ENVIRONMENTAL INVESTIGATION SERVICES

4 February 2011
Ref: E21873FJadd

TO: EG Funds Management
Level 14, 345 George Street
Sydney NSW 2000

C/O: Urbis
By email: aharvey@urbis.com.au

Attention: Andrew Harvey

ADDENDUM TO PHASE 1 PRELIMINARY ENVIRONMENTAL SITE ASSESSMENT REPORT E21873FJ-RPT
PROPOSED MEDIUM DENSITY RESIDENTIAL DEVELOPMENT
166A EPPING ROAD, 14 AND 16 DAVID AVENUE, NORTH RYDE

This letter forms an addendum to the Environmental Investigation Services (EIS) document titled *"Report to EG Funds Management on Phase 1 Preliminary Environmental Site Assessment for Proposed Medium Density Residential Development at 166a Epping Road 14 And 16 David Avenue, North Ryde, Dated April 2008, Ref: E21873FJ-Rpt".* This addendum should be read in conjunction with the EIS 2008 report.

The site includes three properties at North Ryde; 166a Epping Road (Lot 6/DP 260000), 14 David Avenue (Lot 3/DP 25688) and 16 David Avenue (Lot 4/DP 25688).

EIS understand that the proposed development includes demolition of the existing buildings at the site and construction of a multi-storey residential complex with two basement levels of car parking.

Urbis commissioned EIS, a division of Jeffery & Katauskas Pty Ltd (J&K), to address specific environmental issues associated with the requirements outlined in the document from the NSW Department of Planning, ref: MP 10_0165, File 10/19087, dated 27 January 2011 with attached Director-General's Requirements (DGR) (under Section 75F of the *Environmental and Assessment Act 1973).* The specific environmental issues that EIS have addressed are as follows:

1. **Key Issue No. 13: Groundwater management** - *"The EA is to identify groundwater issues and address any impacts upon groundwater resources and, when potential impacts are identified, provide an indicative scheme for remediation, reduction or management of impacts"*

Postal Address: PO Box 976, North Ryde BC NSW 1670
Tel: 02 9888 5000 • Fax: 9888 5004
EIS is a division of Jeffery and Katauskas Pty Ltd • ABN 17 003 550 801

2. **Appendix B, Plans and Documents, 8: An appropriate level of Contamination Assessment.**
3. **Appendix B, Plans and Documents, 10: Geotechnical/Groundwater Assessment** – *"identifying any groundwater issues and potential degradation to groundwater that may be encountered during excavation and/or piling. The assessment should identify contingency measures to manage any potential impacts".*

The following responses correspond to the above points:

1. EIS consider that the most significant issue regarding groundwater resources at the site is the potential for the proposed development to intercept the groundwater table. The EIS 2008 investigation did not include a groundwater assessment. However during borehole drilling at the site groundwater seepage was observed at depths of 4.0m to 4.8m below existing site levels. Furthermore, site investigations undertaken by EIS/J&K in the North Ryde area indicate groundwater levels vary from approximately 0.8m to 6.6m below ground level. The NSW Department of Water and Energy (DWE) records indicate that several registered groundwater bores lie in close proximity to the site. Two of these wells contained a summary sheet indicating standing water levels at 7.3m and 18m depth (refer to attachment 1). Based on this information, EIS consider there to be a moderate probability that the proposed development will intercept the groundwater table at the site. Dewatering of the basement will most likely be required if groundwater is encountered during the excavation works;
2. EIS consider that the 2008 assessment is an appropriate level of contamination assessment at this stage of the proposed development. The EIS 2008 investigation included a site history assessment and a preliminary soil screening from 30% of the minimum sampling density. Page 24 of the EIS report recommends that, *"As a result of potentially contaminating agricultural activities in the past EIS recommend further sampling and analysis so that the number of sampling locations meets the minimum sampling density recommended by the DECC".* The EIS report did not include a groundwater assessment of the site. An additional assessment of soil and groundwater at the site may be required; and
3. One of the principal issues that could arise during excavation works is that de-watering could lower the water table in the surrounding area. This could have an adverse impact on adjacent buildings. This could be addressed by modelling the impacts of any de-watering and seeking geotechnical advice on how these effects can be mitigated.

EIS consider that the above issues can be addressed at a later stage of the development following acceptance of the concept plan. The above issues can be addressed by undertaking the following:

- Additional soil assessment to meet the recommended soil sampling density.
- A groundwater assessment is undertaken in order to allow for the preparation of a groundwater contingency plan. The assessment should include:

- Installation of groundwater monitoring wells across the area of the proposed basement excavation;
- A screening for potential groundwater contamination; and
- A groundwater model is prepared for the site in order to assess the potential consequences of de-watering the excavation.

