

**LEGEND:**

SECTION A      CROSS SECTION (BH01 - BH02)  
NTS

## APPROXIMATE WATER LEVEL

## NO RECOVERY

Si AND

10

PEAT

## CRIMINAL INVESTIGATION

Project Name		Drawing Title		Drawing No.		Scale		Date	
Client	Project No.	Project No.	Section No.	Sheet No.	Sheet No.	Scale	Signature	Initials	Stamp
Engineered Designs Consulting Civil & Structural Engineers Office: 1-A, Project Plaza Plot No. 117, Sector No. 3, Noida-201301 Ph: 0120-4567890	PUBLIC RENTAL BOARD	GEOTECHNICAL INVESTIGATION FOR NAMELIMELI PROJECT	BOREHOLE CROSS SECTION	1	1	1:50000	1/250/24/50	50/24-03D	50/24-03D

# Appendix D

## *SPT & Site Photographs*



BH01 – SPT @ 1.50m



BH01 – SPT @ 3.00m



BH01 – SPT @ 4.50m



BH01 – SPT @ 6.00m

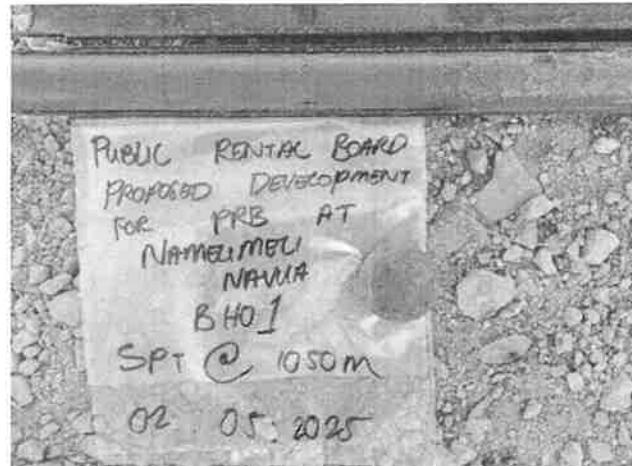


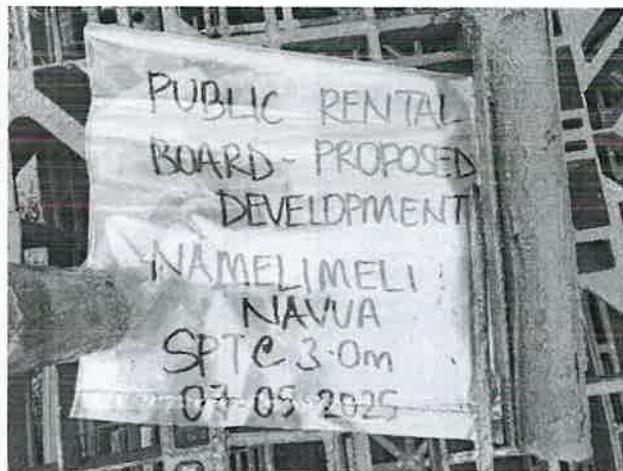
BH01 – SPT @ 7.50m



BH01 – SPT @ 9.00m







BH02 – SPT @ 3.00m



BH02 – SPT @ 4.50m



BH02 – SPT @ 6.00m



BH02 – SPT @ 9.00m





**Site Photo 1**



**Site Photo 2**



**Site Photo 3**



**Site Photo 4**



**Site Photo 5**



**Site Photo 6**



# Appendix E

## *Laboratory Test Results*

**PLASTICITY INDEX (SOILS)  
TEST REPORT**



**Engineered Designs**  
Consulting Civil, Structural,  
Geotechnical Engineers & Project  
Managers

Project : **Proposed Development for Public Rental Board**  
 Location : **Namelimeli, Navua**  
 Client : **Public Rental Board**  
 Requested by : **Rajiv Singh** Date Sample: **02/05/2025**  
 Sampled by : **Risal Deo** Date Received: **02/05/2025**  
 Sampling method : **ED - Borehole Drill Rig**  
 Sample description : **Grey, SILT with minor intrusions of peat**  
 Sample condition : **Saturated As Received**  
 Sample reference : **BH01**  
 Sample depth : **6.0M**

