GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

Job No: 8599/73
Our Ref: 8599/73-AA-R2
24 January 2022

Daracon Contractors Pty Ltd
184 Adderley Street
AUBURN NSW 2144
Email: SimpsonW@daracon.com.au

Attention: Mr S Wong

Dear Sir

re: **Newpark – Precinct 7 – Stage 7B**
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 fifty-five (255) lots are covered in this report (Lots 7401 to 7655).

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

JACK-SCOTT HERBEN
Geotechnical Engineer

Reviewed by

EMGED RIZKALLA
Director

TABLE OF CONTENTS

****

APPENDICES

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 7B). A total of two hundred and fifty-five (255) lots are covered in this report (Lots 7401 to 7655).

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 22nd August 2022 and consisted of excavation of seventy two (72) test pits (TP1 to TP72) 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 8599/73-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 7B) is irregular in shape and located within the Newpark subdivision. The site is bound by Stage 7B to the north east; Stage 7A to the east; Stage 7C to the south; Stage 7D to the south west; open fields followed by low density residential to the north west; Stage 7J 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)
TP1	1.5	0.0-0.3	NE	0.3-1.5
TP2	1.5	0.0-0.3	NE	0.3-1.5
TP3	1.5	0.0-0.3	NE	0.3-1.5
TP4	1.5	0.0-0.3	0.3-0.6	0.6-1.5
TP5	1.5	0.0-0.3	0.3-0.6	0.6-1.5

Test Pit	Termination Depth (m)	Topsoil (m)	Fill (m)	Natural (m)
TP6	1.5	0.0-0.3	0.3-0.6	0.6-1.5
TP7	1.5	0.0-0.3	0.3-0.6	0.6-1.5
TP8	1.5	0.0-0.3	0.3-0.6	0.6-1.5
TP9	1.5	0.0-0.3	0.3-0.6	0.6-1.5
TP10	1.5	0.0-0.3	0.3-0.6	0.6-1.5
TP11	1.5	0.0-0.3	0.3-0.6	0.6-1.5
TP12	1.5	0.0-0.3	0.3-0.6	0.6-1.5
TP13	1.5	0.0-0.3	0.3-0.6	0.6-1.5
TP14	1.5	0.0-0.3	0.3-0.6	0.6-1.5
TP15	1.5	0.0-0.3	0.3-0.6	0.6-1.5
TP16	1.5	0.0-0.3	0.3-0.6	0.6-1.5
TP17	1.5	0.0-0.3	NE	0.3-1.5
TP18	1.5	0.0-0.3	NE	0.3-1.5
TP19	1.5	0.0-0.3	NE	0.3-1.5
TP20	1.5	0.0-0.3	NE	0.3-1.5
TP21	1.5	0.0-0.3	NE	0.3-1.5
TP22	1.5	0.0-0.3	NE	0.3-1.5
TP23	1.5	0.0-0.3	NE	0.3-1.5
TP24	1.5	0.0-0.3	NE	0.3-1.5
TP25	1.5	0.0-0.3	NE	0.3-1.5
TP26	1.5	0.0-0.3	NE	0.3-1.5
TP27	1.5	0.0-0.3	NE	0.3-1.5
TP28	1.5	0.0-0.3	NE	0.3-1.5
TP29	1.5	0.0-0.3	NE	0.3-1.5
TP30	1.5	0.0-0.3	NE	0.3-1.5
TP31	1.5	0.0-0.3	NE	0.3-1.5
TP32	1.5	0.0-0.3	NE	0.3-1.5
TP33	1.5	0.0-0.3	NE	0.3-1.5
TP34	1.5	0.0-0.3	NE	0.3-1.5
TP35	1.5	0.0-0.3	NE	0.3-1.5
TP36	1.5	0.0-0.3	NE	0.3-1.5
TP37	1.5	0.0-0.3	NE	0.3-1.5
TP38	1.5	0.0-0.3	NE	0.3-1.5
TP39	1.5	0.0-0.3	NE	0.3-1.5
TP40	1.5	0.0-0.3	NE	0.3-1.5
TP41	1.5	0.0-0.3	NE	0.3-1.5

Test Pit	Termination Depth (m)	Topsoil (m)	Fill (m)	Natural (m)
TP42	1.5	0.0-0.3	NE	0.3-1.5
TP43	1.5	0.0-0.3	NE	0.3-1.5
TP44	1.5	0.0-0.3	NE	0.3-1.5
TP45	1.5	0.0-0.3	NE	0.3-1.5
TP46	1.5	0.0-0.3	0.3-0.5	0.5-1.5
TP47	1.5	0.0-0.3	0.3-0.5	0.5-1.5
TP48	1.5	0.0-0.3	0.3-0.5	0.5-1.5
TP49	1.5	0.0-0.3	NE	0.3-1.5
TP50	1.5	0.0-0.3	NE	0.3-1.5
TP51	1.5	0.0-0.3	NE	0.3-1.5
TP52	1.5	0.0-0.3	NE	0.3-1.5
TP53	1.5	0.0-0.3	NE	0.3-1.5
TP54	1.5	0.0-0.3	NE	0.3-1.5
TP55	1.5	0.0-0.3	NE	0.3-1.5
TP56	1.5	0.0-0.3	NE	0.3-1.5
TP57	1.5	0.0-0.3	NE	0.3-1.5
TP58	1.5	0.0-0.3	NE	0.3-1.5
TP59	1.5	0.0-0.3	NE	0.3-1.5
TP60	1.5	0.0-0.3	NE	0.3-1.5
TP61	1.5	0.0-0.3	NE	0.3-1.5
TP62	1.5	0.0-0.3	NE	0.3-1.5
TP63	1.5	0.0-0.3	NE	0.3-1.5
TP64	1.5	0.0-0.3	NE	0.3-1.5
TP65	1.5	0.0-0.3	0.3-0.8	0.8-1.5
TP66	1.5	0.0-0.3	NE	0.3-1.5
TP67	1.5	0.0-0.3	NE	0.3-1.5
TP68	1.5	0.0-0.3	NE	0.3-1.5
TP69	1.5	0.0-0.3	NE	0.3-1.5
TP70	1.5	0.0-0.3	NE	0.3-1.5
TP71	1.5	0.0-0.3	0.3-0.5	0.5-1.5
TP72	1.5	0.0-0.3	NE	0.3-1.5

