



Job No: 8599/94
Our Ref: 8599/94-AA-R1
14 September 2022

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184 Adderley Street
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Email: SimpsonW@daracon.com.au

Attention: Mr S Wong

Dear Sir

re: **Newpark – Precinct 7 – Stage 7C**
Abell Road, Marsden Park
Site Classification Report

Please find herewith our site classification report for the proposed dwellings to be located at the above subdivision. A total of two hundred and six (242) lots are covered in this report (Lots 7701 to 7942).

This report contains information on sub-surface conditions encountered at the site, together with site classification of the proposed lots in accordance with Australian Standard AS2870-2011 "Residential slabs & footings".

If you have any questions, please do not hesitate to contact the undersigned.

Yours faithfully
GEOTECH TESTING PTY LTD

A handwritten signature in black ink, appearing to read "Emged Rizkalla", is written over a thin horizontal line.

EMGED RIZKALLA
Director

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1.0 INTRODUCTION

This report provides results of a site classification investigation for the proposed dwellings to be located at Abell Road, Marsden Park (Newpark Precinct 7C). A total of two hundred and six (242) lots are covered in this report (Lots 7701 to 7942).

Site classification in accordance with AS2870-2011 is only applicable for design of footing systems for a single dwelling, house, townhouse or similar structure that would be detached or separated by a party wall or common wall including buildings classified as Class 1 and Class 10a in the Building Code of Australia (BCA). AS2870 is not suitable for dwellings situated vertically above or below another dwelling. Therefore, a geotechnical investigation would be required for other dwellings to be classified in accordance with the BCA.

It is understood that the proposed dwellings are to be of brick veneer construction and wall loadings are expected to be in the range of 15kN/m to 50kN/m. The maximum working load (safe bearing pressure) would be in the order of 50kPa for ground supported floor slabs and 100kPa for strip and pad footings.

2.0 FIELD WORK

Field work for the investigation was carried out under the full time supervision of a Geotechnical Engineer on 15th to the 22nd August 2022 and consisted of excavation of fifty six (56) test pits (TP1 to TP56) to depths of the order of 1.5m using a 5 tonne excavator. Test pits at shallow depths were terminated due to refusal on bedrock. The locations of the test pits are shown on the attached Drawing No 8599/94-AA1 in Appendix A. A summary of the field data obtained is presented in Appendix A.

3.0 SITE CONDITIONS

3.1 Surface Conditions

The site (Precinct 7C) is irregular in shape and located within the Newpark subdivision. The site is bound by Stage 7A to the east; air services land to the south; Stage 7D to the west and Stage 7B to the north. At the time of investigation, earthworks for the lots had been completed and the construction of internal roads was underway. The topography of the site is generally flat with a mild slope in the northern direction.

3.2 Sub-Surface Conditions

Sub-surface conditions encountered in the test pits are detailed in the attached Table A and summarised below in Table 1.

Table 1: Sub-surface conditions

Test Pit	Termination Depth (m)	Topsoil (m)	Fill (m)	Natural (m)	Bedrock (m)
TP1	1.5	NE	NE	0.0-1.5	NE
TP2	1.5	NE	NE	0.0-1.5	NE
TP3	1.5	NE	NE	0.0-1.5	NE
TP4	1.5	NE	NE	0.0-1.5	NE
TP5	1.5	0.0-0.3	NE	0.3-1.5	NE
TP6	1.5	NE	NE	0.0-1.5	NE

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Test Pit	Termination Depth (m)	Topsoil (m)	Fill (m)	Natural (m)	Bedrock (m)
TP7	1.5	NE	NE	0.0-1.5	NE
TP8	1.5	NE	NE	0.0-1.5	NE
TP9	1.5	NE	NE	0.0-1.5	NE
TP10	1.5	NE	NE	0.0-1.5	NE
TP11	1.5	NE	NE	0.0-1.5	NE
TP12	1.3	NE	NE	0.0-1.3	1.3
TP13	1.5	NE	NE	0.0-1.5	NE
TP14	1.5	NE	NE	0.0-1.5	NE
TP15	1.5	NE	NE	0.0-1.5	NE
TP16	1.5	0.0-0.2	NE	0.2-1.5	NE
TP17	0.7	0.0-0.1	NE	0.1-0.7	0.7
TP18	0.6	0.0-0.3	NE	NE	0.3-0.6
TP19	1.5	NE	NE	0.0-1.5	NE
TP20	1.5	0.0-0.2	NE	0.2-1.5	NE
TP21	0.6	NE	NE	0.0-0.4	0.4-0.6
TP22	1.5	NE	NE	0.0-1.5	NE
TP23	1.5	NE	NE	0.0-1.5	NE
TP24	1.5	NE	NE	0.0-1.5	NE
TP25	0.5	NE	NE	NE	0.0-0.5
TP26	1.5	NE	NE	0.0-1.5	NE
TP27	1.2	NE	NE	0.0-1.0	1.0-1.2
TP28	1.5	NE	NE	0.0-0.8	0.8-1.5
TP29	1.5	NE	NE	0.0-1.5	NE
TP30	1.5	NE	NE	0.0-0.9	0.9-1.1
TP31	1.1	NE	NE	0.0-1.0	1.1
TP32	1.5	0.0-0.3	NE	0.3-1.5	NE
TP33	1.5	NE	NE	0.0-1.5	NE
TP34	1.0	NE	NE	0.0-1.0	1.0
TP35	1.5	NE	NE	0.0-1.5	NE
TP36	1.5	NE	NE	0.0-1.5	NE
TP37	1.1	NE	NE	0.0-1.1	1.1
TP38	1.5	0.0-0.2	NE	0.2-1.5	NE
TP39	0.5	0.0-0.3	NE	0.3-0.5	0.5
TP40	1.5	0.0-0.3	NE	0.3-1.5	NE
TP41	1.5	0.0-0.2	NE	0.2-1.5	NE
TP42	1.4	0.0-0.3	NE	0.3-1.2	1.2-1.4
TP43	1.5	NE	NE	0.0-1.5	NE
TP44	1.5	NE	NE	0.0-1.5	NE
TP45	1.5	0.0-0.2	NE	0.2-1.5	NE

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Test Pit	Termination Depth (m)	Topsoil (m)	Fill (m)	Natural (m)	Bedrock (m)
TP46	1.5	NE	NE	0.0-1.5	NE
TP47	1.5	0.0-0.2	NE	0.2-1.5	NE
TP48	1.5	0.0-0.2	NE	0.2-0.6	0.6-0.8
TP49	1.4	0.0-0.3	NE	0.3-1.2	1.2-1.4
TP50	0.5	NE	NE	0.0-0.3	0.3-0.5
TP51	1.5	NE	NE	0.0-1.3	1.3-1.5
TP52	1.2	NE	NE	0.0-1.0	1.0-1.2
TP53	1.2	NE	NE	0.0-1.0	1.0-1.2
TP54	0.7	NE	NE	0.0-0.2	0.2-0.7
TP55	0.7	NE	NE	0.0-0.6	0.6-0.7
TP56	1.5	NE	NE	0.0-0.4	0.4-0.6

NE: Not encountered to the termination depth

The test pit investigation revealed the following generalised sub-surface profile:

