

AUTO PATH: L:\PROJECTS\2004\SETHUSAMUDRAM PROJECT - DPR EIA\SOILBORINGS\REPORT ENG\SR004 - BORELOG FINAL DETAIL REPORT - FEB 2005

Bore Hole No	Location		Diameter of Borehole	Date of Commencement	Date of completion					
	Latitude	Longitude								
1	9°07'16.4"N	79°29'31.4"E	100mm	10-2-05	11-2-05					
Depth below GL	Visual soil description	Depth	Type	No	Penetration (cm)					
					15	30	45	60	N	
0.0 - 1.5	Grey fine sand	1.5	SPT		2	4	5	-	9	
1.5 - 3.0	Grey fine sand	3.0	SPT		3	6	6	-	12	
3.0 - 4.5	Grey silty fine sand	4.5	SPT		5	6	7	-	13	
4.5 - 6.0	Grey silty fine sand	6.0	SPT		9	16	25	-	41	
6.0 - 7.5	Greyish ash coloured silty fine sand	7.5	SPT		12	20	31	-	51	
7.5 - 9.0	Grey silty clay with pieces of calcareous sand stone	9.0	SPT		16	10	9	-	19	
9.0 - 10.5	Grey silty clay with pieces of calcareous sand stone	10.5	SPT		10	12	12	-	24	
10.5 - 12.0	Crushed pieces of rocks and calcareous sand stone	12.0	SPT		For 6cm penetration 50 blows rock from 12m depth below ground level bore hole terminated at 12 m					
					15	30	45	60	N	
12.0 - 13.5	Silty fine sand	13.5	SPT		5	5	8	-	13	
13.5 - 15.0	Fine sand with white colour small stones (may be coral bed)	15.0	SPT		21	30	56	-	86	
15.0 - 16.5	Fine silty sand with one or two stones.	16.5	SPT		20	40	46	-	86	
16.5 - 18.0	Fine silty sand (Greyish in colour)	18.0	SPT		15	For 22cm penetration			100	
18.0 - 19.5	Silty fine sand	18.0	SPT		9	12	16	-	28	
19.5 - 21.0	Silty fine sand	21.0	SPT		18	19	21	-	40	

NOTE: SOIL DATA IS BASED ON NOT FINAL REPORT - FEB 2005.

REPORT NO.
RP 004 (A)

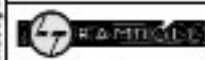
PROJECT: SETHUSAMUDRAM SHIP CHANNEL PROJECT - DPR & EVALUATION OF EIA

PROJECT NO.
C1041202

TITLE:
BORELOG - 1 AT ADAM'S BRIDGE

DATE: 10-02-05

MADE: SR



L&T-RAMBØLL
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FIGURE NO:
FD0511

REV:
0

Bore Hole No	Location		Diameter of Borehole	Date of Commencement	Date of completion					
	Latitude	Longitude								
1	9°07'16.4"N	79°29'31.4"E	100mm	10-2-05	11-2-05					
Depth below GL	Visual soil description		Depth	Type	No	Penetration (cm)				
						15	30	45	60	N
0.0 - 1.5	Grey fine sand		1.5	SPT		2	4	5	-	9
1.5 - 3.0	Grey fine sand		3.0	SPT		3	6	6	-	12
3.0 - 4.5	Grey silty fine sand		4.5	SPT		5	6	7	-	13
4.5 - 6.0	Grey silty fine sand		6.0	SPT		9	16	25	-	41
6.0 - 7.5	Greyish ash coloured silty fine sand		7.5	SPT		12	20	31	-	51
7.5 - 9.0	Grey silty clay with pieces of calcareous sand stone		9.0	SPT		16	10	9	-	19
9.0 - 10.5	Grey silty clay with pieces of calcareous sand stone		10.5	SPT		10	12	12	-	24
10.5 - 12.0	Crushed pieces of rocks and calcareous sand stone		12.0	SPT		For 6cm penetration 50 blows rock from 12m depth below ground level bore hole terminated at 12 m				
						15	30	45	60	N
12.0 - 13.5	Silty fine sand		13.5	SPT		5	5	8	-	13
13.5 - 15.0	Fine sand with white colour small stones (may be coral bed)		15.0	SPT		21	30	56	-	86
15.0 - 16.5	Fine silty sand with one or two stones.		16.5	SPT		20	40	46	-	86
16.5 - 18.0	Fine silty sand (Greyish in colour)		18.0	SPT		15	For 22cm penetration			100
18.0 - 19.5	Silty fine sand		18.0	SPT		9	12	16	-	28
19.5 - 21.0	Silty fine sand		21.0	SPT		18	19	21	-	40

NOTE: SOIL DATA IS BASED ON NOT FINAL REPORT - FEB 2006.

