F

F'

PROPERTY BOUNDARY

PROPOSED BUILDING

PROPERTY BOUNDARY

APPROXIMATE GROUND SURFACE LEVEL

110
Offset - 7m NE

111
Offset - 10m NE

refusal

refusal

UNIT 1 & 2

UNIT 3

UNIT 4

PROPOSED BASEMENT BEL RL 61.4

Bottom Depth 16 m

Bottom Depth 14.2 m

ELEVATION (AHD)

76
74
72
70
68
66
64
62
60
58
56

0
20
40
60
80
100
120
140
160

DISTANCE ALONG PROFILE (m)

NOTES:
1. The ground surface level is estimated; however is largerly unknown over the existing building footprint.
2. Subsurface profile is accurate at bore locations only and may vary significantly away from bores.
3. For details of Section F-F' refer Drawing 1

GEOLOGICAL PROFILE:
UNIT 1: Filling
UNIT 2: Residual clays and extremely weathered rock
UNIT 3: Laminite and fine to medium grained sandstone (Mittagong Formation)
UNIT 4: Medium to coarse grained sandstone (Hawkesbury Sandstone)

NOTE: Summary logs only. Should be read in conjunction with detailed logs.

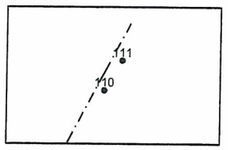
LEGEND
- Filling
- Concrete
- Laminite
- Sandstone coarse grained

ROCK STRENGTH
EL - Extremely Low
VL - Very Low
L - Low
M - Medium
H - High
VH - Very High

SOIL CONSISTENCY
vs - very soft
s - soft
f - firm
st - stiff
vst - very stiff
h - hard
vl - very loose
l - loose
md - medium dense
d - dense
vd - very dense

TESTS / OTHER
N - Standard penetration test value
- Water level
BEL Bulk excavation level
Inferred boundary

SITE MAP



Douglas Partners
Geotechnics / Environment / Groundwater

CLIENT: Stamford Property Services Pty Ltd		TITLE: INTERPRETED GEOLOGICAL SECTION F - F'	PROJECT No: 72138
OFFICE: Sydney	DRAWN BY: GRB/LD	Proposed Macquarie Village	DRAWING No: 7
SCALE: 1:500 (H) 1:100 (V) @ A3	DATE: 17.01.2011	110 - 114 Herring Road, Macquarie Park	REVISION: 0

P:\72138 NORTH RYDE, Stamford Hotel GRB\Drawings\72138-7.dwg, 31/01/2011 9:33:23 AM

About this Report

Douglas Partners

Introduction

These notes have been provided to amplify DP's report in regard to classification methods, field procedures and the comments section. Not all are necessarily relevant to all reports.

DP's reports are based on information gained from limited subsurface excavations and sampling, supplemented by knowledge of local geology and experience. For this reason, they must be regarded as interpretive rather than factual documents, limited to some extent by the scope of information on which they rely.

Copyright

Borehole and Test Pit Logs

The borehole and test pit logs presented in this report are an engineering and/or geological interpretation of the subsurface conditions, and their reliability will depend to some extent on frequency of sampling and the method of drilling or excavation. Ideally, continuous undisturbed sampling or core drilling will provide the most reliable assessment, but this is not always practicable or possible to justify on economic grounds. In any case the boreholes and test pits represent only a very small sample of the total subsurface profile.

Interpretation of the information and its application to design and construction should therefore take into account the spacing of boreholes or pits, the frequency of sampling, and the possibility of other than 'straight line' variations between the test locations.

Groundwater

Where groundwater levels are measured in boreholes there are several potential problems, namely:

- In low permeability soils groundwater may enter the hole very slowly or perhaps not at all during the time the hole is left open;
- A localised, perched water table may lead to an erroneous indication of the true water table;
- Water table levels will vary from time to time with seasons or recent weather changes. They may not be the same at the time of construction as are indicated in the report; and
- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must first be washed out of the hole if water measurements are to be made.

More reliable measurements can be made by installing standpipes which are read at intervals over several days, or perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from a perched water table.

Reports

The report has been prepared by qualified personnel, is based on the information obtained from field and laboratory testing, and has been undertaken to current engineering standards of interpretation and analysis. Where the report has been prepared for a specific design proposal, the information and interpretation may not be relevant if the design proposal is changed. If this happens, DP will be pleased to review the report and the sufficiency of the investigation work.