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

This letter has been prepared for the particular project described and no responsibility is accepted for the use of any part of this letter in any other context or for any other purpose. Copyright in this letter is the property of EIS. EIS has used a degree of care, 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.

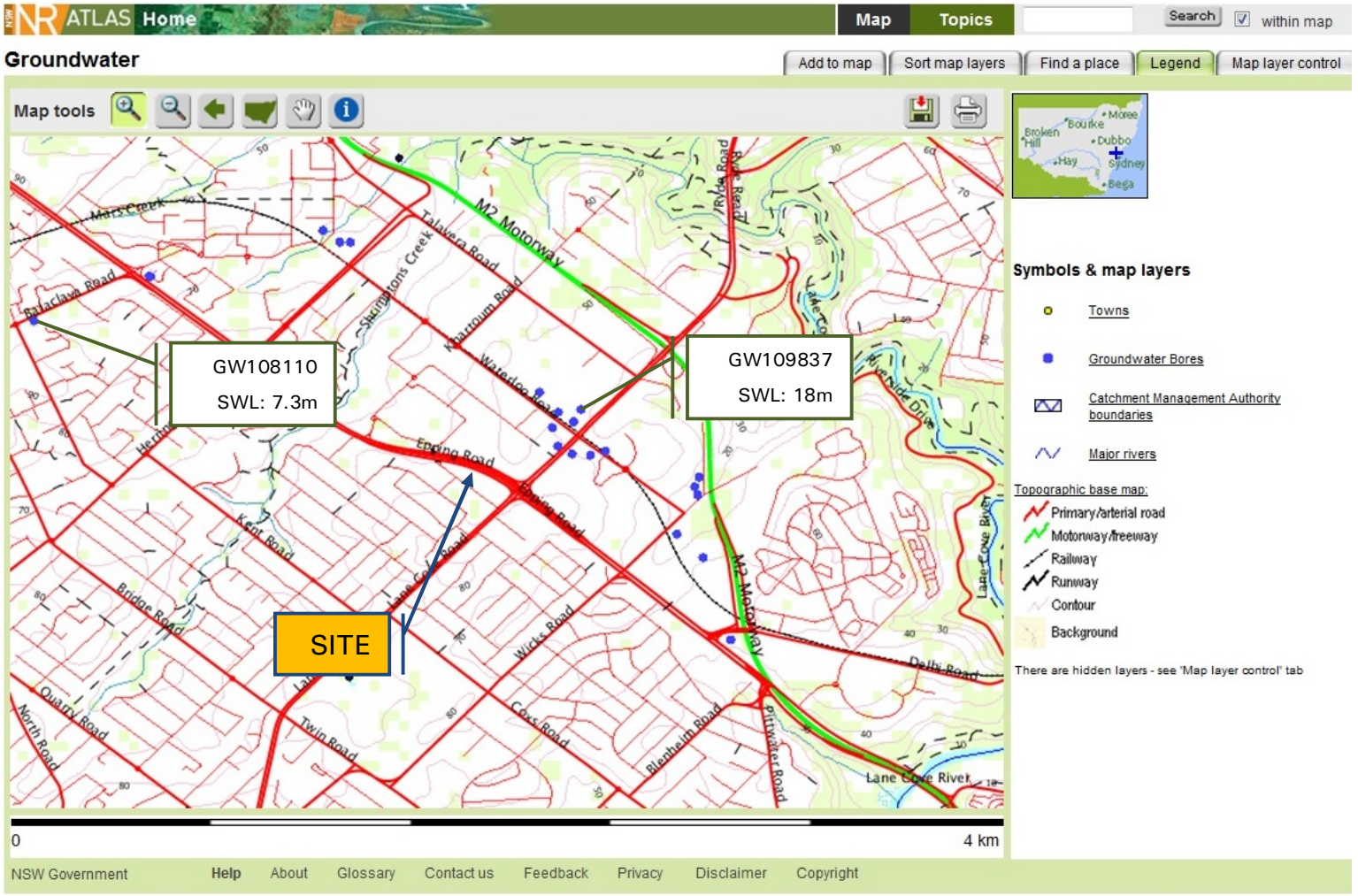
Should you require any further information regarding the above please do not hesitate to contact the undersigned.

