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| | | | | | | | | | | | | FINAL 1 | 8/03/2016 |
|--------------------------|-------------|---|----------------------------|--------|--|-------------|--------------------|---|---|--------------------|--|--|-------------------|
| | 1.31 | àc. | | | | | GE | OTECHN | ICAL | | BOREHOLE No | BI | H247 |
| | | SH) | Qu | e | ensland | | BC | REHOLE | LOG | | Shee | t 1 of 3 | |
| | | | Go | ve | ernment | SY | FOR | GEOTECHNICAL TE REFER FORM F:GE | RMS AND | | REFERENCE No | H1 | 12256 |
| PROJE | СТ | Mac | kay Ring | g Ro | ad | | | | | | | | |
| LOCAT | ION | Pion | eer Rive | er B | ridge, Pier 15 (CL) | | | | | | COORDINATES 721353. | 1 E; 766052 | 23.8 N |
| PROJE | CT No | FG6 | 184 | | SURFACE RL 3.34m | PLU | JNGE S | 90° | DATE STAF | RTED 20/11/2015 | 5 GRID DATUM | GDA 94 / N | /IGA Z55 |
| JOB No | D | 242/ | ′10G/90 |)6 | HEIGHT DATUM A.H.D. | BEA | RING ° | | DATE COMPLI | ETED 22/11/2015 | 5 DRILLER | Cairns Dril | ling |
| | | | | | | | | | | | · | | |
| DEPTH (m) | R.L. (m) | AUGER CASING WASH BORING CORE DRILLING | RQD ()% CORE REC% | SAMPLE | MATERIAL DESCRIPTION | LITHOLOGY | USCS WEATHERING | INTACT STRENGTH 표근구구, 독, 독, 구, 주, 급 | DEFECT SPACING | | ADDITIONAL DATA AND TEST RESULTS | | SAMPLES TESTS |
| | | | | | SAND (Fill) Brown, moist, very loose to loose. Fine to coarse grained; trace silt; trace gravel. 2.0m: Very loose. 4.0m: Becoming medium dense. | | (sw) | | | 1.00m: No SPT test | | 3, 1, 2 N=3 1, 1, 1, 1 N=2 5, 7, 11 N=18 7, 11, 10 N=21 | SPT SPT |
| - 5 | -1.66 | | | F G | Gravelly SAND (Alluvium) Brown, wet, loose becoming medium dense with depth. | | (SW) | | - - - - - - - - - - - - - | | | 7, 4, 3 N=7 2, 4, 11 N=15 1, 4, 7 | SPT SPT SPT |
| - 6 · · | | | | н | Silty SAND (Alluvium) Grey, wet, medium dense. Fine to medium grained; trace gravel. | ××××× | | | | | | 7, 11, 14 N=11 | SPT SPT |
| - 7 | | | | 1 | | × × × | | | | | | 7, 8, 11 N=19 | SPT |
| - 8 - 8 - 9 - 9 | | | | ĸ | | ×××× | (SM) | | | | | 11, 11, 8 N=19 | SPT |
| 8 | | | | | 8.0m: Fine to coarse grained sand. | × × × | | | | | | 5, 7, 9 N=16 | SPT |
| | -5.16 | | | L | Clayey Silty SAND (Alluvium) | × × × | | | | | | 5, 7, 9 N=16 | |
| - - 9 | | | | | Pale grey, moist to wet, medium dense. Fine to coarse grained sand. | × × × | 2 | | | | | 6, 9, 12 N=21 | SPT |
| - - - | | | | N | 9.5m: Becoming_dense. | × × × | (SM) | | - | | | 10, 15, 19 N=34 | SPT |
| - | -6.66 | | | 0 | Continued on next sheet | × | 2 | | | | | | SPT |

| REMARKS: Kgwu = Wundaru Granodiorite | LOGGED BY | REVIEWED BY |
|--|-----------|--------------------|
| | T. Goosey | S.Foley |
| TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI | | |

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| | | | | | | | | - | | FINAL 1 | 8/03/2016 |
|-----------|--|---|--------|---|-----------|--------------------|--|----------------|----------------------|--------------------|------------------|
| | 176 | | | | | GE | OTECHNICAL | | BOREHOLE No | В | H247 |
| | | 👬 Qı | le | ensland | | BC | REHOLE LOG | | Sheet | 2 of 3 | |
| | B | S GC |)V | ernment | SY | | GEOTECHNICAL TERMS AND REFER FORM F:GEOT 017/8-2014 | | REFERENCE No | H: | 12256 |
| PROJEC | Т | Mackay Rir | ng Ro | bad | | | | | | | |
| LOCATIO | N | Pioneer Riv | ver E | Bridge, Pier 15 (CL) | | | | | COORDINATES 721353.1 | E; 766052 | 23.8 N |