NE: Not encountered to the termination depth

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

Topsoil	Silty Gravelly Clay, high plasticity, brown, occasional ironstone gravel and cobble Silty Gravelly Clay, high plasticity, brown-grey, occasional ironstone gravel and cobble Silty Gravelly Clay, high plasticity, brown-red, occasional ironstone gravel and cobble Silty Clay, low plasticity, dark brown Silty Clay, high plasticity, dark brown, occasional gravel Silty Clay, high plasticity, dark brown-red, occasional gravel Silty Clay, high plasticity, brown, trace of gravel Silty Clay, high plasticity, brown-orange-red, trace of ironstone gravel, trace of cobble Silty Clay, low plasticity, brown, occasional gravel and ironstone gravel Silty Gravelly Clay, high plasticity, red-grey, trace of ironstone gravel Silty Gravelly Clay, low plasticity, dark brown Silty Gravelly Clay, high plasticity, grey-brown, occasional gravel and ironstone gravel Silty Gravelly Clay, low plasticity, grey-orange-brown Silty Gravelly Clay, low plasticity, brown Silty Clay, high plasticity, red-grey Silty Clay, low plasticity, grey-brown, trace of cobble Silty Clay, high plasticity, red-brown, occasional gravel Silty Cobbly Clay, high plasticity, brown-orange, trace of ironstone gravel Silty Clay, high plasticity, grey, occasional gravel and ironstone gravel Silty Clay, high plasticity, grey-brown, occasional ironstone gravel, gravel and cobble Silty Clay, high plasticity, grey-orange, trace of ironstone gravel Silty Gravelly Clay, high plasticity, dark brown Silty Clay, medium to high plasticity, brown, trace of gravel, trace of shale fragments, trace of cobble Silty Clay, medium to high plasticity, orange-grey, trace of gravel, trace of ironstone gravel Silty Clay, low plasticity, grey-red, trace gravel Silty Cobbly Clay, high plasticity, brown, trace of ironstone gravel, trace of gravel Silty Cobbly Clay, high plasticity, brown-orange, trace of ironstone gravel Silty Gravelly Clay, low plasticity, grey-brown, trace of ironstone gravel
Fill	Silty Gravelly Clay, high plasticity, dark brown, medium grain subangular gravel, trace of medium grain subrounded cobble Silty Gravelly Clay, low plasticity, grey-brown, medium grain subangular gravel Silty Clay, high plasticity, brown-grey, trace of medium grain subrounded cobble, trace of medium to coarse grain subangular gravel Silty Clay, high plasticity, brown, trace of medium grain subrounded cobble, occasional shale fragments and gravel Silty Clay, medium to high plasticity, brown, trace of medium grain subrounded cobble

Natural	Silty Gravelly CLAY, low to medium plasticity, brown, trace of cobble Silty Gravelly CLAY, low to medium plasticity, brown-red, trace of cobble Silty CLAY, high plasticity, brown, trace of gravel, occasional cobble and ironstone pockets Silty CLAY, high plasticity, brown-grey, cobble, trace of gravel Silty CLAY, high plasticity, brown-orange, trace of ironstone pockets, trace of cobble, trace of shale fragments, trace of gravel Silty CLAY, high plasticity, brown-red, trace of cobble, trace of ironstone pockets, trace of gravel Silty Gravelly CLAY, high plasticity, dark brown, trace of cobble, trace of ironstone pockets Silty CLAY, high plasticity, brown, trace of cobble, trace of ironstone pockets, trace of gravel Silty Cobbly CLAY, high plasticity, brown, trace of ironstone pockets, occasional gravel and shale fragments Silty Gravelly Sandy CLAY, medium to high plasticity, grey-brown-orange, trave of ironstone pockets Silty Gravelly Sandy CLAY, medium to high plasticity, brown, trace of ironstone pockets Silty Cobbly CLAY, high plasticity, brown-grey, occasional gravel, ironstone pockets and ironstone gravel Silty Gravelly CLAY, high plasticity, brown-grey, trace of cobble, trace of ironstone pockets Silty Gravelly CLAY, high plasticity, grey-brown, trace of ironstone pockets, occasional cobble Silty Gravelly CLAY, low plasticity, grey-orange, trace of ironstone pockets Silty Gravelly CLAY, medium to high plasticity, brown, trace of ironstone pockets Silty Gravelly CLAY, low plasticity, brown-orange, trace of ironstone pockets Silty CLAY, low plasticity, grey-orange, trace of gravel, trace of ironstone pockets, trace of cobble Silty CLAY, medium to high plasticity, grey-orange, trace of cobble, trace of gravel, trace of ironstone pockets Silty CLAY, high plasticity, red-grey, trace of cobble, trace of ironstone pockets, trace of gravel Silty Cobbly CLAY, low plasticity, grey-brown, trace of ironstone pockets Silty CLAY, high plasticity, red-brown, trace of cobble, trace of gravel, occasional ironstone pockets Silty Cobbly CLAY, high plasticity, brown-orange, trace of ironstone pockets, trace of gravel Silty Gravelly CLAY, high plasticity, occasional ironstone pockets and cobble Silty Cobbly CLAY, high plasticity, grey, trace of gravel Silty Cobbly CLAY, high plasticity, grey-brown, trace of ironstone pockets, trace of gravel Silty CLAY, medium to high plasticity, brown, trace of cobble Silty CLAY, medium to high plasticity, brown, trace of cobble, trace of ironstone pockets, trace of gravel Silty Gravelly CLAY, high plasticity, red-brown-grey, trace of ironstone pockets Silty CLAY, high plasticity, grey, trace of ironstone pockets, occasional gravel Silty Cobbly CLAY, low plasticity, orange-grey, trace of ironstone pockets Silty Gravelly CLAY, medium to high plasticity, orange-grey, with ironstone pockets Silty CLAY, low plasticity, grey-red, trace of ironstone pockets, trace of gravel Silty CLAY, high plasticity, red-brown-grey, trace of cobble, trace of ironstone pockets Silty CLAY, high plasticity, dark red-brown, trace of gravel Silty CLAY, low plasticity, brown, trace of ironstone pockets, trace of cobble, trace of gravel Silty CLAY, medium to high plasticity, brown-red, trace of ironstone pockets, trace of cobble, trace of gravel Silty Gravelly CLAY, high plasticity, brown grey, trace of cobble, trace of ironstone pockets Silty Gravelly CLAY, low plasticity, grey-brown, trace of ironstone pockets

*See Appendix A “Table A - Summary of Test Pits” for more descript soil classifications

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 seven (7) undisturbed U_{50} and four (4) 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)
TP15	0.7-0.6	Silty Cobbly CLAY, high plasticity, brown, medium grain subrounded cobble, trace of coarse subangular gravel, trace of ironstone pockets	-	-	-	1.0
TP17	0.6-0.8	Silty Gravelly Sandy CLAY, medium to high plasticity, grey-brown-orange, fine to medium grain sand, medium grain subangular gravel, trace of ironstone pockets	-	-	-	1.8
TP28	0.6-0.8	Silty CLAY, low plasticity, grey-orange, trace of medium to coarse grain subangular gravel, trace of ironstone pockets, trace of medium grain subrounded cobble	-	-	-	2.3
TP35	0.4-0.6	Silty CLAY, high plasticity, red-brown, trace of medium to coarse grain subangular gravel, trace of medium grain subrounded cobble	-	-	-	3.3
TP40	0.4-0.6	Silty CLAY, high plasticity, brown, trace of medium grain subrounded cobble, trace of ironstone pockets, trace of medium to coarse grain subangular gravel	-	-	-	3.0
TP44	0.3-0.4	Silty Cobbly CLAY, high plasticity, grey, medium grain subrounded cobble, trace of medium to coarse grain subangular gravel	52	26	15	-
TP48	0.4-0.5	Silty CLAY, medium to high plasticity, brown, trace of medium grain subrounded cobble	39	17	12.5	-
TP49	0.4-0.6	Silty CLAY, high plasticity, brown, trace of ironstone pockets, medium to coarse grain subangular gravel	-	-	-	N/A
TP52	0.6-0.8	Silty CLAY, high plasticity, grey, trace of ironstone pockets, trace of medium to coarse grain subangular gravel	54	30	14.5	-