<b>Project No :</b>	<b>GEO 50-24</b>
<b>Lab Ref No :</b>	<b>A-134-25</b>
<b>Client Ref No :</b>	
<b>Folder No :</b>	

<b>Test Results</b>	
As rec'd water content:	<b>86.6%</b>
Liquid limit:	<b>100</b>
Plastic limit:	<b>56</b>
Plasticity Index:	<b>44</b>
Linear Shrinkage:	<b>6</b>

<b>Test methods</b>	<b>Notes</b>
Water Content:	NZS 4402 : 1986, Test 2.1
Liquid Limit:	NZS 4402 : 1986, Test 2.2
Plastic Limit:	NZS 4402 : 1986, Test 2.3
Plasticity Index:	NZS 4402 : 1986, Test 2.4
Linear Shrinkage:	NZS 4402 : 1986, Test 2.6
	Test performed on: Whole soil

Date tested : **05/05/2025**  
 Date reported : **14/05/2025**

**Results only apply to sample tested.  
This report may only be reproduced in full.**

**Approved:**

*Ansaar Ali*  
 Designation : **Geotechnical Engineer / Laboratory Manager**  
 Date : **14/05/2025**

**Page 1 of 1**

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 Email: [edesigns@edesignsfiji.com](mailto:edesigns@edesignsfiji.com)

**PLASTICITY INDEX (SOILS)  
TEST REPORT**



**Engineered Designs**  
Consulting Civil, Structural,  
Geotechnical Engineers & Project  
Managers

Project : **Proposed Development for Public Rental Board**  
 Location : **Namelimeli, Navua**  
 Client : **Public Rental Board**  
 Requested by : **Rajiv Singh**  
 Sampled by : **Risal Deo**  
 Sampling method : **ED - Borehole Drill Rig**  
 Sample description : **Grey, SILT**  
 Sample condition : **Saturated As Received**  
 Sample reference : **BH01**  
 Sample depth : **9.0M**

Date Sample: **02/05/2025**  
 Date Received: **02/05/2025**

<b>Project No :</b>	<b>GEO 50-24</b>
<b>Lab Ref No :</b>	<b>A-135-25</b>
<b>Client Ref No :</b>	
<b>Folder No :</b>	

**Test Results**

As rec'd water content:	<b>88.2%</b>
Liquid limit:	<b>96</b>
Plastic limit:	<b>53</b>
Plasticity Index:	<b>43</b>
Linear Shrinkage:	<b>7</b>

<b>Test methods</b>	<b>Notes</b>
Water Content:	Test performed on: Whole soil
Liquid Limit:	
Plastic Limit:	
Plasticity Index:	
Linear Shrinkage:	

Date tested : **05/05/2025**  
 Date reported : **14/05/2025**

**Results only apply to sample tested.**  
**This report may only be reproduced in full.**

**Approved:**

*Ansaar Ali*  
 Designation : **Geotechnical Engineer / Laboratory Manager**  
 Date : **14/05/2025**

**PLASTICITY INDEX (SOILS)  
TEST REPORT**



**Engineered Designs**  
Consulting Civil, Structural,  
Geotechnical Engineers & Project  
Managers

Project : **Proposed Development for Public Rental Board**  
 Location : **Namelimeli, Navua**  
 Client : **Public Rental Board**  
 Requested by : **Rajiv Singh** Date Sampled: **07/05/2025**  
 Sampled by : **Rajiv Singh** Date Received: **07/05/2025**  
 Sampling method : **ED - Borehole Drill Rig**  
 Sample description : **Dark grey, marine SILT with fibrous PEAT**  
 Sample condition : **Saturated As Received**  
 Sample reference : **BH02**  
 Sample depth : **3.0M**

<b>Project No :</b>	<b>GEO 50-24</b>
<b>Lab Ref No :</b>	<b>A-136-25</b>
<b>Client Ref No :</b>	
<b>Folder No :</b>	

**Test Results**

As rec'd water content: **73.8%**  
 Liquid limit: **82**  
 Plastic limit: **52**  
 Plasticity Index: **30**  
 Linear Shrinkage: **14**

