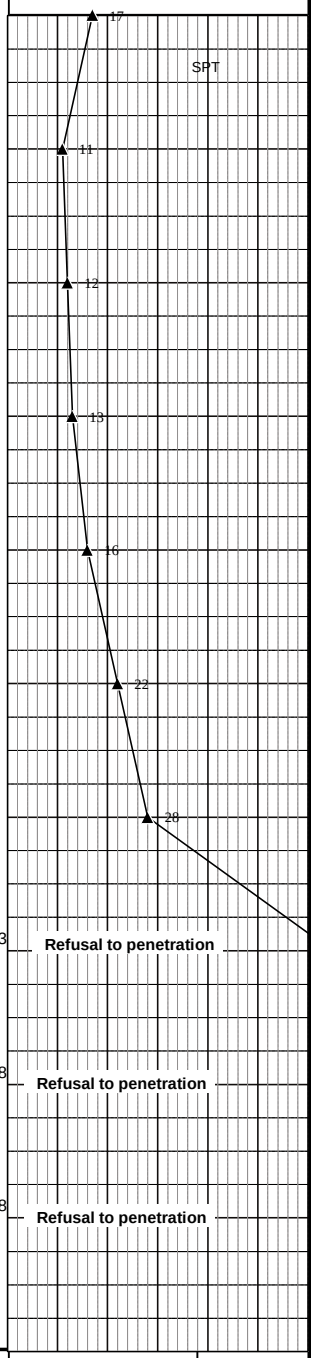
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 2 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 11
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	31.75
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	2.30	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	401093.414 N	**DATE COMMENCED**	27/4/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494428.739 E	**DATE COMPLETED**	2/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
10.00										10.00	5	9	8	17
						CS								
11.00	-8.70	3.00								11.00	5	5	6	11
					CLAY, reddish brown, high plastic, traces of sand, STIFF, moist (lateritic)	CH		1.40m GWL, 2/5/2013						
12.00										12.00	5	6	6	12
12.60	-10.30	1.60												
13.00					SANDY CLAY, greyish brown, high plastic, traces of sand, STIFF, moist (lateritic)	CS				13.00	5	7	6	13
14.00	-11.70	1.40								14.00	5	8	8	16
					SILT, grey to brownish grey, intermediate plastic clay fines with traces of sand, MEDIUM DENSE, moist	MI								
15.00										15.00	8	11	11	22
16.00	-13.70	2.00								16.00	8	12	16	28
17.00					SANDY SILT, brownish grey with thin band of greenish grey, fine sand grains, MEDIUM DENSE to VERY DENSE, moist (completely weathered rock)	MS				17.00	12	23	20/8	43/23
18.00										18.00	19	34	15/3	49/18
19.00										19.00	21	36	15/3	51/18
20.00														

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial
W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	11/04/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 3 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 11
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	31.75
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	2.30	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	401093.414 N	**DATE COMMENCED**	27/4/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494428.739 E	**DATE COMPLETED**	2/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm	MOISTURE CONTENT - % / UNDRAINED SHEAR STRENGTH - kN/m² / SPT RESISTANCE - Blows/30 cm
20.00	-17.70	4.00								20.00	35	38/9	-	>50	Refusal to penetration
					Completely weathered rock										
21.00										21.00	45/13	-	-	>50	Refusal to penetration
										Core Depth m	Core Recovery %	RQD %		Return of Water %	
21.75	-19.45	1.75			**Rock Level**					21.75	10	Nil		-	
22.00								1.40m GWL, 2/5/2013		23.25					
23.00					Biotite granatic gneiss, greenish grey, fine to medium grained, highly weathered, highly fractured	Rock				23.25	20	Nil		-	
										24.75					
24.00															
										24.75	20	Nil		-	
25.00										26.25					
26.00															
26.25	-23.95	4.50								26.25	27	13		-	
										27.75					
27.00					Hornblende biotite gneiss, grey, fine to medium grained, moderately weathered, moderately strong to strong, highly fractured,	Rock									
										27.75	50	33		-	
28.00										29.25					
29.00															
										29.25	50	6		-	
										30.75					
30.00															

Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	11/04/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 4 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 11
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	31.75
DRILING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	2.30	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / **CASING SIZE** NX	**CO-ORDINATES**	401093.414 N	**DATE COMMENCED**	27/4/2013
VANE SIZE [mm*mm]	- / **UDS SAMPLER SIZE [mm]** -		494428.739 E	**DATE COMPLETED**	2/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	γ - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
30.00						Rock		1.40m GWL, 2/5/2013		Core Depth m	Core Recovery %	RQD %	Return of Water %	
30.75	-28.45	4.50								30.75	98	53	-	
31.00					Hornblende biotite gneiss, grey, fine to medium grained, fresh, strog to very strong, highly fractured,	Rock				31.75				
31.75	-29.45	1.00												
32.00					Borehole terminated 31.75m depth									
33.00														
34.00														
35.00														
36.00														
37.00														
38.00														
39.00														
40.00														

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)

Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	11/04/2013
Checked By	JU

LOG OF BOREHOLE

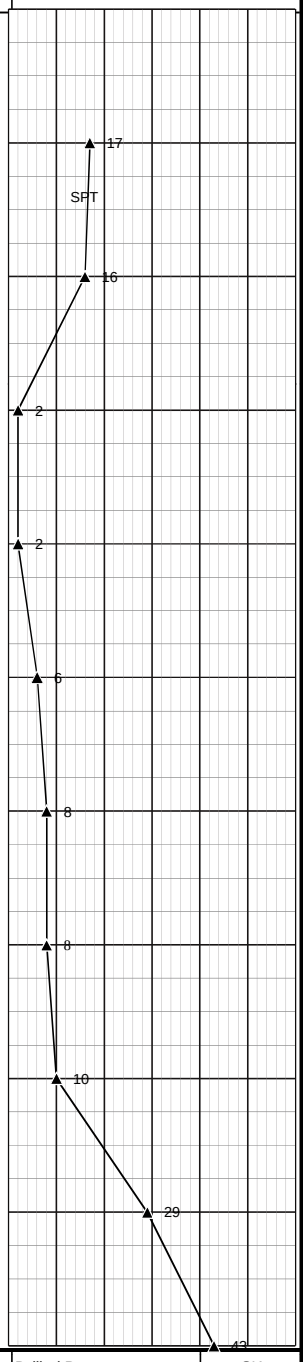
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 1 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 12
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	1.57	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	401154.745 N	**DATE COMMENCED**	2/5/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494452.881 E	**DATE COMPLETED**	9/5/2012

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	γ - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
0.00	1.57				GROUND LEVEL									
1.00					SILTY SAND, yellowish brown, fine to medium grains with occasional gravel, MEDIUM DENSE, moist (lateritic fill)	SM		0.80m GWL, 9/5/2012		1.00	8	8	9	17
2.00										2.00	8	8	8	16
2.20	-0.63	2.20												
3.00					PEAT, black, fine fibrous to amorphous, traces of clay size particles, SOFT to STIFF, moist	Pt				3.00	1	1	1	2
4.00										4.00	2	1	1	2
5.00										5.00	3	3	3	6
										UDS 5.40-5.90 UDS 5.90-6.50				
6.00										6.00	4	3	5	8
6.80	-5.23	4.60												
7.00					SILT, dark grey, with organic matter, traces of fine to medium sand grains, low plastic fines, LOOSE, moist	MLO				7.00	4	4	4	8
7.60	-6.03	0.80												
8.00					PEAT, black, amorphous, STIFF, moist	Pt				8.00	5	5	5	10
8.60	-7.03	1.00												
9.00					SILT/CLAY, reddish mottled with grey, high plastic clay fines with traces of sand and occasional gravel, MEDIUM DENSE, moist	MH/CH				9.00	12	14	15	29
10.00														

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial
W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	SK
Logged By	KSH
Date	10/05/2013
Checked By	JU

LOG OF BOREHOLE

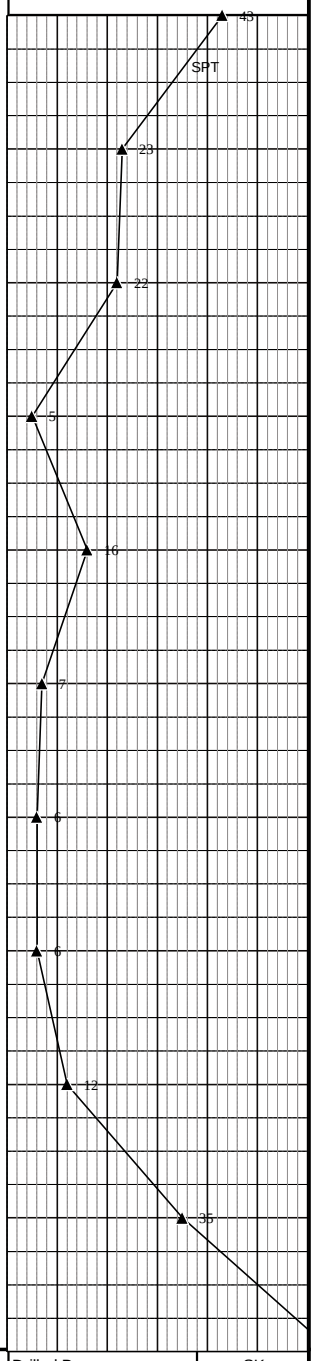
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 2 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 12
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	0.00
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	1.57	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	401154.745 N	**DATE COMMENCED**	2/5/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494452.881 E	**DATE COMPLETED**	9/5/2012

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
10.00					Dense state of consistancy at 10.00m depth	CH/MH		0.80m GWL, 9/5/2012		10.00	16	20	23	43
11.00										11.00	12	11	12	23
12.00	-10.43	3.40			SANDY CLAY, grey, high plastic, traces of fine to medium sand grains with occasional cemented sand nodules, VERY STIFF, moist	CS				12.00	12	10	12	22
12.50	-10.93	0.50												
13.00					CLAY, dark grey, high plastic with organic matters, FIRM, moist	CHO				13.00	3	2	3	5
14.00					Very stiff state of consistancy at 14.00m depth					14.00	5	7	9	16
15.00										15.00	6	4	3	7
16.00										16.00	3	3	3	6
17.00										17.00	3	3	3	6
18.00										18.00	5	6	6	12
18.50	-16.93	6.00												
19.00					SILTY SAND, grey, fine to medium sand grains with presence of mica, MEDIUM DENSE to VERY DENSE, moist (completely weathered rock)	SM				19.00	15	17	18	35
20.00														

MOISTURE CONTENT - %
10 20 30 40 50 60
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm
10 20 30 40 50 60



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial
W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	SK
Logged By	KSH
Date	10/05/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 3 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 12
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	0.00
DRILLING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	1.57	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / CASING SIZE: NX	**CO-ORDINATES**	401154.745 N	**DATE COMMENCED**	2/5/2013
VANE SIZE [mm*mm]	- / UDS SAMPLER SIZE [mm]: -		494452.881 E	**DATE COMPLETED**	9/5/2012

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm	Core Depth m	Core Recovery %	RQD %	Return of Water %
20.00										20.00	19	-	-	>50				
					SM													
21.00	-19.43	2.50			**Rock Level**					21.00	14	-	-	>50				
					Highly weathered rock	Rock		0.80m GWL, 9/5/2012		21.00					21.00	10	Nil	-
22.00										22.50								
22.50	-20.93	1.50								22.50	40	10						
										24.00								
23.00																		
24.00										24.00	34	Nil						
										25.50								
25.00					Biotite granitic gneiss, light grey to pinkish grey, medium to coarse grained, moderately weathered, moderately weak to moderately strong, highly fractured	Rock												
										25.50	28	6						
26.00										27.00								
27.00										27.00	62	17						
										28.50								
28.00																		
28.50	-26.93	6.00								28.50	97	89						
										30.00								
29.00					Garnet biotite granitic gneiss, pinkish grey, medium to coarse grained, fresh, very strong, slightly fractured	Rock												
30.00	-28.43	1.50			Borehole terminated at 30.00m depth													

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)

Refusal to penetration

Refusal to penetration

Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	SK
Logged By	KSH
Date	10/05/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 3 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			CLIENT	ORIENTAL CONSULTANT COMPANY LTD.	BOREHOLE NO	BH 13
LOCATION	PELIYAGODA			CONTRACT NO	30/24318	DEPTH OF HOLE (m)	27.50
DRILING METHOD	CORE DRILLING			ELEVATION (m MSL)	2.20	CHAINAGE / OFFSET	-
CORE SIZE [mm]	54	CASING SIZE	NX	CO-ORDINATES	401117.040 N	DATE COMMENCED	5/5/2013
VANE SIZE [mm*mm]	-	UDS SAMPLER SIZE [mm]	-		494528.639 E	DATE COMPLETED	8/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm	Core Depth m	Core Recovery %	RQD %	Return of Water %
20.00										20.00	11	16	25	41				
					SILTY SAND, dark grey, fine to medium grains, DENSE to VERY DENSE, moist (completely weathered rock)	SM												
21.00										21.00	22	30	10/2	40/17				
21.50	-19.30	1.75			**Rock Level**													
					Hornblende biotite gneiss, dark grey, medium grained, highly to moderately weathered, weak to moderately weak, highly fractured	Rock		0.60m GWL, 8/5/2013		21.50	34	Nil		75				
22.00										23.00								
22.70	-20.50	1.20																
23.00										23.00	80	40		80				
					Biotite granitic gneiss, pinkish grey, medium to coarse grained, moderately to slightly weathered, moderately weak to strong, highly fractured	Rock				24.00	75	Nil		75				
24.00										25.00								
25.00										25.00	65	Nil		75				
26.00	-23.80	3.30								26.00								
					Biotite granitic gneiss, pinkish grey, medium to coarse grained, slightly weathered to fress, moderately strong to strong, slightly fractured	Rock				26.00	100	88		90				
27.00										27.50								
27.50	-25.30	1.50																
28.00					Borehole terminated at 27.50m depth													
29.00																		
30.00																		

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)

41
Refusal to penetration

Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial
W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	10/05/2013
Checked By	JU

LOG OF BOREHOLE

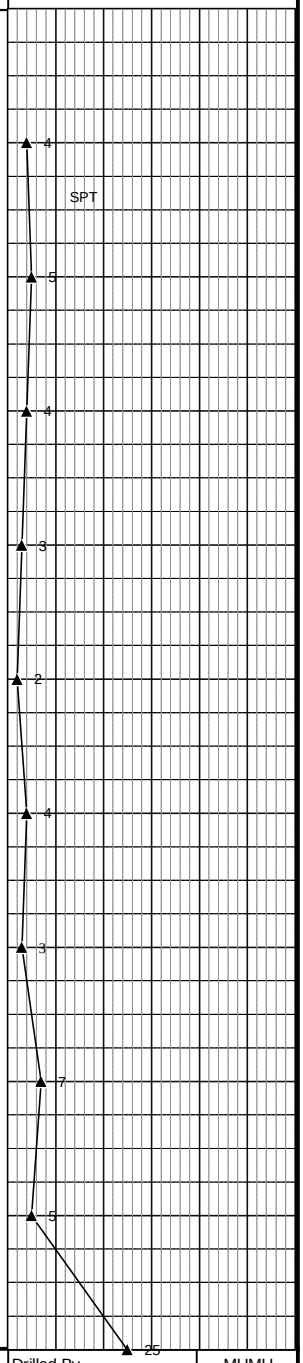
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 1 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 13
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	27.50
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	2.20	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	401117.040 N	**DATE COMMENCED**	5/5/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494528.639 E	**DATE COMPLETED**	8/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	γ - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
0.00	2.20				GROUND LEVEL									
0.40	1.80	0.40			SILTY SAND, blackish grey, medium to coarse grains with occasional gravel and plant roots, moist (fill)	SM								
1.00					SILTY SAND, reddish brown, medium to coarse sand grains with occasional gravel, LOOSE, moist (lateritic fill)	SM		0.6m GWL, 8/5/2013		1.00	2	2	2	4
2.00										2.00	2	3	2	5
3.00										3.00	2	2	2	4
3.10	-0.90	2.70												
4.00					PEAT, black, amorphous, SOFT, moist	Pt				4.00	1	1	2	3
5.00										5.00	2	1	1	2
6.00										6.00	1	2	2	4
7.00	-4.80	3.90								7.00	1	2	1	3
8.00					PEAT, black, fine fibrous with partially decomposed vegetation, SOFT to FIRM, moist	Pt				8.00	3	4	3	7
9.00										9.00	3	3	2	5
9.60	-7.40	2.60												
10.00														

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
W - Wash sample
SPT - SPT Sample
- Undisturbed sample

Drilled By	MHMH
Logged By	KSH
Date	10/05/2013

LOG OF BOREHOLE

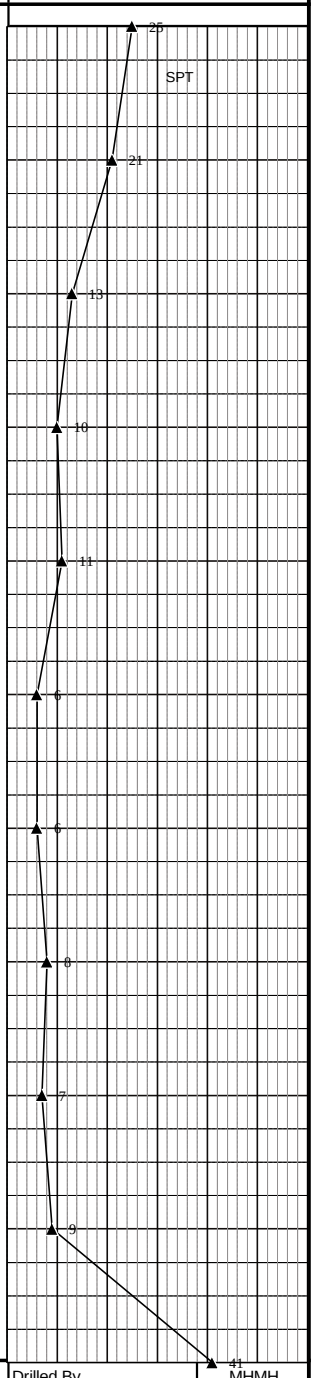
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 2 of 3

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			CLIENT	ORIENTAL CONSULTANT COMPANY LTD.	BOREHOLE NO	BH 13
LOCATION	PELIYAGODA			CONTRACT NO	30/24318	DEPTH OF HOLE (m)	27.50
DRILING METHOD	CORE DRILLING			ELEVATION (m MSL)	2.20	CHAINAGE / OFFSET	-
CORE SIZE [mm]	54	CASING SIZE	NX	CO-ORDINATES	401117.040 N	DATE COMMENCED	5/5/2013
VANE SIZE [mm*mm]	-	UDS SAMPLER SIZE [mm]	-		494528.639 E	DATE COMPLETED	8/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
10.00					SILT/CLAY, reddish brown mottled with grey, traces of medium to coarse sand grains with occasional gravel, high plastic clay fines, MEDIUM DENSE, moist	MH/CH		0.60m GWL, 8/5/2013		10.00	14	12	13	25
11.00										11.00	13	11	10	21
12.00	-9.80	2.40			CLAY, reddish mottled with grey, high plastic, STIFF, moist	CH				12.00	6	6	7	13
13.00										13.00	5	5	5	10
13.50	-11.30	1.50												
14.00										14.00	5	5	6	11
15.00										15.00	3	3	3	6
16.00					CLAY, black grey, high plastic with organic matters, traces of fine sand, STIFF to FIRM, moist	CHO				16.00	3	3	3	6
17.00										17.00	3	4	4	8
18.00										18.00	3	3	4	7
19.00										19.00	3	4	5	9
19.75	-17.55	6.25												
20.00						SM								

MOISTURE CONTENT - %
10 20 30 40 50 60
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm
10 20 30 40 50 60



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial
W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	10/05/2013
Checked By	JU

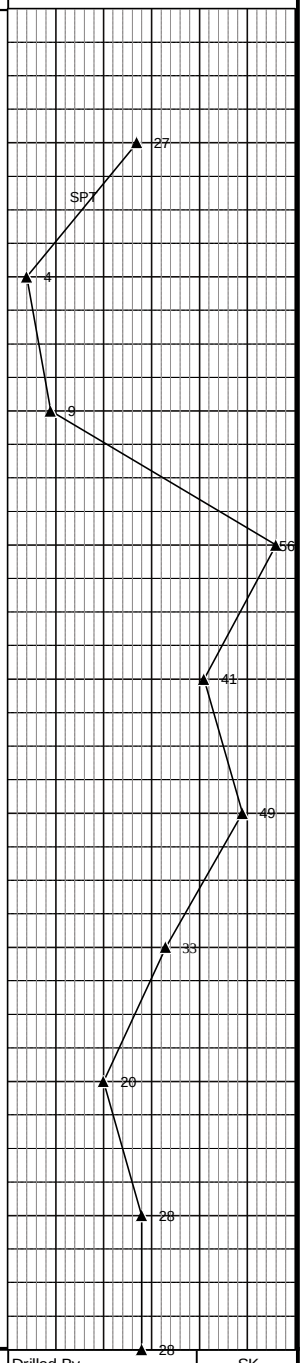
LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 1 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE		CLIENT	ORIENTAL CONSULTANT COMPANY LTD.	BOREHOLE NO: BH 14
LOCATION	PELIYAGODA		CONTRACT NO	30/24318	DEPTH OF HOLE (m): 32.75
DRILING METHOD	CORE DRILLING		ELEVATION (m MSL)	1.96	CHAINAGE / OFFSET: -
CORE SIZE [mm]	54	CASING SIZE: NX	CO-ORDINATES	401242.842 N	DATE COMMENCED: 10/5/2013
VANE SIZE [mm*mm]	-	UDS SAMPLER SIZE [mm]: -		494453.904 E	DATE COMPLETED: 14/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	γ - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
0.00	1.96				GROUND LEVEL									
		0.40			SILTY SAND, dark brown, medium to coarse grains with gravel, occasional plants roots (fll)	SM								
0.40	1.56													
1.00					SILTY SAND, reddish brown, fine to medium grains with traces of clay, MEDIUM DENSE, moist (fll)	SM		0.85m GWL, 14/5/2013		1.00	10	13	14	27
1.70	0.26	1.30												
2.00					CLAY, black grey, with organic matters, high plastic, FIRM, moist	CHO				2.00	9	2	2	4
3.00	-1.04	1.30								3.00	2	5	4	9
3.35	-1.39	0.35			PEAT, black, with partially decomposed vegetation and traces of clay size particles, STIFF, moist	Pt								
4.00					SILTY GRAVEL, reddish brown, medium to coarse sand grains with traces of clay, DENSE, moist (laterite)	GM				4.00	20	26	30	56
5.00	-3.04	1.65								5.00	12	18	23	41
6.00										6.00	20	23	26	49
7.00					SILT/CLAY, reddish mottled with dull white and yellow, traces of sand, high plastic clay fines, partially weathered gravel, silt percentage increases with depth, DENSE to MEDIUM DENSE, moist (laterite)	MH/CH				7.00	11	15	18	33
8.00										8.00	8	9	11	20
9.00										9.00	12	14	14	28
10.00														



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression

W - Wash sample
SPT - SPT Sample
- Undisturbed sample

Drilled By	SK
Logged By	KSH
Date	16/05/2013

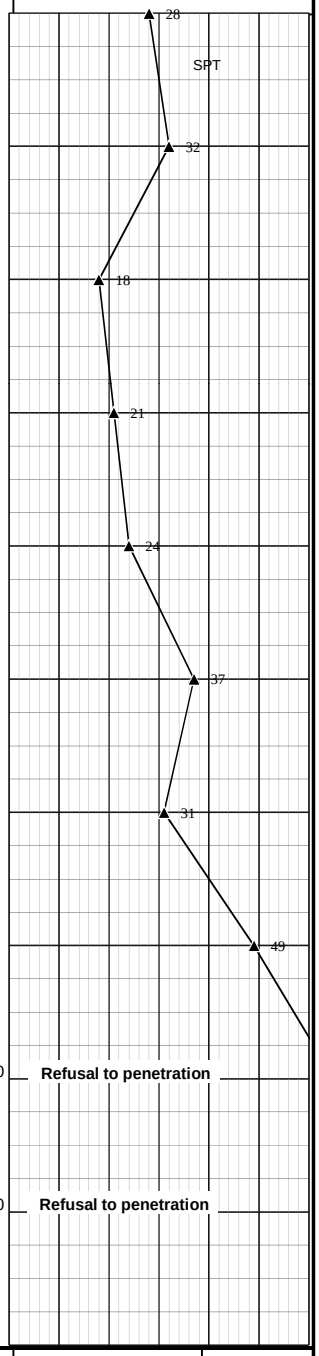
LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 2 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 14
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	32.75
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	1.96	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	401242.842 N	**DATE COMMENCED**	10/5/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494453.904 E	**DATE COMPLETED**	14/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
10.00						MH/CH		0.85m GWL, 14/5/2013		10.00	9	12	16	28
11.00	-9.04	6.00								11.00	8	13	19	32
12.00					SILT, brick red to yellowish brown, traces of sand and high plastic clay fines, MEDIUM DENSE, moist	MH				12.00	4	8	10	18
13.00										13.00	5	10	11	21
14.00										14.00	7	10	14	24
15.00										15.00	16	18	19	37
15.60	-13.64	4.60								16.00	12	14	17	31
16.00														
17.00					SILT, greyish brown, traces of sand with presence of mica, low plastic, DENSE to VERY DENSE, moist (completely weathered rock)	ML				17.00	19	23	26	49
18.00										18.00	12/5	-	-	>50 Refusal to penetration
19.00										19.00	18/5	-	-	>50 Refusal to penetration
20.00														



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	SK
Logged By	KSH
Date	16/05/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 3 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 14
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	32.75
DRILING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	1.96	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / **CASING SIZE** NX	**CO-ORDINATES**	401242.842 N	**DATE COMMENCED**	10/5/2013
VANE SIZE [mm*mm]	- / **UDS SAMPLER SIZE [mm]** -		494453.904 E	**DATE COMPLETED**	14/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm	MOISTURE CONTENT - % / UNDRAINED SHEAR STRENGTH - kN/m² / SPT RESISTANCE - Blows/30 cm
20.00										20.00	20/5	-	-	>50	Refusal to penetration
21.00						ML				21.00	-	-	-	>50	Refusal to penetration
22.00								0.85m GWL, 14/5/2013		22.00	-	-	-	>50	Refusal to penetration
										Core Depth m	Core Recovery %	RQD %	Return of Water %		
22.75	-20.79	7.15			**Rock Level**					22.75	35	22	-		
23.00					Garnet hornblende biotite gneiss, grey, medium grained, highly to slightly weathered, very weak to strong, slightly fractured	Rock				24.25					
24.00															
24.35	-22.39	1.60								24.25	84	10	-		
25.00										25.75					
26.00					Garnet biotite granitic gneiss, pinkish grey, medium to coarse grained, slightly weathered, moderately strong to strong, highly fractured	Rock				25.75	99	42	-		
27.00										27.25					
28.00										27.25	69	28	-		
29.00										28.75					
30.00										28.75	54	6	-		
										30.25					

Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	SK
Logged By	KSH
Date	16/05/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 4 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 14
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	32.75
DRILING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	1.96	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / **CASING SIZE** NX	**CO-ORDINATES**	401242.842 N	**DATE COMMENCED**	10/5/2013
VANE SIZE [mm*mm]	- / **UDS SAMPLER SIZE [mm]** -		494453.904 E	**DATE COMPLETED**	14/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm	MOISTURE CONTENT - % / UNDRAINED SHEAR STRENGTH - kN/m² / SPT RESISTANCE - Blows/30 cm
30.00										Core Depth m	Core Recovery %	RQD %	Return of Water %		10 20 30 40 50 60
						Rock				30.25	60	28	-		
31.00										31.75					
								0.85m GWL, 14/5/2013		31.75	48	Nil	-		
32.00										32.75					
32.75	-30.79	8.40													
33.00					Borehole terminated at 32.75m depth										
34.00															
35.00															
36.00															
37.00															
38.00															
39.00															
40.00															

Natural moisture content, Atterberg Limits (LL, PL) — γ –Wet unit weight — W - Wash sample
SPT 'N', blows/ft — G -Grainsize Analysis — SPT - SPT Sample
Vane shear strength, peak — U - Unconfined compression — Undisturbed sample
Vane shear strength, residual — CU - Consolidated undrained triaxial — Disturbed Sample

Drilled By	SK
Logged By	KSH
Date	16/05/2013
Checked By	JU

LOG OF BOREHOLE

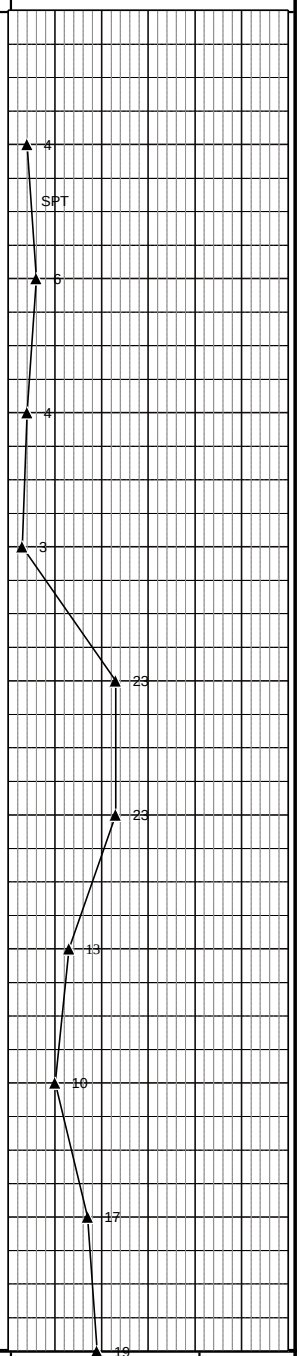
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 1 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 15
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	34.10
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	2.03	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	401220.720 N	**DATE COMMENCED**	27/4/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494579.327 E	**DATE COMPLETED**	30/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
0.00	2.03				GROUND LEVEL									
1.00					SILTY SAND, reddish brown, fine to medium grains with pockets of clay fines, occasional gravel, LOOSE, moist (fill)	SM		0.60m GWL, 30/4/2013		1.00	2	2	2	4
1.50	0.53	1.50												
2.00					SILT, reddish brown, traces of fine to medium sand grains with low plastic fines and occasional gravel, LOOSE, moist (lateritic fill)	ML				2.00	3	3	3	6
3.00										3.00	2	2	2	4
3.50	-1.47	2.00												
4.00					PEAT, black, pockets of partially decomposed vegetation, SOFT, moist	Pt				4.00	1	2	1	3
4.75	-2.72	1.25												
5.00					SAND, dark grey, fine grains with organic matters, poorly graded MEDIUM DENSE, moist	SP				5.00	8	11	12	23
6.00	-3.97	1.25								6.00	12	11	12	23
6.90					SILT, dark grey, intermediate plastic clay fines with organic matters and traces of sand, MEDIUM DENSE, moist	MIO								
7.00	-4.87	0.90								7.00	8	6	7	13
8.00					SAND, dark grey, fine to medium grains with little amount of organic matters, well graded, MEDIUM DENSE, moist	SW				8.00	5	4	6	10
8.50	-6.47	1.60												
9.00					GRAVELLY CLAY, reddish brown mottled with grey, high plastic, medium to coarse sand grains, VERY STIFF, moist	CG				9.00	7	8	9	17
10.00														

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
W - Wash sample
SPT - SPT Sample
- Undisturbed sample

Drilled By	PSN
Logged By	KSH
Date	03/05/2013

LOG OF BOREHOLE

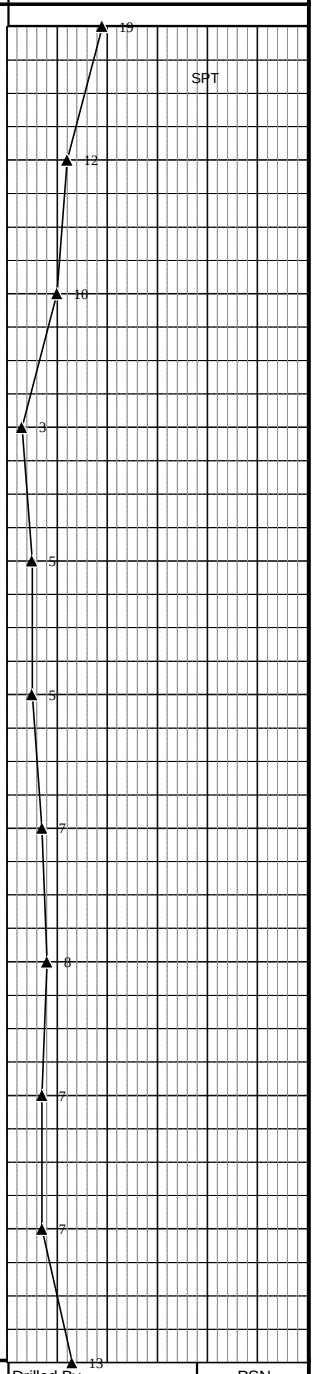
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 2 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 15
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	34.10
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	2.03	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	401220.720 N	**DATE COMMENCED**	27/4/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494579.327 E	**DATE COMPLETED**	30/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
10.00										10.00	8	9	10	19
						CG								
11.00	-8.97	2.50								11.00	7	6	6	12
					CLAY, yellowish brown mottled with grey, high plastic, traces of sand, STIFF, moist	CH		0.60m GWL, 30/4/2013						
12.00										12.00	5	5	5	10
12.80		1.80												
13.00	#####									13.00	2	1	2	3
14.00										14.00	2	2	3	5
15.00					CLAY/SILT, dark grey, high plastic with organic matters and traces of sand, silt percentage increases with depth SOFT to FIRM, moist	CHO/MHO				15.00	2	2	3	5
16.00										16.00	2	3	4	7
17.00										17.00	2	3	5	8
18.00										18.00	2	3	4	7
19.00	-16.97	6.20								19.00	3	3	4	7
					CLAY, light grey, high plastic, traces of sand, STIFF to VERY STIFF, moist	CH								
20.00														

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial
W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	PSN
Logged By	KSH
Date	03/05/2013
Checked By	JU

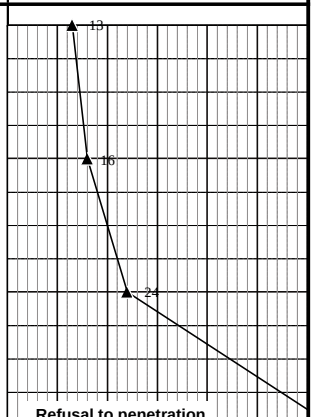
LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 3 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 15
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	34.10
DRILING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	2.03	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / **CASING SIZE** NX	**CO-ORDINATES**	401220.720 N	**DATE COMMENCED**	27/4/2013
VANE SIZE [mm*mm]	- / **UDS SAMPLER SIZE [mm]** -		494579.327 E	**DATE COMPLETED**	30/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm	MOISTURE CONTENT - % / UNDRAINED SHEAR STRENGTH - kN/m² / SPT RESISTANCE - Blows/30 cm
20.00										20.00	5	6	7	13	
21.00					CLAY, light grey, high plastic, traces of sand, STIFF to VERY STIFF to HARD, moist	CH		0.60m GWL, 30/4/2013		21.00	7	7	9	16	
22.00										22.00	8	11	13	24	
22.90															
23.00	-20.87	3.90								23.00	27/10	-	-	>50	Refusal to penetration
					SILTY SAND, grey mottled with yellow, fine to medium grains with presence of mica, VERY DENSE, moist (completely weathered rock)	SM									
24.00										24.00	-	-	-	>50	Refusal to penetration
24.10	-22.07	1.20			**Rock Level**										
										Core Depth m	Core Recovery %	RQD %	Return of Water %		
										24.10	11	Nil	-		
25.00					Highly weathered rock, grey, fine to medium grained, weak, highly fractured	Rock				25.60					
26.00										25.60 27.10	13	Nil	-		
27.00															
27.10	-25.07	3.00								27.10	54	18	-		
28.00					Hornblende biotite granatic gneiss, grey, fine to medium grained, moderately weathered, moderately strong to strong, highly fractured	Rock				28.60					
29.00										28.60 30.10	65	25	-		
30.00															



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	PSN
Logged By	KSH
Date	03/05/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 4 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 15
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	34.10
DRILING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	2.03	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / **CASING SIZE** NX	**CO-ORDINATES**	401220.720 N	**DATE COMMENCED**	27/4/2013
VANE SIZE [mm*mm]	- / **UDS SAMPLER SIZE [mm]** -		494579.327 E	**DATE COMPLETED**	30/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	γ - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm	Core Depth m	Core Recovery %	RQD %	Return of Water %
30.00																		
										30.10					30.10	83	26	-
										31.55					31.55			
31.00					Hornblende biotite granatic gneiss, grey, fine to medium grained, moderately weathered, moderately strong to strong, highly fractured	Rock		0.60m GWL, 30/4/2013										
										31.55					31.55	93	26	-
										33.05					33.05			
32.00																		
33.00																		
										33.05					33.05	87	38	-
										34.10					34.10			
34.00																		
34.10	-32.07	7.00			Borehole terminated at 34.10m depth													
35.00																		
36.00																		
37.00																		
38.00																		
39.00																		
40.00																		

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)

Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	PSN
Logged By	KSH
Date	03/05/2013
Checked By	JU

LOG OF BOREHOLE

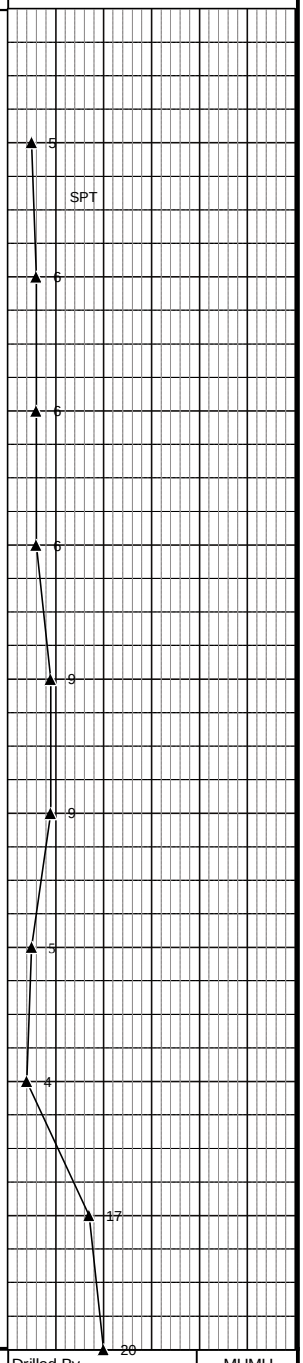
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 1 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE		**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO** BH 16
LOCATION	PELIYAGODA		**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)** 38.90
DRILING METHOD	CORE DRILLING		**ELEVATION (m MSL)**	8.22	**CHAINAGE / OFFSET** -
CORE SIZE [mm]	54	**CASING SIZE** NX	**CO-ORDINATES**	401213.482 N	**DATE COMMENCED** 18/5/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]** -		494664.387 E	**DATE COMPLETED** 22/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
0.00	8.22				GROUND LEVEL									
0.30	7.92	0.30			SILTY SAND, dark brown, fine grains, occasional plant roots, moist (fill)	SM								
1.00										1.00	2	3	2	5
2.00										2.00	3	3	3	6
3.00										3.00	3	3	3	6
4.00					GRAVELLY SILT, reddish brown, with plastic clay fines, LOOSE, moist (laterite fill)	MG				4.00	3	3	3	6
5.00								6.20m GWL, 22/5/2013		5.00	4	5	4	9
6.00										6.00	4	5	4	9
7.00										7.00	2	3	2	5
8.00										8.00	2	2	2	4
9.00	-0.78	8.70								9.00	8	8	9	17
10.00					SAND, grey to yellowish brown, fine to coarse grains, well graded, MEDIUM DENSE, moist	SW								

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
W - Wash sample
SPT - SPT Sample
- Undisturbed sample

Drilled By	MHMH
Logged By	KSH
Date	22/05/2013

LOG OF BOREHOLE

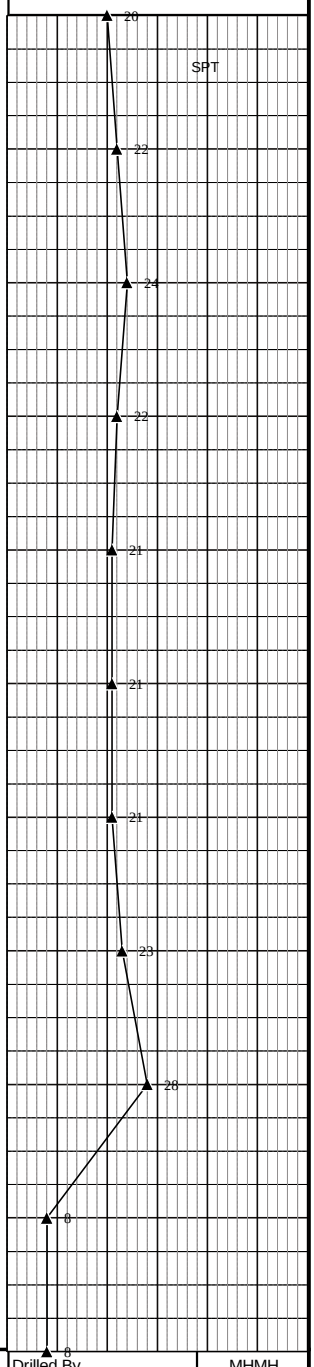
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 2 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			CLIENT	ORIENTAL CONSULTANT COMPANY LTD.	BOREHOLE NO	BH 16
LOCATION	PELIYAGODA			CONTRACT NO	30/24318	DEPTH OF HOLE (m)	38.90
DRILING METHOD	CORE DRILLING			ELEVATION (m MSL)	8.22	CHAINAGE / OFFSET	-
CORE SIZE [mm]	54	CASING SIZE	NX	CO-ORDINATES	401213.482 N	DATE COMMENCED	18/5/2013
VANE SIZE [mm*mm]	-	UDS SAMPLER SIZE [mm]	-		494664.387 E	DATE COMPLETED	22/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
10.00										10.00	9	10	10	20
11.00										11.00	8	11	11	22
12.00						SW		6.20m GWL, 22/5/2013		12.00	7	11	13	24
13.00										13.00	8	10	12	22
14.00										14.00	8	11	10	21
15.00										15.00	9	10	11	21
16.00	-7.78	7.00								16.00	8	10	11	21
17.00					SANDY CLAY, reddish brown, high plastic, fine to medium sand grains with gravel and occasional organic matters, VERY STIFF, moist (laterite)	CS				17.00	9	11	12	23
18.00										18.00	8	12	16	28
19.00	-10.78	3.00								19.00	4	4	4	8
20.00					CLAY, dark grey, with organic matters, high plastic, with pockets of peat, STIFF, moist	CHO								

MOISTURE CONTENT - %
10 20 30 40 50 60
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm
10 20 30 40 50 60



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial
W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	22/05/2013
Checked By	JU

LOG OF BOREHOLE

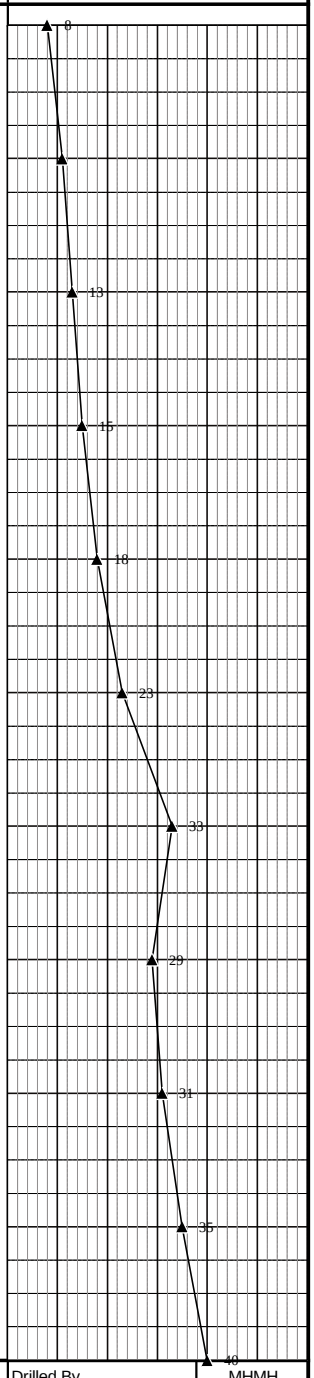
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 3 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 16
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	38.90
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	8.22	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	401213.482 N	**DATE COMMENCED**	18/5/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494664.387 E	**DATE COMPLETED**	22/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
20.00														
21.00						CHO		6.20m GWL, 22/5/2013		21.00	5	6	5	11
22.00										22.00	5	6	7	13
23.00	-14.78	4.00			PEAT, black, partially decomposed timber, VERY STIFF, moist	Pt				23.00	5	7	8	15
24.00	-15.78	1.00			CLAY, dark grey, with organic matters, high plastic, VERY STIFF, moist	CHO				24.00	6	8	10	18
25.00	-16.78	1.00								25.00	8	10	13	23
26.00					SILT, dark grey, fine sand grains with organic matters, low plastic, with presence of mica, MEDIUM DENSE to DENSE, moist	MLO				26.00	9	15	18	33
27.00										27.00	8	12	17	29
28.00	-19.78	3.00								28.00	8	13	18	31
29.00					SILT, grey, fine sand grains with occasional organic matters, low plastic, with presence of mica, DENSE, moist	ML				29.00	8	15	20	35
30.00														

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	22/05/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 4 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE		**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO** BH 16
LOCATION	PELIYAGODA		**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)** 38.90
DRILING METHOD	CORE DRILLING		**ELEVATION (m MSL)**	8.22	**CHAINAGE / OFFSET** -
CORE SIZE [mm]	54	**CASING SIZE** NX	**CO-ORDINATES**	401213.482 N	**DATE COMMENCED** 18/5/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]** -		494664.387 E	**DATE COMPLETED** 22/5/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	γ - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm	MOISTURE CONTENT - % / UNDRAINED SHEAR STRENGTH - kN/m² / SPT RESISTANCE - Blows/30 cm
30.00	-21.78	2.00				ML				30.00	9	18	22	40	
					SILTY SAND, grey mottled with dull white, fine to medium grains, with presence of mica, DENSE to VERY DENSE, moist (completely weathered rock)	SM									SPT 40
31.00										31.00	45/13	-	-	>50	Refusal to penetration
											Core Depth m	Core Recovery %	RQD %	Return of Water %	
31.50	-23.28	1.50			**Rock Level**					31.50	Nil	Nil		-	
32.00					Highly weathered rock	Rock		6.20m GWL, 22/5/2013		33.00					
33.00	-24.78	1.50								33.00	88	59		-	
34.00										34.50					
35.00					Hornblende biotite gneiss, light grey to pinkish grey, medium to coarse grained, moderately to slightly weathered, strong, moderately fractured	Rock				34.50	82	42		80	
36.00										36.00	30	Nil		80	
37.00										37.50					
37.50	-29.28	4.50								37.50	94	87		80	
38.00					Garnet hornblende biotite gneiss, light grey, medium to coarse grained, fresh, very strong, slightly fractured	Rock				38.90					
38.90															
39.00	-30.68	1.40													
					Borehole terminated at 38.90m depth										
40.00															

Natural moisture content, Atterberg Limits (LL, PL) — γ –Wet unit weight — W - Wash sample
SPT 'N', blows/ft — G -Grainsize Analysis — SPT - SPT Sample
Vane shear strength, peak — U - Unconfined compression — Undisturbed sample
Vane shear strength, residual — CU - Consolidated undrained triaxial — Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	22/05/2013
Checked By	JU

LOG OF BOREHOLE

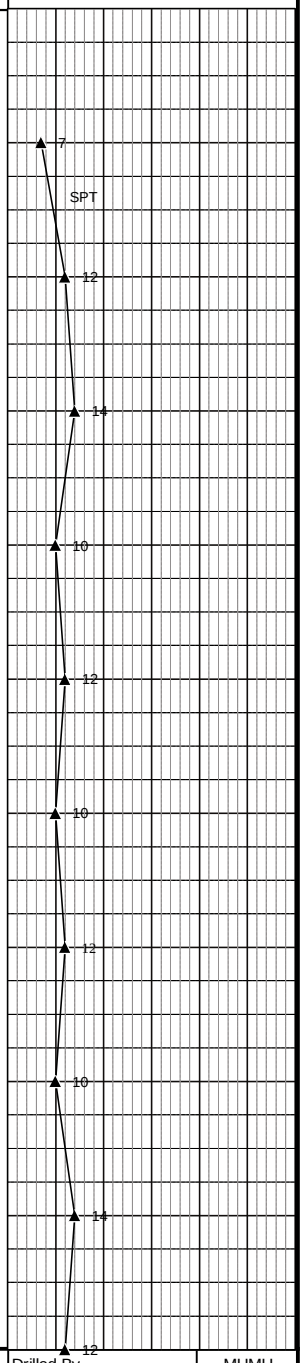
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 1 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE		**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO** BH 17
LOCATION	PELIYAGODA		**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)** 38.90
DRILING METHOD	CORE DRILLING		**ELEVATION (m MSL)**	6.40	**CHAINAGE / OFFSET** -
CORE SIZE [mm]	54	**CASING SIZE** NX	**CO-ORDINATES**	401277.975 N	**DATE COMMENCED** 20/4/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]** -		494729.770 E	**DATE COMPLETED** 21/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
0.00	6.40				GROUND LEVEL									
					SILTY SAND, black, fine to medium grains with occasional plants roots, moist (fill)	SM								
0.80	5.60	0.80												
1.00										1.00	3	3	4	7
					SILTY SAND, reddish brown to yellowish brown,fine to medium grains with gravel and plastic fines, LOOSE to MEDIUM DENSE, miost (lateritic fill)	SM								
2.00										2.00	3	5	7	12
3.00										3.00	6	6	8	14
3.80	2.60	3.00												
4.00					SANDY SILT, yellowish brown, fine to medium sand grains with plastic fines, MEDIUM DENSE, moist (lateritic fill)	MS		4.60m GWL, 21/4/2013		4.00	5	5	5	10
5.00										5.00	5	8	4	12
5.80	0.60	2.00												
6.00					CLAY, reddish brown, high plastic with occasional gravel, STIFF, moist (lateritic fill)	CH				6.00	4	5	5	10
7.00										7.00	5	6	6	12
8.00										8.00	5	5	5	10
8.20	-1.80	2.40												
					CLAYEY SAND, black, fine to medium grains, occasional gravel, intermediate plastic clay fines with organic matters, MEDIUM DENSE, moist	SC								
9.00	-2.60	0.80								9.00	6	7	7	14
					SAND, black, medium to coarse grains with organic matters, poorly graded, MEDIUM DENSE, moist	SP								
10.00														

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
W - Wash sample
SPT - SPT Sample
- Undisturbed sample

Drilled By	MHMH
Logged By	KSH
Date	26/04/2013

LOG OF BOREHOLE

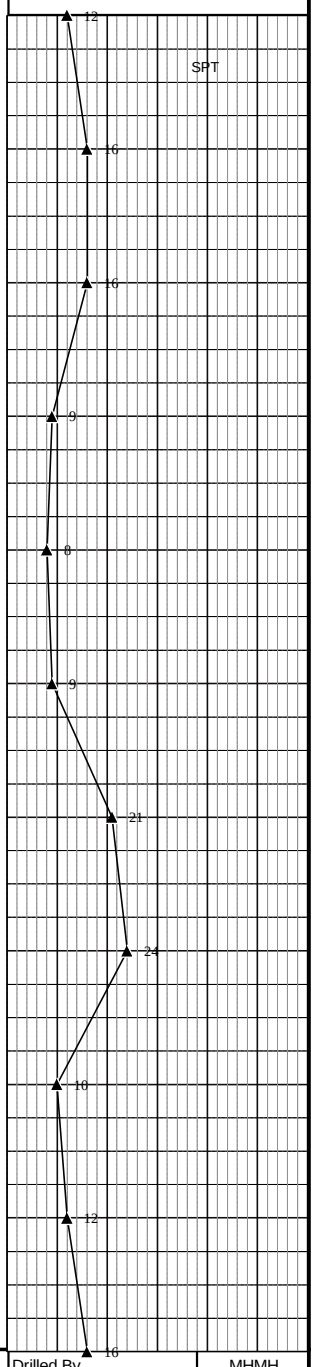
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 2 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 17
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	38.90
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	6.40	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	401277.975 N	**DATE COMMENCED**	20/4/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494729.770 E	**DATE COMPLETED**	21/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
10.00										10.00	5	6	6	12
11.00						SP		4.60m GWL, 21/4/2013		11.00	6	7	9	16
12.00										12.00	5	8	8	16
13.00	-6.60	4.00								13.00	5	4	5	9
13.50	-7.10	0.50			SAND, grey, medium to coarse with sub angular quartzitic grains, occasional organic matters, well graded, LOOSE, moist	SW								
14.00					PEAT, black, amorphous with presence of clay, STIFF, moist	Pt				14.00	4	4	4	8
15.00										15.00	4	4	5	9
15.60	-9.20	2.10												
16.00					CLAY, grey mottled with red, high plastic, with sand and partially weathered gravel, VERY STIFF to STIFF, moist (laterite)	CH				16.00	6	10	11	21
17.00										17.00	7	11	13	24
18.00										18.00	6	5	5	10
18.20	-11.80	2.60												
19.00					PEAT, black, with organic silt, STIFF, moist	Pt				19.00	6	6	6	12
19.50	-13.10	1.30												
20.00					SANDY CLAY, reddish brown, high plastic, fine to medium sand grains, occasional organic matters, VERY STIFF, moist	CS								

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial
W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	26/04/2013
Checked By	JU