Every care is taken with the report as it relates to interpretation of subsurface conditions, discussion of geotechnical and environmental aspects, and recommendations or suggestions for design and construction. However, DP cannot always anticipate or assume responsibility for:

- Unexpected variations in ground conditions. The potential for this will depend partly on borehole or pit spacing and sampling frequency;
- Changes in policy or interpretations of policy by statutory authorities; or
- The actions of contractors responding to commercial pressures.

If these occur, DP will be pleased to assist with investigations or advice to resolve the matter.

About this Report

Site Anomalies

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, DP requests that it be immediately notified. Most problems are much more readily resolved when conditions are exposed rather than at some later stage, well after the event.

Information for Contractual Purposes

Where information obtained from this report is provided for tendering purposes, it is recommended that all information, including the written report and discussion, be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate to prepare a specially edited document. DP would be pleased to assist in this regard and/or to make additional report copies available for contract purposes at a nominal charge.

Site Inspection

The company will always be pleased to provide engineering inspection services for geotechnical and environmental aspects of work to which this report is related. This could range from a site visit to confirm that conditions exposed are as expected, to full time engineering presence on site.

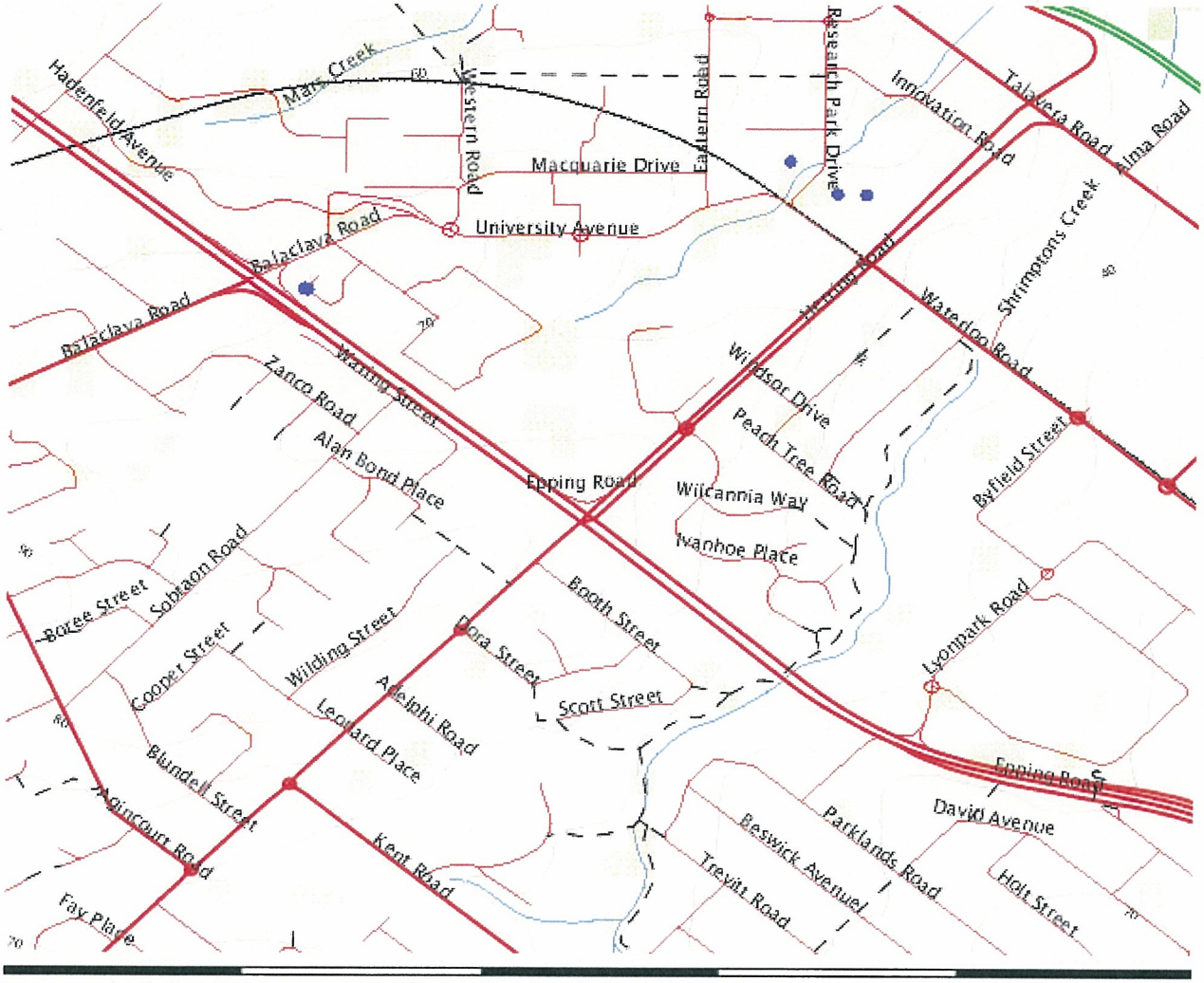
Appendix B

Groundwater Bore Search

Map from the NSW Natural Resource Atlas

Map created with NSW Groundwater Works - http://nratlas.nsw.gov.au

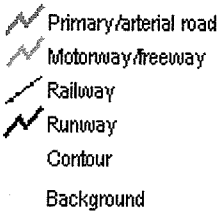
Tuesday, January 18, 2011



0 1 Km

Legend

Symbol	Layer	Custodian
	Cities and large towns renderImage: Cannot build image from features	
Cowra	Populated places renderImage: Cannot build image from features	
	Towns	
	Groundwater Bores	
	Catchment Management Authority boundaries	
	Major rivers	
	Topographic base map	



Groundwater Works Summary

For information on the meaning of fields please see Glossary
Document Generated on Monday, January 17, 2011

Print Report

