



Job No: 8599/75  
Our Ref: 8599/75-AA  
25 November 2021

Daracon Contractors Pty Ltd  
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Email: [SimpsonW@daracon.com.au](mailto:SimpsonW@daracon.com.au)

Attention: Mr S Wong

Dear Sir

re: **Abell Road, Marsden Park  
Newpark – Precinct 7 – Stage 7A  
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 eighty-four (284) lots are covered in this report (Lots 7101 to 7384).

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 "Ravi-Indran", is written over a horizontal line.

RAM RAVI-INDRAN  
Geotechnical Engineer

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Newpark Precinct 7 Stage 7A - Abell Road, Marsden Park

## 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 7A). A total of 284 lots are covered in this report (Lots 7101 to 7384).

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 26<sup>th</sup> to the 29<sup>th</sup> October 2021 and consisted of excavation of one hundred and thirty-two (132) test pits (TP1 to TP132) 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 8599/75-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 7A) is of rectangular shape and located within the Newpark subdivision. The site is bound by a creek running along the eastern boundary, forestation to the south and under development subdivision to all other sides. The site is bounded by other stages of the newly developed subdivision. 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 towards the easterly direction. The ground surface was generally void of vegetation.

### 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	0.0-1.5	NE	NE
TP2	1.5	NE	0.0-1.5	NE	NE
TP3	1.5	NE	0.0-1.5	NE	NE
TP4	1.5	NE	0.0-0.9	0.9-1.5	NE