LOG OF BOREHOLE

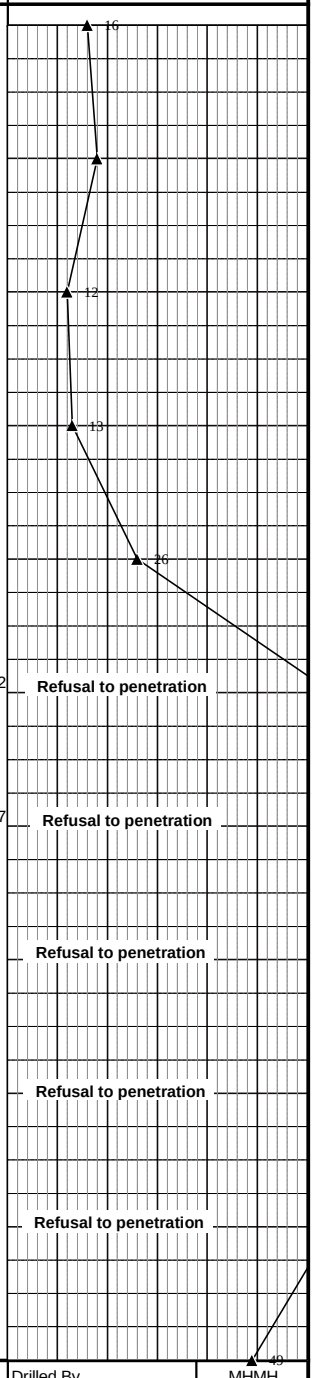
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 3 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 17
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	38.90
DRILING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	6.40	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / **CASING SIZE** NX	**CO-ORDINATES**	401277.975 N	**DATE COMMENCED**	20/4/2013
VANE SIZE [mm*mm]	- / **UDS SAMPLER SIZE [mm]** -		494729.770 E	**DATE COMPLETED**	21/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
20.00						CS		4.60m GWL, 21/4/2013		20.00	7	8	8	16
21.00										21.00	6	9	9	18
22.00	-15.60	2.50			ORGANIC SILT, black, intermediate plastic clay fines, traces of sand, MEDIUM DENSE, moist	MIO				22.00	6	6	6	12
23.00										23.00	6	6	7	13
24.00	-17.60	2.00			SAND, dark grey, fine grains with organic matters, poorly graded, MEDIUM DENSE, moist	SP				24.00	8	14	12	26
25.00	-18.60	1.00			SAND, grey, fine to medium grains, well graded, VERY DENSE, moist	SW				25.00	20	25	18/7	43/22
26.00										26.00	20	30	12/2	42/17
27.00										27.00	24	30/7	-	>50
28.00	-21.60	3.00			SAND, dark brown to yellowish brown, medium to coarse grains, VERY DENSE, moist (completely weathered rock)	SW				28.00	22	40/12	-	>50
29.00										29.00	19	27	20/7	>50
30.00														

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	26/04/2013
Checked By	JU

LOG OF BOREHOLE

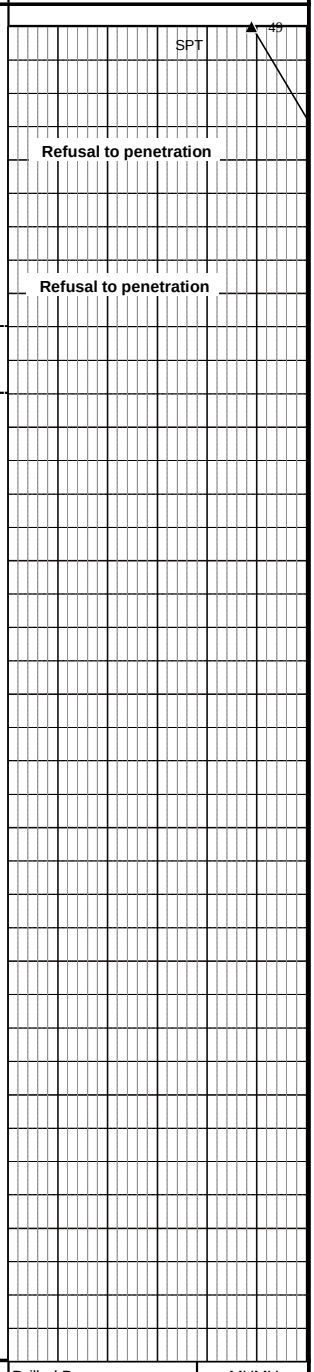
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 4 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 17
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	38.90
DRILING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	6.40	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / CASING SIZE: NX	**CO-ORDINATES**	401277.975 N	**DATE COMMENCED**	20/4/2013
VANE SIZE [mm*mm]	- / UDS SAMPLER SIZE [mm]: -		494729.770 E	**DATE COMPLETED**	21/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	γ - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm	Core Depth m	Core Recovery %	RQD %	Return of Water %
30.00										30.00	17	25	24	49				
31.00						SW		4.60m GWL, 21/4/2013		31.00	24	30/7	-	>50				
32.00										32.00	26	30/7	-	>50				
32.85	#####	4.85			**Rock Level**													
33.00										32.85	40	23		75				
34.00					Biotite granitic gneiss, pinkish grey, medium to coarse grained, moderately weathered, moderately weak to moderately strong, slightly fractured	Rock				34.35								
35.00										34.35	20	Nil		70				
35.10	-28.70	2.25								35.10								
36.00					Hornblende biotite gneiss, pinkish grey, medium to coarse grained, fresh, moderately strong to very strong	Rock				35.10	48	27		-				
37.00										36.10								
38.00										36.10	50	27		-				
38.90										37.40								
39.00	-32.50	3.80			Borehole terminated at 38.90m depth					37.40	98	85		80				
40.00										38.90								

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	26/04/2013
Checked By	JU

LOG OF BOREHOLE

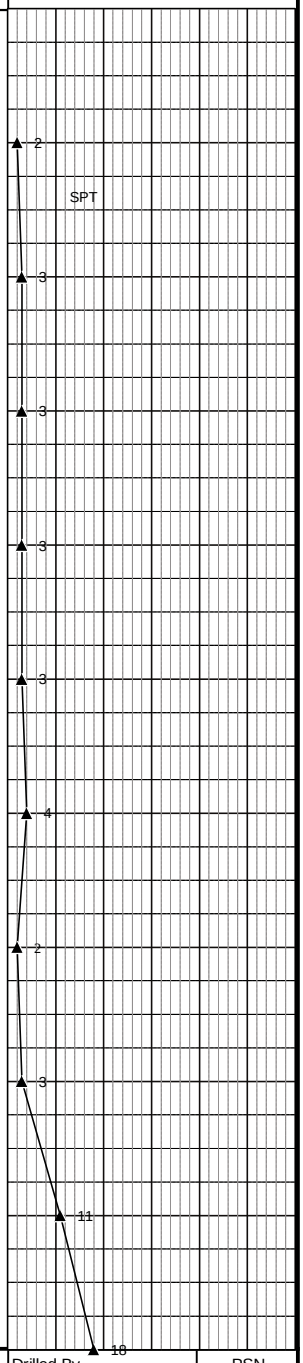
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 1 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE		**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO** BH 18
LOCATION	PELIYAGODA		**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)** 40.00
DRILING METHOD	CORE DRILLING		**ELEVATION (m MSL)**	2.24	**CHAINAGE / OFFSET** -
CORE SIZE [mm]	54	**CASING SIZE** NX	**CO-ORDINATES**	401379.112 N	**DATE COMMENCED** 7/4/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]** -		494841.894 E	**DATE COMPLETED** 10/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
0.00	2.24				GROUND LEVEL									
1.00					CLAYEY GRAVEL, reddish brown, fine to medium sand grains, VERY LOOSE, moist (fill)	GC		0.50m GWL, 10/4/2013		1.00	2	1	1	2
2.00	0.24	2.00								2.00	2	1	2	3
3.00	-0.76	1.00			CLAY/SILT, brownish grey, fine sand grains, high plastic fines, SOFT, moist (lateritic fill)	CH/MH				3.00	2	2	1	3
4.00	-1.76	1.00			SILTY SAND, yellowish brown, fine to medium grains with plastic fines, VERY LOOSE, moist (lateritic fill)	SM				4.00	2	1	2	3
5.00					PEAT, black, with partially decomposed vegetation, SOFT, moist	Pt				5.00	2	1	2	3
6.00										6.00	2	2	2	4
7.00	-4.76	3.00								7.00	1	1	1	2
8.00					PEAT, black, amorphous, SOFT, moist	Pt				8.00	2	1	2	3
9.00	-6.76	2.00								9.00	3	6	5	11
10.00					SAND, dark grey to yellowish grey, fine to medium grains, traces of organic matter, well graded, MEDIUM DENSE, moist	SW								

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
W - Wash sample
SPT - SPT Sample
- Undisturbed sample

Drilled By	PSN
Logged By	KSH
Date	11/04/2013

LOG OF BOREHOLE

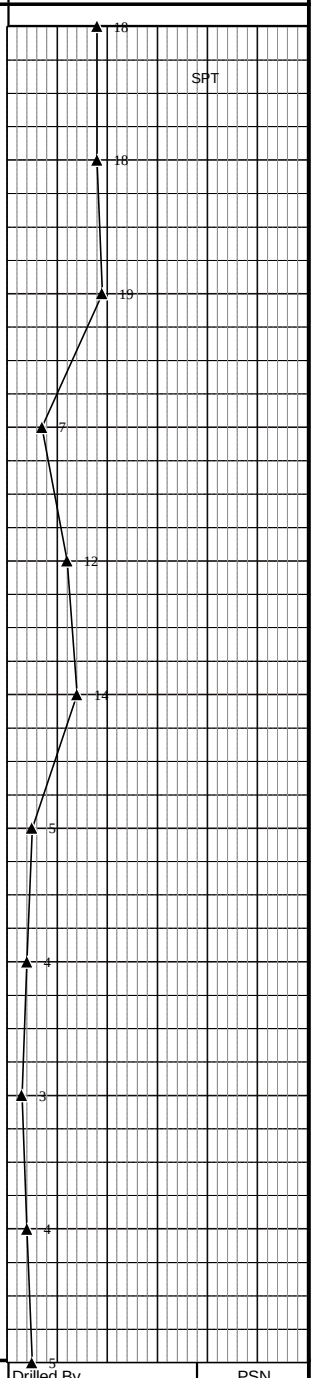
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 2 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			CLIENT	ORIENTAL CONSULTANT COMPANY LTD.	BOREHOLE NO	BH 18
LOCATION	PELIYAGODA			CONTRACT NO	30/24318	DEPTH OF HOLE (m)	40.00
DRILING METHOD	CORE DRILLING			ELEVATION (m MSL)	2.24	CHAINAGE / OFFSET	-
CORE SIZE [mm]	54	CASING SIZE	NX	CO-ORDINATES	401379.112 N	DATE COMMENCED	7/4/2013
VANE SIZE [mm*mm]	-	UDS SAMPLER SIZE [mm]	-		494841.894 E	DATE COMPLETED	10/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
10.00										10.00	5	6	12	18
						SW								
11.00	-8.76	2.00								11.00	8	9	9	18
					CLAY, reddish grey, high plastic, with occasional gravel, VERY STIFF, moist	CH		0.50m GWL, 10/4/2013						
12.00										12.00	12	10	9	19
13.00	-10.76	2.00								13.00	4	3	4	7
					CLAY, black grey, high plastic, with organic matters, FIRM, moist	CH								
14.00	-11.76	1.00								14.00	7	7	5	12
14.50	-12.26	0.50			ORGANIC SILT, black, high plastic clay fines, MEDIUM DENSE, moist	MHO								
15.00					SAND, black grey, fine grains with organic matters, poorly graded, MEDIUM DENSE, moist	SP				15.00	7	7	7	14
16.00	-13.76	1.50								16.00	4	3	2	5
17.00					SILT, black, traces of fine to medium sand grains with organic matters, low plastic, LOOSE to VERY LOOSE, moist	ML				17.00	2	2	2	4
18.00										18.00	1	2	1	3
19.00										19.00	2	2	2	4
20.00														

MOISTURE CONTENT - %
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial
W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	PSN
Logged By	KSH
Date	11/04/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

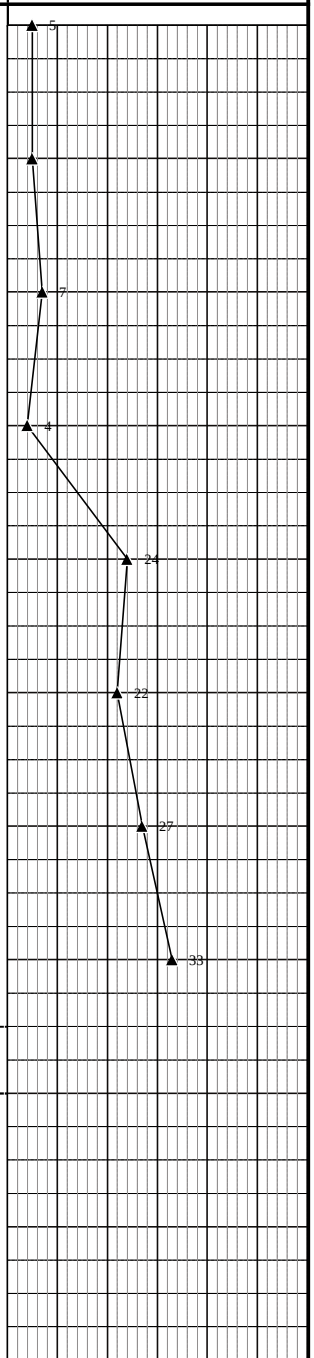
SHEET NO. 3 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			CLIENT	ORIENTAL CONSULTANT COMPANY LTD.	BOREHOLE NO	BH 18
LOCATION	PELIYAGODA			CONTRACT NO	30/24318	DEPTH OF HOLE (m)	40.00
DRILING METHOD	CORE DRILLING			ELEVATION (m MSL)	2.24	CHAINAGE / OFFSET	-
CORE SIZE [mm]	54	CASING SIZE	NX	CO-ORDINATES	401379.112 N	DATE COMMENCED	7/4/2013
VANE SIZE [mm*mm]	-	UDS SAMPLER SIZE [mm]	-		494841.894 E	DATE COMPLETED	10/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
20.00	-17.76	4.00				ML				20.00	3	2	3	5
21.00					SILTY SAND, yellowish brown, fine grains with plastic fines, LOOSE, moist	SM		0.50m GWL, 10/4/2013		21.00	3	2	3	5
22.00										22.00	3	3	4	7
23.00										23.00	3	1	3	4
23.70	-21.46	3.70												
24.00					SAND, yellowish brown, medium to coarse grains, well graded, MEDIUM DENSE, moist	SW				24.00	8	11	13	24
25.00										25.00	10	9	13	22
26.00										26.00	11	13	14	27
26.80	-24.56	3.10												
27.00					SILTY SAND, grey mottled with white, fine grains with presence of mica, DENSE, moist (completely weathered rock)	SM				27.00	14	16	17	33
28.00														
28.20	-25.96	1.40			**Rock Level**					28.20	25	Nil	80	
29.00					Garnet hornblende biotite gneiss, brownish grey, medium grained, highly to moderately weathered, very weak to weak, highly fractured	Rock				30.50				
30.00														

Core Depth m	Core Recovery %	RQD %	Return of Water %
28.20	25	Nil	80
30.50			

MOISTURE CONTENT - %
10 20 30 40 50 60
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm
10 20 30 40 50 60



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	PSN
Logged By	KSH
Date	11/04/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 4 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 18
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	40.00
DRILING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	2.24	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / **CASING SIZE** NX	**CO-ORDINATES**	401379.112 N	**DATE COMMENCED**	7/4/2013
VANE SIZE [mm*mm]	- / **UDS SAMPLER SIZE [mm]** -		494841.894 E	**DATE COMPLETED**	10/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	γ - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1 / 2 / 3, FOR 30cm	Core Depth m	Core Recovery %	RQD %	Return of Water %
30.00															
										30.50					
										31.70					
31.00						Rock									
										31.70					
										33.20					
32.00															
33.00															
										33.20					
										35.00					
34.00															
34.10	-31.86	5.90													
35.00										35.00					
										36.50					
36.00					Biotite granitic gneiss, pinkish grey, medium to coarse grained, highly to moderately weathered, very weak to moerately weak, highly fractured, slightly faulted	Rock									
										36.50					
										37.50					
37.00															
										37.50					
										39.00					
38.00															
39.00										39.00					
										40.00					
40.00	-37.76	5.90			Borehole terminated at 40.00m depth										

0.50m GWL, 10/4/2013

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)

Natural moisture content, Atterberg Limits (LL, PL)	γ –Wet unit weight	W - Wash sample	
SPT 'N', blows/ft	G -Grainsize Analysis	SPT - SPT Sample	
Vane shear strength, peak	U - Unconfined compression	Undisturbed sample	
Vane shear strength, residual	CU - Consolidated undrained triaxial	Disturbed Sample	

Drilled By	PSN
Logged By	KSH
Date	11/04/2013
Checked By	JU

LOG OF BOREHOLE

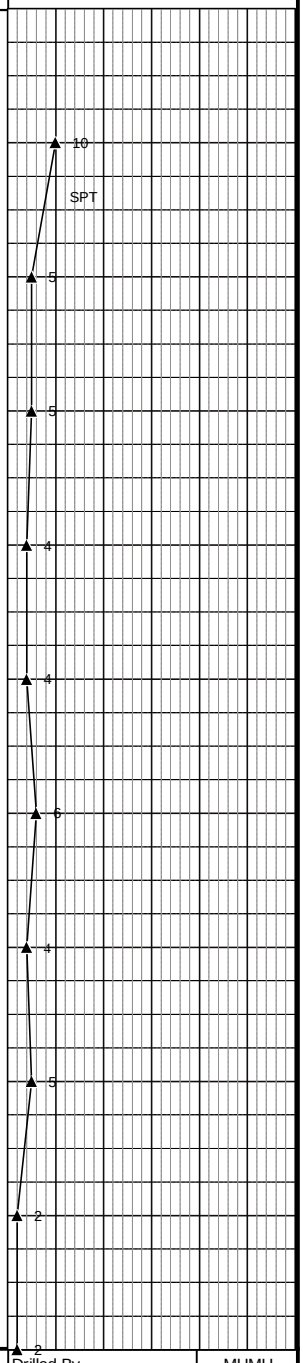
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 1 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 19
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	38.00
DRILING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	1.90	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / **CASING SIZE** NX	**CO-ORDINATES**	401429.638 N	**DATE COMMENCED**	29/3/2013
VANE SIZE [mm*mm]	- / **UDS SAMPLER SIZE [mm]** -		494900.379 E	**DATE COMPLETED**	5/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
0.00	1.90				GROUND LEVEL									
0.90					SILTY GRAVEL, reddish brown, fine to medium sand grains with plastic fines, moist (lateritic fill)	GM		0.50m GWL, 5/4/2013						
1.00	1.00	0.90								1.00	5	7	3	10
					SAND with garbage, brownish grey, medium to coarse grains with gravel, poorly graded, MEDIUM DENSE to LOOSE, moist (fill)	SP								
2.00										2.00	4	4	1	5
2.15	-0.25	1.25												
										UDS (2.50-3.00)				
3.00					SILT/CLAY, brownish grey, high plastic clay fines, LOOSE, moist	MH/CH				3.00	1	2	3	5
4.00										4.00	2	2	2	4
5.00					*Note : Undisturbed sample was collected at same depth in same layer in additional borehole*					5.00	2	3	1	4
										UDS (5.00-5.50)				
5.40	-3.50	3.25												
6.00					PEAT, black, partially decomposed vegetation with organic silt, FIRM, moist	Pt				6.00	2	4	2	6
7.00										7.00	2	2	2	4
8.00										8.00	2	3	2	5
9.00	-7.10	3.60								9.00	1	1	1	2
					PEAT, black, amorphous with organic silt, intermediate plastic clay fines, SOFT, moist	Pt								
10.00														

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
W - Wash sample
SPT - SPT Sample
- Undisturbed sample

Drilled By	MHMH
Logged By	KSH
Date	01/04/2013

LOG OF BOREHOLE

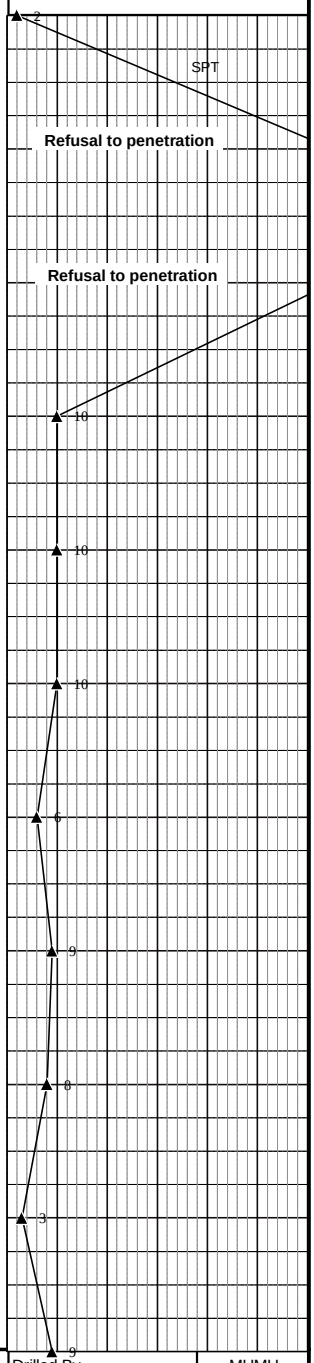
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 2 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			CLIENT	ORIENTAL CONSULTANT COMPANY LTD.	BOREHOLE NO	BH 19
LOCATION	PELIYAGODA			CONTRACT NO	30/24318	DEPTH OF HOLE (m)	38.00
DRILING METHOD	CORE DRILLING			ELEVATION (m MSL)	1.90	CHAINAGE / OFFSET	-
CORE SIZE [mm]	54	CASING SIZE	NX	CO-ORDINATES	401429.638 N	DATE COMMENCED	29/3/2013
VANE SIZE [mm*mm]	-	UDS SAMPLER SIZE [mm]	-		494900.379 E	DATE COMPLETED	5/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
10.00						Pt		0.50m GWL, 5/4/2013		10.00	2	1	1	2
11.00	-9.10	2.00								11.00	18/10	-	-	>50
					SILTY SAND, greyish brown, medium to coarse grains, VERY DENSE, moist	SM								
12.00										12.00	10	-	-	>50
12.80	-10.90	1.80												
13.00										13.00	4	5	5	10
14.00										14.00	8	5	5	10
					PEAT, black, with partially decomposed vegetation, STIFF, moist	Pt								
15.00										15.00	7	5	5	10
16.00										16.00	4	2	4	6
17.00										17.00	4	4	5	9
18.00	-16.10	5.20								18.00	3	4	4	8
19.00					SANDY SILT, grey, traces of clay, LOOSE, moist	MS				19.00	1	2	1	3
20.00														

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial
W - Wash sample
SPT - SPT Sample
Undisturbed sample
Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	01/04/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 3 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 19
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	38.00
DRILING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	1.90	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / **CASING SIZE** NX	**CO-ORDINATES**	401429.638 N	**DATE COMMENCED**	29/3/2013
VANE SIZE [mm*mm]	- / **UDS SAMPLER SIZE [mm]** -		494900.379 E	**DATE COMPLETED**	5/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
20.00														
						MS				20.00	3	4	5	9
21.00	-19.10	3.00								21.00	4	5	4	9
					SILTY SAND, light grey, fine to medium grains with plastic fines, LOOSE to MEIUM DENSE, moist	SM								
22.00										22.00	5	9	10	19
22.20	-20.30	1.20						0.50m GWL, 5/4/2013						
23.00										23.00	8	16	21	37
					SAND, greyish brown, medium to coarse grains with occasional gravel, well graded, DENSE to VERY DENSE, moist (completely weathered rock)	SW								
24.00										24.00	16	25	31	>50
25.00										25.00	18	34	15/5	>50
26.00	-24.10	3.80			**Rock Level**					25.80	29	15/5	-	>50
										Core Depth m	Core Recovery %	RQD %	Return of Water %	
					Biotite granitic gneiss, pinkish grey, medium to coarse grained, highly weathered, very weak (washed sample)	Rock				26.00	Nil	Nil	80	
27.00										26.50 / 26.50	Nil	Nil	80	
27.90										28.00				
28.00	-26.00	1.90								28.00	0.01	Nil	80	
										30.40				
					Biotite granitic gneiss, pinkish grey, medium to coarse grained, highly to moderately weathered, weak to moderately weak, highly fractured	Rock								
29.00														
30.00														

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)

Refusal to
Refusal to
Refusal to

Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	01/04/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 4 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 19
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	38.00
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	1.90	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	401429.638 N	**DATE COMMENCED**	29/3/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		494900.379 E	**DATE COMPLETED**	5/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	γ - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm	MOISTURE CONTENT - % / UNDRAINED SHEAR STRENGTH - kN/m² / SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)
30.00										Core Depth m	Core Recovery %	RQD %	Return of Water %		
										30.40	10	Nil		80	
										32.00					
31.00					Biotite granitic gneiss, pinkish grey, medium to coarse grained, highly to moderately weathered, weak to moderately weak, highly fractured	Rock		0.50m GWL, 5/4/2013							
32.00										32.00	17	Nil		80	
										34.00					
33.00															
34.00										34.00	5	Nil		80	
										35.50					
35.00															
35.50	-33.60	7.60								35.50	Nil	Nil		80	
										36.50					
36.00					Biotite granitic gneiss, pinkish grey, medium to coarse grained, highly weathered, very weak (wash sample)	Rock				36.50	Nil	Nil		80	
										38.00					
37.00															
38.00	-36.10	2.50													
					Borehole terminated at 38.00m depth										
39.00															
40.00															

Natural moisture content, Atterberg Limits (LL, PL) — γ –Wet unit weight — W - Wash sample
SPT 'N', blows/ft — G -Grainsize Analysis — SPT - SPT Sample
Vane shear strength, peak — U - Unconfined compression — Undisturbed sample
Vane shear strength, residual — CU - Consolidated undrained triaxial — Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	01/04/2013
Checked By	JU

LOG OF BOREHOLE

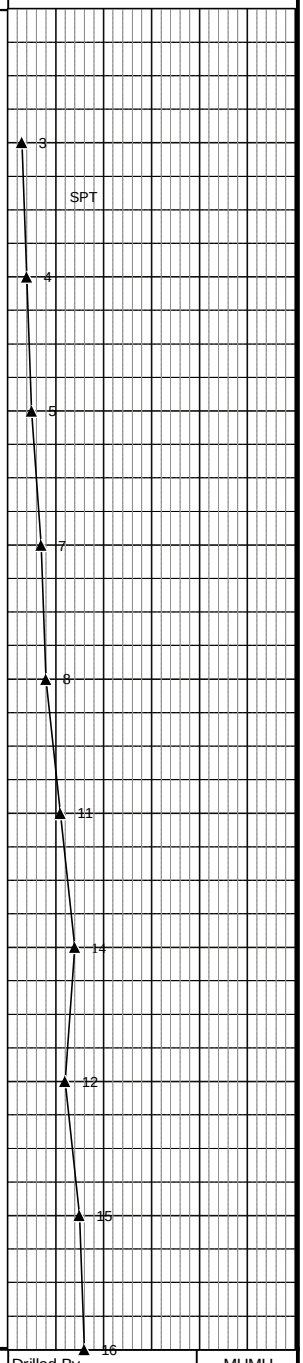
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 1 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 20
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	37.80
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	2.20	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	401568.604 N	**DATE COMMENCED**	30/3/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		495051.692 E	**DATE COMPLETED**	5/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
0.00	2.20				GROUND LEVEL									
0.30	1.90	0.30			SILTY GRAVEL, yellowish brown, fine to medium sand grains with moist (lateritic fill)	GM								
1.00					SILTY GRAVEL, reddish brown to yellowish brown, fine to medium sand grains with plastic fines, VERY LOOSE, moist (lateritic fill)	GM		1.45m GWL, 5/4/2013		1.00	2	1	2	3
2.00										2.00	2	2	2	4
3.00										3.00	3	2	3	5
3.50	-1.30	3.20												
4.00					GRAVEL, greyish brown, fine to medium and sub angular to sub rounded quartzitic gravel with little amount of sand, LOOSE to MEDIUM DENSE, moist	GP				4.00	4	4	3	7
5.00										5.00	4	4	4	8
6.00										6.00	5	5	6	11
7.00										7.00	6	7	7	14
8.00										8.00	5	6	6	12
9.00										9.00	5	7	8	15
10.00														

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
W - Wash sample
SPT - SPT Sample
- Undisturbed sample

Drilled By	MHMH
Logged By	KSH
Date	01/04/2013

LOG OF BOREHOLE

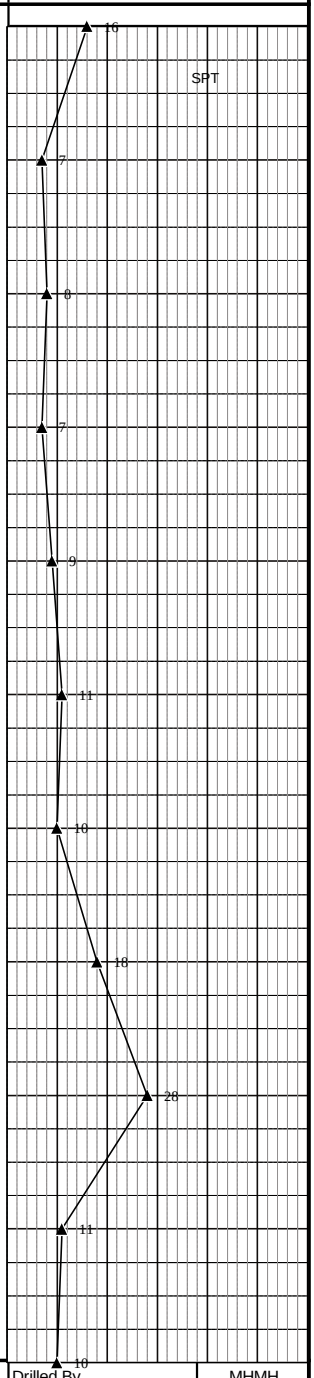
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 2 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 20
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	37.80
DRILING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	2.2	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / **CASING SIZE** NX	**CO-ORDINATES**	401568.604 N	**DATE COMMENCED**	30/3/2013
VANE SIZE [mm*mm]	- / **UDS SAMPLER SIZE [mm]** -		495051.692 E	**DATE COMPLETED**	5/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
10.00						GP		1.45m GWL, 5/4/2013		10.00	7	8	8	16
10.65	-8.45	7.15												
11.00					GRAVELLY CLAY, greyish brown, with sub angular quartzitic gravel, intermediate plastic clay fines, FIRM, moist	CG				11.00	4	4	3	7
12.00	-9.80	1.35								12.00	4	4	4	8
13.00										13.00	5	3	4	7
14.00					CLAY, reddish grey, high plastic, with occasional gravel particles, FIRM to STIFF, moist	CH				14.00	4	5	4	9
15.00										15.00	5	5	6	11
16.00										16.00	5	5	5	10
17.00	-14.80	5.00								17.00	7	8	10	18
18.00					SAND, light grey, fine to medium grains with little amount of silt, poorly graded, MEDIUM DENSE, moist	SP				18.00	8	10	18	28
19.00	-16.80	2.00								19.00	6	5	6	11
20.00					SILTY SAND, grey, fine to medium grains with plastic fines, MEDIUM DENSE to VERY DENSE, moist	SM								

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL) — γ –Wet unit weight — W - Wash sample
SPT 'N', blows/ft — G -Grainsize Analysis — SPT - SPT Sample
Vane shear strength, peak — U - Unconfined compression — Undisturbed sample
Vane shear strength, residual — CU - Consolidated undrained triaxial — Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	01/04/2013
Checked By	JU

LOG OF BOREHOLE

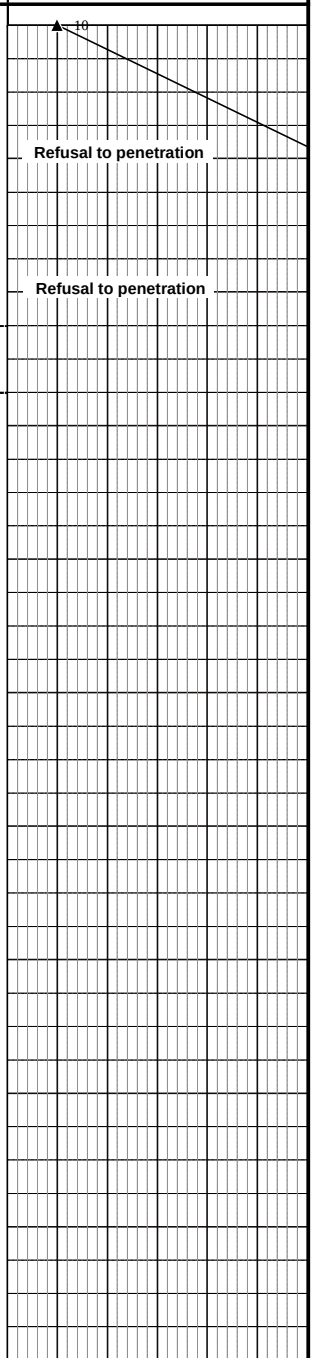
NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 3 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 20
LOCATION	PELIYAGODA	**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	37.80
DRILLING METHOD	CORE DRILLING	**ELEVATION (m MSL)**	2.2	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54 / CASING SIZE: NX	**CO-ORDINATES**	401568.604 N	**DATE COMMENCED**	30/3/2013
VANE SIZE [mm*mm]	- / UDS SAMPLER SIZE [mm]: -		495051.692 E	**DATE COMPLETED**	5/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	Y - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm
20.00										20.00	5	4	6	10
					SM									
21.00										21.00	9	15	20/8	>50
22.00	-19.80	3.00						1.45m GWL, 5/4/2013		22.00	12	20	22/7	>50
					SILTY SAND, pinkish grey, fine grains, VERY DENSE, moist (completely weathered rock)	SM				Core Depth m	Core Recovery %	RQD %	Return of Water %	
23.00	-20.80	1.00			**Rock Level**					23.00	NIL	NIL	70	
										24.50				
24.00					Biotite granitic gneiss, pinkish grey, medium to coarse grained, highly weathered, very weak (washed sample)	Rock								
										24.50	NIL	NIL		
25.00										26.30				
26.00														
26.30	-24.10	3.30								26.30	34	NIL		
										27.80				
27.00														
28.00					Biotite granitic gneiss, pinkish grey, medium to coarse grained, highly to moderately weathered, weak to moderately weak, highly fractured	Rock				27.80	34	NIL		
										29.30				
29.00														
										29.30	50	6.7		
30.00										30.80				

MOISTURE CONTENT - % (10 20 30 40 50 60)
UNDRAINED SHEAR STRENGTH - kN/m²
SPT RESISTANCE - Blows/30 cm (10 20 30 40 50 60)



Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual

γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial

W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	01/04/2013
Checked By	JU

LOG OF BOREHOLE

NATIONAL BUILDING RESEARCH ORGANISATION
GEOTECHNICAL ENGINEERING DIVISION
99/1, Jawatta Road, Colombo 05.

SHEET NO. 4 of 4

PROJECT	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE			**CLIENT**	ORIENTAL CONSULTANT COMPANY LTD.	**BOREHOLE NO**	BH 20
LOCATION	PELIYAGODA			**CONTRACT NO**	30/24318	**DEPTH OF HOLE (m)**	37.80
DRILING METHOD	CORE DRILLING			**ELEVATION (m MSL)**	2.2	**CHAINAGE / OFFSET**	-
CORE SIZE [mm]	54	**CASING SIZE**	NX	**CO-ORDINATES**	401568.604 N	**DATE COMMENCED**	30/3/2013
VANE SIZE [mm*mm]	-	**UDS SAMPLER SIZE [mm]**	-		495051.692 E	**DATE COMPLETED**	5/4/2013

DEPTH [m]	ELEVATION [m MSL]	LAYER THICKNESS(m)	SAMPLE TYPE	SAMPLE NO.	SOIL DESCRIPTION	STRATA	LEGEND	GWL	γ - [g/cm³] OTHER TESTS	DEPTH TESTED [m]	STANDARD PENETRATION TEST DATA: NUMBER OF BLOWS PER 15cm 1	2	3	FOR 30cm	MOISTURE CONTENT - % / UNDRAINED SHEAR STRENGTH - kN/m² / SPT RESISTANCE - Blows/30 cm
30.00															
										Core Depth m / Core Recovery % / RQD % / Return of Water %					
										30.80	34	13.3			
31.00										32.30					
					Biotite granitic gneiss, pinkish grey, medium to coarse grained, highly to moderately weathered, weak to moderately weak, highly fractured	Rock		1.45m GWL, 5/4/2013							
32.00										32.30	93	42			
										33.80					
33.00															
										33.80	43	NIL			
34.00										35.30					
35.00															
										35.30	50	25			
										36.30					
36.00															
										36.30	40	Nil			
										37.80					
37.00															
37.80	-35.60	11.50													
38.00					Borehole terminated at 37.80m depth										
39.00															
40.00															

Natural moisture content, Atterberg Limits (LL, PL)
SPT 'N', blows/ft
Vane shear strength, peak
Vane shear strength, residual
γ –Wet unit weight
G -Grainsize Analysis
U - Unconfined compression
CU - Consolidated undrained triaxial
W - Wash sample
SPT - SPT Sample
- Undisturbed sample
- Disturbed Sample

Drilled By	MHMH
Logged By	KSH
Date	01/04/2013
Checked By	JU

APPENDIX III

Summary of the Laboratory Test Results

GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE

Table 7.2 - Summary of Uniaxial Compressive Strength Test Results for Rock Samples

Borehole No.	Depth	Unconfined Compressive Strength Value (N/mm^2)
BH 1	24.50-24.75	46.12
BH 3	25.30-25.65	64.79
BH 4	20.50-20.90	57.43
BH 7	12.50-12.75	49.46
BH 8	27.75-27.95	36.27
BH 11	28.10-28.25	8.83
BH 13	26.75-27.00	25.08
BH 14	31.20-31.50	12.69
BH 17	37.15-37.25	34.86
	38.25-38.45	41.97
	38.75-38.90	19.56
BH 20	32.60-32.80	28.21

Tested By : Building Material Division

APPENDIX IV

Details of the Laboratory Test Results

NATIONAL BUILDING RESEARCH ORGANISATION

GEOTECHNICAL ENGINEERING DIVISION

TABLE 7.1 - SUMMARY OF TEST RESULTS

PROJECT : **GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE**

Sheet No. 1 of 2

Job Ref. 30/24318

Borehole No.	Depth of Sample Collection m	Soil Classification	Natural Moisture Content %	Specific Gravity	Grain Size Distribution				Atterberg Limits			Triaxial Test/ Consolidated Undrained		Consolidation Test			Direct Shear	
					Gravel %	Sand %	Silt %	Clay %	LL %	PL %	PI %	C_u kPa	ϕ_u Deg.	C_c kPa	$C_c / (1+e_0)$	P_c kPa	C kPa	ϕ Deg.
BH 4	9.00-9.45	SC	29	2.58	8	67	8	17	73	30	43							
	10.00-10.45	CV	32	2.48	1	31	14	54	86	35	51							
	11.00-11.45	MH	46	2.49	5	24	37	34	57	38	19							
BH 9	5.00-5.45	CS	23		8	24	15	53										
	6.00-6.45	CS	25		10	36	13	41										
	7.00-7.46	CV	26		10	27	19	44	75	30	45							
BH 14	2.00-2.45	CHO	53		6	12	22	60										
	6.00-6.45	MH/CH	48		20	20	16	44	63	41	22							
	12.00-12.45	MH	40		1	31	40	28	62	45	17							
BH 17	4.00-4.45	MS	32	2.64	11	29	31	29										
	6.00-6.45	CH	39	2.65	25	20	20	35										
	16.00-16.45	CH	34	2.64	9	16	20	55	65	32	33							
BH 19	2.50-3.00	MH/CH	53	2.57								4	34	0.40	0.17	40		
BH 20	11.00-11.45	CG	37		39	12	13	36										
	13.00-13.45	CI	26		11	27	8	54	41	23	18							

TESTED BY RU/DR CHECKED BY : KSH CERTIFIED BY : JU DATE : 11/7/2013

NATIONAL BUILDING RESEARCH ORGANISATION

GEOTECHNICAL ENGINEERING DIVISION

TABLE 7.1 - SUMMARY OF TEST RESULTS

PROJECT : **GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE**

Sheet No. 1 of 2

Job Ref. 30/24318

For Peat Samples

Borehole No.	Depth of Sample Collection	Soil Classification	Natural Moisture Content	Specific Gravity	Grain Size Distribution				Atterberg Limits			Triaxial Test/ Consolidated Undrained		Consolidation Test			Direct Shear	
					(1) *	(2) *	(3) *	(4) *	LL	PL	PI	C'	ϕ'	C_c	$C_c / (1+e_0)$	P_c	C	ϕ
	m		%		%	%	%	%	%	%	%	kPa	Deg.	kPa		kPa	kPa	Deg.
BH 1	5.50-6.00	Pt	93	2.10	0	1	99	50	131	83	48	12	43	0.77	0.27	50		
	6.50-7.00	Pt	94	2.15	1	3	96	48	127	80	47	8	36	0.78	0.25	55		
BH 5	6.00-6.45	Pt	41		36	34	30	18										
	6.50-7.00	Pt	122	2.20										0.78	0.15	60		
BH 12	5.40-5.90	Pt	124	2.23	1	3	96		289	200	89			0.96	0.22	40		
	5.90-6.50	Pt	183	2.15	11	10	80		283	191	92			1.10	0.29	45		
	5.90-6.50	Pt	102									4	33					
BH 19	5.50-6.00	Pt	90	2.34								0.77	0.23 35					
	7.00-7.45	Pt	100	2.36	8	9	84	38	103	90	13							
	9.00-9.45	Pt	86	2.45	1	15	84	39	105	76	29							

Note

(1)* - Percentage of Organic matter greater than 4.75 mm

(2)* - Percentage of Organic matter greater than 0.075 mm

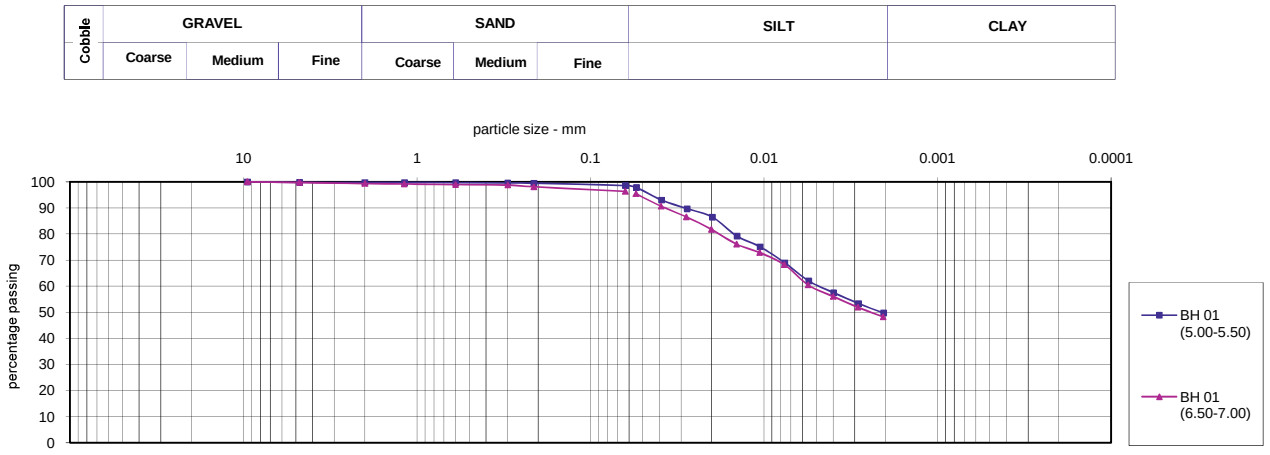
(3)* - Clay & Organic matter Passing through 0.075mm

(4)* - Clay Content

TESTED BY RU/DR CHECKED BY : KSH CERTIFIED BY : JU DATE : 11/7/2013

NATIONAL BUILDING RESEARCH ORGANISATION	Job Ref.	30/24318
GEOTECHNICAL ENGINEERING DIVISION	Client	ORIENTAL CONSULTANT COMPANY LTD.
PARTICLE SIZE DISTRIBUTION CURVE - GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE		

Test Method BS 1377



Location	Sample No	Depth (m)	Classification	Liquid Limits	Plastic Limits	Plasticity Index	(1) (%)	(2) (%)	(3) (%)	(4) (%)
Peliyagoda	BH 1	5.00-5.50	Pt	131	83	48	0	1	99	50
	BH 1	6.50-7.00	Pt	127	80	47	1	3	96	48

Remarks

(1) Percentage of organic matter greater than 4.75 mm

(2) Percentage of organic matter greater than 0.075 mm

(3) Clay & organic matter passing through 0.075 mm

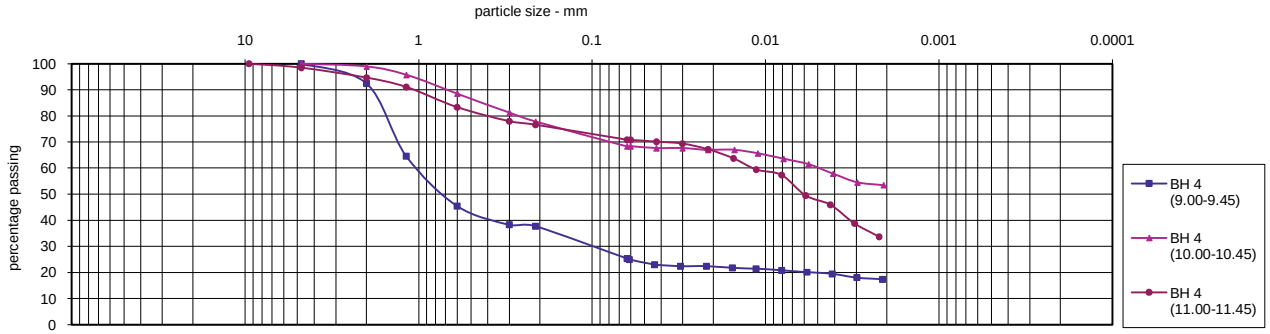
(4) Clay content

DATE : 1/4/2013 TESTED BY : WKS CHECKED BY : KSH CERTIFIED BY: JU

NATIONAL BUILDING RESEARCH ORGANISATION	Job Ref.	30/24318
GEOTECHNICAL ENGINEERING DIVISION	Client	ORIENTAL CONSULTANT COMPANY LTD.
PARTICLE SIZE DISTRIBUTION CURVE - GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE		

Test Method **BS 1377**

Cobble	GRAVEL			SAND			SILT	CLAY
	Coarse	Medium	Fine	Coarse	Medium	Fine		



Chainage	Sample No	Depth (m)	Classification	Liquid Limit	Plastic Limit	Plasticity Index	Cobble (%)	Gravel (%)	Sand (%)	Silt & Clay (%)	Clay (%)	Cu	Cc	Remarks
	BH 4	9.00-9.45	SC	73	30	43		8	67	25	17			
	BH 4	10.00-10.45	CV	86	35	51		1	31	68	54			
	BH 4	11.00-11.45	MH	57	38	19		5	24	71	34			

DATE : 21/5/2013 TESTED BY : TAC/RU CHECKED BY : KSH CERTIFIED BY: JU

NATIONAL BUILDING RESEARCH ORGANISATION

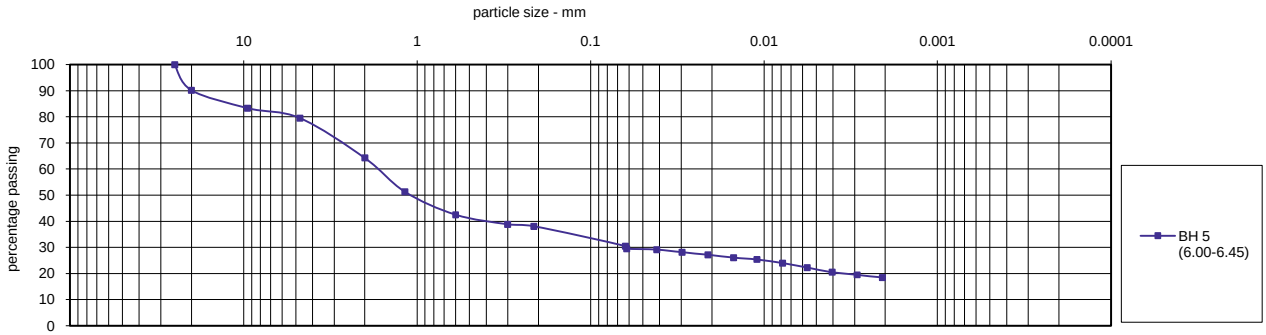
GEOTECHNICAL ENGINEERING DIVISION

PARTICLE SIZE DISTRIBUTION CURVE - **GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE**

Job Ref.	30/24318
Client	ORIENTAL CONSULTANT COMPANY LTD.

Test Method **BS 1377**

Cobble	GRAVEL			SAND			SILT	CLAY
	Coarse	Medium	Fine	Coarse	Medium	Fine		



Location	Sample No	Depth (m)	Classification	Liquid Limits	Plastic Limits	Plasticity Index	(1) (%)	(2) (%)	(3) (%)	(4) (%)
Peliyagoda	BH 5	6.00-6.45	Pt			0	36	34	30	18

Remarks

(1) Percentage of organic matter greater than 4.75 mm

(2) Percentage of organic matter greater than 0.075 mm

(3) Clay & organic matter passing through 0.075 mm

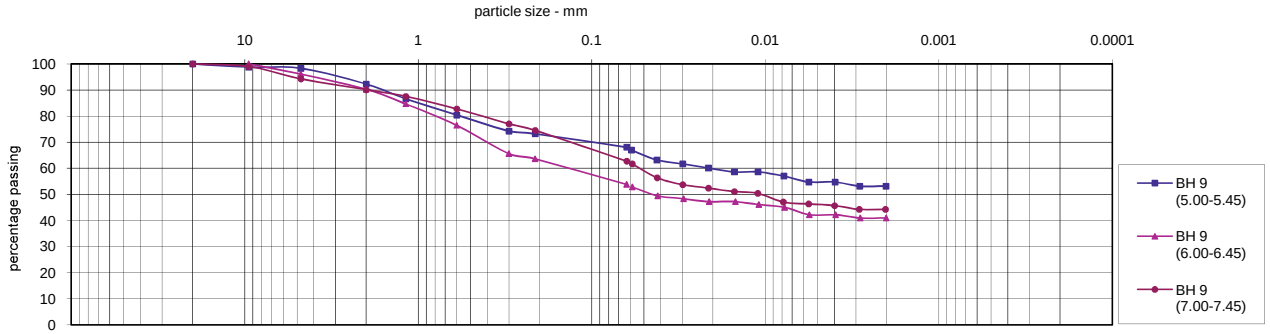
(4) Clay content

DATE : 21/5/2013 TESTED BY : WKS CHECKED BY : KSH CERTIFIED BY: JU

NATIONAL BUILDING RESEARCH ORGANISATION	Job Ref.	30/24318
GEOTECHNICAL ENGINEERING DIVISION	Client	ORIENTAL CONSULTANT COMPANY LTD.
PARTICLE SIZE DISTRIBUTION CURVE - GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE		

Test Method **BS 1377**

Cobble	GRAVEL			SAND			SILT	CLAY
	Coarse	Medium	Fine	Coarse	Medium	Fine		



Chainage	Sample No	Depth (m)	Classification	Liquid Limit	Plastic Limit	Plasticity Index	Cobble (%)	Gravel (%)	Sand (%)	Silt & Clay (%)	Clay (%)	Cu	Cc	Remarks
	BH 9	5.00-5.45	CS					8	24	68	53			
	BH 9	6.00-6.45	CS					10	36	54	41			
	BH 9	7.00-7.45	CV	75	30	45		10	27	63	44			

DATE : 3/5/2013 TESTED BY : WKS CHECKED BY : KSH CERTIFIED BY: JU

NATIONAL BUILDING RESEARCH ORGANISATION

GEOTECHNICAL ENGINEERING DIVISION

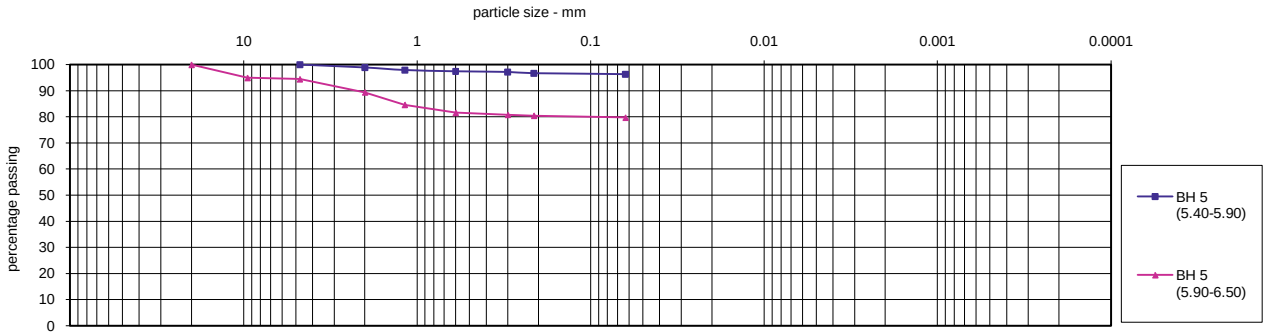
PARTICLE SIZE DISTRIBUTION CURVE - **GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE**

Job Ref. 30/24318

Client ORIENTAL CONSULTANT COMPANY LTD.

