Taylor Thomson Whitting (NSW) Pty Ltd Consulting Engineers ACN 113 578 377
48 Chandos Street St Leonards NSW 2065 PO Box 738 Crows Nest NSW 1585
T 61 2 9439 7288 F 61 2 9439 3146 ttwsyd@ttw.com.au www.ttw.com.au

7 May 2015 141531

SCECGS Redlands Ltd
c/- Sandrick Project Directions
Suite 412 Nexus Norwest
4 Columbia Court
Baulkham Hills NSW 2153

Attention: Adam Martinez

REDLANDS SENIOR CAMPUS NEW LEARNING HUB
STRUCTURAL ADEQUACY LETTER

Dear Adam,

At the request of Redlands, Taylor Thomson Whitting (NSW) Pty Ltd has been commissioned to prepare a preliminary structural letter for the proposed new learning hub development at Redlands Senior Campus.

1.0 PROPOSED STRUCTURE

The proposed new development consists of one (1) basement level carpark, ground floor and four (4) storeys of classrooms above ground with a landscaped roof. The approximate excavation depth is 4.5 metres.

1.1 Foundation and Shoring System

The proposed foundation system for the development is reinforced bored piles founded in at least Class V sandstone. The design of these piles will follow the recommendations of the geotechnical investigation. High level footings will also be considered based on the level of the sandstone rock.

The basement level shoring structure will be a 600mm diameter soldier piled wall with shotcrete infill and a spoon drain on the internal side to address any groundwater seepage. The shoring will have temporary ground anchors during construction and permanently propped, as the lateral earth loads will be transferred to the concrete floor frame and lift/stair cores. This system is consistent with the recommendations in the geotechnical investigation.

1.2 Building Structure

The proposed building structure is a reinforced concrete frame (columns and slabs) with stability being derived from lift and stair cores, and isolated blade walls.

2.0 GEOTECHNICAL INVESTIGATION

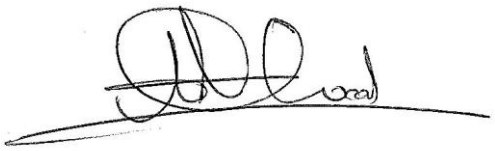
The geotechnical investigation by JK Geotechnics report 27775ZRrpt involved a study of the relevant soil landscape and geological maps of the project area; and eight (8) bore holes samples drilled to 2.7m – 7.9m. The subsurface conditions are described in the report as residual silty clays overlying weathered sandstone bedrock.

Groundwater levels have been inferred from pore pressure measurements to within a range of RL 72.800 to RL 75.200. The ground floor excavation is not expected to extend below the assumed groundwater table. It is expected that any seepage during excavation will be able to be dealt with by conventional pumping techniques.

3.0 STRUCTURAL DESIGN

The proposed structure will be designed in accordance with the relevant Australian Standards and be structurally adequate to support the required loads imposed for the building as detailed on the architectural drawings by TKD Architects.

Prepared by:
TAYLOR THOMSON WHITTING (NSW) PTY LTD



Wystan Alexander
Associate Director

Authorised by:
TAYLOR THOMSON WHITTING (NSW) PTY LTD

Barry Young
Director

P:\2014\1415\141531\Letters\150507- Preliminary Structural Adequacy Letter Rev. 1 BY ct.doc