



RAFELETOS ZANUTTINI

Consulting Engineers

DATE : 14/02/2017
OUR REFERENCE: 75537E
YOUR REFERENCE: ATTIA
LOCATION: LOT 20 ASSISI CLOSE CRANEBROOK

BOREHOLE 3	
<i>Depth mm</i>	<i>Material description</i>
00	Surface level
100	Controlled and compacted fill
200	brown black
300	silty clay materials
400	moist and stiff also crumbly
500	gravel shale fragments
600	---- Refusal hard material ----
700	
800	
900	
1000	
1100	
1200	

Taken : Rear left hand side of proposed residence

BOREHOLE 4	
<i>Depth mm</i>	<i>Material description</i>
00	Surface level
100	
200	
300	
400	
500	
600	---- same as Borehole 3----
700	
800	
900	
1000	
1100	
1200	

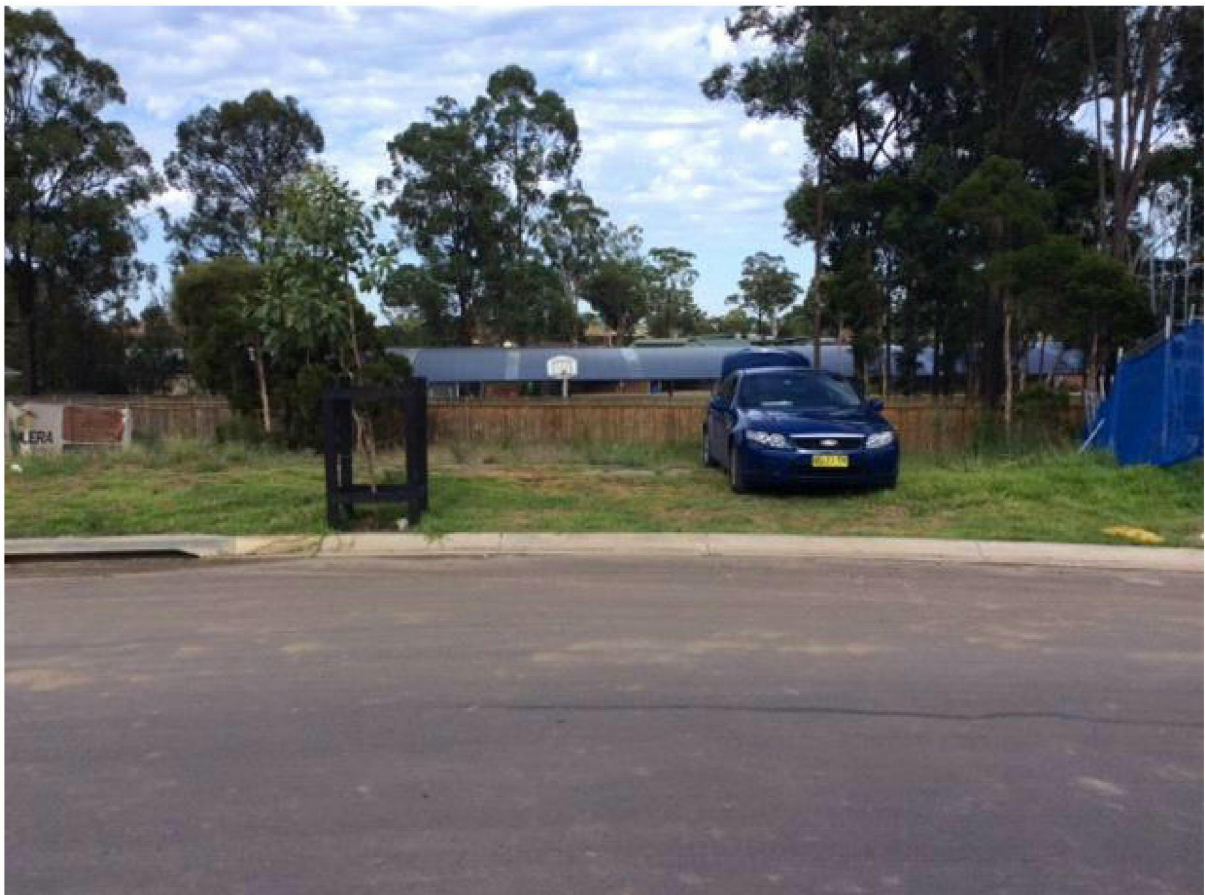
Taken : Rear right hand side of proposed residence



