

**PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 - CT19  
AND ITS ASSOCIATED WORKS AT WESTPORTS, PULAU INDAH,  
SELANGOR.**

**FACTUAL REPORT  
VOL. 1 BORELOG RECORD**

Job No. : SG/1281/2018

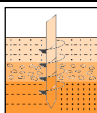
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Date Prepared : 28th February 2019

Serial No.	Inv. No	Master Copy	Distribution	Issued Date	Prepared by:	Checked by:
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**STRATA GEOTECHNICS SDN. BHD**

*We specialized in Micropile, Slope Stabilization, Ground Improvement, Soil Investigation, Waterwell, Structural Repair and Laboratory Testing*

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## **1.0 INTRODUCTION**

This report presents the results of the soil investigation carried out for the project **“PROPOSED EXPENSION OF CONTAINER TERMINAL CT10 - CT19 AND ITS ASSOCIATED WORKS AT WESTPORTS PULAU INDAH SELANGOR.”**.

**Strata Geotechnics Sdn. Bhd.** was appointed by the client **Westports (M) Sdn. Bhd.** to carry out the above-mentioned works.

The consulting engineer for the above-mentioned project was **HSS Integrated Sdn. Bhd.**

Field work was carried out on 21<sup>st</sup> September 2018 for soil investigation works and was completed on 22<sup>nd</sup> January 2019. Whilst, for Mackintosh Probe Test was carried out on 28<sup>th</sup> September 2018 and 13<sup>rd</sup> October 2018.

This report contains the factual sub-surface information recorded in the field and laboratory test results of selected soil samples. Borehole location plan is shown in ‘**Appendix A**’. The results are recorded as shown in ‘**Appendix B**’ for Borehole Test, ‘**Appendix C**’ for Mackintosh Probe Test records and ‘**Appendix D**’ for laboratory test results.

## **2.0 OBJECTIVES**

The main objectives of this soil investigation are to: -

- (1) To determine the geotechnical engineering properties of the subsoil condition at the proposed site for foundation design, by conducting in-situ test and collecting disturbed and undisturbed soil samples for laboratory testing, required for design and construction works.
- (2) To carry out soil investigation works at Westports Pulau Indah, Selangor for development purposed.

### **3.0 SCOPE OF WORKS**

The scope of work for the project consists of Borehole Drilling, Standard Penetration Test, Mackintosh Probe Test, and Laboratory Testing.

In soil investigation works for Westports Pulau Indah, Selangor;

- The proposed locations for soil investigation works is as shown in the drawing in ‘**Appendix A**’ for;
  - FORTY (40) Boreholes, BH1 – BH40.
- SPT were carried out at 1.5meter intervals on all the boreholes to determine the soil bearing capacity and disturbed split spoon samples were obtained from the boreholes.
- Disturbed samples were taken at various depths along the boreholes for visual examination and subsequent laboratory testing.
- Undisturbed sampling of 50mm diameter on soft to medium stiff clay.
- Laboratory testing on selected samples, classification and strength test were carried out.
- Prepare and submit a factual report documenting the findings of the investigation report.

In mackintosh probes test works for Westports Pulau Indah, Selangor.

- 30 numbers of Mackintosh probes were carried respectively at the locations specified by the client’s consultant

### **4.0 GUIDELINE OF PRACTICE**

The soil investigation work was carried out in compliance and accordance to the followings:

- (1) British Standard Code of Practice BS: 5930-2015 (formerly CP2001:1957) “Site Investigations”.
- (2) British Standard Code of Practice BS1377-1990 “Method of Test for Soil for Civil Engineering Purposes”.

## 5.0 FIELD EXPLORATION

### 5.1 ROTARY WASH BOREHOLES

#### I. BORING MACHINE

The borehole was advanced by using a multispeed rotary boring machine. Rotary Wash boring method is used to advance the borehole. Disturbed and Undisturbed soil samples (if any) shall be collected where necessary. HW size (100mm o.d.) casing is used for first 36.00m and continue with NW size (75mm o.d.) casing to prevent wall collapsing.

#### II. STANDARD PENETRATION TEST (SPT)

SPT was carried out at an interval of 1.5m by driving a split spoon of 50mm diameter into the soil by using a 65kg hammer free falling over a height of 760mm. The numbers of blows for the initial 150mm was recorded as seating blows and the following numbers of blows for the next 300mm penetration is recorded as the N value (or the blow count) of the soil strata encountered.

#### III. SAMPLING

**Disturbed** soil samples were obtained by using a split spoon sampler and it were sealed in polythene bag for visual examination, logging and for classification testing. **Undisturbed** samples were collected where very soft to firm cohesive materials is encountered in boreholes. The sampler which has an I.D. of approximately 70mm is secured in a steel tube of 1000mm long of which both ends of the tube be sealed with wax, capped and shall be transported to the laboratory for testing.

#### IV. GROUNDWATER MEASUREMENT (G.W.L.)

The groundwater level in borehole was monitored daily during the period of field operation. It is to inspect the groundwater resource, where it is, how much volume it contains and at what depth it is located.

## **5.2 MACKINTOSH PROBES TEST**

### **I. INTRODUCTION**

This write-up describes the test methodology, equipment and interpretation of Mackintosh Probe Test.

### **II. EQUIPMENT**

The Mackintosh Test equipment consists of a cone penetrometer with a 30°C apex, which is connected to a 12mm diameter rod of 1200mm length. At the other end of the rod, a hammer, which consists of a drive head, drop hammer, guide rod and an end stop is attached as shown in Figure 1. For tests at depth more than 1200mm, additional rods shall be connected with a coupler tightly. The hammer is detached to make way for this extension. When rod had been extended, the hammer is then re-attached at the top end of the rods. Repeat the same process for further extensions until refusal or specified depth.

The weight of the hammer is 4.5kg and the free drop height is 300mm.

The probe has been designed to the recommended method for static and dynamic penetrometer tests of the European Group Subcommittee (1968).

### **III. TEST METHODOLOGY**

The test is carried out by driving the hammer at a specified drop height along a guide rod. The total number of blows required for a penetration of 300mm is recorded. The test is terminated when the number of blows/300mm has reached 400. The probe, depending on the ground condition, can be used up to a depth of 12m.

#### IV. TEST INTERPRETATION

The correlations of allowable bearing capacity against penetration resistance are given Figure 2.

The test however has its limitation due from the fact that the rod is driven into the ground with limited energy and thus would be unable to penetrate through hard layers (medium strength material and gravelly ground greater than 300mm thick).

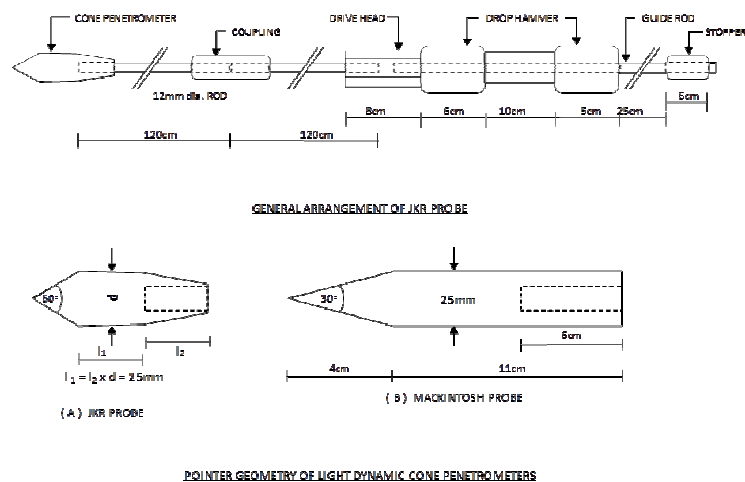


Figure 2

#### 6.0 LABORATORY TEST

The laboratory test was conducted in accordance to BS: 1377: Part 1990 on selected soil samples selected by the consultant engineer.

- (1) Moisture Content Determination
- (2) Bulk Density
- (3) Specific Gravity
- (4) Atterberg Limit Determination
- (5) Particle Size Determination.
- (6) Sieve and Hydrometer Analysis.
- (7) Consolidated Drained Triaxial Test
- (8) Chemical Analysis

## 7.0 SUMMARY OF WORK

<b>PROJECT: PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 – CT19 AND ITS ASSOCIATED WORKS AT WESPORTS PULAU INDAH SELANGOR</b>			
<b>BOREHOLE NO.</b>	<b>DATE STARTED</b>	<b>DATE COMPLETED</b>	<b>FINAL BOREHOLE TERMINATION (M)</b>
BH 1	14/11/2018	16/11/2018	60.45
BH 2	18/11/2018	20/11/2018	60.45
BH 3	05/12/2018	08/12/2018	60.45
BH 4	10/12/2018	12/12/2018	60.45
BH 5	14/12/2018	16/12/2018	60.45
BH 6	09/11/2018	12/11/2018	60.45
BH 7	27/11/2018	02/12/2018	60.45
BH 8	18/12/2018	22/12/2018	60.45
BH 9	02/11/2018	06/11/2018	60.45
BH 10	25/10/2018	27/10/2018	60.45
BH 11	21/09/2018	26/09/2018	60.45
BH 12	25/11/2018	29/11/2018	60.45
BH 13	20/12/2018	22/12/2018	60.45
BH 14	01/01/2019	03/01/2019	60.45
BH 15	12/12/2018	14/12/2018	60.45
BH 16	08/12/2018	10/12/2018	60.45
BH 17	16/12/2018	18/12/2018	60.45
BH 18	04/12/2018	06/12/2018	60.45
BH 19	13/11/2018	17/11/2018	60.45
BH 20	20/11/2018	23/11/2018	60.45
BH 21	26/11/2018	28/11/2018	60.45
BH 22	30/11/2018	02/12/2018	60.45
BH 23	08/12/2018	10/12/2018	60.45
BH 24	04/12/2018	06/12/2018	60.45
BH 25	30/11/2018	02/12/2018	60.45
BH 26	26/11/2018	28/11/2018	60.45
BH 27	12/11/2018	17/11/2018	60.45
BH 28	09/01/2019	11/01/2019	60.45
BH 29	05/01/2019	07/01/2019	60.45
BH 30	09/01/2019	11/01/2019	60.45
BH 31	20/12/2018	22/12/2018	60.45
BH 32	12/12/2018	14/12/2018	60.45
BH 33	16/12/2018	18/12/2018	60.45
BH 34	18/01/2019	20/01/2019	60.45
BH 35	13/01/2019	15/01/2019	60.45
BH 36	13/01/2019	16/01/2019	60.45
BH 37	17/01/2019	19/01/2019	60.45
BH 38	15/01/2019	16/01/2019	60.45
BH 39	20/01/2019	22/01/2019	60.45
BH 40	18/01/2019	20/01/2019	60.45

Table 1: Summary of Work Done (Borehole)



<b>PROJECT: PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 – CT19 AND ITS ASSOCIATED WORKS AT WESPORTS PULAU INDAH SELANGOR</b>			
<b>TEST REF. NO.</b>	<b>DATE STARTED</b>	<b>DATE COMPLETED</b>	<b>FINAL DEPTH (m)</b>
MP 1	12/10/2018	12/10/2018	14.10
MP 2	12/10/2018	12/10/2018	13.20
MP 3	12/10/2018	12/10/2018	12.00
MP 4	12/10/2018	12/10/2018	11.40
MP 5	12/10/2018	12/10/2018	12.60
MP 6	13/10/2018	13/10/2018	12.00
MP 7	13/10/2018	13/10/2018	11.10
MP 8	13/10/2018	13/10/2018	12.60
MP 9	13/10/2018	13/10/2018	11.40
MP 10	13/10/2018	13/10/2018	10.10
MP 11	02/10/2018	02/10/2018	12.60
MP 12	02/10/2018	02/10/2018	10.50
MP 13	02/10/2018	02/10/2018	13.20
MP 14	01/10/2018	01/10/2018	12.30
MP 15	01/10/2018	01/10/2018	8.10
MP 16	01/10/2018	01/10/2018	7.80
MP 17	29/09/2018	29/09/2018	10.20
MP 18	02/10/2018	02/10/2018	8.10
MP 19	02/10/2018	02/10/2018	7.80
MP 20	01/10/2018	01/10/2018	10.20
MP 21	01/10/2018	01/10/2018	8.10
MP 22	29/09/2018	29/09/2018	11.40
MP 23	29/09/2018	29/09/2018	12.00
MP 24	29/09/2018	29/09/2018	10.80
MP 25	29/09/2018	29/09/2018	12.60
MP 26	28/09/2018	28/09/2018	10.20
MP 27	28/09/2018	28/09/2018	11.40
MP 28	28/09/2018	28/09/2018	12.30
MP 29	28/09/2018	28/09/2018	11.70
MP 30	28/09/2018	28/09/2018	10.80

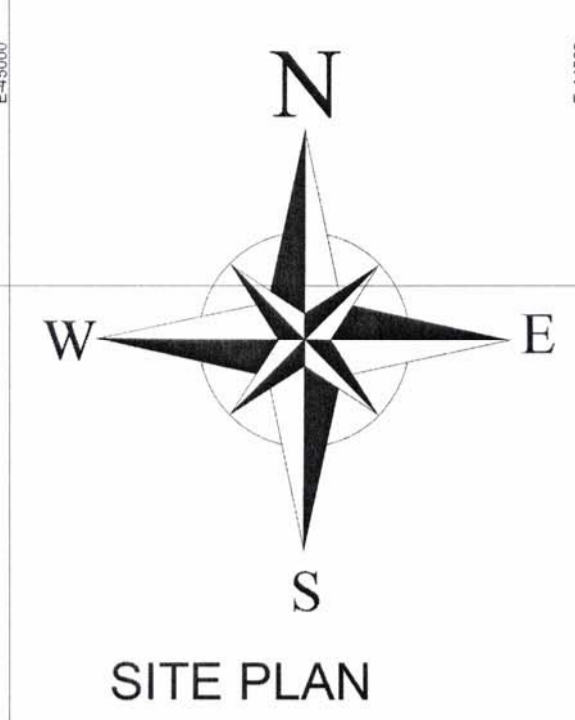
Table 2: Summary of Work Done (Mackintosh Probe Test)

<b>PROJECT: PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 – CT19 AND ITS ASSOCIATED WORKS AT WESPORTS PULAU INDAH SELANGOR</b>		
<b>NO.</b>	<b>TYPES OF TESTS</b>	<b>BOREHOLE NO.</b>
<b>1</b>	<b>MOISTURE CONTENTS</b>	<b>ALL BOREHOLES ( BH 1 – BH 40 )</b>
<b>2</b>	<b>BULK DENSITY</b>	<b>ALL BOREHOLES ( BH 1 – BH 40 )</b>
<b>3</b>	<b>SPECIFIC GRAVITY</b>	<b>ALL BOREHOLES ( BH 1 – BH 40 )</b>
<b>4</b>	<b>ATTERBERG LIMIT</b>	<b>ALL BOREHOLES ( BH 1 – BH 40 )</b>
<b>5</b>	<b>SIEVE &amp; HYDROMETER ANALYSIS</b>	<b>ALL BOREHOLES ( BH 1 – BH 40 )</b>
<b>6</b>	<b>SHEAR BOX TEST</b>	<b>BH 2, BH 5, BH 6, BH 8, BH 9, BH 11, BH 13, BH 15, BH 17, BH 19 - BH 21, BH 24 - BH 28, BH 30, BH 32 - BH 39</b>
<b>7</b>	<b>CHEMICAL TEST ANALYSIS</b>	<b>ALL BOREHOLES ( BH 1 – BH 40 )</b>

**Table 3: Summary of Work Done (Laboratory Test)**

**APPENDIX A**  
**LOCATION PLAN**





GPS baseline marker, nail embedded in concrete, painted red  
Coordinates : N=2986.431  
                  E=4614.827  
                  (Cassini)  
Elevation : 6.16m above CD  
                  3.254m above LSD

EGS02  
GPS baseline marker, nail embedded in pipe on concrete monument, painted red  
Coordinates : N=31264.074  
                  E=46483.286  
                  (Cassini)  
Elevation : 6.37 above CD  
                  3.568m above LSD

EGS01  
GPS baseline marker, nail embedded in pipe on concrete monument, painted red  
Coordinates : N=31830.102  
                  E=46436.399  
                  (Cassini)  
Elevation : 6.22 above CD  
                  3.41m above LSD

EGS04  
GPS baseline marker, nail embedded on top of concrete monument, painted red  
Coordinates : N=31845.471  
                  E=46435.300  
                  (Cassini)  
Elevation : 6.07m above CD  
                  3.209m above LSD

EGS00  
Temporary bench mark, nail on embedded concrete, painted red  
Coordinates : N=31906.449  
                  E=46461.460  
                  (Cassini)  
Elevation : 5.98m above CD  
                  3.179m above LSD

TBM EGS (TIDE GAUGE)  
Mark on concrete slab, painted red  
Coordinates : N=32046.993  
                  E=46501.973  
                  (Cassini)  
Elevation : 5.93m above CD  
                  3.122m above LSD

BOREHOLE OFFSHORE NO.	COORDINATE	NORTHING	EASTING	RL
BH1	-31119.330	-47251.912	1.192	
BH2	-30864.478	-47094.610	1.454	
BH3	-30598.902	-46951.186	1.361	
BH4	-30210.931	-46727.103	1.612	
BH5	-29919.303	-46635.085	1.763	
BH6	-31087.607	-47046.682	1.259	
BH7	-30676.915	-46812.510	1.224	
BH8	-29988.421	-46496.503	1.883	
BH9	-31014.387	-46835.478	1.204	
BH10	-31349.791	-46956.115	1.937	
BH11	-31496.913	-46601.543	1.385	

BOREHOLE OFFSHORE NO.	COORDINATE	NORTHING	EASTING	RL
BH12	-29787.149	-47152.890	-4.744	
BH13	-30297.378	-47036.217	-4.753	
BH14	-30173.917	-47381.454	-3.972	
BH15	-30560.370	-47600.573	-4.597	
BH16	-30830.158	-47757.448	-0.691	
BH17	-30911.895	-47257.996	-1.638	
BH18	-30918.664	-47603.705	-0.620	
BH19	-31796.271	-46948.212	-3.362	
BH20	-31577.876	-47306.982	-2.448	
BH21	-31350.670	-47698.373	-2.143	
BH22	-31175.411	-47961.865	-4.277	
BH23	-31693.290	-48148.271	-4.574	
BH24	-31682.736	-47890.620	-4.661	
BH25	-31995.948	-47509.012	-4.693	
BH26	-32113.895	-47134.912	-4.601	
BH27	-32311.649	-46793.888	-4.227	
BH28	-32016.634	-47001.419	-4.588	
BH29	-32441.294	-47322.245	-4.576	
BH30	-32223.655	-47700.018	-4.506	
BH31	-32093.628	-48073.818	-5.801	
BH32	-31779.295	-48308.370	-4.980	
BH33	-32324.951	-48258.841	-4.873	
BH34	-32540.592	-47982.020	-4.677	
BH35	-32781.699	-47926.342	-4.902	
BH36	-32920.819	-47231.808	-4.887	
BH37	-33085.796	-47693.226	-5.232	
BH38	-32884.776	-48073.899	-5.191	
BH39	-33139.860	-48199.801	-5.822	
BH40	-33291.479	-47971.256	-6.106	

MACKINTOSH PROBER NO.	COORDINATE	NORTHING	EASTING	RL
MP1	-31045.597	-47375.368	1.205	
MP2	-30914.436	-47303.242	1.332	
MP3	-30787.877	-47228.663	1.108	
MP4	-30654.692	-47152.282	1.375	
MP5	-30526.852	-47077.649	1.240	
MP6	-30395.613	-47002.114	0.983	
MP7	-30267.135	-46925.560	1.057	
MP8	-30137.206	-46851.909	1.236	
MP9	-30008.444	-46778.552	1.380	
MP10	-29879.190	-46701.945	1.508	
MP11	-29750.600	-47170.516	1.395	
MP12	-29729.295	-47021.663	1.427	
MP13	-29472.715	-46874.538	1.354	
MP14	-30340.558	-46796.810	1.409	
MP15	-30082.611	-46946.867	1.511	
MP16	-29954.232	-46572.733	1.486	
MP17	-31197.027	-47119.568	1.179	
MP18	-30524.117	-46965.738	1.284	
MP19	-30607.499	-46894.388	1.434	
MP20	-30545.879	-46745.094	1.588	
MP21	-30417.758	-46688.780	1.639	
MP22	-31268.459	-46687.913	1.273	
MP23	-31138.836	-46911.826	1.360	
MP24	-30880.049	-46762.956	1.467	
MP25	-31216.090	-46784.717	1.369	
MP26	-31549.898	-46801.259	0.534	
MP27	-31419.797	-46726.861	1.288	
MP28	-31292.785	-46652.546	1.347	
MP29	-31626.057	-46674.510	1.133	
MP30	-31688.694	-46559.587	1.271	

DUTCH CONE PENETROMETER TEST NO.	COORDINATE	NORTHING	EASTING	RL
DCP-1	-31272.082	-47159.323	0.863	
DCP-2	-31249.697	-46722.252	1.534	
DCP-3	-30801.649	-46930.807	1.377	
DCP-4	-30404.213	-46847.280	1.290	
DCP-5	-30020.748	-46656.906	1.502	

NOTES:  
1. ALL LEVELS ARE BASED ON TBM EGS [RL: 3.125m]  
2. ALL LEVELS AND DISTANCES ARE SHOWN IN METER

LEGEND:  
 DUTCH CONE PENETROMETER TEST (DCP)  
 MACKINTOSH PROBES (MP)  
 BOREHOLES OFFSHORE (BH)  
 BOREHOLES ONSHORE (BH)

PROJECT TITLE:  
**WESTPORTS DEVELOPMENT  
PROPOSED EXPANSION OF CONRAINER  
TERMINAL CT10CT19 AND ITS  
ASSOCIATED WORKS AT WESTPORTS,  
PULAU INDAH SELANGOR  
DARUL EHSAN**

TRENCHING CONTRACTOR  
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Sr: CHU BIN KUAN BSc (Hons.) Land Sur Sc (London)  
F.R.I.S.M., M.R.I.C.S., M.A.A.L.S., Chartered Land Surveyor  
Land Surveyor Licensed Under Act 458 (Revised 1991)

DRAWING TITLE :  
AS-BUILT SURVEY FOR SOIL INVESTIGATION  
SURVEYED BY: S.S.YAU  
DRAWN : S.S.YAU  
CHECK BY: Y.Y.TEO  
DATE : FEBRUARY 2019  
PLAN NO: GL/SJM/SG/WP/SI/AS




<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-1						
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 14/11/2018		<b>Coordinates</b> N -31119.120 E -47251.512									
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> VERTICAL	<b>Date Completed</b> 16/11/2018		<b>Reduced Level (mRL):</b> 1.197									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph					
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description
14/11/2018	0.000	[Disturbed Sample]	D1				TOPSOIL						xx	0.30	0.30		Light grey, very clayey SAND	0
	0.300						Rec: 250/450mm											
	1.500	[Undisturbed Sample]	P1/D2				-HAMMER WEIGHT-						xx	7.18		Very soft, light grey clayey SILT	10	
	1.950						Rec: 300/450mm											
	3.000	[Undisturbed Sample]	UD1				Rec: 800/1000mm						xx	7.18		Top: Light grey, clayey SILT Bottom: DITTO	20	
	4.000						-HAMMER WEIGHT-											
	4.500	[Disturbed Sample]	P2/D3				Rec: 300/450mm						xx	7.48		Very soft, light grey clayey SILT	30	
	4.950						Rec: 850/1000mm											
	6.000	[Undisturbed Sample]	UD2				Rec: 850/1000mm						xx	7.48		Top: Light grey clayey SILT Bottom: DITTO	40	
	7.000						-HAMMER WEIGHT-											
7.500	[Disturbed Sample]	P3/D4				1 0 1 1 0 N=3						xx	2.95		Soft, medium grey CLAY	50		
7.950						Rec: 300/450mm												xx
9.000	[Undisturbed Sample]	UD3				Rec: 800/1000mm						xx	10.43		Top: Medium grey CLAY of high plasticity Bottom: DITTO	0		
10.000						-HAMMER WEIGHT-												xx
10.500	[Disturbed Sample]	P4/D5				1 1 1 1 0 N=4						xx	1.57		Soft, medium grey clayey SILT	10		
10.950						Rec: 350/450mm												xx
12.000																		

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
[Symbol]	= Standard Penetration Test	[Symbol]	Silt	14/11/18	19:00	27.00	27.00	-	OFFSHORE
[Symbol]	= Undisturbed Sample	[Symbol]	Clay	15/11/18	9:00	27.00	27.00	0.60	
[Symbol]	= Disturbed Sample	[Symbol]	Sand	15/11/18	19:00	51.00	51.00	-	
[Symbol]	= Cored Sample	[Symbol]	Gravel	16/11/18	9:00	51.00	51.00	0.50	
[Symbol]	= Vane Shear Test	[Symbol]	Decayed Matter	16/11/18	18:00	60.00	60.00	-	
RQD	= Rock Quality Disignation	[Symbol]	Granite						
TCR	= Total Core Recovery	[Symbol]	Limestone						
CRR	= Core Recovery Ratio	[Symbol]	Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-1							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 14/11/2018		<b>Coordinates</b> N -31119.120 E -47251.512										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> VERTICAL	<b>Date Completed</b> 16/11/2018		<b>Reduced Level (mRL):</b> 1.197										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value
	12.000	UD4					Rec : 850/1000mm						xx				Top: Medium grey, very fine grained silty SAND		
	13.000												xx	1.85			Bottom: DITTO		
	13.500	P5/D6				1	1	2	1	2	2		xx			13.85		Medium stiff, medium grey, clayey SILT	
	13.950						Rec : 250/450mm						xx			1.12			
	15.000	UD5					Rec : 800/1000mm						xx			14.97		Top: Medium grey, clayey SAND	
	16.000												xx			1.46		Bottom: DITTO	
	16.500	P6/D7				1	0	1	2	1	2		xx			16.43		Medium stiff light grey clayey SILT	
	16.950						Rec : 300/450mm						xx			3.03		Top: Medium grey clayey SILT	
	18.000	UD6					Rec : 850/1000mm						xx			19.46		Bottom: DITTO	
	19.000												xx					Stiff, medium grey CLAY	
	19.500	P7/D8				1	1	2	1	2	3		xx						
	19.950						Rec : 250/450mm						xx						
	21.000	P8/D9				1	1	2	2	2	2		xx					-DITTO-	
	21.450						Rec : 300/450mm						xx						
	22.500	P9/D10				1	1	2	4	4	5		xx					Very stiff, medium grey CLAY	
	22.950						Rec : 270/450mm						xx						
	24.000												xx						

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	14/11/18	19:00	27.00	27.00	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	15/11/18	9:00	27.00	27.00	0.60	
	= Disturbed Sample		Sand	15/11/18	19:00	51.00	51.00	-	
	= Cored Sample		Gravel	16/11/18	9:00	51.00	51.00	0.50	
	= Vane Shear Test		Decayed Matter	16/11/18	18:00	60.00	60.00	-	
RQD	= Rock Quality Disignation		Granite						
TCR	= Total Core Recovery		Limestone						
CRP	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-1								
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 14/11/2018		<b>Coordinates</b> N -31119.120 E -47251.512											
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> VERTICAL	<b>Date Completed</b> 16/11/2018		<b>Reduced Level (mRL):</b> 1.197											
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph							
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value 0 10 20 30 40 50						
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	
15/11/2018	24.000	P10/D11					1	2	2	2	3	2						Stiff, medium grey CLAY of high plasticity		
	24.500																			
	25.500	P11/D12					2	2	3	4	3	4						-DITTO-		
	25.950																			
	27.000	P12/D13					1	2	1	2	2	3						-DITTO-		
	27.450																			
	28.500	P13/D14					1	2	1	3	3	3						Stiff, medium grey CLAY		
	28.950																			
	30.000	P14/D15					1	2	2	3	3	4						16.54	-DITTO-	
	30.450																			
31.500	P15/D16					1	2	2	2	4	4							Stiff, medium grey CLAY of high plasticity		
31.950																				
33.000	P16/D17					2	2	1	2	3	3							-DITTO-		
33.450																				
34.500	P17/D18					1	1	2	4	3	2							-DITTO-		
34.950																				
36.000																				

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	14/11/18	19:00	27.00	27.00	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	15/11/18	9:00	27.00	27.00	0.60	
	= Disturbed Sample		Sand	15/11/18	19:00	51.00	51.00	-	
	= Cored Sample		Gravel	16/11/18	9:00	51.00	51.00	0.50	
	= Vane Shear Test		Decayed Matter	16/11/18	18:00	60.00	60.00	-	
RQD	= Rock Quality Disignation		Granite						
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

Prepared by:		Checked by:	
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Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19	Job No. : SG/1281/2018	Date Started : 14/11/2018	Coordinates : N -31119.120 E -47251.512			
Location : PULAU INDAH						
Client	Consultant	Type of Boring	Boring Dia. (mm)	Orientation	Date Completed	Reduced Level (mRL): 1.197
WESTPORTS (M) DDN. BHD.	HSS INTEGRATED SDN. BHD.	ROTARY WASH	100	VERTICAL	16/11/2018	

Date & Time	SAMPLE / INSITU TEST							SOIL / STRATUM DETAILS							Standard Penetration Test Graph 'N' Value 0 10 20 30 40 50					
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)	Thickness (m)		W G	Description			
						75mm	75mm	75mm	75mm	75mm	75mm									
	36.000		P18/D19							3	3						1.49	Medium dense, medium grey, very clayey SAND		
	36.450					Rec : 280/450mm														
	37.500		P20/D21							2	3	2	4	5			14	Stiff, medium grey CLAY		
	37.950					Rec : 300/450mm														
	39.000		P21/D22							2	2	2	3	5			12	-DITTO-		
	39.450					Rec : 320/450mm														
	40.500		P22/D23							2	2	4	4	5			15	Very stiff, medium grey CLAY		
	40.950					Rec : 250/450mm														
	42.000		P23/D24							2	2	4	4	3			17	-DITTO-		
	42.500					Rec : 270/450mm														
	43.500		P24/D25							2	2	4	5	7			22	-DITTO-		
	43.950					Rec : 250/450mm														
	45.000		P25/D26							2	3	5	5	5			22	-DITTO-		
	45.950					Rec : 250/450mm														
	46.500		P26/D27							2	3	7	6	6			26	-DITTO-		
	46.950					Rec : 270/450mm														
	48.000																			

<b>Legend</b> = Standard Penetration Test = Undisturbed Sample = Disturbed Sample = Cored Sample = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRP = Core Recovery Ratio	<b>Soil Legend</b> Silt Clay Sand Gravel Decayed Matter Granite Limestone Mudstone	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
Cohesive Soil (N) V.soft   Soft   M. Stiff   Stiff   V. Stiff   Hard							
Non Cohesive Soil (N) V.Loose   Loose   Medium Dense   Dense   Very Dense							
Prepared by:					Checked by:		




<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-1									
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 14/11/2018		<b>Coordinates</b> N -31119.120 E -47251.512												
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> VERTICAL	<b>Date Completed</b> 16/11/2018		<b>Reduced Level (mRL):</b> 1.197												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value		
75mm	75mm	75mm	75mm	75mm	75mm	75mm	75mm	75mm	75mm	75mm	75mm		75mm							75mm	75mm
16/11/2018	48.000	P27/D28					2	3	8	9	9	11								Hard, medium grey CLAY	40
	48.450						3	8	9	9	37	Rec : 300/450mm									
	49.500	P28/D29					2	4	7	7	9	10							Hard, medium grey CLAY of intermediate plasticity	33	
	49.950						4	7	7	9	33	Rec : 300/450mm									N=
	51.000	P29/D30					2	3	7	8	8	11							-DITTO-	34	
	51.450						3	7	8	8	34	Rec : 280/450mm									N=
	52.500	P30/D31					2	5	6	8	10	10							-DITTO-	34	
	52.950						5	6	8	10	34	Rec : 300/450mm									N=
	54.000	P31/D32					2	4	5	6	8	9							Very stiff, medium grey CLAY	28	
	54.450						4	5	6	8	28	Rec : 350/450mm									N=
55.500	P32/D33					2	4	6	6	11	13							Hard, medium grey CLAY of high plasticity	36		
55.950						4	6	6	11	36	Rec : 290/450mm									N=	
57.000	P33/D34					3	5	8	8	9	10							-DITTO-	35		
57.450						5	8	8	9	35	Rec : 250/450mm									N=	
58.500	P34/D35					2	5	6	9	9	12							Hard, medium grey CLAY	36		
58.950						5	6	9	9	36	Rec : 300/450mm									N=	
60.000																					

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
		14/11/18	19:00	27.00	27.00	-	LAND
		15/11/18	9:00	27.00	27.00	0.60	
		15/11/18	19:00	51.00	51.00	-	
		16/11/18	9:00	51.00	51.00	0.50	
		16/11/18	18:00	60.00	60.00	-	
RQD = Rock Quality Disignation							
TCR = Total Core Recovery							
CRR = Core Recovery Ratio							

<b>Prepared by:</b>		<b>Checked by:</b>	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.								
										6 of 6		BH-1								
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates											
Location : PULAU INDAH					SG/1281/2018		14/11/2018		N -31119.120											
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47251.512										
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	VERTICAL		16/11/2018		Reduced Level (mRL): 1.197										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph							
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value 0 10 20 30 40 50						
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thick-ness (m)	W G	Description	
	60.000		P35/D36				2	4	7	9	9	12				22.96		-DITTO-		
	60.450						Rec : 300/450mm N= 38													
																		<b>Borehole terminated at depth 60.45m</b>		

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	14/11/18	19:00	27.00	27.00	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	15/11/18	9:00	27.00	27.00	0.60	
	= Disturbed Sample		Sand	15/11/18	19:00	51.00	51.00	-	
	= Cored Sample		Gravel	16/11/18	9:00	51.00	51.00	0.50	
	= Vane Shear Test		Decayed Matter	16/11/18	18:00	60.00	60.00	-	
RQD	= Rock Quality Disignation		Granite						
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

Prepared by:	Checked by:
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**STRATA GEOTECHNICS SDN. BHD.** ( Co. No. 393744T )  
 No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor.  
 Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622

**Sheet**  
1 of 6

**Borehole Ref. No.**  
BH-2

**Client** : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19

**Job No.** : SG/1281/2018

**Date Started** : 18/11/2018

**Coordinates** : N -30864.478  
E -47094.610

**Client** : WESTPORTS (M) SDN. BHD.

**Consultant** : HSS INTEGRATED SDN. BHD.

**Type of Boring** : ROTARY WASH

**Boring Dia. (mm)** : 100

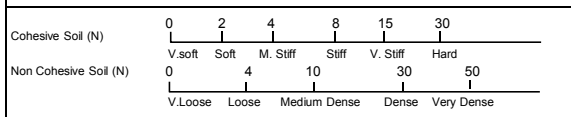
**Orientation** : VERTICAL

**Date Completed** : 20/11/2018


**Reduced Level (mRL):** 1.454

Date & Time	SAMPLE / INSITU TEST										SOIL / STRATUM DETAILS					Standard Penetration Test Graph							
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)	Thick-ness (m)		W G	Description					
							75mm	75mm	75mm	75mm	75mm								N				
18/11/2018	0.000		D1				TOPSOIL					0.30											
	0.300																						
	1.500		P1/D1				0	0	1	0	0	1	2			2.70							
	1.950						Rec: 300/450mm																
	3.000		UD1				Rec: 850/1000mm																
	4.000						-HAMMER WEIGHT- Rec: 300/450mm																
	4.500		P2/D2				Rec: 900/1000mm																
	4.950						-HAMMER WEIGHT- Rec: 350/450mm																
	6.000		UD2				Rec: 870/1000mm																
	7.000						Rec: 350/450mm																
	7.500		P3/D3																				
	7.950																						
	9.000		UD3																				
	10.000																						
	10.500		P4/D4				0	1	0	1	0	1	2										
	10.950						Rec: 350/450mm																
	12.000																						














Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
		18/11/18	19:00	24.00	24.00	0.30	
		19/11/18	8:00	24.00	24.00	0.00	
		19/11/18	19:00	48.00	48.00	0.50	
		20/11/18	8:30	48.00	48.00	0.00	
		20/11/18	18:00	60.00	60.00	0.30	



**Prepared by:** \_\_\_\_\_ **Checked by:** \_\_\_\_\_


 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-2						
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 18/11/2018		<b>Coordinates</b> N -30864.478 E -47094.610									
<b>Client</b> WESTPORTS (M) SDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> VERTICAL		<b>Date Completed</b> 20/11/2018		<b>Reduced Level (mRL):</b> 1.454								
<b>Date &amp; Time</b>	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>						<b>Standard Penetration Test Graph</b> 'N' Value 0 10 20 30 40 50					
	<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Field Test / Rock Cores</b>					<b>Casing Record</b>		<b>Legend</b>	<b>Depth (m)</b>	<b>Thick-ness (m)</b>	<b>W G</b>	<b>Description</b>
	12.000	UD4				Rec : 850/1000mm											Top: Light to medium grey, CLAY. Bottom: DITTO	
	13.000					-HAMMER WEIGHT- Rec: 350/450mm								12.00				Soft, light to medium grey, CLAY.
	13.500	P5/D5																
	13.950																	
	15.000	UD5				Rec : 800/1000mm											Top: Light to medium grey, CLAY. Bottom: DITTO	
	16.000																	
	16.500	P6/D6				1	0	2	2	1	2	N=7	xx xx xx xx xx xx xx	1.50			Medium stiff, light to medium grey, silty CLAY.	
	16.950																	
	18.000	UD6				Rec : 800/1000mm											Top: Light to medium grey, CLAY of very high plasticity. Bottom: DITTO	
	19.000																	
	19.500	P7/D7				1	1	1	2	2	2	N=7	xx xx xx xx xx xx xx	3.00			Medium stiff, light to medium grey, silty CLAY.	
	19.950																	
	21.000	P8/D8				2	1	2	2	3	3	N=10	xx xx xx xx xx xx xx	3.00			Stiff, light to medium grey, silty CLAY.	
	21.450																	
	22.500	P9/D9				2	3	2	2	4	3	N=11	xx xx xx xx xx xx xx				Stiff, light to medium grey, CLAY.	
	22.950																	
	24.000																	

<b>Legend</b>		<b>Soil Legend</b>		<b>Date</b>	<b>Time</b>	<b>Depth of Hole (m)</b>	<b>Depth of Casing (m)</b>	<b>Depth of Water (m)</b>	<b>Remarks :</b>
	= Standard Penetration Test		Silt	18/11/18	8:30	0.00	0.00	0.00	
	= Undisturbed Sample		Clay	18/11/18	19:00	24.00	24.00	0.30	
	= Disturbed Sample		Sand	19/11/18	8:00	24.00	24.00	0.00	
	= Cored Sample		Gravel	19/11/18	19:00	48.00	48.00	0.50	
	= Vane Shear Test		Decayed Matter	20/11/18	8:30	48.00	48.00	0.00	
RQD	= Rock Quality Disignation		Granite	20/11/18	18:00	60.00	60.00	0.30	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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 <b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622		Sheet		Borehole Ref. No.																									
		3 of 6		BH-2																									
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19				Job No.		Date Started	Coordinates																						
Location : PULAU INDAH				SG/1281/2018		18/11/2018	N -30864.478																						
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation	Date Completed	Reduced Level (mRL):																					
WESTPORTS (M) SDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	VERTICAL	20/11/2018	1.454																					
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph																
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value															
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description		0	10	20	30	40	50			
19/11/2018	24.000	P10/D10					2	2	3	3	2	3																	
	24.500						11	Rec : 350/450mm	N=																				
	25.500	P11/D11						3	2	3	3	4																	
	25.950							14	Rec : 350/450mm	N=																			
	27.000	P12/D12						4	2	3	3	4																	
	27.450							14	Rec : 350/450mm	N=																			
	28.500	P13/D13						2	3	4	4	3																	
	28.950							16	Rec : 300/450mm	N=																			
	30.000	P14/D14						1	2	2	1	2																	
	30.450							7	Rec : 300/450mm	N=																			
	31.500	P15/D15						2	1	2	2	1																	
	31.950							8	Rec : 300/450mm	N=																			
	33.000	P16/D16						2	2	3	3	4																	
	33.450							14	Rec : 400/450mm	N=																			
	34.500	P17/D17						3	2	2	3	3																	
	34.950							10	Rec : 300/450mm	N=																			
	36.000																												

Legend		Soil Legend			Remarks :				
	= Standard Penetration Test		Silt	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Cohesive Soil (N)   0   2   4   8   15   30 V.soft   Soft   M. Stiff   Stiff   V. Stiff   Hard Non Cohesive Soil (N)   0   4   10   30   50 V.Loose   Loose   Medium Dense   Dense   Very Dense
	= Undisturbed Sample		Clay	18/11/18	8:30	0.00	0.00	0.00	
	= Disturbed Sample		Sand	18/11/18	19:00	24.00	24.00	0.30	
	= Cored Sample		Gravel	19/11/18	8:00	24.00	24.00	0.00	
	= Vane Shear Test		Decayed Matter	19/11/18	19:00	48.00	48.00	0.50	
RQD	= Rock Quality Disignation		Granite	20/11/18	8:30	48.00	48.00	0.00	
TCR	= Total Core Recovery		Limestone	20/11/18	18:00	60.00	60.00	0.30	
CRR	= Core Recovery Ratio		Mudstone						





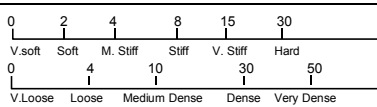











<b>Prepared by:</b>	<b>Checked by:</b>
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STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )												Sheet		Borehole Ref. No.								
No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622												4 of 6		BH-2								
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19						Job No.		Date Started		Coordinates												
Location : PULAU INDAH						SG/1281/2018		18/11/2018		N -30864.478												
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47094.610												
WESTPORTS (M) SDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	VERTICAL		20/11/2018		Reduced Level (mRL): 1.454												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thick-ness (m)	W G	Description	'N' Value			
	36.000		P18/D18				2	3	4	4	5	5										
	36.450																					
	37.500		P19/D19				3	2	3	5	4	5										
	37.950																					
	39.000		P20/D20				2	2	4	4	4	5										
	39.450																					
	40.500		P21/D21				2	1	2	1	1	1										
	40.950																					
	42.000		P22/D22				3	2	3	4	6	6										
	42.500																					
	43.500		P23/D23				3	4	4	3	5	6										
	43.950																					
	45.000		P24/D24				4	3	5	5	5	4										
	45.950																					
	46.500		P25/D25				5	5	7	7	9	9										
	46.950																					
	48.000																					


  

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :	
				18/11/18	8:30	0.00	0.00	0.00		
				18/11/18	19:00	24.00	24.00	0.30		
				19/11/18	8:00	24.00	24.00	0.00	Cohesive Soil (N) V.soft    Soft    M. Stiff    Stiff    V. Stiff    Hard	
				19/11/18	19:00	48.00	48.00	0.50		
				20/11/18	8:30	48.00	48.00	0.00	Non Cohesive Soil (N) V.Loose    Loose    Medium Dense    Dense    Very Dense	
				20/11/18	18:00	60.00	60.00	0.30		
										Prepared by:
										Checked by:

<b>STRATA GEOTECHNICS SDN. BHD.</b> (Co. No. 393744T) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622				<b>Sheet</b>		<b>Borehole Ref. No.</b>													
				5 of 6		BH-2													
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19				Job No.		Date Started		Coordinates											
Location : PULAU INDAH				SG/1281/2018		18/11/2018		N -30864.478											
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47094.610									
WESTPORTS (M) SDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	VERTICAL		20/11/2018		<b>Reduced Level (mRL):</b> 1.454									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS				Standard Penetration Test Graph								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)	Thick-ness (m)	W G	Description	'N' Value 0 10 20 30 40 50	
75mm							75mm	75mm	75mm	75mm	75mm								N=
20/11/2018	48.000	P26/D26					4	6	6	7	9	10						-DITTO-	32
	48.450						Rec : 300/450mm												
	49.500	P27/D27					4	5	5	7	7		10					Very stiff, light to medium grey, very clayey SAND.	29
	49.950						Rec : 250/450mm												
	51.000	P28/D28					4	4	7	7	8		7					-DITTO-	29
	51.450						Rec : 300/450mm												
	52.500	P29/D29					5	7	7	9	9		10					Hard, light to medium grey, very clayey SAND.	35
	52.950						Rec : 250/450mm												
	54.000	P30/D30					4	5	5	6	6		8					Very stiff, light to medium grey, CLAY.	25
	54.450						Rec : 300/450mm												
55.500	P31/D31					5	4	5	6	6	7						-DITTO-	24	
55.950						Rec : 250/450mm													
57.000	P32/D32					6	4	6	7	9		9					Hard, light to medium grey, CLAY.	31	
57.450						Rec : 250/450mm													
58.500	P33/D33					5	5	6	7	7		9					Very stiff, light to medium grey, CLAY.	29	
58.950						Rec : 250/450mm													
60.000																			
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :										
	= Standard Penetration Test		Silt	18/11/18	8:30	0.00	0.00	0.00	Cohesive Soil (N)      0    2    4    8    15    30 V.soft    Soft    M. Stiff    Stiff    V. Stiff    Hard Non Cohesive Soil (N)    0    4    10    30    50 V.Loose    Loose    Medium Dense    Dense    Very Dense										
	= Undisturbed Sample		Clay	18/11/18	19:00	24.00	24.00	0.30											
	= Disturbed Sample		Sand	19/11/18	8:00	24.00	24.00	0.00											
	= Cored Sample		Gravel	19/11/18	19:00	48.00	48.00	0.50											
	= Vane Shear Test		Decayed Matter	20/11/18	8:30	48.00	48.00	0.00											
RQD	= Rock Quality Disignation		Granite	20/11/18	18:00	60.00	60.00	0.30	<b>Prepared by:</b>										
TCR	= Total Core Recovery		Limestone					<b>Checked by:</b>											
CRR	= Core Recovery Ratio		Mudstone																

 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.												
										6 of 6		BH-2												
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates															
Location : PULAU INDAH					SG/1281/2018		18/11/2018		N -30864.478															
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47094.610														
WESTPORTS (M) SDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	VERTICAL		20/11/2018		Reduced Level (mRL): 1.454														
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph											
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value										
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	0	10	20	30	40
	60.000		P34/D34				5	7	7	6	8	8				6.45		-DITTO-						
	60.450								Rec : 300/450mm N= 29								60.45		Borehole terminated at depth 60.45m					
Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :															
	= Standard Penetration Test		Silt	18/11/18	8:30	0.00	0.00	0.00	 Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense															
	= Undisturbed Sample		Clay	18/11/18	19:00	24.00	24.00	0.30																
	= Disturbed Sample		Sand	19/11/18	8:00	24.00	24.00	0.00																
	= Cored Sample		Gravel	19/11/18	19:00	48.00	48.00	0.50																
	= Vane Shear Test		Decayed Matter	20/11/18	8:30	48.00	48.00	0.00																
RQD	= Rock Quality Disignation		Granite	20/11/18	18:00	60.00	60.00	0.30																
TCR	= Total Core Recovery		Limestone																					
CRR	= Core Recovery Ratio		Mudstone																					
				Prepared by:		Checked by:																		



 <b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.						
										1 of 6		BH-3						
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.			Date Started		Coordinates								
Location : PULAU INDAH					SG/1281/2018			5/12/2018		N -30598.902								
Client		Consultant			Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		Reduced Level (mRL):							
WESTPORTS (M) SDN. BHD.		HSS INTEGRATED SDN. BHD.			ROTARY WASH	100	VERTICAL		8/12/2018		1.391							
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph					
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description
		75mm	75mm	75mm	75mm	75mm	75mm											
5/12/2018	0.000		D1				TOPSOIL					0.30	---	0.30		Light grey, very clayey SAND		
	0.300												xx					
	1.500		P1/D1				0	1	0	1	0	0		xx	2.60		Very soft, light to medium grey, silty CLAY.	
	1.950						Rec: 350/450mm						xx					
	3.000		UD1				Rec: 850/1000mm						xx					
	4.000												xx	0.40		Top: Light to medium grey, very clayey SAND		
	4.500		P2/D2				-HAMMER WEIGHT- Rec: 400/450mm						xx			Bottom: Light to medium grey, silty CLAY.		
	4.950												xx			Very soft, light to medium grey, silty CLAY.		
	6.000		UD2				Rec: 900/1000mm						xx	5.40		Top: Light to medium grey, silty CLAY.		
	7.000												xx			Bottom: DITTO		
	7.500		P3/D3				-HAMMER WEIGHT- Rec: 400/450mm						xx			Very soft, light to medium grey, silty CLAY.		
	7.950												xx					
	9.000		UD3				Rec: 910/1000mm						xx	8.70		Top: Light to medium grey, CLAY.		
	10.000												xx	1.75		Bottom: DITTO		
10.500		P4/D4				-HAMMER WEIGHT- Rec: 400/450mm						xx	10.45		Very soft, light to medium grey, silty CLAY.			
10.950												xx	1.55					
12.000												xx	12.00					

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	5/12/2018	8:30	0.00	0.00	0.00	Cohesive Soil (N)  0 2 4 8 15 30 V. soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N)  0 4 10 30 50 V. Loose Loose Medium Dense Dense Very Dense  Prepared by: _____ Checked by: _____
	= Undisturbed Sample		Clay	5/12/2018	19:00	24.00	24.00	0.30	
	= Disturbed Sample		Sand	6/12/2018	8:00	24.00	24.00	0.00	
	= Cored Sample		Gravel	7/12/2018	19:00	42.00	42.00	0.20	
	= Vane Shear Test		Decayed Matter	8/12/2018	8:30	42.00	42.00	0.00	
RQD	= Rock Quality Disignation		Granite	8/12/2018	8:30	42.00	42.00	0.00	
TCR	= Total Core Recovery		Limestone	8/12/2018	18:00	60.00	60.00	0.20	

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-3											
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 5/12/2018		<b>Coordinates</b> N -30598.902 E -46951.186														
<b>Client</b> WESTPORTS (M) SDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> VERTICAL	<b>Date Completed</b> 8/12/2018		<b>Reduced Level (mRL):</b> 1.391														
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph										
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value				
	12.000	UD4					Rec : 900/1000mm								1.30			Top: Light to medium grey, CLAY. Bottom: DITTO					
	13.000						-HAMMER WEIGHT- Rec : 370/450mm						xx		1.60			Very soft, light to medium grey, silty CLAY.					
	13.500	P5/D5					Rec : 900/1000mm								14.90			Top: Light to medium grey, CLAY. Bottom: DITTO					
	15.000	UD5					Rec : 900/1000mm								16.30			Top: Light to medium grey, CLAY. Bottom: DITTO					
	16.000						Rec : 350/450mm N= 2						xx		1.50			Very soft, light to medium grey, silty CLAY with some gravel.					
	16.500	P6/D6					Rec : 900/1000mm								18.00			Top: Light to medium grey, CLAY. Bottom: DITTO					
	16.950						Rec : 350/450mm N= 4						xx		1.40			Soft, light to medium grey, silty CLAY with traces of organic matter.					
	18.000	UD6					Rec : 900/1000mm								19.50			Top: Light to medium grey, sandy CLAY. Bottom: DITTO					
	19.000						Rec : 350/450mm N= 5						xx		2.50			Medium stiff, light to medium grey, silty CLAY.					
	19.500	P7/D7					Rec : 900/1000mm								22.50			Top: Light to medium grey, sandy CLAY. Bottom: DITTO					
	19.950						Rec : 350/450mm						xx					Medium stiff, light to medium grey, silty CLAY.					
	21.000	UD7					Rec : 900/1000mm																
	22.000						Rec : 350/450mm						xx										
	22.500	P8/D8					Rec : 900/1000mm																
	22.950						Rec : 350/450mm						xx										
	24.000												xx										


Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	5/12/2018	8:30	0.00	0.00	0.00	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	5/12/2018	19:00	24.00	24.00	0.30	
	= Disturbed Sample		Sand	6/12/2018	8:00	24.00	24.00	0.00	
	= Cored Sample		Gravel	7/12/2018	19:00	42.00	42.00	0.20	
	= Vane Shear Test		Decayed Matter	8/12/2018	8:30	42.00	42.00	0.00	
	= Rock Quality Disignation		Granite	8/12/2018	18:00	60.00	60.00	0.20	
	= Total Core Recovery		Limestone						
	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622	<b>Sheet</b>		<b>Borehole Ref. No.</b>			
	3 of 6		BH-3			
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19		<b>Job No.</b>		<b>Date Started</b>	<b>Coordinates</b>	
Location : PULAU INDAH		SG/1281/2018		5/12/2018	N -30598.902	
<b>Client</b>	<b>Consultant</b>	<b>Type of Boring</b>	<b>Boring Dia. (mm)</b>	<b>Orientation</b>	<b>Date Completed</b>	E -46951.186
WESTPORTS (M) SDN. BHD.	HSS INTEGRATED SDN. BHD.	ROTARY WASH	100	VERTICAL	8/12/2018	<b>Reduced Level (mRL):</b> 1.391

Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph 'N' Value 0 10 20 30 40 50					
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thick-ness (m)	W G	Description
							75mm	75mm	75mm	75mm	75mm							
6/12/2018	24.000	P9/D9					1	1	1	2	1	2		XX --				-DITTO-
	24.500											N= 6						
	25.500	P10/D10					2	1	2	3	2	3		XX --	5.95			Stiff, light to medium grey spotted with dark grey, silty CLAY.
	25.950											N= 10						
	27.000	P11/D11					2	1	2	2	3	4		XX --				Stiff, light to medium grey, silty CLAY.
	27.450											N= 11						
	28.500	P12/D12					2	2	1	2	2	2		... ..		1.25		Medium stiff, light to medium grey, sandy CLAY.
	28.950											N= 7						
	30.000	P13/D13					3	4	4	4	4	4		... ..				Very stiff, light to medium grey, CLAY.
	30.450											N= 16						
	31.500	P14/D14					4	3	4	4	5	4		... ..				-DITTO-
	31.950											N= 17						
	33.000	P15/D15					3	4	4	5	4	5		... ..				Stiff, light to medium grey, CLAY.
	33.450											N= 18						
	34.500	P16/D16					4	4	5	5	6	6		... ..				Very stiff, light to medium grey, CLAY.
	34.950											N= 22						
36.000																		

<b>Legend</b>	<b>Soil Legend</b>	<b>Date</b>	<b>Time</b>	<b>Depth of Hole (m)</b>	<b>Depth of Casing (m)</b>	<b>Depth of Water (m)</b>	<b>Remarks :</b>  Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
= Standard Penetration Test	Silt	5/12/2018	8:30	0.00	0.00	0.00	
= Undisturbed Sample	Clay	5/12/2018	19:00	24.00	24.00	0.30	
= Disturbed Sample	Sand	6/12/2018	8:00	24.00	24.00	0.00	
= Cored Sample	Gravel	7/12/2018	19:00	42.00	42.00	0.20	
= Vane Shear Test	Decayed Matter	8/12/2018	8:30	42.00	42.00	0.00	
<b>RQD</b> = Rock Quality Disignation	Granite	8/12/2018	18:00	60.00	60.00	0.20	
<b>TCR</b> = Total Core Recovery	Limestone						
<b>CRR</b> = Core Recovery Ratio	Mudstone						
<b>Prepared by:</b>						<b>Checked by:</b>	

 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.													
										4 of 6		BH-3													
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates																
Location : PULAU INDAH					SG/1281/2018		5/12/2018		N -30598.902																
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -46951.186															
WESTPORTS (M) SDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	VERTICAL		8/12/2018		Reduced Level (mRL): 1.391															
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph												
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value											
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	0	10	20	30	40	50
8/12/2018	36.000	P17/D17					5	4	5	4	5	6				7.50			-DITTO-						
	36.450						Rec : 230/450mm	N=	20																
	37.500	P18/D18					5	4	4	5	6	6		xx		1.55			Very stiff, light to medium grey, silty CLAY with traces of organic matter.						
	37.950						Rec : 310/450mm	N=	21																
	39.000	P19/D19					5	5	6	5	6	6							Very stiff, light to medium grey, sandy CLAY.						
	39.450						Rec : 270/450mm	N=	23																
	40.500	P20/D20					5	4	6	6	7	8				4.75			-DITTO-						
	40.950						Rec : 250/450mm	N=	27																
	42.000	P21/D21					5	5	5	5	7	7							-DITTO-						
	42.500						Rec : 300/450mm	N=	24																
43.500	P22/D22					5	4	6	6	6	8		xx					Very stiff, light to medium grey silty CLAY with traces of organic matter.							
43.950						Rec : 300/450mm	N=	26																	
45.000	P23/D23					5	5	6	7	6	7		xx					Very stiff, light to medium grey, silty CLAY.							
45.450						Rec : 270/450mm	N=	26																	
46.500	P24/D24					4	6	6	7	8	8		xx					-DITTO-							
46.950						Rec : 310/450mm	N=	29																	
48.000																									

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	5/12/2018	8:30	0.00	0.00	0.00	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	5/12/2018	19:00	24.00	24.00	0.30	
	= Disturbed Sample		Sand	6/12/2018	8:00	24.00	24.00	0.00	
	= Cored Sample		Gravel	7/12/2018	19:00	42.00	42.00	0.20	
	= Vane Shear Test		Decayed Matter	8/12/2018	8:30	42.00	42.00	0.00	
RQD	= Rock Quality Disignation		Granite	8/12/2018	18:00	60.00	60.00	0.20	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						
Prepared by:									Checked by:















<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-3								
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 5/12/2018		<b>Coordinates</b> N -30598.902 E -46951.186											
<b>Client</b> WESTPORTS (M) SDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> VERTICAL	<b>Date Completed</b> 8/12/2018		<b>Reduced Level (mRL):</b> 1.391											
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50							
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Depth (m)	Thickness (m)	W G	Description			
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record	Legend						
	48.000	P25/D25					5	5	7	8	8	8	xx	5.95			Hard, light to medium grey, silty CLAY.			
	48.450						5	7	7	8	9	9	xx							
	49.500	P26/D26					5	7	7	8	9	9	...	1.55			Hard, light to medium grey, sandy CLAY			
	49.950						5	7	7	8	9	9	...							
	51.000	P27/D27					5	6	6	7	6	6	---	5.80			Very stiff, light to medium grey, CLAY.			
	51.450						5	6	6	7	6	6	---							
	52.500	P28/D28					6	7	7	6	7	8	---	5.80			-DITTO-			
	52.950						6	7	7	6	7	8	---							
	54.000	P29/D29					6	7	7	8	8	8	---	5.80			Hard, light to medium grey, CLAY.			
	54.450						6	7	7	8	8	8	---							
	55.500	P30/D30					6	6	7	6	6	8	---	5.80			Very stiff, light to medium grey, CLAY.			
	55.950						6	6	7	6	6	8	---							
	57.000	P31/D31					7	8	8	7	8	9	xx	3.20			Hard, light to medium grey, silty CLAY.			
	57.450						7	8	8	7	8	9	xx							
	58.500	P32/D32					7	8	9	9	10	10	xx	3.20			-DITTO-			
	58.950						7	8	9	9	10	10	xx							
	60.000												xx							




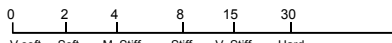













  

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	5/12/2018	8:30	0.00	0.00	0.00	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	5/12/2018	19:00	24.00	24.00	0.30	
	= Disturbed Sample		Sand	6/12/2018	8:00	24.00	24.00	0.00	
	= Cored Sample		Gravel	7/12/2018	19:00	42.00	42.00	0.20	
	= Vane Shear Test		Decayed Matter	8/12/2018	8:30	42.00	42.00	0.00	
	RQD = Rock Quality Disignation		Granite	8/12/2018	18:00	60.00	60.00	0.20	
	TCR = Total Core Recovery		Limestone						
	CRR = Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.							
										6 of 6		BH-3							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates										
Location : PULAU INDAH					SG/1281/2018		5/12/2018		N -30598.902										
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -46951.186									
WESTPORTS (M) SDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	VERTICAL		8/12/2018		Reduced Level (mRL): 1.391									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value
	60.000	P33/D33					8	7	7	8	9	11		---		0.45		Hard, light to medium grey, sandy CLAY	0 10 20 30 40 50
	60.450							Rec : 270/450mm N= 35								60.45			
<b>Borehole terminated at depth 60.45m</b>																			
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :										
	= Standard Penetration Test		Silt	5/12/2018	8:30	0.00	0.00	0.00	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense										
	= Undisturbed Sample		Clay	5/12/2018	19:00	24.00	24.00	0.30											
	= Disturbed Sample		Sand	6/12/2018	8:00	24.00	24.00	0.00											
	= Cored Sample		Gravel	7/12/2018	19:00	42.00	42.00	0.20											
	= Vane Shear Test		Decayed Matter	8/12/2018	8:30	42.00	42.00	0.00											
RQD	= Rock Quality Disignation		Granite	8/12/2018	18:00	60.00	60.00	0.20											
TCR	= Total Core Recovery		Limestone																
CRR	= Core Recovery Ratio		Mudstone																
					<b>Prepared by:</b>		<b>Checked by:</b>												

 <b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.							
										1 of 6		BH-3							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.			Date Started		Coordinates									
Location : PULAU INDAH					SG/1281/2018			5/12/2018		N -30598.902									
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		Reduced Level (mRL):									
WESTPORTS (M) SDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	VERTICAL		8/12/2018		1.391									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)	Thickness (m)	W G	Description	N' Value	
5/12/2018	0.000		D1				TOPSOIL					0.30	---	0.30		Light grey, very clayey SAND	0 10 20 30 40 50		
	0.300																		
	1.500		P1/D1				0	1	0	1	0	0			2.60			Very soft, light to medium grey, silty CLAY.	
	1.950																		
	3.000		UD1																
	4.000																		
	4.500		P2/D2																
	4.950																		
	6.000		UD2																
	7.000																		
	7.500		P3/D3																
	7.950																		
9.000		UD3																	
10.000																			
10.500		P4/D4																	
10.950																			
12.000																			
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :										
	= Standard Penetration Test		Silt	5/12/2018	8:30	0.00	0.00	0.00	Cohesive Soil (N)  Non Cohesive Soil (N)   <b>Prepared by:</b> _____ <b>Checked by:</b> _____										
	= Undisturbed Sample		Clay	5/12/2018	19:00	24.00	24.00	0.30											
	= Disturbed Sample		Sand	6/12/2018	8:00	24.00	24.00	0.00											
	= Cored Sample		Gravel	7/12/2018	19:00	42.00	42.00	0.20											
	= Vane Shear Test		Decayed Matter	8/12/2018	8:30	42.00	42.00	0.00											
	RQD = Rock Quality Disignation		Granite	8/12/2018	18:00	60.00	60.00	0.20											
	TCR = Total Core Recovery		Limestone	8/12/2018	18:00	60.00	60.00	0.20											


<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-3												
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 5/12/2018		<b>Coordinates</b> N -30598.902 E -46951.186															
<b>Client</b> WESTPORTS (M) SDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> VERTICAL		<b>Date Completed</b> 8/12/2018		<b>Reduced Level (mRL):</b> 1.391														
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph											
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value					
	12.000	UD4					Rec : 900/1000mm											Top: Light to medium grey, CLAY. Bottom: DITTO	0 10 20 30 40 50					
	13.000																							
	13.500																							
	13.950	P5/D5					-HAMMER WEIGHT- Rec : 370/450mm						xx					Very soft, light to medium grey, silty CLAY.						
	15.000																							
	15.000	UD5					Rec : 900/1000mm												Top: Light to medium grey, CLAY. Bottom: DITTO					
	16.000																							
	16.500																							
	16.500	P6/D6					0 1 0 1 0 1 N= 2						xx						Very soft, light to medium grey, silty CLAY with some gravel.					
	16.950																							
	18.000																							
	18.000	UD6					Rec : 900/1000mm												Top: Light to medium grey, CLAY. Bottom: DITTO					
	19.000																							
	19.500																							
	19.500	P7/D7					1 0 1 1 1 1 N= 4						xx						Soft, light to medium grey, silty CLAY with traces of organic matter.					
	19.950																							
	21.000																							
	21.000	UD7					Rec : 900/1000mm												Top: Light to medium grey, sandy CLAY. Bottom: DITTO					
	22.000																							
	22.500																							
	22.500	P8/D8					1 0 1 1 1 1 N= 5						xx						Medium stiff, light to medium grey, silty CLAY.					
	22.950																							
	24.000																							
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :															
	= Standard Penetration Test		Silt	5/12/2018	8:30	0.00	0.00	0.00	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense															
	= Undisturbed Sample		Clay	5/12/2018	19:00	24.00	24.00	0.30																
	= Disturbed Sample		Sand	6/12/2018	8:00	24.00	24.00	0.00																
	= Cored Sample		Gravel	7/12/2018	19:00	42.00	42.00	0.20																
	= Vane Shear Test		Decayed Matter	8/12/2018	8:30	42.00	42.00	0.00																
RQD	= Rock Quality Disignation		Granite	8/12/2018	18:00	60.00	60.00	0.20																
TCR	= Total Core Recovery		Limestone						<b>Prepared by:</b>															
CRR	= Core Recovery Ratio		Mudstone						<b>Checked by:</b>															



<b>STRATA GEOTECHNICS SDN. BHD.</b> (Co. No. 393744T) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622											Sheet 3 of 6			Borehole Ref. No. BH-3										
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH							Job No. SG/1281/2018		Date Started 5/12/2018		Coordinates N -30598.902 E -46951.186													
Client WESTPORTS (M) SDN. BHD.		Consultant HSS INTEGRATED SDN. BHD.			Type of Boring ROTARY WASH	Boring Dia. (mm) 100	Orientation VERTICAL		Date Completed 8/12/2018		Reduced Level (mRL): 1.391													
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50											
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description										
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thick-ness (m)	W G						
6/12/2018	24.000	P9/D9					1	1	1	2	1	2		XX ---										
	24.500																							
	25.500	P10/D10						2	1	2	3	2	3	XX ---	5.95						Stiff, light to medium grey spotted with dark grey, silty CLAY.	10		
	25.950																							
	27.000	P11/D11						2	1	2	2	3	4	XX ---							Stiff, light to medium grey, silty CLAY.	11		
	27.450																							
	28.500	P12/D12						2	2	1	2	2	2	XX ---	1.25						Medium stiff, light to medium grey, sandy CLAY.	16		
	28.950																							
	30.000	P13/D13						3	4	4	4	4	4	XX ---							Very stiff, light to medium grey, CLAY.	17		
	30.450																							
	31.500	P14/D14						4	3	4	4	5	4	XX ---							-DITTO-	18		
	31.950																							
	33.000	P15/D15						3	4	4	5	4	5	XX ---							Stiff, light to medium grey, CLAY.	18		
	33.450																							
	34.500	P16/D16						4	4	5	5	6	6	XX ---							Very stiff, light to medium grey, CLAY.	22		
	34.950																							
36.000																								

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	5/12/2018	8:30	0.00	0.00	0.00	Cohesive Soil (N) V.soft   Soft   M. Stiff   Stiff   V. Stiff   Hard 0   2   4   8   15   30 Non Cohesive Soil (N) V.Loose   Loose   Medium Dense   Dense   Very Dense 0   4   10   30   50
	= Undisturbed Sample		Clay	5/12/2018	19:00	24.00	24.00	0.30	
	= Disturbed Sample		Sand	6/12/2018	8:00	24.00	24.00	0.00	
	= Cored Sample		Gravel	7/12/2018	19:00	42.00	42.00	0.20	
	= Vane Shear Test		Decayed Matter	8/12/2018	8:30	42.00	42.00	0.00	
	RQD = Rock Quality Disignation		Granite	8/12/2018	18:00	60.00	60.00	0.20	
	TCR = Total Core Recovery		Limestone						Prepared by: _____ Checked by: _____
	CRR = Core Recovery Ratio		Mudstone						


 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.													
										4 of 6		BH-3													
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates																
Location : PULAU INDAH					SG/1281/2018		5/12/2018		N -30598.902																
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -46951.186															
WESTPORTS (M) SDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	VERTICAL		8/12/2018		Reduced Level (mRL): 1.391															
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph												
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value											
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	0	10	20	30	40	50
8/12/2018	36.000	P17/D17					5	4	5	4	5	6				7.50			-DITTO-						
	36.450						Rec : 230/450mm	N=	20																
	37.500	P18/D18					5	4	4	5	6	6		xx		1.55			Very stiff, light to medium grey, silty CLAY with traces of organic matter.						
	37.950						Rec : 310/450mm	N=	21																
	39.000	P19/D19					5	5	6	5	6	6							Very stiff, light to medium grey, sandy CLAY.						
	39.450						Rec : 270/450mm	N=	23																
	40.500	P20/D20					5	4	6	6	7	8				4.75			-DITTO-						
	40.950						Rec : 250/450mm	N=	27																
	42.000	P21/D21					5	5	5	5	7	7							-DITTO-						
	42.500						Rec : 300/450mm	N=	24																
43.500	P22/D22					5	4	6	6	6	8		xx					Very stiff, light to medium grey silty CLAY with traces of organic matter.							
43.950						Rec : 300/450mm	N=	26																	
45.000	P23/D23					5	5	6	7	6	7		xx					Very stiff, light to medium grey, silty CLAY.							
45.450						Rec : 270/450mm	N=	26																	
46.500	P24/D24					4	6	6	7	8	8		xx					-DITTO-							
46.950						Rec : 310/450mm	N=	29																	
48.000																									

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	5/12/2018	8:30	0.00	0.00	0.00	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	5/12/2018	19:00	24.00	24.00	0.30	
	= Disturbed Sample		Sand	6/12/2018	8:00	24.00	24.00	0.00	
	= Cored Sample		Gravel	7/12/2018	19:00	42.00	42.00	0.20	
	= Vane Shear Test		Decayed Matter	8/12/2018	8:30	42.00	42.00	0.00	
RQD	= Rock Quality Disignation		Granite	8/12/2018	18:00	60.00	60.00	0.20	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

Prepared by:		Checked by:	
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













 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19										Job No.		Date Started		Coordinates					
Location : PULAU INDAH										SG/1281/2018		5/12/2018		N -30598.902 E -46951.186					
Client		Consultant			Type of Boring		Boring Dia. (mm)	Orientation		Date Completed		Reduced Level (mRL):							
WESTPORTS (M) SDN. BHD.		HSS INTEGRATED SDN. BHD.			ROTARY WASH		100	VERTICAL		8/12/2018		1.391							
Date & Time	SAMPLE / INSITU TEST								SOIL / STRATUM DETAILS					Standard Penetration Test Graph					
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value		
						75mm	75mm	75mm	75mm	75mm	75mm							0 10 20 30 40 50	
	48.000	P25/D25				5	5	7	8	8	8	xx	5.95			Hard, light to medium grey, silty CLAY.	0	0	
	48.450					5	5	7	8	8	8	31							xx
	49.500	P26/D26				5	7	7	8	9	9	...	1.55			Hard, light to medium grey, sandy CLAY	10	10	
	49.950					5	7	7	8	9	9	33							...
	51.000	P27/D27				5	6	6	7	6	6	---	5.80			Very stiff, light to medium grey, CLAY.	20	20	
	51.450					5	6	6	7	6	6	25							---
	52.500	P28/D28				6	7	7	6	7	8	---	5.80			-DITTO-	30	30	
	52.950					6	7	7	6	7	8	28							---
	54.000	P29/D29				6	7	7	8	8	8	---	5.80			Hard, light to medium grey, CLAY.	40	40	
	54.450					6	7	7	8	8	8	31							---
	55.500	P30/D30				6	6	7	6	6	8	---	5.80			Very stiff, light to medium grey, CLAY.	50	50	
	55.950					6	6	7	6	6	8	27							---
	57.000	P31/D31				7	8	8	7	8	9	xx	3.20			Hard, light to medium grey, silty CLAY.	60	60	
	57.450					7	8	8	7	8	9	32							xx
	58.500	P32/D32				7	8	9	9	10	10	xx	3.20			-DITTO-	70	70	
	58.950					7	8	9	9	10	10	38							xx
	60.000											xx							














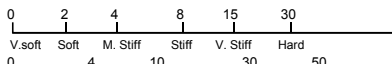
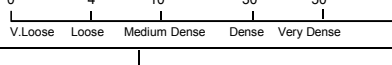
  

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	5/12/2018	8:30	0.00	0.00	0.00	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	5/12/2018	19:00	24.00	24.00	0.30	
	= Disturbed Sample		Sand	6/12/2018	8:00	24.00	24.00	0.00	
	= Cored Sample		Gravel	7/12/2018	19:00	42.00	42.00	0.20	
	= Vane Shear Test		Decayed Matter	8/12/2018	8:30	42.00	42.00	0.00	
	RQD = Rock Quality Disignation		Granite	8/12/2018	18:00	60.00	60.00	0.20	
	TCR = Total Core Recovery		Limestone						
	CRR = Core Recovery Ratio		Mudstone						

Prepared by:		Checked by:	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.							
										6 of 6		BH-3							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates										
Location : PULAU INDAH					SG/1281/2018		5/12/2018		N -30598.902										
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -46951.186									
WESTPORTS (M) SDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	VERTICAL		8/12/2018		Reduced Level (mRL): 1.391									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value
	60.000	P33/D33					8	7	7	8	9	11		---		0.45		Hard, light to medium grey, sandy CLAY	0 10 20 30 40 50
	60.450							Rec : 270/450mm N= 35								60.45			
<b>Borehole terminated at depth 60.45m</b>																			
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :										
	= Standard Penetration Test		Silt	5/12/2018	8:30	0.00	0.00	0.00	Cohesive Soil (N)    0    2    4    8    15    30 V.soft   Soft   M. Stiff   Stiff   V. Stiff   Hard Non Cohesive Soil (N)    0    4    10    30    50 V.Loose   Loose   Medium Dense   Dense   Very Dense										
	= Undisturbed Sample		Clay	5/12/2018	19:00	24.00	24.00	0.30											
	= Disturbed Sample		Sand	6/12/2018	8:00	24.00	24.00	0.00											
	= Cored Sample		Gravel	7/12/2018	19:00	42.00	42.00	0.20											
	= Vane Shear Test		Decayed Matter	8/12/2018	8:30	42.00	42.00	0.00											
RQD	= Rock Quality Disignation		Granite	8/12/2018	18:00	60.00	60.00	0.20											
TCR	= Total Core Recovery		Limestone																
CRR	= Core Recovery Ratio		Mudstone																
					<b>Prepared by:</b>		<b>Checked by:</b>												