Test Method **BS 1377**

Cobble	GRAVEL			SAND			SILT	CLAY
	Coarse	Medium	Fine	Coarse	Medium	Fine		



Location	Sample No	Depth (m)	Classification	Liquid Limits	Plastic Limits	Plasticity Index	(1) (%)	(2) (%)	(3) (%)	(4) (%)
Peliyagoda	BH 12	5.40-5.90	Pt	289	200	89	1	3	96	
	BH 12	5.90-6.50	Pt	283	191	92	11	10	80	

Remarks

(1) Percentage of organic matter greater than 4.75 mm

(2) Percentage of organic matter greater than 0.075 mm

(3) Clay & organic matter passing through 0.075 mm

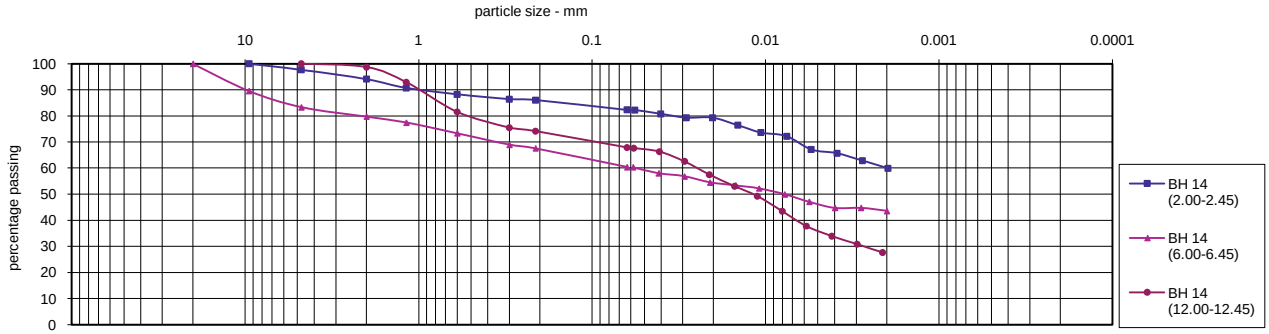
(4) Clay content

DATE : 21/5/2013 TESTED BY : TAC CHECKED BY : KSH CERTIFIED BY: JU

NATIONAL BUILDING RESEARCH ORGANISATION	Job Ref.	30/24318
GEOTECHNICAL ENGINEERING DIVISION	Client	ORIENTAL CONSULTANT COMPANY LTD.
PARTICLE SIZE DISTRIBUTION CURVE - GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE		

Test Method **BS 1377**

Cobble	GRAVEL			SAND			SILT	CLAY
	Coarse	Medium	Fine	Coarse	Medium	Fine		



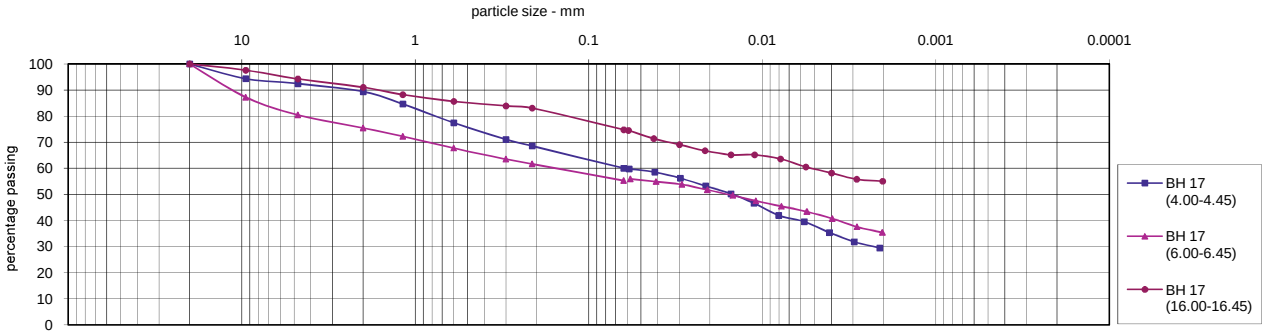
Chainage	Sample No	Depth (m)	Classification	Liquid Limit	Plastic Limit	Plasticity Index	Cobble (%)	Gravel (%)	Sand (%)	Silt & Clay (%)	Clay (%)	Cu	Cc	Remarks
	BH 14	2.00-2.45	CHO					6	12	82	60			
	BH 14	6.00-6.45	MH/CH	63	41	22		20	20	60	44			
	BH 14	12.00-12.45	MH	62	45	17		1	31	68	28			

DATE : 21/5/2013 TESTED BY : TAC/RU CHECKED BY : KSH CERTIFIED BY: JU

NATIONAL BUILDING RESEARCH ORGANISATION	Job Ref.	30/24318
GEOTECHNICAL ENGINEERING DIVISION	Client	ORIENTAL CONSULTANT COMPANY LTD.
PARTICLE SIZE DISTRIBUTION CURVE - GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE		

Test Method **BS 1377**

Cobble	GRAVEL			SAND			SILT	CLAY
	Coarse	Medium	Fine	Coarse	Medium	Fine		



Chainage	Sample No	Depth (m)	Classification	Liquid Limit	Plastic Limit	Plasticity Index	Cobble (%)	Gravel (%)	Sand (%)	Silt & Clay (%)	Clay (%)	Cu	Cc	Remarks
	BH 17	4.00-4.45	MS					11	29	60	29			
	BH 17	6.00-6.45	CH					25	20	55	35			
	BH 17	16.00-16.45	CH	65	32	33		9	16	75	55			

DATE : 7/5/2013 TESTED BY : RU CHECKED BY : KSH CERTIFIED BY: JU

NATIONAL BUILDING RESEARCH ORGANISATION

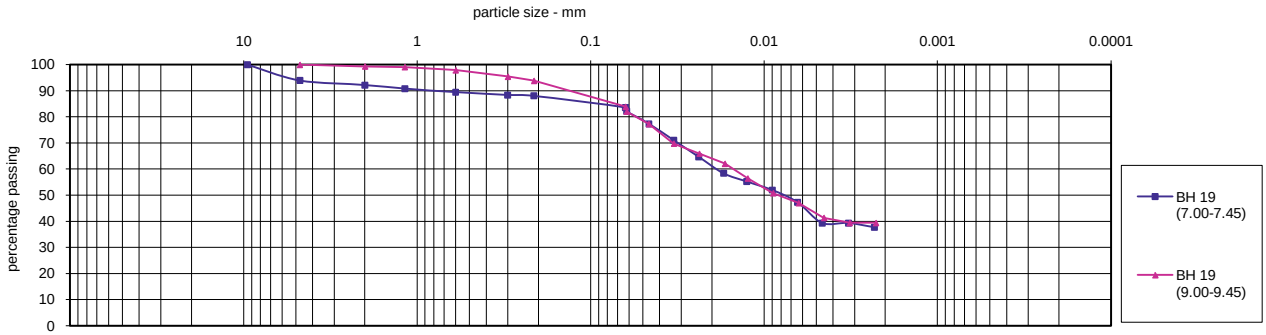
GEOTECHNICAL ENGINEERING DIVISION

PARTICLE SIZE DISTRIBUTION CURVE - **GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE**

Job Ref.	30/24318
Client	ORIENTAL CONSULTANT COMPANY LTD.

Test Method **BS 1377**

Cobble	GRAVEL			SAND			SILT	CLAY
	Coarse	Medium	Fine	Coarse	Medium	Fine		



Location	Sample No	Depth (m)	Classification	Liquid Limits	Plastic Limits	Plasticity Index	(1) (%)	(2) (%)	(3) (%)	(4) (%)
Peliyagoda	BH 19	7.00-7.45	Pt	103	90	13	8	9	84	38
	BH 19	9.00-9.45	Pt	105	76	29	1	15	84	39

Remarks

(1) Percentage of organic matter greater than 4.75 mm

(2) Percentage of organic matter greater than 0.075 mm

(3) Clay & organic matter passing through 0.075 mm

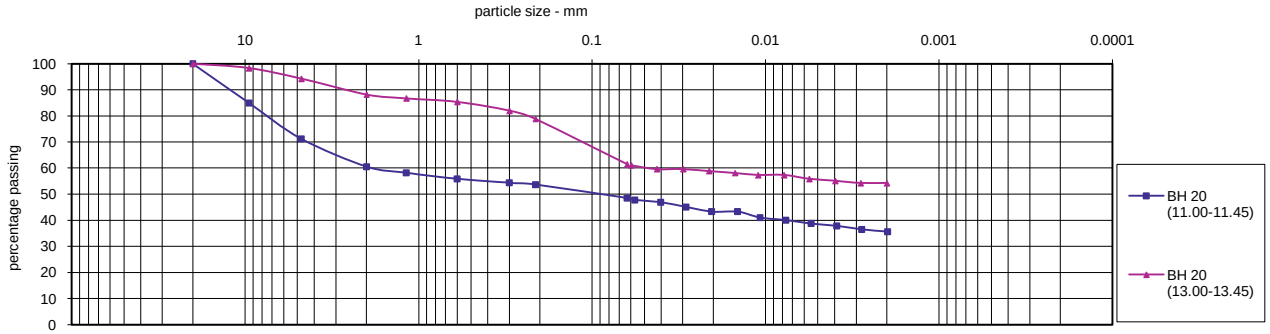
(4) Clay content

DATE : 2/4/2013 TESTED BY : DR CHECKED BY : KSH CERTIFIED BY: JU

NATIONAL BUILDING RESEARCH ORGANISATION	Job Ref.	30/24318
GEOTECHNICAL ENGINEERING DIVISION	Client	ORIENTAL CONSULTANT COMPANY LTD.
PARTICLE SIZE DISTRIBUTION CURVE - GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE		

Test Method **BS 1377**

Cobble	GRAVEL			SAND			SILT	CLAY
	Coarse	Medium	Fine	Coarse	Medium	Fine		



Chainage	Sample No	Depth (m)	Classification	Liquid Limit	Plastic Limit	Plasticity Index	Cobble (%)	Gravel (%)	Sand (%)	Silt & Clay (%)	Clay (%)	Cu	Cc	Remarks
	BH 20	11.00-11.45	CG					39	12	49	36			
	BH 20	13.00-13.45	Cl	41	23	18		11	27	62	54			

DATE : 5/4/2013 TESTED BY : RU CHECKED BY : KSH CERTIFIED BY: JU

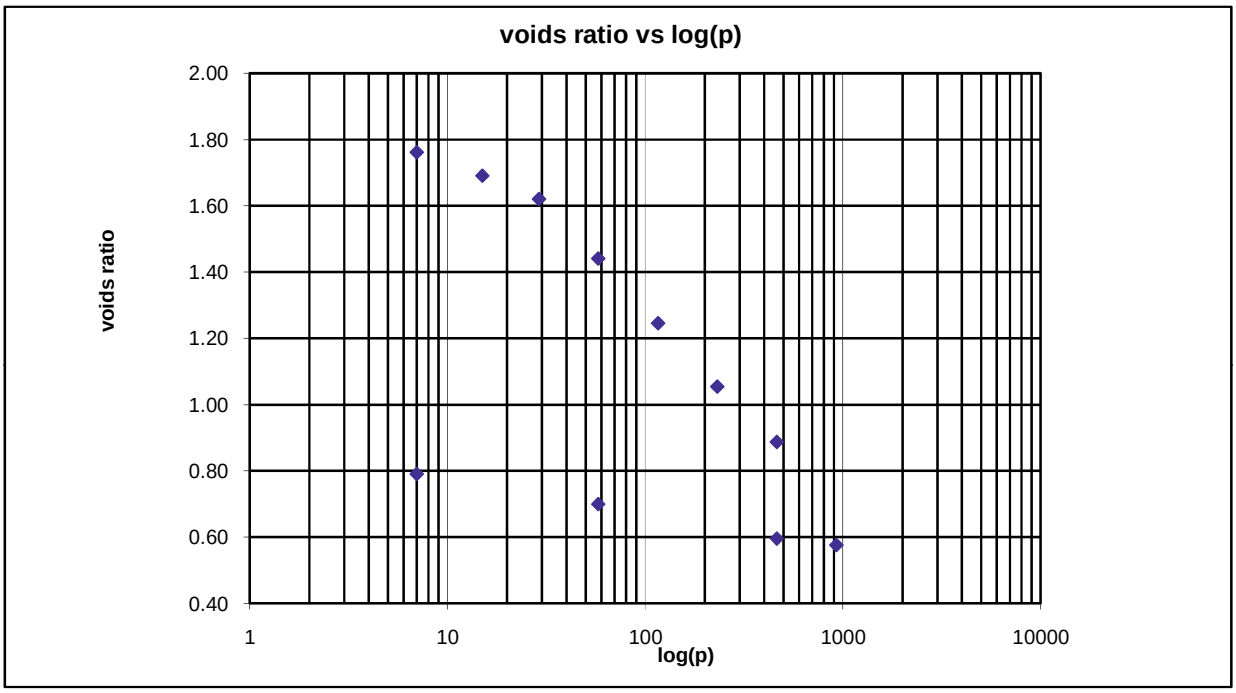
GEOTCHNICAL ENGINEERING DIVISION

NATIONAL BUILDING RESEARCH ORGANISATION

CONSOLIDATION TEST (Log Pressure / Void Ratio Curve)

Project	**GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE**				
Client	**ORIENTAL CONSULTANT COMPANY LTD.**		Project No.	**30/24318**	
Location	**Peliyagoda**	Chainage.	**0**	Sample No.	**BH 01**
Soil Description	**Peat**	Depth (m)	**5.50-6.00**	Started Date	**10/03/2013**

Test Method : ASTM D 2435-90



SPECIMEN INITIALLY					
Diameter	mm	50.00	Bulk density	g/cm^3	1.39
Height Initial	mm	20.00	Moisture content	%	92.5
Void ratio initial	e_o	1.90	Dry density	g/cm^3	0.72
Saturation	%	100	Specific gravity	G	2.10
Void ratio final	e_f	0.79	Solid height	mm	6.89
Compression Index	C_c	0.77	Swelling index	C_s	0.07
Pre consolidation pressure			50 kPa		

Remarks:

Pressure range (kPa)	Void ratio (e)	Laboratory coefficient of Compressibility M_v (m^2 / kN)	Laboratory coefficient of Consolidation C_v (m^2 / Yr)
0.0	1.9	0.00697	-
7.0	1.8	0.00323	27.3901
15.0	1.7	0.00187	21.6152
29.0	1.6	0.00235	17.6815
58.0	1.4	0.00138	13.9922
116.0	1.2	0.00074	10.5441
232.0	1.1	0.00035	7.0096
463.0	0.9	0.00036	4.7714
926.0	0.6	0.00003	3.6851
463.0	0.6	0.00016	
58.0	0.7	0.00105	
7.0	0.8		

Date	Tested by	Checked by	Certified by	Remarks
19/04/2013	DR	JU	NV	

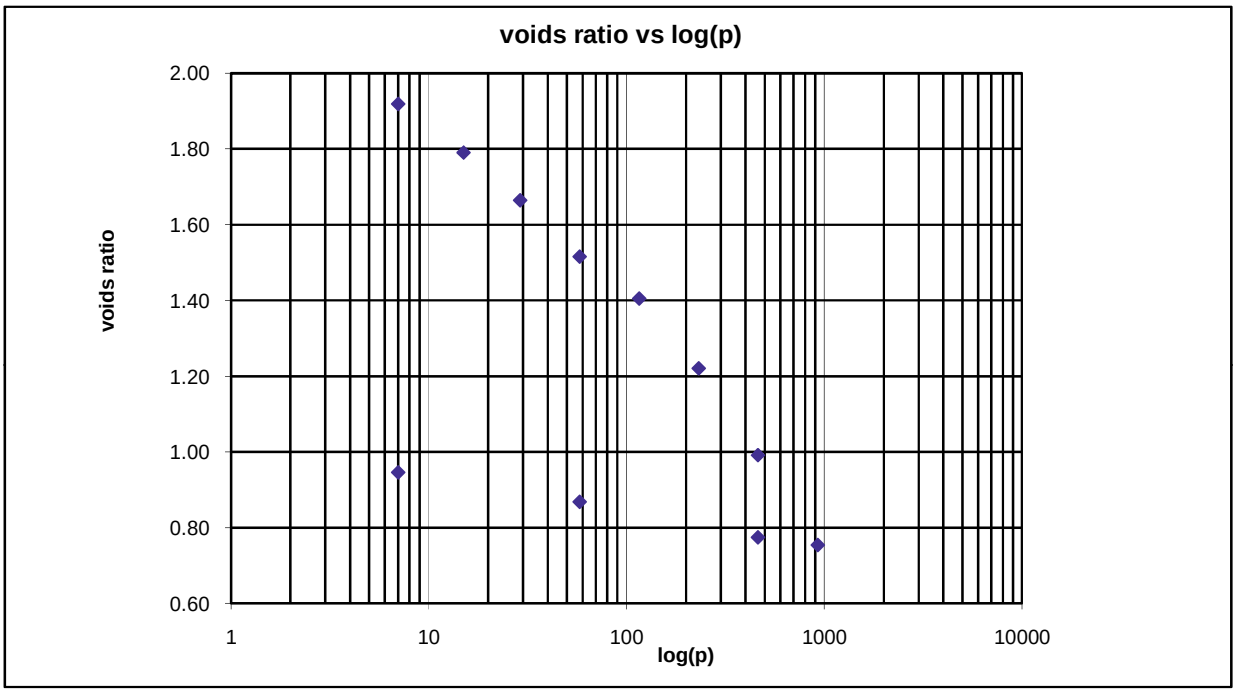
GEOTCHNICAL ENGINEERING DIVISION

NATIONAL BUILDING RESEARCH ORGANISATION

CONSOLIDATION TEST (Log Pressure / Void Ratio Curve)

Project	**GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE**				
Client	**ORIENTAL CONSULTANT COMPANY LTD.**		Project No.	**30/24318**	
Location	**Peliyagoda**	Chainage.		Sample No.	**BH 01**
Soil Description	**Peat**	Depth (m)	**6.50-7.00**	Started Date	**10/03/2013**

Test Method : ASTM D 2435-90



SPECIMEN INITIALLY					
Diameter	mm	50.00	Bulk density	g/cm^3	1.39
Height Initial	mm	20.00	Moisture content	%	93.6
Void ratio initial	e_o	2.06	Dry density	g/cm^3	0.72
Saturation	%	100	Specific gravity	G	2.15
Void ratio final	e_f	0.95	Solid height	mm	6.53
Compression Index	C_c	0.78	Swelling index	C_s	0.07
Pre consolidation pressure			55 kPa		

Remarks:

Pressure range (kPa)	Void ratio (e)	Laboratory coefficient of Compressibility M_v (m^2 / kN)	Laboratory coefficient of Consolidation C_v (m^2 / Yr)
0.0	2.1	0.00673	-
7.0	1.9	0.00549	27.4380
15.0	1.8	0.00323	21.2967
29.0	1.7	0.00192	16.7618
58.0	1.5	0.00076	13.1676
116.0	1.4	0.00066	10.4445
232.0	1.2	0.00045	9.2298
463.0	1.0	0.00026	7.6511
926.0	0.8	0.00003	2.2910
463.0	0.8	0.00013	
58.0	0.9	0.00082	
7.0	0.9		

Date	Tested by	Checked by	Certified by	Remarks
19/04/2013	DR	JU	NV	

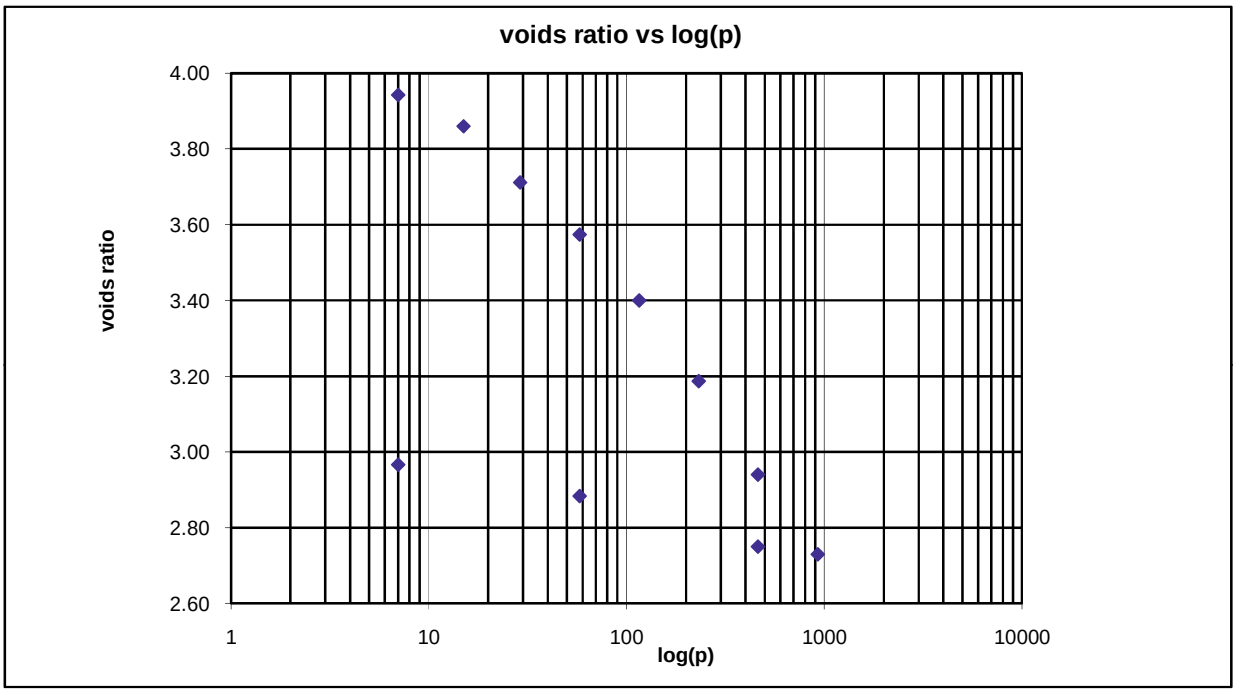
GEOTCHNICAL ENGINEERING DIVISION

NATIONAL BUILDING RESEARCH ORGANISATION

CONSOLIDATION TEST (Log Pressure / Void Ratio Curve)

Project	**GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE**				
Client	**ORIENTAL CONSULTANT COMPANY LTD.**		Project No.	**30/24318**	
Location	**Peliyagoda**	Chainage.		Sample No.	**BH 05**
Soil Description	**PEAT with partially decomposed vegetation**	Depth (m)	**6.50-7.00**	Started Date	**16/05/2013**

Test Method : ASTM D 2435-90



SPECIMEN INITIALLY					
Diameter	mm	50.00	Bulk density	g/cm^3	1.29
Height Initial	mm	20.00	Moisture content	%	122.4
Void ratio initial	e_o	4.07	Dry density	g/cm^3	0.58
Saturation	%	100	Specific gravity	G	2.20
Void ratio final	e_f	2.97	Solid height	mm	3.95
Compression Index	C_c	0.78	Swelling index	C_s	0.08
Pre consolidation pressure			60 kPa		

Remarks:

Pressure range (kPa)	Void ratio (e)	Laboratory coefficient of Compressibility M_v (m^2 / kN)	Laboratory coefficient of Consolidation C_v (m^2 / Yr)
0.0	4.1	0.00350	-
7.0	3.9	0.00210	28.0778
15.0	3.9	0.00218	19.7848
29.0	3.7	0.00101	11.4102
58.0	3.6	0.00066	8.6979
116.0	3.4	0.00042	8.1239
232.0	3.2	0.00025	6.1472
463.0	2.9	0.00012	3.3999
926.0	2.7	0.00001	1.2261
463.0	2.7	0.00009	
58.0	2.9	0.00041	
7.0	3.0	0.00000	

Date	Tested by	Checked by	Certified by	Remarks
05/06/2013	TAC	JU	NV	

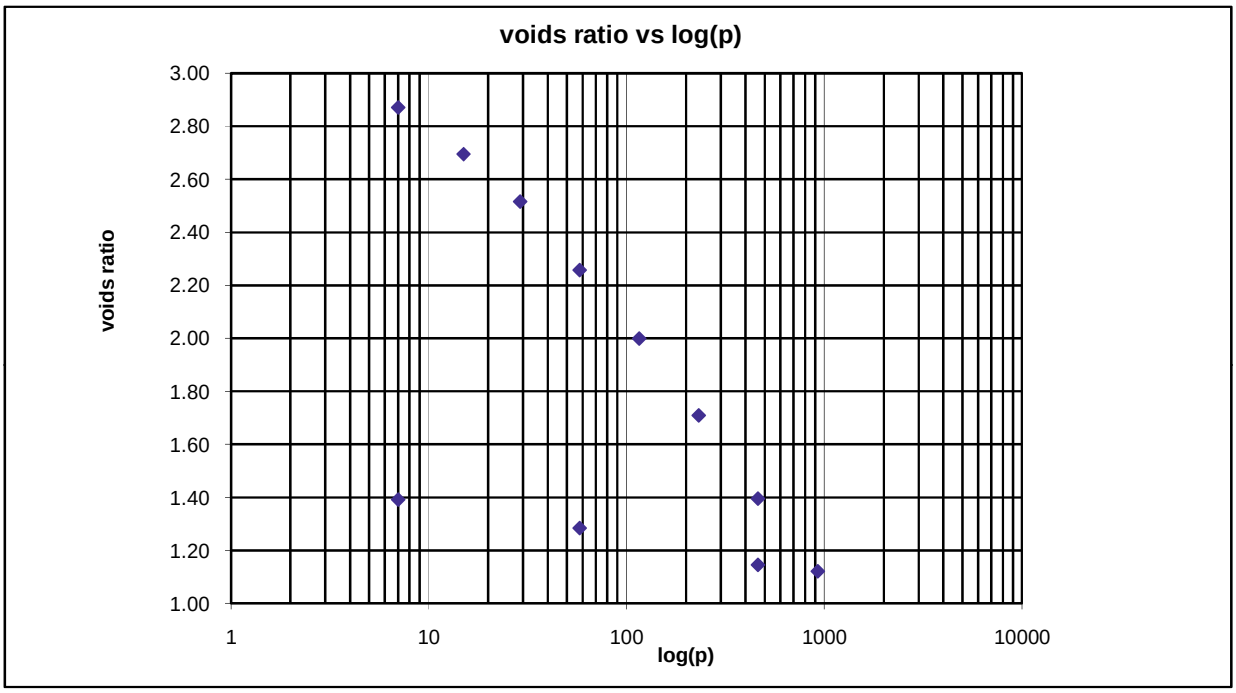
GEOTCHNICAL ENGINEERING DIVISION

NATIONAL BUILDING RESEARCH ORGANISATION

CONSOLIDATION TEST (Log Pressure / Void Ratio Curve)

Project	**GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE**				
Client	**ORIENTAL CONSULTANT COMPANY LTD.**		Project No.	**30/24318**	
Location	**Peliyagoda**	Chainage.		Sample No.	**BH 12**
Soil Description	**PEAT fine fibrous to amorphous**	Depth (m)	**5.40-5.90**	Started Date	**16/05/2013**

Test Method : ASTM D 2435-90



SPECIMEN INITIALLY					
Diameter	mm	50.00	Bulk density	g/cm^3	1.30
Height Initial	mm	20.00	Moisture content	%	124.4
Void ratio initial	e_o	3.27	Dry density	g/cm^3	0.58
Saturation	%	100	Specific gravity	G	2.23
Void ratio final	e_f	1.39	Solid height	mm	4.68
Compression Index	C_c	0.96	Swelling index	C_s	0.08
Pre consolidation pressure			40 kPa		

Remarks:

Pressure range (kPa)	Void ratio (e)	Laboratory coefficient of Compressibility M_v (m^2 / kN)	Laboratory coefficient of Consolidation C_v (m^2 / Yr)
0.0	3.3	0.01339	-
7.0	2.9	0.00569	11.6190
15.0	2.7	0.00346	6.7155
29.0	2.5	0.00253	5.1255
58.0	2.3	0.00137	2.0104
116.0	2.0	0.00084	1.2603
232.0	1.7	0.00050	1.1562
463.0	1.4	0.00025	1.0243
926.0	1.1	0.00002	0.8023
463.0	1.1	0.00016	
58.0	1.3	0.00092	
7.0	1.4	0.00000	

Date	Tested by	Checked by	Certified by	Remarks
05/06/2013	TAC	JU	NV	

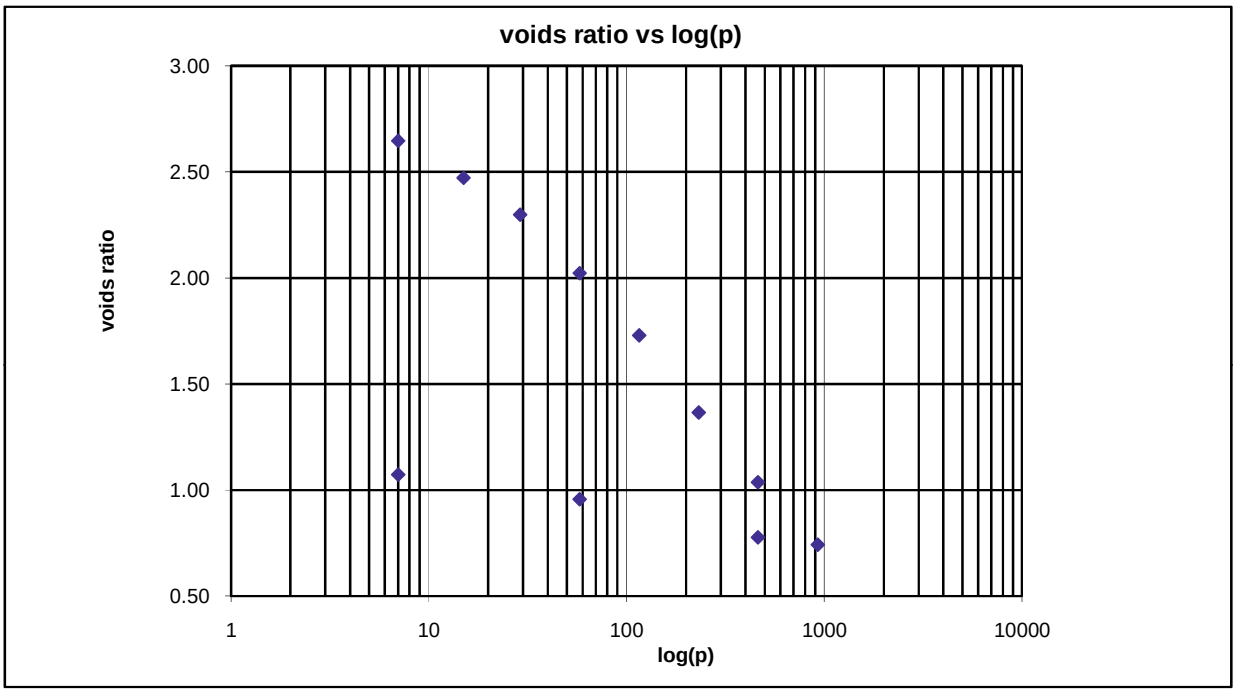
GEOTCHNICAL ENGINEERING DIVISION

NATIONAL BUILDING RESEARCH ORGANISATION

CONSOLIDATION TEST (Log Pressure / Void Ratio Curve)

Project	**GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE**				
Client	**ORIENTAL CONSULTANT COMPANY LTD.**		Project No.	**30/24318**	
Location	**Peliyagoda**	Chainage.		Sample No.	**BH 12**
Soil Description	**PEAT fine fibrous to amorphous**	Depth (m)	**5.90-6.50**	Started Date	**13/05/2013**

Test Method : ASTM D 2435-90



SPECIMEN INITIALLY					
Diameter	mm	50.00	Bulk density	g/cm^3	1.20
Height Initial	mm	20.00	Moisture content	%	183.3
Void ratio initial	e_o	2.85	Dry density	g/cm^3	0.42
Saturation	%	100	Specific gravity	G	2.15
Void ratio final	e_f	1.07	Solid height	mm	5.19
Compression Index	C_c	1.10	Swelling index	C_s	0.15
Pre consolidation pressure			45 kPa		

Remarks:

Pressure range (kPa)	Void ratio (e)	Laboratory coefficient of Compressibility M_v (m^2 / kN)	Laboratory coefficient of Consolidation C_v (m^2 / Yr)
0.0	2.9	0.00753	-
7.0	2.6	0.00599	20.0424
15.0	2.5	0.00358	10.9330
29.0	2.3	0.00288	8.0089
58.0	2.0	0.00167	3.1026
116.0	1.7	0.00115	0.9252
232.0	1.4	0.00060	0.8578
463.0	1.0	0.00031	0.5883
926.0	0.7	0.00004	0.3425
463.0	0.8	0.00025	
58.0	1.0	0.00118	
7.0	1.1	0.00000	

Date	Tested by	Checked by	Certified by	Remarks
05/06/2013	TAC	JU	NV	

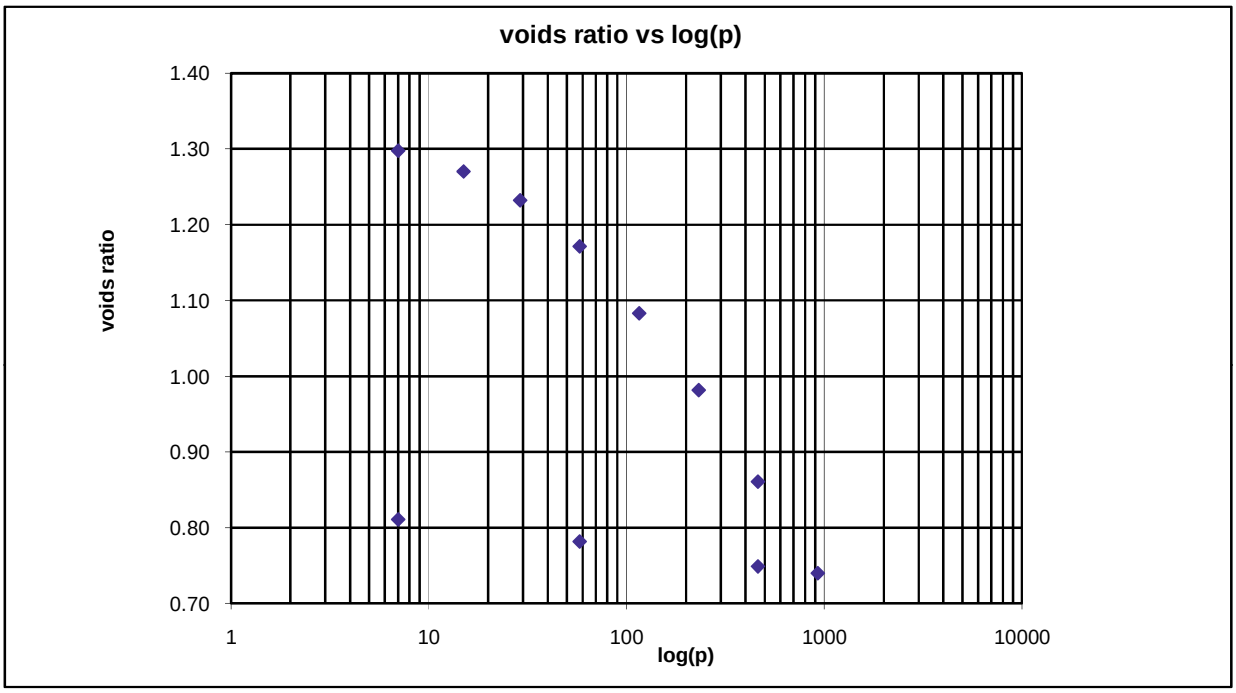
GEOTCHNICAL ENGINEERING DIVISION

NATIONAL BUILDING RESEARCH ORGANISATION

CONSOLIDATION TEST (Log Pressure / Void Ratio Curve)

Project	**GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE**				
Client	**ORIENTAL CONSULTANT COMPANY LTD.**		Project No.	**30/24318**	
Location	**Peliyagoda**	Chainage.		Sample No.	**BH 19**
Soil Description	**Silt/Clay**	Depth (m)	**2.50-3.00**	Started Date	**01/04/2013**

Test Method : ASTM D 2435-90



SPECIMEN INITIALLY					
Diameter	mm	50.00	Bulk density	g/cm^3	1.68
Height Initial	mm	20.00	Moisture content	%	53.1
Void ratio initial	e_o	1.36	Dry density	g/cm^3	1.09
Saturation	%	100	Specific gravity	G	2.57
Void ratio final	e_f	0.81	Solid height	mm	8.47
Compression Index	C_c	0.40	Swelling index	C_s	0.03
Pre consolidation pressure			50 kPa		

Remarks:

Pressure range (kPa)	Void ratio (e)	Laboratory coefficient of Compressibility M_v (m^2 / kN)	Laboratory coefficient of Consolidation C_v (m^2 / Yr)
0.0	1.4	0.00387	-
7.0	1.3	0.00150	15.7520
15.0	1.3	0.00120	9.6894
29.0	1.2	0.00094	7.7795
58.0	1.2	0.00070	4.0018
116.0	1.1	0.00042	2.5938
232.0	1.0	0.00026	2.1249
463.0	0.9	0.00014	1.5544
926.0	0.7	0.00001	1.5050
463.0	0.7	0.00005	
58.0	0.8	0.00032	
7.0	0.8		

Date	Tested by	Checked by	Certified by	Remarks
19/04/2013	DR	JU	NV	

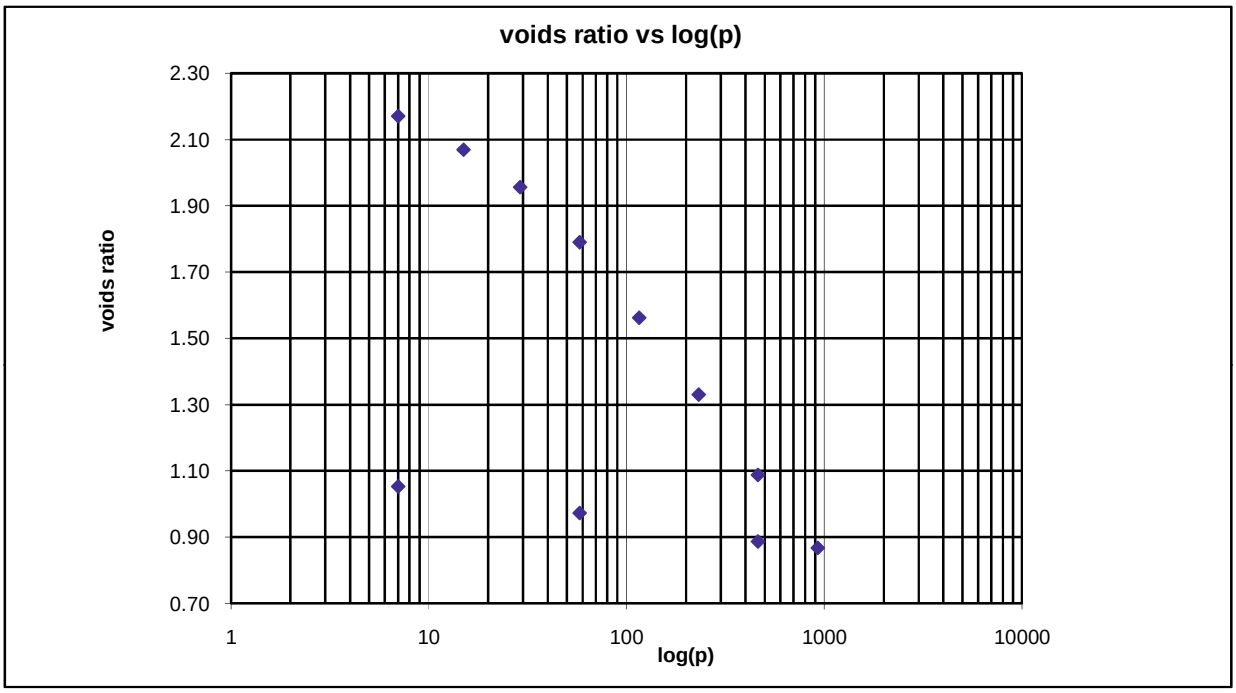
GEOTCHNICAL ENGINEERING DIVISION

NATIONAL BUILDING RESEARCH ORGANISATION

CONSOLIDATION TEST (Log Pressure / Void Ratio Curve)

Project	**GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE**				
Client	**ORIENTAL CONSULTANT COMPANY LTD.**		Project No.	**30/24318**	
Location	**Peliyagoda**	Chainage.		Sample No.	**BH 19**
Soil Description	**Peat**	Depth (m)	**5.50-6.00**	Started Date	**01/04/2013**

Test Method : ASTM D 2435-90



SPECIMEN INITIALLY					
Diameter	mm	50.00	Bulk density	g/cm^3	1.40
Height Initial	mm	20.00	Moisture content	%	89.6
Void ratio initial	e_o	2.38	Dry density	g/cm^3	0.74
Saturation	%	100	Specific gravity	G	2.34
Void ratio final	e_f	1.05	Solid height	mm	5.92
Compression Index	C_c	0.77	Swelling index	C_s	0.08
Pre consolidation pressure			30kPa		

Remarks:

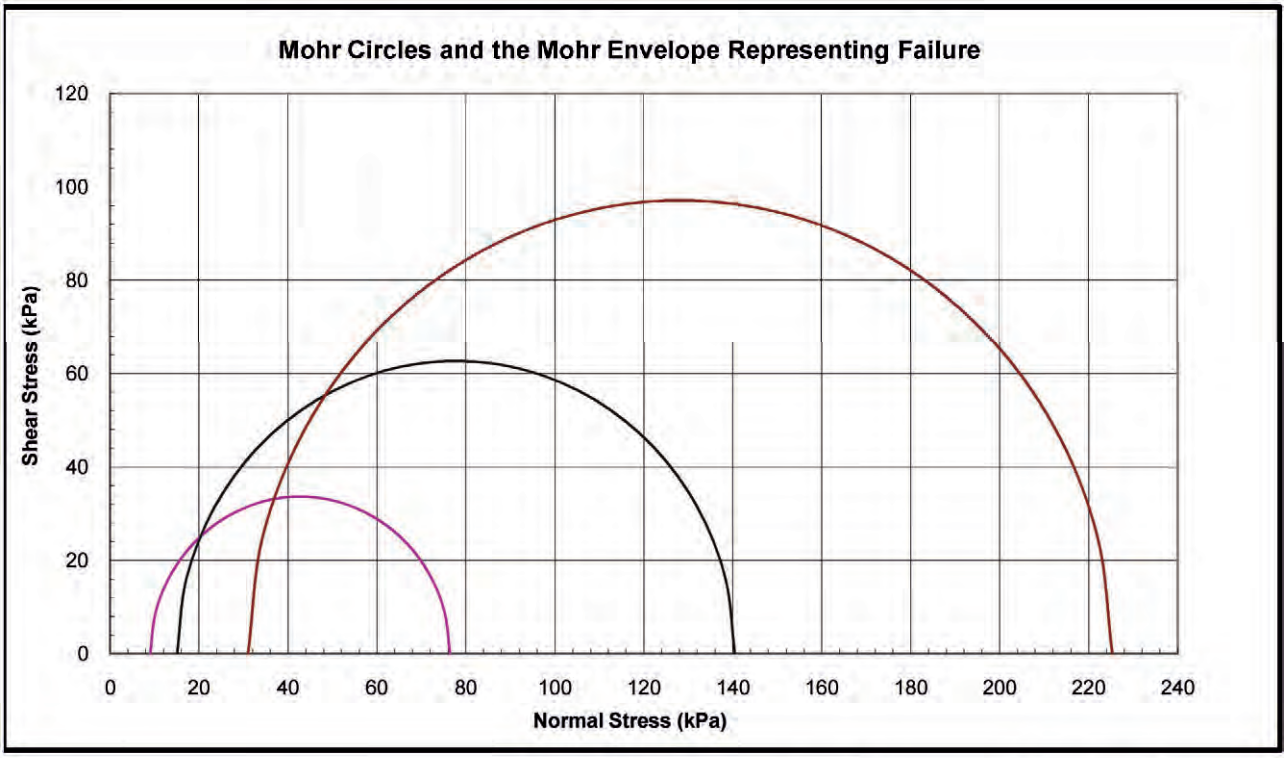
Pressure range (kPa)	Void ratio (e)	Laboratory coefficient of Compressibility M_v (m^2 / kN)	Laboratory coefficient of Consolidation C_v (m^2 / Yr)
0.0	2.4	0.00868	-
7.0	2.2	0.00400	9.7399
15.0	2.1	0.00262	3.4566
29.0	2.0	0.00194	1.1319
58.0	1.8	0.00141	0.9572
116.0	1.6	0.00078	0.6774
232.0	1.3	0.00045	0.5661
463.0	1.1	0.00023	0.4930
926.0	0.9	0.00002	0.4534
463.0	0.9	0.00011	
58.0	1.0	0.00080	
7.0	1.1		

Date	Tested by	Checked by	Certified by	Remarks
19/04/2013	DR	JU	NV	

CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST

With Pore Water Pressure Measurement

Project :	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	Project No :	30/24318	Location :	Peliyagoda
		Borehole No :	BH 1	Depth (m) :	5.50-6.00
Client :	ORIENTAL CONSULTANT COMPANY LTD.	Stage No :	1,2,3	Sample Type :	Undisturbed
		Soil Clasification :		Amorphous PEAT with plastic fines	



Shear Strength Parameters

C'	kPa	12
ϕ'	Deg	43

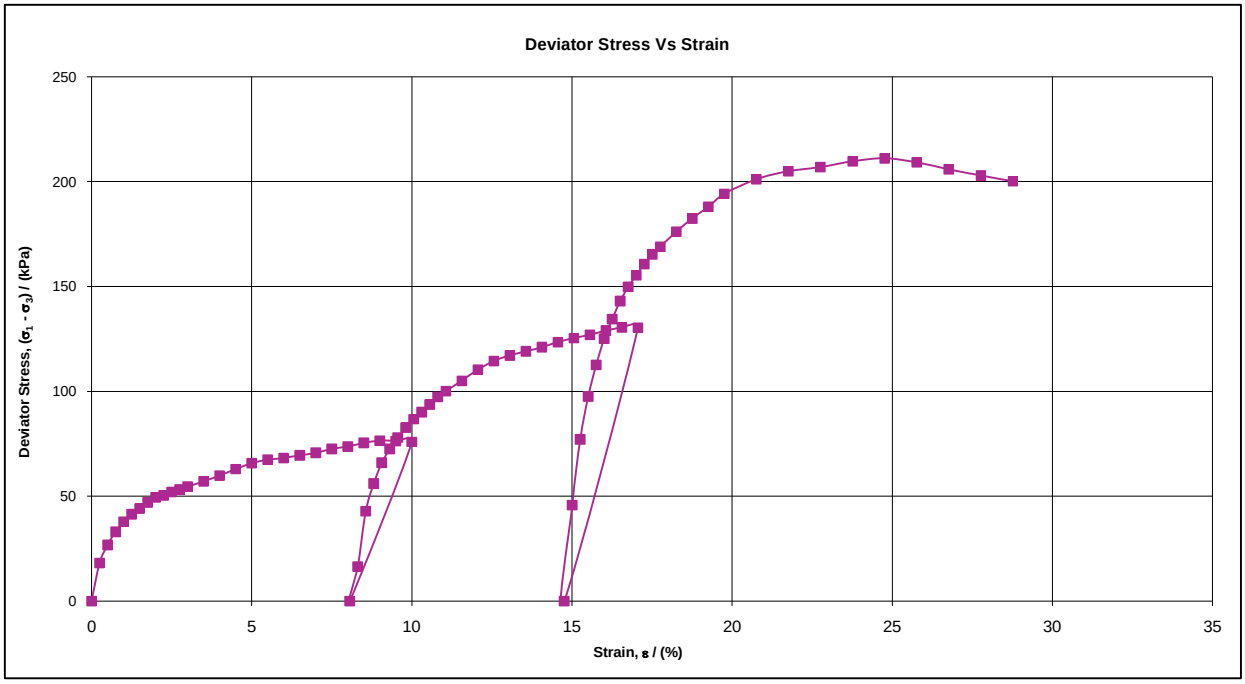
Test Code		Stage 1	Stage 2	Stage 3
Dry Density	g/cm^3	0.73		
Natural Moisture Content	%	91.6		
B(After application of Back Pressure)		1.00	1.00	1.00
Rate of Strain	mm/min	0.1	0.1	0.1
Strain at Failure	%	5.50	15.06	19.76
Cell Pressure during Shear	kPa	240	290	390
Effective Confine Pressure	kPa	50	100	200
Measured Deviater Stress at failure	kPa	67.35	125.42	194.27
Pore Pressure change at failure	kPa	41.00	85.00	169.00
Effective Major Principal Stress at failure	kPa	76.35	140.42	225.27
Effective Confine Pressure at failure	kPa	9.00	15.00	31.00
s'	kPa	42.68	77.71	128.14
t'	kPa	33.68	62.71	97.14
Pore Pressure coefficient "A" at Failure		0.61	0.68	0.87

NATIONAL BUILDING RESEARCH ORGANISATION

Geotechnical Engineering Division

Date	Tested by	Ckecked by	Certified by	Remarks

Project :	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE
Location :	Peliyagoda
Borehole No :	BH 1
Depth (m) :	5.50-6.00
Stage No :	1, 2, 3
Soil Type :	



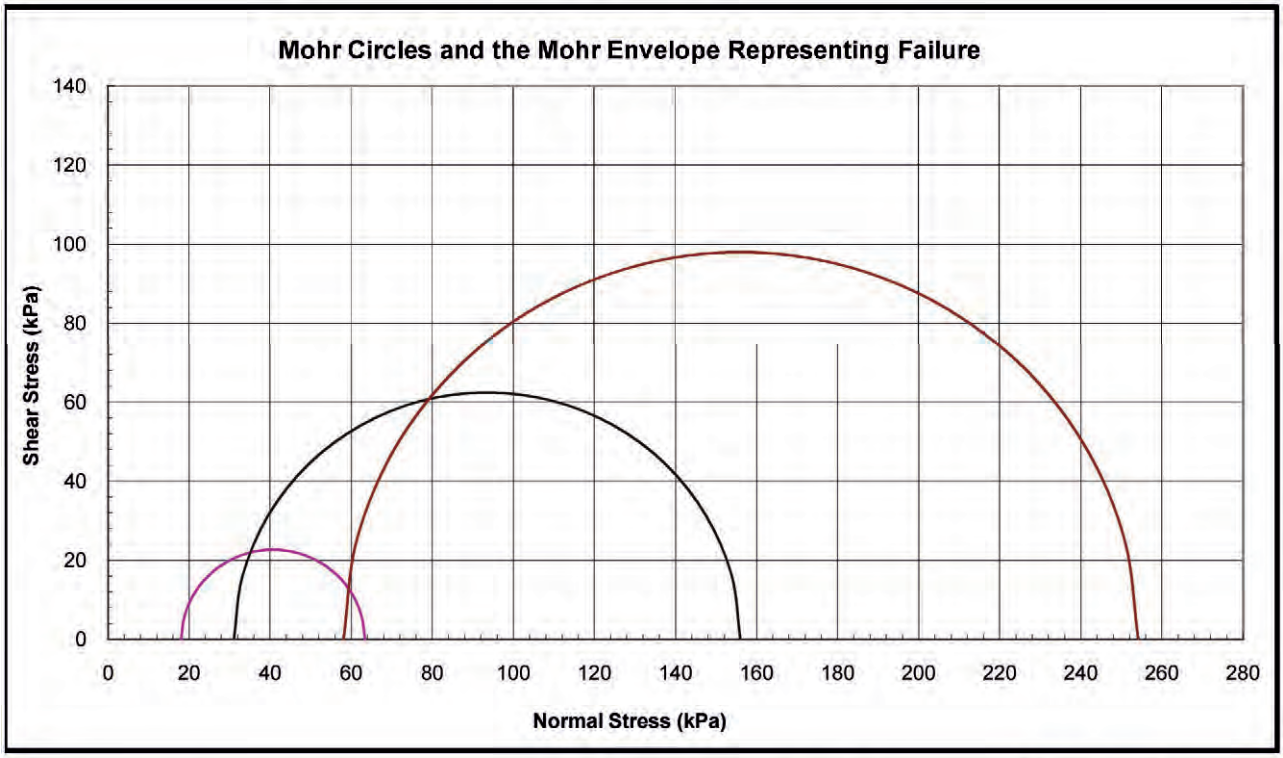
NATIONAL BUILDING RESEARCH ORGANISATION

Geotechnical Engineering Division

CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST

With Pore Water Pressure Measurement

Project :	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	Project No :	30/24318	Location :	Peliyagoda
		Borehole No :	BH 1	Depth (m) :	6.50-7.00
Client :	ORIENTAL CONSULTANT COMPANY LTD.	Stage No :	1,2,3	Sample Type :	Undisturbed
		Soil Clasification :		Amorphous PEAT with plastic fines	



Shear Strength Parameters

C'	kPa	8
ϕ'	Deg	36

Test Code		Stage 1	Stage 2	Stage 3
Dry Density	g/cm^3	0.79		
Natural Moisture Content	%	79.3		
B(After application of Back Pressure)		0.98	0.98	0.98
Rate of Strain	mm/min	0.1	0.1	0.1
Strain at Failure	%	4.50	15.94	23.35
Cell Pressure during Shear	kPa	190	240	340
Effective Confine Pressure	kPa	50	100	200
Measured Deviater Stress at failure	kPa	45.31	124.91	196.02
Pore Pressure change at failure	kPa	32.00	69.00	142.00
Effective Major Principal Stress at failure	kPa	63.31	155.91	254.02
Effective Confine Pressure at failure	kPa	18.00	31.00	58.00
s'	kPa	40.65	93.45	156.01
t'	kPa	22.65	62.45	98.01
Pore Pressure coefficient "A" at Failure		0.71	0.55	0.72

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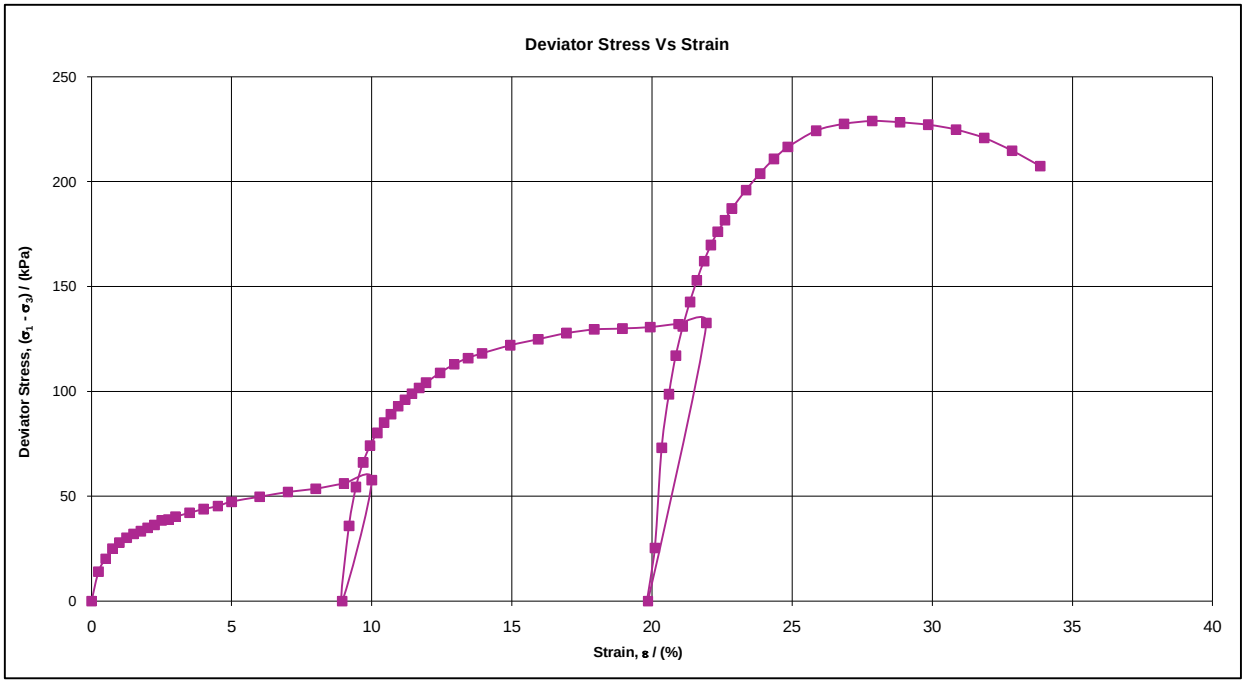
Geotechnical Engineering Division