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Test Pit	Termination Depth (m)	Topsoil (m)	Fill (m)	Natural (m)	Bedrock (m)
TP5	1.5	NE	0.0-0.6	0.6-1.5	NE
TP6	1.5	NE	0.0-0.8	0.8-1.5	NE
TP7	1.5	NE	0.0-0.8	0.5-1.5	NE
TP8	1.5	NE	0.0-0.6	0.6-1.5	NE
TP9	1.5	NE	0.0-0.5	0.5-1.5	NE
TP10	1.5	NE	0.0-0.5	0.5-1.5	NE
TP11	1.5	NE	0.0-0.5	0.5-1.5	NE
TP12	1.5	NE	0.0-1.5	NE	NE
TP13	1.5	NE	0.0-1.5	NE	NE
TP14	1.5	NE	0.0-1.5	NE	NE
TP15	1.5	NE	0.0-1.5	NE	NE
TP16	1.5	NE	0.0-1.5	NE	NE
TP17	1.5	NE	0.0-1.5	NE	NE
TP18	1.5	NE	0.0-1.5	NE	NE
TP19	1.5	NE	0.0-1.5	NE	NE
TP20	1.5	NE	0.0-1.5	NE	NE
TP21	1.5	NE	0.0-1.5	NE	NE
TP22	1.5	NE	0.0-1.5	NE	NE
TP23	1.5	NE	0.0-1.5	NE	NE
TP24	1.5	NE	0.0-1.5	NE	NE
TP25	1.5	NE	0.0-1.5	NE	NE
TP26	1.5	NE	0.0-1.5	NE	NE
TP27	1.5	NE	0.0-1.5	NE	NE
TP28	1.5	NE	NE	0.0-1.5	NE
TP29	1.5	NE	NE	0.0-1.5	NE
TP30	1.5	NE	0.0-1.5	NE	NE
TP31	1.5	NE	0.0-1.5	NE	NE
TP32	1.5	NE	0.0-1.5	NE	NE
TP33	1.5	NE	0.0-1.5	NE	NE
TP34	1.5	NE	0.0-1.5	NE	NE
TP35	1.5	NE	0.0-1.5	NE	NE
TP36	1.5	NE	0.0-1.5	NE	NE
TP37	1.5	NE	NE	0.0-1.5	NE
TP38	1.5	NE	NE	0.0-1.5	NE
TP39	1.5	NE	NE	0.0-1.5	NE
TP40	1.5	NE	NE	0.0-1.5	NE
TP41	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)
TP42	1.5	NE	NE	0.0-1.5	NE
TP43	1.5	NE	NE	0.0-1.5	NE
TP44	1.5	NE	NE	0.0-1.5	NE
TP45	1.5	NE	NE	0.0-1.5	NE
TP46	1.5	NE	0.0-1.5	NE	NE
TP47	1.5	NE	0.0-1.5	NE	NE
TP48	1.5	NE	0.0-1.5	NE	NE
TP49	1.5	NE	0.0-1.5	NE	NE
TP50	1.5	NE	0.0-1.5	NE	NE
TP51	1.5	NE	0.0-1.5	NE	NE
TP52	1.5	NE	NE	0.0-1.5	NE
TP53	1.5	NE	NE	0.0-1.5	NE
TP54	1.5	NE	NE	0.0-1.5	NE
TP55	1.5	NE	NE	0.0-1.5	NE
TP56	1.5	NE	NE	0.0-1.5	NE
TP57	0.9	NE	NE	0.9	NE
TP58	1.1	NE	NE	1.1	NE
TP59	0.6	NE	NE	0.6	NE
TP60	0.7	NE	NE	0.7	NE
TP61	0.7	NE	NE	0.7	NE
TP62	0.8	NE	NE	0.8	NE
TP63	1.5	NE	0.0-0.3	0.3-1.5	NE
TP64	1.5	NE	0.0-0.2	0.2-1.5	NE
TP65	1.5	NE	0.0-0.3	0.3-1.5	NE
TP66	0.7	NE	0.0-0.2	0.2-0.7	NE
TP67	1.5	NE	0.0-1.5	NE	NE
TP68	1.5	NE	0.0-1.5	NE	NE
TP69	1.5	NE	0.0-1.5	NE	NE
TP70	1.5	NE	0.0-1.5	NE	NE
TP71	1.5	NE	0.0-1.5	NE	NE
TP72	1.5	NE	0.0-0.4	0.4-1.5	NE
TP73	1.5	NE	0.0-0.1	0.1-1.5	NE
TP74	1.5	NE	0.0-0.1	0.1-1.5	NE
TP75	1.5	NE	0.0-0.1	0.1-1.5	NE
TP76	1.5	NE	NE	0.0-1.5	NE
TP77	1.5	NE	NE	0.0-1.5	NE
TP78	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)
TP79	1.5	NE	NE	0.0-1.5	NE
TP80	1.5	NE	NE	0.0-1.5	NE
TP81	1.5	NE	0.0-1.5	NE	NE
TP82	1.5	NE	0.0-1.5	NE	NE
TP83	1.5	NE	0.0-1.5	NE	NE
TP84	1.5	NE	0.0-1.5	NE	NE
TP85	1.5	NE	0.0-1.5	NE	NE
TP86	1.5	NE	0.0-1.5	NE	NE
TP87	1.5	NE	0.0-1.5	NE	NE
TP88	1.5	NE	0.0-1.5	NE	NE
TP89	1.5	NE	0.0-1.5	NE	NE
TP90	1.5	NE	NE	0.0-1.5	NE
TP91	1.5	NE	NE	0.0-1.5	NE
TP92	1.5	NE	NE	0.0-1.5	NE
TP93	1.5	NE	0.0-1.0	1.0-1.5	NE
TP94	1.5	NE	0.0-1.5	NE	NE
TP95	1.5	NE	0.0-1.5	NE	NE
TP96	1.5	NE	0.0-1.5	NE	NE
TP97	1.5	NE	0.0-1.5	NE	NE
TP98	1.5	NE	0.0-1.5	NE	NE
TP99	1.5	NE	NE	0.0-1.5	NE
TP100	1.5	NE	NE	0.0-1.5	NE
TP101	1.5	0.0-0.2	NE	0.2-1.5	NE
TP102	1.5	0.0-0.2	NE	0.2-1.5	NE
TP103	1.5	0.0-0.2	NE	0.2-1.5	NE
TP104	1.5	0.0-0.2	NE	0.2-1.5	NE
TP105	1.5	0.0-0.2	NE	0.2-1.5	NE
TP106	1.5	0.0-0.2	NE	0.2-1.5	NE
TP107	1.5	0.0-0.2	NE	0.2-1.5	NE
TP108	1.5	0.0-0.2	NE	0.2-1.5	NE
TP109	1.5	0.0-0.2	NE	0.2-1.5	NE
TP110	1.5	0.0-0.2	NE	0.2-1.5	NE
TP111	1.5	0.0-0.2	NE	0.2-1.5	NE
TP112	1.5	0.0-0.2	NE	0.2-1.5	NE
TP113	1.5	0.0-0.2	NE	0.2-1.5	NE
TP114	1.5	0.0-0.2	NE	0.2-1.5	NE
TP115	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)
TP116	1.5	0.0-0.2	NE	0.2-1.5	NE
TP117	1.5	0.0-0.2	NE	0.2-1.5	NE
TP118	1.5	0.0-0.2	NE	0.2-1.5	NE
TP119	1.5	NE	0.0-1.5	NE	NE
TP120	1.5	NE	0.0-1.5	NE	NE
TP121	1.5	NE	0.0-1.5	NE	NE
TP122	1.5	NE	0.0-1.5	NE	NE
TP123	1.5	NE	0.0-1.5	NE	NE
TP124	1.5	NE	0.0-1.5	NE	NE
TP125	1.5	NE	0.0-1.5	NE	NE
TP126	1.5	0.0-0.2	NE	0.2-1.5	NE
TP127	1.5	0.0-0.2	NE	0.2-1.5	NE
TP128	1.5	NE	0.0-0.7	0.7-1.5	NE
TP129	1.5	NE	0.0-1.5	NE	NE
TP130	1.5	NE	0.0-1.5	NE	NE
TP131	1.5	NE	0.0-1.5	NE	NE
TP132	1.5	NE	0.0-1.5	NE	NE

NE: Not encountered to the termination depth

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

<b>Fill</b>	<p>Silty Clay, low to medium plasticity, brown, with gravel, cobbles and traces of boulders</p> <p>Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles</p> <p>Silty Clay, medium to high plasticity, brown, with cobbles, gravel</p>
<b>Natural</b>	<p>Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles</p> <p>Silty CLAY, medium to high plasticity, brown, with cobbles, boulders</p> <p>Silty Sandy CLAY, low to medium plasticity, brown, with gravel</p> <p>Silty CLAY, medium plasticity, red-brown mottled grey, with ironstone gravel and cobbles</p> <p>Silty CLAY, low to medium plasticity, orange-brown</p> <p>Silty Sandy CLAY, low plasticity, brown</p> <p>Silty CLAY, high plasticity, grey mottled brown, with ironstone gravel</p>