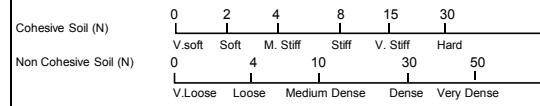














 <b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.																																																																	
										1 of 6		BH-4																																																																	
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates																																																																				
Location : PULAU INDAH					SG/1281/2018		10/12/2018		N -30210.121																																																																				
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -46727.103																																																																			
WESTPORTS (M) SDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	VERTICAL		12/12/2018		Reduced Level (mRL): 1.612																																																																			
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph																																																																
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	N' Value																																																										
10/12/2018	0.000		D1				TOPSOIL							0.30	0.30		Light grey, very clayey SAND																																																												
	0.300																																																																												
	1.500		P1/D1				-HAMMER WEIGHT- Rec: 350/450mm								4.15	5		Very soft, light to medium grey, sandy CLAY.																																																											
	1.950																																																																												
	3.000		UD1				Rec: 870/1000mm											Top: Light to medium grey, sandy CLAY. Bottom: DITTO																																																											
	4.000																																																																												
	4.500		P2/D2				-HAMMER WEIGHT- Rec: 400/450mm								2.85			Very soft, light to medium grey, silty CLAY.																																																											
	4.950																																																																												
	6.000		UD2				Rec: 900/1000mm											Top: Light to medium grey, silty CLAY. Bottom: DITTO																																																											
	7.000																																																																												
	7.500		P3/D3				-HAMMER WEIGHT- Rec: 400/450mm								2.05			Very stiff, light to medium grey, CLAY.																																																											
	7.950																																																																												
	9.000		UD3				Rec: 850/1000mm											Top: Light to medium grey, CLAY. Bottom: Light to medium grey, silty CLAY.																																																											
	10.000																																																																												
	10.500		P4/D4				Rec: 400/450mm								1.05			Very soft, light to medium grey, sandy CLAY.																																																											
	10.950																																																																												
	12.000																																																																												
<b>Legend</b>  = Standard Penetration Test  = Undisturbed Sample  = Disturbed Sample  = Cored Sample  = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery												<b>Soil Legend</b>  Silt  Clay  Sand  Gravel  Decayed Matter  Granite  Limestone												<table border="1"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Depth of Hole (m)</th> <th>Depth of Casing (m)</th> <th>Depth of Water (m)</th> <th>Remarks :</th> </tr> </thead> <tbody> <tr> <td>10/12/18</td> <td>8:30</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td></td> </tr> <tr> <td>10/12/18</td> <td>19:00</td> <td>24.00</td> <td>24.00</td> <td>0.40</td> <td></td> </tr> <tr> <td>11/12/18</td> <td>8:30</td> <td>24.00</td> <td>24.00</td> <td>0.10</td> <td></td> </tr> <tr> <td>11/12/18</td> <td>19:00</td> <td>51.00</td> <td>51.00</td> <td>0.30</td> <td></td> </tr> <tr> <td>12/12/18</td> <td>8:30</td> <td>51.00</td> <td>51.00</td> <td>0.00</td> <td></td> </tr> <tr> <td>12/12/18</td> <td>19:00</td> <td>60.00</td> <td>60.00</td> <td>0.30</td> <td></td> </tr> </tbody> </table>												Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :	10/12/18	8:30	0.00	0.00	0.00		10/12/18	19:00	24.00	24.00	0.40		11/12/18	8:30	24.00	24.00	0.10		11/12/18	19:00	51.00	51.00	0.30		12/12/18	8:30	51.00	51.00	0.00		12/12/18	19:00	60.00	60.00	0.30	
Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :																																																																								
10/12/18	8:30	0.00	0.00	0.00																																																																									
10/12/18	19:00	24.00	24.00	0.40																																																																									
11/12/18	8:30	24.00	24.00	0.10																																																																									
11/12/18	19:00	51.00	51.00	0.30																																																																									
12/12/18	8:30	51.00	51.00	0.00																																																																									
12/12/18	19:00	60.00	60.00	0.30																																																																									
 Cohesive Soil (N) 0 2 4 8 15 30 V. soft Soft M. Stiff Stiff V. Stiff Hard												 Non Cohesive Soil (N) 0 4 10 30 50 V. Loose Loose Medium Dense Dense Very Dense																																																																	
Prepared by:												Checked by:																																																																	

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622											<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-4						
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018			<b>Date Started</b> 10/12/2018		<b>Coordinates</b> N -30210.121 E -46727.103									
<b>Client</b> WESTPORTS (M) SDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> VERTICAL		<b>Date Completed</b> 12/12/2018		<b>Reduced Level (mRL):</b> 1.612									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value	
	12.000	UD4					Rec : 900/1000mm						xx				Top: Light to medium grey, silty CLAY.		
	13.000												xx	1.45		Bottom: DITTO			
	13.500												xx	13.45					
	13.950	P5/D5				0	1	0	1	1	1						Soft, light to medium grey, CLAY.		
	15.000																		
	15.000	UD5					Rec : 800/1000mm										Top: Light to medium grey, CLAY.		
	16.000																Bottom: DITTO		
	16.500					1	0	1	1	1	1						Soft, light to medium grey, CLAY.		
	16.950	P6/D6					Rec : 350/450mm												
	18.000																		
	18.000	UD6					Rec : 900/1000mm										Top: Light to medium grey, CLAY.		
	19.000																Bottom: DITTO		
	19.500					1	1	1	1	1	1						Medium stiff, light to medium grey, silty CLAY		
	19.950	P7/D7					Rec : 350/450mm												
	21.000																		
	21.000	UD7					Rec : 900/1000mm										Top: Light to medium grey, CLAY.		
	22.000																Bottom: DITTO		
	22.500					2	1	2	1	2	2						Stiff, light to medium grey, silty CLAY.		
	22.950	P8/D8					Rec : 270/450mm												
	24.000																		
<b>Legend</b>		<b>Soil Legend</b>		<b>Date</b>	<b>Time</b>	<b>Depth of Hole (m)</b>	<b>Depth of Casing (m)</b>	<b>Depth of Water (m)</b>	<b>Remarks :</b>										
	= Standard Penetration Test		Silt	10/12/18	8:30	0.00	0.00	0.00											
	= Undisturbed Sample		Clay	10/12/18	19:00	24.00	24.00	0.40											
	= Disturbed Sample		Sand	11/12/18	8:30	24.00	24.00	0.10											
	= Cored Sample		Gravel	11/12/18	19:00	51.00	51.00	0.30											
	= Vane Shear Test		Decayed Matter	12/12/18	8:30	51.00	51.00	0.00											
	RQD = Rock Quality Disignation		Granite	12/12/18	19:00	60.00	60.00	0.30											
	TCR = Total Core Recovery		Limestone						Cohesive Soil (N)    0    2    4    8    15    30 V.soft    Soft    M. Stiff    Stiff    V. Stiff    Hard Non Cohesive Soil (N)    0    4    10    30    50 V.Loose    Loose    Medium Dense    Dense    Very Dense										
	CRR = Core Recovery Ratio		Mudstone																
<b>Prepared by:</b>					<b>Checked by:</b>														

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-4							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 10/12/2018		<b>Coordinates</b> N -30210.121 E -46727.103										
<b>Client</b> WESTPORTS (M) SDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> VERTICAL	<b>Date Completed</b> 12/12/2018		<b>Reduced Level (mRL):</b> 1.612										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description					
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	
11/12/2018	24.000	P9/D9					3	4	4	4	4	4			24.50	1.45			Very stiff, light to medium, sandy CLAY.
	24.500						Rec : 300/450mm	N= 16											
	25.500	P10/D10					3	4	4	3	4	5			25.45				Very stiff, light to medium grey, silty CLAY with traces of organic matter.
	25.950						Rec : 350/450mm	N= 16											
	27.000	P11/D11					3	2	3	4	4	4			27.50				Very stiff, light to medium grey, silty CLAY.
	27.450						Rec : 300/450mm	N= 15											
	28.500	P12/D12					3	2	3	3	3	4			28.50				Stiff, light to medium grey, CLAY.
	28.950						Rec : 320/450mm	N= 13											
	30.000	P13/D13					4	4	3	4	4	5			31.45				Very stiff, light to medium grey, CLAY.
	30.450						Rec : 300/450mm	N= 16											
	31.500	P14/D14					3	4	4	4	5	5			31.45				Very stiff, light to medium grey, sandy CLAY
	31.950						Rec : 300/450mm	N= 18											
	33.000	P15/D15					5	5	7	6	7	9			32.90				Very stiff, light to medium grey, very clayey SAND with traces of organic matter.
	33.450						Rec : 300/450mm	N= 29											
	34.500	P16/D16					5	6	6	7	7	8			34.950				-DITTO-
	34.950						Rec : 270/450mm	N= 28											
36.000																			

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	10/12/18	8:30	0.00	0.00	0.00	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense  Prepared by: _____ Checked by: _____
	= Undisturbed Sample		Clay	10/12/18	19:00	24.00	24.00	0.40	
	= Disturbed Sample		Sand	11/12/18	8:30	24.00	24.00	0.10	
	= Cored Sample		Gravel	11/12/18	19:00	51.00	51.00	0.30	
	= Vane Shear Test		Decayed Matter	12/12/18	8:30	51.00	51.00	0.00	
	RQD = Rock Quality Disignation		Granite	12/12/18	19:00	60.00	60.00	0.30	
	TCR = Total Core Recovery		Limestone						
	CRR = Core Recovery Ratio		Mudstone						


 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.							
										4 of 6		BH-4							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates										
Location : PULAU INDAH					SG/1281/2018		10/12/2018		N -30210.121										
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -46727.103									
WESTPORTS (M) SDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	VERTICAL		12/12/2018		Reduced Level (mRL): 1.612									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value
	36.000	P17/D17					6	5	6	6	7	7		--- xx		1.45		Very stiff, light to medium grey, silty CLAY.	0
	36.450						6	5	6	6	7	7							
	37.500	P18/D18					6	6	7	7	9	9		.....		1.55		Hard, light to medium grey, sandy CLAY.	20
	37.950						6	6	7	7	9	9							
	39.000	P19/D19					6	7	7	8	7	9		.....		2.95		Very stiff, light to medium grey, clayey SAND.	40
	39.450						6	7	7	8	7	9							
	40.500	P20/D20					5	5	6	7	7	7		.....		4.35		Hard, light to medium grey, CLAY.	50
	40.950						5	5	6	7	7	7							
	42.000	P21/D21					5	4	5	7	7	8		.....		4.35		Hard, light to medium grey, CLAY.	
	42.500						5	4	5	7	7	8							
	43.500	P22/D22					6	5	6	7	9	9		.....		4.35		Hard, light to medium grey, CLAY.	
	43.950						6	5	6	7	9	9							
	45.000	P23/D23					5	5	7	8	8	8		.....		4.35		Hard, light to medium grey, CLAY.	
	45.450						5	5	7	8	8	8							
	46.500	P24/D24					6	7	8	9	9	11		.....		4.35		Hard, light to medium grey, sandy CLAY.	
	46.950						6	7	8	9	9	11							
	48.000																		
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :										
	= Standard Penetration Test		Silt	10/12/18	8:30	0.00	0.00	0.00											
	= Undisturbed Sample		Clay	10/12/18	19:00	24.00	24.00	0.40											
	= Disturbed Sample		Sand	11/12/18	8:30	24.00	24.00	0.10											
	= Cored Sample		Gravel	11/12/18	19:00	51.00	51.00	0.30											
	= Vane Shear Test		Decayed Matter	12/12/18	8:30	51.00	51.00	0.00											
	RQD = Rock Quality Disignation		Granite	12/12/18	19:00	60.00	60.00	0.30											
	TCR = Total Core Recovery		Limestone																
	CRR = Core Recovery Ratio		Mudstone																
<b>Prepared by:</b>		<b>Checked by:</b>																	




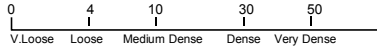
<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-4							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 10/12/2018		<b>Coordinates</b> N -30210.121 E -46727.103										
<b>Client</b> WESTPORTS (M) SDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> VERTICAL		<b>Date Completed</b> 12/12/2018		<b>Reduced Level (mRL):</b> 1.612									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value 0 10 20 30 40 50					
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description
12/12/2018	48.000	P25/D25					5	4	5	5	7	8			48.45	3.15		Very stiff, light to medium grey, sandy CLAY.	
	48.450						Rec : 300/450mm	N= 25											
	49.500	P26/D26					5	5	6	6	7	6			49.950			Very stiff, light o medium grey, very clayey SAND	
	49.950						Rec : 300/450mm	N= 25											
	51.000	P27/D27					4	5	6	6	7	7			51.450	4.45		-DITTO-	
	51.450						Rec : 250/450mm	N= 26											
	52.500	P28/D28					5	6	6	6	6	8			52.950			-DITTO-	
	52.950						Rec : 270/450mm	N= 26											
	54.000	P29/D29					5	5	6	7	7	7			54.450	1.60		Very stiff, light to medium grey, sandy CLAY.	
	54.450						Rec : 300/450mm	N= 27											
55.500	P30/D30					6	7	6	7	7	9			55.950			Very stiff, light to medium grey, CLAY.		
55.950						Rec : 300/450mm	N= 29												
57.000	P31/D31					7	7	6	7	9	9			57.450	4.50		Hard, light to medium grey, CLAY.		
57.450						Rec : 270/450mm	N= 31												
58.500	P32/D32					6	7	6	6	7	9			58.950			Very stiff, light to medium grey, CLAY.		
58.950						Rec : 300/450mm	N= 28												
60.000														60.000					


  

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	10/12/18	8:30	0.00	0.00	0.00	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	10/12/18	19:00	24.00	24.00	0.40	
	= Disturbed Sample		Sand	11/12/18	8:30	24.00	24.00	0.10	
	= Cored Sample		Gravel	11/12/18	19:00	51.00	51.00	0.30	
	= Vane Shear Test		Decayed Matter	12/12/18	8:30	51.00	51.00	0.00	
RQD	= Rock Quality Disignation		Granite	12/12/18	19:00	60.00	60.00	0.30	Prepared by:
TCR	= Total Core Recovery		Limestone						Checked by:
CRR	= Core Recovery Ratio		Mudstone						













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										6 of 6		BH-4														
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates																	
Location : PULAU INDAH					SG/1281/2018		10/12/2018		N -30210.121																	
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -46727.103																
WESTPORTS (M) SDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	VERTICAL		12/12/2018		Reduced Level (mRL): 1.612																
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph													
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value												
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thick-ness (m)	W G	Description	0	10	20	30	40	50	
	60.000		P33/D33				7	7	7	8	9	9				0.45		Hard, light to medium grey, sandy CLAY.								
	60.450						Rec : 300/450mm																			
																		Borehole terminated at depth 60.45m after 1 hard layer								

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	10/12/18	8:30	0.00	0.00	0.00	Cohesive Soil (N)  Non Cohesive Soil (N) 
	= Undisturbed Sample		Clay	10/12/18	19:00	24.00	24.00	0.40	
	= Disturbed Sample		Sand	11/12/18	8:30	24.00	24.00	0.10	
	= Cored Sample		Gravel	11/12/18	19:00	51.00	51.00	0.30	
	= Vane Shear Test		Decayed Matter	12/12/18	8:30	51.00	51.00	0.00	
RQD	= Rock Quality Disignation		Granite	12/12/18	19:00	60.00	60.00	0.30	Prepared by: _____ Checked by: _____
	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

 <b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622													Sheet		Borehole Ref. No.									
													1 of 6		BH-5									
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19						Job No.			Date Started		Coordinates													
Location : PULAU INDAH						SG/1281/2018			14/12/2018		N -29919.393													
Client			Consultant			Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		Reduced Level (mRL):												
WESTPORTS (M) DDN. BHD.			HSS INTEGRATED SDN. BHD.			ROTARY WASH	100	Vertical		16/12/2018		1.763												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph											
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	ROD (%)	Field Test / Rock Cores							N' Value										
						75mm	75mm	75mm	75mm	75mm	75mm	Casing Record	Legend	Depth (m)	Thick-ness (m)	W G	Description	0	10	20	30	40	50	
14/12/2018	0.000													0.30	0.30		Light grey, very clayey SAND							
	1.500	P1/D1													2.54			Very soft light to medium grey, CLAY						
	1.950																							
	3.000	UD1												3.26	0.42		Top: Light to medium grey, sandy CLAY							
	4.000																Bottom: Light to medium grey, CLAY							
	4.500	P2/D2													4.17			Very soft, light to medium grey, CLAY						
	4.950																							
	6.000	UD2															Top: Light to medium grey, CLAY							
	7.000																Bottom: DITTO							
	7.500	P3/D3				0	1	0	1	0	1					7.43			Very soft, light to medium grey, silty CLAY					
	7.950																							
	9.000	UD3															Top: Light to medium grey, CLAY							
	10.000																Bottom: Light to medium grey, silty CLAY							
	10.500	P4/D4				0	1	0	1	0	1								Very soft, light to medium grey, silty CLAY					
	10.950																							
	12.000																							

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	14/12/18	-	-	-	-	ONSHORE
	= Undisturbed Sample		Clay	14/12/18	19:00	27.00	27.00	0.3	
	= Disturbed Sample		Sand	15/12/18	8:30	27.00	27.00	0.1	
	= Cored Sample		Gravel	15/12/18	19:00	42.00	42.00	0.4	
	= Vane Shear Test		Decayed Matter	16/12/18	8:30	42.00	42.00	0.2	
RQD	= Rock Quality Disignation		Granite	16/12/18	19:00	60.00	60.00	0.3	
TCR	= Total Core Recover		Limestone	16/12/18	19:00	60.00	60.00	0.3	

Cohesive Soil (N)	
0	2 4 8 15 30
V.soft	Soft M. Stiff Stiff V. Stiff Hard

Non Cohesive Soil (N)	
0	4 10 30 50
V.Loose	Loose Medium Dense Dense Very Dense

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622													<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-5	
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 14/12/2018		<b>Coordinates</b> N -29919.393 E -46635.085							
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 16/12/2018		<b>Reduced Level (mRL):</b> 1.763						
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50			
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)
12.000		UD4					Rec : 910/1000mm						xx	4.10		Top: Light to medium grey, silty CLAY
13.000							Rec : 350/450mm									
13.500		P5/D5				0	1	0	1	0	1			13.46		
13.950							Rec : 350/450mm									
15.000		UD5					Rec : 900/1000mm						xx	1.51		
16.000							Rec : 300/450mm									
16.500		P6/D6				0	1	0	1	1	1			14.92		
16.950							Rec : 300/450mm									
18.000		UD6					Rec : 900/1000mm						xx	18.35		
19.000							Rec : 350/450mm									
19.500		P7/D7				1	1	1	1	1	1			16.43		
19.950							Rec : 350/450mm									
21.000		UD7					Rec : 900/1000mm						xx	1.13		
22.000							Rec : 350/450mm									
22.500		P8/D8				1	2	2	2	2	2			19.48		
22.950							Rec : 350/450mm									
24.000																

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	14/12/18	-	-	-	-
	= Undisturbed Sample		Clay	14/12/18	19:00	27.00	27.00	0.3
	= Disturbed Sample		Sand	15/12/18	8:30	27.00	27.00	0.1
	= Cored Sample		Gravel	15/12/18	19:00	42.00	42.00	0.4
	= Vane Shear Test		Decayed Matter	16/12/18	8:30	42.00	42.00	0.2
RQD	= Rock Quality Disignation		Granite	16/12/18	19:00	60.00	60.00	0.3
TCR	= Total Core Recovery		Limestone					
CRP	= Core Recovery Ratio		Mudstone					

Cohesive Soil (N)		Non Cohesive Soil (N)	
0	30	0	50
V.soft	Hard	V.Loose	Very Dense
Soft		Loose	
M. Stiff		Medium Dense	
Stiff		Dense	
V. Stiff			

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622		<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-5																																			
		<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH			<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 14/12/2018		<b>Coordinates</b> N -29919.393 E -46635.085																														
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 16/12/2018		<b>Reduced Level (mRL):</b> 1.763																													
<b>Date &amp; Time</b> 15/12/2018	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>						<b>Standard Penetration Test Graph</b> 																										
	<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Field Test / Rock Cores</b>					<b>Casing Record</b>		<b>Legend</b>	<b>Depth (m)</b>	<b>Thick-ness (m)</b>	<b>W G</b>	<b>Description</b>	<b>'N' Value</b> 0 10 20 30 40 50																				
	24.000		P9/D9				2	1	2	2	3	2	---	---																									
	24.450							Rec : 350/450mm																															
	25.500		P10/D10				2	2	3	3	3	5	---	---			8.99																						
	25.950							Rec : 300/450mm																															
	27.000		P11/D11				3	4	4	5	5	6	---	---																									
	27.450							Rec : 350/450mm																															
	28.500		P12/D12				3	5	4	4	5	6	---	xx																									
	28.950							Rec : 300/450mm										1.51																					
	30.000		P13/D13				4	4	5	4	5	6	---	xx																									
	30.450							Rec : 320/450mm																															
	31.500		P14/D14				4	3	4	4	5	4	---	...																									
	31.950							Rec : 300/450mm																															
	33.000		P15/D15				5	4	5	5	7	7	---	xx																									
	33.450							Rec : 300/450mm																															
	34.500		P16/D16				4	5	6	6	5	7	---	xx																									
	34.950							Rec : 250/450mm																															
	36.000																																						
<b>Legend</b> 		<b>Soil Legend</b> 		<b>Date</b> 14/12/18 14/12/18 15/12/18 15/12/18 16/12/18 16/12/18	<b>Time</b> - 19:00 8:30 19:00 8:30 19:00	<b>Depth of Hole (m)</b> - 27.00 27.00 42.00 42.00 42.00 60.00	<b>Depth of Casing (m)</b> - 27.00 27.00 42.00 42.00 42.00 60.00	<b>Depth of Water (m)</b> - 0.3 0.1 0.4 0.2 0.3	<b>Remarks :</b>					<b>Prepared by:</b>	<b>Checked by:</b>																								

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-5								
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 14/12/2018		<b>Coordinates</b> N -29919.393 E -46635.085											
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 16/12/2018		<b>Reduced Level (mRL):</b> 1.763										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph							
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value 0 10 20 30 40 50						
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	
16/12/2018	36.000	P17/D17					5	4	5	5	6	6		--- xx	37.43	4.56		-DITTO-		
	36.450						Rec : 300/450mm	N= 22												
	37.500	P18/D18					5	6	7	7	8	9		--- xx	37.43	3.02		Dense, light to medium grey, very clayey SAND		
	37.950						Rec : 250/450mm	N= 31												
	39.000	P19/D19					6	5	6	7	9	10		--- xx	40.45	3.02		-DITTO-		
	39.450						Rec : 200/450mm	N= 32												
	40.500	P20/D20					5	6	7	6	8	8		... xx	40.45	4.44		Medium dense, light to medium grey, silty fine grain SAND		
	40.950						Rec : 270/450mm	N= 29												
	42.000	P21/D21					6	6	7	6	7	8		... xx	44.89	1.54		-DITTO-		
	42.450						Rec : 300/450mm	N= 28												
43.500	P22/D22					4	5	5	6	7	9		... xx	46.43	1.54		Medium dense, light to medium grey, silty fine grain SAND			
43.950						Rec : 300/450mm	N= 27													
45.000	P23/D23					5	6	7	7	8	8		... xx	46.43	1.54		Medium dense, light to medium grey, clayey SAND			
45.450						Rec : 250/450mm	N= 30													
46.500	P24/D24					6	8	8	8	9	10		... xx	46.43	1.54		Dense, light to medium grey, silty fine grain SAND			
46.950						Rec : 250/450mm	N= 37													
48.000																				

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	14/12/18	-	-	-	-	
	= Undisturbed Sample		Clay	14/12/18	19:00	27.00	27.00	0.3	
	= Disturbed Sample		Sand	15/12/18	8:30	27.00	27.00	0.1	
	= Cored Sample		Gravel	15/12/18	19:00	42.00	42.00	0.4	
	= Vane Shear Test		Decayed Matter	16/12/18	8:30	42.00	42.00	0.2	
RQD	= Rock Quality Disignation		Granite	16/12/18	19:00	60.00	60.00	0.3	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-5						
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 14/12/2018		<b>Coordinates</b> N -29919.393 E -46635.085									
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 16/12/2018		<b>Reduced Level (mRL):</b> 1.763								
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph					
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description	'N' Value 0 10 20 30 40 50			
						75mm	75mm	75mm	75mm	75mm	75mm	Casing Record	Legend			Depth (m)	Thickness (m)	W G
	48.000		P25/D25				6	7	8	9	9		xx		3.06			
	48.450						Rec : 280/450mm											
	49.500		P26/D26				6	6	7	9	8				49.49			Dense, light to medium grey, slightly clayey SAND
	49.950						Rec : 260/450mm											
	51.000		P27/D27				6	5	6	6	7		xx		50.90			Medium dense, light to medium grey, silty fine grain SAND
	51.450						Rec : 250/450mm											
	52.500		P28/D28				4	4	4	5	5				52.45			Very stiff, light to medium grey, sandy CLAY
	52.950						Rec : 300/450mm											
	54.000		P29/D29				4	5	5	4	5		xx		53.83			Very stiff, light to medium grey, silty CLAY
	54.450						Rec : 310/450mm											
	55.500		P30/D30				4	4	5	5	6		xx		56.98			-DITTO-
	55.950						Rec : 280/450mm											
	57.000		P31/D31				4	4	3	4	4							Very stiff, light to medium grey, CLAY
	57.450						Rec : 250/450mm											
	58.500		P32/D32				5	4	5	5	6							-DITTO-
	58.950						Rec : 270/450mm											
	60.000																	

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	14/12/18	-	-	-	-	
	= Undisturbed Sample		Clay	14/12/18	19:00	27.00	27.00	0.3	
	= Disturbed Sample		Sand	15/12/18	8:30	27.00	27.00	0.1	
	= Cored Sample		Gravel	15/12/18	19:00	42.00	42.00	0.4	
	= Vane Shear Test		Decayed Matter	16/12/18	8:30	42.00	42.00	0.2	
RQD	= Rock Quality Disignation		Granite	16/12/18	19:00	60.00	60.00	0.3	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 6 of 6		<b>Borehole Ref. No.</b> BH-5						
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH						<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 14/12/2018		<b>Coordinates</b> N -29919.393 E -46635.085								
<b>Client</b> WESTPORTS (M) DDN. BHD.			<b>Consultant</b> HSS INTEGRATED SDN. BHD.			<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 16/12/2018								
<b>Reduced Level (mRL):</b> 1.763																		
<b>Date &amp; Time</b>		<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>					<b>Standard Penetration Test Graph</b> 					
		<b>Depth (m)</b> 60.000 60.450	<b>Test</b> P33/D33	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Field Test / Rock Cores</b>										
						75mm 5	75mm 5	75mm 6	75mm 5	75mm 6	75mm 7	Casing Record --- --- --- --- 60.45	Legend --- --- --- ---	Depth (m) 3.47	Thick-ness (m) 3.47	W G --- --- --- ---	Description -DITTO-  <i>Borehole terminated at depth 60.45m</i>	'N' Value 0 10 20 30 40 50


<b>Legend</b> = Standard Penetration Test = Undisturbed Sample = Disturbed Sample = Cored Sample = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRP = Core Recovery Ratio				<b>Soil Legend</b> Silt Clay Sand Gravel Decayed Matter Granite Limestone Mudstone				Date 14/12/18 14/12/18 15/12/18 15/12/18 16/12/18 16/12/18		Time - 19:00 8:30 19:00 8:30 19:00		Depth of Hole (m) - 27.00 27.00 42.00 42.00 60.00		Depth of Casing (m) - 27.00 27.00 42.00 42.00 60.00		Depth of Water (m) - 0.3 0.1 0.4 0.2 0.3		<b>Remarks :</b>   Cohesive Soil (N) V.soft Soft M. Stiff Stiff V. Stiff Hard  Non Cohesive Soil (N) V.Loose Loose Medium Dense Dense Very Dense			
<b>Prepared by:</b> _____						<b>Checked by:</b> _____															


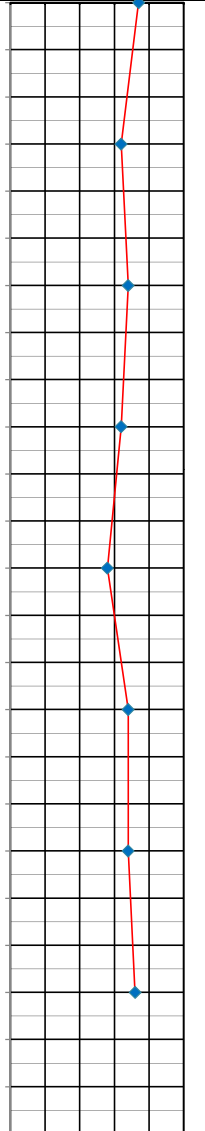


<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-6							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 9/11/2018		<b>Coordinates</b> N -31069.897 E -47046.682										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 12/11/2018		<b>Reduced Level (mRL):</b> 1.299									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Depth (m)	Thickness (m)	W G	Description		
9/11/2018	0.000	[Disturbed Sample]	D1				TOPSOIL						0.30	0.30		Light grey, very clayey SAND			
	0.300						Rec: 250/450mm						0.30						
	1.500	[Undisturbed Sample]	P1/D2				-HAMMER WEIGHT-						2.95	2.65	5	Very soft, light grey, clayey SILT			
	1.950						Rec: 300/450mm						2.95						
	3.000	[Undisturbed Sample]	UD1				Rec: 800/1000mm						4.40	1.45		Top: Light grey, CLAY Bottom: DITTO			
	4.000						-HAMMER WEIGHT-						4.40						
	4.500	[Disturbed Sample]	P2/D3				Rec: 300/450mm						5.90	1.50		Very soft, light grey, clayey SILT			
	4.950						-HAMMER WEIGHT-						5.90						
	6.000	[Undisturbed Sample]	UD2				Rec: 850/1000mm						7.45	1.55		Top: Light grey, very clayey SAND Bottom: DITTO			
	7.000						-HAMMER WEIGHT-						7.45						
7.500	[Disturbed Sample]	P3/D4				1 0 1 1 0 1 N= 3						9.00	1.55		Soft, light grey, clayey SILT				
7.950						Rec: 300/450mm						9.00							
9.000	[Undisturbed Sample]	UD3				Rec: 800/1000mm						10.40	1.40		Top: Light grey, very clayey SAND Bottom: DITTO				
10.000						-HAMMER WEIGHT-						10.40							
10.500	[Disturbed Sample]	P4/D5				1 1 0 1 1 1 N= 6						10.40	1.60		Soft, light grey, clayey SILT				
10.950						Rec: 300/450mm						10.40							
12.000																			
<b>Legend</b> = Standard Penetration Test = Undisturbed Sample = Disturbed Sample = Cored Sample = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRR = Core Recovery Ratio		<b>Soil Legend</b> Silt Clay Sand Gravel Decayed Matter Granite Limestone Mudstone		<b>Date</b> 9/11/18 9:00 9/11/18 18:30 10/11/18 9:00 10/11/18 18:30 12/11/18 9:00 12/11/18 18:30		<b>Time</b> 9:00 18:30 9:00 18:30 9:00 18:30		<b>Depth of Hole (m)</b> 0.00 27.00 7.00 42 42 60.45		<b>Depth of Casing (m)</b> 0.00 27.00 27.00 42 42 60		<b>Depth of Water (m)</b> - - 0.40 - - 0.5		<b>Remarks :</b> OFFSHORE Cohesive Soil (N) Non Cohesive Soil (N)				<b>Prepared by:</b> _____ <b>Checked by:</b> _____	

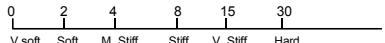
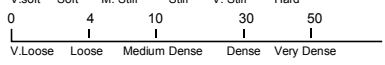
<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-6									
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 9/11/2018		<b>Coordinates</b> N -31069.897 E -47046.682												
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 12/11/2018		<b>Reduced Level (mRL):</b> 1.299												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value		
	12.000	UD4					Rec : 750/1000mm								1.45			Top: Light and grey sandy CLAY Bottom: DITTO			
	13.000																				
	13.500					1	1	2	1	2	2							Medium stiff, light grey clayey SILT with gravel.			
	13.950	P5/D6					Rec : 250/450mm														
	15.000																				
	15.500	UD5					Rec : 800/1000mm								4.45			Top: Light grey clayey SILT Bottom: DITTO			
	16.000																				
	16.500					1	0	1	2	1	2							Medium stiff light grey clayey SILT			
	16.950	P6/D7					Rec : 300/450mm														
	18.000																				
	18.500	UD6					Rec : 850/1000mm								1.60			Top: Light grey CLAY of intermediate plasticity Bottom: DITTO			
	19.000																				
	19.500					1	1	2	1	2	3							Stiff, light grey clayey SILT with sand			
	19.950	P7/D8					Rec : 300/450mm														
	21.000					1	1	2	2	1	3							-DITTO-			
	21.450	P8/D9					Rec : 300/450mm														
	22.500					1	1	2	4	4	5							Very stiff, light grey clayey SAND			
	22.950	P9/D10					Rec : 250/450mm														
	24.000																				
<b>Legend</b> = Standard Penetration Test = Undisturbed Sample = Disturbed Sample = Cored Sample = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRR = Core Recovery Ratio		<b>Soil Legend</b> Silt Clay Sand Gravel Decayed Matter Granite Limestone Mudstone		<b>Date</b> 9/11/18 9/11/18 10/11/18 10/11/18 12/11/18 12/11/18		<b>Time</b> 9:00 18:30 9:00 18:30 9:00 18:30		<b>Depth of Hole (m)</b> 0.00 27.00 7.00 42 42 60.45		<b>Depth of Casing (m)</b> 0.00 27.00 27.00 42 42 60		<b>Depth of Water (m)</b> - - 0.40 - 0.5 -		<b>Remarks :</b> Cohesive Soil (N) Non Cohesive Soil (N)		 		<b>Prepared by:</b>		<b>Checked by:</b>	

















 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19										Job No.		Date Started		Coordinates					
Location : PULAU INDAH										SG/1281/2018		9/11/2018		N -31069.897					
Client			Consultant			Type of Boring		Boring Dia. (mm)	Orientation		Date Completed		E -47046.682						
WESTPORTS (M) DDN. BHD.			HSS INTEGRATED SDN. BHD.			ROTARY WASH		100	Vertical		12/11/2018		Reduced Level (mRL): 1.299						
Date & Time	SAMPLE / INSITU TEST							SOIL / STRATUM DETAILS							Standard Penetration Test Graph				
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)		Thickness (m)	W G	Description	'N' Value
12/11/2018	36.000	P18/D19					1	1	2	3	2	2	9	...	7.55			-DITTO-	0
	36.450						1	1	2	3	2	2							
	37.500	P20/D21					1	2	2	3	3	5	13	xx	37.45			Stiff, light grey clayey SILT	10
	37.950						1	2	2	3	3	5							
	39.000	P21/D22					1	2	2	2	4	4	12	xx	4.45			-DITTO-	20
	39.450						1	2	2	2	4	4							
	40.500	P22/D23					1	2	2	3	5	5	15	xx	41.90			-DITTO-	30
40.950	1						2	2	3	5	5	Rec : 250/450mm							
42.000	P23/D24					2	2	4	4	3	7	18	xx	3.10			Very stiff, light grey sandy SILT with clay	40	
42.500						2	2	4	4	3	7								Rec : 270/450mm
43.500	P24/D25					2	2	4	4	6	7	21	xx	45.00			-DITTO-	50	
43.950						2	2	4	4	6	7								Rec : 250/450mm
45.000	P25/D26					2	3	4	4	6	6	20	xx	46.40			Very stiff, light grey silty SAND with clay.	50	
45.950						2	3	4	4	6	6								Rec : 300/450mm
46.500	P26/D27					2	3	5	5	7	10	27	xx				Very stiff, light grey slightly clayey SAND	50	
46.950						2	3	5	5	7	10								Rec : 250/450mm
48.000																			
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :										
	= Standard Penetration Test		Silt	9/11/18	9:00	0.00	0.00	-											
	= Undisturbed Sample		Clay	9/11/18	18:30	27.00	27.00	-											
	= Disturbed Sample		Sand	10/11/18	9:00	7.00	27.00	0.40	Cohesive Soil (N)										
	= Cored Sample		Gravel	10/11/18	18:30	42	42	-	Non Cohesive Soil (N)										
	= Vane Shear Test		Decayed Matter	12/11/18	9:00	42	42	0.5	V.Loose Loose Medium Dense Dense Very Dense										
RQD	= Rock Quality Disignation		Granite	12/11/18	18:30	60.45	60	-	Prepared by:										
TCR	= Total Core Recovery		Limestone	12/11/18	18:30	60.45	60	-	Checked by:										
CRR	= Core Recovery Ratio		Mudstone																















 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-6						
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 9/11/2018		<b>Coordinates</b> N -31069.897 E -47046.682									
<b>Client</b>		<b>Consultant</b>		<b>Type of Boring</b>	<b>Boring Dia. (mm)</b>	<b>Orientation</b>		<b>Date Completed</b>		<b>Reduced Level (mRL):</b> 1.299								
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		12/11/2018		1.299								
<b>Date &amp; Time</b>	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>						<b>Standard Penetration Test Graph</b> 					
	<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Field Test / Rock Cores</b>					<b>Casing Record</b>		<b>Legend</b>	<b>Depth (m)</b>	<b>Thick-ness (m)</b>	<b>W G</b>	<b>Description</b>
	48.000	[Symbol]	P27/D28			2	3	7	9	9	12							Hard, light grey clayey SAND
	48.450										37							
	49.500	[Symbol]	P28/D29			2	4	6	6	9	11							-DITTO-
	49.950										32							6.05
	51.000	[Symbol]	P29/D30			2	3	6	8	8	12							Hard, light grey clayey SAND
	51.450										34							
	52.500	[Symbol]	P30/D31			2	4	6	8	9	9		xx	xx	xx	xx	xx	Hard, light grey silty SAND
	52.950										32							1.45
	54.000	[Symbol]	P31/D32			2	4	5	5	8	10							Hard, light grey clayey SAND
	54.450										28							
	55.500	[Symbol]	P32/D33			2	4	6	6	10	12							-DITTO-
	55.950										34							3.05
	57.000	[Symbol]	P33/D34			3	5	8	8	9	9							Hard, light grey sandy CLAY
	57.450										34							
	58.500	[Symbol]	P34/D35			2	4	6	8	10	12							-DITTO-
	58.950										36							3.05
	60.000																	

<b>Legend</b>		<b>Soil Legend</b>		<b>Date</b>	<b>Time</b>	<b>Depth of Hole (m)</b>	<b>Depth of Casing (m)</b>	<b>Depth of Water (m)</b>	<b>Remarks :</b>
[Symbol]	= Standard Penetration Test	[Symbol]	Silt	9/11/18	9:00	0.00	0.00	-	
[Symbol]	= Undisturbed Sample	[Symbol]	Clay	9/11/18	18:30	27.00	27.00	-	
[Symbol]	= Disturbed Sample	[Symbol]	Sand	10/11/18	9:00	7.00	27.00	0.40	
[Symbol]	= Cored Sample	[Symbol]	Gravel	10/11/18	18:30	42	42	-	
[Symbol]	= Vane Shear Test	[Symbol]	Decayed Matter	12/11/18	9:00	42	42	0.5	
RQD	= Rock Quality Disignation	[Symbol]	Granite	12/11/18	18:30	60.45	60	-	
TCR	= Total Core Recovery	[Symbol]	Limestone						
CRR	= Core Recovery Ratio	[Symbol]	Mudstone						

<b>Remarks :</b>
Cohesive Soil (N) 
Non Cohesive Soil (N) 
<b>Prepared by:</b>
<b>Checked by:</b>

 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622											<b>Sheet</b> 6 of 6		<b>Borehole Ref. No.</b> BH-6																										
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH						<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 9/11/2018		<b>Coordinates</b> N -31069.897 E -47046.682																													
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 12/11/2018		<b>Reduced Level (mRL):</b> 1.299																													
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50																										
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Casing Record	Legend	Depth (m)	Thick-ness (m)	W G	Description																				
							75mm	75mm	75mm	75mm	75mm	75mm																											
	60.000		P35/D36				2	4	7	9	9	12		...				Hard, light grey very clayey SAND																					
	60.450													...		0.45																							
																		<i>Borehole terminated at depth 60.45m</i>																					
<b>Legend</b>  = Standard Penetration Test  = Undisturbed Sample  = Disturbed Sample  = Cored Sample  = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRR = Core Recovery Ratio		<b>Soil Legend</b>  Silt  Clay  Sand  Gravel  Decayed Matter  Granite  Limestone  Mudstone		<b>Date</b> 9/11/18 9/11/18 10/11/18 10/11/18 12/11/18 12/11/18	<b>Time</b> 9:00 18:30 9:00 18:30 9:00 18:30	<b>Depth of Hole (m)</b> 0.00 27.00 7.00 42 42 60.45	<b>Depth of Casing (m)</b> 0.00 27.00 27.00 42 42 60	<b>Depth of Water (m)</b> - - 0.40 - 0.5 -	<b>Remarks :</b>  <table border="0"> <tr> <td>Cohesive Soil (N)</td> <td>0</td> <td>2</td> <td>4</td> <td>8</td> <td>15</td> <td>30</td> </tr> <tr> <td></td> <td>V.soft</td> <td>Soft</td> <td>M. Stiff</td> <td>Stiff</td> <td>V. Stiff</td> <td>Hard</td> </tr> <tr> <td>Non Cohesive Soil (N)</td> <td>0</td> <td>4</td> <td>10</td> <td>30</td> <td>50</td> <td></td> </tr> <tr> <td></td> <td>V.Loose</td> <td>Loose</td> <td>Medium Dense</td> <td>Dense</td> <td>Very Dense</td> <td></td> </tr> </table>			Cohesive Soil (N)	0	2	4	8	15	30		V.soft	Soft	M. Stiff	Stiff	V. Stiff	Hard	Non Cohesive Soil (N)	0	4	10	30	50			V.Loose	Loose	Medium Dense	Dense	Very Dense	
Cohesive Soil (N)	0	2	4	8	15	30																																	
	V.soft	Soft	M. Stiff	Stiff	V. Stiff	Hard																																	
Non Cohesive Soil (N)	0	4	10	30	50																																		
	V.Loose	Loose	Medium Dense	Dense	Very Dense																																		
<b>Prepared by:</b>						<b>Checked by:</b>																																	

<b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-7						
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 27/11/2018		<b>Coordinates</b> N -30676.015 E -468112.510									
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 2/12/2018		<b>Reduced Level (mRL):</b> 1.724								
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph N' Value 0 10 20 30 40 50					
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Depth (m)	Thickness (m)	W G	Description	
27/11/2018	0.000						75mm	75mm	75mm	75mm	75mm	75mm		...	0.30	0.30		Light grey, very clayey SAND
	1.500		P1/D1				0	1	0	1	0	1		...	2.65	2.65		Very soft, light to medium grey, silty CLAY
	1.950													...	2.95			
	3.000		UD1											...	1.45			Top: Light to medium grey, CLAY of very high plasticity Bottom: DITTO
	4.000													...	4.40			
	4.500		P2/D2											...	1.50			Very soft, light to medium grey, silty CLAY
	4.950													...	5.90			
	6.000		UD2											...	1.55			Top: Light to medium grey, CLAY Bottom: DITTO
	7.000													...	7.45			
	7.500		P3/D3											...	4.55			Very soft, light to medium grey, silty CLAY Top: Light to medium grey, silty CLAY Bottom: DITTO
	7.950													...				
	9.000		UD3											...				
10.000													...					
10.500		P4/D4											...				Very soft, light to medium grey, silty CLAY	
10.950													...					
12.000													...	12.00				
<b>Legend</b> = Standard Penetration Test = Undisturbed Sample = Disturbed Sample = Cored Sample = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery		<b>Soil Legend</b> Silt Clay Sand Gravel Decayed Matter Granite Limestone		<b>Date</b> 27/11/18 27/11/18 30/11/18 30/11/18 1/12/18 1/12/18	<b>Time</b> 8:30 19:00 8:30 19:00 8:30 19:00	<b>Depth of Hole (m)</b> - 15.00 15.00 25.50 25.50 45.00	<b>Depth of Casing (m)</b> - 15.00 15.00 25.50 25.50 45.00	<b>Depth of Water (m)</b> - 0.3 - - -	<b>Remarks :</b> ONSHORE Cohesive Soil (N) V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) V.Loose Loose Medium Dense Dense Very Dense									

 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.																																																																																																																		
										2 of 6		BH-7																																																																																																																		
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates																																																																																																																					
Location : PULAU INDAH					SG/1281/2018		27/11/2018		N -30676.015																																																																																																																					
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -468112.510																																																																																																																				
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		2/12/2018		Reduced Level (mRL): 1.724																																																																																																																				
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph																																																																																																																	
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value																																																																																																											
30/11/2018	12.000	UD4					75mm	75mm	75mm	75mm	75mm			12.30	0.30		Top: Light to medium grey, CLAY of high plasticity Bottom: Light to medium grey, silty CLAY																																																																																																													
	13.000																																																																																																																													
	13.500	P5/D5																																																																																																																												
	13.950																																																																																																																													
	15.000	UD5													5.65		Top: Light to medium grey, silty CLAY Bottom: DITTO																																																																																																													
	16.000																																																																																																																													
	16.500	P6/D6																																																																																																																												
	16.950																																																																																																																													
	18.000	UD6														0.45		Top: Light to medium grey, CLAY Bottom: Light to medium grey, silty CLAY																																																																																																												
	19.000																																																																																																																													
19.500	P7/D7																																																																																																																													
19.950																																																																																																																														
21.000	UD7																																																																																																																													
22.000																																																																																																																														
22.500	P8/D8																																																																																																																													
22.950																																																																																																																														
24.000																																																																																																																														
<b>Legend</b>  = Standard Penetration Test  = Undisturbed Sample  = Disturbed Sample  = Cored Sample  = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRP = Core Recovery Ratio										<b>Soil Legend</b>  Silt  Clay  Sand  Gravel  Decayed Matter  Granite  Limestone  Mudstone										<table border="1"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Depth of Hole (m)</th> <th>Depth of Casing (m)</th> <th>Depth of Water (m)</th> <th>Remarks :</th> </tr> </thead> <tbody> <tr> <td>27/11/18</td> <td>8:30</td> <td>-</td> <td>-</td> <td>-</td> <td></td> </tr> <tr> <td>27/11/18</td> <td>19:00</td> <td>15.00</td> <td>15.00</td> <td>0.3</td> <td></td> </tr> <tr> <td>30/11/18</td> <td>8:30</td> <td>15.00</td> <td>15.00</td> <td>-</td> <td></td> </tr> <tr> <td>30/11/18</td> <td>19:00</td> <td>25.50</td> <td>25.50</td> <td>0.2</td> <td></td> </tr> <tr> <td>1/12/18</td> <td>8:30</td> <td>25.50</td> <td>25.50</td> <td>-</td> <td></td> </tr> <tr> <td>1/12/18</td> <td>19:00</td> <td>45.00</td> <td>45.00</td> <td>0.4</td> <td></td> </tr> <tr> <td>2/12/18</td> <td>8:30</td> <td>45.00</td> <td>45.00</td> <td>-</td> <td></td> </tr> </tbody> </table>										Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :	27/11/18	8:30	-	-	-		27/11/18	19:00	15.00	15.00	0.3		30/11/18	8:30	15.00	15.00	-		30/11/18	19:00	25.50	25.50	0.2		1/12/18	8:30	25.50	25.50	-		1/12/18	19:00	45.00	45.00	0.4		2/12/18	8:30	45.00	45.00	-		<table border="1"> <thead> <tr> <th colspan="2">Cohesive Soil (N)</th> <th colspan="5">0 2 4 8 15 30</th> </tr> <tr> <td colspan="2"></td> <td>V.soft</td> <td>Soft</td> <td>M. Stiff</td> <td>Stiff</td> <td>V. Stiff</td> <td>Hard</td> </tr> <tr> <th colspan="2">Non Cohesive Soil (N)</th> <th colspan="5">0 4 10 30 50</th> </tr> <tr> <td colspan="2"></td> <td>V.Loose</td> <td>Loose</td> <td>Medium Dense</td> <td>Dense</td> <td>Very Dense</td> </tr> </thead> </table>										Cohesive Soil (N)		0 2 4 8 15 30							V.soft	Soft	M. Stiff	Stiff	V. Stiff	Hard	Non Cohesive Soil (N)		0 4 10 30 50							V.Loose	Loose	Medium Dense	Dense	Very Dense	Prepared by: _____ Checked by: _____									
Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :																																																																																																																									
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


<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-7								
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 27/11/2018		<b>Coordinates</b> N -30676.015 E -468112.510											
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 2/12/2018		<b>Reduced Level (mRL):</b> 1.724										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph							
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description	'N' Value 0 10 20 30 40 50					
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record			Legend	Depth (m)	Thickness (m)	W G	
1/12/2018	24.000	UD8					Rec : 900/1000mm						Top: Light to medium grey, CLAY of high plasticity							
	25.000															25.45	1.45		Bottom: DITTO	
	25.500	P9/D9					1	2	1	2	2	2							Medium stiff, light to medium grey, silty CLAY	
	25.950																			
	27.000	P10/D10					2	1	2	2	3	2							Stiff, light to medium grey, silty CLAY	
	27.450																			
	28.500	P11/D11					2	2	3	2	2	3							Stiff, light to medium grey, silty CLAY	
	28.950																			
	30.000	P12/D12					2	3	3	2	3	3								Stiff, light grey, CLAY
	30.450																			
31.500	P13/D13					1	2	3	2	2	2							Stiff, light to medium grey, CLAY		
31.950																				
33.000	P14/D14					3	4	5	5	5	6							Very stiff, light to medium grey, sandy CLAY		
33.450																				
34.500	P15/D15					2	2	1	2	3	2							Medium stiff, light to medium grey, CLAY		
34.950																				
36.000																				

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	27/11/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	27/11/18	19:00	15.00	15.00	0.3	
	= Disturbed Sample		Sand	30/11/18	8:30	15.00	15.00	-	
	= Cored Sample		Gravel	30/11/18	19:00	25.50	25.50	0.2	
	= Vane Shear Test		Decayed Matter	1/12/18	8:30	25.50	25.50	-	
RQD	= Rock Quality Disignation		Granite	1/12/18	19:00	45.00	45.00	0.4	
TCR	= Total Core Recovery		Limestone	2/12/18	8:30	45.00	45.00	-	
CRP	= Core Recovery Ratio		Mudstone						




 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-7							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 27/11/2018		<b>Coordinates</b> N -30676.015 E -468112.510										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 2/12/2018		<b>Reduced Level (mRL):</b> 1.724										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description	'N' Value 0 10 20 30 40 50				
						75mm	75mm	75mm	75mm	75mm	75mm	Casing Record	Legend			Depth (m)	Thickness (m)	W G	
	48.000		P24/D24				3	4	3	5	5	4			4.50			Very stiff, light to medium grey, CLAY	
	48.450																		
	49.500		P25/D25				3	3	4	5	5	5			1.45			Very stiff, light to medium grey, sandy CLAY	
	49.950																		
	51.000		P26/D26				3	4	4	5	6	6			1.55			Very stiff, light to medium grey, silty CLAY	
	51.450																		
	52.500		P27/D27				5	4	5	6	6	9			1.35			Very stiff, light to medium grey, CLAY	
	52.950																		
	54.000		P28/D28				4	3	4	5	5	7			3.15			Very stiff, light to medium grey, silty CLAY	
	54.450																		
	55.500		P29/D29				3	4	4	5	6	6			1.45			-DITTO-	
	55.950																		
	57.000		P30/D30				3	4	4	3	5	6			1.60			Very stiff, light to medium grey, CLAY	
	57.450																		
	58.500		P31/D31				4	3	4	6	6	7			0.3			Very stiff, light to medium grey, silty CLAY	
	58.950																		
	60.000																		

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	27/11/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	27/11/18	19:00	15.00	15.00	0.3	
	= Disturbed Sample		Sand	30/11/18	8:30	15.00	15.00	-	
	= Cored Sample		Gravel	30/11/18	19:00	25.50	25.50	0.2	
	= Vane Shear Test		Decayed Matter	1/12/18	8:30	25.50	25.50	-	
RQD	= Rock Quality Disignation		Granite	1/12/18	19:00	45.00	45.00	0.4	
TCR	= Total Core Recovery		Limestone	2/12/18	8:30	45.00	45.00	-	
CRR	= Core Recovery Ratio		Mudstone						

Prepared by:		Checked by:	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.							
										6 of 6		BH-7							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates										
Location : PULAU INDAH					SG/1281/2018		27/11/2018		N -30676.015										
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -468112.510									
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		2/12/2018		Reduced Level (mRL): 1.724									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value 0 10 20 30 40 50					
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thick-ness (m)	W G	Description
	60.000	P32/D32					5	4	5	5	7	8				0.45		Very stiff, light to medium grey, sandy CLAY	
	60.450							Rec : 200/450mm N= 25											
																		<i>Borehole terminated at depth 60.45m</i>	

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	27/11/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard
	= Undisturbed Sample		Clay	27/11/18	19:00	15.00	15.00	0.3	
	= Disturbed Sample		Sand	30/11/18	8:30	15.00	15.00	-	Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Cored Sample		Gravel	30/11/18	19:00	25.50	25.50	0.2	
	= Vane Shear Test		Decayed Matter	1/12/18	8:30	25.50	25.50	-	
RQD	= Rock Quality Disignation		Granite	1/12/18	19:00	45.00	45.00	0.4	
TCR	= Total Core Recovery		Limestone	2/12/18	8:30	45.00	45.00	-	
CRP	= Core Recovery Ratio		Mudstone						

Prepared by:

Checked by:

<b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-8							
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 18/12/2018		<b>Coordinates</b> N -29989.421 E -46498.503										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 22/12/2018		<b>Reduced Level (mRL):</b> 1.883										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							N' Value					
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description
18/12/2018	0.000													---	0.30	0.30		Light grey, very clayey SAND	
	1.500		P1/D1											XX		2.65		Very soft, light to medium grey, silty CLAY	
	1.950													XX					
	3.000		UD1											---				Top: Light to medium grey, slightly clayey SAND	
	4.000													---		1.45		Bottom: Light to medium grey, slightly clayey SAND	
	4.500		P2/D2											XX				Very soft, light to medium grey, silty CLAY	
	4.950													XX		2.10			
	6.000		UD2											---				Top: Light to medium grey, silty CLAY	
	7.000													---		0.95		Bottom: Light to medium grey, CLAY	
	7.500		P3/D3											XX				Very soft, light to medium grey, silty CLAY	
	7.950													XX		1.41			
	9.000		UD3											---				Top: Light to medium grey, sandy CLAY	
	10.000													---		10.40		Bottom: DITTO	
	10.500		P4/D4											XX				Very soft, light to medium grey, silty CLAY	
	10.950													XX					
	12.000													---					

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	18/12/18	8:30	-	-	-	Cohesive Soil (N) V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	18/12/18	19:00	27.00	24.00	0.5	
	= Disturbed Sample		Sand	20/12/18	8:30	24.00	24.00	-	
	= Cored Sample		Gravel	20/12/18	19:00	42.00	42.00	1.0	
	= Vane Shear Test		Decayed Matter	21/12/18	8:00	42.00	42.00	0.5	
RQD	= Rock Quality Disignation		Granite	21/12/18	19:00	51.00	51.00	0.7	
TCR	= Total Core Recovery		Limestone						

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-8							
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 18/12/2018		<b>Coordinates</b> N -29989.421 E -46498.503										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 22/12/2018		<b>Reduced Level (mRL):</b> 1.883									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Depth (m)	Thickness (m)	W G	Description		
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record	Legend					
	12.000		UD4												12.30	1.90		Top: Light to medium grey, CLAY	
														xx ...				Bottom: Light to medium grey, sandy SILT	
	13.000													xx ...		1.10			
	13.500													xx ...					
	13.950		P5/D5			0	1	0	1	1	1							Soft, light to medium grey, CLAY with some of organic matter	
	15.000																		
	15.000		UD5															Top: Light to medium grey, CLAY	
	16.000																	Bottom: DITTO	
	16.500																		
	16.500		P6/D6			0	1	0	1	1	1							Very soft, light to medium grey, CLAY	
	16.950																		
	18.000																		
	18.000		UD6															Top: Light to medium grey, clayey SAND	
	19.000																	Bottom: DITTO	
	19.500																		
	19.500		P7/D7			1	1	1	1	1	1							Medium stiff, light to medium grey, silty CLAY	
	19.950																		
	21.000																		
	21.000		UD7															Top: Light to medium grey, CLAY	
	22.000																	Bottom: DITTO	
	22.500																		
	22.500		P8/D8			1	2	2	2	2	2							Medium stiff, light to medium grey, sandy SILT	
	22.950																		
	24.000																		

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	18/12/18	8:30	-	-	-	
	= Undisturbed Sample		Clay	18/12/18	19:00	27.00	24.00	0.5	
	= Disturbed Sample		Sand	20/12/18	8:30	24.00	24.00	-	
	= Cored Sample		Gravel	20/12/18	19:00	42.00	42.00	1.0	
	= Vane Shear Test		Decayed Matter	21/12/18	8:00	42.00	42.00	0.5	
RQD	= Rock Quality Disignation		Granite	21/12/18	19:00	51.00	51.00	0.7	
TCR	= Total Core Recovery		Limestone	22/12/18	8:30	51.00	51.00	0.3	
CRR	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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













<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-8							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 18/12/2018		<b>Coordinates</b> N -29989.421 E -46498.503										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 22/12/2018		<b>Reduced Level (mRL):</b> 1.883										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description					
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	
20/12/2018	24.000	P9/D9					2	1	2	2	2	2	8	xx ...	24.450	2.98			-DITTO-
	24.450						Rec : 300/450mm	N=	8	xx ...									
	25.500	P10/D10					3	2	2	2	3	3	10	...	25.950	1.42			Stiff, light to medium grey, very clayey SAND
	25.950						Rec : 300/450mm	N=	10	...									
	27.000	P11/D11					4	3	4	4	3	5	16	xx ...	27.450	1.55			Very stiff, light to medium grey, sandy SILT
	27.450						Rec : 340/450mm	N=	16	xx ...									
	28.500	P12/D12					6	5	6	6	7	7	26	... xx	28.950				Medium dense, light to medium grey, silty fine grain SAND
	28.950						Rec : 300/450mm	N=	26	... xx									
	30.000	P13/D13					5	6	7	7	9	9	32	... xx	30.450	4.39			Dense, light to medium grey, silty fine grain SAND
	30.450						Rec : 250/450mm	N=	32	... xx									
	31.500	P14/D14					6	7	9	8	10	10	37	... xx	31.950				-DITTO-
	31.950						Rec : 200/450mm	N=	37	... xx									
	33.000	P15/D15					6	6	7	8	9	9	35	... --	33.450				Dense, light to medium grey, slightly clayey SAND
	33.450						Rec : 300/450mm	N=	35	... --									
	34.500	P16/D16					6	5	5	8	9	9	31	... --	34.950				-DITTO-
	34.950						Rec : 250/450mm	N=	31	... --									
36.000																			

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	18/12/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	18/12/18	19:00	27.00	24.00	0.5	
	= Disturbed Sample		Sand	20/12/18	8:30	24.00	24.00	-	
	= Cored Sample		Gravel	20/12/18	19:00	42.00	42.00	1.0	
	= Vane Shear Test		Decayed Matter	21/12/18	8:00	42.00	42.00	0.5	
	RQD = Rock Quality Disignation		Granite	21/12/18	19:00	51.00	51.00	0.7	
	TCR = Total Core Recovery		Limestone	22/12/18	8:30	51.00	51.00	0.3	
	CRR = Core Recovery Ratio		Mudstone						

Prepared by:		Checked by:	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-8							
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 18/12/2018		<b>Coordinates</b> N -29989.421 E -46498.503										
<b>Client</b>		<b>Consultant</b>		<b>Type of Boring</b>	<b>Boring Dia. (mm)</b>	<b>Orientation</b>		<b>Date Completed</b>		<b>Reduced Level (mRL):</b> 1.883									
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		22/12/2018											
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value
21/12/2018	36.000	P17/D17					7	6	7	9	9	11	--- --					-DITTO-	0
	36.450						7	6	7	9	9	11							
	37.500	P18/D18					8	9	9	9	10	12	--- --		7.56		Dense, light to medium grey, clayey SAND	10	
	37.950						8	9	9	9	10	12							Rec : 280/450mm
	39.000	P19/D19					7	6	7	7	9	10	--- --				-DITTO-	20	
	39.450						7	6	7	7	9	10							Rec : 300/450mm
	40.500	P20/D20					5	6	5	5	6	7	XX ...		1.45		Very stiff, light to medium grey, sandy SILT	30	
	40.950						5	6	5	5	6	7							Rec : 300/450mm
42.000	P21/D21					6	5	6	6	7	8	--- --			1.63		Very stiff, light to medium grey, clayey SAND	40	
42.450						6	5	6	6	7	8								Rec : 250/450mm
43.500	P22/D22					5	6	7	7	8	8	XX ...		1.42		Very stiff, medium grey, sandy SILT	50		
43.950						5	6	7	7	8	8							Rec : 300/450mm	N= 30
45.000	P23/D23					5	6	6	6	7	7	--- --				Very stiff, medium to dark grey, CLAY	60		
45.950						5	6	6	6	7	7							Rec : 250/450mm	N= 26
46.500	P24/D24					6	5	6	7	7	7	--- --				-DITTO-	70		
46.950						6	5	6	7	7	7							Rec : 300/450mm	N= 27
48.000																			
<b>Legend</b>  = Standard Penetration Test  = Undisturbed Sample  = Disturbed Sample  = Cored Sample  = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRP = Core Recovery Ratio		<b>Soil Legend</b>  Silt  Clay  Sand  Gravel  Decayed Matter  Granite  Limestone  Mudstone		<b>Date</b> 18/12/18 18/12/18 20/12/18 20/12/18 21/12/18 21/12/18 22/12/18	<b>Time</b> 8:30 19:00 8:30 19:00 8:00 19:00 8:30	<b>Depth of Hole (m)</b> - 27.00 24.00 42.00 42.00 51.00 51.00	<b>Depth of Casing (m)</b> - 24.00 24.00 42.00 42.00 51.00 51.00	<b>Depth of Water (m)</b> - 0.5 - 1.0 0.5 0.7 0.3	<b>Remarks :</b>  <div style="display: flex; justify-content: space-around;"> <div> <b>Cohesive Soil (N)</b>            0    2    4    8    15    30            V.soft    Soft    M. Stiff    Stiff    V. Stiff    Hard         </div> <div> <b>Non Cohesive Soil (N)</b>            0    4    10    30    50            V.Loose    Loose    Medium Dense    Dense    Very Dense         </div> </div>		<b>Prepared by:</b> _____ <b>Checked by:</b> _____								



<div style="display: flex; justify-content: space-between;"> <div style="font-size: 0.8em;"> <b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b>          No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor.          Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622       </div> </div>					<b>Sheet</b>	<b>Borehole Ref. No.</b>															
					5 of 6	BH-8															
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates												
Location : PULAU INDAH					SG/1281/2018		18/12/2018		N -29989.421 E -46498.503												
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation	Date Completed		Reduced Level (mRL):												
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical	22/12/2018		1.883												
Date & Time	SAMPLE / INSITU TEST					SOIL / STRATUM DETAILS					Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50										
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores														
							75mm	75mm	75mm	75mm	75mm		75mm	Casing Record	Legend	Depth (m)	Thick-ness (m)	W G	Description		
22/12/2018	48.000	P25/D25				5	5	5	6	6	7	24							-DITTO-		
	48.450						Rec : 250/450mm														
	49.500	P26/D26				6	5	6	7	7	9	29							-DITTO-		
	49.950						Rec : 250/450mm														
	51.000	P27/D27				6	6	6	6	7	8	27							-DITTO-		
	51.450						Rec : 250/450mm														
	52.500	P28/D28				7	6	7	8	8	8	31							Hard, medium to dark grey, CLAY with some of organic matter		
	52.950						Rec : 250/450mm														
54.000	P29/D29				5	6	7	7	8	9	31							Hard, medium to dark grey, CLAY			
54.450						Rec : 270/450mm															
55.500	P30/D30				6	6	6	7	7	7	27							Very stiff, medium to dark grey, CLAY			
55.950						Rec : 250/450mm															
57.000	P31/D31				5	4	6	7	7	8	28							-DITTO-			
57.450						Rec : 250/450mm															
58.500	P32/D32				6	6	6	7	8	8	29							-DITTO-			
58.950						Rec : 250/450mm															
60.000																					
<b>Legend</b>			<b>Soil Legend</b>			Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :										
	= Standard Penetration Test			= Silt		18/12/18	8:30	-	-	-											
	= Undisturbed Sample			= Clay		18/12/18	19:00	27.00	24.00	0.5											
	= Disturbed Sample			= Sand		20/12/18	8:30	24.00	24.00	-											
	= Cored Sample			= Gravel		20/12/18	19:00	42.00	42.00	1.0											
	= Vane Shear Test			= Decayed Matter		21/12/18	8:00	42.00	42.00	0.5											
RQD	= Rock Quality Disignation			= Granite		21/12/18	19:00	51.00	51.00	0.7											
TCR	= Total Core Recovery			= Limestone		22/12/18	8:30	51.00	51.00	0.3											
CRP	= Core Recovery Ratio			= Mudstone																	
						<div style="display: flex; justify-content: space-between;"> <div> <p>Cohesive Soil (N)</p> <p>V.soft   Soft   M. Stiff   Stiff   V. Stiff   Hard</p> </div> <div> <p>Non Cohesive Soil (N)</p> <p>V. Loose   Loose   Medium Dense   Dense   Very Dense</p> </div> </div>															
Prepared by:					Checked by:																

<b>STRATA GEOTECHNICS SDN. BHD.</b> (Co. No. 393744T) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 6 of 6			<b>Borehole Ref. No.</b> BH-8									
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH										<b>Job No.</b> SG/1281/2018			<b>Date Started</b> 18/12/2018		<b>Coordinates</b> N -29989.421 E -46498.503							
<b>Client</b> WESTPORTS (M) DDN. BHD.			<b>Consultant</b> HSS INTEGRATED SDN. BHD.			<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 22/12/2018		<b>Reduced Level (mRL):</b> 1.883										
<b>Date &amp; Time</b>	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>					<b>Standard Penetration Test Graph</b>										
	<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>75mm</b>	<b>75mm</b>	<b>75mm</b>	<b>75mm</b>	<b>75mm</b>	<b>75mm</b>	<b>Casing Record</b>	<b>Legend</b>	<b>Depth (m)</b>	<b>Thickness (m)</b>	<b>W G</b>	<b>Description</b>		<b>'N' Value</b> 0 10 20 30 40 50		
	60.000		P33/D33													15.55			Hard, medium to dark grey, CLAY			
	60.450																		<i>Borehole terminated at depth 60.45m</i>			

<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	<b>Remarks :</b>		
= Standard Penetration Test = Undisturbed Sample = Disturbed Sample = Cored Sample = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRP = Core Recovery Ratio		Silt Clay Sand Gravel Decayed Matter Granite Limestone Mudstone		18/12/18	8:30	-	-	-	Cohesive Soil (N)  Non Cohesive Soil (N) 		
				18/12/18	19:00	27.00	24.00	0.5			
				20/12/18	8:30	24.00	24.00	-			
				20/12/18	19:00	42.00	42.00	1.0			
				21/12/18	8:00	42.00	42.00	0.5			
				21/12/18	19:00	51.00	51.00	0.7			
				22/12/18	8:30	51.00	51.00	0.3	<b>Prepared by:</b> _____ <b>Checked by:</b> _____		

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-9						
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 2/11/2018		<b>Coordinates</b> N -31014.387 E -46835.478									
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 6/11/2018		<b>Reduced Level (mRL):</b> 1.204									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph					
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description
2/11/2018	0.000		D1				TOPSOIL					0.30	---	0.30	0.30		Light grey, very clayey SAND	
	0.300												xx					
	1.500		P1/D2				-HAMMER WEIGHT-						xx	2.65	5	Very soft light grey clayey SILT.		
	1.950						Rec: 300/450mm						xx					
	3.000		UD1				Rec: 800/1000mm						xx				Top: CLAY of high plasticity	
	4.000												xx	1.45		Bottom: DITTO		
	4.500		P2/D3				-HAMMER WEIGHT-						xx			Very soft light grey clayey SILT		
	4.950						Rec: 300/450mm						xx	1.50				
	6.000		UD2				Rec: 750/1000mm						xx			Top: CLAY of intermediate plasticity		
	7.000												xx	1.50		Bottom: DITTO		
	7.500		P3/D4			1	0	1	1	0	1		xx			Soft, light grey clayey SILT with sand		
	7.950						Rec: 300/450mm						xx	1.45				
	9.000		UD3				Rec: 750/1000mm						xx			Top: CLAY		
	10.000												xx	1.55		Bottom: DITTO		
	10.500		P4/D5			1	0	1	1	1	2		xx			Medium stiff, light grey clayey SILT with sand		
	10.950						Rec: 275/450mm						xx	1.60				
	12.000												xx					

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	02/11/18	9:00	-	-	-	OFFSHORE
	= Undisturbed Sample		Clay	02/11/18	18:30	12.00	12.00	-	
	= Disturbed Sample		Sand	03/11/18	9:00	12.00	12.00	0.50	
	= Cored Sample		Gravel	03/11/18	18:30	39.00	39.00	-	
	= Vane Shear Test		Decayed Matter	03/11/18	18:30	39.00	39.00	0.40	
	RQD = Rock Quality Disignation		Granite	05/11/18	9:00	39.00	39.00	0.40	
	TCR = Total Core Recovery		Limestone	05/11/18	18:30	59.00	59.00	-	
	CRR = Core Recovery Ratio		Mudstone	06/11/18	9:00	59.00	59.00	0.60	

<b>Prepared by:</b>		<b>Checked by:</b>	
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
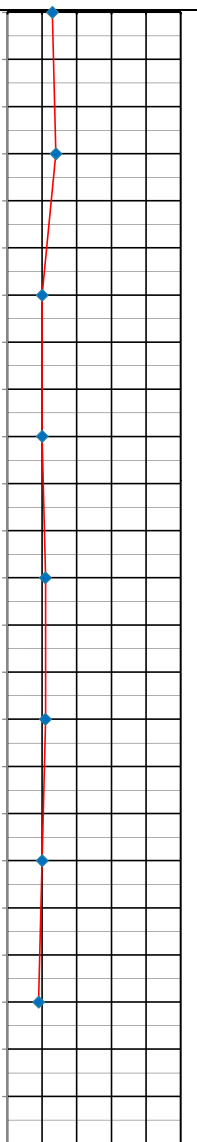
<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-9							
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 2/11/2018		<b>Coordinates</b> N -31014.387 E -46835.478										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 6/11/2018		<b>Reduced Level (mRL):</b> 1.204										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value
	12.000	UD4					Rec : 800/1000mm											Top: CLAY of high plasticity	
	13.000																	Bottom: DITTO	
	13.500					1	0	1	0	1	2							Medium stiff, light grey clayey SILT	
	13.950	P5/D6					Rec : 250/450mm												
	15.000																	Top: Light grey clayey SILT	
	16.000	UD5					Rec : 800/1000mm											Bottom: DITTO	
	16.500					1	1	0	1	2	5							Medium stiff light grey clayey SILT	
	16.950	P6/D7					Rec : 300/450mm												
	18.000																	Top: Light grey CLAY of intermediate plasticity	
	19.000	UD6					Rec : 800/1000mm											Bottom: DITTO	
	19.500					1	0	1	2	2	3							Stiff, light grey clayey SILT with sand	
	19.950	P7/D8					Rec : 300/450mm												
	21.000					1	0	2	1	2	3							-DITTO-	
	21.450	P8/D9					Rec : 300/450mm												
	22.500					2	1	2	4	4	5							Very stiff, light grey sandy SILT with clay	
	22.950	P9/D10					Rec : 250/450mm												
	24.000																		

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	xxxx Silt	02/11/18	9:00	-	-	-	
	xxx Clay	02/11/18	18:30	12.00	12.00	-	
	... Sand	03/11/18	9:00	12.00	12.00	0.50	
	oooo Gravel	03/11/18	18:30	39.00	39.00	-	
	Decayed Matter	03/11/18	18:30	39.00	39.00	0.40	
RQD = Rock Quality Disignation	++++ Granite	05/11/18	9:00	39.00	39.00	0.40	
TCR = Total Core Recovery	++++ Limestone	05/11/18	18:30	59.00	59.00	-	
CRR = Core Recovery Ratio	++++ Mudstone	06/11/18	9:00	59.00	59.00	0.60	

<b>Prepared by:</b>		<b>Checked by:</b>	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-9						
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 2/11/2018		<b>Coordinates</b> N -31014.387 E -46835.478									
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 6/11/2018		<b>Reduced Level (mRL):</b> 1.204									
<b>Date &amp; Time</b>	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>						<b>Standard Penetration Test Graph</b> 					
	<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Field Test / Rock Cores</b>					<b>Casing Record</b>		<b>Legend</b>	<b>Depth (m)</b>	<b>Thick-ness (m)</b>	<b>W G</b>	<b>Description</b>
4/11/2018	24.000	[Disturbed Sample]	P10/D11				2	2	3	2	4	4	xx ...	3.10		Stiff, light grey sandy SILT with clay		
	24.500						2	2	3	2	4	13						xx ...
								Rec : 300/450mm										
	25.500	[Disturbed Sample]	P11/D12				2	2	3	4	3	4	xx ...	25.50		Stiff, light grey CLAY		
	25.950						2	2	3	4	3	14						xx ...
								Rec : 300/450mm										
	27.000	[Disturbed Sample]	P12/D13				1	2	2	1	2	5	xx ...	4.30		Stiff, light grey CLAY of high plasticity		
	27.450						1	2	2	1	2	10						xx ...
								Rec : 300/450mm										
	28.500	[Disturbed Sample]	P13/D14				1	1	2	3	2	3	xx ...	29.80		-DITTO-		
	28.950						1	1	2	3	2	10						xx ...
								Rec : 300/450mm										
	30.000	[Disturbed Sample]	P14/D15				1	2	1	2	3	5	xx ...	3.15		Stiff, light grey clayey SILT		
	30.450						1	2	1	2	3	11						xx ...
								Rec : 300/450mm										
	31.500	[Disturbed Sample]	P15/D16				1	2	2	3	2	4	xx ...	32.95		-DITTO-		
	31.950						1	2	2	3	2	11						xx ...
								Rec : 300/450mm										
33.000	[Disturbed Sample]	P16/D17				1	1	2	2	3	3	xx ...			Stiff, light grey CLAY			
33.450						1	1	2	2	3	10						xx ...	
							Rec : 300/450mm											
34.500	[Disturbed Sample]	P17/D18				1	1	2	1	2	4	xx ...			-DITTO-			
34.950						1	1	2	1	2	9						xx ...	
							Rec : 300/450mm											


  

<b>Legend</b>		<b>Soil Legend</b>		<b>Date</b>	<b>Time</b>	<b>Depth of Hole (m)</b>	<b>Depth of Casing (m)</b>	<b>Depth of Water (m)</b>	<b>Remarks :</b>
[Symbol]	= Standard Penetration Test	[Symbol]	Silt	02/11/18	9:00	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
[Symbol]	= Undisturbed Sample	[Symbol]	Clay	02/11/18	18:30	12.00	12.00	-	
[Symbol]	= Disturbed Sample	[Symbol]	Sand	03/11/18	9:00	12.00	12.00	0.50	
[Symbol]	= Cored Sample	[Symbol]	Gravel	03/11/18	18:30	39.00	39.00	-	
[Symbol]	= Vane Shear Test	[Symbol]	Decayed Matter	05/11/18	9:00	39.00	39.00	0.40	
[Symbol]	= RQD = Rock Quality Disignation	[Symbol]	Granite	05/11/18	18:30	59.00	59.00	-	
[Symbol]	= TCR = Total Core Recovery	[Symbol]	Limestone	06/11/18	9:00	59.00	59.00	0.60	
[Symbol]	= CRP = Core Recovery Ratio	[Symbol]	Mudstone						<b>Prepared by:</b> _____ <b>Checked by:</b> _____

