

COPYRIGHT NOTICE

This geotechnical log and its associated data (the Document) is licensed by the Queensland Department of Transport and Main Roads under the [Creative Commons Attribution 4.0 Licence](#) (CC BY 4.0). When reusing the Document, in whole or in part, please attribute the Department as follows: "*(c) State of Queensland (Department of Transport and Main Roads) 2020, licensed under the CC BY 4.0 Licence*". This licence does not apply to the Queensland Government logo or trademarks.

LIMITATION OF LIABILITY

The CC BY 4.0 Licence contains a comprehensive Disclaimer of Warranties and Limitation of Liability. In addition, please note that this Document was prepared for Departmental use only. Reuse of the Document by anyone for any other purpose could result in error and/or loss. You should obtain professional advice before making decisions based on the contents of the Document.

When reproducing any part of this Document, you must also reproduce this limitation of liability notice in addition to the italicised attribution statement above.

Retrieved from the Queensland Geotechnical Database <http://qgd.org.au/>



**Queensland
Government**

**GEOTECHNICAL
BOREHOLE LOG**

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

BOREHOLE No **BH263**

Sheet 1 of 4

REFERENCE No **H12272**

| | | | |
|------------|--|---------------------|-------------------------------------|
| PROJECT | Mackay Ring Road | | |
| LOCATION | Pioneer River Bridge, Abutment B (RHS) | | COORDINATES 721384.5 E; 7660682.1 N |
| PROJECT No | FG6184 | SURFACE RL 8.50m | PLUNGE 90° |
| | | | DATE STARTED 20/07/2015 |
| | | | GRID DATUM GDA 94 / MGA Z55 |
| JOB No | 242/10G/906 | HEIGHT DATUM A.H.D. | BEARING ° |
| | | | DATE COMPLETED 22/07/2015 |
| | | | DRILLER Saxon Drilling |

| DEPTH (m) | R.L. (m) | AUGER CASING WASHBORING CORE DRILLING | RQD (%) CORE REC % | SAMPLE | MATERIAL DESCRIPTION | LITHOLOGY | USCS WEATHERING | INTACT STRENGTH | | | | | | | | | | DEFECT SPACING | ADDITIONAL DATA AND TEST RESULTS | SAMPLES TESTS |
|-----------|----------|---------------------------------------|-----------------------|--------|--|-----------|-----------------|--------------------|-----|---|---|---|----|----|----|----|---|----------------|----------------------------------|---------------|
| | | | | | | | | EH | VH | H | M | J | VJ | EU | EC | VC | C | | | |
| 1 | 7.60 | | | X | Silty Sandy CLAY (Topsoil) Dark brown, moist, firm. Low plasticity, trace rootlets. | (CL) | | | | | | | | | | | | | 2, 3, 2 N=5 | SPT |
| | | | | Xx | | | | 2, 2, 3 N=5 | SPT | | | | | | | | | | | |
| 2 | 6.50 | | | A | Silty SAND (Alluvium) Brown, moist, loose. Fine grained sand, trace rootlets. | (SM) | | | | | | | | | | | | | 3, 3, 3 N=6 | SPT |
| | | | | Ax | 1.60m: silt content decreasing, no rootlets, very loose to loose. | | | 3, 2, 2 N=4 | SPT | | | | | | | | | | | |
| 3 | | | | B | SAND (Alluvium) Pale brown, moist, loose. Fine to medium grained sand. | | | | | | | | | | | | | | 2, 3, 2 N=5 | SPT |
| | | | | Bx | | | | 3, 4, 5 N=9 | SPT | | | | | | | | | | | |
| 4 | | | | C | 3.00m: becomes medium dense | (SW) | | | | | | | | | | | | | 5, 6, 8 N=14 | SPT |
| | | | | Cx | 3.50m: becomes fine to coarse grained sand, with fine to medium grained gravel, subrounded to rounded grains. 4.00m: becomes wet. | | | 6, 6, 7 N=13 | SPT | | | | | | | | | | | |
| 5 | 3.50 | | | D | | | | | | | | | | | | | | | 8, 9, 6 N=15 | SPT |
| | | | | Dx | | | | 8, 11, 10 N=21 | SPT | | | | | | | | | | | |
| 6 | | | | E | Gravelly SAND (Alluvium) Pale brown, wet, medium dense. Fine to coarse grained sand, fine to medium grained gravel, subrounded grains. | | | | | | | | | | | | | | 9, 11, 12 N=23 | SPT |
| | | | | Ex | | | | 8, 8, 7 N=15 | SPT | | | | | | | | | | | |
| 7 | | | | F | | | | | | | | | | | | | | | 6, 11, 11 N=22 | SPT |
| | | | | Fx | 6.50 to 7.00m: very loose zone. | | | 2, 1, 2 N=3 | SPT | | | | | | | | | | | |
| 8 | | | | G | | (SW) | | | | | | | | | | | | | 7, 9, 9 N=18 | SPT |
| | | | | Gx | | | | 11, 10, 9 N=19 | SPT | | | | | | | | | | | |
| 9 | | | | H | | | | | | | | | | | | | | | 9, 8, 11 N=19 | SPT |
| | | | | Hx | | | | 12, 13, 17 N=30 | SPT | | | | | | | | | | | |
| | | | | I | | | | | | | | | | | | | | | 12, 14, 12 N=26 | SPT |
| | | | | Ix | 9.50m: becomes dense. | | | 14, 19, 21 N=40 | SPT | | | | | | | | | | | |