Test Pit	Depth (m)	Material Description	Liquid Limit (%)	Plasticity Index (%)	Linear Shrinkage (%)	Shrink/Swell Index (%/pF)
TP55	0.4-0.6	Silty CLAY, high plasticity, brown, trace of ironstone pockets, trace of medium to coarse grain subangular gravel	-	-	-	1.4
TP72	0.4-0.6	Silty CLAY, high plasticity, grey, trace of ironstone pockets	28	14	5.5	-

*N/A: Not able to be determined

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: 8599/71-AB dated 23rd January 2023). 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 15th to 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".

GEOTECH TESTING PTY LTD

APPENDIX A

TABLE A
SUMMARY OF TEST PITS

DRAWING NO 8599/73-AA1
(*Test Pit Location Plan*)

TABLE A

Job No: 8599/73
Our Ref: 8599/73-AA

TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP1	0.0-0.3		TOPSOIL: Silty Gravelly Clay, high plasticity, brown
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CL-CI) Silty Gravelly CLAY, low to medium plasticity, brown, medium to coarse grain subangular gravel, trace of medium grain subrounded cobble, M<PL, stiff
TP2	0.0-0.3		TOPSOIL: Silty Clay, low plasticity, dark brown
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CL-CI) Silty Gravelly CLAY, low to medium plasticity, brown-red, medium to coarse grain subangular gravel, trace of medium grain subrounded cobble, M≤PL, stiff
TP3	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, dark brown, trace of medium grain subangular gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty CLAY, high plasticity, brown, trace of fine to coarse subangular gravel, M≤PL, stiff,
TP4	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, brown, trace of medium grain subangular gravel
	0.3-0.6	0.4-0.5 (DS)	FILL: Silty Gravelly Clay, high plasticity, dark brown, medium grain subangular gravel, trace of medium grain subrounded cobble, M≤PL, well compacted
	0.6-1.5	0.8-0.9 (DS)	(CH) Silty Gravelly CLAY, high plasticity, dark brown, medium grain subangular gravel, trace of medium grain subrounded cobble, trace of ironstone pockets, M≤PL, stiff
TP5	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, brown
	0.3-0.6	0.4-0.5 (DS)	FILL: Silty Clay, high plasticity, brown-grey, trace of medium grain subrounded cobble, trace of medium to coarse grain subangular gravel, M≤PL, well compacted
	0.6-1.5	0.8-0.9 (DS)	(CH) Silty CLAY, high plasticity, brown-grey, trace of medium grain subrounded cobble, trace of medium to coarse grain subangular gravel, M≤PL, stiff

TABLE A

Job No: 8599/73
Our Ref: 8599/73-AA

TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP6	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, brown
	0.3-0.6	0.4-0.5 (DS)	FILL: Silty Clay, high plasticity, brown, trace of medium grain subrounded cobble, trace of medium to coarse grain subangular gravel, M≤PL, well compacted
	0.6-1.5	0.8-0.9 (DS)	(CH) Silty CLAY, high plasticity, brown, trace of medium grain subrounded cobble, trace of medium to coarse grain subangular gravel, trace of ironstone pockets, M≤PL, stiff
TP7	0.0-0.3		TOPSOIL: Silty Clay, low plasticity, brown
	0.3-0.6	0.4-0.5 (DS)	FILL: Silty Clay, high plasticity, brown, trace of medium grain subrounded cobble, trace of coarse grain subangular gravel, M≤PL, well compacted
	0.6-1.5	0.8-0.9 (DS)	(CL) Silty CLAY, high plasticity, brown, trace of medium grain subrounded cobble, trace of ironstone pockets, trace of coarse grain subangular gravel, M≤PL, stiff
TP8	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, brown
	0.3-0.6	0.4-0.5 (DS)	FILL: Silty Cobbly Clay, high plasticity, brown, medium grain subrounded cobble, trace of coarse grain subangular gravel, M≤PL, well compacted
	0.6-1.5	0.8-0.9 (DS)	(CH) Silty Cobbly CLAY, high plasticity, brown, medium grain subrounded cobble, trace of coarse grain subangular gravel, trace of ironstone pockets, M≤PL, stiff
TP9	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, brown
	0.3-0.6	0.4-0.5 (DS)	FILL: Silty Cobbly Clay, high plasticity, brown, medium grain subrounded cobble, trace of coarse grain subangular gravel, M≤PL, well compacted
	0.6-1.5	0.8-0.9 (DS)	(CH) Silty Cobbly CLAY, high plasticity, brown, medium grain subrounded cobble, trace of coarse grain subangular gravel, trace of ironstone pockets, M≤PL, stiff
TP10	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, brown
	0.3-0.6	0.4-0.5 (DS)	FILL: Silty Cobbly Clay, high plasticity, brown, medium grain subrounded cobble, trace of coarse grain subangular gravel, M≤PL, well compacted
	0.6-1.5	0.8-0.9 (DS)	(CH) Silty Cobbly CLAY, high plasticity, brown, medium grain subrounded cobble, trace of coarse grain subangular gravel, trace of ironstone pockets, M≤PL, stiff

