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**Queensland
Government**

Department of
Main Roads

ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND
SYMBOLS REFER FORM F:GEOT 017/5-2009

BOREHOLE No BH051

SHEET 1 of 1

REFERENCE No H10611

PROJECT BRUCE HIGHWAY (COOROY - CURRA) SECTION A GEOTECHNICAL INVESTIGATION

LOCATION Cut 17 COORDINATES 483219.6 E; 7081111.7 N

PROJECT No FG5825 SURFACE R.L. 115.54m PLUNGE _____ DATE STARTED 17/8/09 GRID DATUM MGA94

JOB No 128/10A/901 HEIGHT DATUM AHD BEARING _____ DATE COMPLETED 17/8/09 DRILLER Geo Drill

DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC WEATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
0	115.54					Clayey SILT Red-brown to orange-brown with HW clasts of rock colluvium.							
1					A		(CI-ML)					3,4,5 N=9	SPT
2	113.54				B	Mottled yellow-brown, becoming silt.						3,5,8 N=13	SPT
3					C	Sandy SILT (Residual) Grey and yellow-brown, fine grained, with some clay.						6,10,10 N=20	SPT
4	111.54				D	Foliations observed in sample recovery.						10,13,17 N=30	SPT
5			(0)			PHYLLITE (HW) Yellow-brown, fine grained, with off-white clay seams throughout. Intermixed clay and quartz gravels. Weakly foliated, generally steeply dipping.		HW				Jt, 85°- 90°, clay and gravel infill Is(50) = 0.53MPa Is(50) = 0.04MPa	x x
6			86 (0)									Disturbed zone of clay and quartz gravel Is(50) = 0.05MPa Is(50) = 0.07MPa	o x
7	109.08		31 (0)									Disturbed zone of clay and quartz gravel Is(50) = 0.08MPa	x
8			28 (0)			PHYLLITE (MW) Pale brown, fine grained. Weakly to moderately foliated, typically 50°.		MW				Disturbed zone of clay and quartz gravel Is(50) = 0.58MPa	x
9			100 (0)			Defects closely spaced. Defects typically dipping at 10° and 80°. Some defect surfaces clay infilled.						Is(50) = 0.49MPa Is(50) = 0.17MPa	o x
10	107.04		100 (0)			Detailed defect description shown on Form GEOT533/8 attached.						Disturbed foliations and brecciated phyllite within clay Is(50) = 0.04MPa Is(50) = 1.20MPa	x x
						Borehole terminated at 8.5m						Is(50) = 0.31MPa Is(50) = 0.17MPa	o x

REMARKS Detailed defect descriptions are shown on Form GEOT533/8 attached.

LOGGED BY
AN

Project: **Bruce Highway Upgrade (Cooroy – Curra) Section A**
Borehole No: **BH51**
Start Depth: 3.00m
Finish Depth: 8.50m
Project No: FG5825
H No: 10611



SCALE 1:5

F:GEOT043/1

DEFECT DESCRIPTIONS OF ENGINEERING BORELOGS

[CHARACTERISATION OF DEFECTS ARE IN ACCORDANCE WITH
ISRM SUGGESTED METHODS (1981)]

BOREHOLE NO.:	BH51
SHEET:	1 of 2
REFERENCE NO.:	H10611

PROJECT:	Bruce Highway (Cooroy – Curra) Section A Geotechnical Investigation					
LOCATION:	Cut 17					
PROJECT NO.:	FG5825	SURFACE R.L.:	115.5	DRILLER:	Geodrill	
JOB NO.:	128/10A/901	DATUM:	AHD	DATE DRILLED:	17/08/09	

