ACCREDITED LABORATORY
SAC-SINGLAS
Cert No: LA-1993-0064-A
Cert No: LA-2000-0178-F

CERTIFICATE OF ANALYSIS

Work Order	: **SG1808925**	Page	: 1 of 2
Client	: **RYOBI GEOTECH PTE LTD**	Project	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
Contact	: Mr Min Win Htut	Order number	: GTPO2161
Address	: 58A Sungei Kadut Loop Ryobi Industrial Bldg, Singapore 729505	Quote number	: SG2016RYOGEO0001 (Soil - Organic Content, Total Sulphate, pH Value, Chloride Content & Soluble Sulphate)
E-mail	: min.win.htut@ryobi-g.com	Date Received	: 31-May-2018
Telephone	: +65 6369 7100	Date Analysed	: 01-Jun-2018
Facsimile	: +65 6362 5848	Date Issued	: 08-Jun-2018
No. of samples received	: 5	No. of samples analysed	: 5

General Comments

This report supersedes any previous report(s) with this reference. All pages of this report have been checked and approved for release. Results apply to the sample(s) as submitted. The laboratory declares that the test results relate only to the items tested and do not substitute any other documents. This report may not be reproduced except with prior written approval from the testing laboratory. This report may not be used for advertising purposes.

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* Preceeding indicates non-accredited test. In the case when a procedure belonging to an accredited method was used for non-accredited matrix, would apply that the reported results are non-accredited.

- **BS method is referenced to British Standard 1377: Part 3/1990**
- **Organic Content Test is referenced to Clause 3 of Part 3:BS1377**
- **Chloride Content Test is referenced to Clause 7.3 or Part 3:BS1377**
- **Sulphate Content Test is referenced to Clause 5.2 of Part 3:BS1377**
- **pH Test is referenced to Clause 9 of Part 3: BS1377**

Signatories

This laboratory is accredited under SAC - SINGLAS. The tests reported herein have been performed in accordance with the laboratory's Terms of Accreditation. This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Accreditation Category*	*Position*
Pansy Teo	SG - Inorganics SG - Organics	Senior Environmental Manager

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-1993-0044-A Cert No: LA-2000-0175-P ALS

Analytical Results

Sub-Matrix: **SOIL**				Client sample ID	**BH-3 S1**	**BH-4 S1**	**BH-5 S1**
				Sampling date/time	31-May-2018 00:00	31-May-2018 00:00	31-May-2018 00:00
Compound	*Method*	*LOR*	*Unit*		**SG1808925-001**	**SG1808925-002**	**SG1808925-003**
INORGANIC- Physical Properties							
pH Value	BS1377 pH	0.1	pH Unit		7.2	5.6	7.4
INORGANICS - Nonmetalllic Constituents							
Chloride	BS1377 Cl	0.01	% DW		<0.01	<0.01	<0.01
Organic Matter	BS1377	0.1	% DW		0.5	0.2	0.3
Sulphate as SO3	BS1377 SO3	0.01	% DW		<0.01	<0.01	<0.01

Sub-Matrix: **SOIL**				Client sample ID	**BH-6 S1**	**BH-7 S1**	**—**
				Sampling date/time	31-May-2018 00:00	31-May-2018 00:00	----
Compound	*Method*	*LOR*	*Unit*		**SG1808925-004**	**SG1808925-005**	**--------**
INORGANIC- Physical Properties							
pH Value	BS1377 pH	0.1	pH Unit		6.5	6.5	----
INORGANICS - Nonmetalllic Constituents							
Chloride	BS1377 Cl	0.01	% DW		<0.01	<0.01	----
Organic Matter	BS1377	0.1	% DW		0.3	0.5	----
Sulphate as SO3	BS1377 SO3	0.01	% DW		<0.01	<0.01	----

ACCREDITED LABORATORY
SAC-SINGLAS
Cert No: LA-1993-0064-A
Cert No: LA-2000-0178-F

CERTIFICATE OF ANALYSIS

Work Order	: **SG1808926**	Page	: 1 of 2
Client	: **RYOBI GEOTECH PTE LTD**	Project	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
Contact	: Mr Min Win Htut	Order number	: GTPO2161
Address	: 58A Sungei Kadut Loop Ryobi Industrial Bldg, Singapore 729505	Quote number	: SG2016RYOGEO0002 (Water - Organic Content, Sulphate Content, Chloride, pH, Salinity & Soluble Sulphate)
E-mail	: min.win.htut@ryobi-g.com	Date Received	: 31-May-2018
Telephone	: +65 6369 7100	Date Analysed	: 31-May-2018
Facsimile	: +65 6362 5848	Date Issued	: 08-Jun-2018
No. of samples received	: 5	No. of samples analysed	: 5

General Comments

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* Preceeding indicates non-accredited test. In the case when a procedure belonging to an accredited method was used for non-accredited matrix, would apply that the reported results are non-accredited.

- **Sulphate Content Test is referenced to Clause 5.2 of Part 3:BS1377**
- **BS method is referenced to British Standard 1377: Part 3/1990**
- **Chloride ContentTest is referenced to Clause 7.3 of Part 3: BS1377**
- **pH Test is referenced to Clause 9 of Part 3: BS1377**

Signatories

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Signatories	*Accreditation Category*	*Position*
Pansy Teo	SG - Inorganics SG - Organics	Senior Environmental Manager

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-1993-0064-A Cert No: LA-2000-0178-F ALS

Analytical Results

Sub-Matrix: **WATER**

				Client sample ID	BH-3	BH-4	BH-5
				Sampling date/time	31-May-2018 00:00	31-May-2018 00:00	31-May-2018 00:00
Compound	*Method*	*LOR*	*Unit*		**SG1808926-001**	**SG1808926-002**	**SG1808926-003**
INORGANIC- Physical Properties							
pH Value	BS1377 pH	0.1	pH Unit		12.2	7.2	12.3
INORGANICS - Nonmetalllic Constituents							
Chloride	BS1377 Cl	0.01	g/L		<0.01	<0.01	<0.01
INORGANICS-Anions							
Sulphate as SO3	BS1377 SO3	0.01	g/L		<0.01	<0.01	<0.01
ORGANICS-General							
•Organic Content	Ashing/Gravimetric	0.10	% (w/v)		<0.10	<0.10	<0.10

Sub-Matrix: **WATER**

				Client sample ID	BH-6	BH-7	—
				Sampling date/time	31-May-2018 00:00	31-May-2018 00:00	----
Compound	*Method*	*LOR*	*Unit*		**SG1808926-004**	**SG1808926-005**	--------
INORGANIC- Physical Properties							
pH Value	BS1377 pH	0.1	pH Unit		7.6	12.2	----
INORGANICS - Nonmetalllic Constituents							
Chloride	BS1377 Cl	0.01	g/L		<0.01	<0.01	----
INORGANICS-Anions							
Sulphate as SO3	BS1377 SO3	0.01	g/L		0.01	<0.01	----
ORGANICS-General							
•Organic Content	Ashing/Gravimetric	0.10	% (w/v)		<0.10	<0.10	----

Ryobi Geotechnique International Pte Ltd

58A Sungei Kadut Loop, Ryobi Industrial Bldg., Singapore 729505 Tel: 65- 6369 7100 Fax: 65- 6362 5848

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

SUMMARY OF LABORATORY TEST RESULTS

CLIENT : AVA

PROJECT : 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)

JOB NO. : K5728

BOREHOLE NO :			BH-4						
SAMPLE NO :			D 1	SPT02	TW01	SPT05	TW02	SPT07	SPT08
SAMPLE DEPTH :		m	1.00	4.00-4.45	8.00-8.90	12.00-12.45	16.00-16.90	18.00-18.45	20.00-20.45
MOISTURE CONTENT (BS 1377 Part 2 : 1990 : Method 3)		%		-	22.3	18.9	20.8	-	22.7
BULK DENSITY (BS 1377 Part 2 : 1990 : Method 7)		Mg/m^3	-	-	2.05	2.10	2.07	-	1.91
DRY DENSITY (BS 1377 Part 2 : 1990 : Method 7)		Mg/m^3	-	-	-	-	-	-	-
PARTICLE DENSITY (BS 1377 Part 2 : 1990 : Method 8 / Small Pyknometer)		Mg/m^3	-	-	2.66	2.63	2.66	-	2.65
GRAIN SIZE ANALYSIS (BS 1377 Part 2 : 1990 : Method 9.3 & 9.5)	GRAVEL	%	-	-	19	24	0	-	0
	SAND	%	-	-	43	46	23	-	11
	SILT	%	-	-	24	18	48	-	51
	CLAY	%	-	-	14	12	29	-	38
ATTERBERG LIMITS (BS 1377 Part 2 : 1990 : Method 4.3 & 5)	LIQUID LIMIT	%	-	37.9	49.6	-	41.0	39.6	-
	PLASTIC LIMIT	%	-	16.4	27.9	-	17.8	15.3	-
	PLASTICITY INDEX		-	21	22	-	23	24	-
TRIAXIAL COMPRESSION TEST (BS 1377 Part 7 & 8 : 1990)	TEST TYPE		-	-	-	-	**UU**	-	-
	TOTAL COHESION	kPa	-	-	-	-	83.8	-	-
	TEST TYPE		-	-	**CU**	-	-	-	-
	EFFECTIVE COHESION	kPa	-	-	10.7	-	-	-	-
	EFFECTIVE PHI ANGLE	degree	-	-	35.0	-	-	-	-
CONSOLIDATION TEST (BS 1377 Part 5 : 1990 : Method 3)	PRECONSOLIDATION PRESSURE	kPa	-	-	-	-	-	-	-
	COMPRESSION INDEX	C_c	-	-	-	-	-	-	-
ROCK TEST	POINT LOAD STRENGTH INDEX $I_{s(50)}$	MPa	-	-	-	-	-	-	-
	BULK DENSITY	Mg/m^3	-	-	-	-	-	-	-
	UNCONFINED COMPRESSIVE STRENGTH	MPa	-	-	-	-	-	-	-
CHEMICAL CONTENTS ANALYSIS	pH Value		5.6	-	-	-	-	-	-
	Chloride Content	%	<0.01	-	-	-	-	-	-
	Organic Content	%	0.2	-	-	-	-	-	-
	Sulphate Content	%	<0.01	-	-	-	-	-	-

LEGENDS :

UU - Unconsolidated Undrained Test (Part 7/Method 8)

CU - Consolidated Undrained Test (Part 8/Method 7)

CD - Consolidated Drained Test (Part 8/Method 8)

REMARKS :

-

PREPARED BY : (Min Win Htut)

CHECKED BY : (Sio Keong Kong)

DATE : 11/06/2018

This laboratory is accredited under the Singapore Accreditation Council-Singapore Laboratory Accreditation Scheme (SAC-SINGLAS) and has met the requirements of ISO /IEC 17025 : 2005. The results reported herein have been performed in accordance with the laboratory's terms of accreditation under the SAC-SINGLAS.

Ryobi Geotechnique International Pte Ltd
58A Sungei Kadut Loop, Ryobi Industrial Bldg., Singapore 729505 Tel: 65- 6369 7100 Fax: 65- 6362 5848

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

SUMMARY OF LABORATORY TEST RESULTS

CLIENT : AVA
PROJECT : 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
JOB NO. : K5728

BOREHOLE NO :			BH-4						
SAMPLE NO :			TW03	SPT10	SPT11	W1			
SAMPLE DEPTH :		m	24.00-24.90	26.00-26.45	28.00-28.45	Water Sample			
MOISTURE CONTENT (BS 1377 Part 2 : 1990 : Method 3)		%	18.6	-	13.5				
BULK DENSITY (BS 1377 Part 2 : 1990 : Method 7)		Mg/m^3	2.06	-	1.91	-			
DRY DENSITY (BS 1377 Part 2 : 1990 : Method 7)		Mg/m^3	-	-	-	-			
PARTICLE DENSITY (BS 1377 Part 2 : 1990 : Method 8 / Small Pyknometer)		Mg/m^3	2.60	-	2.60	-			
GRAIN SIZE ANALYSIS (BS 1377 Part 2 : 1990 : Method 9.3 & 9.5)	GRAVEL	%	1	-	11	-			
	SAND	%	74	-	66	-			
	SILT	%	21	-	19	-			
	CLAY	%	4	-	4	-			
ATTERBERG LIMITS (BS 1377 Part 2 : 1990 : Method 4.3 & 5)	LIQUID LIMIT	%	51.8	41.6	-	-			
	PLASTIC LIMIT	%	26.9	16.2	-	-			
	PLASTICITY INDEX		25	25	-	-			
TRIAXIAL COMPRESSION TEST (BS 1377 Part 7 & 8 : 1990)	TEST TYPE		**UU**	-	-	-			
	TOTAL COHESION	kPa	240.6	-	-	-			
	TEST TYPE		-	-	-	-			
	EFFECTIVE COHESION	kPa	-	-	-	-			
	EFFECTIVE PHI ANGLE	degree	-	-	-	-			
CONSOLIDATION TEST (BS 1377 Part 5 : 1990 : Method 3)	PRECONSOLIDATION PRESSURE	kPa	-	-	-	-			
	COMPRESSION INDEX	C_c	-	-	-	-			
ROCK TEST	POINT LOAD STRENGTH INDEX $I_{s(50)}$	MPa	-	-	-	-			
	BULK DENSITY	Mg/m^3	-	-	-	-			
	UNCONFINED COMPRESSIVE STRENGTH	MPa	-	-	-	-			
CHEMICAL CONTENTS ANALYSIS	pH Value		-	-	-	7.2			
	Chloride Content	g/L	-	-	-	<0.01			
	Organic Content	% (w/v)	-	-	-	<0.10			
	Sulphate Content	g/L	-	-	-	<0.01			

LEGENDS :
UU - Unconsolidated Undrained Test (Part 7/Method 8)
CU - Consolidated Undrained Test (Part 8/Method 7)
CD - Consolidated Drained Test (Part 8/Method 8)

REMARKS :
-

PREPARED BY : (Min Win Htut)

CHECKED BY : (Sio Keong Kong)

DATE : 11/06/2018

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MOISTURE CONTENT, DENSITY AND PARTICLE DENSITY

(TEST METHOD- BS 1377 Part 2 : 1990)

PROJECT 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)

JOB NO. K5728

BOREHOLE NO.	SAMPLE NO.	DEPTH (m)	MOISTURE CONTENT (%)	BULK DENSITY (Mg/m^3)	DRY DENSITY (Mg/m^3)	PARTICLE DENSITY (Mg/m^3)
BH-4	TW01	8.00-8.90	22.3	2.05	-	2.66
BH-4	SPT05	12.00-12.45	18.9	2.10	-	2.63
BH-4	TW02	16.00-16.90	20.8	2.07	-	2.66
BH-4	SPT08	20.00-20.45	22.7	1.91	-	2.65
BH-4	TW03	24.00-24.90	18.6	2.06	-	2.60
BH-4	SPT11	28.00-28.45	13.5	1.91	-	2.60

Method Used : MOISTURE CONTENT (BS 1377 Part 2 : 1990 : 3.2)
BULK & DRY DENSITY (BS 1377 Part 2 : 1990 : 7.2)
PARTICLE DENSITY (BS 1377 Part 2 : 1990 : 8.3)

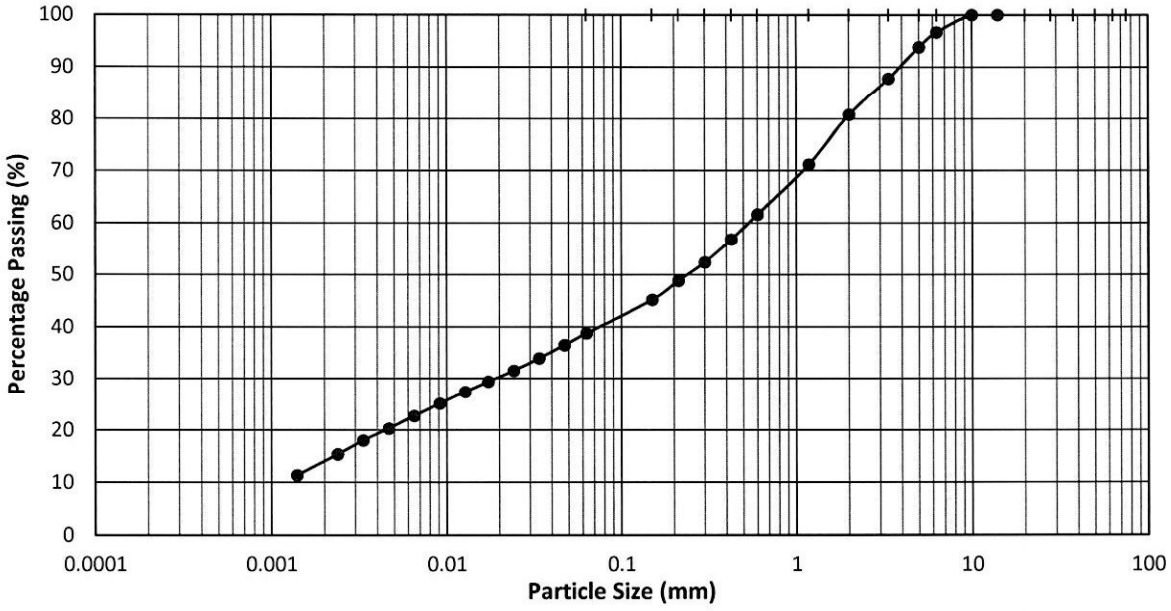
TESTED BY: MONJU Date : 30.05.2018	APPROVED BY: (Authorised Signatory - Min Win Htut)	DATE : 11.6.2018