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PROPERTY FEATURES

Property locality :	New subdivision
Existing building :	Previously undeveloped
Building platform :	Not constructed
Exposed rock visible :	Not evident
Signs of soil reactivity :	No significant signs evident
Natural site slope :	Gentle fall
Retaining walls :	No significant retaining walls visible
Environmental exposure :	Not significant
Significant Trees :	No significant trees

WIND CLASSIFICATION

Wind Region :	A
Terrain Category :	TC2.5
Topographic Classification :	T1
Shielding Classification :	Full
Wind Classification :	N2

SITE INVESTIGATION

Fill encountered :	Yes
Soft or colapsing soils :	No
Floating boulders encountered :	No
Presence of bedrock or shale :	No
Seepage evident during borehole:	No
Approximate soil bearing pessure (kPa) :	450

RESULTS AND RECOMMENDATIONS

Approx pier depth (mm) :	1000
Site Classification :	Refer to lab results
Comments :	

FIELD INVESTIGATION:

BOREHOLE 1	
Depth mm	Material description
00	----- Surface level -----
100	Controlled and compacted fill
200	brown black
300	silty clay materials
400	moist and firm
500	gravel shale fragments
600	-----
700	red grey light brown
800	Clayey material
900	dry and firm also crumbly
1000	with shale fragments
1100	
1200	
1300	---- Borehole Discontinued ----
1400	
1500	

Taken : Front left hand side of proposed residence

BOREHOLE 2	
Depth mm	Material description
00	----- Surface level -----
100	
200	
300	
400	
500	
600	---- same as Borehole 1----
700	
800	
900	
1000	
1100	
1200	
1300	
1400	
1500	

Taken : Front right hand side of proposed residence

CERTIFICATION

Engineer John Rafeletos B.E. MIE Aust.



Notations:

- Provide piercing through any uncontrolled fill, founded to natural ground. The extent of piercing shall be established on site.
- Where rock is encountered, the slab and footings are to be founded or pierced to rock. The extent of piercing determined on site.
- Some difficult soil conditions may require the use of helical screw piers or driven piles at the discretion of the engineer.
- This report is based on observations and investigations by Rafeletos Zanuttini Pty Ltd for the purpose of establishing design criteria to be adopted exclusively by Rafeletos Zanuttini Pty Ltd for the design of any future slab and/or footing system.
- This report is to be read in conjunction with any other design documentation and instructions given by Rafeletos Zanuttini
- The site conditions at the time of issuing this report shall be confirmed by the client prior to and during any construction works.
- This report does not include any field or laboratory assessment of the acid sulfate soils or salinity requirements of the site, and is to be investigated by the client if specifically required. However it is advised that certain Sydney councils such as Camden, Fairfield, Wollondilly etc have adopted a council wide acid sulfate soils policy and that all properties within these councils need to be designed and constructed to saline affected requirements unless site specific testing is undertaken and confirms otherwise.
- Deep excavations may encounter bedrock or shale, in such circumstances deeper piers to even bearing may be required.



DATE 21/02/2017
JOB NUMBER 75537E
CLIENT ATTIA
LOCATION LOT 20 ASSISI CLOSE CRANEBROOK

SHRINK SWELL TEST RESULTS

Depth sampled	1.2 m
Hs-max adopted	1.8 m
Encountered bedrock depth (m)	Not encountered
Encountered water table depth (m)	Not encountered
Test Procedure	AS1289 7.1.1
Applied load	25 kPa
Water used	Distilled
Estimated Inert Inclusions	0-10 %
Initial moisture content of soil sample	18.1 %
Final moisture content of saturated test sample	27 %
Shrinkage strain	2 %
Swell strain	1.8 %
Shrink Swell Index	1.6 %
Ys value	44 mm
Site Classification	H1