Topsoil	<p>Silty Clay, high plasticity, dark grey, traces of fine to coarse gravels and rootlets</p> <p>Silty Clay, medium to high plasticity, dark grey, traces of fine to coarse gravels and grass roots</p> <p>Silty Clay, low to medium plasticity, dark grey-black, traces of fine to coarse gravels and grass roots</p> <p>Silty Clay, medium to high plasticity, brown, traces of fine to coarse gravels and rootlets</p> <p>Silty Clay, low to medium plasticity, brown-black, traces of gravel and root fibres,</p>
Natural	<p>Silty CLAY, high plasticity, brown mottled grey, traces of cobbles and gravel</p> <p>Silty CLAY, high plasticity, brown</p> <p>Silty CLAY, low to medium plasticity, brown mottled grey, traces of sand</p> <p>Silty CLAY, medium to high plasticity, brown, traces of gravels</p> <p>Silty CLAY, low to medium plasticity, grey mottled yellow, traces of sand</p> <p>Silty CLAY, medium to high plasticity, brown-black, traces of gravels and cobbles</p> <p>Silty CLAY, low to medium plasticity, brown-black, traces of sand and fine to coarse gravels</p> <p>Silty CLAY, low to medium plasticity, grey mottled brown, traces of fine to coarse gravels</p> <p>Silty CLAY, medium to high plasticity, dark grey, traces of fine to coarse gravels</p> <p>Silty CLAY, low to medium plasticity, grey</p> <p>Silty CLAY, low to medium plasticity, grey, traces of fine to coarse gravels (ironstone)</p> <p>Silty CLAY, low plasticity, grey mottled brown</p> <p>Shaley CLAY, low plasticity, grey mottled brown, with fine to coarse sandstone</p> <p>Sandy CLAY, low to medium plasticity, grey mottled brown</p> <p>Sandy CLAY, low to medium plasticity, brown mottled grey ,with fine to coarse sandstone</p> <p>Gravelly SAND, fine to coarse grained, brown, fine to coarse sub-angular gravels</p> <p>Sandy CLAY, low to medium plasticity, grey, fine to medium grained</p>

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Bedrock	<p>SANDSTONE, fine to coarse grained, grey, slightly weathered, high strength, with iron-staining</p> <p>SILTSTONE/SANDSTONE, fine to coarse grained, light grey, distinctly weathered, low strength</p> <p>SANDSTONE, fine to coarse grained, brown, distinctly weathered, medium strength</p> <p>IRONSTONE/SANDSTONE, brown, distinctly weathered, medium strength</p> <p>SANDSTONE, fine to coarse grained, brown, distinctly weathered, medium strength, with iron-staining</p> <p>SANDSTONE, fine to coarse grained, grey, highly to extremely weathered, low strength</p> <p>SANDSTONE, fine to coarse grained, brown, with iron-staining, highly to extremely weathered, medium strength</p> <p>SANDSTONE, fine to coarse grained, brown mottled grey, extremely weathered, low strength</p>
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Groundwater was not observed in the test pits during the short time that they remained open. It must be noted that fluctuations in the level of groundwater might occur due to variations in rainfall, temperature and/or other factors.

4.0 LABORATORY TESTING

A total of twenty (20) undisturbed U₅₀ and one Atterberg limit samples were recovered from the site. These samples were tested to determine shrink/swell index values. The tests were conducted as per relevant Australian Standards and the results are summarised below and detailed in the attached test certificates.

Table 2: Summary of Test Results

Test Pit	Depth (m)	Material Description	Liquid Limit (%)	Plasticity Index (%)	Linear Shrinkage (%)	Shrink/Swell Index (%/pF)
TP2	0.6-1.0	Silty CLAY, medium to high plasticity, brown	-	-	-	1.2
TP3	1.1-1.4	Silty CLAY, low to medium plasticity, grey mottled yellow, traces of sand	-	-	-	3.3
TP8	1.0-1.3	Silty CLAY, low to medium plasticity, brown-grey, trace of fine to coarse gravels	39	19	N/A	-
TP9	0.7-1.0	Silty CLAY, low to medium plasticity, grey mottled brown, traces of fine to coarse gravels	-	-	-	1.7
TP12	0.6-0.9	Silty CLAY, medium to high plasticity, brown mottled grey, traces of fine to coarse gravels	-	-	-	0.8
TP13	0.4-0.7	Silty CLAY, low to medium plasticity, grey	-	-	-	3.3
TP19	0.3-0.6	Silty CLAY, low to medium plasticity, mottled grey brown, traces of fine to coarse gravels	-	-	-	1.5

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Test Pit	Depth (m)	Material Description	Liquid Limit (%)	Plasticity Index (%)	Linear Shrinkage (%)	Shrink/Swell Index (%/pF)
TP23	0.4-0.7	Silty CLAY, medium to high plasticity, brown mottled grey, traces of fine to coarse sub-rounded gravels	-	-	-	4.9
TP24	0.7-1.0	Silty CLAY, low to medium plasticity, mottled yellow grey, traces of fine to coarse sand	-	-	-	1.8
TP29	0.8-1.1	Silty CLAY, low to medium plasticity, grey mottled brown, traces of sand,	-	-	-	0.6
TP31	0.2-0.5	Sandy CLAY, low to medium plasticity, grey mottled brown	-	-	-	0.6
TP32	0.3-0.6	Sandy CLAY, low to medium plasticity, grey brown, traces of fine to coarse gravels	-	-	-	1.7
TP35	0.6-0.9	Silty CLAY, low to medium plasticity, grey mottled brown, with fine to medium grained sand and traces of fine to coarse gravels	-	-	-	0.5
TP37	0.8-0.8	Silty CLAY, high plasticity, grey mottled brown	-	-	-	1.4
TP40	1.1-1.4	Sandy CLAY, low to medium plasticity, grey mottled brown, fine to coarse grained, traces of fine to coarse gravels	-	-	-	0.6
TP43	0.5-0.8	Silty CLAY, medium to high plasticity, mottled grey brown, traces of fine grained sand	-	-	-	1.3
TP44	0.6-0.9	Silty CLAY, medium to high plasticity, mottled brown-grey, traces of fine to coarse gravels and sand	-	-	-	0.7
TP45	0.8-1.1	Silty CLAY, high plasticity, mottled brown-grey, traces of sand and gravels	-	-	-	1.6
TP46	1.0-1.3	Silty CLAY, high plasticity, mottled grey brown	-	-	-	2.0
TP51	0.6-0.9	Silty CLAY, high plasticity, mottled brown grey	-	-	-	1.4
TP53	0.4-0.7	Silty CLAY, medium to high plasticity, grey mottled brown, traces of fine to coarse gravels and sand	-	-	-	2.2

N/A: Not able to be determined

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5.0 DISCUSSION & RECOMMENDATIONS

5.1 Assessment of Fill

Fill was encountered in a number of test pits excavated across the site. It should be noted that a number of field density tests were conducted by Geotech Testing Pty Ltd during the fill placement and the results are provided in our summary report (Our Ref: 8599/66-AA dated 19th of August 2022). Based on our inspection of the fill during the investigation and the above field density tests results, it is our assessment that the fill is "Controlled Fill".

5.2 Site Classification

Based on the field and laboratory results, the site classification to AS2870-2011 "Residential slabs & footings", for the proposed lots are summarised in Appendix B of this report.

It is recommended that footings for the proposed dwellings are founded on the same stratum, below any topsoil or deleterious material, to minimise the potential for differential movement.

The above recommendations are applicable to the Lots at the date of conducting the investigation, being the 15th to the 22nd August 2022 and are made on the following assumptions:

1. The construction requirements of AS2870-2011 must be followed.
2. The recommendations for site maintenance set out in Appendix B of AS2870 are followed.
3. The performance expectations set out in Appendix C of AS2870 are acceptable.

