H&H Consulting Engineers Pty Ltd *(trading as Henry & Hymas)*

ABN 77 091 243 355
ACN 091 243 355

Address
Suite 2.01
828 Pacific Highway
Gordon
New South Wales 2072

Telephone
+61 2 9417 8400

Facsimile
+61 2 9417 8337

Email
email@hhconsult.com.au

Web
www.henryandhymas.com.au

henry&hymas

30 October 2020 Our Ref: A19949–L2/LR

Mahady Management

Attention: Terry Mahady (terrymahady@gmail.com)

Dear Terry,

RE: KINCOPPAL SCHOOL ROSEBAY – PRECINCTS A & B - SSDA PROPOSED ALTERATIONS AND ADDITIONS TO JUNIOR SCHOOL AND ELC BUILDINGS – STRUCTURAL CLARIFICATIONS

As per the current architectural drawings, it is proposed to undertake alterations and additions to the existing ELC and Junior School buildings in Precinct A and the existing Year 8 Centre (Precinct B) at the Kincoppal School.

Precinct A – Junior School and ELC

It is proposed to construct a new trafficable roof terrace on the existing building. This will involve the demolition of the existing roof structure and the construction of a new reinforced and/or post-tensioned concrete slab structure. It is also proposed to provide extensions to the existing floors on the northern and western sides. These slabs will also be of reinforced or post tensioned construction.

- The new roof structure will be designed to accommodate the proposed loads including landscape loads.
- Initial preliminary reviews of the existing structure suggest that the existing structural columns appear to be structurally adequate to support the additional loads. Further detailed review will be required to ensure that all strength and FRL requirements are met.
- Based on the information provided on the available existing structural drawings, the existing footings appear to be undersized for the proposed additional loads. Further detailed geotechnical investigations will be required to determine if higher capacities can be achieved in the foundation material (rock) than that noted on the structural drawings. If higher capacities cannot be achieved, strengthening works will be required for the footings. These details have not been finalised at this time.
- New columns will be required to support the slab extensions. These columns will continue to ground level and will require new footings.

Precinct A – Junior School Admin Building Roof Pavilion

It is proposed to demolish the existing concrete pavilion structure on the roof level of the existing building. It is also proposed to construct a new learning area in the same area. This area will consist of lightweight steel construction supporting a lightweight steel roof. Review of the existing slab supporting the concrete pavilion has not been carried out at this stage, however this will be required to ensure the existing roof slab has sufficient capacity to support the proposed loads.

henry&hymas

Based on the existing loading from the concrete structure, we are of the opinion that any strengthening required will be minor.

Precinct B – Year 8 Centre

It is proposed to construct a new learning area over the existing roof area of the existing building and re-furbish the existing learning area on the same level. A further extension over the existing roof space on the southern side is also proposed.

The existing concrete roof is currently documented as being trafficable and so should have sufficient capacity to support the loading from the proposed learning area. Final confirmation of this will be required, however it is not envisaged that any strengthening will be required in this area.

The new floor extension over the existing roof space will be designed to accommodate the proposed loads. Structure will need to be kept as light as possible to minimize the impact on the existing structure. Investigation and survey of the existing structure will be required to determine the existing framing. The existing structure will then need to be reviewed for the proposed loads.
As can be seen from the drawings, the sewer line runs directly adjacent to the boundary of the proposed development.

Precinct B – Main Entry – Bus Parking Area

It is proposed to develop current landscaped areas in the South-East corner of the school site to accommodate parking area for the school buses. This development will also allow for several staff carparking spaces to be accommodated on a basement level below the bus parking.

This will require some excavation into the existing ground heading towards the existing buildings to the north of the parking area. It is proposed to construct shoring / retaining walls around the north, west and east perimeters of the area to retain the surrounding ground and any potential surcharge from the adjacent building footings. It is envisaged that the retaining walls will consist of reinforced concrete soldier piles at regular spacing with shotcrete infill panels in between.

The suspended slabs will be of reinforced and/or post tensioned concrete construction supported on reinforced concrete columns. The Basement slab will also be of reinforced concrete construction. Columns will be founded on the underlying rock either via pad footings or bored piers.

The above structure will be designed in accordance with the design parameters provided within the Geotechnical Investigation report.

Whilst further investigations and design reviews will be required, we are of the opinion that the proposed development is achievable.

We trust this satisfies your current requirements. Please don't hesitate to contact the undersigned should you wish to discuss anything further.

Yours faithfully,

LAKI REVELLOS
For, and on behalf of,
H & H Consulting Engineers Pty Ltd