Date	Tested by	Ckecked by	Certified by	Remarks

Project :	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE
Location :	Peliyagoda
Borehole No :	BH 1
Depth (m) :	6.50-7.00
Stage No :	1, 2, 3
Soil Type :	



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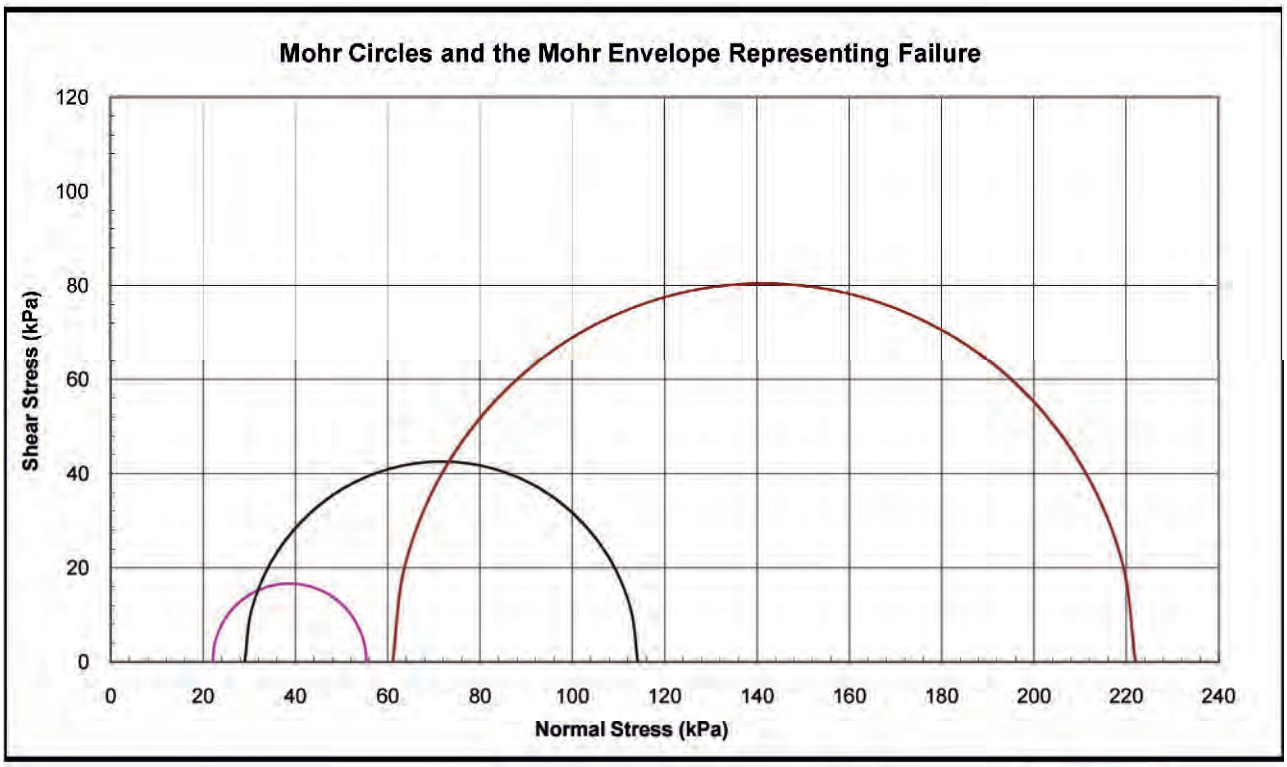
Geotechnical Engineering Division

CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST

With Pore Water Pressure Measurement

Project :	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	Project No :	30/24318	Location :	Peliyagoda
		Borehole No :	BH 12	Depth (m) :	5.90-6.50
Client :	ORIENTAL CONSULTANT COMPANY LTD.	Stage No :	1,2,3	Sample Type :	Undisturbed
		Soil Clasification :		PEAT with fine fibrous to amorphous	



Shear Strength Parameters

C'	kPa	4
ϕ'	Deg	33

Test Code		Stage 1	Stage 2	Stage 3
Dry Density	g/cm^3	0.67		
Natural Moisture Content	%	102.4		
B(After application of Back Pressure)		0.98	0.98	0.98
Rate of Strain	mm/min	0.1	0.1	0.1
Strain at Failure	%	1.78	7.73	13.49
Cell Pressure during Shear	kPa	140	190	290
Effective Confine Pressure	kPa	50	100	200
Measured Deviater Stress at failure	kPa	33.37	85.09	160.91
Pore Pressure change at failure	kPa	28.00	71.00	139.00
Effective Major Principal Stress at failure	kPa	55.37	114.09	221.91
Effective Confine Pressure at failure	kPa	22.00	29.00	61.00
s'	kPa	38.69	71.55	141.46
t'	kPa	16.69	42.55	80.46
Pore Pressure coefficient "A" at Failure		0.84	0.83	0.86

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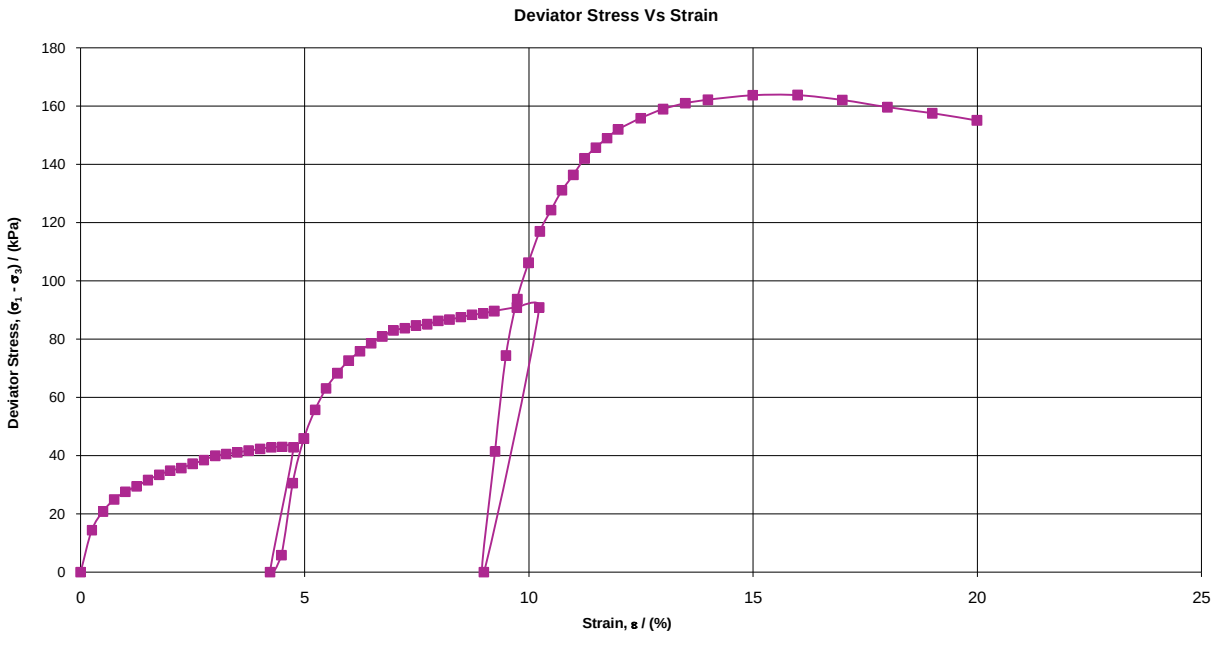
Geotechnical Engineering Division

Date	Tested by	Ckecked by	Certified by	Remarks
19/06/2013	MA	JU	NV	

Project :	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE
Location :	Peliyagoda
Borehole No :	BH 12
Depth (m) :	5.90-6.50
Stage No :	1, 2, 3
Soil Type :	



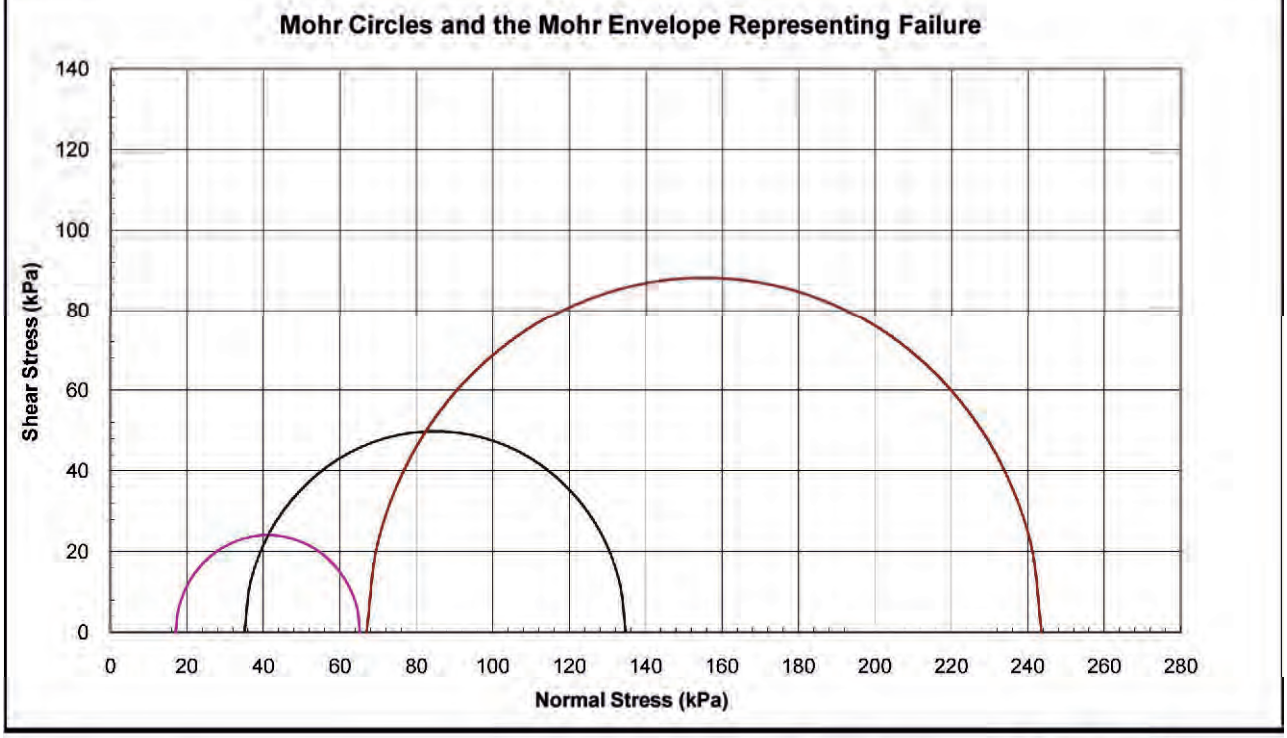
NATIONAL BUILDING RESEARCH ORGANISATION

Geotechnical Engineering Division

CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST

With Pore Water Pressure Measurement

Project :	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE	Project No :	30/24318	Location :	Peliyagoda
		Borehole No :	BH 19	Depth (m) :	2.50-3.00
Client :	ORIENTAL CONSULTANT COMPANY LTD.	Stage No :	1,2,3	Sample Type :	Undisturbed
		Soil Clasification :		Silt/Clay, high plastic	



Shear Strength Parameters

C'	kPa	4
ϕ'	Deg	34

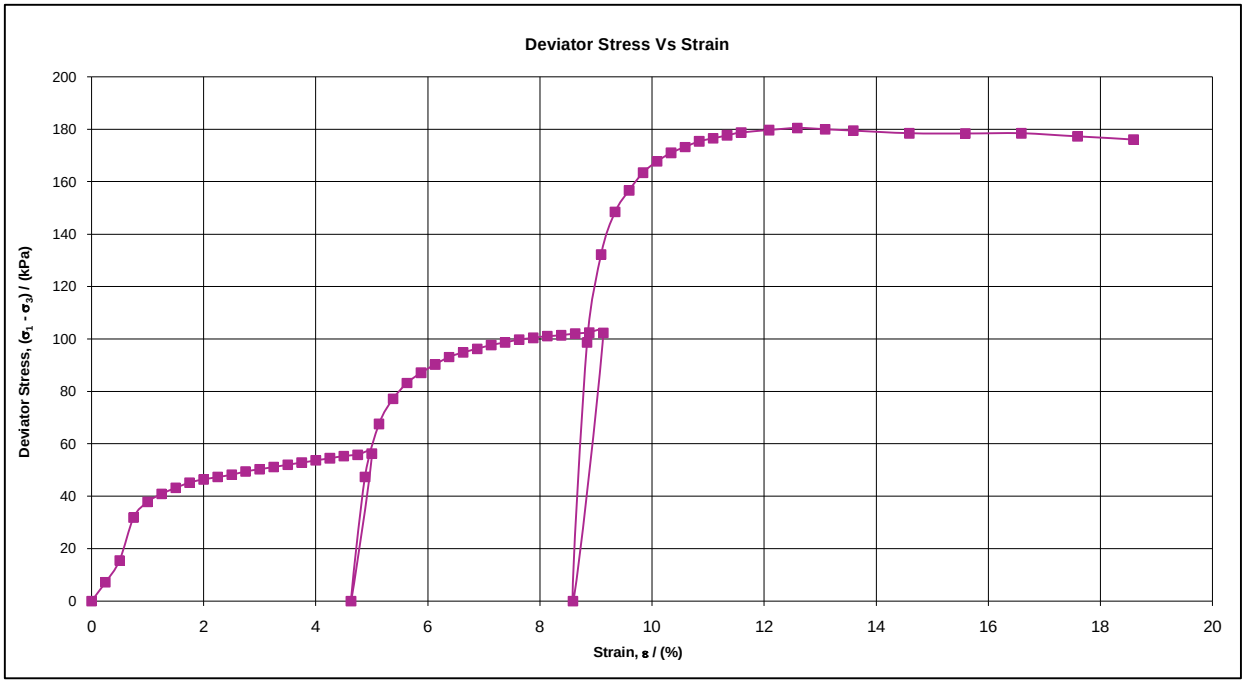
Test Code		Stage 1	Stage 2	Stage 3
Dry Density	g/cm^3	1.14		
Natural Moisture Content	%	51.4		
B(After application of Back Pressure)		0.96	0.96	0.96
Rate of Strain	mm/min	0.1	0.1	0.1
Strain at Failure	%	2.50	7.63	11.34
Cell Pressure during Shear	kPa	190	240	340
Effective Confine Pressure	kPa	50	100	200
Measured Deviater Stress at failure	kPa	48.19	99.70	176.50
Pore Pressure change at failure	kPa	33.00	65.00	133.00
Effective Major Principal Stress at failure	kPa	65.19	134.70	243.50
Effective Confine Pressure at failure	kPa	17.00	35.00	67.00
s'	kPa	41.10	84.85	155.25
t'	kPa	24.10	49.85	88.25
Pore Pressure coefficient "A" at Failure		0.68	0.65	0.75

NATIONAL BUILDING RESEARCH ORGANISATION

Geotechnical Engineering Division

Date	Tested by	Ckecked by	Certified by	Remarks

Project :	GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE
Location :	Peliyagoda
Borehole No :	BH 19
Depth (m) :	2.50-3.00
Stage No :	1, 2, 3
Soil Type :	Silt/Clay, high plastic



NATIONAL BUILDING RESEARCH ORGANISATION

Geotechnical Engineering Division

TEST RESULTS OF ROCK SAMPLES

Ref. No. : 202413 0791 **Report No. : M/13/063**

Client : G.E.D.

Project : GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE

Project No. : 30/24318

Serial No.	1	2	3
Bore hole No.	BH-03	BH-11	BH-08
Depth (m)	25.30-25.65	28.10-28.25	27.75-27.95
Samples received on	07-May-13	07-May-13	07-May-13
Diameter in mm (Av.)	54.5	54.4	54.4
Length as received (mm)	360	270	175
Length after cutting in mm (Av.)	110	110	110
Weight of sample in (g)	713	657	666
Density in kg/m^3 (based on measured dimension)	2779	2570	2605
Date of testing	08-May-13	08-May-13	08-May-13
Load in kN	151.0	20.5	84.2
Area of cross section in mm^2	2332.83	2324.28	2324.28
Measured compressive strength N/mm^2	64.72	8.82	36.22
Length / Diameter ratio	2.02	2.02	2.02
*Computed compressive strength 'C' N/mm^2 (equivalent to h/d = 2)	64.79	8.83	36.27
Rounded off value	65.0	9.0	36.5

Note : 1) To make sure that the applied load was uniaxial, grease pads were used between the machine and the sample both at top and bottom surfaces.

2) Computed using the equation [$C = C_o/(0.88+(0.24)d/h))$]* given in 7.1.9 of ASTM D 2938-86$^{\varepsilon 1}$; Standard Test Method for Unconfined Compressive Strength of Intact Rock Core Specimens[1]

Technical Officer/Technician Engineer

Scientist

Director/Head-BMD

NATIONAL BUILDING RESEARCH ORGANISATION
BUILDING MATERIALS RESEARCH & TESTING DIVISION
No. 99/1, JAWATTE ROAD,
COLOMBO 05.

TEST RESULTS OF ROCK SAMPLES

Ref. No. : 202413 0853 **Report No. : M/13/067**

Client : G.E.D.

Project : GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE

Project No. : 30/24318

Serial No.	1	2
Bore hole No.	BH-4	BH-14
Depth (m)	20.50-20.90	31.20-31.50
Samples received on	16-May-13	16-May-13
Diameter in mm (Av.)	54.5	54.4
Length as received (mm)	270	150
Length after cutting in mm (Av.)	110	109
Weight of sample in (g)	623	680
Density in kg/m^3 (based on measured dimension)	2428	2684
Date of testing	17-May-13	17-May-13
Load in kN	133.8	29.5
Area of cross section in mm^2	2332.83	2324.28
Measured compressive strength N/mm^2	57.37	12.68
Length / Diameter ratio	2.02	2.00
*Computed compressive strength 'C' N/mm^2 (equivalent to h/d = 2)	57.43	12.69
Rounded off value	65.0	9.0

Note : 1) Testing was carried out as per ASTM D 7012:2007
Standard Test Method for Compressive strength and Elastic Moduli of Intact Core Specimens Under Varying States of Stress and Temperatures

2) Computed using the equation [$C = C_a/(0.88+(0.24)d/h))$]* given in 7.1.9 of ASTM D 2938-86^{e1} ; Standard Test Method for Unconfined Compressive Strength of Intact Rock Core Specimens[1]

3) Ser.No.2 crack was observed on the sample before loading

Technical Officer/Technician Engineer

Scientist

Director/Head-BMD

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COLOMBO 05.

TEST RESULTS OF ROCK SAMPLES

Ref. No. : 202413 0769 **Report No. : M/13/062**

Client : G.E.D.

Project : GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE

Project No. : 30/24318

Serial No.	1	2	3
Bore hole No.	BH-17	BH-17	BH-17
Depth (m)	37.15-37.25	38.25-38.45	38.75-38.90
Samples received on	02-May-13	02-May-13	02-May-13
Diameter in mm (Av.)	54.5	54.6	54.6
Length as received (mm)	148	172	165
Length after cutting in mm (Av.)	110	110	110
Weight of sample in (g)	672	682	665
Density in kg/m^3 (based on measured dimension)	2619	2648	2582
Date of testing	08-May-13	08-May-13	08-May-13
Load in kN	81.2	98.2	45.8
Area of cross section in mm^2	2332.83	2341.40	2341.40
Measured compressive strength N/mm^2	34.82	41.93	19.54
Length / Diameter ratio	2.02	2.01	2.01
*Computed compressive strength 'C' N/mm^2 (equivalent to h/d = 2)	34.86	41.97	19.56
Rounded off value	35.0	42.0	19.5

Note : 1) To make sure that the applied load was uniaxial, grease pads were used between the machine and the sample both at top and bottom surfaces.

2) Computed using the equation [$C = C_a/(0.88+(0.24)d/h))$]* given in 7.1.9 of ASTM D 2938-86^{e1} ; Standard Test Method for Unconfined Compressive Strength of Intact Rock Core Specimens[1]

Technical Officer/Technician Engineer

Scientist

Director/Head-BMD

NATIONAL BUILDING RESEARCH ORGANISATION
BUILDING MATERIALS RESEARCH & TESTING DIVISION
No. 99/1, JAWATTA ROAD,
COLOMBO 05

TEST RESULTS OF ROCK SAMPLES

Ref. No. : 202413 0638 **Report No. : M/13/047**

Client : G.E.D.

Project : GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE

Project No. : 30/24318

Serial No.	1
Bore hole No.	BH 01
Depth (m)	24.50-24.75
Samples received on	05-Apr-13
Diameter in mm (Av.)	55.1
Length as received (mm)	855
Length after cutting in mm (Av.)	110
Weight of sample in (g)	728
Density in kg/m^3 (based on measured dimension)	2776
Date of testing	10-Apr-13
Load in kN	110.0
Area of cross section in mm^2	2384.48
Measured compressive strength N/mm^2	46.13
Length / Diameter ratio	2.00
*Computed compressive strength 'C' N/mm^2 (equivalent to h/d = 2)	46.12
Rounded off value	46.0

Note : 1) To make sure that the applied load was uniaxial, grease pads were used between the machine and the sample both at top and bottom surfaces.

2) Computed using the equation [$C = C_a/(0.88+(0.24)d/h))$]* given in 7.1.9 of ASTM D 2938-86$^{\varepsilon 1}$; Standard Test Method for Unconfined Compressive Strength of Intact Rock Core Specimens[1]

Technical Officer/Technician Engineer

Scientist

Director/Head-BMD

NATIONAL BUILDING RESEARCH ORGANISATION
BUILDING MATERIALS RESEARCH & TESTING DIVISION
No. 99/1, JAWATTA ROAD,
COLOMBO 05.

TEST RESULTS OF ROCK SAMPLES

Ref. No. : 202413 0686 **Report No. : M/13/054**

Client : G.E.D.

Project : GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE

Project No. : 30/24318

Serial No.	1
Bore hole No.	BH 20
Depth (m)	32.60-32.80
Samples received on	11-Apr-13
Diameter in mm (Av.)	54.6
Length as received (mm)	160
Length after cutting in mm (Av.)	110
Weight of sample in (g)	683
Density in kg/m^3 (based on measured dimension)	2652
Date of testing	23-Apr-13
Load in kN	66.0
Area of cross section in mm^2	2341.40
Measured compressive strength N/mm^2	28.19
Length / Diameter ratio	2.01
*Computed compressive strength 'C' N/mm^2 (equivalent to h/d = 2)	28.21
Rounded off value	28.5

Note : 1) To make sure that the applied load was uniaxial, grease pads were used between the machine and the sample both at top and bottom surfaces.

2) Computed using the equation [$C = C_n/(0.88+(0.24)d/h))$]* given in 7.1.9 of ASTM D 2938-86^{e1} ; Standard Test Method for Unconfined Compressive Strength of Intact Rock Core Specimens[1]

Technical Officer/Technician Engineer

Scientist

Director/Head-BMD

NATIONAL BUILDING RESEARCH ORGANISATION
BUILDING MATERIALS RESEARCH & TESTING DIVISION
No. 99/1, JAWATTA ROAD,
COLOMBO 05.

TEST RESULTS OF ROCK SAMPLES

Ref. No. : 202413 0895 **Report No. : M/13/076**

Client : G.E.D.

Project : GEOTECHNICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE

Project No. : 30/24318

Serial No.	1	2
Bore hole No.	BH-07	BH-13
Depth (m)	12.50-12.75	26.75-27.00
Samples received on	22-May-13	22-May-13
Diameter in mm (Av.)	55.2	55.2
Length as received (mm)	440	360
Length after cutting in mm (Av.)	110	110
Weight of sample in (g)	0.698	0.673
Density in kg/m^3 (based on measured dimension)	3	3
Date of testing	28-May-13	28-May-13
Load in kN	118.2	60.0
Area of cross section in mm^2	2388.81	2391.41
Measured compressive strength N/mm^2	49.48	25.09
Length / Diameter ratio	1.99	1.99
*Computed compressive strength 'C' N/mm^2 (equivalent to h/d = 2)	49.46	25.08
Rounded off value	49.5	25.0

Note : 1) To make sure that the applied load was uniaxial, grease pads were used between the machine and the sample both at top and bottom surfaces.

2) Computed using the equation [$C = C_a/(0.88+(0.24)d/h))$]* given in 7.1.9 of ASTM D 2938-86^{e1} ; Standard Test Method for Unconfined Compressive Strength of Intact Rock Core Specimens[1]

Technical Officer/Technician Engineer

Scientist

Director/Head-BMD

NATIONAL BUILDING RESEARCH ORGANISATION
BUILDING MATERIALS RESEARCH & TESTING DIVISION
No. 99/1, JAWATTE ROAD,
COLOMBO 05.

APPENDIX V

Tables

TABLE 1 - CO-ORDINATES TO NATIONAL GRIDS & ELEVATIONS WITH MEAN SEA LEVEL OF GEOLOGICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE

Borehole No.	Elevation (m MSL)	Coordinates	
		N	E
BH 1	3.76	401030.819	494492.525
BH 2	3.75	400911.329	494527.962
BH 3	4.05	400769.417	494548.492
BH 4	2.60	400643.136	494599.559
BH 5	3.40	400509.400	494640.988
BH 6	3.40	400526.203	494659.319
BH 7	3.15	400396.203	494729.280
BH 8	3.36	401045.413	494133.457
BH 9	2.80	401089.949	494257.453
BH 10	2.40	401090.530	494328.241
BH 11	2.30	401093.414	494428.739
BH 12	1.57	401154.745	494452.881
BH 13	2.20	401117.040	494528.639
BH 14	1.96	401242.842	494453.904
BH 15	2.03	401220.720	494579.327
BH 16	8.22	401213.482	494664.387
BH 17	6.40	401277.975	494729.770
BH 18	2.24	401379.112	494841.894
BH 19	1.90	401429.638	494900.379
BH 20	2.20	401568.604	495051.692

TABLE 2 - DETAILS OF BOREHOLE INVESTIGATION OF GEOLOGICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE

Borehole No.	RHS / LHS		Overburden		Weathered Rock				Hard Rock		Total No. of SPT
					CR < 50%		CR > 50% & RQD < 50%		CR > 50% & RQD > 50%		
	N	E	Depth Range	Thickness of Layer	Depth Range	Thickness of Layer	Depth Range	Thickness of Layer	Depth Range	Thickness of Layer	
BH - 01	401030.819	494492.525	0.00 - 19.40	19.40	-	-	19.40 - 23.40	4.00	23.40 - 24.75	1.35	19
BH - 02	400911.329	494527.962	0.00 -19.00	19.00	-	-	22.20 - 23.50	1.30	19.00 - 22.20 23.50 - 25.00	4.70	19
BH - 03	400769.417	494548.492	0.00 -21.80	21.80	-	-	21.80 - 25.00	3.20	25.00 - 27.80	2.80	21
BH - 04	400643.136	494599.559	0.00 -15.20	15.20	-	-	-	-	15.20 - 21.00	5.80	15
BH - 05	400509.400	494640.988	0.00 - 22.40	22.40	22.40 - 23.15	0.75	24.65 - 26.15	1.50	23.15 - 24.65 26.15 - 29.15	4.50	22
BH - 06	400526.203	494659.319	0.00 - 22.10	22.10	-	-	22.10 - 25.10	3.00	25.10 - 28.10	3.00	22

TABLE 2 - DETAILS OF BOREHOLE INVESTIGATION OF GEOLOGICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE

Borehole No.	RHS / LHS		Overburden		Weathered Rock				Hard Rock		Total No. of SPT
					CR < 50%		CR > 50% & RQD < 50%		CR > 50% & RQD > 50%		
	N	E	Depth Range	Thickness of Layer	Depth Range	Thickness of Layer	Depth Range	Thickness of Layer	Depth Range	Thickness of Layer	
BH - 07	400396.203	494729.280	0.00 - 11.80	11.80	-	-	-	-	11.80 - 17.90	6.1	11
BH - 08	401045.413	494133.457	0.00 - 23.65	23.65	23.65 - 24.50 30.40 - 33.60	4.05	24.50 - 30.40	5.90	-	-	23
BH - 09	401089.949	494257.453	0.00 - 21.00	21.00	21.00 - 40.00	19.00	-	-	-	-	21
BH - 10	401090.530	494328.241	0.00 - 18.70	18.70	18.70 - 26.20 27.20 - 28.70	9.00	26.20 - 27.20	1.00	-	-	18
BH - 11	401093.414	494428.739	0.00 - 21.75	21.75	21.75 - 27.75	6.00	27.75 - 30.75	3.00	30.75 - 31.75	1	21
BH - 12	401154.745	494452.881	0.00 - 21.00	21.00	21.00 - 27.00	6.00	27.00 - 28.50	1.50	28.50 - 30.00	1.5	21

TABLE 2 - DETAILS OF BOREHOLE INVESTIGATION OF GEOLOGICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE

Borehole No.	RHS / LHS		Overburden		Weathered Rock				Hard Rock		Total No. of SPT
					CR < 50%		CR > 50% & RQD < 50%		CR > 50% & RQD > 50%		
	N	E	Depth Range	Thickness of Layer	Depth Range	Thickness of Layer	Depth Range	Thickness of Layer	Depth Range	Thickness of Layer	
BH - 13	401117.040	494528.639	0.00 - 21.50	21.50	21.50 - 23.00	1.50	23.00 - 26.00	3.00	26.00 - 27.50	1.5	21
BH - 14	401242.842	494453.904	0.00 - 22.75	22.75	22.75 - 24.25 31.75 - 32.75	2.5	24.25 - 31.75	7.5	-	-	22
BH - 15	401220.720	494579.327	0.00 - 24.10	24.10	24.10 - 27.10	3.00	27.10 - 34.10	7.00	-	-	24
BH - 16	401213.482	494664.387	0.00 - 31.50	31.50	31.50 - 33.00 36.00 - 37.50	3.00	34.50 - 36.00	1.50	33.00 - 34.50 37.50 - 38.90	2.9	31
BH - 17	401277.975	494729.770	0.00 - 32.85	32.85	32.85 - 36.10	3.25	36.10 - 37.40	1.30	37.40 - 38.90	1.5	32
BH - 18	401379.112	494841.894	0.00 - 28.20	28.20	28.20 - 39.00	10.80	39.00 - 40.00	1.00	-	-	28

TABLE 2 - DETAILS OF BOREHOLE INVESTIGATION OF GEOLOGICAL SURVEY WORKS FOR THE PROPOSED TRAFFIC IMPROVEMENT PROJECT AROUND NEW KELANI BRIDGE

Borehole No.	RHS / LHS		Overburden		Weathered Rock				Hard Rock		Total No. of SPT
					CR < 50%		CR > 50% & RQD < 50%		CR > 50% & RQD > 50%		
	N	E	Depth Range	Thickness of Layer	Depth Range	Thickness of Layer	Depth Range	Thickness of Layer	Depth Range	Thickness of Layer	
BH - 19	401429.638	494900.379	0.00 - 26.00	26.00	26.00 - 38.00	12.00	-	-	-	-	26
BH - 20	401568.604	495051.692	0.00 - 23.00	23.00	23.00 - 29.30 30.80 - 32.30 33.80 - 35.30 36.30 - 37.80	10.8	29.30 - 30.80 32.30 - 33.80 35.30 - 36.30	4.00	-	-	23
BH - 21	Cancelled by the client										
BH - 22	Cancelled by the client										

APPENDIX VI

Photographs

Photo : Borehole Location BH 1

Photo : Core box BH 1

Photo : Borehole Location BH 2

Photo : Core box BH 2

Photo : Borehole Location BH 3

Photo : Core box BH 3

Photo : Borehole Location BH 4

Photo : Core box BH 4

Photo : Borehole Location BH 5

Photo : Core box BH 5

Photo : Borehole Location BH 6

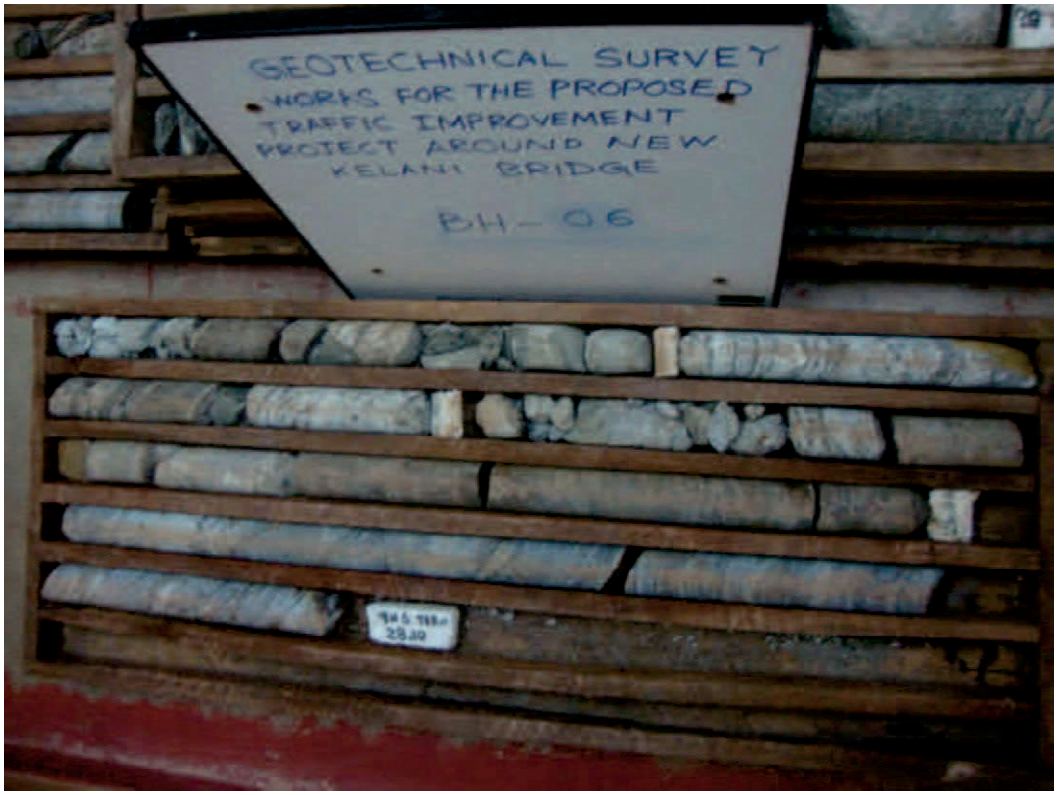


Photo : Core box BH 6

Photo : Borehole Location BH 7

Photo : Core box BH 7

Photo : Borehole Location BH 8

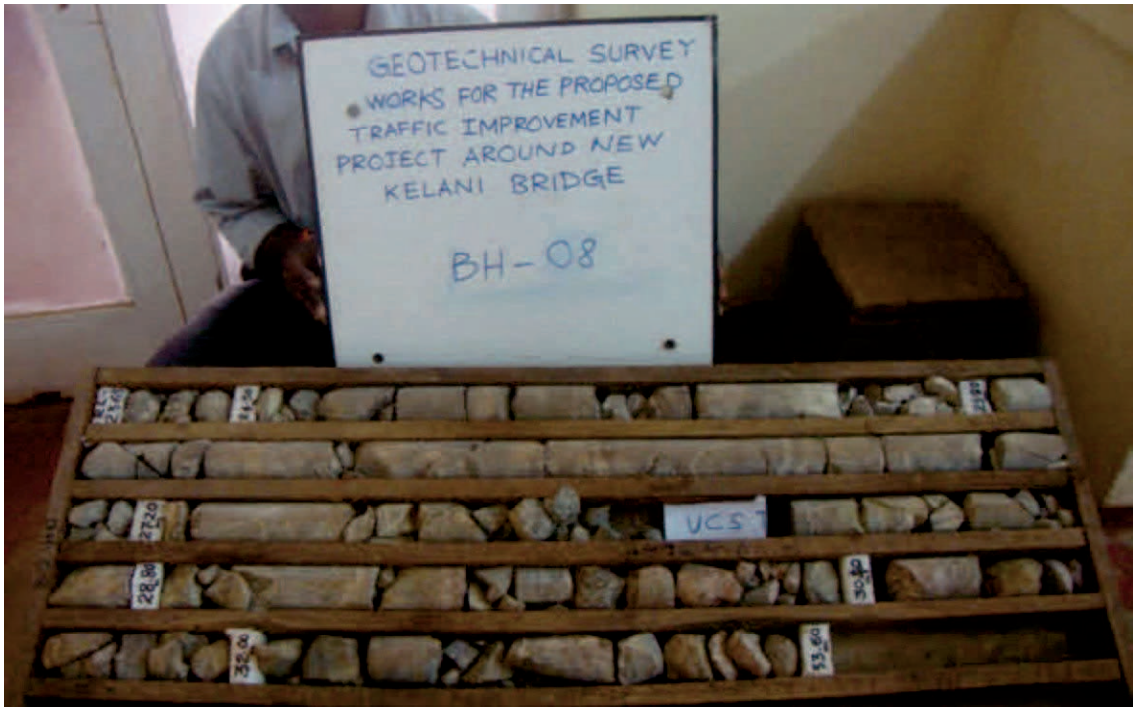


Photo : Core box BH 8

Photo : Borehole Location BH 9

Photo : Core box BH 9

Photo : Borehole Location BH 10

Photo : Core box BH 10

Photo : Borehole Location BH 11

Photo : Core box BH 11

Photo : Borehole Location BH 12

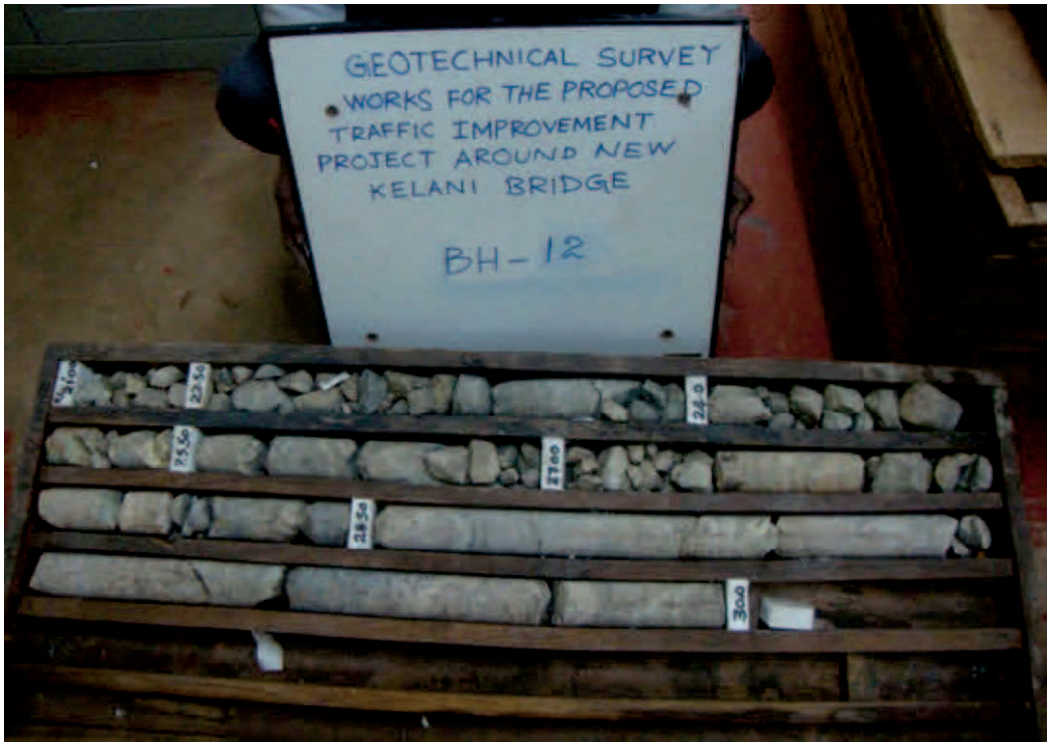


Photo : Core box BH 12

Photo : Borehole Location BH 13

Photo : Core box BH 13

Photo : Borehole Location BH 14

Photo : Core box BH 14

Photo : Borehole Location BH 15

Photo : Core box BH 15

Photo : Borehole Location BH 16

Photo : Core box BH 16

Photo : Borehole Location BH 17

Photo : Core box BH 17

Photo : Borehole Location BH 18

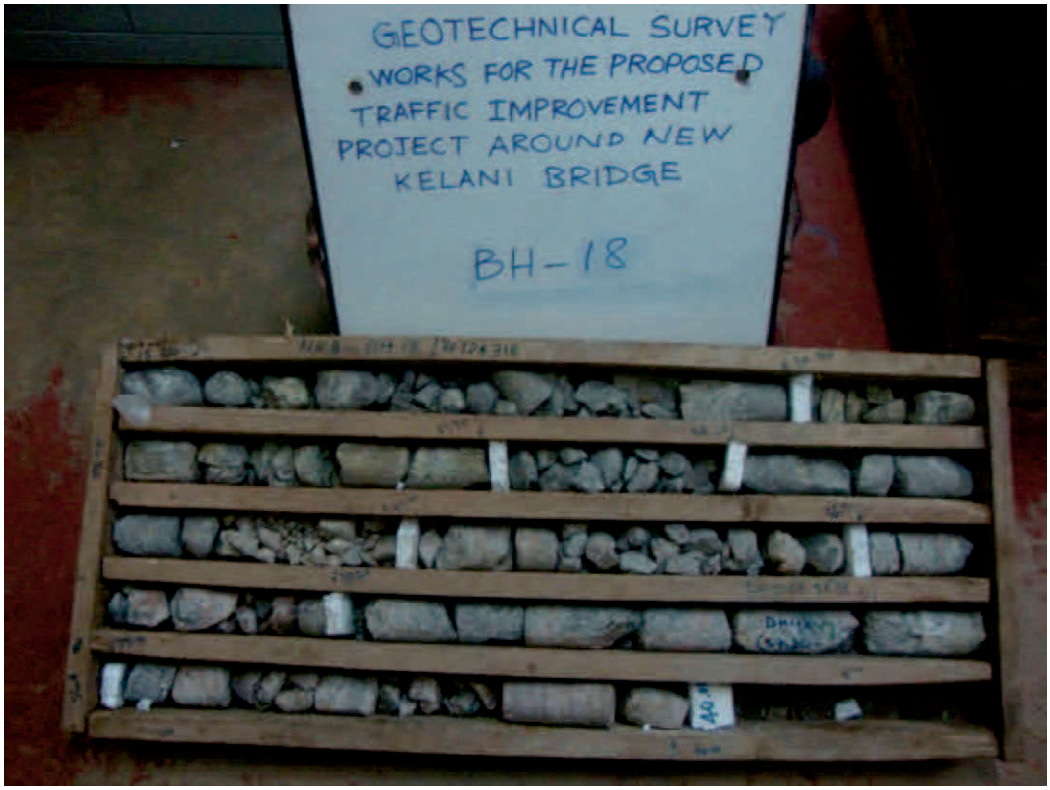


Photo : Core box BH 18

Photo : Borehole Location BH 19

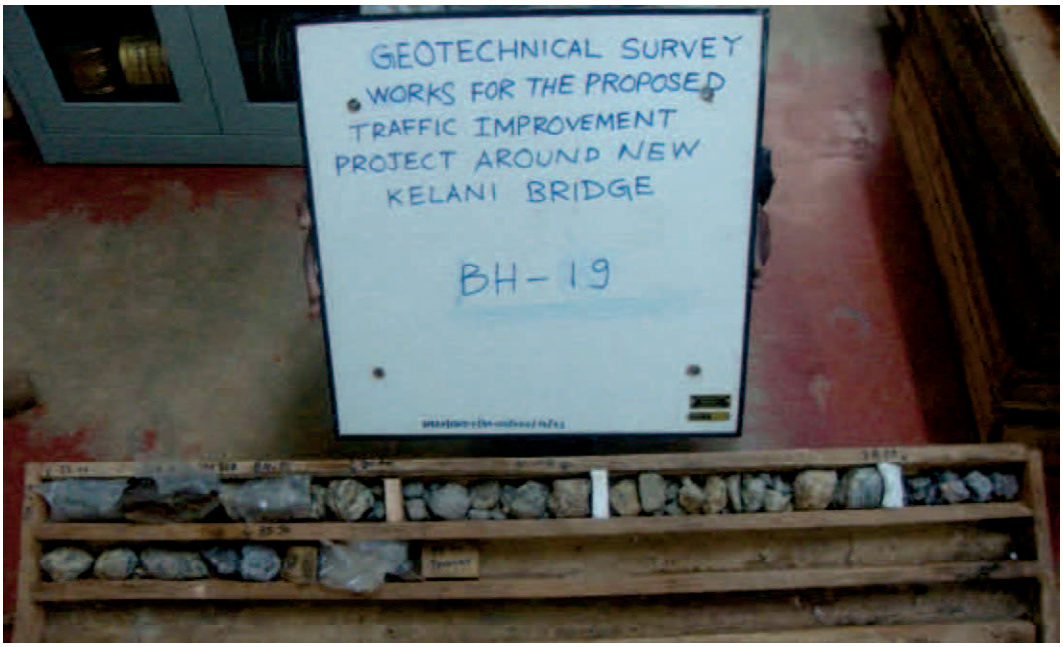


Photo : Core box BH 19

Photo : Borehole Location BH 20

Photo : Core box BH 20

APPENDIX-5

The Draft Terms of Reference

for

General Consulting Services

DRAFT

TERMS OF REFERENCE
FOR
GENERAL CONSULTING SERVICES
OF
THE TRAFFIC IMPROVEMENT AROUND NEW KELANI BRIDGE PROJECT

****** 2014**

ROAD DEVELOPMENT AUTHORITY
MINISTRY OF PORTS AND HIGHWAYS
DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

1. INTRODUCTION

The Government of Democratic Socialist Republic of Sri Lanka (GOS), through the Road Development Authority (RDA), intends to engage a qualified and experienced general consulting firm (the Consultant) to provide the necessary engineering services for detailed design, Bid assistance and construction supervision on Traffic Improvement around New Kelani Bridge Project (the Project) under Japanese ODA Loan provided by the Japan International Cooperation Agency (JICA).

2. PROJECT INFORMATION

2-1. Background

The New Kelani Bridge, a 1,160m long, 6 traffic lane bridge located in the northern part of the capital city Colombo, is becoming a key link for transportation since the A01 Road connecting the city center to the 2nd largest city of the country, Kandy; the access road of Colombo Port; and the A03 Road connecting to the Bandaranaike International Airport are all connected to it.

Although three bridges, including the New Kelani Bridge, are currently crossing the Kelani River, congestion has increased significantly in the past few years due to the traffic volume growth, affecting severely the economy. In addition, since further traffic congestion is expected from a new expressway connecting the Bandaranaike International Airport to this bridge (Colombo - Katunayake expressway, CKE) that was opened in October 2013, congestion reduction has become an urgent issue. Considering the above issues, the GOS has requested in June 2012 to construct a new bridge by Japanese ODA Loan to reduce traffic congestion on the existing bridge.

2-2. Objectives

The objective of the Project is to improve the traffic situation around New Kelani Bridge, which can be possible by:

- Construction of the urban expressway including 2nd New Kelani Bridge

The Project consists of the following four (4) components:

- 1. Construction of a part of Urban Expressway Main Line
- 2. Construction of a part of Urban Expressway Port Line
- 3. Construction of Interchanges and Junction
- 4. Improvement of At-grade Road

Summary of the Project is shown in the following table.

Component	Summary
1. Construction of Urban Expressway Main Line	• Design Speed: 60 km/h • Road Length: 1,580 m • Cross Section: - Main Bridge (6-lane): 30.4 m - Approach Bridge (6-lane): 28.4 m - Approach Bridge (4-lane): 21.4 m - Earth Work (6-lane): 30.5 m • Bridge Type: - Main Bridge (L=380 m): Extra-dozed - Approach Bridge (L=625 m): PC Box Girder - Approach Bridge (L=425 m): Steel Box Girder • Others - Soft Soil Treatment in Earth Work Section
2. Construction of Urban Expressway Port Access Road	• Design Speed: 60 km/h • Road Length: 390 m • Cross Section: 21.4m (4-lane) • Bridge Type: Steel Box Girder (L=390 m)
3. Construction of Interchanges and Junction	• Design Speed: 40 km/h • Ramp Length: - Orugodawatta I/C > Orugodawatta On: 333 m > Orugodawatta Off: 411 m - CKE I/C > CKE A: 820 m > CKE B: 926 m > CKE C: 286 m > CKE D: 345 m - Ingurukade I/C > Ingurukade On: 469 m > Ingurukade Off: 483 m - Kelanittisa JCT > Kelanittisa A: 501 m > Kelanittisa B: 562 m > Kelanittisa C-1: 423 m > Kelanittisa C-2: 324 m > Kelanittisa D: 350 m • Cross Section: - Orugodawatta I/C: 7.9 m (Temporary 2-lane) - CKE I/C: 7.9 m (1-lane), 9.4 m (2-lane) - Ingurukade I/C: 7.9 m (Temporary 2-lane) - Kelanittisa JCT: 7.9 m (1-lane) • Bridge Type: Steel Box Girder (L=1,998 m)
4. Improvement of At-grade Road	• Orugodawatta Intersection - Road Length: > North Bound: 249 m > South Bound: 113 m > East Bound: 191 m > West Bound: 210 m - Cross Section: > North Bound: 8-lane > South Bound: 7-lane > East Bound: 4-lane > West Bound: 5-lane • Kelanittisa Intersection - 1.5 m widening in 100 m

Following the F/S study, the Government of Japan through the JICA has decided to extend its loan to finance for the Project under **th Loan Package in March 2014.

3. GENERAL TERMS OF REFERENCE

3-1. Scope of Works of General Consulting Services

The main feature of the general consulting services is to lead the Project to be successfully completed timely. This will be achieved through the following:

- Engineering/Detailed Design
  1) Review of the Feasibility Studies and relevant existing reports;
  2) Preparation of the detailed design;
  3) Cost estimates based on the detailed design; and
  4) Financial analysis based on the revised cost estimation.
- Bid Assistance
  5) Preparation of bidding documents, assistance for RDA to select the Contractor: bid evaluation; award of the contract; contract negotiation; and finalizing the contract documents.
- Construction Supervision
  6) Supervision of Works comprising aforementioned four components;
  7) Guidance on Operation and Maintenance measures (Preparation of Manual, Training plan, and others) for RDA officials and outsourcing;
  8) Capacity building for Operation and Maintenance.
- Safeguards Assistance
  9) Environmental and Social Considerations (updating, and implementing, the Resettlement Action Plan (RAP) , Environmental Management Plan (EMP), and the Environmental Monitoring Plan (EMoP), and other relevant considerations)
- Others
  10) Safety Considerations (Complying with Safety policy based on JICA policy)
  11) HIV/AIDS prevention
  12) Dispute Board (DB) assistance
  13) Transfer of Technology
  14) Assistance in implementation of Public Relations (PR) of the Project

3-2. Terms and References of the Consultant

1. The consulting services will be provided by an international consulting firm in association with national consultants in compliance with Guidelines for the Employment of Consultants under Japanese ODA Loans, April 2012. The Consultant will ensure that all of the procurement under the civil works contracts conforms to Guidelines for Procurement under Japanese ODA Loans, April 2012.

2. The services that the Consultant is responsible for carrying out on behalf of and in collaboration with RDA/Project Management Unit (hereafter, “PMU”) are stated below. Other government agencies and/or institutions, such as, local government and other organizations concerned will be extensively involved in the implementation of the consulting services. RDA/MIU will make all the coordination and arrangement with the said agencies/organizations concerned and provide necessary data/information to the Consultant.

3. The Consultant will coordinate with other agencies/organizations concerned in order to reach a common ground for the implementation of the activities at every stage of the consulting services.

4. The Consultant will, for construction supervision, function and perform his duties on behalf of the Government as the "Engineer" of the Project as stated in Paragraph (1), Section 4.04 of the Guidelines for Procurement under Japanese ODA Loans, April 2012.

The Engineer" is supposed to obtain the specific approval of the Employer before taking any of the following actions;

(1) Approving subletting of any part of the Works;
(2) Certifying additional cost determined;
(3) Determining an extension of time;
(4) Issuing variation orders, or
(5) Fixing rates or prices.

Also, the Engineer shall obtain approval, if, in the opinion of the Engineer, an emergency occurs affecting the safety of the lives or of the works or of adjoining property, the Engineer may without relieving the Contractor of any of his duties and responsibilities under its Contract, instruct the Contractor to execute all such works or to do all such things as may, in the opinion of the engineer, be necessary to abate or reduce the risk. The Contractor shall forthwith comply, despite the absence of approval of the Employer, with any such instruction of the Engineer.