It is recommended that house owners are made aware of the recommendations given by the CSIRO publication, "Guide to Home Owners on Foundation Maintenance and Footing Performance".

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APPENDIX A

TABLE A SUMMARY OF TEST PITS

**DRAWING NO 8599/94-AA1
(*Test Pit Location Plan*)**

TABLE A

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP1	0.0-0.5		(CH) Silty CLAY, high plasticity, brown mottled grey, traces of cobbles and gravel, M≈PL, F
	0.5-1.3	0.8-1.0 (DS)	(CH) Silty CLAY, high plasticity, brown, M≈PL, St
	1.3-1.5	1.3-1.5 (DS)	Silty CLAY, low to medium plasticity, brown mottled grey, traces of sand, M≈PL, VSt
TP2	0.0-0.4	0.2-0.4 (DS)	Silty CLAY, medium to high plasticity, brown, traces of gravels and root fibres, M≈PL, F
	0.4-0.8	0.6-1.0 (U ₅₀)	Silty CLAY, medium to high plasticity, brown, M≈PL, St
	0.8-1.5	1.0-1.2 (DS)	Silty CLAY, low to medium plasticity, brown mottled grey, M≈PL, VSt
TP3	0.0-0.3		Silty CLAY, high plasticity, brown, traces of medium to coarse gravels, M<PL, F
	0.3-1.0	0.4-0.6 (DS)	Silty CLAY, medium to high plasticity, grey mottled yellow, M≈PL, St
	1.0-1.5	1.1-1.4 (U ₅₀)	Silty CLAY, low to medium plasticity, grey mottled yellow, traces of sand, M≈PL, St
TP4	0.0-0.6	0.4-0.6 (DS)	Silty CLAY, medium to high plasticity, brown-black, traces of gravels and cobbles, M>PL, St
	0.6-1.5	1.0-1.2 (DS)	Silty CLAY, low to medium plasticity, grey mottled brown, traces of fine to coarse gravels, M>PL, VSt
TP5	0.0-0.3		TOPSOIL: Silty Clay, medium to high plasticity, brown black, traces of sand and root fibres, M>PL, F
	0.3-1.5	0.5-0.8 (DS) 1.3-1.5 (DS)	Silty CLAY, low to medium plasticity, grey mottled brown, M≈PL, St
TP6	0.0-0.5		Silty CLAY, medium to high plasticity, brown, traces of fine to coarse gravels, M>PL, St
	0.5-0.7	0.5-0.7 (DS)	Silty CLAY, low to medium plasticity, brown-black, traces of sand and fine to coarse gravels, M>PL, F
	0.7-0.9	0.7-0.9 (DS)	Silty SAND, fine to coarse grained, black-brown, M>PL, F
	0.9-1.5		Silty CLAY, medium to high plasticity, mottled grey-brown, M>PL, St

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP7	0.0-0.5	0.3-0.5 (DS)	Silty CLAY, medium to high plasticity, grey mottled brown, traces of fine to coarse gravels and cobbles, M>PL, F
	0.5-1.5	1.0-1.2 (DS)	Silty CLAY, medium to high plasticity, brown-black, traces of fine to coarse gravels and cobbles, M<PL, St
TP8	0.0-0.5		Silty CLAY, medium to high plasticity, mottled grey-brown, traces of fine to coarse gravels and cobbles, M<PL, F
	0.5-0.9	0.5-0.9 (DS)	Silty CLAY, medium to high plasticity, brown mottled grey, traces of fine to coarse gravels and cobbles, M>PL, St
	0.9-1.1	0.9-1.1 (DS)	Silty CLAY, low to medium plasticity, brown-grey, trace of fine to coarse gravels, M<PL, St
	1.1-1.5	1.0-1.3 (U ₅₀)	
TP9	0.0-0.3		Silty CLAY, medium to high plasticity, dark grey, traces of fine to coarse gravels, M<PL, St
	0.3-1.1	0.3-0.6 (DS) 0.7-1.0 (U ₅₀)	Silty CLAY, low to medium plasticity, grey mottled brown, traces of fine to coarse gravels, M≈PL, St
	1.1-1.5	1.1-1.3 (DS)	Silty CLAY, medium to high plasticity, brown, traces of fine to coarse gravels, M≈PL, St
TP10	0.0-0.3		Silty CLAY, medium to high plasticity, dark grey, traces of fine to coarse gravels, M<PL, F
	0.3-0.7		Silty CLAY, low to medium plasticity, grey mottled brown, traces of fine to coarse gravels, M≈PL, St
	0.7-1.1	0.7-0.9 (DS)	Silty CLAY, medium to high plasticity, brown, traces of fine to coarse gravels, cobbles and boulders, M≈PL, St
	1.1-1.5	1.2-1.4 (DS)	Silty CLAY, medium to high plasticity, brown mottled grey, traces of fine to coarse gravels, M≈PL, St
TP11	0.0-0.3		Silty CLAY, medium to high plasticity, dark grey, traces of fine to coarse gravels, M<PL, F
	0.3-0.7	0.4-0.7 (DS)	Silty CLAY, low to medium plasticity, brown mottled grey, traces of fine to coarse gravels, M≈PL, St
	0.7-1.5	1.0-1.2 (DS)	Silty CLAY, low plasticity, grey mottled brown, traces of fine to coarse gravels, M≈PL, VSt

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP12	0.0-0.3		Silty CLAY, medium to high plasticity, dark grey, traces of fine to coarse gravels, M<PL, F
	0.3-1.0	0.5-0.8 (DS) 0.6-0.9 (U ₅₀)	Silty CLAY, medium to high plasticity, brown mottled grey, traces of fine to coarse gravels, M≈PL, St
	1.0-1.3		Silty CLAY, low to medium plasticity, grey mottled brown, with fine to coarse gravels, M≈PL, St
	1.3 Refusal		SILTSTONE/SANDSTONE, fine to coarse grained, light grey, distinctly weathered, low strength
TP13	0.0-0.7	0.2-0.4 (DS) 0.4-0.7 (U ₅₀)	Silty CLAY, low to medium plasticity, grey, M>PL, St
	0.7-1.5	1.2-1.4 (DS)	Silty CLAY, low plasticity, grey mottled brown, traces of fine to coarse gravels (ironstone)
TP14	0.0-0.3		Silty CLAY, low to medium plasticity, grey mottled brown, traces of gravel, MOPL, St
	0.3-1.5	0.4-0.6 (DS) 0.8-1.0 (DS)	Silty CLAY, low to medium plasticity, grey, traces of fine to coarse gravels (ironstone), M>PL, VSt
TP15	0.0-1.5	0.3-0.5 (DS) 1.0-1.2 (DS)	Silty CLAY, low to medium plasticity, grey mottled brown, traces of fine to coarse ironstone, M>PL, St
TP16	0.0-0.2		TOPSOIL: Silty Clay, high plasticity, dark grey, traces of fine to coarse gravels and rootlets, M≈PL, VSt
	0.2-1.2	0.6-0.8 (DS)	Silty CLAY, low to medium plasticity, mottled grey brown, with fine to coarse gravels and cobbles, M>PL, St
	1.2-1.5	1.2-1.4 (DS)	Sandy CLAY, low to medium plasticity, grey mottled brown, with fine to coarse sandstone, M>PL, VSt
TP17	0.0-0.1		TOPSOIL: Silty Clay, medium to high plasticity, dark grey, traces of fine to coarse gravels and grass roots, M≈PL, F
	0.1-0.7	0.2-0.4 (DS)	Sandy CLAY, low to medium plasticity, mottled grey brown, fine to coarse grained, traces of fine to coarse sandstone, M>PL, St
	0.7 Refusal		SANDSTONE, fine to coarse grained, grey, slightly weathered, high strength, with ironstaining