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

GRAIN SIZE ANALYSIS BY SIEVE AND HYDROMETER METHOD

(TEST METHOD- BS 1377 : Part 2 : 1990 - Clauses 9.3 & 9.5)

PROJECT	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
JOB NO.	: K5728
BOREHOLE NO.	: BH-4
SAMPLE NO.	: TW01
DEPTH (m)	: 8.00-8.90m
TEST DATE	: 06.06.2018



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLE
	SILT			SAND			GRAVEL			

SOIL DESCRIPTION : **Light grey slightly gravelly sandy CLAY**

HYDROMETER + SIEVING

GRAVEL	=	**19**	%
SAND	=	**43**	%
SILT	=	**24**	%
CLAY	=	**14**	%

% of Passing 0.425 mm Sieve : 56.8

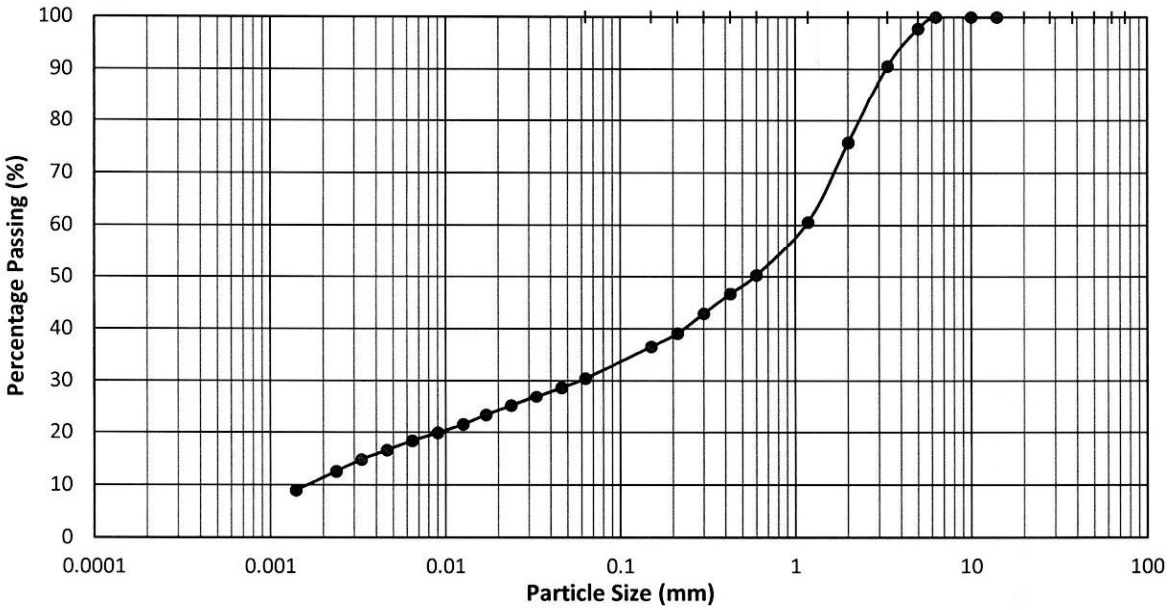
TESTED BY :	APPROVED BY :	DATE :
	(Authorised Signatory - Min Win Htut)	11.6.2018

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

GRAIN SIZE ANALYSIS BY SIEVE AND HYDROMETER METHOD

(TEST METHOD- BS 1377 : Part 2 : 1990 - Clauses 9.3 & 9.5)

PROJECT	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
JOB NO.	: K5728
BOREHOLE NO.	: BH-4
SAMPLE NO.	: SPT05
DEPTH (m)	: 12.00-12.45m
TEST DATE	: 04.05.2018



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLE
	SILT			SAND			GRAVEL			

SOIL DESCRIPTION : **Light grey very gravelly very clayey SAND**

HYDROMETER + SIEVING

GRAVEL	=	**24**	%
SAND	=	**46**	%
SILT	=	**18**	%
CLAY	=	**12**	%

% of Passing 0.425 mm Sieve : 46.7

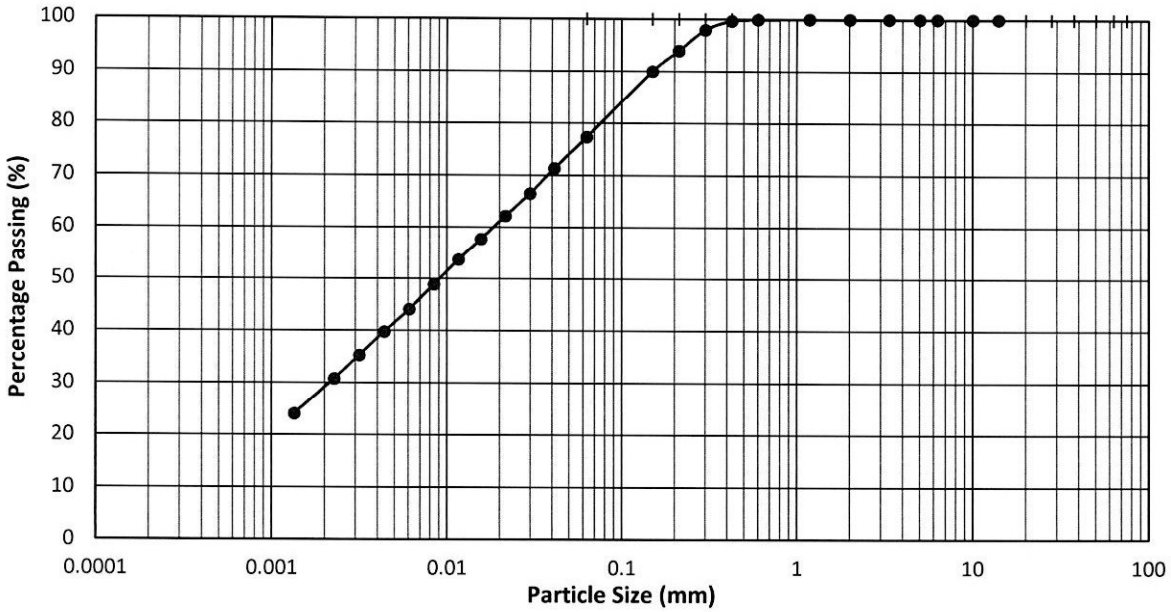
TESTED BY :	APPROVED BY :	DATE :
	(Authorised Signatory - Min Win Htut)	11.5.2018

GRAIN SIZE ANALYSIS BY SIEVE AND HYDROMETER METHOD

(TEST METHOD- BS 1377 : Part 2 : 1990 - Clauses 9.3 & 9.5)

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

PROJECT	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
JOB NO.	: K5728
BOREHOLE NO.	: BH-4
SAMPLE NO.	: TW02
DEPTH (m)	: 16.00-16.90m
TEST DATE	: 06.06.20108



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLE
	SILT			SAND			GRAVEL			

SOIL DESCRIPTION : **Light grey and yellow slightly sandy CLAY**

HYDROMETER + SIEVING

GRAVEL	=	**0**	%
SAND	=	**23**	%
SILT	=	**48**	%
CLAY	=	**29**	%

% of Passing 0.425 mm Sieve : 99.7

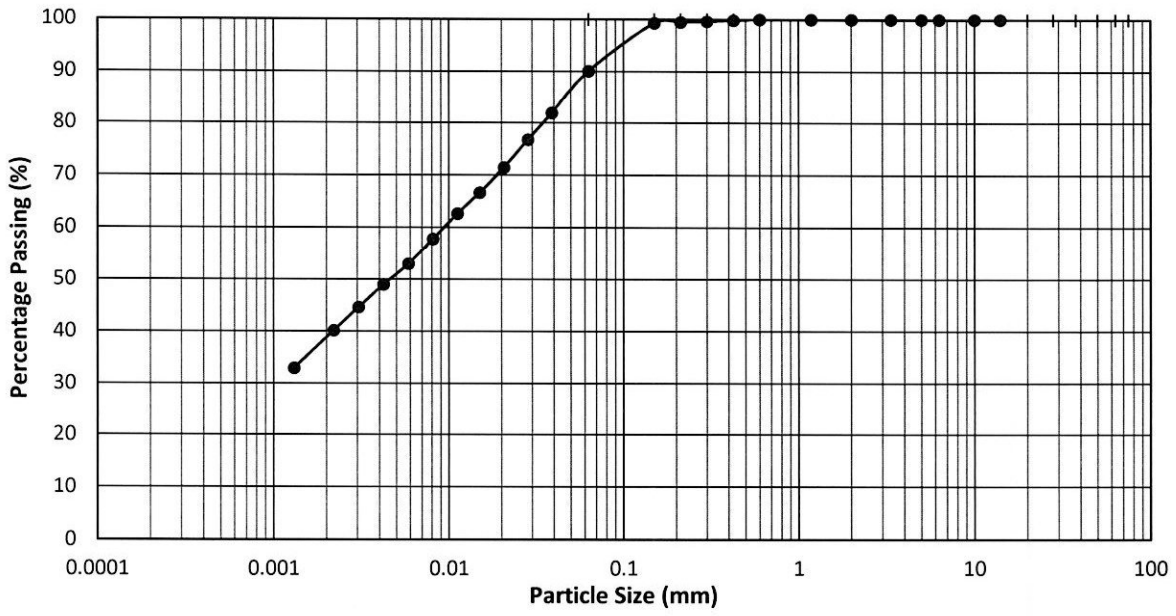
TESTED BY :	APPROVED BY :	DATE :
	(Authorised Signatory - Min Win Htut)	11.6.2018

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

GRAIN SIZE ANALYSIS BY SIEVE AND HYDROMETER METHOD

(TEST METHOD- BS 1377 : Part 2 : 1990 - Clauses 9.3 & 9.5)

PROJECT	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
JOB NO.	: K5728
BOREHOLE NO.	: BH-4
SAMPLE NO.	: SPT08
DEPTH (m)	: 20.00-20.45m
TEST DATE	: 05.06.2018



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLE
	SILT			SAND			GRAVEL			

SOIL DESCRIPTION : **Light grey and yellowish brown slightly sandy CLAY**

HYDROMETER + SIEVING

GRAVEL	=	**0**	%
SAND	=	**11**	%
SILT	=	**51**	%
CLAY	=	**38**	%

% of Passing 0.425 mm Sieve : 99.8

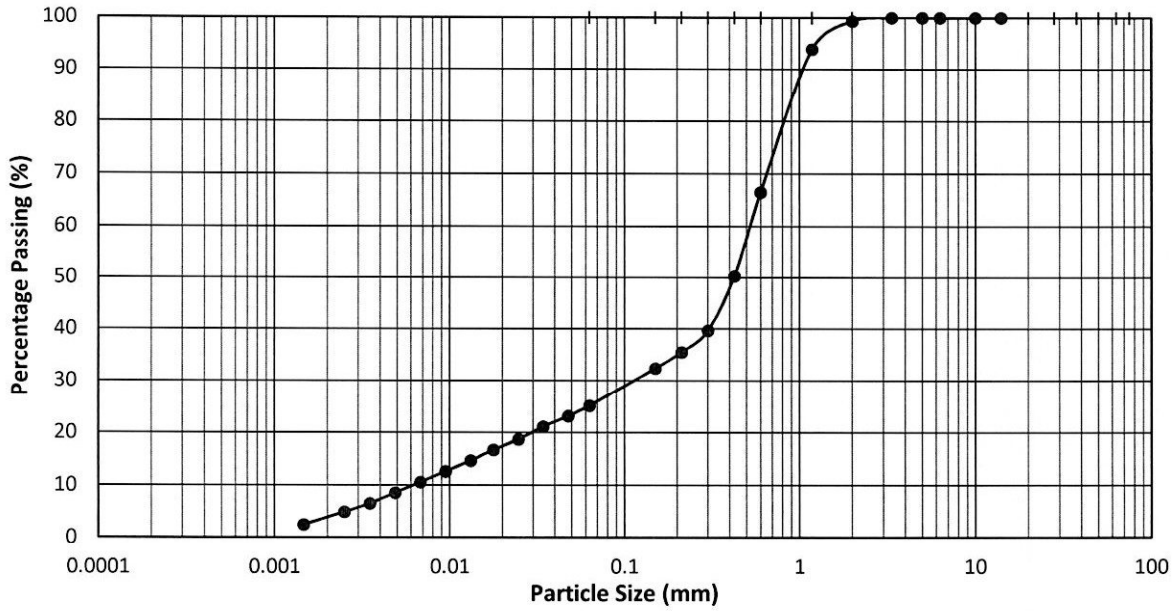
TESTED BY :	APPROVED BY :	DATE :
	(Authorised Signatory - Min Win Htut)	11.6.2018

GRAIN SIZE ANALYSIS BY SIEVE AND HYDROMETER METHOD

(TEST METHOD- BS 1377 : Part 2 : 1990 - Clauses 9.3 & 9.5)

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2018-0623-B

PROJECT	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
JOB NO.	: K5728
BOREHOLE NO.	: BH-4
SAMPLE NO.	: TW03
DEPTH (m)	: 24.00-24.90m
TEST DATE	: 05.06.2018



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLE
	SILT			SAND			GRAVEL			

SOIL DESCRIPTION : **Light grey and greenish grey very clayey SAND with traces of gravel**

HYDROMETER + SIEVING

GRAVEL	=	**1**	%
SAND	=	**74**	%
SILT	=	**21**	%
CLAY	=	**4**	%

% of Passing 0.425 mm Sieve : 50.3

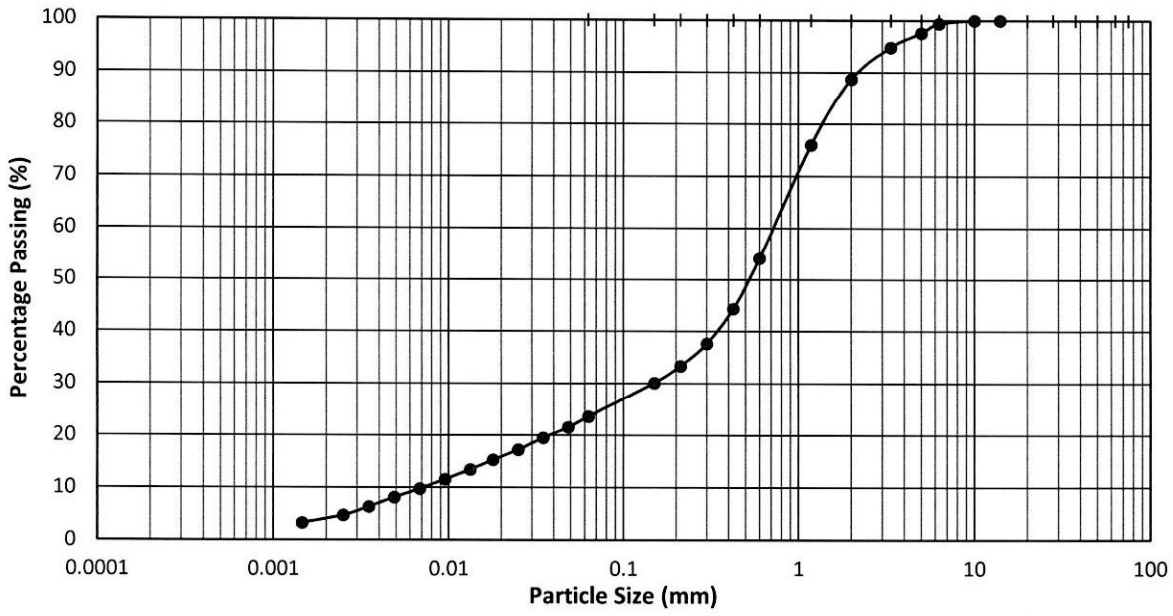
TESTED BY :	APPROVED BY :	DATE :
	(Authorised Signatory - Min Win Htut)	11.6.2018

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

GRAIN SIZE ANALYSIS BY SIEVE AND HYDROMETER METHOD

(TEST METHOD- BS 1377 : Part 2 : 1990 - Clauses 9.3 & 9.5)

PROJECT	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
JOB NO.	: K5728
BOREHOLE NO.	: BH-4
SAMPLE NO.	: SPT11
DEPTH (m)	: 28.00-28.45m
TEST DATE	: 04.05.2018



