

Date: 7 December 2022

Ref: 35689Z let

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Attention: Ms Sevda Cemil
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GEOTECHNICAL ASSESSMENT

PROPOSED CAR PARK EXPANSION

ST LUKE'S GRAMMAR JUNIOR SCHOOL, HEADLAND ROAD, DEE WHY, NSW

This letter reports our geotechnical assessment of the proposed car park expansion at St Luke's Grammar Junior School in Dee Why.

We understand from the provided architectural drawings (Project No 22072, Drawing Nos 1050^A, 1051^C to 1053^C and 1054^A to 1057^A) prepared by Gardner Wetherill Associates that it is proposed to extend the ground floor car park beneath the multi-storey junior school building further towards the north-east and south-east.

Our site inspection on 8 December 2022 indicated that the excavation for the proposed extension has already been completed and has resulted in a sub-vertical cut face approximately 2.2m high. A ripped/crushed sandstone backfill berm has been placed against the cut face, with the upper exposed approximately 0.5m high portion revealing what appeared to be competent massive sandstone bedrock. The limited sandstone exposure was in accordance with our expectations. The completed excavation is indicated on the relevant provided structural drawing for the junior school building (Drawing No 80818317-ST-1001C, 'Footings Plan') prepared by Cardno. All visible columns within the ground floor were founded below the ground floor slab level and the backfilled berm was screened by a temporary wall.

Based on the above, we consider that the principle geotechnical issue associated with the proposed car park expansion is the stability of the cut face.

We have extensive experience and a good understanding of the subsurface conditions at the school which have been obtained from our previous involvement with several projects within the St Luke's Grammar School grounds. The previous JK Geotechnics (previously known as Jeffery and Katauskas) involvement is indicated in attached Table A.

Based on our experience, we consider that a vertical cut in the competent sandstone bedrock was appropriate. However, localised stabilisation measures may be necessary if adverse defects such as inclined joints or bedding are present. Treatment for zones requiring stabilisation may include rock bolting,



shotcreting, underpinning, etc. Clay seams occurring in the permanently exposed sandstone cut face may also require 'dental' treatment. We therefore recommend that the rock face be inspected by a geotechnical engineer once the backfill berm has been removed, to identify adverse defects and to propose appropriate stabilisation measures. We note that the details and extent of localised stabilisation measures can only be finalised following the geotechnical inspection. However, based on the results of previous investigations and the limited existing exposures, localised stabilisation measures are expected to be minimal.

We note that this report is limited to the geotechnical issues associated with the proposed junior school car park expansion. Geotechnical issues associated with the junior school building itself have been excluded from the current assessment.

Should you require any further information regarding the above, please do not hesitate to contact the undersigned.

