



Site Classification Report

Client: McDonald Jones Homes

Project Address: Lot 152 #8 Menin Place Milperra NSW



SITE CLASSIFICATION	SOIL REACTIVITY	Job Number	MJ9410
Class P	H1*	Revision	A
		Soil Exposure Class	A1
		Ys Range (mm)	41 - 60
		Yt (mm)	12
*Soil reactivity excludes the condition(s) causing 'Class P'			
WIND RATING - AS4055:2021 N1 (Shielded)		Report Date	21/01/2026
		Drill Date	12/01/2026
		Building Class	1a (Dwelling)
'P Class' Reasons, Trees, Structural Removal			

SITE CONDITIONS AND FEATURES OVERVIEW

Trees Within Influence	Yes	Retaining Walls	No
Trees Recently Removed	No	Services at Proposed Building Pad	Yes
Estate Fill	No	Slope	Slight
Uncontrolled Fill	No	Drainage	Poor
Low Bearing Capacity Soils	No	Rock Near Surface	No
Knock-down / Rebuild	Yes	Marine / Canal Environment	No
Existing Structures	Yes	Sub-Soil Seepage	No

Site Conditions and Features Comments:

Existing House and Shed and Pool on Site. Sewer & Stormwater & Electrical Services are Noted in Proximity of Proposed Building Pad

LIMITATIONS OF ASSESSMENT

Whilst due diligence has been exercised to assess the suitability of the site's ground conditions for the proposed construction, assessment of slope stability, mining subsidence, coastal protection, and other special geotechnical assessments are not included in this commission. A suitable qualified and experienced person should be engaged to undertake an assessment if necessary.

1. INTRODUCTION

This report is based on our field and laboratory test results, site and construction information (if any) supplied by the client. Should proposed construction vary from that advised, this office should be notified as additional testing may be required. It should also be noted that the test results may not be relevant if the location of a proposed structure varies from that originally advised. This report relates to the ground conditions on the property at the time of the site investigation. If advised by the client, this report has considered the proposed site preparation. If unadvised cutting or filling is proposed or carried out, additional testing may be required to reclassify the site as indicated in Clause 2.3.2 (B) and Clause 2.5.3 of AS2870-2011.

This site has been classified in accordance with Section 2 of AS2870-2011. The characteristic surface movement, y_s , has been determined either by shrink and swell tests as specified in AS1289.7.1.1-1992 in accordance with Clause 2.3.2 (i) of AS2870-2011, or by visual-tactile identification of the soil with the assistance of Atterberg Limits in accordance with Clause 2.3.2 (iii) of AS2870-2011.

This investigation report has been prepared based on information provided to our office and collected by our staff. Where applicable, the report has also been prepared in accordance with the criteria outlined in the relevant state policies and guidelines.

This report has been prepared in order that Residential Engineering undertake a footing or slab design on the behalf of and for the client stated on the front page, and their building team. Residential Engineering Consulting Engineers accepts no liability or responsibility whatsoever for the use of this report by other parties without formal written approval of this office.

2. SITE CLASSIFICATION DESCRIPTIONS

(in accordance with Clause 2.1.1, Clause 2.1.3, Table 2.1 and Table 2.3 of AS2870-2011)

- A** Most sand and rock sites with little or no ground movement from moisture changes.
- S** Slightly reactive clay sites, which may experience only slight ground movement from moisture changes. Estimated characteristic surface movement, $0 < y_s \leq 20\text{mm}$.
- M** Moderately reactive clay or silt sites, which may experience moderate ground movement from moisture changes. Estimated characteristic surface movement, $20 < y_s \leq 40\text{mm}$.
- H1** Highly reactive clay sites, which may experience high ground movement from moisture changes. Estimated characteristic surface movement, $40 < y_s \leq 60\text{mm}$.
- H2** Highly reactive clay sites, which may experience very high ground movement from moisture changes. Estimated characteristic surface movement, $60 < y_s \leq 75\text{mm}$.
- E** Extremely reactive sites, which may experience extreme ground movement from moisture changes. Estimated characteristic surface movement, $y_s > 75\text{mm}$.
- P** Particular sites, due to either: low bearing strength, potential excessive foundation settlement, fill, mine subsidence, landslide, collapse activity, coastal erosion, abnormal moisture changes or sites which cannot be classified otherwise.