TABLE A

Job No: 8599/73
Our Ref: 8599/73-AA

TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP11	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, brown, trace of medium grain subrounded cobble
	0.3-0.6	0.4-0.5 (DS)	FILL: Silty Cobbly Clay, high plasticity, brown, medium grain subrounded cobble, trace of coarse grain subangular gravel, M≤PL, well compacted
	0.6-1.5	0.8-0.9 (DS)	(CH) Silty Cobbly CLAY, high plasticity, brown, medium grain subrounded cobble, trace of coarse grain subangular gravel, trace of ironstone pockets, M≤PL, stiff
TP12	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, brown, trace of medium grain subrounded cobble
	0.3-0.6	0.4-0.5 (DS)	FILL: Silty Cobbly Clay, high plasticity, brown, medium grain subrounded cobble, trace of coarse grain subangular gravel, M≤PL, well compacted
	0.6-1.5	0.8-0.9 (DS)	(CH) Silty Cobbly CLAY, high plasticity, brown, medium grain subrounded cobble, trace of coarse grain subangular gravel, trace of ironstone pockets, M≤PL, stiff
TP13	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, brown, trace of medium grain subrounded cobble
	0.3-0.6	0.4-0.5 (DS)	FILL: Silty Cobbly Clay, high plasticity, brown, medium grain subrounded cobble, trace of coarse grain subangular gravel, M≤PL, well compacted
	0.6-1.5	0.8-0.9 (DS)	(CH) Silty Cobbly CLAY, high plasticity, brown, medium grain subrounded cobble, trace of coarse grain subangular gravel, trace of ironstone pockets, M≤PL, stiff
TP14	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, brown, trace of medium grain subrounded cobble
	0.3-0.6	0.4-0.5 (DS)	FILL: Silty Cobbly Clay, high plasticity, brown, medium grain subrounded cobble, trace of coarse grain subangular gravel, M≤PL, well compacted
	0.6-1.5	0.8-0.9 (DS)	(CH) Silty Cobbly CLAY, high plasticity, brown, medium grain subrounded cobble, trace of coarse grain subangular gravel, trace of ironstone pockets, M≤PL, stiff

TABLE A

Job No: 8599/73
Our Ref: 8599/73-AA

TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP15	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, brown, trace of medium grain subrounded cobble
	0.3-0.6	0.4-0.5 (DS)	FILL: Silty Cobbly Clay, high plasticity, brown, medium grain subrounded cobble, trace of coarse grain subangular gravel, M≤PL, well compacted
	0.6-1.5	0.7-0.9 (U_{50}) 0.8-0.9 (DS)	(CH) Silty Cobbly CLAY, high plasticity, brown, medium grain subrounded cobble, trace of coarse grain subangular gravel, trace of ironstone pockets, M≤PL, stiff
TP16	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, brown, trace of medium grain subrounded cobble
	0.3-0.6	0.4-0.5 (DS)	FILL: Silty Cobbly Clay, high plasticity, brown, medium grain subrounded cobble, trace of coarse grain subangular gravel, M≤PL, well compacted
	0.6-1.5	0.8-0.9 (DS)	(CH) Silty Cobbly CLAY, high plasticity, brown, medium grain subrounded cobble, trace of coarse grain subangular gravel, trace of ironstone pockets, M≤PL, stiff
TP17	0.0-0.3		TOPSOIL: Silty Gravelly Clay, high plasticity, red-grey, medium to coarse grain subangular gravel, trace of ironstone gravel
	0.3-1.5	0.4-0.5 (DS) 0.6-0.8 (U_{50}) 0.8-0.9 (DS)	(CI-CH) Silty Gravelly Sandy CLAY, medium to high plasticity, grey-brown-orange, fine to medium grain sand, medium grain subangular gravel, trace of ironstone pockets, M≤PL, stiff
TP18	0.0-0.3		TOPSOIL: Silty Gravelly Clay, high plasticity, red-grey, medium to coarse grain subangular gravel, trace of ironstone gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CI-CH) Silty Gravelly Sandy CLAY, medium to high plasticity, brown, fine to medium grain sand, medium to coarse grain subangular gravel, trace of ironstone pockets, M≤PL, stiff
TP19	0.0-0.3		TOPSOIL: Silty Gravelly Clay, high plasticity, brown-grey, trace of ironstone gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty Cobbly CLAY, high plasticity, brown-grey, medium grain subrounded cobble, trace of ironstone pockets, trace of medium to coarse grain subangular gravel, M≤PL, stiff

TABLE A

Job No: 8599/73
Our Ref: 8599/73-AA

TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP20	0.0-0.3		TOPSOIL: Silty Gravelly Clay, low plasticity, dark brown, medium to coarse grain subangular gravel
	0.3-1.5	0.4-0.5 (DS) 0.4-0.6 (U_{50}) 0.8-0.9 (DS)	(CH) Silty Gravelly CLAY, high plasticity, brown-grey, medium grain subangular gravel, trace of medium grain subrounded cobble, trace of ironstone pockets, M≤PL, stiff
TP21	0.0-0.3		TOPSOIL: Silty Gravelly Clay, high plasticity, red-grey, medium to coarse grain subangular gravel, trace of ironstone gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CI-CH) Silty Gravelly Sandy CLAY, medium to high plasticity, grey-brown-orange, fine to medium grain sand, medium grain subangular gravel, trace of ironstone pockets, M≤PL, stiff
TP22	0.0-0.3		TOPSOIL: Silty Gravelly Clay, high plasticity, grey-brown
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty Gravelly CLAY, high plasticity, grey-brown, medium to coarse grain subangular gravel, trace of ironstone pockets, M≤PL, stiff to very stiff
TP23	0.0-0.3		TOPSOIL: Silty Gravelly Clay, high plasticity, grey-brown
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty Gravelly CLAY, high plasticity, grey-brown, medium grain subangular gravel, trace of ironstone pockets, M≤PL, stiff to very stiff
TP24	0.0-0.3		TOPSOIL: Silty Gravelly Clay, low plasticity, grey-orange-brown, medium grain subangular gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CL) Silty Gravelly CLAY, low plasticity, grey-orange, medium grain subangular gravel, trace of ironstone pockets, M<PL, VSt
TP25	0.0-0.3		TOPSOIL: Silty Gravelly Clay, high plasticity, brown-red, medium grain subangular gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CI-CH) Silty Gravelly CLAY, medium to high plasticity, brown, medium to coarse grain subangular gravel, trace of ironstone pockets, M≤PL, stiff

TABLE A

Job No: 8599/73
Our Ref: 8599/73-AA

TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP26	0.0-0.3		TOPSOIL: Silty Gravelly Clay, low plasticity, brown, medium grain subangular gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CL) Silty Gravelly CLAY, low plasticity, brown-orange, medium to coarse grain subangular gravel, trace of ironstone pockets, M<PL, stiff to very stiff
TP27	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, dark brown-red, trace of medium to coarse grain subangular gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty CLAY, high plasticity, brown-orange, trace of ironstone pockets, trace of medium grain subrounded cobble, trace of shale fragments, trace of medium to coarse grain subangular gravel, M≤PL, stiff to very stiff
TP28	0.0-0.3		TOPSOIL: Silty Clay, low plasticity, dark brown
	0.3-1.5	0.4-0.5 (DS) 0.6-0.8 (U_{50}) 0.8-0.9 (DS)	(CL) Silty CLAY, low plasticity, grey-orange, trace of medium to coarse grain subangular gravel, trace of ironstone pockets, trace of medium grain subrounded cobble, M≤PL, stiff
TP29	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, brown, trace of medium grain subangular gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CI-CH) Silty CLAY, medium to high plasticity, grey-orange, trace of medium grain subrounded cobble, trace of medium to coarse grain subangular gravel, trace of ironstone pockets, M≤PL, stiff
TP30	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, brown, trace of medium grain subangular gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CI-CH) Silty CLAY, medium to high plasticity, grey-orange, trace of medium grain subrounded cobble, trace of medium to coarse grain subangular gravel, trace of ironstone pockets, M≤PL, stiff
TP31	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, red-grey
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty CLAY, high plasticity, red-grey, trace of medium grain subrounded cobble, trace of ironstone pockets, trace of medium to coarse grain subangular gravel, M≤PL, stiff