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLE
	SILT			SAND			GRAVEL			

SOIL DESCRIPTION : **Light grey and yellowish brown gravelly very clayey SAND**

HYDROMETER + SIEVING

GRAVEL	=	**11**	%
SAND	=	**66**	%
SILT	=	**19**	%
CLAY	=	**4**	%

% of Passing 0.425 mm Sieve : 44.3

TESTED BY :	APPROVED BY :	DATE :
	(Authorised Signatory - Min Win Htut)	11.6.2018

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

ATTERBERG LIMITS TEST BY CONE PENETROMETER METHOD

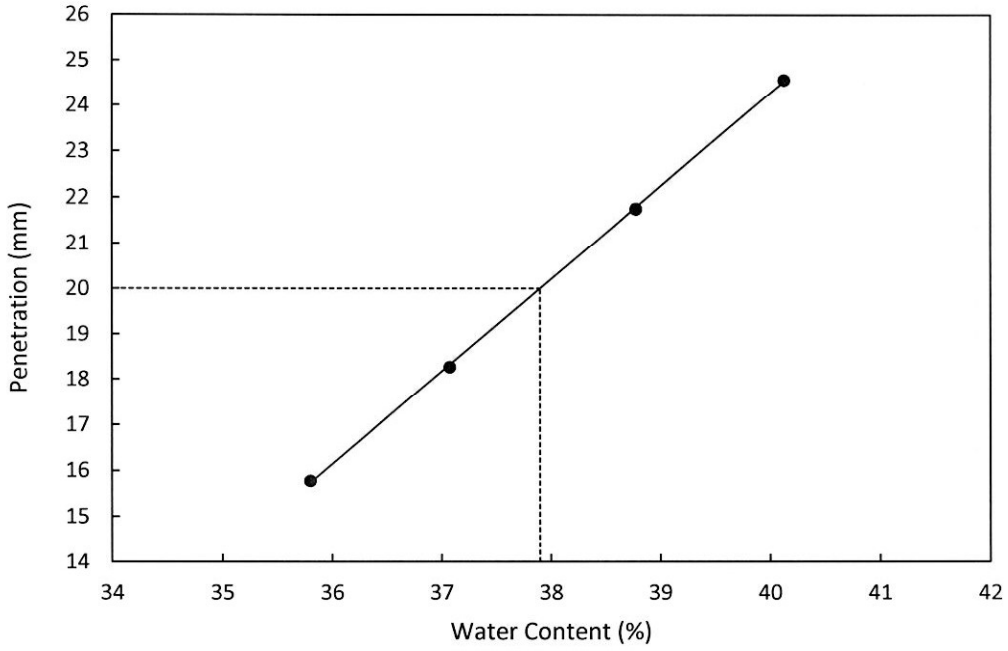
(TEST METHOD- BS 1377 : Part 2 : 1990 - Method 4.3 & 5)

PROJECT	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
JOB NO.	: K5728
BOREHOLE NO.	: BH-4
SAMPLE NO.	: SPT02
DEPTH(M)	: 4.00-4.45m
SOIL DESCRIPTION	: Light grey and yellowish brown slightly gravelly slightly sandy CLAY
SAMPLE CONDITION	: Natural
% OF PASSING 0.425mm SIEVE	: -
TEST DATE	: 02.06.2018

		LIQUID LIMIT				PLASTIC LIMIT	
WET WEIGHT + CUP	(g)	20.06	20.55	20.56	20.42	20.15	20.14
DRY WEIGHT + CUP	(g)	17.01	17.41	17.33	17.21	18.47	18.56
CUP WEIGHT	(g)	8.49	8.94	9.00	9.21	8.23	8.96
WATER CONTENT	(%)	35.8	37.1	38.8	40.1	16.4	16.5
PENETRATION	(mm)	15.8	18.3	21.8	24.6	-	-

LIQUID LIMIT	(%)	**37.9**
PLASTIC LIMIT	(%)	**16.4**
PLASTICITY INDEX		**21**

NOTE:
M : SILT
C : CLAY
L : LOW PLASTICITY
I : INTERMEDIATE PLASTICITY
H : HIGH PLASTICITY
V : VERY HIGH PLASTICITY
E : EXTREMELY HIGH PLASTICITY



TESTED BY :	APPROVED BY :	DATE :
	(Authorised Signatory - Min Win Htut)	11.6.2018

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

ATTERBERG LIMITS TEST BY CONE PENETROMETER METHOD

(TEST METHOD- BS 1377 : Part 2 : 1990 - Method 4.3 & 5)

PROJECT	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
JOB NO.	: K5728
BOREHOLE NO.	: BH-4
SAMPLE NO.	: TW01
DEPTH(M)	: 8.00-8.90m
SOIL DESCRIPTION	: Light grey slightly gravelly sandy CLAY
SAMPLE CONDITION	: Sieved
% OF PASSING 0.425mm SIEVE	: 37
TEST DATE	: 01.06.2018

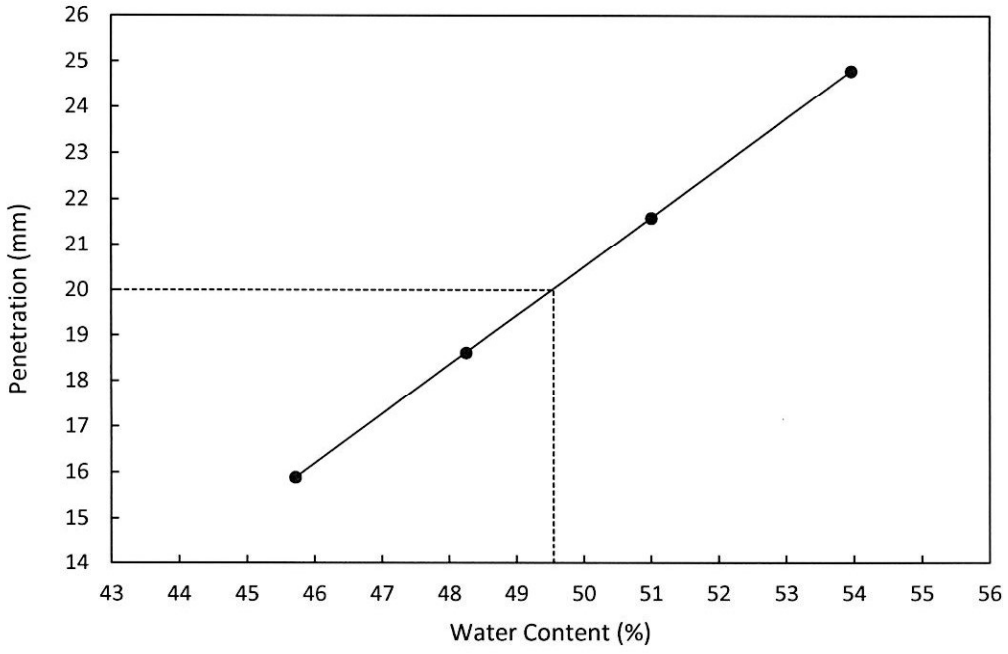
		LIQUID LIMIT				PLASTIC LIMIT	
WET WEIGHT + CUP	(g)	20.45	20.31	20.34	20.32	20.74	20.45
DRY WEIGHT + CUP	(g)	16.93	16.59	16.52	15.89	18.13	17.79
CUP WEIGHT	(g)	9.23	8.88	9.03	7.68	8.71	8.29
WATER CONTENT	(%)	45.7	48.2	51.0	54.0	27.7	28.0
PENETRATION	(mm)	15.9	18.6	21.6	24.8	-	-

LIQUID LIMIT	(%)	**49.6**
PLASTIC LIMIT	(%)	**27.9**
PLASTICITY INDEX		**22**

NOTE:

M : SILT C : CLAY L : LOW PLASTICITY

I : INTERMEDIATE PLASTICITY H : HIGH PLASTICITY V : VERY HIGH PLASTICITY E : EXTREMELY HIGH PLASTICITY



TESTED BY :	APPROVED BY :	DATE :
S. Raj.	(Authorised Signatory - Min Win Htut)	11.6.2018

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

ATTERBERG LIMITS TEST BY CONE PENETROMETER METHOD

(TEST METHOD- BS 1377 : Part 2 : 1990 - Method 4.3 & 5)

PROJECT	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
JOB NO.	: K5728
BOREHOLE NO.	: BH-4
SAMPLE NO.	: TW02
DEPTH(M)	: 16.00-16.90m
SOIL DESCRIPTION	: Light grey and yellow slightly sandy CLAY
SAMPLE CONDITION	: Natural
% OF PASSING 0.425mm SIEVE	: 100
TEST DATE	: 01.06.2018

		LIQUID LIMIT				PLASTIC LIMIT	
WET WEIGHT + CUP	(g)	20.04	20.60	20.49	20.13	20.92	20.79
DRY WEIGHT + CUP	(g)	17.02	17.18	17.19	16.83	19.16	18.87
CUP WEIGHT	(g)	9.12	8.66	9.27	9.26	9.26	8.10
WATER CONTENT	(%)	38.2	40.1	41.7	43.6	17.8	17.8
PENETRATION	(mm)	15.2	18.6	21.3	24.5	-	-

LIQUID LIMIT	(%)	**41.0**
PLASTIC LIMIT	(%)	**17.8**
PLASTICITY INDEX		**23**

NOTE:
M : SILT
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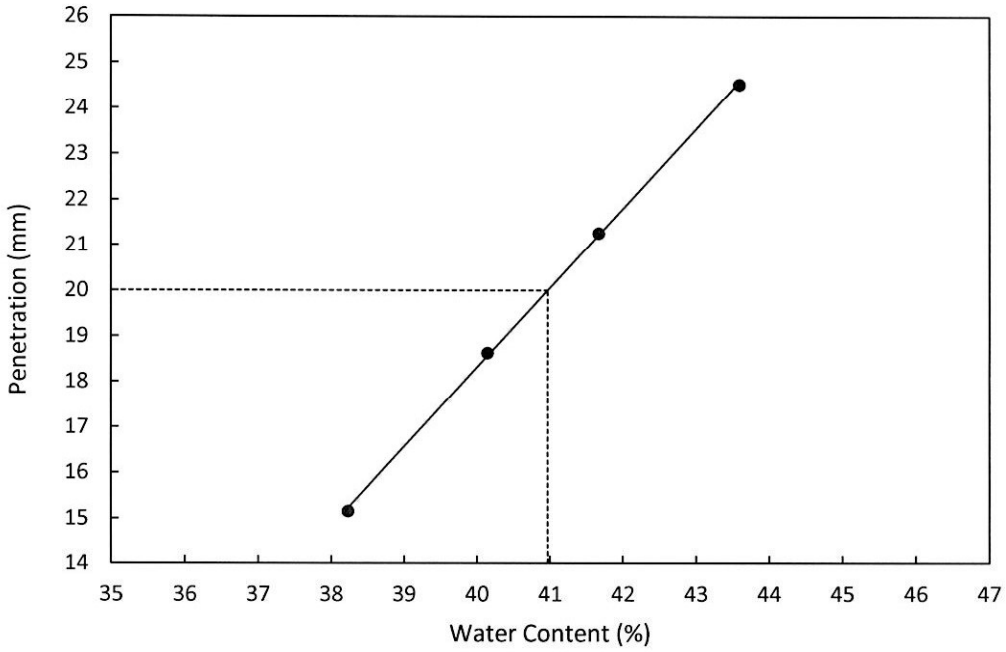

TESTED BY :	APPROVED BY :	DATE :
S. Thy.	(Authorised Signatory - Min Win Htut)	11.6.2018

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

ATTERBERG LIMITS TEST BY CONE PENETROMETER METHOD

(TEST METHOD- BS 1377 : Part 2 : 1990 - Method 4.3 & 5)

PROJECT	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
JOB NO.	: K5728
BOREHOLE NO.	: BH-4
SAMPLE NO.	: SPT07
DEPTH(M)	: 18.00-18.45m
SOIL DESCRIPTION	: Light grey and yellowish brown slightly sandy CLAY
SAMPLE CONDITION	: Natural
% OF PASSING 0.425mm SIEVE	: -
TEST DATE	: 02.06.2018

		LIQUID LIMIT				PLASTIC LIMIT	
WET WEIGHT + CUP	(g)	20.28	20.45	20.78	20.56	20.68	20.64
DRY WEIGHT + CUP	(g)	17.00	17.10	17.49	17.17	19.02	19.07
CUP WEIGHT	(g)	8.06	8.52	9.43	9.26	8.25	8.73
WATER CONTENT	(%)	36.7	39.0	40.8	42.9	15.4	15.2
PENETRATION	(mm)	15.6	19.2	21.8	25.1	-	-

LIQUID LIMIT	(%)	**39.6**
PLASTIC LIMIT	(%)	**15.3**
PLASTICITY INDEX		**24**

NOTE:
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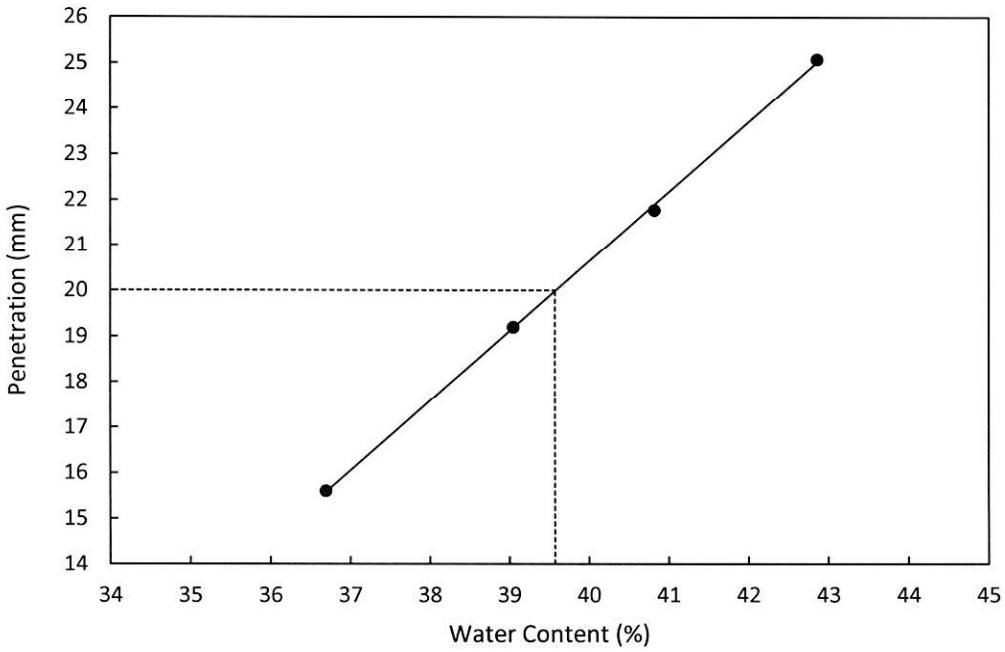
E : EXTREMELY HIGH PLASTICITY



TESTED BY :	APPROVED BY :	DATE :
	(Authorised Signatory - Min Win Htut)	11.6.2018

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

ATTERBERG LIMITS TEST BY CONE PENETROMETER METHOD

(TEST METHOD- BS 1377 : Part 2 : 1990 - Method 4.3 & 5)

PROJECT	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
JOB NO.	: K5728
BOREHOLE NO.	: BH-4
SAMPLE NO.	: TW03
DEPTH(M)	: 24.00-24.90m
SOIL DESCRIPTION	: Light grey and greenish grey very clayey SAND with traces of gravel
SAMPLE CONDITION	: Sieved
% OF PASSING 0.425mm SIEVE	: 32
TEST DATE	: 01.06.2018

