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# ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND  
SYMBOLS REFER FORM F:GEOT 017/8-2014

BOREHOLE No **BH114**  
SHEET **1** of **4**  
REFERENCE No **12060**

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1  
LOCATION Peak Downs Hwy Overpass Abutment A; CH: 5564m; COORDINATES 720955.9 E; 7657920.6 N  
PROJECT No FG6184 SURFACE R.L. 12.42m PLUNGE \_\_\_\_\_ DATE STARTED 21/9/14 GRID DATUM GDA 94 /MGA Zone 55  
JOB No \_\_\_\_\_ HEIGHT DATUM AHD BEARING \_\_\_\_\_ DATE COMPLETED 23/9/14 DRILLER Saxon Drilling

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	12.42												
0.50	11.92					<b>Clayey SILT (ALLUVIUM)</b> Dark brown, moist, soft. Low plasticity.	(ML)						
1					A	<b>Silty CLAY (ALLUVIUM)</b> Brown mottled orange and grey, moist, stiff to very stiff. High plasticity.						4,7,9 N=16	SPT
2					B		(CH)					3,9,6 N=15	SPT
3					C	3.00m: Colour change to dark brown, orange.						4,6,9 N=15	SPT
4					D	4.00m: Trace fine grained sand.						5,9,11 N=20	SPT
4.50	7.92					<b>Clayey SAND (ALLUVIUM)</b> Brown, moist, medium dense. Fine grained. Minor zones of Sandy CLAY.	(SC)					4,6,9 N=15	SPT
5					E								
5.90	6.52				F	<b>Silty CLAY (ALLUVIUM)</b> Brown, orange and grey, moist, stiff to mainly very stiff. High plasticity.						3,4,5 N=9	SPT
7					G	7.00m: Colour change to dark grey.						6,10,14 N=24	SPT
8					H		(CH)					4,7,9 N=16	SPT
9					J							3,5,9 N=14	SPT
10													

REMARKS Kgwu - Wundaru Granodiorite;

# Sample failed along existing defect surface.

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# ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND  
SYMBOLS REFER FORM F:GEOT 017/8-2014

BOREHOLE No **BH114**  
SHEET **2** of **4**  
REFERENCE No **12060**

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1  
LOCATION Peak Downs Hwy Overpass Abutment A; CH: 5564m; COORDINATES 720955.9 E; 7657920.6 N  
PROJECT No FG6184 SURFACE R.L. 12.42m PLUNGE \_\_\_\_\_ DATE STARTED 21/9/14 GRID DATUM GDA 94 /MGA Zone 55  
JOB No \_\_\_\_\_ HEIGHT DATUM AHD BEARING \_\_\_\_\_ DATE COMPLETED 23/9/14 DRILLER Saxon Drilling

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
10	2.42												
11					K	<b>Silty CLAY (ALLUVIUM)</b> (Cont'd) Colour change to brown mottled yellow and grey.						4,6,11 N=17	SPT
12					L							6,10,13 N=23	SPT
12.00m					M	12.00m: Colour change to yellow mottled red and grey.						5,8,10 N=18	SPT
12.90	-0.48												
13					N	<b>Clayey SAND (ALLUVIUM)</b> Yellow, brown, moist, medium dense. Fine to medium grained.						4,6,17 N=23	SPT
14.00	-1.58												
15					P	<b>Silty CLAY (RESIDUAL)</b> Yellow mottled brown and grey, moist, very stiff. High plasticity.						5,9,10 N=19	SPT
16					Q							6,8,12 N=20	SPT
17					R							5,7,11 N=18	SPT
18					S							6,9,10 N=19	SPT
17.50	-5.08												
19					T	<b>Silty Sandy CLAY (RESIDUAL)</b> Brown mottled orange and grey, moist, stiff to very stiff. Medium plasticity.						3,6,9 N=15	SPT
20					U							4,7,8 N=15	SPT

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# ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND  
SYMBOLS REFER FORM F:GEOT 017/8-2014

BOREHOLE No **BH114**  
SHEET **3** of **4**  
REFERENCE No **12060**

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1  
LOCATION Peak Downs Hwy Overpass Abutment A; CH: 5564m; COORDINATES 720955.9 E; 7657920.6 N  
PROJECT No FG6184 SURFACE R.L. 12.42m PLUNGE \_\_\_\_\_ DATE STARTED 21/9/14 GRID DATUM GDA 94 /MGA Zone 55  
JOB No \_\_\_\_\_ HEIGHT DATUM AHD BEARING \_\_\_\_\_ DATE COMPLETED 23/9/14 DRILLER Saxon Drilling