3.2.1 Detailed Design

3.2.1.1 Review of Feasibility Study

1) JICA Preparatory Study comprising Preliminary Design, Environmental Impact Assessment (EIA) and Resettlement Action Plan (RAP) has been conducted by Oriental Consultants Co., Ltd in association with Katahira & Engineers International under JICA (hereinafter, "JICA F/S") (December 2013). The study report provides the design conditions, preliminary studies and feature of the road undertaken. The Consultant shall review the contents of report and verify any technical, economic, or commercial findings given in them that may affect directly project cost. To develop the alternatives in accordance with the design criteria and standards to prove technical feasibility and permit costing to the required level of accuracy with review of the following points;

(1) Evaluation/Analysis of investigated and surveyed data for hydrology, geology, hydraulics, etc.;
(2) Scale and Technical Standards applied to the Project;
(3) Alignment of the Roads;
(4) Structural Alternatives for the Bridges;

3.2.1.2 Preparation of Detailed Design

1) The Consultant will prepare the detailed design for the Project. More specifically, the Consultant will provide the following:

1. Preparatory for Detailed Design

(1) To collect and review all of the available existing data to be utilized, and determine its adequacy and appropriateness;
(2) To review the preliminary engineering design prepared under JICA F/S, and to conduct the site survey to confirm if the current conditions on site will influence the design previously carried out;
(3) To define the work to be done and data required to be collected to progress the services; to identify the points and areas where the topographical survey, the soils/materials survey and any other surveys are to be conducted;

(4) To prepare detailed work plan, progress reports and implementation schedule for the Project to ensure effective monitoring and timely project outputs, and regularly update the same;
(5) To seek RDA/PMU's comments on the Inception Report in references to the items (1), (2), (3) and (4) stated above.

2. Survey and Study

(1) To undertake the topographical survey including the followings to prepare the topographic map and all other necessary data for the detailed engineering design;
   a. Establishment of horizontal and vertical control monuments
   b. Topographic profile survey along the center line (Area of topographic profile survey will be one hundred (100) m for both sides of the center line)
   c. River cross-section survey (Interval of cross-sections will be twenty (20) m for straight and uniform river reaches, ten (10) m at minor bends and five (5) to ten (10) m at sharp bends.)
   d. Topographic survey to reflect all natural changes and man-made structures with contour lines
(2) To undertake the soils/materials survey and the geotechnical investigation;
   a. To undertake test pitting, boring and corresponding laboratory tests.
   b. To collect materials samples at candidate material sources, and to undertake necessary laboratory tests for samples.
   c. To study utilization of materials for concrete, asphalt, and embankment, etc.
(3) To study possibility of liquefaction, and existence of soft ground based on the surveys above; to study necessary countermeasures to be incorporated in the detailed engineering design if liquefaction layers and soft ground layers are confirmed;
(4) To find the level and quality of groundwater for existing wells located adjacent to bridge site, the survey shall be carried out by local consultant. Data is to be used as a baseline of monitoring during the construction. Terms of reference for survey shall be prepared by the Consultant for numbers of wells located in the presumed area affected by the construction;
(5) To review environmental impact analysis;
(6) To review the project's expected costs;

3. Detailed Design

(1) To conduct further surveys and investigations as necessary;
(2) To conduct the design in accordance with the design criteria and standards established and the agreed implementation approach;
(3) To prepare all necessary design drawings at an appropriate scale for the civil works to be implemented;
(4) To estimate quantities in accordance with the construction pay items;
(5) To prepare the construction execution plan covering construction procedures, construction schedule, location and size of construction camp and equipment motor pool/workshop, safety measures, methodologies to mitigate environmental impacts, disposal sites of dredged materials, materials sources, material transport routes and traffic control measures along the transport routes, and environmental monitoring system;
(6) To study inflow of construction materials and outflow of construction waste and disposal materials and identify all negative impacts; to specify possible mitigation measures in the special provision of the construction contract;
(7) To prepare the Traffic Management Plan during construction to avoid or at least mitigate traffic congestion, traffic accidents, traffic disturbance to school children, commuters, local business, etc., that is to be specified in the special provisions

of the construction contract;

(8) To undertake unit price analysis classified into labor, material, equipment, tax, overheads, profit, and others; to estimate cost based on the established unit prices;

(9) To perform constructability review and value engineering review;

(10) To prepare the Detailed Design Report, as a minimum, include construction drawings, detailed cost estimates, necessary calculations to determine and justify the engineering details for the Project, associated contract documentation to include detailed specifications, bill of quantities (BOQ), implementation schedule for the Project. Such detailed specifications will contain those in relation to i) quality control of plant materials and workmanship, ii) safety, and iii) protection of the environment;

(11) To seek RDA/PMU's comments on the Detailed Design Report, and to obtain RDA/PMU's and JICA's approval;

3.2.1.3 Updating Economic Analysis and the Project cost estimation

1) The Consultant shall review and revise Economic Analysis included in the JICA F/S based on the result of Detailed Design.

3.2.2 Bid Assistance

3.2.2.1 Preparation of Pre-Qualification (PQ) and Bidding Documents

1) The Consultant shall prepare the pre-qualification (PQ) documents and bidding documents for the Project in accordance with "Guidelines for the Employment of Consultant under Japanese ODA Loans" dated April 2012., taking into account the following points:-

(1) PQ documents should be in accordance with "Standard Prequalification Documents under Japanese Loan "

(http://www.jica.go.jp/activities/schemes/finance_co/procedure/guideline/tender/ku57pq00000v0qfy-att/prequa.pdf)

(2) Bidding Documents should be in accordance with "Standard Bidding Documents under Japanese Loan"

(http://www.jica.go.jp/activities/schemes/finance_co/procedure/guideline/tender/ku57pq00000v0qfy-att/prequa.pdf)"

(3) Evaluation criteria on PQ and bidding should be considered of technical feature of the Project

2) When preparing bidding documents for procurement of works, the Consultant shall confirm the followings:

(1) Bidding documents should include the followings;

a. Instruction to Bidders
b. Form of Contract
c. General Conditions of Contract
d. Special Provisions of Contract
e. Form of Bid
f. Technical Specifications
g. Plans
h. Environmental Management Plan (EMP) and JICA Guidelines for environmental and social considerations (April 2010)
i. Detailed cost estimate

(2) The personnel for key positions to be proposed by bidders shall include an accident prevention officer,

(3) Bidders shall furnish a safety plan,
(4) Contractors shall include concrete safety measures, reflecting the contents of safety plan mentioned above.
(5) Contractors shall furnish a Health Safety Management Plan (HSMP) based on the EIA report and the Environmental Management Plan (EMP) attached as Appendix 1 (*To be decided by RDA after JICA appraisal)*.

3) The Consultant shall clearly state in bidding documents that the consultant for construction supervision function and perform his duties on behalf of the Government as the "Engineer" of the Project as stated in Paragraph (1), Section 4.04 of the Guidelines for Procurement under Japanese ODA Loans, April 2012.

3.2.2.2 PQ Evaluation Assistance

1) The Consultant shall assist RDA/PMU in PQ announcement, addendum / corrigendum, and clarifications to the applicants' queries;
2) The Consultant shall evaluate PQ applications in accordance with the criteria set forth in PQ documents; and
3) The Consultant shall prepare a PQ evaluation report for approval of the PQ evaluation committee.

3.2.2.3 Bidding Assistance

1) The Consultant shall assist RDA/PMU in issuing bid invitation, conducting pre-bid conferences, issuing addendum/corrigendum, and clarifications to bidders' queries.
2) The Consultant shall review the bids in accordance with the instruction / conditions set forth in the bidding documents and confirm its substantial responsiveness to the bid.
3) The Consultant shall confirm that, mobilization schedule, method statement, construction schedule, safety plan, and EMP in the proposal have been prepared in harmony with each other and will meet such requirements set forth in applicable laws and regulations, specifications and other parts of the bidding documents;
4) The Consultant shall prepare the bid evaluation report for approval of the bid evaluation committee;
5) The Consultant shall assist RDA/PMU in contract negotiation by preparing agenda and facilitating negotiations including preparation of minutes of clarification meeting; and
6) The Consultant shall prepare the draft and final contract agreement.

3.2.2.4 Public Relations

1) The Consultant shall prepare the Public Relations ("PR") Strategy Plan, which illustrates PR activities of RDA/PMU, the Consultant and the Contractors. The Strategy Plan shall be reviewed and approved by RDA/PMU, and the PR material (brochures, Radio or TV advertisement, or other materials proposed in the PR Strategy Plan) will be prepared accordingly. Cost of PR activities shall be borne by the Project. The PR activities shall be planned and implemented by completion of the Project.
2) The PR Strategy Plan will aim at:
   (1) Providing general information of the current and forecast traffic situation of the roads around New Kelani Bridge and bridge technologies adapted to the Project.
   (2) Disseminating pro-active information on traffic control, and traffic congestion likely to occur during construction
   (3) Notifying possible bidders' participation in the tender process

3.2.3 Construction Supervision

3.2.3.1 Supervision of Construction Works

1. Supervision of Works

1) During the construction supervision stage, the Consultant will function on behalf of the Government as the "Engineer" of the Project as stated in Paragraph (1), Section 4.04 of the Guidelines for Procurement under Japanese ODA Loans, April 2012. The Consultant will perform his duties and task during the construction and defect liability period in accordance with the contracts to be concluded between the Employer and the Contractors.
2) More specifically, the Consultant shall provide the following:

(1) To act as "The Engineer" to carry out duties exercising authority, specified or implied by the Contract with the Contractors; the Consultant shall be deemed to act as the Employer (i.e. RDA/PMU) shall make fair determination in accordance with the Contract wherever required for any consent or determination;

(2) To issue to the Contractor instructions and additional or modified drawings which may be necessary for the execution of the Works and rectification of any defects, all in accordance with the Contract after taking approval from the Employer;

(3) To provide assistance to the Employer concerning variations and claims which are to be ordered/issued at the initiative of the Employer;

(4) To issue the commencement order to the Contractors;

(5) To provide recommendation to RDA/PMU for acceptance of the Contractor Performance security, advance payment security and required insurances;

(6) To review and approve the proposals submitted by the contractors which include work program, method statements, material sources, manpower and equipment deployment. In light of Section 3.03 of Guidelines for the Employment of Consultants under Japanese ODA Loans, April 2012, the Consultant shall pay attention, in particular, to whether such proposals will meet the safety requirements set forth in the applicable laws and regulations, the specifications or other parts of the contract;

(7) To explain and/or adjust ambiguities and/or discrepancies in the Contract Documents and issue any necessary clarifications or instructions;

(8) To assess the adequacy of all inputs such as materials and labor provided by the contractor and his methods of works in relation to the required rate of progress; to keep and regularly update a list of the Contractor's equipment (and its condition) to ensure compliance with the list of equipment which the Contractor provided in his bid;

(9) To organize the supervision of the works with proper locations and supervise their work in order to ensure that it is effectively executed;

(10) To organize and operate materials laboratory on the basis of the provisions in the construction contract and perform all laboratory and field testing of materials and products needed to ensure the quality as required by the plans and specifications is obtained;

(11) To check shop works and tests of contractors/suppliers in their factories before shipment and issue necessary certificates of inspection, if it is requested by RDA/PMU;

(12) To maintain representatives at the site at all times to supervise all the works of the contractor and to issue site instruction as required;

(13) To review and approve all of contractor's working drawings and drawings for temporary works;

(14) To perform verification surveys of the Contractor's stake-out surveys for alignment of river channel, location of structures and facilities, and vertical control bench marks;

(15) To monitor the strict adherence to the safety plan during construction as follows;

a. The Consultant shall review the Programme submitted by contractors from the point of views of securing the safety during construction and require them to submit further details, if necessary.
b. During the supervision of construction works, the Consultant shall confirm that an accident prevention officer proposed by contractor is duly assigned at the project site and that construction works are carried out according to the safety plan as well as the safety measures prescribed in the Programme. If the Consultant recognizes any questions regarding the safety measures in general including the ones mentioned above, the Consultant shall require contractors to make appropriate improvements.
c. During the supervision of construction works, the Consultant shall patrol construction site daily to keep the construction work safe.

(16) To compute quantities of approved and accepted works and materials and check, certify the contractor's monthly and final payment certification;

(17) To prepare and submit reports to RDA/PMU monthly on the progress of the work, the contractor's performance, quality of works, and the project's financial status and forecasts;

(18) To furnish timely assistance and direction to the Contractors in all matters related to the interpretation of the contract documents after seeking comments / approval from the Employer

(19) To furnish timely assistance and direction to the Contractors in all matters related to ground survey controls, quality control testing, and other matters relating to contract compliance and progress of the report;

(20) To prepare and maintain inspection and engineering reports and records to adequately document the progress and performances of the works;

(21) To carry out field inspections on the contractor's setting out to ensure that the works are carried out in accordance with drawings and other design details.

(22) To supervise the works so that all the contractual requirements will be met by the contractors, including those in relation to i) quality and quantity of the works, ii) safety and iii) protection of the environment. In light of Section 3.03 of Guidelines for the Employment of Consultants under Japanese ODA Loans (April 2012), the Consultant shall confirm that an accident prevention officer proposed by contractor is duly assigned at the project site and that construction works are carried out according to the requirements set forth in the applicable laws and regulations, the specifications or other parts of the contract;

(23) To inspect the construction method, equipment to be used, workmanship at the site, and attend shop inspection and manufacturing tests in accordance with the specifications;

(24) To survey and measure the work output performed by the contractors and issue payment certificates such as interim payment certificates and final

payment certificate as specified in the contract in close cooperation and coordination with RDA/PMU;

(25) To coordinate the works among different contractors employed for the Project;

(26) To assure the receipts of, and maintain as permanent records, all warrants required under the terms of the contract documents for materials and equipment accepted and incorporated in the Project. All local materials incorporated in the Project and their sources are also to be approved, and the as-built drawings will be prepared for all works completed;

(27) To examine and determine after obtaining an approval of RDA/PMU, if required in the Contract, all claims/requests of Contractors for time extensions, extra compensations for works or expenses and other similar matters;

(28) To propose and present to the RDA/PMU for approval any changes in the plans that may deem necessary for the completion of works including information or any effect the changes may have on the contract amount and time of completion of the project, and prepare and issue, after obtaining an approval of RDA/PMU, if required in the Contract, all necessary variation orders including alterations on the plans and specifications and other details; to inform RDA/PMU of problems or potential problems, which may arise in connection with any construction contract and suggests or make recommendations to the RDA/PMU of possible solutions; to prepare and endorse for approval the revised design plans incorporating major changes in original design;

(29) To perform price analysis and cost estimates as construction proceeds;

(30) To liaise with the appropriate authorities to ensure that all the affected utility services are promptly relocated, if necessary;

(31) To prepare disbursement schedule on a quarterly basis for submission to JICA, through RDA/PMU;

(32) To monitor physical and financial progress regularly against the milestones as per the contract so as to ensure completion of contract in time;

(33) To compile all information on the Project in a database, and to continuously update and incorporate those in the Monthly and Quarterly Progress Reports to be prepared by the Consultant for submission to RDA/PMU and JICA;

(34) To assist RDA/PMU in providing the Monitoring Indicators during the construction, which are to be stated in the Quarterly Progress Reports once a year, and to transfer the methodology of monitoring those Indicators to RDA/PMU through the on-the-job training;

2. Completion and Taking Over

(1) To carry out the necessary inspection, specify and supervise any remedial works to be carried out by the contractor prior to the issuance of a Taking-Over Certificate ;

(2) To check and certify as-built drawings for the parts of the works designed by the contractors, if any

(3) To prepare construction completion reports for all the construction works of the Project including as-built drawings which is prepared by contractors of all the works completed;

(4) To carry out inspections/preparing punch lists and certification on completion of the works;

(5) To supervise commissioning and carrying out testing during commissioning;

(6) To monitor contractor's work during commissioning period;

(7) To verify that RDA/PMU's staff are appropriately trained and receive specified certificates during the training period;

(8) To perform the inspection of the works and to issue certificates such as the Taking-Over Certificate, Performance Certificate as specified in the civil works contract, prepare a Taking-Over Certificate

(9) To provide periodic or continuous inspection service; to arrange for remedial work as required, prepare all necessary close-out documentation, assist with negotiations to settle final account and/or prepare a Performance Certificate during Defect Liability Period;

3.2.3.2 Transfer of Technology

1) The Consultant shall conduct the transfer of knowledge on the related field to the RDA/PMU's officers concerned during the whole services period.
2) The Consultant shall conduct, but not limited to, the following technical transfer program:

(1) Providing training to the RDA/PMU and other concerned officials of MOPH and relevant bodies in terms of the road/bridge project management, operation and maintenance and organize study tours for them to roads/bridges projects which are similar to the Project.

(2) Providing the technical training and technology transfer to Sri Lankan engineers/workers in design, construction, operation and maintenance of road/bridge.

(3) Instructing the contractor in making reports on technology summarization of bridge;

(4) Preparing and submitting summary technology transfer report of the whole project;

3) The Consultant shall conduct the overseas training during the construction stage. The training course is composed of site visit, presentation by and discussion with related agencies, who are involved in planning, design and supervision of similar road/bridge construction and rehabilitation works.

3.2.3.3 Guidance on Operation and Maintenance measures (Preparation of Manual, Training plan, and others) for RDA officials

1) The Consultant shall prepare the operation and maintenance plan for road/bridge in consultation with RDA/PMU complying with O/M plan of RDA. The O/M plan shall include the detailed guidance for procurement of major spare parts, and emergency maintenance kit
2) The Consultant will prepare Training plan for RDA officials to keep O/M skills for the road/bridge, so that the RDA officials could be become a capable supervisor for the outsourcing company of O/M.
3) The Consultant shall prepare Training plan for RDA officials to keep O/M skills for the inspection equipment / vehicles.

3.2.4 Safeguard Consideration

3.2.4.1 Environmental and Social Considerations [Before Construction]

1) The Consultant shall conduct the study on the site and its surroundings concerning adverse environmental impact, and carefully prepare environmental consideration activities through the preparation/update of detailed engineering design, bidding documents, the Environmental Management Plan (EMP) and the Environmental Monitoring Plan (EMoP) to ensure that the Project comply with the JICA's Environmental and Social Considerations Guidelines (April 2010).
2) More specifically, the Consultant shall provide the following:
   (1) To review Environment Impact Assessment (EIA) and revise/update EMP and EMoP if necessary;
   (2) To assist RDA/PMU in discussing with JICA on the revision of the EMP and EMoP, if necessary;
   (3) To assist RDA/PMU in obtaining clearance/permits, if necessary, in accordance with the planned implementation schedule;
   (4) To prepare the Pre-qualification Documents and Bid Documents which includes the clauses to have Contractor comply with the requirement of the EMP and EMoP, the conditions set on EIA Approval and JICA Environmental Guidelines;
   (5) To prepare specifications and Bill of Quantities (BOQ) for environmental matters including the toxicity test to be conducted by the Contractor. At least, the following contents will be included in the Specifications and the Cost for those activities will be shown explicitly in the BOQ;
      a. "The Contractor shall test the quantity of Arsenic in wells for drinking. The Contractor shall submit the results to the Consultant for approval."
      b. "The Contractor shall ensure that the results of Arsenic test satisfy the proper regulations."
      c. "The Contractor shall reuse the construction sludge following technical specifications and dispose the rest of construction sludge, if any, in a manner not to cause environmental adverse impact."
      d. "The Contractor shall take necessary measures to prevent the soil waste from running off."
      e. "The Contractor shall install facilities such as silt basin to strictly follow the regulations."
3) To monitor the compliance of the Project with conditions set on EIA approval, and make recommendations on environmental mitigation measures to RDA/PMU and the Contractors if necessary;
4) To provide workshops/on-the-job-trainings to RDA staffs in implementation of monitoring of environmental management plans;
5) To assist RDA/PMU in preparation of environmental monitoring report which is to be submitted to JICA as a part of quarterly progress report, by filling in the monitoring form attached as Appendix 3.

3.2.4.2 Environmental and Social Considerations [During Construction]

1) The Consultant will monitor the site and its surroundings regarding adverse environmental impact through the environmental survey and evaluation to be carried out by the contractor, and will monitor any changes which might arise during construction in compliance with the JICA's Environmental and Social Guidelines.
2) More specifically, the Consultant will provide the following:

(1) To assist RDA/PMU to review the Health and Safety Management Plan (HSMP) to be prepared by the Contractor in accordance with the EMP and the approved Environmental Impact Assessment (EIA) report, and make recommendations to RDA/PMU regarding any necessary amendments for RDA's approval;

(2) To assist RDA/PMU in supervision and monitoring of the implementation of EMP and, if necessary, provide RDA/PMU with complementary materials such as operation plan or implementation procedure;

(3) To monitor the environmental impacts in accordance with the EMoP attached as Attachment 2 and provide technical advice, including a feasible solution, for RDA/PMU to improve situation when necessary;

(4) To assist RDA/PMU in supervision and monitoring the compliance with conditions set on EIA approval, the requirements under EMP and the JICA Environmental Guidelines;

(5) To assist RDA/PMU in facilitating stakeholder participation and providing feedback their comments on EMP;

(6) To be the focal point, together with RDA/PMU, for the management of project related environmental impacts, and to support RDA/PMU bringing the grievances, where grievances regarding environmental impact are planned to be dealt with;

(7) To assist RDA/PMU in preparation of the answer to the request from JICA's advisory committee if necessary

(8) To assist RDA/PMU in causing JICA to be furnished with all environmental relevant information on the Project as JICA may reasonably request

(9) To prepare monthly and annual environmental status report;

(10) To assist RDA/PMU in preparation of environmental monitoring report which is to be submitted to JICA as a part of quarterly progress report, by filling in the monitoring form attached as Appendix 3;

3.2.4.3 Review, Update and Implementation of Resettlement Action Plan (RAP)

1) The Consultant will assist RDA/PMU in finalizing, implementing and monitoring the entire RAP, fairly and timely with full transparency. The Consultant will contract with RAP Implementing Agency (RAP IA) with consent of RDA, and RAP IA, under supervision of the Consultant, will update the RAP based on the detailed design, with the consent of RDA/PMU. The Consultant will supervise the RAP IA's work regarding implementation of RAP and preparation and implementation of livelihood restoration program. The Consultant, with RAP IA, will conduct internal monitoring in terms of implementation of RAP and livelihood restoration of PAPs. Besides the internal monitoring, external monitoring will be conducted by the External Monitoring Agency (EMA) which will be hired by RDA/PMU. The Consultant will provide EMA with necessary information and assistance.

2) More specifically, the Consultant will provide the following:

(1) To review existing Resettlement Action Plan (RAP) and all the data/information of PAPs collected during preparation of RAP;

(2) To conduct population census and asset inventory survey to update the list of entitled persons and Inventory of Loss;

(3) To conduct socioeconomic survey. The data should be sufficiently comprehensive to serve as the baseline for livelihood restoration monitoring.

Results of the socioeconomic survey should also be utilized in preparation of detailed livelihood/income restoration program.

(4) To assist RDA/PMU in identifying the Entitled PAPs, and in preparation/updating of the list of Entitled PAPs and 'Payment Statement' for individual Entitled PAPs. The places where each Entitled PAPs will relocate to are necessary to be recorded so that RDA/PMU can implement monitoring on income and living conditions of resettled people;

(5) To assist RDA/PMU in discussing with JICA on the revision of the RAP, if necessary;

(6) To assist RDA/PMU and Property Assessment and Valuation Committee (PAVC) in evaluation of compensation and ensure that the amount is equivalent to full replacement cost;

(7) To review the existing income restoration plan and special assistance plan for vulnerable PAPs and revise/update the contents of the plans based on priorities identified through the census and socioeconomic surveys during detailed design stage with support of relevant government agencies and Non-Governmental Organizations (NGOs). The following contents need to be included in the plans

a Skills Training
b Project related Job Opportunities
c Provision of the special allowance to vulnerable PAPs

(8) To assist RDA/PMU in facilitating stakeholder participation for newly identified PAPs during additional survey, if any, and providing feedback their comments on the RAP

(9) To assist RDA/PMU in facilitating focus group discussion for vulnerable PAPs and providing feedback their comments on income restoration plan and special assistance plan for vulnerable PAPs. To assist RDA/PMU in informing entitled PAPs about resettlement benefits adequately;

(10) To make necessary revision/updates of RAP, based on the results of Detailed Design and the activities above.

(11) To assist RDA/PMU in discussing with JICA on the revision/updates of the RAP if necessary;

(12) To contract with RAP Implementing Agency (IA) with consent of RDA. Draft ToR for RAP IA is attached as Appendix 4

(13) To assist RDA/PMU in establishment of Grievance Redress Committee (GRC)

(14) To assist RDA/PMU in procurement of External Monitoring Agency (EMA). Sample ToR for EMA is attached as Appendix 5.

(15) To conduct workshops/on-the-job-trainings for staffs from RDA/PMU, RAP IA, GRC and relevant agencies (community groups, local administration, NGOs etc.) in implementation of activities based on the final RAP

(16) To assist RDA/PMU in payment of compensations and delivering assistances with RAP IA, following recommendation of PAVC, and ensures that all resettlement benefits are paid accordingly, and provide technical services for keeping and updating records related to resettlement activities such as entitled people's file, calculation and processing of payment, progress, and performance of participatory monitoring;

(17) To assist RDA/PMU, with RAP IA, in provision of necessary assistances for restoration of income and living conditions of PAPs, in coordination with related organizations, when necessary;

(18) To assist RDA/PMU in the physical resettlement activities of PAPs such as informing the PAPs about the documents required for collecting compensation and resettlement benefit;

(19) To ensure dissemination of information on the project and resettlement policy to the PAPs and others (community groups, local administration, and others.) who are instrumental in effective and transparent implementation of the RAP;

(20) To assist RDA/PMU in organizing public consultations and/or focus group discussions and recording the outcome of the meetings;

(21) To ensure that the PAPs are fully aware of the grievance redress procedure and the process of bringing their complaints, investigate the veracity of the complaints, and recommend actions/measures to settle them amicably, fairly and transparently, within the provisions of RAP, before they go to the redress committee or the courts of law;

(22) To provide technical services with GRC for keeping and updating records when necessary;

(23) To monitor and supervise resettlement activities, with RAP IA, including utilization of manpower input, updates of RAP, progress, grievance redress, and restoration of income and living conditions of PAPs, and others;

(24) To prepare of monthly and annual monitoring reports on resettlement;

(25) To assist RDA/PMU in preparation of quarterly monitoring reports on resettlement, which is to be submitted to JICA as a part of quarterly progress report, based on the monitoring plan described in RAP and by filling in the monitoring form attached as Appendix 6;

(26) To assist RDA/PMU in preparation of the answer to the request from JICA's advisory committee, if necessary;

(27) To assist RDA/PMU in causing JICA to be furnished with project related information on resettlement and social issues as JICA may reasonably request.

3.2.5 HIV/AIDS Prevention Activities

1) The Consultant shall carry out, but not limited to, the followings:

   (1) Review and approve the prevention activity plan prepared by contractors;

   (2) Supervising HIV/AIDS prevention activities implemented by contractors;

   (3) Proposing specific actions and program to issues related to the HIV/AIDS;

   (4) Recommending additional program when necessary;

   (5) Preparing and submitting the HIV/AIDS Monitoring Reports periodically.

3.2.6 Safety Considerations (Complying with Safety policy based on JICA policy)

1) The Consultant shall comply with RDA Safety policy based on JICA policy in construction. In consultation with the Contractor, the Consultant will prepare safety manual and safety kit, and prepare any necessary training for RDA officials and the concerned agencies.

3.2.7 Dispute Board (DB) assistance

1) The Consultant will assist any process in terms of Dispute Board mechanism which to be set by RDA/PMU and the Contractor during the construction.

3.2.8 Defect Liability Period

1) The Consultant shall be responsible for, but not limited to, the following task and duties during Defect Liability Period (twelve (12) months) after substantially completion of the road.
   (1) Provision of periodic or continuous inspection services;
   (2) Arrangement of remedial work as required;
   (3) Preparation of all necessary close-out documentation;
   (4) Assist with negotiations to settle final account;
   (5) Inspection of defects and control of punch-lists;
   (6) Preparation of defect liability certificate.
2) The Consultant shall secure the insurance to cover the design failure during the above defects liability period.
3) Expected Time Schedule

The total duration of consulting services will be seventy five (75) months. The implementation schedule expected is as shown in the following table:

Key Activities	Date	Duration in Months
Commencement of Consulting Services	1 January 2015	12
Completion of detail design, preparation of drawings and Bid documents	31 December 2015	
Bid process including prequalification	January 2016 to March 2017	15
Commencement of Civil works	1 April 2017	36
End of Civil works	31 March 2020	
Defect Liability Period	1 April 2020 to 31 March 2021	12
Termination of Consulting Services	31 March 2021	-

4. STAFFING

The following experts will be required to carry out the consulting services. Fifty five (55) international consultants and sixty eight (68) national consultants shall be engaged, over the seventy five (75) month period of the consulting services, for a total of seven hundred fifty seven (757) person-months for international and one thousand sixty (1,060) person-months for national consultants. Total consulting input is two thousand seven hundred three (2,703) person-months including supporting staffs. Tentative assignment schedule is attached Appendix -7

4.1. Phase wise input in months

The Consultant Team for the design, Bid assistance, construction supervision and other miscellaneous consulting services consist of following key personnel together with supporting staff. The allocation of person-month for the respective phases of consulting services is as shown in Table below.

4.1.1 Detailed Design Stage (January 2015 - December 2015)

Designation	No.	Man-Months
International Staff		

Team Leader	1	12
Geological Engineer	1	6
Topographical Engineer	1	6
Highway Engineer (s)	2	24
Bridge Engineer (s)	6	54
Road Facility Engineer	1	6
Traffic Diversion Planner	1	6
Public Utility Relocation Planner	1	6
Construction Planner	1	6
Structure Engineer	1	6
Pavement Engineer	1	6
Material Engineer	1	6
Soft Soil Treatment Engineer	1	6
Electrical Engineer	1	6
Drainage Engineer	1	6
Cost Estimator (s)	2	12
Contract Specialist (s)	2	12
Road Safety Planner	1	6
Environmental Specialist	1	6
Resettlement Specialist	1	6
National Staff		
Deputy Team Leader	1	12
Geological Engineer	1	6
Topographic Engineer	1	6
Highway Engineer	1	12
Bridge Engineer (s)	3	24
Road Facility Engineer	1	6
Traffic Diversion Planner	1	6
Public Utility Relocation Planner	1	6
Construction Planner (s)	2	12
Structure Engineer	1	6
Pavement Engineer	1	6
Material Engineer	1	6
Soft soil Treatment Engineer	1	6
Electrical Engineer	1	6
Drainage Engineer	1	6
Cost Estimator (s)	2	12
Contract Specialist (s)	2	12
Road Safety Planner	1	6
Environmental Specialist	1	6
Resettlement Specialist	1	6

4.1.2 Bid Assistance Stage (January 2016 - March 2017)

Designation	No.	Man-Months
International Staff		
Team Leader	1	8
Procurement Specialist	1	8
Highway Engineer	1	8
Bridge Engineer	1	8
Construction Planner	1	3
National Staff		
Team Leader	1	8
Procurement Specialist	1	8
Highway Engineer	1	8
Bridge Engineer	1	8
Construction Planner	1	3

4.1.3 Construction Supervision and Post Construction Stage (April 2017 – March 2021)

Designation	No.	Man-Months
International Staff		
Team Leader	1	40
Resident Engineer (s)	3	114
Geological Engineer	1	21
Highway Engineer (2)	2	45
Bridge Engineer (s)	3	90
Structure Engineer	1	6
Pavement Engineer	1	6
Material Engineer (s)	3	65
Soft soil Treatment Engineer	1	21
Electrical Engineer	1	24
Contract Specialist	1	33
Traffic Management / Safety Engineer	1	36
Environmental Specialist	1	12
Resettlement Specialist	1	3
HIV/ STD Preventive Coordinator	1	2
National Staff		
Deputy Team Leader	1	36
Resident Engineer (s)	3	108
Geological Engineer	1	21
Highway Engineer (s)	2	43
Bridge Engineer(s)	3	87
Structure Engineer	1	6
Pavement Engineer	1	6
Material Engineer (s)	3	65

Soft Soil Treatment Engineer	1	21
Electrical Engineer	1	24
Contract Specialist (s)	3	99
Quantity Surveyor (s)	3	99
Inspector (s)	9	162
Surveyor (s)	3	63
Environmental Expert	1	12
Resettlement Expert	1	3
HIV/ STD Preventive Coordinator	1	2

4.2. Qualification of key Team Members

The qualification of key Team Members is shown in below

4.2.1 International Consultant

1. International Team Leader (Project Management Specialist / Bridge Engineer)

International Team Leader, who should hold a suitable degree (International undergraduate academic qualification) in civil engineering, and at least twenty (20) years of professional experiences in related fields. He/she also should have experience working in more than five (5) bridge projects including at least one (1) steel bridge project and one (1) pc cable stayed or extra-dozed bridge which has more than 150m of span length, as well as experience working as team leader or deputy team leader in at least two (2) bridge projects.

2. International Resident Engineer (s) (Construction Management Specialist)

International Resident Engineer, who should hold a suitable degree (international undergraduate academic qualification) in civil engineering, and at least fifteen (15) years of professional experience in related fields. He/she also should have experience working in more than five (5) bridge/road projects, as well as experience working as team leader, deputy team leader or resident engineer in at least two (3) bridge/road projects. In addition, he/she has proven capacity, skills and competency of applying FIDIC condition into contract management and other related tasks of the project.

3. International Geological Engineer

International Geological Engineer, who should hold a suitable degree in civil or geological engineering, and at least ten (10) years of professional experience on similar assignment.

4. International Highway Engineer (s)

International Highway Engineer, who should hold a suitable degree in civil engineering, and at least twelve (12) years of professional experience on similar assignment.

5. International Bridge Engineer (s)

International Bridge Engineer, who should hold a suitable degree in civil engineering, and at least twelve (12) years of professional experience on similar assignment.

6. International Structure Engineer

International Structure Engineer, who should hold a suitable degree in civil engineering, and at least ten (10) years of professional experience on similar assignment.

7. International Pavement Engineer

International Pavement Engineer, who should hold a suitable degree in civil engineering, and at least twelve (12) years of professional experience on similar assignment.

8. International Material Engineer (s)

International Material Engineer, who should hold a suitable degree in civil engineering, and at least ten (10) years of professional experience on similar assignment.

9. International Soft Soil Treatment Engineer

International Soft Soil Treatment Engineer, who should hold a suitable degree in civil engineering, and at least ten (10) years of professional experience on similar assignment.

10. International Electrical Engineer

International Electrical Engineer, who should hold a suitable degree in civil or electric engineering, and at least ten (10) years of professional experience on similar assignment.

11. International Contract Specialist

International Contract Specialist, who should hold a suitable degree in civil engineering or related fields, and at least twelve (12) years of professional experience on similar assignment, including contract administration for FIDIC contract of civil works, document preparation, and contract procurement.

12. International Traffic Management / Safety Engineer

International Traffic Management / Safety Engineer, who should hold a suitable degree in civil engineering, and at least ten (10) years of professional experience on similar assignment.

13. International Environmental Specialist

International Environmental Specialist, who should hold a suitable degree in civil engineering or natural/social environmental field, and at least ten (10) years of professional experience on similar assignment, including environmental surveys, stakeholders' consultation, and analyzing environmental impacts to identify mitigation measures, and environmental monitoring in compliance with safeguard policies of the international development financing institutions and national legislations.

14. International Resettlement Specialist

International Resettlement Specialist, who should hold a suitable degree in civil engineering or natural/social environmental field, and at least ten (10) years of professional experience on similar assignment, including census and socioeconomic surveys, stakeholders' consultation, and analyzing social impacts to identify mitigation measures in compliance with social safeguard policies of the international development financing institutions and national legislations. He/she should also have experience of preparing resettlement framework and action plans and implementation of plans for externally financed projects.

15. International HIV/STD Preventive Coordinator

International HIV/STD Preventive Coordinator, who should have at least one (1) experience in the assistance of establishing campaign for HIV/STD Preventative program which is to prevent HIV and Sexual Transmitting Disease at the project site and close coordination among Non-Government Organization (NGO) or Non-profitable organization (NPO) and local community concerned to tackle on disaster issues and/or to support the smooth project implementation.

4.2.2 National Consultant

1. National Deputy Team Leader (Project Management Specialist / Bridge Engineer)

National Team Leader, who should hold a suitable degree (International undergraduate

academic qualification) in civil engineering, and at least twenty (20) years of professional experiences in related fields. He/she also should have experience working in more than three (3) bridge projects, as well as experience working as team leader or deputy team leader in at least one (1) bridge projects.

2. National Resident Engineer (s) (Construction Management Specialist)

National Resident Engineer, who should hold a suitable degree (international undergraduate academic qualification) in civil engineering, and at least fifteen (15) years of professional experience in related fields. He/she also should have experience working in more than three (3) bridge/road projects, as well as experience working as team leader, deputy team leader or resident engineer in at least one (1) bridge/road projects. In addition, he/she has proven capacity, skills and competency of applying FIDIC condition into contract management and other related tasks of the project.

3. National Geological Engineer

National Geological Engineer, who should hold a suitable degree in civil or geological engineering, and at least ten (10) years of professional experience including five (5) years of experience on similar assignment.

4. National Highway Engineer (s)

National Highway Engineer, who should hold a suitable degree in civil engineering, and at least ten (10) years of professional experience including five (5) years of experience on similar assignment.

5. National Bridge Engineer (s)

National Bridge Engineer, who should hold a suitable degree in civil engineering, and at least twelve (12) years of professional experience including ten (10) years of experience on similar assignment.

6. National Structure Engineer

National Structure Engineer, who should hold a suitable degree in civil engineering, and at least ten (10) years of professional experience including five (5) years of experience on similar assignment.

7. National Pavement Engineer

National Pavement Engineer, who should hold a suitable degree in civil engineering, and at least ten (10) years of professional experience including five (5) years of experience on similar assignment.

8. National Material Engineer (s)

National Material Engineer, who should hold a suitable degree in civil engineering, and at least ten (10) years of professional experience including five (5) years of experience on similar assignment.

9. National Soft Soil Treatment Engineer

National Soft Soil Treatment Engineer, who should hold a suitable degree in civil engineering, and at least ten (10) years of professional experience including five (5) years of experience on similar assignment.

10. National Electrical Engineer

National Electrical Engineer, who should hold a suitable degree in civil or electric engineering, and at least ten (10) years of professional experience including five (5) years of experience on similar assignment.

11. National Contract Specialist (s)

National Contract Specialist, who should hold a suitable degree in civil engineering or related fields, and at least ten (10) years of professional experience including five (5) years of experience on similar assignment, including contract administration for FIDIC contract of civil works, document preparation, and contract procurement.

12. National Quantity Surveyor (s)

National Quantity Surveyor, who should hold a suitable degree in civil engineering, and at least ten (10) years of professional experience including five (5) years of experience on similar assignment.

13. National Inspector (s) (Quality Control Engineer)

National Inspector, who should hold a suitable degree in civil engineering, and at least ten (10) years of professional experience including five (5) years of experience on similar assignment.

14. National Surveyor (s)

National Surveyor, who should hold a suitable degree in civil engineering, and at least five (5) years of professional experience including three (3) years of experience on similar assignment.

15. National Environmental Specialist

National Environmental Specialist, who should hold a suitable degree in civil engineering or natural/social environmental field, and at least ten (10) years of professional experience including five (5) years of experience on similar assignment, including environmental surveys, stakeholders' consultation, and analyzing environmental impacts to identify mitigation measures, and environmental monitoring in compliance with safeguard policies of the international development financing institutions and national legislations.

16. National Resettlement Specialist

National Resettlement Specialist, who should hold a suitable degree in civil engineering or natural/social environmental field, and at least ten (10) years of professional experience including five (5) years of experience on similar assignment, including census and socioeconomic surveys, stakeholders' consultation, and analyzing social impacts to identify mitigation measures in compliance with social safeguard policies of the international development financing institutions and national legislations. He/she should also have experience of preparing resettlement framework and action plans and implementation of plans for externally financed projects.

17. National HIV/STD Preventive Coordinator

National HIV/STD Preventive Coordinator, who should have at least one (1) experience in the assistance of establishing campaign for HIV/STD Preventative program which is to prevent HIV and Sexual Transmitting Disease at the project site and close coordination among Non-Government Organization (NGO) or Non-profitable organization (NPO) and local community concerned to tackle on disaster issues and/or to support the smooth project implementation.

The Consultant may propose other experts and supporting staffs required to accomplish the tasks outlined in the TOR. It is the Consultant's responsibility to select the optimum team and to propose the professionals which he believes best meets the needs of RDA/PMU.

4.3. Tasks for Each Professionals

Detailed information on the major tasks and duties for each professional member is as follows:

Detailed Design Stage

Designation	Tasks and Duties
International Staff	
Team Leader	- To lead detailed design task team - To ensure all deliverables are prepared in accordance with quality and time constraints - To manage and supervise site investigation and design and documentation activities for civil works contracts. - To establish appropriate road / bridge construction design standards - To manage and supervise all engineering works - To manage and supervise all plans including traffic diversion plan, public utility relocation plan, construction plan and road safety plan - To manage and supervise project cost estimates - To manage and supervise preparation of the pre-qualification (PQ) documents and bidding documents including technical specifications. - To manage and supervise all environmental tasks. - To manage and supervise all resettlement tasks.
Geological Engineer	- To evaluate/analyze investigated and surveyed data - To collect and review all of the available existing data - To undertake the soils/materials survey and the geotechnical investigation - To find the level and quality of groundwater for existing wells
Topographical Engineer	- To evaluate/analyze investigated and surveyed data - To collect and review all of the available existing data - To undertake the topographical survey
Highway Engineer (s)	- To review scale and technical standards - To review alignment of the roads - To collect and review all of the available existing data - To review the preliminary engineering design - To conduct the detailed design - To prepare all necessary design drawings - To estimate quantities - To prepare the technical specifications
Bridge Engineer (s)	- To review scale and technical standards - To review structural alternatives for the bridges - To collect and review all of the available existing data - To review the preliminary engineering design - To conduct the detailed design - To prepare all necessary design drawings - To estimate quantities - To prepare the technical specifications
Road Facility Engineer	- To review scale and technical standards - To collect and review all of the available existing data - To review the preliminary engineering design - To conduct the detailed design - To prepare all necessary design drawings - To estimate quantities - To prepare the technical specifications
Traffic Diversion Planner	- To collect and review all of the available existing data - To prepare traffic diversion plan - To prepare all necessary design drawings - To prepare the Traffic Management Plan during construction
Public Utility Relocation Planner	- To evaluate/analyze investigated and surveyed data - To collect and review all of the available existing data - To prepare public utility relocation plan

	- To prepare all necessary design drawings
Construction Planner	- To collect and review all of the available existing data - To prepare construction plan - To prepare all necessary design drawings
Structure Engineer	- To review scale and technical standards - To collect and review all of the available existing data - To review the preliminary engineering design - To conduct the detailed design - To prepare all necessary design drawings - To estimate quantities - To prepare the technical specifications
Pavement Engineer	- To review scale and technical standards - To collect and review all of the available existing data - To review the preliminary engineering design - To conduct the detailed design - To prepare all necessary design drawings - To estimate quantities - To prepare the technical specifications
Material Engineer	- To evaluate/analyze investigated and surveyed data - To collect and review all of the available existing data - To review the preliminary engineering design - To undertake the soils/materials survey - To study inflow of construction materials and outflow of construction waste and disposal materials - To prepare the technical specifications
Soft Soil Treatment Engineer	- To review scale and technical standards - To collect and review all of the available existing data - To review the preliminary engineering design - To study possibility of liquefaction, and existence of soft ground - To study necessary countermeasures for liquefaction layers and soft ground layers - To conduct the detailed design - To prepare all necessary design drawings - To estimate quantities - To prepare the technical specifications
Electrical Engineer	- To review scale and technical standards - To collect and review all of the available existing data - To conduct the detailed design - To prepare all necessary design drawings - To estimate quantities - To prepare the technical specifications
Drainage Engineer	- To review scale and technical standards - To collect and review all of the available existing data - To conduct the detailed design - To prepare all necessary design drawings - To estimate quantities - To prepare the technical specifications
Cost Estimator (s)	- To review preliminary cost estimates - To undertake unit price analysis - To prepare cost estimates
Contract Specialist (s)	- To prepare the pre-qualification (PQ) documents and bidding documents
Road Safety Planner	- To prepare the Traffic Management Plan during construction - To prepare all necessary design drawings
Environmental Specialist	- To review Environment Impact Assessment (EIA) and revise/update EMP and EMoP - To prepare specifications and Bill of Quantities (BOQ) for environmental matters - To monitor the compliance of the Project with conditions set on EIA approval - To assist RDA/PMU in preparation of environmental monitoring report -

Resettlement Specialist	- To review existing Resettlement Action Plan (RAP) - To conduct population census and asset inventory survey - To conduct socioeconomic survey - To assist RDA/PMU in identifying the Entitled PAPs, - To review the existing income restoration plan and special assistance plan for vulnerable PAPs - To assist RDA/PMU in facilitating focus group discussion for vulnerable PAPs - To make necessary revision/updates of RAP - To assist RDA/PMU in payment of compensations and delivering assistances with RAP - To assist RDA/PMU in the physical resettlement activities of PAPs
National Staff	
Deputy Team Leader	- To conduct all related tasks together with International Team Leader - To manage and supervise all tasks for national staffs.
Geological Engineer	- To conduct all related tasks together with International Geological Engineer
Topographic Engineer	- To conduct all related tasks together with International Topographic Engineer
Highway Engineer	- To conduct all related tasks together with International Highway Engineer
Bridge Engineer (s)	- To conduct all related tasks together with International Bridge Engineer
Road Facility Engineer	- To conduct all related tasks together with International Road Facility Engineer
Traffic Diversion Planner	- To conduct all related tasks together with International Traffic Diversion Planner
Public Utility Relocation Planner	- To conduct all related tasks together with International Public Utility Relocation Planner
Construction Planner (s)	- To conduct all related tasks together with International Construction Planner
Structure Engineer	- To conduct all related tasks together with International Structure Engineer
Pavement Engineer	- To conduct all related tasks together with International Pavement Engineer
Material Engineer	- To conduct all related tasks together with International Material Engineer
Soft Soil Treatment Engineer	- To conduct all related tasks together with International Soft Soil Treatment Engineer
Electrical Engineer	- To conduct all related tasks together with International Electrical Engineer
Drainage Engineer	- To conduct all related tasks together with International Drainage Engineer
Cost Estimator (s)	- To conduct all related tasks together with International Cost Estimator
Contract Specialist (s)	- To conduct all related tasks together with International Contract Specialist
Road Safety Planner	- To conduct all related tasks together with International Road Safety Planner
Environmental Specialist	- To conduct all related tasks together with International Environmental Specialist
Resettlement Specialist	- To conduct all related tasks together with International Resettlement Specialist

Bid Assistance Stage

Designation	Tasks and Duties
International Staff	
Team Leader	- To assist RDA/PMU in PQ announcement, addendum / corrigendum, and clarifications to the applicants' queries - To evaluate PQ applications

	- To prepare a PQ evaluation report - To assist RDA/PMU in issuing bid invitation, conducting pre-bid conferences, issuing addendum/corrigendum, and clarifications to bidders' queries - To review the bids - To prepare the bid evaluation report - To assist RDA/PMU in contract negotiation - To prepare the draft and final contract agreement
Procurement Specialist	- To assist RDA/PMU in PQ announcement, addendum / corrigendum, and clarifications to the applicants' queries - To evaluate PQ applications - To prepare a PQ evaluation report - To assist RDA/PMU in issuing bid invitation, conducting pre-bid conferences, issuing addendum/corrigendum, and clarifications to bidders' queries - To review the bids - To prepare the bid evaluation report - To assist RDA/PMU in contract negotiation - To prepare the draft and final contract agreement
Highway Engineer	- To assist RDA/PMU in PQ addendum / corrigendum, and clarifications to the applicants' queries - To evaluate PQ applications - To prepare a PQ evaluation report - To assist RDA/PMU in issuing addendum/corrigendum, and clarifications to bidders' queries - To review the bids - To prepare the bid evaluation report
Bridge Engineer	- To assist RDA/PMU in PQ addendum / corrigendum, and clarifications to the applicants' queries - To evaluate PQ applications - To prepare a PQ evaluation report - To assist RDA/PMU in issuing addendum/corrigendum, and clarifications to bidders' queries - To review the bids - To prepare the bid evaluation report
Construction Planner	- To assist RDA/PMU in PQ addendum / corrigendum, and clarifications to the applicants' queries - To evaluate PQ applications - To prepare a PQ evaluation report - To assist RDA/PMU in issuing addendum/corrigendum, and clarifications to bidders' queries - To review the bids - To prepare the bid evaluation report
National Staff	
Team Leader	- To conduct all related tasks together with International Team Leader
Procurement Specialist	- To conduct all related tasks together with International Procurement Specialist
Highway Engineer	- To conduct all related tasks together with International Highway Engineer
Bridge Engineer	- To conduct all related tasks together with International Bridge Engineer
Construction Planner	- To conduct all related tasks together with International Construction Planner

Construction Supervision and Post Construction Stage

Designation	Tasks and Duties
International Staff	
Team Leader	- To lead Construction Supervision task team - To ensure all deliverables are prepared in accordance with quality and time constraints - To manage and supervise all supervision works - To act as “The Engineer” to carry out duties exercising

	authority - To issue to the Contractor instructions and additional or modified drawings - To provide assistance to the Employer concerning variations and claims - To approve the proposals submitted by the contractors - To approve all of contractor's working drawings - To prepare and maintain inspection and engineering reports - To prepare disbursement schedule - To perform price analysis and cost estimates - To carry out the necessary inspection prior to the issuance of a Taking-Over Certificate - To check and certify as-built drawings - To prepare construction completion reports - To provide periodic or continuous inspection service during Defect Liability Period - To assist any process in terms of Dispute Board mechanism
Resident Engineer (s)	- To issue to the Contractor instructions and additional or modified drawings - To provide assistance to the Employer concerning variations and claims - To approve the proposals submitted by the contractors - To approve all of contractor's working drawings - To prepare and maintain inspection and engineering reports - To prepare disbursement schedule - To perform price analysis and cost estimates - To carry out the necessary inspection prior to the issuance of a Taking-Over Certificate - To check and certify as-built drawings - To prepare construction completion reports - To provide periodic or continuous inspection service during Defect Liability Period - To assist any process in terms of Dispute Board mechanism
Geological Engineer	- To review the proposals submitted by the contractors - To review all of contractor's working drawings - To carry out field inspections - To inspect the construction method, equipment to be used - To survey and measure the work output performed by the contractors
Highway Engineer (2)	- To review the proposals submitted by the contractors - To check shop works and tests of contractors/suppliers - To review all of contractor's working drawings - To carry out field inspections - To inspect the construction method, equipment to be used - To survey and measure the work output performed by the contractors - To carry out the necessary inspection prior to the issuance of a Taking-Over Certificate - To check and certify as-built drawings - To prepare construction completion reports - To provide periodic or continuous inspection service during Defect Liability Period - To providing the technical training - To prepare the operation and maintenance plan
Bridge Engineer (s)	- To review the proposals submitted by the contractors - To check shop works and tests of contractors/suppliers - To review all of contractor's working drawings - To carry out field inspections - To inspect the construction method, equipment to be used - To survey and measure the work output performed by

	the contractors - To carry out the necessary inspection prior to the issuance of a Taking-Over Certificate - To check and certify as-built drawings - To prepare construction completion reports - To provide periodic or continuous inspection service during Defect Liability Period - To providing the technical training - To prepare the operation and maintenance plan
Structure Engineer	- To review the proposals submitted by the contractors - To check shop works and tests of contractors/suppliers - To review all of contractor's working drawings - To carry out field inspections - To inspect the construction method, equipment to be used - To survey and measure the work output performed by the contractors - To providing the technical training
Pavement Engineer	- To review the proposals submitted by the contractors - To check shop works and tests of contractors/suppliers - To review all of contractor's working drawings - To carry out field inspections - To inspect the construction method, equipment to be used - To survey and measure the work output performed by the contractors - To providing the technical training
Material Engineer (s)	- To review the proposals submitted by the contractors - To organize and operate materials laboratory - To check shop works and tests of contractors/suppliers - To compute quantities of approved and accepted works and materials - To carry out field inspections - To inspect the construction method, equipment to be used - To survey and measure the work output performed by the contractors
Soft soil Treatment Engineer	- To review the proposals submitted by the contractors - To review all of contractor's working drawings - To carry out field inspections - To inspect the construction method, equipment to be used - To survey and measure the work output performed by the contractors - To providing the technical training
Electrical Engineer	- To review the proposals submitted by the contractors - To check shop works and tests of contractors/suppliers - To review all of contractor's working drawings - To carry out field inspections - To inspect the construction method, equipment to be used - To survey and measure the work output performed by the contractors - To providing the technical training
Contract Specialist	- To provide assistance to the Employer concerning variations and claims - To review the proposals submitted by the contractors
Traffic Management / Safety Engineer	- To monitor the strict adherence to the safety plan - To liaise with the appropriate authorities to ensure that all the affected utility services are promptly relocated - To prepare safety manual and safety kit
Environmental Specialist	- To assist RDA/PMU to review the Health and Safety Management Plan (HSMP) - To assist RDA/PMU in supervision and monitoring of the implementation of EMP - To monitor the environmental impacts in accordance with

	the EMoP - To assist RDA/PMU in facilitating stakeholder participation - To prepare monthly and annual environmental status report
Resettlement Specialist	- To assist RDA/PMU to assure compliance with specific resettlement plan - To facilitate resettlement through coordination with relevant district land acquisition officers. - To prepare draft resettlement monitoring plan
HIV/ STD Preventive Coordinator	- To review and approve the HIV/AIDS prevention activity plan - To Supervise HIV/AIDS prevention activities - To popose specific actions and program to issues related to the HIV/AIDS - To prepare and submit the HIV/AIDS Monitoring Reports
National Staff	
Deputy Team Leader	- To conduct all related tasks together with International Team Leader - To manage and supervise all tasks for national staffs.
Resident Engineer (s)	- To conduct all related tasks together with International Resident Engineer
Geological Engineer	- To conduct all related tasks together with International Geological Engineer
Highway Engineer (s)	- To conduct all related tasks together with International Highway Engineer
Bridge Engineer(s)	- To conduct all related tasks together with International Bridge Engineer
Structure Engineer	- To conduct all related tasks together with International Structure Engineer
Pavement Engineer	- To conduct all related tasks together with International Pavement Engineer
Material Engineer (s)	- To conduct all related tasks together with International Material Engineer
Soft Soil Treatment Engineer	- To conduct all related tasks together with International Soft Soil Treatment Engineer
Electrical Engineer	- To conduct all related tasks together with International Electrical Engineer
Contract Specialist (s)	- To conduct all related tasks together with International Contract Specialist
Quantity Surveyor (s)	- To survey and measure the work output performed by the contractors together with International Engineers
Inspector (s)	- To carry out field inspections together with International Engineers - To inspect the construction method, equipment to be used together with International Engineers
Surveyor (s)	- To assist all tasks for Quantity Surveyors and Inspectors
Environmental Expert	- To conduct all related tasks together with International Environmental Specialist
Resettlement Expert	- To conduct all related tasks together with International Resettlement Specialist
HIV/ STD Preventive Coordinator	- To conduct all related tasks together with International HIV/ STD Preventive Coordinator

5. REPORTING

The Consultant will prepare and submit the following reports and documents to RDA/PMU.