3. SITE PHOTOGRAPHS



4. LABORATORY TESTING RESULTS AND CHARACTERISTIC SURFACE MOVEMENT

ASSUMED CUT / FILL & SOIL PROFILE DATA		SOIL SAMPLE A	
*Assumed Maximum Cut	0 mm	Liquid Limit (LL)	46 %
*Assumed Maximum Fill	300 mm	Linear Shrinkage (LS)	12.8 %
*Where the above assumptions are found to be inaccurate this office must be advised prior to site start		lps	2.6 %/pF
Depth of Soil Cracking	900 mm (Hc)		
Depth of Soil Suction Change	1800 mm (Hs)		

PREDICTED GROUND MOVEMENT	
Extra Movement Due to Trees	12 mm (Yt)
Characteristic Surface Movement	41 mm (Ys)
<i>Ys does not include movement from trees; see Yt for tree effects.</i>	

SOIL AGGRESSIVENESS TEST RESULTS					
The exposure classification for the concrete has been determined for the onsite soils. The exposure classification is obtained from Tables 5.1 and 5.2 of AS2870-2011. The laboratory electrical conductivity test results have been multiplied by the appropriate factor to convert the results to E _{Ce} .					
Location	Depth(mm)	pH	EC1:5 (Ds/m)	E _{Ce} (Ds/m)	Exposure Class
BH1	400	7.1	0.04	0.32	A1
BH1	0	7	0.05	0.4	A1
The minimum concrete strength and reinforcement cover requirements for the various exposure classifications are given in Tables 5.3 and 5.4 of AS2870-2011.					

5. WIND CLASSIFICATION TO AS4055 - 2021

WIND CLASSIFICATION SUMMARY	
Region	A
Terrain Category	2.5
Topographic Classification	T1
*Shielding Classification	FS
SITE WIND CLASSIFICATION	N1
Ultimate Wind Speed (V _{h,u})	34 m/s
Serviceability Wind Speed (V _{h,s})	26 m/s
<i>*Shielding may be conditional on the surrounding area being developed within a 5 year period</i>	
WINDOW EXPOSURE CONSIDERATIONS	
Notes as per section 1.3.7 of AS 2047: Sites are considered to be exposed where one or more of the following AS4055 conditions are satisfied: 1) Terrain Category of TC2 or less 2) Topographic Classification of T3 or greater 3) Shielding Classification of no shielding (NS)	
EXPOSURE DETERMINATION FOR SITE	(Shielded)

6. SITE CLASSIFICATION NOTES

6.1. Limits of our Investigation

The recommendations made in this report assume that the test results are representative of the overall subsurface conditions. Should excavations reveal variations from the soil conditions indicated in this report, our office should be notified before proceeding as the site classification may need revising and modifications to the design may be required. Also, should we be provided with additional information that affects the site classification, an additional fee may be charged to revise and reissue our report. If any detail of this report is unclear, please contact this office.