TABLE A

Job No: 8599/73
Our Ref: 8599/73-AA

TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP32	0.0-0.3		TOPSOIL: Silty Clay, low plasticity, grey-brown, trace of medium grain subrounded cobble
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CL) Silty Cobbly CLAY, low plasticity, grey-brown, medium grain subrounded cobble, trace of ironstone pockets, M<PL, stiff to very stiff
TP33	0.0-0.3		TOPSOIL: Silty Clay, low plasticity, grey-brown, trace of medium grain subrounded cobble
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CL) Silty Cobbly CLAY, low plasticity, grey-brown, medium grain subrounded cobble, trace of ironstone pockets, M<PL, stiff to very stiff
TP34	0.0-0.3		TOPSOIL: Silty Clay, low plasticity, grey-brown, trace of medium grain subrounded cobble
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CL) Silty Cobbly CLAY, low plasticity, grey-brown, medium grain subrounded cobble, trace of ironstone pockets, M<PL, stiff to very stiff
TP35	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, red-brown
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty CLAY, high plasticity, red-brown, trace of medium to coarse grain subangular gravel, trace of medium grain subrounded cobble, M≤PL, stiff
TP36	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, red-brown
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty CLAY, high plasticity, brown, trace of medium grain subrounded cobble, trace of medium to coarse grain subangular gravel, M≤PL, stiff to very stiff
TP37	0.0-0.3		TOPSOIL: Silty Cobbly Clay, high plasticity, brown-orange, medium grain subrounded cobble, trace of ironstone gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty Cobbly CLAY, high plasticity, brown-orange, medium grain subrounded cobble, trace of ironstone pockets, trace of medium to coarse grain subangular gravel, M≤PL, stiff
TP38	0.0-0.3		TOPSOIL: Silty Gravelly Clay, low plasticity, dark brown, medium grain subangular gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty Gravelly CLAY, high plasticity, brown, medium to coarse grain subangular gravel, M≤PL, stiff

TABLE A

Job No: 8599/73
Our Ref: 8599/73-AA

TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP39	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, dark brown
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty CLAY, high plasticity, brown-red, trace of medium grain subrounded cobble, trace of ironstone pockets, trace of medium to coarse grain subangular gravel, M≤PL, stiff
TP40	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, dark brown-red
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS) 0.4-0.6 (U_{50})	(CH) Silty CLAY, high plasticity, brown, trace of medium grain subrounded cobble, trace of ironstone pockets, trace of medium to coarse grain subangular gravel, M≤PL, stiff
TP41	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, brown, trace of medium to coarse grain subangular gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty Cobbly CLAY, high plasticity, brown, trace of medium to coarse grain subangular gravel, trace of ironstone pockets, M≤PL, stiff
TP42	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, brown, trace of medium to coarse grain subangular gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty Cobbly CLAY, high plasticity, brown, medium grain subrounded cobble, trace of medium to coarse grain subangular gravel, trace of ironstone pockets, M≤PL, stiff
TP43	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, brown, trace of medium to coarse grain subangular gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty Cobbly CLAY, high plasticity, brown, trace of medium to coarse grain subangular gravel, trace of ironstone pockets, M≤PL, stiff
TP44	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, grey, trace of medium to coarse grain subangular gravel
	0.3-1.5	0.3-0.4 (atterberg) 0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty Cobbly CLAY, high plasticity, grey, medium grain subrounded cobble, trace of medium to coarse grain subangular gravel, M≈PL, stiff

TABLE A

Job No: 8599/73
Our Ref: 8599/73-AA

TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP45	0.0-0.3		TOPSOIL: Silty Gravelly Clay, high plasticity, dark brown, medium grain subangular gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty Cobbly CLAY, high plasticity, grey-brown, medium grain subrounded cobble, trace of ironstone pockets, trace of medium to coarse grain subangular gravel, M≤PL, stiff
TP46	0.0-0.3		TOPSOIL: Silty Gravelly Clay, high plasticity, brown
	0.3-0.5	0.4-0.5 (DS)	FILL: Silty Cobbly Clay, high plasticity, brown, medium grain subrounded cobble, trace of shale fragments, trace of medium to coarse grain subangular gravels, M≤PL, well compacted
	0.5-1.5	0.8-0.9 (DS)	(CH) Silty Cobbly CLAY, high plasticity, brown, medium grain subrounded cobble, trace of shale fragments, trace of ironstone pockets, trace of medium to coarse grain subangular gravels, M≤PL, stiff
TP47	0.0-0.3		TOPSOIL: Silty Gravelly Clay, high plasticity, brown, medium grain sub angular gravel
	0.3-0.5	0.4-0.5 (DS)	FILL: Silty Cobbly Clay, high plasticity, brown, medium grain subrounded cobble, trace of shale fragments, M≤PL, well compacted
	0.5-1.5	0.8-0.9 (DS)	(CH) Silty Cobbly CLAY, high plasticity, brown, medium grain subrounded cobble, trace of shale fragments, trace of ironstone pockets, M≤PL, stiff
TP48	0.0-0.3		TOPSOIL: Silty Clay, low plasticity, dark brown
	0.3-0.5	0.4-0.5 (DS) 0.4-0.5 ($_{atterberg}$)	FILL: Silty Clay, medium to high plasticity, brown, trace of medium grain subrounded cobble, M≤PL, well compacted
	0.5-1.5	0.8-0.9 (DS)	(CH) Silty CLAY, medium to high plasticity, brown, trace of medium grain subrounded cobble, M≤PL, stiff
TP49	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, grey-brown, trace of ironstone gravel, trace of medium grain subrounded cobble, trace of medium to coarse grain subangular gravel
	0.3-1.5	0.4-0.5 (DS) 0.6-0.8 (U_{50}) 0.8-0.9 (DS)	(CH) Silty CLAY, high plasticity, brown, trace of ironstone pockets, medium to coarse grain subangular gravel, M≤PL, stiff to very stiff

