



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

GS8765-1A

21 February 2023

Angus Whittle
Popov Bass Architects
208 Devonshire Street, Surry Hills NSW 2010
PO Box 334, Surry Hills NSW 2010
t +61 2 9955 5604
m +61 409 597 767
popovbass.com.au

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 14 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.
- A site walk-over to assess current site conditions.
- 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.

Documentation

The following documentation was provided by the client;

- Architectural/Lot drawings including, plans, sections, elevations, shadow diagrams, etc by Popov Bass Architects for Lots 4, 5, 6, 7 & 16, as follows;
 - Lot 4 (No. 4 Knight St, Warriewood) – Drawing Numbers DA100-108, issued 15 December 2022,
 - Lot 5 (No. 5 Knight St, Warriewood) – Drawing Numbers DA100-108, issued 2 December 2022,
 - Lot 6 (No. 6 Knight St, Warriewood) – Drawing Numbers DA100-108, issued 2 December 2022,
 - Lot 7 (No. 7 Knight St, Warriewood) – Drawing Numbers DA100-108, issued 1 December 2022,
 - Lot 16 (No. 8 Knight St, Warriewood) – Drawing Numbers DA103-105, issued 31 January 2023.
- “Plan showing contours and detail on Lot 1 in DP736961 and part of Lot C1 in DP376390 – 1 Fern Creek Road and 12 Orchard Street, Warriewood” by Brunskill McClenahan & Associates Pty Ltd – Surveyors and Planners, Ref. No. 14042-3 issued 8 July 2014.
- “Plan showing detail & levels at 1 Fern Creek Road, Warriewood, being Lots 1 to 17 in DP270922. Northern Beaches LGA”, Ref. No. 0422/1 by YSCO Geomatics Land Resource Consultants, issued February 2022.

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 4, 5 and 6, 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



Rafael Furniss

Senior Engineering Geologist

BSc (Applied Geology), Hons, MSc.
MAGS, MAIG, ISSMGE.