6.2. Tree Influence

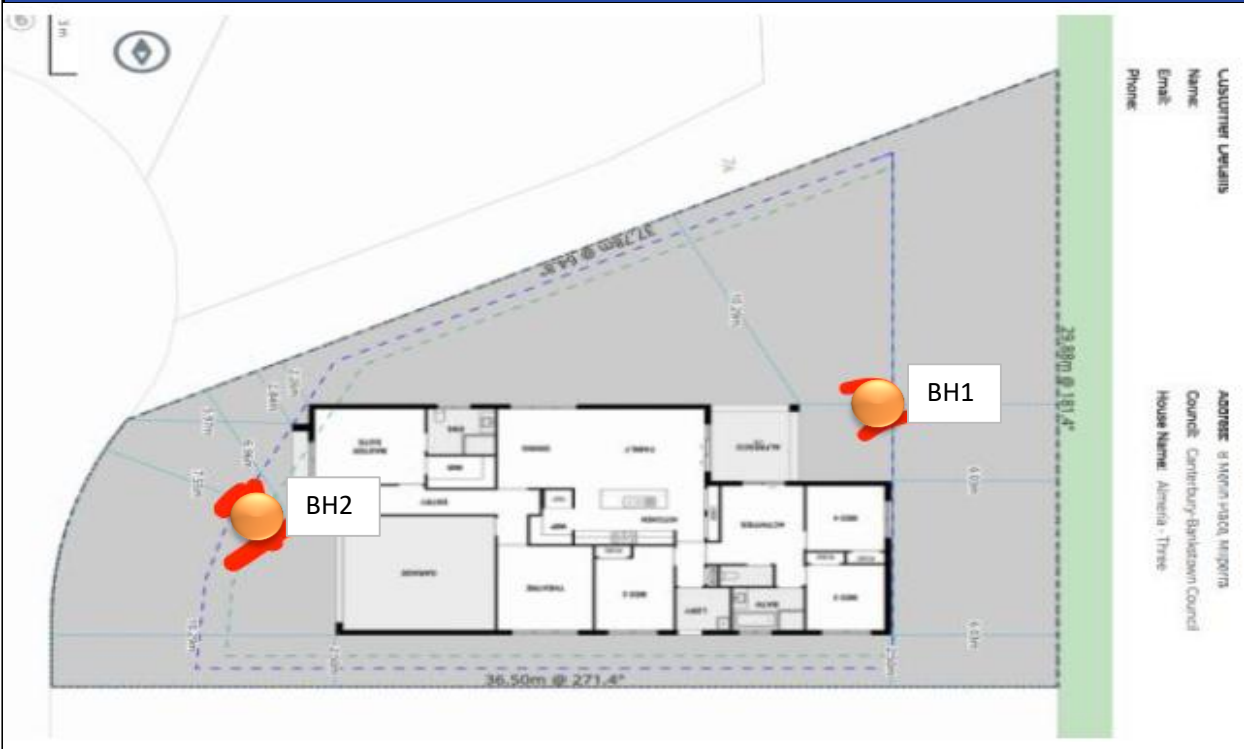
This site has been given a P classification in accordance with Clause 1.3.3, Clause 2.1.3 (e), Appendix H and Appendix CH of AS2870-2011 as our investigation indicates that trees were noted within or adjacent to the footprint of the proposed building. Trees remove moisture from the soil and result in abnormal moisture conditions occurring on site. On removal of these trees, or if they remain in place, damage to a proposed building may occur without additional treatment. The designer is to be informed of the proposed work in order to provide an appropriate design to address the influence of the trees. This may include but is not limited to; provision of piers with a suspended slab solution; stiffening the footing system to take into consideration the total potential movement; provision of a root barrier system acceptable to the designer