Works Details Site Details Form A Licensed Construction Water Bearing Zones Drillers Log

Work Requested -- GW011296

Works Details (top)

GROUNDWATER NUMBER	GW011296
LIC-NUM	10BL004479
AUTHORISED-PURPOSES	IRRIGATION
INTENDED-PURPOSES	IRRIGATION
WORK-TYPE	Bore open thru rock
WORK-STATUS	(Unknown)
CONSTRUCTION-METHOD	Cable Tool
OWNER-TYPE	Private
COMMENCE-DATE	
COMPLETION-DATE	1953-09-01
FINAL-DEPTH (metres)	67.00
DRILLED-DEPTH (metres)	67.10
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	N/A
GWMA	603 - SYDNEY BASIN
GW-ZONE	-
STANDING-WATER-LEVEL	
SALINITY	
YIELD	

Site Details (top)

REGION	10 - SYDNEY SOUTH COAST
RIVER-BASIN	213 - SYDNEY COAST - GEORGES RIVER
AREA-DISTRICT	
CMA-MAP	9130-3N
GRID-ZONE	56/1
SCALE	1:25,000
ELEVATION	
ELEVATION-SOURCE	(Unknown)
NORTHING	6260865.00
EASTING	324904.00
LATITUDE	33 46' 40"
LONGITUDE	151 6' 32"
GS-MAP	0055A4

AMG-ZONE	56
COORD-SOURCE	GD.,PR. MAP
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	HUNTERS HILL
PORTION-LOT-DP	631

Licensed (top)

COUNTY	CUMBERLAND
PARISH	HUNTERS HILL
PORTION-LOT-DP	631

Construction (top)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter; ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

HOLE-NO	PIPE-NO	COMPONENT-CODE	COMPONENT-TYPE	DEPTH-FROM (metres)	DEPTH-TO (metres)	OD (mm)	ID (mm)	INTERVAL	DETAIL
1	1	Casing	(Unknown)	0.00	1.80	203			(Unknown)

Water Bearing Zones (top)

FROM-DEPTH (metres)	TO-DEPTH (metres)	THICKNESS (metres)	ROCK-CAT-DESC	S-W-L	D-D-L	YIELD	TEST-HOLE-DEPTH (metres)	DURATION	SALINITY
58.20	58.20	0.00	(Unknown)	4.50		0.30			501-1000 ppm

Drillers Log (top)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	58.21	58.21	Sandstone		
58.21	65.22	7.01	Shale Water Supply		
65.22	67.05	1.83	Sandstone		

Groundwater Works Summary

For information on the meaning of fields please see Glossary
Document Generated on Monday, January 17, 2011

Print Report

Works Details Site Details Form A Licensed Construction Water Bearing Zones Drillers Log

Work Requested -- GW109694

Works Details (top)

GROUNDWATER NUMBER	GW109694
LIC-NUM	10BL161772
AUTHORISED-PURPOSES	MONITORING BORE
INTENDED-PURPOSES	MONITORING BORE
WORK-TYPE	Bore
WORK-STATUS	
CONSTRUCTION-METHOD	
OWNER-TYPE	Other Govt
COMMENCE-DATE	
COMPLETION-DATE	2001-12-12
FINAL-DEPTH (metres)	46.40
DRILLED-DEPTH (metres)	
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	MACQUARIE UNI STATION SITE
GWMA	-
GW-ZONE	-
STANDING-WATER-LEVEL	
SALINITY	
YIELD	

Site Details (top)