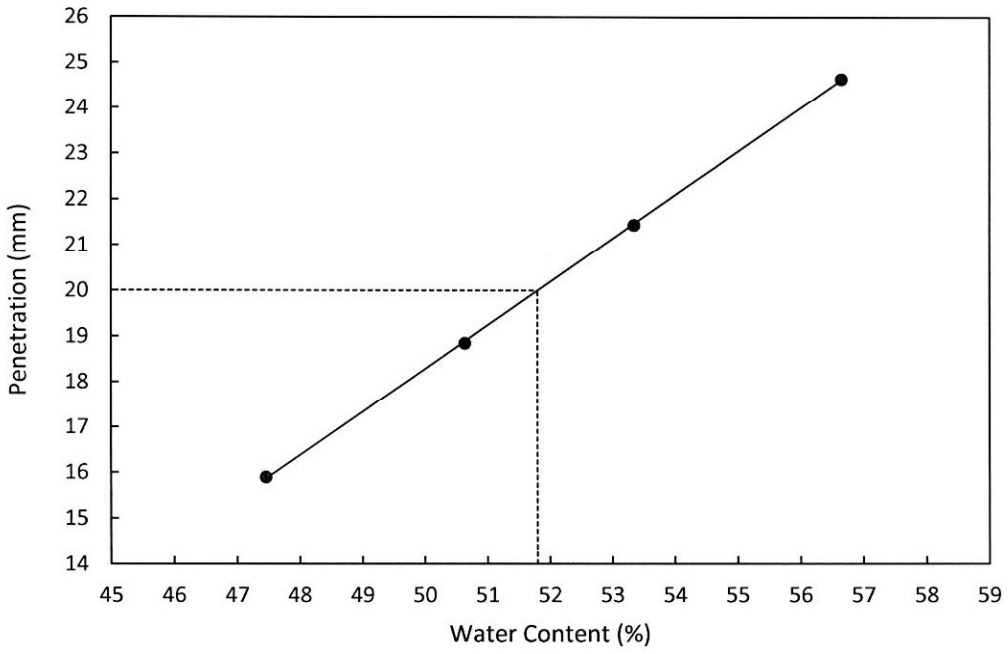
		LIQUID LIMIT				PLASTIC LIMIT	
WET WEIGHT + CUP	(g)	20.83	20.35	20.23	20.73	20.11	20.41
DRY WEIGHT + CUP	(g)	17.10	16.35	16.00	16.17	17.80	17.96
CUP WEIGHT	(g)	9.24	8.45	8.07	8.12	9.30	8.79
WATER CONTENT	(%)	47.5	50.6	53.3	56.6	27.2	26.7
PENETRATION	(mm)	15.9	18.9	21.4	24.6	-	-

LIQUID LIMIT	(%)	**51.8**
PLASTIC LIMIT	(%)	**26.9**
PLASTICITY INDEX		**25**

NOTE:

M : SILT C : CLAY L : LOW PLASTICITY

I : INTERMEDIATE PLASTICITY H : HIGH PLASTICITY V : VERY HIGH PLASTICITY E : EXTREMELY HIGH PLASTICITY



TESTED BY :	APPROVED BY :	DATE :
	(Authorised Signatory - Min Win Htut)	11.6.2018

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

ATTERBERG LIMITS TEST BY CONE PENETROMETER METHOD

(TEST METHOD- BS 1377 : Part 2 : 1990 - Method 4.3 & 5)

PROJECT	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
JOB NO.	: K5728
BOREHOLE NO.	: BH-4
SAMPLE NO.	: SPT10
DEPTH(M)	: 26.00-26.45m
SOIL DESCRIPTION	: Yellowish grey and light grey slightly sandy CLAY
SAMPLE CONDITION	: Natural
% OF PASSING 0.425mm SIEVE	: -
TEST DATE	: 3.6.18

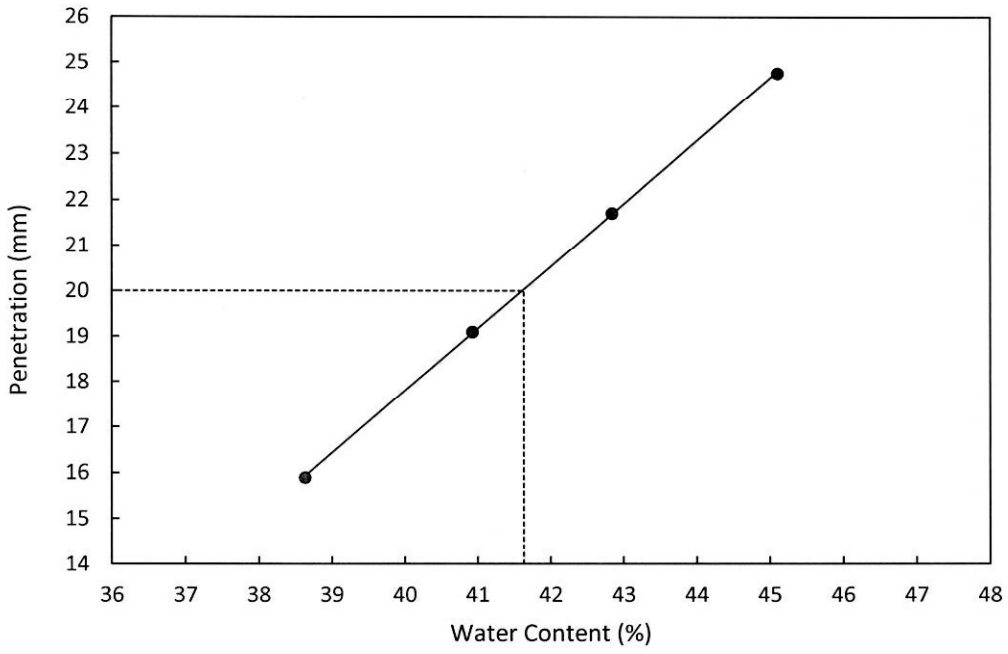
		LIQUID LIMIT				PLASTIC LIMIT	
WET WEIGHT + CUP	(g)	20.68	20.61	20.42	20.58	20.89	20.43
DRY WEIGHT + CUP	(g)	17.52	17.07	16.98	16.71	19.25	18.88
CUP WEIGHT	(g)	9.34	8.42	8.95	8.13	9.26	9.23
WATER CONTENT	(%)	38.6	40.9	42.8	45.1	16.4	16.1
PENETRATION	(mm)	15.9	19.1	21.7	24.8	-	-

LIQUID LIMIT	(%)	**41.6**
PLASTIC LIMIT	(%)	**16.2**
PLASTICITY INDEX		**25**

NOTE:

M : SILT C : CLAY L : LOW PLASTICITY

I : INTERMEDIATE PLASTICITY H : HIGH PLASTICITY V : VERY HIGH PLASTICITY E : EXTREMELY HIGH PLASTICITY



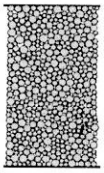
TESTED BY :	APPROVED BY :	DATE :
	(Authorised Signatory - Min Win Htut)	11.6.2018

Total Stress Triaxial Compression

Unconsolidated Undrained (Multiple Specimen)

Summary Report

Sample Details



sketch showing specimen location in original sample

Depth			16.00-16.90m		
Description			Stiff light grey and yellow slightly sandy CLAY		
Type			Undisturbed Sample		
			Spm. 1	2	3
Initial Sample Length	L_0	(mm)	76.0	76.0	76.0
Initial Sample Diameter	D_0	(mm)	38.0	38.0	38.0
Initial Sample Weight	W_0	(gr)	183.6	182.6	183.7
Bulk Density	ρ_0	(Mg/m3)	2.13	2.12	2.13
Particle Density	ρ_s	(Mg/m3)	2.66	2.66	2.66

Initial Conditions

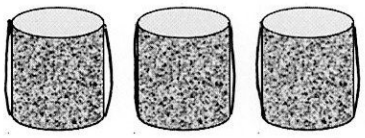
Specimen			Spm. 1	2	3
Initial Cell Pressure	σ_3	(kPa)	150	300	600
Strain Rate	m_s	(mm/min)	0.76000	0.76000	0.76000
MembraneThickness	m_b	(mm)	0.20	0.20	0.20
Initial Moisture	$\omega_i\%$	(%)	20	22	20
Initial Dry Density	ρ_{d0}	(Mg/m3)	1.78	1.74	1.78
Initial Voids Ratio	e_0	.	0.50	0.53	0.49
Initial Degree of Saturation	S_o	(%)	100	100	100

Final Conditions

			Spm. 1	2	3
Max Deviator Stress	$(\sigma_1-\sigma_3)_f$	(kPa)	143.62	179.63	179.29
MembraneCorrection	m_c	(kPa)	1.670	1.690	0.590
Strain At Max Stress	$\varepsilon_f\%$	(%)	15.80	16.07	4.22
Shear Strength	c_u	(kPa)	71.81	89.82	89.65
Final Moisture	$\omega_f\%$	(%)	20	22	20
Final Dry Density	ρ_{df}	(Mg/m3)	1.78	1.74	1.78
Final Voids Ratio	e_f	.	0.50	0.53	0.49
Final Degree of Saturation	S_f	(%)	100.0	100.0	100.0

Notes

Soil parameters in final condition are assumed the same with the initial condition.



Failure Sketch

(surface inclination)

Test Method	BS1377: Part 7 1990 : Clause 8	Test Name	UU4-AVA-B4T2
Database: .\SQLEXPRESS \ RyobiG-L3-2017		Test Date	31/5/2018
Site Reference	AVA-Neo Tiew Crescent (5BHs)	Borehole	BH-4
Jobfile	AVA - Neo Tiew Crescent	Sample	TW02
Client	AVA	Depth	16.00-16.90m
Operator		Checked	Min Win Htut
		Approved	Sio Keong Kong

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

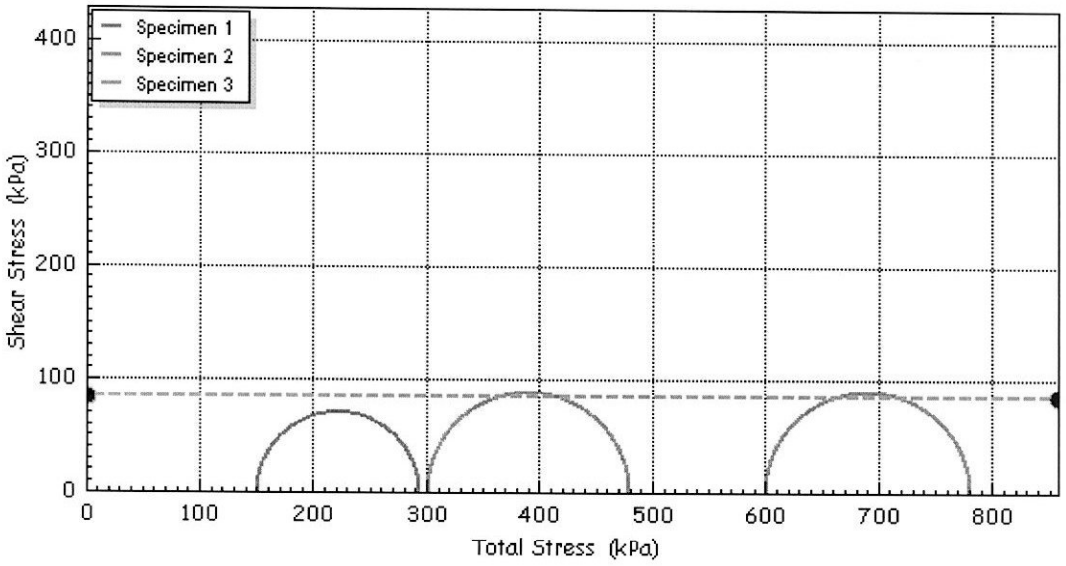
Ryobi Geotechnique International Pte Ltd

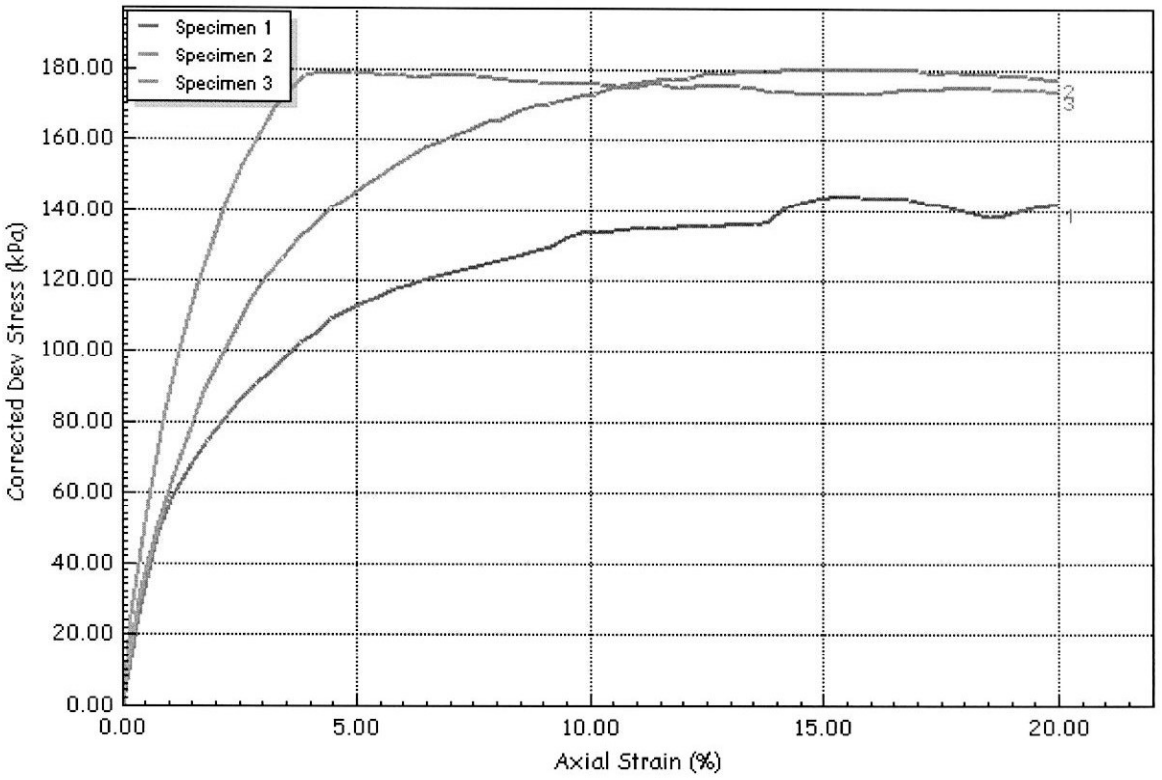
Total Stress Triaxial Compression

Unconsolidated Undrained (Multiple Specimen)

Test Results Plots

Cohesion Level	c	(kPa)	83.8
Friction Angle	ϕ	(deg)	0.0





Test Method	BS1377: Part 7 1990 : Clause 8		Test Name	UU4-AVA-B4T2	
Database: .\SQLEXPRESS \ RyobiG-L3-2017			Test Date	31/5/2018	
Site Reference	AVA-Neo Tiew Crescent (5BHs)		Borehole	BH-4	
Jobfile	AVA - Neo Tiew Crescent		Sample	TW02	
Client	AVA		Depth	16.00-16.90m	
Operator		Checked	Min Win Htut	Approved	Sio Keong Kong

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

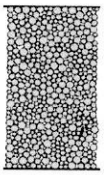
Ryobi Geotechnique International Pte Ltd

Total Stress Triaxial Compression

Unconsolidated Undrained (Multiple Specimen)

Summary Report

Sample Details



sketch showing specimen location in original sample

			Spm. 1	2	3
Depth			24.00-24.90m		
Description			Light grey and greenish grey very clayey SAND with traces of gravel		
Type			Undisturbed Sample		
Initial Sample Length	L_0	(mm)	76.0	76.0	76.0
Initial Sample Diameter	D_0	(mm)	38.0	38.0	38.0
Initial Sample Weight	W_0	(gr)	179.2	179.4	174.6
Bulk Density	ρ_0	(Mg/m3)	2.08	2.08	2.03
Particle Density	ρ_s	(Mg/m3)	2.60	2.60	2.60

Initial Conditions

Specimen			Spm. 1	2	3
Initial Cell Pressure	σ_3	(kPa)	225	450	850
Strain Rate	m_s	(mm/min)	0.76000	0.76000	0.76000
MembraneThickness	m_b	(mm)	0.20	0.20	0.20
Initial Moisture	$\omega_i\%$	(%)	20	19	20
Initial Dry Density	ρ_{d0}	(Mg/m3)	1.74	1.76	1.68
Initial Voids Ratio	e_0	.	0.50	0.48	0.54
Initial Degree of Saturation	S_o	(%)	100	100	97

Final Conditions

			Spm. 1	2	3
Max Deviator Stress	$(\sigma_1-\sigma_3)_f$	(kPa)	399.24	482.15	561.91
MembraneCorrection	m_c	(kPa)	1.840	1.940	1.330
Strain At Max Stress	$\varepsilon_f\%$	(%)	18.03	19.38	11.53
Shear Strength	c_u	(kPa)	199.62	241.07	280.96
Final Moisture	$\omega_f\%$	(%)	20	19	20
Final Dry Density	ρ_{df}	(Mg/m3)	1.74	1.76	1.68
Final Voids Ratio	e_f	.	0.50	0.48	0.54
Final Degree of Saturation	S_f	(%)	100.0	100.0	97.1

Notes

Soil parameters in final condition are assumed the same with the initial condition.

