ENVIRONMENTAL INVESTIGATION SERVICES

13 July 2010
Ref: E17167KBlet-rev1.2

Sir Moses Montefiore Jewish Home
C/- McLachlan Lister Pty Ltd
Level 1, 1 Hickson Road
The Rocks, NSW 2000

Attention: Ms Mary Casey / Mr Clive Chandler

PRELIMINARY SALINITY DESKTOP STUDY
PROPOSED ALTERATIONS AND ADDITIONS
NO. 100 – 102 KING AND 30 – 36 DANGAR STREETS, RANDWICK, NSW

Executive Summary:

EIS was engaged to undertake a preliminary salinity desktop study for the proposed development at the above site. The study was a limited scope of works designed to identify the risks associated with saline soils on the proposed development. A review of the available J&K geotechnical investigation reports indicated that the site is underlain by alluvial sandy soil overlying deep sandstone bedrock. A review of the available salinity risk map has indicated that the site is outside the area mapped on the *Salinity Potential in Western Sydney Map.* Based on the results of the desktop study, we are of the opinion that the risk associated with salinity on the proposed development is relatively low.

1 Introduction

McLachlan Lister Pty Ltd, acting on behalf of Sir Moses Montefiore Jewish Home, commissioned Environmental Investigation Services (EIS), a division of Jeffery & Katauskas Pty Ltd (J&K), to undertake a preliminary salinity desktop study for the proposed alterations and additions to the existing Montefiore Jewish Home at No. 100 – 102 King and 30 – 36 Dangar Streets, Randwick, NSW.

The proposed development area is located within the wider site identified as Lot 202 in DP879576. The site location is shown on Figure 1 and the general site layout is shown on the attached Figure 2.

The study was undertaken generally in accordance with an EIS email cost estimate of 26 May 2010 and McLachlan Lister written acceptance, on behalf of Sir Moses Montefiore Jewish Home, of 28 May 2010.

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EIS is a division of Jeffery and Katauskas Pty Ltd • ABN 17 003 550 801

The preliminary study is a limited scope of works undertaken to assess the probability of the presence of saline soils on the site. The study was designed as a desktop review of potential salinity conditions and does not include an assessment of subsurface conditions at the site.

The study does not address the durability requirements for buried concrete and steel foundations/footings.

This letter should be read in conjunction with the J&K geotechnical assessment report titled '*Report to McLachlan Lister Pty Ltd on Preliminary Geotechnical Assessment for Proposed Alterations and Additions at Montefiore Jewish Home, King Street, Randwick, NSW*' Ref: 17167ZR3rpt, dated 13 July 2010.

The subsurface conditions referred to within this report were those encountered in the boreholes drilled by J&K in 1991 and 2002. Further details are provided in Section 8 of this report.

2 Proposed Development Details

Based on the provided information we understand that the proposed alterations and additions will include the construction of three new four to six level buildings over the southern section of the site (Blocks D, E and F) and some re-configuration of the existing Block C.

The new buildings will be constructed over one level of basement with a proposed finished floor reduced level (RL) at RL41.3m (Blocks D and E) and RL38.3m (Block F), requiring excavations to a maximum depth of about 3.5m. In addition, a new tunnel will connect the southern end of Block A to the northern end of Block C. The tunnel will have a finished floor level at RL37.7m and excavations to a maximum depth of about 4m will be required. Blocks D and E will connect to the existing 'Burger Centre' which occupies the central section of the southern portion of the site.

3 Background

3.1 General Information

Salinity is the accumulation and concentration of salt at or near the ground surface or within surface water bodies. Salt is naturally present in the landscape through deposition of salt from the ocean in coastal areas and through weathering of bedrock that contains salt, accumulated during deposition of original sediments in a prehistoric marine environment. The salts are commonly soluble chlorides, sulphates or carbonates of sodium and magnesium.

In Sydney, salinity issues are typically associated with the Wianamatta Group shales and their derived soil landscapes. The natural vegetation of western Sydney, is dominated by large isolated trees with deep root systems that remove subsurface moisture. Slow rates of percolation through the relatively impermeable clay soil and uptake of a large proportion of rainfall by the trees results in limited recharge of the groundwater system by rainfall. The depth to groundwater has developed a natural equilibrium and there is little tendency for salt contained in the groundwater or subsoils to rise to the surface.

3.2 Salinity and Urban Development

Salinity becomes a problem in urban areas when changes in the land use result in changes to the way water moves through the environment. This can result in vegetation die-back, decreases in water quality and damage to urban infrastructure.

Removal of deep rooted tree species during development and replacement with urban infrastructure, houses and industrial developments reduces the mechanism for the removal of subsurface moisture.

The development of urban salinity is commonly associated with changes in the way water is cycled through the environment (rainfall, surface run-off, water infiltration and groundwater system). An increase in the quantity of water reaching the groundwater table as a result of vegetation clearance, irrigation of parklands, leaking water infrastructure and changes in drainage patterns, can cause a relatively rapid rise in the groundwater table. Earthworks that include excavation of natural soil profiles and exposure of more saline subsurface soils or shale bedrock may also result in an increase in salt concentrations at the ground surface.

Construction of roads, pipelines and buildings commonly results in removal of topsoil leading to exposure of the subsoils and interception of surficial and shallow subsurface drainage. In addition, over-irrigation of urban gardens, leaking water infrastructure and concentrated drainage patterns can result in increased water movement through the subsoil to the groundwater system leading to a relatively rapid rise in the groundwater table.

A rise in groundwater levels and impediments to subsurface drainage patterns can transport salt formerly stored in the bedrock to the surficial soil profile. This may result in salt encrustation of exposed soils, building foundations, roads, drainage infrastructure and corrosion of metal, concrete and other building materials. Increasing salt concentrations in surficial soils and consequently in surface waters may also result in

die-off of the existing vegetation, further reducing the hydrological load on the groundwater system and resulting in further groundwater table rises.

4 Site Description

Site inspections were undertaken by a J&K associate level engineering geologist on 1 May 2009 and 2 June 2010. The following information was obtained:

The site is located at the toe of a concave hillside that slopes down to the west at a maximum of 15°. The site has south, east and north frontages onto King Street, Dangar Street and Govett Laney, respectively.

At the time of the this assessment, the site was occupied by an aged care facility constructed after preparation of the J&K geotechnical report in October 2002. The site surfaces had gentle to moderate slopes down to the west and south-west; the site surface level stepped down approximately 4m from the south-east corner of the site to the south-west corner of the site.

The north half of the site was occupied by a maximum 5 level brick building and the central section of the south portion of the site was occupied by a maximum four level building (The 'Burger Centre'). The buildings were surrounded by asphalt, concrete and asphaltic concrete (AC) paved access roads and footpaths, grass surfaced landscaped areas and planter beds.