Continued on next sheet

REMARKS: Kgwu = Wundaru Granodiorite

| | |
|------------------|--------------------|
| LOGGED BY | REVIEWED BY |
| C.Boyes | S.Foley |



**Queensland
Government**

**GEOTECHNICAL
BOREHOLE LOG**

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

BOREHOLE No **BH263**

Sheet 2 of 4

REFERENCE No **H12272**

| | | | |
|------------|--|-------------------------------------|-----------------------------|
| PROJECT | Mackay Ring Road | | |
| LOCATION | Pioneer River Bridge, Abutment B (RHS) | COORDINATES 721384.5 E; 7660682.1 N | |
| PROJECT No | FG6184 | SURFACE RL 8.50m | PLUNGE 90° |
| | | | DATE STARTED 20/07/2015 |
| | | | GRID DATUM GDA 94 / MGA Z55 |
| JOB No | 242/10G/906 | HEIGHT DATUM A.H.D. | BEARING ° |
| | | | DATE COMPLETED 22/07/2015 |
| | | | DRILLER Saxon Drilling |

| DEPTH (m) | R.L. (m) | FAUGER CASING WASHBORING CORE DRILLING | RQD (%) CORE REC % | SAMPLE | MATERIAL DESCRIPTION | LITHOLOGY | USCS WEATHERING | INTACT STRENGTH | DEFECT SPACING | ADDITIONAL DATA AND TEST RESULTS | SAMPLES TESTS |
|-----------|----------|---|-----------------------|--------|--|-----------|-----------------|-----------------|----------------|----------------------------------|---------------|
| | | | | | | | | | | | |
| | -2.00 | | | J | Gravelly SAND (Alluvium) (Cont'd) | | (SW) | | | 8, 13, 21 N=34 | SPT |
| | | | | Jx | Clayey SAND (Alluvium) Orange brown and pale grey, moist, medium dense. | | | | | 11, 9, 19 N=28 | SPT |
| | | | | K | Fine grained sand. | | (SC) | | | 4, 7, 12 N=19 | SPT |
| | | | | Kx | | | | | | 9, 10, 10 N=20 | SPT |
| | | | | L | | | | | | 5, 11, 10 N=21 | SPT |
| | -4.00 | | | Lx | Silty SAND (Alluvium) Orange brown and pale grey, moist, medium dense. | | | | | 7, 8, 17 N=25 | SPT |
| | | | | M | Fine to medium grained sand. | | | | | 9, 10, 12 N=22 | SPT |
| | | | | Mx | | | (SM) | | | 7, 9, 11 N=20 | SPT |
| | | | | N | | | | | | 10, 9, 10 N=19 | SPT |
| | | | | Nx | | | | | | 9, 12, 17 N=29 | SPT |
| | -7.00 | | | O | 15.00m: trace fine to medium grained gravel, subrounded to rounded grains. | | | | | 9, 13, 13 N=26 | SPT |
| | | | | Ox | GRANODIORITE XW: Recovered as speckled orange, grey and dark grey, moist, dense to very dense, clayey sand. Fine to coarse grained sand. | | | | | 14, 20, 30 N=50 | SPT |
| | | | | P | | | XW | | | 18, 18, 23 N=41 | SPT |
| | | | | Q | | | | | | 16, 30/110 | SPT |
| | -9.50 | | | R | GRANODIORITE HW: Grey and brown, coarse grained, massive, very low strength. | | | | | 30/80 | SPT |
| | | | | S | | | HW | | | 30/120 | SPT |

Continued on next sheet

REMARKS: Kgwu = Wundaru Granodiorite

| LOGGED BY | REVIEWED BY |
|-----------|-------------|
| C.Boyes | S.Foley |



**Queensland
Government**

**GEOTECHNICAL
BOREHOLE LOG**

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

BOREHOLE No **BH263**

Sheet 3 of 4

REFERENCE No **H12272**

| | | | |
|------------|--|---------------------|-------------------------------------|
| PROJECT | Mackay Ring Road | | |
| LOCATION | Pioneer River Bridge, Abutment B (RHS) | | COORDINATES 721384.5 E; 7660682.1 N |
| PROJECT No | FG6184 | SURFACE RL 8.50m | PLUNGE 90° |
| | | | DATE STARTED 20/07/2015 |
| | | | GRID DATUM GDA 94 / MGA Z55 |
| JOB No | 242/10G/906 | HEIGHT DATUM A.H.D. | BEARING ° |
| | | | DATE COMPLETED 22/07/2015 |
| | | | DRILLER Saxon Drilling |