TABLE A

Job No: 8599/73
Our Ref: 8599/73-AA

TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP50	0.0-0.3		TOPSOIL: Silty Clay, medium to high plasticity, brown, trace of medium to coarse grain subangular gravel, trace of shale fragments, trace of medium grain subrounded cobble
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CI-CH) Silty CLAY, medium to high plasticity, brown, trace of medium grain subrounded cobble, trace of ironstone pockets, trace of medium to coarse grain subangular gravel, M≤PL, stiff
TP51	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, red-brown, trace of ironstone gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty Gravelly CLAY, high plasticity, red-brown-grey, medium to coarse grain subangular gravel, trace of ironstone pockets, M≤PL, stiff
TP52	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, grey, trace of ironstone gravel
	0.3-1.5	0.4-0.5 (DS) 0.6-0.8 ($_{atterberg}$) 0.8-0.9 (DS)	(CH) Silty CLAY, high plasticity, grey, trace of ironstone pockets, trace of medium to coarse grain subangular gravel, M≤PL, stiff
TP53	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, grey-orange, trace of ironstone gravel
	0.3-1.5	0.4-0.5 (DS) 0.6-0.8 ($_{atterberg}$) 0.8-0.9 (DS)	(CL) Silty Cobbly CLAY, low plasticity, orange-grey, medium grain subrounded cobble, trace of ironstone pockets, M≤PL, stiff
TP54	0.0-0.3		TOPSOIL: Silty Clay, medium to high plasticity, orange-grey, trace of medium to coarse grain subangular gravel, trace of ironstone gravel
	0.3-1.5	0.4-0.5 (DS) 0.6-0.8 ($_{atterberg}$) 0.8-0.9 (DS)	(CI-CH) Silty Gravelly CLAY, medium to high plasticity, orange-grey, medium to coarse grain subangular gravel, with ironstone pockets, M≤PL, stiff
TP55	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, grey-brown, trace of ironstone gravel, trace of medium grain subrounded cobble, trace of medium to coarse grain subangular gravel
	0.3-1.5	0.4-0.5 (DS) 0.4-0.6 (U_{50}) 0.6-0.8 ($_{atterberg}$) 0.8-0.9 (DS)	(CH) Silty CLAY, high plasticity, brown, trace of ironstone pockets, trace of medium to coarse grain subangular gravel, M≤PL, stiff to very stiff

TABLE A

Job No: 8599/73
Our Ref: 8599/73-AA

TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP56	0.0-0.3		TOPSOIL: Silty Clay, low plasticity, grey-red, trace of medium to coarse grain subangular gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CL) Silty CLAY, low plasticity, grey-red, trace of ironstone pockets, trace of medium to coarse grain subangular gravel, M≤PL, stiff
TP57	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, red-brown
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty CLAY, high plasticity, red-brown-grey, trace of medium grain subrounded cobble, trace of ironstone pockets, M≤PL, stiff
TP58	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, dark brown
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty CLAY, high plasticity, red-brown, trace of ironstone pockets, trace of medium grain subrounded cobble, trace of medium to coarse grain subangular gravel, M≤PL, stiff
TP59	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, grey-brown
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty CLAY, high plasticity, dark red-brown, trace of medium to coarse grain subangular gravel, M≤PL, stiff
TP60	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, brown, trace of medium to coarse grain subangular gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty Gravelly CLAY, high plasticity, brown, medium to coarse grain subangular gravel, trace of medium grain subrounded cobble, M≤PL, stiff
TP61	0.0-0.3		TOPSOIL: Silty Cobbly Clay, high plasticity, brown, medium grain subrounded cobble, trace of ironstone gravel, trace of medium to coarse grain subangular gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty Cobbly CLAY, high plasticity, brown, medium grain subrounded cobble, trace of medium to coarse grain subangular gravel, trace of ironstone pockets, M≤PL, stiff
TP61	0.0-0.3		TOPSOIL: Silty Gravelly Clay, high plasticity, brown-grey, medium to coarse grain subangular gravel, trace of ironstone gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty Cobbly CLAY, high plasticity, brown-grey, medium grain subrounded cobble, trace of ironstone gravel, M≤PL, stiff

