

28 February 2024 E25203.G11.01

William Allen Palmdev Pty Ltd Level 1, 600 Darling Street **ROZELLE NSW 2039** 

## Groundwater Monitoring Report No. 1 1112-1116 Barrenjoey Road, Palm Beach

El Australia (El) has been engaged to prepare this factual letter report to provide continual groundwater levels at the above site. The monitoring period is from Tuesday 24 October 2023 to Thursday 22 February 2024.

Groundwater levels were collected remotely during the monitoring period using data loggers installed within monitoring wells BH201M, BH202M, BH203M and BH204M.

The data logger / monitoring well details and the groundwater levels observed during the monitoring period are summarised in Table 1 & 2 below.

Monitoring Well ID	Top of Well RL (mAHD)	Existing Ground RL (mAHD)	Well Stickup (m)	Well Depth Below Ground (m) <sup>1</sup>	Sensor RL (mAHD)
BH201M	2.12	1.24	0.88	4.39	-3.00
BH202M	4.04	2.40	1.64	5.81	-3.07
BH203M	3.58	2.50	1.08	4.74	-2.19
BH204M	13.82	12.92	0.90	15.07	-1.84

Note 1: The level of the bottom of the well is based on manual measurements after the well installation. The measurement accounts for any variation of the well depth caused by infilling of material through the well screen.

#### Table 2 Summary of Groundwater Levels

Monitoring Well ID	Highest Groundwater RL (mAHD)	Lowest Groundwater RL (mAHD)	
BH201M	0.78	0.12	
BH202M	2.01	1.49	
BH203M	1.88	1.52	
BH204M	9.47	7.03	

El notes that a pump-out test was carried out in BH204M on 14 November 2023, which affected the groundwater level sensor readings. Hence, the data on 14 November during and shortly after the test has been excluded.

Please do not hesitate to contact the undersigned should you have any questions.

For and on behalf of:

EI AUSTRALIA Author

San

David Saw Geotechnical Engineer

Attachments:

Reviewer

Stephen Kim Senior Geotechnical Engineer

Figure 1: Figure 2-5: Data Logger Location Plan Groundwater Level, Daily Rainfall vs. Time From 24 October 2023 to 22 February 2024

Important Information



0 Location of Monitoring Well (El Australia, Additional Geotechnical Investigation 2023) and Data Logger

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Date:

	A.E.	Palmdev Pty Ltd Groundwater Monitoring Report 1112-1116 Barrenjoey Road, Palm Beach NSW	Figure:
	К.Х.		
28-02-24	Data Logger Location Plan		
	28-02-24		Project: E25203.G11









# Important Information



#### SCOPE OF SERVICES

The geotechnical report ("the report") has been prepared in accordance with the scope of services as set out in the contract, or as otherwise agreed, between the Client And El Australia ("El"). The scope of work may have been limited by a range of factors such as time, budget, access and/or site disturbance constraints.

#### **RELIANCE ON DATA**

El has relied on data provided by the Client and other individuals and organizations, to prepare the report. Such data may include surveys, analyses, designs, maps and plans. El has not verified the accuracy or completeness of the data except as stated in the report. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations ("conclusions") are based in whole or part on the data, El will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to El.

#### **GEOTECHNICAL ENGINEERING**

Geotechnical engineering is based extensively on judgment and opinion. It is far less exact than other engineering disciplines. Geotechnical engineering reports are prepared for a specific client, for a specific project and to meet specific needs, and may not be adequate for other clients or other purposes (e.g. a report prepared for a consulting civil engineer may not be adequate for a construction contractor). The report should not be used for other than its intended purpose without seeking additional geotechnical advice. Also, unless further geotechnical advice is obtained, the report cannot be used where the nature and/or details of the proposed development are changed.

#### LIMITATIONS OF SITE INVESTIGATION

The investigation programme undertaken is a professional estimate of the scope of investigation required to provide a general profile of subsurface conditions. The data derived from the site investigation programme and subsequent laboratory testing are extrapolated across the site to form an inferred geological model, and an engineering opinion is rendered about overall subsurface conditions and their likely behaviour with regard to the proposed development. Despite investigation, the actual conditions at the site might differ from those inferred to exist, since no subsurface exploration program, no matter how comprehensive, can reveal all subsurface details and anomalies. The engineering logs are the subjective interpretation of subsurface conditions at a particular location and time, made by trained personnel. The actual interface between materials may be more gradual or abrupt than a report indicates.

### SUBSURFACE CONDITIONS ARE TIME DEPENDENT

Subsurface conditions can be modified by changing natural forces or man-made influences. The report is based on conditions that existed at the time of subsurface exploration. Construction operations adjacent to the site, and natural events such as floods, or ground water fluctuations, may also affect subsurface conditions, and thus the continuing adequacy of a geotechnical report. El should be kept appraised of any such events, and should be consulted to determine if any additional tests are necessary.

#### VERIFICATION OF SITE CONDITIONS

Where ground conditions encountered at the site differ significantly from those anticipated in the report, either due to natural variability of subsurface conditions or construction activities, it is a condition of the report that El be notified of any variations and be provided with an opportunity to review the recommendations of this report. Recognition of change of soil and rock conditions requires experience and it is recommended that a suitably experienced geotechnical engineer be engaged to visit the site with sufficient frequency to detect if conditions have changed significantly.

#### **REPRODUCTION OF REPORTS**

This report is the subject of copyright and shall not be reproduced either totally or in part without the express permission of this Company. Where information from the accompanying report is to be included in contract documents or engineering specification for the project, the entire report should be included in order to minimize the likelihood of misinterpretation from logs.

### **REPORT FOR BENEFIT OF CLIENT**

The report has been prepared for the benefit of the Client and no other party. El assumes no responsibility and will not be liable to any other person or organisation for or in relation to any matter dealt with or conclusions expressed in the report, or for any loss or damage suffered by any other person or organisation arising from matters dealt with or conclusions expressed in the report (including without limitation matters arising from any negligent act or omission of El or for any loss or damage suffered by any other party relying upon the matters dealt with or conclusions expressed in the report). Other parties should not rely upon the report or the accuracy or completeness of any conclusions and should make their own inquiries and obtain independent advice in relation to such matters.

#### **OTHER LIMITATIONS**

El will not be liable to update or revise the report to take into account any events or emergent circumstances or fact occurring or becoming apparent after the date of the report.