6.3. Structure Removal

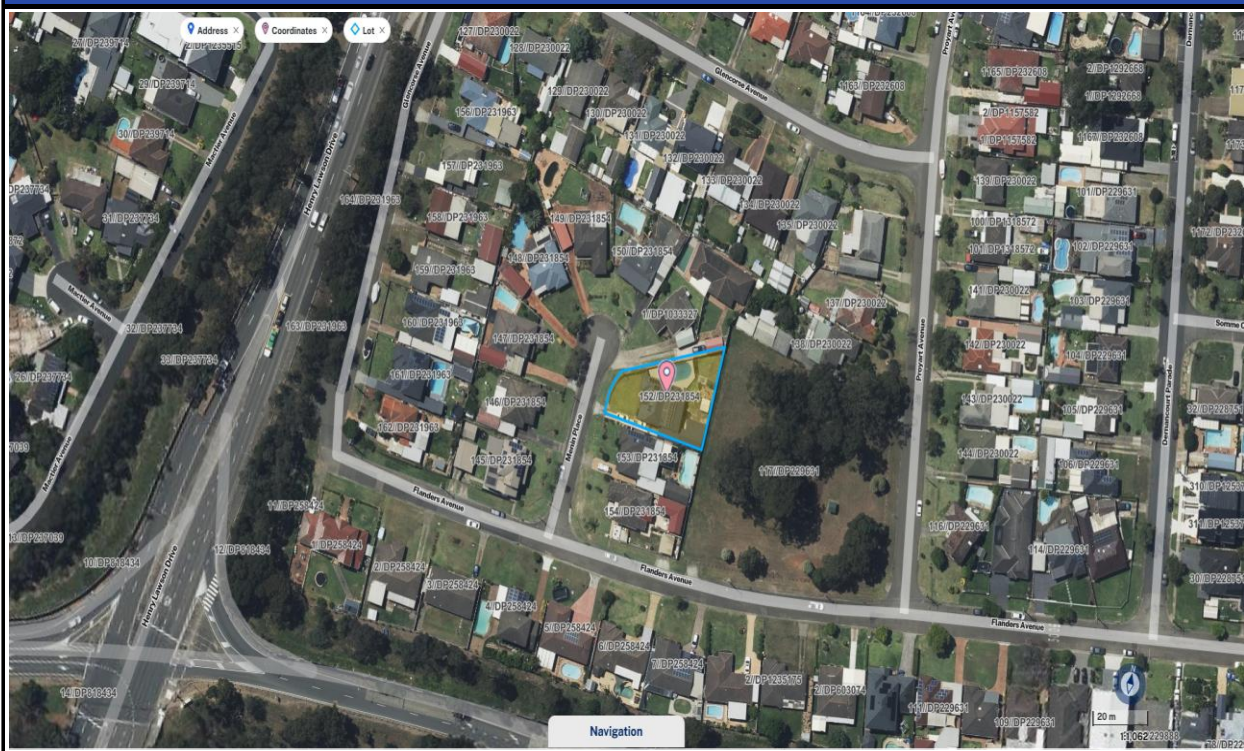
Our site investigation shows that a structure (dwelling or otherwise) has either been recently removed from the site or is currently on site awaiting removal. The removal of the slab and footings of existing structures may result in a change of the moisture condition of the founding soil. The designer is to consider the possibility of abnormal moisture conditions described in Clause 1.3.3 of AS2870-2011 occurring on site. The site shall be given a P classification in accordance with Clause 1.3.3 of AS2870-2011.

7. SITE SKETCH AND MAP REFERENCE

SITE SKETCH



SITE MAP



BORE LOG - BORE HOLE #1						
DEPTH	(m)	PP	qa	DCP	Soil Profile	
0.0				3	TOPSOIL: Silty CLAY With Gravel Stiff Moist (CL) Grey Brown	
				5		
			120	5		
				6	NATURAL: Silty CLAY With Gravel Very Stiff Moist Brown Grey	
				5		
0.5			120	5	Sample A	
				7		
				8		
			180	8	End of Hand Auger	
				8		
1.0				10		
				10		
1.5						
2.0						
2.5						
3.0						
3.5						
4.0						
SAND				SILT & CLAY		
Density Term		Density Index (%)	Approx. DCP Blow Count	Consistency Term	Undrained Shear Strength (kPa)	Approx. DCP Blow Count
Very Loose		<15	< 1	Very Soft	0 - 12	< 1
Loose		15 - 35	1 - 3	Soft	12 - 25	1 - 2
Medium Dense		35 - 65	3 - 9	Firm	25 - 50	2 - 3
Dense		65 - 85	9 - 15	Stiff	50 - 100	3 - 5
Very Dense		> 85	> 15	Very Stiff	100 - 200	5 - 8
				Hard	> 200	> 8
PP - Pocket Penetrometer, qa - Allowable bearing pressure (kPa), DCP - Dynamic Cone Penetrometer (blows/100mm), UTP - Unable to penetrate,						