TABLE A

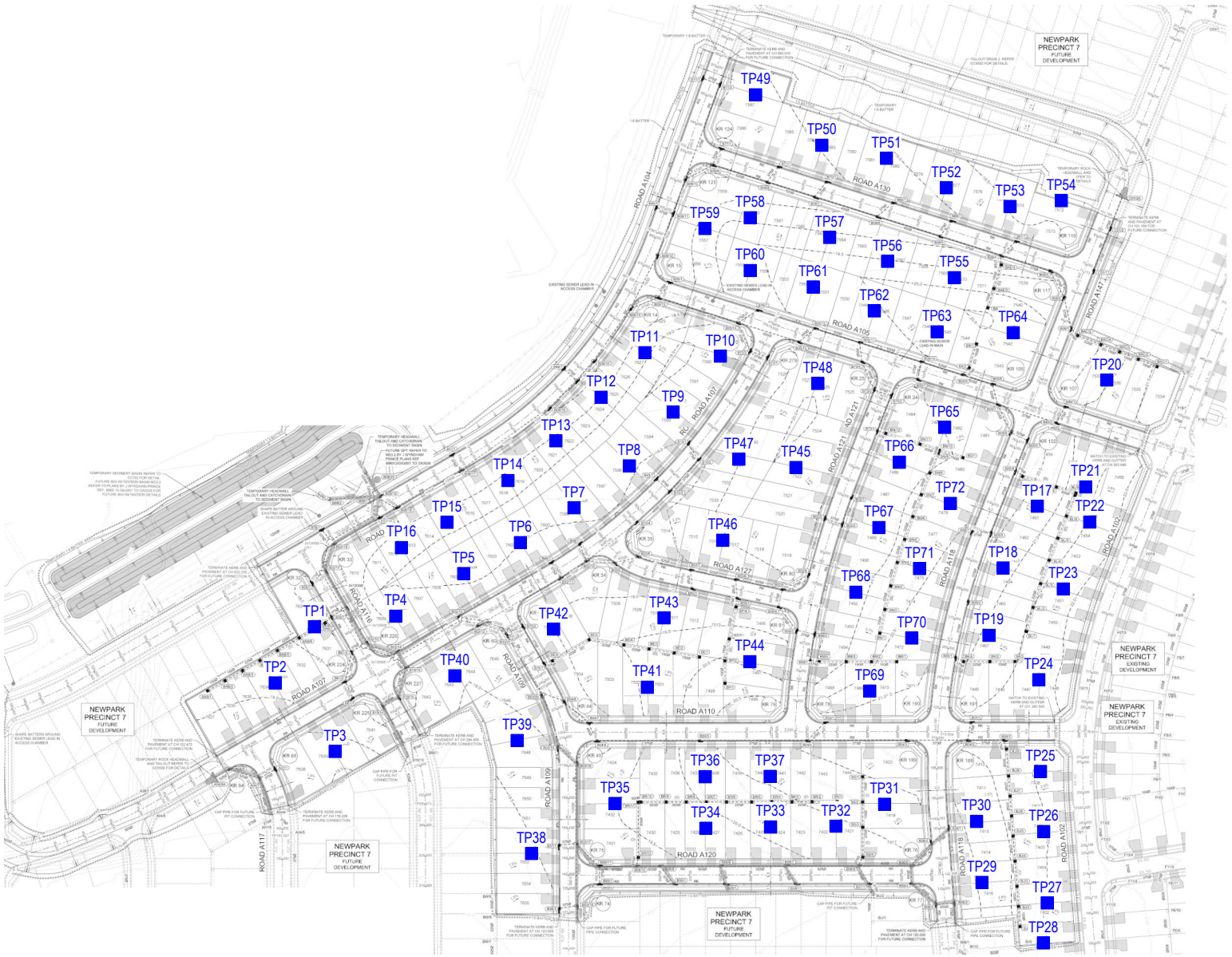
Job No: 8599/73
Our Ref: 8599/73-AA

TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP63	0.0-0.3		TOPSOIL: Silty Clay, low plasticity, brown, trace of ironstone gravel, trace of medium to coarse grain subangular gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CL) Silty CLAY, low plasticity, brown, trace of ironstone pockets, trace of medium grain subrounded cobble, trace of medium to coarse grain subangular gravel, M≤PL, stiff
TP64	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, brown-orange-red, trace of ironstone gravel, trace of medium grain subrounded cobble
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty CLAY, medium to high plasticity, brown-red, trace of ironstone pockets, trace of medium grain subrounded cobble, trace of medium to coarse grain subangular gravel, M≤PL, stiff
TP65	0.0-0.3		TOPSOIL: Silty Gravelly Clay, high plasticity, brown-red, medium grain subangular gravel, trace of medium grain subrounded cobble, trace of ironstone gravel,
	0.3-0.8	0.4-0.5 (DS)	FILL: Silty Gravelly Clay, high plasticity, brown-red, medium to coarse grain subangular gravel, trace of medium grain subrounded cobble, M≤PL, well compacted
	0.8-1.5	0.8-0.9 (DS)	(CH) Silty Gravelly CLAY, high plasticity, brown-red, medium to coarse grain subangular gravel, trace of ironstone pockets, trace of medium grain subrounded cobble, M≤PL, stiff
TP66	0.0-0.3		TOPSOIL: Silty Gravelly Clay, high plasticity, brown, medium to coarse grain subangular gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty Gravelly CLAY, high plasticity, brown, medium to coarse grain subangular gravel, trace of ironstone pockets, trace of medium grain subrounded cobble, M≤PL, stiff
TP67	0.0-0.3		TOPSOIL: Silty Gravelly Clay, high plasticity, grey-brown, medium to coarse grain subangular gravel, trace of ironstone gravel
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty Gravelly CLAY, high plasticity, grey-brown, medium to coarse grain subangular gravel, trace of ironstone pockets, trace of medium grain subrounded cobble, M≤PL, stiff

TABLE A

Job No: 8599/73
Our Ref: 8599/73-AA

TEST PIT	DEPTH (m)	SAMPLE DEPTH (m)	MATERIAL DESCRIPTION
TP68	0.0-0.3		TOPSOIL: Silty Gravelly Clay, high plasticity, brown, medium to coarse grain subangular gravel, trace of medium grain subrounded cobble, trace of ironstone gravels
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty Gravelly CLAY, high plasticity, brown grey, medium to coarse grain subangular gravel, trace of medium grain subrounded cobble, trace of ironstone pockets, M≤PL, stiff
TP69	0.0-0.3		TOPSOIL: Silty Gravelly Clay, high plasticity, brown, medium to coarse grain subangular gravel, trace of ironstone pockets, trace of medium grain subrounded cobble
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty Cobbly CLAY, high plasticity, brown, medium grain subrounded cobble, trace of ironstone pockets, M≤PL, stiff
TP70	0.0-0.3		TOPSOIL: Silty Gravelly Clay, high plasticity, brown, medium to coarse grain subangular gravel, trace of ironstone pockets, trace of medium grain subrounded cobble
	0.3-1.5	0.4-0.5 (DS) 0.8-0.9 (DS)	(CH) Silty Cobbly CLAY, high plasticity, brown, medium grain subrounded cobble, trace of ironstone pockets, M≤PL, stiff
TP71	0.0-0.3		TOPSOIL: Silty Gravelly Clay, low plasticity, grey-brown, medium to coarse grain subangular gravel, trace of ironstone gravel
	0.3-0.5	0.4-0.5 (DS)	FILL: Silty Gravelly Clay, low plasticity, grey-brown, medium grain subangular gravel, M≤PL, well compacted
	0.5-1.5	0.8-0.9 (DS)	(CL) Silty Gravelly CLAY, low plasticity, grey-brown, medium grain subangular gravel, trace of ironstone pockets, M≤PL, stiff
TP72	0.0-0.3		TOPSOIL: Silty Clay, high plasticity, grey, trace of ironstone gravel, M≤PL, stiff
	0.3-1.5	0.4-0.5 (DS) 0.4-0.6 (U_{50}) 0.8-0.9 (DS)	(CH) Silty CLAY, high plasticity, grey, trace of ironstone pockets, M≤PL, stiff



LEGEND

Test Pit

GEOTECH TESTING PTY LTD ®
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 Stage 7B
Marsden Park

Test Pit Locations

Drawing No: 8599/73-AA1
Job No: 8599/73
Drawn By: MH
Date: 19 September 2022
Checked By: JSH

File No: 8599-73
Layers: 0, AA1

APPENDIX B

SUMMARY OF SITE CLASSIFICATIONS

Job No: 8599/73
Our Ref: 8599/73-AA-R2

TABLE B

SUMMARY OF SITE CLASSIFICATIONS

Newpark Precinct 7B, Marsden Park

Lot	Site Classification	Lot	Site Classification	Lot	Site Classification
7401	M	7434	H1	7467	M
7402	M	7435	H1	7468	M
7403	M	7436	H1	7469	M
7404	M	7437	H1	7470	M
7405	M	7438	H1	7471	M
7406	M	7439	H1	7472	M
7407	M	7440	H1	7473	M
7408	M	7441	H1	7474	M
7409	M	7442	H1	7475	M
7410	M	7443	H1	7476	M
7411	M	7444	H1	7477	M
7412	M	7445	M	7478	M
7413	M	7446	M	7479	M
7414	M	7447	M	7480	M
7415	M	7448	M	7481	M
7416	M	7449	M	7482	M
7417	H1	7450	M	7483	M
7418	H1	7451	M	7484	M
7419	H1	7452	M	7485	M
7420	H1	7453	M	7486	M
7421	M	7454	M	7487	M
7422	M	7455	M	7488	M
7423	M	7456	M	7489	M
7424	M	7457	M	7490	M
7425	M	7458	M	7491	M
7426	M	7459	M	7492	M
7427	M	7460	M	7493	M
7428	M	7461	M	7494	M
7429	H1	7462	M	7495	M
7430	H1	7463	M	7496	M
7431	H1	7464	M	7497	H1
7432	H1	7465	M	7498	H1
7433	H1	7466	M	7499	H1