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP18	0.0-0.3		TOPSOIL: Silty CLAY, medium to high plasticity, dark grey, traces of fine to coarse gravels and grass roots
	0.3-0.6	0.3-0.6 (DS)	SANDSTONE, fine to coarse grained, brown, distinctly weathered, medium strength
	0.6 Refusal		
TP19	0.0-0.9	0.2-0.4 (DS) 0.3-0.6 (U ₅₀)	Silty CLAY, low to medium plasticity, mottled grey brown, traces of fine to coarse gravels, M≈PL, VSt
	0.9-1.5	1.2-1.4 (DS)	Silty CLAY, low plasticity, grey mottled brown, M≈PL, VSt
TP20	0.0-0.2		TOPSOIL: Silty Clay, low to medium plasticity, dark grey-black, traces of fine to coarse gravels and grass roots, M>PL, F
	0.2-1.5	0.8-1.0 (DS) 1.3-1.5 (DS)	Silty CLAY, medium to high plasticity, mottled brown grey, with cobbles and gravels
TP21	0.0-0.4	0.2-0.4 (DS)	Silty CLAY, medium to high plasticity, brown mottled grey, traces of fine to coarse gravels, M≈PL, St
	0.4-0.6		IRONSTONE/SANDSTONE, brown, distinctly weathered, medium strength
	0.6 Refusal		
TP22	0.0-0.3	0.2-0.4 (DS)	Silty CLAY, medium to high plasticity, mottled grey brown, traces of sand and fine to coarse gravels, M≈PL, St
	0.3-1.5	1.0-1.2 (DS)	Silty CLAY, medium to high plasticity, mottled grey brown, with fine to coarse sub-rounded gravels, traces of sand, M≈PL, VSt
TP23	0.0-0.5	0.3-0.5 (DS) 0.4-0.7 (U ₅₀)	Silty CLAY, medium to high plasticity, brown mottled grey, traces of fine to coarse sub-rounded gravels, M>PL, St
	0.5-1.5	1.2-1.4 (DS)	Silty CLAY, low to medium plasticity, grey mottled brown, traces of fine to medium gravels, M≈PL, VSt

TABLE A

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP24	0.0-0.4	0.2-0.4 (DS)	Silty CLAY, low to medium plasticity, mottled yellow grey, traces of fine to coarse gravel and sand, M≈PL, VSt
	0.4-1.1	0.7-1.0 (U ₅₀)	Silty CLAY, low to medium plasticity, mottled yellow grey, traces of fine to coarse sand, M≈PL, St
	1.1-1.5	1.1-1.4 (DS)	Silty CLAY, low to medium plasticity, mottled grey yellow, with fine to coarse sub angular gravels, cobbles and sand, M>PL, VSt
TP25	0.0-0.5	0.1-0.4 (DS)	IRONSTONE and SANDSTONE, fine to coarse grained, grey brown, distinctly weathered, low strength, with clay
	0.5 Refusal		
TP26	0.0-0.4	0.2-0.4 (DS)	Sandy CLAY, low to medium plasticity, mottled grey yellow, fine to coarse grained, traces of fine to coarse gravels, M>PL, St
	0.4-1.5	0.9-1.1 (DS)	Sandy CLAY, low to medium plasticity, brown mottled grey, with fine to coarse sub angular gravels, M≈PL, VSt
TP27	0.0-0.4	0.3-0.5 (DS)	Silty CLAY, low to medium plasticity, mottled grey brown, traces of sand, M>PL, St
	0.4-1.0	0.8-1.0 (DS)	Sandy CLAY, low to medium plasticity, mottled grey brown, fine to coarse grained, traces of fine to coarse gravels, M≈PL, VSt
	1.0-1.2		SANDSTONE/IRONSTONE, fine to coarse grained, brown, distinctly weathered, medium strength
TP28	0.0-0.8	0.5-0.7 (DS)	Silty CLAY, medium to high plasticity, grey mottled brown, with cobbles, gravels and sand, M≈PL, VSt
	0.8-1.2	1.0-1.2 (DS)	SANDSTONE, fine grained, brown-grey, extremely weathered, low strength, with ironstaining
	1.2-1.5		Shaley CLAY, low plasticity, grey mottled brown, with fine to coarse sandstone
TP29	0.0-0.5	0.2-0.4 (DS)	Sandy CLAY, medium to high plasticity, brown mottled grey, fine to coarse grained, traces of fine to coarse gravels, M>PL, St
	0.5-1.5	0.8-1.0 (U ₅₀) 1.3-1.5 (DS)	Silty CLAY, low to medium plasticity, grey mottled brown, traces of sand, M≈PL, VSt

TABLE A

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP30	0.0-0.9	0.8-1.0 (DS)	Sandy CLAY, low to medium plasticity, brown mottled grey, fine to coarse grained, with fine to coarse gravels and cobbles, M≈PL, VSt
	0.9-1.1		SANDSTONE, fine to coarse grained, brown, distinctly weathered, medium strength, with ironstaining
TP31	0.0-0.4	0.1-0.3 (DS) 0.2-0.5 (U ₅₀)	Sandy CLAY, low to medium plasticity, grey mottled brown, M>PL, St
	0.4-1.0		Sandy CLAY, low to medium plasticity, brown mottled grey, with fine to coarse sandstone, M≈PL, VSt
	1.0 Refusal		SANDSTONE, fine to coarse grained, brown, distinctly weathered, medium strength, with ironstaining
TP32	0.0-0.3	0.2-0.3 (DS)	TOPSOIL: Silty Clay, medium to high plasticity, brown, traces of fine to coarse gravels and rootlets, M≈PL, S
	0.3-1.5	0.3-0.6 (U ₅₀) 1.0-1.2 (DS)	Sandy CLAY, low to medium plasticity, grey brown, traces of fine to coarse gravels, M>PL, St
TP33	0.0-0.3	0.1-0.3 (DS)	Gravelly SAND, fine to coarse grained, brown, fine to coarse sub-angular gravels, M>PL H
	0.3-1.5	0.9-1.1 (DS)	Silty CLAY, medium to high plasticity, grey mottled brown, traces of sand and gravels, M>PL, St
TP34	0.0-0.3	0.0-0.3 (DS)	Sandy CLAY, low to medium plasticity, grey, fine to medium grained, M>PL, S
	0.3-1.0	0.8-1.0 (DS)	Silty CLAY, medium to high plasticity, brown mottled grey, traces of sand, extremely weathered fine to coarse sandstone, M>PL, VSt
	1.0 Refusal		
TP35	0.0-0.4		Silty CLAY, low to medium plasticity, grey mottled brown, with fine to medium grained sand, M>PL, F
	0.4-1.5	0.4-0.6 (DS) 0.6-0.9 (U ₅₀) 1.2-1.4 (DS)	Silty CLAY, low to medium plasticity, grey mottled brown, with fine to medium grained sand and traces of fine to coarse gravels, St