Failure Sketch

(surface inclination)

Test Method	BS1377: Part 7 1990 : Clause 8	Test Name	UU7-AVA-B4T3
Database: .\SQLEXPRESS \ RyobiG-L3-2017		Test Date	1/6/2018
Site Reference	AVA-Neo Tiew Crescent (5BHs)	Borehole	BH-4
Jobfile	AVA - Neo Tiew Crescent	Sample	TW03
Client	AVA	Depth	24.00-24.90m
Operator		Checked	Min Win Htut
		Approved	Sio Keong Kong

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

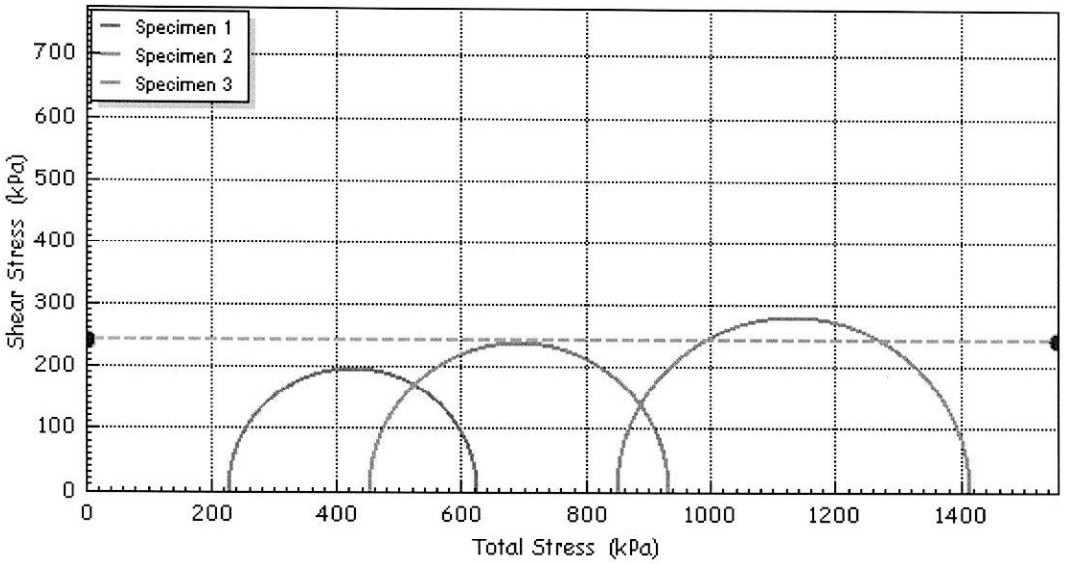
Ryobi Geotechnique International Pte Ltd

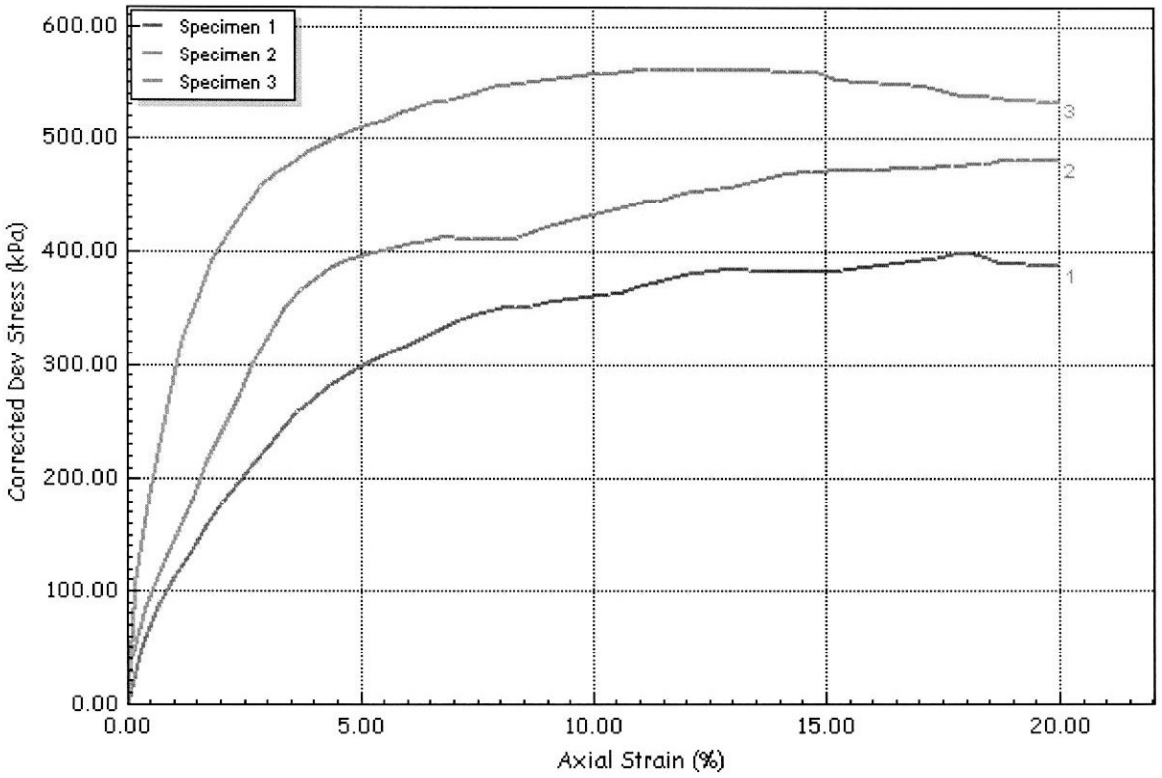
Total Stress Triaxial Compression

Unconsolidated Undrained (Multiple Specimen)

Test Results Plots

Cohesion Level	c	(kPa)	240.6
Friction Angle	ϕ	(deg)	0.0





Test Method	BS1377: Part 7 1990 : Clause 8	Test Name	UU7-AVA-B4T3
Database: .\SQLEXPRESS \ RyobiG-L3-2017		Test Date	1/6/2018
Site Reference	AVA-Neo Tiew Crescent (5BHs)	Borehole	BH-4
Jobfile	AVA - Neo Tiew Crescent	Sample	TW03
Client	AVA	Depth	24.00-24.90m
Operator		Checked	Min Win Htut
		Approved	Sio Keong Kong

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0523-B

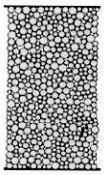
Ryobi Geotechnique International Pte Ltd

Effective Stress Triaxial Compression

Consolidated Undrained

Summary Report

Sample Details



sketch showing specimen location in original sample

			Spm. 1	2	3
Depth			8.00-8.90m		
Description			Light grey slightly gravelly sandy CLAY		
Type			Undisturbed Sample		
Initial Sample Length	L_0	(mm)	76.0	76.0	76.0
Initial Sample Diameter	D_0	(mm)	38.0	38.0	38.0
Initial Sample Weight	W_0	(gr)	181.0	175.1	173.4
Initial Bulk Density	ρ_0	(Mg/m3)	2.10	2.03	2.01
Particle Density	ρ_s	(Mg/m3)	2.58	2.58	2.58

Initial Conditions

			Spm. 1	2	3
Initial Cell Pressure	σ_{3i}	(kPa)	250	300	400
Initial Back Pressure	U_{bi}	(kPa)	200	200	200
Strain Rate	m_s	(mm/min)	0.06000	0.06000	0.06000
Membrane Thickness	m_b	(mm)	0.200	0.200	0.200
Initial Moisture	$\omega_i\%$	(%)	19	20	21
Initial Dry Density	ρ_{di}	(Mg/m3)	1.77	1.69	1.66
Initial Voids Ratio	e_i	.	0.459	0.526	0.553
Initial Degree of Saturation	S_i	(%)	100	99	98
B Value	B	.	0.97	0.98	0.97

Final Conditions

			Spm. 1	2	3
Final Moisture	$\omega_f\%$	(%)	19	21	20
Final Dry Density	ρ_{df}	(Mg/m3)	1.79	1.73	1.73
Final Voids Ratio	e_f	.	0.441	0.489	0.489
Final Degree of Saturation	S_f	(%)	100.0	100.0	100.0
Failure Criteria		.	Max. Stress Ratio	Max. Stress Ratio	Max. Stress Ratio
Strain At Failure	$\varepsilon\%$	(%)	1.89	6.34	4.26
Stress At Failure	$(\sigma_1-\sigma_3)$	(kPa)	120.9	215.0	289.3
Minor Stress At Failure	σ_3'	(kPa)	29.0	61.7	91.6
Major Stress At Failure	σ_1'	(kPa)	149.9	276.7	380.9
Principal Stress Ratio At Failure	σ_1'/σ_3'	(kPa)	5.169	4.484	4.159

Notes

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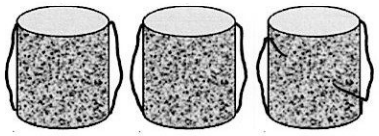


Test Method	BS1377-8 : 1990 : Clause 7	Test Name	CU2-NeoTiew-B4T01
Database: .\SQLEXPRESS \ Ryobi-2017		Test Date	1/6/2018
Site Reference	AVA - Neo Tiew Crescent (5BHs)	Borehole	BH-4
Jobfile	K5728 Neo Tiew Crescent	Sample	TW01
Client	AVA	Depth	8.00-8.90m
Operator		Checked	Min Win Htut
		Approved	Sio Keong Kong

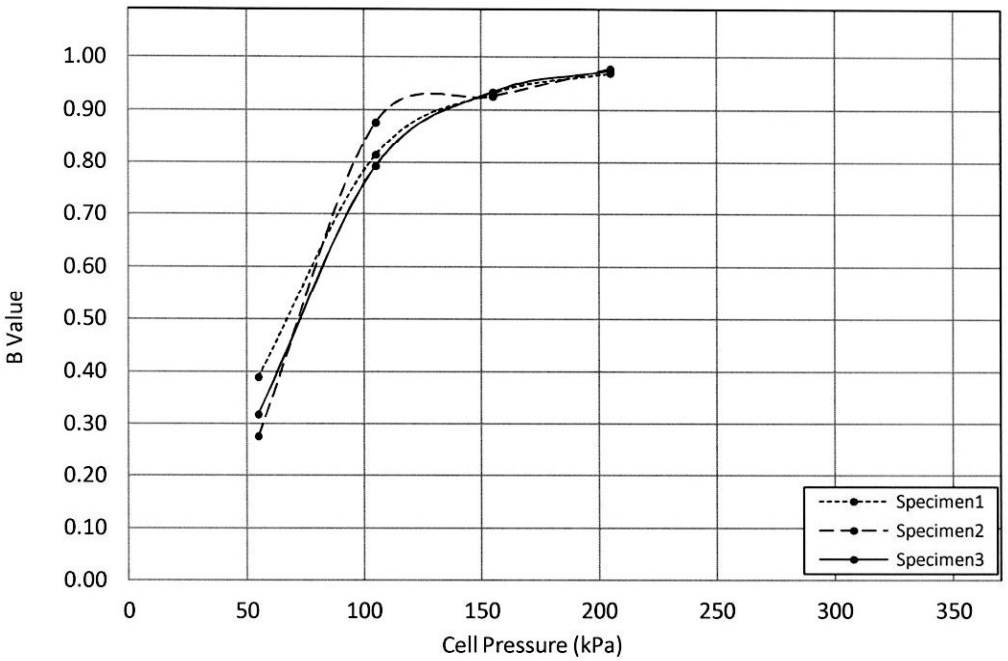
ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

Ryobi Geotechnique International Pte Ltd

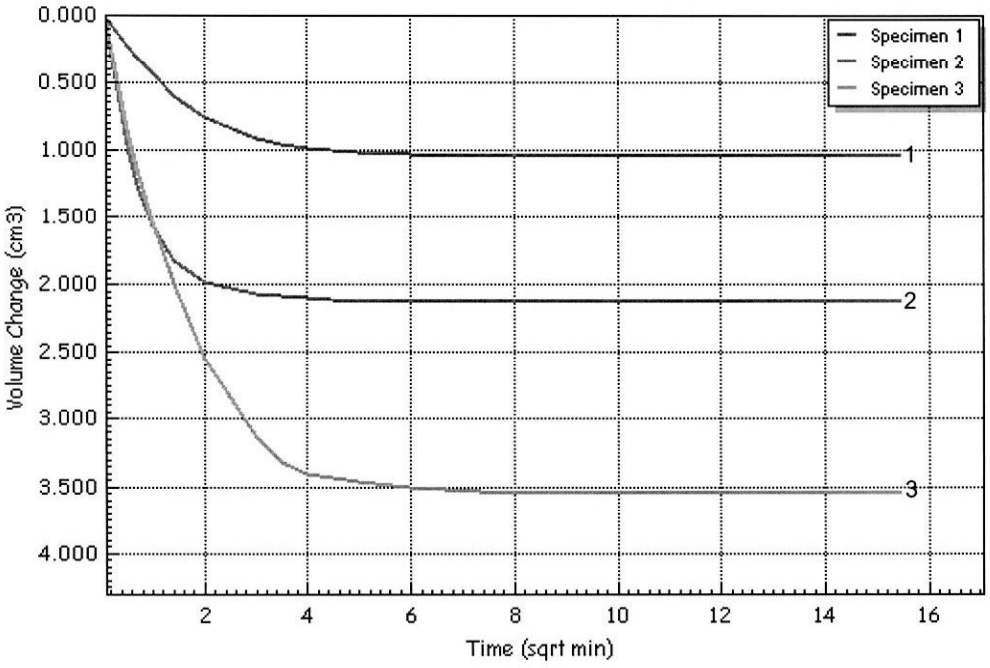
Effective Stress Triaxial Compression

Consolidated Undrained

Saturation and Consolidation Plots



Drainage Method : Both End and Side Drain



Test Method	BS1377-8 : 1990 : Clause 7	Test Name	CU2-NeoTiew-B4T01
Database: .\SQLEXPRESS \ Ryobi-2017		Test Date	1/6/2018
Site Reference	AVA - Neo Tiew Crescent (5BHs)	Borehole	BH-4
Jobfile	K5728 Neo Tiew Crescent	Sample	TW01
Client	AVA	Depth	8.00-8.90m
Operator		Checked	Min Win Htut
		Approved	Sio Keong Kong

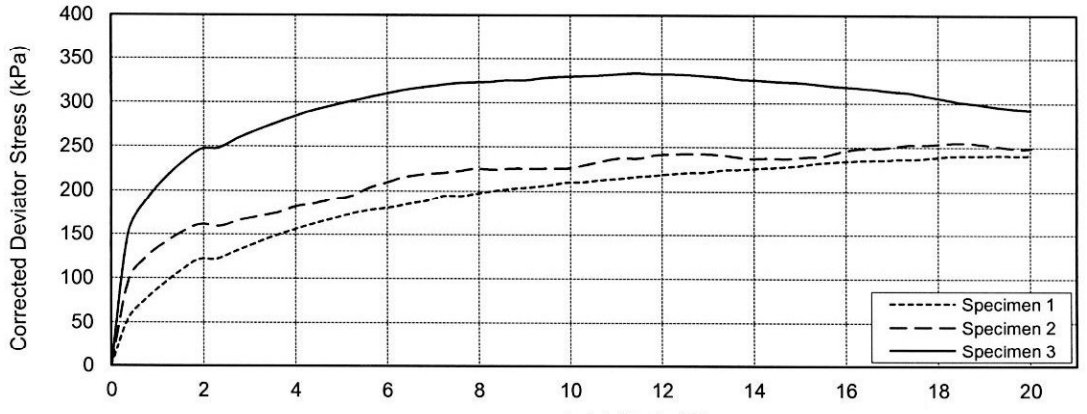
ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

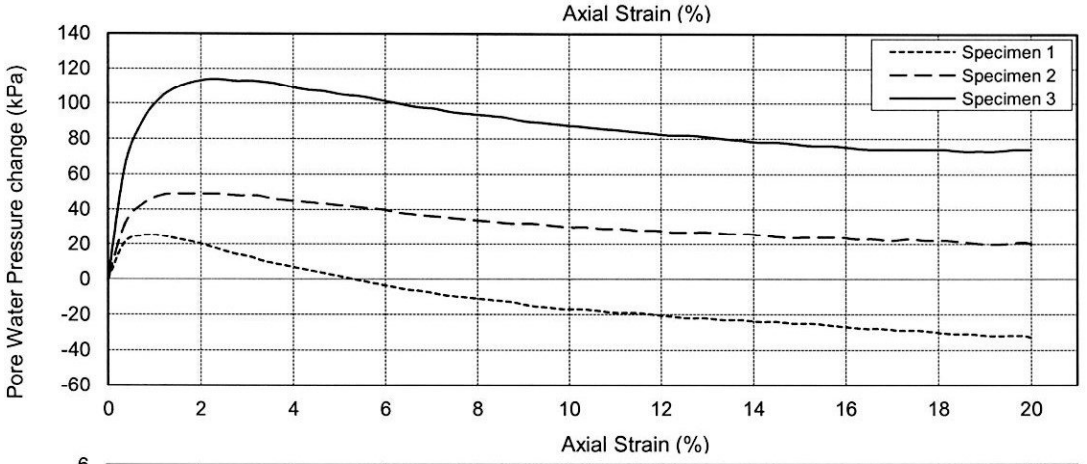
Ryobi Geotechnique International Pte Ltd

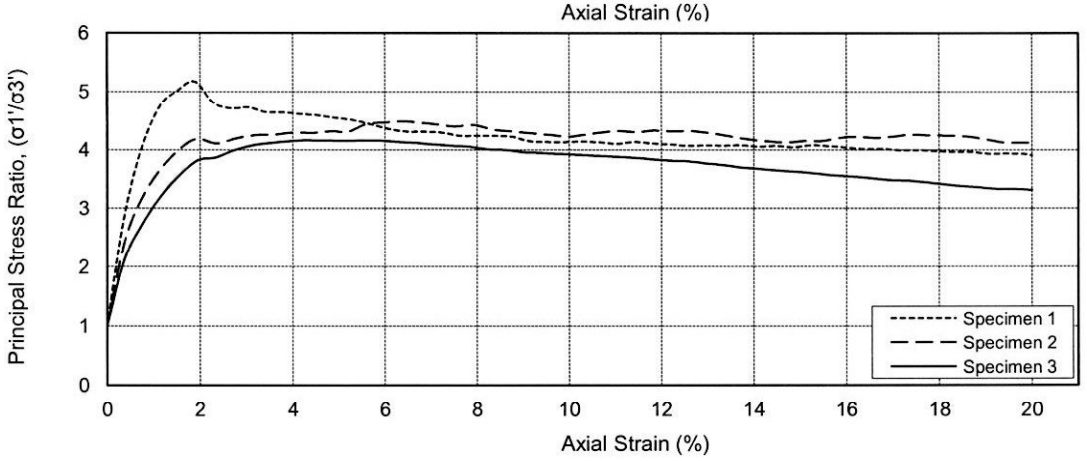
Effective Stress Triaxial Compression

Consolidation Undrained

Shear Stage Plots







Initial and Final Values	Spm.1	Spm.2	Spm.3
Pore Water Pressure at start of shear stage (kPa)	200	200	200
Pore Water Pressure at Max. Stress Ratio (kPa)	221	238	308
A Value at Max. Stress Ratio	0.174	0.177	0.373

Note : Side drain correction has been applied to strain exceeding 2% according to BS 1377.

