ARUP Geotechnics

BOREHOLE RECORD

HOLE **BH8** SHEET 1 OF 4

PROJECT	Yandina Highway Upgrading Preliminary Geotechnical Investigation	LOCATION GROUND LEVEL	see Fig.2.
CONTRACTOR	Christensen Drilling	ANGLE	90
DRILL MODEL	Jacro 350	BEARING	–
MOUNTING	Truck	DIAMETER	100mm
		LOGGED BY	BS
		DATE/S	21 OCT '93

DRILLING	STRATA				MATERIAL DESCRIPTION	CONDITION		OBSERVATIONS
SAMPLE, TEST, BIT, SUPPORT ETC	R.L AHD	DEPTH m	GROUP SYMBOL	LEGEND	SOIL TYPE Colour, Plasticity, Grain Size, Minor Components	WATER/ MOISTURE	CONSISTENCY VS S F St VST H VL L MD D VD	SOIL ORIGIN STRUCTURE, ETC
AD–T		0.0	CH		Silty CLAY: dark brown, low to medium plasticity, some silt.	M		ALLUVIUM
		0.7	CL		Silty Sandy CLAY: dark brown, medium plasticity, some silt and fine grained sand.			
U50 Cu= 200–250		1.5						
AD–T		2.0						
SPT: 4,4,25 *N = 29		3.0						
AD–T		3.4	SC		Clayey SAND: brown, low plasticity clay, medium grained sand.			
		4.0						
SPT: 14,19,12 *N = 31		4.2	SP		Gravelly SAND: brown, medium grained sand, some gravel (<15–20mm) and traces of low plasticity clay.			
AD–T		4.5						
		4.8	GP		Sandy GRAVEL: yellow–brown, low plasticity clay, medium size sand, medium to coarse gravel up to 30mm.			RESIDUAL ROCK
		5.0						
SPT: 11,11,9 *N = 20		6.0						
W–RR (C)		6.8						
		7.0			EW VOLCANIC ROCK: mottled brown, extremely weathered, low plasticity clay content as weathering product.			EW ROCK
SPT:30/125 refusal		7.5						
		7.65			Washbore – Rock Rolling refusal at 7.5m. Borehole continued by coring. See Sheet 3.			
		8.0						

NOTES

1. From PCP26 to BH8 = 65.9m at 298°
2. The SPT result for 3.0m: The high count of 25 for the last 150mm, due to cobble being pushed down hole.
3. Auger drilled to 6.0m. Hole was collapsing below 4.5m. Casing was therefore installed and wash boring commenced.

FIGURE

JOB **7472/4**

ARUP Geotechnics

BOREHOLE RECORD

HOLE **BH8** SHEET 2 OF 4

PROJECT	Yandina Highway Upgrading Preliminary Geotechnical Investigation	LOCATION GROUND LEVEL	see Fig.2.
CONTRACTOR	Christensen Drilling	ANGLE	90
DRILL MODEL	Jacro 350	BEARING	–
MOUNTING	Truck	DIAMETER	100mm
		LOGGED BY	BS
		DATE/S	21 OCT '93

DRILLING	STRATA				MATERIAL DESCRIPTION	CONDITION		OBSERVATIONS
SAMPLE, TEST, BIT, SUPPORT ETC	R.L AHD	DEPTH m	GROUP SYMBOL	LEGEND	SOIL TYPE Colour, Plasticity, Grain Size, Minor Components	WATER/ MOISTURE	CONSISTENCY VS S F ST VST H VL L MD D VD	SOIL ORIGIN STRUCTURE, ETC
		8.0			Coring from 7.65m – 8.8m unsuccessful. No core recovered. Drilling continued by W–RR(C).			
W–RR(C)		8.8						
SPT:30/110 refusal		9.0			EW VOLCANIC ROCK: mottled brown, extremely weathered, low plasticity clay present (weathering product), some silt and fine sand, highly weathered.			EW ROCK (Volcanic)
W–RR(C)		10.0						
		10.5			Washbore – Rock Rolling refused at 10.5m. Drilling continued by coring. See Sheet 3.			
		11.0						
		12.0						
		13.0						
		14.0						
		15.0						
		16.0						

NOTES

4. No recovery from SPT at 6.0m
5. Attempted coring from 7.65m – 8.80m and no core recovered, therefore Washbore – Rock Rolling continued to 9.0m then a SPT attempted, followed by Washbore – Rock Rolling to 10.5m.
6. Water level in borehole 3.2m.