TABLE A

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP36	0.0-1.0	0.6-0.8 (DS)	Sandy CLAY, low to medium plasticity, grey mottled brown, fine to medium grained, M>PL, F
	1.0-1.5	1.1-1.3 (DS)	Sandy CLAY, low to medium plasticity, grey mottled brown, fine to medium grained, traces of fine to coarse gravels, M>PL, VSt
TP37	0.0-0.8	0.3-0.6 (DS) 0.5-0.8 (U ₅₀)	Silty CLAY, high plasticity, grey mottled brown, M>PL, F
	0.8-1.1		Silty CLAY, low to medium plasticity, brown, with fine to coarse gravels, M<PL VSt
	1.1 Refusal		SANDSTONE, fine to coarse grained, extremely weathered, brown, medium strength, with ironstaining
TP38	0.0-0.2		TOPSOIL: Silty Clay, low to medium plasticity, brown-black, traces of gravel and root fibres, M>PL, S
	0.2-0.5	0.2-0.5 (DS)	Silty CLAY, low to medium plasticity, grey mottled brown, with fine to coarse gravel and traces of sand, M≈PL, St
	0.5-1.5		Silty CLAY, medium to high plasticity, mottled brown grey, with extremely weathered, fine to coarse sandstone, M≈PL, VSt
TP39	0.0-0.3		TOPSOIL: Silty Clay, low to medium plasticity, brown-black, traces of fine to medium gravels and rootlets, M≈PL, S
	0.3-0.5	0.3-0.5 (DS)	Silty CLAY, medium to high plasticity, grey mottled brown, with fine to coarse gravels and fine grained sand, M>PL, St
	0.5 Refusal		SANDSTONE, fine to coarse grained, grey, highly to extremely weathered, low strength
TP40	0.0-0.3		TOPSOIL: Silty Clay, low to medium plasticity, brown-black, traces of gravel and root fibres, M>PL, S
	0.3-1.1	0.8-1.0 (DS)	Silty CLAY, low to medium plasticity, grey mottled brown, with fine to coarse sandstone and sand, M≈PL, St
	1.1-1.5	1.1-1.3 (DS) 1.1-1.4 (U ₅₀)	Sandy CLAY, low to medium plasticity, grey mottled brown, fine to coarse grained, traces of fine to coarse gravels, M≈PL, VSt

TABLE A

Job No: 8599/94
Our Ref: 8599/94-AA

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP41	0.0-0.2		TOPSOIL: Silty Clay, low to medium plasticity, brown-black, traces of gravel and root fibres
	0.2-1.1	0.8-1.0 (DS)	Silty CLAY, medium to high plasticity, grey mottled brown, with fine to coarse sandstone and fine grained sand, M≈PL, VSt
	1.1-1.5	1.1-1.3 (DS)	Sandy CLAY, low to medium plasticity, grey mottled brown, fine to coarse grained, traces of fine to coarse sandstone, M≈PL, VSt
TP42	0.0-0.3		TOPSOIL: Silty Clay, low plasticity, black, traces of fine to coarse gravels and rootlets, M>PL, S
	0.3-1.2	0.6-0.8 (DS)	Silty CLAY, medium to high plasticity, mottled brown-grey, traces of fine to coarse sub-angular sandstone and sand, M>PL, VSt
	1.2-1.4		SANDSTONE, fine to coarse grained, brown, with ironstaining, highly to extremely weathered, medium strength
	1.4 Refusal		
TP43	0.0-1.3	0.5-0.8 (U ₅₀) 0.7-0.9 (DS)	Silty CLAY, medium to high plasticity, mottled grey brown, traces of fine grained sand, M≈PL, St
	1.3-1.5	1.3-1.5 (DS)	Silty CLAY, medium to high plasticity, grey, traces of fine to coarse ironstone, M≈PL, VSt
TP44	0.0-0.8	0.3-0.6 (DS) 0.6-0.9 (U ₅₀)	Silty CLAY, medium to high plasticity, mottled brown-grey, traces of fine to coarse gravels and sand, M≈PL, F
	0.8-1.2	0.9-1.1 (DS)	Silty CLAY, medium to high plasticity, grey mottled brown, traces of fine to coarse gravels and sand, M≈PL, St
	1.2-1.3 Refusal		SANDSTONE, fine to coarse grained, mottled grey brown, highly to extremely weathered, low strength
TP45	0.0-0.2		TOPSOIL: Silty Clay, medium to high plasticity, brown-black, traces of rootlets and fine gravels, M<PL, S
	0.2-0.8	0.4-0.6 (DS)	Silty CLAY, high plasticity, mottled brown-grey, traces of sand, M≈PL, St
	0.8-1.0	0.8-1.0 (DS) 0.8-1.1 (U ₅₀)	Silty CLAY, high plasticity, mottled brown-grey, traces of sand and gravels, M≈PL, St
	1.0-1.5	1.1-1.3 (DS)	Silty CLAY, high plasticity, brown mottled grey, M>PL, St

