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BOREHOLE ENGINEERING LOG

BOREHOLE NO.



9/3/10

10/3/10

DS

m94



Drill Model/Mounting:

SHEET 1 OF 4

Client: Department of Transport and Main Roads Project:

Gold Coast Rapid Transit

Borehole Location: 2161016A Project Number:

Gold Coast Highway, Ch: 30578.5

Drillpower Hydrapower Scout

Hole Angle:

90°

Surface RL: 2.67 m AHD*

Date Commenced:

Date Completed:

Log Checked By:

Recorded By:

| | Bor | reh | ole D | iam | eter: | 75 r | nm | Ü | 11090 - 0000 | 75.9536 = 96 | Bearing: Co | 0-0 | rds | s: E | 85753. | 9 N 59588.14 GCCC Grid* |
|--|--|-----|---------|------------------|----------|-------------------|----------------|---------|---------------------|---------------------|---|------|--------|-------------|------------------------------|---|
| SOLLROCK MATERIAL FIELD DESCRIPTION SOLLROCK MATERIAL FIELD DESCRIPTION SOLLROCK MATERIAL FIELD DESCRIPTION D SOLLROCK MATERIAL FIELD DESCRIPTION M SOLLROCK MATERIAL FIELD DESCRIPTION D SOLLROCK MATERIAL FIELD DESCRIPTION M SOLLROCK MATERIAL FIELD DESCRIPTION D SOLLROCK MATERIAL FIELD MATERIAL FIELD DESCRIPTION D SOLLROCK MATERIAL FIELD MATERIAL FIELD DESCRIPTION T SOLUTION MATERIAL FIELD MATERIAL | | _ | _ | nole | | | | | | | | | | | | |
| TC C Page 1 Topsolt (Sity SAND): fine grained, brown. D Topsolt Fill (SAND): fine grained, grey-brown. M Topsolt Fill (SAND): fine grained, grey-brown. Topsolt Fill (| 1 | 2 | 3 | is a | 4 | 5 | - | 6 | 7 | 8 | 9 | | 10 | | 12 œ | 13 |
| FILL (SAND): fine grained, grey-brown. FILL (SAND): fine grained, pale yellow-brown. SPT 2.2.1 SPT 1.2.2 SPT N=3 SPT 1.0.0 | | | | RL(m) AHD* | DEPTH/m) | FIELD TEST | | SAMPLE | GRAPHIC LOG | USC SYMBOL | | _ | _ | 표구기품으상 | HAND PENETROMETE (kPa) | OBSERVATIONS |
| WB -2 -3 -3 -3 -3 -3 -3 -3 -3 -3 | TC | C | | | 0.10 | - | | | | | TOPSOIL (Silty SAND): fine grained, brown. FILL (SAND): fine grained, grey-brown. | ∕ _ | _ | | | |
| | | | 09/03/1 | - 1 - 1 0 1 1 | 3 | | T ₀ | D D SPT | | | 1.2 m: trace root FILL (SAND): fine grained, pale yellow-brown. 2.4m: grey-brown. 3.6 m: grey, trace organics. | | (86.6) | | | SPT: some fall in with |
| | | | | - - - 3 | | - | | | | | META-GREYWACKE: fine to coarse grained, grey and dark green. Appears silicifed. Medium to | | | | | 5.7 m to 6.35 m: NMLC. |
| | 5 | | | _ | 6 | 20 | | | | | high strength. | 1 | | | | \`5.85 m - 5.93 m: J, 60°, I, R, |
| unable to seal casing against rock. SPT 14,23,23 SPT N=46 6 99,20 SW SAND: fine grained, grey. SAND: fine grained, pale brown. W | | | 3 | - | |] | | ļ | | C.D. | | 1 | | | | 6.0 m: complete water loss, |
| ■ | T disonis Differention Adaptains 1 (§ C.G., Volsion C.). LINGIFICE LAND DONE INCL. | | | - | 8 | - SP- 14,23 | ,23 | SPT | | | | | ~ | | | unable to seal casing against rock. BEACH DEPOSITS |
| | | | | | | Thi | s bo | reho | ole log | shou | ld be read in conjunction with Parsons Brinckerhoff's | ac | COI | mpanying s | tandard | notes. |

BOREHOLE ENGINEERING LOG

BOREHOLE NO.