<b>Test methods</b>	<b>Notes</b>
Water Content:	NZS 4402 : 1986, Test 2.1
Liquid Limit:	NZS 4402 : 1986, Test 2.2
Plastic Limit:	NZS 4402 : 1986, Test 2.3
Plasticity Index:	NZS 4402 : 1986, Test 2.4
Linear Shrinkage:	NZS 4402 : 1986, Test 2.6

Date tested : **27/5/2025**  
 Date reported : **04/06/2025**

**Results only apply to sample tested.  
This report may only be reproduced in full.**

**Approved:**

*Ansaar Ali*  
 Designation : **Geotechnical Engineer / Laboratory Manager**  
 Date : **04/06/2025**

**PLASTICITY INDEX (SOILS)  
TEST REPORT**



**Engineered Designs**  
Consulting Civil, Structural,  
Geotechnical Engineers & Project  
Managers

Project :	<b>Proposed Development for Public Rental Board</b>		
Location :	Namelimeli, Navua		
Client :	<b>Public Rental Board</b>		
Requested by :	Rajiv Singh	Date Sampled:	07/05/2025
Sampled by :	Rajiv Singh	Date Received:	07/05/2025
Sampling method :	ED - Borehole Drill Rig		
Sample description :	Dark grey, marine SILT with some shell fragments		
Sample condition :	Saturated As Received	Project No :	GEO 50-24
Sample reference :	BH02	Lab Ref No :	A-137-25
Sample depth :	4.5M	Client Ref No :	
		Folder No :	

<b>Test Results</b>	
As rec'd water content:	<b>83.3%</b>
Liquid limit:	<b>83</b>
Plastic limit:	<b>63</b>
Plasticity Index:	<b>20</b>
Linear Shrinkage:	<b>10</b>

<b>Test methods</b>	<b>Notes</b>
Water Content:	Test performed on: Whole soil
Liquid Limit:	Test performed on: Whole soil
Plastic Limit:	Test performed on: Whole soil
Plasticity Index:	Test performed on: Whole soil
Linear Shrinkage:	Test performed on: Whole soil

Date tested : 27/5/2025

Date reported : 04/06/2025

**Results only apply to sample tested.  
This report may only be reproduced in full.**

**Approved:**

*Ansaar Ali*

Designation : *Geotechnical Engineer / Laboratory Manager*

Date : 04/06/2025

**PLASTICITY INDEX (SOILS)  
TEST REPORT**



**Engineered Designs**  
Consulting Civil, Structural,  
Geotechnical Engineers & Project  
Managers

Project : **Proposed Development for Public Rental Board**  
 Location : **Namelimeli, Navua**  
 Client : **Public Rental Board**  
 Requested by : **Rajiv Singh** Date Sampled: **07/05/2025**  
 Sampled by : **Rajiv Singh** Date Received: **07/05/2025**  
 Sampling method : **ED - Borehole Drill Rig**  
 Sample description : **Dark grey, marine SILT with some shell fragments**  
 Sample condition : **Saturated As Received**  
 Sample reference : **BH02**  
 Sample depth : **6.0M**

<b>Project No :</b>	<b>GEO 50-24</b>
<b>Lab Ref No :</b>	<b>A-138-25</b>
<b>Client Ref No :</b>	
<b>Folder No :</b>	

<b>Test Results</b>	
As rec'd water content:	<b>78.7%</b>
Liquid limit:	<b>82</b>
Plastic limit:	<b>58</b>
Plasticity Index:	<b>24</b>
Linear Shrinkage:	<b>11</b>

<b>Test methods</b>	<b>Notes</b>
Water Content:	Test performed on: Whole soil
Liquid Limit:	
Plastic Limit:	
Plasticity Index:	
Linear Shrinkage:	

Date tested : **27/5/2025**  
 Date reported : **04/06/2025**

**Results only apply to sample tested.  
 This report may only be reproduced in full.**

**Approved:**

*Ansaar Ali*  
 Designation : **Geotechnical Engineer / Laboratory Manager**  
 Date : **04/06/2025**