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PROJECT: SETHUSAMUDRAM SHIP CHANNEL PROJECT - DPR & EVALUATION OF EIA

TITLE: BORELOG - 1 AT ADAM'S BRIDGE



**L&T-RAMBOLL
CONSULTING ENGINEERS LIMITED**

REPORT NO:
RP 004 (A)

PROJECT NO:
C1041202

DATE: 08-02-05

MADE BY:

FIGURE NO: FD0511
REV: 0

AUTO PLOT: L:\PORTS\BANK\THIRUAKKURAI PROJECT - DPR\101\2005\GRAMMURAI\BORELOG - BETA\2\FINAL DETAIL\BORELOG REPORT.FEB 2005.DWG

Bore Hole No	Location		Diameter of Borehole	Date of Commencement	Date of completion				
	Latitude	Longitude							
2	7°07'29.50"N	79°29'15.20"E	100mm	10-2-05	11-2-05				
Depth below GL.	Visual soil description	Depth	Type	No	Penetration (cm)				
					15	30	45	60	N
0.0 - 1.5	Fine sand	1.5	SPT		14	15	21	-	36
1.5 - 3.0	Grey silty fine sand	3.0	SPT		12	18	28	-	46
3.0 - 4.5	Grey silty fine sand	4.5	SPT		14	23	31	-	54
4.5 - 6.0	Grey silty fine sand	6.0	SPT		18	24	32	-	56
6.0 - 7.5	Grey colour silty fine sand calcareous?	7.5	SPT		22	26	33	-	59
7.5 - 9.0	Grey colour silty fine sand calcareous?	9.0	SPT		20	25	29	-	54
9.0 - 10.5	Grey silty clay with pieces of calcareous sand stone	10.5	SPT		10	7	9	-	16
10.5 - 12.0	Grey silty clay with pieces of calcareous sand stone	12.0	SPT		8	10	11	-	21
12.0 - 13.0	Pieces of rocks and pebbles to calcareous sand stones	13.0	DES		15cm core recovered core				
13.0 - 13.5	Coral bed (White to grey in colour)	13.5	Core		1 - 11 - 1m depth.				
13.5 - 14.5	Silty fine sand (grey to ash colour)	14.5	SPT		13	16	18	-	34
14.5 - 16.0	Silty fine sand (Ash colour)	16.0	SPT		15	19	21	-	40
16.0 - 17.0	Sand stone/coral bed at 1.0 m depth from core recovery - 34cm.	16.0 to 17.0 m from G.L.							
17.0 - 18.0	Fine sand with coral bed / sand stone	50 holes for 10cm penetrations.							
18.0 - 19.5	Fine sand with coral bed / sand stone pieces.	21.32 pieces at 1.5m depth							
19.5 - 21.0	Silty fine sand	21.0	SPT		14	23	26	-	49

NOTE: SOIL DATA IS BASED ON PRELIMINARY REPORT - FEB 2005.

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 PATA: L:\PORTS\BANK\THIRUAKKURAI PROJECT - DPR\101\2005\GRAMMURAI\BORELOG - BETA\2\FINAL DETAIL\BORELOG REPORT.FEB 2005.DWG

PROJECT: SETHUSAMUDRAM SHIP CHANNEL PROJECT - DPR & EVALUATION OF EIA

TITLE: BORELOG - 2 AT ADAM'S BRIDGE


L&T-RAMBOLL
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REPORT NO: RP 004 (A)
PROJECT NO: C1041202
DATE: 10-02-05
MADE: SR
FIGURE NO: FD0512
REV: 0

AUTO PATA L:\PROJECTS\SETHUSAMUDRAM\PROJECT - DPR\SETHUSAMUDRAM\REPORT - DIVERS\0004 - BRY AT ADAM DETAILED PROJECT REPORT - FEB 2005

Bore Hole No	Location		Diameter of Borehole	Date of Commencement	Date of completion					
	Latitude	Longitude								
4	9°7.875'N	79°29.069'E	100mm	7-2-05	8-2-05					
Depth below GL	Visual soil description		Depth	Type	No	Penetration (cm)				
						15	30	45	60	N
0.00 – 1.5	Medium to fine grained olive grey sand		1.5	SPT		3	6	10	-	16
1.5 – 3.0	Medium to fine grained calcareous sand		3.0	SPT		5	9	13	-	23
3.0 – 4.5	Medium to coarse sand with shell pieces somewhat calcareous		4.5	SPT		8	14	21	-	35
4.5 – 6.0	Medium to fine sand with minor pieces of calcareous rocks		6.0	SPT		12	20	29	-	49
6.0 – 7.5	Medium to fine sand with minor pieces of calcareous rocks		7.5	SPT		12	22	35	-	57
7.5 – 9.0	Medium to fine grained sand, appears calcareous		9.0	SPT		16	30	46	-	76
9.0 – 10.5	Olive grey clay to silt with hard calcareous sand stones with shells		10.5	SPT		3	4	5	-	9
10.5 – 12.0	Olive grey clay to silt with hard calcareous sand stones with shells		12	SPT		6	5	5	-	10
12.0 – 13.5	Semi plastic silty calcareous clay with shell and pieces of sand stone		13.5	SPT		11	13	13	-	26
13.5 – 15.0	Dense calcareous silty sand to sandy silt		15.0	SPT		16	28	27	-	55
15.0 – 16.5	Ash coloured silty sand		16.5	SPT		14	18	20	-	38
16.5 – 18.0	Grey calcareous silty fine sand		18.0	SPT		15	19	24	-	43
18.0 – 19.5	Grey calcareous silty fine sand		19.5	SPT		19	24	26	-	50
19.5 – 21.0	Grey calcareous silty fine sand		21.0	SPT		24	30	36	-	66
Bore hole terminated in a depth of 21 m below GL										