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 two undisturbed U<sub>50</sub> 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
TP54	0.6-0.9	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles	-	-	-	3.4
TP63	0.5-0.8	(CH) Silty CLAY, medium plasticity, brown and grey, with pebbles and cobbles	-	-	-	1.8
TP76	0.4-0.7	(CL) Silty Sandy CLAY, low plasticity, brown	23%	9%	3.0%	-
TP100	0.2-0.5	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles	-	-	-	3.6

#### 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: 8599/51-AA dated 23<sup>rd</sup> April 2021). 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 23<sup>rd</sup> November 2020 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**

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### **TABLE A SUMMARY OF TEST PITS**

**DRAWING NO 8599/75-AA1  
(*Test Pit Location Plan*)**

**TABLE A**

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP1	0.0-0.8	0.3-0.4 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
	0.8-1.5	1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP2	0.0-0.5	0.3-0.4 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
	0.5-1.5	1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP3	0.0-0.5	0.3-0.4 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
	0.5-1.5	1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP4	0.0-0.9	0.3-0.4 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
	0.9-1.5	1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP5	0.0-0.6	0.3-0.4 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
	0.6-1.5	1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP6	0.0-0.8	0.3-0.4 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
	0.8-1.5	1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff

**TABLE A**

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP7	0.0-0.8	0.3-0.4 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
	0.8-1.5	1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP8	0.0-0.6	0.3-0.4 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
	0.6-1.5	1.0-1.1 (DS)	(CI-CH) Silty CLAY, medium to high plasticity, red-brown, with cobbles, boulders, M<PL, very stiff to hard
TP9	0.0-0.5	0.3-0.4 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
	0.5-1.5	1.0-1.1 (DS)	(CL-CI) Silty Sandy CLAY, low to medium plasticity, brown, with gravel, M<PL, stiff to very stiff
TP10	0.0-0.5	0.3-0.4 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
	0.5-1.5	1.0-1.1 (DS)	(CL-CI) Silty Sandy CLAY, low to medium plasticity, brown, with gravel, M<PL, stiff to very stiff
TP11	0.0-0.5	0.3-0.4 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
	0.5-1.5	1.0-1.1 (DS)	(CL-CI) Silty Sandy CLAY, low to medium plasticity, brown, with gravel, M<PL, stiff to very stiff
TP12	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
TP13	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
TP14	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted

**TABLE A**

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP15	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
TP16	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
TP17	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
TP18	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
TP19	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP20	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP21	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP22	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP23	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP24	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP25	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted

**TABLE A**

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP26	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP27	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP28	0.0-0.8	0.3-0.4 (DS)	(CL-CI) Silty CLAY, low to medium plasticity, orange-brown, M<PL, very stiff
	0.8-1.5	1.0-1.1 (DS)	(CI) Silty CLAY, medium plasticity, red-brown mottled grey, with ironstone gravel, pebble and cobble, M<PL, very stiff to hard
TP29	0.0-0.6	0.3-0.4 (DS)	(CL-CI) Silty CLAY, low to medium plasticity, orange-brown, M<PL, very stiff
	0.6-1.5	1.0-1.1 (DS)	(CI) Silty CLAY, medium plasticity, red-brown mottled grey, with ironstone gravel, pebble and cobble, M<PL, very stiff to hard
TP30	0.0-0.5	0.3-0.4 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
	0.5-1.5	1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP31	0.0-0.5	0.3-0.4 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
	0.5-1.5	1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP32	0.0-0.5	0.3-0.4 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
	0.5-1.5	1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted

**TABLE A**

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP33	0.0-0.5	0.3-0.4 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
	0.5-1.5	1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP34	0.0-0.5	0.3-0.4 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
	0.5-1.5	1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP35	0.0-0.5	0.3-0.4 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
	0.5-1.5	1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP36	0.0-0.5	0.3-0.4 (DS)	FILL: Silty Clay, low to medium plasticity, brown, with gravel, cobble, pebble and boulder, M<OMC, well compacted
	0.5-1.5	1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP37	0.0-0.8	0.3-0.4 (DS)	(CL-CI) Silty CLAY, low to medium plasticity, orange-brown, M<PL, very stiff
	0.8-1.5	1.0-1.1 (DS)	(CI) Silty CLAY, medium plasticity, red-brown mottled grey, with ironstone gravel, pebble and cobble, M<PL, very stiff to hard
TP38	0.0-0.8	0.3-0.4 (DS)	(CL-CI) Silty CLAY, low to medium plasticity, orange-brown, M<PL, very stiff
	0.8-1.5	1.0-1.1 (DS)	(CI) Silty CLAY, medium plasticity, red-brown mottled grey, with ironstone gravel, pebble and cobble, M<PL, very stiff to hard