BORE LOG - BORE HOLE #2					
DEPTH	(m)	PP	qa	DCP	Soil Profile
0.0				3	TOPSOIL: Silty CLAY With Gravel Stiff Moist (CL) Grey Brown
				3	
			100	4	
				5	NATURAL: Silty CLAY With Gravel Very Stiff Moist Brown Grey
				5	
0.5			120	5	
				6	
				7	
			180	8	End of Hand Auger
				8	
1.0				8	
			200	12	
				12	
1.5					
2.0					
2.5					
3.0					
3.5					
4.0					
SAND				SILT & CLAY	
Density Term		Density Index (%)		Approx. DCP Blow Count	
Very Loose		<15		< 1	
Loose		15 - 35		1 - 3	
Medium Dense		35 - 65		3 - 9	
Dense		65 - 85		9 - 15	
Very Dense		> 85		> 15	
				</	

GENERAL NOTES AND SITE MAINTENANCE

7.1. Curing Concrete

For satisfactory results, concrete must be cured for at least seven days. Curing may be achieved by keeping the concrete moist, by applying a curing membrane, or by covering the concrete with a moisture barrier. Many builders find that the most satisfactory way to cure a slab is to cover it with a sheet of polyethylene as soon as possible after finishing. If the slab is moist when covered and the polythene is held securely onto the concrete, this system provides satisfactory curing of the concrete.

7.2. Surface Drainage

During any proposed construction surface drainage water shall be diverted away from footings to a lawful point of discharge. The finished surface of any ground, including pathways and driveways, shall be graded away from any footings, slab or basement retaining wall. This fall is to be at least 50mm over the first metre around the dwelling. The ground shall be graded around such that any surface water will drain away from the building and to prevent any ponding. Such measures to control surface drainage are to be established before the commencement of any ground works and improved further post construction.

7.3. Development Application and Decision Notices

For work requiring building approval, the Development Application Decision Notice, or Form 6, issued by the Council or Building Certifier must be forwarded to us prior to arranging any inspections with this office.

7.4. Site Vegetation

The long-term performance of the house footings is dependent on factors such as site drainage, vegetation and watering of areas adjacent to the house. Trees should be kept an appropriate distance from the house in accordance with the following recommendations:

- 75% of the mature tree height for class M sites
- 100% of the mature tree height for class H sites
- 150% of the mature tree height for class E sites

Watering of lawns and gardens should be consistent. Over watering can damage footings. Equally footings may be damaged by prolonged periods of neglect after years of careful watering. Leaking taps and pipes, and blocked drains should be repaired promptly. Prolonged neglect can lead to damaged footings.

7.5. Design Performance & Homeowners Responsibilities

The owner's attention is drawn to Appendix B 'Performance Criteria and Foundation Maintenance' and Appendix C 'Classification of damage due to Foundation Movements' of AS2870-1996. We also direct the owner to the CSIRO publication Building Technology File 18-2011 'Foundation Maintenance and Footing Performance: A Homeowner's Guide'. Copies of this publication are available from CSIRO Publishing on Ph: 1300-788-000 or at <http://www.publish.csiro.au/book/7076>. This report may be rendered invalid if the property is not maintained as recommended in this publication.

For and on behalf of Residential Engineering



Gervase Purich

FIEAust. CPEng, NER, BPB, RPEQ 11656

ISSUED DOCUMENT LEDGER				
Job #	Rev	Authored	Checked	Authorised
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Further reading refer to links below:

<http://www.publish.csiro.au/book/3621>

<http://www.publish.csiro.au/book/3661>