# Appendix F

## *Liquefaction Analysis Results*



# Engineered Designs

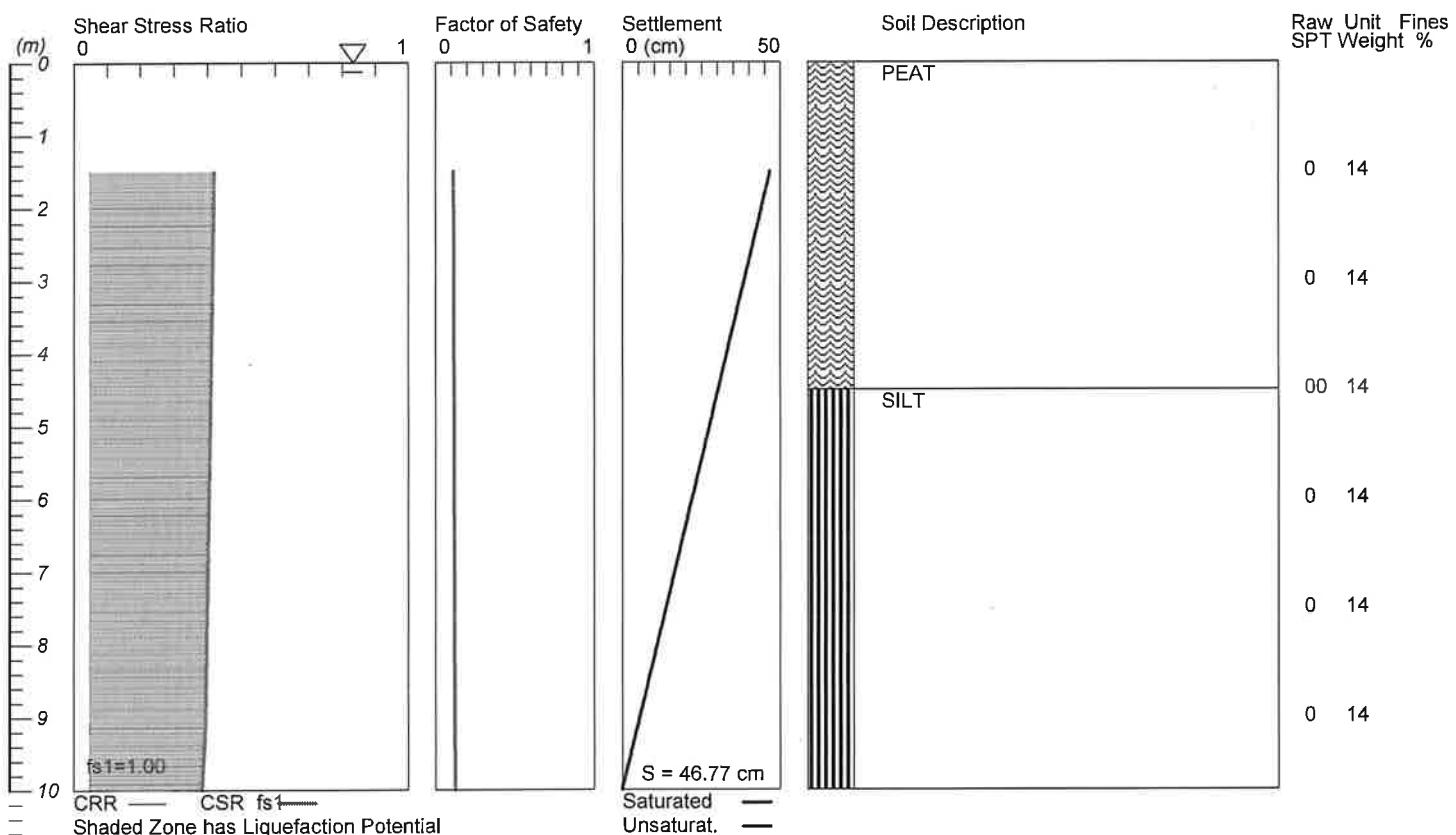
Consulting Civil, Structural,  
Geotechnical Engineers & Project  
Managers

