



ENVIRONMENTAL INVESTIGATION SERVICES

26/08/2016
Ref: E28861KDlet

Tanner Kibble Denton Architects Pty Ltd
Level 1, 19 Forster Street, Surry Hills
SYDNEY NSW 2010

Attention: Mr Ian Burger

ACID SULFATE SOIL POTENTIAL

PROPOSED KELLYVILLE SOUTH PUBLIC SCHOOL DEVELOPMENT

21 AND 23 FAIRWAY DRIVE, KELLYVILLE, NSW

1 INTRODUCTION

EIS have prepared the following reports for the Kellyville South Public School development at 21 and 23 Fairway Drive, Kellyville, NSW:

- Preliminary Stage 1 Environmental Site Assessment¹; and
- Preliminary Stage 2 Environmental Site Assessment².

We understand that the NSW Government Department of Planning and Environment has requested further information regarding the potential for Acid Sulfate Soils (ASS) at the site.

2 SITE INFORMATION

2.1 Regional Geology

A review of the regional geological map of Penrith (1991³) indicates that the site is underlain by Ashfield Shale of the Wianamatta Group, which typically consists of black to dark grey shale and laminite.

¹ EIS, (2015), *Report to Department of Education and Communities on Preliminary Stage 1 Environmental Site Assessment for Proposed School Development at 21 and 23 Fairway Drive, Kellyville, NSW*. (Report Ref: E28861KD rpt, dated 2 December 2015)

² EIS, (2016), *Report to TKD Architects on Preliminary Stage 2 Environmental Site Assessment for Proposed Kellyville South Public School Development at 21 and 23 Fairway Drive, Kellyville, NSW*. (Report Ref: E28861KD rpt2, dated 2 May 2016)

³ Department of Mineral Resources, (1991), *1:100,000 Geological Map of Penrith (Series 9030)*.



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2.2 Acid Sulfate Soil (ASS) Risk⁴

The site is not located in an ASS risk area.

The closest area (Castle Hill) with a probability (assessed as low) of potential for ASS is located approximately 3.7km to the east of the site.

2.3 Subsurface Conditions

Subsurface conditions encountered as part of the investigation works consisted of:

- Fill material extending to depths of approximately 0.2m to 0.5m below ground level;
- Underlain by natural residual clay;
- Weathered shale bedrock (encountered in the majority of the boreholes) at depths ranging from approximately 0.6 to 2.7m below ground level.

3 CONCLUSION

Based on the findings of the EIS assessments undertaken at the site and the information provided within this letter, EIS are of the opinion that potential ASS are not present at the site. Our conclusions are based on the following:

- The ASS risk map for the area indicates that the site is located within an area of no known occurrence of ASS;
- The geological map for Penrith and the borehole logs indicates that the site is underlain by shale bedrock. ASS are usually associated with alluvial sediments;
- The site is located at approximately 70-78m AHD, with no major excavations proposed as part of the development. ASS/PASS are not usually associated with soil horizons above 5m AHD; and
- No layers of organic or peaty materials (that could potentially contain potential ASS) were encountered in the boreholes.

Based on this information, preparation of an ASSMP is not considered necessary for the proposed development.

4 LIMITATIONS

The findings presented in this letter are based on site conditions that existed at the time of the assessment. The conclusions are based on the investigation of conditions at specific locations, chosen to be as representative as possible under the given circumstances.

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⁴ Australian Soil Resource Information Centre (<http://www.asris.csiro.au/themes/AcidSulfateSoils.html>)

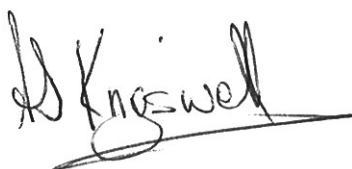
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If you have any questions concerning the contents of this letter please do not hesitate to contact us.

Kind Regards

A handwritten signature in black ink, appearing to read 'M. Delaney', with a long, sweeping horizontal stroke at the end.

Mitchell Delaney
Senior Environmental Scientist

A handwritten signature in black ink, appearing to read 'A. Kingswell', with a long, sweeping horizontal stroke at the end.

Adrian Kingswell
Principal