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BOREHOLE ENGINEERING LOG

BOREHOLE NO.

BH31

SHEET 1 OF 2

Client: QUEENSLAND MAIN ROADS

Date Commenced: 10/5/05

Project: TUGUN BYPASS GEOTECHNICAL INVESTIGATION

Date Completed: 10/5/05

Borehole Location: Noise Structure

Recorded By: DAW

Project Number: 2134070C

Log Checked By:

Drill Model/Mounting: HYDRAPOWER SCOUT 250

Hole Angle: 90°

Surface RL: 27.7 m AHD

Borehole Diameter: 100 mm

Bearing: —

Co-ords: E 47819.3 N 89344.3 PMG

| Borehole Information |         |       |           |          |                 | Field Material Description |             |                                                                                                    |          |                                |                         |                                              |
|----------------------|---------|-------|-----------|----------|-----------------|----------------------------|-------------|----------------------------------------------------------------------------------------------------|----------|--------------------------------|-------------------------|----------------------------------------------|
| 1                    | 2       | 3     | 4         | 5        | 6               | 7                          | 8           | 9                                                                                                  | 10       | 11                             | 12                      | 13                                           |
| METHOD               | SUPPORT | WATER | RL(m) AHD | DEPTH(m) | FIELD TEST      | SAMPLE                     | GRAPHIC LOG | SOIL/ROCK MATERIAL FIELD DESCRIPTION                                                               | MOISTURE | RELATIVE DENSITY / CONSISTENCY | HAND PENETROMETER (kPa) | STRUCTURE AND ADDITIONAL OBSERVATIONS        |
| TC                   | Nil     | None  |           |          |                 |                            |             | GREYWACKE: fine to medium grained, grey-brown mottled orange, highly weathered, very low strength. |          |                                |                         | WEATHERED ROCK                               |
|                      |         |       | 27        | 1        |                 | SPT                        |             |                                                                                                    |          |                                |                         | No Sample Recovered.                         |
|                      |         |       | 26        | 2        | SPT 18.10 /50mm | SPT                        |             | ... as above, grey, moderately weathered, low strength.                                            |          |                                |                         |                                              |
|                      |         |       | 25        | 3        |                 |                            |             |                                                                                                    |          |                                |                         |                                              |
|                      |         |       | 24        | 4        | SPT 6 /130mm    | SPT                        |             |                                                                                                    |          |                                |                         | 4.13m, Hammer bouncing. No Sample Recovered. |
|                      |         |       | 23        | 5        |                 |                            |             | REFER TO CORED BOREHOLE LOG                                                                        |          |                                |                         |                                              |
|                      |         |       | 22        | 6        |                 |                            |             |                                                                                                    |          |                                |                         |                                              |
|                      |         |       | 21        | 7        |                 |                            |             |                                                                                                    |          |                                |                         |                                              |
|                      |         |       | 20        | 8        |                 |                            |             |                                                                                                    |          |                                |                         |                                              |
|                      |         |       | 19        | 9        |                 |                            |             |                                                                                                    |          |                                |                         |                                              |
|                      |         |       | 18        |          |                 |                            |             |                                                                                                    |          |                                |                         |                                              |

This borehole log should be read in conjunction with Parsons Brinckerhoff's accompanying standard notes.



CORED BOREHOLE ENGINEERING LOG

BOREHOLE NO.

BH31

SHEET 2 OF 2

Client: QUEENSLAND MAIN ROADS  
Project: TUGUN BYPASS GEOTECHNICAL INVESTIGATION  
Borehole Location: Noise Structure  
Project Number: 2134070C

Date Commenced: 10/5/05  
Date Completed: 10/5/05  
Recorded By: DAW  
Log Checked By:

Drill Model/Mounting: HYDRAPOWER SCOUT 250  
Borehole Diameter: 100 mm

Hole Angle: 90°  
Bearing: ---

Surface RL: 27.7 m AHD  
Co-ords: E 47819.3 N 89344.3 PMG

| Borehole Information       |         |       |               |     |           | Field Material Description |             |                                                                                                                    |                               |                                   |                                        |                                                                 |
|----------------------------|---------|-------|---------------|-----|-----------|----------------------------|-------------|--------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------|----------------------------------------|-----------------------------------------------------------------|
| 1                          | 2       | 3     | 4             | 5   | 6         | 7                          | 8           | 9                                                                                                                  | 10                            | 11                                | 12                                     |                                                                 |
| METHOD                     | SUPPORT | WATER | CORE RECOVERY | ROD | RL(m) AND | DEPTH(m)                   | GRAPHIC LOG | SOIL/ROCK MATERIAL FIELD DESCRIPTION                                                                               | WEATHERING                    | INFERRED STRENGTH (M50) MPa       | AVERAGE DEFECT SPACING mm              | STRUCTURE AND ADDITIONAL OBSERVATIONS                           |
|                            |         |       |               |     |           |                            |             |                                                                                                                    | EL<br>VL<br>L<br>M<br>H<br>UH | 0.3<br>0.3<br>0.3<br>1<br>3<br>10 | 20<br>30<br>100<br>300<br>1000<br>3000 |                                                                 |
|                            |         |       |               |     |           | 27                         |             |                                                                                                                    |                               |                                   |                                        |                                                                 |
|                            |         |       |               |     |           | 1                          |             |                                                                                                                    |                               |                                   |                                        |                                                                 |
|                            |         |       |               |     |           | 26                         |             |                                                                                                                    |                               |                                   |                                        |                                                                 |
|                            |         |       |               |     |           | 2                          |             |                                                                                                                    |                               |                                   |                                        |                                                                 |
|                            |         |       |               |     |           | 25                         |             |                                                                                                                    |                               |                                   |                                        |                                                                 |
|                            |         |       |               |     |           | 3                          |             |                                                                                                                    |                               |                                   |                                        |                                                                 |
|                            |         |       |               |     |           | 24                         |             |                                                                                                                    |                               |                                   |                                        |                                                                 |
|                            |         |       |               |     |           | 4                          |             |                                                                                                                    |                               |                                   |                                        |                                                                 |
|                            |         |       |               |     |           | 23                         |             |                                                                                                                    |                               |                                   |                                        |                                                                 |
|                            |         |       |               |     |           | 5                          |             | COMMENCE CORING AT 5 m                                                                                             |                               |                                   |                                        |                                                                 |
|                            |         |       |               |     |           | 5.18                       |             | CORE LOSS                                                                                                          |                               |                                   |                                        |                                                                 |
|                            |         |       |               |     |           | 22                         |             | GREYWACKE: fine to medium grained, grey-brown, with iron staining.                                                 | MW                            |                                   |                                        | 5.18m - 5.55m, Non intact core.                                 |
|                            |         |       |               |     |           | 6.00                       |             | CORE LOSS                                                                                                          |                               |                                   |                                        | 5.62m, J, 50°, rough, planar.<br>5.68m - 6.0m, Non intact core. |
|                            |         |       |               |     |           | 6.30                       |             | Interbedded GREYWACKE and ARGILLITE: Greywacke, fine to medium grained, grey brown, iron stained, Argillite, grey. | HW, MW                        |                                   |                                        | 6.2m - 7.0m, Non intact core.                                   |
|                            |         |       |               |     |           | 21                         |             |                                                                                                                    |                               |                                   |                                        | 6.73m, J, 45°, rough, planar.                                   |
|                            |         |       |               |     |           | 7                          |             |                                                                                                                    |                               |                                   |                                        | 7.15m - 7.44m, Non intact core.                                 |
|                            |         |       |               |     |           | 20                         |             |                                                                                                                    |                               |                                   |                                        | 7.83m, J, 45°, rough, planar.                                   |
|                            |         |       |               |     |           | 8                          |             |                                                                                                                    |                               |                                   |                                        | 8.0m - 8.18m, Non intact core.                                  |
|                            |         |       |               |     |           | 8.18                       |             | CORE LOSS                                                                                                          |                               |                                   |                                        |                                                                 |
|                            |         |       |               |     |           | 8.38                       |             | GREYWACKE: fine to medium grained, brown.                                                                          | XW                            |                                   |                                        | 8.38m - 9.0m, Non intact core.                                  |
|                            |         |       |               |     |           | 19                         |             |                                                                                                                    | HW                            |                                   |                                        | 9.2m, J, 20°, smooth, planar.                                   |
|                            |         |       |               |     |           | 9                          |             |                                                                                                                    | XW                            |                                   |                                        | 9.46m, J, 20°, smooth, planar.                                  |
|                            |         |       |               |     |           | 18                         |             |                                                                                                                    |                               |                                   |                                        | 9.53m - 10.0m, Non intact core.                                 |
| END OF BOREHOLE AT 10.00 m |         |       |               |     |           |                            |             |                                                                                                                    |                               |                                   |                                        |                                                                 |

This borehole log should be read in conjunction with Parsons Brinckerhoff's accompanying standard notes.

This borehole log should be read in conjunction with Parsons Brinckerhoff's accompanying standard notes.

Project: Tugun Bypass Geotechnical Investigation  
Borehole: BH31  
Start Depth: 5.00m  
Finish Depth: 10.00m