5.1 Monthly Progress Report and Inception Report

5.1.1 Monthly Progress Report (twenty (20) copies and electronic data): The Consultant

will submit a Monthly Progress Report in the accepted form describing briefly and concisely all activities and progress for the previous month by the 10th day of each month. Problems encountered or anticipated will be clearly stated, together with actions to be taken or recommendations on remedial measures for correction. It will also indicate the work to be performed during the coming month.

5.1.2 Inception Report (twenty (20) copies and electronic data), to be submitted in the 1st month after the commencement of the services, presenting the methodologies, schedule, organization, etc.

5.2 Detailed Engineering Design

5.2.1 Project Definition Report (twenty (20) copies and electronic data), to be submitted in 3rd month after the commencement of the services, presenting the design criteria and standards.

5.2.2 Draft Detailed Design Report (twenty (20) copies and electronic data), to be submitted in 10th month after the commencement of the services, presenting detailed engineering design.

5.2.3 Cost Estimate Report (twenty (20) copies and electronic data), to be submitted in 10th month after the commencement of the services, presenting detailed cost estimate.

5.2.4 Final Detailed Design Report (twenty (20) copies and electronic data), to be submitted in the 12th month after the commencement of the services, finalizing detailed design, cost estimate, bid plan, bid evaluation criteria, technical evaluation criteria and bidding documents through the incorporation of comments on the Draft Detailed Design Report, provided by RDA/PMU.

5.2.5 Environmental Monitoring Report (twenty (20) copies and electronic data), to be submitted quarterly after the commencement of the services, presenting the environmental impacts and implementation of environmental mitigation measures during and after the construction stage. Environmental monitoring forms attached as Appendix 3 will be filled and attached to the Report.

5.2.6 Resettlement Monitoring Report (twenty (20) copies and electronic data), to be submitted quarterly during RAP implementation period. RAP monitoring form attached as Appendix 6 will be filled and attached to the Report.

5.2.7 Environmental and Social Plan Report (twenty (20) copies and electronic data), to be submitted in the 12th month after the commencement of the services, presenting the revised EMP and revised RAP.

5.3 Bidding Assistance (Two Envelope System with Pre-qualification)

5.3.1 Pre-qualification Document with Evaluation Criteria (twenty (20) copies and electronic data), to be submitted within one month after the commencement of the services, presenting the pre-qualification documents and its evaluation criteria.

5.3.2 Bidding Document Report (twenty (20) copies and electronic data), to be submitted within six month after the commencement of the services, presenting the bidding documents

5.3.3 Pre-qualification Evaluation Report (fifteen (15) copies and electronic data) to present the results of the evaluation and to select the qualified applicants.

5.3.4 Technical Evaluation Report (fifteen (15) copies and electronic data) to present the results of technical evaluation and to recommend the qualified applicants

5.3.5 Bid Evaluation Report (fifteen (15) copies and electronic data) to present the results of the Bids to select the most responsible contractors.

5.4 Construction Supervision

5.4.1 Quarterly Progress Report (fifteen (15) copies and electronic data) to be submitted quarterly during construction, presenting the progress status of the Project.

5.4.2 Operation and Maintenance Manual (twenty (20) copies and electronic data) containing technical procedures for the appropriate operation and maintenance of all project facilities.

5.4.3 Environmental Monitoring Report (fifteen (15) copies and electronic data) to be submitted quarterly, presenting the environmental impacts and implementation of environmental mitigation measures during and after the construction stage. Environmental monitoring forms attached as Appendix 3 will be filled and attached to the report.

5.4.4 RAP Monitoring Report (fifteen (15) copies and electronic data) to be submitted quarterly during resettlement. RAP monitoring form attached as Appendix 6 will be filled and attached to the report.

5.4.5 Construction Completion Report (twenty (20) copies and electronic data), to be submitted within three (3) month after completion of construction, which comprises a full size of as-built drawings for all the structures and facilities completed, and the final details of the construction completed together with all data, records, material tests results, field books, etc.

5.4.6 Service Completion Report (twenty (20) copies and electronic data), at the completion of all the general consulting services.

6. Obligations of the RDA, PMU and GOS

6.1 [Detailed Design] and [Bid Assistance]

6.1.1 RDA/PMU will coordinate the implementation of the services between the representatives of relevant organizations of the Democratic Socialist Republic of Sri Lanka, as a sole counterpart agency of JICA.

6.1.2 A Technical Advisory Committee will be established in order to examine and confirm the process and technical details of the services. The Technical Advisory Committee will be constituted by RDA/PMU and authorities concerned for bidding procedure of the ODA Loan Project in the GOS.

6.1.3 The Technical Advisory Committee will be responsible in following technical aspects in order to ensure smooth procurement procedure (approval) of the Project by RDA/PMU;

(1) To examine and analyze the technical aspects of the services based on the reports and explanation by the Consultant in the course (on the each stage) of the services,

(2) To summarize the comments and requests to the services and notify them to the Consultant, and

(3) To confirm the revision by the Consultant based on the comments and requests thereof.

6.1.4 The operational detail of the Technical Advisory Committee will be settled between RDA/PMU and the Consultant.

6.1.5 GOS is prepared to provide the following to the Consultant in support of the general consulting services:

(1) Office space with necessary equipment, furniture and utility. However, the Consultant's requirement for office space, including necessary equipment, furniture and utilities, should be clearly stated in the proposal with its rental cost for the case where RDA/PMU would be unable to provide such facilities.

(2) Existing reports, data, information and available documents relevant to the Project.

(3) Appointment of the counterpart officials, agent and representative as may be necessary for effective implementation of the Consulting Services

(4) Tax exemption for materials, machines, tools, equipment, stationery and others which will be required to conduct the engineering services.

(5) Arrangement of all necessary immigration procedures for the foreign experts.

(6) Assistance for giving security of life and property of the experts during their stay in Sri Lanka.

6.2 [Construction Supervision]

6.2.1 The Government of the Democratic Socialist Republic of Sri Lanka is prepared to provide the following to the Consultant in support of the general consulting services:

(1) Existing reports, data, information and available documents relevant to the Project.

(2) Appointment of the counterpart officials, agent and representative as may be necessary for effective implementation of the Consulting Services

(3) Permission for clearance of temporarily imported plant/equipment on-re-exportable basis required for implementation of the Project will be granted free of Duties and Taxes. *(TO BE DECIDED by RDA referred to other JICA projects).*

(4) Arrangement of all necessary immigration procedures for the foreign experts.

(5) Assistance for giving security of life and property of the experts during their stay in Sri Lanka.

7. APPLICABILITY OF SPECIFIC PROVISIONS OF JICA GUIDELINES TO THE CONSULTANCY CONTRACT

In compliance with the JICA Guidelines for the Employment of Consultants under the Japanese ODA Loans, April 2012, the following sections will be applied:

Section 2.02 Responsibilities of Consultants

(1) In the case of a difference of opinion between RDA/PMU and the Consultant on any important matters involving professional judgment that might affect the proper evaluation or execution of the project, RDA/PMU shall allow the Consultant to submit promptly to RDA/PMU a written report and, simultaneously, to submit a copy to JICA. RDA/PMU shall forward the report to JICA with its comments in time to allow JICA to study it and communicate with RDA/PMU before any irreversible steps are taken in the matter. In cases of urgency, the Consultant shall have the right to request RDA/PMU and/or JICA that the matter be discussed immediately between RDA/PMU and JICA.

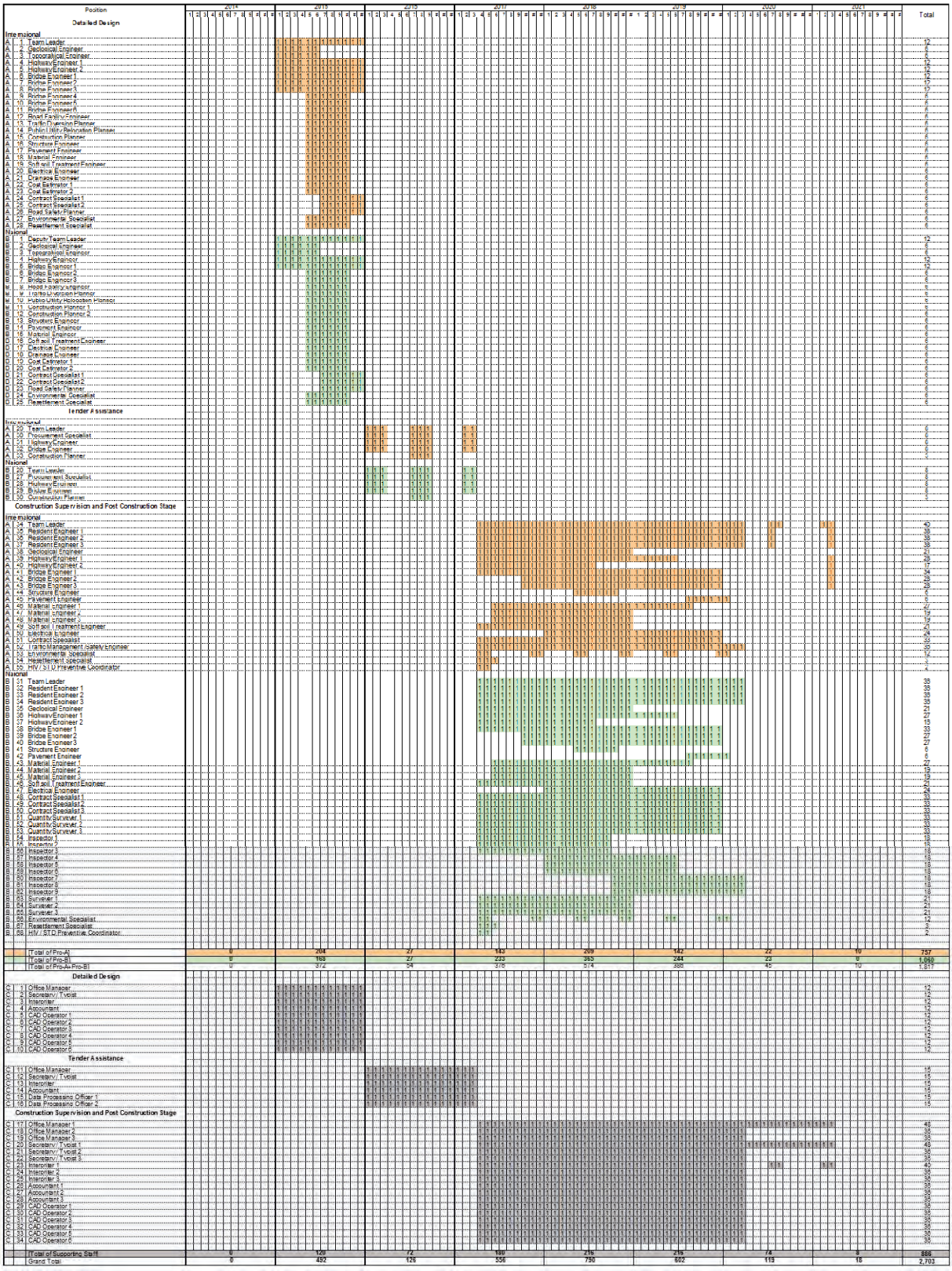
Section 2.06 monitoring by JICA

(1) RDA/PMU is responsible for supervising the Consultant's performance and ensuring that the consultant carries out the assignment in accordance with the contract. Without assuming the responsibilities of RDA/PMU or the Consultant, JICA may monitor the work as necessary in order to satisfy itself that it is being. Carried out in accordance with appropriate standards and is based on acceptable data.

(2) As appropriate, JICA may take part in discussions between RDA/PMU and the Consultant. However, JICA shall not be liable in any way for the implementation of the project by reason of such monitoring or participation in discussions. Neither RDA/PMU nor the Consultant shall be released from any responsibility for the project by reason of JICA's monitoring or participation in discussion.

Appendix 1: Environmental Management Plan
Appendix 2: Environmental Monitoring Plan
Appendix 3: Environmental Monitoring Form
Appendix 4: Draft ToR for RAP Implementing Agency
Appendix 5: Draft ToR for RAP External Monitoring Agency
Appendix 6: RAP Monitoring Form
Appendix 7: General Consulting Services

Manning Schedule



APPENDIX-6

M/M for FGD at Kovil on July 19

Minutes of the meeting held at Kalibadra Amman Hindu Kovil, Wadullawatta Grama Niladari Division,Colombo with Kovil devotees and Affected people around N – Flat at Nawagampura 2nd Stage

Date : 19/07/2013 Time : 3.30 pm – 5.30 pm
Attendance List is followed by the minutes.

Rev. Shiwasri. K.L.M. Sharma, the chief priest of the Kovil welcomed all participants after conducting religious observations.

Mr.Jayakody –Dy Director ESD Explained the proposed 2nd New Kelani bridge Project with a video presentation, highlighting the objectives of the project, project area, main stages & main activities of the project. He also stated that this proposal was selected out of 4 alternatives proposals , because this proposal will gain highest benefits with minimum disadvantages . Next he invited the audience to express their views.

Ven. Mohan Sharma the chief priest emphasized the importance of the meeting because it will avoid the misunderstanding of the community around the kovil area. Chief priest also requested the audience to present their views to project officers directly .It will helps to formulate necessary resettlement plan to mitigate negative impact to the Kovil and it's devotees. He thanked all officers concerned for giving an opportunity to share their views and requested devotees to actively participate in the discussion.

Mrs. S Arsanayagam (Kovil devotee living close to the Kovil) proposed to relocate the kovil to a small size one in the remaining space without demolishing N-flat area. Kovil can She expressed fear that there are rumors heard, this project planners are going to acquire 25-30-houses to rebuilt/relocate the Kovil .It is very harmful and there is no need a kovil without people. Even though they want to do only religious activities. If it is may not be sufficient for religious functions.

If project planners /Government wants to expand the road, they are ready to sacrifice their properties without any objections. Always they are willing to give their support for development activities of the government. But they are not ready to sacrifice their houses & other properties to rebuilt/ relocate the Kovil instead of damage a part of the Kovil. Therefore as a representative of the Kovil devotees, she proposed to rebuilt or renovate the kovil within the remaining land area.

The audience agreed and seconded this proposal with clapping & shouting aggressively. Also they questioned which part of the kovil to be demolish..?

Mrs. Darshika Jayasekera, Chief Engineer RDA, (Colombo) explained the meaning of Blue line & the Red lines in the designed plans. According to the current plans piles may

be construct in the middle of the kovil .During the construction period vibration and huge noise may be occurred. But at this moment they are unable to accurately say the actual Before finalizing the plan ,the soil condition of the area also need to be investigated. After the final planning only the actual situation can be seen. The project planners believe there is a possibility to preserve the sacred places.

The Audience requested when they can get know the real situation..?

Mrs. Jayasekera & Mr. Jayakody explained with the computer presentation.

They showed the current proposal said that they need to submit this proposal to the Central Environment Authority for approval. It takes at least 45 days for the approval with comments or revisions of CEA. They also explained that the government's aim is not to make people suffer from the project, therefore all possible measures need to be taken to avoid such circumstances, in the first instance. Under unavoidable circumstances, if adverse impact can't be avoided, government will take action to minimize them by providing adequate resettlement assistance. In case of the Kovil, if construction plan can't avoid relocation of the Kovil, we need to consider possible alternative solutions to mitigate adverse effects jointly through our consultation. This meeting is an attempt to reach consensus on the issues encountered by all of us.

It was observed that two options for the relocation of the kovil.

1. Kovil can be relocated within the remaining space, by making it smaller than the current condition.
2. Urban Development Authority ready to give a land (10 P) at Wadullawatta area to relocate the Kovil .

The audience accepted the first option, by putting their hands up.

Mr.Ganashen Director/Designs, RDA delivered a speech in Tamil Language summarizing the speeches given by Mr. Jayakody & Mrs. Jayasekera.

Mr. Y.W.Senaratna –Divisional Secretary expressed his views regarding the acquisition and the relocation process.

Mr. Wasantha Sandasiri read out the massage from Member of Parliament -Kolonnawa Mr.Duminda Silva . According to his massage the people who are living surrounding kovil area will not be affected due to kovil relocation.

Mr. R.T.Wijenayake - Grama Niladari repeated again the options of the relocation of the Kovil. He stated that if they agreed to the first option (Reconstruct the same place) Kovil may be smaller than the current size. He requested acceptance of all Hindu devotees for the first option.

Audience accepted it once again.

Following key decisions were taken as relocation options;

1.The chief priest explained to RDA and JICA representatives that they do not object for the development but to reconsider all available options to avoid damage to the Kovil.

2.If only a portion of Kovil is acquired, the government should provide all budgetary requirements to rebuild the remaining portion to the satisfaction of all devotees.

3. Kovil can be relocated within the remaining space. But it may be smaller than the current size.

Mrs. Jayasekera, Chief Engineer thanked all participants and devotees for their presence and views expressed for mitigating ill effects that may occur due to relocation of the kovil premises. She appreciated devotees' interest shown to work together for an acceptable solution.

The meeting terminated with refreshments, around 5.30 pm.

Preparatory Survey on Traffic Improvement Project around Kelani Bridge

Focus Group Meeting at Badra Amman Kovil – Wadullawatta GN Division

Date :2013/07/19 Time :3.30pm- 5.00pm

List of Attendance

No	Name (Officials)	Position & Organization	Telephone No
1	Mr. U.W Senarathna	Divisional Secretary-Kolonnawa	
2	Ven. K.L.M.M.Sharma	Chief Priest –Badra Amman Kovil	
3	Mr. E.I.J.I Yonesawa	Oriental Consultants	
4	Mr.Takuma Ogoni	Oriental Consultants	
5	Mr.J.A.V.S.Jayakody	Dy .Director - RDA	
6	Mrs. D.A.S.Jayasekera	CE /Colombo - RDA	
7	Mr. S.Ganeshan	Director - RDA	
8	Mr.S.M.K.Samarakoon	CE /Kalutara - RDA	
9	Mr. Y.C.W. Dissanayaka .	Engineer- CE office - RDA	
10	Mr.M.D.Senadeera	Senior Technical Officer - RDA	
11	Mr.Sajith Kolombage	RDA	
12	Mrs.S.K.K.Ranasingha	Coordinator- CEAA	
13	Mr.Wasantha Sadusingha	Secretary –MP (Hon Duminda Silva)	
14	Mr.R.T.Wijenayaka	Grama Niladari –Wadullawatta	
15	Miss.Charuka Ratnayaka	CEAA	

	Name Affected People & Kovil devo	House No	Telephone No
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APPENDIX-7

Letter from Kovil Chief Priest

Sri Badrakaligambal Devasthanam

No. 61, 2nd Nawagampura,
New Kelani Bridge Road,
Colombo 14
Tel: 2544512

2013-07-24

Mrs. Dharshika,
Chief Engineer,
Road Development Authority,
No. 15, Park Road,
Colombo

About Sri Badrakaligambal Devasthanaya

Dear Madam,

At a meeting held at the temple premises on 2013-07-19 at 3.00 PM, with the participation of the devotees of the above Hindu Temple, following agreements were reached;

To demolish only part of the temple for road construction allowing the balance section to remain as it is, and to rebuilt the demolished portion in the remaining land available in the back of the temple. Cost of the new construction to be covered by the compensation to be paid for the demolished portion. The estimates submitted earlier for a construction of a new temple is submitted again herewith, but the cost for the construction of half of the temple as agreed above will be only half of the full estimate. JICA study team agreed to arrange compensation, if there are any further damages to the temple during the construction period. Accordingly the request of the devotees is to get the above requirements fulfilled.

(The estimate submitted is for the construction of a New Temple, and therefore the construction cost of only a section may be half of that. However there may be additional expenditure if there are any further damages during the road construction period)

Sgd. / Chief Priest

Sri Badrakaligambal Temple
61,New Kelani Road,
Nawagampura Second Stage,
Chief priest and chief Incumbant
Sri KLM Mohan Sarma
Justice of Peace (whole Island)
President of inter Religion Organization for National Unity.

APPENDIX-8

Equipment Lists of the AEA

Scientific Equipment Invenory

No	Date	LP/D	Sub No.	Item Name	Qty	Issued to	Location	Inv. No	Value	Remarks	
										FAR No	Other
1	1982.11.18	D		Densitometer,(Victorian) M- 07-424 S/No.19668	1	RIC	NDT		Rs.36,900		
2	1982.11.19	D		Electronic Equipment -Amprobe megohmmeter AMC3	1	UOSJ	NIL	1/10/1-6	US $ 330		
3	1982.11.20	D		Amprobe Digsta champ-on VAO Meter	1	UOSJ	NIL	1/10/1-I	US $ 193		
4	1983	D		Sentillometer SPP-2-NF S/No.212566	1	HLAR	QAL		Rs. 44,800		
5	1983.6.1	D		Ictometer IPP4 140 with probe SGS10,and cable of 100 mm	1	CK	NIL	1.-19/6	Rs.126,790	FAR No.-95	
6	1984.4.25	D		Numbering Machine for Radiation Protection Services		HLAR	QAL	1_40	£ 3960		
7	1984.5.17	D		2 Krt 8205-8206 PM 5705/04 SM21 S-4246 (Pulse Generator & Acc.) 4323	2	CK	NIL	1/42/1	Rs126,791		
8	1984.6.21	LP		Oscilloscope LBO 512 B SN 3120387	1	CK	NIL	1/45/	Rs. 9100	FAR No.-125	
9	1984.7.19	D		Multimeter PAN3001 (Pantec S-832190132112 M-PAN3001)	1	CK	NIL	1_57			
10	1985.6.18	LP		Leader Osillascope LBO 522 and accessories S.NO.4034465	1	CK	NIL	1/71/4	Rs. 15,900		
11		LP		Oscillascope S.No. 5060162/LBO 512B with probe	1	CK	NIL	1/73/5	Rs. 9100		
12	1985.8.24	D		Barrow Meter (2039--70392)	1	RIC	SSDL	1/74/7	Rs.536.5		
13	1985.8.21			Stabilizer and accessoreis VR-1000H	2	RIC	NIL	1/74/6	Rs. 8250.00		
14	1985.10.7	D	i	Digital Multimeter with rehargeble battery pack Modle 177/1788, S.No.280376	1	CK	NIL	2./4/2	Rs. 19,500 US$ 871	FAR No.-146	
		D	ii	Digtial Survey Meter (Model 36150(Intergrating) S.NO.21286	1	CK	NIL	2_4-3	1650		
15	1985.10.23	LP	i	Leader Digital Multimeter Model 853 A S.No. 5080721	1		NIL	2_4-4	Rs. 4850		
			ii	Leader Tr. Cheeker/LVT-72 Jet Vam S.No.9050114	1		NIL	2_4-5	Rs. 5600		
16	1986.1.3	D		2560 NPLTheraphy level exposuremeter S.No.218	1	CK	NIL	2_8	6936		
17	1986.1.2	LP		27 Portable Doseratemeter S.No.460	1	HLAR	QAL				
18	1986.1.2	D	i	258IA 0.6 C Ion Chamber (shonka 150) S.No.435	1	CK	SSDL	2_8			
			ii	Modle Type 2562 S.No.214 S R-90 Radiation Source (10m Cr)	1	SSDL	SSDL				
			iii	2561 NPL Theraphy level Ion chamber S.No.266(part of 2560)	1		SSDL				
			iv	2568A Extension cable 2560/61	1		SSDL				
			v	2566 NPL Intercomparision Phantom port of 2560	1		SSDL				
			vi	2536/3B 0.3 CC Soft X-ray Ion Cham 2560 S.No.273	1		SSDL				
			vii	2538/3 R/A Source SR-90 (IL1mBQ)SN; 892-1600	1		SSDL				
			viii	2561 NPL Theraphy level Ion chamber S.No. 273	1		SSDL				
			ix	2570 A Farmer dosemeter (Roentgens) S.No.551	1		SSDL				
			x	25 Calibration of 2570 (Co-60)	1		SSDL				
			xi	2571A 0.6cc Ion Chamber S.No.1039,port of 2570 A system	1		SSDL		US$ 27,747		
			xii	2580A Adaptor cable Port of 2570 A system	1		SSDL				
			xiii	2539A Carrying case theraphy chambers	1		SSDL				
			xiv	2503/3A Source SR-90 (370 NBQ) S.N.2202 (6411BA)	1		SSDL				
			xv	Shield for 10mCi Sr -90 Source 6411BA	1		SSDL				
			xvi	2575A 600 CC window Ion chamber S.No. 303	1		SSDL				
			xvii	Shield for 30 Ci Sr -90 Source Model 2576A S.No.218	1		SSDL				
			xviii	2532/3A 0.03CC Soft X-ray chamber S.No.266	1		SSDL				
			xix	26 Soft X-ray Calibration of 2532/3	1		SSDL				
			xx	2538/3 R/A Source SR-90 (IL1mBQ) S.No.892-1599 PTW 1984	1		SSDL				
			xxi	2537/3 Phantom soft x-ray Ion chamber	1		SSDL				
			xxii	2578A Extension cable	1		SSDL				
			xxiii	27 Portable Doseratemeter S.No.460	1		SSDL				
19	1986.6.5	D		IAEA Drop out relays with power code and fuse box	3	CK & Thushara	NIL	2_17			
20	1986.12.31	D	i	Logic Probe 545A (Logic Probe)	1						
			ii	Logic Probe 546 A (Logic pulser)	1						
			iii	Logic Probe 547A (Current traser) CK	1	NIL	2_37	Rs. 115,886		FAR No. 165	
			iv	Logic Clip 548A (Logic clips)	1						
21	1986.8.22	D	i	Art No.OB2 Irradiation container for the calibration of gamma dosimeters with a 100 mCi Co-60 Source, Type A Container incl. timer OB36 FAR No. 169	1	SSDL	SSDL	2_38	Rs. 572,005 DM 12530		
			ii	Art No.OB34 Low level Panoramic gamma irradiator (Buchler Calibrator (OB 34/1)	1		SSDL		DM 33500		
22	1987.1.2	D		250 Kv ma Directional X-ray Unit , Model 25/357, ANDREX industrial x-ray set S.No.54043 Consisting of : Tube lead CMA 25, Control Unit CMA 357, Connection Cable 20 m, Power Supply Cable 10 m cable bag with accessories	1	RIC	NDT-1	2_39	Rs. 620,619 ,DKK 139900	FAR No. 197	
23	1987.3.31		i	Portotype Board RS 488-933	1	CK	NIL				
			ii	Portotype Board with powr supply SN. RS 489-100 2_43-1	3	Rs 24,120	FAR no 198				
			iii	Power Supply cable RS 488 - 185	3						
24	1987.5.19	LP		Allen Key (10Keys)1/16 , 3/8	1		NIL	2_45-3	Rs. 165		
25	87-6-4	D		Spectroscopy Amplifier (Canbara)- Modle 2020	1	AEA	HLCL	2-48-4-1	Rs. 117990 1560	FAR No. 178	
26	1987.6.4	D	i	Tri Care 2050 CA Low level liquid scintillation analyzer (PERKIN ELMER-PACKARD) S/No 86551	1		TCL	2_48	US $ 36503		
			ii	Cooling Unit -CHILL PACK 1420 S/No.1113 -REMCOR							
			iii	CPU 486 S/No 205272 -KEYPRO							
			iv	Monitor NOLX 1451 -KEYPRO							
			v	Key Board S/No.2299788 IBM							
			vi	Rx80 Printer Modle No. P 80RA S/No 08000642 EPSON (PACKARD)	1						

Scientific Equipment Invenory

No	Date	LP/D	Sub No.	Item Name	Qty	Issued to	Location	Inv. No	Value	Remarks	
										FAR No	Other
27	1987.6.4	D	i	Muffle Furnace Siemon Mueller with (Accessories) 42252/42297	2	Mrs.SSK	-10 -RP	2_48	Rs. 37,674	FAR No. 177	
			ii	Leisturgsregler	2						
			iii	Procelan Disk 12 CM DIAM x 4 CM, Height with flat botton, Holdewanger berlin 8A-5	2						
28	1987.8.22	D		Steel Test Pieces with developing powder	1			2_54	$1,000		
29	1987.9.2	D	i	Normal beam probe B5 S-E Sno. 574	1			2_56-1		UT-2	
			ii	Normal beam probe B2 S-E Sno.01121	1					UT-3	
			iii	TR-Probe SEB 4E	1				DM 15493	UT-20	
			iv	TR Probe SEB 2E	1	NDT	G-05	2_56-2		UT-21	
			v	Miniature Angle beam probe MWB60-4(-E) 56928	1			2_56-3		UT-12	
			vi	Miniature Angle Beam probe MWB 70-4(E) 56929	1			2_56-4		UT-10	
			vii	Miniature Angle Beam Probe MWB45-4(E) 56927	2			2_56-5		UT-15	
			viii	Charging Frame UK645	1		G-12	2_56-6			
			ix	Battery assembly for chrger UK 685	1		G-12	2_56-7			
			x	Probe cable PK:12	1		G-12	2_56-8	Rs. 245,564	FAR No. 182	
			xi	Probe cable SEKG 2	1		G-12	2_56-9			
			xii	Miniature Probe cables MPKH2	2		G-12	2_56-10			
			xiii	AVG seals MAD 44 (set) DGS Charts	1		G-12	2_56-11			
			xvi	Referance standards V2 (IIW)	1		G-12	2_56-12			
30	1987.11.12	D		TLD Unit Model 2271 including cables and manuals S.No. 107102	1	RIC	EPM	2_59	Rs 492,376 US $ 16025	FAR No. 185	
				TLD Unit (Harshow) Model 2000 B, S.NO. 972 -Picco Meter M-1040	1						
				Bicron Ne-sr-90/Y/irrediater Sno. 0102030041 m.2210.							
31	1987.11.30	LP		Leader Dual Tracer Oscilloscope S.NO.7100792,7100783	2	CK	NIL	2_61	Rs. 50,200	FAR No 187	
32	1987.12.10	LP		Logic Probe, Model LP2050 S.No.23218,23222	2	RIC	NIL	2_62	Rs. 1450	FAR No 188	
33	1988.4.20	LP		Old Metal Sheets (Circulars plate) 8"x3 1/2" x 1 1/2",14"x 14"x 5/16"	2			2_72	Rs. 695		
34	1988.5.11	LP		Old Metal Sheets (Circulars plate) 8 1/2" x 3 1/2" x 1 1/2"	1			2_73	Rs. 525		
35	1988.8.19	LP		Iron Plates	2 sets			2_80	Rs. 5750.	FAR No.208	
36	1988.8.29	D		FH 40F1 S.No. 2456, 43186	2		SSDL	2_83	us$ 475	FAR No. 212	
37	1988.9.20	LP		Phototype Board with P.S.U.	2	Mr. R.A	NIL	2_84	Rs. 24,120	FAR No 198	
38	1988.9.30	D	i	Portable Eddy Current Flaw Detector with standard accessoreis and probes	1		NDT	2_86/87	Rs. 275,776	FAR No 214	
			ii	Soft carrying case	1 set						
			iii	Pencil Probes, unshielded Z-145-P , S.N. 910-6010	1 set						
			iv	Shielded P-3-ADJ/S-250							
			v	Adaptor cable 940-1721	1						
			vi	Spring loaded spot type probe	1						
			vii	Weld scan driver/pick up probe							
			viii	DP-PU-DIFF (CHAM) 932-1051	1 set						
			ix	D/PU -DIFF (stab) 930-1573	1 set						
			x	Adaptor cable 940-1721	1						
			xi	Z-600 -375/5-50 KHZ (925-8502)	1						
			xii	Z-100-125/50-50 KHZ (925-8504)	1						
			xiii	Z-5-125/1,0-2,5 MHZ 925-8508	1 set						
			xiv	Spot type low frequency probe	1						
			xv	550-5000 probe 1-5 KHZ (927-8650)	1						
			xvi	Wear shoe (927 - 8651)	1set						
			xvii	Surface crack standards-950-5000 Stainless steel/950 - 5100	1set						
37	1989.1.19	D		Ref.Blocks for altrasonic testing block type 2 IIW -V2,	1	NDT	G-12	3./3/4	Rs. 23,703	FAR No 220	
38	1-Dec-89	D		1000 Portable Nim Bim CANBARA S/No.S- 1088140	1	RIC	NIL	3/3/6-1	US $ 1380		
39	1989.1.12	D	i	Portable Crack Detector with acc. "TIEDE" GWH 2000 S.No. 8826483	1			3.-4	Rs. 224,865		
			ii	High Current Cables 95 mm2	2						
			iii	Pair of Hand Electrodes	1						
			iv	Pair of Kontafluk -B - Electrodes	1						
			v	Electronic democratizing device	1						
			vi	UV-hand lamp with spot focussed reflection TIEDE	1					MPT-3	
			vii	Power Adaptor	1						
			viii	Choke for UV hand lamp	1						
			ix	Detek magnetic field indicator	1					MPT-5	
			x	Centrifuge tube, complete with stand	1					MPT-6	
40	1989.2.8			Ultrasonic Flow Detector Testing Equipment USL48 m Krautkraemer	1	NDT	G-05	3_5	Rs. 457036.83	FAR No.-222 UT-26	
41	1989.10.11	D		Pulse generator BNC,S.No.15058,Model PB4	1	NIL	NIL	3_16	4125		
42	1989	D		Radiometer with acc,FH40F2,S.NO.3871,3872	1			3_18	Rs.141,587 ,AS $31370	FAR No 229	
				Gamma Probe FHZ130,S.NO.1296,1297	1			3_18	AS $11790		
43	1989.11.29	D		Card drawer assembly for mod 2000C TLD Unit incl. Hat finge for card drawer Harshow TL Detector S -905 - M-2000A Picco Meter M-2271	1	TLD		3_18-2	Rs. 79,342	FAR No. 228	
44	1989.-12-27	D	i	Dosimeters pen type BIP STYL S-92488		NDT	G-05	3.-18	Rs. 20673	FAR No. 227	
			ii	Dosimeters pen type SEQ 6-0.2 rad S-92493			NDT				
45	1989.12.20	D		**X-ray Spare as follows**		NDT					
			i	Wire penetrameters to DIN 54109 consisting of FE 1/7 FE6/12,FE 10/16,50m length	1 set		G-12	3.-19-1			

Scientific Equipment Invenory

No	Date	LP/D	Sub No.	Item Name	Qty	Issued to	Location	Inv. No	Value	Remarks	
										FAR No	Other
Cont…..			ii	ASME/ASTM Penetrameters steel consisting of Nos.5,7,10,12,15,17,20,25,30,35,40,45,50	1 set		G-12	3.-19-2	Rs.309,352	FAR No. 235	
Cont…..			iii	IIW Collection of reference radiographers with 86 reference radiographers of welds in steel	1		G-12	3.-19-3			
45			iv	Portable monitoring device WD2,with chargeable battery,				3_19-1-4			
			v	Batter Charger CW 180	1			3-19-1-6		Sold	
			vi	Dose and dose rate meter "Babyline81" in gray No. 1794 with batteris,charger and case for the babyline 81 with accessories	1			3-19-1-6			
46	1989		i	Aluminium Filters type 1100		RPD					
			ii	6" x 6" 0.02"(0.5mm)	2			3.-19-3-1		FAR No. 226	
			iii	6" x 6" 0.04"(1 mm)	2						
			iv	8148 Beam Alignment template	1			3.-19-3-2			
47	1990.2.08	D	i	Dosimeter Charger (Stephen) Sno.2023158	1						
	1990.2.8	D	ii	Direct View Pocket Dosimeter,SEQ 6 Indicating range 0,2 R, No.88551-88560	2 boxes AEA		G-12	3.-21	Rs. 62,934	FAR No. 241	
48				Jacket Bath 6 mm PVC with water inlet & outlet thermostat autom overloading protection for 310 L chemical tanks	1	AEA	Dark Room	3-20-1-1		Sold	
			i	Tank Dukalit 10 LT	3			3-20-1-2			
			ii	Lid for 3447	3			3-20-1-3			
			iii	Floating Lid for 3447	3			3-20-1-4	DM 4425.50		
			iv	Drying cabinet 20	1			3-20-1-5			
			v	Lab stop timer	1			3-20-1-6			
				Gamm Calibrater Unit							
49			i	Irradiator for calibration of dose rate measuring devices Art.No.OB85 01-1x20 ci Cs 137 (740 GBq),1 x 1 ci Co 60 (37 GBq) BUHCHER	1				DM 32800	FAR NO.245	
			ii	Control Desk Art No. OB85 02	1	CK	SSDL	3_22	DM 4600	Rs.1,102,640	
			iii	2 Radioactive Sources Art No. OB85 03	1				DM 11100		
			iv	Trolly To hold the instrument OB85 04	1				DM 1620		
50	1990.4.10	D		Step down Transformer 2000 walt M-N-11MG , 230/115V,200VA	1	NIL	NIL	3_24	Rs. 19672.8	FAR No.240	
51	1990.5.29	D	i	Contamination monitor (Contamat) FHT 11m	2		QAL				
			ii	X-Ray Quality control kit	1						
			iii	Beam alignment Test tool Mod.07-662 S/No.7315	1						
			iv	Colimati0n Test tool Mod.07-661 S/No.8636	1						
			v	Aluminium Plates	1						
				1mm = 09	1						
				.5mm =04	1						
				.1mm =07, .31mm =01	1		QAL		Rs. 114,860	FAR No.253	
				.2mm=01 2.3mm =02	1						
			vi	(iv) Spirit level -01	1						
			vii	(v) Colimater test Tool Model-07-661	1						
			viii	(vi) Beam alignment Test tool Mod.07-662	1						
			ix	(vii) Focal Spot test tool S/No. 112B-4245	1						
			x	(viii) Beam Alignment Test tool Mod.07-662	1						
			xi	(ix) Film screen contact test tool Mod.07-608 S/No.47779-	1						
			xii	(x) Colimater Test Tool S/No. 161B-7028	1		QAL				
52	1990.6.5	D		**Laser Alignment with accessoreis :**		Cancer HP Maharagama	SSDL	3_29	Rs.296,776 A$ 87287	FAR No. 246	
			i	Power Unit S/No.33453He-Ne-laser 0.5 MW with attached focusing device 7x,Spot-time project turnable beam deflector 90 , C/W high voltage module and connects cable 2m, mounted on special suffer	1						
			ii	Filtering level with 19x telescope, mounted on special flonged joint WILDNK 05	1						
			iii	He-Ne 2 nos. Laser Guns S/No. 137500.5 / 13746 MW, with attached focusing device 15x cross hair projection,turnable beam deflector,C/W hig voltage module	1						
			iv	Power supply 220C AC/12VDC with cable and two sockets	1						
			v	Precision steel rulers 1 m long with matted surface	1						
53	1990.7.12			Mini Monitor II model 05-571 S/No C557		ck	ssdl	3-32-1	£ 20747.45		
54	1990.7.12	D		Porto Barrometer , 2039, 70392 Proz. Baro Mit Thermo 1050 - 920 , Mbar 0-500 M 0091	1	CK	SSDL	3_32	Rs. 19,233	FAR No. 247	
55	1990.7.12	D		Light Barries ,T 340(220V S.No.365196,365193,365194, 365195	3	Exp R	DR	3-32-3	DM 119.61	Rs 14700 FAR No. 249	
				T583 Reflectors 26 mm data	3		DR	3-32-4	A$ 4900		
56	1990.7.20	D		Dental Hanger 10 clips	3	Exp R		3_34	DM-1119		
57	1990.7.30	D	i	Water pathom 30x30x30xcm Perspex	1	CK	SSDL	3_37	739.73	FAR No. 250	
			ii	Water pathom 30x30x15xcm Perspex	1				US$ 2542.37	Rs.90,000	
			iii	12 Slices Pantham							
58	1990.8.21	D		**B/W Camera with acc. -**		SSDL	SSDL	3_39	Rs. 328,575 AS$101,245	FAR No. 252 Rs. 394,290	
			i	Camera (Philips) M-LDH0402/10, S-002193 , S.No.002175,002933,002220,003310	5						
			ii	Wall Brackets S.Nos.30577,30532,30473,31102,30676,31303	5						
			iii	B/W Monotor S.NosQA33380,QA30824,QA3286, QA 33518,QA22552, QA3285							
			iv	BNC Cable- 50M	5						
59	1990.8.21	D		**B/W Camera with acc. -**		QAL	QAL		Rs. 65,715 AS$ 20,249		
			i	Camera (Philips) S-002193 M-LDH0402/10, S.No.002173,002175,002933,002220,003310	1						
			ii	Wall Brackets S.Nos.30577,30532,30473,31102,30676,31303	1						
			iii	B/W Monotor S.NosQA33380,QA30824,QA3286, QA 33518,QA22552, QA3285							
			iv	BNC Cable 50M	1						

Scientific Equipment Invenory

No	Date	LP/D	Sub No.	Item Name	Qty	Issued to	Location	Inv. No	Value	Remarks	
										FAR No	Other
60	1990.8.21			(RMI Multy Function KV meter with remort controller S-240A-1366			QAL	3_40	Rs.18,696	FAR No. 256	
61	1990.9.7			Hermes Quality Controll Panthom with three plstic plates and A/C Adaptor Model-B s/No. 328	1		QAL		US $ 2250		
62	1990.9.7	D	i	Hermes readout unit S.No. 323	1		QAL	3_41	Rs. 100,960		
			ii	Hermes Phantom block with detector plate S.NO.321	1						
			iii	Signal Cable 20 m	1						
			iv	Battery Charger Transformer	1						
			v	Energy Filters (5,10 and 15 mm thick	3						
			vi	Build up plates (5,10 and 15 m thick)	3						
63	1990.10.6	LP		Steel Ruler	4	NDT	G-5/G-1	3_44	Rs. 160		
64	1990.11.13	D		Warning Lamps and stand Red type FBL 220V	2	SSDL	AEA	3_44	Rs.29,160	FAR No. 255	
65	1990.12.18	LP		Fabricated steel test paces.	7		NDT	3_45	Rs. 7,000		
66	1990.12.18	LP		Rectangular Blocks	8		NDT	3_45	Rs. 6,240		
67	1991.1.7	D		Pocket Multimeter S.No.224813 keithley	1	NIL	NIL	3_46	US$ 456		
68	1991.2.22	D		TLD Card Drawer	1	TLD	EML	3_49	US $ 2340		
69	1991.5.16	D	i	Autoranging Digital Multimeter S.No.490235, M-175	1		NIL	3_53	Rs. 32,349	FAR No. 260	
			ii	High Voltage Probe M. 1600 A Sno-907285 (Kethely)	1						
			iii	HF taskkoft M. 1682 A (Multimeter Prob)	1						
70	1991.8.5			Timmer Spare parts for CH55 Syrelec Model Pl. (Type 1000 code PA1,)	1	SSDL		3_56	Rs. 12,125	FAR No. 265	
71	1991.9.2	D		Gamma Discs (model:290, 7 set nuclided in D dishes 1 uci,lack of Ba 133,Cd 109,Co 57 Co 60,Cs137,mu 54 and na 22 (Point Source)	1	NDT	LLCL	3_57	Rs. 38,745	FAR No. 262	
72	1991.12.31			98A 20858 Extender Board "A" for S-20MCA	1	SSDL 3_62			Rs.13,284	FAR No. 263	
				98A 20861 Extender Board "B" for S-20 MCA	1				Rs.13,950	FAR No. 261	
73	1992.2.12	D		X-Ray Calibrater Unit (Pantak)		SSDL			Rs. 1,826,664	FAR No. 264	
			i	X-Ray Control panne-Model HF 160 S/No 9109-0003CP		SSDL					
Cont.....			ii	Electronic Controler -Model HF 160 S/No 9109-0003EC		SSDL					
Cont.....			iii	Water Cooler -Model HF 160 S/No 9109-0003WC		SSDL		3-67-2			
73			iv	Cathord Generator-Model HF 160 S/No 9109-0003CT	1	SSDL					
			v	X-Ray Tube		SSDL					
			vi	Shutter Control Pannel		SSDL					
74	1992.2.12			M/No 230 Digital KV Meter S/No. 2030	1			3_67			
75	1992.3.13	D	i	Survey Meter 05 - 571 , S.No.C636	1		QAL	3_68			
			ii	Survey Meter 05 - 571 , S.No.C657 Rs.76,450 FAR No. 278	1	SSDL	SSDL	3_68			
76				Exposure Meter M/No 06-526 S/No 1125	1		QAL				
77				Remort Controller M/No 240A .P/No.102606	1						
78	1992.7.13	D	i	Teleprobe Model FH40 FE-003872-3871 (Fag Survey Meter)	2	AEA	QAL	3_74	Rs. 412,560 AS $ 103140	FAR No. 255	
			ii	Fag Contamination Probe FHZ 130 S/No.42482/31	2						
			iii	Alpha Beta gamma Probe FHZ 140A S/No.42482/34,S/No.42482/34	2						
			iv	Beaker Probe FHZ173 a S/No.42482/35 ,S/No.42482/35	2						
			v	Alpha Beta gamma probe FH25731	2						
			vi	Probe Cable 1.25 m	2						
			vii	Wooden transport case for teleprobe FH 40FE	2						
79	1992.2.13	D	i	Digital Audible Dosimeter Model 885 (S.NO.3248.3898)	2		QAL	3_74	$633	Rs. 325,230 FAR No. 280	
	1992.2.13		ii	Digital Audible Dosimeter Model 885 (S.NO.3248.)	1			3_74	$633		
	1992.2.14	D	iii	Contamination monitors for alpha beta and gamma radiation model autocount PCM 100 Sno.7304,7303(Breth Hold)	2		QAL	3_75	$5,400		
80	1992.7.13		i	"Andrerx" (model CMA20) tube head S.No. 52449	1	NDT					
		LP	ii	"Andrerx" control unit S.No.52449	1	3_75 Rs. 1,555,230	G-05			FAR No.-269 RT-1	
			iii	Connection cable 20 mm	1						
			iv	Power Supply cable 10 mm	1						
81		D		C2575 600cc thin window ionization chamber SN.459	1	SSDL		3_75	Rs. 29,160		
82	1992.11.4	LP	i	Fag telesonde model FH40 FE	1	QAL	QAL	3_81	Rs. 315,864		
			ii	Alpha Beta gamma probe FHZ 140 S/No.42482/31	1						
			iii	Beta Gamma Beaker Probe FHZ 173 S/No.42482/35	1						
			iv	Alpha Beta Gamma Probe FHZ 731	1						
			v	Fag Probe M/No. FHZ 731 S/No.42482/38	2						
			vi	Fag Audible dosimeter	1						
83	1992.11.26			IC Chip Sno. 32933032	1		NIL	3_81	$25		
84	1992.12.30	LP		Krautkramer Model USK 7B Ultrasonic Flow Detector without monitor	1	DGLW	G-05	3_83	Rs. 445,565	FAR No 272 UT-26	
85	1993.2.26	LP		Lab Sink	1	NDT	DR	3_86	Rs. 1210		
86	1993.6.9	D		Nim Bin Power Supply and S.No. 3937103	1	CK	LLCL	3_94	945		
87	1993.6.15	D	i	Multimeter S.No.5730060,5730061,M-8060A	2	NIL	NIL	3_90	996		
			ii	Universal Recharger LT 2003GV "SEIKOSHA" Power Supply	1	RA	NIL	3_90			
			iii	Nicad Battery Pakcs LT 2004NC S.NO. 13676	1		NIL				
88	1993.6.16	D	i	Soldering Power Station-ERSA-MS 6000	1	NIL	NIL				
			ii	Digital LCR Meter "Escort ELC 130,S.NO.21014004	1						
			iii	Service Koffer 1750 (Tool Kit)	1	3_92 Thusara Rs. 59,331	NIL			FAR No. 292	
			iv	Werkgeugtasche 2800 tool set (18 pieces each)	1						
89	1993.6.16		i	Raaco magazine 1224 -Component Storage Boxes (Large)	2			3_92	Rs. 46,810	FAR- 293	
			ii	Raaco magazine 1248 Component Storage Boxes (Small)	2						
			iii	Soldering Iron LONER type M-920	1	NIL	NIL				
90	16/06/1993			DC Power Supply PE 1535 OO (Phillips) Sno. WB 5568	1						

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No	Date	LP/D	Sub No.	Item Name	Qty	Issued to	Location	Inv. No	Value	Remarks	
										FAR No	Other
91	1993.7.6	D		Oscilloscope S.No.B063737, Tektronax 244 5B	1	NIL	NIL	3_95	Rs.22,386.87	FAR No. 295	
92				Telescopic Prob (Fag) M/No.FH 40 FE S/No.FNR-231					620		
				Accessories							
				Detector (Fag Probe) M/No.01164 S/No.42485/5028							
93	93-8-25			Metal Funnel Stand 3" High	1			4_2	Rs.700		
94	1993.3.19	D		Logic Analyzer PC Card	1	NIL	NIL	4_7	Rs. 51,881.95		
95	1993.12.11	LP	i	Krautkramer DM2 thickness guage (Altrasonic Thickness meter)	1	DGLW	G-05	4.-9	Rs, 162000	FAR No-298 UT- 27	
			ii	DA 201 5 MHZ Probe	1						
			iii	DA 231 Probe Cable	1						
			iv	DA 261 Sunshield	1						
96	1994.6.17			Raaco-magazin 1248 Component Storage Boxes (Small)	2	NIU	NIL	4_19	DM 165		
97	1994.8.5	D		Master Board/840632A Accuspec/A (Software)	1	CK	LLCL	4_25	3447		
98	1994.9.2			Temperature Controlled Soldering station PX-1E)	1	Mr. Kasige	Nil	4_27	Rs.6,317	FAR No-300	
99	1994.11.16	LP		Dark Room Safe Light with filter 1/2" 01 number	1	ER T			Rs. 33,750	FAR No-301	
			i	Film Viewer 01 No. radin hat spot	1	DR			Rs. 36250		
			ii	Lead services (4"x10'x0.125") 50 No.	50	DR 4_30			Rs. 17000		
			iii	Lead services (4"x15'x0.125") 10 No.	10				Rs. 4050	FAR No-302	
			iv	Single film cassettes (4"x15") 10 No.	50				Rs. 6750		
			v	Single film cassettes (4"x15") 10 No.	10				Rs. 1700		
100	1995.2.3	LP	i	Survey Meter (Portable Neutron) Model 190, S.No. 1338 Rs.690,000	1	HLAR FAR No-305	QAL	4_31			
			ii	Ditector Model -RPN S/No. S124	1						
101	1995.5.23	D	i	Weller Desoldering/Soldering PUMP,"",DS-801 S.No.40469	1	CK	NIL	4_33	Rs 16,962	FAR No-305	
			ii	Weller Bench Holder (c-15,15093) ,	1						
			iii	Clearing foll DS205(15-1350099)	1						
			iv	Soldering Station -Weller M-WECP 20 S/No. S-07.93	1						
102	1995.6.21	LP	i	Spectroscopy Amplifier M-2012	1	1 Set		4_34	Rs.75,525	Rs. 579,625 (inl.tax) FAR No. 306	
			ii	H.V.Power Supply (Model 3102D)	1				Rs.99,750		
			iii	NIM Bim Power Supply (Model 2000) Sno. 3955409	1		LLCL		Rs.152,000		
			iv	NAI Detector Model 802-4,S.No.03955971	1				Rs.180,550		
			v	P.M.T. Base/Preamplifier Model.2007P) S.No.04956629	1				Rs.43,425		
103	1995.7.6	LP		Lead Shield - 707/S (Special sheet)S.No. 0595, 7336	1		LLCL	4_34	Rs. 492,250	FAR No. 308	
104	1995.6.21			01 set Merinelli Beaker with connecting cable	28	MCS	LLCL	4_74			
105	95-9-28	D		IAEA Ambient Air Sampler including Pumping Station,Sampler Head,Stacked filter unit,01 box of lack of 0.4 um and 8.0 um filters and instructions S.No. 55091180,Model 250	1	MCSS	SPL	4-.35	US$ 1900		
	1996.2.1	D	i	Mini-Reflex light barrious T-340	3	SSDL	AEA	4_39	Rs. 21,080	FAR No-322	
		D	ii	Glass reflector T 583 26mm dia	2						
106	1996.5.28	D		Voleraft Digital Multimeter Messg.M4650 CR (DMM) and acc. S/No. FG 905920	1	NIL	NIL	4_41	AS $ 199		
107	1996.5.28	LP		Digital Oscilloscope S.No.B 010937 Tektronix TDS 340 S/No. B 010937	1	NIL	NIL	4_42	Rs. 203,711	FAR No. 321	
108	1996.7.27	D		Lead Collimator with shutter & set of filters (OB85/873)	2	SSDL	AEA	4_48	Rs.201600	FAR No. 319	
109	1996.7.27	D		Support for Lead Shieldering & Remote Control filter changer unit complete	1	SSDL		4_49	Rs. 258,500	FAR No. 323	
110	1996.9.14	LP		Programmable 10MHZ 2DDS Function generator, S.No. 071462, Model TG 1010	1	Mr. Kasige	NIL	4_51	Rs. 127000	FAR No. 314	
111	1996.10.3	LP		Differential Tastkoff attenuator probe Model: SI 9000 1:20 1:200	1	NIL	NIL	4_51	Rs 19,762.5	FAR No. 325	
112	1996.10.15	D		NAI Detector 3" x 3" S.No. 1962042	1	LLCL	LLCL	4_52	Rs. 350,295	FAR No. 324	
113	1996.10.22	D		Electromagentic Yoke Model Y-7, S.No.96091290	1	NDT - 2	G-05	4_53	Rs. 65000	FAR No-317 MPT-1	
114	1996.10.23	LP	i	Standard Case Contact Probe CHRF 054	1	TMRT	G-05	4.-53	Rs.160000 FAR No- 316	UT-4	
			ii	Standard case Contact Probe CHRF-016						,UT-5	
			iii	Angle Beam Wedge (LSA 0248)			G-12				
			iv	Angle Beam Probe (LSW 4890)							
			v	Angle Beam Probe (LSAW 548)							
			vi	Angle Beam Wedge (LSW 4830)							
			vii	Cable B.N.C. Lemo							
115	1996.11.2	LP		Nitrogen Regulator 1256068		JE	PML	4_54	Rs. 8500		
116	1997.2.2	LP		"Elelctrometer"(Victoreen)Model 530 , S.No. 261 Seatter Ion chamber, Model 6000-532		HLAR	QAL	4_55	Rs. 705,550		
117	1997.2.5	LP		"Memmert" Model UE 400 Electronic Programmable Oven complete with temperature range up to 300 c and intergrated digital timer		HLAR	B Block	4_55	Rs. 104000	FAR No. 326	
118	1997.1.18	LP	i	DX 8620 100 MHZ Analogess digital storage oscilloscope Sn.62500802				4_56-1	Rs. 299,500		
			ii	MX 9002 Differential Probe SN.65100871					Rs. 3750		
			iii	HA 1251 Rs. 232/Centronic interface converter for DSO		NIL	NIL				
119	1997.2.13	D		Scintibloc-51 SEA 51 NAI , S.No.6692, (Scintillation Detector)		VAW	SPL	4_56	Rs. 117,162 us$2864	FAR No.341	
120	1997.4.27	LP		"Automess" Dose Rate Meter Model 6150 ADS,S.No.90473	1	HLAR	SSDL	4_56	Rs.59,957	FAR 327 RT-6	
121	1997.4.27	LP		"Automess" Dose Rate Meter Model 6150 ADS,S.No.90545	1		NDT	4_56	Rs.59,957.5		
122	1997.5.28			Alpha Beta Monitor LB 122 , including LB7618-1, LB-G and calibration against in base standard	1	AJ	QAL	4_57	Rs.105,371.56	FAR No-342	
123	1997.6.16	LP		Black Light 220V Model 2B100 for magnetic particle testing	1	TMRT	G-5	4_59	36000	FAR No-328	
124	1997.6.25	LP		Fluorscent Bench Magnifier with Magnifine Lence	1		NDT	4_60	Rs.8850		
125	1997.8.21	D		Mini Rad Monitor Type 100 R, S.No.3414	1	Mr.A. J	G-10	4_60			
126		LP		UV Light Meter S-39799, M-J221	1	NDT-2	G-12	4_60	Rs. 59900	FAR No- 330 MPT- 8	

