Appendix G  Previous relevant borehole logs
client: MAUNSELL AECOM
project: PRINCES HIGHWAY UPGRADE ROUTE SELECTION STUDY GERRINGONG TO BOMADERRY, NSW
title: APPROXIMATE GROUNDWATER BORE LOCATIONS
original size: A1
project no: GEOTUNAN02580-AA
figure no: N/A

description drawn approved date

- APPROXIMATE GROUNDWATER BORE LOCATIONS

scale: NTS

BMC/CA

03/05/2007

N
<table>
<thead>
<tr>
<th>Reference Number</th>
<th>Title</th>
<th>Source</th>
<th>Location</th>
<th>Description</th>
<th>Date</th>
<th>Scope of Investigations</th>
<th>Scope of Laboratory Testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>Foxground Realignment – Princes Highway</td>
<td>Roads and Traffic Authority of NSW (Prepared by LongMac Associates Pty Ltd)</td>
<td>Bill Ingolds Property, Burtons Farm and Woodeson’s Property, Foxground</td>
<td>Geotechnical investigation for possible realignment of the Princes Highway.</td>
<td>Oct-89</td>
<td>4 Boreholes</td>
<td>None indicated</td>
</tr>
<tr>
<td>R2</td>
<td>Gerringong to Bomaderry Bore Network</td>
<td>Maunsell Aecom</td>
<td>Gerringong to Bomaderry</td>
<td>Groundwater works summary for groundwater bores</td>
<td>1946 To 1999</td>
<td>26 Groundwater Bores</td>
<td>None indicated</td>
</tr>
</tbody>
</table>
HOLE No. BH 1

**Surface Elevation:** 50.00 approx.  
**Angle from Horizontal:** 90.0

**Project:** FOXGROUND REALIGNMENT - PRINCES HIGHWAY  
**Location:** BILL INGOLD'S PROPERTY - FOXGROUND

**Big Type:** B/40 - L  
**Mounting:** TRUCK  
**Contractor:** McDERMOTT  
**Driller:** R. BROWNE

**Chasing Diameter:** HW  
**Barrel (length):** NMLC (8.0m)  
**Bit:** DIAMOND  
**Bit Condition:** FAIR - GOOD

**Date Started:** 15/10/89  
**Date Completed:** 16/10/89  
**Logged by:** SAC  
**Date Logged:** 16/10/89

### DESCRIPTION

- **ROCK TYPE, colour, grain size, structure**  
  (texture, mineral composition, hardness, alteration, cementation, etc. as applicable)  
  and moisture, colour, consistency, structure, SOIL TYPE (origin)

- **TOPSOIL**  
  Moist, brown, sandy clayey SILT (MR)

- **CORE LOSS 0.10m.**  
  - SILT, as above,  
  - fragmented sandstone included

- **SANDSTONE, lightly pinkish grey, fine grained, uniform, black mica, well cemented, quartz lithic (BUDGONG SANDSTONE)**

- **becoming light grey, (dark grey, light greyish grey, pink and white mixed grains)**  
  ironstained 2.0m to 2.25m  

- **included 50mm band of medium coarse rounded gravels light grey pink, well cemented included randomly orientated black striations within SANDSTONE**

### NATURAL FRACTURES

- **Spacing (mm):**
  - Fracture type, orientation, infilling or coating, shape, roughness, other.

### ADDITIONAL DATA

- **Joints, partings, seams, fracture or shear zones, veins**

Note: RL's obtained from DMR topographical plan  
- see site plan

**Disturbed during coring**

- 0.9 to 1.1m

- JT, 5d, FE, CN, PR, RF

- JT, HZ, UN, CN, RF, Mn

- 2 JT, HZ, CN, PR, RF, Mn

- JT, 45d, CN, PR, VR

- JT, 10d, CN, PR, VR

- JT, sub-VT, CN, PR, VR

- FZ, FE, SANDY, GRAVELLY

- JT, HZ, CN, PR, SM, FE

- JT, HZ, CN, PR, SM, FE

- JT, HZ, CN, PR, RF, FE
**HOLE No. BH 1**

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**Description**

ROCK TYPE, colour, grain size, structure (texture, mineral composition, hardness, alteration, cementation, etc. as applicable) and moisture, colour, consistency, structure, SOIL TYPE (origin)