Test Method	BS1337-8 : 1990 : Clause 7	Test Name	CU2-NeoTiew-B4T01
Database	:.\SQLEXPRESS\Ryobi-2017	Test Date	1/6/2018
Site Reference	AVA - Neo Tiew Crescent (2BHs)	Borehole	BH-4
Jobfile	K5728 Neo Tiew Crescent	Sample	TW01
Client	AVA	Depth	8.00-8.90m
Operator	Kay	Checked	Min Win Htut
		Approved	Sio Keong Kong

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

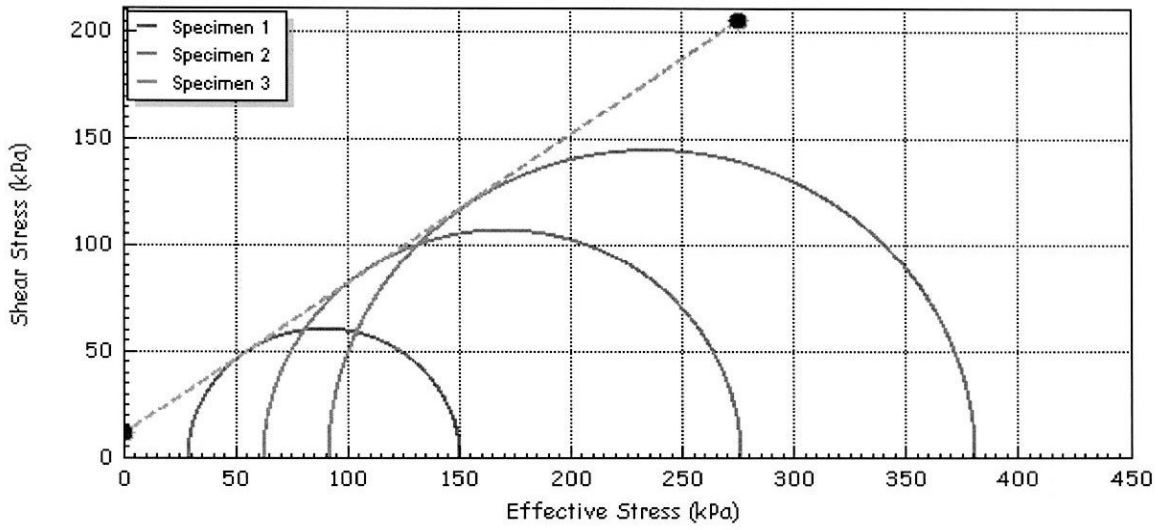
Ryobi Geotechnique International Pte Ltd

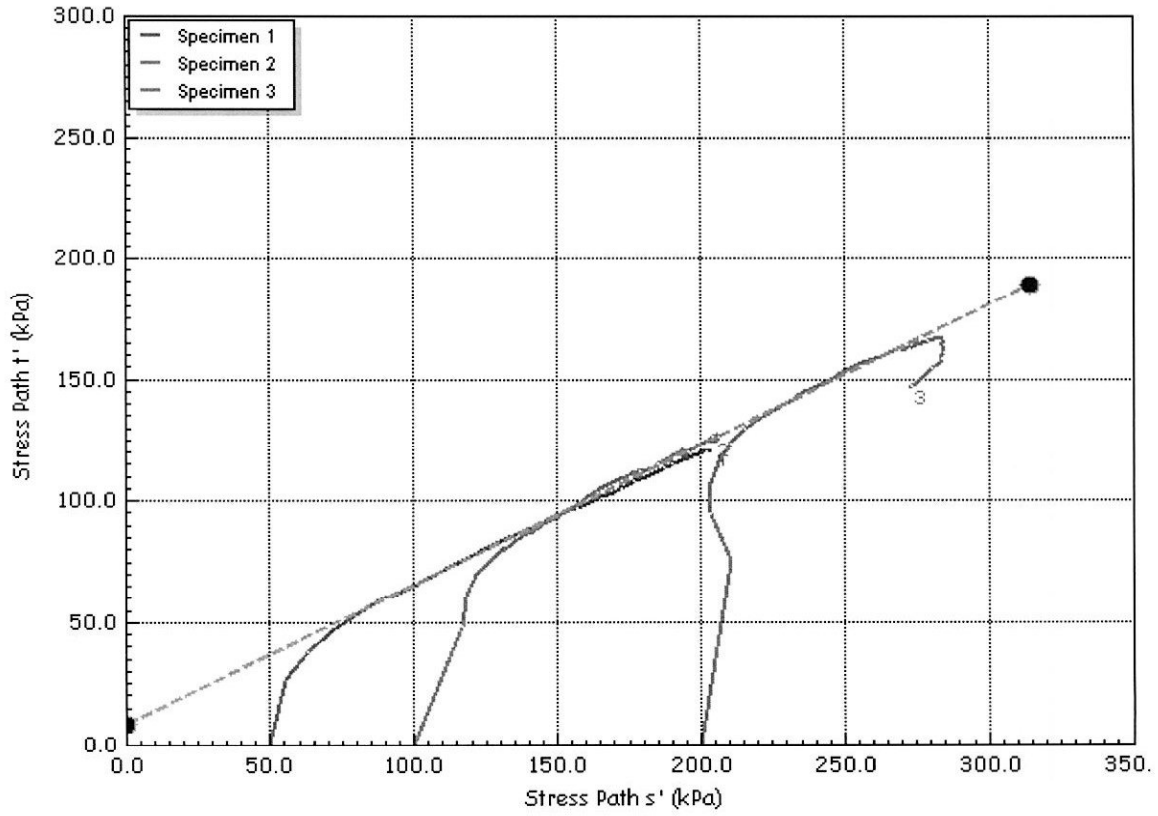
Effective Stress Triaxial Compression

Consolidated Undrained

Shear Stage Plots

Effective Cohesion	c'	(kPa)	10.7	Stress Path Intercept	t_0'	(kPa)	8.7
Effective Friction Angle	ϕ'	(deg)	35.0	Stress Path Inclination	θ	(deg)	29.8





Test Method	BS1377-8 : 1990 : Clause 7		Test Name	CU2-NeoTiew-B4T01	
Database: .\SQLEXPRESS \ Ryobi-2017			Test Date	1/6/2018	
Site Reference	AVA - Neo Tiew Crescent (5BHs)		Borehole	BH-4	
Jobfile	K5728 Neo Tiew Crescent		Sample	TW01	
Client	AVA		Depth	8.00-8.90m	
Operator	Kar	Checked	Min Win Htut	Approved	Sio Keong Kong

ACCREDITED LABORATORY SAC-SINGLAS Cert.No: LA-2016-0623-B

Ryobi Geotechnique International Pte Ltd

ACCREDITED LABORATORY
SAC-SINGLAS
Cert No: LA-1993-0064-A
Cert No: LA-2000-0178-F

CERTIFICATE OF ANALYSIS

Work Order	: **SG1808925**	Page	: 1 of 2
Client	: **RYOBI GEOTECH PTE LTD**	Project	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
Contact	: Mr Min Win Htut	Order number	: GTPO2161
Address	: 58A Sungei Kadut Loop Ryobi Industrial Bldg, Singapore 729505	Quote number	: SG2016RYOGEO0001 (Soil - Organic Content, Total Sulphate, pH Value, Chloride Content & Soluble Sulphate)
E-mail	: min.win.htut@ryobi-g.com	Date Received	: 31-May-2018
Telephone	: +65 6369 7100	Date Analysed	: 01-Jun-2018
Facsimile	: +65 6362 5848	Date Issued	: 08-Jun-2018
No. of samples received	: 5	No. of samples analysed	: 5

General Comments

This report supersedes any previous report(s) with this reference. All pages of this report have been checked and approved for release. Results apply to the sample(s) as submitted. The laboratory declares that the test results relate only to the items tested and do not substitute any other documents. This report may not be reproduced except with prior written approval from the testing laboratory. This report may not be used for advertising purposes.

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, BS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference. LOR = Limit of reporting

* Preceeding indicates non-accredited test. In the case when a procedure belonging to an accredited method was used for non-accredited matrix, would apply that the reported results are non-accredited.

- **BS method is referenced to British Standard 1377: Part 3/1990**
- **Organic Content Test is referenced to Clause 3 of Part 3:BS1377**
- **Chloride Content Test is referenced to Clause 7.3 or Part 3:BS1377**
- **Sulphate Content Test is referenced to Clause 5.2 of Part 3:BS1377**
- **pH Test is referenced to Clause 9 of Part 3: BS1377**

Signatories

This laboratory is accredited under SAC - SINGLAS. The tests reported herein have been performed in accordance with the laboratory's Terms of Accreditation. This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Accreditation Category*	*Position*
Pansy Teo	SG - Inorganics SG - Organics	Senior Environmental Manager

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-1993-0064-A Cert No: LA-2008-0178-P ALS

Analytical Results

Sub-Matrix: **SOIL**

				Client sample ID	BH-3 S1	BH-4 S1	BH-5 S1
				Sampling date/time	31-May-2018 00:00	31-May-2018 00:00	31-May-2018 00:00
Compound	*Method*	*LOR*	*Unit*		**SG1808925-001**	**SG1808925-002**	**SG1808925-003**
INORGANIC- Physical Properties							
pH Value	BS1377 pH	0.1	pH Unit		7.2	5.6	7.4
INORGANICS - Nonmetalllic Constituents							
Chloride	BS1377 Cl	0.01	% DW		<0.01	<0.01	<0.01
Organic Matter	BS1377	0.1	% DW		0.5	0.2	0.3
Sulphate as SO3	BS1377 SO3	0.01	% DW		<0.01	<0.01	<0.01

Sub-Matrix: **SOIL**

				Client sample ID	BH-6 S1	BH-7 S1	—
				Sampling date/time	31-May-2018 00:00	31-May-2018 00:00	----
Compound	*Method*	*LOR*	*Unit*		**SG1808925-004**	**SG1808925-005**	**--------**
INORGANIC- Physical Properties							
pH Value	BS1377 pH	0.1	pH Unit		6.5	6.5	----
INORGANICS - Nonmetalllic Constituents							
Chloride	BS1377 Cl	0.01	% DW		<0.01	<0.01	----
Organic Matter	BS1377	0.1	% DW		0.3	0.5	----
Sulphate as SO3	BS1377 SO3	0.01	% DW		<0.01	<0.01	----

ACCREDITED LABORATORY
SAC-SINGLAS
Cert No: LA-1993-0064-A
Cert No: LA-2000-0178-F

CERTIFICATE OF ANALYSIS

Work Order	: **SG1808926**	Page	: 1 of 2
Client	: **RYOBI GEOTECH PTE LTD**	Project	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
Contact	: Mr Min Win Htut	Order number	: GTPO2161
Address	: 58A Sungei Kadut Loop Ryobi Industrial Bldg, Singapore 729505	Quote number	: SG2016RYOGEO0002 (Water - Organic Content, Sulphate Content, Chloride, pH, Salinity & Soluble Sulphate)
E-mail	: min.win.htut@ryobi-g.com	Date Received	: 31-May-2018
Telephone	: +65 6369 7100	Date Analysed	: 31-May-2018
Facsimile	: +65 6362 5848	Date Issued	: 08-Jun-2018
No. of samples received	: 5	No. of samples analysed	: 5

General Comments

This report supersedes any previous report(s) with this reference. All pages of this report have been checked and approved for release. Results apply to the sample(s) as submitted. The laboratory declares that the test results relate only to the items tested and do not substitute any other documents. This report may not be reproduced except with prior written approval from the testing laboratory. This report may not be used for advertising purposes.

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* Preceeding indicates non-accredited test. In the case when a procedure belonging to an accredited method was used for non-accredited matrix, would apply that the reported results are non-accredited.

- **Sulphate Content Test is referenced to Clause 5.2 of Part 3:BS1377**
- **BS method is referenced to British Standard 1377: Part 3/1990**
- **Chloride ContentTest is referenced to Clause 7.3 of Part 3: BS1377**
- **pH Test is referenced to Clause 9 of Part 3: BS1377**

Signatories

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Signatories	*Accreditation Category*	*Position*
Pansy Teo	SG - Inorganics SG - Organics	Senior Environmental Manager

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-1993-0064-A Cert No: LA-2006-0178-F

ALS

Analytical Results

Sub-Matrix: **WATER**

			Client sample ID	BH-3	BH-4	BH-5
			Sampling date/time	31-May-2018 00:00	31-May-2018 00:00	31-May-2018 00:00
Compound	*Method*	*LOR*	*Unit*	**SG1808926-001**	**SG1808926-002**	**SG1808926-003**
INORGANIC- Physical Properties						
pH Value	BS1377 pH	0.1	pH Unit	12.2	7.2	12.3
INORGANICS - Nonmetalllic Constituents						
Chloride	BS1377 Cl	0.01	g/L	<0.01	<0.01	<0.01
INORGANICS-Anions						
Sulphate as SO3	BS1377 SO3	0.01	g/L	<0.01	<0.01	<0.01
ORGANICS-General						
•Organic Content	Ashing/Gravimetric	0.10	% (w/v)	<0.10	<0.10	<0.10

Sub-Matrix: **WATER**

			Client sample ID	BH-6	BH-7	—
			Sampling date/time	31-May-2018 00:00	31-May-2018 00:00	----
Compound	*Method*	*LOR*	*Unit*	**SG1808926-004**	**SG1808926-005**	--------
INORGANIC- Physical Properties						
pH Value	BS1377 pH	0.1	pH Unit	7.6	12.2	----
INORGANICS - Nonmetalllic Constituents						
Chloride	BS1377 Cl	0.01	g/L	<0.01	<0.01	----
INORGANICS-Anions						
Sulphate as SO3	BS1377 SO3	0.01	g/L	0.01	<0.01	----
ORGANICS-General						
•Organic Content	Ashing/Gravimetric	0.10	% (w/v)	<0.10	<0.10	----

Ryobi Geotechnique International Pte Ltd

58A Sungei Kadut Loop, Ryobi Industrial Bldg., Singapore 729505 Tel: 65- 6369 7100 Fax: 65- 6362 5848

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

SUMMARY OF LABORATORY TEST RESULTS

CLIENT : AVA

PROJECT : 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)

JOB NO. : K5728

BOREHOLE NO :			BH-5						
SAMPLE NO :			D 1	SPT02	TW01	SPT05	TW02	SPT08	SPT09
SAMPLE DEPTH :		m	1.00	4.00-4.45	8.00-8.90	12.00-12.45	16.00-16.90	20.00-20.45	22.00-22.45
MOISTURE CONTENT (BS 1377 Part 2 : 1990 : Method 3)		%	-	-	17.3	25.2	24.5	18.6	-
BULK DENSITY (BS 1377 Part 2 : 1990 : Method 7)		Mg/m^3	-	-	2.09	1.99	2.00	1.88	-
DRY DENSITY (BS 1377 Part 2 : 1990 : Method 7)		Mg/m^3	-	-	-	-	-	-	-
PARTICLE DENSITY (BS 1377 Part 2 : 1990 : Method 8 / Small Pyknometer)		Mg/m^3	-	-	2.59	2.59	2.60	2.58	-
GRAIN SIZE ANALYSIS (BS 1377 Part 2 : 1990 : Method 9.3 & 9.5)	GRAVEL	%	-	-	28	2	0	3	-
	SAND	%	-	-	47	61	67	68	-
	SILT	%	-	-	15	23	20	20	-
	CLAY	%	-	-	10	14	13	9	-
ATTERBERG LIMITS (BS 1377 Part 2 : 1990 : Method 4.3 & 5)	LIQUID LIMIT	%	-	(A)	44.4	-	37.9	-	54.9
	PLASTIC LIMIT	%	-		25.5	-	20.9	-	29.3
	PLASTICITY INDEX		-		19	-	17	-	26
TRIAXIAL COMPRESSION TEST (BS 1377 Part 7 & 8 : 1990)	TEST TYPE		-	-	**UU**	-	**UU**	-	-
	TOTAL COHESION	kPa	-	-	138.6	-	83.0	-	-
	TEST TYPE		-	-	-	-	-	-	-
	EFFECTIVE COHESION	kPa	-	-	-	-	-	-	-
	EFFECTIVE PHI ANGLE	degree	-	-	-	-	-	-	-
CONSOLIDATION TEST (BS 1377 Part 5 : 1990 : Method 3)	PRECONSOLIDATION PRESSURE	kPa	-	-	-	-	295	-	-
	COMPRESSION INDEX	C_c	-	-	-	-	0.123	-	-
ROCK TEST	POINT LOAD STRENGTH INDEX $I_{s(50)}$	MPa	-	-	-	-	-	-	-
	BULK DENSITY	Mg/m^3	-	-	-	-	-	-	-
	UNCONFINED COMPRESSIVE STRENGTH	MPa	-	-	-	-	-	-	-
CHEMICAL CONTENTS ANALYSIS	pH Value		7.4	-	-	-	-	-	-
	Chloride Content	%	<0.01	-	-	-	-	-	-
	Organic Content	%	0.3	-	-	-	-	-	-
	Sulphate Content	%	<0.01	-	-	-	-	-	-

LEGENDS :

UU - Unconsolidated Undrained Test (Part 7/Method 8)

CU - Consolidated Undrained Test (Part 8/Method 7)

CD - Consolidated Drained Test (Part 8/Method 8)

REMARKS :

(A) -Test cancelled due to high content of sand.