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No	Date	LP/D	Sub No.	Item Name	Qty	Issued to	Location	Inv. No	Value	Remarks	
										FAR No	Other
127	2007.8.27	LP		Magnaflux Field Indicator S-97-729			G-05	4_61	Rs.23,800	FAR No- 331	
128	1997.9.02	D		Indian TLD Reader S.No. 03/97 (TLDBR-7B) (Repleasment to 4-43-6)	1	HLAR	AEA	4_61	Rs.350,000	FAR No 349	
			i	Programmable Computer BARC TLD BR 7B/02/96					Rs12,000		
			ii	Mono SVGA Monitor mono chrome Sno-28015958D Model MF4S					Rs.7,000		
			iii	(BARC) TLD Badges	500				Rs.50,000		
129	1997.9.15	LP		Precision Balance S-12943,M-1620D	1	LLCL	AEA	4_61	Rs.72000	FAR No 329	
130	97-10-30	D	i	REX Reference phantoms base package, Type L981030 26761-0323					Rs. 59,896.95		
			ii	Stand	1	One Set		4_63-3			
			iii	Copper Plate	1						
			iv	Rod Panthom	1						
			v	Philler Panthom	1				Rs. 5370		
131	1997.11.13		i	Standard Imag. Inc.,Film Processor quality control kit and (Dark Room Quality control kit)	1	QAL	QAL	4_64	Rs. 106,080.40	FAR No 345	
			ii	X ray 331 portable densitometer,S.No.033036 lid. AC/DC Adaptor	1						
			iii	X-rite 334 portable sensito meter S.No.20978	1						
			iv	TM-99A Digital Thermometer S.No.179090	1						
132	1998.1.9	D	i	Dose Rate Survey Meter "GRAETZ X5 DE ,S.No.53138	1	HLAR	QAL	4_65	Rs. 201,630	FAR No-362	
			ii	"GRAETZ Telescope Probe S.No.175492	1						
133	1998.1.22	D	i	Radiation Monitor with cable, S.No.26-0230,Model 2026 C (RADCAL)	1	HLAR	QAL	4_66	Rs,149,550	FAR No-346	
			ii	Electrometer / Ion Chamber Model:20x6 - 1800 , S.No. 30115	1						
134	1998.2.16	D		X-ray Beam Analyzer,"Victoreen" S-1471,M4000 MX	1	QAL	QAL	4_66	Rs. 212,975 US $ 3500	FAR No-363	
135	1998.2.6	D		TLD Reader and acc. Model 4500C. S.No.5001040 Hashow Acanteam 5500 welch Aqllyn Barcode reader Sno. 1311053-[illegible]	1	HLAR	PML	4_67	Rs. 2,123,712	FAR No-367	
136	1998.2.4	LP	i	Computer Dose System	1	Mrs.SSK	G-9	4_67	Rs.320,769	FAR No-366	
			ii	"Wavetek" Model 310B/320B Digital Multimeter ,S.No.97010791	1						
			iii	Electro Chemical Cell	1						
			iv	IBM Compatible Software	1						
137	1998.6.30	D	i	LCD Display unit incl.display of piggyback board	1			4.-70	Rs. 149,874.59	FRA No- 349	
			ii	Cable to connect LCD Display Unit to Z1-562D board	1						
138	1998.8.14	D		Concrete Test Hammer type N,S.No. 145079		NDT	G-5	4.-72	Rs. 549,676.32	FAR No-348	
			i	Testing Anvil N/ND/L/LR, S.No.9/169,							
			ii	Rebar loctor profomater in model 6 basic equipment S.No.2040-42							
139	1998.9.25	LP		wall mounted thermohygrometer model S.No.150 SEKISUI	1	CK	SSDL	4_73	Rs.7500		
140	1998.9.30	D		Electrostatic Unit Model No.2.u 500 (Keep with the 4-76 balance) (consumable)	1		XRF	4_74	$30		
141	1998.11.19			Micro Pippete 50 to 200 µL ,Micro Pipette 200 to 1000 µL	2	Mrs.SSK	G-10	4_75	Rs. 25,000		
142	1998.11.20	LP		Solder Sucker		Carmela	Nil	4_75			
143	1997.2.06			Digital X-Ray timer -07-457 S/No C-1334	1		QAL		Rs.104,000		
				Digital X-Ray Exposure timer -07-457 S/No C-1335	1		QAL				
144	1998.12.12	LP		Bench Top DC Power Supply, PL 320 QMD, S.NO.104883 (Pricision Line)	1	CK	NIL	4_76	Rs. 61830	FAR No 354	
145	1998.11.25	LP		Micro Balance S.No.13201769,AxD HR 202 Capacity 210g x 0.0001g (Dual)	1	XRF	XRF	4_76	Rs. 107000	FAR No 360	
146	1998.12.2	LP	i	Mini 900 Seris Contamination Monitor S. No. 0003607, Model 900/EP15,	1	QAL	QAL	4_76	Rs. 105,750	FAR No-358	
			ii	Mini 900 Seris Contamination Monitor S. No. 0002943, Model 900/EP15,	1				Rs. 151,875	FAR No-359	
147	1998.12.20	D		Magnatic Stirrer S-33041(Traple Place Heated) S.No. 33041	1	RPL	G-10	4_77	Rs.100,637.33 £ 490.06	FAR No 350A	
148	1999.1.18	LP		Victorian' Iron Chamber Survey Meter,S.No.1016,M-450, P-DE-SI (Iron Chamber Survey Meter)	1		QAL	4_77	Rs. 195500	FAR No 370	
149	1999.3.8	D		Viscometer S-112804	1	RPL	G-10	4_79	1685	FAR No 354-A	
150	1999.2.23	LP	i	Mechanical Stirrer S-JGL 1924	1	RPL	G-10	4_79	Rs. 13500	FAR No-371	
			ii	Heating Mental	2		G-10				
151	1999.3.29	LP		Model 707/S Special Shield for use with NAI Detector	MCS	LLCL		4_80	Rs.835,000	FAR- 372	
152	1999.3.29	LP		Dessicator Cabinet Mino TDC 281-P- S- DES07292-98	1	SSDL	AEA	4_80	Rs. 233,600	FAR- 373	
158	1999.4.2	D		Dry Oven "MEMMERT" ULE 600 , S.No.96980192	1	RPL	G-10	4_80	Rs.254,891.47 DM 3600	FAR No-355	
159	1999.4.2	D		M4 3D Digital Smoke Stain Reflectometer S-02891,14704 , Sno. 02971M 14901	1			4_81	£ 1210.5	FAR No-385	
160	1999.5.3	D		U.V. Exposure Unit,Model. LV204,S.No.071205	1	RP	NIL	4_81	£ 350 Rs. 66,174	FARNo-357	
161	1999.6.16	D	i	SNS -3 Data Logger S.No.3-8	1	VE	TCL	4_83	Rs. 159,991	FARNo-387	
			ii	Palm Top Computer Model F1238A S/NSG83370952 (HAWELETT PACKARD)							
			iii	AC/DC Adaptor F 1307A ABG S/No TH744034701 (HAWELETT PACKARD)							
162	1999.7.29	D	i	Portable Digital DM 7330221 Oscilloscope (Scope Meter) Fluke	1	NIL	NIL	4_85	Rs. 190,644.30 $3683.1	FAR No-390	
			ii	RS.214-146 Digital IC Tester Chipmaster (compact) S.No.CMC42800	1						
			iii	RS 546 -354 Multipurpose vice and 3rd Hard system (PCB Holder accessoreis)	1						
163	1999.7.27	LP		Water Bath DK-8B, S-99436, Ambient - 99L with a digital temperature control	1	RPL	G-10	4_86	Rs. 44,088.88		

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No	Date	LP/D	Sub No.	Item Name	Qty	Issued to	Location	Inv. No	Value	Remarks	
										FAR No	Other
164	1999.9.10	D		"Canberra" Easy Spec Hand Held NAI Spectrometer ,Sno.12982493	1	MCSS	LLCL	4_87-3-2	Rs. 475,483 .£ 6896	FAR No-394	
				Adaptor "UMEC" S.No.C8047363	1		LLCL				
165	1999.11.5	D		Water Purifier,Type200 S.No.10777399G (Water Stiller)	1	RPL	G-10	4_89	Rs. 111,242 DM 1657	FAR No 376	
166	1999.4.20	LP		Top Pan Balance 6200D SCS	1	RPL	G-10	r	Rs. 61,222.74	FAR No 374	
167	1999.11.11	D	i	Dumbell Cutter and acc. S-C99005/12	1	RPL	G-10	4_89	Rs. 317,481 £ 2317	FAR No 378	
			ii	Specimen cutting Die with shank, to ISO 37 , Type 2-1997	1						
			iii	Tear Test specimen in cutter with shank to ISO 34 Fig 3-1979	1						
168	1999.11.17	D		Specroscopy Amplifier, triangular ganssian , S.No.06995605,Model 2026	1	LLCL	LLCL	4_90	Rs.187,459 $2380	FAR No-377	
169	1999.11.17	D		Motor Mill "Pulverise" S.No.102/5365 with acc.	1	SPL		4_90	DM 8929		
170	1999.11.18	D		Bi Distillation Unit Bi 12E including filling level sensor S.No.3510999,M-D6450	1	SPL		4_90	Rs.463,015 £ 11265.45	FAR No-397	
171	1999.12.2	D		Microwave Digestion vess 45 ML	4	MCSS	XRF	5_1-1	Rs.152192.00	FAR No-398	
172	1999.12.2	D	i	"USKPC"Mains Battery Charger Unit (USK-PC) , S.No.387	1	G-5	NDT-G-5	5.-1-2	£ 190		
			ii	"USKPC" Battery Pacy (Nickel cadmium rechargeable battery) S.No.HA98050707151,Type 0757-203-301	1				£ 95		
173	1999.12.3	D	i	X-Ray Tube -(GILARDONI) M-1.5E+07 S/No. 62/147		NDT	B,Block	5_1-5	Rs. 1,993,919	FAR -383	
			ii	X-Ray Control Unit -(GILARDONI) M-1E+07 S/No. 11430004							
174	2000.2.8		i	Portable Neutron Dosimeter Unit CRAMAL/ 31 Sn. 1818603/18396	1		QAL	5_3	Rs. 30,748		
			ii	Battery Charger S.No. 18379	1						
175	2000.2.14	LP	i	Seive Shaker Model D051 S.No.106A1197 with acc.	1	MCSS	SPR	5_4-2	Rs.173,000.00	FAR No- 423	
			ii	01 set of lid and receive							
			iii	01 No. 200 mm/2mm sieve (S.No.5647533)							
			iv	01 No.200 mm/850 micron sieve							
			v	01 No.200 mm/425 micron sieve							
			vi	01 No. 200 mm/250 sieve (S.No.5578459)							
			vii	01 No. 200 mm/106 Micron sieve							
			viii	01 No. 200mm/75 micron sieve							
175	2000.2.15	D		GAMA Beaker PP325DIL with lid L.P. and 133 N.E	33	MCSS	SPR	5_4-3	501.6		
176	2000.2.21	D		NAI (TI) Scintillation Detector ,Mistyle Detector Model 3M3/3, Make Bicron. No. AA 8140	1	MCSS	LLCL	5_5_2	US$1540	FAR N-382	
177	2000.3.17	LP		Universal Oven M-Tanko	1	MCSS		5_6-7	Rs. 58,500	FAR No- 424	
178	2000.3.23	D		Evaluation Kit for Microcontroller -80C535 (MCB517AC V 2.9 517 starter kit) KEIL Board	2		NIL	5_10-3	Rs. 79,202		
179	2000.4.7	LP		Test Tube Racks	3	Mr. Kapila	QAL	5_10-7	Rs. 600		
180	2000.5.3		i	Soldering Station, Model 168-3C , S.No.9508,9511 XY Tronics	2		NIL	5_13-5	Rs. 14,400	FAR No-404	
	2000.5.4		ii	Desoldering Pump (50SLG 93, GS GS108)	3		NIL	5_13-7	Rs. 2,168	FAR No-405	
181	2000.7.19	D	i	12TON Mannual Spectropress (4312 E Pellertizer S.No.012962-02	1	VAW	SPR	5_16-5	Rs. 223,315 (US $ 3241)	FAR No-426	
			ii	Die and Plunger evacuable 13 mm (4013)	1						
182	2000.7.26	LP		PH Meter, Bench Type Complete with Temperature Probe Adaptor & Electrode EC/FG 7350401B "EUTECH" S.No.41112, Make. Singapore,Cyberscan 500 PH		RPL- SSK	G-10	5_17-2	Rs.43,295	FAR No-407	
183	2000.8.1	LP	i	X-ray Beam Analyzer,Victroreen "NERO TN MAX ,Model 8000 S.No.93754 (X-Ray test devise)	1	QAL	QAL	5_17-4	Rs.885,979 US $ 10860	FAR No-384	
			ii	KVP Range Meter Model 8000 S.No.93754, Make USA (Detector)	1						
			iii	Micro filters S.No. 93754,W/A/ Filter S.No. 93754	1						
			iv	AC Adaptor Make "China" port No. PD 1210 AEPL5	1						
			v	Detector Cable with carrying case "ZERO" Centurion	1						
184	2000.9.4	D		Analog Interface Board S.No.0518620	1	RA	QAL	5_19-4	US $ 540		
185	2000.9.18	LP		Jouan Bench Top Centrifuge,Model BB3V(30007151)		SSK	G-10	5_19-5	Rs.89,000	FAR No-408	
186	2000.10.13	LP		Ionization Chamber 0.6 CM type S.No.3071,M 2571A	1		SSDL	5_20-5	Rs.171,414	FAR No-411	
187	2000.10.24	LP		Fluoroscopic Test Object (with 2 copper plates S/No.47032-061 ,4601502-20)	1	THSS	QAL	5_21-3	Rs. 99,500	FAR No-409	
188	2000.10.25	LP	i	Motorized Depth dose system S No. 841 M Including following	1	JG	QAL	5_21-4	Rs. 460,000	FAR No-410	
			ii	Water Phantam S.No.749,Model MT 150	1						
			iii	Power Supply, Model STAF-1059 ED	1						
			iv	Water Drain Kit S.No.99101214F,Model. MT-DDA-M	1						
189	2000.11.6	LP	i	Lead Marker Storage Box Complete with : 5 sets (1 each) letters A-Z and numbers 0-9 size : 6 mm	1		G-12	5.-22-1	Rs.6950	RT-5	
			ii	Channel Hangers for 3 film 4"x10"	8				Rs. 37,840		
			iii	Image quality indicators wire type set (1 each) EN 462-111 AL EN 6 AL EN 10 AL EN, 13 AL EN (for aluminium)	4 (1set)		G-12		Rs. 10,870		
			iv	Image quality indicators wire type set (1 each) EN 462-1:1 FE EN, 6 FE EN, 10 FE EN, 13 FE EN (for steel)	3 (1set)		G-12		Rs. 8,595		
190	2000.11.29	LP		NIM BIN Power Supply S.No.07004103, M-2100-2 "Canberra"	1		NIL	5_23-2	Rs.286,875	FAR No-414	
191	2000.11.29	LP		Fast Pulser S.No.09005249,TC 814 ("Canberra")	1		NIL	5_23-3	Rs.130,000	FAR No-413	
192	2000.12.4	LP		Water Deionizer (Barnstead D 7033-30 Easy Pure RF Bench Top Deinizer complete with D 50231 Pre-treatment D 50229 High Purity/Low TOC DI cartridges and FL 703x2 0.2 u final filter S.No.1051000962198	1	Thilaka	SPR	5_23-4	Rs.241,596	FAR No- 415	

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No	Date	LP/D	Sub No.	Item Name	Qty	Issued to	Location	Inv. No	Value	Remarks	
										FAR No	Other
193	2000.12.27	D		High Voltage Power Supply S.No.09005492,M-3102 D	1		AEA	5_25-1	Rs. 129,375	FAR No-416	
194	2000.12.27	LP	i	Micropipett 1-10µ S.No.26478/26480, Model R680/0	2		XRF	5_25-2	Rs. 19,200	FAR No-432	
			ii	Micropipett 1-100µ S.No.32070,32071, Model R680/B	2		XRF		Rs. 19,200		
195	2000.12.28		i	Phasec 2200 Eddy Current Instrument,Dual Frequency with static & Dynamic mode conductivity & coating thickness measurement C/W Operating mannual, niccd cells				5_25-3	Rs 1,523,455	FAR No-420	
			ii	331012-PHASEC 2200, Portable dual frequency eddy current ist., S.No.83355/02	1						
196	28-Dec-00			**Acc. of Eddy Current Instrument**							
Cont…			i	39A035- BATTERY CHARGER/ELIMINATOR Locator 2/2Ph2200 requires relevent input & output power leads,S.NO.85379/01	1		G-12			ET	
Cont…			ii	(29A096) CORD	1		G-12				
196			iii	33A140 - Carrying bag for PHASEC 2200	1		G-12				
			iv	122PIA-Probe,SFC. Unshielded 4-0" pencil 2M.NF acetal	1					ECT-8	
			v	33A135 - LEAD cond/fast scan-PHASEC 2200 Lemo 5 w Pl to Lemo 12 w pl 1.5 m	1					ECT-19	
			vi	5A011- Lead,Probe 1.5m (BNC-BNC light weight cable)	1					ECT-16	
			vii	33A130-Adapter, 1.5 m Lemo/12w-lemo 4 w (PHASEC 2200 reflection probe	1					ECT-20	
			viii	700 P11A-Probe Reflection shielded NFE 11 idia x 45 Lemo - 4 w 300 HZ-100 KHZ S/No. 83488/3	1		G-12			ECT-7	
			ix	5A213B-Test pencil calibration tube ASME-5 (CZ126 05/8" O/D 20 SWQ)	1		G-12				
			x	IDP138L-18K- Probe, I/D Driff rigid-83 18K 13 (DEMO STD) discon lead S/No. 82750/1	1		G-12			ECT-6	
			xi	47P001-Probe elect. Conductivitystd. AS3000 60KHZ 500 KHZ 12.7DIA, S.No.83754/10	1		G-03				
			xii	33A136-Conductivity calibration block set for PHASEC 2200	1					FAR No-420	
			xiii	106P4-Probe SFC shielded 4.5" str 2.0M Nfe. Acetal	1						
			xiv	29A001-Lead probe 1.5 m BNC/Microdot for locator	1						
			xv	130 P4- PROBE SFC. Ushilded 4-0" 390 Ult pemal 7 K.60K acetal BNC	1						
			xvi	120PIA-PROBE,Sfc ushielded 4-0" pencil 200k. f/NF acetal	1						
			xvii	104P4-Probe SFC shielded 4-5"str. 200k F/NR	1						
197	2000.2.1	D		Panel Meter	1	NIL		5_27-3	Rs. 1200		
198	2000.2.1	LP		ST 62 goot Magnifier glass 01	1		NIL	5_27-4	Rs.1100		
199	2001.2.3	LP	i	"Bicron" Scientillation Detector NAI (II) Model ORTEC 905-4,S.NO.TP 630	1	MCSS	LLCL	5_27	Rs. 127,525	FAR N-402	
			ii	ORTEC MS276 PMT BASE with Pre Amplifier cables S.NO.4108	1	MCSS	LLCL		Rs 235,847	FAR No-419	
200	2001.2.13	LP		ORTEC Spectroscopy amplifer M-575A	1	MCSS	LLCL	5_27	Rs.132,300	FAR No-418	
201	2001.2.21	D	i	Si(Li) Detector Modle SL30165,S.No.1100909	1	MCSS	LLCL	5_29-1	Rs.1,443,834	FAR No-436	
			ii	Desk Top Inspector, S.No.10005670	1						
			iii	Genie 2000 basic input S 502C(software)							
202	2-Feb-01	D		Sample Holder attachement to fit X-ray tube shield	1	VAW	XRF	5_30-2	Rs.148,672.92	FAR No-438	
203	2001.3.6	D	i	Ultrasonic Cleaner,Model RK1040 SN 319020018	1	MCSS	SPL	5_31	Rs. 1,423,092	FAR No-437	
			ii	Basket Type Vibratory disk mill, Model KS 100 P/N20.724 0003	1						
			iii	Sieve shaker AS 200 control G.P/W30.017 0001 SN.200412020	1						
			iv	Sieve damp 'Comfort for sieve 200 P/N310310015AS 200 control G.P/W30.017 0001 SN.200412020							
			v	Standard test sieve 200x50 mm DIN ISO 3310/1C Mesh 63 um P/N 31031 0015	1						
			vi	Milling equipment/grinding set RS100 chrome steel 250ml P/N 01.462.0172	1		XRF				
			vii	Milling equipment/grinding set RS100 from agate 100 ml	1						
204	2001.5.9	D		GM Tube		TDRC	NIL	5_35-4	Rs.50,151.14	FAR NO 433	
				GM Tubes with ripout , S.No.21/2/2KI,Model GM 120	1						
				GM Tube with ripout 22/2/2KI, Model GM120	1						
				GM Tube with ripout 23/2/2KI, Model GM120	1						
				GM Tube with ripout 24/2/2KI, Model GM120	1						
				GM Tube with ripout 25/2/2KI, Model GM120							
205	2000.5.16	LP		Lead Shield , Model 7075 (Ref;50/00/088, for 3x3 NaI Sno.02990213	1	SPL-	LLCL	5_36-1	Rs. 745000	FAR No-403	
206	2001.5.21	LP	i	Bench Thickness Gauge (Digital) Base (S.No.98017/13 Wallace		Mrs S.S.K	G-10	5_36-4	Rs. 185,625	FAR No-450	
			ii	Dial Guage Sno. 113068 Wallace							
			iii	Aditive weight (304)							
			iv	Anvil 3.7mm dia							
			v	Anvil 5.5 mmdia							
			vi	Operating Instruction manual & Test certificate No.22654							
207	2001.5.3	LP		Steel Plates (300mm x 250cmx19mm)	15		NDT-2	5_38-7	Rs. 11,250		
208	2001.5.30	D		Ion Chamber survey Meter Type:21005, S.No.0001953, Model Mini Smarton	1		XRF	5_39-1	Rs. 196,038.95	FAR No-439	
209	2001.6.20			50 NP 13 y.20 Wire Cutters (Goot)	2		NIL	5_40-1	Rs. 1956		

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No	Date	LP/D	Sub No.	Item Name	Qty	Issued to	Location	Inv. No	Value	Remarks	
										FAR No	Other
210	2001.7.30	D		Gents Air Smapler with stacked filter unit (Ambient Air Sampler, incl: pumping station , Sampler Head, Stacked Filter Unit , 1 box each of 0.4 um & 8.0 um filters	1		AEA	5_42-2	Rs. 367,333.71	FAR No-440	
211	2001.8.7	LP	i	Balance Load 470 uH 52x13.5 dial (17 KHZ C/F) BNC - PL S.No. 51815 (5A 137)	1			5_43-1	Rs.12,850	FAR No-453	
			ii	Cable , 1/D Prob.SW/able Cbi,C 20m				5-43-1	Rs.44,525	453	
			iii	Jaeger-6WCBNC-SKT load discon S.No. 92550/01 LRC-5P			G-12			FAR No-452	
			iv	Test Piece, Support ring steel (5A -216)	1				Rs. 14,872	ECT- 26- 454	
212	2001.8.14	LP		ESCO Model EQU/05-EFt customized fume hood/cupboard with all related accessoreis ,S.No.2000-578	1		SPL	5_43-4	Rs.638046	FAR No-417	
213	2001.8.14	LP	i	ESCO Model EQU/05-EFt customized fume hood/cupboard with all related accessoreis ,S.No.2000-577		SSK	G-10	5_43-4	Rs.638,046		
			ii	SDS Analysis Kit							
			iii	Aluminium Sprite Level's Guage							
214	2001.8.17	D		Baby line 81-Portable Ionization chamber S.No.2866,2867,Model : 18316	2	QAL		5_45-1	Rs. 380936.12	FAR -435	
215	2001.8.18	D	i	Model ASA 100 NAI Multychannel Analyzer Card Sno. 6010833		MCSS	LLCL	5.-46-1	Rs. 601,507	FAR No -441	
			ii	Model S-500-C GENEI-2000 Basic Multiimput (Basic spectrescopy software) Sno. 0675080							
			iii	AFT Research Amplifier "Canberra" S.No. 06010526, Model 2025	1						
216	2001.9.3	D		UV-VIS Spectrophotometer Co 2951019		SSK	G-9		Rs.1,348,468	FAR No- 443	
217	2001.11.5	LP		Display Asembly for Canberra Model 2071 dual counter timer SNO. 1183609	1		NIL	5_50-6	Rs.20,380	FAR No- 444	
218	2001.11.20	L P		Ortec Gem -35-P Pof Top Cafisute HPGE Co ariel gamma ray detector S.No.41-TP11706 A	1	MCSS	LLCL	5_51-1	Rs. 2,322,416	FAR No- 451	
219	2001.11.27	LP		Oscillascope SS 7810, (TWATSU) S.No. 31213663	1		NIL	5_52-2	Rs. 163,404	FAR No- 456	
220	2001.12.13	D		Evacuable Pellet die PT No. 3165	1		XRF	5_56-1	Rs. 63,467.97	FAR No- 447	
221	2002.3.22	D	i	Alpha Spectrometer combination sample holder S.No.08011827 Modle 7401	1	MCSS	HLCL	5_60-4	Rs.1,123,462	FAR No-465	
			ii	A 450-20 Alpha PIPS Detector S.No.45020	1						
			iii	C-125-10, BNC To BNC, RG 58/u,50 OHM cable							
			iv	8500C Genie-2000basic-multyinput Genie-2000 8500 security key, Genei 2000CD ROM							
			v	Genie 2000 Operational manual & Cvustomization Tool manual							
222	2002.03.22			Accuspec A Board, Cable LB 1500 Manual:System coinsid S/No 11013890		NIL		5.-60-4			
223	2007.8.27	LP		Magnaflux Field Indicator S-97-729	1		G-05	5_61	Rs.23,800		
224	2002.4.9		i	Aluminium Foil 0.5 mm (0.02 in) Thick Puratronic, 99.998% (Metals basis) stat warennummer : 76061191	1						
			ii	Copper Foil,0.5 mm (0.02in) thick,Puratronic,99.998% (Metals basis) stat. Warennummer: 74101100	1						
			iii	Gold foil,0.5 mm(0.02 in) thick,99.95% (Metals basis) stat warennummer:71081380	1						
			iv	Iron foils,0.5mm (0.02in) thick 99.99% (Metals basis) stat.Warennummer: 72101290	1						
			v	Molybdenum foil, 0.5 mm (0.02 in) thick 99.95% (Metal basis) stat warennummer: 8102920C	1	VAW	XRF	5_62-1			
			vi	Tantalum foil, 0.5 mm (0.02in) thick,99.95% (Metal s basis) stat. warennummer: 81039010	1						
			vii	Titanium foil, 0.25 mm (0.01 in) thick 99.99% (Metals basis) stat warennummer: 81089050	1						
			viii	Yttrium foil, 0.25 mm (0.01 in) thick, 99.9% (REO), stat.warennummer: 28053090	1						
			ix	Zirconium foil, 0.25 mm (0.01in) thick, 99.94% (Metals basis) stat. warennummer: 81099CCC	1						
			x	Mixer vortexer stuart SA7	1						
225	9-Jun-02			Thermo meter 10-250C (Mercury)		TCL		5.-67-1	Rs. 810		
226	2002.7.16	LP		Aluminium Crucible	4		Hot Lab	5_69-6	Rs. 986.63	FAR No-468	
227	2002.7.5	LP		Thermo Meter 10 to 350 C		TNA	XRF	5_69_3	Rs. 810		
228	2002.10.23	D	i	001-0056993/LPBXQ, Angle Beam Probe,WB-45-1E	1	TMRT	G-03	5_71-9	FAR N0-462 Euro 2242	UT-7	
			ii	A002-0056994/LPBYS, Angle Beam Probe, WB 60-1E	1					UT-8	
			iii	003-0057001/LPB67, Angle Beam Probe, WB 70-2E	1					UT-9 -	
			iv	004-0057746/LQB2G, Straight Beam Probe, B4 S-E	1					UT-1	
			v	005-0057903/LQCT3, Fingertip Probe, MB 10 F-E(Microdot Brobe)	1					UT-	
			vi	006-0050326/LPWTS, Probe Cable	1						
229	2002.11.7	D		SMD Micro Controller Training Kit	2	PM	NIL	5_71-10	Rs. 95,756	FAR No-558	
230	2002.11.02	D		15KVA Online Uninterruptible Power Supply (1 hour running time with full load without AC power) Type RVSVS 105065 Power 5000 VA (3500 W Cont. Operation) Main connection voltage:230V,50HZ Output Voltage:230V,50HZ, Bridging time: 65 minutes, SN 0208200329	1	MCSS	LLCL	5_72-1	Rs. 599,317.22		
			i	130 O3 Probe	1					G-12	
			ii	33 A048 Test Pices,	1					G-12	
			iii	31 A 008 Test Block Fe (ENIA 4 x 0.5 spacers 6x25x102mm,S.No.308936/05	1					G-12	
			iv	PC1-5 CPT Colombo	1						

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No	Date	LP/D	Sub No.	Item Name	Qty	Issued to	Location	Inv. No	Value	Remarks	
										FAR No	Other
231	2002.12.20	D	v	700P001 Probe reflection, spot/face shield ,NFE, 200-205 KHZ Sprung, 32x21x54 high	1	TMRT	ET	5.-73-10	Rs. 204,042 $1540.80		
			vi	5A011 Lead Probe 1.5 long (BNC-Bivic lingh weight cable for use with 13030 P3 Probe	1						
			vii	33A121-Adaptor, Lemo Jaeger 0.15m Hocking probe-phasec 2200 for use with P04 weld soar probe	1					FAR No-458	
			viii	5A173-Adaptor,1.5 m Jaege/6 m lemo phasec 2200 to reflection probe for use with 33A121 and 700P001 Probe S/No 83488/3	1						
			ix	800 P 01 Probe, weld scan str.55, 700 KHZ, Fe Tip -R8/16 dia, cbl - 5 m long, jaeger connector	1						
			x	5A011 Lead Probe 1.5 long (BNC-Bivic lingh weight cable for use with 13030 P3 Probe	1						
233	4-Jan-03			Radio Isotop Generator	1	VE	Hot lab	5.-74-1	Rs. 14,682		
234	2003.01.21	D	i	Canberra AFT Spectroscopy Research Amplifier , S,No.05026681, Model 2025 Electronic Components for HP Ge ortec detector model GEM 35 P, S.No.06028105	1	MCSS	LLCL	5_74_2-	Rs 678,859.89	FAR No-469	
			ii	0-6 Kv Power Supply (USD 1120.00)and Ligic Inverter box (USD250.00)	1						
			iii	Nim Bin Power Supply (6,12,24V) 220 VAC (S.No.08028105) MN-2100	1						
235	2003.1.24	D	i	Handheld Dual Colour Sensitometer (S.No. 001474)	1	THSS	QAL	5_75-1			
			ii	07-440-220 Digital Densitometer with Rs. 232 (006)	1				320435.5067		
			iii	16-109 Autostep,X-ray film processor software (350260)	1				(US $ 3194)		
			iv	07-460 calibrated step tablet	1						
			v	07-402 Digital Termometer,S.No.435315	1						
236	2003.1.30			Ceric Cerous Dosimeters (1 plastic container)		RPL	G-10	5_75	Rs. 14397	FAR No-467	
237	2003.-4-9		i	Transfermeter (step down) for filling liq. Nitrogen	1	LLCL		5.-76	Rs. 2,300		
		LP	ii	DC Pannel Meter	1	LLCL		5_76			
238	2003.06.2	D		Marinelli Beaker	162	LLCL		5_76	Rs. 482,241.91		
239	2003.6.28	D	i	Liquid Scintillation Analyzer(LSA) Modle A317001(PERKIN ELMER-PACKARD) Tri-carb 3170 TR/SL Base Unit (S.No. 430841)	1	VE	G-17	5_77-3	Rs.4,778,721.38	FAR No-471	
			ii	Cooling Unit -CP-10-SEI -S/No.02040213- -PERKIN	1						
			iii	Monitor OPTIQUEST Q71 VCDTS22355-6M S/No 70A024903596 (VIEWSONIC) SVGA 17 inch Monitor	1						
			iv	Printer EPSON STYLUS C 82 Modle No-B171A S/No EM2E094444	1						
			v	Accessories of (LSA)							
			vi	Temp.Control Kit 220 volt.	1						
240	2003.6.18	D	i	6" Cooling Rod Extention	1	TNA	LLCL	5_78-1	Rs. 293,194.20	FAR No-472	
			ii	Dewar Leveling Stand	2						
241	2003.7.1	D	i	4000 M Plus Noninvasive X-ray Test Device 103790	1	SSK	QAL	5_79_1	Rs. 702,752.50	FAR No-477	
			ii	4000 excel add in software	1						
			iii	600-100 Ion Chamber 3 cc CT Dose 106162	1						
			iv	303 CNMC 3 cc Mamo/Diagnostic chamber w/coax BNC-M W/Banana Plug 3077012	1						
			v	6000-530 B Ion Chamber,150 CC, Fluro Exit Dose (Acrylic) 106916	1						
242	2003.7.1	D		Gamma Cell Brit GC 500		RPL	B Block	B O Survey	Rs. 7,537,082	FAR No 485	
			i	Ring Spanner Kit							
			ii	Separate ring spanner							
			iii	Set spanner kit (12 Nos)							
			iv	Allen Key Kit							
			v	Gama Cell Covers							
				1. Cylin dried type							
				2. box type							
243	2003.8.20	D	i	Top Opening Lead Shield (16" Deep) S.NO.4031695 Modle 747	1	MCSS	LLCL	5_79-2	Rs.1,298,034	FAR No-478	
			ii	Annular Plug (foor 7500 only)	1						
			iii	Cold Finger Extention-4" long	1						
244	2003.8.26	D	i	MT 1900 Graphit,High-temperature furnace,S.No.HQ 001032		RPL	G-9	5_79-3	Rs.4,731,489.80	FAR No-479	
			ii	Automatic Voltage Stabilizer for HT 1900 Furnance S.No. 0561091							
			iii	Nitrogen (N2) Cylinder for HT 1900 Furnance							
			iv	Hydrogen (H2) Cylinder (H2-5%, N2-95%)for HT 1900 Furnance							
			v	Liquid Petrolium (LP) Gas Cylinder-Large for HT 1900 Furnance							
			vi	Liquid Petrolium (LP) Gas Cylinder-Small for HT 1900 Furnance							
245	2003.10.6	LP		"XMSEA" X-ray film processing system for industrial Radiography	1	TMRT	DR	5_80-3	Rs. 46,500	FAR NO- 487	
246	2003.10.15	D		Marinelli Beaker 133N incl. lid. (Pc)	33	MCSS	LLCL	5_80-4	Rs. 97,077.10	FAR NO- 480	
247	2003.12.19	D	i	Basic Water Quality (HACH Dr 2400) S/No. 030900002601(Portable Spectro meter)	1	VE	TEL	5_81-4	Rs.434,065.82	FAR No-481	
			ii	Digital Titrator HACH							
			iii	Instrument case DREL/2400 HACH							
			iv	Apparatus & Regeant Case DREL/2400 HACH							

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No	Date	LP/D	Sub No.	Item Name	Qty	Issued to	Location	Inv. No	Value	Remarks	
										FAR No	Other
248	2003.12.13	D	i	Multi Parameter Instrument 340 SET 1 S/No. 03380015, w12F 114 B22 with datalogger, Serial interface aditional power supply, Professional case, Probes: SENTIX 41-3, Cellox 325-3, Tetracon 325-3	1	VE	TEL	5_82-1	Rs. 183,762.67	FAR No-482	
			ii	Dissolved Oxygen sensor CELLOX 325-3 S/No.03360165							
			iii	Conductivity Cell TETRAN 325-3 S/No 03360279							
			iv	PH Electrod SENTIX 41-3 S/No CO31402011							
249	2003.12.21	D		Rain gauge with datalogger,UV res.Plastic aerodynamic design,tipping bucket,1 Pule Per 0.2 mm Precip , Surface 507 Cm, height 34cm, Built in data logger (datahog 2)	1	VE	TCL B Block	5_82-2	Rs.206,916.64	FAR No-484 Installed on roof top of	
250	2003.12.29	D		Genie 2000 Interactive Peak fit (Software)	1	MCSS	LLCL	5.-83-1	Rs. 255,143.99 ($2,318)	FAR no-483	
				Genie-2000 Quality Assurance (Software)	1						
251	2004.3.17	LP	i	UV Lamp (Tiede-Germany)	1	TMRT	G-05	5_83-2	Rs. 188,468	MPT-3 FAR No- 493	
			ii	Power Adaptor	1						
			iii	Spare Bulbs	3						
252	2004.3.25	LP	i	Model 18-207 Mammography Screen Film Contact Test Tool Q 622	1	SSK	QAL	5_83-3	Rs, 31,615	FAR No-494	
			ii	Model 6150-AD-5 "Saphymo" Digital High Dose Rate Meter , S.No. 113510	1			5_83-4	Rs. 241,500	FAR No-495	
			iii	Model 76-414-4150 CT Head and Body Dose Phantom	1			5_83-5	Rs. 2268,032	FAR No-496	
253	2004.06.24	LP		Model 18-220 Accreditation Phantom with accessories (including 2 sets of 2 cm thick Acrylic plates 4 plats)	1	SSK	QAL	5_84-2	Rs 82,134	FAR No-489	
254	2004.8.2	LP		Magnatic York	1	TMRT	G-05	5_84-3	Rs.230,113	MPT -1 FAR No- 490	
				Model - 7 , PT No-43560, 230v 50/60 Hz, 1 PH							
255	2004.8.16	LP		Alumina Crucible 'type A'		Ruwan	G-10	5_84-4	Rs. 2975.60	FAR No-570	
256	2004.10.28	LP	i	Lead Bricks (size:4"x4"x2)	60	TMRT	LLCL	5_84-5	Rs125000	FAR No 491	
			ii	Corner Lead Bricks (size: 4"x4"x 2")						FA No-492	
			iii	Lead Bricks (size:4"x4"x2)	162		hot lab	5_84-5	Rs. 337,500		
257	2004.11.3	D		IAEA - 52 Board Training Kit,IAEA - 52 kit	4		NIL	5_85-1	Rs.127,326	FAR No-560	
258	2004.11.22	D	i	Refrigerator System for electrolityc cells (complete with compresor, freezer box with cover and control panel)	1	VE	TEL	5_85-4	Rs. 3,569,586	FAR No- 487	
			ii	Complete set of glassware							
			iii	20 stainless steel electrolytic cells volume 500 ml each							
			iv	Eletrolysis Control unit consisting of Electronic amperohourmeter with shunt power supply, Temperature controller with probe set of connecting cables							
			v	DC Power Supply SM 7020 D S/No.11460200006	1						
			vi	Amphr Meter AZ 4000 Kubler	1						
			vii	Anode Cells	20						
			viii.	Cathode Cells	20						
			ix	tefflon Stopper	20						
			x	Cell oppening fork	1						
			xi	Stepper removing foot	1						
			xii	heaters -500ml W2-500	13						
			xiii	Heaters -100ml W8-100	13						
			xiv	Power regulator Rm 4	1						
			xv	Precision Pipette/Tips V5000 439080278	1						
259	2004.11.22	D		Current Meter Scale- 1000 µA, 48x45mm # 258-580		RA	NIL	5-86-1	EUR 248		
260	2004.11.22	D	i.	NAI Detector 2"x2" S.No.7041654	1	PM	NIL	5_87-2	RS. 229,260 ($ 2192)	FAR No-488	
			ii	Photo Multiplier tube base (14 pin) S.No.12036436	1						
			iii	Photo multiplier tube base (14 pin) S.No.6040978	1						
261	2005.1.21	LP		Hanna Meter Portable Water slash/PH/MV/C Model : H1 8314 N with H1 1217 D Amplified PH electode .No.283461)	1	VE	TEL	5_88-1	Rs. 31740 (Incl . VAT)	FAR NO-498	
262	2005.1.31	D	i	Electronic Precision Balance, Model LE 4200 S (successor of sartorius model LP 4200 S,)	1	TEL	Hot lab	5_88--2	Rs.1,202,070.76	FAR No- 510	
			ii	Drying Oven Model ED 240	1			5_88-3			
			iii	Scholler Steel keg. Slimkeg,capacity 50 liters,stainless steel 1.4301	2			5_88-4			
263	2005.2.22	D	i	CD Sets	1		LLCL	5_89-1	US $ 1180		
			ii	Copy Protection Rom	1						
			iii	Documentation Sets							
264	2005.2.24	LP		Conductivity Meter -Lutron Cd 4301	1	TEL		5_89-2	Rs. 23,000	FAR No-505	
265	2005.2.25	LP	i	Oxygen Meter-Lutron DO 5510 , S D48103	1	G-17		5_89-3	Rs. 39,500	FAR No-503	
			ii	Sensor S/No. 9309	1	TCL					
266	2005.5.4	D		N-Buty/Acrylate EmulsiFying and Despensing Unit -(Latex Processing Unit)	1	Hot lab		5_89-4	Rs.1,298,830	FAR No-497	
267	2005.6.13	D		RAD 60' Personal Alarm Dosimeter S.No. 246111, 246113, 246115,246112	4	QAL		5_89-5	Rs.267,083	FAR No506	
268	2005.7.4	LP		Multiport II , Ethernet, 3 input, MP2 SN 09052490 M.N MP2-3E (Multichannal Analyser)	1	LLCL		5_90-2	9250 Rs 1,136,69	FAR No-513	
269	2005.8.25	LP		Fume Hood	1			5_90-3	Rs. 347,489.18	FAR No-507	
270	2005.10.11		i	Cables for Electric Heaters	15	G-8		5_91	60		
			ii	UV Power Adaptor	3	TEL					
271	2005.11.29	LP		Lux Meter Sanwa LX 3131 S.No.2100233	1	NDT	G-05	5_91-2	Rs. 17,077.50	FAR No 499	
272	2005.12.08	LP		Tester Linear 1C S.No. LMC 2955	1		NIL	5_91-3	Rs. 108,775	FAR No- 501	
273	2005.12.22	LP		DA 400,AC/DC Yoke 230V AC P-T No.518601(Magnatic York)	1		G-5	5_91-4	Rs. 112,055.17	MPT-1 FAR No- 509	
274	2005.12.27	LP		Voltage Event recorder with software B/N 493302 VR 101/004, PC.340528364	1		NIL	5_91-5	Rs. 153,909	FAR No- 502	

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No	Date	LP/D	Sub No.	Item Name	Qty	Issued to	Location	Inv. No	Value	Remarks	
										FAR No	Other
275	2006.5.24	D	i	MG 25-20 Magnatometer 20-0-20, 5080 Gauss Meter A005,H010m MG50	1	NDT	G-12	5_92-2	Rs. 562,015.89	FAR No-533	
			ii	Flaw Mike Portable Ultrasonic Flaw Detector Basic version					Rs.1,289,131		
276	2006.5.24	LP	i	Remote Handling tong, length 1 m	2	QAL	QAL	5_93	Rs.1,713,571.55	FAR No-531	
			ii	Tweezers Jaws	2						
			iii	Dual Grip	2						
			iv	Pincer Action	2						
			v	Remote Handling tong, length 2 m	2						
			vi	Tweezers Jaws	2						
			vii	Dual Grip	2						
			viii	Pincer Action	2						
			ix	Remote Handling tong,length 2 m	1						
			x	Extention Unit, Length 1 m	1						
			xi	Tweezers Jaws	1						
			xii	Dual Grip	1						
			xiii	Pincer Action	1						
277	2006.05.24	LP	i	Flow Detector for Hydrology, Qtrace basic system compact data logger with software	1	VE	TCL G-17	5_93-2	Rs. 139,715.16	FAR No-530	
			ii	Conductivity Probe			G-17				
278	2006.8.23	D		Top Opening Lead Shield (12" deep) S.No.11055607	1	MCSS	LLCL	5_93-3	Rs.1371566.41	FAR No-527	
279	2006.8.23	LC NO: SRL/5/038/8868	i	Ext.Range COAX German, Detector	1	MCSS	LLCL	5_93-4	Rs.1757831.00	FAR No-532	
			ii	Digital Spectrum Analyzer	1						
			iii	Genie 2000 basic input (software)	1						
			iv	Genie 2000 Gamma option (software)							
			v	Labsocs Laboratory efficiency (software)	1						
			vi	Isox Calibration	1						
284	2006.9.14	D		P/N TLD 0880-0304 type 0110 TLD cards, silver/green	500	AK	PML	5_94-iii	Rs1408740.46 US$ 12,382		
				P/N 0870600 0016 type 8814 TLD Card Holders, Black/Green	200						
				P/N 800111 maguire 2214 strap clips, long	200						
				P/N 23283 TLd card holder opener	1						
285	2006.9.18	LP		Digital Hand Held MCA Gamma Spectroscopy system and dose rate meter with automatic nuclide identification and neutron detection ,Type 'Target' identifinder -NHA with NA (TI)-Detector High Gamma dose rate GM Detector and He-3 Neutrondetector S.No. IDENT 3573-27	1	AJ	QAL	5_94-4	Rs. 2,257,533 (Incl. VAT)	FAR No- 525	
286	2006			Mini Drill Stand M-RS 549-088	1						
287	2006			Electric Hair Dryer	1						
288	2006.9.4	LP		40 MHZ DDS Function/Arbitary Waveform Generator, inclusive of PC connectivity software S.No.248572			NIL	5_94-1	Rs. 318493	FAR No-515	
289	2006.9.25	D		Air Particulate on Filter Media SRM Standerd	3	XRF		5_95-2	Rs. 253,343	FAR No-517	
290	2006.9.25	D	i	Check device 90 Sr. Point source	1	SSDL		5_95-3	Rs. 330,275	FAR No-539	
			ii	Ionization Chamber S/No 32003 & Holding device for chambers 32002 32003	1						
291	2006.9.25	D		TLD Cards 52 mx 29.9 mm x 1 mm thick nickel plated aluminium cards on which 3 TLd discs having 13.3 mm	100	PML		5_97-1	Rs. 34,081.20 ($325)		
292	2006.9.25	LP		3106D HV Transformer	1	NIL		5_97-2	Rs.38,626		
293	2006.10.9	LP		Digital Thermometer with All accessoires Milwaukee M/No.TH 300 S/No.	1			5_97-3	Rs. 4,370	FAR No-527	
294	2006.10.9	LP		ZP 1490 H Geiger Muller Tubes(GM Tube)		NIL		5_97-4	Rs.94,072.	FAR No-524	
295	2006.10.19	LP		Digital Multimeter 38 XR Meterman,S.No.060700717,0607(	2	SSDL		5_98-3	Rs.54,050	FAR No-516	
296	2006.11.30	LP		Digital Thermo Hygrometer with accessories Electro Therm M/No. TM 99A, S/No C 318143	1	SSDL		5_98-4	Rs. 24,000	FAR No- 526	
297	2006.12.6	D		Marinelli Beaker 1 L. Lid included 1	100	MCSS	LLCL	5_98-5	Rs.749,240	FAR No- 561	
				040G-Wide-1.3/Mixed solution- Standerds	1						
				1040G-Low -1.3/Mixed Solution Standerds	1						
298	2006.12.14	D	i	MWB 35-4 Miniature Angle Beam Probe, Frequency: 4 MHZ, 35 No.50028	1	TMRT	G-05	5_99-2	Rs. 210,773	UT-14 FAR No-518	
			ii	MWB 45-4 Miniature Angle Beam Probe, Frequency: 4 MHZ, 45 No.50268	1					UT-16	
			iii	MWB 60-4,Miniature Angle Beam Probe Frequency:4MHZ 60 No. 50889	1					UT-13	
			iv	MWB 70-4 Miniature Angle Beam Probe Frequency:4MHZ 70 No.51154, Cables 4	1					UT-10	
299	2006.12.14	D		SI (LI) Detector S.No.6061145	1	XRF		5_99-3	Rs. 1,122,909.50	FAR No-519	
300	2006.12.28	LP	i	Gem MicroscopeSN: 112061101,103061106		RPL	G-9	5_99/100	Rs.1,934,300	FAR No-523	
			ii	01 No. E 330 Digital SLR camera incl 14-45 mm olympus order code : OYE-330 KIT							
			iii	01 No. Digital camera adaptor set order no. ZE T-DCA E-330 S.							
			iv	01 No. digital adaptor olympus E330/c.mount order code DCA E-330 CMT							
			v	01 No. C-Mount Videio adaptor 1.0x2/3" zeiss Order code: ZE VI IX S.No. 12061101, 103061106							
301	2006.12.29	LP	i	Electro Magnetic Crack Detector with all acce.	1	TMRT		5.-100-1	Rs.575,982 FAR No-528	G-5	
			ii	Mag Unit 230VAC S/No 305 with certs. (1 EA)						G-5	
			iii	Prods,Individual Set (1 set)							
			iv	Cable Assy 20' remote control (1EA)						G-5	
			v	Cable 4/0 w/lug and eitherned (1set)						G-5	
			vi	Notch Defect Test Bar (S/N 5945 with certs (1 EA)							
			i	Survey Meter with all accessories	1						
			ii	Control Leaflet							
			iii	6150 AD6 digital doserate meter,S.No.120317							

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No	Date	LP/D	Sub No.	Item Name	Qty	Issued to	Location	Inv. No	Value	Remarks	
										FAR No	Other
302	2006.12.29	LP	iv	Users manual ref.29288712/A		SSK	QAL	5_100-2	Rs.3,503,149.05	FAR No-529	
			v	6150AD17 Contamination probe S.NO.113963							
			vi	6150 AD-19 beta gamma liq. Sample probe s.No.112477							
			vii	Users manual ref.29291084/A							
			viii	Set of 9v batteries for the doserate meter 6150 AD6							
			ix	Transport satchel for the doserate meter 6150 AD6							
			x	1.25m long cable							
			xi	10m long cable							
			xii	Transport case(type 6605-E)for 6150 AD-K							
			xiii	6150 AD-K contamination probe,S.No 123443							
			xiv	Control Leaflet							
			xv	Users manual ref.29291084/A							
			xvi	Handle extention (80cm long) for 6150AD							
			xvii	1.25 m long cable for the handle extention							
			xviii	6150 AD-T portable teletector S.No.123243							
			xix	Control Leaflet							
			xx	Users manual ref 29291084/A							
			xxi	Transport case for the portable teletector AD-T							
			xxii	6150 AD-3 Scintillator probe S.No.123875							
			xxiii	Transport case for the scintillator probe 6150 AD-B							
303	2006.12.29	D		Marinelli Beaker for Ge detectors 3" diam (76 mm diam.end cap) 1L (becher type 530g) and 500 ml (becher type 130G) each size 100 beaker	1	TNA	LLCL	5_101-1	Rs244,813.25		
304	2006.12.29	LP	i	Model 9611 Contrast Current DC Power Supply , Max SAC 17V, digital LCD display, with 400 tlets, 220vac		MCSS	HLCL	5_101-2	Rs. 289,449.50		
			ii	Standard 4 cell electrodeposition set (Teflon cell body 10 ml useful sample volume) to be used with 19.5 mm cathode plating disks (15m effective deposition diameter)	1						
			iii	Includes four standard anode systems (stainless steel and teflon) with replacement capability of the platinum wire electrode; on 4 cell acrylic plastic sand; 4.2 electric cables for connecting the electrodeposition set to the power supply unit	1						
			iv	Platinum wire electrodes 0.8 mm for item Rs.200 setof 4	1						
			v	Pack of 100 stainless steel plating cathode disks, 19.5 mm (15mm effective deposition diameter) one face with mirror finish, to be used with item ref.200							
305	2007.1.18	LP		1225089 Oscilloscope, 100 mHZ, 4 CHN/4 TDS 2014 Digital Oscilloscope S.No.C20285	1	CK	NIL	5_102-2	Rs. 333,960	FAR No- 535	
306	2007.1.19	LP		DC Power supply Quad mode dual 66725 TTI S.NO.262063	1	PM	NIL	5_102-1	Rs.120,757	FAR No-536	
307	2007.3.1	LP	i	90 C Portable Conductivity silinitymeter with 10 sensor and 100 m cable	1	VE	G-17	5_102-6	Rs. 294,781.41		
			ii	Rs.232 serial interfce cable for 90fL meters	1						
			iii	software for microsoft windows	1						
308	2007.4.4	LP		Digital Personal Dosemeter for Nutrons-Model: PDM 313 (Aloka - Japan)	2	SK	QAL	5_103-3	Rs. 374,900	FAR No-538	
309	2007.4.4	LP		Digital Personal Dosemeter for Low Energy X-ray Model : PDM 117	5	SK	QAL	5_103-4	Rs. 356,500	FAR No-537	
310	2007.4.17	LP		Portable Ion Chamber Survey Meter for scatter Radiation measurments Moel: 451P-DE-SI-RYR , S.No.1581, 1566	2	SK	QAL	5_104	Rs. 693,017.16	FAR No-539	
311	2007.4.5	D	i	Radiation Monitor Model AT 1117 M S.No.12033/12014	1	SK	QAL	5_104-1	Rs. 1,451,978	FAR No-541A	
			ii	Contamination Survey Meter radiation monitor model AT 1117 with external Alpha Probe BDPA-01 and external beta probe-BDPB-01 S.No.12044	1						
			iii	Personal Alarming dose meter-alarming electronic personal dosemeter model AT 3509B with computer interface , S.NO.3768	1						
			iv	Emergency Kit consisting of: 1 telescopic probe model BDKG-01 capable of attachment to AT 1117M: wide range alarming gamma dose meter for personal radiation protection model AT 6130D with computer interface package and software	1						
312	2007.4.26	LP		Portable Iron Chamber Survey Meter for low energy radiation measurements (band-Victoreen) Model:451 B-DE-Si.RYR,S.No.719		RP	QAL	5_105-1	Rs. 342,018.99	FAR NO- 540	
313	2007.4.18	LP		Electrical Furnace, Model:HD 230 PAD		VAW	B Block	5_104-3	Rs. 335,969.84	FAR NO- 539A	
314	2007.7.30	LP		Portable Air Sampler 12/24 Model HB 10 DC		MCSS	LLCL	5_105-3	Rs. 585,097	FAR No-551	
315	2007.7.31	LP	i	Portable UV Light Spot Focussed	1		G-05	5_106-1	Rs.268,724.99	FAR No-550 MPT-3	
			ii	Transformer for Normal Operation	1						
			iii	Power Adaptor	1						
			iv	Lamp Holder 610 W/Strw	1						
			v	UV Spare Filter Glass	1						
			vi	UV Spare Bulbs	3						
316	2007.8.14	LP	i	Volumetric Flask, graduated one 1 lit	2	Ruwan	RPL	5_106	Rs. 8119		
			ii	Volumetric Flask, graduated one 500 ml	5						
			iii	Volumetric Flask,Graduated one 250 ml	5						
			iv	Volumetric Flask graduated one 100 ml	5						
			v	Glass Rods, outside Dia. 5 mm	1						