_BUDGONG SANDSTONE, as above._

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**Drilling Progress**

| Depth (metres) | NMLC | Core Loss 1
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>14.85</td>
<td>14.85</td>
<td></td>
</tr>
</tbody>
</table>

**Logging Details**

- **Surface Elevation:** 50.00 approx. Angle from Horizontal: 90.0
- **Date Started:** 13/10/89
- **Date Completed:** 16/10/89
- **Logged by:** SAC
- **Date Logged:** 16/10/89

**Core in Boxes Show**

15.1m extra caused by breaking core to fit into boxes

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**Core Log Sheet**

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**Longmac Associates Pty. Limited**

3 Eden Street, Crows Nest, N.S.W. 2065

Telephone: (02) 922 0520

Consulting Geotechnical Engineers and Geologists

Job No.

AGT5094
**HOLE No. BH 2**

**Core Log Sheet**

**Client:** ROADS AND TRAFFIC AUTHORITY, N.S.W.

**Project:** FOXGROUND REALIGNMENT - PRINCES HIGHWAY

**Location:** BURTONS FARM - FOXGROUND

**Position:** East of farm access to House

**Surface Elevation:** 101.6 approx.

**Angle from Horizontal:** 00.0

**Rig Type:** B/40 - L

**Mounting:** TRUCK

**Contractor:** McDERMOTT

**Driller:** R. BROWNE

**Casing Diameter:** HW

**Barrel (length):** NMLC (3.0m)

**Bit:** DIAMOND

**Bit Condition:** FAIR - GOOD

**Date Started:** 16/10/89

**Date Completed:** 16/10/89

**Logged by:** SAC

**Date Logged:** 16/10/89

### DESCRIPTION

**ROCK TYPE:** colour, grain size, structure (texture, mineral composition, hardness, alteration, cementation, etc. applicable)

and moisture, colour, consistency, structure, SOIL TYPE (origin)

**LEATHERING**

Dry, moist, brown, sandy, clayey SILT (MH) with included round fragments of extremely weathered sandstone.

**LATITE**, silty orange brown with white sand grains, some heavy ironstaining on joint faces, gravelly (fine), coarse grained, very weakly cemented.

**CORE LOSS 0.38m (Assumed)**

**LATITE**, as above.

**Included gravel band, weakly cemented**

### NATURAL FRACTURES

**SPACING (mm)**

**LEATHERING**

**NOTE:** All fractures in plan view. Fracture type, orientation, infilling or coating, shape, roughness, other.

**ADDITIONAL DATA**

(Joints, partings, seams, fracture or shear zones, veins)

- Fracture type, orientation, infilling or coating, shape, roughness, other.

**Note:** RL's obtained from DMR topographical plan - see site plan.

**JT, sub-VT, PR, RF, CN JT, HZ, CN, PR, RF, FE JT, 45d, CN, RF, PR FZ 2 JT, 45d, CN, PR, RF JT, HZ, CN, ST, RF JT, 60d, CN, IR, RF, FE**

Numerous JT's widely spaced FZ, CN(1.5-1.95m)

**FZ, SILTY**

**3 JT, HZ, CN, IR, RF**

**3 JT, sub-VT, CN, PR, RF**

**JT, HZ, CN, IR, RF JT, 45d, CN, IR, RF**

See standard sheets for details of abbreviations and basis of descriptions.
### HOLE No. BH 2