## LIQUEFACTION ANALYSIS

### Geotechnical Investigation for PRB

Hole No.=01 Water Depth=0 m

Magnitude=7.5  
Acceleration=0.196g





# Engineered Designs

Consulting Civil, Structural,  
Geotechnical Engineers & Project  
Managers

## LIQUEFACTION ANALYSIS

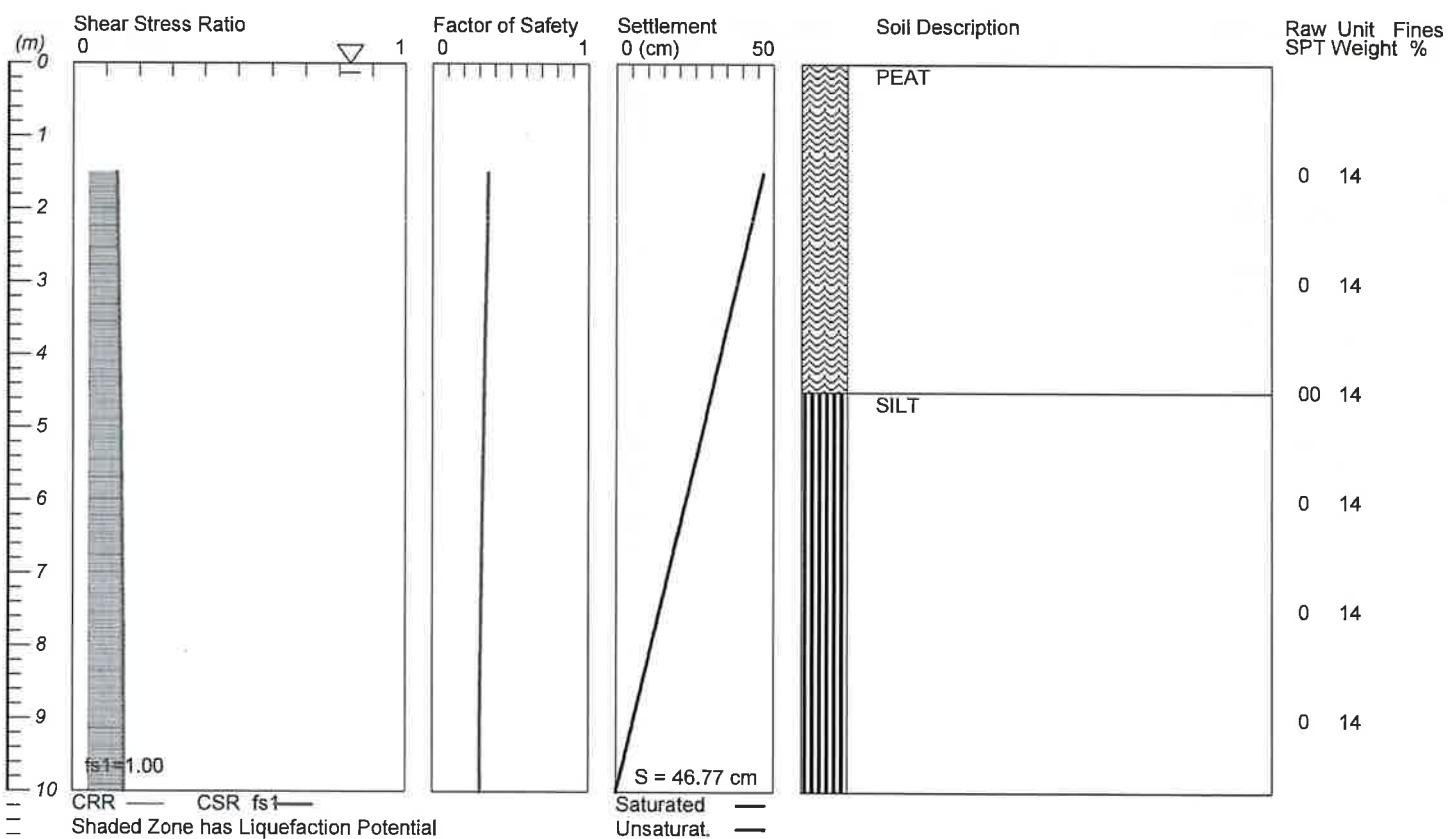