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No	Date	LP/D	Sub No.	Item Name	Qty	Issued to	Location	Inv. No	Value	Remarks	
										FAR No	Other
317	2007.8.31	D		Mixed Nuclides Alpha Spectrometry Source (1 KBQ each Am-241, CM244 Pu-239,Activity tolerance +/-30% , Total Alpha Emission rate calibrated, Activity uncalibrated Alpha Spectrum Supplied, Source diameter 25mm 0.5 mm Active diamter 7 mm, VZ-1679)	1		HLCL	5_106-3	Rs. 381,401.50		
318	2007.9.5	LP	i	Sephymo Teledetector- S/No123147		SK	QAL	5_107-1	Rs.1,153,732.38	FAR No- 546	
			ii	Teletector 6112 M							
			iii	Transport Case							
			iv	Earphones							
			v	3m long cable							
			vi	Software wincom-m for the Telector 6112 m							
319	2007.9.5	LP		Separting Funnel-250ml Conical Shape German	2	Ruwan	RPL	5_107-1-2	Rs. 7980		
				Separating Funnel-500ml , Conical shape-German	1						
				Crucible Tongs, Straing, Flat Hinge mild steel, length 200 m	2						
320	2007.9.19	LP		Borette Straight stopcock, 500 ml	3	KRDe S	RPL	5_107-3	Rs.2018.25		
321	2007.11.26	LP		Buchner Funnel Flask Suction Pump		Ruwan	RPL	5_108-	Rs. 110220		
			i	Buchner Filter Funnel. Suction Filter Funnel (8527005) DIN 12905	3						
			ii	Buchner Filteration Flask 1000 ml with plastic hose Connection and tubulature (5070210)	3						
			iii	Suction Pump Deverse Low Pressuer water jet pump	3						
			iv	Guco-Rubber Gasket,connical O.D. Top 53 mm ID botton33 mm, Ht 34 mm (2356050)	3						
			v	Rubber tubing, ID 9 mm wall thickness 2 mm 2 meter for each set	6mtr.						
322	2007.11.26	LP		Fishes Tongs,Straight for Flasts sequrity tongs for bottles from 100 to 2000 ml 18/8 stainless steel (cat no.8362000)		RPL		5_108	Rs. 3440		
323	2007.11.26	LP	i	Chromatography Columns Bovosilicate Glass ST-Socket 24/29, Cone ST 19/26, with sintered disc.Pc. ID 18 mm effective length 400 mm (CR32/40)	4	Ruwan	RPL	5_109	Rs.51,800		
			ii	Diverse Tamping rod Appox. Length 530 mm for use with column Cr 32/40	4						
			iii	Chromotography Stopcock adapter with bovesit-glass socket ST 19/26, Cone: ST 24/29 Appox. Overall height 190 mm, fitted with economy needle valve stopcock bare 6 mm for fine control of elevent flow (CR 3 T/23)	4						
324	2007.11.30	LP		Heidolph LABOROTA 4000 Eco Rotary Evaporator S.No. main unit: 080714469, Bath 090717188		SSK	G-10	5_109-2	Rs. 557,875	FAR No-545	
325	2007.12.6	LP		Oscillascope acc.AC/DC Current Clamp Fluke M-i30s S.No.94670129	1		NIL	5_110-1	Rs. 99,718	FAR No-547	
326	2007.12.28	LP	i	Sartorios Stainless Steel Filter Holder with 100 ml funnel with lid			SPL	5_113-2	Rs. 154,744	FAR No- 549	
			ii	16606 Glass Suction Flask 1 Ltr.							
			iii	16694-2-50-06 Mini vaccum Pump, S.No.02732730							
			iv	17004 Silicone Bored Stopper							
			v	16623 Rubber vaccum Hose of 1 m							
327	2007.12.28	D	i	TLD Card-210002 Type OCIAIA CC-00151500-A Silver / Green	300		PML	5_114	Rs.1,424,839.50		
			ii	0870600-0015 type 8814 TLd card holders black/blue	150						
			iii	800111 strap clips long	150						
			iv	3283 TLD card holder Opener	1						
328	2007.12.28	D		Ram Ion Digilog (usv/u) S.No.2207-121	1		XRF	5_114-2	Rs.193,059	FRA No- 542	
329	2007.12.31	LP		Selecta/comecta/AC-L4 water Distillation Unit complete with connecting Hoses/Clips and wall mounting brackets, S.No.842307040557	1	VE	TEL	5_114-4	Rs. 179,124	FRA No-548	
330	2007.12.31	LP		ZP 1324 Geiger Muller Tube Certificate of conformity geigers carriage and packing	6		NIL	5_115-4	Rs. 113,171.	FRA No-553	
331	2007.12.31	D	i	Sand Bath with Heater Model ST 72	1	VAW	SPL	5_115-2	Rs. 364,344	FRA No-544	
			ii	Quartz-Ir-Heater with Reflector Bowl Model QF 150 with holding device	1						
332	2007.12.31	D		Nim Random Pulse Generator BNC , M-DB-2 S.No.29522	1		NIL	5_115-3	Rs. 793,164	FRA No-543	
333	2007.12.31	D	i	Micropipette Accra 825 100-1000 ul	1	VAW	XRF	5-116	Rs. 131,078		
			ii	Pipettor Calibra 832 digital 1-10ml	1						
			iii	Pipette tipes 1-1000 ul Pk/1000	3						
			iv	Tips of pipettors 10 ml pk/300	2						
			v	Mixer vortexer stuart SA7	1						
334	2008.1.16	LP	i	Soxhlet Extractor sets		Ruwan	RPL	5_116	Rs. 171,750		
			ii	Extraction apparatus 2230500 ST/6D/46	1						
			iii	Extraction thimbles 8205010 (pack-25 pcs)	1						
			iv	Extraction apparatus 2230 002 - 200ml ST 100 - 45/40	1						
			v	Diverse Pack extraction thimbles	1						
335	2008.1.30	LP	i	Wire Gauge Galvanized 120x120mm Ceramic Heat control	3	Ruwan	RPL	5_116	Rs.20,575		
			ii	Quick fit condensor conder lebig 400 mm	3						
			iii	Condensors coild 400mm	3						
336	2008.1.30	LP	i	Quick Fit Round Bottom Flasks 250 ml	5	Ruwan	RPL	5_117	Rs.4,320		
			ii	Quick Fit Round Bottom Flasks 500 ml	5						
			iii	Quick Fit Round Bottom Flasks 1000 ml	5						
337	2008.2.11	D	i	Air Sampler LV-IE Filter	1		QAL	5_117-2	Rs. 215,189	FAR No-554	
			ii	Filter Holder	1						
			iii	Filter Paper	5						
			iv	Quick Disonnect	1						
338	2008.2.26	LP	i	Radiation Meter (2026c)	1	QAL	QAL	5_119-1	Rs.2,792,875		
			ii	Radiation Protection Chamber(20x6 - 1800)	1						
			iii	Theraphy QA Chamber (21x6-0.6)	1						

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No	Date	LP/D	Sub No.	Item Name	Qty	Issued to	Location	Inv. No	Value	Remarks	
										FAR No	Other
			iv	High Dose Rate Chamber (22x6 - 0.18)	1						
339	2008.2.27	LP		Single Channel Analyzer (ORTEC) Model 550A S.No.07344475	1	PM	NIL	5_119-2	Rs. 209,737	FAR No- 588	
340	2008.3.5	LP		Water Proof Iron Chamber and electrometer with accessories	1	QAL		5_119-3	Rs.4,141,407	FAR No- 591	
341	2008.3.5	LP	i	Dual Counter Timmer moduel (ORTEC) (996) SN.08018797	1	PM	NIL	5_119-4	Rs. 619,977	FAR No- 592	
			ii	Rs.232 interface (99x-1.994.995-999) One Set	1						
			iii	RS232C-NULl Modum cable F/F 3 m C-75 cable	1						
342	2008.3.11			Power Pack 510524 (Germany)	1			5_119-5	Rs. 2,569.43	FAR No- 590	
343	2008.3.31	D		Gross Alpha Beta PIPS Detector Modle 1200-25-300 AM	1	HLCL	HLCL	5_120-1	Rs. 376,658	FAR D-No-1	
344	2008.4.10		i	Wash Bottles - 500 ml	2	G-8		5_120	Rs.1,606.74		
			ii	Wash Bottles -1000 ml	2	G-8					
345	2008.4.30	LP	i	Mobile Xray Machine with dose Meter (DAP) Model compact - 100-30) Type VACU-2000 , S.No.0800583	1	SK	QAL	5_120-5	Rs. 2,064,250	FAR No- 593	
			ii	18x24 cm2 cassettes	1	SK	QAL				
			iii	24x30 cm2 cassettes	2	SK	QAL				
346	2008.4.30	LP		Glass Desicator Setup with stopcock,Excellent flat flange 300 mm	1	Ruwan	G-10	5_120	Rs.39,778.50		
347	2008.4.30	LP		Bunsen Burner , Poligas suitable for all gas tubes with screw cup		Ruwan	G-10	5_120-4			
348	2008.4.30	D		Nim Bin Power Supply S,NO.8064642, Model 4002 D	1		NIL	5_121-1	Rs. 412,694	FAR D-No-2	
350	2008.5.30	LP	i	Lab Stand	3	Ruwan	G-10	5_121	Rs. 14,407.92		
			ii	Boss Head 10 mm	4						
			iii	Boss Head - SWIVEL 17 mm	4						
			iv	Clamp flour finger 50 mm	4						
			v	Clamp Double Adjustable 50 mm	4						
351	2008.6.30	LP		Top Loding weighing balance	1			5_121-5	Rs. 43,895	FAR No- 587	
352	2008.8.29	D		Vacuum Disiccator PP/PC	1				Rs. 18,747.59		
353	2008.8.29	D	i	Lamina Flow Cabinet 230V		VAW	XRF	5_122	Rs 657821.76	FAR D-No-3	
			ii	Microwave Oven siemens,	1				Rs. 54459		
			iii	APC Smart ups 1000 VA/670w	1				Rs.72102.85		
			iv	Interface Port dB-9 Rs.232, smarts/of USB	1						
			v	Ultraschall kompaktgerate sonorex super	1				Rs. 55414.74		
			vi	Ultrasonic compact bath							
			vii	Mortars with pestle made of agate,flowless polished inner surface 25 ml	1				Rs. 11380		
			viii	Mortars with pestle made of agate, flowless, polished inner surface 50 ml	1				Rs. 20255		
			ix	Heating and magnatic stirrers RH basic 2 &RH basic kT/C m	1				Rs. 68,217.45		
			x	Infared Lamp IR 11compressed glass	1				Rs. 6,306.81		
			xi	Spare Lamp for IR 11	1				Rs. 3333.37		
354	2008.9.29	LP	i	Digital caliper 30 mm/12	1	TMRT			Rs.34,091	FAR No-581	
			ii	Screw Pitch Guage , 801	1				Rs.5,445	FAR No-582	
			iii	Thermometer Digital Dual Print	1			5_125-4	Rs.71,213	FAR No-583	
			iv	Multimeter Digital Clamp 1000 A	1				Rs.22,044	FAR No-584	
			v	DIAL test Indicator	1				Rs.67,387	FAR No-585	
355	2008.9.30	LP	i	HI-LO Welding Guage	1	TMRT		5_125-3	Rs.100,350	FAR No-586	
			ii	Weld Guage	1						
356	2008.10.20	LP		672.Spectroscopy Amplifier width Nim 2 S.No.08225371	1	PM	NIL	5_126-1	Rs. 654,714	FAR No-595	
357	2008.10.29	LP		Cables of discarded MT prod machine 4/0 Cable set with either ends suitable for DA 1500 unit	3		NDT-1	5_126-2	467,475	FAR No-594	
358	2008.10.31	D	i	Vac Chamber incl. Vac feed throughs vac connections	1	VAW	XRF	5_126-3	Rs 1,565,221	FAR- D-No-4	
			ii	Sample holder,wheel for 2ry target vacuum chamber	1						
			iii	Sectgt holder plus 4 target holders and targets	1						
			iv	Stepper Motor Plus sample holder for 10 samples	1						
			v	Controller	1						
			vi	Vaccum Pump membarance type oil free	1						
			vii	vaccum hoses monometer valve	1						
			viii	Pure materials for cladding	1						
357	2008.11.5	LP		Analytical Balance (Micro Balance Sn. 1129342542)	1	SSK	G-9	5_126-4	Rs.379,500	FAR No-596	
358	2008.12.9	D	i	Vacuum chamber incl. TXRF adjustment unit	1	VAW	XRF	5_127-1	Rs.14,096,087	FAR- D-No-5	
			ii	Sample Changer, Italstructures(IS)	1						
			iii	MCA Incl. software for Sample Changer	1						
			iv	Seifert Tube amount,Plate,Vac componant	1						
			v	Multilayer mounting system CCD Camara	1						
			vi	Multilayer Adjustment unit	1						
			vii	Ditector SDD (KETEK) S/No 00221	1						
			viii	TXRF Chamber adaption to seifert generator	1						
			ix	Detector unit to Seifernt tube	1						
			x	PC flatscreen printer RS232 TV board for beam controll	1						
359	2008.12.17	LP	i	Diameterx1.0 MHz Longitudinal Transducer top mounted mi	2	TMRT	NDT	5_128-1	Rs. 795,800	FAR No-599	
			ii	3116" diameter x 5.0 MHz dual T/R	2						

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No	Date	LP/D	Sub No.	Item Name	Qty	Issued to	Location	Inv. No	Value	Remarks	
										FAR No	Other
360	2008.12.17	D		Analyticl Evacuable Pellets die set for XRF diameter 25 mm diameter P/N 0012-6653	2				Rs. 291,060.60		
361	2008.12.18	D		Tungsten Carbide Pellets 25 mm/P/N 00126655 set of 2	1		SPR	5_128-2	Rs.63,088.42	FAR D- No-6	
362			i	Drying cabinet 20							
			ii	Lab stop timer							
363	2008.12.29	LP	i	GE Model Phasec 2D Eddy Current tester with following access	1	TMRT	G-05	5_129	Rs. 2,484,000	FAR No-598	
			ii	Phasec 2 portable dual frequency eddy current instrument complete with calibration certificate No.21536 S.NO.560252/05							
			iii	Printed Operating Manual 2d English							
			iv	Battery charger.eliminator requiresS.NO.420304/640							
			v	Power Cord appropriodion to Sri Lankan Power supply S.NO.126707							
			vi	Lead Rs.232for phasec 2s 7 way S.No.40A024							
			vii	Soft padded carrying case S.No.40A142							
			viii	T-10 Desk top compation printer unit S.No. KKG012826							
364	2009.1.29	LP		External Shield for 20 MBQ Source	1			5_130-1	Rs. 27,726		
365	2009.3.9	D	i	Self Contained Flaker - Item No. 32663-AF 80 AS (Scotsman Ice System DD663608W)	1	SSK	G-10	6_1-1	Euro 1469	Rs.2,478,708 FAR-D-No- 7	
			ii	Ultra Pure water system micro pure w.integrated feed water storage tank 6 Ltrs. Item No.32999-08 1202-ST Sno.638/1/08	1				Euro 1925		
			iii	Filter set for micro & micropure Item No. 32999-09 1006	1				Euro 330		
			iv	Ver3150-1R38ELVC vertical laboratory sterilizer - 33044-VFR 3150-1 R 38EL (Autocave)	1				Euro 6228		
			v	Printer, DPU - 30, Seiko	1				Euro 385		
			vi	Compressor Air silent,23 OV/50 Hz, 1HP with automatic drain, airbag, fiac	1				Euro 1155		
			vii	F.Zero value Item 33044-ADD22270047	1				Euro 330		
			viii	Stainless steel container with vent holes	1				Euro 473		
			ix	Stainless stell wire baskets	1				Euro 143		
366	2009.3.11	Lp		Portable Neutron Survey Meter, S.No.107706, Model m99	1	KS	QAL	6_2-2	Rs. 2,475,200	FAR No- 606	
367	2009.3.17	LP		Pressure Pump, Model m99, Make. Saer	1	VAW	XRF	6_2-4	Rs.42,560	FARNo- 607	
368	2009.4.2	D		Diaphragm Pumps type MDI with vacuum tubing 6.0 mm tubing clamp, triyway vacuum valve	1	VAW	XRF	6_2-5	Rs.222,253	FAR-D-No- 8	

No	Date	LP/D	Sub No.	Item Name	Qty	Issued to	Location	Inv. No	Value	Remarks	
										FAR No	Other
369	2009.4.20	D		X-ray Tube SN.180257	1	VAW	XRF	6_3-1	Rs.792,824	FAR-D-No- 9	
370	2009.6.16	D		Sample Holder Wheel Alu 4 seats	1	VAW	XRF	6_3	Rs. 68,858.77	FAR-D-No-10	
				Teflon Washing Unit	1						
371	2009.7.13	LP		Stop Watch - Casio	1	DCK	G-10	6_3	Rs. 3480	FAR No- 609	
372	2009.7.15	LP		2.8v Battery Charger (Energizer)	1	SSDL	AEA	6_3	Rs. 3500	FAR No- 610	
373	2009	LP		TLD Display Board - AEA/B-2/K/4	1	EPM	AEA				
374	2009	LP		Scientific Instrument Board	1	EPM	AEA				
375	2009.7.20	LP		NaI Scintillation Detector 3x3 in crystal 3 in PMT (with preamplifier & Cable) Model C-24-12, C-36-12, C-25-12 SN.60009-00561-1	1	MCSS	LLCL	6_4	Rs. 539,105.28	FAR No- 608	
376	09.02.10			Laboratory Stand	4	VAW	SPR	6-5-4.	9,000		
377	26.02.10		i	Programable Logic Control	1	PM	NIL	6-5-5.	90,332		
			ii	Acc. } Mutimaster cable	1	PM	NIL		25,872		
378	26.04.10			External Drive DVD Writer	1	PM	NIL	6-6-1.	8,000		
379	31.05.10	D		Medical Gas- Vacum Sealer & Compressor	1	SSK	RP	6-6-2.	3785167.81		
380	31.05.10	D		Firmuess Tester	1	SSK	MGIF	6-6-3.	1054326.5		
381	31.05.10	D		Laminar air Flow	1	SSK	MGIF	6-6-4.	1061852.76		
382	31.05.10	D		Laboratory Microscope with Accessories	1	SSK	MGIF	6-6-5.	318502.81		
383	31.05.10	D		Incubator ICP	2	SSK	MGIF	6-6-6.	2385783.27		
384	31.05.10	D		Water Activity Meter	1	SSK	MGIF	6-6-7.	1255997.47		
385	31.05.10	D		Moisture Balance with Accessories	1	SSK	MGIF	6-6-8.	542634.69		
386	31.05.10	D		Laboratory PH Meter with Accessories	1	SSK	MGIF	6-6-9.	218973.83		
387	31.05.10	D		Analytical Balance	1	SSK	MGIF	6-6-10.	393880.54		
388	31.05.10	D		Top Loading Balance	1	SSK	MGIF	6-6-11.	54959.98		
389	31.05.10	D		Oven for Microbiological Laboratory	1	SSK	MGIF	6-7-1.	344821.27		
390	31.05.10	D		Distillation unit	1	SSK	MGIF	6-7-2.	513165.56		
391	31.05.10	D		water Bath	3	SSK	MGIF	6-7-3.	376690.37		
392	31.05.10	D		Hand held Refractometer	1	SSK	MGIF	6-7-4.	20994.47		
393	31.05.10	D		Refractometer Modle	1	SSK	MGIF		77799.94		

No	Date	LP/D	Sub No.	Item Name	Qty	Issued to	Location	Inv. No	Value	Remarks	
										FAR No	Other
394	03.06.10			Liquid penetrent testing Specimens	10	JNE	NDT- G-	6-7-5.	92500		
395	03.06.10			Magnetic Partical tedting Specimens	10	JNE	DT - G-	6-7-6.	126000		
396	30.06.10			Image Quality Indicator	set 01	MAKJ	DT-G-1	6-7-7.	81930		
397	30.06.10			Image Quality Indicator	set 02	MAKJ	DT - G-	6-8-1.	81930		
398	30.06.10	D		Gamma Referance Soutces Set	1	AJ	QAL	6-8-2.	803530.43		
399	30.06.10			Ultrasonic Flaw Detector	1	MAKJ	DT -G-1	6-8-3.	631000		
400	30.06.10			Ultrasonic Flaw Detector	1	MAKJ	DT -G-1	6-9-1.	631000		
401	30.06.10			Ultrasonic Thicknass Gage	2	MAKJ	DT -G-1	6-9-2.	774720		
402	30.06.10			Microdot Transducer Cable (Probe Cable)	2	MAKJ	DT -G-1	6-9-3.	49780		
403	30.07.10			Leser Beam (Red Dut) with DC Power Supply for Aligment Purpose	1	ASRA	SSDL	6-9-4.	99542.52		
404	30.07.10			Spot Fecused UV Lamp	1	JNE	NDT	6-10-1.	524400		
	30.07.10			Extra Bulb	2	JNE					
	30.07.10			Extra Filter	2	JNE					
	30.07.10			Extra Baruty (Bp-12 A) 12v	2	JNE					
405	30.07.10			Magnetic AC/DC InspectionYoke with Carring Case	2	JNE	NDT- G-	6-10-2.	305920		
406	23.08.10			Laboratory Support Stand	2	ASRA	SSDL	6-10-3.	22500		
407	30.08.10			Universal Battary Chagers	1	JNE	DT- G-1	6-10-5.	1450		
408	14.09.10			Qulity Contril Beam Cliecker		KS	QAL	6-10-6.	312281.18		
409	17.09.10			Fluke Victoreen Non- Investive X -Ray Test Device	1	THSS	QAL	6-11-1.	1887179		

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No	Date	LP/D	Sub No.	Item Name	Qty	Issued to	Location	Inv. No	Value	Remarks	
										FAR No	Other
410	17.09.10			External Power Supply Unit Compotable to the Victorem 4000m	1	THSS	QAL	6-11-2.	60063.83		
411	08.10.10	D		Cryogen IC Container GT 26	1	AJ	QAL	6-11-3.	245999.5		
412	27.10.10			Dehumidifire	1	V.A. Waduge	XRF Lab	6-11-4	84166.66		
413	23.11.10			Electronic Balance	1	T.N. Attanayake	LLC Lab	6-11-5	51212.00		
414	10.12.10	D		UV-VIS-NIR Spectrophotometer & Accessories	1	K.R.C. De Silva	Radiation Processing Lab	6-11-6	8109602.50		
415	10.12.10	D		Liquid Water Isotope Analyzer	1	Viraj Edirisinghe	G-7	6-11-7	5309498.90		
416	10.12.11	D		Autoinjector	1	Viraj Edirisinghe	G-7	6-11-8	2238376.10		
417	31.12.10	D		Thickness Gauge Type Solartron LE/12/S 240 V	1	S S Kulathunga	Radiation Processing Lab	6-12-1	557639.85		
418	13.01.11			Stainless Steel Container 20`` * 30`` with Net and Lid	1	S S Kulathunga	Radiation Processing Lab	6-12-2	125075.00		
419	13.01.11			Stainless Steel Container 16`` * 24`` with Net and Lid	1	S S Kulathunga	Radiation Processing Lab	6-12-3	80900.00		
420	13.01.11			Stainless Steel Spoon	2	S S Kulathunga	Radiation Processing Lab	6-12-4	5000.00		
421	23.02.11			Stainless Steel Container	1	Lakmali	Sample I	6-12-5	27500		
				CANCEL				6-12-6			
422	23.02.11			Stainless Steel Box)Divoloping Tanks)	2	Viraj Edirisinghe	Dark Ro	6-12-7	29473.92		
423	03.03.11			C-30 Stand for Gas Cooker	1	S S Kulathunga	Radiation Processing Lab	6-12-8	1100.00		
424	03.03.11			C-40 Stand for Gas Cooker		S S Kulathunga	Radiation Processing Lab	6-12-9	1300.00		
425	23.04.11			One Way Battery Charger (Innergy Brand)	1	A. Jayalath	Radi. Pr	6-13-1	4500.00		
426	31.05.11	D		Spectrophotometer	1	S S Kulathunga	Radiation Processing Lab	6-13-2	5610150.00		
427	31.05.11	D		Viscosystem AVS 470	1	S S Kulathunga	Radiation Processing Lab	6-13-3	1238396.70		
428	31.05.11	D		Ubbelohde Viscosystem (52700ASTM, 52701ASTM, 52710ASTM, 52720ASTM, 52730ASTM, 52740ASTM, 52743ASTM, 52703ASTM, 50110KPAI	1	S S Kulathunga	Radiation Processing Lab	6-13-4	344281.82		
429	31.05.11	D		Ostwald Viscosystem	1	S S Kulathunga	Radiation Processing Lab	6-13-5	13955.15		
430	31.05.11	D		Capillary Viscosystem OA		S S Kulathunga	Radiation Processing Lab	6-13-6	38253.54		
431	31.05.11	D		Capillary Viscosystem 1C		S S Kulathunga	Radiation Processing Lab	6-13-7	38253.54		

No	Date	LP/D	Sub No.	Item name	Qty	Issued To	Location	Inv .No	Value	Remarks	
										FAR No.	Other
432	11.10.26			Saffive Regulator S/N. 1281218	1	A. Ratnayake	TLD Lab	Sc-Ast.-6	24218.88		
				Saffive Nipple	1			Sc-Ast.-6	351.63		
				Saffive Nut Conpling	1			Sc-Ast.-6	357.79		
433	11.12.05			Dark Room Safe Lamp	1	J N Edirisinghe	NDT Dar	Sc-Ast-6	155170.40		
434	11.12.07			TLD Reader Model Harshaw 6600 Plus DXT-RDA with Internal Irradiator	1	A. Ratnayake	TLD Lab	Sc-Ast-6	17826907.00		
435	11.12.07			PC System Monitor - Serial No. : 11019C0800381 Model No.: iiyamaproliteE1706S Mouse - Serial No. : U009HGOQ85 Model No.: Logitec RX 250 Key Board - Serial No. : G0022528 Model No.: Cherry RS6000M CPU - Serial No. : 10/10-083686 Model No.: Intel Pentium Printer - Serial No. : CNC0P41456 Model No.: HP Lazerjet P2035	1	A. Ratnayake	TLD Lab	Sc-Ast-6	545243.50		
436	27.12.11			3 Way Water Tap	2	K.R.C De Silva	Radiation Processing Lab	Sc-Ast-6	25088.00		
437	27.12.11			Shape Refrigerator Model - SJFTORSL - 4 Doors Serial No. - 8110801317	1	V.A. Waduge	Alpha Beta Counting Lab	Sc-Ast-6	279990.00		
438	11.12.28			Digital Radiation Survey Meter (RDS-31S Multi Purpose Meter) Make - Rados Model No. - RDS 31	1	Gayan Perera G-12	NDT Lab	Sc-Ast-6	270368.00		

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No	Date	LP/D	Sub No.	Item Name	Qty	Issued to	Location	Inv. No	Value	Remarks	
										FAR No	Other
				Country of Origin – France Serial No. – 2100599							
439	11.12.29			UV LED AC/DC Inspection Lamp with Accessories – AC Power Code – Battery Pack – Carrying Case – Battery Charger	1	J.N. Edirisinghe G–5	NDT Lab	Sc–Ast–6	351948.80		
440	12.01.12			Film Viewer – Portable Industrial LED Film – Viewer with Four Switch and carring Bag – Viewing Area 80 x 220 mm Make – Wen 2 hou. Lucheng NDT Serial No. – 802621 Model No. – FV 2008	1	J.N. Edirisinghe G–12	NDT Lab	Sc–Ast–6	305984.00		
441	12.01.13			Boss Head	24	Lakmali	Sample Preparation Lab	Sc–Ast–6	7608.00		
				Clamp	24	– do –	– do –	Sc–Ast–6	8544.00		
442	12.01.12			Iron Frame 5` x 4` for Sample Preparation Glas apparatus (C–14)	1	V.A. Waduge	Sample Preparation Lab	Sc–Ast–6	3850.00		
443	12.01.13			Beaker Holders for C–14 Appratus	1	V.A. Waduge	Sample Preparation Lab	Sc–Ast–6	3700.00		
444	12.01.24			Vaccume Gauge	1	V.A. Waduge	Sample Preparation Lab	Sc–Ast–6	3750.00		
445	12.02.11			Ultra Pure Water Purification System Serial No. – 41314742 Model No. – Smart 2 Pure UV	1	V.A. Waduge	Sample Preparation Lab	Sc–Ast–6	655200.00		
446	12.01.20			C–14, Sample Preparation Glass Vaccum Line	1	V.A. Waduge	XRF Lab	Sc–Ast–6	63000.00		
447	12.03.06			For Ceps 1.5 Feet	2	T.N. Attanayake	LLC Lab	Sc–Ast–6	4400		
				For Ceps 1 Feet	1	T.N. Attanayake	LLC Lab	Sc–Ast–6	1400.00		
448	12.03.22			Portable Digital Thermo Hygrometer Serial No. – 11032199 (One year Warranty)	1	R. Abeysinghe	SSDL Lab	Sc–Ast–6	15510.00		
449	12.03.26			Accessories for PHASEC2D Eddy Current Instrument Model – GE, Make – GE Inspection Technologies USA		G–12					
				i.) 90^0 Tip - Delrin Handle - 500 KHz	1 Unit	J.N. Edirisinghe	NDT Lab	Sc–Ast–6	75000.00		
				ii) 45^0 Crank - Delrin Handle - 500KHz	1 Unit			Sc–Ast–6	70000.00		
				iii) 15^0 Crank - 90^0 Tip Delrin Handle - 500 KHz	1 Unit			Sc–Ast–6	75000.00		
				iv) Dynamic Rotating – Probe – 200KHz	1 Unit			Sc–Ast–6	72000.00		
				v) Metal Sorting Absdute – 200 KHz (809P1)	1 Unit			Sc–Ast–6	145000.00		
				vi) Sliding Probe 400H2–50KHz (581P001)	1 Unit			Sc–Ast–6	130000.00		
				vii) Drive Unit 33A 106 and 33A 100	1 Unit			Sc–Ast–6	75000.00		
				viii) Changer (39A023)	1 Unit			Sc–Ast–6	35000.00		
				ix) Conductivity Reference Block (474012)	1 Unit			Sc–Ast–6	65000.00		
				x) Conductivity Reference Block (47A015)	1 Unit			Sc–Ast–6	65000.00		
				xi) Conductivity Reference Block (47A019)	1 Unit			Sc–Ast–6	65000.00		
				xii) Conductivitiy Referecne Block (47A022)	1 Unit			Sc–Ast–6	65000.00		
				xiii) Reference Blcok Dual Reference (47A010)	1 Unit			Sc–Ast–6	65000.00		
450	12.03.27			Multi Channel Eddy Current System Serial No. – 0252F2 Model No. – Apollo (MRX/IMTX)	1 Unit	J.N. Edirisinghe G–12	NDT Lab	Sc–Ast–6	7339000.00		
451	12.03.28			Digital Film Densitometer Model No. – 210 E Denay Serial No. – 3103363	1 Unit	Gayan Perera G–12	NDT Lab	Sc–Ast–6	599200.00		
452	12.03.29			Industrial Film Digitizer 2905HD Laser Film Digitizer (High Density Consist of) Serial No. – 2116374 Model No. – 2905HD * Dell i5 computer – 01 Monitor, Key Board & Mouse (My – OTK54F–Mi101–ICN–000) * Power Cable – 01 * Veiwing Softwayer	1	Gayan Perera G–12	NDT Lab	Sc–Ast–6	9415616.00		
453	12.04.20	D		Stainless Steel Laboratory Standard Container with Dispensing System, 25 Liters	1	V. Edirisinghe	Isotope	Sc–Ast–6	574689.00		
454	12.06.26			Lead Screen 0.125mm	25Pairs	Gayan Perera G–12	NDT Lab	Sc–Ast–6	42000.00		
455	12.06.27			Metal Cover For Air Sampler	1	Lakmali	7/023 P	Sc–Ast–6	5250.00		
456	12.08.08			Burette Clamp	2	Thilakarathne	otope La	Sc–Ast–6	3360.00		
457	12.08.15			Iron Concreet Block	1	Prabath	otope La	Sc–Ast–6	11000.00		
458	12.08.16			Iron Frame Colum Test	1	Prabath	otope La	Sc–Ast–6	15000.00		
459	12.08.22			Laborotry Stand with Support Rod	2	Thilakarathne	otope La	Sc–Ast–6	9811.20		
460	12.08.24			Global Position Sensor (GPS)	1	P D Mahakumara	N I Lab	Sc–Ast–6	81200.00		
461	12.08.30	D		Gama Tracer Modle XLZ–2–RS–232	8	A Jayalath	Room N	Sc–Ast–6	6926030.05		
462	12.08.30			Gama Tracer Extension Unit	8	A Jayalath	Room N	Sc–Ast–6			
463	12.08.30			Network Monitoring Center		A Jayalath	Room N	Sc–Ast–6	3017944.43		
				Server HP Proliant Modle ML 350G6	1	A Jayalath	Room N	Sc–Ast–6			
				UPS APC Smart UPS Modle 1000	1	A Jayalath	Room N	Sc–Ast–6			
		D		Moniter HP 21.5" CPO Modle LE 2202X	1	A Jayalath	Room N	Sc–Ast–6	Vat		
				APC Surge Protector S/N 2Z1141P20219	1	A Jayalath	Room N	Sc–Ast–6	4025.52		
				Network Alarm Box S/N NAB 100181FLA 10018	1	A Jayalath	Room N	Sc–Ast–6			
				Data Expert (Mannual)	1	A Jayalath	Room N	Sc–Ast–6			
464	12.08.30			CS –137 Gama check Source	1	A Jayalath	Room N	Sc–Ast–6	283267.14		
465	12.08.30			Iron Stand For Isotop Hidrology Project	20	Viraj Edirisinghe	I.H. Proj	Sc–Ast–6	59000.00		
466	12.10.02			Magnaflux Y–1 AC Yoke S/N 0227	1	D C Samaraweera	NDT Lab	Sc–Ast–6	188461.73		
467	12.12.20			12V Cor DC to 240V AC Invertor 350w S/No. 2012081930264	1	P D Mahakumara	N I Lab	Sc–Ast–6	3150.00		
468	12.12.31	D		Solar Panel for Early Warning System	1	C Herath	Early Warning System	Sc–Ast–6	31889.78		
469	12.12.31			Computer–Dose Electro Chemical Cell S/No. H101402001	1	M A Hettiarachi	Radiation Processing Lab	Sc–Ast–6	701008.27		
470	12.12.31	D		880 Delta Projector with Ir–192 Handle Grip Centrol Assembly	1	J N Edirisinghe	X–ray R	Sc–Ast–6	2910221.00		

Scientific Equipment Invenory

No	Date	LP/D	Sub No.	Item Name	Qty	Issued to	Location	Inv. No	Value	Remarks	
										FAR No	Other
471	13.01.15			Laboratory Jack 12x14 S.S. Laboratory Jack 20x20 S.S.	3 1	T N Attanayake	LC Lab	Sc-Ast-6 Sc-Ast-6-21-VI	41850.00		
472	13.01.31			Iron Prame for Plot (Plant House)	1	S S Kulatunge	Open University, Nawala	Sc-Ast-6	125714.27		
473	13.02.18			Standart RT Kit (10 Pieces) Standard UT Kit (10 Pieces) Standard MT / PT Kit (10 Pieces) Standard VT Kit (10 Pieces) NDT Demontration Kit (10 Pieces) Reference Radiography Kit	1 1 1 1 1 1	T M R Tennakoon	NDT	Sc-Ast-6 Sc-Ast-6 Sc-Ast-6 Sc-Ast-6 Sc-Ast-6 Sc-Ast-6	2478560.00		
474	13.02.07			Corrosion Analysis Detector with Accessories S/No. 20-1805 - Indicating Device Canin (01) - Carrying Strap (01) - Protection Sleeva for Indi. Device (01) - Transfer Cable (01) - USB - Serial Adaptor (01) - Operating Instruction (01) - Carrying Case Canin (01) - Red Electrode with Spare Parts (01) - Electrode Cable 25m (01) - Cable Coil 25m (01) - Provist PC Software (01) - Bottle with Copper Sulphate (250g) - L-Wheel Electrode System (01) - Tool Kit to wheel Elctrode System (01) - Bottle with Citricacid (250 g)	1	S M S Pulle	NDT Concrete Testing Inspection	-Ast-6-22	2044000.00		
475	13.02.27			Empact Echo Tester with Accessories S/No.IM02235 - Analog to digital data acquisition system(01) - One cylindrical hand-held transducer unit (six Sam.) (3 Flat and 3 cone shaped) (06) - Ten spherical impactors (two sets of fire) (10) - Out put adaptor (01) - Vechicle DC power adaptor (01) - Printed materials (a) Book : Impact Echo (01) (b) Impact Echo Instrument Manual (01) © Impact Echo User's Manual - Ruggedized water proof field case (01) - Wave speed unit for measuring wavespeed rods attached to a tentral ring (01) - Computer software CD (01) - Two BNC Cables - 6ft (02) - USB Port Cable (01) - Dell mini lap top S/No. CKZYZNI (01) - Printer Deskjet 1000HP S/No.CN2BJ28JHX (01)	1	S M S Pulle	NDT Concrete Testing	-Ast-6-2	3091200.00		
476	13.02.27			Rebar Detection System Profometer 5t models S/No.578962 - Indicating Device (01) - Carrying Strap (01) - Universal Probincl Protection Film (01) - Probe cable 1.5 m (01) - Transfer cable 1.5 m (01) - RS 232 / adaptor (01) - Data carrier (01) - Head Set (01) - Protection sleeve for display nut (01) - Operating instructions (01) - Carrying case (01)	1	S M S Pulle	NDT Concrete Testing	c-Ast-6-23	1094240.00		
477	13.02.27			Moisture Meter with Accessories S/No. 60585408 - Hygropin unit (01) - In situ probe (01) - Carrying case (01) - 10 PCS measuring sleeves (10) - CD incl (01) - Hygrolink (01) - Documentation (01)	1	S M S Pulle	NDT Concrete Testing	c-Ast-6-24	397600.00		
478	13.02.27			Pile Integrity Testor Model : PIT-V with Accessories S/No. 3848CA - PIT Model V starter system (01) - 12 V power supply for PITSA (01) - 110 V AC Power Card for 12 V power supply (01) - PIT Transit case (01) - Foam insert for PITSA ellis case 05-7766 (01) - External PCMCIA card reader (01) - Shoulder strap (01) - Execetiv pen stylns (01) - PIT accelerometer wax-50-01 (02) - Battery charger per PIT-5A (01) - 110 V AC power card for battery charger (01) - PIT Vedio (01) - 2 Regular hammer (01) - 3 Regular hammer (01) - PIT accelerometer-top mount white -TL (01) (S/No. 21044)	1	S M S Pulle	NDT Concrete Testing	c-Ast-6-24	2234400.00		
479	13.02.27			Pile Echo Tester (Model ; PET Pro USB) S/No. 26024 with Accessories - USB pet sensor (01) - Spare water proof USB cable (01) - Thorex nylon hammer 32 mm (01) - Carrying case (01) - Replacable tips for hammer (04) - HBM putty (100 gv) - Pet software installation CD (01) - Model ES-08100 accelerometer calibration data (01) - Model ES-08100 accelerometer specification (01) - Validation test result (01) - Certificate of calibration (in house) (01) - Certificate of quality (01) - Declaration of ASTM D5882-07 conformance (01)	1	S M S Pulle	NDT Concrete Testing	c-Ast-6-25	1545600.00		

Scientific Equipment Invenory

No	Date	LP/D	Sub No.	Item Name	Qty	Issued to	Location	Inv. No	Value	Remarks	
										FAR No	Other
				- PET Getting started card (01) - Company mini laptop (S/No. 5CB14151P8) (01) - Printer HP-Deskjet 1000 (S/No. 2BJ28K5R) (01)							
480	13.03.20			Pull Off Tester M Model : 58-C215/T S/No. : 12017 556	1 unit	S M S Pulle	NDT Concrete Testing	c-Ast-6-26	741400.00		
481	13.03.20			Ultrasonic Pulse Velocity with Oscilloscope with Accessories V-meter MKFU Model : VC 400 S/No. : 40001-10535	1 unit	S M S Pulle	NDT Concrete Testing	c-Ast-6-26	1291752.00		
482	13.03.20			Schmith Hammer James Digital Rebounder Reat Hammer with Assessories Model USD 2000 S/No. 40200-822210	1 unit	S M S Pulle	NDT Concrete Testing	c-Ast-6-26	662166.40		
483	13.04.26			A & D SK 5001 WP Scale S/No. - P1644357	1	W M I Dissanayeke	LLC Lab	-Ast-6-26	48070.90		

APPENDIX-9

The Radioactive Materials Stored in the AEA

P – 6.

Radioactive Sources Stored in the Atomic Energy Authority Waste Management Facility Pending Disposal
Up dated on 05.04.2013

(1) Radioactive Sources Conditioned

Package No.	Shield No.	Container No.	No. of Capsules	No. of Sources	Radioactive Material	Activity on 20.05.2010	Institute from which the material received
SRL - 401	SRL - 301	-	10	-	Ra -226	0.54 Ci	Cancer Hospital, Maharagama
SRL – 402	SRL – 302	-	10	-	Ra -226	0.59 Ci	Cancer Hospital, Maharagama
SRL – 403	SRL – 303	-	10	-	Ra -226	0.55 Ci	Cancer Hospital, Maharagama
SRL – 404	SRL – 304	-	10	-	Ra -226	0.52 Ci	Cancer Hospital, Maharagama
SRL – 405	SRL – 305	-	10	-	Ra -226	0.49 Ci	Cancer Hospital, Maharagama
SRL – 406	SRL – 306	-	10	-	Ra -226	0.49 Ci	Cancer Hospital, Maharagama
SRL – 407	SRL – 307	-	10	-	Ra -226	0.51 Ci	Cancer Hospital, Maharagama
SRL – 408	SRL – 308	-	10	-	Ra -226	0.49 Ci	Cancer Hospital, Maharagama
	-	I.C-1	-	02	Ra - 226	39.42 mCi	Ceylon Tobacco Company
SRL - 409	SRL – 309	-	10		Ra -226	0.57 Ci	Cancer Hospital, Maharagama

No. of Sources (Needles) Conditioned = ***90***
No. of Sources Conditioned (Lightening Arrestors) = ***02***
Total No. of Sources Conditioned = ***92 (Date of conditioned 24 April & 12 May 2000)***

(2) Radioactive Sources Not Conditioned

a) Used for Brachytherapy Treatments:

Radioactive Source	No. of sources	Activity on 20.05.2010	Institute from which the material received	Country of Origin/Manufacturer
Co-60 (LC-14)	03	1.77 Ci	Cancer Hospital, Maharagama	Not known
No. of sources	***= 03(Date of received 17.09.2007)***			

Radioactive Source	No. of sources	Activity on 20.05.2010	Institute from which the material received	Country of Origin/Manufacturer
Cs-137 (LC-16)	03	Not known	Teaching Hospital, Kandy	Not known
No. of sources	***= 03 (Date of received 10.08.2010)***			

Radioactive Source	No. of sources	Activity on 01.12.2000	Institute from which the material received	Country of Origin/Manufacturer
Cs-137 (LC-17)	11	0.48 Ci	Teaching Hospital, Kandy	Eric Rouchon
No. of sources	***= 11(Date of received 10.08.2010)***			

b) Used as Lightning Arrestors

Radioactive Source	Activity on 20.05.2010	Institute from which the material received	Country of Origin/Manufacturer
241Am-Be	20 mCi	Triton Hotel, Ahungalla ***(Date of received 12.12.2005)***	United Kingdom
241Am-Be	20 mCi	Neptune Hotel, Beruwala	United Kingdom
241Am-Be	20 mCi	Browns Beach Hotel, Negambo	United Kingdom
241Am-Be	20 mCi	Ceylon Biscuits, Pannipitiya ***(Date of received 17.07.2012)***	United Kingdom
No. of sources	***= 04***		

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c) **Used as Soil Moisture Gauges**

Type	Equipment Model No.	Equipment Serial No.	Source Serial No	Radioactive Source	Activity on 20.05.2010	Institute from which the material received	Country of Origin/Manufacturer
Troxler	3222	220	NE 4420	241Am-Be	9.55 mCi	Land Use Division, Irrigation Department	Troxler Electronic Laboratories, Inc..U.S.A
Troxler	3222	219	NE 4419	241Am-Be	9.55 mCi	Land Use Division, Irrigation Department	Troxler Electronic Laboratories, Inc..U.S.A
Troxler	1255	734	AM 123	241Am-Be Cs-137	94.37 mCi	Land Use Division, Irrigation Department	Troxler Electronic Laboratories, Inc..U.S.A
CPN	-	-	MM4054943	241Am-Be Cs-137	47.91 mCi	Land Use Division, Irrigation Department	Instrotek Company,U.S.A
Neutron depth probes	-	-	-	241Am-Be	Not known	Land Use Division, Irrigation Department	Not known
	-	-	-	241Am-Be	Not known	Land Use Division, Irrigation Department	Not known
Troxler	1255	478	45-5264	241Am-Be	10 mCi	Land Use Division, Irrigation Department	Troxler Electronic Laboratories, Inc..U.S.A

No. of sources = 07

Type	Equipment No.	Radioactive Source	Activity on 20.05.2010	Institute from which the material received	Country of Origin/Manufacturer
CPN 503 DR	H 30119935	241Am-Be	48.50 mCi	Department of Export Agriculture, Matale	Instrotek Company,U.S.A
CPN 503 DR	MS 0099813	241Am-Be Cs-137	48.53 mCi 6.51 mCi	Department of Export Agriculture, Matale	Instrotek Company,U.S.A

No. of sources = 02

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Type	Equipment Model No.	Equipment Serial No.	Source Serial No	Radioactive Source	Activity on 20.05.2010	Institute from which the material received	Country of Origin/Manufacturer
Troxler	3440	34335	47-3009 751-377	241Am-Be Cs-137	40 mCi 8 mCi	China Harbour Engineering,Bandaragama	Troxler Electronic Laboratories, Inc..U.S.A
Troxler	3440 Plus	39538	78-4260 77-7077	241Am-Be Cs-137	40 mCi 8 mCi	China Harbour Engineering,Bandaragama	Troxler Electronic Laboratories, Inc..U.S.A
No. of sources = 02 (Date of received 27.03.2012)							

Type	Equipment Model No.	Equipment Serial No.	Source Serial No	Radioactive Source	Activity on 20.05.2010	Institute from which the material received	Country of Origin/Manufacturer
Troxler	3430	34244	-	241Am-Be Cs-137	40 mCi 8 mCi	Kumagai Gumi Co. Ltd, Baddegama	Troxler Electronic Laboratories, Inc..U.S.A
Troxler	3430	34246	-	241Am-Be Cs-137	40 mCi 8 mCi	Kumagai Gumi Co. Ltd, Baddegama	Troxler Electronic Laboratories, Inc..U.S.A
No. of sources = 02(Date of received 06.11.2012)							

d) Used for Research & Education Purposes

Container No.	Radionuclide (If identified)	Activity on 20.05.2010 (If known)	Institute from which the material received	Country of Origin/Manufacturer
LC -2	Co-60	2.8 mCi	Department of Nuclear Science, University of Colombo	Not Known
LC-3	Co-60	1.8 mCi	Department of Nuclear Science, University of Colombo	Not Known
LC-4	-	Not known	Department of Nuclear Science, University of Colombo	Not Known
LC-5	Co-60	Not known	Department of Nuclear Science, University of Colombo	Not Known
LC-6	-	Not known	Department of Nuclear Science, University of Colombo	Not Known
LC-7	-	Not known	Department of Nuclear Science, University of Colombo	Not Known
LC-8	Neutron	Not known	Department of Nuclear Science, University of Colombo	Not Known
LC-9	Cs-137	Not known	Department of Nuclear Science, University of Colombo	Not Known
LC-10	-	Not known	Department of Nuclear Science, University of Colombo	Not Known
LC-11	-	Not known	Department of Nuclear Science, University of Colombo	Not Known
LC-12	-	Not known	Department of Nuclear Science, University of Colombo	Not Known
LC-13	-	Not known	Department of Nuclear Science, University of Colombo ***(Date of received 29.08.2006))***	Not Known
-	Pu / Be	0.27 mCi	Department of Engineering, University of Moratuwa ***(Date of received 17.02.2003)***	Not Known
No. of sources = 13				

*** All these sources are in mille Curie Levels**

e) Used for Density Gauges

Radioactive Source	No. of Sources	Activity on 24.06.2011	Institute from which the material received	Country of Origin/Manufacturer
Cs-137	05	4.73 Ci (1978)	Ceylon Steel Corporation Ltd, Oruwala	Union of Soviet Socialist Republic (USSR)
	No. of sources= 05 (Date of received 24.06.2011)			

Name, Make & Model of the Device	Date of Manufacturer	Source Serial No	Radioactive Source	Activity on 20.03.2013	Institute from which the material received	Country of Origin/Manufacturer
Industrial Nucleonics Accuray Corporation C-7, S-18	12-1981	S 2141 H	Sr-90	25 mCi	Ceylon Tobacco Company, Colombo 15	Accuray Corporation 650, Ackerman Road, Columbus, OHIO, 43202, U.S.A
	11-1980	S 1815 H	Sr-90	25 mCi		
	12-1981	S 2245 H	Sr-90	25 mCi		
	05-1981	S 2016 H	Sr-90	25 mCi		
	04-1983	S 2703 H	Sr-90	25 mCi		
	05-1981	S 2018 H	Sr-90	25 mCi		
	05-1981	S 2019 H	Sr-90	25 mCi		
	05-1981	S 2017 H	Sr-90	25 mCi		
	12-1981	S 2144 H	Sr-90	25 mCi		
	12-1981	S 2239 H	Sr-90	25 mCi		
	05-1981	S 2020 H	Sr-90	25 mCi		
No. of sources= 11 (Date of received 20.03.2013)						

f) Used for Level Gauges:

Radioactive Source	No. of sources	Activity on 12.03.2013	Institute from which the material received	Country of Origin/Manufacturer
Cs-137	02	100 mCi x 02	Prema Ceylon Ltd, Rajagiriya	Not known
No. of sources = 02(Date of received 12.03.2013)				

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g) Others

Radioactive Material	Activity on 20.05.2010	Institute from which the material received	Country of Origin/Manufacturer	Comments
Cs -137	20.12 mCi	Teaching Hospital, Karapitiya	Not Known	These sources have not yet been used
Cs -137	20.12 mCi	Teaching Hospital, Karapitiya	Not Known	
Cs -137	40.24 mCi	Teaching Hospital, Karapitiya	Not Known	
Cs -137	30.18 mCi	Teaching Hospital, Karapitiya	Not Known	
Cs -137	30.18 mCi	Teaching Hospital, Karapitiya	Not Known	
Cs -137	30.18 mCi	Teaching Hospital, Karapitiya	Not Known	
Cs -137	30.18 mCi	Teaching Hospital, Karapitiya	Not Known	
Cs -137	20.12 mCi	Teaching Hospital, Kandy	Not Known	
Cs -137	20.12 mCi	Teaching Hospital, Kandy	Not Known	
Cs -137	20.12 mCi	Teaching Hospital, Kandy	Not Known	
Cs -137	30.18 mCi	Teaching Hospital, Kandy	Not Known	
Cs -137	30.18 mCi	Teaching Hospital, Kandy	Not Known	
Cs -137	30.18 mCi	Teaching Hospital, Kandy	Not Known	
Cs -137	12.07 mCi	Ceylon Petroleum Corporation	Not Known	
	No. of sources	***= 15***		

Total Nos. of Sources Not Conditioned = ***80***

Total nos. of sources stored in AEA = 172