Job No: 8599/73
Our Ref: 8599/73-AA-R2

Newpark Precinct 7B, Marsden Park (Continued)

Lot	Site Classification	Lot	Site Classification	Lot	Site Classification
7500	H1	7533	M	7566	M
7501	H1	7534	M	7567	M
7502	H1	7535	M	7568	M
7503	H1	7536	M	7569	M
7504	H1	7537	M	7570	M
7505	H1	7538	M	7571	M
7506	H1	7539	M	7572	M
7507	H1	7540	M	7573	M
7508	H1	7541	M	7574	M
7509	H1	7542	M	7575	M
7510	H1	7543	M	7576	H1
7511	H1	7544	M	7577	H1
7512	H1	7545	M	7578	H1
7513	H1	7546	M	7579	H1
7514	M	7547	M	7580	H1
7515	M	7548	M	7581	H1
7516	M	7549	M	7582	H1
7517	M	7550	M	7583	M
7518	M	7551	M	7584	M
7519	M	7552	M	7585	H1
7520	M	7553	M	7586	H1
7521	M	7554	M	7587	H1
7522	M	7555	M	7588	H1
7523	M	7556	M	7589	M
7524	M	7557	M	7590	M
7525	M	7558	M	7591	M
7526	M	7559	M	7592	M
7527	M	7560	M	7593	M
7528	M	7561	M	7594	M
7529	M	7562	M	7595	M
7530	M	7563	M	7596	M
7531	M	7564	M	7597	M
7532	M	7565	M	7598	M

Job No: 8599/73
Our Ref: 8599/73-AA-R2

Newpark Precinct 7B, Marsden Park (Continued)

Lot	Site Classification	Lot	Site Classification
7599	M	7632	M
7600	M	7633	M
7601	M	7634	M
7602	M	7635	M
7603	M	7636	M
7604	M	7637	M
7605	M	7638	M
7606	M	7639	M
7607	M	7640	M
7608	M	7641	M
7609	M	7642	M
7610	M	7643	M
7611	M	7644	M
7612	M	7645	M
7613	M	7646	M
7614	M	7647	M
7615	M	7648	M
7616	M	7649	M
7617	M	7650	M
7618	M	7651	M
7619	M	7652	M
7620	M	7653	M
7621	M	7654	M
7622	M	7655	M
7623	M		
7624	M		
7625	M		
7626	M		
7627	M		
7628	M		
7629	M		
7630	M		
7631	M		

M: Moderately Reactive, Free Surface Movement: 20-40mm
H1: Highly Reactive, Free Surface Movement: 40-60mm

APPENDIX C

LABORATORY TEST RESULTS

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

TEST RESULTS - ATTERBERG LIMITS
Test Procedure AS1289 3.1.1, 3.1.2, 3.2.1, 3.3.1, 3.4.1

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/73

PROJECT: SITE CLASSIFICATION
RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7B

Date Tested: 26&30/08/2022 Tested By: NP
Checked By: AK

Sample Identification	Test Pit 44
Laboratory Number	8599/73-36
Depth (m)	0.3 - 0.4
Test Description	
Liquid Limit (W_L)	52%
Plastic Limit (W_P)	26%
Plastic Index (I_P)	26%
Linear Shrinkage (LS)	15.0%
Mould Length (mm)	125
Sample History	Oven Dried Dry Sieved
Material Description	

A Kench

Report Date
01/09/2022

Approved Signatory

NATA
Nata Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

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

GEOTECH TESTING PTY LTD ®
ABN 71 076 676 321

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

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/73

PROJECT: SITE CLASSIFICATION
RESIDENTIAL DEVELOPMENT WOORONG PARK MARSDEN PARK PRECINCT, NEWPARK PRECINCT 7 STAGE 7B

Date Tested: 26&30/08/2022 Tested By: NP
Checked By: AK

Sample Identification	Test Pit 48	Test Pit 52	Test Pit 72
Laboratory Number	8599/73-37	8599/73-39	8599/73-41
Depth (m)	0.4 - 0.5	0.6 - 0.8	0.4 - 0.6
Test Description			
Liquid Limit (W_L)	39%	54%	28%
Plastic Limit (W_P)	22%	24%	14%
Plastic Index (I_P)	17%	30%	14%
Linear Shrinkage (LS)	12.5%	14.5%	5.5%
Mould Length (mm)	127	125	125
Sample History	Oven Dried Dry Sieved	Oven Dried Dry Sieved	Oven Dried Dry Sieved
Material Description			

Form No R004 Version 13 - 07/21 - Issued by ER

A Kench

Report Date
01/09/2022

Approved Signatory

NATA

Accredited for compliance with ISO/IEC 17025 - Testing.

Nata Accreditation Number 2734
Corporate Site Number 2727

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

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

TEST RESULTS - SHRINK / SWELL INDEX

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/73

SITE CLASSIFICATION

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

Test Procedure: AS 1289 7.1.1				
Sample Identification				Test Pit 15
Depth (m)				0.7 - 0.9
Laboratory Number				8599/73-31
Date Tested:				26/08/2022
Tested By:				NP
Checked By:				AK
Test Description				
Moisture Content				
Initial %				15.0
Final %				17.3
Swell %				0.9
Shrinkage %				1.4
Shrink/Swell Index $\%/_pF$				1.0
Material Description				

Form No R007 Version 13 07/21

Report Date 05/09/2022

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench

Approved Signatory

NATA Accreditation Number 2734
Corporate Site Number 2727

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

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

TEST RESULTS - SHRINK / SWELL INDEX

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/73

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

Test Procedure: AS 1289 7.1.1

Sample Identification	Test Pit 17	Test Pit 28	Test Pit 35	Test Pit 40
Depth (m)	0.6 - 0.8	0.6 - 0.8	0.4 - 0.6	0.4 - 0.6
Laboratory Number	8599/73-32	8599/73-33	8599/73-34	8599/73-35
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				

Form No R007 Version 13 07/21

NATA Accreditation Number 2734
Corporate Site Number 2727

Accredited for compliance with ISO/IEC 17025 - Testing.

A Kench

Report Date 05/09/2022

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

GEOTECH TESTING PTY LTD®
ABN 71 076 676 321

TEST RESULTS - SHRINK / SWELL INDEX

DARACON CONTRACTORS PTY LTD
184 ADDERLEY STREET WEST
AUBURN NSW 2144

Laboratory: Penrith
Job No: 8599/73

SITE CLASSIFICATION

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

Test Procedure: AS 1289 7.1.1				
Sample Identification	Test Pit 55			
Depth (m)	0.4 - 0.6			
Laboratory Number	8599/73-40			
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

Accredited for compliance with ISO/IEC 17025 - Testing.

NATA Accreditation Number 2734
Corporate Site Number 2727

A Kench

Report Date
05/09/2022

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