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-9							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 2/11/2018		<b>Coordinates</b> N -31014.387 E -46835.478										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 6/11/2018		<b>Reduced Level (mRL):</b> 1.204										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph 'N' Value 0 10 20 30 40 50						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description					
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	
	36.000		P19/D20				1	2	1	2	3	3				4.45			
	36.450																		
	37.500		P20/D21				1	2	2	1	3	3		xx	37.40				
	37.950													xx					
	39.000		P21/D22				1	2	1	2	4	4		xx					
	39.450													xx					
	40.500		P22/D23				1	2	2	3	5	5		xx					
	40.950													xx					
	42.000		P23/D24				2	2	3	4	3	7		xx					
	42.450													xx					
	43.500		P24/D25				2	2	4	3	5	7		xx					
	43.950													xx					
5/11/2018	45.000		P25/D26				2	3	3	5	5	7		xx					
	45.950													xx					
	46.500		P26/D27				2	3	5	5	7	9		xx					
	46.950													xx					

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	02/11/18	9:00	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	02/11/18	18:30	12.00	12.00	-	
	= Disturbed Sample		Sand	03/11/18	9:00	12.00	12.00	0.50	
	= Cored Sample		Gravel	03/11/18	18:30	39.00	39.00	-	
	= Vane Shear Test		Decayed Matter	03/11/18	18:30	39.00	39.00	0.40	
	RQD = Rock Quality Disignation		Granite	05/11/18	9:00	39.00	39.00	-	
	TCR = Total Core Recovery		Limestone	05/11/18	18:30	59.00	59.00	-	
	CRR = Core Recovery Ratio		Mudstone	06/11/18	9:00	59.00	59.00	0.60	

<b>Prepared by:</b>		<b>Checked by:</b>	
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
 <b>STRATA GEOTECHNICS SDN. BHD.</b> (Co. No. 393744T) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622											Sheet		Borehole Ref. No.								
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19											5 of 6		BH-9								
Location : PULAU INDAH											Job No.		Date Started		Coordinates						
											SG/1281/2018		2/11/2018		N -31014.387 E -46835.478						
Client			Consultant			Type of Boring		Boring Dia. (mm)	Orientation		Date Completed		Reduced Level (mRL):								
WESTPORTS (M) DDN. BHD.			HSS INTEGRATED SDN. BHD.			ROTARY WASH		100	Vertical		6/11/2018		1.204								
Date & Time	SAMPLE / INSITU TEST							SOIL / STRATUM DETAILS					Standard Penetration Test Graph								
Date & Time	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)	Thick-ness (m)	W G	Description	'N' Value			
							75mm	75mm	75mm	75mm	75mm							75mm	0	10	20
6/11/2018	48.000		P27/D28				3	3	7	6	7	9									
	48.450																	6.05			
	49.500		P28/D29				3	5	7	7	9		xx								
	49.950																1.45				
	51.000		P29/D30				2	5	6	8	8										
	51.450																1.45				
	52.500		P30/D31				2	4	7	7	9		xx								
	52.950																1.60				
	54.000		P31/D32				3	5	5	7	7										
	54.450																				
55.500		P32/D33				2	5	4	7	9											
55.950																					
57.000		P33/D34				2	4	8	7	9											
57.450																					
58.500		P34/D35				3	5	7	7	10											
58.950																					

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	02/11/18	9:00	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	02/11/18	18:30	12.00	12.00	-	
	= Disturbed Sample		Sand	03/11/18	9:00	12.00	12.00	0.50	
	= Cored Sample		Gravel	03/11/18	18:30	39.00	39.00	-	
	= Vane Shear Test		Decayed Matter	03/11/18	18:30	39.00	39.00	0.40	
RQD	= Rock Quality Disignation		Granite	05/11/18	9:00	39.00	39.00	-	
TCR	= Total Core Recovery		Limestone	05/11/18	18:30	59.00	59.00	-	
CRP	= Core Recovery Ratio		Mudstone	06/11/18	9:00	59.00	59.00	0.60	

<b>Prepared by:</b>		<b>Checked by:</b>	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.												
										6 of 6		BH-9												
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates															
Location : PULAU INDAH					SG/1281/2018		2/11/2018		N -31014.387															
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -46835.478														
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		6/11/2018		Reduced Level (mRL): 1.204														
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph											
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value										
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thick-ness (m)	W G	Description	0	10	20	30	40
	60.000	P35/D36					3	5	7	9	9	13		... xx		6.45		Hard, light grey silty SAND						
	60.450							Rec : 270/450mm N= 38																
																		Borehole terminated at depth 60.45m						

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	02/11/18	9:00	-	-	-	Cohesive Soil (N) V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	02/11/18	18:30	12.00	12.00	-	
	= Disturbed Sample		Sand	03/11/18	9:00	12.00	12.00	0.50	
	= Cored Sample		Gravel	03/11/18	18:30	39.00	39.00	-	
	= Vane Shear Test		Decayed Matter	05/11/18	9:00	39.00	39.00	0.40	
	RQD = Rock Quality Disignation		Granite	05/11/18	18:30	59.00	59.00	-	
	TCR = Total Core Recovery		Limestone	06/11/18	9:00	59.00	59.00	0.60	
	CRR = Core Recovery Ratio		Mudstone						Prepared by: _____



<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-10					
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 25/10/2018		<b>Coordinates</b> N -31349.751 E -46856.115								
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 27/10/2018		<b>Reduced Level (mRL):</b> 1.637								
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50				
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Depth (m)	Thickness (m)	W G	Description
25/10/2018	0.000	[Disturbed Sample]	D1				TOPSOIL						0.30	xx	0.30	Dark grey, clayey SILT	
	0.300						Rec: 200/300mm										
	1.500	[Disturbed Sample]	P1/D2				-HAMMER WEIGHT-						5	xx	5	Very soft light grey clayey SILT.	
	1.950						Rec: 300/450mm										
	3.000	[Undisturbed Sample]	UD1				Rec: 900/1000mm						5.60	xx	5.60	Top: Light grey clayey SILT Bottom: DITTO	
	4.000						-HAMMER WEIGHT-										
	4.500	[Disturbed Sample]	P2/D3				Rec: 300/450mm						5.90	xx	5.90	Very soft light grey clayey SILT	
	4.950						-HAMMER WEIGHT-										
	6.000	[Undisturbed Sample]	UD2				Rec: 800/1000mm						7.45	xx	7.45	Top: Light grey sandy CLAY Bottom: DITTO	
	7.000						-HAMMER WEIGHT-										
7.500	[Disturbed Sample]	P3/D4				1	0	0	1	0	1	N=	xx	7.45	7.45	Very soft, light grey clayey SILT with sand	
7.950						Rec: 300/450mm											Casing Record
9.000	[Undisturbed Sample]	UD3				Rec: 950/1000mm						9.00	xx	9.00	Top: Light grey clayey SILT with sand Bottom: DITTO		
10.000						-HAMMER WEIGHT-										Casing Record	Legend
10.500	[Disturbed Sample]	P4/D5				1	0	1	0	1	N=	xx	9.00	9.00	Soft, light grey clayey SILT with sand		
10.950						Rec: 250/450mm										Casing Record	Legend
12.000							Casing Record	Legend	Depth (m)	Thickness (m)	W G	Description					
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)							Depth of Water (m)	Depth of Water (m)	Remarks :		
[Disturbed Sample]	= Standard Penetration Test	[xxxx xxx]	Silt	25/10/18	9:00	-	-	-	OFFSHORE								
[Undisturbed Sample]	= Undisturbed Sample	[----- -----]	Clay	25/10/18	18:30	21.00	1.00	1.0	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard								
[Disturbed Sample]	= Disturbed Sample	[..... .....]	Sand	26/10/18	9:00	21.00	21.00	0.5	Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense								
[Cored Sample]	= Cored Sample	[o o o o o o o o]	Gravel	26/10/18	18:30	42.00	42.00	0.8	Prepared by:								
[Vane Shear Test]	= Vane Shear Test	[+ + + + + + + +]	Decayed Matter	27/10/18	9:00	42.00	42.00	0.5	Checked by:								
RQD	= Rock Quality Disignation	[+ + + + + + + +]	Granite	27/10/18	18:30	60.00	60.00	1.0									
TCR	= Total Core Recovery	[+ + + + + + + +]	Limestone														
CRR	= Core Recovery Ratio	[+ + + + + + + +]	Mudstone														

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-10						
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 25/10/2018		<b>Coordinates</b> N -31349.751 E -46856.115									
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 27/10/2018		<b>Reduced Level (mRL):</b> 1.637								
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50					
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description
	12.000	UD4					Rec : 950/1000mm											Top: Light grey CLAY of intermediate plasticity Bottom: DITTO
	13.000																	
	13.500	P5/D6				1	1	1	0	1	2						Soft, light grey clayey SILT with sand	
	13.950						Rec : 250/450mm											
	15.000	UD5					Rec : 950/1000mm											Top: Light grey clayey SILT with sand Bottom: DITTO
	16.000																	
	16.500	P6/D7				1	1	0	1	1	2						Soft light grey clayey SILT with sand	
	16.950						Rec : 300/450mm											
	18.000	UD6					Rec : 900/1000mm											Top: Light grey sandy CLAY Bottom: DITTO
	19.000																	
	19.500	P7/D8				1	0	1	1	0	1						Light grey clayey SILT	
	19.950						Rec : 300/450mm											
	21.000	P8/D9				1	0	1	0	1	1						Light grey clayey SILT	
	21.450						Rec : 300/450mm											
	22.500	P9/D10				1	0	1	2	1	1						Soft light grey clayey SILT with sand	
	22.950						Rec : 250/450mm											
	24.000																	
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :									
	= Standard Penetration Test		Silt	25/10/18	9:00	-	-	-										
	= Undisturbed Sample		Clay	25/10/18	18:30	21.00	1.00	1.0										
	= Disturbed Sample		Sand	26/10/18	9:00	21.00	21.00	0.5										
	= Cored Sample		Gravel	26/10/18	18:30	42.00	42.00	0.8										
	= Vane Shear Test		Decayed Matter	27/10/18	9:00	42.00	42.00	0.5										
RQD	= Rock Quality Disignation		Granite	27/10/18	18:30	60.00	60.00	1.0										
TCR	= Total Core Recovery		Limestone															
CRP	= Core Recovery Ratio		Mudstone															
								Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard										
								Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense										
<b>Prepared by:</b>					<b>Checked by:</b>													

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-10							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 25/10/2018		<b>Coordinates</b> N -31349.751 E -46856.115										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 27/10/2018		<b>Reduced Level (mRL):</b> 1.637										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph 'N' Value 0 10 20 30 40 50						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description					
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	
26/10/2018	24.000	P10/D11					1	1	2	1	2	1	6						Soft light grey sandy CLAY
	24.500						Rec : 200/450mm												
	25.500	P11/D12					1	1	2	2	1	2	7						-DITTO-
	25.950						Rec : 300/450mm												
	27.000	P12/D13					1	1	2	2	2	1	7			6.00			-DITTO-
	27.450						Rec : 300/450mm												
	28.500	P13/D14					1	2	1	2	2	3	8						-DITTO-
	28.950						Rec : 300/450mm												
30.000	P14/D15					1	0	2	1	2	2	7	xx			1.45		Medium stiff, light grey clayey SILT	
30.450						Rec : 300/450mm													
31.500	P15/D16					1	2	2	4	3	3	12						Medium stiff, light grey sandy CLAY	
31.950						Rec : 250/450mm													
33.000	P16/D17					1	1	2	2	1	1	6						Medium stiff, light grey sandy CLAY	
33.450						Rec : 250/450mm													
34.500	P17/D18					1	0	2	2	1	2	7						-DITTO-	
34.950						Rec : 300/450mm													
36.000																			

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	25/10/18	9:00	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	25/10/18	18:30	21.00	1.00	1.0	
	= Disturbed Sample		Sand	26/10/18	9:00	21.00	21.00	0.5	
	= Cored Sample		Gravel	26/10/18	18:30	42.00	42.00	0.8	
	= Vane Shear Test		Decayed Matter	26/10/18	18:30	42.00	42.00	0.5	
RQD	= Rock Quality Disignation		Granite	27/10/18	9:00	42.00	42.00	0.5	
TCR	= Total Core Recovery		Limestone	27/10/18	18:30	60.00	60.00	1.0	
CRR	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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
<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-10							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 25/10/2018		<b>Coordinates</b> N -31349.751 E -46856.115										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 27/10/2018		<b>Reduced Level (mRL):</b> 1.637										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value
	36.000	P18/D19					1	2	3	3	4	3			37.40			Stiff, light grey sandy CLAY	13
	36.450						Rec : 300/450mm	5	17										
	37.500	P19/D20					2	3	4	4	5	4						Very stiff, light grey clayey SILT with sand	17
	37.950						Rec : 250/450mm	6	17										
	39.000	P20/D21					2	4	3	4	4	6						-DITTO-	17
	39.450						Rec : 300/450mm	7	21										
	40.500	P21/D22					1	3	5	5	4	7						-DITTO-	21
	40.950						Rec : 200/450mm	8	26										
	42.000	P22/D23					2	4	6	5	7	7						-DITTO-	25
	42.450						Rec : 250/450mm	8	26										
	43.500	P23/D24					2	5	4	6	8	8						Very stiff, light grey sandy SILT	26
	43.950						Rec : 300/450mm	3	16										
	45.000	P24/D25					2	2	4	5	4	3						Very stiff, light grey CLAY of intermediate plasticity	16
	45.450						Rec : 250/450mm	2	7										
	46.500	P25/D26					2	1	2	1	2	2						Medium stiff, light grey clayey SILT with sand	7
	46.950						Rec : 300/450mm												
	48.000																		

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	25/10/18	9:00	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	25/10/18	18:30	21.00	1.00	1.0	
	= Disturbed Sample		Sand	26/10/18	9:00	21.00	21.00	0.5	
	= Cored Sample		Gravel	26/10/18	18:30	42.00	42.00	0.8	
	= Vane Shear Test		Decayed Matter	27/10/18	9:00	42.00	42.00	0.5	
RQD	= Rock Quality Disignation		Granite	27/10/18	18:30	60.00	60.00	1.0	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

Prepared by:		Checked by:	
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













 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-10							
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 25/10/2018		<b>Coordinates</b> N -31349.751 E -46856.115										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 27/10/2018		<b>Reduced Level (mRL):</b> 1.637										
<b>Date &amp; Time</b>	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>						<b>Standard Penetration Test Graph</b>						
	<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Field Test / Rock Cores</b>					<b>Casing Record</b>	<b>Legend</b>	<b>Depth (m)</b>	<b>Thickness (m)</b>	<b>W G</b>	<b>Description</b>	<b>'N' Value</b> 0 10 20 30 40 50	
27/10/2018	48.000	P26/D27					1	1	2	3	2	1	xx	4.55			-DITTO-		
	48.450						1	1	2	3	2	8	xx						
	49.500	P27/D28					1	0	1	2	2	1	xx	4.55			-DITTO-		
	49.950						1	0	1	2	2	6	xx						
	51.000	P28/D29					1	1	2	3	2	2	xx	2.95			Medium stiff, light grey CLAY		
	51.450						1	1	2	3	2	9	xx						
	52.500	P29/D30					1	2	3	3	3	2	xx	2.95			Stiff, light grey, CLAY of intermediate plasticity		
	52.950						1	2	3	3	3	11	xx						
	54.000	P30/D31					2	1	2	3	5	5	xx	1.55			Very stiff, light grey clayey SILT		
	54.450						2	1	2	3	5	15	xx						
55.500	P31/D32					2	2	4	5	5	4	xx	4.55			Very stiff, light grey, CLAY of intermediate plasticity			
55.950						2	2	4	5	5	18	xx							Rec : 300/450mm
57.000	P32/D33					2	3	5	4	5	5	xx	4.55			-DITTO-			
57.450						2	3	5	4	5	19	xx							Rec : 300/450mm
58.500	P33/D34					1	3	4	4	5	7	xx	4.55			-DITTO-			
58.950						1	3	4	4	5	20	xx							Rec : 300/450mm
60.000																			

<b>Legend</b>		<b>Soil Legend</b>		<b>Date</b>	<b>Time</b>	<b>Depth of Hole (m)</b>	<b>Depth of Casing (m)</b>	<b>Depth of Water (m)</b>	<b>Remarks :</b>
	= Standard Penetration Test		Silt	25/10/18	9:00	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	25/10/18	18:30	21.00	1.00	1.0	
	= Disturbed Sample		Sand	26/10/18	9:00	21.00	21.00	0.5	
	= Cored Sample		Gravel	26/10/18	18:30	42.00	42.00	0.8	
	= Vane Shear Test		Decayed Matter	27/10/18	9:00	42.00	42.00	0.5	
	RQD = Rock Quality Disignation		Granite	27/10/18	18:30	60.00	60.00	1.0	
	TCR = Total Core Recovery		Limestone						
	CRR = Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.																																																																																																																																																																														
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	60.000	P34/D35					2	3	5	7	6	7		...				Very stiff, sandy CLAY	0 10 20 30 40 50																																																																																																																																																																							
	60.450							Rec : 300/450mm N= 25							60.45			Borehole terminated at depth 60.45m																																																																																																																																																																								
<b>Legend</b>  = Standard Penetration Test  = Undisturbed Sample  = Disturbed Sample  = Cored Sample  = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRP = Core Recovery Ratio												<b>Soil Legend</b>  Silt  Clay  Sand  Gravel  Decayed Matter  Granite  Limestone  Mudstone												<table border="1"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Depth of Hole (m)</th> <th>Depth of Casing (m)</th> <th>Depth of Water (m)</th> <th>Remarks :</th> </tr> </thead> <tbody> <tr> <td>25/10/18</td> <td>9:00</td> <td>-</td> <td>-</td> <td>-</td> <td></td> </tr> <tr> <td>25/10/18</td> <td>18:30</td> <td>21.00</td> <td>1.00</td> <td>1.0</td> <td></td> </tr> <tr> <td>26/10/18</td> <td>9:00</td> <td>21.00</td> <td>21.00</td> <td>0.5</td> <td></td> </tr> <tr> <td>26/10/18</td> <td>18:30</td> <td>42.00</td> <td>42.00</td> <td>0.8</td> <td></td> </tr> <tr> <td>27/10/18</td> <td>9:00</td> <td>42.00</td> <td>42.00</td> <td>0.5</td> <td></td> </tr> <tr> <td>27/10/18</td> <td>18:30</td> <td>60.00</td> <td>60.00</td> <td>1.0</td> <td></td> </tr> </tbody> </table>												Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :	25/10/18	9:00	-	-	-		25/10/18	18:30	21.00	1.00	1.0		26/10/18	9:00	21.00	21.00	0.5		26/10/18	18:30	42.00	42.00	0.8		27/10/18	9:00	42.00	42.00	0.5		27/10/18	18:30	60.00	60.00	1.0		<table border="1"> <thead> <tr> <th>Cohesive Soil (N)</th> <th>0</th> <th>2</th> <th>4</th> <th>8</th> <th>15</th> <th>30</th> </tr> </thead> <tbody> <tr> <td>V.soft</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Soft</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>M. Stiff</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Stiff</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>V. Stiff</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Hard</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Non Cohesive Soil (N)</th> <th>0</th> <th>4</th> <th>10</th> <th>30</th> <th>50</th> </tr> </thead> <tbody> <tr> <td>V.Loose</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Loose</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Medium Dense</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Dense</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Very Dense</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>												Cohesive Soil (N)	0	2	4	8	15	30	V.soft							Soft							M. Stiff							Stiff							V. Stiff							Hard							Non Cohesive Soil (N)	0	4	10	30	50	V.Loose						Loose						Medium Dense						Dense						Very Dense						Prepared by: _____ Checked by: _____											
Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :																																																																																																																																																																																					
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**STRATA GEOTECHNICS SDN. BHD.** ( Co. No. 393744T )  
 No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor.  
 Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622

**Sheet**  
1 of 6

**Borehole Ref. No.**  
BH-11

**Client** : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19  
**Job No.** : SG/1281/2018  
**Date Started** : 21/09/2018  
**Coordinates** : N -31496.913  
 Location : PULAU INDAH  
 E -46601.543

**Client** : WESTPORTS (M) DDN. BHD.  
**Consultant** : HSS INTEGRATED SDN. BHD.  
**Type of Boring** : ROTARY WASH  
**Boring Dia. (mm)** : 100  
**Orientation** : Vertical  
**Date Completed** : 26/09/2018  
**Reduced Level (mRL):** : 1.385

Date & Time	SAMPLE / INSITU TEST										SOIL / STRATUM DETAILS					Standard Penetration Test Graph		
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)	Thick-ness (m)		W G	Description
							75mm	75mm	75mm	75mm	75mm							
21/09/2018	0.000		D1								0.30	xx	0.30	0.30	5	Very soft, light grey silty CLAY		
	0.300											xx						
	1.500		P1/D2									xx	2.65	2.65	5	Very soft, light grey silty CLAY		
	1.950											xx						
	3.000		UD1									xx	2.95		5	Top: Light grey, CLAY of hevly high plasticity Bottom: DITTO		
	4.000											xx	1.40					
	4.500											xx	4.35		5	Soft, light grey silty CLAY with fine sand		
	4.950		P2/D3				1	0	1	0	1	0	xx	1.65				
	6.000		UD2										xx	6.00		5		Top: Light grey, very clayey SAND Bottom: DITTO
	7.000											xx	1.45					
7.500											xx	7.45						
7.950		P3/D4				1	0	1	0	1	1	xx	1.50		5	Soft, light grey silty CLAY with fine sand		
9.000		UD3										xx	8.95		5	Top: Light grey, CLAY Bottom: DITTO		
10.000												xx	1.45					
10.500												xx	10.40					
10.950		P4/D5				1	0	1	1	1	2	xx			5	Medium stiff, light grey silty CLAY with fine sand		
12.000												xx						

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks
		21/9/18	10:00	0.00	0.00	-	OFFSHORE
		21/9/18	18:00	15.00	15.00	-	
		22/9/18	9:00	15.00	15.00	-	
		22/9/18	18:00	36.00	36.00	-	
		24/9/18	9:00	36.00	36.00	-	
RQD = Rock Quality Disignation		24/9/18	9:00	36.00	36.00	-	
TCR = Total Core Recovery		24/9/18	18:00	45.00	45.00	-	

**Remarks :**

OFFSHORE

Cohesive Soil (N)

Non Cohesive Soil (N)

0 2 4 8 15 30  
 V.soft Soft M. Stiff Stiff V. Stiff Hard

0 4 10 30 50  
 V.Loose Loose Medium Dense Dense Very Dense

**Prepared by:** \_\_\_\_\_ **Checked by:** \_\_\_\_\_

	26/9/18	9:00	51.00	51.00	-	Hong Li	C.W.Yee
	26/9/18	15:00	51.00	51.00	-		





**STRATA GEOTECHNICS SDN. BHD.** ( Co. No. 393744T )  
 No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor.  
 Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622

**Sheet**  
2 of 6

**Borehole Ref. No.**  
BH-11

**Client** : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19  
**Job No.** : SG/1281/2018  
**Date Started** : 21/09/2018  
**Coordinates** : N -31496.913  
 Location : PULAU INDAH  
 E -46601.543

**Client** : WESTPORTS (M) DDN. BHD.  
**Consultant** : HSS INTEGRATED SDN. BHD.  
**Type of Boring** : ROTARY WASH  
**Boring Dia. (mm)** : 100  
**Orientation** : Vertical  
**Date Completed** : 26/09/2018  
**Reduced Level (mRL):** : 1.385

Date & Time	SAMPLE / INSITU TEST										SOIL / STRATUM DETAILS										Standard Penetration Test Graph N' Value 0 10 20 30 40 50
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores						Casing Record	Legend	Depth (m)	Thick-ness (m)	W G	Description			
							75mm	75mm	75mm	75mm	75mm	75mm									
23/09/2018	12.000	UD4											xx			5	Top: Light grey silty CLAY with sand Bottom: DITTO				
	13.000												xx								
	13.500	P5/D6				1	1	0	1	2	2	5				5	Medium stiff, light grey silty CLAY with fine sand				
	13.950												xx			6.05					
	15.000	UD5											xx			5	Top: Light grey silty CLAY with sand Bottom: DITTO				
	16.000												xx								
	16.500	P6/D7				1	1	2	1	2	2	7				5	Medium stiff, light grey, sandy CLAY				
	16.950												xx			18.00					
	18.000	UD6											xx			5	Top: Light grey silty CLAY with sand Bottom: DITTO				
	19.000												xx			19.45					
19.500	P7/D8				1	1	1	2	2	3	8				5	Stiff, light grey, sandy CLAY					
19.950												xx									
21.000	P8/D9				1	2	2	2	3	2	9				5	-DITTO-					
21.450												xx									
22.500	P9/D10				1	2	1	2	3	3	9				5	Stiff, light grey clayey SILT					
22.950												xx			1.60						
24.000												xx			24.00						

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	xxxx xxx Silt	21/9/18	10:00	0.00	0.00	-	
	Clay	21/9/18	18:00	15.00	15.00	-	
	Sand	22/9/18	9:00	15.00	15.00	-	
	Gravel	22/9/18	18:00	36.00	36.00	-	
	Decayed Matter	24/9/18	9:00	36.00	36.00	-	
RQD = Rock Quality Disignation	++++ ++ Granite	24/9/18	18:00	45.00	45.00	-	
TCR = Total Core Recovery	++++ ++ Limestone						

Remarks :

Cohesive Soil (N) : 0 2 4 8 15 30  
 V.soft Soft M. Stiff Stiff V. Stiff Hard

Non Cohesive Soil (N) : 0 4 10 30 50  
 V.Loose Loose Medium Dense Dense Very Dense

Prepared by: \_\_\_\_\_ Checked by: \_\_\_\_\_

	26/9/18	9:00	51.00	51.00	-	Hong Li	C.W.Yee
	26/9/18	15:00	51.00	51.00	-		



**STRATA GEOTECHNICS SDN. BHD.** ( Co. No. 393744T )  
 No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor.  
 Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622

**Sheet**  
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**Borehole Ref. No.**  
BH-11

**Client** : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19  
**Job No.** : SG/1281/2018  
**Date Started** : 21/09/2018  
**Coordinates** : N -31496.913  
 Location : PULAU INDAH  
 E -46601.543

**Client** : WESTPORTS (M) DDN. BHD.  
**Consultant** : HSS INTEGRATED SDN. BHD.  
**Type of Boring** : ROTARY WASH  
**Boring Dia. (mm)** : 100  
**Orientation** : Vertical  
**Date Completed** : 26/09/2018  
**Reduced Level (mRL):** 1.385

Date & Time	SAMPLE / INSITU TEST										SOIL / STRATUM DETAILS										Standard Penetration Test Graph
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores						Casing Record	Legend	Depth (m)	Thick-ness (m)	W G	Description	'N' Value		
							75mm	75mm	75mm	75mm	75mm	75mm								75mm	
24/09/2018	24.000		P10/D11				1	2	2	3	2	3	10				5	Stiff, light grey, CLAY	10		
	24.500																1.30				
	25.500		P11/D12				1	2	2	2	3	4	11	xx			5	-DITTO-	20		
	25.950													xx			1.60				
	27.000		P12/D13				2	1	2	4	4	3	13				4	Stiff, light grey, very clayey SAND	30		
	27.450																1.55				
	28.500		P13/D14				2	2	3	4	3	3	13				5	Stiff, light grey sandy CLAY	40		
	28.950																1.50				
30.000		P14/D15				2	3	4	6	6	7	23				5	Very stiff, light grey, CLAY	50			
30.450																1.55					
31.500		P15/D16				2	3	5	5	7	7	24	xx			4	Very stiff, light grey silty SAND with clay	10			
31.950													xx			1.35					
33.000		P16/D17				2	2	5	7	7	9	28				4	Very stiff, light grey, very clayey SAND	20			
33.450																1.61					
34.500		P17/D18				2	3	5	7	8	8	28	xx			4	Very stiff, light grey silty SAND	30			
34.950													xx								
36.000													xx								

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	xxxx xxx	21/9/18	10:00	0.00	0.00	-	
	-----	21/9/18	18:00	15.00	15.00	-	
	.....	22/9/18	9:00	15.00	15.00	-	
	oooo oooo	22/9/18	18:00	36.00	36.00	-	
	++++	24/9/18	9:00	36.00	36.00	-	
RQD = Rock Quality Disignation	++	24/9/18	18:00	45.00	45.00	-	
TCR = Total Core Recovery	++++						

**Remarks :**

Cohesive Soil (N) : 0 2 4 8 15 30  
 V.soft Soft M. Stiff Stiff V. Stiff Hard

Non Cohesive Soil (N) : 0 4 10 30 50  
 V.Loose Loose Medium Dense Dense Very Dense

**Prepared by:** \_\_\_\_\_ **Checked by:** \_\_\_\_\_

	26/9/18	9:00	51.00	51.00	-	Hong Li	C.W.Yee
	26/9/18	15:00	51.00	51.00	-		



**STRATA GEOTECHNICS SDN. BHD.** ( Co. No. 393744T )  
 No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor.  
 Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622

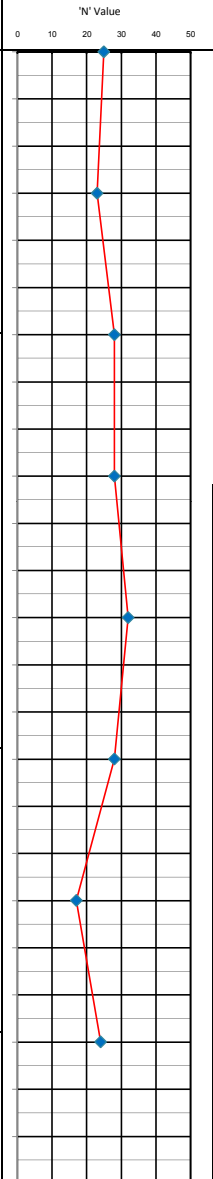
**Sheet**  
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**Borehole Ref. No.**  
BH-11

**Client** : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19  
**Job No.** : SG/1281/2018  
**Date Started** : 21/09/2018  
**Coordinates** : N -31496.913  
 Location : PULAU INDAH  
 E -46601.543

**Client** : WESTPORTS (M) DDN. BHD.  
**Consultant** : HSS INTEGRATED SDN. BHD.  
**Type of Boring** : ROTARY WASH  
**Boring Dia. (mm)** : 100  
**Orientation** : Vertical  
**Date Completed** : 26/09/2018  
**Reduced Level (mRL):** 1.385

Date & Time	SAMPLE / INSITU TEST										SOIL / STRATUM DETAILS						Standard Penetration Test Graph		
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores						Casing Record	Legend	Depth (m)	Thick-ness (m)		W G	Description
							75mm	75mm	75mm	75mm	75mm	75mm							
25/09/2018	36.000		P18/D19				2	2	6	5	7	7	25	...	xx		4	-DITTO-	
	36.450													...	xx				
	37.500		P19/D20				2	3	5	5	7	6	23	...	xx	4.50	4	Very stiff, light grey silty SAND	
	37.950													...	xx				
	39.000		P20/D21				2	4	7	7	6	8	28	...	xx	38.95	4	Very stiff, light grey, very cleyey SAND	
	39.450													...	xx				
	40.500		P21/D22				3	5	7	8	6	7	28	...	xx	4.50	4	-DITTO-	
	40.950													...	xx				
	42.000		P22/D23				3	6	8	8	9	7	32	...	xx	43.45	4	-DITTO-	
	42.450													...	xx				
43.500		P23/D24				2	4	6	6	7	9	28	...	xx	46.40	5	Very stiff, light grey, sandy CLAY		
43.950													...	xx					
45.000		P24/D25				2	5	5	4	4	4	17	...	xx	2.95	5	Very stiff, light grey, sandy CLAY		
45.450													...	xx					
46.500		P25/D26				2	4	5	5	7	7	24	...	xx	46.40	5	Very stiff, light grey clayey SILT with sand		
46.950													...	xx					



Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
= Standard Penetration Test	Silt	21/9/18	10:00	0.00	0.00	-	
= Undisturbed Sample	Clay	21/9/18	18:00	15.00	15.00	-	
= Disturbed Sample	Sand	22/9/18	9:00	15.00	15.00	-	
= Cored Sample	Gravel	22/9/18	18:00	36.00	36.00	-	
= Vane Shear Test	Decayed Matter	22/9/18	18:00	36.00	36.00	-	
RQD = Rock Quality Disignation	Granite	24/9/18	9:00	36.00	36.00	-	
TCR = Total Core Recovery	Limestone	24/9/18	18:00	45.00	45.00	-	

Remarks :

Cohesive Soil (N) : 0 2 4 8 15 30  
 V.soft Soft M. Stiff Stiff V. Stiff Hard

Non Cohesive Soil (N) : 0 4 10 30 50  
 V.Loose Loose Medium Dense Dense Very Dense

Prepared by: \_\_\_\_\_ Checked by: \_\_\_\_\_

	26/9/18	9:00	51.00	51.00	-	Hong Li	C.W.Yee
	26/9/18	15:00	51.00	51.00	-		



**STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )**  
 No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor.  
 Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622

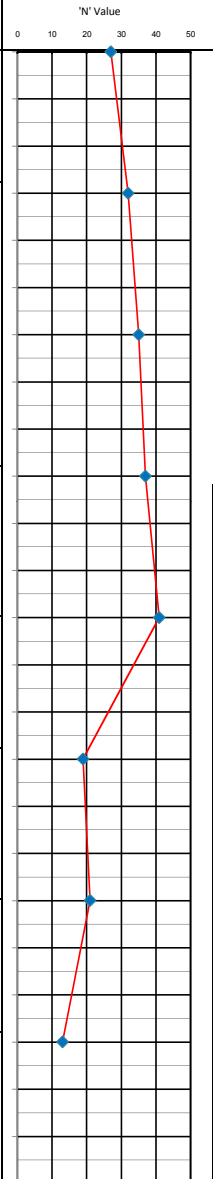
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**Borehole Ref. No.**  
BH-11

**Client** : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19  
**Job No.** : SG/1281/2018  
**Date Started** : 21/09/2018  
**Coordinates** : N -31496.913  
 Location : PULAU INDAH  
 E -46601.543

**Client** : WESTPORTS (M) DDN. BHD.  
**Consultant** : HSS INTEGRATED SDN. BHD.  
**Type of Boring** : ROTARY WASH  
**Boring Dia. (mm)** : 100  
**Orientation** : Vertical  
**Date Completed** : 26/09/2018  
**Reduced Level (mRL):** : 1.385

Date & Time	SAMPLE / INSITU TEST										SOIL / STRATUM DETAILS					Standard Penetration Test Graph		
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)	Thickness (m)		W G	Description
							75mm	75mm	75mm	75mm	75mm							
26/09/2018	48.000		P26/D27				2	3	4	7	7	9	27	xx			-DITTO-	
	48.450													xx	3.00			
	49.500		P27/D28				2	5	7	7	9	32	xx		5		Hard, pale grey CLAY of high plasticity	
	49.950													xx				
	51.000		P28/D29				2	5	7	7	9	35	xx		3.10		Hard, pale grey CLAY	
	51.450													xx				
	52.500		P29/D30				3	5	6	8	10	37	xx		4		Hard, light grey silty SAND	
	52.950													xx	1.45			
	54.000		P30/D31				2	6	8	10	10	41	oo		1.50		Hard, light grey, slightly clayey GRAVEL	
	54.450													oo				
55.500		P31/D32				2	3	5	5	5	19	xx		4		Very stiff, light grey with dary grey silty SAND		
55.950													xx	1.35				
57.000		P32/D33				2	2	4	6	5	21	xx		1.65		Very stiff, light grey with dary grey, very clayey SAND		
57.450													xx					
58.500		P33/D34				2	2	3	2	3	13	xx		5		Stiff, pale grey clayey SILT		
58.950													xx	1.55				
60.000													xx					



Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
		21/9/18	10:00	0.00	0.00	-	
		21/9/18	18:00	15.00	15.00	-	
		22/9/18	9:00	15.00	15.00	-	
		22/9/18	18:00	36.00	36.00	-	
		24/9/18	9:00	36.00	36.00	-	
RQD = Rock Quality Disignation		24/9/18	18:00	45.00	45.00	-	
TCR = Total Core Recovery							

Prepared by: \_\_\_\_\_

Checked by: \_\_\_\_\_

Cohesive Soil (N) : 0 2 4 8 15 30  
 V.soft Soft M. Stiff Stiff V. Stiff Hard

Non Cohesive Soil (N) : 0 4 10 30 50  
 V.Loose Loose Medium Dense Dense Very Dense

	26/9/18	9:00	51.00	51.00	-	Hong Li	C.W.Yee
	26/9/18	15:00	51.00	51.00	-		





**STRATA GEOTECHNICS SDN. BHD.** ( Co. No. 393744T )  
 No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor.  
 Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622

**Sheet**  
6 of 6

**Borehole Ref. No.**  
BH-11

**Client** : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19  
**Job No.** : SG/1281/2018  
**Date Started** : 21/09/2018  
**Coordinates** : N -31496.913  
 Location : PULAU INDAH  
 E -46601.543

**Client** : WESTPORTS (M) DDN. BHD.  
**Consultant** : HSS INTEGRATED SDN. BHD.  
**Type of Boring** : ROTARY WASH  
**Boring Dia. (mm)** : 100  
**Orientation** : Vertical  
**Date Completed** : 26/09/2018  
**Reduced Level (mRL):** 1.385

**Date & Time** :  
**SAMPLE / INSITU TEST**  
**SOIL / STRATUM DETAILS**  
**Standard Penetration Test Graph**

Date & Time	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores						Casing Record	Legend	Depth (m)	Thick-ness (m)	W G	Description	Standard Penetration Test Graph
							75mm	75mm	75mm	75mm	75mm	75mm							
							N=												
	60.000		P34/D35				2	2	4	3	4	5	16				5	Very stiff, pale grey, CLAY of high plasticity	
	60.450																	Borehole terminated at depth 60.45m	

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	21/9/18	10:00	0.00	0.00	-	Cohesive Soil (N) : 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) : 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	21/9/18	18:00	15.00	15.00	-	
	= Disturbed Sample		Sand	22/9/18	9:00	15.00	15.00	-	
	= Cored Sample		Gravel	22/9/18	18:00	36.00	36.00	-	
	= Vane Shear Test		Decayed Matter	24/9/18	9:00	36.00	36.00	-	
	= Rock Quality Disignation		Granite	24/9/18	9:00	36.00	36.00	-	
	= Total Core Recovery		Limestone	24/9/18	18:00	45.00	45.00	-	

**Prepared by:** \_\_\_\_\_ **Checked by:** \_\_\_\_\_

	26/9/18	9:00	51.00	51.00	-	Hong Li	C.W.Yee
	26/9/18	15:00	51.00	51.00	-		



**STRATA GEOTECHNICS SDN. BHD.** ( Co. No. 393744T )  
 No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor.  
 Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622

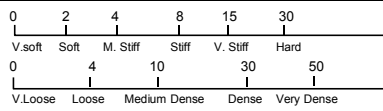
<b>Sheet</b>	<b>Borehole Ref. No.</b>
1 of 6	BH-12

<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19	<b>Job No.</b>	<b>Date Started</b>	<b>Coordinates</b>
<b>Location</b> : PULAU INDAH	SG/1281/2018	25/12/2018	N -29787.149

<b>Client</b>	<b>Consultant</b>	<b>Type of Boring</b>	<b>Boring Dia. (mm)</b>	<b>Orientation</b>	<b>Date Completed</b>	<b>Reduced Level (mRL):</b>
WESTPORTS (M) DDN. BHD.	HSS INTEGRATED SDN. BHD.	ROTARY WASH	100	Vertical	29/12/2018	-4.7436

Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS										Standard Penetration Test Graph		
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)	Thick-ness (m)	W G		Description	'N' Value
							75mm	75mm	75mm	75mm	75mm								
25/12/2018	0.000													0.30	0.30		Very soft, light grey silty CLAY		
	1.500		P1/D1				0	1	0	1	0	1	2		2.70		Very soft, medium grey, silty CLAY		
	1.950																		
	3.000		UD1														Top: Light to medium grey, CLAY		
	4.000														1.45		Bottom: Light to medium grey, CLAY		
	4.500														4.45				
	4.950		P2/D2												1.42		Very soft, light to medium grey, silty CLAY		
	6.000		UD2												5.87		Top: Light to medium grey, CLAY		
	7.000														1.59		Bottom: DITTO		
	7.500														7.46				
	7.950		P3/D3														Very soft, light to medium grey, silty CLAY		
	9.000		UD3												4.54		Top: Light to medium grey, silty CLAY		
	10.000																Bottom: DITTO		
	10.500																		
	10.950		P4/D4														Very soft, light to medium grey, silty CLAY		
	12.000																		

<b>Legend</b>	<b>Soil Legend</b>	<b>Date</b>	<b>Time</b>	<b>Depth of Hole (m)</b>	<b>Depth of Casing (m)</b>	<b>Depth of Water (m)</b>	<b>Remarks :</b>
= Standard Penetration Test	Silt	25/12/18	8:30	-	-	-	OFFSHORE
= Undisturbed Sample	Clay	25/12/18	19:00	24.00	29.00	-	
= Disturbed Sample	Sand	26/12/18	8:30	24.00	29.00	-	
= Cored Sample	Gravel	26/12/18	19:00	39.00	44.00	-	
= Vane Shear Test	Decayed Matter	27/12/18	8:00	39.00	44.00	-	
RQD = Rock Quality Disignation	Granite	27/12/18	19:00	51.00	56.00	-	
TCR = Total Core Recovery	Limestone	29/12/18	8:00	51.00	56.00	-	
CRR = Core Recovery Ratio	Mudstone	29/12/18	19:00	60.00	65.00	-	
W.G = Weathering Grade	Sandstone						



**Prepared by:** Hong Li  
**Checked by:** C.W.Yee

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-12							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 25/12/2018		<b>Coordinates</b> N -29787.149 E -47152.890										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 29/12/2018		<b>Reduced Level (mRL):</b> -4.7436										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value
	12.000		UD4				Rec : 900/1000mm											Top: Light to medium grey, clayey SAND	
	13.000																	Bottom: DITTO	
	13.500					1	0	1	0	1	1							Soft, grey, CLAY	
	13.950		P5/D5				Rec : 350/450mm												
	15.000																	Top: Light to medium grey, CLAY	
	16.000																	Bottom: DITTO	
	16.500					1	1	1	1	1	1							Soft, medium grey, CLAY	
	16.950		P6/D6				Rec : 300/450mm												
	18.000																	Top: Light to medium grey, sandy CLAY	
	19.000																	Bottom: DITTO	
	19.500					1	1	1	1	1	2							Medium stiff, medium grey, CLAY	
	19.950		P7/D7				Rec : 300/450mm												
	21.000																	Top: Light to medium grey, silty CLAY	
	22.000																	Bottom: Light to medium grey, CLAY	
	22.500					1	1	1	1	1	1							Soft, light to medium grey, CLAY	
	22.950		P8/D8				Rec : 310/450mm												
	24.000																		
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :										
	= Standard Penetration Test		Silt	25/12/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense										
	= Undisturbed Sample		Clay	25/12/18	19:00	24.00	29.00	-											
	= Disturbed Sample		Sand	26/12/18	8:30	24.00	29.00	-											
	= Cored Sample		Gravel Decayed Matter	26/12/18	19:00	39.00	44.00	-											
	= Vane Shear Test		Granite	27/12/18	8:00	39.00	44.00	-											
RQD	= Rock Quality Disignation		Limestone	27/12/18	19:00	51.00	56.00	-											
TCR	= Total Core Recovery		Mudstone	29/12/18	8:00	51.00	56.00	-											
CRP	= Core Recovery Ratio								<b>Prepared by:</b> _____ <b>Checked by:</b> _____										

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-12				
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 25/12/2018		<b>Coordinates</b> N -29787.149 E -47152.890							
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 29/12/2018		<b>Reduced Level (mRL):</b> -4.7436							
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50			
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Depth (m)	Thickness (m)	W G
26/12/2018	24.000	UD8					Rec : 900/1000mm						24.30	0.30		Top: Light to medium grey, sandy CLAY
	25.000															Bottom: Light to medium grey, silty CLAY
	25.500	P9/D9				2	1	1	1	1	1		3.10			Soft, light to medium grey, silty CLAY
	25.950						Rec : 250/450mm									
	27.000	UD9					Rec : 900/1000mm						27.40			Top: Light to medium grey, silty CLAY
	28.000															Bottom: Light to medium grey, CLAY
	28.500	P10/D10				2	2	1	2	2	2		1.52			Medium stiff, light to medium grey, silty CLAY
	28.950						Rec : 280/450mm									
	30.000	UD10					Rec : 900/1000mm						30.43	0.46		Top: Light to medium grey, sandy CLAY
	31.000															Bottom: Light to medium grey, CLAY
	31.500	P11/D11				1	2	2	2	2	2		4.62			Stiff, light to medium grey, silty CLAY
	31.950						Rec : 300/450mm									
33.000	P12/D12				2	2	3	3	3	3		4.62			Stiff, light to medium grey, silty CLAY	
33.450						Rec : 300/450mm										
34.500	P13/D13				2	2	3	3	3	3					-DITTO-	
34.950						Rec : 300/450mm										
36.000												36.00				
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :							
	= Standard Penetration Test		Silt	25/12/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense							
	= Undisturbed Sample		Clay	25/12/18	19:00	24.00	29.00	-								
	= Disturbed Sample		Sand	26/12/18	8:30	24.00	29.00	-								
	= Cored Sample		Gravel	26/12/18	19:00	39.00	44.00	-								
	= Vane Shear Test		Decayed Matter	27/12/18	8:00	39.00	44.00	-								
RQD	= Rock Quality Disignation		Granite	27/12/18	19:00	51.00	56.00	-								
TCR	= Total Core Recovery		Limestone	29/12/18	8:00	51.00	56.00	-								
CRP	= Core Recovery Ratio		Mudstone													
				<b>Prepared by:</b>		<b>Checked by:</b>										


STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )										Sheet		Borehole Ref. No.										
No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										4 of 6		BH-12										
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.			Date Started		Coordinates												
Location : PULAU INDAH					SG/1281/2018			25/12/2018		N -29787.149 E -47152.890												
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		Reduced Level (mRL):												
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		29/12/2018		-4.7436												
Date & Time	SAMPLE / INSITU TEST							SOIL / STRATUM DETAILS						Standard Penetration Test Graph								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)		Thickness (m)	W G	Description	'N' Value				
				RQD (%)	75mm	75mm	75mm	75mm	75mm	75mm												
27/12/2018	36.000		P14/D14			2	3	3	4	3	4											
	36.450					Rec : 250/450mm								1.45								
	37.500		P15/D15			3	3	4	5	5	5											
	37.950					Rec : 270/450mm								37.45								
	39.000		P16/D16			4	5	4	5	5	5											
	39.450					Rec : 250/450mm								3.03								
	40.500		P17/D17			5	4	5	5	6	6											
	40.950					Rec : 200/450mm								40.48								
42.000		P18/D18			5	6	6	5	6	7												
42.450					Rec : 250/450mm								4.47									
43.500		P19/D19			5	6	7	7	8	8												
43.950					Rec : 300/450mm								44.95									
45.000		P20/D20			6	5	6	7	9	9												
45.950					Rec : 250/450mm								1.50									
46.500		P21/D21			7	6	7	7	9	10												
46.950					Rec : 250/450mm								46.45									
48.000																						

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
		25/12/18	8:30	-	-	-	
		25/12/18	19:00	24.00	29.00	-	
		26/12/18	8:30	24.00	29.00	-	
		26/12/18	19:00	39.00	44.00	-	
		27/12/18	8:00	39.00	44.00	-	
RQD = Rock Quality Disignation		27/12/18	19:00	51.00	56.00	-	
TCR = Total Core Recovery		29/12/18	8:00	51.00	56.00	-	
CRP = Core Recovery Ratio							


  

Prepared by:	Checked by:
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.								
										5 of 6		BH-12								
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates											
Location : PULAU INDAH					SG/1281/2018		25/12/2018		N -29787.149											
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47152.890										
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		29/12/2018		Reduced Level (mRL): -4.7436										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph							
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value	
75mm	75mm	75mm	75mm	75mm	75mm	75mm	75mm	75mm	75mm	75mm										
29/12/2018	48.000	P22/D22					8	7	8	9	10	11	...	xx	2.91			-DITTO-	40	
	48.450						8	7	8	9	10	11	...	xx						
	Rec : 270/450mm																			
	49.500	P23/D23						8	8	7	9	9	11	...	xx	49.36			Dense, light to medium grey, slightly clayey SAND	40
	49.950							8	8	7	9	9	11	...	xx					
	Rec : 250/450mm																			
	51.000	P24/D24						8	7	7	8	8	10	...	xx	4.14			-DITTO-	40
	51.450							8	7	7	8	8	10	...	xx					
	Rec : 200/450mm																			
	52.500	P25/D25						7	8	8	9	9	10	...	xx	53.50			-DITTO-	40
52.950	7							8	8	9	9	10	...	xx						
Rec : 230/450mm																				
54.000	P26/D26						6	6	6	7	7	9	...	xx	1.97			Very stiff, light to medium grey, silty CLAY	40	
54.450							6	6	6	7	7	9	...	xx						
Rec : 300/450mm																				
55.500	P27/D27						5	7	7	8	9	9	...	xx	55.47			Hard, light to medium grey, CLAY	40	
55.950							5	7	7	8	9	9	...	xx						
Rec : 300/450mm																				
57.000	P28/D28						4	5	5	6	7	8	...	xx				Very stiff, light to medium grey, CLAY	40	
57.450							4	5	5	6	7	8	...	xx						
Rec : 250/450mm																				
58.500	P29/D29						5	6	6	7	7	9	...	xx				-DITTO-	40	
58.950							5	6	6	7	7	9	...	xx						
Rec : 270/450mm																				
60.000																				

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	25/12/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	25/12/18	19:00	24.00	29.00	-	
	= Disturbed Sample		Sand	26/12/18	8:30	24.00	29.00	-	
	= Cored Sample		Gravel	26/12/18	19:00	39.00	44.00	-	
	= Vane Shear Test		Decayed Matter	27/12/18	8:00	39.00	44.00	-	
RQD	= Rock Quality Disignation		Granite	27/12/18	19:00	51.00	56.00	-	
TCR	= Total Core Recovery		Limestone	29/12/18	8:00	51.00	56.00	-	
CRP	= Core Recovery Ratio		Mudstone						

 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.												
										6 of 6		BH-12												
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates															
Location : PULAU INDAH					SG/1281/2018		25/12/2018		N -29787.149															
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47152.890														
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		29/12/2018		Reduced Level (mRL): -4.7436														
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph											
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value										
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thick-ness (m)	W G	Description	0	10	20	30	40
	60.000	P30/D30					6	6	7	7	7	8				4.98		-DITTO-						
	60.450							Rec : 270/450mm N= 29																
																		<b>Borehole terminated at depth 60.45m</b>						

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	25/12/18	8:30	-	-	-	Cohesive Soil (N) V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	25/12/18	19:00	24.00	29.00	-	
	= Disturbed Sample		Sand	26/12/18	8:30	24.00	29.00	-	
	= Cored Sample		Gravel	26/12/18	19:00	39.00	44.00	-	
	= Vane Shear Test		Decayed Matter	27/12/18	8:00	39.00	44.00	-	
RQD	= Rock Quality Disignation		Granite	27/12/18	19:00	51.00	56.00	-	
TCR	= Total Core Recovery		Limestone	29/12/18	8:00	51.00	56.00	-	
CRP	= Core Recovery Ratio		Mudstone						

Prepared by:

Checked by:



STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )										Sheet		Borehole Ref. No.						
No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										1 of 6		BH-13						
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.			Date Started		Coordinates								
Location : PULAU INDAH					SG/1281/2018			20/12/2018		N -30207.378								
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		Reduced Level (mRL):								
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		22/12/2018		-4.7533								
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph					
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Description		N' Value 0 10 20 30 40 50				
						75mm	75mm	75mm	75mm	75mm	75mm		Casing Record		Legend	Depth (m)	Thickness (m)	W G
20/12/2018	0.000												--- xx	0.30	0.30		Very soft, light grey silty CLAY	
	1.500		P1/D1										--- xx		3.10		Very soft, light to medium grey, silty CLAY	
	1.950												--- xx					
	3.000		UD1										--- xx	3.40			Top: Light to medium grey, silty CLAY	
	4.000												--- xx		1.05		Bottom: Light to medium grey, CLAY	
	4.500		P2/D2										--- xx		3.01		Very soft, light to medium grey, silty CLAY	
	4.950												--- xx					
	6.000		UD2										--- xx				Top: Light to medium grey, silty CLAY	
	7.000												--- xx				Bottom: DITTO	
	7.500		P3/D3										--- xx	7.46			Very soft, light to medium grey, CLAY	
	7.950												--- xx		1.52			
	9.000		UD3										--- xx				Top: Light to medium grey, silty CLAY	
	10.000												--- xx		1.47		Bottom: DITTO	
	10.500		P4/D4										--- xx	10.45			Very soft, light to medium grey, CLAY	
	10.950												--- xx		1.55			
	12.000												--- xx	12.00				


  

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
		20/12/18	8:30	-	-	-	OFFSHORE
		20/12/18	19:00	30.00	37.00	-	
		21/12/18	8:30	30.00	37.00	-	
		21/12/18	19:00	42.00	49.00	-	
		22/12/18	8:00	42.00	49.00	-	
RQD = Rock Quality Disignation		22/12/18	19:00	60.00	67.00	-	
TCR = Total Core Recovery							

Cohesive Soil (N)		Non Cohesive Soil (N)	
V.soft	Soft	V.Loose	Loose
M. Stiff	Stiff	Medium Dense	Dense
V. Stiff	Hard	Very Dense	



 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.											
										2 of 6		BH-13											
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates														
Location : PULAU INDAH					SG/1281/2018		20/12/2018		N -30207.378														
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		Reduced Level (mRL):													
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		22/12/2018		-4.7533													
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph										
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value				
							75mm	75mm	75mm	75mm	75mm												
	12.000	UD4																					
	13.000																						
	13.500	P5/D5				0	1	0	1	1	1					2.97							
	13.950																						
	15.000	UD5																					
	16.000																						
	16.500	P6/D6				0	1	0	1	0	1												
	16.950																						
	18.000	UD6																					
	19.000																						
	19.500	P7/D7				0	1	1	1	1	1												
	19.950																						
	21.000	UD7																					
	22.000																						
	22.500	P8/D8				0	1	1	1	1	1												
	22.950																						
	24.000																						

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	20/12/18	8:30	-	-	-	
	= Undisturbed Sample		Clay	20/12/18	19:00	30.00	37.00	-	
	= Disturbed Sample		Sand	21/12/18	8:30	30.00	37.00	-	
	= Cored Sample		Gravel	21/12/18	19:00	42.00	49.00	-	
	= Vane Shear Test		Decayed Matter	21/12/18	19:00	42.00	49.00	-	
RQD	= Rock Quality Disignation		Granite	22/12/18	8:00	42.00	49.00	-	
TCR	= Total Core Recovery		Limestone	22/12/18	19:00	60.00	67.00	-	
CRR	= Core Recovery Ratio		Mudstone						


  

Cohesive Soil (N)		0	2	4	8	15	30
Non Cohesive Soil (N)		0	4	10	30	50	
		V. Loose	Loose	Medium Dense	Dense	Very Dense	

Prepared by:	Checked by:
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-13						
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 20/12/2018		<b>Coordinates</b> N -30207.378 E -47036.217									
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 22/12/2018		<b>Reduced Level (mRL):</b> -4.7533									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph					
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description
21/12/2018	24.000	UD8					Rec : 910/1000mm						xx				Top: Light to medium grey, silty CLAY	
	25.000												xx				Bottom: DITTO	
	25.500	P9/D9				1	1	1	1	1	2		xx	4.54			Medium stiff, light to medium grey, silty CLAY	
	25.950						Rec : 250/450mm						xx					
	27.000	UD9					Rec : 870/1000mm						xx				Top: Light to medium grey, sandy CLAY	
	28.000												xx				Bottom: Light to medium grey, silty CLAY	
	28.500	P10/D10				1	1	2	1	1	2		xx	4.11			Medium stiff, light to medium grey, silty CLAY	
	28.950						Rec : 300/450mm						xx					
	30.000	UD10					Rec : 900/1000mm						xx				Top: Light to medium grey, silty CLAY	
	31.000												xx				Bottom: DITTO	
31.500	P11/D11				2	1	2	1	2	2		xx	1.43			Medium stiff, light to medium grey, sandy CLAY with trace of organic matter		
31.950						Rec : 350/450mm						xx						
33.000	UD11					Rec : 870/1000mm						xx				Top: Light to medium grey, silty CLAY		
34.000												xx				Bottom: DITTO		
34.500	P12/D12				2	2	2	2	1	2		xx	1.65			Medium stiff, light to medium grey, sandy CLAY		
34.950						Rec : 300/450mm						xx						
36.000												xx						
<b>Legend</b> = Standard Penetration Test = Undisturbed Sample = Disturbed Sample = Cored Sample = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRP = Core Recovery Ratio		<b>Soil Legend</b> Silt Clay Sand Gravel Decayed Matter Granite Limestone Mudstone		<b>Date</b> 20/12/18 8:30 20/12/18 19:00 21/12/18 8:30 21/12/18 19:00 22/12/18 8:00 22/12/18 19:00		<b>Time</b> 8:30 19:00 8:30 19:00 8:00 19:00		<b>Depth of Hole (m)</b> - 30.00 30.00 42.00 42.00 42.00 60.00		<b>Depth of Casing (m)</b> - 37.00 37.00 49.00 49.00 49.00 67.00		<b>Depth of Water (m)</b> - - - - - -		<b>Remarks :</b> Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense		<b>Prepared by:</b> _____ <b>Checked by:</b> _____		

 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet			Borehole Ref. No.										
										4 of 6			BH-13										
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.			Date Started		Coordinates													
Location : PULAU INDAH					SG/1281/2018			20/12/2018		N -30207.378													
Client		Consultant			Type of Boring		Boring Dia. (mm)	Orientation		Date Completed		E -47036.217											
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.			ROTARY WASH		100	Vertical		22/12/2018		Reduced Level (mRL): -4.7533											
Date & Time	SAMPLE / INSITU TEST							SOIL / STRATUM DETAILS						Standard Penetration Test Graph									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Depth (m)	Thick-ness (m)		W G	Description	'N' Value 0 10 20 30 40 50						
75mm	75mm	75mm	75mm	75mm	75mm																		
22/12/2018	36.000	P13/D13					4	5	5	7	7	6	25						Medium dense, light grey, clayey SAND	30			
	36.450																						
	37.500	P14/D14					3	4	4	6	7	9	26							2.94			
	37.950																						
	39.000	P15/D15					5	6	6	7	9	9	31		xx			Dense, light to medium grey, silty fine grain SAND	35				
	39.450																						
	40.500	P16/D16					6	6	6	7	9	10	32								4.47		
	40.950																						
	42.000	P17/D17					4	5	5	7	8	10	30									4.47	
	42.450																						
43.500	P18/D18					5	6	6	6	7	9	28						Medium dense, light to medium grey, silty fine grain SAND	30				
43.950																							
45.000	P19/D19					7	6	7	8	8	8	31		xx				Dense, light to medium grey, silty fine grain SAND	35				
45.950																							
46.500	P20/D20					7	7	8	8	9	9	34						Dense, light to medium grey, clayey SAND	35				
46.950																							
48.000																							

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	20/12/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	20/12/18	19:00	30.00	37.00	-	
	= Disturbed Sample		Sand	21/12/18	8:30	30.00	37.00	-	
	= Cored Sample		Gravel	21/12/18	19:00	42.00	49.00	-	
	= Vane Shear Test		Decayed Matter	22/12/18	8:00	42.00	49.00	-	
	RQD = Rock Quality Disignation		Granite	22/12/18	19:00	60.00	67.00	-	
	TCR = Total Core Recovery		Limestone						
	CRR = Core Recovery Ratio		Mudstone						

Prepared by:		Checked by:	
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

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-13									
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 20/12/2018		<b>Coordinates</b> N -30207.378 E -47036.217												
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 22/12/2018		<b>Reduced Level (mRL):</b> -4.7533												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description							
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G			
	48.000		P21/D21				5	6	7	7	8	8	...	xx							
	48.450						Rec : 270/450mm														
	49.500		P22/D22				5	5	6	6	7	8	...	xx	2.96						
	49.950						Rec : 250/450mm														
	51.000		P23/D23				4	5	4	5	5	7	...	xx							
	51.450						Rec : 300/450mm														
	52.500		P24/D24				5	5	5	6	6	7	...	xx	2.87						
	52.950						Rec : 300/450mm														
	54.000		P25/D25				5	6	6	7	7	7	...	xx							
	54.450						Rec : 300/450mm														
	55.500		P26/D26				4	5	7	6	6	7	...	xx							
	55.950						Rec : 250/450mm														
	57.000		P27/D27				5	6	6	7	7	8	...	xx							
	57.450						Rec : 250/450mm														
	58.500		P28/D28				4	6	5	6	7	8	...	xx							
	58.950						Rec : 270/450mm														



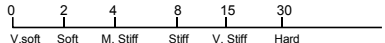
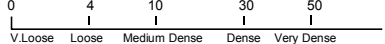











Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	20/12/18	8:30	-	-	-	
	= Undisturbed Sample		Clay	20/12/18	19:00	30.00	37.00	-	
	= Disturbed Sample		Sand	21/12/18	8:30	30.00	37.00	-	
	= Cored Sample		Gravel	21/12/18	19:00	42.00	49.00	-	
	= Vane Shear Test		Decayed Matter	22/12/18	8:00	42.00	49.00	-	
RQD	= Rock Quality Disignation		Granite	22/12/18	19:00	60.00	67.00	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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
 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.												
										6 of 6		BH-13												
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates															
Location : PULAU INDAH					SG/1281/2018		20/12/2018		N -30207.378															
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47036.217														
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		22/12/2018		Reduced Level (mRL): -4.7533														
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph											
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value										
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thick-ness (m)	W G	Description	0	10	20	30	40
	60.000		P29/D29				5	6	7	7	8	8				6.62		-DITTO-						
	60.450								Rec : 250/450mm N= 30															
																		<i>Borehole terminated at depth 60.45m</i>						

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	20/12/18	8:30	-	-	-	Cohesive Soil (N)  V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N)  V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	20/12/18	19:00	30.00	37.00	-	
	= Disturbed Sample		Sand	21/12/18	8:30	30.00	37.00	-	
	= Cored Sample		Gravel	21/12/18	19:00	42.00	49.00	-	
	= Vane Shear Test		Decayed Matter	22/12/18	8:00	42.00	49.00	-	
RQD	= Rock Quality Disignation		Granite	22/12/18	19:00	60.00	67.00	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

Prepared by:		Checked by:	
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 <b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.										
										1 of 6		BH-14										
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates													
Location : PULAU INDAH					SG/1281/2018		1/1/2019		N -30173.017													
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		Reduced Level (mRL):												
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		3/1/2019		3.972												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							N' Value								
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description			
1/1/2019	0.000						TOPSOIL															
	1.500		P1/D1				1	1	1	1	1	1		xx	0.30	0.30		Very soft, light grey silty CLAY				
	1.950													xx		2.68		Soft, light to medium grey, sandy SILT				
	3.000		UD1											xx	2.98			Top: Light to medium grey, clayey SAND				
	4.000													xx	3.35	0.37		Bottom: Light to medium grey, silty CLAY				
	4.500		P2/D2				0	1	0	1	0	1		xx	4.47			Very soft, light to medium grey, sandy SILT				
	4.950													xx		1.96		Top: Light to medium grey, sandy SILT				
	6.000		UD2											xx	6.43			Bottom: Light to medium grey, silty CLAY				
	7.000													xx				Very soft, light to medium grey, silty CLAY				
	7.500		P3/D3											xx	8.97			Top: Light to medium grey, CLAY				
	7.950													xx	10.45			Bottom: DITTO				
	9.000		UD3											xx		1.48		Very soft, medium grey, silty CLAY				
	10.000													xx		1.55						
	10.500		P4/D4											xx								
	10.950													xx								
	12.000													xx								

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
		1/1/19	8:30	-	-	-	OFFSHORE
		1/1/19	19:00	21.00	27.00	-	
		2/1/19	8:30	21.00	27.00	-	
		2/1/19	19:00	42.00	48.00	-	
		3/1/19	8:00	42.00	42.00	-	
RQD = Rock Quality Disignation		3/1/19	19:00	60.00	66.00	-	
TCR = Total Core Recovery							

Cohesive Soil (N)		Non Cohesive Soil (N)				
V.soft	Soft	M. Stiff	Stiff	V. Stiff	Hard	
0	2	4	8	15	30	
V.Loose		Loose	Medium Dense	Dense	Very Dense	
0	4	10	30	50		





<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-14									
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 1/1/2019		<b>Coordinates</b> N -30173.017 E -47381.454												
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 3/1/2019		<b>Reduced Level (mRL):</b> 3.972												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description							
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G		'N' Value	
	12.000	UD4					Rec : 890/1000mm														
	13.000																				
	13.500	P5/D5					-HAMMER WEIGHT- N= 0														
	13.950						Rec : 300/450mm														
	15.000	UD5					Rec : 920/1000mm														
	16.000																				
	16.500	P6/D6					0	1	0	1	0	1									
	16.950						Rec : 320/450mm														
	18.000	UD6					Rec : 900/1000mm														
	19.000																				
	19.500	P7/D7					1	0	1	1	0	1									
	19.950						Rec : 300/450mm														
	21.000	UD7					Rec : 900/1000mm														
	22.000																				
2/1/2018	22.500	P8/D8					1	0	1	1	1	1									
	22.950						Rec : 350/450mm														
	24.000																				

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	1/1/19	8:30	-	-	-	
	= Undisturbed Sample		Clay	1/1/19	19:00	21.00	27.00	-	
	= Disturbed Sample		Sand	2/1/19	8:30	21.00	27.00	-	
	= Cored Sample		Gravel	2/1/19	19:00	42.00	48.00	-	
	= Vane Shear Test		Decayed Matter	2/1/19	19:00	42.00	48.00	-	
RQD	= Rock Quality Disignation		Granite	3/1/19	8:00	42.00	42.00	-	
TCR	= Total Core Recovery		Limestone	3/1/19	19:00	60.00	66.00	-	
CRR	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-14							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 1/1/2019		<b>Coordinates</b> N -30173.017 E -47381.454										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 3/1/2019		<b>Reduced Level (mRL):</b> 3.972										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value
	24.000	UD8					Rec : 900/1000mm											Top: Light to medium grey, CLAY	
	25.000						Rec : 900/1000mm											Bottom: DITTO	
	25.500	P9/D9				2	1	2	2	2	2							Medium stiff, light to medium grey, CLAY	
	25.950						Rec : 300/450mm												
	27.000	UD9					Rec : 900/1000mm											Top: Light to medium grey, CLAY	
	28.000						Rec : 900/1000mm											Bottom: DITTO	
	28.500	P10/D10				2	2	2	3	2	3							Stiff, light to medium grey, CLAY	
	28.950						Rec : 320/450mm												
	30.000	P11/D11				4	3	5	5	4	5							Very stiff, light to medium grey, CLAY	
	30.450						Rec : 270/450mm												
	31.500	P12/D12				3	4	4	5	7	6							-DITTO-	
	31.950						Rec : 250/450mm												
	33.000	P13/D13				5	5	6	7	7	7							Very stiff, light to medium grey, CLAY	
	33.450						Rec : 250/450mm												
	34.500	P14/D14				5	4	5	7	6	7							Very stiff, dark grey, CLAY	
	34.950						Rec : 270/450mm												
	36.000																		

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	1/1/19	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	1/1/19	19:00	21.00	27.00	-	
	= Disturbed Sample		Sand	2/1/19	8:30	21.00	27.00	-	
	= Cored Sample		Gravel	2/1/19	19:00	42.00	48.00	-	
	= Vane Shear Test		Decayed Matter	3/1/19	8:00	42.00	42.00	-	
	RQD = Rock Quality Disignation		Granite	3/1/19	19:00	60.00	66.00	-	
	TCR = Total Core Recovery		Limestone						Prepared by:
	CRR = Core Recovery Ratio		Mudstone						Checked by:

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-14												
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH				<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 1/1/2019		<b>Coordinates</b> N -30173.017 E -47381.454																
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 3/1/2019		<b>Reduced Level (mRL):</b> 3.972															
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph											
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value										
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	WG	Description	0	10	20	30	40
3/1/2018	36.000		P15/D15				6	5	6	6	7	7												
	36.450						Rec : 250/450mm																	
	37.500		P16/D16				7	7	8	9	9	9							Hard, medium grey, sandy CLAY with some of organic matter					
	37.950						Rec : 250/450mm																	
	39.000		P17/D17				6	6	7	7	8	9							Dense, light to medium grey, silty fine grain SAND					
	39.450						Rec : 270/450mm																	
	40.500		P18/D18				7	8	7	8	9	9							-DITTO-					
	40.950						Rec : 270/450mm																	
42.000		P19/D19				7	6	8	7	8	10							-DITTO-						
42.450						Rec : 250/450mm																		
43.500		P20/D20				7	7	9	9	10	11							Dense, light to medium grey, slightly clayey SAND						
43.950						Rec : 300/450mm																		
45.000		P21/D21				7	6	7	8	9	10							-DITTO-						
45.950						Rec : 250/450mm																		
46.500		P22/D22				7	8	7	8	8	10							Dense, light to medium grey, silty fine grain SAND						
46.950						Rec : 270/450mm																		
48.000																								

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :	
	= Standard Penetration Test		Silt	1/1/19	8:30	-	-	-		
	= Undisturbed Sample		Clay	1/1/19	19:00	21.00	27.00	-		
	= Disturbed Sample		Sand	2/1/19	8:30	21.00	27.00	-		
	= Cored Sample		Gravel	2/1/19	19:00	42.00	48.00	-		
	= Vane Shear Test		Decayed Matter	3/1/19	8:00	42.00	42.00	-		
RQD	= Rock Quality Disignation		Granite	3/1/19	19:00	60.00	66.00	-		
TCR	= Total Core Recovery		Limestone							
CRR	= Core Recovery Ratio		Mudstone							


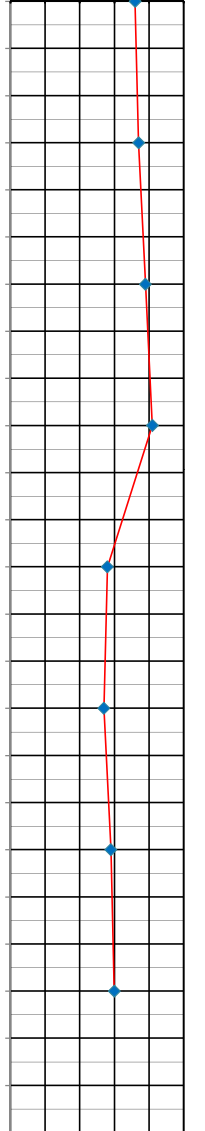
Cohesive Soil (N)	0	2	4	8	15	30
V.soft						
Soft						
M. Stiff						
Stiff						
V. Stiff						
Hard						














  

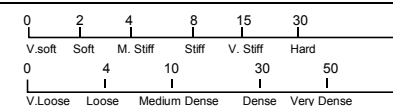
Non Cohesive Soil (N)	0	4	10	30	50
V.Loose					
Loose					
Medium Dense					
Dense					
Very Dense					



Prepared by:	Checked by:
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-14	
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 1/1/2019		<b>Coordinates</b> N -30173.017 E -47381.454				
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 3/1/2019		<b>Reduced Level (mRL):</b> 3.972				
<b>Date &amp; Time</b>	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>						<b>Standard Penetration Test Graph</b> 
	<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Field Test / Rock Cores</b>	<b>Casing Record</b>	<b>Legend</b>	<b>Depth (m)</b>	<b>Thickness (m)</b>	<b>W G</b>	
	48.000	P23/D23				7 8 8 9 9 10 Rec : 250/450mm N= 36		... xx ... xx ... xx ... xx ... xx ... xx ... xx	48.000	3.16		-DITTO-	
	48.450								49.48			Dense, light to medium grey, clayey SAND	
	49.500	P24/D24				8 7 8 9 9 11 Rec : 250/450mm N= 37		... .. ... .. ... .. ... .. ... .. ... .. ... ..	49.500	1.15			
	49.950								50.63			Dense, light to medium grey, silty fine grain SAND with some of organic matter	
	51.000	P25/D25				7 9 9 10 9 11 Rec : 250/450mm N= 39		... xx ... xx ... xx ... xx ... xx ... xx ... xx	51.000	3.06		Dense, light to medium grey, silty fine grain SAND	
	51.450								53.69			Very stiff, medium to dark grey, sandy CLAY	
	52.500	P26/D26				8 7 9 10 11 11 Rec : 200/450mm N= 41		... xx ... xx ... xx ... xx ... xx ... xx ... xx	52.500	1.68		Very stiff, light to medium grey, CLAY	
	52.950								55.37			-DITTO-	
	54.000	P27/D27				5 5 6 6 7 9 Rec : 300/450mm N= 28		... .. ... .. ... .. ... .. ... .. ... .. ... ..	54.000			-DITTO-	
	54.450								55.37			-DITTO-	
	55.500	P28/D28				5 6 6 7 7 7 Rec : 300/450mm N= 27		... .. ... .. ... .. ... .. ... .. ... .. ... ..	55.500				
	55.950								57.000			-DITTO-	
	57.000	P29/D29				6 5 6 7 8 8 Rec : 250/450mm N= 29		... .. ... .. ... .. ... .. ... .. ... .. ... ..	57.000				
	57.450								58.500			-DITTO-	
	58.500	P30/D30				7 6 7 7 7 9 Rec : 270/450mm N= 30		... .. ... .. ... .. ... .. ... .. ... .. ... ..	58.500				
	58.950												



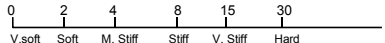
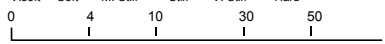











<b>Legend</b>  = Standard Penetration Test  = Undisturbed Sample  = Disturbed Sample  = Cored Sample  = Vane Shear Test <b>RQD</b> = Rock Quality Disignation <b>TCR</b> = Total Core Recovery <b>CRR</b> = Core Recovery Ratio		<b>Soil Legend</b>  Silt  Clay  Sand  Gravel  Decayed Matter  Granite  Limestone  Mudstone		<b>Date</b>	<b>Time</b>	<b>Depth of Hole (m)</b>	<b>Depth of Casing (m)</b>	<b>Depth of Water (m)</b>	<b>Remarks :</b>
		1/1/19	8:30	-	-	-			
		1/1/19	19:00	21.00	27.00	-			
		2/1/19	8:30	21.00	27.00	-			
		2/1/19	19:00	42.00	48.00	-			
		3/1/19	8:00	42.00	42.00	-			
		3/1/19	19:00	60.00	66.00	-			



**Prepared by:** \_\_\_\_\_ **Checked by:** \_\_\_\_\_

 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.												
										6 of 6		BH-14												
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates															
Location : PULAU INDAH					SG/1281/2018		1/1/2019		N -30173.017															
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47381.454														
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		3/1/2019		Reduced Level (mRL): 3.972														
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph											
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value										
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thick-ness (m)	W G	Description	0	10	20	30	40
	60.000		P31/D31				8	7	6	7	8	10				5.08		Hard, light to medium grey, CLAY						
	60.450								Rec : 300/450mm N= 31															
																		Borehole terminated at depth 60.45m						