TABLE A

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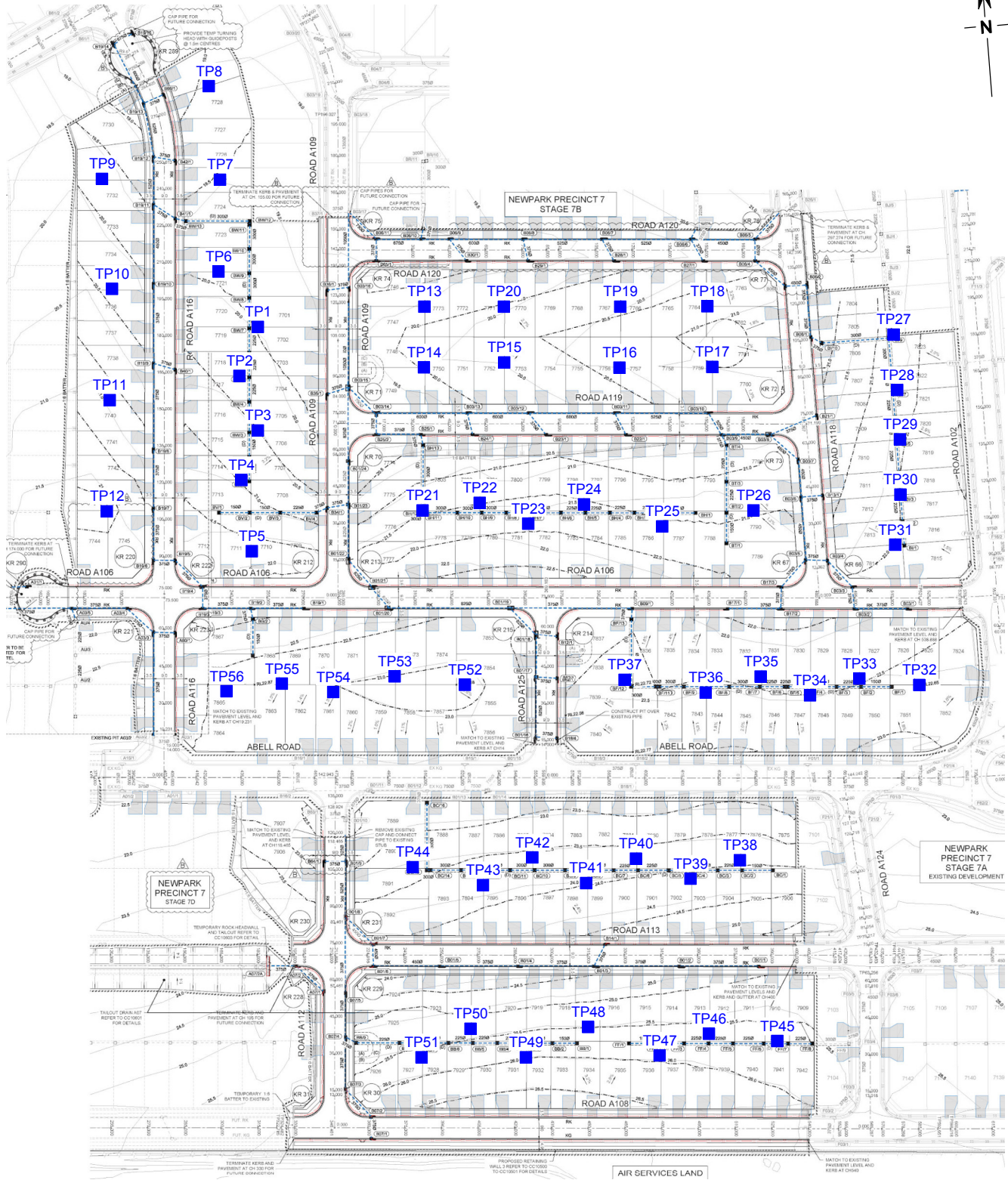
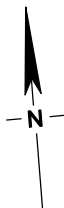
TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP46	0.0-0.3		Silty CLAY, medium to high plasticity, brown-black, traces of sub-angular fine to coarse gravels, M<PL, F
	0.3-0.8	0.4-0.6 (DS) 0.7-0.9 (DS)	Silty CLAY, high plasticity, mottled brown grey, traces of fine to coarse gravels, M>PL, St
	0.8-1.5	1.0-1.3 (U ₅₀)	Silty CLAY, high plasticity, mottled grey brown, M>PL, VSt
TP47	0.0-0.2		TOPSOIL: Silty Clay, medium to high plasticity, brown-black, traces of gravels and rootlets, M<PL, S
	0.2-1.0	0.3-0.5 (DS)	Silty CLAY, high plasticity, mottled brown grey, traces of fine to coarse gravels and sand, M≈PL, S
	1.0-1.2		Silty CLAY, high plasticity, brown, M>PL, VSt
	1.2-1.5	1.2-1.4 (DS)	Silty CLAY, high plasticity, brown, traces of sand, M>PL, VSt
TP48	0.0-0.2		TOPSOIL: Silty Clay, medium to high plasticity, brown-black, traces of fine to medium gravels and rootlets, M<PL, S
	0.2-0.6	0.4-0.6 (DS)	Sandy CLAY, medium to high plasticity, brown, fine to coarse grained, M≈PL, F
	0.6-0.8 Refusal		SANDSTONE, fine to coarse grained, grey, distinctly weathered, medium strength
TP49	0.0-0.3		TOPSOIL: Silty Clay, medium to high plasticity, black-brown, traces of fine to medium gravels, M<PL, F
	0.3-0.7	0.3-0.5 (DS)	Silty CLAY, high plasticity, brown mottled grey, traces of fine to medium gravels, M>PL, St
	0.7-1.2	1.0-1.2 (DS)	Silty CLAY, high plasticity, brown, traces of sand, M>PL, St
	1.2-1.4 Refusal		SANDSTONE, fine to coarse grained, grey, distinctly weathered, medium strength
TP50	0.0-0.3	0.1-0.3 (DS)	Sandy CLAY, medium to high plasticity, mottled brown grey, fine to medium grained sand, M>PL, F
	0.3-0.5		SANDSTONE, fine to coarse grained, grey, highly to extremely weathered, low strength
	0.5 Refusal		

TABLE A

Job No: 8599/94
Our Ref: 8599/94-AA

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP51	0.0-0.4	0.2-0.4 (DS)	Silty CLAY, medium to high plasticity, black, traces of sand, M>PL, F
	0.4-0.8	0.6-0.9 (U ₅₀)	Silty CLAY, high plasticity, mottled brown grey, M≈PL, St
	0.8-1.3	0.9-1.1 (DS)	Sandy CLAY, medium to high plasticity, mottled brown grey, fine to medium grained sand, M>PL, St
	1.3-1.5		SANDSTONE, fine to coarse grained, grey-brown, highly to extremely weathered, low strength
TP52	0.0-1.0	0.4-0.6 (DS)	Silty CLAY, medium to high plasticity, grey mottled brown, traces of fine grained sand and fine to coarse gravels, M≈PL, St
	1.0-1.2		SANDSTONE, fine to coarse grained, brown, distinctly weathered, medium strength, with ironstaining
	1.2 Refusal		
TP53	0.0-1.0	0.2-0.4 (DS) 0.4-0.7 (U ₅₀)	Silty CLAY, medium to high plasticity, grey mottled brown, traces of fine to coarse gravels and sand, M≈PL, St
	1.0-1.2		SANDSTONE, fine to coarse grained, brown mottled grey, extremely weathered, low strength
	1.2 Terminated		
TP54	0.0-0.2		Silty CLAY, medium to high plasticity, mottled grey-brown, with fine to coarse grained, brown, distinctly weathered, low to medium strength, with ironstaining
	0.2-0.7	0.3-0.5 (DS)	SANDSTONE, fine to coarse grained, brown, distinctly weathered, low to medium strength, with ironstaining
	0.7 Terminated		
TP55	0.0-0.6	0.4-0.6 (DS)	Silty CLAY, medium to high plasticity, mottled grey-brown, with fine to coarse sandstone and sand, M≈PL, St
	0.6-0.7 Terminated		SANDSTONE, fine to coarse grained, brown, distinctly weathered, low to medium strength, with ironstaining
TP56	0.0-0.4	0.1-0.3 (DS)	Silty CLAY, medium to high plasticity, mottled grey-brown, with fine to coarse sandstone and sand, M≈PL, St
	0.4-0.6 Terminated		SANDSTONE, fine to coarse grained, brown, distinctly weathered, low to medium strength, with ironstaining



LEGEND

- Test Pit

PREPARED BY:



34 Borec Road
Penrith
NSW 2750
ABN 71 076 676 321

Tel: 02 4722 2744
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www.geotech.com.au

Daracon Contractors Pty Ltd
Residential Development
Woorong Park Precinct 7C
Marsden Park

Test Pit Locations

Drawing No: 8599/94-AA1
Job No: 8599/67
Drawn By: MH
Date: 17 August 2022
Checked By: PP

File No: 8599-94-AA1
Layers: 0, AA1

APPENDIX B

SUMMARY OF SITE CLASSIFICATIONS

Job No: 8599/94
Our Ref: 8599/94-AA

TABLE B

SUMMARY OF SITE CLASSIFICATIONS

Newpark Precinct 7C, Marsden Park

Lot	Site Classification	Lot	Site Classification	Lot	Site Classification
7701	M	7734	M	7767	M
7702	M	7735	M	7768	M
7703	M	7736	M	7769	M
7704	M	7737	M	7770	M
7705	M	7738	M	7771	M
7706	M	7739	M	7772	M
7707	M	7740	M	7773	M
7708	M	7741	M	7774	M
7709	M	7742	M	7775	M
7710	M	7743	M	7776	M
7711	M	7744	M	7777	M
7712	M	7745	M	7778	H1
7713	M	7746	M	7779	H1
7714	M	7747	M	7780	H1
7715	M	7748	M	7781	H1
7716	M	7749	M	7782	H1
7717	M	7750	M	7783	M
7718	M	7751	M	7784	M
7719	M	7752	M	7785	M
7720	M	7753	M	7786	M
7721	M	7754	M	7787	M
7722	M	7755	M	7788	M
7723	M	7756	M	7789	M
7724	M	7757	M	7790	M
7725	M	7758	M	7791	M
7726	M	7759	M	7792	M
7727	M	7760	M	7793	M
7728	M	7761	M	7794	M
7729	M	7762	S	7795	M
7730	M	7763	S	7796	M
7731	M	7764	S	7797	M
7732	M	7765	M	7798	M
7733	M	7766	M	7799	H1