The subject site comprises the south portion of the greater site, i.e. to the east and west of The 'Burger Centre'. The pertinent site features are as follows:

- The south portion of the east site boundary comprised a grass surfaced batter which sloped down to the west at a maximum of approximately 15°;
- The south portion of the east side of The 'Burger Centre' was lined by a paved area;
- The central portion of The 'Burger Centre' was lined by an AC paved car park which extended west under the building to an access road and extended to the east;
- The east portion of the car park was lined by concrete block retaining walls of approximately 3.5m maximum height which supported the grass surfaced slopes and the paved area to the south;
- The north portion of the east side of The 'Burger Centre' was lined by an AC paved driveway with a deck area suspended over the western side of the driveway;
- The north subject site boundary was lined by asphalt and AC paved driveways;
- The north and central portions of the west side of The 'Burger Centre' were lined by gently sloping landscaped areas;

- The south portion of the west side of The 'Burger Centre' was lined by what appeared to be an elevated yard area a maximum of approximately 3m above surrounding landscaped surface levels. Observations were limited due to the presence of a timber screen of approximately 5m maximum height;
- The south-west corner of the site was occupied by child-care centre comprising clad frame buildings which were set-back approximately 2m from the concrete block retaining wall (maximum height approximately 2m) which supported the south portion of the west side of the driveway entrance into the site;
- The child care centre was accessed from the King Street frontage by a suspended concrete deck supported on concrete columns. Below the south end of the suspended deck a sand batter (approximately 2.5m maximum height) sloped down to the north at a maximum of approximately 40°; traces of a dilapidated steel soldier pile wall with timber infill panels was evident;
- A raised landscaped area extended north along the west site boundary from the north end of the childcare centre. The landscaped area was supported by a concrete retaining wall (maximum height approximately 1.5m). A portion of the south side of the landscaped area and the entire length of the west side of the landscaped area sloped down to the south and west at a maximum of approximately 30°. The remainder of the north-west portion of the site comprised a grass surfaced landscaped area which sloped down to the east and south at a maximum of approximately 20°;
- The south end of the west site boundary was lined by a concrete block wall (maximum height approximately 3m). The central portion of the west site boundary was lined by a concrete block fence (maximum height approximately 1.5m). The face of the fence contained a number of rusted 24mm diameter bolt heads and plates and occasional cracks up to approximately 4mm width were recorded. The north end of the west site boundary was lined by a concrete block wall (maximum height a approximately 2.5m) which supported the subject site. Occasional hairline (upto 2mm wide) cracks were observed in the wall;
- Neighbouring four and five level brick residential unit buildings were set-back approximately 5m to 10m from the south and central portions of the west site boundary. Sections of render were missing from a unit building wall adjacent to the central portion of the western site boundary; and
- A brick, saw-tooth roof factory building was set-back approximately 5m from the north portion of the west site boundary. Neighbouring grass surfaced and paved yard areas lined the west site boundary.

Based on a cursory inspection from within the site, the existing buildings, paved surfaces and structures were generally in good condition except where otherwise detailed above.

5 Regional Geology

The geological map of Sydney (Map 9130, 1:100,000 Department of Mineral Resources – 1983) indicates the site to be underlain by dune sand deposits of Quaternary age. These sands form part of the Botany Basin deposits, which extend to the south and west of the site. It is known that the depth of sand and other alluvial deposits increases to the south, with bedrock generally occurring at depths in excess of 20m in the Mascot area.

6 Hydrogeology

Department of Water and Energy (DWE) records were researched for the study and indicated that 15 registered groundwater bores lie within approximately 500m of the site. The groundwater works summaries and a map indicating the location of the bores in relation to the site are attached in Appendix A. The details are summarised in the following table:

Ref No	Approximate Distance from Site (m)	Approximate Direction from Site	Depth (m)	Standing Water Level (m)	Salinity (mg/L^)	Registered Purpose
GW107805	200	North-east	Na	Na	Na	Domestic
GW072219	200	North-west	8	Na	Na	Domestic
GW108166	200	North-west	8	Na	Na	Domestic
GW106087	200	North-west	7.63	4.58	Na	Domestic
GW106078	220	North-west	7.32	4.27	Na	Domestic
GW105625	250	West	14.00	4.60	172	Recreation
GW106671	300	West	9.5	Na	Na	Domestic
GW108207	300	West	9.5	5.0	Na	Domestic
GW110099	375	West	8.0	2.0	Na	Domestic
GW105730	400	West	8.0	Na	Na	Domestic
GW101699	400	West	7.0	Na	Na	Domestic
GW040224	500	South-west	7.0	Na	Na	Recreation
GW103124	550	West	Na	Na	Na	Recreation
GW104890	600	West	25.0	0.9	104	Recreation
GW110542	500	North-east	27.8	12.20	134	Domestic
Note: ^ Groundwater Salinity values have been assumed to be in mg/L. Na – Not Applicable						

The stratigraphy of the site is expected to consist of relatively high permeability alluvial sandy soil overlying deep bedrock. Based on these conditions and the results of the groundwater bore search, groundwater may be considered to be a potential resource in the area.

Three of the registered monitoring wells included groundwater salinity data which ranged from 104mg/L to 172mg/L. We can convert this data into electrical conductivity (EC) values by dividing the data with the conversion factor of 0.52 (recommended value at 25°, ANZECC 2000[1]). The EC values range from 200μS/cm to 331μS/cm which are within the Freshwater Rivers category (Suttar 1990[2])

7 Salinity Hazard Map

The *Salinity Potential in Western Sydney Map* prepared by DLWC (now DECCW) in 2002 provides local government and state agencies with information to develop a salinity management response. The map indicates the distribution and potential severity of salinity at a 1:100,000 scale based upon the current understanding of the factors that may lead to the development of saline conditions.

Based upon interpretation from the geological formations and soil groups presented on the map, the site is not located in a region of salinity potential.

8 Subsurface Conditions Encountered by J&K

The subsurface conditions that would be expected to be encountered at the site are based on the results of boreholes JK6 and JK11 to JK15 (drilled by J&K in 1991) and boreholes ML1, ML3 to ML5, ML7 to ML10 and ML12 (drilled by J&K in 2002). Reference should be made to the borehole logs presented in Appendix A of the J&K report dated 13 July 2010 for detailed descriptions of the subsurface conditions at each borehole location.

The J&K boreholes were drilled as part of geotechnical investigations previously undertaken at the site in order to make an assessment of the subsurface conditions encountered at the site. These boreholes are different from those outlined in Section 6 above. The groundwater bores (outlined in Section 6) are located outside the site and provide information on regional groundwater conditions.

The boreholes disclosed a generalised subsurface profile that comprised a limited thickness of fill, over natural sands, then sandstone bedrock at depths ranging between 0.6m and 6.5m. A summary of the subsurface conditions is outlined below.

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[1] ANZECC (2000). *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*.

[2] Sutter, S. (1990). *Ribbons of Blue Handbook*. Scitech, Victoria.

Paved Surfaces

Concrete and asphalt paved surfaces were encountered in boreholes JK13, JK14, ML4, ML8 and ML10 and ranged between approximately 50mm and 200mm in thickness.

Fill

Sandy or clayey fill with varying gravel content was encountered from surface level or beneath paved surfaces in boreholes JK6, JK11 to JK15, ML1 and ML9. In borehole JK14 a crushed sandstone fill (450mm thick) layer (interpreted to represent pavement foundation material) was encountered beneath the paved surface.