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	1/1/19	8:30	-	-	-	Cohesive Soil (N)  V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N)  V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	1/1/19	19:00	21.00	27.00	-	
	= Disturbed Sample		Sand	2/1/19	8:30	21.00	27.00	-	
	= Cored Sample		Gravel	2/1/19	19:00	42.00	48.00	-	
	= Vane Shear Test		Decayed Matter	3/1/19	8:00	42.00	42.00	-	
RQD	= Rock Quality Disignation		Granite	3/1/19	19:00	60.00	66.00	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

Prepared by:	Checked by:
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<b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-15							
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 12/12/2018		<b>Coordinates</b> N -30560.370 E -47600.573										
<b>Client</b> WESTPORTS (M) SDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> VERTICAL	<b>Date Completed</b> 14/12/2018		<b>Reduced Level (mRL):</b> -4.5932										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							N' Value					
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description
12/12/2018	0.000		D1				TOPSOIL						0.30	-- xx	0.30		Very soft, light grey, silty CLAY		
	0.300																		
	1.500		P1/D1				0	1	0	1	0	1					5	Very stiff, light to medium grey, silty CLAY.	
	1.950																		
	3.000		UD1															Top: Light to medium grey, silty CLAY.	
	4.000																	Bottom: DITTO	
	4.500		P2/D2														9.10	Very soft, light to medium grey, silty CLAY.	
	4.950																		
	6.000		UD2															Top: Light to medium grey, silty CLAY.	
	7.000																	Bottom: DITTO	
	7.500		P3/D3															Very soft, light to medium grey, silty CLAY.	
	7.950																		
	9.000		UD3															Top: Light to medium grey, silty CLAY.	
	10.000																	Bottom: Light to medium grey, CLAY.	
	10.500		P4/D4				0	0	1	0	0	1						Very soft, light to medium grey, CLAY.	
	10.950																		
	12.000												12.00		12.00				

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	12/12/18	8:30	0.00	0.00	0.00	Cohesive Soil (N) Non Cohesive Soil (N) Prepared by: _____ Checked by: _____
	= Undisturbed Sample		Clay	12/12/18	19:00	27.00	34.00	0.00	
	= Disturbed Sample		Sand	13/12/18	8:30	27.00	34.00	0.00	
	= Cored Sample		Gravel	13/12/18	19:00	42.00	44.00	0.00	
	= Vane Shear Test		Decayed Matter	14/12/18	8:30	42.00	49.00	0.00	
RQD	= Rock Quality Disignation		Granite	14/12/18	19:00	60.00	67.00	0.00	
TCR	= Total Core Recovery		Limestone						

								nuua		u.v. 100
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-15								
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 12/12/2018		<b>Coordinates</b> N -30560.370 E -47600.573											
<b>Client</b> WESTPORTS (M) SDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> VERTICAL	<b>Date Completed</b> 14/12/2018		<b>Reduced Level (mRL):</b> -4.5932											
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50							
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Depth (m)	Thickness (m)	W G	Description			
							75mm	75mm	75mm	75mm	75mm	75mm								
	12.000	UD4																		
	13.000																			
	13.500	P5/D5				0	1	0	0	1	0									
	13.950																			
	15.000	UD5																		
	16.000																			
	16.500	P6/D6																		
	16.950																			
	18.000	UD6																		
	19.000																			
	19.500	P7/D7																		
	19.950																			
	21.000	UD7																		
	22.000																			
	22.500	P8/D8				0	1	0	1	0	1									
	22.950																			
	24.000																			


  

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	12/12/18	8:30	0.00	0.00	0.00	
	= Undisturbed Sample		Clay	12/12/18	19:00	27.00	34.00	0.00	
	= Disturbed Sample		Sand	13/12/18	8:30	27.00	34.00	0.00	
	= Cored Sample		Gravel	13/12/18	19:00	42.00	44.00	0.00	
	= Vane Shear Test		Decayed Matter	14/12/18	8:30	42.00	49.00	0.00	
	RQD = Rock Quality Disignation		Granite	14/12/18	19:00	60.00	67.00	0.00	
	TCR = Total Core Recovery		Limestone						
	CRR = Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-15						
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 12/12/2018		<b>Coordinates</b> N -30560.370 E -47600.573									
<b>Client</b> WESTPORTS (M) SDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> VERTICAL	<b>Date Completed</b> 14/12/2018		<b>Reduced Level (mRL):</b> -4.5932									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50					
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description
13/12/2018	24.000	UD8					Rec : 870/1000mm											Top: Light to medium grey, CLAY. Bottom: DITTO.
	25.000																	
	25.500	P9/D9				0	0	1	0	1	1				5.15			Soft, light to medium grey, CLAY.
	25.950																	
	27.000	UD9					Rec : 910/1000mm											Top: Light to medium grey, CLAY. Bottom: Light to medium grey, silty CLAY.
	28.000																	
	28.500	P10/D10				1	1	1	1	1	1				1.40			Stiff, light to medium grey, CLAY.
	28.950																	
	30.000	UD10					Rec : 900/1000mm											Top: Light to medium grey, sandy CLAY. Bottom: DITTO.
	31.000																	
31.500	P11/D11				1	1	1	1	1	1				1.55				
31.950																		
33.000	P12/D12				1	1	1	1	2	2				4.55			Medium stiff, light to medium grey, CLAY.	
33.450																		
34.500	P13/D13				1	1	1	2	2	2								
34.950																		
36.000																		
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :									
	= Standard Penetration Test		Silt	12/12/18	8:30	0.00	0.00	0.00	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense									
	= Undisturbed Sample		Clay	12/12/18	19:00	27.00	34.00	0.00										
	= Disturbed Sample		Sand	13/12/18	8:30	27.00	34.00	0.00										
	= Cored Sample		Gravel	13/12/18	19:00	42.00	44.00	0.00										
	= Vane Shear Test		Decayed Matter	14/12/18	8:30	42.00	49.00	0.00										
	RQD = Rock Quality Disignation		Granite	14/12/18	19:00	60.00	67.00	0.00										
	TCR = Total Core Recovery		Limestone															
	CRR = Core Recovery Ratio		Mudstone															
<b>Prepared by:</b>		<b>Checked by:</b>																


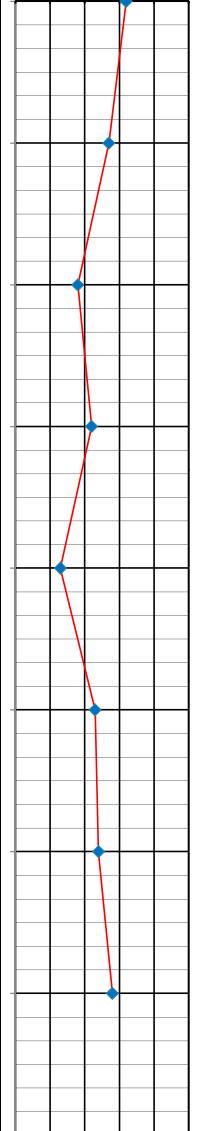
 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622						Sheet		Borehole Ref. No.											
						4 of 6		BH-15											
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19				Job No.		Date Started	Coordinates												
Location : PULAU INDAH				SG/1281/2018		12/12/2018	N	-30560.370											
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation	Date Completed	Reduced Level (mRL):											
WESTPORTS (M) SDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	VERTICAL	14/12/2018	-4.5932											
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS				Standard Penetration Test Graph								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value	
							75mm	75mm	75mm	75mm									75mm
14/12/2018	36.000		P14/D14				3	2	2	2	4	4	12					Stiff, light to medium grey, sandy CLAY.	
	36.450																		
	37.500		P15/D15				3	3	3	4	3	4	14		2.75			-DITTO-	
	37.950																		
	39.000		P16/D16				5	6	6	5	6	6	23	.. xx				Medium dense, light to medium grey, silty fine grain SAND.	
	39.450													.. xx					
	40.500		P17/D17				5	5	5	6	6	6	23	.. xx	4.65			-DITTO-	
	40.950													.. xx					
	42.000		P18/D18				6	5	6	6	7	7	26	.. xx				-DITTO-	
	42.450													.. xx					
	43.500		P19/D19				6	7	7	8	9	33	.. xx	1.60				Dense, light to medium grey, very clayey SAND	
	43.950												.. xx						
	45.000		P20/D20				5	6	6	7	7	27	.. xx					Medium dense, light to medium grey, silty fine grain SAND.	
	45.450												.. xx						
	46.500		P21/D21				6	7	7	6	8	29	.. xx					-DITTO-	
	46.950												.. xx						
	48.000												.. xx						

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	12/12/18	8:30	0.00	0.00	0.00	Cohesive Soil (N) V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	12/12/18	19:00	27.00	34.00	0.00	
	= Disturbed Sample		Sand	13/12/18	8:30	27.00	34.00	0.00	
	= Cored Sample		Gravel	13/12/18	19:00	42.00	44.00	0.00	
	= Vane Shear Test		Decayed Matter	14/12/18	8:30	42.00	49.00	0.00	
	= Rock Quality Disignation		Granite	14/12/18	19:00	60.00	67.00	0.00	
	= Total Core Recovery		Limestone						
	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>	<b>Checked by:</b>
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-15							
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 12/12/2018		<b>Coordinates</b> N -30560.370 E -47600.573										
<b>Client</b> WESTPORTS (M) SDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> VERTICAL	<b>Date Completed</b> 14/12/2018		<b>Reduced Level (mRL):</b> -4.5932										
<b>Date &amp; Time</b>	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>						<b>Standard Penetration Test Graph</b> 						
	<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Field Test / Rock Cores</b>					<b>Casing Record</b>		<b>Legend</b>	<b>Depth (m)</b>	<b>Thickness (m)</b>	<b>W G</b>	<b>Description</b>	<b>'N' Value</b> 0 10 20 30 40 50
48.000	[Standard Penetration Test]	P22/D22				7	6	7	8	8	9	---	xx	48.450	1.35		Dense, light to medium grey, silty fine grain SAND.	32	
48.450						Rec : 300/450mm													
49.500	[Standard Penetration Test]	P23/D23				6	6	6	7	7	7	---	---	49.35	1.65		Medium dense, light to medium grey, clayey SAND	27	
49.950						Rec : 270/450mm													
51.000	[Standard Penetration Test]	P24/D24				4	3	4	4	5	5	---	---	51.00	1.40		Very stiff, light to medium grey, CLAY with some of organic matter	18	
51.450						Rec : 280/450mm													
52.500	[Standard Penetration Test]	P24/D24				4	5	4	5	6	7	xx	xx	52.40	1.50		Very stiff, light to medium grey, silty CLAY.	22	
52.950						Rec : 250/450mm													
54.000	[Standard Penetration Test]	P25/D25				4	3	3	3	3	4	---	---	53.90			Stiff, light to medium grey, CLAY.	13	
54.450						Rec : 250/450mm													
55.500	[Standard Penetration Test]	P26/D26				4	5	5	6	6	6	---	---				Very stiff, light to medium grey, CLAY.	23	
55.950						Rec : 300/450mm													
57.000	[Standard Penetration Test]	P27/D27				5	5	6	5	6	7	---	---				Very stiff, light to medium grey, CLAY.	24	
57.450						Rec : 270/450mm													
58.500	[Standard Penetration Test]	P28/D28				5	6	7	7	7	7	---	---				Very stiff, light to medium grey, CLAY.	28	
58.950						Rec : 250/450mm													
60.000																			

**Legend**

- = Standard Penetration Test
- = Undisturbed Sample
- = Disturbed Sample
- = Cored Sample
- = Vane Shear Test
- RQD = Rock Quality Disignation
- TCR = Total Core Recovery
- CRR = Core Recovery Ratio

**Soil Legend**

- Silt
- Clay
- Sand
- Gravel
- Decayed Matter
- Granite
- Limestone
- Mudstone



Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)
12/12/18	8:30	0.00	0.00	0.00
12/12/18	19:00	27.00	34.00	0.00
13/12/18	8:30	27.00	34.00	0.00
13/12/18	19:00	42.00	44.00	0.00
14/12/18	8:30	42.00	49.00	0.00
14/12/18	19:00	60.00	67.00	0.00






**Remarks :**









Cohesive Soil (N) 0 2 4 8 15 30  
 V.soft Soft M. Stiff Stiff V. Stiff Hard

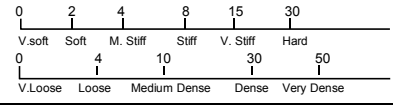
Non Cohesive Soil (N) 0 4 10 30 50  
 V.Loose Loose Medium Dense Dense Very Dense

**Prepared by:** \_\_\_\_\_ **Checked by:** \_\_\_\_\_

 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.												
										6 of 6		BH-15												
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates															
Location : PULAU INDAH					SG/1281/2018		12/12/2018		N -30560.370															
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47600.573														
WESTPORTS (M) SDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	VERTICAL		14/12/2018		Reduced Level (mRL): -4.5932														
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph											
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value										
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	0	10	20	30	40
	60.000		P29/D29				6	6	7	6	7	6				6.55		Very stiff, light to medium grey, CLAY.						
	60.450								Rec : 250/450mm N= 26								60.45		Borehole terminated at depth 60.45m					
										Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :									
										12/12/18	8:30	0.00	0.00	0.00										
										12/12/18	19:00	27.00	34.00	0.00										
										13/12/18	8:30	27.00	34.00	0.00	Cohesive Soil (N)									
										13/12/18	19:00	42.00	44.00	0.00	Non Cohesive Soil (N)									
										14/12/18	8:30	42.00	49.00	0.00										
										14/12/18	19:00	60.00	67.00	0.00										
										Prepared by:		Checked by:												

- Legend**
-  = Standard Penetration Test
  -  = Undisturbed Sample
  -  = Disturbed Sample
  -  = Cored Sample
  -  = Vane Shear Test
  - RQD = Rock Quality Disignation
  - TCR = Total Core Recovery
  - CRR = Core Recovery Ratio

- Soil Legend**
-  Silt
  -  Clay
  -  Sand
  -  Gravel
  -  Decayed Matter
  -  Granite
  -  Limestone
  -  Mudstone




<b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-16										
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 8/12/2018		<b>Coordinates</b> N -30830.158 E -47757.448													
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 10/12/2018		<b>Reduced Level (mRL):</b> -0.6912													
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph N' Value 0 10 20 30 40 50									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description								
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G				
8/12/2018	0.000						TOPSOIL								0.30	0.30			Very soft, light grey, silty CLAY			
	1.500		P1/D1				-HAMMER WEIGHT- N=0 Rec: 300/450mm									2.68				Very soft, light to medium grey, silty CLAY		
	1.950																					
	3.000		UD1				Rec: 900/1000mm										2.98				Top: Medium to dark grey, sandy CLAY	
	4.000																			Bottom: Light to medium grey, CLAY		
	4.500		P2/D2				-HAMMER WEIGHT- N=0 Rec: 330/450mm									4.42				Very soft, light to medium grey, silty CLAY		
	4.950																					
	6.000		UD2				Rec: 920/1000mm													Top: Light to medium grey, silty CLAY		
	7.000																			Bottom: DITTO		
	7.500		P3/D3				-HAMMER WEIGHT- N=0 Rec: 300/450mm													Very soft, light to medium grey, silty CLAY		
	7.950																					
	9.000		UD3				Rec: 910/1000mm													Top: Light to medium grey, silty CLAY		
	10.000																			Bottom: DITTO		
	10.500		P4/D4				-HAMMER WEIGHT- N=0 Rec: 310/450mm													Very soft, light to medium grey, silty CLAY		
	10.950																					
	12.000																					

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	8/12/18	8:30	-	-	-	OFFSHORE
	= Undisturbed Sample		Clay	8/12/18	19:00	27.00	35.00	-	
	= Disturbed Sample		Sand	9/12/18	8:30	27.00	35.00	-	
	= Cored Sample		Gravel	9/12/18	19:00	42.00	50.00	-	
	= Vane Shear Test		Decayed Matter	10/12/18	8:30	42.00	50.00	-	
RQD	= Rock Quality Disignation		Granite	10/12/18	8:30	42.00	50.00	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
TCR	= Total Core Recovery		Limestone	10/12/18	19:00	60.00	68.00	-	



 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.										
										2 of 6		BH-16										
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates													
Location : PULAU INDAH					SG/1281/2018		8/12/2018		N -30830.158													
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47757.448												
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		10/12/2018		Reduced Level (mRL): -0.6912												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value			
							75mm	75mm	75mm	75mm	75mm											
	12.000	UD4					Rec : 800/1000mm						xx				Top: Light to medium grey, silty CLAY					
	13.000												xx				Bottom: DITTO					
	13.500	P5/D5					-HAMMER WEIGHT- N= 0 Rec : 330/450mm						xx				Very soft, light to medium grey, silty CLAY					
	15.000	UD5					Rec : 890/1000mm						xx	13.53			Top: Light to medium grey, CLAY					
	16.000												xx			Bottom: DITTO						
	16.500	P6/D6					0	1	0	1	0	1		xx			Very soft, light to medium grey, silty CLAY					
	16.950						Rec : 300/450mm						xx									
	18.000	UD6					Rec : 900/1000mm						xx				Top: Light to medium grey, CLAY					
	19.000												xx	1.52			Bottom: DITTO					
	19.500	P7/D7					0	1	0	1	1	1		xx			Soft, light to medium grey, silty CLAY					
	19.950						Rec : 290/450mm						xx	1.29								
	21.000	UD7					Rec : 880/1000mm						xx				Top: Light to medium grey, CLAY					
	22.000												xx	1.72			Bottom: DITTO					
	22.500	P8/D8					1	1	1	2	1	1		xx			Medium stiff, light to medium grey, silty CLAY					
	22.950						Rec : 300/450mm						xx	1.52								
	24.000												xx									

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	8/12/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	8/12/18	19:00	27.00	35.00	-	
	= Disturbed Sample		Sand	9/12/18	8:30	27.00	35.00	-	
	= Cored Sample		Gravel	9/12/18	19:00	42.00	50.00	-	
	= Vane Shear Test		Decayed Matter	10/12/18	8:30	42.00	50.00	-	
	RQD = Rock Quality Disignation		Granite	10/12/18	19:00	60.00	68.00	-	
	TCR = Total Core Recovery		Limestone						
	CRR = Core Recovery Ratio		Mudstone						

Prepared by:		Checked by:	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-16											
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 8/12/2018		<b>Coordinates</b> N -30830.158 E -47757.448														
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 10/12/2018		<b>Reduced Level (mRL):</b> -0.6912														
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph										
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value									
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description				
9/12/2018	24.000	UD8					Rec : 900/1000mm																
	25.000																						
	25.500	P9/D9				0	1	1	1	1	1	1											
	25.950						Rec : 330/450mm																
	27.000	UD9					Rec : 910/1000mm																
	28.000																						
	28.500	P10/D10				1	1	1	1	1	1	1											
	28.950						Rec : 300/450mm																
	30.000	UD10					Rec : 900/1000mm																
	31.000																						
	31.500	P11/D11				1	1	1	1	1	1	1											
	31.950						Rec : 310/450mm																
33.000	P12/D12				2	1	2	2	2	2	2												
33.450						Rec : 300/450mm																	
34.500	P13/D13				1	2	1	2	2	2	2												
34.950						Rec : 270/450mm																	
36.000																							

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
		8/12/18	8:30	-	-	-	
		8/12/18	19:00	27.00	35.00	-	
		9/12/18	8:30	27.00	35.00	-	
		9/12/18	19:00	42.00	50.00	-	
		9/12/18	19:00	42.00	50.00	-	
RQD = Rock Quality Disignation		10/12/18	8:30	42.00	50.00	-	
TCR = Total Core Recovery		10/12/18	19:00	60.00	68.00	-	
CRP = Core Recovery Ratio							


  

<b>Prepared by:</b>		<b>Checked by:</b>	
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Cohesive Soil (N)		0    2    4    8    15    30
V.soft    Soft    M. Stiff    Stiff    V. Stiff    Hard		
Non Cohesive Soil (N)		0    4    10    30    50
V.Loose    Loose    Medium Dense    Dense    Very Dense		

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.							
										4 of 6		BH-16							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.			Date Started		Coordinates									
Location : PULAU INDAH					SG/1281/2018			8/12/2018		N -30830.158									
Client		Consultant			Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47757.448								
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.			ROTARY WASH	100	Vertical		10/12/2018		Reduced Level (mRL): -0.6912								
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS					Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50							
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores						Description						
							75mm	75mm	75mm	75mm	75mm	75mm		Casing Record	Legend	Depth (m)	Thickness (m)	W G	
10/12/2018	36.000	P14/D14					2	2	2	3	2	2							
	36.450						2	2	2	3	2	2							
	37.500	P15/D15					1	2	1	2	2	1							
	37.950						1	2	1	2	2	1							
	39.000	P16/D16					2	1	2	2	1	3				14.90			
	39.450						2	1	2	2	1	3							
	40.500	P17/D17					2	3	2	3	3	3							
	40.950						2	3	2	3	3	3							
	42.000	P18/D18					3	2	3	4	4	5							
	42.450						3	2	3	4	4	5							
43.500	P19/D19					3	2	3	4	3	5								
43.950						3	2	3	4	3	5								
45.000	P20/D20					4	3	4	3	5	5								
45.950						4	3	4	3	5	5								
46.50	P21/D21					5	4	6	6	5	6								
46.95						5	4	6	6	5	6								
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :										
	= Standard Penetration Test		Silt	8/12/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense										
	= Undisturbed Sample		Clay	8/12/18	19:00	27.00	35.00	-											
	= Disturbed Sample		Sand	9/12/18	8:30	27.00	35.00	-											
	= Cored Sample		Gravel	9/12/18	19:00	42.00	50.00	-											
	= Vane Shear Test		Decayed Matter	10/12/18	8:30	42.00	50.00	-											
RQD	= Rock Quality Disignation		Granite	10/12/18	19:00	60.00	68.00	-											
TCR	= Total Core Recovery		Limestone	10/12/18	19:00	60.00	68.00	-											
CRP	= Core Recovery Ratio		Mudstone						Prepared by: _____ Checked by: _____										


 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-16								
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 8/12/2018		<b>Coordinates</b> N -30830.158 E -47757.448											
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 10/12/2018		<b>Reduced Level (mRL):</b> -0.6912											
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph							
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value 0 10 20 30 40 50						
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	
	48.000		P22/D22				4	6	6	5	6	6				3.01		-DITTO-		
	48.450						Rec : 310/450mm													
	49.500		P23/D23				5	4	5	6	6	7			49.43			Very stiff, light to medium grey, sandy CLAY with trace of organic matter		
	49.950						Rec : 300/450mm													
	51.000		P24/D24				3	4	5	5	6	6						Very stiff, light to medium grey, CLAY		
	51.450						Rec : 270/450mm													
	52.500		P24/D25				5	4	5	5	6	7						-DITTO-		
	52.950						Rec : 300/450mm													
	54.000		P26/D26				6	5	6	7	7	8						Very stiff, light to medium grey, CLAY		
	54.450						Rec : 250/450mm													
	55.500		P27/D27				4	3	5	5	4	6						-DITTO-		
	55.950						Rec : 310/450mm													
	57.000		P28/D28				6	7	7	7	6	8						-DITTO-		
	57.450						Rec : 300/450mm													
	58.500		P29/D29				6	7	9	9	8	9						Hard, light to medium grey, CLAY		
	58.950						Rec : 250/450mm													
	60.000																			














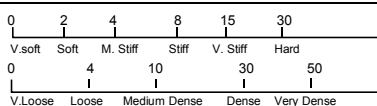
Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	8/12/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	8/12/18	19:00	27.00	35.00	-	
	= Disturbed Sample		Sand	9/12/18	8:30	27.00	35.00	-	
	= Cored Sample		Gravel	9/12/18	19:00	42.00	50.00	-	
	= Vane Shear Test		Decayed Matter	10/12/18	8:30	42.00	50.00	-	
	RQD = Rock Quality Disignation		Granite	10/12/18	19:00	60.00	68.00	-	
	TCR = Total Core Recovery		Limestone						
	CRR = Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622	<b>Sheet</b>	<b>Borehole Ref. No.</b>	
	6 of 6	BH-16	
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19	<b>Job No.</b>	<b>Date Started</b>	<b>Coordinates</b>
Location : PULAU INDAH	SG/1281/2018	8/12/2018	N -30830.158
<b>Client</b>	<b>Consultant</b>	<b>Type of Boring</b>	<b>Boring Dia. (mm)</b>
WESTPORTS (M) DDN. BHD.	HSS INTEGRATED SDN. BHD.	ROTARY WASH	100
			<b>Orientation</b>
			Vertical
			<b>Date Completed</b>
			10/12/2018
			<b>Reduced Level (mRL):</b>
			-0.6912

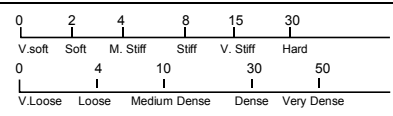
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS								Standard Penetration Test Graph <small>'N' Value</small>							
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)		Thickness (m)	W G	Description				
							75mm	75mm	75mm	75mm	75mm	75mm										
							6	5	6	7	8	9										
	60.000																					
	60.450	P30/D30													9.45							
							Rec : 300/450mm															

<b>Legend</b>  = Standard Penetration Test  = Undisturbed Sample  = Disturbed Sample  = Cored Sample  = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRR = Core Recovery Ratio	<b>Soil Legend</b>  Silt  Clay  Sand  Gravel  Decayed Matter  Granite  Limestone  Mudstone	Date Time Depth of Hole (m) Depth of Casing (m) Depth of Water (m)	Remarks :  		
		8/12/18 8:30 8/12/18 19:00 9/12/18 8:30 9/12/18 19:00 10/12/18 8:30 10/12/18 19:00	- 27.00 35.00 50.00 42.00 60.00	- 35.00 50.00 50.00 68.00	Prepared by: _____ Checked by: _____

<b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-17						
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 16/12/2018		<b>Coordinates</b> N -30591.836 E -47257.956									
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 18/12/2018		<b>Reduced Level (mRL):</b> -1.8384								
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph					
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description
16/12/2018	0.000						TOPSOIL						xx	0.30	0.30		Very soft, light grey, silty CLAY	
	1.500		P1/D1				-HAMMER WEIGHT- N=0 Rec: 400/450mm						xx	2.60		Very soft, light to medium grey, CLAY		
	1.950						Rec: 900/1000mm						xx	2.90		Top: Light to medium grey, silty CLAY Bottom: DITTO		
	3.000		UD1				Rec: 910/1000mm						xx	6.05		Very soft, light to medium grey, silty CLAY		
	4.000						-HAMMER WEIGHT- N=0 Rec: 400/450mm						xx			Top: Light to medium grey, silty CLAY Bottom: DITTO		
	4.500		P2/D2				Rec: 910/1000mm						xx			Very soft, light to medium grey, silty CLAY		
	4.950						Rec: 350/450mm N=2						xx			Top: Light to medium grey, silty CLAY Bottom: DITTO		
	6.000		UD2				Rec: 810/1000mm						xx	8.95		Very soft, light to medium grey, silty CLAY		
	7.000						Rec: 350/450mm N=2						xx			Top: Light to medium grey, sandy CLAY Bottom: DITTO		
	7.500		P3/D3				Rec: 810/1000mm						xx	10.40		Very soft, light to medium grey, silty CLAY		
	7.950						Rec: 350/450mm N=2						xx					
	9.000		UD3				Rec: 350/450mm N=2						xx					
	10.000						Rec: 350/450mm N=2						xx					
	10.500		P4/D4				Rec: 350/450mm N=2						xx					
	10.950						Rec: 350/450mm N=2						xx					
	12.000												xx					
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :									
	= Standard Penetration Test		Silt	16/12/18	8:30	-	-	-	OFFSHORE									
	= Undisturbed Sample		Clay	16/12/18	19:00	27.00	33.00	-	Cohesive Soil (N)									
	= Disturbed Sample		Sand	17/12/18	8:30	27.00	33.00	-	V.soft Soft M. Stiff Stiff V. Stiff Hard									
	= Cored Sample		Gravel	17/12/18	19:00	45.00	54.00	-	Non Cohesive Soil (N)									
	= Vane Shear Test		Decayed Matter	18/12/18	8:30	45.00	54.00	-	V.Loose Loose Medium Dense Dense Very Dense									
RQD	= Rock Quality Disignation		Granite	18/12/18	8:30	45.00	54.00	-										
TCR	= Total Core Recovery		Limestone	18/12/18	19:00	60.00	66.00	-										



STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )										Sheet		Borehole Ref. No.										
No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										2 of 6		BH-17										
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.			Date Started		Coordinates												
Location : PULAU INDAH					SG/1281/2018			16/12/2018		N -30591.836												
Client		Consultant			Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47257.956											
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.			ROTARY WASH	100	Vertical		18/12/2018		Reduced Level (mRL): -1.8384											
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value			
	12.000		UD4				75mm	75mm	75mm	75mm	75mm											
	13.000																					
	13.500																					
	13.950		P5/D5																			
	15.000																					
	15.000		UD5																			
	16.000																					
	16.500																					
	16.500																					
	16.950		P6/D6																			
	18.000																					
	18.000		UD6																			
	19.000																					
	19.500																					
	19.500																					
	19.500		P7/D7																			
	21.000																					
	21.000		UD7																			
	22.000																					
	22.500																					
	22.500																					
	22.500		P8/D8																			
	24.000																					
Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :													
	= Standard Penetration Test		Silt	16/12/18	8:30	-	-	-														
	= Undisturbed Sample		Clay	16/12/18	19:00	27.00	33.00	-														
	= Disturbed Sample		Sand	17/12/18	8:30	27.00	33.00	-														
	= Cored Sample		Gravel	17/12/18	19:00	45.00	54.00	-														
	= Vane Shear Test		Decayed Matter	18/12/18	8:30	45.00	54.00	-														
RQD	= Rock Quality Disignation		Granite	18/12/18	19:00	60.00	66.00	-														
TCR	= Total Core Recovery		Limestone																			
CRR	= Core Recovery Ratio		Mudstone																			



Prepared by: \_\_\_\_\_ Checked by: \_\_\_\_\_

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-17				
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 16/12/2018		<b>Coordinates</b> N -30591.836 E -47257.956							
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 18/12/2018		<b>Reduced Level (mRL):</b> -1.8384							
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50			
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Depth (m)	Thickness (m)	W G
17/12/2018	24.000	UD8					Rec : 880/1000mm						24.00	1.45		Top: Light to medium grey, silty CLAY Bottom: DITTO
	25.000												25.45			
	25.500	P9/D9				1	1	1	1	1	1	N= 4		1.85		Soft, light to medium grey, CLAY
	25.950						Rec : 350/450mm									
	27.000	UD9					Rec : 900/1000mm						27.30			Top: Light to medium grey, CLAY
	28.000													1.20		Bottom: Light to medium grey, silty CLAY
	28.500	P10/D10				1	1	1	1	1	1	N= 4			1.95	
	28.950						Rec : 350/450mm									
	30.000	UD10					Rec : 850/1000mm						30.45			Top: Light to medium grey, CLAY
	31.000													0.95		Bottom: Light to medium grey, silty CLAY
	31.500	P11/D11				1	1	1	1	1	1	N= 5			2.90	
	31.950						Rec : 350/450mm									
33.000	UD11					Rec : 910/1000							34.30		Top: Light to medium grey, CLAY Bottom: DITTO	
34.000																
34.500	P12/D12				1	1	1	1	2	2	N= 6		1.70		Medium stiff, light to medium grey, silty CLAY	
34.950						Rec : 250/450mm										
36.000												36.00				
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :							
	= Standard Penetration Test		Silt	16/12/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense							
	= Undisturbed Sample		Clay	16/12/18	19:00	27.00	33.00	-								
	= Disturbed Sample		Sand	17/12/18	8:30	27.00	33.00	-								
	= Cored Sample		Gravel	17/12/18	19:00	45.00	54.00	-								
	= Vane Shear Test		Decayed Matter	18/12/18	8:30	45.00	54.00	-								
	RQD = Rock Quality Disignation		Granite	18/12/18	19:00	60.00	66.00	-								
	TCR = Total Core Recovery		Limestone													
	CRR = Core Recovery Ratio		Mudstone													
				<b>Prepared by:</b>		<b>Checked by:</b>										




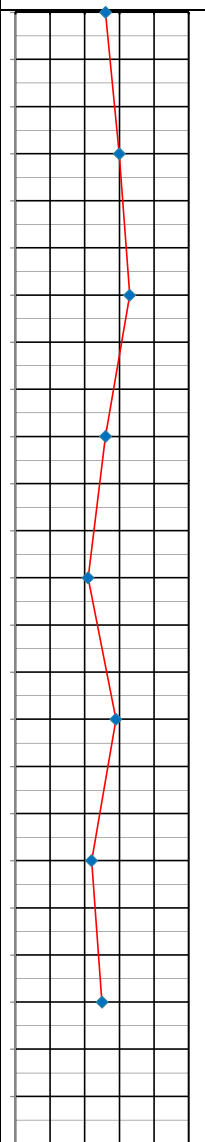
<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-17										
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 16/12/2018		<b>Coordinates</b> N -30591.836 E -47257.956													
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 18/12/2018		<b>Reduced Level (mRL):</b> -1.8384													
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description								
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thick-ness (m)	W G				
18/12/2018	36.000	P13/D13					2	1	2	2	2	2								Medium stiff, light to medium grey, CLAY	10	
	36.450						8	Rec : 350/450mm														
	37.500	P14/D14					3	2	3	3	4	4								Stiff, light to medium grey, CLAY	15	
	37.950						14	Rec : 300/450mm														
	39.000	P15/D15					3	3	2	3	4	5								-DITTO-	20	
	39.450						14	Rec : 270/450mm														
	40.500	P16/D16					3	4	4	5	5	5								Very stiff, light to medium grey, CLAY	25	
	40.950						19	Rec : 270/450mm														
	42.000	P17/D17					3	4	3	4	4	4								Stiff, light to medium grey, CLAY	30	
	42.450						15	Rec : 300/450mm														
	43.500	P18/D18					4	3	4	4	5	4								Very stiff, light to medium grey, CLAY	35	
	43.950						17	Rec : 350/450mm														
	45.000	P19/D19					3	4	4	5	5	5								-DITTO-	40	
	45.950						19	Rec : 310/450mm														
	46.500	P20/D20					5	5	6	6	5	6								Medium dense, light to medium grey, sandy CLAY	45	
	46.950						23	Rec : 250/450mm														
	48.000																					














Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	16/12/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	16/12/18	19:00	27.00	33.00	-	
	= Disturbed Sample		Sand	17/12/18	8:30	27.00	33.00	-	
	= Cored Sample		Gravel	17/12/18	19:00	45.00	54.00	-	
	= Vane Shear Test		Decayed Matter	18/12/18	8:30	45.00	54.00	-	
RQD	= Rock Quality Disignation		Granite	18/12/18	19:00	60.00	66.00	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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
 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-17		
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 16/12/2018		<b>Coordinates</b> N -30591.836 E -47257.956					
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 18/12/2018		<b>Reduced Level (mRL):</b> -1.8384				
<b>Date &amp; Time</b>	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>						<b>Standard Penetration Test Graph</b> 	
	<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Field Test / Rock Cores</b>	<b>Casing Record</b>	<b>Legend</b>	<b>Depth (m)</b>	<b>Thick-ness (m)</b>	<b>W G</b>		<b>Description</b>
	48.000	P21/D21				5 4 6 6 7 7 Rec : 270/450mm N= 26							-DITTO-	
	48.450									4.50			-DITTO-	
	49.500	P22/D22				7 6 7 7 8 8 Rec : 250/450mm N= 30								
	49.950													
	51.000	P23/D23				5 6 7 8 9 9 Rec : 250/450mm N= 33		xx xx xx xx xx xx xx	50.95	1.45			Dense, light to medium grey, silty fine grain SAND	
	51.450													
	52.500	P24/D24				5 5 6 6 7 7 Rec : 200/450mm N= 26							Medium dense, light to medium grey, very clayey SAND	
	52.950													
	54.000	P25/D25				4 5 4 5 6 6 Rec : 250/450mm N= 21				3.10			Medium dense, light to medium grey, very clayey SAND	
	54.450													
	55.500	P26/D26				4 5 4 4 5 6 Rec : 270/450mm N= 19		xx xx xx xx xx xx xx	55.50	1.30			Very stiff, light to medium grey, silty CLAY	
	55.950													
	57.000	P27/D27				5 4 5 5 6 6 Rec : 300/450mm N= 22							Very stiff, light to medium grey, CLAY	
	57.450													
	58.500	P28/D28				4 5 6 6 6 7 Rec : 310/450mm N= 25							-DITTO-	
	58.950													
	60.000													

<b>Legend</b>		<b>Soil Legend</b>		<b>Date</b>		<b>Time</b>		<b>Depth of Hole (m)</b>		<b>Depth of Casing (m)</b>		<b>Depth of Water (m)</b>		<b>Remarks :</b>	
 = Standard Penetration Test		 Silt		16/12/18		8:30		-		-		-			
 = Undisturbed Sample		 Clay		16/12/18		19:00		27.00		33.00		-			
 = Disturbed Sample		 Sand		17/12/18		8:30		27.00		33.00		-		Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense	
 = Cored Sample		 Gravel		17/12/18		19:00		45.00		54.00		-			
 = Vane Shear Test		 Decayed Matter		18/12/18		8:30		45.00		54.00		-			
RQD = Rock Quality Disignation		 Granite		18/12/18		19:00		60.00		66.00		-			
TCR = Total Core Recovery		 Limestone													
CRP = Core Recovery Ratio		 Mudstone													

<b>Prepared by:</b>		<b>Checked by:</b>	
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
 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.													
										6 of 6		BH-17													
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates																
Location : PULAU INDAH					SG/1281/2018		16/12/2018		N -30591.836																
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47257.956															
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		18/12/2018		Reduced Level (mRL): -1.8384															
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph												
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value											
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thick-ness (m)	W G	Description	0	10	20	30	40	50
	60.000						5	4	5	5	5	7				3.65		-DITTO-							
	60.450		P29/D29				Rec : 270/450mm N= 22																		
																		Borehole terminated at depth 60.45m							













Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	16/12/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	16/12/18	19:00	27.00	33.00	-	
	= Disturbed Sample		Sand	17/12/18	8:30	27.00	33.00	-	
	= Cored Sample		Gravel	17/12/18	19:00	45.00	54.00	-	
	= Vane Shear Test		Decayed Matter	18/12/18	8:30	45.00	54.00	-	
	= Rock Quality Disignation		Granite	18/12/18	19:00	60.00	66.00	-	
	= Total Core Recovery		Limestone						
	= Core Recovery Ratio		Mudstone						

Prepared by:	Checked by:
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 <b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-18						
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 4/12/2018		<b>Coordinates</b> N -30918.664 E -47603.705									
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 6/12/2018		<b>Reduced Level (mRL):</b> -0.9244								
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph					
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores						Depth (m)	Thickness (m)	W G	Description	N' Value 0 10 20 30 40 50	
4/12/2018	0.000						TOPSOIL						0.30	0.30		Very soft, light grey, silty CLAY		
	1.500		P1/D1				-HAMMER WEIGHT- N=0 Rec: 250/450mm						3.15			Very soft, light to medium grey, silty CLAY		
	1.950																	
	3.000		UD1				Rec: 920/1000mm						3.45			Top: Light to medium grey, silty CLAY		
	4.000															Bottom: Light to medium grey, CLAY of high plasticity		
	4.500		P2/D2				-HAMMER WEIGHT- N=0 Rec: 300/450mm						4.48			Very soft, light to medium grey, silty CLAY		
	4.950																	
	6.000		UD2				Rec: 900/1000mm						5.84			Top: Light to medium grey, CLAY		
	7.000															Bottom: Light to medium grey, silty CLAY		
	7.500		P3/D3				-HAMMER WEIGHT- N=0 Rec: 320/450mm						2.67			Very soft, light to medium grey, silty CLAY		
	7.950																	
	9.000		UD3				Rec: 900/1000mm						8.97			Top: Light to medium grey, CLAY		
10.000															Bottom: DITTO			
10.500		P4/D4				-HAMMER WEIGHT- N=0 Rec: 300/450mm						10.42			Very soft, light to medium grey, silty CLAY			
10.950																		
12.000																		

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
 = Standard Penetration Test	 Silt	4/12/18	8:30	-	-	-	OFFSHORE  Cohesive Soil (N) V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) V.Loose Loose Medium Dense Dense Very Dense
 = Undisturbed Sample	 Clay	4/12/18	19:00	15.00	21.50	-	
 = Disturbed Sample	 Sand	5/12/18	8:30	15.00	21.50	-	
 = Cored Sample	 Gravel	5/12/18	19:00	42.00	48.50	-	
 = Vane Shear Test	 Decayed Matter	6/12/18	8:30	42.00	48.50	-	
RQD = Rock Quality Disignation	 Granite	6/12/18	19:00	60.00	66.50	-	
TCR = Total Core Recovery	 Limestone						




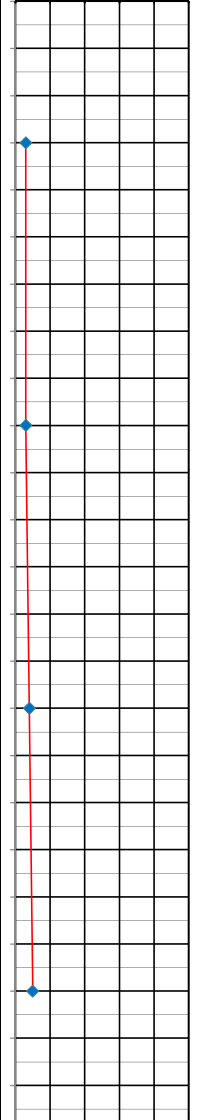
<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-18							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 4/12/2018		<b>Coordinates</b> N -30918.664 E -47603.705										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 6/12/2018		<b>Reduced Level (mRL):</b> -0.9244										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value
5/12/2018	12.000	UD4					Rec : 890/1000mm						xx				Top: Light to medium grey, silty CLAY		
	13.000												xx				Bottom: DITTO		
	13.500	P5/D5					-HAMMER WEIGHT- N=0 Rec : 300/450mm						xx	4.58			Very soft, light to medium grey, silty CLAY		
	13.950												xx						
	15.000	UD5					Rec : 850/1000mm						xx				Top: Light to medium grey, sandy CLAY		
	16.000												xx				Bottom: DITTO		
	16.500	P6/D6				0	1	0	1	0	1	2		xx				Very soft, light to medium grey, silty CLAY	
	16.950						Rec : 310/450mm						xx	1.44					
	18.000	UD6					Rec : 900/1000mm						xx				Top: Light to medium grey, CLAY		
	19.000												xx				Bottom: DITTO		
19.500	P7/D7					-HAMMER WEIGHT- N=0 Rec : 300/450mm						xx				Very soft, light to medium grey, silty CLAY with some of organic matter			
19.950												xx	1.51						
21.000	UD7					Rec : 920/1000mm						xx				Top: Light to medium grey, CLAY of high plasticity			
22.000												xx				Bottom: DITTO			
22.500	P8/D8					-HAMMER WEIGHT- N=0 Rec : 250/450mm						xx				Very soft, light to medium grey, CLAY with some of organic matter			
22.950												xx							














  

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	4/12/18	8:30	-	-	-	
	= Undisturbed Sample		Clay	4/12/18	19:00	15.00	21.50	-	
	= Disturbed Sample		Sand	5/12/18	8:30	15.00	21.50	-	
	= Cored Sample		Gravel	5/12/18	19:00	42.00	48.50	-	
	= Vane Shear Test		Decayed Matter	5/12/18	19:00	42.00	48.50	-	
RQD	= Rock Quality Disignation		Granite	6/12/18	8:30	42.00	48.50	-	
TCR	= Total Core Recovery		Limestone	6/12/18	19:00	60.00	66.50	-	
CRR	= Core Recovery Ratio		Mudstone						

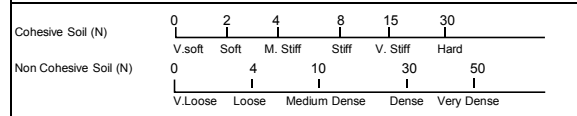
  

<b>Prepared by:</b>		<b>Checked by:</b>	
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
 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-18				
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 4/12/2018		<b>Coordinates</b> N -30918.664 E -47603.705							
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 6/12/2018		<b>Reduced Level (mRL):</b> -0.9244						
<b>Date &amp; Time</b>	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>					<b>Standard Penetration Test Graph</b> 				
	<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Field Test / Rock Cores</b>						<b>Casing Record</b>	<b>Legend</b>	<b>Depth (m)</b>	<b>Thick-ness (m)</b>
	24.000	UD8				Rec : 900/1000mm ---										Top: Light to medium grey, CLAY Bottom: DITTO
	25.000					---										
	25.500	P9/D9			0	1	0	1	1	1	3					Soft, light to medium grey, CLAY
	25.950					Rec : 280/450mm ---										
	27.000	UD9				Rec : 900/1000mm ---										Top: Light to medium grey, CLAY of high plasticity Bottom: DITTO
	28.000					---										
	28.500	P10/D10			1	0	1	0	1	1	3					Soft, light to medium grey, CLAY
	28.950					Rec : 300/450mm ---										
	30.000	UD10				Rec : 890/1000mm ---										Top: light to medium grey, CLAY Bottom: DITTO
	31.000					---										
	31.500	P11/D11			1	1	1	1	1	1	4					Soft, light to medium grey, CLAY
	31.950					Rec : 270/450mm ---										
	33.000	UD11				Rec : 900/1000mm ---										Top: Light to medium grey, CLAY of high plasticity Bottom: DITTO
	34.000					---										
	34.500	P12/D12			1	1	2	1	1	1	5					Medium stiff, light to medium grey, silty CLAY
	34.950					Rec : 320/450mm ---										
	36.000					---										

<b>Legend</b>		<b>Soil Legend</b>		<b>Date</b>	<b>Time</b>	<b>Depth of Hole (m)</b>	<b>Depth of Casing (m)</b>	<b>Depth of Water (m)</b>	<b>Remarks :</b>
	= Standard Penetration Test		Silt	4/12/18	8:30	-	-	-	
	= Undisturbed Sample		Clay	4/12/18	19:00	15.00	21.50	-	
	= Disturbed Sample		Sand	5/12/18	8:30	15.00	21.50	-	
	= Cored Sample		Gravel	5/12/18	19:00	42.00	48.50	-	
	= Vane Shear Test		Decayed Matter	6/12/18	8:30	42.00	48.50	-	
RQD	= Rock Quality Disignation		Granite	6/12/18	19:00	60.00	66.50	-	
TCR	= Total Core Recovery		Limestone						
CRP	= Core Recovery Ratio		Mudstone						

<b>Depth of Hole (m)</b>	<b>Depth of Casing (m)</b>	<b>Depth of Water (m)</b>	<b>Remarks :</b>
-	-	-	
15.00	21.50	-	
42.00	48.50	-	
42.00	48.50	-	
60.00	66.50	-	



**Prepared by:** \_\_\_\_\_ **Checked by:** \_\_\_\_\_

 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.								
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19										Job No.		Date Started		Coordinates						
Location : PULAU INDAH										SG/1281/2018		4/12/2018		N -30918.664						
Client		Consultant		Type of Boring		Boring Dia. (mm)		Orientation		Date Completed		Reduced Level (mRL):								
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH		100		Vertical		6/12/2018		-0.9244								
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph							
Date & Time	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores						Casing Record	Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value	
							75mm	75mm	75mm	75mm	75mm	75mm								
6/12/2018	36.000	P13/D13					1	2	2	1	2	2	Rec : 300/450mm	N=7	---	xx	2.98		-DITTO-	0
	36.450						1	2	2	1	2	2								
	37.500	P14/D14					2	1	2	2	1	1	Rec : 300/450mm	N=6	---	---		Medium stiff, light to medium grey, silty CLAY	10	
	37.950						1	2	2	1	1	1								---
	39.000	P15/D15					2	3	3	3	4	5	Rec : 290/450mm	N=15	---	---		Stiff, light to medium grey, CLAY	20	
	39.450						3	3	3	4	5	5								---
	40.500	P16/D16					3	2	4	3	5	7	Rec : 400/450mm	N=19	---	---		Very stiff, light to medium grey, CLAY	30	
	40.950						2	4	3	5	7	7								---
	42.000	P17/D17					3	3	5	7	7	6	Rec : 350/450mm	N=25	---	---		Very stiff, light to medium grey, CLAY	40	
	42.450						3	5	7	7	6	6								---
43.500	P18/D18					3	4	3	4	5	6	Rec : 250/450mm	N=18	---	---		Very stiff, light to medium grey, CLAY	50		
43.950						4	3	4	5	6	6								---	---
45.000	P19/D19					4	5	6	6	6	7	Rec : 300/450mm	N=25	---	---		Very stiff, light to medium grey, CLAY	60		
45.950						5	6	6	6	7	7								---	---
46.500	P20/D20					4	5	5	7	7	9	Rec : 270/450mm	N=28	---	---		-DITTO-	70		
46.950						5	5	7	7	9	9								---	---
48.000																				

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	4/12/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	4/12/18	19:00	15.00	21.50	-	
	= Disturbed Sample		Sand	5/12/18	8:30	15.00	21.50	-	
	= Cored Sample		Gravel	5/12/18	19:00	42.00	48.50	-	
	= Vane Shear Test		Decayed Matter	6/12/18	8:30	42.00	48.50	-	
RQD	= Rock Quality Disignation		Granite	6/12/18	19:00	60.00	66.50	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

Prepared by:	Checked by:
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
<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-18											
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 4/12/2018		<b>Coordinates</b> N -30918.664 E -47603.705														
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 6/12/2018		<b>Reduced Level (mRL):</b> -0.9244														
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph										
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description	'N' Value 0 10 20 30 40 50								
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record			Legend	Depth (m)	Thickness (m)	W G				
	48.000		P21/D21				3	4	4	6	7	8		xx									
	48.450						Rec : 200/450mm																
	49.500		P22/D22				5	6	6	7	7	9		xx	2.92								
	49.950						Rec : 230/450mm																
	51.000		P23/D23				4	5	7	7	8	8		xx									
	51.450						Rec : 300/450mm																
	52.500		P24/D24				3	4	4	4	3	5		xx									
	52.950						Rec : 230/450mm																
	54.000		P25/D25				4	5	7	7	7	10		xx	5.97								
	54.450						Rec : 300/450mm																
	55.500		P26/D26				5	5	6	6	5	8		xx									
	55.950						Rec : 260/450mm																
	57.000		P27/D27				4	3	4	5	7	7		xx									
	57.450						Rec : 200/450mm																
	58.500		P28/D28				3	5	5	6	7	8		xx									
	58.950						Rec : 300/450mm																
	60.000													xx	60.00								

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	4/12/18	8:30	-	-	-	
	= Undisturbed Sample		Clay	4/12/18	19:00	15.00	21.50	-	
	= Disturbed Sample		Sand	5/12/18	8:30	15.00	21.50	-	
	= Cored Sample		Gravel	5/12/18	19:00	42.00	48.50	-	
	= Vane Shear Test		Decayed Matter	6/12/18	8:30	42.00	48.50	-	
RQD	= Rock Quality Disignation		Granite	6/12/18	19:00	60.00	66.50	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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
 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.												
										6 of 6		BH-18												
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates															
Location : PULAU INDAH					SG/1281/2018		4/12/2018		N -30918.664															
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47603.705														
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		6/12/2018		Reduced Level (mRL): -0.9244														
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph											
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value										
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thick-ness (m)	W G	Description	0	10	20	30	40
	60.000	P29/D29					4	3	5	6	6	9				0.45		Very stiff, light to medium grey, CLAY						
	60.450							Rec : 250/450mm N= 26																
																		Borehole terminated at depth 60.45m						

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	4/12/18	8:30	-	-	-	Cohesive Soil (N) V.soft   Soft   M. Stiff   Stiff   V. Stiff   Hard Non Cohesive Soil (N) V.Loose   Loose   Medium Dense   Dense   Very Dense
	= Undisturbed Sample		Clay	4/12/18	19:00	15.00	21.50	-	
	= Disturbed Sample		Sand	5/12/18	8:30	15.00	21.50	-	
	= Cored Sample		Gravel	5/12/18	19:00	42.00	48.50	-	
	= Vane Shear Test		Decayed Matter	6/12/18	8:30	42.00	48.50	-	
	RQD = Rock Quality Disignation		Granite	6/12/18	19:00	60.00	66.50	-	
	TCR = Total Core Recovery		Limestone						
	CRR = Core Recovery Ratio		Mudstone						

Prepared by:	Checked by:
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 <b>STRATA GEOTECHNICS SDN. BHD. (Co. No. 393744T)</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622												<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-19			
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH						<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 13/11/2018		<b>Coordinates</b> N -31796.271 E -46948.212							
<b>Client</b> : WESTPORTS (M) DDN. BHD.			<b>Consultant</b> : HSS INTEGRATED SDN. BHD.			<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 17/11/2018		<b>Reduced Level (mRL):</b> -3.3624						
<b>Date &amp; Time</b>	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>						<b>Standard Penetration Test Graph</b> N' Value 0 10 20 30 40 50				
	<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Field Test / Rock Cores</b>							<b>Depth (m)</b>	<b>Thickness (m)</b>	<b>W</b>	<b>G</b>
13/11/2018	0.000						TOPSOIL						0.30	0.30			Very soft, light grey, silty CLAY
	1.500		P1/D1			0	0	0	1	0	0	1					Very soft, medium to dark grey, silty CLAY of intermediate plasticity
	1.950					Rec: 450/450mm											
	3.000		UD1														Top: Medium to dark grey, silty CLAY Bottom: DITTO
	4.000																
	4.500		P2/D2			0	0	1	0	0	0	1					Very soft, medium to dark grey, silty CLAY
	4.950					Rec: 400/450mm											
	6.000		UD2														Top: Medium to dark grey, silty CLAY Bottom: DITTO
	7.000																
	7.500		P3/D3			0	0	0	1	0	0	1					Very soft, medium to dark grey, silty CLAY
	7.950					Rec: 400/450mm											
	9.000		UD3														Top: Medium to dark grey, silty CLAY Bottom: DITTO
	10.000																
	10.500		P4/D4			0	0	1	0	0	0	1					Very soft, light to medium grey, silty CLAY
	10.950					Rec: 400/450mm											

<b>Legend</b>		<b>Soil Legend</b>		<b>Date</b>	<b>Time</b>	<b>Depth of Hole (m)</b>	<b>Depth of Casing (m)</b>	<b>Depth of Water (m)</b>	<b>Remarks</b>
	= Standard Penetration Test		Silt	13/11/18	8:30	0.00	0.00	0	OFFSHORE  Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	13/11/18	19:00	30.00	39.00	-	
	= Disturbed Sample		Sand	15/11/18	8:30	30.00	39.00	-	
	= Cored Sample		Gravel	15/11/18	19:00	42.00	51.00	-	
	= Vane Shear Test		Decayed Matter	16/11/18	8:30	42.00	51.00	-	
RQD	= Rock Quality Disignation		Granite	16/11/18	18:30	52.50	61.50	-	
TCR	= Total Core Recovery		Limestone						



<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-19							
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 13/11/2018		<b>Coordinates</b> N -31796.271 E -46948.212										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 17/11/2018		<b>Reduced Level (mRL):</b> -3.3624									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value
	12.000	UD4					Rec : 800/1000mm						xx					Top: Light to medium grey, CLAY of intermediate plasticity	
	13.000												xx					Bottom: DITTO	
	13.500	P5/D5				0	0	1	0	1	0			xx				Very soft, light to medium grey, silty CLAY	10
	13.950						Rec : 450/450mm						xx						
	15.000	UD5					Rec : 850/1000mm						xx					Top: Light to medium grey, silty CLAY	
	16.000												xx					Bottom: DITTO	
	16.500	P6/D6				0	0	1	0	0	0			xx				Very soft, light to medium grey, silty CLAY	10
	16.950						Rec : 400/450mm						xx						
	18.000	UD6					Rec : 850/1000mm						xx					Top: Light to medium grey, silty CLAY	
	19.000												xx					Bottom: DITTO	
	19.500	P7/D7				0	0	1	0	1	0			xx				Very soft, light to medium grey, silty CLAY	10
	19.950						Rec : 400/450mm						xx						
	21.000	UD7					Rec : 850/1000mm						xx					Top: Light to medium grey, silty CLAY	
	22.000												xx					Bottom: DITTO	
	22.500	P8/D8				0	1	1	1	1	0			xx				Soft, light to medium grey, silty CLAY	10
	22.950						Rec : 350/450mm						xx						
	24.000												xx						
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :										
	= Standard Penetration Test		Silt	13/11/18	8:30	0.00	0.00	0	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense										
	= Undisturbed Sample		Clay	13/11/18	19:00	30.00	39.00	-											
	= Disturbed Sample		Sand	15/11/18	8:30	30.00	39.00	-											
	= Cored Sample		Gravel	15/11/18	19:00	42.00	51.00	-											
	= Vane Shear Test		Decayed Matter	16/11/18	8:30	42.00	51.00	-											
RQD	= Rock Quality Disignation		Granite	16/11/18	18:30	52.50	61.50	-											
TCR	= Total Core Recovery		Limestone	17/11/18	8:30	52.50	61.50	-											
CRR	= Core Recovery Ratio		Mudstone																
<b>Prepared by:</b>		<b>Checked by:</b>																	

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-19								
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 13/11/2018		<b>Coordinates</b> N -31796.271 E -46948.212											
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 17/11/2018		<b>Reduced Level (mRL):</b> -3.3624										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS				Standard Penetration Test Graph									
Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)	Thickness (m)	W/G	Description	'N' Value			
						75mm	75mm	75mm	75mm	75mm	75mm									
		UD8				Rec : 700/1000mm												Top: Light to medium grey, CLAY of high plasticity		
																		Bottom: DITTO		
		P9/D9			0	0	1	0	1	0			xx					Very soft, light to medium grey, clayey SILT		
												xx								
		P10/D10			0	1	0	1	1	1			xx					Soft, light to medium grey, CLAY		
												xx								
		P11/D11			0	1	3	3	5	5			xx					Medium dense, light to medium grey, very clayey SAND		
												xx								
		P12/D12			2	1	3	3	4	4			xx					Medium dense, light to medium grey, silty fine grain SAND		
												xx								
		P13/D13			3	4	5	5	5	6			xx					Medium dense, light to medium grey spotted brown, silty fine grain SAND		
												xx								
		P14/D14			2	1	4	5	5	7			xx					Medium dense, light to medium grey, very clayey SAND		
												xx								
		P15/D15			1	2	3	3	2	3			xx					Stiff, light to medium grey, clayey SILT		
												xx								

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	13/11/18	8:30	0.00	0.00	0	
	= Undisturbed Sample		Clay	13/11/18	19:00	30.00	39.00	-	
	= Disturbed Sample		Sand	15/11/18	8:30	30.00	39.00	-	
	= Cored Sample		Gravel	15/11/18	19:00	42.00	51.00	-	
	= Vane Shear Test		Decayed Matter	16/11/18	8:30	42.00	51.00	-	
RQD	= Rock Quality Disignation		Granite	16/11/18	18:30	52.50	61.50	-	
TCR	= Total Core Recovery		Limestone	17/11/18	8:30	52.50	61.50	-	
CRR	= Core Recovery Ratio		Mudstone						

Cohesive Soil (N)		Non Cohesive Soil (N)	
0	30	0	50
V.soft	Hard	V.Loose	Very Dense
Soft		Loose	
M. Stiff		Medium Dense	
Stiff		Dense	
V. Stiff			

<b>Prepared by:</b>		<b>Checked by:</b>	
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
<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-19							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 13/11/2018		<b>Coordinates</b> N -31796.271 E -46948.212										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 17/11/2018		<b>Reduced Level (mRL):</b> -3.3624									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value 0 10 20 30 40 50					
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description
16/11/2018	36.000	P16/D16					2	3	2	4	4	5	---	---	36.000	1.48		Stiff, light to medium grey, sandy CLAY	0
	3						2	4	4	5	15	Rec : 350/450mm							
	36.450	P17/D17					4	3	5	5	6	6	xx	xx	37.48	1.38		Medium dense, light to medium grey, silty fine grain SAND	10
	37.950						5	5	6	22	Rec : 350/450mm								
	39.000	P18/D18					3	4	4	5	6	6	---	---	38.86	1.64		Medium dense, light to medium grey, sandy CLAY	20
	39.450						4	4	5	6	21	Rec : 400/450mm							
	40.500	P19/D19					5	5	7	7	9	9	---	---	40.50	1.43		Dense, light to medium grey, slightly clayey SAND	30
	40.950						6	7	7	9	32	Rec : 350/450mm							
	42.000	P20/D20					3	5	5	4	5	7	xx	xx	41.93	6.07		Very stiff, medium to dark grey, clayey SILT	40
	42.450						4	5	4	5	21	Rec : 350/450mm							
43.500	P21/D21					4	4	4	6	7	7	xx	xx	48.00	6.07		-DITTO-	50	
43.950						5	6	7	28	Rec : 350/450mm									
45.000	P22/D22					3	4	4	5	6	6	xx	xx	48.00	6.07		-DITTO-	50	
45.950						4	5	6	21	Rec : 350/450mm									
46.500	P23/D23					4	4	4	5	5	6	xx	xx	48.00	6.07		Very stiff, medium to dark grey, sandy CLAY	50	
46.950						5	5	6	20	Rec : 350/450mm									
48.000																			

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	13/11/18	8:30	0.00	0.00	0	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	13/11/18	19:00	30.00	39.00	-	
	= Disturbed Sample		Sand	15/11/18	8:30	30.00	39.00	-	
	= Cored Sample		Gravel	15/11/18	19:00	42.00	51.00	-	
	= Vane Shear Test		Decayed Matter	16/11/18	8:30	42.00	51.00	-	
RQD	= Rock Quality Disignation		Granite	16/11/18	18:30	52.50	61.50	-	
TCR	= Total Core Recovery		Limestone	17/11/18	8:30	52.50	61.50	-	
CRR	= Core Recovery Ratio		Mudstone						



<b>Prepared by:</b>		<b>Checked by:</b>	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-19									
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 13/11/2018		<b>Coordinates</b> N -31796.271 E -46948.212												
<b>Client</b>		<b>Consultant</b>			<b>Type of Boring</b>	<b>Boring Dia. (mm)</b>	<b>Orientation</b>		<b>Date Completed</b>		<b>Reduced Level (mRL):</b> -3.3624										
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.			ROTARY WASH	100	Vertical		17/11/2018												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS					Standard Penetration Test Graph									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores						'N' Value 0 10 20 30 40 50								
							75mm	75mm	75mm	75mm	75mm	75mm		Casing Record	Legend	Depth (m)	Thickness (m)	W G	Description		
17/11/2018	48.000	P24/D24					5	5	7	9	9	8							Dense, light to medium grey, slightly clayey SAND		
	48.450						Rec : 300/450mm	N= 33													
	49.500	P25/D25					6	5	6	6	9	10				2.87			-DITTO-		
	49.950						Rec : 300/450mm	N= 31													
	51.000	P26/D26					5	4	6	7	7	8							Medium dense, light to medium grey, very stiff SAND		
	51.450						Rec : 350/450mm	N= 28													
	52.500	P27/D27					4	6	6	7	8	8				3.11			-DITTO-		
	52.950						Rec : 300/450mm	N= 29													
	54.000	P28/D28					4	3	4	5	5	7				53.98			Very stiff, medium to dark grey, sandy CLAY		
	54.450						Rec : 350/450mm	N= 21													
	55.500	P29/D29					5	5	6	7	8	8					2.74			-DITTO-	
	55.950						Rec : 300/450mm	N= 29													
57.000	P30/D30					3	5	4	6	6	6							Very stiff, greenish dark grey, clayey SILT			
57.450						Rec : 350/450mm	N= 22														
58.500	P31/D31					4	3	5	5	7	8					3.28			Very stiff, medium to dark grey, clayey SILT with trace of organic matter		
58.950						Rec : 300/450mm	N= 25														
60.000															60.00						



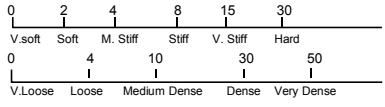











  

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	13/11/18	8:30	0.00	0.00	0	
	= Undisturbed Sample		Clay	13/11/18	19:00	30.00	39.00	-	
	= Disturbed Sample		Sand	15/11/18	8:30	30.00	39.00	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard
	= Cored Sample		Gravel	15/11/18	19:00	42.00	51.00	-	
	= Vane Shear Test		Decayed Matter	16/11/18	8:30	42.00	51.00	-	Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
RQD	= Rock Quality Disignation		Granite	16/11/18	18:30	52.50	61.50	-	
TCR	= Total Core Recovery		Limestone	17/11/18	8:30	52.50	61.50	-	Prepared by: _____ Checked by: _____
CRR	= Core Recovery Ratio		Mudstone						



 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.													
										6 of 6		BH-19													
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates																
Location : PULAU INDAH					SG/1281/2018		13/11/2018		N -31796.271																
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -46948.212															
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		17/11/2018		Reduced Level (mRL): -3.3624															
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph												
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value											
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thick-ness (m)	W G	Description	0	10	20	30	40	50
	60.000		P32/D32				5	6	7	7	8	8				0.45		Very stiff, medium to dark grey, sandy CLAY							
	60.450								Rec : 300/450mm N= 30																
																		Borehole terminated at depth 60.45m							

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	13/11/18	8:30	0.00	0.00	0	 <p>Cohesive Soil (N) 0 2 4 8 15 30            V.soft Soft M. Stiff Stiff V. Stiff Hard            Non Cohesive Soil (N) 0 4 10 30 50            V.Loose Loose Medium Dense Dense Very Dense</p>
	= Undisturbed Sample		Clay	13/11/18	19:00	30.00	39.00	-	
	= Disturbed Sample		Sand	15/11/18	8:30	30.00	39.00	-	
	= Cored Sample		Gravel	15/11/18	19:00	42.00	51.00	-	
	= Vane Shear Test		Decayed Matter	16/11/18	8:30	42.00	51.00	-	
RQD	= Rock Quality Disignation		Granite	16/11/18	18:30	52.50	61.50	-	
TCR	= Total Core Recovery		Limestone	17/11/18	8:30	52.50	61.50	-	
CRP	= Core Recovery Ratio		Mudstone						

Prepared by:

Checked by:

STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )										Sheet		Borehole Ref. No.														
No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										1 of 6		BH-20														
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates																	
Location : PULAU INDAH					SG/1281/2018		20/11/2018		N -31577.876																	
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		Reduced Level (mRL):																
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		23/11/2018		-2.4480																
Date & Time	SAMPLE / INSITU TEST							SOIL / STRATUM DETAILS				Standard Penetration Test Graph														
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores						N' Value													
							75mm	75mm	75mm	75mm	75mm	75mm														
20/11/2018	0.000						TOPSOIL																			
	1.500		P1/D1				0	0	1	0	0	0														
	1.950						Rec: 350/450mm																			
	3.000		UD1				Rec: 910/1000mm																			
	4.000						Rec: 910/1000mm																			
	4.500		P2/D2				0	0	1	0	1	0														
	4.950						Rec: 350/450mm																			
	6.000		UD2				Rec: 830/1000mm																			
	7.000						Rec: 830/1000mm																			
	7.500		P3/D3				-HAMMER WEIGHT- N=0																			
	7.950						Rec: 400/450mm																			
	9.000		UD3				Rec: 850/1000mm																			
	10.000						Rec: 850/1000mm																			
	10.500		P4/D4				-HAMMER WEIGHT- N=0																			
	10.950						Rec: 400/450mm																			
	12.000						Rec: 400/450mm																			


  

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks
		20/11/18	8:30	-	-	-	OFFSHORE
		20/11/18	19:00	15.00	23.50	-	
		22/11/18	8:30	15.00	23.50	-	
		22/11/18	19:00	30.00	38.50	-	
		23/11/18	8:30	30.00	38.50	-	
RQD = Rock Quality Disignation		23/11/18	19:30	60.00	68.50	-	
TCR = Total Core Recovery							

Cohesive Soil (N)	Non Cohesive Soil (N)
0      2      4      8      15      30 V.soft   Soft   M. Stiff   Stiff   V. Stiff   Hard	0      4      10      30      50 V.Loose   Loose   Medium Dense   Dense   Very Dense



 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.							
										2 of 6		BH-20							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates										
Location : PULAU INDAH					SG/1281/2018		20/11/2018		N -31577.876										
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47326.082									
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		23/11/2018		Reduced Level (mRL): -2.4480									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value
22/11/2018	12.000	UD4					Rec : 830/1000mm								12.39	0.39		Top: Medium to dark grey, CLAY	
	13.000															1.09		Bottom: Medium to dark grey, clayey SILT	
	13.500	P5/D5					-HAMMER WEIGHT- N=0 Rec : 300/450mm											Very soft, medium to dark grey, CLAY	
	15.000	UD5					Rec : 870/1000mm											Top: Medium to dark grey, CLAY Bottom: DITTO	
	16.500	P6/D6					-HAMMER WEIGHT- N=0 Rec : 350/450mm											Very soft, medium to dark grey, CLAY	
	18.000	UD6					Rec : 880/1000mm											Top: Medium to dark grey, CLAY Bottom: DITTO	
	19.500	P7/D7					-HAMMER WEIGHT- N=0 Rec : 350/450mm											Very soft, medium to dark grey, CLAY	
	21.000	UD7					Rec : 850/1000mm											Top: Medium to dark grey, CLAY of high plasticity Bottom: DITTO	
	22.500	P8/D8					0 1 0 0 1 1 Rec : 350/450mm											Very soft, light to medium grey, CLAY	
	24.000																		
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :										
	= Standard Penetration Test		Silt	20/11/18	8:30	-	-	-	Cohesive Soil (N)  0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N)  0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense										
	= Undisturbed Sample		Clay	20/11/18	19:00	15.00	23.50	-											
	= Disturbed Sample		Sand	22/11/18	8:30	15.00	23.50	-											
	= Cored Sample		Gravel	22/11/18	19:00	30.00	38.50	-											
	= Vane Shear Test		Decayed Matter	23/11/18	8:30	30.00	38.50	-											
RQD	= Rock Quality Disignation		Granite	23/11/18	19:30	60.00	68.50	-											
TCR	= Total Core Recovery		Limestone																
CRR	= Core Recovery Ratio		Mudstone																
				<b>Prepared by:</b>		<b>Checked by:</b>													

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-20										
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 20/11/2018		<b>Coordinates</b> N -31577.876 E -47326.082													
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 23/11/2018		<b>Reduced Level (mRL):</b> -2.4480													
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description								
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G		'N' Value		
23/11/2018	24.000	UD8					Rec : 880/1000mm															
	25.000																					
	25.500	P9/D9				0	1	0	1	0	1	2										
	25.950						Rec : 350/450mm															
	27.000	UD9					Rec : 880/1000mm															
	27.450																					
	28.500	P10/D10					-HAMMER WEIGHT- N= 0															
	28.950						Rec : 350/450mm															
	30.000	UD10					Rec : 850/1000mm															
	31.000																					
	31.500	P11/D11				1	2	2	2	3	3	10		xx								
	31.950						Rec : 300/450mm															
	33.000	P12/D12				1	2	2	2	2	3	9		xx								
33.450						Rec : 300/450mm																
34.500	P13/D13				1	1	2	2	3	2	9		xx									
34.950						Rec : 300/450mm																
36.000																						

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
		20/11/18	8:30	-	-	-	
		20/11/18	19:00	15.00	23.50	-	
		22/11/18	8:30	15.00	23.50	-	
		22/11/18	19:00	30.00	38.50	-	
		23/11/18	8:30	30.00	38.50	-	
RQD = Rock Quality Disignation		23/11/18	19:30	60.00	68.50	-	
TCR = Total Core Recovery							
CRP = Core Recovery Ratio							

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-20										
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 20/11/2018		<b>Coordinates</b> N -31577.876 E -47326.082													
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 23/11/2018		<b>Reduced Level (mRL):</b> -2.4480													
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Depth (m)	Thickness (m)	W G	Description					
							75mm	75mm	75mm	75mm	75mm	75mm										
	36.000		P14/D14				1	2	2	3	3	3	11									
	36.450						Rec : 300/450mm							5.96								
	37.450		P15/D15				2	2	2	3	2	2	9									
	37.950						Rec : 300/450mm							1.25								
	39.000		P16/D16				3	2	4	5	5	4	18									
	39.450						Rec : 300/450mm															
	40.500		P17/D17				2	3	3	5	5	5	18									
	40.950						Rec : 350/450mm															
	42.000		P18/D18				2	4	4	7	6	8	25									
	42.450						Rec : 300/450mm															
	43.500		P19/D19				5	6	6	7	9	9	31									
	43.950						Rec : 300/450mm							9.33								
	45.000		P20/D20				4	4	6	7	7	8	28									
	45.950						Rec : 300/450mm															
	46.500		P21/D21				5	5	6	6	7	7	26									
	46.950						Rec : 300/450mm															
	48.000																					


  

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	20/11/18	8:30	-	-	-	
	= Undisturbed Sample		Clay	20/11/18	19:00	15.00	23.50	-	
	= Disturbed Sample		Sand	22/11/18	8:30	15.00	23.50	-	
	= Cored Sample		Gravel	22/11/18	19:00	30.00	38.50	-	
	= Vane Shear Test		Decayed Matter	23/11/18	8:30	30.00	38.50	-	
RQD	= Rock Quality Disignation		Granite	23/11/18	19:30	60.00	68.50	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-20										
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 20/11/2018		<b>Coordinates</b> N -31577.876 E -47326.082													
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 23/11/2018		<b>Reduced Level (mRL):</b> -2.4480													
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Depth (m)	Thickness (m)	W G	Description					
							75mm	75mm	75mm	75mm	75mm	75mm										
	48.000		P22/D22				4	6	7	8	9	9										
	48.450						Rec : 250/450mm							1.47								
	49.500		P23/D23				2	3	3	4	4	4										
	49.950						Rec : 300/450mm							1.53								
	51.000		P24/D24				3	3	5	5	4	6										
	51.450						Rec : 300/450mm							1.40								
	52.500		P25/D25				2	2	3	2	3	3										
	52.950						Rec : 300/450mm							3.03								
	54.000		P26/D26				3	4	4	5	4	4										
	54.450						Rec : 300/450mm							4.57								
	55.500		P27/D27				3	4	3	4	4	4										
	55.950						Rec : 350/450mm															
	57.000		P28/D28				3	4	4	4	5	5										
	57.450						Rec : 350/450mm															
	58.500		P29/D29				4	5	5	4	6	6										
	58.950						Rec : 300/450mm															
	60.000																					
<b>Legend</b> = Standard Penetration Test = Undisturbed Sample = Disturbed Sample = Cored Sample = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRP = Core Recovery Ratio		<b>Soil Legend</b> Silt Clay Sand Gravel Decayed Matter Granite Limestone Mudstone		Date Time Depth of Hole (m) Depth of Casing (m) Depth of Water (m)		Remarks : Cohesive Soil (N) Non Cohesive Soil (N)				Prepared by: Checked by:												

 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.							
										6 of 6		BH-20							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates										
Location : PULAU INDAH					SG/1281/2018		20/11/2018		N -31577.876										
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47326.082									
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		23/11/2018		Reduced Level (mRL): -2.4480									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value 0 10 20 30 40 50					
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thick-ness (m)	W G	Description
	60.000	P30/D30					4	4	5	6	6	5		---		0.45		Very stiff, medium to dark grey, very clayey SAND	
	60.450							Rec : 300/450mm N= 22											
																		<i>Borehole terminated at depth 60.45m</i>	