NOTE: SOIL DATA IS BASED ON PRELIMINARY REPORT - FEB 2005.

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	PROJECT: SETHUSAMUDRAM SHIP CHANNEL PROJECT - DPR & EVALUATION OF EIA
	TITLE: BORELOG - 4 AT ADAM'S BRIDGE
L&T-RAMBØLL CONSULTING ENGINEERS LIMITED	

REPORT NO: RP 004 (A)
PROJECT NO: C1041202
DATE: 18-02-05
MADE: SR
FIGURE NO: FD0513
REV: 0

AUTO PATH L:\PROJECTS\2004\SETHUSAMUDRAM\PROJECT\REPORTS\2005\20050804\REPORT\2005\0804\REPORT - PER 2005-08-04

Bore Hole No	Location		Depth of Bore hole drilled	Depth of water column	Date of Commencement	Date of completion				
	Latitude	Longitude								
11	79°26'46.00"N	89°09'03.4"E	24m	2.5m	5-2-05	8-2-05				
Depth below GL	Visual soil description		Depth	Type	No	Penetration (cm)				
						15	20	45	60	75
0 - 1.5	Fine to medium calcareous sand		1.50	SPT		9	11	14	-	25
1.5 - 3.0	Medium to coarse calcareous sand with dark minerals		3.00	SPT		13	23	27	-	50
3.0 - 4.5	Medium to fine calcareous sand		3.00	UDS (slipped)		11	13	17	-	30
			4.5	SPT						
4.5 - 6.0	Medium grained grey sand with minor sand rock pieces		6.00	SPT		12	16	25	-	41
6.0 - 7.5	Olive grey calcareous sand Borehole collapsed and re-drilling carried out		7.5	SPT		16	20	22	-	42
7.5 - 9.0	Calcareous fine sand with minor shells		9.0	SPT		18	20	25	-	45
9.0 - 10.5	Grey coloured calcareous sand with shell pieces along with rounded pieces of calcareous rock		10.5	SPT		5	4	5	-	9
10.5 - 12.5	Olive grey sticky clay with pieces of calcareous sand stones, rounded to pebbly less than 8 mm dia									
12.5 - 13.5	Calcareous marl? With round pebbles of calcareous sand stones		13.5	SPT		5	5	6	-	11
13.5 - 15.0	Light grey to cement grey calcareous sand with pieces of calcareous sand stones		15.00	SPT		10	15	20	-	33
15.0 - 16.5	Calcareous clayey sand with calcareous sand stones		16.5	SPT		12	16	20	-	36
16.5 - 18.0	Grey to reddish, plastic, sticky calcareous silt to fine sand		18.0	SPT		20	25	30	-	55
18.0 - 19.5	Olive grey semi plastic stiff to sticky calcareous clayey silt		19.5	SPT		29	50	50	-	100
19.5 - 21.0	Olive grey semi plastic stiff to sticky calcareous clayey silt but more plastic		21.0	SPT		60	50	50	-	100
21.0 - 22.5	Light coloured somewhat dense sticky calcareous clayey silt		22.5	SPT		18	20	25	-	45
22.5 - 24.0	Light coloured dense sticky calcareous clayey silt The borehole was closed at 24.00m below GL on 8-2-05		24.0	SPT		20	22	30	-	52

NOTE: SOIL DATA IS BASED ON FINAL REPORT - FEB 2005.

REPORT NO:
RP 004 (A)

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PROJECT: SETHUSAMUDRAM SHIP CHANNEL PROJECT - DPR & EVALUATION OF EIA

PROJECT NO:
C1041202

TITLE: BORELOG - 11 AT ADAM'S BRIDGE

DATE: 10-02-05
MADE: SR

 **L&T-RAMBØLL**
CONSULTING ENGINEERS LIMITED

FIGURE NO:
FD0514
REV:
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