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Refine Living
C/- Arcanary
Shop 3, 173-179 Bronte Road
Queens Park NSW 2022

Attention: Jack Eades

BULK EXCAVATION REPORT FOR 10 BEVERLEY PLACE CURL CURL NSW

1.0 INTRODUCTION

The purpose of this report is to address the excavation requirements relating to the proposed demolition and excavation at 10 Beverley Place, Curl Curl, to prepare for the construction of a new residential development. The future development consists of a subdivision into two lots and construction of a house on one lot and a duplex on the adjacent. Swimming pools will be provided for each residence

Reference is made to the Geotechnical Report, reference J5931 dated 27.02.2025 prepared by White Geotechnical Group and this report should be read in conjunction with the geotechnical report.

2.0 EXCAVATION CONDITIONS AND SUPPORT

According to the Geotechnical report the site consists of fill overlying sandstone bedrock which is typically found at shallow depths. The bedrock has been originally benched to suit the previous development with deeper fill present toward the front of the property, along the eastern, southern and northern sides in particular below the driveway and garden, with exposed rock faces visible moving westward toward the rear.

The proposed excavation will remove the majority or all of the fill toward the front of the property and will entail significant excavation into the bedrock. The footprint of the excavation will follow that of the proposed garage level of the residences, which is slightly lower than the existing driveway entrance level.

To the south of the excavation it is not anticipated that significant shoring will be required. The proposed building footprint at garage level is approximately 3m off the southern boundary and excavation will predominantly be a vertical cut in rock. There is a retaining wall situated on the boundary, however due to the shallow presence of rock it is unlikely that it would be undermined by the works. Should shoring be required above rock level to hold back fill or soil, this should be achieved relatively easily by conventional techniques, eg battering, benching and/or sandbags. Underpinning of the retaining wall might be required however this is viewed as being unlikely to be necessary.

Similarly, the excavation along the western edge of the basement excavation will be into solid bedrock, albeit to a height of over 8m, and according to the data in the geotechnical report there will be minimal fill encountered to be retained which would require shoring. If a small proportion of fill is found, it may be removed and/or battered or shored as described above.

As the proposed building footprint encroaches closer to the northern boundary than at the south, and there is a neighbouring garage and wall built hard against the boundary it is possible that the excavation could undermine adjacent footings should those footings not be founded on rock and should those footings be situated significantly higher than the proposed. It is noted that the basement setback from the northern boundary is more than that of the level above, which will likely be cantilevered, so the excavation setback is in reality more than it appears when viewing the ground floor plan alone.

The geotechnical report describes a more significant depth to rock in the area along the northern boundary, around 2.5-2.8m, however it does appear that this area has been filled to follow the grade of the driveway. The impact on the footings of the adjacent structures depends on the depth of the existing footings, the nature of them, and the foundations upon which they are placed. These factors are unknown at the current time and as per the recommendations of the Geotech report, further exploratory work along that boundary should be undertaken prior to design of the structural system. It may be necessary for a more robust and permanent shoring system to be located along this boundary, such as contiguous piles.

The geotechnical report has recommended that retaining walls be constructed in front of all cut rock faces, which will be considered during the design of the wall types, cavities and drainage, particularly around the garage level.

3.0 VIBRATION

Induced ground vibrations can be expected during the proposed works. The adjoining properties are likely to be founded on similar bedrock. Based on the proposed RLs and the geotechnical report, it is expected that rock excavation will be significant. It is recommended to maintain a maximum peak particle velocity of 3-5mm/s. To reduce the potential for induced vibrations, depending on the strength of the rock, it may be advisable to employ a saw-cutting technique, particularly adjacent to walls along the boundaries, rather than direct hammering. To ensure the induced ground vibrations remain below the upper limit of 5mm/s we recommend periodic vibration monitoring when demolition and excavation machinery is to be used. The contractor should follow the advice of the geotechnical engineer with regard to techniques used and monitoring of vibration. We note that the induced vibrations are both site and plant specific. Care should be taken by the contractor to avoid sudden stop-start movements of machinery to ensure the ground induced vibrations stay below 5mm/s.

4.0 GROUNDWATER AND DEWATERING

The presence of groundwater was not mentioned in the geotechnical report so it is assumed none was present, which would be logical considering the steep nature of the site. Therefore no de-watering is anticipated.

4.0 CONCLUSION

It is our opinion that the proposed development can be safely excavated when carried out in accordance with the structural drawings to be prepared by ROR Consulting Engineers. The works should be executed by an appropriately experienced and insured builder in accordance with the ROR structural drawings, the geotechnical report and advice and ongoing site monitoring by both the Structural Engineer and the Geotechnical Engineer. The geotechnical report should be referred to for all advice regarding vibration monitoring and monitoring of the exposed rock cuts.

This report shall not be construed as relieving any other party of their responsibilities, liabilities or contractual obligations.

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