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	20/11/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	20/11/18	19:00	15.00	23.50	-	
	= Disturbed Sample		Sand	22/11/18	8:30	15.00	23.50	-	
	= Cored Sample		Gravel	22/11/18	19:00	30.00	38.50	-	
	= Vane Shear Test		Decayed Matter	23/11/18	8:30	30.00	38.50	-	
RQD	= Rock Quality Disignation		Granite	23/11/18	19:30	60.00	68.50	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

Prepared by:

Checked by:



<b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-21									
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 26/11/2018		<b>Coordinates</b> N -31350.670 E -47698.373												
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 28/11/2018		<b>Reduced Level (mRL):</b> -2.1432											
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							N' Value							
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description		
26/11/2018	0.000						TOPSOIL								0.30	0.30		Very soft, light grey, silty CLAY			
	1.500		P1/D1				0	0	1	0	0	1				2.59			Very loose, medium to dark grey, clayey fine SAND with some of shells		
	1.950						Rec: 400/450mm														
	3.000		UD1				Rec: 900/1000mm													Top: Light to medium grey, CLAY of high plasticity	
	4.000						Rec: 900/1000mm													Bottom: DITTO	
	4.500		P2/D2				-HAMMER WEIGHT- N=0 Rec: 400/450mm													Very soft, medium to dark grey, clayey SILT	
	4.950						Rec: 400/450mm														
	6.000		UD2				Rec: 850/1000mm													Top: Medium to dark grey, CLAY	
	7.000						Rec: 850/1000mm													Bottom: Medium to dark grey, silty CLAY	
	7.500		P3/D3				-HAMMER WEIGHT- N=0 Rec: 400/450mm													Very soft, medium to dark grey, silty CLAY with some of shells	
	7.950						Rec: 400/450mm														
	9.000		UD3				Rec: 900/1000mm													Top: Medium to dark grey, silty CLAY	
	10.000						Rec: 900/1000mm													Bottom: DITTO	
	10.500		P4/D4				-HAMMER WEIGHT- N=0 Rec: 400/450mm													Very soft, medium to dark grey, CLAY	
	10.950						Rec: 400/450mm														
	12.000																				


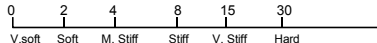
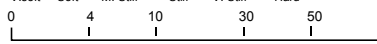
Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	26/11/18	8:30	-	-	-	OFFSHORE
	= Undisturbed Sample		Clay	26/11/18	19:00	30.00	38.00	-	
	= Disturbed Sample		Sand	27/11/18	8:30	30.00	38.00	-	
	= Cored Sample		Gravel	27/11/18	19:00	45.00	53.00	-	
	= Vane Shear Test		Decayed Matter	27/11/18	19:00	45.00	53.00	-	
RQD	= Rock Quality Disignation		Granite	28/11/18	8:00	45.00	53.00	-	
TCR	= Total Core Recovery		Limestone	28/11/18	19:00	60.00	68.00	-	

Cohesive Soil (N)		Non Cohesive Soil (N)	
0	30	0	50
V.soft	Hard	V.Loose	Very Dense
Soft		Loose	
M. Stiff		Medium Dense	
Stiff		Dense	
V. Stiff			



	<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T )	<b>Sheet</b>	<b>Borehole Ref. No.</b>																																																	
	No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622	2 of 6	BH-21																																																	
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19		Job No.		Date Started	Coordinates																																															
Location : PULAU INDAH		SG/1281/2018		26/11/2018	N -31350.670 E -47698.373																																															
<b>Client</b>	<b>Consultant</b>	<b>Type of Boring</b>	<b>Boring Dia. (mm)</b>	<b>Orientation</b>	<b>Date Completed</b>																																															
WESTPORTS (M) DDN. BHD.	HSS INTEGRATED SDN. BHD.	ROTARY WASH	100	Vertical	28/11/2018																																															
					<b>Reduced Level (mRL):</b> -2.1432																																															
Date & Time	SAMPLE / INSITU TEST				SOIL / STRATUM DETAILS				Standard Penetration Test Graph																																											
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores				Casing Record	Legend	Depth (m)	Thickness (m)	W/G	Description	'N' Value 0 10 20 30 40 50																																			
	12.000	UD4					Rec : 900/1000mm								8.96		Top: Medium to dark grey, CLAY Bottom: DITTO																																			
	13.000						-HAMMER WEIGHT- N=0 Rec : 450/450mm										Very soft, medium to dark grey, CLAY																																			
	13.500		P5/D5				Rec : 900/1000mm										Top: Medium to dark grey, CLAY Bottom: DITTO																																			
	13.950						-HAMMER WEIGHT- N=0 Rec : 400/450mm										Very soft, medium to dark grey, CLAY with trace of organic matter																																			
	15.000		UD5				Rec : 900/1000mm										Top: Medium to dark grey, CLAY of high plasticity Bottom: DITTO																																			
	16.000						-HAMMER WEIGHT- N=0 Rec : 400/450mm										Very soft, medium to dark grey, silty CLAY with traces of organic matter																																			
	16.500		P6/D6				Rec : 900/1000mm										Top: Medium to dark grey, silty CLAY Bottom: DITTO																																			
	16.950						-HAMMER WEIGHT- N=0 Rec : 400/450mm										Very soft, medium to dark grey, silty CLAY with traces of organic matter																																			
	18.000		UD6				Rec : 900/1000mm										Top: Medium to dark grey, silty CLAY Bottom: DITTO																																			
	19.000						-HAMMER WEIGHT- N=0 Rec : 400/450mm										Very soft, medium to dark grey, silty CLAY with traces of organic matter																																			
	19.500		P7/D7				Rec : 900/1000mm										Top: Medium to dark grey, silty CLAY Bottom: DITTO																																			
	19.950						-HAMMER WEIGHT- N=0 Rec : 400/450mm										Very soft, medium to dark grey, silty CLAY with trace of organic matter																																			
	21.000		UD7				Rec : 900/1000mm										Top: Medium to dark grey, silty CLAY Bottom: DITTO																																			
	22.000						-HAMMER WEIGHT- N=0 Rec : 400/450mm										Very soft, medium to dark grey, silty CLAY with trace of organic matter																																			
	22.500		P8/D8				Rec : 900/1000mm										Top: Medium to dark grey, silty CLAY Bottom: DITTO																																			
	22.950						-HAMMER WEIGHT- N=0 Rec : 400/450mm										Very soft, medium to dark grey, silty CLAY with trace of organic matter																																			
	24.000						Rec : 900/1000mm										Top: Medium to dark grey, silty CLAY Bottom: DITTO																																			
										19.42						Very soft, medium to dark grey, silty CLAY with traces of organic matter																																				
										4.58						Top: Medium to dark grey, silty CLAY Bottom: DITTO																																				
										24.00						Very soft, medium to dark grey, silty CLAY with trace of organic matter																																				
<b>Legend</b>										<b>Soil Legend</b>																																										
= Standard Penetration Test					Silt					Clay					Sand																																					
= Undisturbed Sample					Gravel					Decayed Matter					Granite																																					
= Disturbed Sample					Limestone					Mudstone																																										
= Cored Sample																																																				
= Vane Shear Test																																																				
RQD = Rock Quality Disignation																																																				
TCR = Total Core Recovery																																																				
CRR = Core Recovery Ratio																																																				
										Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :																																					
										26/11/18	8:30	-	-	-																																						
										26/11/18	19:00	30.00	38.00	-																																						
										27/11/18	8:30	30.00	38.00	-																																						
										27/11/18	19:00	45.00	53.00	-																																						
										28/11/18	8:00	45.00	53.00	-																																						
										28/11/18	19:00	60.00	68.00	-																																						
										<table style="width:100%; border: none;"> <tr> <td style="width: 20%;">Cohesive Soil (N)</td> <td colspan="10" style="text-align: center;"> </td> </tr> <tr> <td>Non Cohesive Soil (N)</td> <td colspan="10" style="text-align: center;"> </td> </tr> <tr> <td></td> <td colspan="10" style="text-align: center;">           V. Loose   Loose   Medium Dense   Dense   Very Dense         </td> </tr> </table>										Cohesive Soil (N)											Non Cohesive Soil (N)												V. Loose   Loose   Medium Dense   Dense   Very Dense									
Cohesive Soil (N)																																																				
Non Cohesive Soil (N)																																																				
	V. Loose   Loose   Medium Dense   Dense   Very Dense																																																			
										Prepared by:					Checked by:																																					

 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.										
										3 of 6		BH-21										
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates													
Location : PULAU INDAH					SG/1281/2018		26/11/2018		N -31350.670													
Client			Consultant			Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		Coordinates										
WESTPORTS (M) DDN. BHD.			HSS INTEGRATED SDN. BHD.			ROTARY WASH	100	Vertical		28/11/2018		E -47698.373										
										<b>Reduced Level (mRL):</b>		-2.1432										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores								Casing Record	Legend	Depth (m)	Thick-ness (m)	W G	Description	'N' Value	
27/11/2018	24.000		UD8				Rec : 900/1000mm												Top: Medium to dark grey, CLAY			
	25.000																		Bottom: DITTO			
	25.500		P9/D9			0	1	0	1	0	0	0	1						Very soft, medium to dark grey, CLAY	1		
	25.950							Rec : 400/450mm														
	27.000		UD9					Rec : 900/1000mm												Top: Medium to dark grey, CLAY		
	28.000																			Bottom: DITTO		
	28.500		P10/D10			0	1	0	1	0	1	2							Very soft, medium to dark grey, CLAY	2		
	28.950							Rec : 450/450mm														
30.000		UD10					Rec : 880/1000mm												Top: Medium to dark grey, CLAY			
30.450																			Bottom: DITTO			
31.500		P11/D11			0	0	1	0	1	1	3							Soft, light to medium grey, CLAY	3			
31.950							Rec : 400/450mm															
33.000		UD11					Rec : 900/1000mm												Top: Light to medium grey, CLAY of high plasticity			
34.000																			Bottom: DITTO			
34.500		P12/D12			0	1	0	1	1	1	3							Soft, light to medium grey, CLAY	3			
34.950							Rec : 400/450mm															
36.000																						
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :													
	= Standard Penetration Test		Silt	26/11/18	8:30	-	-	-														
	= Undisturbed Sample		Clay	26/11/18	19:00	30.00	38.00	-														
	= Disturbed Sample		Sand	27/11/18	8:30	30.00	38.00	-														
	= Cored Sample		Gravel	27/11/18	19:00	45.00	53.00	-														
	= Vane Shear Test		Decayed Matter	28/11/18	8:00	45.00	53.00	-														
RQD	= Rock Quality Disignation		Granite	28/11/18	19:00	60.00	68.00	-														
TCR	= Total Core Recovery		Limestone																			
CRR	= Core Recovery Ratio		Mudstone																			
										Cohesive Soil (N)												
										Non Cohesive Soil (N)												
					Prepared by:		Checked by:															

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-21							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 26/11/2018		<b>Coordinates</b> N -31350.670 E -47698.373										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 28/11/2018		<b>Reduced Level (mRL):</b> -2.1432									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description					
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	
28/11/2018	36.000	P13/D13					1	0	2	1	2	2				13.41		Medium stiff, light to medium grey, CLAY	
	36.450						1	2	1	2	7	Rec : 350/450mm N=							
	37.500	P14/D14					2	1	2	3	3	2		xx		1.45		Stiff, light to medium grey, clayey SILT	
	37.950						1	2	3	3	10	Rec : 300/450mm N=							
	39.000	P15/D15					2	2	3	3	5	4		xx		3.05		Medium dense, light to medium grey, silty fine grain SAND	
	39.450						2	3	3	5	15	Rec : 300/450mm N=							
	40.500	P16/D16					3	2	3	4	4	5		xx		3.04		-DITTO-	
	40.950						3	4	4	4	16	Rec : 350/450mm N=							
	42.000	P17/D17					3	2	2	3	4	4		xx		4.191		Stiff, medium to dark grey, very clayey SAND	
	42.450						3	3	4	4	13	Rec : 350/450mm N=							
43.500	P18/D18					5	4	6	6	7	7		xx		3.04		Medium dense, medium to dark grey, very clayey SAND with trace of organic matter		
43.950						5	6	6	7	26	Rec : 300/450mm N=								
45.000	P19/D19					5	5	7	8	8	8		xx		1.49		Dense, light to medium grey, silty fine grain SAND		
45.950						5	7	8	8	31	Rec : 300/450mm N=								
46.500	P20/D20					5	7	7	9	9	9		xx		1.56		Dense, light to medium grey, very clayey SAND with trace of organic matter		
46.950						5	9	9	9	35	Rec : 300/450mm N=								
48.000																			

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	26/11/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	26/11/18	19:00	30.00	38.00	-	
	= Disturbed Sample		Sand	27/11/18	8:30	30.00	38.00	-	
	= Cored Sample		Gravel	27/11/18	19:00	45.00	53.00	-	
	= Vane Shear Test		Decayed Matter	28/11/18	8:00	45.00	53.00	-	
RQD	= Rock Quality Disignation		Granite	28/11/18	19:00	60.00	68.00	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-21																							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 26/11/2018		<b>Coordinates</b> N -31350.670 E -47698.373																										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 28/11/2018		<b>Reduced Level (mRL):</b> -2.1432																									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50																						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Depth (m)	Thickness (m)	W G	Description																		
							75mm	75mm	75mm	75mm	75mm	75mm																							
	48.000	P21/D21					7	7	7	7	8	8	...	xx	49.43	1.43		Medium dense, light to medium grey, silty fine grain SAND																	
	48.450						Rec : 300/450mm																												
	49.500						P22/D22					7										8	7	7	6	8	...	xx	50.97	1.54		Medium dense, light to medium grey, very clayey SAND			
	49.950											Rec : 300/450mm																							
	51.000						P23/D23					5										6	6	7	7	9	...	xx	9.03			Medium dense, light to medium grey, silty fine grain SAND with some of organic matter			
	51.450	Rec : 300/450mm																																	
	52.500	P24/D24					4	5	7	7	9	11	...	xx				Dense, light to medium grey, silty fine grain SAND																	
	52.950						Rec : 250/450mm																												
	54.000	P25/D25					5	7	7	9	9	10	...	xx				Dense, light to medium grey, silty fine grain SAND																	
	54.450						Rec : 300/450mm																												
	55.500	P26/D26					5	6	6	9	9	11	...	xx				-DITTO-																	
	55.950						Rec : 300/450mm																												
	57.000	P27/D27					7	7	6	8	10	11	...	xx				-DITTO-																	
	57.450						Rec : 250/450mm																												
	58.500	P28/D28					6	6	7	7	8	9	...	xx				-DITTO-																	
	58.950						Rec : 300/450mm																												
	60.000																																		

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	26/11/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	26/11/18	19:00	30.00	38.00	-	
	= Disturbed Sample		Sand	27/11/18	8:30	30.00	38.00	-	
	= Cored Sample		Gravel	27/11/18	19:00	45.00	53.00	-	
	= Vane Shear Test		Decayed Matter	28/11/18	8:00	45.00	53.00	-	
	RQD = Rock Quality Disignation		Granite	28/11/18	19:00	60.00	68.00	-	
	TCR = Total Core Recovery		Limestone						
	CRR = Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622							<b>Sheet</b>		<b>Borehole Ref. No.</b>																																																																																														
							6 of 6		<b>BH-21</b>																																																																																														
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19						<b>Job No.</b>		<b>Date Started</b>		<b>Coordinates</b>																																																																																													
Location : PULAU INDAH						SG/1281/2018		26/11/2018		N     -31350.670																																																																																													
<b>Client</b>		<b>Consultant</b>			<b>Type of Boring</b>	<b>Boring Dia. (mm)</b>	<b>Orientation</b>		<b>Date Completed</b>		E     -47698.373																																																																																												
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.			ROTARY WASH	100	Vertical		28/11/2018		<b>Reduced Level (mRL):</b> -2.1432																																																																																												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph																																																																																										
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)	Thick-ness (m)	W G	Description	'N' Value																																																																																					
	60.000	P29/D29					5	6	6	7	9	10	---	---				Dense, light to medium grey, very clayey SAND	0	10	20	30	40	50																																																																															
	60.450						Rec : 300/450mm					---	---	60.45	0.45			Borehole terminated at depth 60.45m																																																																																					
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;"><b>Legend</b></td> <td colspan="2" style="text-align: center;"><b>Soil Legend</b></td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Time</td> <td style="text-align: center;">Depth of Hole (m)</td> <td style="text-align: center;">Depth of Casing (m)</td> <td style="text-align: center;">Depth of Water (m)</td> <td colspan="3" style="text-align: center;">Remarks :</td> </tr> <tr> <td style="text-align: center;"></td> <td>= Standard Penetration Test</td> <td style="text-align: center;"></td> <td>Silt</td> <td>26/11/18</td> <td>8:30</td> <td>-</td> <td>-</td> <td>-</td> <td colspan="3" rowspan="5"> <p>Cohesive Soil (N)    0    2    4    8    15    30</p> <p>V.soft    Soft    M. Stiff    Stiff    V. Stiff    Hard</p> <p>Non Cohesive Soil (N)    0    4    10    30    50</p> <p>V.Loose    Loose    Medium Dense    Dense    Very Dense</p> </td> </tr> <tr> <td style="text-align: center;"></td> <td>= Undisturbed Sample</td> <td style="text-align: center;"></td> <td>Clay</td> <td>26/11/18</td> <td>19:00</td> <td>30.00</td> <td>38.00</td> <td>-</td> </tr> <tr> <td style="text-align: center;"></td> <td>= Disturbed Sample</td> <td style="text-align: center;"></td> <td>Sand</td> <td>27/11/18</td> <td>8:30</td> <td>30.00</td> <td>38.00</td> <td>-</td> </tr> <tr> <td style="text-align: center;"></td> <td>= Cored Sample</td> <td style="text-align: center;"></td> <td>Gravel</td> <td>27/11/18</td> <td>19:00</td> <td>45.00</td> <td>53.00</td> <td>-</td> </tr> <tr> <td style="text-align: center;"></td> <td>= Vane Shear Test</td> <td style="text-align: center;"></td> <td>Decayed Matter</td> <td>28/11/18</td> <td>8:00</td> <td>45.00</td> <td>53.00</td> <td>-</td> </tr> <tr> <td style="text-align: center;">RQD</td> <td>= Rock Quality Disignation</td> <td style="text-align: center;"></td> <td>Granite</td> <td>28/11/18</td> <td>19:00</td> <td>60.00</td> <td>68.00</td> <td>-</td> </tr> <tr> <td style="text-align: center;">TCR</td> <td>= Total Core Recovery</td> <td style="text-align: center;"></td> <td>Limestone</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">CRR</td> <td>= Core Recovery Ratio</td> <td style="text-align: center;"></td> <td>Mudstone</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>												<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :				= Standard Penetration Test		Silt	26/11/18	8:30	-	-	-	<p>Cohesive Soil (N)    0    2    4    8    15    30</p> <p>V.soft    Soft    M. Stiff    Stiff    V. Stiff    Hard</p> <p>Non Cohesive Soil (N)    0    4    10    30    50</p> <p>V.Loose    Loose    Medium Dense    Dense    Very Dense</p>				= Undisturbed Sample		Clay	26/11/18	19:00	30.00	38.00	-		= Disturbed Sample		Sand	27/11/18	8:30	30.00	38.00	-		= Cored Sample		Gravel	27/11/18	19:00	45.00	53.00	-		= Vane Shear Test		Decayed Matter	28/11/18	8:00	45.00	53.00	-	RQD	= Rock Quality Disignation		Granite	28/11/18	19:00	60.00	68.00	-	TCR	= Total Core Recovery		Limestone						CRR	= Core Recovery Ratio		Mudstone						Prepared by:		Checked by:		
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :																																																																																														
	= Standard Penetration Test		Silt	26/11/18	8:30	-	-	-	<p>Cohesive Soil (N)    0    2    4    8    15    30</p> <p>V.soft    Soft    M. Stiff    Stiff    V. Stiff    Hard</p> <p>Non Cohesive Soil (N)    0    4    10    30    50</p> <p>V.Loose    Loose    Medium Dense    Dense    Very Dense</p>																																																																																														
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<b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-22										
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 30/11/2018		<b>Coordinates</b> N -31175.411 E -47961.865													
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 2/12/2018		<b>Reduced Level (mRL):</b> -4.2788												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							N' Value								
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description			
30/11/2018	0.000						TOPSOIL															
	1.500		P1/D1				0	0	1	0	0	1		xx	0.30	0.30		Very soft, light grey, silty CLAY				
	1.950													xx				Very soft, light to medium grey, silty CLAY				
	3.000		UD1											xx	2.67							
	4.000													xx				Top: Light to medium grey, CLAY of high plasticity Bottom: DITTO				
	4.500		P2/D2											xx								
	4.950													xx				Very soft, light to medium grey, CLAY				
	6.000		UD2											xx	2.97							
	7.000													xx				Top: Light to medium grey, CLAY Bottom: Light to medium grey, silty CLAY				
	7.500		P3/D3				0	0	1	0	0	0		xx								
	7.950													xx				Very soft, light to medium grey, CLAY with trace of organic matter				
	9.000		UD3											xx	6.35							
	10.000													xx				Top: Light to medium grey, sandy CLAY Bottom: DITTO				
	10.500		P4/D4											xx	1.08							
	10.950													xx				Very soft, light to medium grey, CLAY				
	12.000													xx	7.43							
														xx	1.54							
														xx	8.97							
														xx	-8.97							
														xx	10.48							

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	30/11/18	8:30	-	-	-	OFFSHORE
	= Undisturbed Sample		Clay	30/11/18	19:00	25.00	35.00	-	
	= Disturbed Sample		Sand	1/12/18	8:30	25.00	35.00	-	
	= Cored Sample		Gravel	1/12/18	19:00	48.00	58.00	-	
	= Vane Shear Test		Decayed Matter	2/12/18	8:30	48.00	58.00	-	
RQD	= Rock Quality Disignation		Granite	2/12/18	8:30	48.00	58.00	-	
TCR	= Total Core Recovery		Limestone	2/12/18	19:00	60.00	70.00	-	

Cohesive Soil (N)	
0	2 4 8 15 30
V.soft	Soft M. Stiff Stiff V. Stiff Hard

Non Cohesive Soil (N)	
0	4 10 30 50
V.Loose	Loose Medium Dense Dense Very Dense





<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-22							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 30/11/2018		<b>Coordinates</b> N -31175.411 E -47961.865										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 2/12/2018		<b>Reduced Level (mRL):</b> -4.2788										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value
	12.000		UD4				75mm	75mm	75mm	75mm	75mm	75mm			12.43	1.95		Top: Light to medium grey, CLAY Bottom: Light to medium grey, silty CLAY	0 10 20 30 40 50
	13.000																		
	13.500		P5/D5												14.76	14.76		Very soft, light to medium grey, silty CLAY	
	13.950																		
	15.000		UD5															Top: Light to medium grey, CLAY Bottom: DITTO	
	16.000																		
	16.500		P6/D6												16.40			Very soft, light to medium grey, silty CLAY with trace of organic matter	
	16.950																		
	18.000		UD6															Top: Light to medium grey, silty CLAY Bottom: DITTO	
	19.000																		
	19.500		P7/D7															Very soft, light to medium grey, silty CLAY with some of organic matter	
	19.950																		
	21.000		UD7												20.98			Top: Light to medium grey, sandy CLAY Bottom: Light to medium grey, CLAY	
	22.000																		
	22.500		P8/D8												21.83	0.85		Very soft, light to medium grey spotted dark grey, silty CLAY with some of organic matter	
	22.950																		
	24.000														22.49	0.66			
<b>Legend</b> = Standard Penetration Test = Undisturbed Sample = Disturbed Sample = Cored Sample = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRP = Core Recovery Ratio		<b>Soil Legend</b> Silt Clay Sand Gravel Decayed Matter Granite Limestone Mudstone		Date Time Depth of Hole (m) Depth of Casing (m) Depth of Water (m)		Remarks : Cohesive Soil (N) Non Cohesive Soil (N)		 V.soft   Soft   M. Stiff   Stiff   V. Stiff   Hard 0   4   10   30   50 V.Loose   Loose   Medium Dense   Dense   Very Dense		Prepared by: _____ Checked by: _____									

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-22							
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 30/11/2018		<b>Coordinates</b> N -31175.411 E -47961.865										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 2/12/2018		<b>Reduced Level (mRL):</b> -4.2788										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value
1/12/2018	24.000	UD8					Rec : 900/1000mm						xx				Top: Light to medium grey, CLAY of high plasticity		
	25.000												xx				Bottom: DITTO		
	25.500					0	1	0	0	1	1						Very soft, light to medium grey, silty CLAY		
	25.950	P9/D9					Rec : 350/450mm						xx						
	27.000	UD9					Rec : 900/1000mm						xx		7.27			Top: Light to medium grey, silty CLAY	
	28.000												xx				Bottom: DITTO		
	28.500					0	1	0	1	0	1						Very soft, light to medium grey, silty CLAY		
	28.950	P10/D10					Rec : 350/450mm						xx						
	30.000	UD10					Rec : 900/1000mm						xx		0.59			Top: Light to medium grey, CLAY	
	31.000												xx					Bottom: Light to medium grey, sandy CLAY	
	31.500					0	1	1	1	1	1								
	31.950	P11/D11					Rec : 300/450mm						xx			31.48			Soft, light to medium grey, silty CLAY
33.000	UD11					Rec : 900/1000mm						xx					Top: Light to medium grey, silty CLAY		
34.000												xx					Bottom: DITTO		
34.500					1	1	1	1	1	1									
34.950	P12/D12					Rec : 300/450mm						xx					Medium stiff, light to medium grey, silty CLAY		
36.000												xx							

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	xxxx xxx	30/11/18	8:30	-	-	-	
	-----	30/11/18	19:00	25.00	35.00	-	
	.....	1/12/18	8:30	25.00	35.00	-	
	o o o o	1/12/18	19:00	48.00	58.00	-	
	o o o o	2/12/18	8:30	48.00	58.00	-	
RQD = Rock Quality Disignation	++++	2/12/18	19:00	60.00	70.00	-	
TCR = Total Core Recovery	++						
CRR = Core Recovery Ratio	++++						

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-22										
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 30/11/2018		<b>Coordinates</b> N -31175.411 E -47961.865													
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 2/12/2018		<b>Reduced Level (mRL):</b> -4.2788												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description								
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G				
	36.000	P13/D13					2	1	2	2	2	1										
	36.450																					
	37.500	P14/D14					4	3	5	5	4	6					4.46					
	37.950																					
	39.000	P15/D15					3	4	4	6	6	5										
	39.450																					
	40.500	P16/D16					4	5	6	6	7	9		xx			1.47					
	40.950																					
	42.000	P17/D17					3	4	4	7	7	6					41.93					
	42.450																					
	43.500	P18/D18					3	2	2	3	4	4					1.54					
	43.950																					
	45.000	P19/D19					4	4	4	3	4	5		xx			1.53					
	45.950																					
	46.500	P20/D20					2	4	5	5	6	7		xx			3.00					
	46.950																					
	48.000													xx								

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	30/11/18	8:30	-	-	-	
	= Undisturbed Sample		Clay	30/11/18	19:00	25.00	35.00	-	
	= Disturbed Sample		Sand	1/12/18	8:30	25.00	35.00	-	
	= Cored Sample		Gravel	1/12/18	19:00	48.00	58.00	-	
	= Vane Shear Test		Decayed Matter	2/12/18	8:30	48.00	58.00	-	
RQD	= Rock Quality Disignation		Granite	2/12/18	19:00	60.00	70.00	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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













<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-22											
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 30/11/2018		<b>Coordinates</b> N -31175.411 E -47961.865														
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 2/12/2018		<b>Reduced Level (mRL):</b> -4.2788													
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50										
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description									
							75mm	75mm	75mm	75mm	75mm	75mm											
2/12/2018	48.000	P21/D21					5	5	7	7	9	9	32	...	xx	1.39	Dense, light to medium grey, silty fine grain SAND						
	48.450						Rec : 250/450mm	...	xx														
	49.500	P22/D22					5	6	6	7	7	9	24	...	xx	1.57	Medium dense, light to medium grey, clayey SAND						
	49.950						Rec : 300/450mm	...	xx														
	51.000	P23/D23					6	6	7	6	9	10	32	...	xx	1.47	Dense, light to medium grey, silty fine grain SAND						
	51.450						Rec : 300/450mm	...	xx														
	52.500	P24/D24					5	5	4	6	6	8	24	---	xx	3.04	Very stiff, light to medium grey, silty CLAY						
	52.950						Rec : 230/450mm	---	xx														
54.000	P25/D25					5	6	6	7	7	9	29	---	xx	1.52	Very stiff, light to medium grey, silty CLAY							
54.450						Rec : 230/450mm	---	xx															
55.500	P26/D26					4	5	7	7	8	8	30	---	xx	1.52	Very stiff, light to medium grey, very clayey SAND							
55.950						Rec : 300/450mm	---	xx															
57.000	P27/D27					4	4	5	7	7	9	28	---	xx	-	Very stiff, light to medium grey, CLAY							
57.450						Rec : 300/450mm	---	xx															
58.500	P28/D28					5	4	5	6	8	10	29	---	xx	-	-DITTO-							
58.950						Rec : 250/450mm	---	xx															
60.000																							

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	30/11/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard
	= Undisturbed Sample		Clay	30/11/18	19:00	25.00	35.00	-	
	= Disturbed Sample		Sand	1/12/18	8:30	25.00	35.00	-	Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Cored Sample		Gravel	1/12/18	19:00	48.00	58.00	-	
	= Vane Shear Test		Decayed Matter	2/12/18	8:30	48.00	58.00	-	
RQD	= Rock Quality Disignation		Granite	2/12/18	19:00	60.00	70.00	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

Prepared by:		Checked by:	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.																																																																																																																									
										6 of 6		BH-22																																																																																																																									
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates																																																																																																																												
Location : PULAU INDAH					SG/1281/2018		30/11/2018		N -31175.411																																																																																																																												
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47961.865																																																																																																																											
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		2/12/2018		Reduced Level (mRL): -4.2788																																																																																																																											
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph																																																																																																																								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value																																																																																																																							
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thick-ness (m)	W G	Description	0	10	20	30	40	50																																																																																																												
	60.000		P29/D29				6	5	6	6	7	9				3.46		-DITTO-																																																																																																																			
	60.450						Rec : 300/450mm N= 28								60.45			Borehole terminated at depth 60.45m																																																																																																																			
<b>Legend</b>  = Standard Penetration Test  = Undisturbed Sample  = Disturbed Sample  = Cored Sample  = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRR = Core Recovery Ratio												<b>Soil Legend</b>  Silt  Clay  Sand  Gravel  Decayed Matter  Granite  Limestone  Mudstone												<table border="1"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Depth of Hole (m)</th> <th>Depth of Casing (m)</th> <th>Depth of Water (m)</th> <th>Remarks :</th> </tr> </thead> <tbody> <tr> <td>30/11/18</td> <td>8:30</td> <td>-</td> <td>-</td> <td>-</td> <td></td> </tr> <tr> <td>30/11/18</td> <td>19:00</td> <td>25.00</td> <td>35.00</td> <td>-</td> <td></td> </tr> <tr> <td>1/12/18</td> <td>8:30</td> <td>25.00</td> <td>35.00</td> <td>-</td> <td></td> </tr> <tr> <td>1/12/18</td> <td>19:00</td> <td>48.00</td> <td>58.00</td> <td>-</td> <td></td> </tr> <tr> <td>2/12/18</td> <td>8:30</td> <td>48.00</td> <td>58.00</td> <td>-</td> <td></td> </tr> <tr> <td>2/12/18</td> <td>19:00</td> <td>60.00</td> <td>70.00</td> <td>-</td> <td></td> </tr> </tbody> </table>												Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :	30/11/18	8:30	-	-	-		30/11/18	19:00	25.00	35.00	-		1/12/18	8:30	25.00	35.00	-		1/12/18	19:00	48.00	58.00	-		2/12/18	8:30	48.00	58.00	-		2/12/18	19:00	60.00	70.00	-		<table border="1"> <thead> <tr> <th colspan="2">Cohesive Soil (N)</th> <th colspan="6">0 2 4 8 15 30</th> </tr> <tr> <td>V.soft</td> <td>Soft</td> <td>M. Stiff</td> <td>Stiff</td> <td>V. Stiff</td> <td>Hard</td> <td></td> <td></td> </tr> </thead> <tbody> <tr> <th colspan="2">Non Cohesive Soil (N)</th> <th colspan="6">0 4 10 30 50</th> </tr> <tr> <td>V.Loose</td> <td>Loose</td> <td>Medium Dense</td> <td>Dense</td> <td>Very Dense</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>												Cohesive Soil (N)		0 2 4 8 15 30						V.soft	Soft	M. Stiff	Stiff	V. Stiff	Hard			Non Cohesive Soil (N)		0 4 10 30 50						V.Loose	Loose	Medium Dense	Dense	Very Dense				<b>Prepared by:</b> _____ <b>Checked by:</b> _____											
Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :																																																																																																																																
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V.soft	Soft	M. Stiff	Stiff	V. Stiff	Hard																																																																																																																																
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V.Loose	Loose	Medium Dense	Dense	Very Dense																																																																																																																																	

<b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-23							
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 8/12/2018		<b>Coordinates</b> N -31503.290 E -48148.271										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 10/12/2018		<b>Reduced Level (mRL):</b> -4.5741									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)	Thickness (m)	W G	Description	N' Value	
8/12/2018	0.000						TOPSOIL						xx	0.30	0.30		Very soft, light grey, silty CLAY		
	1.500		P1/D1				-HAMMER WEIGHT- Rec: 250/450mm N= 0						xx	3.15		Very soft, light to medium grey, CLAY			
	1.950						Rec: 900/1000mm						xx	3.45		Top: Light to medium grey, CLAY			
	3.000		UD1				Rec: 900/1000mm						xx	1.03		Bottom: Light to medium grey, silty CLAY			
	4.000						-HAMMER WEIGHT- Rec: 300/450mm N= 0						xx	4.48		Very soft, light to medium grey, CLAY			
	4.500		P2/D2				Rec: 900/1000mm						xx	1.49		Top: Light to medium grey, silty CLAY			
	4.950						Rec: 900/1000mm						xx	1.46		Bottom: DITTO			
	6.000		UD2				-HAMMER WEIGHT- Rec: 270/450mm N= 0						xx	7.43		Very soft, light to medium grey, CLAY			
	7.000						Rec: 870/1000mm						xx	1.43		Top: Light to medium grey, silty CLAY			
	7.500		P3/D3				-HAMMER WEIGHT- Rec: 300/450mm N= 0						xx	8.86		Bottom: DITTO			
	7.950						Rec: 870/1000mm						xx	1.56		Very soft, light to medium grey, CLAY			
	9.000		UD3				-HAMMER WEIGHT- Rec: 300/450mm N= 0						xx	10.42		Top: Light to medium grey, silty CLAY			
10.000						Rec: 300/450mm						xx	1.58		Bottom: DITTO				
10.500		P4/D4										xx	12.00						
10.950												xx							
12.000												xx							

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	8/12/18	8:30	-	-	-	OFFSHORE
	= Undisturbed Sample		Clay	8/12/18	19:00	30.00	40.50	-	
	= Disturbed Sample		Sand	9/12/18	8:30	30.00	40.50	-	
	= Cored Sample		Gravel	9/12/18	19:00	45.00	55.50	-	
	= Vane Shear Test		Decayed Matter	10/12/18	8:30	45.00	55.50	-	
RQD	= Rock Quality Disignation		Granite	10/12/18	8:30	45.00	55.50	-	Cohesive Soil (N)      0    2    4    8    15    30 V.soft    Soft    M. Stiff    Stiff    V. Stiff    Hard Non Cohesive Soil (N)    0    4    10    30    50 V.Loose    Loose    Medium Dense    Dense    Very Dense
TCR	= Total Core Recovery		Limestone	10/12/18	19:00	60.00	70.50	-	



















<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-23	
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 8/12/2018		<b>Coordinates</b> N -31503.290 E -48148.271				
<b>Client</b> WESTPORTS (M) DDN. BHD.			<b>Consultant</b> HSS INTEGRATED SDN. BHD.			<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 10/12/2018		<b>Reduced Level (mRL):</b> -4.5741	
Date & Time	SAMPLE / INSITU TEST							SOIL / STRATUM DETAILS					Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores	Casing Record	Legend	Depth (m)	Thickness (m)	W G	
	12.000		UD4				Rec : 900/1000mm			12.38	0.38		Top: Light to medium grey, sandy CLAY Bottom: Light to medium grey, CLAY
	13.000												
	13.500		P5/D5			0	1 0 1 0 1				2.44		Very soft, light to medium grey, CLAY
	13.950						Rec : 300/450mm						
	15.000		UD5				Rec : 880/1000mm				1.63		Top: Light to medium grey, sandy CLAY Bottom: DITTO
	16.000												
	16.500		P6/D6			1	1 1 1 0 1				1.53		Soft, light to medium grey, CLAY
	16.950						Rec : 290/450mm						
	18.000		UD6				Rec : 910/1000mm				1.45		Top: Light to medium grey, CLAY Bottom: Light to medium grey, silty CLAY
	19.000												
	19.500		P7/D7			1	1 1 1 1 1				1.57		Medium stiff, light to medium grey, CLAY with trace of organic matter
	19.950						Rec : 300/450mm						
	21.000		UD7				Rec : 920/1000mm				0.42		Top: Light to medium grey, silty CLAY Bottom: Light to medium grey, CLAY
	22.000												
	22.500		P8/D8			1	1 1 1 1 1						Soft, light to medium grey, CLAY
	22.950						Rec : 300/450mm						
	24.000												

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	8/12/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	8/12/18	19:00	30.00	40.50	-	
	= Disturbed Sample		Sand	9/12/18	8:30	30.00	40.50	-	
	= Cored Sample		Gravel Decayed Matter	9/12/18	19:00	45.00	55.50	-	
	= Vane Shear Test		Granite	10/12/18	8:30	45.00	55.50	-	
RQD	= Rock Quality Disignation		Limestone	10/12/18	19:00	60.00	70.50	-	
TCR	= Total Core Recovery		Mudstone						
CRP	= Core Recovery Ratio								

<b>Prepared by:</b>		<b>Checked by:</b>	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.																			
										3 of 6		BH-23																			
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19										Job No.		Date Started		Coordinates																	
Location : PULAU INDAH										SG/1281/2018		8/12/2018		N -31503.290																	
Client			Consultant			Type of Boring		Boring Dia. (mm)	Orientation		Date Completed		E -48148.271																		
WESTPORTS (M) DDN. BHD.			HSS INTEGRATED SDN. BHD.			ROTARY WASH		100	Vertical		10/12/2018		Reduced Level (mRL): -4.5741																		
Date & Time	SAMPLE / INSITU TEST							SOIL / STRATUM DETAILS							Standard Penetration Test Graph																
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)	Thickness (m)			W G	Description	'N' Value												
9/12/2018	24.000		UD8			Rec : 910/1000mm											Top: Light to medium grey, CLAY														
	25.000																Bottom: DITTO														
	25.500					1	1	1	1	1	2				5.93		Medium stiff, light to medium grey, CLAY														
	25.950		P9/D9			Rec : 290/450mm																									
	27.000																Top: Light to medium grey, CLAY														
	28.000		UD9			Rec : 850/1000mm											Bottom: Light to medium grey, silty CLAY														
	28.500																														
	28.950		P10/D10			1	1	2	1	2	6				1.54		Medium stiff, light to medium grey, CLAY														
	30.000																Top: Light to medium grey, sandy CLAY														
	31.000		UD10			Rec : 900/1000mm											Bottom: DITTO														
31.500																															
31.950		P11/D11			1	1	1	1	2	6				1.26		Medium stiff, light to medium grey, CLAY															
33.000																Top: Light to medium grey, CLAY															
34.000		UD11			Rec : 890/1000mm											Bottom: Light to medium grey, silty CLAY															
34.500																															
34.950		P12/D12			1	2	2	2	2	8				1.57		Medium stiff, light to medium grey, CLAY															
36.000																															
<b>Legend</b>  = Standard Penetration Test  = Undisturbed Sample  = Disturbed Sample  = Cored Sample  = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRP = Core Recovery Ratio										<b>Soil Legend</b>  Silt  Clay  Sand  Gravel  Decayed Matter  Granite  Limestone  Mudstone										Date		Time		Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :				
										8/12/18		8:30		-	-	-															
										8/12/18		19:00		30.00	40.50	-															
										9/12/18		8:30		30.00	40.50	-															
										9/12/18		19:00		45.00	55.50	-															
										10/12/18		8:30		45.00	55.50	-															
										10/12/18		19:00		60.00	70.50	-															
										Cohesive Soil (N)		0		2	4	8	15	30													
										Non Cohesive Soil (N)		0		4	10	30	50														
										V.soft		Soft		M. Stiff	Stiff	V. Stiff	Hard														
										V.Loose		Loose		Medium Dense	Dense	Very Dense															
										Prepared by:		Checked by:																			


<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-23												
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 8/12/2018		<b>Coordinates</b> N -31503.290 E -48148.271															
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 10/12/2018		<b>Reduced Level (mRL):</b> -4.5741															
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50											
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description										
							75mm	75mm	75mm	75mm	75mm	75mm												
	36.000		P13/D13				3	2	2	3	3	4	12											
	36.450						Rec : 300/450mm																	
	37.500		P14/D14				3	4	4	4	5	5	18											
	37.950						Rec : 320/450mm																	
	39.000		P15/D15				3	3	4	5	4	6	19											
	39.450						Rec : 300/450mm																	
	40.500		P16/D16				5	4	5	5	7	7	24											
	40.950						Rec : 270/450mm																	
	42.000		P17/D17				5	5	6	7	7	7	27											
	42.450						Rec : 250/450mm																	
	43.500		P18/D18				5	5	7	7	7	6	27											
	43.950						Rec : 300/450mm																	
	45.000		P19/D19				5	6	7	7	9	9	32											
	45.950						Rec : 350/450mm																	
10/12/2018	46.500		P20/D20				5	5	7	7	8	10	32											
	46.950						Rec : 300/450mm																	
	48.000																							


  

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	8/12/18	8:30	-	-	-	
	= Undisturbed Sample		Clay	8/12/18	19:00	30.00	40.50	-	
	= Disturbed Sample		Sand	9/12/18	8:30	30.00	40.50	-	
	= Cored Sample		Gravel	9/12/18	19:00	45.00	55.50	-	
	= Vane Shear Test		Decayed Matter	10/12/18	8:30	45.00	55.50	-	
RQD	= Rock Quality Disignation		Granite	10/12/18	19:00	60.00	70.50	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.								
										5 of 6		BH-23								
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates											
Location : PULAU INDAH					SG/1281/2018		8/12/2018		N -31503.290											
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -48148.271										
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		10/12/2018		Reduced Level (mRL): -4.5741										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph							
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value	
	48.000	P21/D21					6	7	7	6	8	9							Very stiff, light to medium grey, sandy CLAY	0
	48.450						6	7	7	6	8	9								
	49.500	P22/D22					5	5	6	6	6	6								2.94
	49.950						5	5	6	6	6	6								
	51.000	P23/D23					4	5	6	7	7	7								2.96
	51.450						4	5	6	7	7	7								
	52.500	P24/D24					5	4	6	6	8	8								1.40
	52.950						5	4	6	6	8	8								
	54.000	P25/D25					6	6	6	5	6	7								2.96
	54.450						6	6	6	5	6	7								
	55.500	P26/D26					6	5	5	6	7	9								3.21
	55.950						6	5	5	6	7	9								
	57.000	P27/D27					5	6	7	7	8	8								-
	57.450						5	6	7	7	8	8								
	58.500	P28/D28					7	7	6	8	8	10								-
	58.950						7	7	6	8	8	10								
	60.000																			
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :											
	= Standard Penetration Test		Silt	8/12/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense											
	= Undisturbed Sample		Clay	8/12/18	19:00	30.00	40.50	-												
	= Disturbed Sample		Sand	9/12/18	8:30	30.00	40.50	-												
	= Cored Sample		Gravel	9/12/18	19:00	45.00	55.50	-												
	= Vane Shear Test		Decayed Matter	10/12/18	8:30	45.00	55.50	-												
RQD	= Rock Quality Disignation		Granite	10/12/18	19:00	60.00	70.50	-												
TCR	= Total Core Recovery		Limestone																	
CRR	= Core Recovery Ratio		Mudstone																	
				<b>Prepared by:</b>		<b>Checked by:</b>														

 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.							
										6 of 6		BH-23							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates										
Location : PULAU INDAH					SG/1281/2018		8/12/2018		N -31503.290										
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -48148.271									
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		10/12/2018		Reduced Level (mRL): -4.5741									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value 0 10 20 30 40 50					
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thick-ness (m)	W G	Description
	60.000	P29/D29					7	8	8	9	9					0.45		Hard, light to medium grey, CLAY	
	60.450							Rec : 250/450mm N= 36											
																		<i>Borehole terminated at depth 60.45m</i>	

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	8/12/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	8/12/18	19:00	30.00	40.50	-	
	= Disturbed Sample		Sand	9/12/18	8:30	30.00	40.50	-	
	= Cored Sample		Gravel	9/12/18	19:00	45.00	55.50	-	
	= Vane Shear Test		Decayed Matter	10/12/18	8:30	45.00	55.50	-	
RQD	= Rock Quality Disignation		Granite	10/12/18	19:00	60.00	70.50	-	<b>Prepared by:</b> _____ <b>Checked by:</b> _____
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622											Sheet 1 of 6		Borehole Ref. No. BH-24						
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19						Job No. SG/1281/2018		Date Started 4/12/2018		Coordinates N -31682.736 E -47890.620									
Location : PULAU INDAH																			
Client WESTPORTS (M) DDN. BHD.			Consultant HSS INTEGRATED SDN. BHD.			Type of Boring ROTARY WASH	Boring Dia. (mm) 100	Orientation Vertical	Date Completed 6/12/2018		Reduced Level (mRL): -4.6613								
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph N' Value 0 10 20 30 40 50						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	
4/12/2018	0.000						TOPSOIL							0.30	0.30		Very soft, light grey, silty CLAY		
	1.500		P1/D1				-HAMMER WEIGHT- N=0 Rec: 400/450mm								2.68			Very soft, light to medium grey, CLAY	
	1.950														2.98				
	3.000		UD1				Rec: 870/1000mm								3.45	0.47		Top: Medium grey, silty CLAY	
	4.000														0.98			Bottom: Light to medium grey, CLAY	
	4.500		P2/D2				-HAMMER WEIGHT- N=0 Rec: 300/450mm								4.43			Very soft, light to medium grey, silty CLAY	
	4.950														2.06				
	6.000		UD2				Rec: 900/1000mm								6.49			Top: Medium grey, silty CLAY	
	7.000														0.93			Bottom: Light to medium grey, CLAY	
	7.500		P3/D3				-HAMMER WEIGHT- N=0 Rec: 300/450mm								7.42			Very soft, light to medium grey, silty CLAY	
	7.950														1.53				
	9.000		UD3				Rec: 920/1000mm								8.95			Top: Medium grey, CLAY	
10.000														3.05			Bottom: Light to medium grey, CLAY		
10.500		P4/D4				-HAMMER WEIGHT- N=0 Rec: 400/450mm											Very soft, light to medium grey, CLAY		
10.950																			
12.000																			

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	4/12/18	8:30	-	-	-	OFFSHORE
	= Undisturbed Sample		Clay	4/12/18	19:00	24.00	34.00	-	
	= Disturbed Sample		Sand	5/12/18	8:30	24.00	24.00	-	
	= Cored Sample		Gravel	5/12/18	19:00	45.00	55.00	-	
	= Vane Shear Test		Decayed Matter	6/12/18	8:30	45.00	55.00	-	
RQD	= Rock Quality Disignation		Granite	6/12/18	19:00	60.00	70.00	-	
TCR	= Total Core Recovery		Limestone	6/12/18	19:00	60.00	70.00	-	

Cohesive Soil (N)	
0	2 4 8 15 30
V.soft	Soft M. Stiff Stiff V. Stiff Hard

Non Cohesive Soil (N)	
0	4 10 30 50
V.Loose	Loose Medium Dense Dense Very Dense



<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-24						
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 4/12/2018		<b>Coordinates</b> N -31682.736 E -47890.620									
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 6/12/2018		<b>Reduced Level (mRL):</b> -4.6613									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph					
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description
	12.000	UD4					75mm	75mm	75mm	75mm	75mm			1.48			Top: Light to medium grey, silty CLAY Bottom: DITTO	
	13.000													13.48				
	13.500	P5/D5												1.52			Very soft, light to medium grey, CLAY	
	13.950													15.00				
	15.000	UD5												15.36	0.36		Top: Light to medium grey, sandy CLAY Bottom: DITTO	
	16.000													17.94				
	16.500	P6/D6												2.58			Very soft, light to medium grey, silty CLAY	
	16.950													17.94				
	18.000	UD6												17.94			Top: Light to medium grey, CLAY Bottom: DITTO	
	19.000													4.49			Very soft, light to medium grey, CLAY	
	19.500	P7/D7												4.49				
	19.950													22.43				
	21.000	UD7												22.43			Top: Light to medium grey, CLAY Bottom: Medium grey, CLAY	
	22.000													22.43				
	22.500	P8/D8												1.57			Soft, medium grey, silty CLAY	
	22.950													1.57				
	24.000													24.00				
<b>Legend</b> = Standard Penetration Test = Undisturbed Sample = Disturbed Sample = Cored Sample = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRR = Core Recovery Ratio		<b>Soil Legend</b> Silt Clay Sand Gravel Decayed Matter Granite Limestone Mudstone		<b>Date</b> 4/12/18 8:30 4/12/18 19:00 5/12/18 8:30 5/12/18 19:00 6/12/18 8:30 6/12/18 19:00		<b>Time</b> 8:30 19:00 8:30 19:00 8:30 19:00		<b>Depth of Hole (m)</b> - 24.00 24.00 45.00 45.00 45.00 60.00		<b>Depth of Casing (m)</b> - 34.00 24.00 55.00 55.00 55.00 70.00		<b>Depth of Water (m)</b> - - - - - -		<b>Remarks :</b> Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense				
<b>Prepared by:</b>										<b>Checked by:</b>								



<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-24						
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 4/12/2018		<b>Coordinates</b> N -31682.736 E -47890.620									
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 6/12/2018		<b>Reduced Level (mRL):</b> -4.6613									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50					
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description				
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G
5/12/2018	24.000	UD8					Rec : 900/1000mm						Top: Light to medium grey, CLAY Bottom: Medium grey, CLAY					
	25.000														1.46			
	25.500					0	1	0	1	0	1	2		xx	25.46			
	25.950	P9/D9					Rec : 250/450mm						Very soft, medium grey, silty CLAY					
	27.000																	
	28.000	UD9					Rec : 900/1000mm						Top: Light to medium grey, CLAY Bottom: Medium grey, CLAY					
	28.500					0	1	1	1	1	1	4		xx	28.48			
	28.950	P10/D10					Rec : 300/450mm						Soft, light to medium grey, silty CLAY					
	30.000																	
	31.000	UD10					Rec : 900/1000mm						Top: Light to medium grey, CLAY Bottom: DITTO					
	31.500					0	0	1	0	1	1	3		xx	31.47			
	31.950	P11/D11					Rec : 300/450mm						Soft, light to medium grey, silty CLAY					
33.000					1	2	1	2	2	3	8		xx	32.95				
34.000	P12/D12					Rec : 300/450mm						Medium stiff, medium to dark grey, CLAY						
34.500					1	1	2	2	2	1	7		xx					
34.950	P13/D13					Rec : 270/450mm						-DITTO-						
36.000																		

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
		4/12/18	8:30	-	-	-	
		4/12/18	19:00	24.00	34.00	-	
		5/12/18	8:30	24.00	24.00	-	
		5/12/18	19:00	45.00	55.00	-	
		6/12/18	8:30	45.00	55.00	-	
RQD = Rock Quality Disignation		6/12/18	19:00	60.00	70.00	-	
TCR = Total Core Recovery							
CRR = Core Recovery Ratio							

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-24										
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 4/12/2018		<b>Coordinates</b> N -31682.736 E -47890.620													
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 6/12/2018		<b>Reduced Level (mRL):</b> -4.6613													
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description	'N' Value 0 10 20 30 40 50							
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record			Legend	Depth (m)	Thickness (m)	W G			
	36.000		P14/D14				3	2	3	2	3	3										
	36.450						Rec : 300/450mm															
	37.500		P15/D15				3	3	4	4	5	4										
	37.950						Rec : 260/450mm															
	39.000		P16/D16				2	3	3	4	5	5										
	39.450						Rec : 290/450mm															
	40.500		P17/D17				3	5	7	6	5	5				11.92						
	40.950						Rec : 300/450mm															
	42.000		P18/D18				4	5	5	4	5	6										
	42.450						Rec : 270/450mm															
	43.500		P19/D19				4	5	6	6	7	9										
	43.950						Rec : 300/450mm															
	45.000		P20/D20				3	2	3	4	4	6		xx		44.87						
	45.450						Rec : 300/450mm									1.55						
	46.500		P21/D21				4	3	4	5	5	7		xx		46.42						
	46.950						Rec : 250/450mm															
	48.000																					

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	4/12/18	8:30	-	-	-	
	= Undisturbed Sample		Clay	4/12/18	19:00	24.00	34.00	-	
	= Disturbed Sample		Sand	5/12/18	8:30	24.00	24.00	-	
	= Cored Sample		Gravel	5/12/18	19:00	45.00	55.00	-	
	= Vane Shear Test		Decayed Matter	6/12/18	8:30	45.00	55.00	-	
RQD	= Rock Quality Disignation		Granite	6/12/18	19:00	60.00	70.00	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-24								
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 4/12/2018		<b>Coordinates</b> N -31682.736 E -47890.620											
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 6/12/2018		<b>Reduced Level (mRL):</b> -4.6613											
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph							
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value 0 10 20 30 40 50						
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	
	48.000		P22/D22				3	3	5	5	6	6		xx		3.05		-DITTO-		
	48.450						Rec : 270/450mm													
	49.500		P23/D23				4	3	4	6	6	8		xx				Very stiff, light to medium grey, very clayey SAND		
	49.950						Rec : 270/450mm													
	51.000		P24/D24				5	7	7	7	8	7		xx		4.49		Medium dense, light to medium grey, clayey SAND		
	51.450						Rec : 200/450mm													
	52.500		P25/D25				5	4	6	7	8	9		xx				-DITTO-		
	52.950						Rec : 230/450mm													
	54.000		P26/D26				6	7	6	7	9	10		xx				Dense, light to medium grey, silty fine grain SAND		
	54.450						Rec : 240/450mm													
	55.500		P27/D27				6	6	7	8	10	11		xx				-DITTO-		
	55.950						Rec : 200/450mm													
	57.000		P28/D28				5	7	7	9	9	10		xx				-DITTO-		
	57.450						Rec : 200/450mm													
	58.500		P29/D29				5	4	3	4	5	7		xx				Very stiff, light to medium grey, silty fine grain SAND		
	58.950						Rec : 300/450mm													
	60.000													xx						



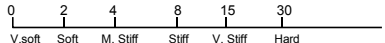
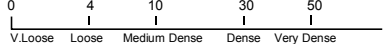











Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	4/12/18	8:30	-	-	-	
	= Undisturbed Sample		Clay	4/12/18	19:00	24.00	34.00	-	
	= Disturbed Sample		Sand	5/12/18	8:30	24.00	24.00	-	
	= Cored Sample		Gravel	5/12/18	19:00	45.00	55.00	-	
	= Vane Shear Test		Decayed Matter	6/12/18	8:30	45.00	55.00	-	
RQD	= Rock Quality Disignation		Granite	6/12/18	19:00	60.00	70.00	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.												
										6 of 6		BH-24												
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates															
Location : PULAU INDAH					SG/1281/2018		4/12/2018		N -31682.736															
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47890.620														
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		6/12/2018		Reduced Level (mRL): -4.6613														
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph											
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value										
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thick-ness (m)	W G	Description	0	10	20	30	40
	60.000		P30/D30				5	5	5	7	7	9		---		0.45		Very stiff, light to medium grey, very clayey SAND						
	60.450								Rec : 300/450mm N= 28															
																		<b>Borehole terminated at depth 60.45m</b>						

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	4/12/18	8:30	-	-	-	Cohesive Soil (N)  V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N)  V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	4/12/18	19:00	24.00	34.00	-	
	= Disturbed Sample		Sand	5/12/18	8:30	24.00	24.00	-	
	= Cored Sample		Gravel	5/12/18	19:00	45.00	55.00	-	
	= Vane Shear Test		Decayed Matter	6/12/18	8:30	45.00	55.00	-	
RQD	= Rock Quality Disignation		Granite	6/12/18	19:00	60.00	70.00	-	
TCR	= Total Core Recovery		Limestone	6/12/18	19:00	60.00	70.00	-	
CRR	= Core Recovery Ratio		Mudstone						Prepared by: _____

<b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-25											
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 30/11/2018		<b>Coordinates</b> N -31895.948 E -47509.012														
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 2/12/2018		<b>Reduced Level (mRL):</b> -4.8930													
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph										
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	N' Value				
30/11/2018	0.000						TOPSOIL						xx	0.30	0.30		Very soft, light gry, silty CLAY	0 10 20 30 40 50					
	1.500		P1/D1				0	0	1	0	0	1		xx				Very soft, light to medium grey, silty CLAY with some of organic matter					
	1.950													xx	2.67								
	3.000		UD1											xx	2.97								
	3.420													xx	3.42	0.45		Top: Light to medium grey, sandy CLAY					
	4.000													xx		1.06		Bottom: Light to medium grey, sandy SILT					
	4.500		P2/D2											xx	4.48			Very soft, light to medium grey, CLAY					
	4.950													xx									
	6.000		UD2											xx	5.96			Top: Light to medium grey, silty CLAY					
	7.000													xx		1.45		Bottom: DITTO					
	7.500		P3/D3											xx	7.41			Very soft, light to medium grey, CLAY					
	7.950													xx		1.45							
	9.000		UD3											xx	8.86			Top: Light to medium grey, silty CLAY					
	10.000													xx		1.63		Bottom: DITTO					
	10.500		P4/D4											xx	10.49			Very soft, light to medium grey, CLAY					
	10.950													xx		1.51							
	12.000													xx	12.00								














  

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	30/11/18	8:30	-	-	-	OFFSHORE
	= Undisturbed Sample		Clay	30/11/18	19:00	33.00	43.00	-	
	= Disturbed Sample		Sand	1/12/18	8:30	33.00	43.00	-	
	= Cored Sample		Gravel	1/12/18	19:00	48.00	58.00	-	
	= Vane Shear Test		Decayed Matter	1/12/18	19:00	48.00	58.00	-	
RQD	= Rock Quality Disignation		Granite	2/12/18	8:30	48.00	58.00	-	
TCR	= Total Core Recovery		Limestone	2/12/18	19:00	60.00	70.00	-	














  

Cohesive Soil (N)		Non Cohesive Soil (N)	
0	30	0	50
V.soft	Hard	V.Loose	Very Dense
Soft		Loose	
M. Stiff		Medium Dense	
Stiff		Dense	
V. Stiff			



 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622		<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-25																					
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH				<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 30/11/2018		<b>Coordinates</b> N -31895.948 E -47509.012																	
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 2/12/2018	<b>Reduced Level (mRL):</b> -4.8930																
<b>Date &amp; Time</b>				<b>SAMPLE / INSITU TEST</b>					<b>SOIL / STRATUM DETAILS</b>					<b>Standard Penetration Test Graph</b>											
<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Field Test / Rock Cores</b>					<b>Casing Record</b>	<b>Legend</b>	<b>Depth (m)</b>	<b>Thickness (m)</b>	<b>W G</b>	<b>Description</b>					<b>'N' Value</b>				
12.000		UD4				Rec : 800/1000mm						-- xx	12.38	0.38		Top: Light to medium grey, silty CLAY									
13.000																Bottom: Light to medium grey, CLAY									
13.500		P5/D5				Rec : 300/450mm N= 2										Very soft, light to medium grey, silty CLAY									
15.000		UD5				Rec : 900/1000mm										Top: Light to medium grey, very clayey SAND									
16.000																Bottom: DITTO									
16.500		P6/D6				Rec : 250/450mm N= 3										Soft, light to medium grey, sandy CLAY									
18.000		UD6				Rec : 900/1000mm										Top: Light to medium grey, CLAY									
19.000																Bottom: DITTO									
19.500		P7/D7				-HAMMER WEIGHT- Rec : 300/450mm N= 0										Very soft, light to medium grey, silty CLAY									
21.000		UD7				Rec : 650/1000mm										Top: Light to medium grey, very clayey SAND									
22.000																Bottom: DITTO									
22.500		P8/D8				-HAMMER WEIGHT- Rec : 300/450mm N= 0										Very soft, light to medium grey, silty CLAY									
24.000																									

<b>Legend</b>		<b>Soil Legend</b>		<b>Date</b>		<b>Time</b>		<b>Depth of Hole (m)</b>		<b>Depth of Casing (m)</b>		<b>Depth of Water (m)</b>		<b>Remarks :</b>					
	= Standard Penetration Test		Silt	30/11/18	8:30														
	= Undisturbed Sample		Clay	30/11/18	19:00	33.00	43.00												
	= Disturbed Sample		Sand	1/12/18	8:30	33.00	43.00												
	= Cored Sample		Gravel	1/12/18	19:00	48.00	58.00												
	= Vane Shear Test		Decayed Matter																
RQD	= Rock Quality Disignation		Granite	2/12/18	8:30	48.00	58.00												
TCR	= Total Core Recovery		Limestone	2/12/18	19:00	60.00	70.00												
CRP	= Core Recovery Ratio		Mudstone																

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>Cohesive Soil (N)</b>		0    2    4    8    15    30				
V.soft    Soft    M. Stiff    Stiff    V. Stiff    Hard						
<b>Non Cohesive Soil (N)</b>		0    4    10    30    50				
V.Loose    Loose    Medium Dense    Dense    Very Dense						

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-25								
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 30/11/2018		<b>Coordinates</b> N -31895.948 E -47509.012											
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 2/12/2018		<b>Reduced Level (mRL):</b> -4.8930										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph							
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value	
1/12/2018	24.000	UD8					Rec : 800/1000mm						xx				2.98		Top: Light to medium grey, silty CLAY Bottom: DITTO	
	25.000						-HAMMER WEIGHT- N=0 Rec : 300/450mm												Very soft, light to medium grey, CLAY	
	25.500	P9/D9																		
	25.950																			
	27.000	UD9					Rec : 900/1000mm												Top: Light to medium grey, CLAY Bottom: DITTO	
	28.000																			
	28.500	P10/D10					1	1	1	2	1	2							Medium stiff, light to medium grey, CLAY	
	28.950						Rec : 250/450mm													
	30.000	UD10					Rec : 850/1000mm												Top: Light to medium grey, CLAY Bottom: DITTO	
	31.000																			
	31.500	P11/D11					1	1	1	1	1	1							Soft, light to medium grey, CLAY	
	31.950						Rec : 400/450mm													
33.000	P12/D12					0	1	1	2	1	2							Medium stiff, light to medium grey, CLAY		
33.450						Rec : 300/450mm														
34.500	P13/D13					1	2	2	1	3	2							Medium stiff, light to medium grey, sandy CLAY		
34.950						Rec : 350/450mm														
36.000																				

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	30/11/18	8:30	-	-	-	
	= Undisturbed Sample		Clay	30/11/18	19:00	33.00	43.00	-	
	= Disturbed Sample		Sand	1/12/18	8:30	33.00	43.00	-	
	= Cored Sample		Gravel	1/12/18	19:00	48.00	58.00	-	
	= Vane Shear Test		Decayed Matter	1/12/18	19:00	48.00	58.00	-	
RQD	= Rock Quality Disignation		Granite	2/12/18	8:30	48.00	58.00	-	
TCR	= Total Core Recovery		Limestone	2/12/18	19:00	60.00	70.00	-	
CRP	= Core Recovery Ratio		Mudstone						


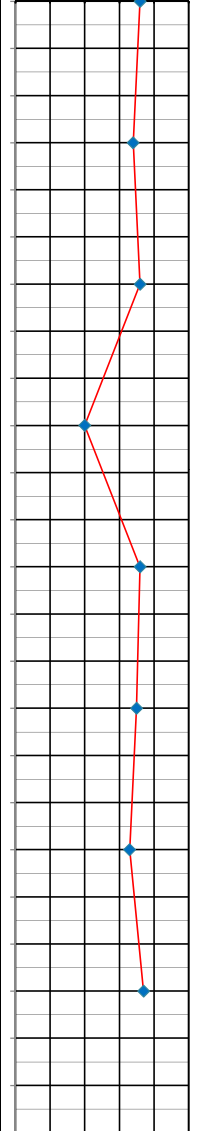
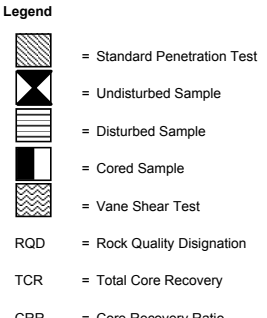
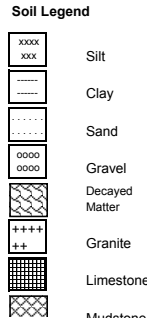
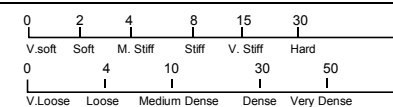
<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-25	
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 30/11/2018		<b>Coordinates</b> N -31895.948 E -47509.012				
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 2/12/2018		<b>Reduced Level (mRL):</b> -4.8930				
<b>Date &amp; Time</b>	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>					<b>Standard Penetration Test Graph</b> 	
	<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Field Test / Rock Cores</b>	<b>Casing Record</b>	<b>Legend</b>	<b>Depth (m)</b>	<b>Thick-ness (m)</b>		<b>W G</b>
36.000	P14/D14					2 2 3 2 4 4 N=13 Rec : 300/450mm						Stiff, light to medium grey, very clayey SAND	
36.450													
37.500	P15/D15					2 3 4 2 3 2 N=12 Rec : 300/450mm						-DITTO-	
37.950													
39.000	P16/D16					3 2 3 3 2 3 N=11 Rec : 250/450mm						-DITTO-	
39.450													
40.500	P17/D17					3 3 4 6 6 7 N=23 Rec : 300/450mm						Very stiff, light to medium grey, very clayey SAND	
40.950													
42.000	P18/D18					3 4 3 5 7 7 N=22 Rec : 300/450mm						Very stiff, light to medium grey, silty CLAY with trace of organic matter	
42.450													
43.500	P19/D19					4 4 5 7 6 8 N=26 Rec : 300/450mm						Very stiff, light to medium grey, silty CLAY with some organic matter	
43.950													
45.000	P20/D20					5 7 7 7 6 9 N=29 Rec : 350/450mm						-DITTO-	
45.950													
46.500	P21/D21					5 6 7 8 9 9 N=33 Rec : 300/450mm						Dense, light to medium grey, silty fine grain SAND	
46.950													
48.000													

<b>Legend</b>		<b>Soil Legend</b>		<b>Date</b>		<b>Time</b>		<b>Depth of Hole (m)</b>		<b>Depth of Casing (m)</b>		<b>Depth of Water (m)</b>		<b>Remarks :</b>	
= Standard Penetration Test		Silt		30/11/18		8:30		-		-		-			
= Undisturbed Sample		Clay		30/11/18		19:00		33.00		43.00		-			
= Disturbed Sample		Sand		1/12/18		8:30		33.00		43.00		-		Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard	
= Cored Sample		Gravel		1/12/18		19:00		48.00		58.00		-			
= Vane Shear Test		Decayed Matter		2/12/18		8:30		48.00		58.00		-		Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense	
<b>RQD</b> = Rock Quality Disignation		Granite		2/12/18		19:00		60.00		70.00		-			
<b>TCR</b> = Total Core Recovery		Limestone												<b>Prepared by:</b>   <b>Checked by:</b>	
<b>CRP</b> = Core Recovery Ratio		Mudstone													

 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622	<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-25								
	<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH		<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 30/11/2018	<b>Coordinates</b> N -31895.948 E -47509.012					
<b>Client</b> WESTPORTS (M) DDN. BHD.	<b>Consultant</b> HSS INTEGRATED SDN. BHD.	<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 2/12/2018	<b>Reduced Level (mRL):</b> -4.8930					
<b>Date &amp; Time</b> 2/12/2018	<b>SAMPLE / INSITU TEST</b>					<b>SOIL / STRATUM DETAILS</b>					<b>Standard Penetration Test Graph</b> 
	<b>Depth (m)</b> 48.000 48.450 49.500 49.950 51.000 51.450 52.500 52.950 54.000 54.450 55.500 55.950 57.000 57.450 58.500 58.950 60.000	<b>Test</b> P22/D22 P23/D23 P24/D24 P25/D25 P26/D26 P27/D27 P28/D28 P29/D29	<b>TCR (%)</b>  	<b>CRR (%)</b>  	<b>RQD (%)</b>  	<b>Field Test / Rock Cores</b> 75mm 75mm 75mm 75mm 75mm N= Rec : 250/450mm Rec : 250/450mm Rec : 250/450mm Rec : 300/450mm Rec : 250/450mm Rec : 360/450mm Rec : 300/450mm Rec : 250/450mm	<b>Casing Record</b>  	<b>Legend</b>  	<b>Depth (m)</b>  	<b>Thick-ness (m)</b>  	
<b>Legend</b> 		<b>Soil Legend</b> 		<b>Date</b> 30/11/18 30/11/18 1/12/18 1/12/18 2/12/18 2/12/18	<b>Time</b> 8:30 19:00 8:30 19:00 8:30 19:00	<b>Depth of Hole (m)</b> - 33.00 33.00 48.00 48.00 60.00	<b>Depth of Casing (m)</b> - 43.00 43.00 58.00 58.00 70.00	<b>Depth of Water (m)</b> - - - - - -	<b>Remarks :</b>   	<b>Prepared by:</b> _____	<b>Checked by:</b> _____

	<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622	<b>Sheet</b> 6 of 6	<b>Borehole Ref. No.</b> <b>BH-25</b>			
	Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH	<b>Job No.</b> SG/1281/2018	<b>Date Started</b> 30/11/2018	<b>Coordinates</b> N -31895.948 E -47509.012		
<b>Client</b>	<b>Consultant</b>	<b>Type of Boring</b>	<b>Boring Dia. (mm)</b>	<b>Orientation</b>	<b>Date Completed</b>	<b>Reduced Level (mRL):</b>
WESTPORTS (M) DDN. BHD.	HSS INTEGRATED SDN. BHD.	ROTARY WASH	100	Vertical	2/12/2018	-4.8930


Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS										Standard Penetration Test Graph			
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores						Casing Record	Legend	Depth (m)	Thick-ness (m)		W G	Description	
							75mm	75mm	75mm	75mm	75mm	75mm								
	60.000	▨	P30/D30				8	7	7	9	10	10		xx				-DITTO-		
	60.450	▨					Rec : 300/450mm N= 36							xx	3.47			60.45		
																			<i>Borehole terminated at depth 60.45m</i>	

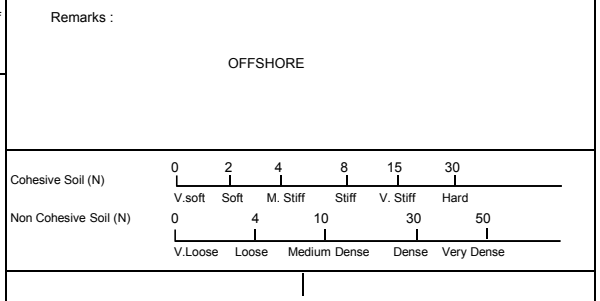
Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
▨ = Standard Penetration Test	xxxx = Silt	30/11/18	8:30	-	-	-	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">           Cohesive Soil (N)            V.soft   Soft   M. Stiff   Stiff   V. Stiff   Hard            0   2   4   8   15   30         </div> <div style="width: 45%;">           Non Cohesive Soil (N)            V.Loose   Loose   Medium Dense   Dense   Very Dense            0   4   10   30   50         </div> </div>
▣ = Undisturbed Sample	----- = Clay	30/11/18	19:00	33.00	43.00	-	
▣ = Disturbed Sample	..... = Sand	1/12/18	8:30	33.00	43.00	-	
▣ = Cored Sample	o o o o = Gravel	1/12/18	19:00	48.00	58.00	-	
▣ = Vane Shear Test	o o o o = Decayed Matter	2/12/18	8:30	48.00	58.00	-	
RQD = Rock Quality Disignation	++++ = Granite	2/12/18	19:00	60.00	70.00	-	
TCR = Total Core Recovery	++++ = Limestone						
CRP = Core Recovery Ratio	++++ = Mudstone						















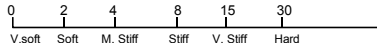
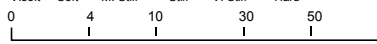
Prepared by: _____	Checked by: _____
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 <b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.									
										1 of 6		BH-26									
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19						Job No.		Date Started		Coordinates											
Location : PULAU INDAH						SG/1281/2018		26/11/2018		N -32113.065											
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		Reduced Level (mRL):											
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		28/11/2018		-4.6013											
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	ROD (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)	Thickness (m)	W G	Description	N' Value			
75mm							75mm	75mm	75mm	75mm	75mm							0 10 20 30 40 50			
26/11/2018	0.000						TOPSOIL									Very soft, light grey, silty CLAY					
	1.500		P1/D1				-HAMMER WEIGHT- N= 0 Rec: 400/450mm								2.66		Very soft, light to medium grey, silty CLAY				
	1.950						Rec: 900/1000mm								2.96						
	3.000		UD1				Rec: 900/1000mm										Top: Light to medium grey, CLAY of high plasticity Bottom: Light to medium grey, CLAY				
	4.000														4.43						
	4.500		P2/D2				-HAMMER WEIGHT- N= 0 Rec: 400/450mm										Very soft, light to medium grey, silty CLAY				
	4.950						Rec: 900/1000mm														
	6.000		UD2				Rec: 900/1000mm										Top: Light to medium grey, silty CLAY Bottom: DITTO				
	7.000																				
	7.500		P3/D3				-HAMMER WEIGHT- N= 0 Rec: 350/450mm										Very soft, light to medium grey, CLAY				
	7.950						Rec: 900/1000mm														
	9.000		UD3				Rec: 900/1000mm										Top: Light to medium grey, silty CLAY Bottom: DITTO				
10.000																					
10.500		P4/D4				-HAMMER WEIGHT- N= 0 Rec: 350/450mm										Very soft, light to medium grey, CLAY					
10.950						Rec: 900/1000mm															
12.000																					

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	26/11/18	8:30	-	-	-	OFFSHORE
	= Undisturbed Sample		Clay	26/11/18	19:00	27.00	36.50	-	
	= Disturbed Sample		Sand	27/11/18	8:30	27.00	36.50	-	
	= Cored Sample		Gravel	27/11/18	19:00	41.00	51.50	-	
	= Vane Shear Test		Decayed Matter	27/11/18	8:00	42.00	51.50	-	
RQD	= Rock Quality Disignation		Granite	28/11/18	19:00	60.00	69.50	-	
TCR	= Total Core Recovery		Limestone						





