

## **PRELIMINARY GEOTECHNICAL ASSESSMENT:**

### **43 Curban Street, Balgowlah Heights**

#### **1.0 Proposed Development**

- 1.1** Demolish the existing driveway and construct a new carport and crossover at the road frontage requiring minor leveling.
- 1.2** Re-landscape the uphill side of the property requiring minor fill to a maximum height of ~0.6m.
- 1.3** Various other minor external alterations and additions.
- 1.4** Details of the proposed development are shown on 8 drawings prepared by Right Angle Design and Drafting, Job number RADD25034. Drawing numbered A1 is dated JUN 2024. Drawings numbered A3 to A8 are dated JULY 2024. Drawing A2 is dated JULY 2025.

#### **2.0 Site Location**

- 2.1** The site was inspected on the 17<sup>th</sup> July, 2025.
- 2.2** This residential property is on the low side of the road and has a NW aspect. It is located on the gentle to moderately graded middle reaches of a hillslope. The slope falls at gentle angles across a majority of the property before increasing to moderate angles at the lower common boundary. The slope above the property continues at similar gentle angles. The slope below the property continues at similar moderate angles. No rock outcrops on the property. The Sydney 1:100 000 Geological Sheet indicates the site is underlain by Hawkesbury Sandstone that is described as a medium to coarse grained quartz sandstone with very minor shale and laminite lenses. Sandstone bedrock is expected to underlie the surface at relatively shallow depths.

The natural surface of the block has been altered by a ~1.0m cut for the pool, as well as various low cuts and fills for paved, lawn and garden areas across the property.

**2.3** The site shows no indications of historical movement in the natural surface that could have occurred since the property was developed. We are aware of no history of instability on the property.

### **3.0 Site Description**

The natural slope falls across the property at an average angle of ~11°. At the road frontage, a concrete driveway runs downslope to a parking area in the E corner of the property. Between the road frontage and the house is a gently graded lawn and garden bedding. The part two-storey rendered brick house is supported on brick walls. Thin stepped and horizontal cracking was observed in the brickwork and rendering in the NE supporting wall of the house (Photo 1). This cracking is typical in houses of this age and construction and we attribute it to minor settlement and slight movement of the brickwork immediately above the upper window lintel. A stable pool which shows no signs of movement has been cut into the slope below the house. Minor fill for landscaping in this location is supported by stable low rendered concrete block retaining walls. The remainder of the moderately graded slope to the downhill common boundary is terraced by two retaining walls of concrete block and mortared sandstone construction which step down the slope to a height of ~2.0m. These walls are considered stable. The land surface surrounding the house is mostly lawn covered with some pebbled and garden areas. No significant signs of movement associated with slope instability were observed on the grounds. No cliffs or large rock faces were observed on the property or in the near vicinity. No geotechnical hazards that could impact on the subject property were observed on the surrounding neighbouring properties as viewed from the subject property and the street.

## 4.0 Recommendations

The proposed development and site conditions were considered and applied to the current council requirements. See the required inspection below that is to be carried out during construction and is a requirement for the final geotechnical certification. Apart from the inspection, it is not expected additional geotechnical input will be required provided good design and building practices are followed.

## 5.0 Inspection

The client and builder are to familiarise themselves with the following required inspection as well as council geotechnical policy. We cannot provide geotechnical certification for the owners or the regulating authorities if the following inspection has not been carried out during the construction process.

- All footings are to be inspected and approved by the geotechnical consultant while the excavation equipment and contractors are still onsite and before steel reinforcing is placed or concrete is poured.

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Photo 1

## Information about your Preliminary Assessment

This Preliminary Assessment relies on visual observations of the surface features observed during the site inspection. Where reference is made to subsurface features (e.g., the depth to rock) these are interpretations based on the surface features present and previous experience in the area. No ground testing was conducted as part of this assessment and it is possible subsurface conditions will vary from those interpreted in the assessment.

In some cases, we will recommend no further geotechnical assessment is necessary despite the presence of existing fill or a rock face on the property that exceed the heights that would normally trigger a full geotechnical report, according to the Preliminary Assessment Flow Chart. Where this is the case, if it is an existing fill, it is either supported by a retaining wall that we consider stable, or is battered at a stable angle and situated in a suitable position on the slope. If it is a rock face that exceeds the flow chart limit height, the face has been deemed to be competent rock that is considered stable. These judgements are backed by the inspection of over 5000 properties on Geotechnical related matters.

The proposed excavation heights referred to in section 2.0 of this assessment are estimated by review of the plans we have been given for the job. Although we make every reasonable effort to provide accurate information excavation heights should be checked by the owner or person lodging the DA. If the excavation heights referred to in section 2.0 of this assessment are incorrect, we are to be informed immediately and before this assessment is lodged with the DA.