**TABLE A**

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP39	0.0-0.8	0.3-0.4 (DS)	(CL-CI) Silty CLAY, low to medium plasticity, orange-brown, M<PL, very stiff
	0.8-1.5	1.0-1.1 (DS)	(CI) Silty CLAY, medium plasticity, red-brown mottled grey, with ironstone gravel, pebble and cobble, M<PL, very stiff to hard
TP40	0.0-0.8	0.3-0.4 (DS)	(CL-CI) Silty CLAY, low to medium plasticity, orange-brown, M<PL, very stiff
	0.8-1.5	1.0-1.1 (DS)	(CI) Silty CLAY, medium plasticity, red-brown mottled grey, with ironstone gravel, pebble and cobble, M<PL, very stiff to hard
TP41	0.0-0.8	0.3-0.4 (DS)	(CL-CI) Silty CLAY, low to medium plasticity, orange-brown, M<PL, very stiff
	0.8-1.5	1.0-1.1 (DS)	(CI) Silty CLAY, medium plasticity, red-brown mottled grey, with ironstone gravel, pebble and cobble, M<PL, very stiff to hard
TP42	0.0-0.8	0.3-0.4 (DS)	(CL-CI) Silty CLAY, low to medium plasticity, orange-brown, M<PL, very stiff
	0.8-1.5	1.0-1.1 (DS)	(CI) Silty CLAY, medium plasticity, red-brown mottled grey, with ironstone gravel, pebble and cobble, M<PL, very stiff to hard
TP43	0.0-0.6	0.3-0.4 (DS)	(CL-CI) Silty CLAY, low to medium plasticity, orange-brown, M<PL, very stiff
	0.6-1.5	1.0-1.1 (DS)	(CI) Silty CLAY, medium plasticity, red-brown mottled grey, with ironstone gravel, pebble and cobble, M<PL, very stiff to hard
TP44	0.0-0.8	0.3-0.4 (DS)	(CL-CI) Silty CLAY, low to medium plasticity, orange-brown, M<PL, very stiff
	0.8-1.5	1.0-1.1 (DS)	(CI) Silty CLAY, medium plasticity, red-brown mottled grey, with ironstone gravel, pebble and cobble, M<PL, very stiff to hard
TP45	0.0-0.8	0.3-0.4 (DS)	(CL-CI) Silty CLAY, low to medium plasticity, orange-brown, M<PL, very stiff
	0.8-1.5	1.0-1.1 (DS)	(CI) Silty CLAY, medium plasticity, red-brown mottled grey, with ironstone gravel, pebble and cobble, M<PL, very stiff to hard

**TABLE A**

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP46	0.0-0.5	0.3-0.4 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
	0.5-1.5	1.0-1.1 (DS)	FILL: Silty Clay, medium to high plasticity, brown, with cobble and gravel, M<OMC, well compacted
TP47	0.0-0.5	0.3-0.4 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
	0.5-1.5	1.0-1.1 (DS)	FILL: Silty Clay, medium to high plasticity, brown, with cobble and gravel, M<OMC, well compacted
TP48	0.0-0.5	0.3-0.4 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
	0.5-1.5	1.0-1.1 (DS)	FILL: Silty Clay, medium to high plasticity, brown, with cobble and gravel, M<OMC, well compacted
TP49	0.0-0.5	0.3-0.4 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
	0.5-1.5	1.0-1.1 (DS)	FILL: Silty Clay, medium to high plasticity, brown, with cobble and gravel, M<OMC, well compacted
TP50	0.0-0.5	0.3-0.4 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
	0.5-1.5	1.0-1.1 (DS)	FILL: Silty Clay, medium to high plasticity, brown, with cobble and gravel, M<OMC, well compacted
TP51	0.0-0.5	0.3-0.4 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
	0.5-1.5	1.0-1.1 (DS)	FILL: Silty Clay, medium to high plasticity, brown, with cobble and gravel, M<OMC, well compacted
TP52	0.0-0.5	0.3-0.4 (DS)	(CL-CI) Silty CLAY, low to medium plasticity, orange-brown, M<PL, very stiff
	0.5-1.5	1.0-1.1 (DS)	(CI) Silty CLAY, medium plasticity, red-brown mottled grey, with ironstone gravel, pebble and cobble, M<PL, very stiff to hard



**TABLE A**

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP53	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP54	0.0-0.5	0.3-0.4 (DS)	(CI-CH) Silty CLAY, medium to high plasticity, red-brown, with cobbles, boulders, M<PL, very stiff to hard
	0.5-1.5	0.6-0.9 (U <sub>50</sub> ) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP55	0.0-0.5	0.3-0.4 (DS)	(CI-CH) Silty CLAY, medium to high plasticity, red-brown, with cobbles, boulders, M<PL, very stiff to hard
	0.5-1.5	1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP56	0.0-0.5	0.3-0.4 (DS)	(CI-CH) Silty CLAY, medium to high plasticity, red-brown, with cobbles, boulders, M<PL, very stiff to hard
	0.5-1.5	1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP57	0.0-0.8	0.3-0.4 (DS)	(CI-CH) Silty CLAY, medium to high plasticity, red-brown, with cobbles, boulders, M<PL, very stiff to hard
	0.8-0.9		Refusal due to boulder
TP58	0.0-1.0	0.3-0.4 (DS)	(CI-CH) Silty CLAY, medium to high plasticity, red-brown, with cobbles, boulders, M<PL, very stiff to hard
	1.0-1.1		Refusal due to boulder
TP59	0.0-0.5	0.3-0.4 (DS)	(CI-CH) Silty CLAY, medium to high plasticity, red-brown, with cobbles, boulders, M<PL, very stiff to hard
	0.5-0.6		Refusal due to boulder
TP60	0.0-0.6	0.3-0.4 (DS)	(CI-CH) Silty CLAY, medium to high plasticity, red-brown, with cobbles, boulders, M<PL, very stiff to hard
	0.6-0.7		Refusal due to boulder
TP61	0.0-0.6	0.3-0.4 (DS)	(CL-CI) Silty CLAY, low to medium plasticity, orange-brown, M<PL, very stiff
	0.6-0.7		Refusal due to boulder