RTBH24

9/3/10

10/3/10

DS 1.M90



SHEET 2 OF 4

Client: Department of Transport and Main Roads

Gold Coast Rapid Transit Project:

Gold Coast Highway, Ch: 30578.5 Borehole Location:

2161016A Project Number:

Hole Angle:

90°

Surface RL:

2.67 m AHD*

Date Commenced:

Date Completed:

Log Checked By:

Recorded By:

Drillpower Hydrapower Scout Drill Model/Mounting: Borehole Diameter: 75 mm Bearing: Co-ords: E 85753.9 N 59588.14 GCCC Grid* **Borehole Information Field Material Description** 8 13 **IROMETER** GRAPHIC LOG USC SYMBOL STRUCTURE AND ADDITIONAL OBSERVATIONS RL(m) AHD FIELD TEST MOISTURE SOIL/ROCK MATERIAL FIELD DESCRIPTION METHOD WATER HAND PENET (kPa) SN TSN SAND: fine grained, grey. (continued) SPT 4,5,1 N=6 SP 12 Interlayered Clayey SAND and SAND: fine grained, black/dark grey and sand fine grained, grey-white. 12.40 -10 13 Brinckerhoff Australia Pty Ltd. Version 5.1 ENGINEERING BOREHOLE LOG GCRT BOREHOLES, GPJ GEOTECH 24-2-2006. GDT 25/5/10 SPT 9,15,19 N=34 15 16 SPT 7,14,25 N=39 16.80 Silty CLAY: low plasticity, brown. RESIDUAL SOIL 17 17.80 META-SILTSTONE: grey and dark grey, WEATHERED ROCK extremely weathered, extremely low strength. -16 19 **META-GREYWACKE:** fine grained, grey-green, extremely weathered, extremely low strength. REFER TO CORED BOREHOLE LOG -17 This borehole log should be read in conjunction with Parsons Brinckerhoff's accompanying standard notes.



CORED BOREHOLE ENGINEERING LOG

Hole Angle:

BOREHOLE NO.

RTBH24

SHEET 3 OF 4

9/3/10

10/3/10

DS m91

Client: Project: Department of Transport and Main Roads

Gold Coast Rapid Transit

Borehole Location: Project Number:

Drill Model/Mounting:

Gold Coast Highway, Ch: 30578.5

2161016A

Drillpower Hydrapower Scout

90°

Surface RL:

Log Checked By: 2.67 m AHD*

Date Commenced:

Date Completed:

Recorded By:

| ore | eho | le D | Dian | net | | | 75 mm | | Bearing: | | | ords: | E 85753.9 N 59588.14 GCCC Gr |
|-----------|---------|-------|------|---------|-------------|-----------|---------------------------------------|-------------|--|------------|--|--|---|
| | _ | reho | | | | | | | | | Material De | | |
| 1 | 2 | 3 | | | | | 6 | 7 901 | 8 | SING 6 | INFERRED | AVERAGE DEFECT SPACING mm | 12 STRUCTURE AND ADDITIONAL |
| ODE I DIM | SUPPORT | WATER | CORE | DOD DOD | מאַר (וֹיִי | RL(m) AHD | DEPTH(m) | GRAPHIC LOG | SOIL/ROCK MATERIAL FIELD DESCRIPTION | WEATHERING | KH= 100.03 13 - 0.3 - 0.0 13 - 0.3 | 300 300 300 300 300 300 | OBSERVATIONS |
| | | | | | - | -8 | 11- | | | | | | |
| | | * | | | - | 10 | 12 - - - - 13 - - - | | 1 | | | | |
| | | | | | | 12 | 14 - - - - - 15 - - | | s. | | | | |
| | | | | | - | 14 | - 16 – - - - - 17 – | | | | | | |
| | | | | | | 15 | - 18 – - - - 19 – | | | | | | |
|) | | | | | - | 17 | 19.86 | | COMMENCE CORING AT 19.5 m META-GREYWACKE: fine grained, grey-green. META-SILTSTONE: dark grey. | SW | | | 19.5 m - 19.6 m: Fractured 19.65 m, 19.68 m: J x 2, 45°, P, S, Fe stained 19.86 m: B, 30°, P, R, clean |



CORED BOREHOLE ENGINEERING LOG

BOREHOLE NO.

RTBH24

SHEET 4 OF 4

Client: Project: Department of Transport and Main Roads

Gold Coast Rapid Transit

Borehole Location: Project Number:

Gold Coast Highway, Ch: 30578.5

2161016A

Date Commenced:

Date Completed:

9/3/10 10/3/10

Recorded By: Log Checked By:

DS 1 mg/

Drill Model/Mounting: Drillpower Hydrapower Scout

Hole Angle:

90°

Surface RL:

2.67 m AHD*

| ore | ehol | e D | iam | eter | : | 75 mm | | Bearing: | | Co-ords: | E 85753.9 N 59588.14 GCCC G | | | | | |
|-----------|---------|-------|----------------------|--------|----------------------|----------------|-------------|---|--------------|---|---|------|--|--|--|--|
| _ | | | _ | _ | mat | | | | | laterial Description | | | | | | |
| 1 | 2 | 3 | 4 \ | 5 | . Ф | 6 (u | 7 9010 | 8 SOIL/ROCK MATERIAL FIELD DESCRIPTION | BRING 6 | 10 - 11 INFERRED STRENGTH IS(50) MPa AVERAGE DEFECT SPACING mm | 12 STRUCTURE AND ADDITIONAL | | | | | |
| טטרו פואו | SUPPORT | WATER | 100 CORE RECOVERY | 20 Rab | RL(m) AHD* | DEPTH(m) | GRAPHIC LOG | META-SILTSTONE: dark grey. | X WEATHERING | M | OBSERVATIONS | | | | | |
| ININIC | | | | | - | 20.50 | : <u> </u> | (continued) | MW | | | | | | | |
| | | | | | - 18 | 20.70 | | CORE LOSS META-SILTSTONE: dark grey. | D 63 A 6 | | | | | | | |
| | 2 | | | | - | 24 | | WETA-SILTSTONE: dark grey. | MW | | 5 | | | | | |
| | | | | | - | 21 – | | | | | 9 | | | | | |
| | | | | | | - | | | | | | | | | | |
| | | | <u></u> | | - 19 | - | | | | | | | | | | |
| | | | 92 | 0 | 8 | 21.80 | | dark grey, thinly laminated with pale | | | | | | | | |
| | | | | | B | 22 – | | green-grey siltstone. | | | | | | | | |
| | | | | | |] | : | | | | | | | | | |
| | | | | | - -20 | - | | | | | 20.7 m to 22.55 m: Non intact core | | | | | |
| | | | | | - | A | | | | | | | | | | |
| | | | | | - | 23 – | _:- | | | | ■ 23.1 m: DB | | | | | |
| | | | 200 | 500 | - |] | | | | | = 23.13 m: DB 30mm 23.15, 23.18, 23.8 m: J, 30-60°, P, S, | | | | | |
| | | | 95 | 20 | - - 21 | i . | | | | | clean 23.3 m - 23.34 m: Fractured | | | | | |
| | | | | | -21 | = | | | | | 23.34 m - 23.45 m: J, 70°, P, R, clean 23.5 m - 23.55 m: J, 45°, P, S, clean | | | | | |
| 3 | | | 7 | | - | 23.9524 | | CORE LOSS END OF BOREHOLE AT 24.00 m | | | 23.5 m - 23.55 m: J, 75°, P, S, clean 23.58, 23.78 m: J, 70-75°, P, R, clean | | | | | |
| | | | | | - | 1 | | END OF BOREHOLE AT 24.00 III | | | | | | | | |
| | | | | | - - 22 | = | | | | | Limit of Investigation | | | | | |
| | | | | | _ | 14 | | | | | * Horizontal and vertical data determine | | | | | |
| | | | | | 8 | 25 – | | | | | by Ground Survey | | | | | |
| | | | | | 6 | | | | | | | | | | | |
| | | | | | - - 23 | - | _ | | | | | | | | | |
| | | | | | - | - | | | | | e e | | | | | |
| | | | | | _ | 26 – | | | | | | | | | | |
| | | * | | å | _ |] | | | | | | | | | | |
| | | | | 8 | - - 24 | - | | | | | | | | | | |
| | | | | | - | - | | | | | | | | | | |
| | | | | 100 | - | - | - | - | - | | - | 27 – | | | | |
| | | | | 100 | - | 5 | | | | | | | | | | |
| | | | | | - - 25 | 9 | | | | | | | | | | |
| | | | | 9 | -23 | - | | | | | | | | | | |
| | | | | | - | 28 – | | | | | | | | | | |
| | | | | | - | - | | | | | | | | | | |
| | | | | | - | - | | | | | | | | | | |
| | | | | | - 26 - | - | | | | | | | | | | |
| | | | | | - | 29 – | | | | | | | | | | |
| | | | | | . | 1 | | | | | | | | | | |
| | | | | | - | 1 | | | | | | | | | | |
| | | | | 0,00 | - 27 - | - | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

REPORT OF PHOTOGRAPHS



Borehole number:

RTBH24

1 of

Department of Client:

Transport and Main Roads

Coordinates:

E 85753.90 N 59588.14

Depth range:

6.7 m - 7.0 m & 19.5 m - 24.0 m

Gold Coast Project:

Rapid Transit

Surface RL:

2.67 m AHD

Inclined length:

Sheet

Borehole location:

Ch: 30579.7

Hole angle:

90°

Drill model/mounting:

Hydrapower Scout

Project number: 2161016A Bearing: Borehole diameter: 75 mm