| DEPTH (m) | R.L. (m) | FAUGER CASING WASHBORING CONE DRILLING | RQD (%) | CORE REC % | SAMPLE | MATERIAL DESCRIPTION | LITHOLOGY | USCS WEATHERING | INTACT STRENGTH | DEFECT SPACING | ADDITIONAL DATA AND TEST RESULTS | SAMPLES TESTS | |
|-----------|----------|--|----------|------------|--------|---|-----------|-----------------|-----------------|----------------|----------------------------------|--|----|
| | | | | | | | | | | | | | EH |
| 21 | | | | | | GRANODIORITE XW: Recovered as pale grey, grey and orange, moist, very dense, silty clayey sand. Fine to coarse grained sand. | XW | | | | 20.51m: Minor dolerite dykes | SPT | |
| 22 | | | | | | | | | | | | SPT | |
| 23 | | | | | | | | | | | | SPT | |
| 24 | | | | | | | | | | | | SPT | |
| 25 | | | | | | | | | | | | SPT | |
| 26 | | | | | | | | | | | | SPT | |
| 27 | -17.80 | | (64) | | | GRANODIORITE HW: Speckled grey, dark grey and pale red with orange, fine to coarse grained, massive, very low to medium strength. GRANODIORITE SW: Grey, dark grey and pale red, fine to coarse grained, massive, very high strength. Js: 30° to 40°; (<1/m); Pl/Sm; OP; CA Ct; Js: 5° to 10°; (2/m); Pl-Un/Sm; OP; Cn or CA Ct; Js: 75° to 85°; (<1/m); Un/Sm-Ro; OP-CD; CA VN <5mm; | HW | | | | | Is(50)=0.03 MPa D (26.56m) Is(50)=0.08 MPa A (26.60m) Is(50)=7.60 MPa A (26.85m) Is(50)=4.30 MPa D (26.95m) Is(50)=8.90 MPa D (27.25m) | |
| 28 | -18.35 | | | | | | | | | | | 27.60m-28.00m: J: 80°; Un/Sm; CD; CA VN; 28.00m-28.10m: J: 80°; Un/Ro; OP; CA VN <1mm; | |
| 29 | | | 100 (98) | | | | SW | | | | | Is(50)=9.80 MPa A (28.76m) Is(50)=13.00 MPa D (28.87m) UCS=168.00 MPa E=78.5 GPa (29.27m) | |
| 30 | -21.50 | | | | | | | | | | | | |

Continued on next sheet

REMARKS: Kgwu = Wundaru Granodiorite

| | |
|------------------|--------------------|
| LOGGED BY | REVIEWED BY |
| C.Boyes | S.Foley |

CORE PHOTO LOG

DEPARTMENT OF TRANSPORT AND MAIN ROADS
 Geotechnical Section
 35 Butterfield Street, Herston Qld 4006
 Phone 07 3066 3336



| | | | |
|--------------|-------------------------------------|------------------|----------|
| Project Name | Mackay – Ring Road (Stage 2) | | |
| Project No. | FG6184 | Date | 22/07/15 |
| Borehole No. | BH 263 | TMR H No. | H12272 |
| Location | Pioneer River Bridge | Start Depth (m) | 26.30 |
| Detail | Abutment B, RHS | Finish Depth (m) | 37.36 |
| Chainage | | Submitted By | M.Ensor |
| Remarks | | | |

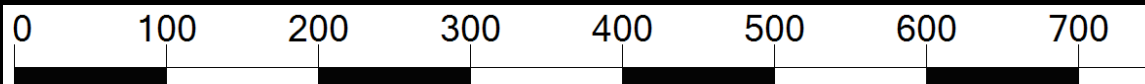
The photograph shows a vertical stack of soil core samples, each housed in a metal box. The boxes are labeled with their respective depths in meters: 26.30, 27.00, 28.00, 28.90, 29.00, 30.00, 30.50, 31.00, 31.18, 32.00, 33.00, 33.50, 34.00, and 35.00. The samples are dark grey to black, indicating fine-grained soil. A scale bar at the bottom indicates a length of 700mm, with a scale of 1:5.

CORE PHOTO LOG

DEPARTMENT OF TRANSPORT AND MAIN ROADS
 Geotechnical Section
 35 Butterfield Street, Herston Qld 4006
 Phone 07 3066 3336



| | | | |
|--------------|-------------------------------------|------------------|----------|
| Project Name | Mackay – Ring Road (Stage 2) | | |
| Project No. | FG6184 | Date | 22/07/15 |
| Borehole No. | BH 263 | TMR H No. | H12272 |
| Location | Pioneer River Bridge | Start Depth (m) | 26.30 |
| Detail | Abutment B, RHS | Finish Depth (m) | 37.36 |
| Chainage | | Submitted By | M.Ensor |
| Remarks | | | |



SCALE 1:5