### Geotechnical Investigation for PRB

Hole No.=01 Water Depth=0 m

Ground Improvement of Fill=1.9 m

Magnitude=7.5

Acceleration=0.196g





# Engineered Designs

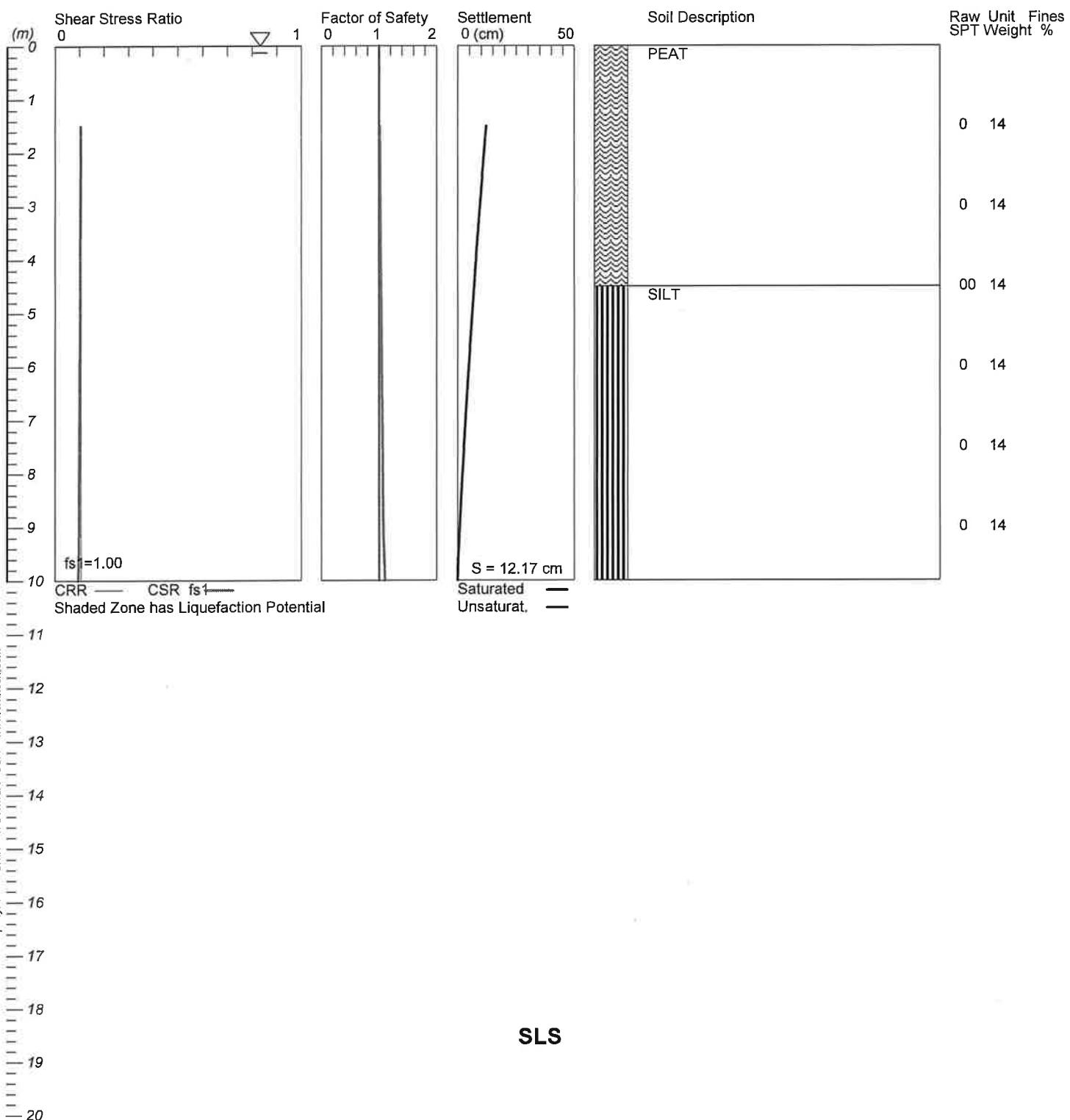
Consulting Civil, Structural,  
Geotechnical Engineers & Project  
Managers