Yours faithfully
For and on behalf of
JK GEOTECHNICS



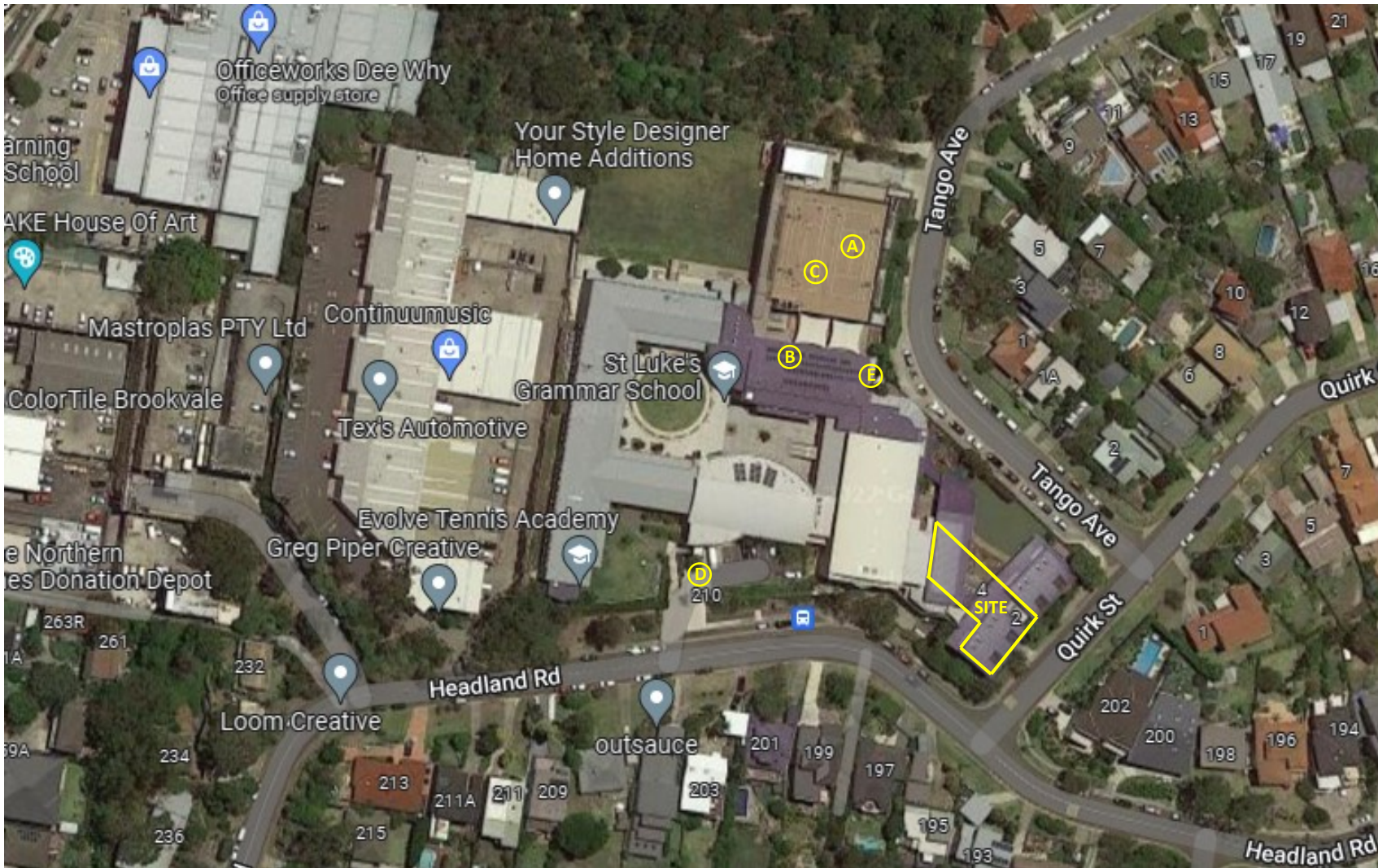
Agi Zenon
Principal Consultant | Geotechnical Engineer

Encl: Table A: Details of our Previous Involvement at St Luke's Grammar School
Figure 1: Site Layout Plan



TABLE A
DETAILS OF OUR PREVIOUS INVOLVEMENT AT ST LUKE'S GRAMMAR SCHOOL, DEE WHY

Number	Date	Our Reference	Project Description	Location Relative to Site
A	October 1999	14652S	Geotechnical Investigation for Proposed Car Park	115m to the north-west
B	April 2000	15010S	Geotechnical Investigation for Proposed Resources Centre	90m to the north-west
C	January 2009	22631Z	Geotechnical Investigation for Proposed Stage 1 Additions	115m to the north-west
C	July 2010 to March 2011	22631ZY	Geotechnical Inspections during Construction of Stage 1 Additions	115m to the north-west
D	November 2013	25968Z	Geotechnical Assessment for Proposed Upgrading and Landscaping of Senior Quadrangle and Headland Street Frontage	73m to the west
D	October 2014	25968Z	Geotechnical Inspection during Construction of above Works	73m to the west
E	November 2013	25968Z	Geotechnical Assessment for Proposed Canteen, Music Tutorial Rooms and Junior Toilets Refurbishment	63m to the north-west



Site Layout Plan

Courtesy of 'Google Maps'

To be read in conjunction with Table A.

FIGURE 1 • 35698Z