Relic (Old) Topsoil

A sandy layer with roots (interpreted to be a relic topsoil layer) was encountered at the base of the fill in boreholes JK6, JK13 and JK14 and ranged in thickness from "thin" (JK13, no thickness recorded) to 0.3m (JK14).

Natural Soils

The natural soils generally comprised sands and were encountered from surface level or beneath the fill or old topsoil in all boreholes except JK11.

In boreholes JK6 and ML12, residual clayey sand (1.1m thick) and sandy clay of medium plasticity and very stiff strength/medium dense clayey sand (0.8m thick), were encountered at 5.0m and 4.7m depth. This extended down to the bedrock surface.

Weathered Sandstone Bedrock

Sandstone bedrock was encountered in boreholes JK6, JK11, JK15, ML4, ML5, ML7 to ML10 and ML12 at depths ranging between 0.6m (JK11) to 6.5m (ML7). Where surface RLs have been recorded on the borehole logs, we note that close to the eastern site boundary the bedrock surface ranges between approximately RL38.16 (JK6) and RL39.5 (ML9). To the west, at approximate locations close to the eastern side of The 'Burger Centre', the bedrock surface had stepped down to approximately RL36.8m (ML4), RL36.9m (ML7) and RL37.7m (ML10). No boreholes penetrated weathered sandstone bedrock over the central or western portions of the subject site.

Groundwater

Groundwater was encountered during auger drilling in boreholes JK15, ML3, ML4 and ML10 at depths of 2.7m, 1.2m, 5.3m and 5.1m, respectively. On completion of auger drilling, standing water levels were recorded in boreholes JK6 and JK12 at depths of 5.1m and 2.8m, respectively. This was equivalent to approximately

RL39.1m and RL36.2m. In borehole ML3, a collapse depth was recorded at 1.2m on completion of auger drilling. In sandy soils, borehole collapse often occurs at, or close to, the standing groundwater levels.

In the cored boreholes, standing water levels were recorded within a short time of completion core drilling in ML4, ML5, ML7, ML8, ML9, ML10 and ML12, at depths of 5m, 6.2m, 1.4m, 8.0m, 2.0m, 4.8m and 2.7m, respectively. These depths are equivalent to RL37.5m, RL35.6m, RL37.2m, RL35.9m, RL41.8m, RL38.0m and RL41.2m. However, we note that water flush is used as part of the core drilling process thereby preventing a meaningful assessment of groundwater levels in the cored boreholes as groundwater levels would not have stabilised over the short monitoring period. Full water flush returns were noted in all the cored boreholes indicating a relatively low permeability rock mass.

We note that no long term groundwater monitoring has been undertaken. However, based on advice provided in the previous J&K hydrogeological report dated September 2002 and monitoring of groundwater levels in 2003 during construction of the existing buildings at the site, plotting of all available groundwater data at the site indicated a hydraulic gradient down to the west and north-west. However, over the subject site, the monitoring of groundwater levels indicated a hydraulic gradient down to the west-north-west.

9 Summary of Laboratory Test Results Undertaken by J&K

Laboratory tests previously undertaken by J&K on selected soil samples indicated the following:

- The pH results of the natural sand samples ranged from 7.2 to 7.4; and
- The sulphate results of the natural sand samples were $<$50mg/kg.

10 Conclusion

The preliminary study was a limited scope of works undertaken to identify the risks associated with salinity on the proposed development.

Based on the provided information we understand that the proposed alterations and additions will include the construction of three new four to six level buildings over the southern section of the site (Blocks D, E and F) and some re-configuration of the existing Block C. The new buildings will be constructed over one level of basement with a proposed finished floor reduced level (RL) at RL41.3m (Blocks D and E) and RL38.3m (Block F), requiring excavations to a maximum depth of about 3.5m. In addition, a new tunnel will connect the southern end of Block A to the northern end of Block C. The tunnel will have a finished floor level at RL37.7m and excavations to a

maximum depth of about 4m will be required. Blocks D and E will connect to the existing 'Burger Centre' which occupies the central section of the southern portion of the site.

A review of the available salinity risk maps and J&K geotechnical investigation reports has indicated the following:

- The regional geology map indicated that the site is underlain by dune sand deposits of Quaternary age. Saline soils are usually associated with Shale bedrock;
- The groundwater bore records search indicated that 16 registered bores lie within approximately 500m of the site;
- The stratigraphy of the site is expected to consist of relatively high permeability alluvial sandy soil overlying deep bedrock. Based on these conditions and the results of the groundwater bore search, groundwater may be considered to be a potential resource in the area. High densities of groundwater bores are not usually encountered in areas with salinity issues due to the limitations of re-using saline water;
- The groundwater EC values presented on the bore licenses ranged from 200μS/cm to 331μS/cm which are within the Freshwater Rivers category;
- The site is outside the area mapped on the *Salinity Potential in Western Sydney Map*; and
- The laboratory testing undertaken by J&K on selected natural soil samples indicated that the pH ranged from 7.2 to 7.4 and sulphate concentrations were below 50mg/kg.

Based on the results of the desktop study, we are of the opinion that the risk associated with salinity on the proposed development is relatively low.

11 General Information

The findings presented in this letter are based on site conditions that existed at the time of the J&K assessment. The conclusions are based on the investigation of conditions at specific locations, chosen to be as representative as possible under the given circumstances.

Subsurface soil and rock conditions encountered between investigation locations may be found to be different from those expected. Groundwater conditions may also vary, especially after climatic changes.

skill and diligence normally exercised by consulting engineers in similar circumstances and locality. No other warranty expressed or implied is made or intended. Subject to payment of all fees due for the investigation, the client alone shall have a licence to use this letter.

If you have any questions concerning the contents of this letter please do not hesitate to contact us.

