



ENVIRONMENTAL - REMEDIATION - GEOTECHNICAL ENGINEERING - WORK HEALTH & SAFETY - LABORATORIES - DRILLING

GS8765-3A

24<sup>th</sup> October 2023

**Angus Whittle**

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Dear Angus,

Re: Addendum Letter to Aargus' previously issued Geotechnical Report and Landslide Risk Assessment for No. 1 Fern Creek Rd, Warriewood NSW 2102

**Scope of Work**

Aargus was recently asked to assess the conditions on the site for comparison with those site conditions described in Aargus Geotechnical Report for the site (Report number GS5895-2A dated 4<sup>th</sup> August 2014), and to provide an addendum letter to accompany the original geotechnical report, for submission to the Northern Beaches Council.

Aargus was also asked to update the previously issued report site plan to reflect an updated topographical survey and to briefly discuss the need for an Acid Sulphate Soil assessment of the site and lots therein.

The scope of works requested included;

- A review of legislation relevant to the Warriewood Valley land release and other Northern Beaches Council Development Control Plans and Local Environment Plans was also undertaken.
- Comparison of the 2014 survey plan with the 2022 survey plan
- Review of lot plans.
- New photographs of the site.
- Update the Site Plan appendix of the original report with the new survey plan, update the photograph appendix with new site photographs. The main body of the report remains unaltered, with the same issue date.

The following documentation was provided by the client;

Architectural/Lot drawings including, plans, sections, elevations, shadow diagrams, etc by Popov Bass Architects for Lots 2,3,8,12,13,14,15 and 17 as follows;

- Lot 2 (No. 1 Knight St, Warriewood) – Drawing Numbers DA101-112, Revision A issued 19 September 2023,
- Lot 3 (No. 2 Knight St, Warriewood) – Drawing Numbers DA100-110, Revision B issued 25 September 2023,
- Lot 8 (No. 9 Knight St, Warriewood) – Drawing Numbers DA100-115, Revision01 issued 29 August 2023,
- Lot 12 (No. 13 Knight St, Warriewood) – Drawing Numbers DA102-112, Revision A issued 29 September 2023,
- Lot 13 (No. 12 Knight St, Warriewood) – Drawing Numbers DA102-109, Revision C issued 10 October 2023
- Lot 14 (No. 11 Knight St, Warriewood) – Drawing Numbers DA102-109, Revision B issued 10 October 2023
- Lot 15 (No. 10 Knight St, Warriewood) – Drawing Numbers DA102-108, Revision B issued 10 October 2023
- Lot 17 (No. 3 Knight St, Warriewood) – Drawing Numbers DA102-109, Revision A-WIP,

**Other reference material included;**

- Aargus Geotechnical Investigation Report and Landslide Risk Assessment, 2014, ref. no. GS5895-2A.
- Ahern C R, Stone, Y, and Blunden B (1998). Acid Sulfate Soils Assessment Guidelines, Published by the Acid Sulfate Soil Management Advisory Committee, Wollongbar, NSW, Australia.
- Hornsby - Mona Vale Acid Sulphate Soil Risk Map, No. 91 30S1 Edition 2 dated 1997, issued by the Department of Land and Water Conservation.

## Review Conclusions

Aargus went to site and conducted a site walkover to all parts of the site, taking photographs.

Aargus was informed verbally that a number of trees were removed in the time between the original geotechnical investigation report and the present day, and there does appear to be fewer trees in some parts of Lots 2,3,8 and 13 presumably to allow earth-moving equipment access for road and retaining wall construction. The surface in some areas appears to be disturbed.

Despite this, the conditions of the site and the lots have not changed significantly since the original geotechnical report was issued in 2014 and the recommendations listed in that report are still valid for the site today. Particular attention should be given to the recommendations regarding landslide risk mitigation, footings being founded on material of consistent characteristics across the footprint of each proposed building, and to the recommendations on good hillside construction practice.

Reference to NSW Government Acid Sulphate Soil Risk maps shows that the site is approximately 220m north-west of the nearest known occurrence of Potential Acid Sulphate Soils (PASS) or Acid Sulphate Soils (ASS). The site is at an elevation of RL 20 m AHD to approximately RL 37.5 m AHD, well above known occurrences and well-above the levels and environments where such soils formed in the last 10,000 years (see Ahern et al 1998, above). Testing for ASS or PASS is not considered to be necessary.

For and on behalf of

**Aargus Pty Ltd**

*Murali. P*

**Murali Pamu**

B. Tech, GradDipEng, ME Stud, MIE Aust

**Senior Geotechnical Engineer**