**Client:** ROADS AND TRAFFIC AUTHORITY, N.S.W.  
**Project:** FOXGROUND REALIGNMENT - PRINCES HIGHWAY  
**Location:** BURTONS FARM - FOXGROUND  
**Position:** East of farm access to House  
**Surface Elevation:** 101.00 approx.  
**Angle from Horizontal:** 90.00  
**Rig Type:** B/40 - L  
**Mounting:** TRUCK  
**Contractor:** McDERMOTT  
**Driller:** R. BROWNE  
**Casing Diameter:** HW  
**Barrel (length):** NMLC (3.0m)  
**Bit:** DIAMOND  
**Bit Condition:** FAIR - GOOD  
**Date Started:** 16/10/89  
**Date Completed:** 16/10/89  
**Logged by:** SAC  
**Date Logged:** 16/10/89

#### Progress

<table>
<thead>
<tr>
<th>Depth (metres)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>Included gravel, weakly cemented band 50mm?</td>
</tr>
<tr>
<td>6.00</td>
<td>Included gravel band</td>
</tr>
<tr>
<td>7.00</td>
<td>Contorted bedding</td>
</tr>
<tr>
<td>8.55</td>
<td>Band clayey sandstone, 50mm</td>
</tr>
<tr>
<td></td>
<td>Heavy iron staining, greenish grey and dark orange brown and white speckled</td>
</tr>
</tbody>
</table>

#### Additional Data

- **Fracture type, orientation, infilling or coating, shape, roughness, other.**
  - JT, 45d, CN, PR, VR
  - FZ, SILTY
  - JT, 45d, CN, IR, VR
  - BP, HZ, CN, FE, RF
  - 2 JT, 5d, CN, PR, VR
  - JT, 45d, CN, FE, PR, RF
  - JT, 5d, CN, PR, RF
  - FZ, GRAVEL
  - JT, HZ, CN, PR, RF
  - FZ, CN
  - JT, HZ, CN, IR
  - JT, HZ, CN, PR, RF
  - JT, HZ, CN, PR, RF
  - 2 JT, HZ, CN, PR, RF
  - FZ, SILTY
  - FZ, SILTY
  - FZ, SILTY
  - JT, 45d, CN, FE, PR, RF
  - JT, 45d, CA, FE, PR, RF
  - FZ, CN, FE
  - JT, HZ, CN, IR, RF
  - JT, 30d, CN, IR, RF
  - JT, 70d, CN
  - 2 JT, 10d, CN
  - JT, 60d, CN, CU, CN, RF
  - JT, 20d & HZ, PR, RF

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See standard sheets for details of abbreviations & basis of descriptions  
**LONGMAC ASSOCIATES PTY. LIMITED**  
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*Telephone: (02) 929 0520*  
CONSULTING GEOTECHNICAL ENGINEERS AND GEOLOGISTS  
**Job No.** AGT5094
**HOLE No. BH 2**

**Sheet 3 of 5**

**Client:** ROADS AND TRAFFIC AUTHORITY, N.S.W.

**Project:** FOXGROUND REALIGNMENT - PRINCES HIGHWAY

**Location:** BURTONS FARM - FOXGROUND

**Position:** East of farm access to House

**Surface Elevation:** 101.00 approx. Angle from Horizontal: 00.0

**Rig Type:** B/40 - L  **Mounting:** TRUCK  **Contractor:** McDERMOTT  **Driller:** R. BROWNE

**Casing Diameter:** HW  **Barrel (length):** NMLC (3.0m)  **Bit:** DIAMOND  **Bit Condition:** FAIR - GOOD

**Date Started:** 16/10/89  **Date Completed:** 16/10/89  **Logged by:** SAC  **Date Logged:** 16/10/89

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**DESCRIPTION**

ROCK TYPE, colour, grain size, structure (texture, mineral composition, hardness, alteration, cementation, etc. as applicable)
and moisture, colour, consistency, structure, SOIL TYPE (origin)

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**DRILLING & CASING**

progress

10.80

NMLC

(0)

12.00

CORING

13.60

(0)

15.00

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**ADDITIONAL DATA**

(joints, partings, seams, fracture or shear zones, veins)

Fracture type, orientation, infilling or coating, shape, roughness, other.

