Crozier Geotechnical Consultants ABN: 96 113 453 624
Unit 12/ 42-46 Wattle Road Phone: (02) 9939 1882
Brookvale NSW 2100 Fax :(02) 9939 1883
Crozier Geotechnical Consultants division of PJC Geo-Engineering Pty Ltd

REPORT ON GEOTECHNICAL SITE INVESTIGATION

for

NEW RESIDENTIAL SEVEN STOREY DEVELOPMENT

at

18 HOWARD AVENUE, DEE WHY

Prepared For

NMMH Pty. Ltd.

Project: 2014-120.1

May, 2017

Document Revision Record

Issue No	Date	Details of Revisions
0	15th July 2014	Original issue
1	5th May 2017	Additional investigation into water table

5.0 CONCLUSION:

The site investigation identified fill soils to approximately 4.30m underlain by generally clayey soils to 28.82m depth with some bands of medium dense to dense sand. The water table was not intersected to 3.00m depth, the limit of the borehole investigation. Therefore, it is located below this level and as such the level of bulk or detail excavation. As such the development will not impact the water table and no dewatering will be required.

An assessment of pile capacity at various depths was undertaken based on the preliminary investigation results to determine factored load capacities to achieve approximately 10mm elastic settlement. These assessments were undertaken as per the recommendations of AS2159 and were based on the CPT testing and well known correlations. Further geotechnical investigation for this project is recommended to confirm pile design parameters. The further investigations should follow demolition of the existing site structure, and should comprise additional CPT testing if friction piles are to be adopted, or boreholes cored into the bedrock if end bearing piles are to be adopted.

The assessment was undertaken based on the use of CFA/grout injected pile construction methods which are recommended due to the water table and potential for relaxation into open bored piles in this geological environment. All pile footings should be inspected during installation to ensure the expected ground conditions are encountered in all pile footings.

The CPT results indicated layers of clay material which may contain Acid Sulfate or Potential Acid Sulfate Soils whilst the water table will be intersected in deep pile footing excavations. It is therefore recommended that should material below the water table be proposed to be excavated for pile construction then acid sulfate testing should be undertaken as part of the next sequence of the geotechnical investigation to determine whether there is an acid sulfate hazard and if an Acid Sulfate Management Plan is required. Based on the identified site conditions Acid Sulfate Soils are expected at the site.

Based on our investigation the site is considered suitable for the proposed construction works provided that the recommendations outlined in this report are followed.

Ben Taylor
Geotechnical Engineer

Reviewed/Edited By:
Troy Crozier
Principal Engineering Geologist