| PROJEC | PROJECT No FG6184 SURFACE RL 3.34m | | | | | | DATE STAF | RTED 20/11/201 | 5 GRID DATUM | GDA 94 / N | MGA Z55 |
| JOB No | NOB No 242/10G/906 HEIGHT DATUM A.H.D. BEARING DATE COMPLETED 22/11/2015 DRILLER Cairns Drilling | | | | | | | | | | ling |
| _ | | RQD | | | ~ | Ű | INTACT DEFECT | | ADDITIONAL DATA | | |
| DEPTH (m) | R.L. (m) | W()) % CASSING WASH BORING VASH BORING CORE DRILLING CORE DRILLING | SAMPLE | MATERIAL DESCRIPTION | LITHOLOGY | USCS WEATHERING | | | AND TEST RESULTS | | SAMPLES TESTS |
| _ | | < | Р | CLAY (Alluvium) | - | (61) | | | | 9, 16, 25 N=41 | SPT |
| - | -7.16 | | _ | Brown, moist, hard. Low to mediur plasticity; trace sand, | | (CL) | | | 2 | 1, 30/100mm | |
| - | | | Q | Sandy CLAY (Residual) Brown grey, moist, hard. Low | | (CL) | + | | | | SPT |
| - 11 | -7.66 | | | plasticity; fine to medium grained sand. | | | | | | 11, 21, 29 N=50 | 0.07 |
| - | | | R | Silty CLAY (Residual) Pale grey, moist, hard. | | | + | | | | SPT |
| - | | | | Low plasticity; trace sand. | ×- | _ | | | | | - |
| - 12 | | | _ | | ÷. | | + | | 22, | 28, 30/80mm hb | SPT |
| - | | | S | | × | (CL) | | | | | |
| - | | | | | ×_ | (CL) | + | | | | - |
| - 13 | | | т | | × | | + | | 2 | 1, 30/130mm hb | SPT |
| - | | | - | | × | | + | | | | - |
| - | | | | | ×- | | | | | | |
| 14 | 10.66 | | U | GRANODIORITE (Kgwu) | ×- + | - | | | | 30/120mm | |
| - | | | | XW: Recovered as Gravelly Clayey | ÷ | | + | | | hb | |
| - | | | | SAND. Pale grey mottled brown, moist, very dense. | E | ŀ | | | | | - |
| - 15 | | | V | | F. | - - | <u>+</u> | | | 30/130mm | SPT |
| - | | | | | + | ŀ | | | | hb | - |
| - | | | | | + | ŀ | + | | | | |
| - 16 | | | W | | E | - | + | | | 30/60mm | |
| - | | | | 16.0m: Silty Gravelly SAND. | + | ŀ | + | | | hb | - |
| | | | | | ÷ | | | | | | |
| - 17 | | | × | | | | | | | 30/30mm | - - |
| | | | | 17.0m: Recovered as Silty Clayey SAND. Fine to medium grained. | + | | | | | hb | - |
| - | | | | | ÷ | - | | | | | |
| - | | | | | ÷ | ŀ | | | | 20/70 | - |
| - 18 | | | Y | | E | | | | | 30/70mm hb | |
| - | | | | | + | - | | | | | - |
| | | | | | Ļ | | 1 ‡ | | | | - |
| 19 | | | Z | | ÷ | | | | | 30/80mm hb | SPT |
| | | | | | F. | - | | | | | - |
| | 16.66 | | | | ÷ | - | | | | | - |
| | | | 1 | Continued on next sheet | 1. | | J | I | 1 | | I |
| RE | MAR | KS: Kgwu | = V | /undaru Granodiorite | | | | | LOGGED BY | REVIE | EWED BY |
| | | | | | | | | | T. Goosey | S. | Foley |
| | | | | ТМ | GEOTE | HNICAL B | OREHOLE LOG - CREATED WITH HOLEBASE SI | | | | |

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| | | | | | | _ | | | | | | | FINAL 1 | .8/03/2016 |
|---|-------------|---|--------------------------|--------|---|--|---|------------------------------------|--------------------------------------|------------------|---|--------------------------------------|------------------------------------|---|
| | * 77 | àc. | | | | | | GE | OTECHN | IICAL | | BOREHOLE No | В | H247 |
| | | | Qu | e | ensland | | | BC | REHOLE | LOG | | She | et 3 of 3 | |
| Government | | | | | | SY | | GEOTECHNICAL TE REFER FORM F:GE | | | REFERENCE No | н | 12256 | |
| PROJE | СТ | Mac | kay Ring | g Rc | bad | | | | | | | | | |
| LOCAT | | | | | ridge, Pier 15 (CL) | | | | | | | COORDINATES 721353 | .1 E; 76605 | 23.8 N |