---

**WEATHERING**

Estimated Strength Is(50) MPa

Spacing (mm)

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**NATURAL FRACTURES**

grossly disturbed during extraction (10.0 - 10.6m)

FZ, SILTY

BP, HZ, CN, IR, RF

2 BP, HZ, CN, PR, RF

JT, 45d, CN, FE, PR, VR

FZ, CN, FE

JT, 45d, FE, PR, RF

FZ, CN, FE

Many JT's, HZ, 45d, CN, IR (11.8 - 12.0m)

Predominant sub-VT, JT, CN, PR, RF

FZ, CN, FE

stained (13.15 - 13.46m)

3 JT, 10d, CN, PR, RF

JT, HZ, GRAVEL, CU, RF, FE

JT, 30d, GRAVEL, PR, RF

JT, 40d, FZ, CN, PR, VR

JT, HZ, FZ, CN, PR, VR

JT, 70d, CLAY, KT, QZ

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Job No. AGT5094
**HOLE No. BH 2**

**Project:** FOXGROUND REALIGNMENT - PRINCES HIGHWAY  
**Location:** BURTONS FARM - FOXGROUND  
**Big Type:** B/40 - L  
**Mounting:** TRUCK  
**Contractor:** McDERMOTT  
**Driller:** R. BROWNE  
**Casing Diameter:** HW  
**Barrel (length):** NMLC (3.0m)  
**Bit:** DIAMOND  
**Date Started:** 16/10/89  
**Date Completed:** 16/10/89  
**Logged by:** SAC  
**Date Logged:** 16/10/89  

### DESCRIPTION

**ROCK TYPE**
- Colour, grain size, structure (texture, mineral composition, hardness, alteration, cementation, etc. as applicable) and moisture, colour, consistency, structure, SOIL TYPE (origin)

**LATITE, blue grey speckled white, fine grained, very hard, massive.**

### NATURAL FRACURES

- Fracture type, orientation, infilling or coating, shape, roughness, other.

### ADDITIONAL DATA
- (Joints, partings, seams, fracture or shear zones, veins)

- PR, RF OPEN CRYSTAL GROWTH

- JT, HZ, KT, CA, PR, RF

- JT, 45d, QZ, PR, RF, FE

- VN, sub-VT, QZ, TIGHT

- VN, sub-VT, QZ, Ti

- JT, 60d, QZ, FE, PR, RF

- VN, QZ & CLAY, OPEN

- JT, 45d, KT & CA
- JT, 20d, IR, CN, VR

- JT, HZ, KT, CN, PR, RF

- JT, sub-VT, CN, PR, VR

---

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**CONSULTING GEOTECHNICAL ENGINEERS AND GEOLOGISTS**  

**Job No.** AGT5094
HOLE No. BH 2

Sheet 5 of 5

Client: ROADS AND TRAFFIC AUTHORITY, N.S.W.
Project: FOXGROUND REALIGNMENT - PRINCES HIGHWAY
Location: BURTONS FARM - FOXGROUND

Position: East of farm access to House
Surface Elevation: 101.00 approx. Angle from Horizontal: 90.0

Big Type: B/40 - L
Mounting: TRUCK
Contractor: McDERMOTT
Driller: R. BROWNE

Casing Diameter: HW
Barrel (length): NMLC (3.0m)
Bit: DIAMOND
Bit Condition: FAIR - GOOD

Date Started: 16/10/89
Date Completed: 16/10/89
Logged by: SAC
Date Logged: 16/10/89

DESCRIPTION

ROCK TYPE, colour, grain size, structure (texture, mineral composition, hardness, alteration, cementation, etc. as applicable) and moisture, colour, consistency, structure, SOIL TYPE (origin)

LATITE, as above.
becoming highly weathered, light greyish green
included band SILT (extremely weathered rock), green, numerous chlorite veins, low plasticity, firm
greenish grey

ENDED BORE AT 21.00m in extremely weathered LATITE.

See standard sheets for details of abbreviations & basis of descriptions

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