## LIQUEFACTION ANALYSIS

### Geotechnical Investigation for PRB

Hole No.=01 Water Depth=0 m

Magnitude=5.5  
Acceleration=0.049g





# Engineered Designs

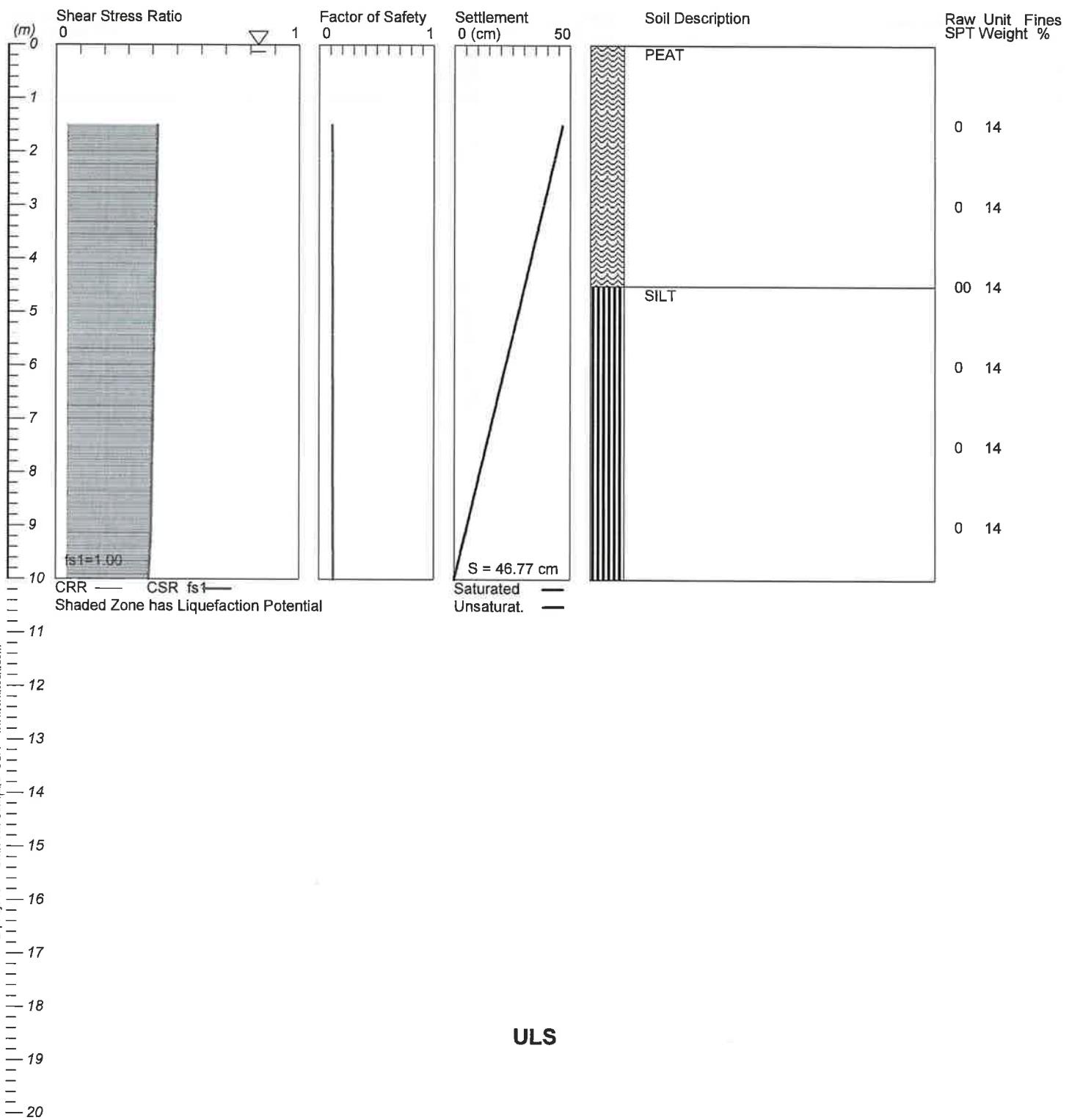
Consulting Civil, Structural,  
Geotechnical Engineers & Project  
Managers