| PROJE | CT No | FG6 | 184 | | SURFACE RL | 3.34m | PLL | UNGE S | 90° | DATE STA | rted 20/11/201 | .5 GRID DATUI | / GDA 94 / | MGA Z55 |
| JOB N | 0 | 242, | 242/10G/906 HEIGHT DATUM | | | A.H.D. | | | | | | ETED 22/11/2015 DRILLER Cairns Drill | | |
| | | | RQD | | _ | | L | - (7) | | | | ADDITIONAL DATA | | |
| DEPTH (m) | R.L. (m) | AUGER CASING WASH BORING CORE DRILLING | ()% CORE REC% | SAMPLE | MATERIAL DES | | ГІТНОГОGY | USCS WEATHERING | INTACT STRENGTH 표,독,ᆂ,ᆂ,ᆃ,ᆜᆃ,ᆋ | | | AND TEST RESULTS | | SAMPLES |
| E | | | | AA | GRANODIORITE (Kgw XW: Cont'd. | /u) | ++ | | | _ | | | 30/50mm hb | SPT |
| E | | | | | XW. Cont u. | | +++++++++++++++++++++++++++++++++++++++ | xw | | _ | | | | |
| - | -17.51 | | (82) | | | | Ľ+ | | | _ | | | | – – A (20.90m) [–] |
| 21 | | | (02) | | MICRODIORITE (Kgw MW: Green grey, find grained, massive, hig Calcite veins through | e to medium h strength. | | | MH | c vc-c | 21.23m-21.29m: E | 3Z | ls(50)=0.93 MPa ls(50)=0.46 MPa | D (21.00m)- |
| - - - 22 | | | | | - Js: 5°-15° (2/m) Pl-L St - Js: 50°-60° (<1/m) F | Jn/Ro, TI-OP, Fe | | мw | | с | 21.63m-22.90m: S fault, 20mm-40mr healed. | | | - |
| - | | | | | | | Ň | | н | w | | | UCS=11.10 MPa | (22.26m) |
| E | -19.59 | | | | | | Ň | | | | | | ls(50)=1.50 MPa | A (22.73m) |
| 23 | -20.56 | | <u>100</u> (43) | | GRANODIORITE (Kgw MW: Pale red-grey, c porphyritic, medium strength. - Js: 10°-20° (5/m) Pl- Şt. | oarse grained, to high ·Un/Ro, OP, Fe | * + * + * + * + | Mw | MH | c | □ 23.86m-23.90m: E | 3Z, contact. | Is(50)=0.63 MPa | D (23.57m)– |
| - - - - - - - - - - - - - - - - - - - | -21.89 | | | | MICRODIORITE (Kgw SW: Blue-grey, fine to grained, missive, hig - Js: 5°-15° (9/m) Pl/f - Js: 30°-40° (5-6/m) - Js: 50°-65° (2/m) Pl, | o medium n strength. Ro, TI, Fe St PI/Ro, TI, Fe St | | sw | н | vc-c c | | | | I (24.46m) A (24.65m) D (24.85m) |
| - - - - - - 26 | | | 100 (71) | | GRANODIORITE (Kgw SW: Pale red-grey, cc porphyritic, high to v strength. - Js: 5°-15° (3/m) Un, - Js: 30°-45° (2/m) Un | arse grained, ery high 'Ro, OP, Fe St h/Ro, OP, Fe St | * + + + + + + + + + * + + + | sw | H-VH | c | 25.23m: COntact 7 St | 70°, Un/Ro, DP, Fe | Is(50)=1.20 MPa Is(50)=2.60 MPa | – – – A (25.70m)– D (25.78m)– – – |
| - - - | -23.51 | | 100 | | - Js: 70°-80° (1/m) Pl, Borehole complete | | | • | | VC-C | | | Is(50)=5.00 MPa Is(50)=1.30 MPa | A (26.42m) D (26.52m) |
| 27 | | | | | | | | | | | | | | |
| F | | | | | | | | | | - | | | | - |
| R | emar | KS: | Kgwu = | = W | /undaru Granodio | rite | | | | | | LOGGED BY | | E WED BY Foley |
| | | | | | | TMR | GEOTEC | HNICAL B | OREHOLE LOG - CREATED \ | VITH HOLEBASE SI | | | | |

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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 (Sta | age 2) | | |
|----------------|--|---------------------|---|----------------|
| Project No. | FG6184 | <u> </u> | Date | 22/11/15 |
| Borehole No. | BH 247 | | TMR H No. | H12256 |
| Location | Pioneer River Bridge | | Start Depth (m) | 20.85 |
| Detail | Pier 15, centreline | | Finish Depth (m) | 26.85 |
| Chainage | | | Submitted By | M.Ensor |
| Remarks | | | | 1 |
| | F66184 | | Minin | |
| L L | 21.0m | | | |
| STAR STAR | | | BOX1 | cecco. |
| | BH247 | 2 | A I A | |
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