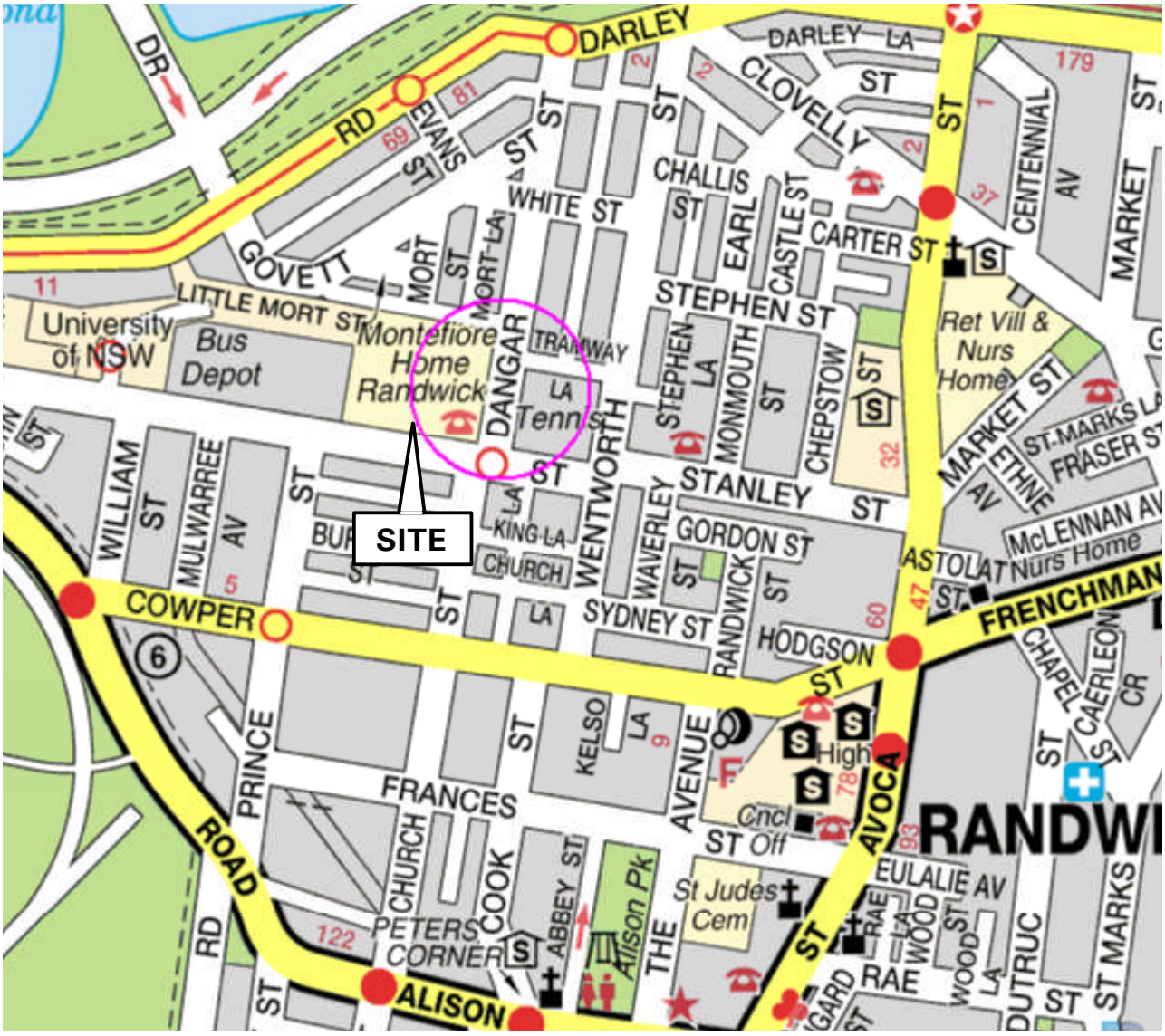
Yours faithfully
ENVIRONMENTAL INVESTIGATION SERVICES

Vittal Boggaram
Senior Environmental Scientist

Adrian Kingswell
Senior Associate

Attachments:

- Figure 1: Site Location Plan
- Figure 2: Site Layout Plan
- Appendix A: Groundwater Bore Records



Ref: UBD Street Directory 2008 (44th Ed), Copyright Universal Publisher Pty Ltd.

SITE LOCATION PLAN

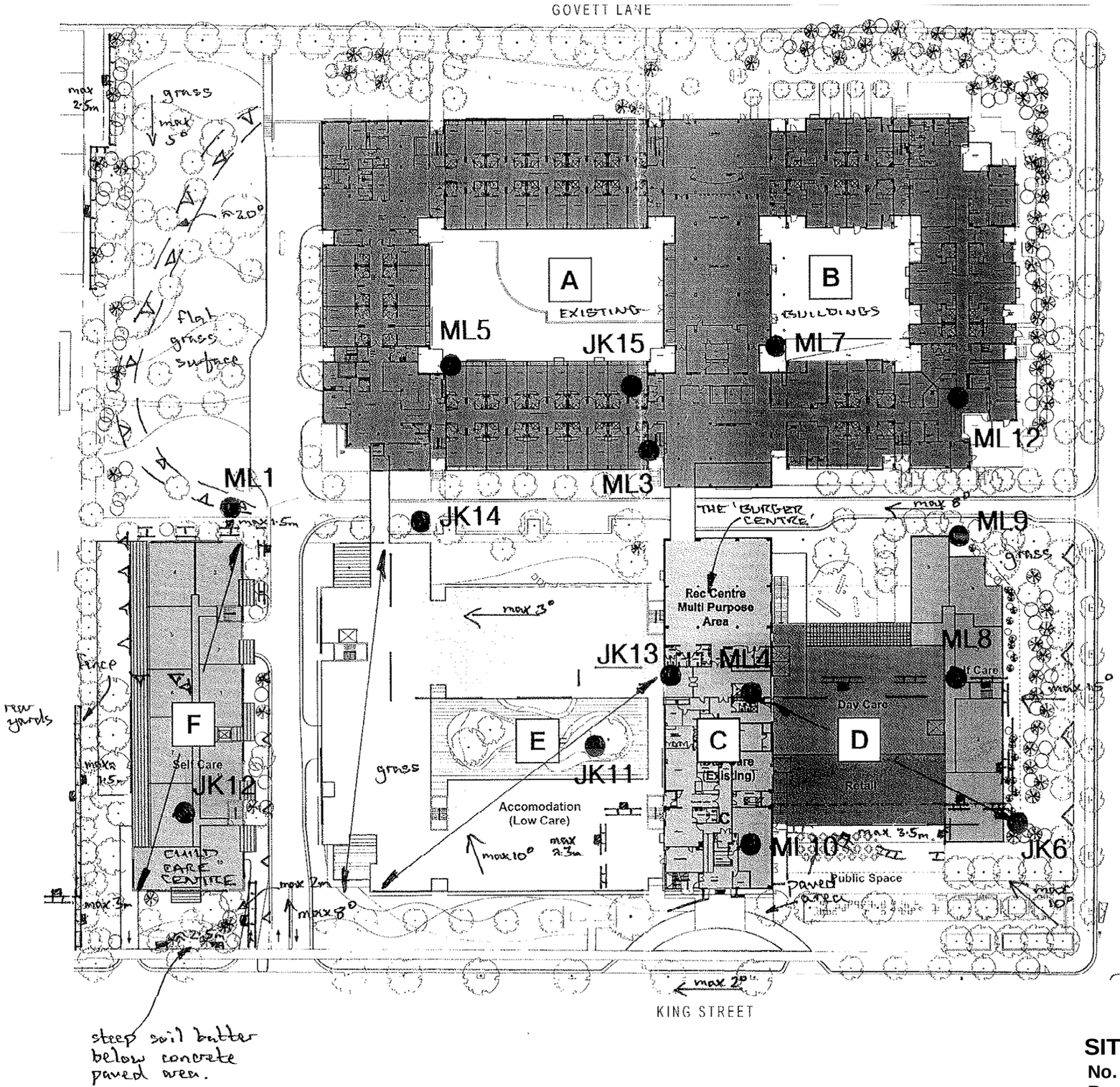
No. 100-102 King & 30-36 Dangar Streets Randwick, NSW

NOT TO SCALE

NOTE: Reference should be made to the text for a full understanding of this plan

EIS Ref No: E17167KBlet
Figure No: 1

ENVIRONMENTAL INVESTIGATION SERVICES



N

Approximate Scale (m)

0 37.5

NOTE: This plan has been prepared from site measurements and should not be construed as a site survey plan. Boundary and facility locations are considered to be approximate. Reference should be made to the text for a full understanding of this plan.