DEPTH	DEFECT TYPE	DIP°	PLANARITY	ROUGHNESS	APERTURE	WALL ALTERATION	OTHER
4.0-4.05	WS						Clay Seam
4.16-4.2	WS						Clay Seam
4.23	J	30	PI	S	O	Cn	
4.28	J	30	PI	S	O	CI	
4.28-4.35	WS						Clay Seam
4.45-4.48	WS						Clay Seam
4.48	J	60	PI		C	CI	
4.59-4.62	WS						Clay Seam
4.62	J	70	PI	S	O	FeSt	
4.68	J	60	Ir	SR	O	FeSt	
4.7-4.88	WS	80					Clay Seam
4.88-5.20	WS						Clay Seam
5.5-5.72	WS						Clay and Quatz Gravel
6.0-6.03	QZ	60					Highly Fractured
6.06	J	65	PI	S	O	FeSt	
6.46-6.64	BZ						
6.60	J	60	PI	S	O	FeSt	
6.65	J	10	PI	SR	O	FeSt	

Abbreviations (as per F: GEOT 017/5 – 2009)

ROUGHNESS		WALL ALTERATIONS		TYPE		OTHER	
R	Rough	FeSt	Iron Stained	J, Js	Joint, Joints	CI	Clay Infill
Sr	Slightly Rough	W	Weathered	B	Bedding	CLy	Clayey
S	Smooth	Smn	Secondary Mineralisation	BP	Bedding Parting	Co	Coal Seam
SL	Slickensided	Cn	Clean	FP	Foliation Parting	Carb	Carbonaceous
PO	Polished	MnSt	Manganese Stained	LP	Lamination Parting	SI	Sand Infill
PLANARITY		APERTURE		CLV	Cleavage	QZ	Quartz
PI	Planar	C	Closed	Fr	Fracture	CA	Calcite
St	Stepped	O	Open	SZ	Sheared Zone	Chl	Chlorite
Un	Undulating	F	Filled	CZ	Crushed Zone	In	Incipient
Cu	Curved	T	Tight	BZ	Broken Zone	Int	Intersecting
Ir	Irregular			HFZ	Highly Fractured Zone	Lam (s)	Lamination (s)
				WS	Weathered Seam	Di	Drilling Induced
				Vn	Vein	H	Horizontal
						V	Vertical

NOTE: This sheet should be read in conjunction with appropriate Engineering Borelog. Defect angles were measured with respect to horizontal plane.

BOREHOLE NO.:	BH51
SHEET:	2 of 2
REFERENCE NO.:	H10611

DEPTH	DEFECT TYPE	DIP°	PLANARITY	ROUGHNESS	APERTURE	WALL ALTERATION	OTHER
6.65	J	70	PI	S	O	FeSt	250mm
6.82	J	10	Cu	S	O	FeSt	
6.96	J	10	PI	S	O	FeSt	
7.04	J	10	PI	SR	O	FeSt	
7.04	J	60	PI	S	O	FeSt	
7.07	J	60	PI	S	O	FeSt	
7.13-7.16	WS						Clay
7.2	J	45	PI	S	O	FeSt	
7.21	J	60	PI	SR	O	FeSt	
7.36	J	10	PI	SR	O	FeSt	
7.4	J	80	PI	S	O	FeSt	50mm Long
7.45	J	20	PI	S	O	FeSt	
7.47	J	20	St	SR	O	FeSt	
7.55	J	30	PI	S	O	Cn	
7.62	J	40	PI	S	O	FeSt	
7.62	J	80	Ir		C	FeSt	200mm
7.71	J	70	PI		C	Cl	150mm Long
7.81	J	45	PI		C	FeSt	
7.9	J	70	PI	S	O	FeSt	
7.93	J	20	PI	S	O	FeSt	
8.01	J	30	PI		C	Cl	
8.04	J	30	PI	S	O	FeSt	
8.21	J	30	Ir	R	O	FeSt	
8.26	J	30	PI	SR	O	FeSt	
8.31	J	40	PI		C	FeSt	
8.33	J	90	PI	R	O	FeSt	
8.37	J	20	PI	S	O	Cl	
8.43	J	10	PI		C	Cl	5mm Thick
8.43	J	80	PI		C	FeSt	60mm Long