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
20	-7.58				V	<b>Silty Sandy CLAY (ALLUVIUM)</b> (Cont'd)						5,9,12 N=21	SPT
21					W	21.00m: Becoming Sandy CLAY, low to medium plasticity.	(Cl)					5,9,10 N=19	SPT
21.90	-9.48				X	<b>Clayey SAND (RESIDUAL)</b> Brown, moist, medium dense to very dense. Fine grained.						10,11,18 N=29	SPT
23					Y	23.00m: Becoming fine to medium grained. Clay content reduces with depth.	(SC)					7,14,15 N=29	SPT
24					Z							9,15,15 N=30	SPT
25	-12.58				AA	<b>GRANODIORITE (Kgwu)</b> HW: Grey-brown, fine to medium grained, massive, mainly very low to low strength. Highly fractured and broken throughout.						Is(50) = 4.75MPa; #	D (25.13m)
25.90	-13.48				(0)			HW					
26					(0)	<b>GRANODIORITE (Kgwu)</b> MW: Pale grey and brown, fine to medium grained, massive, medium strength. Highly fractured throughout.		HW				25.73m-25.80m: Core Loss	
26.40	-13.98				(20)			MW					
27					100	<b>GRANODIORITE (Kgwu)</b> SW: Grey, white and orange, fine to medium grained, massive, very high strength. Occasional HW zones of low strength. Defects: - Js; 10°-20° (3/m); Pl/Ro, OP, Fe St, some Cly Vr; - Js; 45° (3/m); Pl/Ro, OP, Fe St, some Cly Vr; - Js; 55°-60° (2/m); Pl/Ro, OP, Fe St, some Cly Vr;		SW				Is(50) = 4.60MPa Is(50) = 3.31MPa; #	A (26.60m) D (26.65m)
28					(0)			HW				28.15m-28.45m: HW zone.	
29					100			SW				Is(50) = 10.06MPa UCS=208MPa; Is(50) = 6.52MPa	D (28.60m) A (29.43m)
30					(100)								

REMARKS Kgwu - Wundaru Granodiorite;

# Sample failed along existing defect surface.

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# ENGINEERING BOREHOLE LOG

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SYMBOLS REFER FORM F:GEOT 017/8-2014

BOREHOLE No BH114  
SHEET 4 of 4  
REFERENCE No 12060

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1  
LOCATION Peak Downs Hwy Overpass Abutment A; CH: 5564m; COORDINATES 720955.9 E; 7657920.6 N  
PROJECT No FG6184 SURFACE R.L. 12.42m PLUNGE \_\_\_\_\_ DATE STARTED 21/9/14 GRID DATUM GDA 94 /MGA Zone 55  
JOB No \_\_\_\_\_ HEIGHT DATUM AHD BEARING \_\_\_\_\_ DATE COMPLETED 23/9/14 DRILLER Saxon Drilling

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
30	-17.58			100		GRANODIORITE (Kgwu) SW: (Cont'd)	+						Is(50) = 4.75MPa	A (30.33m)
30.85	-18.43			100			+	SW						
31						Borehole terminated at 30.85m. .								
32														
33														
34														
35														
36														
37														
38														
39														
40														

REMARKS Kgwu - Wundaru Granodiorite;  
# Sample failed along existing defect surface.

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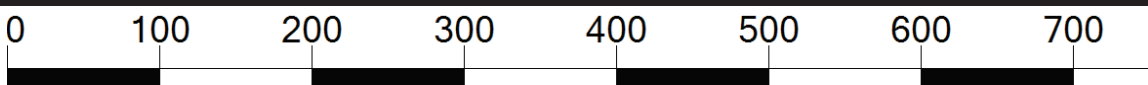
# CORE PHOTO LOG

DEPARTMENT OF TRANSPORT & MAIN ROADS  
Geotechnical Branch  
35 Butterfield Street, HERSTON Qld 4006  
Phone 07 3066 3336



Department of  
Transport and Main Roads

Project Name	<b>Mackay – Ring Road</b>		
Project No	FG6184	Date	23/09/14
Borehole No	BH 114	TMR H No	12060
Location	Peak Downs Hwy Overpass	Start Depth (m)	25.1
Detail	Abutment A	Finish Depth (m)	30.85
Chainage	<b>5564</b>	Submitted By	J. Lopez
Remarks			



SCALE 1:5