Yours faithfully
For and on behalf of
ENVIRONMENTAL INVESTIGATION SERVICES

Cameron Hollands
Environmental Scientist

Adrian Kingswell
Senior Associate

Attachments:
1: The NSW Department of Water and Energy (DWE) records


NR ATLAS Home
Map
Topics
Search
within map
Groundwater
Add to map
Sort map layers
Find a place
Legend
Map layer control
Map tools
GW108110
SWL: 7.3m
GW109837
SWL: 18m
SITE
M2 Motorway
Talavera Road
Epping Road
Lane Cove River
Symbols & map layers
Towns
Groundwater Bores
Catchment Management Authority boundaries
Major rivers
Topographic base map:
Primary/arterial road
Motorway/freeway
Railway
Runway
Contour
Background
There are hidden layers - see 'Map layer control' tab
0
4 km
NSW Government
Help
About
Glossary
Contact us
Feedback
Privacy
Disclaimer
Copyright

Groundwater Works Summary

For information on the meaning of fields please see Glossary
Document Generated on Wednesday, February 2, 2011

Print Report

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

Work Requested -- GW109837

Works Details (top)

GROUNDWATER NUMBER	GW109837
LIC-NUM	10BL161221
AUTHORISED-PURPOSES	MONITORING BORE
INTENDED-PURPOSES	MONITORING BORE
WORK-TYPE	Bore
WORK-STATUS	
CONSTRUCTION-METHOD	
OWNER-TYPE	Private
COMMENCE-DATE	
COMPLETION-DATE	2002-12-21
FINAL-DEPTH (metres)	36.60
DRILLED-DEPTH (metres)	
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	PARRAMATTA RAIL LINK
GWMA	-
GW-ZONE	-
STANDING-WATER-LEVEL	18.00
SALINITY	
YIELD	

Site Details (top)

REGION	10 - SYDNEY SOUTH COAST
RIVER-BASIN	
AREA-DISTRICT	
CMA-MAP	
GRID-ZONE	
SCALE	
ELEVATION	
ELEVATION-SOURCE	
NORTHING	6260229.00
EASTING	326728.00

LATITUDE	33 47' 2"
LONGITUDE	151 7' 43"
GS-MAP	
AMG-ZONE	56
COORD-SOURCE	
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	HUNTERS HILL
PORTION-LOT-DP	7//851788

Licensed (top)

COUNTY	CUMBERLAND
PARISH	HUNTERS HILL
PORTION-LOT-DP	100 875114

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	36.60	203			Rotary Air
1	1	Casing	PVC Class 9	0.00	36.60	150			Glued
1	1	Opening	Screen	17.10	32.10	150			PVC Class 9; A: 1mm; Glued

Water Bearing Zones (top)

no details

Drillers Log (top)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	3.60	3.60	FILL		
3.60	4.80	1.20	CLAY		
4.80	8.40	3.60	SHALE		
8.40	18.00	9.60	FINE SANDSTONE		
18.00	36.60	18.60	COARSE SANDSTONE		

Groundwater Works Summary

For information on the meaning of fields please see Glossary
Document Generated on Wednesday, February 2, 2011

Print Report

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

Work Requested -- GW108110

Works Details (top)

GROUNDWATER NUMBER	GW108110
LIC-NUM	10BL602106
AUTHORISED-PURPOSES	RECREATION (GROUNDWATER)
INTENDED-PURPOSES	RECREATION (GROUNDWATER)
WORK-TYPE	Bore
WORK-STATUS	
CONSTRUCTION-METHOD	Rotary
OWNER-TYPE	
COMMENCE-DATE	
COMPLETION-DATE	2005-02-01
FINAL-DEPTH (metres)	81.00
DRILLED-DEPTH (metres)	81.00
CONTRACTOR-NAME	
DRILLER-NAME	
PROPERTY	CURZON HALL
GWMA	-
GW-ZONE	-
STANDING-WATER-LEVEL	7.30
SALINITY	2500.00
YIELD	2.50

Site Details (top)

REGION	10 - SYDNEY SOUTH COAST
RIVER-BASIN	
AREA-DISTRICT	
CMA-MAP	
GRID-ZONE	
SCALE	
ELEVATION	
ELEVATION-SOURCE	
NORTHING	6260634.00
EASTING	324418.00

LATITUDE	33 46' 48"
LONGITUDE	151 6' 13"
GS-MAP	
AMG-ZONE	56
COORD-SOURCE	
REMARK	

Form-A (top)

COUNTY	CUMBERLAND
PARISH	HUNTERS HILL
PORTION-LOT-DP	10 1100767

Licensed (top)

COUNTY	CUMBERLAND
PARISH	HUNTERS HILL
PORTION-LOT-DP	10 1100767

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	81.00	200			Down Hole Hammer
1	1	Casing	PVC Class 9	-0.30	81.00				Seated on Bottom
1	1	Opening	Slots - Vertical	57.00	75.00	10			PVC Class 18; SL: 18mm; A: 3mm
1		Annulus	Waterworn/Rounded	0.00	81.00				Graded; GS: 5-10mm; Q: 1m³

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
0.00	9.00	9.00		7.30		0.50	12.00	2.00	
69.00	72.00	3.00		7.30		2.50	75.00	2.00	2500.00

Drillers Log (top)

FROM	TO	THICKNESS	DESC	GEO-MATERIAL	COMMENT
0.00	15.00	15.00	SHALE WEATHERED		
15.00	81.00	66.00	SANDSTONE GREY		