SITE LAYOUT PLAN

No. 100-102 King & 30-36 Dangar Streets
Randwick, NSW

EIS Ref No: E17167KBlet
Figure No: 2

ENVIRONMENTAL INVESTIGATION SERVICES

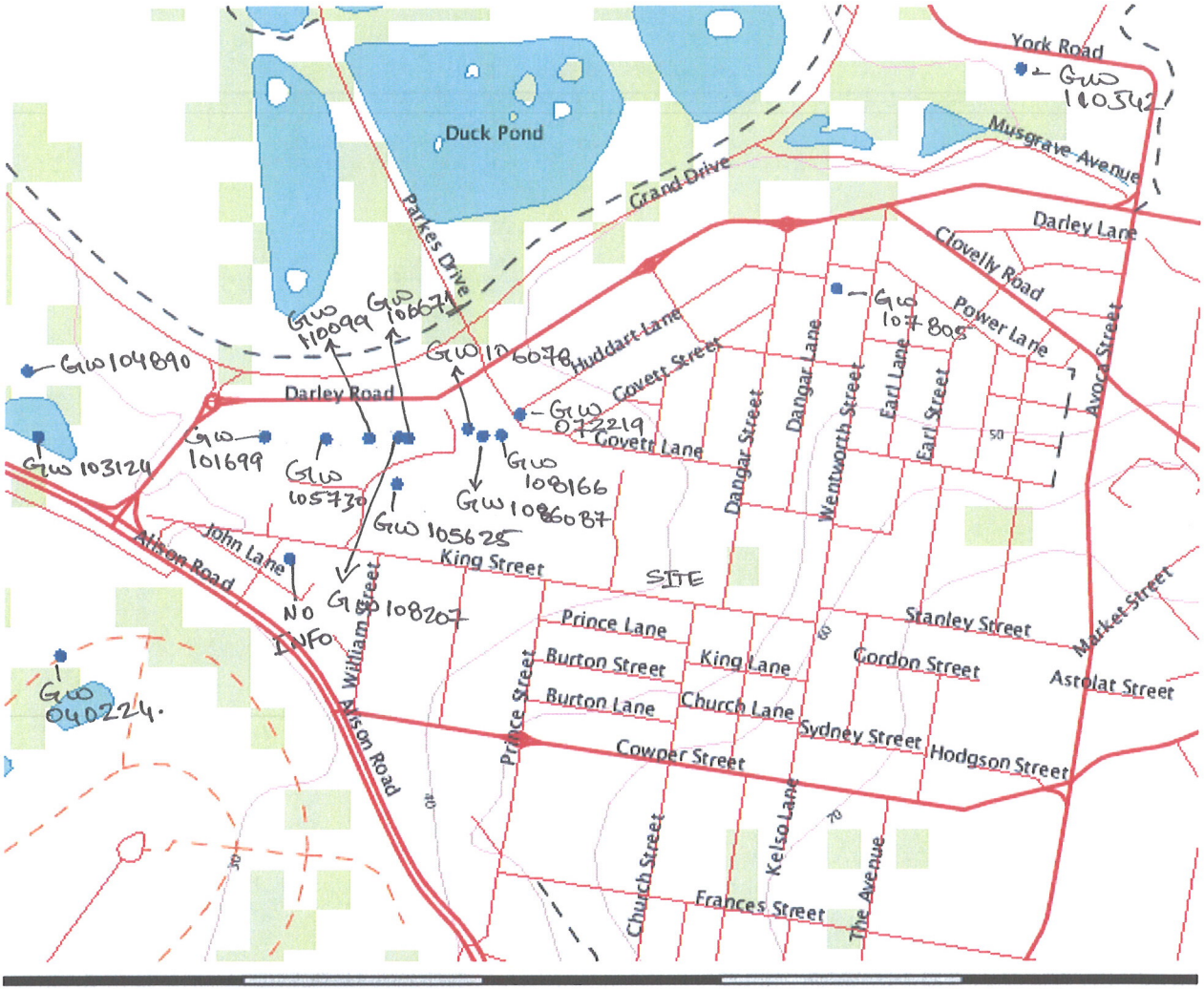
APPENDIX A

(GROUNDWATER BORE RECORDS)

Map from the NSW Natural Resource Atlas

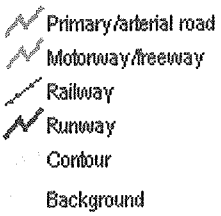
Map created with NSW Natural Resource Atlas - http://nratlas.nsw.gov.au

Friday, June 04, 2010



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 Friday, June 4, 2010

Print Report

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

Work Requested -- GW107805

Works Details (top)

GROUNDWATER NUMBER	GW107805
LIC-NUM	10BL165702
AUTHORISED-PURPOSES	DOMESTIC
INTENDED-PURPOSES	DOMESTIC
WORK-TYPE	Bore
WORK-STATUS	Abandoned - Backfilled
CONSTRUCTION-METHOD	Auger
OWNER-TYPE	Private
COMMENCE-DATE	
COMPLETION-DATE	2006-02-27
FINAL-DEPTH (metres)	
DRILLED-DEPTH (metres)	
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	VANERIS
GWMA	-
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	9130-3S
GRID-ZONE	56/1
SCALE	1:25,000
ELEVATION	
ELEVATION-SOURCE	
NORTHING	6247176.00
EASTING	337348.00
LATITUDE	33 54' 12"
LONGITUDE	151 14' 27"
GS-MAP	

AMG-ZONE	56
COORD-SOURCE	GIS - Geographic Information System
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	C//173194

Licensed (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	C 173194

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 Friday, June 4, 2010

Print Report

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

Work Requested -- GW072219

Works Details (top)

GROUNDWATER NUMBER	GW072219
LIC-NUM	
AUTHORISED-PURPOSES	
INTENDED-PURPOSES	DOMESTIC
WORK-TYPE	Spear
WORK-STATUS	(Unknown)
CONSTRUCTION-METHOD	Cable Tool
OWNER-TYPE	Private
COMMENCE-DATE	
COMPLETION-DATE	1995-02-28
FINAL-DEPTH (metres)	8.00
DRILLED-DEPTH (metres)	8.00
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	
GWMA	
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	
GRID-ZONE	
SCALE	
ELEVATION	
ELEVATION-SOURCE	
NORTHING	6246982.00
EASTING	336957.00
LATITUDE	33 54' 18"
LONGITUDE	151 14' 12"
GS-MAP	

AMG-ZONE	56
COORD-SOURCE	GD.,ACC.GIS
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	L1 DP4589

Licensed (top)

no details

Water Bearing Zones (top)

no details

Drillers Log (top)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	8.00	8.00			

Groundwater Works Summary

For information on the meaning of fields please see Glossary
Document Generated on Friday, June 4, 2010