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP62	0.0-0.7	0.3-0.4 (DS)	(CL-CI) Silty CLAY, low to medium plasticity, orange-brown, M<PL, very stiff
	0.7-0.8		Refusal due to boulder
TP63	0.0-0.3	0.3-0.4 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
	0.3-1.5	0.5-0.8 (U <sub>50</sub> ) 1.0-1.1 (DS)	(CI) Silty CLAY, medium plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP64	0.0-0.2		FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
	0.2-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CI) Silty CLAY, medium plasticity, red-brown mottled grey, with ironstone gravel, pebble and cobble, M<PL, very stiff to hard
TP65	0.0-0.3		FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
	0.3-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CI-CH) Silty CLAY, medium to high plasticity, red-brown, with cobbles, boulders, M<PL, very stiff to hard
TP66	0.0-0.2		FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
	0.2-0.6	0.3-0.4 (DS)	(CI-CH) Silty CLAY, medium to high plasticity, red-brown, with cobbles, boulders, M<PL, very stiff to hard
	0.6-0.7		Refusal due to boulder
TP67	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP68	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP69	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP70	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP71	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP72	0.0-0.4	0.3-0.4 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
	0.4-1.5	1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP73	0.0-0.1		FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
	0.1-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP74	0.0-0.1		FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
	0.1-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP75	0.0-0.1		FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
	0.1-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP76	0.0-0.5	0.3-0.4 (DS) 0.4-0.7 (U <sub>50</sub> )	(CL) Silty Sandy CLAY, low plasticity, brown, M<PL, very stiff
	0.5-1.5	1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP77	0.0-0.5	0.3-0.4 (DS)	(CL) Silty Sandy CLAY, low plasticity, brown, M<PL, very stiff
	0.5-1.5	1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP78	0.0-0.5	0.3-0.4 (DS)	(CL) Silty Sandy CLAY, low plasticity, brown, M<PL, very stiff
	0.5-1.5	1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP79	0.0-0.6	0.3-0.4 (DS)	(CI-CH) Silty CLAY, medium to high plasticity, red-brown, with cobbles, boulders, M<PL, very stiff to hard
	0.6-1.5	1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP80	0.0-0.6	0.3-0.4 (DS)	(CI-CH) Silty CLAY, medium to high plasticity, red-brown, with cobbles, boulders, M<PL, very stiff to hard
	0.6-1.5	1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP81	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Clay, medium to high plasticity, brown, with cobble and gravel, M<OMC, well compacted
TP82	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Clay, medium to high plasticity, brown, with cobble and gravel, M<OMC, well compacted
TP83	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Clay, medium to high plasticity, brown, with cobble and gravel, M<OMC, well compacted
TP84	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Clay, medium to high plasticity, brown, with cobble and gravel, M<OMC, well compacted
TP85	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Clay, medium to high plasticity, brown, with cobble and gravel, M<OMC, well compacted
TP86	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Clay, medium to high plasticity, brown, with cobble and gravel, M<OMC, well compacted
TP87	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP88	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP89	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP90	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP91	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CI-CH) Silty CLAY, medium to high plasticity, red-brown, with cobbles, boulders, M<PL, very stiff to hard
TP92	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CI-CH) Silty CLAY, medium to high plasticity, red-brown, with cobbles, boulders, M<PL, very stiff to hard
TP93	0.0-1.0	0.3-0.4 (DS)	FILL: Silty Clay, medium to high plasticity, brown, with cobble and gravel, M<OMC, well compacted
	1.0-1.5	1.0-1.1 (DS)	(CI-CH) Silty CLAY, medium to high plasticity, red-brown, with cobbles, boulders, M<PL, very stiff to hard
TP94	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Clay, medium to high plasticity, brown, with cobble and gravel, M<OMC, well compacted
TP95	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Clay, medium to high plasticity, brown, with cobble and gravel, M<OMC, well compacted
TP96	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Clay, medium to high plasticity, brown, with cobble and gravel, M<OMC, well compacted
TP97	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Clay, medium to high plasticity, brown, with cobble and gravel, M<OMC, well compacted
TP98	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Clay, medium to high plasticity, brown, with cobble and gravel, M<OMC, well compacted
TP99	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CI-CH) Silty CLAY, medium to high plasticity, red-brown, with cobbles, boulders, M<PL, very stiff to hard
TP100	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP101	0.0-0.2		TOPSOIL: Silty Sandy Clay, low plasticity, dark brown
	0.2-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP102	0.0-0.2		TOPSOIL: Silty Sandy Clay, low plasticity, dark brown
	0.2-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CI-CH) Silty CLAY, medium to high plasticity, red-brown, with cobbles, boulders, M<PL, very stiff to hard
TP103	0.0-0.2		TOPSOIL: Silty Sandy Clay, low plasticity, dark brown
	0.2-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP104	0.0-0.2		TOPSOIL: Silty Sandy Clay, low plasticity, dark brown
	0.2-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP105	0.0-0.2		TOPSOIL: Silty Sandy Clay, low plasticity, dark brown
	0.2-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP106	0.0-0.2		TOPSOIL: Silty Sandy Clay, low plasticity, dark brown
	0.2-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP107	0.0-0.2		TOPSOIL: Silty Sandy Clay, low plasticity, dark brown
	0.2-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP108	0.0-0.2		TOPSOIL: Silty Sandy Clay, low plasticity, dark brown
	0.2-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP109	0.0-0.2		TOPSOIL: Silty Sandy Clay, low plasticity, dark brown
	0.2-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff

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TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP110	0.0-0.2		TOPSOIL: Silty Sandy Clay, low plasticity, dark brown
	0.2-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP111	0.0-0.2		TOPSOIL: Silty Sandy Clay, low plasticity, dark brown
	0.2-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP112	0.0-0.2		TOPSOIL: Silty Sandy Clay, low plasticity, dark brown
	0.2-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP113	0.0-0.2		TOPSOIL: Silty Sandy Clay, low plasticity, dark brown
	0.2-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP114	0.0-0.2		TOPSOIL: Silty Sandy Clay, low plasticity, dark brown
	0.2-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, brown and grey, with pebbles and cobbles, M<PL, stiff to very stiff
TP115	0.0-0.2		TOPSOIL: Silty Sandy Clay, low plasticity, dark brown
	0.2-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, grey mottled brown, with ironstone gravel, M<PL, very stiff
TP116	0.0-0.2		TOPSOIL: Silty Sandy Clay, low plasticity, dark brown
	0.2-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, grey mottled brown, with ironstone gravel, M<PL, very stiff
TP117	0.0-0.2		TOPSOIL: Silty Sandy Clay, low plasticity, dark brown
	0.2-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, grey mottled brown, with ironstone gravel, M<PL, very stiff
TP118	0.0-0.2		TOPSOIL: Silty Sandy Clay, low plasticity, dark brown
	0.2-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, grey mottled brown, with ironstone gravel, M<PL, very stiff

**TABLE A**

Job No: 8599/75  
Our Ref: 8599/75-AA

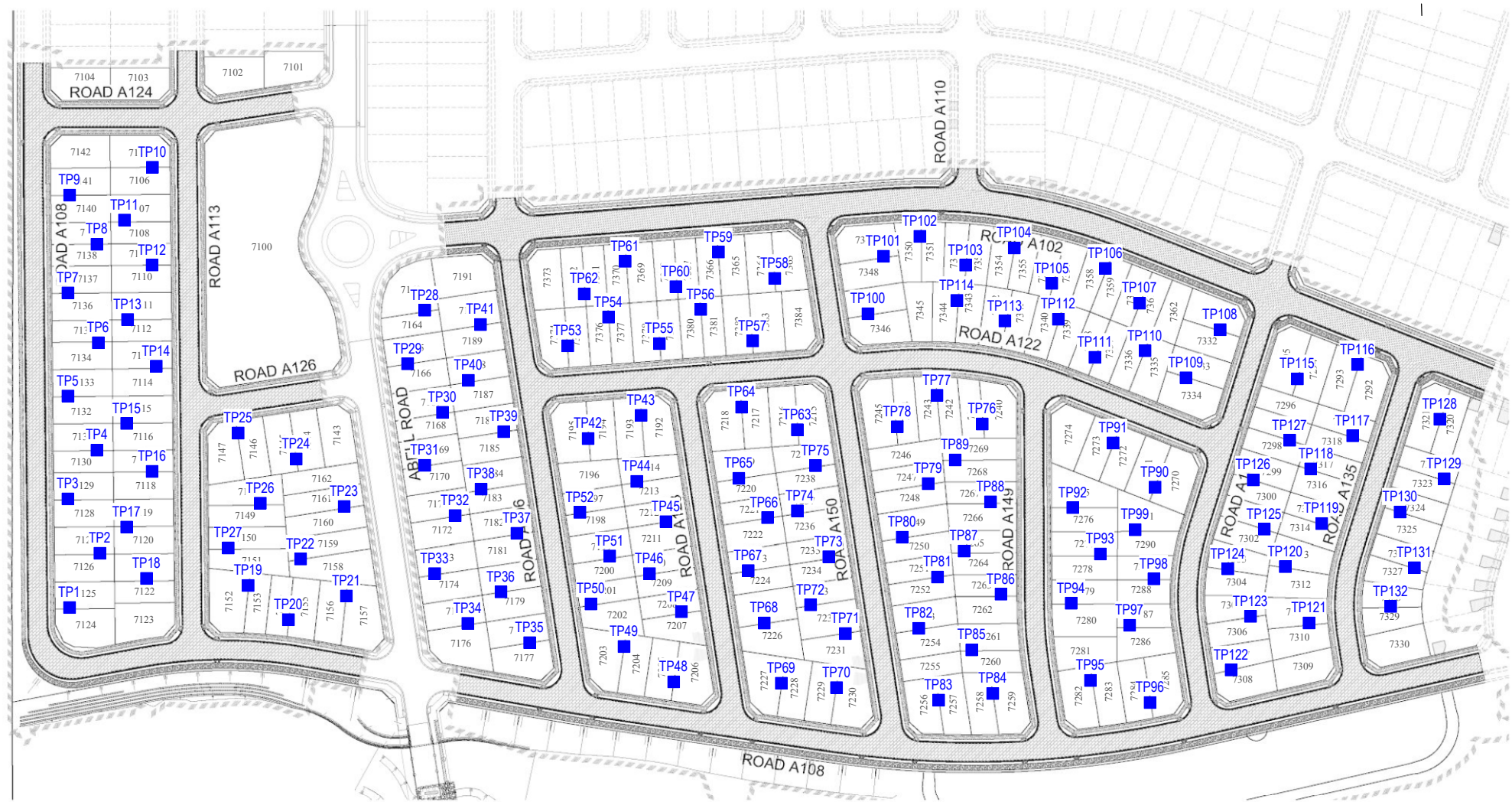
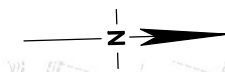
TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP119	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP120	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP121	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP122	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP123	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP124	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP125	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
TP126	0.0-0.2		TOPSOIL: Silty Sandy Clay, low plasticity, dark brown
	0.2-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, grey mottled brown, with ironstone gravel, M<PL, very stiff
TP127	0.0-0.2		TOPSOIL: Silty Sandy Clay, low plasticity, dark brown
	0.2-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	(CH) Silty CLAY, high plasticity, grey mottled brown, with ironstone gravel, M<PL, very stiff
TP128	0.0-0.7	0.3-0.4 (DS)	FILL: Silty Sandy Clay, low to medium plasticity, brown, with gravel, cobbles and pebbles, M<OMC, well compacted
	0.7-1.5	1.0-1.1 (DS)	(CI-CH) Silty CLAY, medium to high plasticity, red-brown, with cobbles, boulders, M<PL, very stiff to hard