## LIQUEFACTION ANALYSIS

### Geotechnical Investigation for PRB

Hole No.=02 Water Depth=0 m

Magnitude=7.5  
Acceleration=0.196g





# LIQUEFACTION ANALYSIS

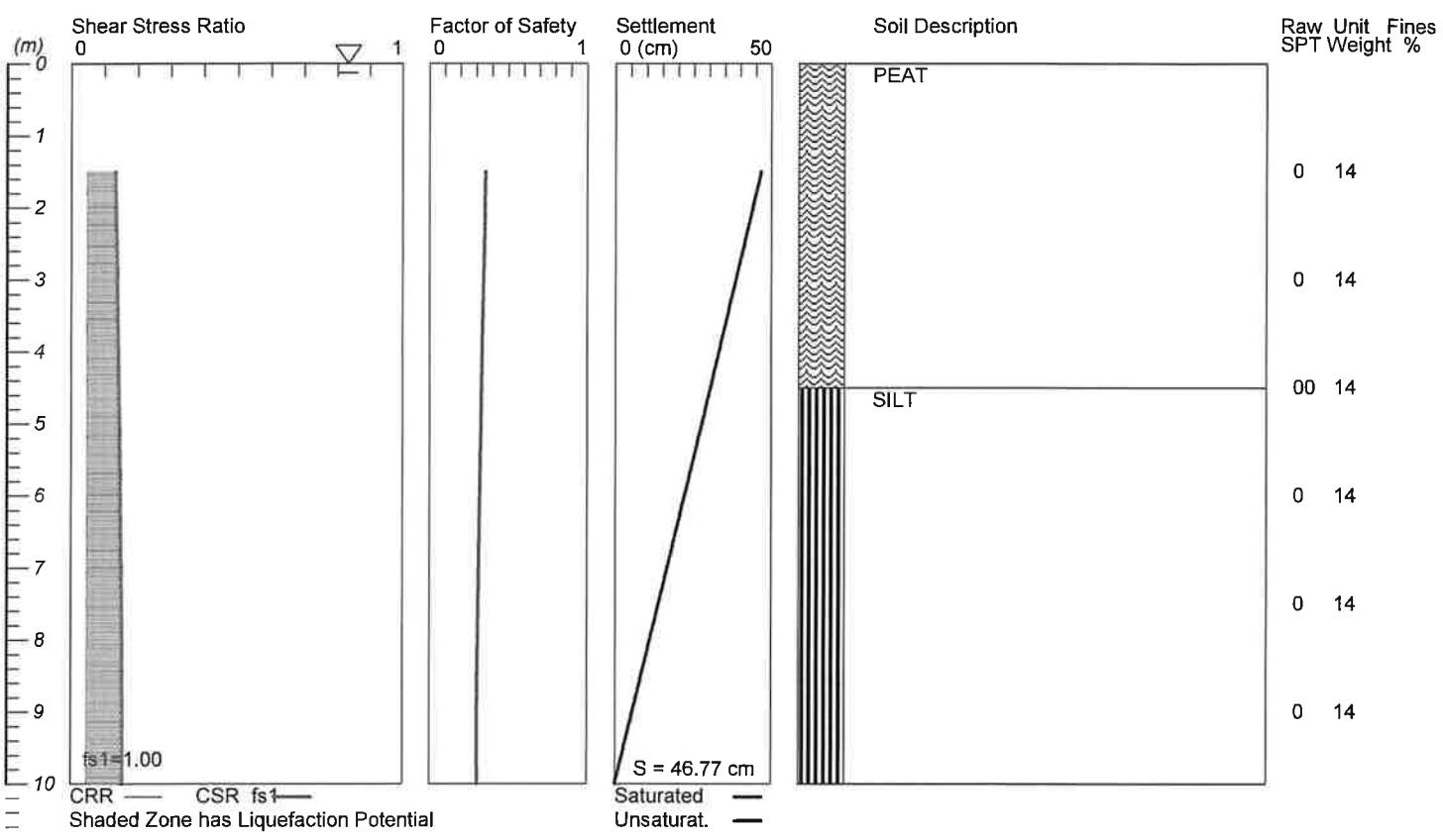
## Geotechnical Investigation for PRB

**Hole No.=02 Water Depth=0 m**

**Ground Improvement of Fill=1.9 m**

**Magnitude=7.5**

**Acceleration=0.196g**



**ULS**



## Engineered Designs

**Consulting Civil, Structural,  
Geotechnical Engineers & Project  
Managers**

# LIQUEFACTION ANALYSIS

## Geotechnical Investigation for PRB

**Hole No.=02    Water Depth=0 m**

*Magnitude=5.5*  
*Acceleration=0.049g*