PREPARED BY : (Min Win Htut)

CHECKED BY : (Sio Keong Kong)

DATE : 11/06/2018

This laboratory is accredited under the Singapore Accreditation Council-Singapore Laboratory Accreditation Scheme (SAC-SINGLAS) and has met the requirements of ISO /IEC 17025 : 2005. The results reported herein have been performed in accordance with the laboratory's terms of accreditation under the SAC-SINGLAS.

Ryobi Geotechnique International Pte Ltd

58A Sungei Kadut Loop, Ryobi Industrial Bldg., Singapore 729505 Tel: 65- 6369 7100 Fax: 65- 6362 5848

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

SUMMARY OF LABORATORY TEST RESULTS

CLIENT : AVA

PROJECT : 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)

JOB NO. : K5728

BOREHOLE NO :			BH-5						
SAMPLE NO :			TW03	SPT10	SPT11	W1			
SAMPLE DEPTH :		m	24.00-24.90	26.00-26.45	28.00-28.45	Water Sample			
MOISTURE CONTENT (BS 1377 Part 2 : 1990 : Method 3)		%	20.2	-	19.0				
BULK DENSITY (BS 1377 Part 2 : 1990 : Method 7)		Mg/m^3	2.10	-	1.80	-			
DRY DENSITY (BS 1377 Part 2 : 1990 : Method 7)		Mg/m^3	-	-	-	-			
PARTICLE DENSITY (BS 1377 Part 2 : 1990 : Method 8 / Small Pyknometer)		Mg/m^3	2.64	-	2.60	-			
GRAIN SIZE ANALYSIS (BS 1377 Part 2 : 1990 : Method 9.3 & 9.5)	GRAVEL	%	0	-	6	-			
	SAND	%	37	-	66	-			
	SILT	%	56	-	24	-			
	CLAY	%	7	-	4	-			
ATTERBERG LIMITS (BS 1377 Part 2 : 1990 : Method 4.3 & 5)	LIQUID LIMIT	%	54.0	(A)	-	-			
	PLASTIC LIMIT	%	24.6		-	-			
	PLASTICITY INDEX		29		-	-			
TRIAXIAL COMPRESSION TEST (BS 1377 Part 7 & 8 : 1990)	TEST TYPE		-	-	-	-			
	TOTAL COHESION	kPa	-	-	-	-			
	TEST TYPE		**CU**	-	-	-			
	EFFECTIVE COHESION	kPa	24.9	-	-	-			
	EFFECTIVE PHI ANGLE	degree	34.0	-	-	-			
CONSOLIDATION TEST (BS 1377 Part 5 : 1990 : Method 3)	PRECONSOLIDATION PRESSURE	kPa	-	-	-	-			
	COMPRESSION INDEX	C_c	-	-	-	-			
ROCK TEST	POINT LOAD STRENGTH INDEX $I_{s(50)}$	MPa	-	-	-	-			
	BULK DENSITY	Mg/m^3	-	-	-	-			
	UNCONFINED COMPRESSIVE STRENGTH	MPa	-	-	-	-			
CHEMICAL CONTENTS ANALYSIS	pH Value		-	-	-	12.3			
	Chloride Content	g/L	-	-	-	<0.01			
	Organic Content	% (w/v)	-	-	-	<0.10			
	Sulphate Content	g/L	-	-	-	<0.01			

LEGENDS :

UU - Unconsolidated Undrained Test (Part 7/Method 8)
CU - Consolidated Undrained Test (Part 8/Method 7)
CD - Consolidated Drained Test (Part 8/Method 8)

REMARKS :

(A) -Test cancelled due to high content of sand.

PREPARED BY : (Min Win Htut)

CHECKED BY : (Sio Keong Kong)

DATE : 11/06/2018

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ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

MOISTURE CONTENT, DENSITY AND PARTICLE DENSITY

(TEST METHOD- BS 1377 Part 2 : 1990)

PROJECT 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)

JOB NO. K5728

BOREHOLE NO.	SAMPLE NO.	DEPTH (m)	MOISTURE CONTENT (%)	BULK DENSITY (Mg/m^3)	DRY DENSITY (Mg/m^3)	PARTICLE DENSITY (Mg/m^3)
BH-5	TW01	8.00-8.90	17.3	2.09	-	2.59
BH-5	SPT05	12.00-12.45	25.2	1.99	-	2.59
BH-5	TW02	16.00-16.90	24.5	2.00	-	2.60
BH-5	SPT08	20.00-20.45	18.6	1.88	-	2.58
BH-5	TW03	24.00-24.90	20.2	2.10	-	2.64
BH-5	SPT11	28.00-28.45	19.0	1.80	-	2.60

Method Used : MOISTURE CONTENT (BS 1377 Part 2 : 1990 : 3.2)
BULK & DRY DENSITY (BS 1377 Part 2 : 1990 : 7.2)
PARTICLE DENSITY (BS 1377 Part 2 : 1990 : 8.3)

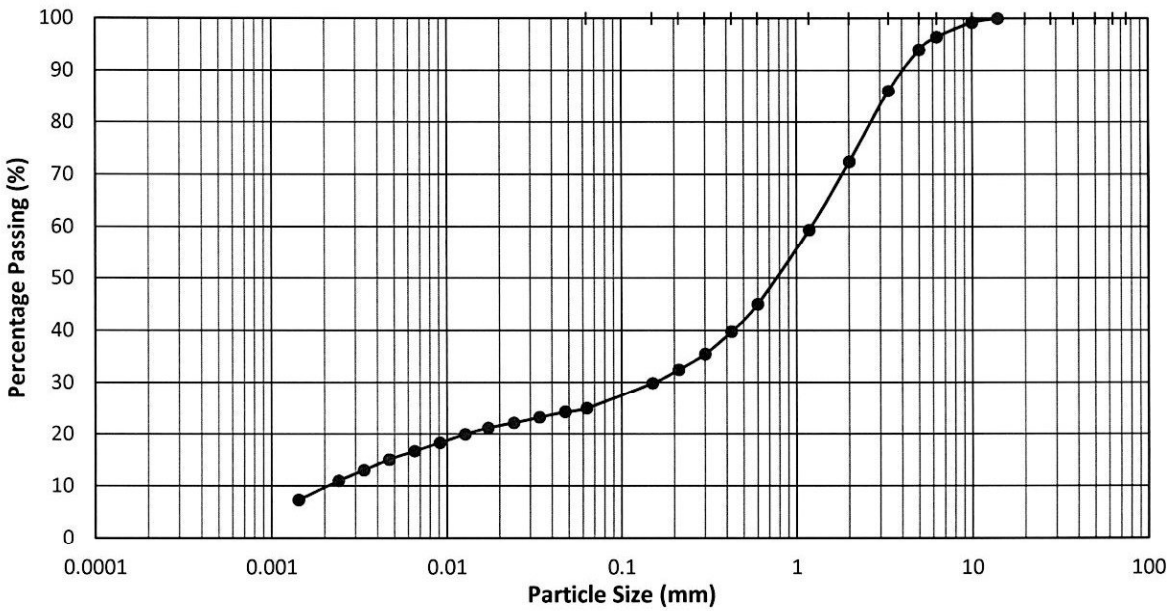
TESTED BY: MONJU Date : 30.05.2018	APPROVED BY: (Authorised Signatory - Min Win Htut)	DATE : 11.6.2018

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

GRAIN SIZE ANALYSIS BY SIEVE AND HYDROMETER METHOD

(TEST METHOD- BS 1377 : Part 2 : 1990 - Clauses 9.3 & 9.5)

PROJECT	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
JOB NO.	: K5728
BOREHOLE NO.	: BH-5
SAMPLE NO.	: TW01
DEPTH (m)	: 8.00-8.90m
TEST DATE	: 02.06.2018



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLE
	SILT			SAND			GRAVEL			

SOIL DESCRIPTION : **Light grey very clayey very gravelly SAND**

HYDROMETER + SIEVING

GRAVEL	=	**28**	%
SAND	=	**47**	%
SILT	=	**15**	%
CLAY	=	**10**	%

% of Passing 0.425 mm Sieve : 39.8

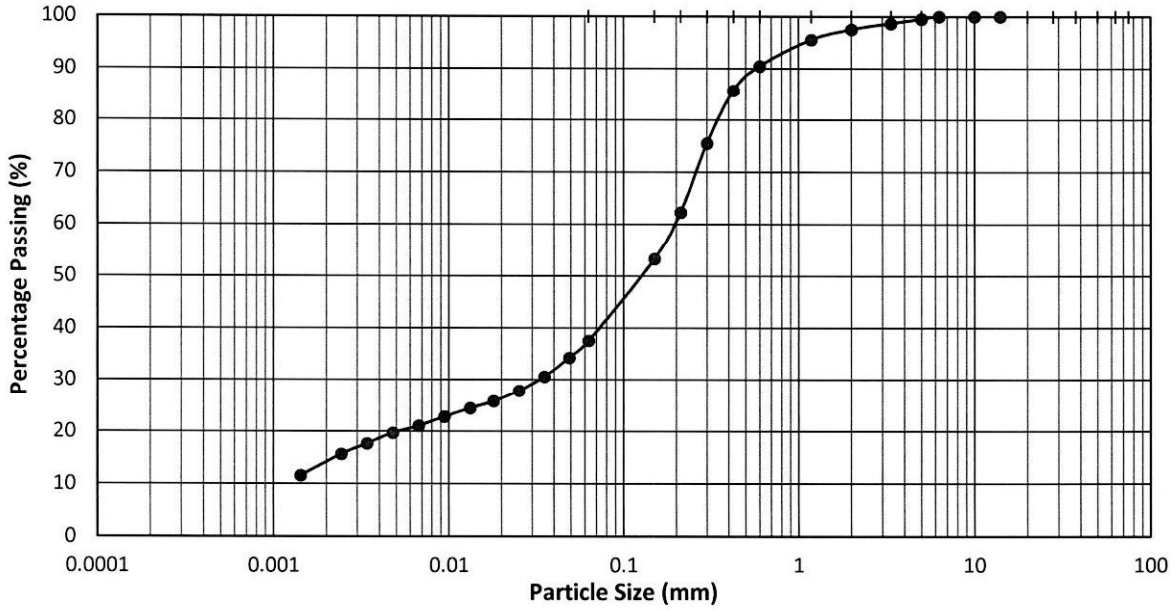
TESTED BY :	APPROVED BY :	DATE :
	(Authorised Signatory - Min Win Htut)	11.6.2018

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

GRAIN SIZE ANALYSIS BY SIEVE AND HYDROMETER METHOD

(TEST METHOD- BS 1377 : Part 2 : 1990 - Clauses 9.3 & 9.5)

PROJECT	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
JOB NO.	: K5728
BOREHOLE NO.	: BH-5
SAMPLE NO.	: SPT05
DEPTH (m)	: 12.00-12.45m
TEST DATE	: 01.06.2018



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLE
	SILT			SAND			GRAVEL			

SOIL DESCRIPTION : **Light greenish grey slightly gravelly sandy CLAY**

HYDROMETER + SIEVING

GRAVEL	=	**2**	%
SAND	=	**61**	%
SILT	=	**23**	%
CLAY	=	**14**	%

% of Passing 0.425 mm Sieve : 85.7

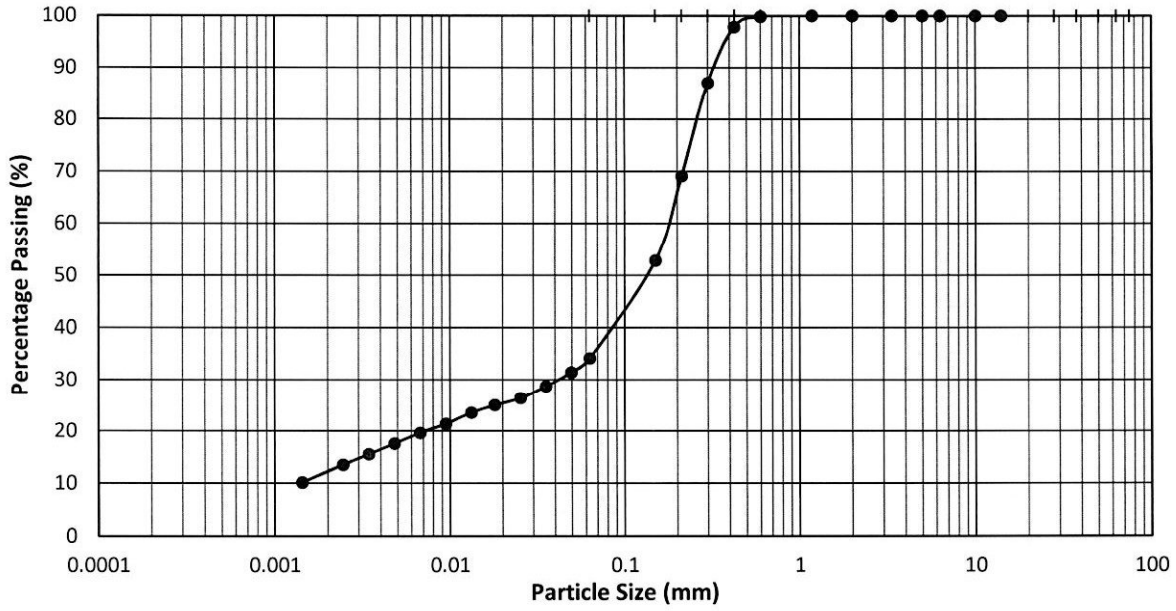
TESTED BY :	APPROVED BY :	DATE :
	(Authorised Signatory - Min Win Htut)	11.6.2018

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

GRAIN SIZE ANALYSIS BY SIEVE AND HYDROMETER METHOD

(TEST METHOD- BS 1377 : Part 2 : 1990 - Clauses 9.3 & 9.5)

PROJECT	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
JOB NO.	: K5728
BOREHOLE NO.	: BH-5
SAMPLE NO.	: TW02
DEPTH (m)	: 16.00-16.90m
TEST DATE	: 02.06.2016



