

RGS32576.1 - AM

28 July 2022

RP Infrastructure
Level 19/9 Hunter Street
SYDNEY NSW 2000

Attention: Yonis Ahmad

Dear Yonis,

**RE: A2 Banksia Unit, Tamworth Hospital – Dean Street, Tamworth
Desktop Groundwater Assessment**

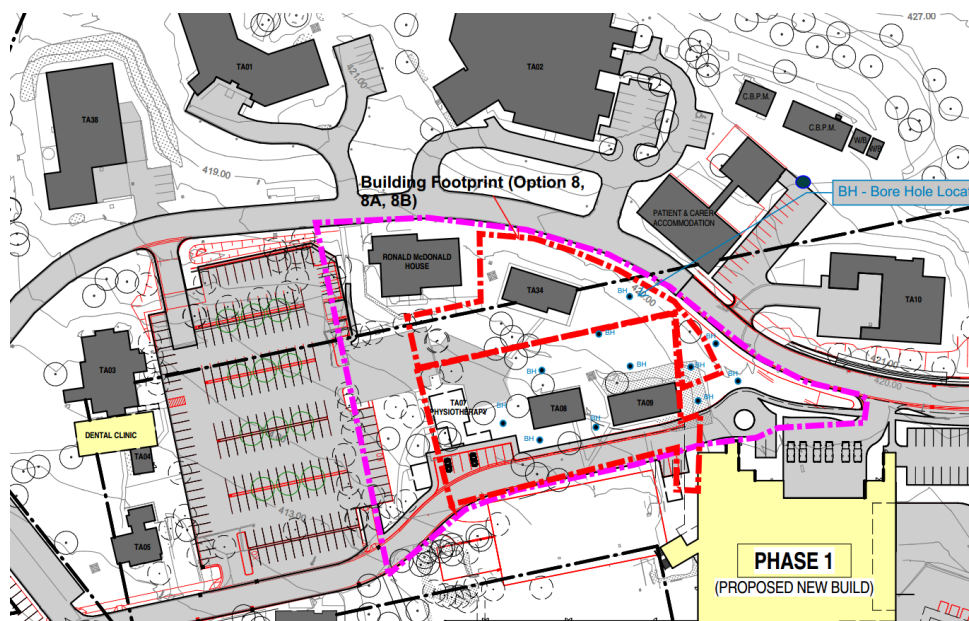
1 INTRODUCTION

Regional Geotechnical Solutions Pty Ltd (RGS) has undertaken a desktop groundwater assessment for A2 Banksia Unit, Tamworth Hospital to be located on Dean Street, Tamworth. RGS previously undertook geotechnical investigations and assessment for this development with results presented in report RGS32576.1 – AH dated 31 March 2021. It is understood that the project is under review and additional information on groundwater impacts is required.

This desktop assessment was limited to the review of available information including the following:

- The investigation undertaken by RGS for initial stages of this development (RGS32576.1 – AH);
- Online resources including geology maps and satellite imagery; and
- Past reports undertaken by RGS and others at the hospital site and nearby areas.

The area proposed to be development is presented below.



The proposed development area.



Proposed elevations.

2 REVIEW OF AVAILABLE DATA

2.1 Internal Resources

RGS has undertaken two investigations within the hospital. Both reports have been reviewed for this assessment. The following was noted.

RGS undertook investigations for the subject area in 2021 with results presented in Report No. RGS32576.1 – AH. The investigation included boreholes extended through the weathered rock profile to depths of up to 6m. Groundwater inflows were not observed within any of the boreholes drilled during the investigations, however, long term groundwater monitoring was not undertaken.

RGS undertook investigations for the New England North West Regional Cancer Centre at the hospital in 2010 with results presented in report No. RGS00140.1-AD. The site is approximately 250m south of the subject area. The investigation included boreholes extended through the weathered rock profile to depths of up to 5.05m. Groundwater inflows were not observed within any of the boreholes drilled during the investigations, however, long term groundwater monitoring was not undertaken.



