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**ENGINEERING
BOREHOLE LOG**

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

BOREHOLE No BH139
SHEET 1 of 4
REFERENCE No 12084

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1
LOCATION Fursden Creek Bridge Pier 1; CH: 9090m; COORDINATES 721489.3 E; 7661405.8 N
PROJECT No FG6184 SURFACE R.L. 6.50m PLUNGE DATE STARTED 4/11/14 GRID DATUM GDA 94 /MGA Zone 55
JOB No HEIGHT DATUM AHD BEARING DATE COMPLETED 6/11/14 DRILLER Saxon Drilling

| DEPTH (m) | R.L. (m) | AUGER CASING WASH BORING CORE DRILLING | RQD () % | CORE REC % | SAMPLE | MATERIAL DESCRIPTION | LITHOLOGY | INTACT STRENGTH | | | | | | | | | | | DEFECT SPACING (mm) | GRAPHIC LOG | ADDITIONAL DATA AND TEST RESULTS | SAMPLES TESTS | | |
|-----------|----------|--|-----------|------------|--------|--|-----------|-----------------|------------|---|---|---|----|----|----|----|---|----|---------------------|-------------|----------------------------------|-----------------|-----|--|
| | | | | | | | | USC | WEATHERING | | | | | | | | | | | | | | | |
| 0 | 6.50 | | | | | | | EH | VH | H | M | J | VL | EL | EC | VC | W | WW | VW | EW | | | | |
| 0.50 | 6.00 | | | | | Clayey SILT (TOPSOIL) Dark brown, moist, soft. Low plasticity. Some roots. | (ML) | | | | | | | | | | | | | | | | | |
| 1 | | | | | A | SILT with sand (ALLUVIUM) Brown, moist, very stiff. Low plasticity. Fine grained sand. | (ML) | | | | | | | | | | | | | | | 7,12,15 N=27 | SPT | |
| 1.60 | 4.90 | | | | B | Silty SAND (ALLUVIUM) Brown, moist, loose to medium dense. Fine grained sand. | (SM) | | | | | | | | | | | | | | | 2,3,3 N=6 | SPT | |
| 3 | | | | | C | | | | | | | | | | | | | | | | | 4,4,6 N=10 | SPT | |
| 3.90 | 2.60 | | | | D | SAND with silt (ALLUVIUM) Brown, moist, medium dense. Fine to coarse grained sand. | | | | | | | | | | | | | | | | 4,8,10 N=18 | SPT | |
| 5 | | | | | E | 5.00m: Becoming mainly medium to coarse grained sand. | (SP-SM) | | | | | | | | | | | | | | | 4,7,11 N=18 | SPT | |
| 6 | | | | | F | | | | | | | | | | | | | | | | | 2,5,9 N=14 | SPT | |
| 7.20 | -0.50 | | | | G | 6.70m: Trace medium gravel. Silty SAND (ALLUVIUM) Dark grey and brown, moist, dense to very dense. Fine grained sand. | (SM) | | | | | | | | | | | | | | | 14,20,30/120 | SPT | |
| 8 | | | | | H | 7.90m: Becoming medium grained sand. Trace fine gravel. | | | | | | | | | | | | | | | | 9,12,12 N=24 | SPT | |
| 8.40 | -1.90 | | | | J | Silty CLAY (RESIDUAL) Grey mottled orange-brown, moist, very stiff. Medium plasticity. Trace fine to coarse grained sand. | (CI) | | | | | | | | | | | | | | | 4,7,10 N=17 | SPT | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | |

TMR JAN 15.GLB Log_A_ENG ENGINEERING BOREHOLE LOG W LITHOLOGY FG6184 - BOREHOLES.GPJ <<DrawingFile>> Datget CPT Tool gInt Add-In 04/09/2015 10:51

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

LOGGED BY
MS

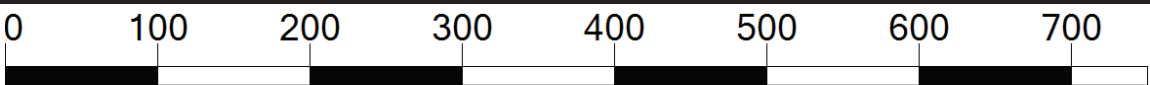
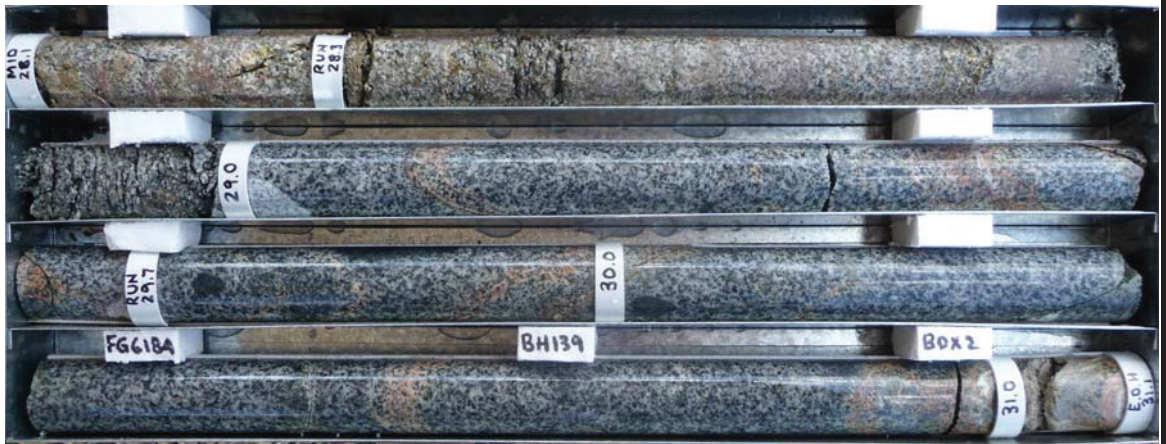
CORE PHOTO LOG

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 | Mackay – Ring Road | | |
| Project No | FG6184 | Date | 06/11/14 |
| Borehole No | BH139 | TMR H No | 12084 |
| Location | Fursden Creek Bridge | Start Depth (m) | 25.1 |
| Detail | Pier 1 | Finish Depth (m) | 31.1 |
| Chainage | 9090m | Submitted By | J. Lopez |
| Remarks | | | |



SCALE 1:5