Job No: 8599/94
 Our Ref: 8599/94-AA

Newpark Precinct 7C, Marsden Park (Continued)

Lot	Site Classification	Lot	Site Classification	Lot	Site Classification
7800	H1	7833	M	7866	M
7801	H1	7834	M	7867	M
7802	H1	7835	M	7868	M
7803	H1	7836	M	7869	M
7804	M	7837	M	7870	M
7805	M	7838	M	7871	M
7806	M	7839	M	7872	M
7807	M	7840	M	7873	M
7808	M	7841	M	7874	M
7809	M	7842	M	7875	M
7810	M	7843	M	7876	M
7811	M	7844	M	7877	M
7812	M	7845	M	7878	M
7813	M	7846	M	7879	M
7814	M	7847	M	7880	M
7815	M	7848	M	7881	M
7816	M	7849	M	7882	M
7817	M	7850	M	7883	M
7818	M	7851	M	7884	M
7819	M	7852	M	7885	M
7820	M	7853	M	7886	M
7821	M	7854	M	7887	M
7822	M	7855	M	7888	M
7823	M	7856	M	7889	M
7824	M	7857	M	7890	M
7825	M	7858	M	7891	M
7826	M	7859	M	7892	M
7827	M	7860	M	7893	M
7828	M	7861	M	7894	M
7829	M	7862	M	7895	M
7830	M	7863	M	7896	M
7831	M	7864	M	7897	M
7832	M	7865	M	7898	M

Job No: 8599/94
 Our Ref: 8599/94-AA

Newpark Precinct 7C, Marsden Park (Continued)

Lot	Site Classification	Lot	Site Classification
7899	M	7921	S
7900	M	7922	S
7901	M	7923	M
7902	M	7924	M
7903	M	7925	M
7904	M	7926	M
7905	M	7927	M
7906	H1	7928	M
7907	H1	7929	M
7908	M	7930	M
7909	M	7931	M
7910	M	7932	M
7911	M	7933	M
7912	M	7934	M
7913	M	7935	M
7914	M	7936	M
7915	M	7937	M
7916	M	7938	M
7917	M	7939	M
7918	M	7940	M
7919	M	7941	M
7920	M	7942	M

S: Slightly reactive, free Surface Movement: 0-20mm
 M: Moderately Reactive, Free Surface Movement: 20-40mm
 H1: Highly Reactive, Free Surface Movement: 40-60mm

APPENDIX C

LABORATORY TEST RESULTS

TEST RESULTS - SHRINK / SWELL INDEX

DARACON CONTRACTORS PTY LTD
186 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/94

SITE CLASSIFICATION

RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7C
Page 1 of 4

Test Procedure: AS 1289 7.1.1				
Sample Identification	Test Pit 2	Test Pit 3	Test Pit 9	Test Pit 12
Depth (m)	0.6 - 1.0	1.1 - 1.4	0.7 - 1.0	0.6 - 0.9
Laboratory Number	8599/94-1	8599/94-2	8599/4-4	8599/94-5
Date Tested:	11/08/2022	11/08/2022	11/08/2022	11/08/2022
Tested By:	NP	NP	NP	NP
Checked By:	AK	AK	AK	AK
Test Description				
Moisture Content				
Initial %	19.0	24.7	15.4	16.1
Final %	19.8	25.7	25.0	18.4
Swell %	Nil	2.1	2.4	1.9
Shrinkage %	2.2	4.9	1.8	0.4
Shrink/Swell Index %/pF	1.2	3.3	1.7	0.8
Material Description	(CL) Silty CLAY, low plasticity, brown	(CH) Silty CLAY, high plasticity, grey & yellow-brown, trace of fine to coarse sand	(CI-CH) Silty CLAY, medium to high plasticity, grey with brown mottling	(CL-CI) Sandy CLAY, low to medium plasticity, grey

Form No R007 Version 13 07/21

Report Date
19/08/2022



NATA Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with
ISO/IEC 17025 - Testing.

A Kench

Approved Signatory

34 Borec Road, Penrith NSW 2750
Telephone: (02) 4722 2744

Unit 4, 18-20 Whyalla Place, Prestons NSW 2170
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TEST RESULTS - SHRINK / SWELL INDEX

DARACON CONTRACTORS PTY LTD
186 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/94

SITE CLASSIFICATION

RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7C
Page 2 of 4

Test Procedure: AS 1289 7.1.1				
Sample Identification	Test Pit 13	Test Pit 19	Test Pit 23	Test Pit 24
Depth (m)	0.4 - 0.7	0.3 - 0.6	0.4 - 0.7	0.7 - 1.0
Laboratory Number	8599/94-6	8599/94-7	8599/94-8	8599/94-9
Date Tested:	11/08/2022	12/08/2022	15/08/2022	12/08/2022
Tested By:	NP	NP	NP	NP
Checked By:	AK	AK	AK	AK
Test Description				
Moisture Content				
Initial %	19.3	13.9	22.8	13.5
Final %	25.1	17.2	28.8	22.6
Swell %	3.5	1.0	3.5	0.5
Shrinkage %	4.2	2.2	7.0	3.1
Shrink/Swell Index % _{pF}	3.3	1.5	4.9	1.8
Material Description	(CI-CH) Silty CLAY, medium to high plasticity, grey	(CI) Silty CLAY, medium plasticity, grey & brown	(CH) Silty CLAY, high plasticity, brown with grey mottling, trace of fine to medium gravel	(CI-CH) Silty CLAY, medium to high plasticity, yellow-brown & grey, trace of fine to coarse sand

Form No R007 Version 13 07/21

Report Date
19/08/2022



NATA Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with
ISO/IEC 17025 - Testing.

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TEST RESULTS - SHRINK / SWELL INDEX

DARACON CONTRACTORS PTY LTD
186 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/94

SITE CLASSIFICATION

RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7C
Page 3 of 4

Test Procedure: AS 1289 7.1.1				
Sample Identification	Test Pit 29	Test Pit 31	Test Pit 32	Test Pit 35
Depth (m)	0.8 - 1.1	0.2 - 0.5	0.3 - 0.6	0.6 - 0.9
Laboratory Number	8599/94-10	8599/94-11	8599/94-12	8599/94-13
Date Tested:	15/08/2022	15/08/2022	15/08/2022	15/08/2022
Tested By:	NP	NP	NP	NP
Checked By:	AK	AK	AK	AK
Test Description				
Moisture Content				
Initial %	14.3	13.8	12.7	11.8
Final %	15.8	15.3	17.2	16.6
Swell %	0.1	0.2	Nil	Nil
Shrinkage %	1.0	1.0	3.0	1.0
Shrink/Swell Index %/pF	0.6	0.6	1.7	0.5
Material Description	(CL) Silty CLAY, low plasticity, grey with brown mottling, trace of fine to coarse sand	(CL) Sandy CLAY, low plasticity, grey-brown	(CL-CI) Sandy CLAY, low to medium plasticity, grey-brown, trace of fine to medium gravel	(CL) Silty CLAY, low plasticity, grey with brown mottling

Form No R007 Version 13 07/21

Report Date
19/08/2022



NATA Accreditation Number 2734
Corporate Site Number 2727

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TEST RESULTS - SHRINK / SWELL INDEX

DARACON CONTRACTORS PTY LTD
186 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/94