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLE
	SILT			SAND			GRAVEL			

SOIL DESCRIPTION : **Light greenish grey very clayey SAND**

HYDROMETER + SIEVING

GRAVEL	=	**0**	%
SAND	=	**67**	%
SILT	=	**20**	%
CLAY	=	**13**	%

% of Passing 0.425 mm Sieve : 97.8

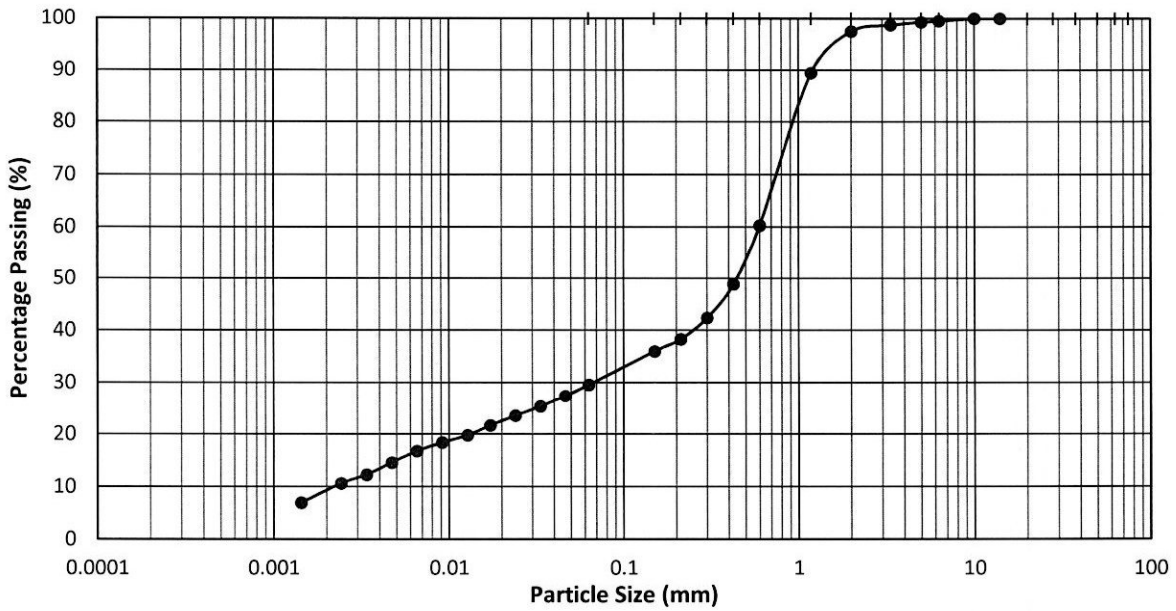
TESTED BY :	APPROVED BY :	DATE :
	(Authorised Signatory - Min Win Htut)	11.6.2016

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

GRAIN SIZE ANALYSIS BY SIEVE AND HYDROMETER METHOD

(TEST METHOD- BS 1377 : Part 2 : 1990 - Clauses 9.3 & 9.5)

PROJECT	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
JOB NO.	: K5728
BOREHOLE NO.	: BH-5
SAMPLE NO.	: SPT08
DEPTH (m)	: 20.00-20.45m
TEST DATE	: 01.06.2018



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLE
	SILT			SAND			GRAVEL			

SOIL DESCRIPTION : **Light greenish grey slightly gravelly very clayey SAND**

HYDROMETER + SIEVING

GRAVEL	=	**3**	%
SAND	=	**68**	%
SILT	=	**20**	%
CLAY	=	**9**	%

% of Passing 0.425 mm Sieve : 48.9

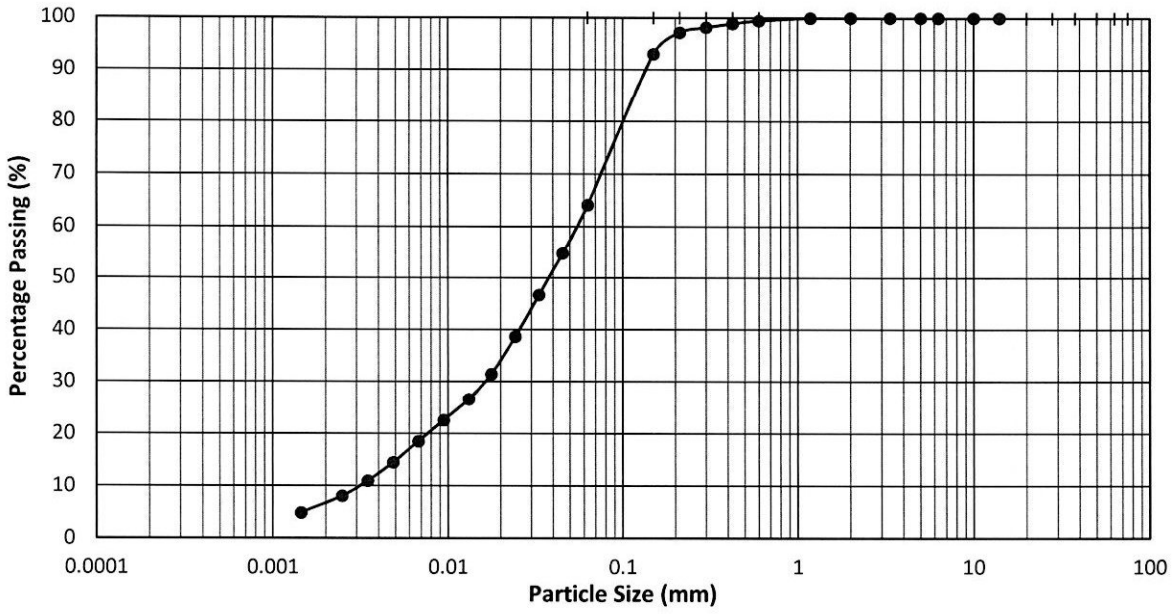
TESTED BY :	APPROVED BY :	DATE :
	(Authorised Signatory - Min Win Htut)	11.6.2018

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0523-B

GRAIN SIZE ANALYSIS BY SIEVE AND HYDROMETER METHOD

(TEST METHOD- BS 1377 : Part 2 : 1990 - Clauses 9.3 & 9.5)

PROJECT	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
JOB NO.	: K5728
BOREHOLE NO.	: BH-5
SAMPLE NO.	: TW03
DEPTH (m)	: 24.00-24.90m
TEST DATE	: 02.06.2018



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLE
	SILT			SAND			GRAVEL			

SOIL DESCRIPTION : **Greenish grey and yellowish brown sandy CLAY**

HYDROMETER + SIEVING

GRAVEL	=	**0**	%
SAND	=	**37**	%
SILT	=	**56**	%
CLAY	=	**7**	%

% of Passing 0.425 mm Sieve : 98.9

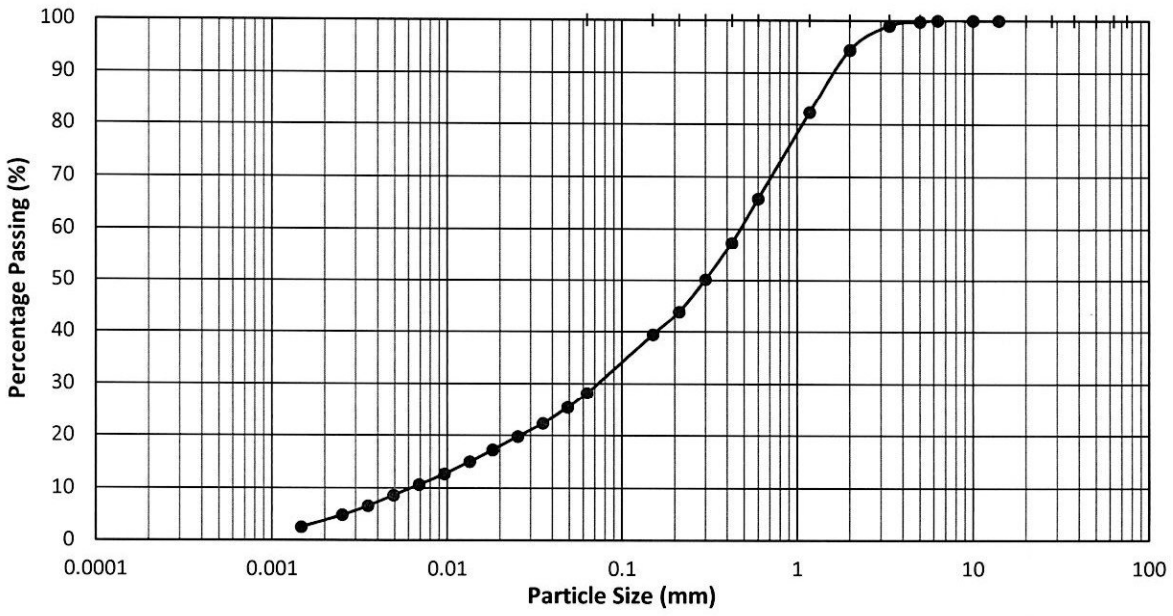
TESTED BY :	APPROVED BY :	DATE :
	(Authorised Signatory - Min Win Htut)	11.6.2018

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

GRAIN SIZE ANALYSIS BY SIEVE AND HYDROMETER METHOD

(TEST METHOD- BS 1377 : Part 2 : 1990 - Clauses 9.3 & 9.5)

PROJECT	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
JOB NO.	: K5728
BOREHOLE NO.	: BH-5
SAMPLE NO.	: SPT11
DEPTH (m)	: 28.00-28.45m
TEST DATE	: 02.06.2018



CLAY	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	COBBLE
	SILT			SAND			GRAVEL			

SOIL DESCRIPTION : **Light greenish grey gravelly very clayey SAND**

HYDROMETER + SIEVING

GRAVEL	=	**6**	%
SAND	=	**66**	%
SILT	=	**24**	%
CLAY	=	**4**	%

% of Passing 0.425 mm Sieve : 57.3

TESTED BY :	APPROVED BY :	DATE :
	(Authorised Signatory - Min Win Htut)	11.6.2018

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

ATTERBERG LIMITS TEST BY CONE PENETROMETER METHOD

(TEST METHOD- BS 1377 : Part 2 : 1990 - Method 4.3 & 5)

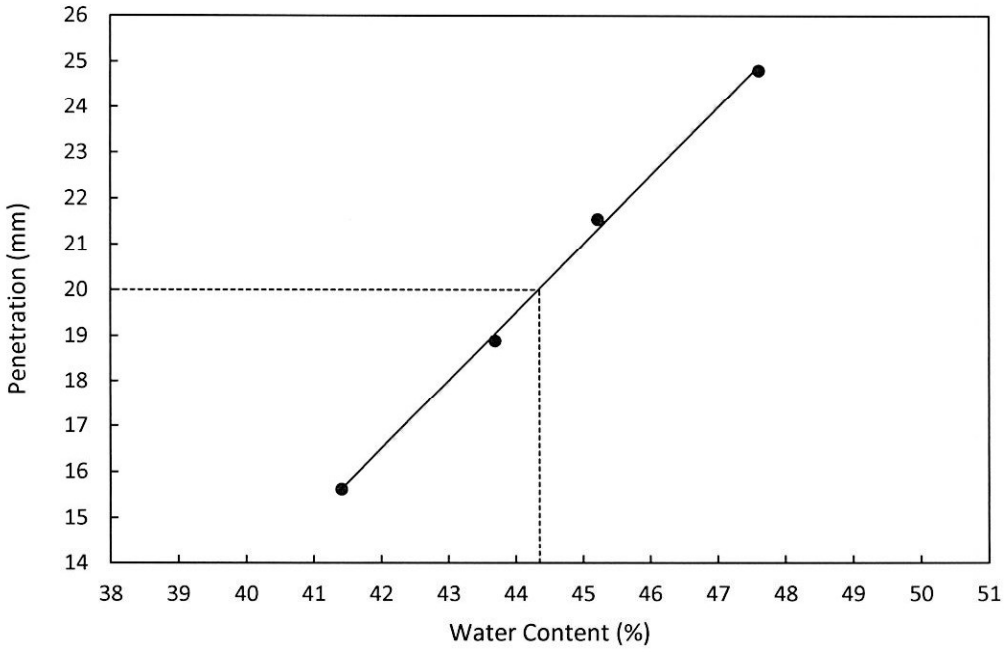
PROJECT	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
JOB NO.	: K5728
BOREHOLE NO.	: BH-5
SAMPLE NO.	: TW01
DEPTH(M)	: 8.00-8.90m
SOIL DESCRIPTION	: Light grey very clayey very gravelly SAND
SAMPLE CONDITION	: Sieved
% OF PASSING 0.425mm SIEVE	: 45
TEST DATE	: 31.05.2018

		LIQUID LIMIT				PLASTIC LIMIT	
WET WEIGHT + CUP	(g)	20.52	20.72	20.63	20.79	20.54	20.98
DRY WEIGHT + CUP	(g)	16.93	17.12	17.04	16.82	18.22	18.60
CUP WEIGHT	(g)	8.26	8.88	9.10	8.48	9.18	9.23
WATER CONTENT	(%)	41.4	43.7	45.2	47.6	25.7	25.4
PENETRATION	(mm)	15.6	18.9	21.6	24.8	-	-

LIQUID LIMIT	(%)	**44.4**
PLASTIC LIMIT	(%)	**25.5**
PLASTICITY INDEX		**19**

NOTE:

M : SILT C : CLAY L : LOW PLASTICITY I : INTERMEDIATE PLASTICITY H : HIGH PLASTICITY V : VERY HIGH PLASTICITY E : EXTREMELY HIGH PLASTICITY



TESTED BY :	APPROVED BY :	DATE :
	(Authorised Signatory - Min Win Htut)	11.6.2018

ACCREDITED LABORATORY SAC-SINGLAS Cert No: LA-2016-0623-B

ATTERBERG LIMITS TEST BY CONE PENETROMETER METHOD

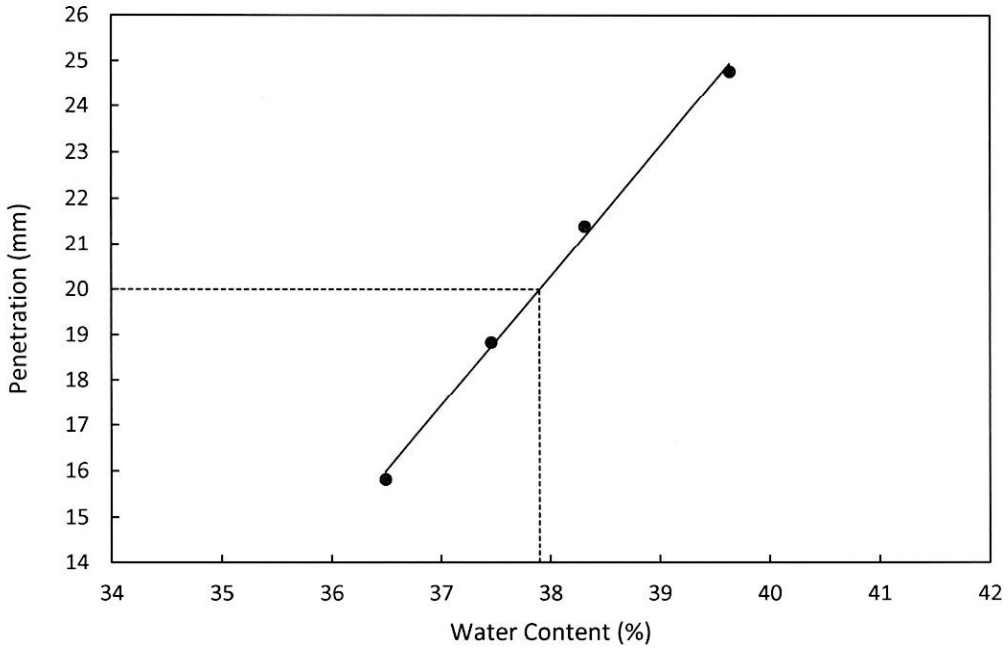
(TEST METHOD- BS 1377 : Part 2 : 1990 - Method 4.3 & 5)

PROJECT	: 36 months SI Term Contract for AVA at Neo Tiew Crescent (5BHs)
JOB NO.	: K5728
BOREHOLE NO.	: BH-5
SAMPLE NO.	: TW02
DEPTH(M)	: 16.00-16.90m
SOIL DESCRIPTION	: Light greenish grey very clayey SAND
SAMPLE CONDITION	: Natural
% OF PASSING 0.425mm SIEVE	: 98
TEST DATE	: 31.05.2018

		LIQUID LIMIT				PLASTIC LIMIT	
WET WEIGHT + CUP	(g)	20.17	20.72	20.75	20.73	20.22	20.65
DRY WEIGHT + CUP	(g)	17.05	17.42	17.21	17.46	18.35	18.59
CUP WEIGHT	(g)	8.50	8.61	7.97	9.21	9.31	8.79
WATER CONTENT	(%)	36.5	37.5	38.3	39.6	20.7	21.0
PENETRATION	(mm)	15.8	18.8	21.4	24.8	-	-

LIQUID LIMIT	(%)	**37.9**
PLASTIC LIMIT	(%)	**20.9**
PLASTICITY INDEX		**17**

NOTE:
M : SILT
C : CLAY
L : LOW PLASTICITY
I : INTERMEDIATE PLASTICITY
H : HIGH PLASTICITY
V : VERY HIGH PLASTICITY
E : EXTREMELY HIGH PLASTICITY



TESTED BY :	APPROVED BY :	DATE :
	(Authorised Signatory - Min Win Htut)	11.6.2018