Print Report

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

Work Requested -- GW108166

Works Details (top)

GROUNDWATER NUMBER	GW108166
LIC-NUM	10BL600428
AUTHORISED-PURPOSES	DOMESTIC
INTENDED-PURPOSES	DOMESTIC
WORK-TYPE	Spear
WORK-STATUS	
CONSTRUCTION-METHOD	
OWNER-TYPE	
COMMENCE-DATE	
COMPLETION-DATE	2007-05-29
FINAL-DEPTH (metres)	8.00
DRILLED-DEPTH (metres)	
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	PEREIRA
GWMA	-
GW-ZONE	-
STANDING-WATER-LEVEL	
SALINITY	
YIELD	10.00

Site Details (top)

REGION	10 - SYDNEY SOUTH COAST
RIVER-BASIN	
AREA-DISTRICT	
CMA-MAP	
GRID-ZONE	
SCALE	
ELEVATION	
ELEVATION-SOURCE	
NORTHING	6246951.00
EASTING	336935.00
LATITUDE	33 54' 19"
LONGITUDE	151 14' 11"
GS-MAP	

AMG-ZONE	56
COORD-SOURCE	
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	2 789674

Licensed (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	2 789674

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 Friday, June 4, 2010

Print Report

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

Work Requested -- GW106087

Works Details (top)

GROUNDWATER NUMBER	GW106087
LIC-NUM	10BL162976
AUTHORISED-PURPOSES	DOMESTIC
INTENDED-PURPOSES	DOMESTIC
WORK-TYPE	Spear
WORK-STATUS	Supply Obtained
CONSTRUCTION-METHOD	Jetted - Water
OWNER-TYPE	Private
COMMENCE-DATE	
COMPLETION-DATE	2004-04-14
FINAL-DEPTH (metres)	7.63
DRILLED-DEPTH (metres)	7.63
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	WATKINS
GWMA	-
GW-ZONE	-
STANDING-WATER-LEVEL	4.58
SALINITY	
YIELD	1.00

Site Details (top)

REGION	10 - SYDNEY SOUTH COAST
RIVER-BASIN	213 - SYDNEY COAST - GEORGES RIVER
AREA-DISTRICT	
CMA-MAP	9130-3S
GRID-ZONE	56/1
SCALE	1:25,000
ELEVATION	
ELEVATION-SOURCE	(Unknown)
NORTHING	6246950.00
EASTING	336912.00
LATITUDE	33 54' 19"
LONGITUDE	151 14' 10"
GS-MAP	

AMG-ZONE	56
COORD-SOURCE	GIS - Geographic Information System
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	22/26/4589

Licensed (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	22 4589

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	7.63	100			Jetted - Water
1	1	Casing	Stainless Steel	0.00	6.71	42	38		Glued

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
4.58	7.63	3.05		4.58		1.00			

Drillers Log (top)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	7.63	7.63	sand, unconsolidated		

Groundwater Works Summary

For information on the meaning of fields please see Glossary
Document Generated on Friday, June 4, 2010

Print Report

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

Work Requested -- GW106078

Works Details (top)

GROUNDWATER NUMBER	GW106078
LIC-NUM	10BL162975
AUTHORISED-PURPOSES	DOMESTIC
INTENDED-PURPOSES	DOMESTIC
WORK-TYPE	Spear
WORK-STATUS	Supply Obtained
CONSTRUCTION-METHOD	Jetted - Water
OWNER-TYPE	Private
COMMENCE-DATE	
COMPLETION-DATE	2004-04-14
FINAL-DEPTH (metres)	7.32
DRILLED-DEPTH (metres)	7.32
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	RAYMOND
GWMA	-
GW-ZONE	-
STANDING-WATER-LEVEL	4.27
SALINITY	
YIELD	1.00

Site Details (top)

REGION	10 - SYDNEY SOUTH COAST
RIVER-BASIN	213 - SYDNEY COAST - GEORGES RIVER
AREA-DISTRICT	
CMA-MAP	9130-3S
GRID-ZONE	56/1
SCALE	1:25,000
ELEVATION	
ELEVATION-SOURCE	(Unknown)
NORTHING	6246960.00
EASTING	336894.00
LATITUDE	33 54' 19"
LONGITUDE	151 14' 9"
GS-MAP	

AMG-ZONE	56
COORD-SOURCE	GIS - Geographic Information System
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	21/26/4589

Licensed (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	21 4589

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	7.32	100			Jetted - Water
1	1	Casing	Stainless Steel	0.00	6.41	42	38		Glued

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
4.27	7.32	3.05		4.27		1.00			

Drillers Log (top)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	7.32	7.32	sand, unconsolidated		

Groundwater Works Summary

For information on the meaning of fields please see Glossary
Document Generated on Friday, June 4, 2010

Print Report

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

Work Requested -- GW105625

Works Details (top)

GROUNDWATER NUMBER	GW105625
LIC-NUM	10BL164953
AUTHORISED-PURPOSES	RECREATION (GROUNDWATER)
INTENDED-PURPOSES	RECREATION (GROUNDWATER)
WORK-TYPE	Bore
WORK-STATUS	
CONSTRUCTION-METHOD	Rotary Air
OWNER-TYPE	
COMMENCE-DATE	
COMPLETION-DATE	2004-12-06
FINAL-DEPTH (metres)	13.80
DRILLED-DEPTH (metres)	14.00
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	THE UNIVERSITY OF NSW
GWMA	-
GW-ZONE	-
STANDING-WATER-LEVEL	4.60
SALINITY	172.00
YIELD	0.90

Site Details (top)

REGION	10 - SYDNEY SOUTH COAST
RIVER-BASIN	213 - SYDNEY COAST - GEORGES RIVER
AREA-DISTRICT	
CMA-MAP	9130-3S
GRID-ZONE	56/1
SCALE	1:25,000
ELEVATION	
ELEVATION-SOURCE	(Unknown)
NORTHING	6246876.00
EASTING	336807.00
LATITUDE	33 54' 21"
LONGITUDE	151 14' 6"
GS-MAP	

AMG-ZONE	56
COORD-SOURCE	
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	4 212352

Licensed (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	4 212352

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	14.00	300			Rotary Air/Mud
1	1	Casing	PVC Class 9	-0.30	10.20	140			Screwed and Glued; Other
1	1	Opening	Screen - Wire Wound	10.20	13.80	126			Johnson; Stainless Steel 304; A: .7mm; Screwed and Glued
1		Annulus	Waterworn/Rounded	0.00	0.00				Graded; GS: 1-14mm; Q: 1000m³

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
8.00	13.80	5.80		4.60		0.90	13.60	0.50	172.00

Drillers Log (top)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT

0.00	1.00	1.00	SILTY SAND
1.00	6.50	5.50	L/BROWN SAND
6.50	8.00	1.50	SAND,SMALL CLAY BANDS
8.00	10.00	2.00	W. L/BROWN SAND
10.00	13.50	3.50	W. CREAM SAND
13.50	13.80	0.30	DIRTY YELLOW SAND
13.80	14.00	0.20	RED CLAY

