

GEOTECH AUSTRALIA PTY LTD

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GEOTECHNICAL INVESTIGATION REPORT

Project: 123 Sunset Boulevard, Sydney NSW 2000
Client: Sunset Construction Pty Ltd
Report No: GT-2024-1847
Date: 25 June 2024

EXECUTIVE SUMMARY

A comprehensive geotechnical investigation was conducted comprising three (3) boreholes to depths ranging from 2.5m to 4.0m below existing ground level. Laboratory testing was performed on selected samples to determine soil classification and engineering properties.

SITE CONDITIONS:

- The site is relatively flat with a gentle slope from front to rear (approx. 0.5m over 30m)
- No surface water ponding observed during site visit
- Existing vegetation consists of grass and small shrubs
- One large eucalyptus tree located at rear boundary (12m from proposed dwelling)

SUBSURFACE CONDITIONS:

- 0.0m - 0.3m: Topsoil (dark brown, loose, organic)
- 0.3m - 1.5m: Silty CLAY (light brown, stiff, low plasticity)
- 1.5m - 4.0m: Sandy CLAY (brown-grey, very stiff, moderately plastic)
- No groundwater encountered to maximum depth of investigation

SOIL CLASSIFICATION: Class S (Slightly Reactive Clay) per AS 2870-2011

BEARING CAPACITY: 150 kPa for strip footings at 600mm depth

FOOTING DESIGN: Stiffened raft or strip footings on Class S sites

RECOMMENDATIONS

1. Strip footings with minimum width of 450mm and depth of 600mm below natural ground level
2. Concrete strength minimum 25MPa for footings and slabs
3. Reinforced concrete slab-on-ground with F82 mesh minimum
4. Provide edge beams around entire perimeter
5. Install subsurface drainage around footing perimeter
6. Remove tree at rear boundary prior to construction (potential foundation impact)
7. Ensure adequate surface drainage away from building
8. Compact fill beneath slab to 98% Standard Maximum Dry Density

Report prepared by:

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