 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622	Sheet		Borehole Ref. No.																		
	2 of 6		BH-26																		
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19			Job No.		Date Started	Coordinates															
Location : PULAU INDAH			SG/1281/2018		26/11/2018	N -32113.065 E -47134.512															
Client	Consultant	Type of Boring	Boring Dia. (mm)	Orientation	Date Completed	Reduced Level (mRL):															
WESTPORTS (M) DDN. BHD.	HSS INTEGRATED SDN. BHD.	ROTARY WASH	100	Vertical	28/11/2018	-4.6013															
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value 0 10 20 30 40 50							
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thick-ness (m)	W G	Description		
	12.000		UD4				Rec : 880/1000mm							xx				Top: Light to medium grey, silty CLAY			
	13.000													xx	1.46			Bottom: DITTO			
	13.500					0	1	0	0	1	0				13.46			Very soft, light to medium grey, CLAY			
	13.950		P5/D5				Rec : 350/450mm											1.44			
	15.000																	14.90			
	15.000		UD5				Rec : 870/1000mm							xx				1.57		Top: Light to medium grey, CLAY of high plasticity	
	16.000													xx				16.47		Bottom: DITTO	
	16.500					0	1	0	0	1	0							Very soft, light to medium grey, CLAY			
	16.950		P6/D6				Rec : 400/450mm											1.38			
	18.000																	17.85			
	18.000		UD6				Rec : 850/1000mm							..				0.45		Top: Light to medium grey, sandy CLAY	
	19.000													xx				1.18		Bottom: Light to medium grey, silty CLAY	
	19.500					0	1	0	1	0	1				19.48			Very soft, light to medium grey, CLAY			
	19.500		P7/D7				Rec : 400/450mm											1.48			
	21.000																	20.96			
	21.000		UD7				Rec : 850/1000mm							xx				1.52		Top: Light to medium grey, silty CLAY	
	22.000													xx				22.48		Bottom: DITTO	
	22.500					1	0	0	1	0	1							Very soft, light to medium grey, CLAY			
	22.500		P8/D8				Rec : 400/450mm											1.52			
	22.950																				
	24.000																				
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :												
	= Standard Penetration Test		Silt	26/11/18	8:30	-	-	-													
	= Undisturbed Sample		Clay	26/11/18	19:00	27.00	36.50	-													
	= Disturbed Sample		Sand	27/11/18	8:30	27.00	36.50	-													
	= Cored Sample		Gravel	27/11/18	19:00	41.00	51.50	-													
	= Vane Shear Test		Decayed Matter	27/11/18	19:00	41.00	51.50	-													
RQD	= Rock Quality Disignation		Granite	28/11/18	8:00	42.00	51.50	-													
TCR	= Total Core Recovery		Limestone	28/11/18	19:00	60.00	69.50	-													
CRR	= Core Recovery Ratio		Mudstone																		
										Cohesive Soil (N)											
										Non Cohesive Soil (N)											
				<b>Prepared by:</b>		<b>Checked by:</b>															

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-26										
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 26/11/2018		<b>Coordinates</b> N -32113.065 E -47134.512													
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 28/11/2018		<b>Reduced Level (mRL):</b> -4.6013												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value								
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description			
27/11/2018	24.000	UD8					Rec : 800/1000mm															
	25.000														1.46				Top: Light to medium grey, very clayey SAND Bottom: DITTO			
	25.500	P9/D9					-HAMMER WEIGHT- N=0 Rec : 350/450mm												Very soft, light to medium grey, CLAY			
	27.000	UD9					Rec : 900/1000mm													Top: Light to medium grey, CLAY of high plasticity Bottom: DITTO		
	28.000																					
	28.500	P10/D10					0	1	0	1	1	1							Soft, light to medium grey, CLAY			
	28.950						Rec : 350/450mm															
	30.000	UD10					Rec : 900/1000mm													Top: Light to medium grey, CLAY Bottom: DITTO		
	31.000																					
	31.500	P11/D11					0	1	0	1	0	1							Soft, light to medium grey, silty CLAY			
	31.950						Rec : 350/450mm															
	33.000	UD11					Rec : 920/1000mm													Top: Light to medium grey, CLAY Bottom: DITTO		
34.000																						
34.500	P12/D12					1	0	2	1	1	1							Medium stiff, light to medium grey, sandy CLAY				
34.950						Rec : 350/450mm																
36.000																						


Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	26/11/18	8:30	-	-	-	
	= Undisturbed Sample		Clay	26/11/18	19:00	27.00	36.50	-	
	= Disturbed Sample		Sand	27/11/18	8:30	27.00	36.50	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Cored Sample		Gravel	27/11/18	19:00	41.00	51.50	-	
	= Vane Shear Test		Decayed Matter	28/11/18	8:00	42.00	51.50	-	
RQD	= Rock Quality Disignation		Granite	28/11/18	19:00	60.00	69.50	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-26																	
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 26/11/2018		<b>Coordinates</b> N -32113.065 E -47134.512																				
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 28/11/2018		<b>Reduced Level (mRL):</b> -4.6013																				
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50																
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Depth (m)	Thickness (m)	W G	Description												
28/11/2018	36.000	P13/D13					2	3	3	4	4	4	18	2.93		Very stiff, light to medium grey, sandy CLAY	36.450												
	Rec : 300/450mm																												
	37.500	P14/D14					3	4	4	5	5	6	20	1.42		Very stiff, light to medium grey, silty CLAY	37.950												
	Rec : 300/450mm																												
	39.000	P15/D15					3	5	5	5	7	7	24	3.11		Very stiff, light to dark grey, CLAY	39.450												
	Rec : 350/450mm																												
	40.500	P16/D16					3	4	4	6	6	7	23	41.96		-DITTO-	40.950												
	Rec : 350/450mm																												
	42.000	P17/D17					3	5	5	7	7	7	26	1.52		Very stiff, light to medium grey, sandy CLAY	42.450												
	Rec : 350/450mm																												
43.500	P18/D18					5	5	7	8	8	9	32	44.89		Hard, light to medium grey, clayey SAND with trace of organic matter	43.950													
Rec : 300/450mm																													
45.000	P19/D19					6	5	6	6	7	9	28	3.11		Medium dense, light to medium grey, sandy CLAY	45.950													
Rec : 300/450mm																													
46.500	P20/D20					6	6	6	7	7	8	28	48.00		-DITTO-	46.950													
Rec : 300/450mm																													
<b>Legend</b> = Standard Penetration Test = Undisturbed Sample = Disturbed Sample = Cored Sample = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRP = Core Recovery Ratio										<b>Soil Legend</b> Silt Clay Sand Gravel Decayed Matter Granite Limestone Mudstone										<b>Remarks :</b> Date: 26/11/18 Time: 8:30 Depth of Hole (m): - Depth of Casing (m): - Date: 26/11/18 Time: 19:00 Depth of Hole (m): 27.00 Depth of Casing (m): 36.50 Date: 27/11/18 Time: 8:30 Depth of Hole (m): 27.00 Depth of Casing (m): 36.50 Date: 27/11/18 Time: 19:00 Depth of Hole (m): 41.00 Depth of Casing (m): 51.50 Date: 28/11/18 Time: 8:00 Depth of Hole (m): 42.00 Depth of Casing (m): 51.50 Date: 28/11/18 Time: 19:00 Depth of Hole (m): 60.00 Depth of Casing (m): 69.50		Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard		Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense		<b>Prepared by:</b>		<b>Checked by:</b>	



 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-26									
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH				<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 26/11/2018		<b>Coordinates</b> N -32113.065 E -47134.512													
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 28/11/2018		<b>Reduced Level (mRL):</b> -4.6013												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description							
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G			
	48.000	P21/D21					6	6	7	7	9	9	32	... xx	49.48	1.48				Dense, light to medium grey, silty fine grain SAND	48.000
	48.450						6	7	9	9	8	10		...							
	49.500	P22/D22					6	7	9	9	8	10	36	...	49.48					Dense, light to medium grey, very clayey SAND	49.500
	49.950						6	7	9	9	8	10		...							
	51.000	P23/D23					6	7	7	9	10	10	36	...	49.48					-DITTO-	51.000
	51.450						6	7	7	9	10	10		...							
	52.500	P24/D24					7	7	9	9	9	11	38	...	49.48					-DITTO-	52.500
	52.950						7	7	9	9	9	11		...							
	54.000	P25/D25					6	7	7	9	9	13	38	... xx	53.96					Dense, light to medium grey, silty fine grain SAND	54.000
	54.450						6	7	7	9	9	13		...							
	55.500	P26/D26					7	7	7	9	9	11	36	...	53.96					-DITTO-	55.500
	55.950						7	7	7	9	9	11		...							
	57.000	P27/D27					7	8	8	7	9	12	36	...	53.96					-DITTO-	57.000
	57.450						7	8	8	7	9	12		...							
	58.500	P28/D28					5	7	7	9	11	12	39	...	53.96					-DITTO-	58.500
	58.950						5	7	7	9	11	12		...							
	60.000													60.00							

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	26/11/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	26/11/18	19:00	27.00	36.50	-	
	= Disturbed Sample		Sand	27/11/18	8:30	27.00	36.50	-	
	= Cored Sample		Gravel	27/11/18	19:00	41.00	51.50	-	
	= Vane Shear Test		Decayed Matter	28/11/18	8:00	42.00	51.50	-	
RQD	= Rock Quality Disignation		Granite	28/11/18	19:00	60.00	69.50	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )												Sheet		Borehole Ref. No.																																			
No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622												6 of 6		BH-26																																			
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19						Job No.		Date Started		Coordinates																																							
Location : PULAU INDAH						SG/1281/2018		26/11/2018		N -32113.065																																							
Client				Consultant				Type of Boring		Boring Dia. (mm)		Orientation		Date Completed		E -47134.512																																	
WESTPORTS (M) DDN. BHD.				HSS INTEGRATED SDN. BHD.				ROTARY WASH		100		Vertical		28/11/2018		Reduced Level (mRL): -4.6013																																	
Date & Time												SAMPLE / INSITU TEST								SOIL / STRATUM DETAILS				Standard Penetration Test Graph																									
												Depth (m)		Test		Sample No.		TCR (%)		CRR (%)		RQD (%)		Field Test / Rock Cores						Casing Record		Legend		Depth (m)		Thick-ness (m)		W G		Description		'N' Value 0 10 20 30 40 50							
												60.000		P29/D29										6 10 7 8 10 11						60.45				Dense, light to medium grey, very clayey SAND															
												60.450														Rec : 300/450mm				N= 36																			

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	26/11/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	26/11/18	19:00	27.00	36.50	-	
	= Disturbed Sample		Sand	27/11/18	8:30	27.00	36.50	-	
	= Cored Sample		Gravel	27/11/18	19:00	41.00	51.50	-	
	= Vane Shear Test		Decayed Matter	28/11/18	8:00	42.00	51.50	-	
RQD	= Rock Quality Disignation		Granite	28/11/18	19:00	60.00	69.50	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						
Prepared by:									
Checked by:									

<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-27										
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 12/11/2018		<b>Coordinates</b> N -32311.649 E -46793.898													
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 17/11/2018		<b>Reduced Level (mRL):</b> -4.2268												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Depth (m)	Thickness (m)	W G	Description					
12/11/2018	0.000						75mm	75mm	75mm	75mm	75mm	75mm										
							TOPSOIL							0.30	0.30		Very soft, light grey, silty CLAY					
	1.500		P1/D1				0	0	1	0	1	0	2									
	1.950						Rec: 350/450mm										Very soft, medium to dark grey, silty CLAY					
	3.000		UD1				Rec: 900/1000mm										Top: Medium to dark grey, silty CLAY Bottom: DITTO					
	4.500		P2/D2				0	0	1	0	0	0	1									
	4.950						Rec: 450/450mm							8.67			Very soft, medium to dark grey, silty CLAY					
	6.000		UD2				Rec: 900/1000mm										Top: Medium to dark grey, silty CLAY Bottom: DITTO					
	7.500		P3/D3				1	0	0	1	0	1	2									
	7.950						Rec: 400/450mm										Very soft, medium to dark grey, silty CLAY					
	9.000		UD3				Rec: 850/1000mm										Top: Medium to dark grey, very clayey sand Bottom: DITTO					
	10.000																					
	10.500		P4/D4				0	0	0	1	0	0	1									
	10.950						Rec: 400/450mm							10.43			Very soft, medium to dark grey, silty CLAY					
	12.000																					
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :													
	= Standard Penetration Test		Silt	12/11/18	8:30	0.00	0.00	-	OFFSHORE													
	= Undisturbed Sample		Clay	12/11/18	19:00	13.00	25.50	-														
	= Disturbed Sample		Sand	13/11/18	8:30	13.00	25.50	-														
	= Cored Sample		Gravel	13/11/18	18:30	31.50	44.00	-														
	= Vane Shear Test		Decayed Matter	14/11/18	8:30	31.50	44.00	-														
RQD	= Rock Quality Disignation		Granite	14/11/18	19:00	39.00	51.50	-														
TCR	= Total Core Recovery		Limestone	16/11/18	8:30	39.00	51.50	-														
CRP	= Core Recovery Ratio		Mudstone																			
										Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard												
										Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense												
<b>Prepared by:</b>						<b>Checked by:</b>																

17/11/18	19:00	60.00	72.50	-
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-27						
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 12/11/2018		<b>Coordinates</b> N -32311.649 E -46793.898									
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 17/11/2018		<b>Reduced Level (mRL):</b> -4.2268								
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50					
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description				
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G
13/11/2018	12.000	UD4					0	0	1	0	0	0		--- xx	12.000			Top: Medium to dark grey, silty CLAY
	13.000													--- xx				Bottom: DITTO
	13.500	P5/D5					0	0	0	1	0	0		--- xx	13.500	4.46		Very soft, medium to dark grey, silty CLAY
	13.950													--- xx				
	15.000	UD5												--- xx	14.89			Top: Medium to dark grey, CLAY of high plasticity
	16.000													--- xx		1.54		Bottom: DITTO
	16.500	P6/D6					0	1	0	0	1	0		--- xx	16.43			Very soft, medium to dark grey, silty CLAY
	16.950													--- xx				
	18.000	UD6												--- xx		4.52		Top: Medium to dark grey, silty CLAY
	19.000													--- xx				Bottom: DITTO
19.500	P7/D7					0	0	1	0	1	0		--- xx	20.95			Very soft, medium to dark grey, silty CLAY	
19.950													--- xx					
21.000	UD7												xx ...		1.55		Top: Medium to dark grey, sandy CLAY	
22.000													xx ...				Bottom: DITTO	
22.500	P8/D8					0	1	0	1	0	0		--- xx	22.50			Very soft, light to medium grey, silty CLAY	
22.950													--- xx					
24.000													--- xx					

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	12/11/18	8:30	0.00	0.00	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard
	= Undisturbed Sample		Clay	12/11/18	19:00	13.00	25.50	-	
	= Disturbed Sample		Sand	13/11/18	8:30	13.00	25.50	-	Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Cored Sample		Gravel	13/11/18	18:30	31.50	44.00	-	
	= Vane Shear Test		Decayed Matter	14/11/18	8:30	31.50	44.00	-	<b>Prepared by:</b> _____ <b>Checked by:</b> _____
RQD	= Rock Quality Disignation		Granite	14/11/18	19:00	39.00	51.50	-	
TCR	= Total Core Recovery		Limestone	16/11/18	8:30	39.00	51.50	-	
CRR	= Core Recovery Ratio		Mudstone						

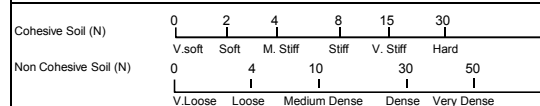
17/11/18	19:00	60.00	72.50	-
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-27																		
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 12/11/2018		<b>Coordinates</b> N -32311.649 E -46793.898																					
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 17/11/2018		<b>Reduced Level (mRL):</b> -4.2268																				
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph																	
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value											
14/11/2018	24.000	UD8					Rec : 850/1000mm						xx				Top: Light to medium grey, silty CLAY													
	25.000												xx			Bottom: DITTO														
	25.500	P9/D9				0	1	0	0	1	0			4.39			Very soft, light to medium grey, silty CLAY													
	25.950						Rec : 300/450mm						xx																	
	27.000	UD9					Rec : 800/1000mm						xx				Top: Light to medium grey, CLAY of high plasticity													
	30.000												xx			Bottom: DITTO														
31.500	P10/D10				0	1	0	1	1	2			6.07			Very soft, medium to dark gray, CLAY of high plasticity														
31.950						Rec : 300/450mm						xx																		
33.000	P11/D11				3	5	5	7	9	9			32.96			Medium dense, light to medium grey spotted brown, very clayey SAND														
33.450						Rec : 300/450mm						xx																		
34.500	P12/D12				2	2	5	5	7	10			34.42			Medium dense, light to medium grey, silty SAND														
34.950						Rec : 300/450mm						xx																		
36.000												xx																		
<b>Legend</b> = Standard Penetration Test = Undisturbed Sample = Disturbed Sample = Cored Sample = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRP = Core Recovery Ratio											<b>Soil Legend</b> Silt Clay Sand Gravel Decayed Matter Granite Limestone Mudstone											<b>Date</b> 12/11/18 12/11/18 13/11/18 13/11/18 14/11/18 14/11/18 16/11/18	<b>Time</b> 8:30 19:00 8:30 18:30 8:30 19:00 8:30	<b>Depth of Hole (m)</b> 0.00 13.00 13.00 31.50 31.50 39.00 39.00	<b>Depth of Casing (m)</b> 0.00 25.50 25.50 44.00 44.00 51.50 51.50	<b>Depth of Water (m)</b> - - - - - -	<b>Remarks :</b> Cohesive Soil (N) Non Cohesive Soil (N)	 	<b>Prepared by:</b>	<b>Checked by:</b>

17/11/18	19:00	60.00	72.50	-
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


<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622				<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-27																	
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH			<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 12/11/2018		<b>Coordinates</b> N -32311.649 E -46793.898																
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 17/11/2018	<b>Reduced Level (mRL):</b> -4.2268														
<b>Date &amp; Time</b> 16/11/2018	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>				<b>Standard Penetration Test Graph</b>												
	<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Field Test / Rock Cores</b>					<b>Casing Record</b>	<b>Legend</b>	<b>Depth (m)</b>	<b>Thick-ness (m)</b>	<b>W G</b>	<b>Description</b>	<b>'N' Value</b>					
	36.000 36.450 37.500 37.950 39.000 39.450 40.500 40.950 42.000 42.450 43.500 43.950 45.000 45.450 46.500 46.950 48.000		P13/D13 P14/D14 P15/D15 P16/D16 P17/D17 P18/D18 P19/D19 P20/D20				3 5 5 7 9 9 Rec: 250/450mm N=30 5 7 5 5 9 9 Rec: 300/450mm N=28 3 5 5 7 7 10 Rec: 300/450mm N=29 4 3 5 5 7 9 Rec: 300/450mm N=26 3 3 4 4 4 6 Rec: 350/450mm N=18 5 4 5 7 9 9 Rec: 300/450mm N=30 5 5 4 5 6 6 Rec: 300/450mm N=21 5 5 7 7 7 8 Rec: 350/450mm N=29									6.06 40.48 1.50 41.98 4.49 46.47							
<b>Legend</b>		<b>Soil Legend</b>		<b>Date</b>	<b>Time</b>	<b>Depth of Hole (m)</b>	<b>Depth of Casing (m)</b>	<b>Depth of Water (m)</b>	<b>Remarks :</b>														
				12/11/18	8:30	0.00	0.00	-															
				12/11/18	19:00	13.00	25.50	-															
				13/11/18	8:30	13.00	25.50	-															
				13/11/18	18:30	31.50	44.00	-															
				14/11/18	8:30	31.50	44.00	-															
				14/11/18	19:00	39.00	51.50	-															
				16/11/18	8:30	39.00	51.50	-															



**Prepared by:**  **Checked by:**















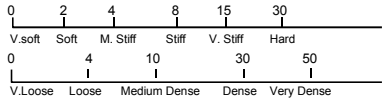
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.							
										5 of 6		BH-27							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates										
Location : PULAU INDAH					SG/1281/2018		12/11/2018		N -32311.649										
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -46793.898									
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		17/11/2018		Reduced Level (mRL): -4.2268									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value
75mm	75mm	75mm	75mm	75mm	75mm														
17/11/2018	48.000	P21/D21					3	5	4	5	5	7	---	---	49.46			-DITTO-	0
	48.450						Rec: 350/450mm	N= 21											
	49.500	P22/D22					5	3	3	4	5	7	...	xx	5.99			Medium dense, medium to dark grey spotted brown, silty fine SAND	10
	49.950						Rec: 300/450mm	N= 19											
	51.000	P23/D23					4	5	5	6	7	7	...	xx	5.99			-DITTO-	20
	51.450						Rec: 300/450mm	N= 25											
	52.500	P24/D24					2	4	4	7	8	8	...	xx	5.99			Medium dense, light to medium grey, silty fine SAND	30
	52.950						Rec: 350/450mm	N= 27											
54.000	P25/D25					4	5	5	7	9	9	...	xx	5.99			Medium dense, light to medium grey, silty fine grain SAND	40	
54.450						Rec: 350/450mm	N= 30												
55.500	P26/D26					4	6	7	7	9	10	...	xx	2.97			Dense, light to medium grey, clayey SAND	50	
55.950						Rec: 300/450mm	N= 35												
57.000	P27/D27					6	7	7	9	9	9	...	xx	2.97			-DITTO-	60	
57.450						Rec: 300/450mm	N= 34												
58.500	P28/D28					5	7	7	6	7	9	...	xx	1.58			Medium dense, light to medium grey, silty fine grain SAND	70	
58.950						Rec: 300/450mm	N= 29												
60.000																			

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	12/11/18	8:30	0.00	0.00	-	Cohesive Soil (N) V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	12/11/18	19:00	13.00	25.50	-	
	= Disturbed Sample		Sand	13/11/18	8:30	13.00	25.50	-	
	= Cored Sample		Gravel	13/11/18	18:30	31.50	44.00	-	
	= Vane Shear Test		Decayed Matter	14/11/18	8:30	31.50	44.00	-	
RQD = Rock Quality Disignation			Granite	14/11/18	19:00	39.00	51.50	-	
TCR = Total Core Recovery			Limestone	16/11/18	8:30	39.00	51.50	-	
CRR = Core Recovery Ratio			Mudstone						

17/11/18	19:00	60.00	72.50	-
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622				Sheet		Borehole Ref. No.													
				6 of 6		BH-27													
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19				Job No.		Date Started		Coordinates											
Location : PULAU INDAH				SG/1281/2018		12/11/2018		N -32311.649 E -46793.898											
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed											
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		17/11/2018											
								Reduced Level (mRL): -4.2268											
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS				Standard Penetration Test Graph								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value 0 10 20 30 40 50	
	60.000 60.450	P29/D29					6	6	6	7	7	8		...	60.45		Medium dense, light to medium grey, very clayey SAND		
							Rec: 250/450mm N= 28									Borehole terminated at depth 60.45m			
Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)							Remarks :								
12/11/18	8:30	0.00	0.00	-															
12/11/18	19:00	13.00	25.50	-															
13/11/18	8:30	13.00	25.50	-															
13/11/18	18:30	31.50	44.00	-															
14/11/18	8:30	31.50	44.00	-															
14/11/18	19:00	39.00	51.50	-															
16/11/18	8:30	39.00	51.50	-															
<b>Legend</b>		<b>Soil Legend</b>																	
	= Standard Penetration Test		Silt																
	= Undisturbed Sample		Clay																
	= Disturbed Sample		Sand																
	= Cored Sample		Gravel																
	= Vane Shear Test		Decayed Matter																
RQD	= Rock Quality Disignation		Granite																
TCR	= Total Core Recovery		Limestone																
CRP	= Core Recovery Ratio		Mudstone																
																			
																		<b>Prepared by:</b> _____ <b>Checked by:</b> _____	

17/11/18	19:00	60.00	72.50	-
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-28						
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 9/1/2019		<b>Coordinates</b> N -32616.634 E -47001.419									
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 11/1/2019		<b>Reduced Level (mRL):</b> -4.5877									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph					
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description
9/1/2019  9/1/2019 10:30 (2.6m)	0.000						TOPSOIL						xx	0.30	0.30		Very soft, light grey, silty CLAY	
	1.500		P1/D1			0	1	0	1	0	1	2		xx	2.64		Very soft, light to medium grey, clayey SILT	
	1.950													xx				
	3.000		UD1											xx	2.94		Top: Light to medium grey, CLAY Bottom: DITTO	
	4.000													xx	1.53			
	4.500													xx	4.47			
	4.950		P2/D2			0	1	0	1	0	1	2		xx	1.52		Very soft, light to medium grey, clayey SILT	
	6.000		UD2											xx	5.99		Top: Light to medium grey, CLAY Bottom: DITTO	
	7.000													xx	1.44			
	7.500													xx	7.43			
	7.950		P3/D3									0		xx	1.27		Very soft, light to medium grey, clayey SILT	
	9.000		UD3											xx	8.70		Top: Light to medium grey, CLAY Bottom: DITTO	
10.000													xx	1.72				
10.500													xx	10.42				
10.950		P4/D4									0		xx	1.58		Very soft, light to medium grey with spotted dark grey, clayey SILT with trace of organic matter		
12.000													xx	12.00				

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	9/1/19	8:30	-	-	-	OFFSHORE
	= Undisturbed Sample		Clay	9/1/19	19:00	24.00	32.00	-	
	= Disturbed Sample		Sand	10/1/19	8:30	24.00	32.00	-	
	= Cored Sample		Gravel	10/1/19	19:00	45.00	53.00	-	
	= Vane Shear Test		Decayed Matter	11/1/19	8:30	45.00	53.00	-	
	RQD = Rock Quality Disignation		Granite	11/1/19	19:00	60.00	68.00	-	
	TCR = Total Core Recovery		Limestone						
	CRR = Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-28						
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 9/1/2019		<b>Coordinates</b> N -32616.634 E -47001.419									
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 11/1/2019		<b>Reduced Level (mRL):</b> -4.5877								
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph					
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description
	12.000	UD4					Rec : 870/1000mm						xx	12.30	0.30		Top: Light to medium grey, silty CLAY	
	13.000												---		1.18		Bottom: Light to medium grey, CLAY	
	13.500	P5/D5					-HAMMER WEIGHT- N= 0 Rec : 300/450mm						xx		1.52		Very soft, light to medium grey, clayey SILT	
	15.000	UD5					Rec : 900/1000mm						---		1.38		Top: Light to medium grey, CLAY Bottom: DITTO	
	16.500	P6/D6					0	1	0	1	1	1	2		1.62		Very soft, medium grey, silty CLAY	
	18.000	UD6					Rec : 910/1000mm						---		0.23		Top: Light to medium grey, CLAY Bottom: Light to medium grey, silty CLAY	
	19.500	P7/D7					1	0	1	0	1	1	3		2.72		Soft, light to medium grey, silty CLAY with trace of organic matter	
	21.000	UD7					Rec : 910/1000mm						---				Top: Light to medium grey, CLAY Bottom: DITTO	
	22.500	P8/D8					0	1	0	1	1	1	3				Soft, medium grey, CLAY	
	24.000												---					

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	9/1/19	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	9/1/19	19:00	24.00	32.00	-	
	= Disturbed Sample		Sand	10/1/19	8:30	24.00	32.00	-	
	= Cored Sample		Gravel	10/1/19	19:00	45.00	53.00	-	
	= Vane Shear Test		Decayed Matter	11/1/19	8:30	45.00	53.00	-	
	RQD = Rock Quality Disignation		Granite	11/1/19	19:00	60.00	68.00	-	
	TCR = Total Core Recovery		Limestone						
	CRR = Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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
<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-28											
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 9/1/2019		<b>Coordinates</b> N -32616.634 E -47001.419														
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 11/1/2019		<b>Reduced Level (mRL):</b> -4.5877														
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph										
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value 0 10 20 30 40 50									
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description				
10/1/2019	24.000	UD8					Rec : 900/1000mm																
	25.000														3.85								
	25.500												xx										
	25.950	P9/D9					1	1	1	1	2	1											
	27.000																						
	27.000	UD9					Rec : 900/1000mm																
	28.000																						
	28.500																						
	28.950	P10/D10					1	1	1	1	1	2											
	28.950						Rec : 300/450mm																
	30.000																						
	30.000	UD10					Rec : 900/1000mm																
31.000																							
31.500																							
31.950	P11/D11					1	1	1	1	2	2												
31.950						Rec : 300/450mm																	
33.000																							
33.000	P12/D12					2	3	4	3	3	3												
33.450						Rec : 350/450mm																	
34.500																							
34.500	P13/D13					3	2	3	3	3	2												
34.950						Rec : 300/450mm																	
36.000																							

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	9/1/19	8:30	-	-	-	
	= Undisturbed Sample		Clay	9/1/19	19:00	24.00	32.00	-	
	= Disturbed Sample		Sand	10/1/19	8:30	24.00	32.00	-	
	= Cored Sample		Gravel	10/1/19	19:00	45.00	53.00	-	
	= Vane Shear Test		Decayed Matter	11/1/19	8:30	45.00	53.00	-	
RQD	= Rock Quality Disignation		Granite	11/1/19	19:00	60.00	68.00	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.									
										4 of 6		BH-28									
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates												
Location : PULAU INDAH					SG/1281/2018		9/1/2019		N -32616.634												
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47001.419											
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		11/1/2019		Reduced Level (mRL): -4.5877											
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value		
							75mm	75mm	75mm	75mm	75mm	75mm								0 10 20 30 40 50	
	36.000		P14/D14				2	3	3	4	4	3									
	36.450						Rec : 300/450mm														
	37.500		P15/D15				4	4	5	4	5	6									
	37.950						Rec : 310/450mm														
	39.000		P16/D16				5	4	5	5	6	6									
	39.450						Rec : 250/450mm														
	40.500		P17/D17				5	6	5	6	7	7									
	40.950						Rec : 250/450mm														
	42.000		P18/D18				6	5	6	7	7	9									
	42.450						Rec : 270/450mm														
	43.500		P19/D19				4	5	6	6	7	6									
	43.950						Rec : 270/450mm														
	45.000		P20/D20				5	4	5	5	7	8									
	45.950						Rec : 300/450mm														
	46.500		P21/D21				6	7	7	6	7	7									
	46.950						Rec : 250/450mm														
11/1/2019	48.000																				


Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
		9/1/19	8:30	-	-	-	
		9/1/19	19:00	24.00	32.00	-	
		10/1/19	8:30	24.00	32.00	-	
		10/1/19	19:00	45.00	53.00	-	
		11/1/19	8:30	45.00	53.00	-	
RQD = Rock Quality Disignation		11/1/19	19:00	60.00	68.00	-	
TCR = Total Core Recovery							
CRR = Core Recovery Ratio							














  

Cohesive Soil (N)		0	2	4	8	15	30
Non Cohesive Soil (N)		0	4	10	30	50	
		V.soft	Soft	M. Stiff	Stiff	V. Stiff	Hard
		V.Loose	Loose	Medium Dense	Dense	Very Dense	

Prepared by:	Checked by:
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	<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622	<b>Sheet</b> 5 of 6	<b>Borehole Ref. No.</b> BH-28																
	Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19		Job No.	Date Started	Coordinates														
Location : PULAU INDAH		SG/1281/2018		9/1/2019	N -32616.634														
Client	Consultant	Type of Boring	Boring Dia. (mm)	Orientation	Date Completed	E -47001.419													
WESTPORTS (M) DDN. BHD.	HSS INTEGRATED SDN. BHD.	ROTARY WASH	100	Vertical	11/1/2019	Reduced Level (mRL): -4.5877													
Date & Time	SAMPLE / INSITU TEST					SOIL / STRATUM DETAILS					Standard Penetration Test Graph								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					'N' Value							
						75mm	75mm	75mm	75mm	75mm	75mm		Casing Record	Legend	Depth (m)	Thick-ness (m)	W G	Description	0 10 20 30 40 50
	48.000	P22/D22					7	8	10	8	7	9	---	---	2.96			Hard, medium grey, CLAY with some of organic matter	40
	48.450																		
	49.500	P23/D23					6	7	9	9	11	10	---	---	2.87			Hard, medium grey, CLAY	39
	49.950																		
	51.000	P24/D24					5	6	5	7	7	9	xx	xx	50.96			Very stiff, light to medium grey, silty CLAY	28
	51.450																		
	52.500	P25/D25					6	5	6	7	9	9	xx	xx	2.87			Hard, medium grey, silty CLAY	31
	52.950																		
	54.000	P26/D26					5	6	7	6	7	9	xx	xx	53.83			Very stiff, light to medium grey, sandy CLAY	29
	54.450																		
	55.500	P27/D27					3	5	6	6	7	8	xx	xx	3.06			-DITTO-	27
	55.950																		
	57.000	P28/D28					4	7	5	8	8	9	xx	xx	56.89			Very stiff, light to medium grey, clayey SILT	30
	57.450																		
	58.500	P29/D29					5	6	7	7	8	8	xx	xx	3.11			-DITTO-	30
	58.950																		
	60.000																		

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
		9/1/19	8:30	-	-	-	
		9/1/19	19:00	24.00	32.00	-	
		10/1/19	8:30	24.00	32.00	-	
		10/1/19	19:00	45.00	53.00	-	
		10/1/19	19:00	45.00	53.00	-	
RQD = Rock Quality Disignation		11/1/19	8:30	45.00	53.00	-	
TCR = Total Core Recovery		11/1/19	19:00	60.00	68.00	-	
CRP = Core Recovery Ratio							

**Prepared by:** \_\_\_\_\_

**Checked by:** \_\_\_\_\_

Cohesive Soil (N)

V.soft    Soft    M. Stiff    Stiff    V. Stiff    Hard

0       2       4       8       15       30

Non Cohesive Soil (N)


V.Loose    Loose    Medium Dense    Dense    Very Dense

0       4       10       30       50

STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet 6 of 6		Borehole Ref. No. BH-28															
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No. SG/1281/2018		Date Started 9/1/2019		Coordinates N -32616.634																		
Location : PULAU INDAH									E -47001.419																		
Client	Consultant	Type of Boring	Boring Dia. (mm)	Orientation	Date Completed	Reduced Level (mRL): -4.5877																					
WESTPORTS (M) DDN. BHD.	HSS INTEGRATED SDN. BHD.	ROTARY WASH	100	Vertical	11/1/2019																						
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS				Standard Penetration Test Graph																
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Description	'N' Value 0 10 20 30 40 50														
						75mm	75mm	75mm	75mm	75mm	Casing Record			Legend	Depth (m)	Thick-ness (m)	W G										
60.000	P30/D30	[Standard Penetration Test symbol]				4	6	6	7	8	7	...	...	60.45	0.45		Very stiff, light to medium grey, very clayey SAND	[SPT Graph]									
60.450							Rec : 250/450mm												28								
Borehole terminated at depth 60.45m																											
Legend	Soil Legend					Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :																
[Symbol] = Standard Penetration Test	[Symbol] = Undisturbed Sample	[Symbol] = Disturbed Sample	[Symbol] = Cored Sample	[Symbol] = Vane Shear Test	[Symbol] = Rock Quality Disignation	[Symbol] = Total Core Recovery	[Symbol] = Core Recovery Ratio	[Symbol] Silt	[Symbol] Clay	[Symbol] Sand	[Symbol] Gravel	[Symbol] Decayed Matter	[Symbol] Granite	[Symbol] Limestone	[Symbol] Mudstone	9/1/19	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense						
											Prepared by:							Checked by:									

<b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622											<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-29				
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 5/1/2019		<b>Coordinates</b> N -32441.294 E -47322.245								
<b>Client</b> WESTPORTS (M) DDN. BHD.			<b>Consultant</b> HSS INTEGRATED SDN. BHD.			<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 7/1/2019	<b>Reduced Level (mRL):</b> -4.5756							
<b>Date &amp; Time</b>	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>						<b>Standard Penetration Test Graph</b> N' Value 0 10 20 30 40 50				
	<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Field Test / Rock Cores</b>							<b>Depth (m)</b>	<b>Thickness (m)</b>	<b>W G</b>	<b>Description</b>
5/1/2019	0.000						TOPSOIL						0.30	0.30		Very soft, light grey, silty CLAY	
	1.500		P1/D1			1	0	1	0	1	0			2.68			Very soft, light to medium grey, clayey SILT
	1.950						Rec: 300/450mm										
	3.000		UD1				Rec: 890/1000mm							0.37		Top: Medium grey, very clayey SAND	
	4.000													1.08		Bottom: Medium grey, silty CLAY	
	4.500		P2/D2			1	0	1	0	1	1			1.43		Soft, medium grey, clayey SILT	
	4.950						Rec: 300/450mm										
	6.000		UD2				Rec: 920/1000mm							1.57		Top: Light to medium grey, sandy CLAY	
	7.000													7.43		Bottom: DITTO	
	7.500		P3/D3			1	0	1	1	1	1			1.48		Soft, medium grey, clayey SILT	
	7.950						Rec: 300/450mm										
	9.000		UD3				Rec: 900/1000mm							1.55		Top: Light to medium grey, CLAY	
	10.000													10.46		Bottom: DITTO	
	10.500		P4/D4				-HAMMER WEIGHT-							1.54		Very soft, medium grey, silty CLAY	
	10.950						Rec: 280/450mm										
	12.000													12.00			
<b>Legend</b> = Standard Penetration Test = Undisturbed Sample = Disturbed Sample = Cored Sample = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery		<b>Soil Legend</b> Silt Clay Sand Gravel Decayed Matter Granite Limestone		<b>Date</b> 5/1/19 5/1/19 6/1/19 6/1/19 7/1/19 7/1/19	<b>Time</b> 8:30 19:00 8:30 19:00 8:00 19:00	<b>Depth of Hole (m)</b> - 27.00 27.00 45.00 45.00 68.00	<b>Depth of Casing (m)</b> - 35.00 35.00 53.00 53.00 65.00	<b>Depth of Water (m)</b> - - - - - -	<b>Remarks :</b> OFFSHORE Cohesive Soil (N) V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) V.Loose Loose Medium Dense Dense Very Dense								



 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.											
										2 of 6		BH-29											
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates														
Location : PULAU INDAH					SG/1281/2018		5/1/2019		N -32441.294														
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47322.245													
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		7/1/2019		Reduced Level (mRL): -4.5756													
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph										
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value				
							75mm	75mm	75mm	75mm	75mm	75mm											
	12.000	UD4					Rec : 900/1000mm																
	13.000														1.48			Top: Light to medium grey, CLAY Bottom: DITTO					
	13.500																						
	13.950	P5/D5					-HAMMER WEIGHT- N= 0 Rec : 300/450mm											Very soft, medium grey, silty CLAY					
	15.000																						
	15.500	UD5					Rec : 900/1000mm											Top: Light to medium grey, CLAY Bottom: DITTO					
	16.000																						
	16.500																						
	16.950	P6/D6					0	1	0	1	0	1	0	1	2			Very soft, medium to dark grey, silty CLAY					
	18.000																						
	18.500	UD6					Rec : 900/1000mm											Top: Light to medium grey, CLAY Bottom: Light to medium grey, silty CLAY					
	19.000																						
	19.500																						
	19.950	P7/D7					1	1	1	1	1	1	1	2	5			Medium stiff, medium grey, silty CLAY					
	21.000																						
	21.500	UD7					Rec : 920/1000mm											Top: Light to medium grey, CLAY Bottom: Light to medium grey, silty CLAY					
	22.000																						
	22.500																						
	22.950	P8/D8					1	1	2	1	2	1	2	7			Medium stiff, light to medium grey, silty CLAY						
	24.000																						

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	5/1/19	8:30	-	-	-	OFFSHORE
	= Undisturbed Sample		Clay	5/1/19	19:00	27.00	35.00	-	
	= Disturbed Sample		Sand	6/1/19	8:30	27.00	35.00	-	
	= Cored Sample		Gravel	6/1/19	19:00	45.00	53.00	-	
	= Vane Shear Test		Decayed Matter	7/1/19	8:00	45.00	53.00	-	
RQD	= Rock Quality Disignation		Granite	7/1/19	19:00	68.00	65.00	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b> _____		<b>Checked by:</b> _____	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-29				
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 5/1/2019		<b>Coordinates</b> N -32441.294 E -47322.245							
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 7/1/2019		<b>Reduced Level (mRL):</b> -4.5756						
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50			
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Depth (m)	Thickness (m)	W G
6/1/2019	24.000	UD8					Rec : 900/1000mm						24.00			Top: Medium grey, silty CLAY
	25.000												25.00			Bottom: DITTO
	25.500	P9/D9				2	1	1	1	1	2		6.13			Medium stiff, medium grey, silty CLAY
	25.950						Rec : 320/450mm						25.95			
	27.000	UD9					Rec : 910/1000mm						27.00			Top: Light to medium grey, silty CLAY
	28.000												28.00			Bottom: Light to medium grey, CLAY
	28.500	P10/D10				1	0	1	1	1	1		1.38			Soft, medium grey, silty CLAY
	28.950						Rec : 280/450mm						28.95			
	30.000	UD10					Rec : 900/1000mm						30.00			Top: Medium grey, CLAY
	31.000												31.00			Bottom: DITTO
31.500	P11/D11				2	1	2	2	1	3		1.41			Medium stiff, medium to dark grey, silty CLAY	
31.950						Rec : 300/450mm						31.95				
33.000	P12/D12				3	3	4	5	4	4		1.59			Very stiff, medium grey, sandy CLAY	
33.450						Rec : 350/450mm						33.45				
34.500	P13/D13				3	3	4	5	5	6					Very stiff, medium grey, silty CLAY	
34.950						Rec : 300/450mm						34.95				
36.000												36.00				
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :							
	= Standard Penetration Test		Silt	5/1/19	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense							
	= Undisturbed Sample		Clay	5/1/19	19:00	27.00	35.00	-								
	= Disturbed Sample		Sand	6/1/19	8:30	27.00	35.00	-								
	= Cored Sample		Gravel	6/1/19	19:00	45.00	53.00	-								
	= Vane Shear Test		Decayed Matter	7/1/19	8:00	45.00	53.00	-								
RQD	= Rock Quality Disignation		Granite	7/1/19	19:00	68.00	65.00	-								
TCR	= Total Core Recovery		Limestone													
CRR	= Core Recovery Ratio		Mudstone													
				<b>Prepared by:</b>		<b>Checked by:</b>										




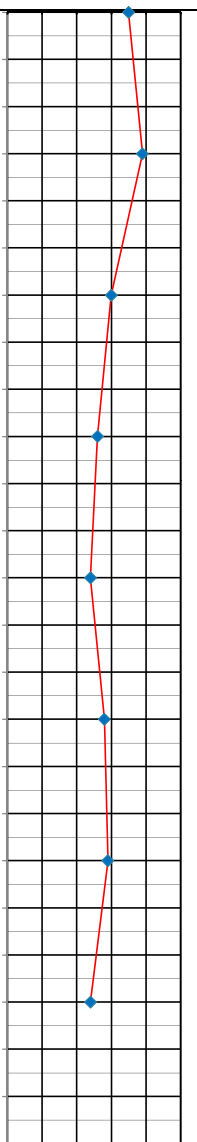
<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-29							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 5/1/2019		<b>Coordinates</b> N -32441.294 E -47322.245										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 7/1/2019		<b>Reduced Level (mRL):</b> -4.5756										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value 0 10 20 30 40 50					
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description
	36.000		P14/D14				3	4	5	5	4	6	---	xx				-DITTO-	
	36.450												---	xx					
	37.500		P15/D15				5	4	5	5	7	6	---	xx	4.52			Very stiff, light to medium grey, silty CLAY	
	37.950												---	xx					
	39.000		P16/D16				6	5	6	7	7	8	---	xx				Very stiff, medium to dark grey, CLAY	
	39.450												---	xx					
	40.500		P17/D17				5	6	7	6	7	9	---	xx				-DITTO-	
	40.950												---	xx					
	42.000		P18/D18				6	5	5	6	6	6	---	xx	5.87			-DITTO-	
	42.450												---	xx					
	43.500		P19/D19				6	5	5	6	5	5	---	xx				Very stiff, medium grey, CLAY	
	43.950												---	xx					
	45.000		P20/D20				7	6	7	8	8	9	---	xx				Hard, medium grey, sandy CLAY	
	45.950												---	xx	1.67				
	46.500		P21/D21				8	7	8	8	9	10	---	xx				Dense, medium to dark grey, very clayey SAND	
	46.950												---	xx					
	48.000												---	xx					














Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	5/1/19	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	5/1/19	19:00	27.00	35.00	-	
	= Disturbed Sample		Sand	6/1/19	8:30	27.00	35.00	-	
	= Cored Sample		Gravel	6/1/19	19:00	45.00	53.00	-	
	= Vane Shear Test		Decayed Matter	7/1/19	8:00	45.00	53.00	-	
RQD	= Rock Quality Disignation		Granite	7/1/19	19:00	68.00	65.00	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

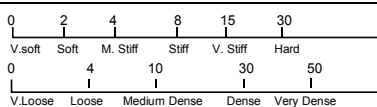
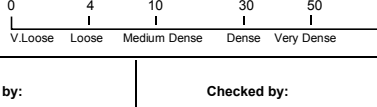
<b>Prepared by:</b>		<b>Checked by:</b>	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622						<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-29													
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH						<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 5/1/2019		<b>Coordinates</b> N -32441.294 E -47322.245											
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 7/1/2019		<b>Reduced Level (mRL):</b> -4.5756												
<b>Date &amp; Time</b>	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>						<b>Standard Penetration Test Graph</b> 								
	<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Field Test / Rock Cores</b>					<b>Casing Record</b>		<b>Legend</b>	<b>Depth (m)</b>	<b>Thick-ness (m)</b>	<b>W G</b>	<b>Description</b>	<b>'N' Value</b>		
	48.000		P22/D22				7	8	9	8	9	9									
	48.450																				
	49.500		P23/D23				8	7	9	9	11	10			4.44						
	49.950																				
	51.000		P24/D24				7	6	7	8	7	8		xx		1.55					
	51.450												xx								
	52.500		P25/D25				5	6	6	5	7	8		xx							
	52.950												xx								
	54.000		P26/D26				5	6	5	6	6	7		xx		2.98					
	54.450												xx								
	55.500		P27/D27				6	7	6	7	7	8		xx							
	55.950												xx								
	57.000		P28/D28				5	7	7	6	8	8		xx							
	57.450												xx		4.54						
	58.500		P29/D29				5	3	4	6	7	7		xx							
	58.950												xx								
	60.000												xx								


<b>Legend</b>			<b>Soil Legend</b>			<b>Date</b>		<b>Time</b>		<b>Depth of Hole (m)</b>	<b>Depth of Casing (m)</b>	<b>Depth of Water (m)</b>	<b>Remarks :</b>
	= Standard Penetration Test			Silt		5/1/19	8:30	-	-	-	-	-	
	= Undisturbed Sample			Clay		5/1/19	19:00	27.00	35.00	-	-	-	
	= Disturbed Sample			Sand		6/1/19	8:30	27.00	35.00	-	-	-	
	= Cored Sample			Gravel		6/1/19	19:00	45.00	53.00	-	-	-	
	= Vane Shear Test			Decayed Matter		7/1/19	8:00	45.00	53.00	-	-	-	
RQD	= Rock Quality Disignation			Granite		7/1/19	19:00	68.00	65.00	-	-	-	
TCR	= Total Core Recovery			Limestone									
CRR	= Core Recovery Ratio			Mudstone									

<b>Cohesive Soil (N)</b>	<b>Non Cohesive Soil (N)</b>
	
	

<b>Prepared by:</b>	<b>Checked by:</b>
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












 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.												
										6 of 6		BH-29												
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates															
Location : PULAU INDAH					SG/1281/2018		5/1/2019		N -32441.294															
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47322.245														
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		7/1/2019		Reduced Level (mRL): -4.5756														
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph											
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value										
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thick-ness (m)	W G	Description	0	10	20	30	40
	60.000	P30/D30					6	7	7	9	8	8				0.45		Hard, medium to dark grey, sandy CLAY						
	60.450							Rec : 200/450mm N= 33																
																		Borehole terminated at depth 60.45m						

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	5/1/19	8:30	-	-	-	Cohesive Soil (N) V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	5/1/19	19:00	27.00	35.00	-	
	= Disturbed Sample		Sand	6/1/19	8:30	27.00	35.00	-	
	= Cored Sample		Gravel	6/1/19	19:00	45.00	53.00	-	
	= Vane Shear Test		Decayed Matter	7/1/19	8:00	45.00	53.00	-	
RQD	= Rock Quality Disignation		Granite	7/1/19	19:00	68.00	65.00	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

Prepared by:

Checked by:

 <b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622											Sheet		Borehole Ref. No.																			
											1 of 6		BH-30																			
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19						Job No.		Date Started		Coordinates																						
Location : PULAU INDAH						SG/1281/2018		9/1/2019		N -32223.655																						
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		Reduced Level (mRL):																						
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		11/1/2019		-4.5587																						
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph																			
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Description		N' Value																		
							75mm	75mm	75mm	75mm	75mm		75mm		Casing Record	Legend	Depth (m)	Thickness (m)	W G													
9/1/2019	0.000						TOPSOIL						--- xx	0.30	0.30		Very soft, light grey, silty CLAY															
	1.500		P1/D1				-HAMMER WEIGHT- N=0 Rec: 300/450mm						--- xx		2.64		Very soft, light to medium grey, CLAY															
	1.950												--- xx																			
	3.000		UD1				Rec: 870/1000mm						--- xx		0.43		Top: Light to medium grey, silty CLAY															
	4.000												--- xx		-3.37		Bottom: Light to medium grey, CLAY															
	4.500		P2/D2				-HAMMER WEIGHT- N=0 Rec: 320/450mm						--- xx				Very soft, light to medium grey, silty CLAY															
	4.950												--- xx																			
	6.000		UD2				Rec: 900/1000mm						--- xx				Top: Light to medium grey, silty CLAY															
	7.000												--- xx				Bottom: DITTO															
	7.500		P3/D3				-HAMMER WEIGHT- N=0 Rec: 350/450mm						--- xx				Very soft, light to medium grey, silty CLAY															
	7.950												--- xx																			
	9.000		UD3				Rec: 850/1000mm						--- xx				Top: Light to medium grey, CLAY															
	10.000												--- xx				Bottom: DITTO															
	10.500		P4/D4				Rec: 300/450mm						--- xx				Very soft, light to medium grey, silty CLAY															
	10.950												--- xx																			
	12.000												--- xx																			
<b>Legend</b>  = Standard Penetration Test  = Undisturbed Sample  = Disturbed Sample  = Cored Sample  = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery											<b>Soil Legend</b>  Silt  Clay  Sand  Gravel  Decayed Matter  Granite  Limestone											Date Time 9/1/19 8:30 9/1/19 19:00 10/1/19 8:30 10/1/19 19:00 11/1/19 8:30 11/1/19 19:00		Depth of Hole (m) - 27.00 27.00 48.00 48.00 60.00		Depth of Casing (m) - 35.00 35.00 56.00 56.00 68.00		Depth of Water (m) - - - - -		Remarks : OFFSHORE Cohesive Soil (N) V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) V.Loose Loose Medium Dense Dense Very Dense		




<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-30									
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 9/1/2019		<b>Coordinates</b> N -32223.655 E -47700.018												
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 11/1/2019		<b>Reduced Level (mRL):</b> -4.5587												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Depth (m)	Thickness (m)	W G	Description				
							75mm	75mm	75mm	75mm	75mm	75mm									
	12.000	UD4					Rec : 900/1000mm							1.48		Top: Light to medium grey, CLAY Bottom: DITTO					
	13.000																				
	13.500	P5/D5				0	1	0	1	0	1	2									
	13.950						Rec : 300/450mm							1.49		Very soft, medium grey, silty CLAY					
	15.000	UD5					Rec : 900/1000mm							1.52		Top: Light to medium grey, CLAY Bottom: DITTO					
	16.000																				
	16.500	P6/D6				1	0	1	0	1	3										
	16.950						Rec : 350/450mm							1.87		Soft, medium grey, silty CLAY					
	18.000	UD6					Rec : 890/1000mm							18.36		Top: Light to medium grey, silty CLAY Bottom: Light to medium grey, CLAY					
	19.000																				
	19.500	P7/D7				1	0	1	0	1	0	2									
	19.950						Rec : 300/450mm							1.53		Very soft, medium grey, silty CLAY					
	21.000	UD7					Rec : 900/1000mm							1.51		Top: Light to medium grey, sandy CLAY Bottom: DITTO					
	22.000																				
	22.500	P8/D8				1	1	2	1	1	5										
	22.950						Rec : 300/450mm							1.53		Medium stiff, medium grey, silty CLAY					
	24.000																				

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	9/1/19	8:30	-	-	-	
	= Undisturbed Sample		Clay	9/1/19	19:00	27.00	35.00	-	
	= Disturbed Sample		Sand	10/1/19	8:30	27.00	35.00	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Cored Sample		Gravel	10/1/19	19:00	48.00	56.00	-	
	= Vane Shear Test		Decayed Matter	11/1/19	8:30	48.00	56.00	-	
RQD	= Rock Quality Disignation		Granite	11/1/19	19:00	60.00	68.00	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-30										
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 9/1/2019		<b>Coordinates</b> N -32223.655 E -47700.018													
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 11/1/2019		<b>Reduced Level (mRL):</b> -4.5587													
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph									
Date & Time	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores						Casing Record	Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value			
							75mm	75mm	75mm	75mm	75mm	75mm										
10/1/2019	24.000	UD8					Rec : 920/1000mm															
	25.000																					
	25.500	P9/D9				2	1	2	1	1	2											
	25.950						Rec : 300/450mm															
	27.000	UD9					Rec : 890/1000mm															
	28.000																					
	28.500	P10/D10				1	1	2	1	1	1											
	28.950						Rec : 320/450mm															
	30.000	UD10					Rec : 900/1000mm															
	31.000																					
	31.500	P11/D11				2	1	2	1	2	2											
	31.950						Rec : 290/450mm															
33.000	P12/D12				4	4	5	5	4	6												
33.450						Rec : 290/450mm																
34.500	P13/D13				3	5	4	5	6	6												
34.950						Rec : 300/450mm																
36.000																						

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	9/1/19	8:30	-	-	-	
	= Undisturbed Sample		Clay	9/1/19	19:00	27.00	35.00	-	
	= Disturbed Sample		Sand	10/1/19	8:30	27.00	35.00	-	
	= Cored Sample		Gravel	10/1/19	19:00	48.00	56.00	-	
	= Vane Shear Test		Decayed Matter	10/1/19	19:00	48.00	56.00	-	
RQD	= Rock Quality Disignation		Granite	11/1/19	8:30	48.00	56.00	-	
TCR	= Total Core Recovery		Limestone	11/1/19	19:00	60.00	68.00	-	
CRP	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> (Co. No. 393744T) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622				Sheet		Borehole Ref. No.																	
				4 of 6		BH-30																	
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19				Job No.		Date Started		Coordinates															
Location : PULAU INDAH				SG/1281/2018		9/1/2019		N -32223.655															
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed															
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		11/1/2019															
								Reduced Level (mRL): -4.5587															
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50										
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Casing Record	Legend	Depth (m)	Thickness (m)	W G	Description				
						75mm	75mm	75mm	75mm	75mm	75mm												
36.000	P14/D14					4	3	4	5	6	7	N= 23						1.48	Medium dense, medium to dark grey, clayey fine grain SAND				
36.450							Rec : 270/450mm															37.48	
37.500	P15/D15					5	6	7	7	9	9	N= 32						1.45	Dense, light to medium grey, CLAY with trace of organic matter				
37.950							Rec : 250/450mm															38.93	
39.000	P16/D16					6	5	6	7	7	9	N= 29							2.96	Medium dense, medium grey, clayey fine grain SAND			
39.450							Rec : 250/450mm																41.89
40.500	P17/D17					6	6	7	7	8	8	N= 30							1.58	Very stiff, medium to dark grey, very clayey SAND			
40.950							Rec : 270/450mm																43.47
42.000	P18/D18					5	4	5	4	4	5	N= 18							1.58	Very stiff, medium to dark grey, sandy CLAY			
42.450							Rec : 300/450mm																43.47
43.500	P19/D19					9	5	4	5	5	5	N= 19								1.58	Very stiff, medium grey, silty CLAY		
43.950							Rec : 270/450mm																
45.000	P20/D20					5	4	4	6	5	5	N= 20									1.58	-DITTO-	
45.950							Rec : 270/450mm																
46.500	P21/D21					5	5	4	5	6	6	N= 22										1.58	-DITTO-
46.950							Rec : 250/450mm																

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	9/1/19	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	9/1/19	19:00	27.00	35.00	-	
	= Disturbed Sample		Sand	10/1/19	8:30	27.00	35.00	-	
	= Cored Sample		Gravel	10/1/19	19:00	48.00	56.00	-	
	= Vane Shear Test		Decayed Matter	11/1/19	8:30	48.00	56.00	-	
	RQD = Rock Quality Disignation		Granite	11/1/19	19:00	60.00	68.00	-	
	TCR = Total Core Recovery		Limestone						Prepared by: _____
	CRR = Core Recovery Ratio		Mudstone						Checked by: _____




<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-30								
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 9/1/2019		<b>Coordinates</b> N -32223.655 E -47700.018											
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 11/1/2019		<b>Reduced Level (mRL):</b> -4.5587											
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph							
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description	'N' Value 0 10 20 30 40 50					
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record			Legend	Depth (m)	Thickness (m)	W G	
11/1/2019	48.000	P22/D22					4	4	5	4	5	6	---	xx	49.48	6.01			-DITTO-	
	48.450						Rec : 300/450mm	N= 20	---	xx										
	49.500	P23/D23					3	4	5	5	4	5	---	...	4.47			Very stiff, light to medium grey, sandy CLAY		
	49.950						Rec : 270/450mm	N= 19	---	...										
	51.000	P24/D24					4	3	4	5	5	4	---	...	4.47			-DITTO-		
	51.450						Rec : 250/450mm	N= 18	---	...										
	52.500	P25/D25					3	4	3	5	5	0	---	...	53.95			-DITTO-		
	52.950						Rec : 190/450mm	N= 19	---	...										
	54.000	P26/D26					3	4	5	4	4	4	---	xx	1.55			Very stiff, light to medium grey, silty CLAY		
	54.450						Rec : 300/450mm	N= 17	---	xx										
55.500	P27/D27					4	3	4	5	5	4	---	...	55.50			Very stiff, light to medium grey, CLAY			
55.950						Rec : 280/450mm	N= 18	---	...											
57.000	P28/D28					5	4	3	4	5	5	---	---				-DITTO-			
57.450						Rec : 280/450mm	N= 12	---	---											
58.500	P29/D29					4	5	4	5	5	5	---	---				-DITTO-			
58.950						Rec : 270/450mm	N= 19	---	---											
60.000																				

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	9/1/19	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	9/1/19	19:00	27.00	35.00	-	
	= Disturbed Sample		Sand	10/1/19	8:30	27.00	35.00	-	
	= Cored Sample		Gravel	10/1/19	19:00	48.00	56.00	-	
	= Vane Shear Test		Decayed Matter	11/1/19	8:30	48.00	56.00	-	
	RQD = Rock Quality Disignation		Granite	11/1/19	19:00	60.00	68.00	-	
	TCR = Total Core Recovery		Limestone						
	CRR = Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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
 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.												
										6 of 6		BH-30												
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates															
Location : PULAU INDAH					SG/1281/2018		9/1/2019		N -32223.655															
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47700.018														
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		11/1/2019		Reduced Level (mRL): -4.5587														
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph											
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value										
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thick-ness (m)	W G	Description	0	10	20	30	40
	60.000	P30/D30					5	4	5	6	6	6				4.95		-DITTO-						
	60.450							Rec : 300/450mm																
																		Borehole terminated at depth 60.45m						

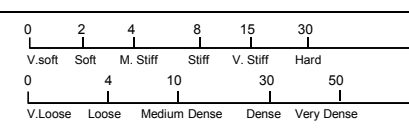
  

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	9/1/19	8:30	-	-	-	Cohesive Soil (N) V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	9/1/19	19:00	27.00	35.00	-	
	= Disturbed Sample		Sand	10/1/19	8:30	27.00	35.00	-	
	= Cored Sample		Gravel	10/1/19	19:00	48.00	56.00	-	
	= Vane Shear Test		Decayed Matter	11/1/19	8:30	48.00	56.00	-	
RQD	= Rock Quality Disignation		Granite	11/1/19	19:00	60.00	68.00	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

Prepared by:

Checked by:


 <b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.							
										1 of 6		BH-31							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.			Date Started		Coordinates									
Location : PULAU INDAH					SG/1281/2018			20/12/2018		N -32003.628									
Client		Consultant			Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		Reduced Level (mRL):								
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.			ROTARY WASH	100	Vertical		22/12/2018		-5.8008								
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	N' Value
		75mm	75mm	75mm	75mm	75mm	75mm												
20/12/2018	0.000						TOPSOIL							0.30	0.30		Very soft, light grey, silty CLAY		
	1.500		P1/D1				0	1	0	1	1				2.64			Soft, light to medium grey, sandy SILT	
	1.950						Rec: 400/450mm												
	3.000		UD1				Rec: 920/1000mm											Top: Light to medium grey, CLAY	
	4.000																Bottom: DITTO		
	4.500		P2/D2				0	1	0	0	1				1.48			Very soft, light to medium grey, silty CLAY	
	4.950						Rec: 400/450mm												
	6.000		UD2				Rec: 900/1000mm											Top: Light to medium grey, CLAY	
	7.000																Bottom: Light to medium grey, silty CLAY		
	7.500		P3/D3				0	1	0	1	0				8.93			Very soft, light to medium grey, silty CLAY	
	7.950						Rec: 350/450mm												
	9.000		UD3				Rec: 910/1000mm											Top: Light to medium grey, CLAY	
	10.000																Bottom: Light to medium grey, silty CLAY		
	10.500		P4/D4				-HAMMER WEIGHT-											Very soft, medium to dark grey, silty CLAY with trace of organic matter	
	10.950						Rec: 300/450mm												
	12.000																		
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :										
	= Standard Penetration Test		Silt	20/12/18	8:30	-	-	-	OFFSHORE										
	= Undisturbed Sample		Clay	20/12/18	19:00	24.00	36.00	-											
	= Disturbed Sample		Sand	21/12/18	8:30	24.00	36.00	-											
	= Cored Sample		Gravel	21/12/18	19:00	42.00	54.00	-											
	= Vane Shear Test		Decayed Matter	22/12/18	8:00	42.00	54.00	-											
RQD	= Rock Quality Disignation		Granite	22/12/18	19:00	60.00	72.00	-											
TCR	= Total Core Recovery		Limestone																







<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-31							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 20/12/2018		<b>Coordinates</b> N -32003.628 E -48073.818										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 22/12/2018		<b>Reduced Level (mRL):</b> -5.8008									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value
21/12/2018	24.000	UD8					Rec : 910/1000mm							14.37	-5.06		Top: Light to medium grey, CLAY		
	25.000																Bottom: Light to medium grey, silty CLAY		
	25.500	P9/D9				1	1	1	1	1	2				13.52		Medium stiff, light to medium grey, silty CLAY		
	25.950						Rec : 270/450mm												
	27.000	UD9					Rec : 870/1000mm							27.89			Top: Light to medium grey, sandy CLAY		
	28.000																Bottom: Light to medium grey, silty CLAY		
	28.500	P10/D10				0	1	0	1	1	2						Soft, light to medium grey, silty CLAY with some of organic matter		
	28.950						Rec : 300/450mm												
	30.000	UD10					Rec : 900/1000mm										Top: Light to medium grey, silty CLAY		
	31.000																Bottom: DITTO		
31.500	P11/D11				1	1	2	2	1	1					7.14		Medium stiff, medium grey, silty CLAY with some of organic matter		
31.950						Rec : 300/450mm													
33.000	UD11					Rec : 850/1000mm										Top: Light to medium grey, silty CLAY			
34.000																Bottom: DITTO			
34.500	P12/D12				1	2	2	2	2	3							Stiff, medium grey, CLAY with some of organic matter		
34.950						Rec : 270/450mm									1.53				
36.000																			
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :										
	= Standard Penetration Test		Silt	20/12/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense										
	= Undisturbed Sample		Clay	20/12/18	19:00	24.00	36.00	-											
	= Disturbed Sample		Sand	21/12/18	8:30	24.00	36.00	-											
	= Cored Sample		Gravel	21/12/18	19:00	42.00	54.00	-											
	= Vane Shear Test		Decayed Matter	22/12/18	8:00	42.00	54.00	-											
RQD	= Rock Quality Disignation		Granite	22/12/18	19:00	60.00	72.00	-											
TCR	= Total Core Recovery		Limestone																
CRR	= Core Recovery Ratio		Mudstone																
				<b>Prepared by:</b>		<b>Checked by:</b>													


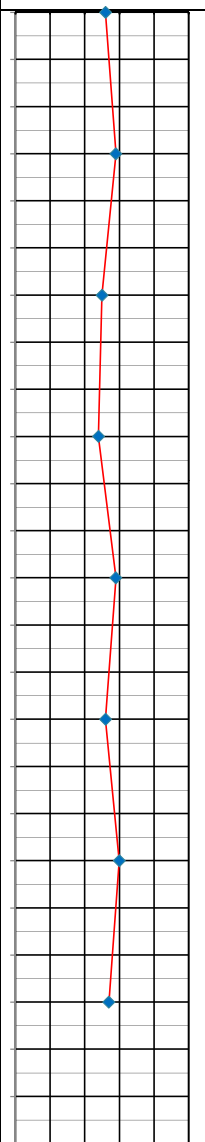
 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.													
										4 of 6		BH-31													
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates																
Location : PULAU INDAH					SG/1281/2018		20/12/2018		N -32003.628																
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -48073.818															
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		22/12/2018		Reduced Level (mRL): -5.8008															
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph												
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value											
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	0	10	20	30	40	50
22/12/2018	36.000	P13/D13					1	1	2	2	2	2		xx				Medium stiff, light to medium grey, silty CLAY with trace of organic matter							
	36.450						1	1	2	2	2	2													8
	37.500	P14/D14					2	2	2	1	2	3		xx				Medium stiff, light to medium grey, silty CLAY							
	37.950						2	2	2	1	2	3													8
	39.000	P15/D15					1	2	3	2	3	2		xx				Stiff, light to medium grey, CLAY							
	39.450						1	2	3	2	3	2													10
	40.500	P16/D16					2	2	2	4	3	3		xx				Stiff, light to medium grey, CLAY							
	40.950						2	2	2	4	3	3													12
	42.000	P17/D17					2	3	2	3	4	4		xx				-DITTO-							
	42.450						2	3	2	3	4	4													13
	43.500	P18/D18					2	2	3	3	4	4		xx				Stiff, light to medium grey, silty CLAY							
	43.950						2	2	3	3	4	4													14
	45.000	P19/D19					3	3	4	3	4	5		xx				Very stiff, light to medium grey, CLAY							
	45.950						3	3	4	3	4	5													16
	46.500	P20/D20					4	5	5	5	4	5		xx				-DITTO-							
	46.950						4	5	5	5	4	5													19
	48.000																								














  

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	20/12/18	8:30	-	-	-	
	= Undisturbed Sample		Clay	20/12/18	19:00	24.00	36.00	-	
	= Disturbed Sample		Sand	21/12/18	8:30	24.00	36.00	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Cored Sample		Gravel	21/12/18	19:00	42.00	54.00	-	
	= Vane Shear Test		Decayed Matter	22/12/18	8:00	42.00	54.00	-	
RQD	= Rock Quality Disignation		Granite	22/12/18	19:00	60.00	72.00	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						


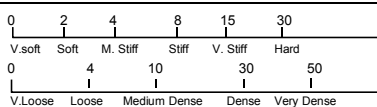
Prepared by:	Checked by:
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
 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-31				
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 20/12/2018		<b>Coordinates</b> N -32003.628 E -48073.818							
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 22/12/2018		<b>Reduced Level (mRL):</b> -5.8008						
<b>Date &amp; Time</b>	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>						<b>Standard Penetration Test Graph</b> 			
	<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Casing Record</b>	<b>Legend</b>	<b>Depth (m)</b>	<b>Thick-ness (m)</b>	<b>W G</b>	<b>Description</b>				
	48.000	P21/D21				4	5	5	7	7	7	26	--- xx	4.49		-DITTO-
	48.450												--- xx			
	49.500	P22/D22				4	5	7	6	7	9	29	--- ..	1.57		Very stiff, light to medium grey, sandy CLAY
	49.950												--- ..			
	51.000	P23/D23				5	4	5	6	6	8	25	--- xx	1.46		Very stiff, light to medium grey, silty CLAY
	51.450												--- xx			
	52.500	P24/D24				5	4	5	5	7	7	24	--- ..	1.49		Very stiff, light to medium grey, sandy CLAY
	52.950												--- ..			
	54.000	P25/D25				6	5	6	7	7	9	29	--- xx	6.06		Very stiff, medium grey, silty CLAY
	54.450												--- xx			
	55.500	P26/D26				5	4	5	6	7	8	26	--- xx			-DITTO-
	55.950												--- xx			
	57.000	P27/D27				6	6	7	7	8	8	30	--- xx			-DITTO-
	57.450												--- xx			
	58.500	P28/D28				5	4	6	6	7	8	27	--- xx			-DITTO-
	58.950												--- xx			
	60.000												--- xx			

<b>Legend</b>		<b>Soil Legend</b>		<b>Date</b>	<b>Time</b>	<b>Depth of Hole (m)</b>	<b>Depth of Casing (m)</b>	<b>Depth of Water (m)</b>	<b>Remarks :</b>
	= Standard Penetration Test		Silt	20/12/18	8:30	-	-	-	
	= Undisturbed Sample		Clay	20/12/18	19:00	24.00	36.00	-	
	= Disturbed Sample		Sand	21/12/18	8:30	24.00	36.00	-	
	= Cored Sample		Gravel	21/12/18	19:00	42.00	54.00	-	
	= Vane Shear Test		Decayed Matter	21/12/18	19:00	42.00	54.00	-	
RQD	= Rock Quality Disignation		Granite	22/12/18	8:00	42.00	54.00	-	
TCR	= Total Core Recovery		Limestone	22/12/18	19:00	60.00	72.00	-	
CRP	= Core Recovery Ratio		Mudstone						

<b>Cohesive Soil (N)</b>	0    2    4    8    15    30
V.soft    Soft    M. Stiff    Stiff    V. Stiff    Hard	
<b>Non Cohesive Soil (N)</b>	0    4    10    30    50
V.Loose    Loose    Medium Dense    Dense    Very Dense	
<b>Prepared by:</b>	
<b>Checked by:</b>	



 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.							
										6 of 6		BH-31							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates										
Location : PULAU INDAH					SG/1281/2018		20/12/2018		N -32003.628										
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -48073.818									
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		22/12/2018		Reduced Level (mRL): -5.8008									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value
	60.000	P29/D29					5	5	6	7	6	7						Very stiff, light to medium grey, CLAY	0 10 20 30 40 50
	60.450							Rec : 300/450mm N= 26											
																		<b>Borehole terminated at depth 60.45m</b>	
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :										
	= Standard Penetration Test		Silt	20/12/18	8:30	-	-	-											
	= Undisturbed Sample		Clay	20/12/18	19:00	24.00	36.00	-											
	= Disturbed Sample		Sand	21/12/18	8:30	24.00	36.00	-											
	= Cored Sample		Gravel	21/12/18	19:00	42.00	54.00	-											
	= Vane Shear Test		Decayed Matter	21/12/18	19:00	42.00	54.00	-											
RQD	= Rock Quality Disignation		Granite	22/12/18	8:00	42.00	54.00	-											
TCR	= Total Core Recovery		Limestone	22/12/18	19:00	60.00	72.00	-											
CRR	= Core Recovery Ratio		Mudstone																
				<b>Prepared by:</b>		<b>Checked by:</b>													

 <b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.									
										1 of 6		BH-32									
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates												
Location : PULAU INDAH					SG/1281/2018		12/12/2018		N -31779.295												
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		Reduced Level (mRL):											
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		14/12/2018		-4.5817											
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Depth (m)		Thickness (m)	W G	Description	N' Value				
						75mm	75mm	75mm	75mm	75mm	75mm		Casing Record					Legend			
12/12/2018	0.000						TOPSOIL														
	1.500		P1/D1				-HAMMER WEIGHT- N=0 Rec: 400/450mm						4.15								
	1.950						Rec: 870/1000mm														
	3.000		UD1				Rec: 900/1000mm														
	4.000						-HAMMER WEIGHT- N=0 Rec: 400/450mm						4.45								
	4.500		P2/D2				Rec: 370/450mm														
	4.950						Rec: 890/1000mm														
	6.000		UD2				Rec: 300/450mm														
	7.000						Rec: 300/450mm														
	7.500		P3/D3				Rec: 300/450mm														
	7.950						Rec: 300/450mm														
	9.000		UD3				Rec: 300/450mm														
	10.000						Rec: 300/450mm														
	10.500		P4/D4				Rec: 300/450mm														
	10.950						Rec: 300/450mm														
	12.000						Rec: 300/450mm														

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
		12/12/18	8:30	-	-	-	OFFSHORE
		12/12/18	19:00	27.00	38.00	-	
		13/12/18	8:30	27.00	38.00	-	
		13/12/18	19:00	39.00	50.00	-	
		14/12/18	8:30	39.00	50.00	-	
RQD = Rock Quality Disignation		14/12/18	19:00	60.00	71.00	-	
TCR = Total Core Recovery							

Cohesive Soil (N)	
0	30
V.soft	Hard
Soft	M. Stiff
Stiff	V. Stiff

Non Cohesive Soil (N)	
0	50
V.Loose	Very Dense
Loose	Dense
Medium Dense	



<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-32							
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 12/12/2018		<b>Coordinates</b> N -31779.295 E -48308.370										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 14/12/2018		<b>Reduced Level (mRL):</b> -4.5817										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	
							75mm	75mm	75mm	75mm	75mm	75mm							
	12.000	UD4					Rec : 890/1000mm								1.40			Top: Light to medium grey, CLAY Bottom: DITTO	
	13.000																		
	13.500	P5/D5				0	1	0	1	1	1								
	13.950						Rec : 250/450mm								1.60			Soft, light to medium grey, sandy CLAY with some of gravel	
	15.000	UD5					Rec : 920/1000mm								1.45			Top: Light to medium grey, CLAY Bottom: DITTO	
	16.000																		
	16.500	P6/D6				0	1	0	1	1	1								
	16.950						Rec : 400/450mm								3.10			Soft, light to medium grey, sandy CLAY with some organic matter	
	18.000	UD6					Rec : 890/1000mm								1.45			Top: Light to medium grey, sandy CLAY Bottom: DITTO	
	19.000																		
	19.500	P7/D7				0	1	0	1	0	1								
	19.950						Rec : 300/450mm								1.30			Very soft, light to medium grey, silty CLAY	
	21.000	UD7					Rec : 910/1000mm								1.55			Top: Light to medium grey, CLAY Bottom: DITTO	
	22.000																		
	22.500	P8/D8				1	1	1	1	1	1								
	22.950						Rec : 270/450mm								1.60			Soft, light to medium grey, silty CLAY	
	24.000																		