**TABLE A**Job No: 8599/75  
Our Ref: 8599/75-AA

Page 16 of 16

<b>TEST PIT</b>	<b>DEPTH (m)</b>	<b>SAMPLE DEPTH (m)</b>	<b>MATERIAL DESCRIPTION</b>
TP129	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Clay, medium to high plasticity, brown, with cobble and gravel, M<OMC, well compacted
TP130	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Clay, medium to high plasticity, brown, with cobble and gravel, M<OMC, well compacted
TP131	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Clay, medium to high plasticity, brown, with cobble and gravel, M<OMC, well compacted
TP132	0.0-1.5	0.3-0.4 (DS) 1.0-1.1 (DS)	FILL: Silty Clay, medium to high plasticity, brown, with cobble and gravel, M<OMC, well compacted



**LEGEND**

■ Test Pit



34 Borec Road  
Penrith  
NSW 2750  
ABN 71 076 676 321

Ph: 02 4722 2744  
Fx: 02 4722 2777  
www.geotech.com.au  
e-mail: info@geotech.com.au

**NOTES**

1. Site features are indicative and are not to scale.
2. This drawing has been produced using a base plan provided by others to which additional information e.g test pits, borehole locations or notes have been added. Some or all of the plan may not be relevant at the time of producing this drawing

Daracon Contractors Pty Ltd  
Residential Development  
Woorong Park Marsden Park Precinct  
Newpark 7A

**Test Pit Locations**

Drawing No: 8599/75-AA1  
Job No: 8599/75  
Drawn By: MH  
Date: 1 November 2021  
Checked By: RR

File No: 8599-75  
Layers: 0, AA1

## **APPENDIX B**

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### **SUMMARY OF SITE CLASSIFICATIONS**

Job No: 8599/47  
 Our Ref: 8599/47-AA

**TABLE B**

**SUMMARY OF SITE CLASSIFICATIONS**

**Newpark Precinct 7A, Marsden Park**

Lot	Site Classification	Lot	Site Classification	Lot	Site Classification
7101	M	7134	H1	7167	M
7102	M	7135	H1	7168	M
7103	M	7136	H1	7169	M
7104	M	7137	H1	7170	M
7105	M	7138	H1	7171	M
7106	M	7139	H1	7172	M
7107	M	7140	M	7173	M
7108	M	7141	M	7174	M
7109	M	7142	M	7175	M
7110	M	7143	M	7176	M
7111	M	7144	M	7177	M
7112	M	7145	M	7178	M
7113	M	7146	M	7179	M
7114	M	7147	M	7180	M
7115	M	7148	M	7181	M
7116	M	7149	M	7182	M
7117	M	7150	M	7183	M
7118	M	7151	M	7184	M
7119	M	7152	M	7185	M
7120	M	7153	M	7186	M
7121	M	7154	M	7187	M
7122	M	7155	M	7188	M
7123	M	7156	M	7189	M
7124	M	7157	M	7190	M
7125	M	7158	M	7191	M
7126	M	7159	M	7192	M
7127	M	7160	M	7193	M
7128	M	7161	M	7194	M
7129	M	7162	M	7195	M
7130	M	7163	M	7196	M
7131	M	7164	M	7197	M
7132	H1	7165	M	7198	M
7133	H1	7166	M	7199	H1