2.2 External Resources

A groundwater bore search on the NSW Department of Primary Industries Office of Water website (<https://realtimedata.watersw.com.au/water.stm>) indicates there is a licenced groundwater bore (GW057928) located within the hospital grounds. The drill records indicate a water bearing zone of 26.2m to 26.5m. There is an additional bore (GW052834) located to the west that recorded a water bearing zone of 24.5m to 34m.

The above mentioned bores were both installed in the 1980s. No further data (such as monitoring levels) could be obtained for the bores.

A review of publicly available (<https://minview.geoscience.nsw.gov.au/>) geotechnical reports that were undertaken on nearby sites indicates:

- Four geotechnical reports have been prepared for the New England Institute of TAFE that is located to the east of Janison Street. The investigations included the drilling of boreholes to depths of up to 4.5m. Minor groundwater inflows were encountered within one of the boreholes at a depth of 2.5m, however, the report states that the inflows were likely to be attributed to "a leaking water pipe or other causes"; and
- One geotechnical report has been prepared for Oxley High School that is located to the north of Piper Street. The investigation included the drilling of boreholes to a depth of up to 4.5m. Groundwater was not encountered during the investigation.

A review of reports obtained by other consultants was undertaken. Boreholes at the site have been extended to depths of up to 10m through the weathered rock profile did not encounter groundwater.

3 CONCLUSION

Based on the review of available data, it is assessed that groundwater has not been encountered within investigations undertaken from 1981 to 2021 to depths of up to 10m below surface level. However, RGS is not aware of any long term monitoring of groundwater levels having been undertaken at the site.

Recent investigations in other parts of Tamworth have encountered perched water tables at shallow depths (less than 1m). This has been assessed to be attributed to the high rainfall events over the past 12 months.

Further, it is noted that due to the highly fractured weathered rock underlying the site water flows would be expected through joints and other defects within the weathered rock where water is perched upslope.

In consideration of this normal groundwater levels at the site are expected to be greater than 5m below surface level. However, due to the recent high rainfall events some perched groundwater may be encountered within excavations in the upper 1m to 2m profile.

4 LIMITATIONS

This report comprises the results of an investigation carried out for a specific purpose and client as defined in the document. The report should not be used by other parties or for purposes or projects other than those assumed and stated within the report, as it may not contain adequate or appropriate information for applications other than those assumed or advised at the time of its



preparation. The contents of the report are for the sole use of the client and no responsibility or liability will be accepted to any third party. The report should not be reproduced either in part or in full, without the express permission of Regional Geotechnical Solutions Pty Ltd.

Geotechnical site investigation is based on data collection, judgment, experience, and opinion. By its nature, it is less exact than other engineering disciplines. The findings presented in this report and used as the basis for the recommendations presented herein were obtained using normal, industry accepted geotechnical design practises and standards. To our knowledge, they represent a reasonable interpretation of the general condition of the site. Under no circumstances, however, can it be considered that these findings represent the actual state of the site at all points.

The recommended depth and properties of any soil, rock, groundwater, or other material referred to in this report is an engineering estimate based on the information available at the time of its writing. The estimate is influenced and limited by the fieldwork method and testing carried out in the site investigation, and other relevant information as has been made available. In cases where information has been provided to Regional Geotechnical Solutions for the purposes of preparing this report it has been assumed that the information is accurate and appropriate for such use. No responsibility is accepted by Regional Geotechnical Solutions for inaccuracies within any data supplied by others.

If site conditions encountered during construction vary significantly from those discussed in this report, Regional Geotechnical Solutions Pty Ltd should be contacted for further advice.

This report alone should not be used by contractors as the basis for preparation of tender documents or project estimates. Contractors using this report as a basis for preparation of tender documents should avail themselves of all relevant background information regarding the site before deciding on selection of construction materials and equipment.

If you have any questions regarding this project, or require any additional consultations, please contact the undersigned.

For and on behalf of **Regional Geotechnical Solutions Pty Ltd**

Prepared by

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