SITE CLASSIFICATION

RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7C
Page 4 of 4

Test Procedure: AS 1289 7.1.1				
Sample Identification	Test Pit 37			
Depth (m)	0.5 - 0.8			
Laboratory Number	8599/94-14			
Date Tested:	15/08/2022			
Tested By:	NP			
Checked By:	AK			
Test Description				
Moisture Content				
Initial %	15.6			
Final %	17.4			
Swell %	Nil			
Shrinkage %	2.5			
Shrink/Swell Index %/pF	1.4			
Material Description	(Cl) Silty CLAY, medium plasticity, brown & grey			

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TEST RESULTS - SHRINK / SWELL INDEX

DARACON CONTRACTORS PTY LTD
186 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/94

SITE CLASSIFICATION

RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7C
Page 1 of 2

Test Procedure: AS 1289 7.1.1				
Sample Identification	Test Pit 40	Test Pit 43	Test Pit 44	Test Pit 45
Depth (m)	1.1 - 1.4	0.5 - 0.8	0.6 - 0.9	0.8 - 1.1
Laboratory Number	8599/94-15	8599/94-16	8599/94-17	8599/94-18
Date Tested:	16/08/2022	16/08/2022	17/08/2022	17/08/2022
Tested By:	NP	NP	NP	NP
Checked By:	AK	AK	AK	AK
Test Description				
Moisture Content				
Initial %	13.0	17.8	13.8	15.9
Final %	19.4	22.0	16.5	17.2
Swell %	0.2	0.1	Nil	2.6
Shrinkage %	1.0	2.3	1.3	1.5
Shrink/Swell Index %/pF	0.6	1.3	0.7	1.6
Material Description				

Form No R007 Version 13 07/21



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TEST RESULTS - SHRINK / SWELL INDEX

DARACON CONTRACTORS PTY LTD
186 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/94

SITE CLASSIFICATION

RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7C
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Test Procedure: AS 1289 7.1.1				
Sample Identification	Test Pit 46	Test Pit 51	Test Pit 53	
Depth (m)	1.0 - 1.3	0.6 - 0.9	0.4 - 0.7	
Laboratory Number	8599/94-19	8599/94-20	8599/94-21	
Date Tested:	17/08/2022	17/08/2022	17/08/2022	
Tested By:	NP	NP	NP	
Checked By:	AK	AK	AK	
Test Description				
Moisture Content				
Initial %	16.2	15.8	16.8	
Final %	17.2	17.7	20.3	
Swell %	0.3	0.4	1.6	
Shrinkage %	2.0	1.4	2.2	
Shrink/Swell Index %/pF	1.2	0.9	1.7	
Material Description				

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TEST RESULTS - SHRINK / SWELL INDEX

DARACON CONTRACTORS PTY LTD
186 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/94

SITE CLASSIFICATION

RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7C
Page 1 of 4

Test Procedure: AS 1289 7.1.1				
Sample Identification	Test Pit 2	Test Pit 13	Test Pit 29	Test Pit 45
Depth (m)	0.2 - 0.5	0.3 - 0.6	0.3 - 0.6	0.4 - 0.6
Laboratory Number	8599/94-22	8599/94-23	8599/94-24	8599/94-26
Date Tested:	24/08/2022	24/08/2022	24/08/2022	24/08/2022
Tested By:	NP	NP	NP	NP
Checked By:	AK	AK	AK	AK
Test Description				
Moisture Content				
Initial %	17.7	13.1	16.8	18.4
Final %	20.0	18.8	19.8	24.0
Swell %	0.7	2.4	Nil	2.8
Shrinkage %	2.9	2.0	3.5	4.8
Shrink/Swell Index %/pF	1.8	1.8	2.0	3.4
Material Description				

Form No R007 Version 13 07/21

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TEST RESULTS - SHRINK / SWELL INDEX

DARACON CONTRACTORS PTY LTD
186 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/94

SITE CLASSIFICATION

RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7C
Page 2 of 4

Test Procedure: AS 1289 7.1.1				
Sample Identification	Test Pit 55	Test Pit 60	Test Pit 66	Test Pit 86
Depth (m)	0.4 - 0.6	0.6 - 0.8	0.4 - 0.6	0.7 - 0.9
Laboratory Number	8599/94-27	8599/94-29	8599/94-30	8599/94-31
Date Tested:	24/08/2022	24/08/2022	26/08/2022	26/08/2022
Tested By:	NP	NP	NP	NP
Checked By:	AK	AK	AK	AK
Test Description				
Moisture Content				
Initial %	13.2	16.9	19.0	15.0
Final %	19.0	23.0	23.4	17.3
Swell %	0.2	2.7	0.9	0.9
Shrinkage %	1.0	2.8	3.1	1.4
Shrink/Swell Index %/pF	0.6	2.3	2.0	1.0
Material Description				

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Report Date
05/09/2022



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TEST RESULTS - SHRINK / SWELL INDEX

DARACON CONTRACTORS PTY LTD
186 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/94

SITE CLASSIFICATION

RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7C
Page 3 of 4

Test Procedure: AS 1289 7.1.1				
Sample Identification	Test Pit 88	Test Pit 99	Test Pit 106	Test Pit 111
Depth (m)	0.6 - 0.8	0.6 - 0.8	0.4 - 0.6	0.4 - 0.6
Laboratory Number	8599/94-32	8599/94-33	8599/94-34	8599/94-35
Date Tested:	26/08/2022	26/08/2022	26/08/2022	26/08/2022
Tested By:	NP	NP	NP	NP
Checked By:	AK	AK	AK	AK
Test Description				
Moisture Content				
Initial %	11.0	16.4	22.1	20.1
Final %	16.3	20.4	27.0	27.4
Swell %	1.1	1.6	0.1	0.1
Shrinkage %	2.6	3.4	5.9	5.3
Shrink/Swell Index %/pF	1.8	2.3	3.3	3.0
Material Description				

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Report Date
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TEST RESULTS - SHRINK / SWELL INDEX

DARACON CONTRACTORS PTY LTD
 186 ADDERLEY STREET WEST
 AUBURN NSW 2144

Laboratory: Penrith
 Job No: 8599/94

SITE CLASSIFICATION

RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7C
 Page 4 of 4

Test Procedure: AS 1289 7.1.1				
Sample Identification	Test Pit 126			
Depth (m)	0.4 - 0.6			
Laboratory Number	8599/94-40			
Date Tested:	26/08/2022			
Tested By:	NP			
Checked By:	AK			
Test Description				
Moisture Content				
Initial %	16.8			
Final %	23.6			
Swell %	Nil			
Shrinkage %	2.5			
Shrink/Swell Index %/pF	1.4			
Material Description				

Form No R007 Version 13 07/21

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TEST RESULTS - ATTERBERG LIMITS
Test Procedure AS1289 3.1.1, 3.2.1, 3.3.1, 3.4.1

DARACON CONTRACTORS PTY LTD
 186 ADDERLEY STREET WEST
 AUBURN NSW 2144

Laboratory: Penrith
 Job No: 8599/94

PROJECT: SITE CLASSIFICATION
 RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7C
 Page 1 of 1

Date Tested: 19/08/2022		Tested By: NP	
		Checked By: AK	
Sample Identification	Test Pit 8		
Laboratory Number	8599/94-3		
Depth (m)	1.0 - 1.3		
Test Description			
Liquid Limit (W _L)	39%		
Plastic Limit (W _P)	20%		
Plastic Index (I _P)	19%		
Linear Shrinkage (LS)	Not Determined		
Mould Length (mm)	N/A		
Sample History	Oven Dried Dry Sieved	Oven Dried Dry Sieved	Oven Dried Dry Sieved
Material Description			

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A Kench Report Date
 23/08/2022



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