Groundwater Works Summary

For information on the meaning of fields please see Glossary
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Print Report

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

Work Requested -- GW106671

Works Details (top)

GROUNDWATER NUMBER	GW106671
LIC-NUM	10BL162426
AUTHORISED-PURPOSES	DOMESTIC
INTENDED-PURPOSES	DOMESTIC
WORK-TYPE	Spear
WORK-STATUS	Supply Obtained
CONSTRUCTION-METHOD	Auger
OWNER-TYPE	Private
COMMENCE-DATE	
COMPLETION-DATE	2004-10-15
FINAL-DEPTH (metres)	9.50
DRILLED-DEPTH (metres)	9.50
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	ANDERSON
GWMA	-
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	9130-3S
GRID-ZONE	56/1
SCALE	1:25,000
ELEVATION	
ELEVATION-SOURCE	
NORTHING	6246945.00
EASTING	336820.00
LATITUDE	33 54' 19"
LONGITUDE	151 14' 6"
GS-MAP	

AMG-ZONE	56
COORD-SOURCE	GIS - Geographic Information System
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	16/26/4589

Licensed (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	16 4589

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	9.50	100			Auger
1	1	Casing	(Unknown)	0.00	9.50				

Water Bearing Zones (top)

no details

Drillers Log (top)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	9.50	9.50		sand	

Groundwater Works Summary

For information on the meaning of fields please see Glossary
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Print Report

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

Work Requested -- GW108207

Works Details (top)

GROUNDWATER NUMBER	GW108207
LIC-NUM	10BL162227
AUTHORISED-PURPOSES	DOMESTIC
INTENDED-PURPOSES	DOMESTIC
WORK-TYPE	Spear
WORK-STATUS	
CONSTRUCTION-METHOD	
OWNER-TYPE	
COMMENCE-DATE	
COMPLETION-DATE	2004-01-01
FINAL-DEPTH (metres)	9.50
DRILLED-DEPTH (metres)	
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	SAVAGE
GWMA	-
GW-ZONE	-
STANDING-WATER-LEVEL	5.00
SALINITY	
YIELD	1.00

Site Details (top)

REGION	10 - SYDNEY SOUTH COAST
RIVER-BASIN	
AREA-DISTRICT	
CMA-MAP	
GRID-ZONE	
SCALE	
ELEVATION	
ELEVATION-SOURCE	
NORTHING	6246946.00
EASTING	336808.00
LATITUDE	33 54' 19"
LONGITUDE	151 14' 6"
GS-MAP	

AMG-ZONE	56
COORD-SOURCE	
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	15 4589

Licensed (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	15 4589

Water Bearing Zones (top)

no details

Drillers Log (top)

no details

Groundwater Works Summary

For information on the meaning of fields please see Glossary
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Print Report

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

Work Requested -- GW110099

Works Details (top)

GROUNDWATER NUMBER	GW110099
LIC-NUM	10BL162241
AUTHORISED-PURPOSES	DOMESTIC
INTENDED-PURPOSES	DOMESTIC
WORK-TYPE	Bore
WORK-STATUS	
CONSTRUCTION-METHOD	
OWNER-TYPE	Private
COMMENCE-DATE	
COMPLETION-DATE	2003-01-01
FINAL-DEPTH (metres)	8.00
DRILLED-DEPTH (metres)	
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	KIERNAN
GWMA	-
GW-ZONE	-
STANDING-WATER-LEVEL	2.00
SALINITY	
YIELD	2.50

Site Details (top)

REGION	10 - SYDNEY SOUTH COAST
RIVER-BASIN	
AREA-DISTRICT	
CMA-MAP	
GRID-ZONE	
SCALE	
ELEVATION	
ELEVATION-SOURCE	
NORTHING	6246944.00
EASTING	336771.00
LATITUDE	33 54' 19"
LONGITUDE	151 14' 4"
GS-MAP	

AMG-ZONE	56
COORD-SOURCE	
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	12/26/4589

Licensed (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	12 4589

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 Friday, June 4, 2010

Print Report

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

Work Requested -- GW105730

Works Details (top)

GROUNDWATER NUMBER	GW105730
LIC-NUM	10BL162270
AUTHORISED-PURPOSES	DOMESTIC
INTENDED-PURPOSES	DOMESTIC
WORK-TYPE	Bore
WORK-STATUS	(Unknown)
CONSTRUCTION-METHOD	Auger
OWNER-TYPE	Private
COMMENCE-DATE	
COMPLETION-DATE	2003-11-15
FINAL-DEPTH (metres)	8.00
DRILLED-DEPTH (metres)	8.00
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	DEBDEN - WILKINS
GWMA	-
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	9130-3S
GRID-ZONE	56/1
SCALE	1:25,000
ELEVATION	
ELEVATION-SOURCE	(Unknown)
NORTHING	6246942.00
EASTING	336717.00
LATITUDE	33 54' 19"
LONGITUDE	151 14' 2"
GS-MAP	

AMG-ZONE	56
COORD-SOURCE	GIS - Geographic Information System
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	8/26/4589

Licensed (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	8 4589

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	8.00	100000			Other
1		Hole	Hole	0.00	8.00	100			Auger
1	1	Casing	Lining	0.00	8.00				

Water Bearing Zones (top)

no details

Drillers Log (top)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	8.00	8.00		sand	

Groundwater Works Summary

For information on the meaning of fields please see Glossary
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Print Report

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

Work Requested -- GW101699

Works Details (top)

GROUNDWATER NUMBER	GW101699
LIC-NUM	10BL158646
AUTHORISED-PURPOSES	DOMESTIC
INTENDED-PURPOSES	DOMESTIC
WORK-TYPE	Bore
WORK-STATUS	(Unknown)
CONSTRUCTION-METHOD	Hand Drilled
OWNER-TYPE	
COMMENCE-DATE	
COMPLETION-DATE	1998-06-03
FINAL-DEPTH (metres)	7.00
DRILLED-DEPTH (metres)	7.00
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	N/A
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	6246944.00
EASTING	336640.00
LATITUDE	33 54' 19"
LONGITUDE	151 13' 59"
GS-MAP	

AMG-ZONE	56
COORD-SOURCE	
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	3//592365

Licensed (top)

COUNTY	CUMBERLAND
PARISH	BOTANY
PORTION-LOT-DP	LOT3 DP502365

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	7.00	90			Hand Drilled

Water Bearing Zones (top)

no details

Drillers Log (top)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	7.00	7.00		Sand	

Groundwater Works Summary

For information on the meaning of fields please see Glossary
Document Generated on Friday, June 4, 2010

Print Report

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

Work Requested -- GW040224

Works Details (top)

GROUNDWATER NUMBER	GW040224
LIC-NUM	
AUTHORISED-PURPOSES	
INTENDED-PURPOSES	RECREATION (GROUNDWATER)
WORK-TYPE	Spear
WORK-STATUS	Abandoned Bore
CONSTRUCTION-METHOD	(Unknown)
OWNER-TYPE	Private
COMMENCE-DATE	
COMPLETION-DATE	
FINAL-DEPTH (metres)	7.00
DRILLED-DEPTH (metres)	0.00
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	
GWMA	
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	9130-3S
GRID-ZONE	56/1
SCALE	1:25,000
ELEVATION	
ELEVATION-SOURCE	R.L. at Surface
NORTHING	6246613.00
EASTING	336394.00
LATITUDE	33 54' 30"
LONGITUDE	151 13' 49"
GS-MAP	0055A4