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	xxxx Silt	12/12/18	8:30	-	-	-	
	xxx Clay	12/12/18	19:00	27.00	38.00	-	
	... Sand	13/12/18	8:30	27.00	38.00	-	
	oooo Gravel	13/12/18	19:00	39.00	50.00	-	
	Decayed Matter	14/12/18	8:30	39.00	50.00	-	
RQD = Rock Quality Disignation	++++ Granite	14/12/18	19:00	60.00	71.00	-	
TCR = Total Core Recovery	++++ Limestone						
CRR = Core Recovery Ratio	++++ Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-32										
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 12/12/2018		<b>Coordinates</b> N -31779.295 E -48308.370													
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 14/12/2018		<b>Reduced Level (mRL):</b> -4.5817													
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value 0 10 20 30 40 50								
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description			
13/12/2018	24.000	UD8					Rec : 900/1000mm															
	25.000																					
	25.500	P9/D9				1	1	1	1	1	1	N= 4			26.90	2.90		Soft, light to medium grey, CLAY				
	25.950						Rec : 250/450mm															
	27.000	UD9					Rec : 900/1000mm						xx		27.40	0.50		Top: Light to medium grey, silty CLAY				
	28.000												xx					Bottom: Light to medium grey, CLAY				
	28.500	P10/D10				1	1	2	1	2	2	N= 7			29.95	2.55		Medium stiff, light to medium grey, CLAY				
	28.950						Rec : 250/450mm															
	30.000	UD10					Rec : 920/1000mm						xx		31.40	1.45		Top: Light to medium grey, silty CLAY				
	31.000												xx					Bottom: DITTO				
	31.500	P11/D11				1	2	2	2	2	2	N= 8						Medium stiff, light to medium grey, CLAY				
	31.950						Rec : 300/450mm															
33.000	P12/D12				2	3	3	4	3	5	N= 15						Stiff, light to medium grey, CLAY					
33.450						Rec : 300/450mm																
34.500	P13/D13				2	3	3	4	4	4	N= 15						-DITTO-					
34.950						Rec : 250/450mm																
36.000																						

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
		12/12/18	8:30	-	-	-	
		12/12/18	19:00	27.00	38.00	-	
		13/12/18	8:30	27.00	38.00	-	
		13/12/18	19:00	39.00	50.00	-	
		13/12/18	19:00	39.00	50.00	-	
RQD = Rock Quality Disignation		14/12/18	8:30	39.00	50.00	-	
TCR = Total Core Recovery		14/12/18	19:00	60.00	71.00	-	
CRP = Core Recovery Ratio							

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>Legend</b> = Standard Penetration Test = Undisturbed Sample = Disturbed Sample = Cored Sample = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRP = Core Recovery Ratio		<b>Soil Legend</b> Silt Clay Sand Gravel Decayed Matter Granite Limestone Mudstone	
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Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard	Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-32							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 12/12/2018		<b>Coordinates</b> N -31779.295 E -48308.370										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 14/12/2018		<b>Reduced Level (mRL):</b> -4.5817										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value 0 10 20 30 40 50					
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description
14/12/2018	36.000	P14/D14					3	3	4	4	4	6						Medium dense, light to medium grey, very clayey SAND	
	36.450						3	4	4	4	6	18	Rec : 250/450mm						
	37.500	P15/D15					4	3	3	5	5	5						-DITTO-	
	37.950						4	3	3	5	5	18	Rec : 250/450mm						
	39.000	P16/D16					4	4	3	4	5	7						-DITTO-	
	39.450						4	4	3	4	5	19	Rec : 300/450mm						
	40.500	P17/D17					5	6	6	7	7	7						Medium dense, light to medium grey, clayey SAND	
	40.950						5	6	6	7	7	27	Rec : 300/450mm						
	42.000	P18/D18					5	5	7	7	9	10						Dense, light to medium grey, clayey SAND	
	42.450						5	5	7	7	9	33	Rec : 250/450mm						
43.500	P19/D19					6	6	5	7	7	10						Medium dense, light to medium grey, silty fine grain SAND		
43.950						6	6	5	7	7	28	Rec : 250/450mm	xx						
45.000	P20/D20					4	5	5	5	5	5						Very stiff, light to medium grey, very clayey SAND		
45.950						4	5	5	5	5	20	Rec : 300/450mm							
46.500	P21/D21					5	4	5	6	6	6						-DITTO-		
46.950						5	4	5	6	6	23	Rec : 300/450mm							
48.000																			

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	12/12/18	8:30	-	-	-	
	= Undisturbed Sample		Clay	12/12/18	19:00	27.00	38.00	-	
	= Disturbed Sample		Sand	13/12/18	8:30	27.00	38.00	-	
	= Cored Sample		Gravel	13/12/18	19:00	39.00	50.00	-	
	= Vane Shear Test		Decayed Matter	14/12/18	8:30	39.00	50.00	-	
RQD	= Rock Quality Disignation		Granite	14/12/18	19:00	60.00	71.00	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-32								
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 12/12/2018		<b>Coordinates</b> N -31779.295 E -48308.370											
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 14/12/2018		<b>Reduced Level (mRL):</b> -4.5817											
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50							
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description						
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G		
	48.000	P22/D22					6	6	7	7	9	9				7.50				Dense, light to medium grey, clayey SAND
	48.450						Rec : 250/450mm	N= 32												
	49.500	P23/D23					6	7	7	9	9	10								-DITTO-
	49.950						Rec : 250/450mm	N= 35												
	51.000	P24/D24					7	6	7	7	8	9								-DITTO-
	51.450						Rec : 270/450mm	N= 31												
	52.500	P25/D25					4	5	4	5	5	7								Very stiff, light to medium grey, CLAY
	52.950						Rec : 300/450mm	N= 21												
	54.000	P26/D26					4	5	5	5	6	6								Very stiff, light to medium grey, CLAY
	54.450						Rec : 250/450mm	N= 22												
	55.500	P27/D27					5	4	5	6	5	5								-DITTO-
	55.950						Rec : 200/450mm	N= 21												
	57.000	P28/D28					4	5	6	6	6	7								-DITTO-
	57.450						Rec : 250/450mm	N= 25												
	58.500	P29/D29					5	4	4	6	6	7								-DITTO-
	58.950						Rec : 250/450mm	N= 23												
	60.000																			

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	12/12/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	12/12/18	19:00	27.00	38.00	-	
	= Disturbed Sample		Sand	13/12/18	8:30	27.00	38.00	-	
	= Cored Sample		Gravel	13/12/18	19:00	39.00	50.00	-	
	= Vane Shear Test		Decayed Matter	14/12/18	8:30	39.00	50.00	-	
RQD	= Rock Quality Disignation		Granite	14/12/18	19:00	60.00	71.00	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

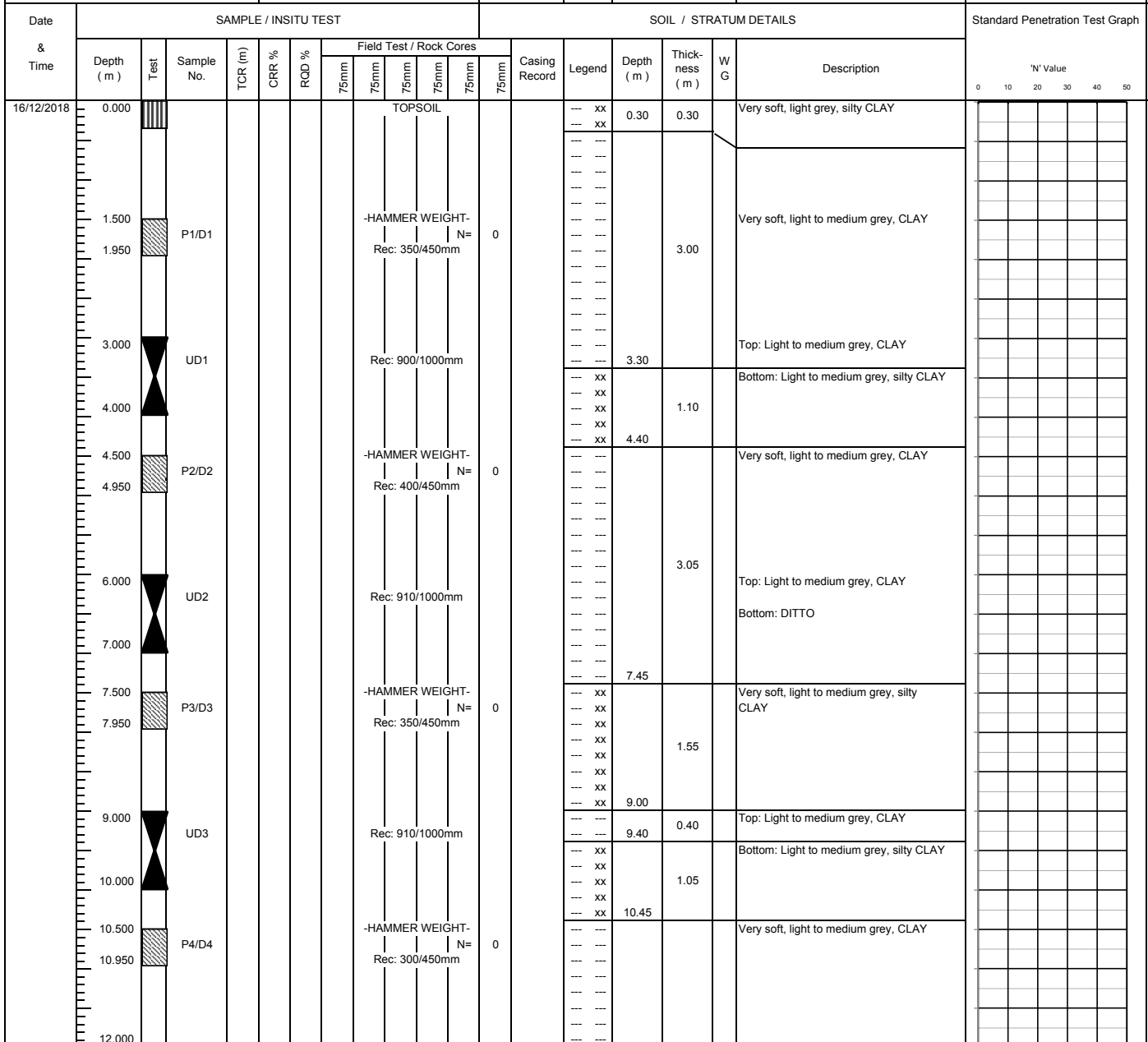
Prepared by:		Checked by:	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 6 of 6		<b>Borehole Ref. No.</b> BH-32			
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 12/12/2018		<b>Coordinates</b> N -31779.295 E -48308.370						
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 14/12/2018		<b>Reduced Level (mRL):</b> -4.5817						
<b>Date &amp; Time</b>	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>				<b>Standard Penetration Test Graph</b> 				
	<b>Depth (m)</b> 60.000 60.450	<b>Test</b> 	<b>Sample No.</b> P30/D30	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Field Test / Rock Cores</b>						<b>Depth (m)</b> 8.00 60.45	<b>Thick-ness (m)</b>	<b>W G</b>
<b>Legend</b> = Standard Penetration Test = Undisturbed Sample = Disturbed Sample = Cored Sample = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRP = Core Recovery Ratio		<b>Soil Legend</b> Silt Clay Sand Gravel Decayed Matter Granite Limestone Mudstone		<b>Date</b>	<b>Time</b>	<b>Depth of Hole (m)</b>	<b>Depth of Casing (m)</b>	<b>Depth of Water (m)</b>	<b>Remarks :</b>  Cohesive Soil (N)  Non Cohesive Soil (N)			<b>Prepared by:</b>	<b>Checked by:</b>		




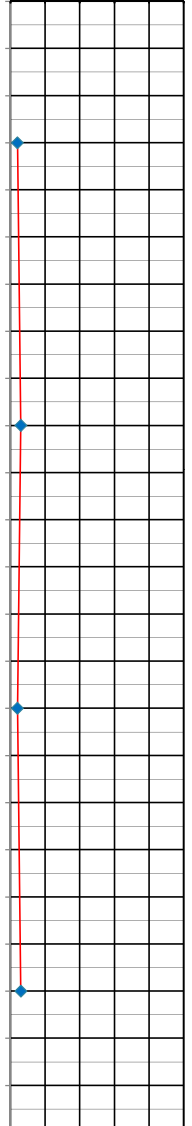
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19	<b>Job No.</b>	<b>Date Started</b>	<b>Coordinates</b>
Location : PULAU INDAH	SG/1281/2018	16/12/2018	N -32324.351

<b>Client</b>	<b>Consultant</b>	<b>Type of Boring</b>	<b>Boring Dia. (mm)</b>	<b>Orientation</b>	<b>Date Completed</b>	<b>Reduced Level (mRL):</b>
WESTPORTS (M) DDN. BHD.	HSS INTEGRATED SDN. BHD.	ROTARY WASH	100	Vertical	18/12/2018	-4.8734
















Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
= Standard Penetration Test	Silt	16/12/18	8:30	-	-	-	OFFSHORE
= Undisturbed Sample	Clay	16/12/18	19:00	24.00	35.00	-	
= Disturbed Sample	Sand	17/12/18	8:30	24.00	35.00	-	
= Cored Sample	Gravel	17/12/18	19:00	42.00	53.00	-	
= Vane Shear Test	Decayed Matter	18/12/18	8:30	42.00	53.00	-	Cohesive Soil (N) V.soft   Soft   M. Stiff   Stiff   V. Stiff   Hard Non Cohesive Soil (N) V.Loose   Loose   Medium Dense   Dense   Very Dense
RQD = Rock Quality Disignation	Granite	18/12/18	19:00	60.00	71.00	-	
TCR = Total Core Recovery	Limestone						



 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-33	
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 16/12/2018		<b>Coordinates</b> N -32324.351 E -48258.341				
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 18/12/2018		<b>Reduced Level (mRL):</b> -4.8734			
<b>Date &amp; Time</b>	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>						<b>Standard Penetration Test Graph</b> 
	<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Field Test / Rock Cores</b>	<b>Casing Record</b>	<b>Legend</b>	<b>Depth (m)</b>	<b>Thickness (m)</b>	<b>W G</b>	
	12.000	UD4				Rec : 880/1000mm							Top: Light to medium grey, CLAY Bottom: Light to medium grey, CLAY
	13.000												
	13.500	P5/D5			0	1 0 1 0 1	N= 2			5.05			Very soft, light to medium grey, CLAY
	13.950					Rec : 350/450mm							
	15.000	UD5				Rec : 900/1000mm							Top: Light to medium grey, sandy CLAY Bottom: Light to medium grey, sandy CLAY
	16.000									0.90			
	16.500	P6/D6			0	1 1 1 1 0	N= 3			1.50			Soft, light to medium grey, silty CLAY
	16.950					Rec : 350/450mm							
	18.000	UD6				Rec : 820/1000mm							Top: Light to medium grey, CLAY Bottom: Light to medium grey, silty CLAY
	19.000												
	19.500	P7/D7			0	1 0 1 0 0	N= 2			2.65			Very soft, light to medium grey, silty CLAY
	19.950					Rec : 350/450mm							
	21.000	UD7				Rec : 800/1000mm							Top: Light to medium grey, CLAY Bottom: Light to medium grey, CLAY
	22.000												
	22.500	P8/D8			0	1 0 1 1 1	N= 3			3.05			Soft, light to medium grey, CLAY
	22.950					Rec : 300/450mm							
	24.000												















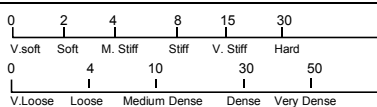
  


<b>Legend</b>		<b>Soil Legend</b>		<b>Date</b>	<b>Time</b>	<b>Depth of Hole (m)</b>	<b>Depth of Casing (m)</b>	<b>Depth of Water (m)</b>	<b>Remarks :</b>
	= Standard Penetration Test		Silt	16/12/18	8:30	-	-	-	
	= Undisturbed Sample		Clay	16/12/18	19:00	24.00	35.00	-	
	= Disturbed Sample		Sand	17/12/18	8:30	24.00	35.00	-	
	= Cored Sample		Gravel	17/12/18	19:00	42.00	53.00	-	
	= Vane Shear Test		Decayed Matter	18/12/18	8:30	42.00	53.00	-	
<b>RQD</b>	= Rock Quality Disignation		Granite	18/12/18	19:00	60.00	71.00	-	
<b>TCR</b>	= Total Core Recovery		Limestone						
<b>CRP</b>	= Core Recovery Ratio		Mudstone						














<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-33							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 16/12/2018		<b>Coordinates</b> N -32324.351 E -48258.341										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 18/12/2018		<b>Reduced Level (mRL):</b> -4.8734										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value 0 10 20 30 40 50					
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description
17/12/2018	24.000	UD8					Rec : 900/1000mm						---	xx				Top: Light to medium grey, silty CLAY	
	25.000												---	xx	1.45			Bottom: DITTO	
	25.500												---	xx	25.45			Soft, light to medium grey, CLAY	
	25.950	P9/D9					1	1	1	1	1	1							
	27.000												---	xx				Top: Light to medium grey, silty CLAY	
	27.500												---	xx				Bottom: DITTO	
	28.000	UD9											---	xx					
	28.500												---	xx					
	28.950	P10/D10					1	2	1	1	2	2							
	30.000												---	xx					
	30.500												---	xx					
	31.000	UD10											---	xx					
31.500												---	xx						
31.950	P11/D11					2	1	2	2	2	2								
33.000												---	xx						
33.450	P12/D12					3	2	3	2	2	2								
34.500												---	xx						
34.950	P13/D13					3	3	3	3	4	4								
36.000												---	xx						
<b>Legend</b> = Standard Penetration Test = Undisturbed Sample = Disturbed Sample = Cored Sample = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRP = Core Recovery Ratio		<b>Soil Legend</b> Silt Clay Sand Gravel Decayed Matter Granite Limestone Mudstone		Date Time Depth of Hole (m) Depth of Casing (m) Depth of Water (m)		Remarks : Cohesive Soil (N) Non Cohesive Soil (N)				Prepared by: Checked by:									

 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622				<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-33																	
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH				<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 16/12/2018	<b>Coordinates</b> N -32324.351 E -48258.341																
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 18/12/2018	<b>Reduced Level (mRL):</b> -4.8734															
<b>Date &amp; Time</b> 18/12/2018	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>						<b>Standard Penetration Test Graph</b>										
	<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Field Test / Rock Cores</b>						<b>Casing Record</b>	<b>Legend</b>	<b>Depth (m)</b>	<b>Thickness (m)</b>	<b>W G</b>	<b>Description</b>	<b>'N' Value</b> 0 10 20 30 40 50				
	36.000	[Hatched]	P14/D14				4	3	4	4	5	6	...	xx			Medium dense, light to medium grey, silty SAND	[Graph Point]					
	36.450						4	3	3	3	5	5	...	xx			-DITTO-	[Graph Point]					
	37.500	[Hatched]	P15/D15				4	3	3	3	5	5	...	xx			-DITTO-	[Graph Point]					
	37.950						4	3	3	3	5	5	...	xx			-DITTO-	[Graph Point]					
	39.000	[Hatched]	P16/D16				5	6	6	7	7	7	...	xx			-DITTO-	[Graph Point]					
	39.450						5	6	6	7	7	7	...	xx			-DITTO-	[Graph Point]					
	40.500	[Hatched]	P17/D17				7	5	6	8	9	10	...	xx		10.30	Dense, light to medium grey, silty SAND	[Graph Point]					
	40.950						7	5	6	8	9	10	...	xx		10.30	Dense, light to medium grey, silty SAND	[Graph Point]					
	42.000	[Hatched]	P18/D18				6	7	7	9	9	9	...	xx			-DITTO-	[Graph Point]					
	42.450						6	7	7	9	9	9	...	xx			-DITTO-	[Graph Point]					
	43.500	[Hatched]	P19/D19				6	7	7	8	8	11	...	xx			Dense, light to medium grey, silty SAND	[Graph Point]					
	43.950						6	7	7	8	8	11	...	xx			Dense, light to medium grey, silty SAND	[Graph Point]					
	45.000	[Hatched]	P20/D20				6	8	7	8	9	9	...	xx			Dense, light to medium grey, silty SAND	[Graph Point]					
	45.950						6	8	7	8	9	9	...	xx			Dense, light to medium grey, silty SAND	[Graph Point]					
	46.500	[Hatched]	P21/D21				9	5	4	4	4	6	...	xx		46.30	Very stiff, light to medium grey, sandy CLAY	[Graph Point]					
	46.950						9	5	4	4	4	6	...	xx		46.30	Very stiff, light to medium grey, sandy CLAY	[Graph Point]					
	48.000																	[Graph Point]					
<b>Legend</b>  = Standard Penetration Test  = Undisturbed Sample  = Disturbed Sample  = Cored Sample  = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRP = Core Recovery Ratio	<b>Soil Legend</b>  Silt  Clay  Sand  Gravel  Decayed Matter  Granite  Limestone  Mudstone	<b>Date</b> 16/12/18 16/12/18 17/12/18 17/12/18 18/12/18 18/12/18	<b>Time</b> 8:30 19:00 8:30 19:00 8:30 19:00	<b>Depth of Hole (m)</b> - 24.00 24.00 42.00 42.00 60.00	<b>Depth of Casing (m)</b> - 35.00 35.00 53.00 53.00 71.00	<b>Depth of Water (m)</b> - - - - -	<b>Remarks :</b> Cohesive Soil (N) Non Cohesive Soil (N)		<b>Prepared by:</b>	<b>Checked by:</b>													

 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622				Sheet		Borehole Ref. No.																		
				5 of 6		BH-33																		
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19				Job No.		Date Started		Coordinates																
Location : PULAU INDAH				SG/1281/2018		16/12/2018		N -32324.351																
Client		Consultant		Type of Boring		Boring Dia. (mm)		Orientation		Date Completed		Reduced Level (mRL):												
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH		100		Vertical		18/12/2018		-4.8734												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph											
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value						
							75mm	75mm	75mm	75mm	75mm	75mm							0	10	20	30	40	50
	48.000		P22/D22				4	6	6	7	7	7												
	48.450																							
	49.500		P23/D23				5	4	4	6	7	8					4.60							
	49.950																							
	51.000		P24/D24				6	6	5	6	7	7												
	51.450																							
	52.500		P25/D25				5	5	6	5	7	7												
	52.950																							
	54.000		P26/D26				4	5	5	6	6	6												
	54.450																							
	55.500		P27/D27				5	5	5	7	6	7												
	55.950																							
	57.000		P28/D28				6	6	7	6	7	7												
	57.450																							
	58.500		P29/D29				6	5	6	7	7	7												
	58.950																							
	60.000																							

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	16/12/18	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	16/12/18	19:00	24.00	35.00	-	
	= Disturbed Sample		Sand	17/12/18	8:30	24.00	35.00	-	
	= Cored Sample		Gravel	17/12/18	19:00	42.00	53.00	-	
	= Vane Shear Test		Decayed Matter	18/12/18	8:30	42.00	53.00	-	
RQD	= Rock Quality Disignation		Granite	18/12/18	19:00	60.00	71.00	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

Prepared by:		Checked by:	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622											Sheet		Borehole Ref. No.									
											6 of 6		BH-33									
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates													
Location : PULAU INDAH					SG/1281/2018		16/12/2018		N -32324.351													
Client			Consultant			Type of Boring	Boring Dia. (mm)	Orientation		Date Completed	E -48258.341											
WESTPORTS (M) DDN. BHD.			HSS INTEGRATED SDN. BHD.			ROTARY WASH	100	Vertical		18/12/2018	Reduced Level (mRL): -4.8734											
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value 0 10 20 30 40 50								
	60.000	P30/D30				6	7	7	6	7	9			---								
	60.450										29	Casing Record	Legend	Depth (m)	Thick-ness (m)							
														60.45	9.55							

Borehole terminated at depth 60.45m



**Legend**

- = Standard Penetration Test
- = Undisturbed Sample
- = Disturbed Sample
- = Cored Sample
- = Vane Shear Test
- RQD = Rock Quality Disignation
- TCR = Total Core Recovery
- CRR = Core Recovery Ratio

**Soil Legend**

- Silt
- Clay
- Sand
- Gravel
- Decayed Matter
- Granite
- Limestone
- Mudstone

Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
16/12/18	8:30	-	-	-	
16/12/18	19:00	24.00	35.00	-	
17/12/18	8:30	24.00	35.00	-	
17/12/18	19:00	42.00	53.00	-	
18/12/18	8:30	42.00	53.00	-	
18/12/18	19:00	60.00	71.00	-	

**Soil Classification Scale:**

Cohesive Soil (N)      0    2    4    8    15    30  
V.soft    Soft    M. Stiff    Stiff    V. Stiff    Hard

Non Cohesive Soil (N)      0    4    10    30    50  
V.Loose    Loose    Medium Dense    Dense    Very Dense

**Prepared by:** \_\_\_\_\_      **Checked by:** \_\_\_\_\_

<b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-34						
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 18/1/2019		<b>Coordinates</b> N -32540.592 E -47882.020									
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 20/1/2019		<b>Reduced Level (mRL):</b> -4.6708								
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph					
	Depth (m)	Test	Sample No.	TCR (m)	CRR %	RQD %	Field Test / Rock Cores							Description				
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thick-ness (m)	W G
18/1/2019	0.000						TOPSOIL						Very soft, light grey, silty CLAY					
	1.500		P1/D1				0	1	0	1	0	1	2		2.60			Very soft, light to medium grey, CLAY
	1.950						Rec: 300/450mm											
18/1/2019 10:00 (3.0m)	3.000		UD1				Rec: 800/1000mm						Top: Lght to medium grey, CLAY Bottom: DITTO					
	4.500		P2/D2				-HAMMER WEIGHT- N= 0 Rec: 310/450mm						Very soft, light to medium grey, silty CLAY					
	4.950						Rec: 900/1000mm						Top: Light to medium grey, silty CLAY Bottom: DITTO					
	6.000		UD2				-HAMMER WEIGHT- N= 0 Rec: 300/450mm						Very soft, medium grey, CLAY					
	7.500		P3/D3				Rec: 900/1000mm						Top: Light to medium grey, CLAY Bottom: DITTO					
	7.950						-HAMMER WEIGHT- N= 0 Rec: 350/450mm						Very soft, medium grey, CLAY					
	9.000		UD3				Rec: 900/1000mm						Top: Light to medium grey, CLAY Bottom: DITTO					
	10.500		P4/D4				-HAMMER WEIGHT- N= 0 Rec: 350/450mm						Very soft, medium grey, CLAY					
	10.950						Rec: 900/1000mm						Top: Light to medium grey, CLAY Bottom: DITTO					
	12.000																	

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
		18/1/19	8:30	-	-	-	OFF SHORE
		18/1/19	19:00	30.00	37.50	-	
		19/1/19	8:30	30.00	37.50	-	
		19/1/19	19:00	40.50	48.00	-	
		20/1/19	8:30	40.50	48.00	-	
RQD = Rock Quality Disignation		20/1/19	19:00	60.00	67.50	-	
TCR = Total Core Recover							

Cohesive Soil (N)	
0	30
V.soft	Hard
Soft	M. Stiff
Stiff	V. Stiff

Non Cohesive Soil (N)	
0	50
V.Loose	Very Dense
Loose	Dense
Medium Dense	






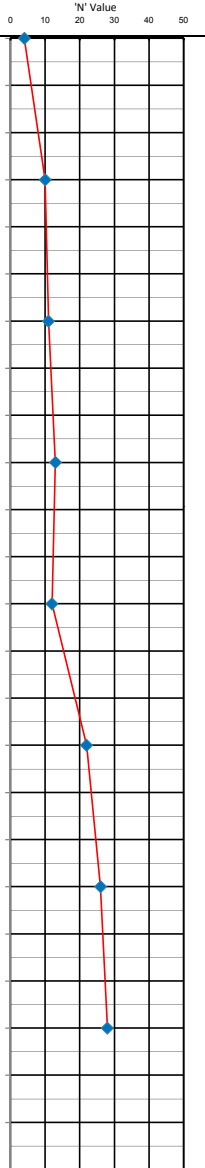
<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-34						
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH				<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 18/1/2019		<b>Coordinates</b> N -32540.592 E -47882.020										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 20/1/2019		<b>Reduced Level (mRL):</b> -4.6708									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph					
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description				
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thick-ness (m)	W G
	12.000	UD4														1.43		Top: Light to medium grey, sandy CLAY Bottom: DITTO
	13.000																	
	13.500	P5/D5				0	1	0	1	1	1							Soft, medium grey, silty CLAY
	13.950																	
	15.000	UD5																Top: Light to medium grey, silty CLAY Bottom: DITTO
	16.000																	
	16.500	P6/D6																Very soft, medium grey, silty CLAY
	16.950																	
	18.000	UD6																Top: Light to medium grey, CLAY Bottom: DITTO
	19.000																	
	19.500	P7/D7				1	1	1	1	1	1							Soft, medium grey, CLAY
	19.950																	
	21.000	UD7																Top: Light to medium grey, sandy CLAY Bottom: DITTO
	22.000																	
	22.500	P8/D8				1	1	2	1	2	3							Medium stiff, light to medium grey, CLAY
	22.950																	
	24.000																	



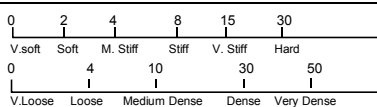














  

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	18/1/19	8:30	-	-	-	
	= Undisturbed Sample		Clay	18/1/19	19:00	30.00	37.50	-	
	= Disturbed Sample		Sand	19/1/19	8:30	30.00	37.50	-	
	= Cored Sample		Gravel	19/1/19	19:00	40.50	48.00	-	
	= Vane Shear Test		Decayed Matter	20/1/19	8:30	40.50	48.00	-	
RQD	= Rock Quality Disignation		Granite	20/1/19	19:00	60.00	67.50	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-34	
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 18/1/2019		<b>Coordinates</b> N -32540.592 E -47882.020				
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 20/1/2019		<b>Reduced Level (mRL):</b> -4.6708			
<b>Date &amp; Time</b>	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>						<b>Standard Penetration Test Graph</b> 
	<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Field Test / Rock Cores</b>	<b>Casing Record</b>	<b>Legend</b>	<b>Depth (m)</b>	<b>Thickness (m)</b>	<b>W G</b>	
19/1/2019	24.000	P9/D9				1 2 1 1 1 1	N= 4	xx ---	24.450	1.40		Soft, medium grey, clayey SILT with trace of organic matter	
	24.450					Rec : 300/450mm		xx ---					
	25.500	P10/D10				2 2 3 2 2 3	N= 10	xx ---	25.40			Stiff, medium grey, silty CLAY with traces of organic matter	
	25.950					Rec : 280/450mm		xx ---					
	27.000	P11/D11				3 2 2 3 3 3	N= 11	xx ---	3.10			-DITTO-	
	27.450					Rec : 270/450mm		xx ---					
	28.500	P12/D12				3 3 4 3 2 4	N= 13	xx ---	28.50			Stiff, medium grey, CLAY	
	28.950					Rec : 300/450mm		xx ---					
	30.000	P13/D13				3 2 3 3 3 3	N= 12	xx ---	2.95			-DOTTO-	
	30.450					Rec : 270/450mm		xx ---					
	31.500	P14/D14				5 4 5 5 6 6	N= 22	xx ---	31.45			Very stiff, medium grey, sandy CLAY	
	31.950					Rec : 250/450mm		xx ---		1.45			
	33.000	P15/D15				5 6 6 7 6 7	N= 26	xx ---	32.90			Medium dense, medium grey, clayey fine grain SAND	
	33.450					Rec : 270/450mm		xx ---					
	34.500	P16/D16				4 6 7 6 7 8	N= 28	xx ---				Medium dense, medium grey, very clayey SAND	
	34.950					Rec : 270/450mm		xx ---					
36.000							xx ---						


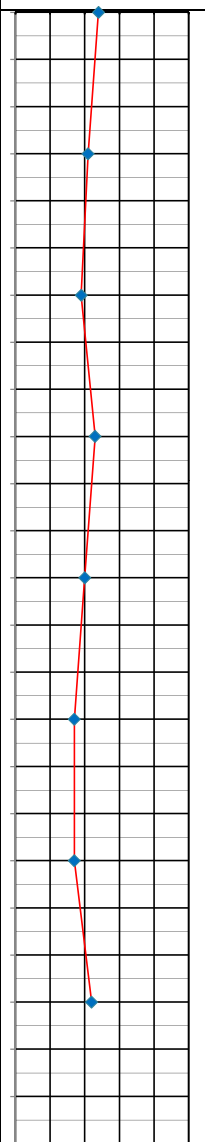
<b>Legend</b>		<b>Soil Legend</b>		<b>Date</b>		<b>Time</b>		<b>Depth of Hole (m)</b>		<b>Depth of Casing (m)</b>		<b>Depth of Water (m)</b>		<b>Remarks :</b>	
 = Standard Penetration Test		 Silt		18/1/19		8:30		-		-		-			
 = Undisturbed Sample		 Clay		18/1/19		19:00		30.00		37.50		-			
 = Disturbed Sample		 Sand		19/1/19		8:30		30.00		37.50		-			
 = Cored Sample		 Gravel		19/1/19		19:00		40.50		48.00		-			
 = Vane Shear Test		 Decayed Matter		20/1/19		8:30		40.50		48.00		-			
 RQD = Rock Quality Disignation		 Granite		20/1/19		19:00		60.00		67.50		-			
 TCR = Total Core Recovery		 Limestone													
 CRP = Core Recovery Ratio		 Mudstone													

Prepared by: \_\_\_\_\_ Checked by: \_\_\_\_\_



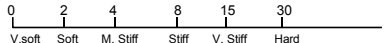
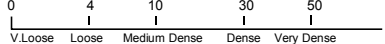














<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-34										
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 18/1/2019		<b>Coordinates</b> N -32540.592 E -47882.020													
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 20/1/2019		<b>Reduced Level (mRL):</b> -4.6708												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description								
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	N Value			
20/1/2019	36.000	P17/D17					6	7	6	8	8	9	---	---							Dense, medium grey, clayey fine grain SAND with trace of organic matter	0 10 20 30 40 50
	36.450						Rec : 240/450mm	N= 31														
	37.500	P18/D18					7	6	7	9	9	8	---	---						Dense, medium grey, clayey fine grain SAND		
	37.950						Rec : 250/450mm	N= 33														
	39.000	P19/D19					6	7	6	8	7	10	---	---						Dense, medium grey, very clayey SAND		
	39.450						Rec : 200/450mm	N= 31														
	40.500	P20/D20					6	6	7	8	8	8	---	---						-DITTO-		
	40.950						Rec : 230/450mm	N= 31														
	42.000	P21/D21					5	5	4	5	6	6	xx	xx						Very stiff, light to medium grey, silty CLAY		
	42.450						Rec : 300/450mm	N= 21														
	43.500	P22/D22					5	6	5	5	6	7	xx	xx						Very stiff, light to medium grey, silty CLAY		
	43.950						Rec : 270/450mm	N= 23														
45.000	P23/D23					6	5	6	6	7	6	---	---						Very stiff, light to medium grey, CLAY			
45.950						Rec : 230/450mm	N= 25															
46.500	P24/D24					5	5	4	5	6	6	---	---						-DITTO-			
46.950						Rec : 270/450mm	N= 21															
48.000																						

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	18/1/19	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	18/1/19	19:00	30.00	37.50	-	
	= Disturbed Sample		Sand	19/1/19	8:30	30.00	37.50	-	
	= Cored Sample		Gravel	19/1/19	19:00	40.50	48.00	-	
	= Vane Shear Test		Decayed Matter	20/1/19	8:30	40.50	48.00	-	
	RQD = Rock Quality Disignation		Granite	20/1/19	19:00	60.00	67.50	-	
	TCR = Total Core Recovery		Limestone						Prepared by:
	CRR = Core Recovery Ratio		Mudstone						Checked by:


 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-34	
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 18/1/2019		<b>Coordinates</b> N -32540.592 E -47882.020				
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 20/1/2019		<b>Reduced Level (mRL):</b> -4.6708			
<b>Date &amp; Time</b>	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>					<b>Standard Penetration Test Graph</b> 	
	<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Casing Record</b>	<b>Legend</b>	<b>Depth (m)</b>	<b>Thick-ness (m)</b>	<b>W G</b>		<b>Description</b>
48.000	P25/D25	5	6	6	5	6	7	24				-DITTO-	
48.450						Rec : 250/450mm							
49.500	P26/D26	4	5	4	5	6	6	21				-DITTO-	
49.950						Rec : 250/450mm							
51.000	P27/D27	5	4	5	5	5	4	19		8.94		-DITTO-	
51.450						Rec : 280/450mm							
52.500	P28/D28	5	4	6	5	6	6	23				Very stiff, medium grey, CLAY with traces of organic matter	
52.950						Rec : 300/450mm							
54.000	P29/D29	5	4	5	4	5	6	20		53.94		Very stiff, light to medium grey, sandy CLAY	
54.450						Rec : 270/450mm				1.48			
55.500	P30/D30	6	5	4	5	4	4	17				Very stiff, light to medium grey, CLAY	
55.950						Rec : 280/450mm							
57.000	P31/D31	7	5	6	6	5	6	17				-DITTO-	
57.450						Rec : 250/450mm							
58.500	P32/D32	4	5	6	6	5	5	22				-DITTO-	
58.950						Rec : 230/450mm							
60.000													

<b>Legend</b>		<b>Soil Legend</b>		<b>Date</b>		<b>Time</b>		<b>Depth of Hole (m)</b>		<b>Depth of Casing (m)</b>		<b>Depth of Water (m)</b>		<b>Remarks :</b>	
 = Standard Penetration Test		 Silt		18/1/19		8:30		-		-		-		Cohesive Soil (N)  V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N)  V.Loose Loose Medium Dense Dense Very Dense	
 = Undisturbed Sample		 Clay		18/1/19		19:00		30.00		37.50		-			
 = Disturbed Sample		 Sand		19/1/19		8:30		30.00		37.50		-			
 = Cored Sample		 Gravel		19/1/19		19:00		40.50		48.00		-			
 = Vane Shear Test		 Decayed Matter		20/1/19		8:30		40.50		48.00		-			
 RQD = Rock Quality Disignation		 Granite		20/1/19		19:00		60.00		67.50		-			
 TCR = Total Core Recovery		 Limestone													
 CRP = Core Recovery Ratio		 Mudstone													

<b>Prepared by:</b>		<b>Checked by:</b>	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.							
										6 of 6		BH-34							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates										
Location : PULAU INDAH					SG/1281/2018		18/1/2019		N -32540.592										
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47882.020									
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		20/1/2019		Reduced Level (mRL): -4.6708									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description					
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	
	60.000	P33/D33					5	5	4	6	5	5				5.03			Very stiff, light to medium grey, CLAY
	60.450							Rec : 270/450mm											
																			<i>Borehole terminated at depth 60.45m</i>


  

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	18/1/19	8:30	-	-	-	Cohesive Soil (N) V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	18/1/19	19:00	30.00	37.50	-	
	= Disturbed Sample		Sand	19/1/19	8:30	30.00	37.50	-	
	= Cored Sample		Gravel	19/1/19	19:00	40.50	48.00	-	
	= Vane Shear Test		Decayed Matter	20/1/19	8:30	40.50	48.00	-	
RQD	= Rock Quality Disignation		Granite	20/1/19	19:00	60.00	67.50	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

<b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-35					
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 13/1/2019		<b>Coordinates</b> N -32761.699 E -47509.342								
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 15/1/2019		<b>Reduced Level (mRL):</b> -4.5816							
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph N' Value 0 10 20 30 40 50				
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Depth (m)	Thickness (m)	W G	Description
13/1/2019	0.000						TOPSOIL						0.30	0.30		Very soft, light grey, silty CLAY	
13/1/2019 10:00 (1.5m)	1.500		P1/D1				0	1	0	1	1	1	3	9.10			Soft, light to medium grey, silty CLAY
	1.950						Rec: 300/450mm										
	3.000		UD1											2.97			Top: Medium grey, very clayey SAND Bottom: DITTO
	4.000						Rec: 910/1000mm							1.46			
	4.500		P2/D2				1	0	1	0	1	0	2	4.43			Very soft, light to medium grey, silty CLAY
	4.950						Rec: 300/450mm										
	6.000		UD2											4.52			Top: Light to medium grey, silty CLAY Bottom: DITTO
	7.000						Rec: 850/1000mm										
	7.500		P3/D3										0	8.95			Very soft, light to medium grey, silty CLAY
	7.950						-HAMMER WEIGHT- Rec: 350/450mm										
	9.000		UD3											9.40	0.45		Top: Light to medium grey, very clayey SAND Bottom: Light to medium grey, CLAY
	10.000						Rec: 900/1000mm							1.03			
	10.500		P4/D4				0	1	0	1	0	1	2	10.43			Very soft, medium grey, silty CLAY
	10.950						Rec: 300/450mm										
	12.000																
<b>Legend</b>		<b>Soil Legend</b>		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :								
	= Standard Penetration Test		Silt	13/1/19	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense								
	= Undisturbed Sample		Clay	13/1/19	19:00	27.00	36.00	-									
	= Disturbed Sample		Sand	14/1/19	8:30	27.00	36.00	-									
	= Cored Sample		Gravel	14/1/19	19:00	39.00	48.00	-									
	= Vane Shear Test		Decayed Matter	15/1/19	8:30	39.00	48.00	-									
RQD	= Rock Quality Disignation		Granite	15/1/19	19:00	60.00	69.00	-									
TCR	= Total Core Recovery		Limestone														





 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.												
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19										Job No.		Date Started		Coordinates										
Location : PULAU INDAH										SG/1281/2018		13/1/2019		N -32761.699										
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		Reduced Level (mRL):														
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		15/1/2019		-4.5816														
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph											
Date & Time	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores						Casing Record	Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value					
							75mm	75mm	75mm	75mm	75mm	75mm							0	10	20	30	40	50
	12.000	UD4					Rec : 920/1000mm							xx				Top: Light to medium grey, silty CLAY						
	13.000													xx				Bottom: DITTO						
	13.500	P5/D5					-HAMMER WEIGHT- N=0 Rec : 300/450mm							xx	4.53			Very soft, light to medium grey, silty CLAY						
	13.950													xx										
	15.000	UD5					Rec : 910/1000mm							xx				Top: Light to medium grey, CLAY						
	16.000													xx				Bottom: Light to medium grey, CLAY						
	16.500													xx										
	16.950	P6/D6				1	1	1	1	1	0		xx				Soft, light to medium grey, silty CLAY							
	16.950						Rec : 320/450mm N=3							xx										
	18.000	UD6					Rec : 900/1000mm							xx				Top: Light to medium grey, silty CLAY						
	19.000													xx				Bottom: DITTO						
	19.500													xx										
	19.950	P7/D7				1	1	1	1	1	1		xx				Soft, light to medium grey, CLAY							
	19.950						Rec : 350/450mm N=4							xx										
	21.000	UD7					Rec : 870/1000mm							xx				Top: Light to medium grey, CLAY						
	22.000													xx				Bottom: DITTO						
	22.500													xx										
	22.950	P8/D8				1	0	1	1	2	2		xx				Medium stiff, light to medium grey, silty CLAY							
	22.950						Rec : 300/450mm N=6							xx										
	24.000													xx										

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	13/1/19	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	13/1/19	19:00	27.00	36.00	-	
	= Disturbed Sample		Sand	14/1/19	8:30	27.00	36.00	-	
	= Cored Sample		Gravel	14/1/19	19:00	39.00	48.00	-	
	= Vane Shear Test		Decayed Matter	15/1/19	8:30	39.00	48.00	-	
	RQD = Rock Quality Disignation		Granite	15/1/19	19:00	60.00	69.00	-	
	TCR = Total Core Recovery		Limestone						
	CRP = Core Recovery Ratio		Mudstone						

Prepared by:		Checked by:	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-35																					
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 13/1/2019		<b>Coordinates</b> N -32761.699 E -47509.342																								
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 15/1/2019		<b>Reduced Level (mRL):</b> -4.5816																								
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50																				
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Depth (m)	Thickness (m)	W G	Description																
14/1/2019	24.000	P9/D9					2	2	1	2	2	3	N=8	Casing Record	Legend	24.000	2.99		-DITTO-														
	24.450						2	2	1	2	2	3								Rec : 270/450mm	25.42												
	25.500	P10/D10					2	2	3	3	5	3	N=14			25.500	1.56		Stiff, medium to dark grey, sandy CLAY														
	25.950						2	2	3	3	5	3								Rec : 310/450mm	26.98												
	27.000	P11/D11					3	2	3	3	2	3	N=11			27.000			Stiff, light to medium grey, silty CLAY														
	27.450						3	2	3	3	2	3								Rec : 270/450mm	28.500												
	28.500	P12/D12					1	1	2	1	1	1	N=5			28.500	4.50		-DOTTO-														
	28.950						1	1	2	1	1	1								Rec : 320/450mm	30.000												
	30.000	P13/D13					1	1	2	1	1	1	N=5			30.000			-DOTTO-														
	30.450						1	1	2	1	1	1								Rec : 320/450mm	31.48												
31.500	P14/D14					2	1	2	1	2	2	N=7			31.500	1.48		Medium dense, medium to dark grey, very clayey SAND															
31.950						2	1	2	1	2	2								Rec : 290/450mm	32.96													
33.000	P15/D15					6	5	6	7	9	9	N=31			32.96			Dense, medium to dark grey, silty fine grain SAND															
33.450						6	5	6	7	9	9								Rec : 270/450mm														
34.500	P16/D16					5	6	5	6	8	9	N=28			34.500			Medium dense, light to medium grey, silty fine grain SAND															
34.950						5	6	5	6	8	9								Rec : 250/450mm														
36.000																																	
<b>Legend</b> = Standard Penetration Test = Undisturbed Sample = Disturbed Sample = Cored Sample = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRP = Core Recovery Ratio										<b>Soil Legend</b> Silt Clay Sand Gravel Decayed Matter Granite Limestone Mudstone										Date 13/1/19 8:30 13/1/19 19:00 14/1/19 8:30 14/1/19 19:00 15/1/19 8:30 15/1/19 19:00		Time 8:30 19:00 8:30 19:00 8:30 19:00		Depth of Hole (m) - 27.00 27.00 39.00 39.00 60.00		Depth of Casing (m) - 36.00 36.00 48.00 48.00 69.00		Depth of Water (m) - - - - -		Remarks : Cohesive Soil (N) V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) V.Loose Loose Medium Dense Dense Very Dense		Prepared by: _____ Checked by: _____	

<b>STRATA GEOTECHNICS SDN. BHD.</b> (Co. No. 393744T) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-35								
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 13/1/2019		<b>Coordinates</b> N -32761.699 E -47509.342											
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 15/1/2019		<b>Reduced Level (mRL):</b> -4.5816										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph							
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value 0 10 20 30 40 50						
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	
15/1/2019	36.000		P17/D17				6	5	5	6	7	10	---	xx				-DITTO-		
	36.450						Rec : 250/450mm						---	xx						
	37.500		P18/D18				6	7	7	9	8	9	---	xx		7.52		Dense, medium grey, silty fine grain SAND with trace of organic matter		
	37.950						Rec : 270/450mm						---	xx						
	39.000		P19/D19				7	6	7	9	10	10	---	xx				Dense, medium grey, silty fine grain SAND		
	39.450						Rec : 270/450mm						---	xx						
	40.500		P20/D20				5	5	4	5	6	6	---	---		1.44		Medium dense, light to medium grey, very clayey SAND		
	40.950						Rec : 300/450mm						---	---						
	42.000		P21/D21				4	3	4	3	3	5	---	xx		41.92		Stiff, light to medium grey, silty CLAY		
	42.450						Rec : 310/450mm						---	xx						
43.500		P22/D22				3	4	4	3	4	5	---	xx		2.93		Very stiff, light to medium grey, silty CLAY			
43.950						Rec : 290/450mm						---	xx							
45.000		P23/D23				4	5	4	5	4	4	---	---				Very stiff, light to medium grey, CLAY			
45.950						Rec : 300/450mm						---	---							
46.500		P24/D24				3	5	5	4	5	6	---	---				Very stiff, medium to dark grey, CLAY with trace of peats			
46.950						Rec : 270/450mm						---	---							
48.000												---	---							

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	xxxx xxx	13/1/19	8:30	-	-	-	Cohesive Soil (N) V.soft   Soft   M. Stiff   Stiff   V. Stiff   Hard Non Cohesive Soil (N) V.Loose   Loose   Medium Dense   Dense   Very Dense
	-----	13/1/19	19:00	27.00	36.00	-	
	.....	14/1/19	8:30	27.00	36.00	-	
	oooo oooo	14/1/19	19:00	39.00	48.00	-	
	oooo oooo	15/1/19	8:30	39.00	48.00	-	
RQD = Rock Quality Disignation	++++ ++	15/1/19	19:00	60.00	69.00	-	
TCR = Total Core Recovery	++++ ++						Prepared by:
CRR = Core Recovery Ratio	++++ ++						Checked by:

STRATA GEOTECHNICS SDN. BHD. (Co. No. 393744T) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622				Sheet 5 of 6		Borehole Ref. No. BH-35																																					
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19				Job No. SG/1281/2018		Date Started 13/1/2019	Coordinates N -32761.699 E -47509.342																																				
Location : PULAU INDAH				Type of Boring ROTARY WASH		Date Completed 15/1/2019	Reduced Level (mRL): -4.5816																																				
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation																																					
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical																																					
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS				Standard Penetration Test Graph 'N' Value 0 10 20 30 40 50																																
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Description																															
						75mm	75mm	75mm	75mm	75mm	75mm		Casing Record	Legend	Depth (m)	Thick-ness (m)	W G																										
48.000		P25/D25				5	4	5	5	6	6																																
48.450						Rec : 250/450mm																																					
49.500		P26/D26				3	5	5	7	6	6																																
49.950						Rec : 250/450mm																																					
51.000		P27/D27				3	3	3	5	5	6				9.11																												
51.450						Rec : 270/450mm																																					
52.500		P28/D28				4	5	4	5	5	6																																
52.950						Rec : 270/450mm																																					
54.000		P29/D29				4	3	4	5	5	6			53.96																													
54.450						Rec : 300/450mm					xx																																
55.500		P30/D30				3	3	5	4	5	5				4.48																												
55.950						Rec : 270/450mm					xx																																
57.000		P31/D31				5	4	5	5	6	6																																
57.450						Rec : 250/450mm					xx																																
58.500		P32/D32				6	5	6	7	7	9				1.56																												
58.950						Rec : 250/450mm					xx																																
60.000														60.00																													
<b>Legend</b> = Standard Penetration Test = Undisturbed Sample = Disturbed Sample = Cored Sample = Vane Shear Test RQD = Rock Quality Disignation TCR = Total Core Recovery CRR = Core Recovery Ratio																																											
<b>Soil Legend</b> Silt Clay Sand Gravel Decayed Matter Granite Limestone Mudstone																																											
Date		Time		Depth of Hole (m)		Depth of Casing (m)		Depth of Water (m)		Remarks :																																	
13/1/19		8:30		-		-		-																																			
13/1/19		19:00		27.00		36.00		-																																			
14/1/19		8:30		27.00		36.00		-																																			
14/1/19		19:00		39.00		48.00		-																																			
15/1/19		8:30		39.00		48.00		-																																			
15/1/19		19:00		60.00		69.00		-																																			
<table border="0" style="width: 100%;"> <tr> <td>Cohesive Soil (N)</td> <td>0</td><td>2</td><td>4</td><td>8</td><td>15</td><td>30</td> </tr> <tr> <td></td> <td>V.soft</td><td>Soft</td><td>M. Stiff</td><td>Stiff</td><td>V. Stiff</td><td>Hard</td> </tr> <tr> <td>Non Cohesive Soil (N)</td> <td>0</td><td>4</td><td>10</td><td>30</td><td>50</td> </tr> <tr> <td></td> <td>V.Loose</td><td>Loose</td><td>Medium Dense</td><td>Dense</td><td>Very Dense</td> </tr> </table>																		Cohesive Soil (N)	0	2	4	8	15	30		V.soft	Soft	M. Stiff	Stiff	V. Stiff	Hard	Non Cohesive Soil (N)	0	4	10	30	50		V.Loose	Loose	Medium Dense	Dense	Very Dense
Cohesive Soil (N)	0	2	4	8	15	30																																					
	V.soft	Soft	M. Stiff	Stiff	V. Stiff	Hard																																					
Non Cohesive Soil (N)	0	4	10	30	50																																						
	V.Loose	Loose	Medium Dense	Dense	Very Dense																																						
Prepared by:										Checked by:																																	

							<b>Sheet</b> 6 of 6		<b>Borehole Ref. No.</b> BH-35											
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 13/1/2019		<b>Coordinates</b> N -32761.699 E -47509.342											
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 15/1/2019		<b>Reduced Level (mRL):</b> -4.5816										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph							
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Casing Record	Legend	Depth (m)	Thick-ness (m)	W	G	Description
						75mm	75mm	75mm	75mm	75mm	75mm	75mm								
	60.000	P32/D32				7	6	7	7	8	10			60.45	0.45					
	60.450																			

**Legend**  
 = Standard Penetration Test  
 = Undisturbed Sample  
 = Disturbed Sample  
 = Cored Sample  
 = Vane Shear Test  
 RQD = Rock Quality Disignation  
 TCR = Total Core Recovery  
 CRP = Core Recovery Ratio

**Soil Legend**  
 Silt  
 Clay  
 Sand  
 Gravel  
 Decayed Matter  
 Granite  
 Limestone  
 Mudstone

Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)
13/1/19	8:30	-	-	-
13/1/19	19:00	27.00	36.00	-
14/1/19	8:30	27.00	36.00	-
14/1/19	19:00	39.00	48.00	-
15/1/19	8:30	39.00	48.00	-
15/1/19	19:00	60.00	69.00	-

**Remarks :**

Dense, dark grey, very clayey SAND


**Borehole terminated at depth 60.45m**

Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard		
Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense		

**Prepared by:** \_\_\_\_\_ **Checked by:** \_\_\_\_\_

<b>STRATA GEOTECHNICS SDN. BHD. (Co. No. 393744T)</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-36					
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 13/1/2019		<b>Coordinates</b> N -32920.819 E -47231.808								
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 16/1/2019		<b>Reduced Level (mRL):</b> -4.8864							
<b>Date &amp; Time</b>	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>					<b>Standard Penetration Test Graph</b>					
	<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Field Test / Rock Cores</b>					<b>Depth (m)</b>	<b>Thickness (m)</b>	<b>W G</b>	<b>Description</b>	<b>N' Value</b>	
13/1/2019	0.000						TOPSOIL					0.30	0.30		Very soft, light grey, silty CLAY		
14/1/2019 11:00 (1.5m)	1.500		P1/D1			0	1	0	1	1			2.68			Soft, medium grey, clayey SILT with some of organic matter	
	1.950												2.98				
	3.000		UD1										1.45			Top: Light to medium grey, silty CLAY Bottom: DITTO	
	4.000												4.43				
	4.500		P2/D2			0	1	0	1	0			1.54			Ver soft, light to medium grey, clayey SILT	
	4.950												5.97				
	6.000		UD2										2.99			Top: Light to medium grey, silty CLAY Bottom: DITTO	
	7.000												8.96				
	7.500		P3/D3										9.33	0.37		Top: Light to medium grey, sandy CLAY Bottom: Light to medium grey, silty CLAY	
	7.950																
	9.000		UD3														
	10.000																
	10.500		P4/D4														
	10.950																
	12.000																
<b>Legend</b>		<b>Soil Legend</b>		<b>Date</b>	<b>Time</b>	<b>Depth of Hole (m)</b>	<b>Depth of Casing (m)</b>	<b>Depth of Water (m)</b>	<b>Remarks :</b>								
	= Standard Penetration Test		Silt	13/1/19	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense								
	= Undisturbed Sample		Clay	13/1/19	19:00	24.00	33.00	-									
	= Disturbed Sample		Sand	14/1/19	8:30	24.00	33.00	-									
	= Cored Sample		Gravel	14/1/19	19:00	42.00	51.00	-									
	= Vane Shear Test		Decayed Matter	16/1/19	8:30	42.00	51.00	-									
<b>RQD</b>	= Rock Quality Disignation		Granite	16/1/19	19:00	60.00	69.00	-									
<b>TCR</b>	= Total Core Recovery		Limestone														



 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-36							
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 13/1/2019		<b>Coordinates</b> N -32920.819 E -47231.808										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 16/1/2019		<b>Reduced Level (mRL):</b> -4.8864									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS					Standard Penetration Test Graph							
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value	
							75mm	75mm	75mm	75mm	75mm	75mm							0 10 20 30 40 50
	12.000		UD4				Rec : 890/1000mm						xx			Top: Light to medium grey, silty CLAY			
	13.000												xx			Bottom: DITTO			
	13.500		P5/D5				-HAMMER WEIGHT- N= 0 Rec : 350/450mm						xx	5.66		Very soft, medium spotted dark grey, silty CLAY			
	13.950												xx						
	15.000		UD5				Rec : 900/1000mm						xx			Top: Light to medium grey, CLAY			
	16.000												xx	1.49		Bottom: DITTO			
	16.500		P6/D6			0	1	0	1	1	1	1		xx			Soft, light to medium grey, silty CLAY	◆	
	16.950						Rec : 300/450mm						xx						
	18.000		UD6				Rec : 900/1000mm						xx			Top: Medium grey, silty CLAY			
	19.000												xx	4.52		Bottom: DITTO			
	19.500		P7/D7			0	1	1	0	1	1	1		xx			Soft, Light to medium grey, silty CLAY	◆	
	19.950						Rec : 330/450mm						xx						
	21.000		UD7				Rec : 750/1000mm						xx			Top: Light to medium grey, sandy CLAY			
	22.000												xx	1.46		Bottom: DITTO			
	22.500		P8/D8			1	2	1	2	2	1	6		xx			Medium stiff, light to medium grey, silty CLAY	◆	
	22.950						Rec : 300/450mm						xx	1.54					
	24.000												xx						

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	13/1/19	8:30	-	-	-	
	= Undisturbed Sample		Clay	13/1/19	19:00	24.00	33.00	-	
	= Disturbed Sample		Sand	14/1/19	8:30	24.00	33.00	-	
	= Cored Sample		Gravel	14/1/19	19:00	42.00	51.00	-	
	= Vane Shear Test		Decayed Matter	16/1/19	8:30	42.00	51.00	-	
RQD	= Rock Quality Disignation		Granite	16/1/19	19:00	60.00	69.00	-	
TCR	= Total Core Recovery		Limestone						
CRP	= Core Recovery Ratio		Mudstone						


<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-36					
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 13/1/2019		<b>Coordinates</b> N -32920.819 E -47231.808								
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 16/1/2019		<b>Reduced Level (mRL):</b> -4.8864							
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  'N' Value 0 10 20 30 40 50				
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Depth (m)	Thickness (m)	W/G	Description
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record				
14/1/2019	24.000	UD8					Rec : 910/1000mm										
	25.000																Bottom: DITTO
	25.500																
	25.950	P9/D9					1	1	1	2	2	2					Medium stiff, light to medium grey, silty CLAY
							Rec : 350/450mm										
	27.000																
	27.450	P10/D10					2	1	2	2	2	2					Medium stiff, light to medium grey, CLAY
							Rec : 300/450mm										
	28.500																
	28.950	P11/D11					4	5	5	6	6	6					Very stiff, medium to dark grey, sandy CLAY
							Rec : 250/450mm										
	30.000																
	30.450	P12/D12					5	4	4	5	4	6					-DITTO-
							Rec : 280/450mm										
	31.500																
31.950	P13/D13					5	5	6	5	6	7					Medium dense, medium to dark grey, very clayey SAND	
						Rec : 230/450mm											
33.000																	
33.450	P14/D14					5	5	6	6	6	6					Medium dense, light to medium grey, silty fine grain SAND	
						Rec : 230/450mm											
34.500																	
34.950	P15/D15					5	4	6	7	6	7					-DITTO-	
						Rec : 200/450mm											
36.000																	

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	13/1/19	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	13/1/19	19:00	24.00	33.00	-	
	= Disturbed Sample		Sand	14/1/19	8:30	24.00	33.00	-	
	= Cored Sample		Gravel	14/1/19	19:00	42.00	51.00	-	
	= Vane Shear Test		Decayed Matter	16/1/19	8:30	42.00	51.00	-	
	RQD = Rock Quality Disignation		Granite	16/1/19	19:00	60.00	69.00	-	
	TCR = Total Core Recovery		Limestone						
	CRR = Core Recovery Ratio		Mudstone						

 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-36							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 13/1/2019		<b>Coordinates</b> N -32920.819 E -47231.808										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 16/1/2019		<b>Reduced Level (mRL):</b> -4.8864									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value					
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description
16/1/2019	36.000	P16/D16					6	6	5	7	9	9	...	xx	37.44	1.44		Medium dense, light to medium grey, very clayey SAND	0
	36.450						Rec : 200/450mm	N=30	...	xx									
	37.500	P17/D17					6	7	7	8	8	11	...	xx	38.98	1.54		Dense, medium grey, silty fine grain SAND	10
	37.950						Rec : 180/450mm	N=39	...	xx									
	39.000	P18/D18					7	6	6	8	10	10	...	xx	40.42	1.44		Dense, medium grey, very clayey SAND	20
	39.450						Rec : 200/450mm	N=34	...	xx									
	40.500	P19/D19					4	5	5	5	6	6	...	xx	43.48	3.06		Very stiff, medium grey, sandy CLAY	30
	40.950						Rec : 300/450mm	N=22	...	xx									
	42.000	P20/D20					3	3	4	4	3	4	...	xx	44.48	3.06		Stiff, medium grey, sandy CLAY	40
	42.450						Rec : 350/450mm	N=15	...	xx									
43.500	P21/D21					3	3	4	3	5	4	...	xx	45.48	1.54		Very stiff, light to medium grey, silty CLAY	50	
43.950						Rec : 280/450mm	N=16	...	xx										
45.000	P22/D22					3	3	4	3	4	4	...	xx	46.48	1.54		Stiff, light to medium grey, silty CLAY with traces of organic matter	60	
45.950						Rec : 300/450mm	N=15	...	xx										
46.500	P23/D23					4	5	5	4	5	5	...	xx	47.48	1.54		Very stiff, light to medium grey, silty CLAY	70	
46.950						Rec : 310/450mm	N=19	...	xx										
48.000																			

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	13/1/19	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	13/1/19	19:00	24.00	33.00	-	
	= Disturbed Sample		Sand	14/1/19	8:30	24.00	33.00	-	
	= Cored Sample		Gravel	14/1/19	19:00	42.00	51.00	-	
	= Vane Shear Test		Decayed Matter	16/1/19	8:30	42.00	51.00	-	
	RQD = Rock Quality Disignation		Granite	16/1/19	19:00	60.00	69.00	-	
	TCR = Total Core Recovery		Limestone						
	CRR = Core Recovery Ratio		Mudstone						

Prepared by:		Checked by:	
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

STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )										Sheet		Borehole Ref. No.								
No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										5 of 6		BH-36								
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates											
Location : PULAU INDAH					SG/1281/2018		13/1/2019		N -32920.819											
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47231.808										
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		16/1/2019		Reduced Level (mRL): -4.8864										
Date & Time	SAMPLE / INSITU TEST					SOIL / STRATUM DETAILS					Standard Penetration Test Graph									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores						'N' Value							
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record	Legend	Depth (m)	Thick-ness (m)	W G	Description		0 10 20 30 40 50
	48.000	[Symbol]	P24/D24				3	5	4	4	4	4		xx	49.42	5.94		Very stiff, light to medium grey, silty CLAY		
	48.450													xx						
	49.500	[Symbol]	P25/D25				4	5	5	3	6	6		xx				Very stiff, light to medium grey, sandy CLAY		
	49.950													xx						
	51.000	[Symbol]	P26/D26				3	4	5	5	4	4		xx				-DITTO-		
	51.450													xx						
	52.500	[Symbol]	P27/D27				4	3	4	5	5	6		xx				Very stiff, medium grey, CLAY with trace of organic matter		
	52.950													xx						
	54.000	[Symbol]	P28/D28				3	2	3	4	3	4		xx				Stiff, medium grey, silty CLAY		
	54.450													xx						
	55.500	[Symbol]	P29/D29				5	5	6	6	7	6		xx				Medium dense, medium grey, clayey fine grain SAND		
	55.950													xx						
	57.000	[Symbol]	P30/D30				4	5	5	6	5	7		xx				Medium dense, medium to dark grey, clayey fine grain SAND		
	57.450													xx						
	58.500	[Symbol]	P31/D31				6	5	6	6	7	7		xx				-DITTO-		
	58.950													xx						
	60.000													xx						














Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
[Symbol]	= Standard Penetration Test	[Symbol]	Silt	13/1/19	8:30	-	-	-	
[Symbol]	= Undisturbed Sample	[Symbol]	Clay	13/1/19	19:00	24.00	33.00	-	
[Symbol]	= Disturbed Sample	[Symbol]	Sand	14/1/19	8:30	24.00	33.00	-	
[Symbol]	= Cored Sample	[Symbol]	Gravel	14/1/19	19:00	42.00	51.00	-	
[Symbol]	= Vane Shear Test	[Symbol]	Decayed Matter	16/1/19	8:30	42.00	51.00	-	
RQD	= Rock Quality Disignation	[Symbol]	Granite	16/1/19	19:00	60.00	69.00	-	
TCR	= Total Core Recovery	[Symbol]	Limestone						
CRR	= Core Recovery Ratio	[Symbol]	Mudstone						

Cohesive Soil (N)		Non Cohesive Soil (N)	
0    2    4    8    15    30 V.soft   Soft   M. Stiff   Stiff   V. Stiff   Hard		0    4    10    30    50 V.Loose   Loose   Medium Dense   Dense   Very Dense	
Prepared by:		Checked by:	

 <b>STRATA GEOTECHNICS SDN. BHD.</b> (Co. No. 393744T) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622												Sheet		Borehole Ref. No.										
												6 of 6		BH-36										
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19						Job No.		Date Started		Coordinates														
Location : PULAU INDAH						SG/1281/2018		13/1/2019		N -32920.819														
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47231.808														
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		16/1/2019		Reduced Level (mRL): -4.8864														
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph											
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value										
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	0	10	20	30	40
	60.000		P32/D32				5	6	7	6	7	7		---				Medium dense, medium to dark grey, very clayey SAND						
	60.450								Rec : 250/450mm N= 27															
																		<b>Borehole terminated at depth 60.45m</b>						

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	13/1/19	8:30	-	-	-	
	= Undisturbed Sample		Clay	13/1/19	19:00	24.00	33.00	-	
	= Disturbed Sample		Sand	14/1/19	8:30	24.00	33.00	-	
	= Cored Sample		Gravel	14/1/19	19:00	42.00	51.00	-	
	= Vane Shear Test		Decayed Matter	16/1/19	8:30	42.00	51.00	-	
RQD	= Rock Quality Disignation		Granite	16/1/19	19:00	60.00	69.00	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

Cohesive Soil (N)		0	2	4	8	15	30
Non Cohesive Soil (N)		0	4	10	30	50	
		V. Soft	Soft	M. Stiff	Stiff	V. Stiff	Hard
		V. Loose	Loose	Medium Dense	Dense	Very Dense	

<b>Prepared by:</b>	<b>Checked by:</b>
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<b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-37										
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 17/1/2019		<b>Coordinates</b> N -33086.796 E -47693.226													
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 19/1/2019		<b>Reduced Level (mRL):</b> -6.2317												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Depth (m)		Thickness (m)	W G	Description						
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record	Legend								
17/1/2019	0.000						TOPSOIL						0.30	0.30		Very soft, light grey, silty CLAY						
	1.500		P1/D1				1	1	1	1	1					2.63			Very loose, light grey, clayey SAND			
	1.950						Rec: 240/450mm															
	3.000		P2/D2				2	1	1	2	1					2.93			Loose, brownish grey, silty coarse grain SAND			
	3.450						Rec: 200/450mm															
	4.500		P3/D3				1	2	2	2	2					4.47			Loose, medium grey, very clayey SAND			
	4.950						Rec: 210/450mm															
	6.000		P4/D4				1	2	1	2	2								-DITTO-			
	6.450						Rec: 250/450mm															
	7.500		P5/D5				1	2	2	2	2					6.01			Loose, medium grey, clayey fine grain SAND			
	7.950						Rec: 280/450mm															
	9.000		P6/D6				1	2	3	3	2								Medium dense, medium grey, very clayey SAND with trace of organic matter			
	10.000						Rec: 230/450mm															
	10.500		P7/D7				1	1	1	2	1					10.48			Loose, medium grey, silty coarse grain SAND			
	10.950						Rec: 190/450mm															
	12.000																					

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	17/1/19	8:30	-	-	-	OFF SHORE
	= Undisturbed Sample		Clay	17/1/19	19:00	27.00	37.50	-	
	= Disturbed Sample		Sand	18/1/19	8:30	27.00	37.50	-	
	= Cored Sample		Gravel	18/1/19	19:00	48.00	58.50	-	
	= Vane Shear Test		Decayed Matter	19/1/19	8:30	48.00	58.50	-	
RQD	= Rock Quality Disignation		Granite	19/1/19	8:30	48.00	58.50	-	
TCR	= Total Core Recovery		Limestone	19/1/19	19:00	60.00	70.50	-	

Cohesive Soil (N)		Non Cohesive Soil (N)	
0	30	0	50
V.soft	Hard	V.Loose	Very Dense
Soft	M. Stiff	Loose	Medium Dense
M. Stiff	Stiff	Medium Dense	Dense
V. Stiff	Hard	Dense	Very Dense



<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-37									
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 17/1/2019		<b>Coordinates</b> N -33086.796 E -47693.226												
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 19/1/2019		<b>Reduced Level (mRL):</b> -6.2317												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description							
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G			
	12.000		P8/D8				1	1	1	2	1	1		... xx		2.87					
	12.450						Rec : 190/450mm														
	13.500		P9/D9				1	1	1	1	1	1		... xx	13.35						
	13.950						Rec : 160/450mm								1.62						
	15.000		UD1				Rec : 920/1000mm								14.97						
	16.000						Rec : 920/1000mm								1.51						
	16.500		P10/D10				3	3	4	4	5	5		... xx		1.42					
	16.950						Rec : 240/450mm								17.90						
	18.000		P11/D11				2	3	4	3	4	4		... xx							
	19.000						Rec : 260/450mm														
	19.500		P12/D12				2	3	3	4	5	5		... xx		4.60					
	19.950						Rec : 250/450mm														
	21.000		P13/D13				1	2	2	3	4	5		... xx							
	21.450						Rec : 210/450mm														
	22.500		P14/D14				1	0	1	0	1	1		... xx	22.50						
	22.950						Rec : 255/450mm								1.50						
	24.000														24.00						

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	xxxx Silt	17/1/19	8:30	-	-	-	
	xxx Clay	17/1/19	19:00	27.00	37.50	-	
	... Sand	18/1/19	8:30	27.00	37.50	-	
	oooo Gravel	18/1/19	19:00	48.00	58.50	-	
	Decayed Matter	19/1/19	8:30	48.00	58.50	-	
RQD = Rock Quality Disignation	++++ Granite	19/1/19	19:00	60.00	70.50	-	
TCR = Total Core Recovery	++++ Limestone						
CRP = Core Recovery Ratio	++++ Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-37							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 17/1/2019		<b>Coordinates</b> N -33086.796 E -47693.226										
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 19/1/2019		<b>Reduced Level (mRL):</b> -6.2317									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value
18/1/2019	24.000	UD2					Rec : 850/1000mm											Top: Light grey, sandy CLAY	0
	25.000																	Bottom: DITTO	10
	25.500						2	3	3	4	5	3						Medium dense, light grey, silty fine grain SAND	20
	25.950	P15/D15					Rec : 240/450mm												30
	27.000						2	4	4	5	6	5						-DITTO-	40
	27.450	P16/D16					Rec : 300/450mm												50
	28.500						3	4	6	6	7	6						Medium dense, light grey, clayey SAND	
	28.950	P17/D17					Rec : 200/450mm												
	30.000						3	2	3	3	3	3						-DOTTO-	
	30.450	P18/D18					Rec : 270/450mm												
31.500						5	4	5	5	6	6						-DITTO-		
31.950	P19/D19					Rec : 250/450mm													
33.000						3	3	3	6	5	6						Medium dense, light grey, silty fine grain SAND		
33.450	P20/D20					Rec : 270/450mm													
34.500						3	6	7	8	9	9						Dense, light grey, clayey SAND		
34.950	P21/D21					Rec : 250/450mm													
36.000																			

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
		17/1/19	8:30	-	-	-	
		17/1/19	19:00	27.00	37.50	-	
		18/1/19	8:30	27.00	37.50	-	
		18/1/19	19:00	48.00	58.50	-	
		19/1/19	8:30	48.00	58.50	-	
RQD = Rock Quality Disignation		19/1/19	19:00	60.00	70.50	-	
TCR = Total Core Recovery							
CRR = Core Recovery Ratio							

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-37									
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 17/1/2019		<b>Coordinates</b> N -33086.796 E -47693.226												
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 19/1/2019		<b>Reduced Level (mRL):</b> -6.2317											
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description							
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G			
	36.000		P22/D22				5	7	8	9	10	10									
	36.450						Rec : 250/450mm														
	37.500		P23/D23				3	6	7	9	8	9									
	37.950						Rec : 220/450mm														
	39.000		P24/D24				4	5	7	8	10	10									
	39.450						Rec : 250/450mm														
	40.500		P25/D25				5	7	9	10	13	15									
	40.950						Rec : 230/450mm														
	42.000		P26/D26				4	6	6	7	8	10									
	42.450						Rec : 200/450mm														
	43.500		P27/D27				3	4	4	6	7	7			43.48						
	43.950						Rec : 230/450mm														
	45.000		P28/D28				2	3	5	5	6	6									
	45.950						Rec : 260/450mm														
	46.500		P29/D29				3	4	6	6	6	8									
	46.950						Rec : 240/450mm														
	48.000																				


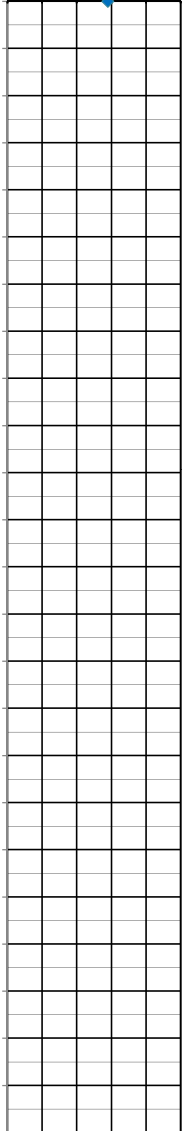


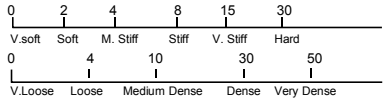











  


Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
		17/1/19	8:30	-	-	-	
		17/1/19	19:00	27.00	37.50	-	
		18/1/19	8:30	27.00	37.50	-	
		18/1/19	19:00	48.00	58.50	-	
		19/1/19	8:30	48.00	58.50	-	
RQD = Rock Quality Disignation		19/1/19	19:00	60.00	70.50	-	
TCR = Total Core Recovery							
CRR = Core Recovery Ratio							

