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19 July 2013 121784

John Holland Pty Ltd
Level 3, 65 Pirrama Road
Pyrmont NSW 2009

Attention: Diego Ascui

ABERCROMBIE PRECINCT PROJECT
STAGE 1 BUSINESS SCHOOL
SYDNEY UNIVERSITY, DARLINGTON CAMPUS
CORNER ABERCROMBIE ST AND CODRINGTON ST, DARLINGTON
DA No: MO07_0158
STRUCTURAL ENGINEERING STATEMENT FOR SECTION 75W

The proposed development consists of the new University of Sydney Business School and the refurbishment of the existing H69 Economics and Business Building.

The proposed business school building will be a framed multi-level building, consisting of post-tensioned floor slabs and beams. The building will be laterally braced to resist wind and earthquake loads a combination of lift & stair shafts and frame action between concrete columns and floor beams.

The intention is to design each typical floor with sufficient flexibility to allow the floor use to change between lecture rooms and offices.

The roof slabs will be designed to be trafficable and capable of supporting roof gardens and terraces.

Post-tensioned transfer beams will be used at Ground floor and Level 1 to support columns located over the 300 seat and 550 seat auditoriums.

Perimeter shoring to the excavation will typically consist of soldier pile walls supported in the short term during the construction by temporary ground anchors. The building structure will be designed to resist the lateral soil pressure loads from the shoring in the long term. In some areas where the building structure cannot be utilised in this way permanent ground anchors will be used or the shoring piles designed to cantilever with no ground anchors.

Basement and Carpark level slabs will typically be designed as drained on-grade slabs.

The concrete columns and lift/stair shafts will be supported on bored piers and/or concrete pad footings founded on shale. The shoring and footing design will be based upon the recommendations of the project geotechnical engineer, Coffey Geotechnics.

TaylorThomsonWhitting

Structural

Civil

Traffic

Facade

Engineers

The majority of the facades to the proposed business school building will have lightweight framing, relying on the concrete floor slabs for support. Additional secondary structural steel framing will be introduced for sun-shading and access for window cleaning.

All structural framing and structural components will be designed and documented to comply with the provisions and applicable Australian Standards from Section B, Part B1 of the Building Code of Australia 2013. The applicable Australian Standards are listed below:

AS 1170.0 - 2002	Structural design actions – General principles
AS 1170.1-2002	Structural design actions – Permanent, imposed and other actions
AS 1170.2 - 2011	Structural design actions – Wind actions
AS 1170.4 - 2007	Structural design actions – Earthquake actions in Australia
AS 3600 - 2009	Concrete Structures
AS 3700 - 2011	Masonry Structures
AS 4100 -1998	Steel Structures

Yours faithfully,
TAYLOR THOMSON WHITTING (NSW) PTY LTD

DAVID CAROLAN
Director

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