Job No: 8599/47  
 Our Ref: 8599/47-AA

**Newpark Precinct 7A, Marsden Park (Continued)**

Lot	Site Classification	Lot	Site Classification	Lot	Site Classification
7200	H1	7233	H1	7266	M
7201	H1	7234	H1	7267	M
7202	H1	7235	H1	7268	M
7203	H1	7236	H1	7269	M
7204	H1	7237	H1	7270	H1
7205	H1	7238	H1	7271	H1
7206	H1	7239	H1	7272	H1
7207	H1	7240	H1	7273	H1
7208	H1	7241	H1	7274	H1
7209	H1	7242	H1	7275	H1
7210	H1	7243	H1	7276	H1
7211	H1	7244	H1	7277	H1
7212	M	7245	H1	7278	H1
7213	M	7246	H1	7279	M
7214	M	7247	H1	7280	M
7215	H1	7248	H1	7281	M
7216	H1	7249	H1	7282	M
7217	H1	7250	H1	7283	M
7218	H1	7251	M	7284	M
7219	H1	7252	M	7285	M
7220	H1	7253	M	7286	M
7221	H1	7254	M	7287	M
7222	H1	7255	M	7288	M
7223	M	7256	M	7289	M
7224	M	7257	M	7290	H1
7225	M	7258	M	7291	H1
7226	M	7259	M	7292	H1
7227	M	7260	M	7293	H1
7228	M	7261	M	7294	H1
7229	M	7262	M	7295	H1
7230	M	7263	M	7296	H1
7231	M	7264	M	7297	H1
7232	H2	7265	M	7298	H1

Job No: 8599/47  
 Our Ref: 8599/47-AA

**Newpark Precinct 7A, Marsden Park (Continued)**

Lot	Site Classification	Lot	Site Classification	Lot	Site Classification
7299	H1	7328	M	7357	H1
7300	H1	7329	M	7358	H1
7301	M	7330	M	7359	H1
7302	M	7331	H1	7360	H1
7303	M	7332	H1	7361	H1
7304	M	7333	H1	7362	H1
7305	M	7334	H1	7363	H1
7306	M	7335	H1	7364	H1
7307	M	7336	H1	7365	H1
7308	M	7337	H1	7366	H1
7309	M	7338	H1	7367	H1
7310	M	7339	H1	7368	H1
7311	M	7340	H1	7369	H1
7312	M	7341	H1	7370	H1
7313	M	7342	H1	7371	H1
7314	M	7343	H1	7372	H1
7315	M	7344	H1	7373	H1
7316	M	7345	H1	7374	H1
7317	M	7346	H1	7375	H1
7318	H1	7347	H1	7376	H1
7319	H1	7348	H1	7377	H1
7320	H1	7349	H1	7378	H1
7321	H1	7350	H1	7379	H1
7322	M	7351	H1	7380	H1
7323	M	7352	H1	7381	H1
7324	M	7353	H1	7382	H1
7325	M	7354	H1	7383	H1
7326	M	7355	H1	7384	H1
7327	M	7356	H1		

M: Moderately Reactive, Free Surface Movement: 20-40mm

H1: Highly Reactive, Free Surface Movement: 40-60mm

## **APPENDIX C**

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### **LABORATORY TEST RESULTS**

DARACON CONTRACTORS PTY LTD  
184 ADDERLEY STREET WEST  
AUBURN NSW 2144

Job No: 8599/75  
Tested By: BC  
Checked By: AK  
Date Tested: 03/11/2021  
Laboratory: Penrith

### SITE CLASSIFICATION

RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7A

### TEST RESULTS - SHRINK / SWELL INDEX

Page 1 of 1

Test Procedure: AS 1289 7.1.1				
Sample Identification	Test Pit 54	Test Pit 63	Test Pit 100	
Depth (m)	0.6 - 0.9	0.5 - 0.8	0.2 - 0.5	
Laboratory Number	8599/75-1	8599/75-2	8599/75-4	
Test Description				
Moisture Content				
Initial %	24.5	21.9	25.5	
Final %	24.7	24.9	28.2	
Swell %	3.3	1.0	2.9	
Shrinkage %	4.5	2.7	5.0	
Shrink/Swell Index %/pF	3.4	1.8	3.6	
Material Description	(CH) Silty CLAY, high plasticity, some fine to medium gravel	(CI) Silty CLAY, medium plasticity, brown & grey, some fine to medium gravel	(CH) Silty CLAY, high plasticity, brown & grey, some fine to medium gravel	

Form No R007 Version 12 06/13



NATA Accreditation Number 2734  
Corporate Site Number 2727

Accredited for compliance with  
ISO/IEC 17025 - Testing.

A Kench 15/11/2021  
Approved Signatory

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

Unit 4, 18-20 Whyalla Place, Prestons NSW 2170  
Telephone: (02) 9607 6111

email: info@geotech.com.au www.geotech.com.au





DARACON CONTRACTORS PTY LTD  
184 ADDERLEY STREET WEST  
AUBURN NSW 2144

SITE CLASSIFICATION  
RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7A

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

Page 1 of 1

Job No:	8599/75	Tested By:	BG
Laboratory	Penrith	Checked By:	AK
Date Tested	10/11/2021		
Sample Identification	Test Pit 76		
Laboratory Number	8599/75-3		
Depth (m)	0.4 - 0.7		
<b>Test Description</b>			
Liquid Limit (W <sub>L</sub> )	23%		
Plastic Limit (W <sub>P</sub> )	14%		
Plastic Index (I <sub>P</sub> )	9%		
Linear Shrinkage (LS)	3.0%		
Mould Length (mm)	125		
<b>Sample History</b>	Oven Dried Dry Sieved		
<b>Material Description</b>	(CL) Sandy CLAY, low plasticity, brown		

Form No R004 Version 12 - 06/13 - Issued by ER



Nata Accreditation Number 2734  
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench

25/11/2021

Approved Signatory

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