FIGURE

JOB **7472/4**

ARUP Geotechnics

BOREHOLE RECORD

HOLE **BH8** SHEET 3 OF 4

PROJECT	Yandina Highway Upgrading Preliminary Geotechnical Investigation	LOCATION GROUND LEVEL	see Fig.2.
CONTRACTOR	Christensen Drilling	ANGLE	90
DRILL MODEL	Jacro 350	BEARING	–
MOUNTING	Truck	DIAMETER	100mm
		LOGGED BY	BS
		DATE/S	21 OCT '93

DRILLING			STRATA				MATERIAL DESCRIPTION	DISCONTINUITIES					
CASING RUN, REC. (%)	WATER	SAMPLE TEST	R.L AHD	DEPTH m	GROUP SYMBOL	LEGEND	SOIL TYPE Colour, Plasticity, Grain Size, Minor Components	WEATHERING	ESTIMATED ROCK STRENGTH EL VL L M H VH EH	FREQUENCY 30 10 3 (per m)	SPECIFIC TYPE	SPECIFIC ANGLE	SPECIFIC THICKNESS (mm)	GENERAL CONDITION Planarity, Roughness, Coating, Infill
				4.0										
				5.0			BH8 Auger drilled from 0.0m to 4.5m. Continued drilling by Washbore – Rock Rolling from 6.5m to 7.5m. Refer to Sheet 1 for description.							
				6.0										
				7.0										
				7.65										
0%				8.0			CORE LOSS 1150mm							
				8.8										
				9.0			Washbore – Rock Rolling to 9.0m. Then SPT attempt, followed by W–RR(C) to 10.5m. See Sheet 2.							
				10.0										
25%				10.5			VOLCANIC ROCK: brown – black, grain size from 3mm to 40mm, highly weathered, only basalt cobbles recorded, matrix removed (clay matrix washed away by technique).	HW						Clay matrix completely removed by coring process leaving only gravel remnants in core barrel.
				11.0										
				11.8										
				12.0			(cont.) see Sheet 4.							

NOTES

TYPE OF DISCONTINUITY
Jo–JOINT
Be–BEDDING PLANE PARTING
Fo–FOLIATED PARTING
Cl–CLAY SEAM
We–WEATHERED SEAM
Cr–CRUSHED SEAM
Sh–SHEARED ZONE

FIGURE

JOB **7472/4**

ARUP Geotechnics

BOREHOLE RECORD

HOLE BH8 SHEET 4 OF 4

PROJECT	Yandina Highway Upgrading Preliminary Geotechnical Investigation	LOCATION GROUND LEVEL	see Fig.2.
CONTRACTOR	Christensen Drilling	ANGLE	90
DRILL MODEL	Jacro 350	BEARING	–
MOUNTING	Truck	DIAMETER	100mm
		LOGGED BY	PFW/BS
		DATE/S	20 OCT '93

DRILLING			STRATA				MATERIAL DESCRIPTION	DISCONTINUITIES					
CASING RUN, REC. (%)	WATER	SAMPLE TEST	R.L AHD	DEPTH m	GROUP SYMBOL	LEGEND	SOIL TYPE Colour, Plasticity, Grain Size, Minor Components	WEATHERING	ESTIMATED ROCK STRENGTH EL VL L M H VH EH	3D FREQUENCY 1D (per m) 3 1	SPECIFIC TYPE	SPECIFIC ANGLE	SPECIFIC THICKNESS (mm)	GENERAL CONDITION Planarity, Roughness, Coating, Infill
80%				12.0			VOLCANIC BRECCIA: pink brown to black, medium to very coarse grained, massive to heavily fractured, some heavily weathered clasts up to 15mm.	HW						2 fractures, one 0° and the second 70°, clay matrix weathered at top of sequence.
				12.75			END BH8							
				13.0										
				14.0										
				15.0										
				16.0										
				17.0										
				18.0										
				19.0										
				20.0										

NOTES

TYPE OF DISCONTINUITY
Jo–JOINT
Be–BEDDING PLANE PARTING
Fo–FOLIATED PARTING
Cl–CLAY SEAM
We–WEATHERED SEAM
Cr–CRUSHED SEAM
Sh–SHEARED ZONE

FIGURE

JOB 747214