REGION	10 - SYDNEY SOUTH COAST
RIVER-BASIN	
AREA-DISTRICT	
CMA-MAP	
GRID-ZONE	
SCALE	
ELEVATION	
ELEVATION-SOURCE	
NORTHING	6261053.00
EASTING	325698.00
LATITUDE	33 46' 35"
LONGITUDE	151 7' 3"
GS-MAP	

AMG-ZONE	56
COORD-SOURCE	
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	HUNTERS HILL
PORTION-LOT-DP	18 1058168

Licensed (top)

COUNTY	CUMBERLAND
PARISH	HUNTERS HILL
PORTION-LOT-DP	20 1015626

Water Bearing Zones (top)

no details

Drillers Log (top)

no details

Groundwater Works Summary

For information on the meaning of fields please see Glossary
Document Generated on Tuesday, January 18, 2011

Print Report

Works Details Site Details Form A Licensed Construction Water Bearing Zones Drillers Log

Work Requested -- GW109695

Works Details (top)

GROUNDWATER NUMBER	GW109695
LIC-NUM	10BL161772
AUTHORISED-PURPOSES	MONITORING BORE
INTENDED-PURPOSES	MONITORING BORE
WORK-TYPE	Bore
WORK-STATUS	
CONSTRUCTION-METHOD	
OWNER-TYPE	Other Govt
COMMENCE-DATE	
COMPLETION-DATE	2000-01-18
FINAL-DEPTH (metres)	44.30
DRILLED-DEPTH (metres)	
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	MACQUARIE UNI STATION SITE
GWMA	-
GW-ZONE	-
STANDING-WATER-LEVEL	
SALINITY	
YIELD	

Site Details (top)

REGION	10 - SYDNEY SOUTH COAST
RIVER-BASIN	
AREA-DISTRICT	
CMA-MAP	
GRID-ZONE	
SCALE	
ELEVATION	
ELEVATION-SOURCE	
NORTHING	6261053.00
EASTING	325742.00
LATITUDE	33 46' 35"
LONGITUDE	151 7' 5"
GS-MAP	

AMG-ZONE	56
COORD-SOURCE	
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	HUNTERS HILL
PORTION-LOT-DP	18 1058168

Licensed (top)

COUNTY	CUMBERLAND
PARISH	HUNTERS HILL
PORTION-LOT-DP	20 1015626

Construction (top)

Negative depths indicate Above Ground Level;H-Hole;P-Pipe;OD-Outside Diameter;
ID-Inside Diameter;C-Cemented;SL-Slot Length;A-Aperture;GS-Grain Size;Q-Quantity

HOLE-NO	PIPE-NO	COMPONENT-CODE	COMPONENT-TYPE	DEPTH-FROM (metres)	DEPTH-TO (metres)	OD (mm)	ID (mm)	INTERVAL	DETAIL
1		Hole	Hole	0.00	44.30				

Water Bearing Zones (top)

no details

Drillers Log (top)

no details

Groundwater Works Summary

For information on the meaning of fields please see Glossary
Document Generated on Monday, January 17, 2011

Print Report

Works Details Site Details Form A Licensed Construction Water Bearing Zones Drillers Log

Work Requested -- GW109696

Works Details (top)

GROUNDWATER NUMBER	GW109696
LIC-NUM	10BL161772
AUTHORISED-PURPOSES	MONITORING BORE
INTENDED-PURPOSES	MONITORING BORE
WORK-TYPE	Bore
WORK-STATUS	
CONSTRUCTION-METHOD	
OWNER-TYPE	Other Govt
COMMENCE-DATE	
COMPLETION-DATE	2000-01-27
FINAL-DEPTH (metres)	35.50
DRILLED-DEPTH (metres)	
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	MACQUARIE UNI STATION SITE
GWMA	-
GW-ZONE	-
STANDING-WATER-LEVEL	
SALINITY	
YIELD	

Site Details (top)

REGION	10 - SYDNEY SOUTH COAST
RIVER-BASIN	
AREA-DISTRICT	
CMA-MAP	
GRID-ZONE	
SCALE	
ELEVATION	
ELEVATION-SOURCE	
NORTHING	6261111.00
EASTING	325625.00
LATITUDE	33 46' 33"
LONGITUDE	151 7' 1"
GS-MAP	

AMG-ZONE	56
COORD-SOURCE	
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	HUNTERS HILL
PORTION-LOT-DP	18 1058168

Licensed (top)

COUNTY	CUMBERLAND
PARISH	HUNTERS HILL
PORTION-LOT-DP	20 1015626

Water Bearing Zones (top)

no details

Drillers Log (top)

no details