AMG-ZONE	56
COORD-SOURCE	Surveyed
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	1//130234

Licensed (top)

no details

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	7.00	40		

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 Friday, June 4, 2010

Print Report

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

Work Requested -- GW103124

Works Details (top)

GROUNDWATER NUMBER	GW103124
LIC-NUM	10BL156139
AUTHORISED-PURPOSES	RECREATION (GROUNDWATER)
INTENDED-PURPOSES	RECREATION (GROUNDWATER)
WORK-TYPE	Bore
WORK-STATUS	(Unknown)
CONSTRUCTION-METHOD	
OWNER-TYPE	
COMMENCE-DATE	
COMPLETION-DATE	1995-01-01
FINAL-DEPTH (metres)	
DRILLED-DEPTH (metres)	
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	MOORE PARK
GWMA	-
GW-ZONE	-
STANDING-WATER-LEVEL	
SALINITY	
YIELD	40.00

Site Details (top)

REGION	10 - SYDNEY SOUTH COAST
RIVER-BASIN	213 - SYDNEY COAST - GEORGES RIVER
AREA-DISTRICT	
CMA-MAP	9130-3S
GRID-ZONE	56/1
SCALE	1:25,000
ELEVATION	
ELEVATION-SOURCE	
NORTHING	6246940.00
EASTING	336360.00
LATITUDE	33 54' 19"
LONGITUDE	151 13' 48"
GS-MAP	

AMG-ZONE	56
COORD-SOURCE	
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	1723//45644

Licensed (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	1723 45644

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 Friday, June 4, 2010

Print Report

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

Work Requested -- GW104890

Works Details (top)

GROUNDWATER NUMBER	GW104890
LIC-NUM	10BL162062
AUTHORISED-PURPOSES	RECREATION (GROUNDWATER)
INTENDED-PURPOSES	IRRIGATION
WORK-TYPE	Bore
WORK-STATUS	Test Hole
CONSTRUCTION-METHOD	Rotary
OWNER-TYPE	Other Govt
COMMENCE-DATE	
COMPLETION-DATE	2003-06-19
FINAL-DEPTH (metres)	25.00
DRILLED-DEPTH (metres)	25.80
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	CENTENNIAL PONDS
GWMA	-
GW-ZONE	-
STANDING-WATER-LEVEL	0.90
SALINITY	104.00
YIELD	1.00

Site Details (top)

REGION	10 - SYDNEY SOUTH COAST
RIVER-BASIN	213 - SYDNEY COAST - GEORGES RIVER
AREA-DISTRICT	
CMA-MAP	9130-3S
GRID-ZONE	56/1
SCALE	1:25,000
ELEVATION	
ELEVATION-SOURCE	(Unknown)
NORTHING	6247038.00
EASTING	336345.00
LATITUDE	33 54' 16"
LONGITUDE	151 13' 48"
GS-MAP	

AMG-ZONE	56
COORD-SOURCE	
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	1723 45644

Licensed (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	1723 45644

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	25.80	140			Rotary
1	1	Casing	PVC Class 18	0.00	18.00	60			C: 0-.2m; Screwed
1	1	Casing	PVC Class 18	24.00	25.00	60			Screwed; Seated on Bottom
1	1	Opening	Screen	18.00	24.00	60			PVC Class 18; A: .5mm; Screwed
1		Annulus	Crushed Aggregate	0.20	25.00				Graded; GS: 1-2mm; Q: 260m³

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
1.00	25.80	24.80		0.90		1.00	25.00	0.50	104.00

Drillers Log (top)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	10.50	10.50	SAND,BROWN TO GREY		
10.50	13.50	3.00	SAND,L/GREY		
13.50	13.60	0.10	SANDY CLAY		

13.60	17.00	3.40	SAND/L/GREY
17.00	21.00	4.00	SAND L/GREY
21.00	22.00	1.00	SAND/PEAT
22.00	25.80	3.80	L/GREY

Groundwater Works Summary

For information on the meaning of fields please see Glossary
Document Generated on Friday, June 4, 2010

Print Report

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

Work Requested -- GW110542

Works Details (top)

GROUNDWATER NUMBER	GW110542
LIC-NUM	10BL603341
AUTHORISED-PURPOSES	DOMESTIC
INTENDED-PURPOSES	DOMESTIC
WORK-TYPE	Bore
WORK-STATUS	
CONSTRUCTION-METHOD	Auger
OWNER-TYPE	Private
COMMENCE-DATE	
COMPLETION-DATE	2009-10-12
FINAL-DEPTH (metres)	27.80
DRILLED-DEPTH (metres)	28.00
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	MORIAH WAR MEMORIAL COLLEGE
GWMA	-
GW-ZONE	-
STANDING-WATER-LEVEL	12.20
SALINITY	134.00
YIELD	0.60

Site Details (top)

REGION	10 - SYDNEY SOUTH COAST
RIVER-BASIN	
AREA-DISTRICT	
CMA-MAP	
GRID-ZONE	
SCALE	
ELEVATION	
ELEVATION-SOURCE	
NORTHING	6247507.00
EASTING	337570.00
LATITUDE	33 54' 1"
LONGITUDE	151 14' 36"
GS-MAP	

AMG-ZONE	56
COORD-SOURCE	
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	22//879582

Licensed (top)

COUNTY	CUMBERLAND
PARISH	ALEXANDRIA
PORTION-LOT-DP	22 879582

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	5.00	228			Auger
1		Hole	Hole	5.00	28.00	330			Other
1	1	Casing	Steel	-0.45	0.75	168			Suspended in Clamps
1	1	Casing	PVC Class 9	0.30	24.30	140			Screwed and Glued; Driven into small hole
1	1	Casing	Stainless Steel	27.30	27.80	140			Seated on Bottom
1	1	Opening	Screen	24.30	27.30	140			Stainless Steel; A: .7mm; Screwed and Glued
1		Annulus	Concrete	-0.10	0.50	228			
1		Annulus	Concrete	0.00	28.00	330			
1		Annulus	Waterworn/Rounded	1.00	11.00				Graded; GS: 2-10mm
1		Annulus	Waterworn/Rounded	11.00	27.50				Graded; GS: 1-2mm

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	DURATION	SALINITY

					(metres)		
23.00	27.50	4.50		12.20	0.60	0.25	134.00

Drillers Log (top)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	1.00	1.00	SAND AND FILL		
1.00	7.00	6.00	SAND L/BROWN		
7.00	13.00	6.00	SAND L/GREY		
13.00	17.00	4.00	SAND YELLOW		
17.00	20.00	3.00	SAND GREY		
20.00	23.00	3.00	SAND D/GREY		
23.00	27.50	4.50	SAND CREAM		
27.50	28.00	0.50	SAND AND CLAY		