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-37										
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 17/1/2019		<b>Coordinates</b> N -33086.796 E -47693.226													
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 19/1/2019		<b>Reduced Level (mRL):</b> -6.2317													
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description								
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G				
19/1/2019	48.000						3	6	7	7	6	8				4.48						
	48.450		P30/D30				Rec : 235/450mm															
	49.500		P31/D31				3	4	5	5	5	6			49.40							
	49.950						Rec : 190/450mm															
	51.000		P32/D32				2	4	4	5	4	6										
	51.450						Rec : 170/450mm															
	52.500		P33/D33				3	3	4	3	4	5										
	52.950						Rec : 170/450mm															
	54.000		P34/D34				3	5	4	5	6	6				8.95						
	54.450						Rec : 190/450mm															
55.500		P30/D30				2	4	5	4	5	4											
55.950						Rec : 180/450mm																
57.000		P31/D31				7	5	6	6	5	6											
57.450						Rec : 250/450mm																
58.500		P32/D32				4	5	6	6	5	5				58.35							
58.950						Rec : 230/450mm																
60.000																						
<b>Legend</b> 																						
<b>Soil Legend</b> 																						
<b>Remarks :</b> Date: 17/1/19 Time: 8:30 Depth of Hole (m): - Depth of Casing (m): - Date: 17/1/19 Time: 19:00 Depth of Hole (m): 27.00 Depth of Casing (m): 37.50 Date: 18/1/19 Time: 8:30 Depth of Hole (m): 27.00 Depth of Casing (m): 37.50 Date: 18/1/19 Time: 19:00 Depth of Hole (m): 48.00 Depth of Casing (m): 58.50 Date: 19/1/19 Time: 8:30 Depth of Hole (m): 48.00 Depth of Casing (m): 58.50 Date: 19/1/19 Time: 19:00 Depth of Hole (m): 60.00 Depth of Casing (m): 70.50																						
Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard															Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense							
Prepared by:										Checked by:												

	STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )	Sheet	Borehole Ref. No.														
	No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622	6 of 6	BH-37														
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19		Job No.		Date Started	Coordinates												
Location : PULAU INDAH		SG/1281/2018		17/1/2019	N -33086.796 E -47693.226												
Client	Consultant	Type of Boring	Boring Dia. (mm)	Orientation	Date Completed												
WESTPORTS (M) DDN. BHD.	HSS INTEGRATED SDN. BHD.	ROTARY WASH	100	Vertical	19/1/2019												
					Reduced Level (mRL): -6.2317												
Date & Time	SAMPLE / INSITU TEST				SOIL / STRATUM DETAILS				Standard Penetration Test Graph								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores			Casing Record	Legend	Depth (m)	Thick-ness (m)	W G	Description	N Value 0 10 20 30 40 50	
	60.000 60.450	P32/D32					3 5 6 7 8 8	75mm 75mm 75mm 75mm 75mm 75mm	N= 29		... xx ... xx ... xx ... xx ... xx	60.45	2.10		Medium dense, medium grey, silty fine grain SAND		
							Rec : 230/450mm								<i>Borehole terminated at depth 60.45m</i>		
Legend		Soil Legend				Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :						
	= Standard Penetration Test		Silt	17/1/19	8:30	-	-	-	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Cohesive Soil (N)</p> <p>V.soft Soft M. Stiff Stiff V. Stiff Hard</p> <p>Non Cohesive Soil (N)</p> <p>V.Loose Loose Medium Dense Dense Very Dense</p> </div> <div style="width: 45%; text-align: center;">  </div> </div>								
	= Undisturbed Sample		Clay	17/1/19	19:00	27.00	37.50	-									
	= Disturbed Sample		Sand	18/1/19	8:30	27.00	37.50	-									
	= Cored Sample		Gravel	18/1/19	19:00	48.00	58.50	-									
	= Vane Shear Test		Decayed Matter	19/1/19	8:30	48.00	58.50	-									
RQD	= Rock Quality Disignation		Granite	19/1/19	19:00	60.00	70.50	-									
TCR	= Total Core Recovery		Limestone						Prepared by:			Checked by:					
CRP	= Core Recovery Ratio		Mudstone														

 <b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.									
										1 of 6		BH-38									
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates												
Location : PULAU INDAH					SG/1281/2018		15/1/2019		N -32864.776												
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		Reduced Level (mRL):											
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		16/1/2019		-5.1912											
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Depth (m)		Thickness (m)	W G	Description	N' Value				
						75mm	75mm	75mm	75mm	75mm	75mm		Casing Record					Legend			
13/1/2019	0.000						TOPSOIL														
13/1/2019 10:00 (1.5m)	1.500		P1/D1				0	0	0	0	0	1									
	1.950																				
	3.000		UD1																		
	4.000																				
	4.500																				
	4.950		P2/D2				0	1	0	1	0	1									
	6.000		UD2																		
	7.000																				
	7.500																				
	7.950		P3/D3				0	1	0	0	0	1									
	9.000		UD3																		
	10.000																				
	10.500																				
	10.950		P4/D4				0	1	0	1	0	1									
	12.000																				

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
		15/1/19	8:30	-	-	-	
		15/1/19	19:00	36.00	46.50	-	
		16/1/19	8:30	36.00	46.50	-	
		16/1/19	19:00	60.00	70.50	-	
RQD = Rock Quality Disignation							
TCR = Total Core Recovery							

Cohesive Soil (N)	Non Cohesive Soil (N)
0    2    4    8    15    30 V.soft   Soft   M. Stiff   Stiff   V. Stiff   Hard	0    4    10    30    50 V.Loose   Loose   Medium Dense   Dense   Very Dense




<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-38					
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 15/1/2019		<b>Coordinates</b> N -32864.776 E -48073.899								
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 16/1/2019		<b>Reduced Level (mRL):</b> -5.1912								
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph				
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description	'N' Value 0 10 20 30 40 50		
						75mm	75mm	75mm	75mm	75mm	75mm	Casing Record	Legend			Depth (m)	Thickness (m)
	12.000	UD4					Rec : 990/1000mm						Top: Light to medium grey, CLAY Bottom: DITTO				
	13.000													13.48	1.48		
	13.500	P5/D5				1	1	2	1	2	0						
	13.950						Rec : 330/450mm						Medium stiff, medium grey with spotted dark grey, silty CLAY with traces of peats				
	15.000	UD5					Rec : 1000/1000mm						Top: Medium grey, silty CLAY Bottom: DITTO				
	16.000													4.48	4.48		
	16.500	P6/D6				1	1	0	1	1	1						
	16.950						Rec : 310/450mm						Soft, light to medium grey spotted dark grey, silty CLAY with traces of peats				
	18.000	UD6					Rec : 1000/1000mm						Top: Light to medium grey, CLAY Bottom: DITTO				
	19.000													1.46	1.46		
	19.500	P7/D7				2	3	4	4	5	4						
	19.950						Rec : 140/450mm						Medium dense, light to medium grey, silty fine grain SAND				
	21.000	P8/D8				3	3	4	4	4	4						
	21.450						Rec : 220/450mm						Medium dense, dark grey, very clayey SAND				
	22.500	P9/D9				2	3	3	2	3	3						
	22.950						Rec : 350/450mm						Stiff, light to medium grey, silty CLAY				
	24.000																

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	xxxx Silt	15/1/19	8:30	-	-	-	
	xxx Clay	15/1/19	19:00	36.00	46.50	-	
	... Sand	16/1/19	8:30	36.00	46.50	-	
	oooo Gravel	16/1/19	19:00	60.00	70.50	-	
	Decayed Matter						
	Granite						
	Limestone						
	Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.													
										3 of 6		BH-38													
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates																
Location : PULAU INDAH					SG/1281/2018		15/1/2019		N -32864.776																
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -48073.899															
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		16/1/2019		Reduced Level (mRL): -5.1912															
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph												
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value											
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	0	10	20	30	40	50
14/1/2019	24.000	P10/D10					1	2	2	3	4	4		xx	25.42			-DITTO-							
	24.450						13	Rec : 310/450mm	N=																
	25.500	P11/D11					2	4	4	5	5	6		xx	25.42			Medium dense, light grey, silty fine grain SAND							
	25.950						20	Rec : 250/450mm	N=																
	27.000	P12/D12					3	3	4	5	6	7		xx	6.03			Medium dense, brownish to dark grey, silty fine grain SAND with traces of organic matter							
	27.450						22	Rec : 270/450mm	N=																
	28.500	P13/D13					3	5	5	6	7	7		xx	6.03			Medium dense, brownish to greyish silty fine grain SAND							
	28.950						25	Rec : 290/450mm	N=																
	30.000	P14/D14					3	3	5	7	8	6		xx	31.45			Medium dense, light to medium grey, silty fine grain SAND							
	30.450						26	Rec : 230/450mm	N=																
	31.500	P15/D15					3	5	5	5	5	6		xx	31.45			Medium dense, light to medium grey, clayey fine grain SAND							
	31.950						21	Rec : 345/450mm	N=																
	33.000	P16/D16					3	5	4	4	6	5		xx	2.94			Medium dense, light to medium grey, clayey fine grain SAND							
	33.450						19	Rec : 290/450mm	N=																
	34.500	P17/D17					2	4	4	5	5	6		xx	34.39			Very stiff, light to medium grey, CLAY							
	34.950						20	Rec : 305/450mm	N=																
	36.000																								

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	15/1/19	8:30	-	-	-	Cohesive Soil (N) 0    2    4    8    15    30 V.soft    Soft    M. Stiff    Stiff    V. Stiff    Hard Non Cohesive Soil (N) 0    4    10    30    50 V.Loose    Loose    Medium Dense    Dense    Very Dense
	= Undisturbed Sample		Clay	15/1/19	19:00	36.00	46.50	-	
	= Disturbed Sample		Sand	16/1/19	8:30	36.00	46.50	-	
	= Cored Sample		Gravel	16/1/19	19:00	60.00	70.50	-	
	= Vane Shear Test		Decayed Matter						
RQD	= Rock Quality Disignation		Granite						
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

Prepared by:		Checked by:	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 4 of 6		<b>Borehole Ref. No.</b> BH-38									
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 15/1/2019		<b>Coordinates</b> N -32864.776 E -48073.899												
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 16/1/2019		<b>Reduced Level (mRL):</b> -5.1912												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description	'N' Value 0 10 20 30 40 50						
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record			Legend	Depth (m)	Thickness (m)	W G		
16/1/2019	36.000	P18/D18					3	4	5	6	7	7				3.06					
	36.450						Rec : 230/450mm	N= 25													
	37.500	P19/D19					2	3	3	3	4	5									
	37.950						Rec : 335/450mm	N= 15													
	39.000	P20/D20					2	4	4	5	5	4									
	39.450						Rec : 300/450mm	N= 18													
	40.500	P21/D21					3	5	5	4	5	7									
	40.950						Rec : 290/450mm	N= 21													
	42.000	P22/D22					3	5	6	7	7	6									
	42.450						Rec : 360/450mm	N= 26													
43.500	P23/D23					2	4	5	6	7	7										
43.950						Rec : 310/450mm	N= 25														
45.000	P24/D24					3	5	6	7	8	8										
45.950						Rec : 300/450mm	N= 27														
46.500	P25/D25					3	5	4	7	7	7										
46.950						Rec : 280/450mm	N= 25														
48.000																					















Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	15/1/19	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	15/1/19	19:00	36.00	46.50	-	
	= Disturbed Sample		Sand	16/1/19	8:30	36.00	46.50	-	
	= Cored Sample		Gravel	16/1/19	19:00	60.00	70.50	-	
	= Vane Shear Test		Decayed Matter						
RQD	= Rock Quality Disignation		Granite						
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						


  

<b>Prepared by:</b>		<b>Checked by:</b>	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622	Sheet		Borehole Ref. No.																																												
	6 of 6		BH-38																																												
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19		Job No.		Date Started	Coordinates																																										
Location : PULAU INDAH		SG/1281/2018		15/1/2019	N -32864.776 E -48073.899																																										
Client	Consultant		Type of Boring	Boring Dia. (mm)	Orientation	Date Completed	Reduced Level (mRL):																																								
WESTPORTS (M) DDN. BHD.	HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical	16/1/2019	-5.1912																																								
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph																																		
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores						Casing Record	Legend	Depth (m)	Thickness (m)	W G	Description	'N' Value																												
							75mm	75mm	75mm	75mm	75mm	75mm							0 10 20 30 40 50																												
	60.000						3	3	4	4	6	7		---	---	---				Very stiff, brownish grey, sandy CLAY																											
	60.450		P32/D32											---	---	---		0.45			Borehole terminated at depth 60.45m																										
<div style="display: flex; justify-content: space-between;"> <div data-bbox="138 1648 414 1963"> <p><b>Legend</b></p> <ul style="list-style-type: none"> <li> = Standard Penetration Test</li> <li> = Undisturbed Sample</li> <li> = Disturbed Sample</li> <li> = Cored Sample</li> <li> = Vane Shear Test</li> <li>RQD = Rock Quality Disignation</li> <li>TCR = Total Core Recovery</li> <li>CRR = Core Recovery Ratio</li> </ul> </div> <div data-bbox="430 1648 576 1963"> <p><b>Soil Legend</b></p> <ul style="list-style-type: none"> <li> Silt</li> <li> Clay</li> <li> Sand</li> <li> Gravel</li> <li> Decayed Matter</li> <li> Granite</li> <li> Limestone</li> <li> Mudstone</li> </ul> </div> <div data-bbox="592 1648 901 1963"> <table border="1"> <thead> <tr> <th>Date</th> <th>Time</th> <th>Depth of Hole (m)</th> <th>Depth of Casing (m)</th> <th>Depth of Water (m)</th> <th>Remarks :</th> </tr> </thead> <tbody> <tr> <td>15/1/19</td> <td>8:30</td> <td>-</td> <td>-</td> <td>-</td> <td rowspan="4" style="vertical-align: top;"> <div style="display: flex;"> <div style="flex: 1;"> <p>Cohesive Soil (N)</p> <p>0    2    4    8    15    30</p> <p>V.soft   Soft   M. Stiff   Stiff   V. Stiff   Hard</p> </div> <div style="flex: 1;"> <p>Non Cohesive Soil (N)</p> <p>0    4    10    30    50</p> <p>V.Loose   Loose   Medium Dense   Dense   Very Dense</p> </div> </div> </td> </tr> <tr> <td>15/1/19</td> <td>19:00</td> <td>36.00</td> <td>46.50</td> <td>-</td> </tr> <tr> <td>16/1/19</td> <td>8:30</td> <td>36.00</td> <td>46.50</td> <td>-</td> </tr> <tr> <td>16/1/19</td> <td>19:00</td> <td>60.00</td> <td>70.50</td> <td>-</td> </tr> </tbody> </table> </div> </div> <div data-bbox="917 1648 1461 1963"> <p>Prepared by: _____ Checked by: _____</p> </div>																					Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :	15/1/19	8:30	-	-	-	<div style="display: flex;"> <div style="flex: 1;"> <p>Cohesive Soil (N)</p> <p>0    2    4    8    15    30</p> <p>V.soft   Soft   M. Stiff   Stiff   V. Stiff   Hard</p> </div> <div style="flex: 1;"> <p>Non Cohesive Soil (N)</p> <p>0    4    10    30    50</p> <p>V.Loose   Loose   Medium Dense   Dense   Very Dense</p> </div> </div>	15/1/19	19:00	36.00	46.50	-	16/1/19	8:30	36.00	46.50	-	16/1/19	19:00	60.00	70.50	-
Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :																																										
15/1/19	8:30	-	-	-	<div style="display: flex;"> <div style="flex: 1;"> <p>Cohesive Soil (N)</p> <p>0    2    4    8    15    30</p> <p>V.soft   Soft   M. Stiff   Stiff   V. Stiff   Hard</p> </div> <div style="flex: 1;"> <p>Non Cohesive Soil (N)</p> <p>0    4    10    30    50</p> <p>V.Loose   Loose   Medium Dense   Dense   Very Dense</p> </div> </div>																																										
15/1/19	19:00	36.00	46.50	-																																											
16/1/19	8:30	36.00	46.50	-																																											
16/1/19	19:00	60.00	70.50	-																																											

 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622											Sheet 1 of 6		Borehole Ref. No. BH-39								
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH				Job No. SG/1281/2018		Date Started 20/1/2019		Coordinates N -33139.860 E -48199.801													
Client WESTPORTS (M) DDN. BHD.		Consultant HSS INTEGRATED SDN. BHD.		Type of Boring ROTARY WASH	Boring Dia. (mm) 100	Orientation Vertical		Date Completed 22/1/2019		Reduced Level (mRL): -5.8218											
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value							
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description		
20/1/2019	0.000						TOPSOIL														
20/1/2019 12:00 (5.50m)	1.500	Standard Penetration Test	P1/D1				2	3	3	3	4	4		xx	0.30	0.30		Very soft, light grey, silty CLAY			
	1.950															2.50		Medium dense, dark grey, very clayey SAND			
	3.000	Standard Penetration Test	P2/D2				0	0	1	0	1	0			2.80			Very soft, light to medium grey, CLAY			
	4.000															1.60					
	4.500	Undisturbed Sample	UD1											xx	4.40			Top: Medium grey, silty CLAY Bottom: DITTO			
	5.500															1.50					
	6.000	Standard Penetration Test	P3/D3				0	1	0	1	0	1			5.90			Very soft, medium to dark grey, CLAY with traces of peats			
	6.450																				
	7.500	Undisturbed Sample	UD2															Top: Medium to grey, CLAY Bottom: DITTO			
	8.500																				
	9.000	Standard Penetration Test	P4/D4				1	0	1	1	1	1						Soft, medium to dark grey, CLAY with traces of peats			
	9.450																				
	10.500	Undisturbed Sample	UD3															Top: Medium to dark grey, CLAY Bottom: DITTO			
	11.500																				
	12.000																				

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
		20/1/19	8:30	-	-	-	OFF SHORE
		20/1/19	19:00	30.00	42.00	-	
		21/1/19	8:30	30.00	42.00	-	Cohesive Soil (N)
		21/1/19	19:00	45.00	57.00	-	
		22/1/19	8:30	45.00	57.00	-	Non Cohesive Soil (N)
RQD = Rock Quality Disignation		22/1/19	19:00	60.00	72.00	-	
TCR = Total Core Recovery							

Cohesive Soil (N)		Non Cohesive Soil (N)	
V.soft	0	V.Loose	0
Soft	2	Loose	4
M. Stiff	4	Medium Dense	10
Stiff	8	Dense	30
V. Stiff	15	Very Dense	50
Hard	30		



<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-39									
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 20/1/2019		<b>Coordinates</b> N -33139.860 E -48199.801												
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 22/1/2019		<b>Reduced Level (mRL):</b> -5.8218											
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description							
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	N Value		
	12.000		P5/D5				1	1	1	2	1	1		5							
	12.450						Rec : 440/450mm														
	13.500		UD4				Rec : 1000/1000mm														
	14.500																				
	15.000		P6/D6				1	2	1	1	2	2	6								
	15.450						Rec : 380/450mm														
	16.500		UD5				Rec : 910/1000mm								14.95						
	17.500																				
	18.000		P7/D7				2	1	2	1	2	2	7								
	18.950						Rec : 360/450mm														
	19.500		UD6				Rec : 900/1000mm														
	20.500																				
	21.000		P8/D8				3	2	3	2	3	4	12			20.85					
	21.450						Rec : 240/450mm									1.63					
	22.500		P9/D9				3	3	4	5	4	4	17			22.48					
	22.950						Rec : 220/450mm									1.52					
	24.000														24.00						

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	20/1/19	8:30	-	-	-	
	= Undisturbed Sample		Clay	20/1/19	19:00	30.00	42.00	-	
	= Disturbed Sample		Sand	21/1/19	8:30	30.00	42.00	-	
	= Cored Sample		Gravel	21/1/19	19:00	45.00	57.00	-	
	= Vane Shear Test		Decayed Matter	22/1/19	8:30	45.00	57.00	-	
RQD	= Rock Quality Disignation		Granite	22/1/19	19:00	60.00	72.00	-	
TCR	= Total Core Recovery		Limestone						
CRP	= Core Recovery Ratio		Mudstone						

Soil Legend	
0	V.soft
2	Soft
4	M. Stiff
8	Stiff
15	V. Stiff
30	Hard

Soil Legend	
0	V.Loose
4	Loose
10	Medium Dense
30	Dense
50	Very Dense

<b>Prepared by:</b>		<b>Checked by:</b>	
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
<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622												<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-39									
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH						<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 20/1/2019		<b>Coordinates</b> N -33139.860 E -48199.801													
<b>Client</b> WESTPORTS (M) DDN. BHD.			<b>Consultant</b> HSS INTEGRATED SDN. BHD.			<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 22/1/2019		<b>Reduced Level (mRL):</b> -5.8218												
Date & Time	SAMPLE / INSITU TEST							SOIL / STRATUM DETAILS					Standard Penetration Test Graph										
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Description											
							75mm	75mm	75mm	75mm	75mm												
21/1/2019	24.000	P10/D10					3	4	4	6	5	5											Medium dense, light to medium grey, very clayey SAND
	24.450						Rec : 200/450mm	N= 20															
	25.500	P11/D11					4	4	3	5	7	6											-DITTO-
	25.950						Rec : 280/450mm	N= 21															
	27.000	P12/D12					3	5	6	6	5	6											Medium dense, light grey, silty fine grain SAND
	27.450						Rec : 280/450mm	N= 23															
	28.500	P13/D13					4	4	5	6	7	7											-DITTO-
	28.950						Rec : 250/450mm	N= 25															
	30.000	P14/D14					3	2	3	3	3	3											Medium dense, light grey, clayey SAND
	30.450						Rec : 270/450mm	N= 12															
	31.500	P15/D15					4	6	7	6	8	6											Medium dense, medium grey, silty medium grain SAND
	31.950						Rec : 285/450mm	N= 27															
	33.000	P16/D16					3	4	4	5	6	5											Medium dense, medium grey, silty medium grain SAND
	33.450						Rec : 240/450mm	N= 20															
	34.500	P17/D17					2	3	3	4	6	8											Medium dense, light grey, very clayey SAND
	34.950						Rec : 290/450mm	N= 21															
	36.000																						

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	20/1/19	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	20/1/19	19:00	30.00	42.00	-	
	= Disturbed Sample		Sand	21/1/19	8:30	30.00	42.00	-	
	= Cored Sample		Gravel	21/1/19	19:00	45.00	57.00	-	
	= Vane Shear Test		Decayed Matter	22/1/19	8:30	45.00	57.00	-	
	RQD = Rock Quality Disignation		Granite	22/1/19	19:00	60.00	72.00	-	
	TCR = Total Core Recovery		Limestone						
	CRR = Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.										
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19										Job No.		Date Started		Coordinates								
Location : PULAU INDAH										SG/1281/2018		20/1/2019		N -33139.860								
Client			Consultant			Type of Boring		Boring Dia. (mm)	Orientation		Date Completed		Reduced Level (mRL):									
WESTPORTS (M) DDN. BHD.			HSS INTEGRATED SDN. BHD.			ROTARY WASH		100	Vertical		22/1/2019		-5.8218									
Date & Time	SAMPLE / INSITU TEST							SOIL / STRATUM DETAILS							Standard Penetration Test Graph							
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores					Casing Record	Legend	Depth (m)		Thickness (m)	W G	Description				
							75mm	75mm	75mm	75mm	75mm	75mm										
	36.000		P18/D18				4	5	6	7	6	5										
	36.450						Rec : 290/450mm								2.96							
	37.500		P19/D19				3	5	4	6	8	8										
	37.950						Rec : 300/450mm								1.35			Medium dense, medium grey, silty medium grain SAND				
	39.000		P20/D20				5	6	8	8	9	7										
	39.450						Rec : 335/450mm								1.64			Dense, light grey, clayey SAND				
	40.500		P21/D21				3	6	7	7	6	7										
	40.950						Rec : 380/450mm								4.48			Medium dense, light grey, silty fine grain SAND				
	42.000		P22/D22				5	2	4	6	8	6										
	42.450						Rec : 310/450mm								4.48			Medium dense, medium grey, silty fine grain SAND				
	43.500		P23/D23				2	3	4	5	4	5										
	43.950						Rec : 320/450mm								4.48			Medium dense, light grey, silty fine grain SAND				
	45.000		P24/D24				3	5	5	5	5	5										
	45.950						Rec : 290/450mm								4.48			Medium dense, light grey, clayey SAND				
22/1/2019	46.500		P25/D25				2	4	4	5	6	8										
	46.950						Rec : 270/450mm											-DITTO-				
	48.000																					


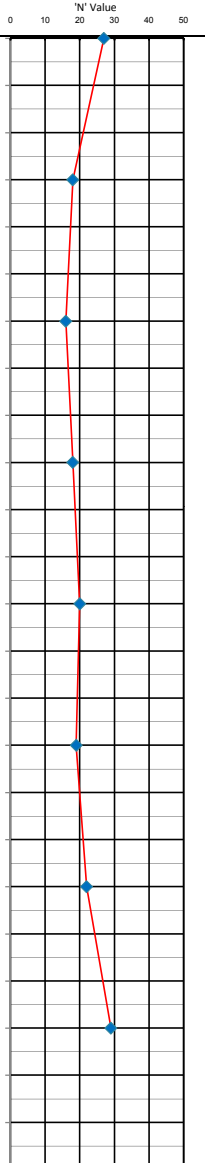
Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	20/1/19	8:30	-	-	-	
	= Undisturbed Sample		Clay	20/1/19	19:00	30.00	42.00	-	
	= Disturbed Sample		Sand	21/1/19	8:30	30.00	42.00	-	
	= Cored Sample		Gravel	21/1/19	19:00	45.00	57.00	-	
	= Vane Shear Test		Decayed Matter	22/1/19	8:30	45.00	57.00	-	
RQD	= Rock Quality Disignation		Granite	22/1/19	19:00	60.00	72.00	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						














  

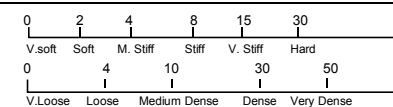
Cohesive Soil (N)		0	2	4	8	15	30
Non Cohesive Soil (N)		0	4	10	30	50	
		V.soft	Soft	M. Stiff	Stiff	V. Stiff	Hard
		V.Loose	Loose	Medium Dense	Dense	Very Dense	



Prepared by:	Checked by:
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-39	
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 20/1/2019		<b>Coordinates</b> N -33139.860 E -48199.801				
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 22/1/2019		<b>Reduced Level (mRL):</b> -5.8218			
<b>Date &amp; Time</b>	<b>SAMPLE / INSITU TEST</b>						<b>SOIL / STRATUM DETAILS</b>						<b>Standard Penetration Test Graph</b> 
	<b>Depth (m)</b>	<b>Test</b>	<b>Sample No.</b>	<b>TCR (%)</b>	<b>CRR (%)</b>	<b>RQD (%)</b>	<b>Field Test / Rock Cores</b>	<b>Casing Record</b>	<b>Legend</b>	<b>Depth (m)</b>	<b>Thickness (m)</b>	<b>W G</b>	
	48.000	P26/D26				3 5 6 7 8 6 N=27 Rec : 320/450mm		... xx				-DITTO-	
	48.450							... xx					
	49.500	P27/D27				4 3 6 4 4 4 N=18 Rec : 305/450mm		... xx		6.09		-DITTO-	
	49.950							... xx					
	51.000	P28/D28				3 5 4 4 4 4 N=16 Rec : 260/450mm		... xx		1.42		Very stiff, light to medium grey, silty CLAY	
	51.450							... xx					
	52.500	P29/D29				2 4 5 4 3 6 N=18 Rec : 240/450mm		... xx		1.49		Very stiff, medium to dark grey, CLAY	
	52.950							... xx					
	54.000	P30/D30				3 4 5 5 5 5 N=20 Rec : 220/450mm		... xx		1.39		Very stiff, light to medium grey, silty CLAY	
	54.450							... xx					
	55.500	P31/D31				2 4 5 5 4 5 N=19 Rec : 250/450mm		... xx		3.15		Very stiff, dark grey, CLAY	
	55.950							... xx					
	57.000	P32/D32				3 5 4 6 5 7 N=22 Rec : 275/450mm		... xx		58.45		Very stiff, dark grey, CLAY with traces of peats	
	57.450							... xx					
	58.500	P33/D33				4 6 6 7 8 8 N=29 Rec : 335/450mm		... xx		1.55		Medium dense, light grey, silty fine grain SAND	
	58.950							... xx					
	60.000							... xx					







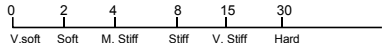


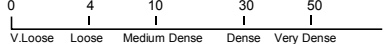





<b>Legend</b>  = Standard Penetration Test  = Undisturbed Sample  = Disturbed Sample  = Cored Sample  = Vane Shear Test <b>RQD</b> = Rock Quality Disignation <b>TCR</b> = Total Core Recovery <b>CRR</b> = Core Recovery Ratio		<b>Soil Legend</b>  Silt  Clay  Sand  Gravel  Decayed Matter  Granite  Limestone  Mudstone		<b>Date</b>	<b>Time</b>	<b>Depth of Hole (m)</b>	<b>Depth of Casing (m)</b>	<b>Depth of Water (m)</b>	<b>Remarks :</b>
		20/1/19	8:30	-	-	-			
		20/1/19	19:00	30.00	42.00	-			
		21/1/19	8:30	30.00	42.00	-			
		21/1/19	19:00	45.00	57.00	-			
		22/1/19	8:30	45.00	57.00	-			
		22/1/19	19:00	60.00	72.00	-			

<b>Remarks :</b>	
<b>Prepared by:</b>	<b>Checked by:</b>



 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622	Sheet		Borehole Ref. No.																						
	6 of 6		BH-39																						
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19		Job No.		Date Started		Coordinates																			
Location : PULAU INDAH		SG/1281/2018		20/1/2019		N -33139.860																			
Client		Consultant		Type of Boring		Boring Dia. (mm)		Orientation		Date Completed		Coordinates													
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH		100		Vertical		22/1/2019		E -48199.801													
													Reduced Level (mRL): -5.8218												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph  0 10 20 30 40 50												
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores											Casing Record	Legend	Depth (m)	Thick-ness (m)	W/G	Description		
							75mm	75mm	75mm	75mm	75mm	75mm	75mm												
	60.000		P34/D34				3	6	8	9	10	9		... ..				60.45	0.45		Dense, medium grey, clayey SAND				
	60.450													... ..							Borehole terminated at depth 60.45m				

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :			
	= Standard Penetration Test		Silt	20/1/19	8:30	-	-	-	Cohesive Soil (N)			
	= Undisturbed Sample		Clay	20/1/19	19:00	30.00	42.00	-	Non Cohesive Soil (N)			
	= Disturbed Sample		Sand	21/1/19	8:30	30.00	42.00	-	 V.soft Soft M. Stiff Stiff V. Stiff Hard			
	= Cored Sample		Gravel	21/1/19	19:00	45.00	57.00	-	 V.Loose Loose Medium Dense Dense Very Dense			
	= Vane Shear Test		Decayed Matter	22/1/19	8:30	45.00	57.00	-	Prepared by:			
RQD	= Rock Quality Disignation		Granite	22/1/19	19:00	60.00	72.00	-	Checked by:			
TCR	= Total Core Recovery		Limestone									
CRR	= Core Recovery Ratio		Mudstone									

<b>STRATA GEOTECHNICS SDN. BHD. ( Co. No. 393744T )</b> No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 1 of 6		<b>Borehole Ref. No.</b> BH-40										
<b>Client</b> : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 <b>Location</b> : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 18/1/2019		<b>Coordinates</b> N -33261.479 E -47971.256													
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 20/1/2019		<b>Reduced Level (mRL):</b> -6.1056													
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph									
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							'N' Value 0 10 20 30 40 50								
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description			
18/1/2019	0.000						TOPSOIL															
	1.500		P1/D1				1	1	1	1	1	1		xx	0.30	0.30		Very soft, light grey, silty CLAY				
	1.950													xx		2.60		Very loose, brownish to greyish, clayey SAND				
	3.000		P2/D2				0	1	0	1	0	1		xx	2.90	7.55		Very soft, medium to dark grey, silty CLAY				
	4.500		UD1											xx				Top: Medium grey, sandy CLAY				
	5.500													xx				Bottom: DITTO				
	6.000		P3/D3				0	1	1	0	1	1		xx				Soft, light to medium grey, silty CLAY				
	6.450													xx								
	7.500		UD2											xx				Top: Light to medium grey, sandy CLAY				
	8.500													xx				Bottom: DITTO				
	9.000		P4/D4				1	1	2	2	2	2		xx				Loose, brownish to medium grey, silty fine grain SAND				
	9.450													xx								
	10.500		P5/D5				1	2	2	1	2	2		xx	10.45			Loose, medium to dark grey, silty medium grain SAND with some of organic matter				
	10.950													xx								
	12.000													xx								

Legend	Soil Legend	Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
		18/1/19	8:30	-	-	-	OFF SHORE
		18/1/19	19:00	30.00	41.00	-	
		19/1/19	8:30	30.00	41.00	-	
		19/1/19	19:00	45.00	56.00	-	
		20/1/19	8:30	45.00	56.00	-	
RQD = Rock Quality Disignation		20/1/19	19:00	60.00	71.00	-	
TCR = Total Core Recovery							

Cohesive Soil (N)	
0	30
V.soft	Hard
Soft	M. Stiff
Stiff	V. Stiff

Non Cohesive Soil (N)	
0	50
V.Loose	Very Dense
Loose	Dense
Medium Dense	



<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 2 of 6		<b>Borehole Ref. No.</b> BH-40									
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 18/1/2019		<b>Coordinates</b> N -33261.479 E -47971.256												
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 20/1/2019		<b>Reduced Level (mRL):</b> -6.1056												
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph								
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							N Value 0 10 20 30 40 50							
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description		
	12.000		P6/D6				1	2	2	3	2	3		... xx				Loose, medium to dark grey, silty medium grain SAND			
	12.450						Rec : 240/450mm								2.85						
	13.500		P7/D7				0	1	1	1	1	1		... xx				Soft, medium grey, silty CLAY			
	13.950						Rec : 290/450mm								1.60						
	15.000		UD3				Rec : 960/1000mm								14.90				Top: Medium grey, sandy CLAY		
	16.000														1.55				Bottom: DITTO		
	16.500		P8/D8				2	3	4	5	6	5		xx ...				Very stiff, light grey, sandy SILT			
	16.950						Rec : 280/450mm								1.45						
	18.000		P9/D9				2	3	4	5	4	4		... xx				Medium dense, light to medium grey, silty medium grain SAND			
	18.950						Rec : 280/450mm								1.50						
	19.500		P10/D10				3	4	4	5	6	6		xx ...				Very stiff, light grey, sandy SILT			
	19.950						Rec : 270/450mm								1.50						
	21.000		P11/D11				2	3	3	4	5	7		... --				Medium dense, light to medium grey, clayey SAND			
	21.450						Rec : 300/450mm								1.59						
	22.500		P12/D12				4	6	6	7	8	8		... xx				Medium dense, brownish to greyish, silty medium grain SAND			
	22.950						Rec : 285/450mm								22.49						
	24.000																				

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	18/1/19	8:30	-	-	-	
	= Undisturbed Sample		Clay	18/1/19	19:00	30.00	41.00	-	
	= Disturbed Sample		Sand	19/1/19	8:30	30.00	41.00	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Cored Sample		Gravel	19/1/19	19:00	45.00	56.00	-	
	= Vane Shear Test		Decayed Matter	20/1/19	8:30	45.00	56.00	-	
RQD	= Rock Quality Disignation		Granite	20/1/19	19:00	60.00	71.00	-	
TCR	= Total Core Recovery		Limestone						
CRP	= Core Recovery Ratio		Mudstone						


  

<b>Prepared by:</b>		<b>Checked by:</b>	
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<b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 3 of 6		<b>Borehole Ref. No.</b> BH-40								
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 18/1/2019		<b>Coordinates</b> N -33261.479 E -47971.256											
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical	<b>Date Completed</b> 20/1/2019		<b>Reduced Level (mRL):</b> -6.1056											
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph							
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							Description						
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G		
19/1/2019	24.000	P13/D13					3	5	5	6	6	7	...	xx	24.450	2.97				-DITTO-
	Rec : 320/450mm						N= 24	...	xx											
	25.500	P14/D14					4	5	6	8	9	9	...	xx	25.950					Dense, medium grey spotted dark grey, clayey SAND
	Rec : 260/450mm						N= 32	...	xx											
	27.000	P15/D15					3	7	8	9	10	8	...	xx	27.450					-DITTO-
	Rec : 245/450mm						N= 35	...	xx											
	28.500	P16/D16					3	4	5	5	5	6	...	xx	28.950					Very stiff, medium grey, silty CLAY
	Rec : 430/450mm						N= 21	...	xx											
	30.000	P17/D17					2	3	4	5	5	4	...	xx	30.450	4.35				-DITTO-
	Rec : 340/450mm						N= 18	...	xx											
31.500	P18/D18					3	4	5	4	4	6	...	xx	31.950					-DITTO-	
Rec : 290/450mm						N= 19	...	xx												
33.000	P19/D19					3	5	7	6	7	8	...	xx	33.450	1.60				Medium dense, light to medium grey, clayey SAND	
Rec : 250/450mm						N= 28	...	xx												
34.500	P20/D20					3	5	4	5	6	7	...	xx	34.950	1.60				Very stiff, medium grey, sandy CLAY	
Rec : 200/450mm						N= 22	...	xx												
36.000																				

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	18/1/19	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	18/1/19	19:00	30.00	41.00	-	
	= Disturbed Sample		Sand	19/1/19	8:30	30.00	41.00	-	
	= Cored Sample		Gravel	19/1/19	19:00	45.00	56.00	-	
	= Vane Shear Test		Decayed Matter	20/1/19	8:30	45.00	56.00	-	
	RQD = Rock Quality Disignation		Granite	20/1/19	19:00	60.00	71.00	-	
	TCR = Total Core Recovery		Limestone						
	CRR = Core Recovery Ratio		Mudstone						


 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.								
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19										Job No.		Date Started		Coordinates						
Location : PULAU INDAH										SG/1281/2018		18/1/2019		N -33261.479						
Client			Consultant			Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		Reduced Level (mRL):								
WESTPORTS (M) DDN. BHD.			HSS INTEGRATED SDN. BHD.			ROTARY WASH	100	Vertical		20/1/2019		-6.1056								
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph							
Date & Time	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores						Casing Record	Legend	Depth (m)	Thickness (m)	W G	Description	N Value	
							75mm	75mm	75mm	75mm	75mm	75mm								
20/1/2019	36.000	P21/D21					4	4	6	7	6	5	Rec : 285/450mm	--- --		1.40		Very stiff, medium grey, very clayey SAND	0 10 20 30 40 50	
	36.450						4	6	7	6	5	24								
	37.500	P22/D22					2	4	5	4	4	5	Rec : 230/450mm	--- xx		1.50		Very stiff, light to medium grey, silty CLAY		
	37.950						4	5	4	4	5	18								
	39.000	P23/D23					3	3	5	4	6	6	Rec : 200/450mm	--- ...		1.45		Very stiff, light to medium grey, sandy CLAY		
	39.450						3	5	4	6	6	21								
	40.500	P24/D24					3	4	5	6	8	8	Rec : 200/450mm	--- ...		3.10		Medium dense, light grey, clayey SAND		
	40.950						4	5	6	8	8	27								
42.000	P25/D25					4	4	5	7	8	10	Rec : 225/450mm	--- ...		43.45		-DITTO-			
42.450						4	5	7	8	10	29									
43.500	P26/D26					3	4	7	6	7	7	Rec : 270/450mm	--- xx		1.53		Medium dense, medium grey, silty medium grain SAND with some of organic matter			
43.950						4	7	6	7	7	28									
45.000	P27/D27					4	4	6	6	8	7	Rec : 180/450mm	--- ...		46.46		Medium dense, brownish grey, very clayey SAND			
45.950						4	6	6	8	7	27									
46.500	P28/D28					4	6	6	5	7	7	Rec : 230/450mm	--- xx				Medium dense, brownish grey, silty fine grain SAND			
46.950						6	6	5	7	7	25									
48.000																				

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	18/1/19	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	18/1/19	19:00	30.00	41.00	-	
	= Disturbed Sample		Sand	19/1/19	8:30	30.00	41.00	-	
	= Cored Sample		Gravel	19/1/19	19:00	45.00	56.00	-	
	= Vane Shear Test		Decayed Matter	20/1/19	8:30	45.00	56.00	-	
	RQD = Rock Quality Disignation		Granite	20/1/19	19:00	60.00	71.00	-	
	TCR = Total Core Recovery		Limestone						
	CRR = Core Recovery Ratio		Mudstone						

Prepared by:		Checked by:	
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
 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										<b>Sheet</b> 5 of 6		<b>Borehole Ref. No.</b> BH-40								
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19 Location : PULAU INDAH					<b>Job No.</b> SG/1281/2018		<b>Date Started</b> 18/1/2019		<b>Coordinates</b> N -33261.479 E -47971.256											
<b>Client</b> WESTPORTS (M) DDN. BHD.		<b>Consultant</b> HSS INTEGRATED SDN. BHD.		<b>Type of Boring</b> ROTARY WASH	<b>Boring Dia. (mm)</b> 100	<b>Orientation</b> Vertical		<b>Date Completed</b> 20/1/2019		<b>Reduced Level (mRL):</b> -6.1056										
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph							
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							N Value 0 10 20 30 40 50						
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thickness (m)	W G	Description	
	48.000	P29/D29					5	5	7	7	6	7		... xx ... xx ... xx ... xx ... xx ... xx	3.01		Medium dense, brownish grey, silty medium grain SAND with trace of peats			
	48.450						Rec : 250/450mm	N= 27												
	49.500	P30/D30					4	5	7	8	6	8		... -- ... -- ... -- ... -- ... -- ... --	1.53		Medium dense, brownish grey, very clayey SAND			
	49.950						Rec : 240/450mm	N= 29												
	51.000	P31/D31					3	3	4	4	6	5		--- xx --- xx --- xx --- xx --- xx --- xx	51.00		Very stiff, medium grey, silty CLAY			
	51.450						Rec : 290/450mm	N= 19												
	52.500	P32/D32					4	4	5	5	5	7		--- xx --- xx --- xx --- xx --- xx --- xx	2.95		-DITTO-			
	52.950						Rec : 300/450mm	N= 22												
	54.000	P33/D33					4	5	5	6	6	5		--- .. --- .. --- .. --- .. --- .. --- ..	53.95	1.45	Very stiff, brownish grey, sandy CLAY			
	54.450						Rec : 300/450mm	N= 22												
	55.500	P34/D34					4	4	5	5	7	7		--- xx --- xx --- xx --- xx --- xx --- xx	55.40	1.40	Very stiff, medium grey, silty CLAY			
	55.950						Rec : 220/450mm	N= 24												
	57.000	P35/D35					4	6	5	5	6	6		... xx ... xx ... xx ... xx ... xx ... xx	56.80	3.20	Medium dense, medium grey, silty medium grain SAND			
	57.450						Rec : 240/450mm	N= 22												
	58.500	P36/D36					5	5	7	6	6	7		... xx ... xx ... xx ... xx ... xx ... xx	3.20		-DITTO-			
	58.950						Rec : 230/450mm	N= 26												
	60.000																			

Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	18/1/19	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	18/1/19	19:00	30.00	41.00	-	
	= Disturbed Sample		Sand	19/1/19	8:30	30.00	41.00	-	
	= Cored Sample		Gravel	19/1/19	19:00	45.00	56.00	-	
	= Vane Shear Test		Decayed Matter	20/1/19	8:30	45.00	56.00	-	
	RQD = Rock Quality Disignation		Granite	20/1/19	19:00	60.00	71.00	-	
	TCR = Total Core Recovery		Limestone						
	CRR = Core Recovery Ratio		Mudstone						

<b>Prepared by:</b>		<b>Checked by:</b>	
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 <b>STRATA GEOTECHNICS SDN. BHD.</b> ( Co. No. 393744T ) No. 22, Jalan P4/8, Seksyen 4, Bandar Teknologi Kajang, 43500 Semenyih, Selangor. Tel : 03-8724 1622, 03-8724 3622; Fax : 03-8724 0622										Sheet		Borehole Ref. No.							
										6 of 6		BH-40							
Client : PROPOSED EXPANSION OF CONTAINER TERMINAL CT10 AND CT19					Job No.		Date Started		Coordinates										
Location : PULAU INDAH					SG/1281/2018		18/1/2019		N -33261.479										
Client		Consultant		Type of Boring	Boring Dia. (mm)	Orientation		Date Completed		E -47971.256									
WESTPORTS (M) DDN. BHD.		HSS INTEGRATED SDN. BHD.		ROTARY WASH	100	Vertical		20/1/2019		Reduced Level (mRL): -6.1056									
Date & Time	SAMPLE / INSITU TEST						SOIL / STRATUM DETAILS						Standard Penetration Test Graph						
	Depth (m)	Test	Sample No.	TCR (%)	CRR (%)	RQD (%)	Field Test / Rock Cores							N Value 0 10 20 30 40 50					
							75mm	75mm	75mm	75mm	75mm	75mm	Casing Record		Legend	Depth (m)	Thick-ness (m)	W G	Description
	60.000	P37/D37					4	6	6	8	7	8		---		0.45		Medium dense, medium grey, very clayey SAND	
	60.450							Rec : 200/450mm N= 29											
																		<i>Borehole terminated at depth 60.45m</i>	

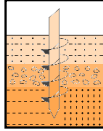
Legend		Soil Legend		Date	Time	Depth of Hole (m)	Depth of Casing (m)	Depth of Water (m)	Remarks :
	= Standard Penetration Test		Silt	18/1/19	8:30	-	-	-	Cohesive Soil (N) 0 2 4 8 15 30 V.soft Soft M. Stiff Stiff V. Stiff Hard Non Cohesive Soil (N) 0 4 10 30 50 V.Loose Loose Medium Dense Dense Very Dense
	= Undisturbed Sample		Clay	18/1/19	19:00	30.00	41.00	-	
	= Disturbed Sample		Sand	19/1/19	8:30	30.00	41.00	-	
	= Cored Sample		Gravel	19/1/19	19:00	45.00	56.00	-	
	= Vane Shear Test		Decayed Matter	20/1/19	8:30	45.00	56.00	-	
RQD	= Rock Quality Disignation		Granite	20/1/19	19:00	60.00	71.00	-	
TCR	= Total Core Recovery		Limestone						
CRR	= Core Recovery Ratio		Mudstone						

Prepared by:	Checked by:
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**APPENDIX C**  
**MACKINTOSH PROBE RECORDS**

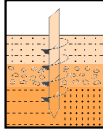


# STRATA GEOTECHNICS SDN BHD

(Co. No. 393744- T)  
 No. 22, Jalan P4/8, Section 4 Bandar Teknologi Kajang,  
 43500 Semenyih, Selangor Darul Ehsan.  
 Tel : 03 8724 1622 / 03 8724 3622 Fax : 03 8724 0622

Job No.SG/1281/2018

Project :	SOIL INVESTIGATIONS FOR WESTPORTS EXPANSION CT10 & CT19						
Position No.	MP1		MP2		MP3		
Reduced Level (m)	1.205		1.332		1.108		
Date	12/10/2018		12/10/2018		12/10/2018		
Depth (m)	No. of Blows		No. of Blows		No. of Blows		
0.00	0		0		0		1
0.0 - 0.3	1		4		3		
0.3 - 0.6	2		8		2		
0.6 - 0.9	4		8		6		
0.9 - 1.2	7		9		11		
1.2 - 1.5	13		26		34		
1.5 - 1.8	19		22		21		
1.8 - 2.1	17		35		25		
2.1 - 2.4	20		44		45		
2.4 - 2.7	32		49		56		
2.7 - 3.0	47		41		67		
3.0 - 3.3	26		24		74		
3.3 - 3.6	54		29		89		
3.6 - 3.9	69		66		48		
3.9 - 4.2	87		79		64		
4.2 - 4.5	84		71		75		
4.5 - 4.8	99		88		77		
4.8 - 5.1	113		95		89		
5.1 - 5.4	106		72		103		
5.4 - 5.7	111	96	116				
5.7 - 6.0	156	101	122				
6.0 - 6.3	168	118	137				
6.3 - 6.6	186	116	149				
6.6 - 6.9	197	134	175				
6.9 - 7.2	172	153	194				
7.2 - 7.5	200	127	187				
7.5 - 7.8	224	200	200				
7.8 - 8.1	249	207	219				
8.1 - 8.4	256	214	222				
8.4 - 8.7	291	261	229				
8.7 - 9.0	300	245	241				
9.0 - 9.3	315	231	263				
9.3 - 9.6	296	259	286				
9.6 - 9.9	287	300	298				
9.9 - 10.2	311	336	369				
10.2 - 10.5	336	321	333				
10.5 - 10.8	348	329	348				
10.8 - 11.1	363	388	354				
11.1 - 11.4	356	365	362				
11.4 - 11.7	377	379	387				
11.7 - 12.0	382	389	374				
12.0 - 12.3	365	374	400				
12.3 - 12.6	378	363					
12.6 - 12.9	359	385					
12.9 - 13.2	384	379					
13.2 - 13.5	394	400					
13.5 - 13.8	379						
13.8 - 14.1	388						
14.1 - 14.4	400						
14.4 - 14.7							
14.7 - 15.0							
Water level (m)	Ground Level		Ground Level		Ground Level		
Final Depth (m)	14.10		13.20		12.00		
Tested by	Suhaimi		Suhaimi		Suhaimi		
Remarks							

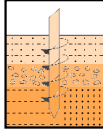


**STRATA GEOTECHNICS SDN BHD**

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 43500 Semenyih, Selangor Darul Ehsan.  
 Tel : 03 8724 1622 / 03 8724 3622 Fax : 03 8724 0622

Job No.SG/1281/2018

Project :		SOIL INVESTIGATIONS FOR WESTPORTS EXPANSION CT10 & CT19						
Position No.	MP4		MP5		MP6			
Reduced Level (m)	1.375		1.240		0.983			
Date	12/10/2018		12/10/2018		13/10/2018			
Depth (m)	No. of Blows		No. of Blows		No. of Blows			
0.00	0		0		0		0	0
0.0 - 0.3	2		3		7		3	7
0.3 - 0.6	4		11		16		7	14
0.6 - 0.9	5		25		27		9	23
0.9 - 1.2	3		31		39		13	26
1.2 - 1.5	16		45		47		23	34
1.5 - 1.8	22		56		56		26	38
1.8 - 2.1	43		59		71		29	47
2.1 - 2.4	43		85		85		34	56
2.4 - 2.7	58		91		91		38	66
2.7 - 3.0	69		98		100		47	97
3.0 - 3.3	51		100		109		56	71
3.3 - 3.6	49		111		119		66	85
3.6 - 3.9	80		117		127		71	89
3.9 - 4.2	88		134		127		85	100
4.2 - 4.5	101		102		111		89	109
4.5 - 4.8	97		145		111		100	116
4.8 - 5.1	111		145		151		109	131
5.1 - 5.4	117		139		167		116	151
5.4 - 5.7	134	169	182	131	186			
5.7 - 6.0	102	200	182	151	174			
6.0 - 6.3	145	214	177	186	189			
6.3 - 6.6	139	225	189	174	200			
6.6 - 6.9	169	225	221	200	217			
6.9 - 7.2	200	238	206	217	226			
7.2 - 7.5	214	263	244	226	234			
7.5 - 7.8	225	287	266	234	263			
7.8 - 8.1	238	251	249	263	279			
8.1 - 8.4	263	294	273	279	254			
8.4 - 8.7	287	304	288	254	275			
8.7 - 9.0	251	337	302	275	288			
9.0 - 9.3	294	352	309	288	281			
9.3 - 9.6	304	365	322	309	294			
9.6 - 9.9	337	344	322	322	277			
9.9 - 10.2	352	384	329	277	301			
10.2 - 10.5	365	371	381	301	318			
10.5 - 10.8	344	400	357	318	366			
10.8 - 11.1	384		363	366	384			
11.1 - 11.4	371		336	384	400			
11.4 - 11.7	400		374	400				
11.7 - 12.0			400					
12.0 - 12.3								
12.3 - 12.6								
12.6 - 12.9								
12.9 - 13.2								
13.2 - 13.5								
13.5 - 13.8								
13.8 - 14.1								
14.1 - 14.4								
14.4 - 14.7								
14.7 - 15.0								
Water level (m)	Ground Level		Ground Level		Ground Level			
Final Depth (m)	11.40		12.60		12.00			
Tested by	Suhaimi		Suhaimi		Suhaimi			
Remarks								

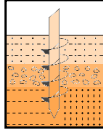


### STRATA GEOTECHNICS SDN BHD

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 43500 Semenyih, Selangor Darul Ehsan.  
 Tel : 03 8724 1622 / 03 8724 3622 Fax : 03 8724 0622

Job No.SG/1281/2018

Project :	SOIL INVESTIGATIONS FOR WESTPORTS EXPANSION CT10 & CT19										
Position No.	MP7			MP8			MP9				
Reduced Level (m)	1.057			1.236			1.320				
Date	13/10/2018			13/10/2018			13/10/2018				
Depth (m)	No. of Blows	No of Blows			No of Blows			No. of Blows	No of Blows		
0.00	0	0			0			0	0		
0.0 - 0.3	1	1			2			1	1		
0.3 - 0.6	1	3			3			1	1		
0.6 - 0.9	3	4			4			2	2		
0.9 - 1.2	4	5			5			3	3		
1.2 - 1.5	11	7			7			15	15		
1.5 - 1.8	13	9			9			13	13		
1.8 - 2.1	17	10			10			16	16		
2.1 - 2.4	18	13			13			21	21		
2.4 - 2.7	22	17			17			29	29		
2.7 - 3.0	23	21			21			35	35		
3.0 - 3.3	26	25			25			39	39		
3.3 - 3.6	29	28			28			61	61		
3.6 - 3.9	37	34			34			59	59		
3.9 - 4.2	44	44			44			73	73		
4.2 - 4.5	51	52			52			89	89		
4.5 - 4.8	72	59			59			121	121		
4.8 - 5.1	81	79			79			147	147		
5.1 - 5.4	93	84			84			139	139		
5.4 - 5.7	109	114			114			179	179		
5.7 - 6.0	95	111			111			166	166		
6.0 - 6.3	119	156			156			201	201		
6.3 - 6.6	127	146			146			233	233		
6.6 - 6.9	145	166			166			256	256		
6.9 - 7.2	166	200			200			263	263		
7.2 - 7.5	187	206			206			281	281		
7.5 - 7.8	193	29			29			285	285		
7.8 - 8.1	200	214			214			297	297		
8.1 - 8.4	205	247			247			300	300		
8.4 - 8.7	254	266			266			311	311		
8.7 - 9.0	289	273			273			322	322		
9.0 - 9.3	271	292			292			336	336		
9.3 - 9.6	282	302			302			339	339		
9.6 - 9.9	299	308			308			354	354		
9.9 - 10.2	314	312			312			362	362		
10.2 - 10.5	327	324			324			373	373		
10.5 - 10.8	355	339			339			387	387		
10.8 - 11.1	376	349			349			388	388		
11.1 - 11.4	400	357			357			391	391		
11.4 - 11.7		344			344			400	400		
11.7 - 12.0		337			337						
12.0 - 12.3		369			369						
12.3 - 12.6		378			378						
12.6 - 12.9		400			400						
12.9 - 13.2											
13.2 - 13.5											
13.5 - 13.8											
13.8 - 14.1											
14.1 - 14.4											
14.4 - 14.7											
14.7 - 15.0											
Water level (m)	Ground Level			Ground Level			Ground Level				
Final Depth (m)	11.10			12.60			11.40				
Tested by	Suhaimi			Suhaimi			Suhaimi				
Remarks											

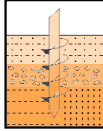


## STRATA GEOTECHNICS SDN BHD

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 43500 Semenyih, Selangor Darul Ehsan.  
 Tel : 03 8724 1622 / 03 8724 3622 Fax : 03 8724 0622

Job No.SG/1281/2018

Project :		SOIL INVESTIGATIONS FOR WESTPORTS EXPANSION CT10 & CT19					
Position No.	MP10		MP11		MP12		
Reduced Level (m)	1.508		1.395		1.427		
Date	13/10/2018		2/10/2018		2/10/2018		
Depth (m)	No. of Blows	No. of Blows		No. of Blows			
0.00	0	0	0	0	0		
0.0 - 0.3	2	1	1	1	1		
0.3 - 0.6	3	4	4	1	1		
0.6 - 0.9	5	7	7	2	2		
0.9 - 1.2	7	9	9	3	3		
1.2 - 1.5	9	18	18	16	11		
1.5 - 1.8	11	35	35	11	21		
1.8 - 2.1	13	44	44	21	25		
2.1 - 2.4	19	53	53	25	14		
2.4 - 2.7	37	66	66	14	11		
2.7 - 3.0	46	49	49	11	10		
3.0 - 3.3	55	57	57	10	9		
3.3 - 3.6	67	79	79	9	31		
3.6 - 3.9	88	97	97	31	39		
3.9 - 4.2	154	124	124	39	51		
4.2 - 4.5	134	135	135	51	62		
4.5 - 4.8	127	151	151	62	77		
4.8 - 5.1	167	178	178	77	81		
5.1 - 5.4	189	194	194	81	94		
5.4 - 5.7	207	219	219	94	104		
5.7 - 6.0	274	227	227	104	119		
6.0 - 6.3	246	247	247	119	126		
6.3 - 6.6	231	278	278	126	152		
6.6 - 6.9	286	317	317	152	163		
6.9 - 7.2	261	336	336	163	133		
7.2 - 7.5	297	372	372	133	173		
7.5 - 7.8	286	383	383	173	181		
7.8 - 8.1	300	400	400	181	200		
8.1 - 8.4	317			200	221		
8.4 - 8.7	326			221	239		
8.7 - 9.0	333			239	257		
9.0 - 9.3	344			257	279		
9.3 - 9.6	369			279	324		
9.6 - 9.9	377			324	364		
9.9 - 10.2	389			364	386		
10.2 - 10.5	400			386	400		
10.5 - 10.8				400			
10.8 - 11.1							
11.1 - 11.4							
11.4 - 11.7							
11.7 - 12.0							
12.0 - 12.3							
12.3 - 12.6							
12.6 - 12.9							
12.9 - 13.2							
13.2 - 13.5							
13.5 - 13.8							
13.8 - 14.1							
14.1 - 14.4							
14.4 - 14.7							
14.7 - 15.0							
Water level (m)	Ground Level		Ground Level		Ground Level		
Final Depth (m)	11.10		12.60		10.50		
Tested by	Suhaimi		Suhaimi		Suhaimi		
Remarks							

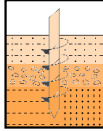


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Job No.SG/1281/2018

Project :		SOIL INVESTIGATIONS FOR WESTPORTS EXPANSION CT10 & CT19					
Position No.	MP13		MP14		MP15		
Reduced Level (m)	1.354		1.409		1.511		
Date	2/10/2018		1/10/2018		1/10/2018		
Depth (m)	No. of Blows	No. of Blows		No. of Blows			
0.00	0	0	0	0	0		
0.0 - 0.3	1	1	1	2	2		
0.3 - 0.6	1	1	1	3	3		
0.6 - 0.9	2	1	1	4	4		
0.9 - 1.2	1	2	2	9	9		
1.2 - 1.5	4	7	7	21	21		
1.5 - 1.8	3	6	6	27	27		
1.8 - 2.1	5	5	5	22	22		
2.1 - 2.4	6	4	4	44	44		
2.4 - 2.7	10	21	21	86	86		
2.7 - 3.0	9	27	27	107	107		
3.0 - 3.3	14	33	33	130	130		
3.3 - 3.6	16	44	44	164	164		
3.6 - 3.9	32	51	51	186	186		
3.9 - 4.2	37	59	59	191	191		
4.2 - 4.5	46	67	67	210	210		
4.5 - 4.8	48	78	78	207	207		
4.8 - 5.1	55	199	199	231	231		
5.1 - 5.4	59	109	109	249	249		
5.4 - 5.7	72	111	111	263	263		
5.7 - 6.0	83	121	121	289	289		
6.0 - 6.3	98	119	119	300	300		
6.3 - 6.6	114	107	107	336	336		
6.6 - 6.9	123	129	129	371	371		
6.9 - 7.2	124	149	149	344	344		
7.2 - 7.5	121	172	172	364	364		
7.5 - 7.8	116	183	183	357	357		
7.8 - 8.1	151	198	198	389	389		
8.1 - 8.4	163	171	171	400	400		
8.4 - 8.7	177	200	200				
8.7 - 9.0	164	211	211				
9.0 - 9.3	189	226	226				
9.3 - 9.6	200	231	231				
9.6 - 9.9	204	267	267				
9.9 - 10.2	219	265	265				
10.2 - 10.5	237	274	274				
10.5 - 10.8	221	289	289				
10.8 - 11.1	274	300	300				
11.1 - 11.4	300	350	350				
11.4 - 11.7	345	337	337				
11.7 - 12.0	362	371	371				
12.0 - 12.3	379	381	381				
12.3 - 12.6	386	400	400				
12.6 - 12.9	381						
12.9 - 13.2	389						
13.2 - 13.5	400						
13.5 - 13.8							
13.8 - 14.1							
14.1 - 14.4							
14.4 - 14.7							
14.7 - 15.0							
Water level (m)	Ground Level		Ground Level		Ground Level		
Final Depth (m)	13.20		12.30		8.10		
Tested by	Suhaimi		Suhaimi		Suhaimi		
Remarks							

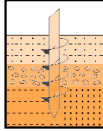


**STRATA GEOTECHNICS SDN BHD**

(Co. No. 393744- T)  
 No. 22, Jalan P4/8, Section 4 Bandar Teknologi Kajang,  
 43500 Semenyih, Selangor Darul Ehsan.  
 Tel : 03 8724 1622 / 03 8724 3622 Fax : 03 8724 0622

Job No.SG/1281/2018

Project :		SOIL INVESTIGATIONS FOR WESTPORTS EXPANSION CT10 & CT19					
Position No.	MP16		MP17		MP18		
Reduced Level (m)	1.486		1.179		1.284		
Date	1/10/2018		29/09/2018		2/10/2018		
Depth (m)	No. of Blows	No of Blows		No of Blows		No of Blows	
0.00	0	0	0	0	0	0	0
0.0 - 0.3	3	1	1	1	1	1	1
0.3 - 0.6	11	1	1	1	1	1	1
0.6 - 0.9	19	3	3	3	3	3	3
0.9 - 1.2	29	5	5	5	5	5	5
1.2 - 1.5	35	14	14	14	14	14	14
1.5 - 1.8	51	27	27	27	27	27	27
1.8 - 2.1	77	35	35	35	35	35	35
2.1 - 2.4	86	46	46	46	46	46	46
2.4 - 2.7	126	57	57	57	57	57	57
2.7 - 3.0	161	68	68	68	68	68	68
3.0 - 3.3	181	55	55	55	55	55	55
3.3 - 3.6	207	79	79	79	79	79	79
3.6 - 3.9	235	99	99	99	99	99	99
3.9 - 4.2	269	111	111	111	111	111	111
4.2 - 4.5	282	121	121	121	121	121	121
4.5 - 4.8	291	143	143	143	143	143	143
4.8 - 5.1	257	129	129	129	129	129	129
5.1 - 5.4	241	135	135	135	135	135	135
5.4 - 5.7	303	163	163	163	163	163	163
5.7 - 6.0	285	171	171	171	171	171	171
6.0 - 6.3	299	191	191	191	191	191	191
6.3 - 6.6	337	204	204	204	204	204	204
6.6 - 6.9	366	221	221	221	221	221	221
6.9 - 7.2	374	229	229	229	229	229	229
7.2 - 7.5	380	275	275	275	275	275	275
7.5 - 7.8	389	286	286	286	286	286	286
7.8 - 8.1	400	306	306	306	306	306	306
8.1 - 8.4		281	281	281	281	281	281
8.4 - 8.7		327	327	327	327	327	327
8.7 - 9.0		340	340	340	340	340	340
9.0 - 9.3		365	365	365	365	365	365
9.3 - 9.6		351	351	351	351	351	351
9.6 - 9.9		386	386	386	386	386	386
9.9 - 10.2		390	390	390	390	390	390
10.2 - 10.5		400	400	400	400	400	400
10.5 - 10.8							
10.8 - 11.1							
11.1 - 11.4							
11.4 - 11.7							
11.7 - 12.0							
12.0 - 12.3							
12.3 - 12.6							
12.6 - 12.9							
12.9 - 13.2							
13.2 - 13.5							
13.5 - 13.8							
13.8 - 14.1							
14.1 - 14.4							
14.4 - 14.7							
14.7 - 15.0							
Water level (m)	Ground Level		Ground Level		Ground Level		
Final Depth (m)	7.80		10.20		8.10		
Tested by	Suhaimi		Suhaimi		Suhaimi		
Remarks							



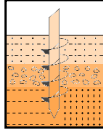
**STRATA GEOTECHNICS SDN BHD**

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Job No.SG/1281/2018

Project :		SOIL INVESTIGATIONS FOR WESTPORTS EXPANSION CT10 & CT19					
Position No.	MP19		MP20		MP21		
Reduced Level (m)	1.434		1.588		1.639		
Date	2/10/2018		1/10/2018		1/10/2018		
Depth (m)	No. of Blows	No. of Blows		No. of Blows			
0.00	0	0	0	0	0		
0.0 - 0.3	1	1	1	2	2		
0.3 - 0.6	1	2	2	3	3		
0.6 - 0.9	2	3	3	5	5		
0.9 - 1.2	3	5	5	7	7		
1.2 - 1.5	4	11	11	10	10		
1.5 - 1.8	5	17	17	14	14		
1.8 - 2.1	7	19	19	22	22		
2.1 - 2.4	9	21	21	26	26		
2.4 - 2.7	11	29	29	31	31		
2.7 - 3.0	13	37	37	49	49		
3.0 - 3.3	15	45	45	41	41		
3.3 - 3.6	17	51	51	53	53		
3.6 - 3.9	24	67	67	71	71		
3.9 - 4.2	33	74	74	77	77		
4.2 - 4.5	41	80	80	65	65		
4.5 - 4.8	49	109	109	100	100		
4.8 - 5.1	57	112	112	131	131		
5.1 - 5.4	63	117	117	154	154		
5.4 - 5.7	83	138	138	141	141		
5.7 - 6.0	101	154	154	159	159		
6.0 - 6.3	113	187	187	167	167		
6.3 - 6.6	137	192	192	184	184		
6.6 - 6.9	121	174	174	171	171		
6.9 - 7.2	127	161	161	189	189		
7.2 - 7.5	156	138	138	200	200		
7.5 - 7.8	173	154	154	206	206		
7.8 - 8.1	167	189	189	213	213		
8.1 - 8.4	183	170	170	219	219		
8.4 - 8.7	200	200	200	284	284		
8.7 - 9.0	214	217	217	289	289		
9.0 - 9.3	229	211	211	302	302		
9.3 - 9.6	235	245	245	346	346		
9.6 - 9.9	273	259	259	371	371		
9.9 - 10.2	289	273	273	337	337		
10.2 - 10.5	334	289	289	381	381		
10.5 - 10.8	354	304	304	377	377		
10.8 - 11.1	381	316	316	381	381		
11.1 - 11.4	400	321	321	400	400		
11.4 - 11.7		349	349				
11.7 - 12.0		363	363				
12.0 - 12.3		387	387				
12.3 - 12.6		391	391				
12.6 - 12.9		400	400				
12.9 - 13.2							
13.2 - 13.5							
13.5 - 13.8							
13.8 - 14.1							
14.1 - 14.4							
14.4 - 14.7							
14.7 - 15.0							
Water level (m)	Ground Level		Ground Level		Ground Level		
Final Depth (m)	7.80		10.20		8.10		
Tested by	Suhaimi		Suhaimi		Suhaimi		
Remarks							



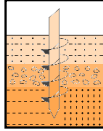


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Job No.SG/1281/2018

Project :		SOIL INVESTIGATIONS FOR WESTPORTS EXPANSION CT10 & CT19					
Position No.	MP22		MP23		MP24		
Reduced Level (m)	1.273		1.360		1.407		
Date	29/09/2018		29/09/2018		29/09/2018		
Depth (m)	No. of Blows	No of Blows		No of Blows			
0.00	0	0	0	0	0		
0.0 - 0.3	1	1	1	1	1		
0.3 - 0.6	2	1	1	2	2		
0.6 - 0.9	1	2	2	1	1		
0.9 - 1.2	3	2	2	3	3		
1.2 - 1.5	5	4	4	3	3		
1.5 - 1.8	8	7	7	5	5		
1.8 - 2.1	7	5	5	7	7		
2.1 - 2.4	8	9	9	8	8		
2.4 - 2.7	12	11	11	41	41		
2.7 - 3.0	19	11	11	53	53		
3.0 - 3.3	23	57	57	65	65		
3.3 - 3.6	26	64	64	74	74		
3.6 - 3.9	33	74	74	87	87		
3.9 - 4.2	39	69	69	95	95		
4.2 - 4.5	48	56	56	106	106		
4.5 - 4.8	51	49	49	111	111		
4.8 - 5.1	66	74	74	131	131		
5.1 - 5.4	87	82	82	146	146		
5.4 - 5.7	74	94	94	174	174		
5.7 - 6.0	91	99	99	163	163		
6.0 - 6.3	88	105	105	197	197		
6.3 - 6.6	119	108	108	201	201		
6.6 - 6.9	153	116	116	213	213		
6.9 - 7.2	177	121	121	217	217		
7.2 - 7.5	153	141	141	244	244		
7.5 - 7.8	187	149	149	263	263		
7.8 - 8.1	199	155	155	279	279		
8.1 - 8.4	189	161	161	297	297		
8.4 - 8.7	185	200	200	301	301		
8.7 - 9.0	227	209	209	309	309		
9.0 - 9.3	244	237	237	335	335		
9.3 - 9.6	264	263	263	354	354		
9.6 - 9.9	291	269	269	361	361		
9.9 - 10.2	271	289	289	376	376		
10.2 - 10.5	301	247	247	388	388		
10.5 - 10.8	356	277	277	379	379		
10.8 - 11.1	374	291	291	400	400		
11.1 - 11.4	391	312	312				
11.4 - 11.7	400	358	358				
11.7 - 12.0		384	384				
12.0 - 12.3		400	400				
12.3 - 12.6							
12.6 - 12.9							
12.9 - 13.2							
13.2 - 13.5							
13.5 - 13.8							
13.8 - 14.1							
14.1 - 14.4							
14.4 - 14.7							
14.7 - 15.0							
Water level (m)	Ground Level		Ground Level		Ground Level		
Final Depth (m)	11.40		12.00		10.80		
Tested by	Suhaimi		Suhaimi		Suhaimi		
Remarks							

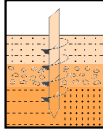


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Job No.SG/1281/2018

Project :	SOIL INVESTIGATIONS FOR WESTPORTS EXPANSION CT10 & CT19							
Position No.	MP25		MP26		MP27			
Reduced Level (m)	1.369		0.534		1.298			
Date	29/09/2018		28/09/2018		28/09/2018			
Depth (m)	No. of Blows		No. of Blows		No. of Blows			
0.00	0		0		0		0	0
0.0 - 0.3	1		2		1		1	1
0.3 - 0.6	1		1		1		2	2
0.6 - 0.9	2		3		3		6	3
0.9 - 1.2	2		5		7		8	6
1.2 - 1.5	4		14		14		13	8
1.5 - 1.8	7		27		36		26	13
1.8 - 2.1	5		45		61		19	24
2.1 - 2.4	9		76		93		37	24
2.4 - 2.7	13		113		142		56	37
2.7 - 3.0	21		159		189		63	56
3.0 - 3.3	42		171		203		75	63
3.3 - 3.6	27		189		218		89	75
3.6 - 3.9	34		253		279		89	89
3.9 - 4.2	49		307		301		77	84
4.2 - 4.5	57		344		303		84	84
4.5 - 4.8	60		387		371		112	112
4.8 - 5.1	85		388		384		98	98
5.1 - 5.4	71		400		400		118	118
5.4 - 5.7	88			107	107			
5.7 - 6.0	94			145	145			
6.0 - 6.3	109			138	138			
6.3 - 6.6	113			157	157			
6.6 - 6.9	121			194	194			
6.9 - 7.2	129			204	204			
7.2 - 7.5	151			177	177			
7.5 - 7.8	163			216	216			
7.8 - 8.1	144			239	239			
8.1 - 8.4	170			259	259			
8.4 - 8.7	189			264	264			
8.7 - 9.0	197			283	283			
9.0 - 9.3	201			288	288			
9.3 - 9.6	204			323	323			
9.6 - 9.9	235			336	336			
9.9 - 10.2	269			358	358			
10.2 - 10.5	283			374	374			
10.5 - 10.8	303			367	367			
10.8 - 11.1	316			386	386			
11.1 - 11.4	333			400	400			
11.4 - 11.7	349							
11.7 - 12.0	370							
12.0 - 12.3	388							
12.3 - 12.6	386							
12.6 - 12.9	400							
12.9 - 13.2								
13.2 - 13.5								
13.5 - 13.8								
13.8 - 14.1								
14.1 - 14.4								
14.4 - 14.7								
14.7 - 15.0								
Water level (m)	Ground Level		Ground Level		Ground Level			
Final Depth (m)	12.60		10.20		11.40			
Tested by	Suhaimi		Suhaimi		Suhaimi			
Remarks								



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Job No.SG/1281/2018

Project :		SOIL INVESTIGATIONS FOR WESTPORTS EXPANSION CT10 & CT19					
Position No.	MP28		MP29		MP30		
Reduced Level (m)	1.347		1.133		1.271		
Date	28/09/2018		28/09/2018		28/09/2018		
Depth (m)	No. of Blows	No. of Blows		No. of Blows			
0.00	0	0	0	0	0		
0.0 - 0.3	2	4	7	7	7		
0.3 - 0.6	2	3	9	9	9		
0.6 - 0.9	3	21	32	32	32		
0.9 - 1.2	5	13	17	17	17		
1.2 - 1.5	9	11	14	14	14		
1.5 - 1.8	17	33	28	28	28		
1.8 - 2.1	31	49	42	42	42		
2.1 - 2.4	29	21	27	27	27		
2.4 - 2.7	26	16	18	18	18		
2.7 - 3.0	39	66	20	20	20		
3.0 - 3.3	53	45	30	30	30		
3.3 - 3.6	51	54	32	32	32		
3.6 - 3.9	83	96	46	46	46		
3.9 - 4.2	98	107	66	66	66		
4.2 - 4.5	101	113	45	45	45		
4.5 - 4.8	107	141	23	23	23		
4.8 - 5.1	121	177	65	65	65		
5.1 - 5.4	117	189	58	58	58		
5.4 - 5.7	137	183	75	75	75		
5.7 - 6.0	133	207	75	75	75		
6.0 - 6.3	177	239	100	100	100		
6.3 - 6.6	197	271	105	105	105		
6.6 - 6.9	208	194	85	85	85		
6.9 - 7.2	231	217	65	65	65		
7.2 - 7.5	263	183	107	107	107		
7.5 - 7.8	247	174	135	135	135		
7.8 - 8.1	254	221	147	147	147		
8.1 - 8.4	292	229	82	82	82		
8.4 - 8.7	303	261	170	170	170		
8.7 - 9.0	281	257	190	190	190		
9.0 - 9.3	311	293	257	257	257		
9.3 - 9.6	322	301	291	291	291		
9.6 - 9.9	339	309	275	275	275		
9.9 - 10.2	351	317	283	283	283		
10.2 - 10.5	327	329	345	345	345		
10.5 - 10.8	369	337	389	389	389		
10.8 - 11.1	383	304	400	400	400		
11.1 - 11.4	354	361					
11.4 - 11.7	341	383					
11.7 - 12.0	359	400					
12.0 - 12.3	388						
12.3 - 12.6	400						
12.6 - 12.9							
12.9 - 13.2							
13.2 - 13.5							
13.5 - 13.8							
13.8 - 14.1							
14.1 - 14.4							
14.4 - 14.7							
14.7 - 15.0							
Water level (m)	Ground Level		Ground Level		Ground Level		
Final Depth (m)	12.30		11.70		10.80		
Tested by	Suhaimi		Suhaimi		Suhaimi		
Remarks							