



AS "Ceļuprojekts"
Ģeoloģijas nodaļa
Murjāņu iela 7a, Rīga
www.celuprojekts.lv

CPT: CPT-2

Total depth: 12.04 m, Date: 11.12.2015.

Surface Elevation: 3.70 m

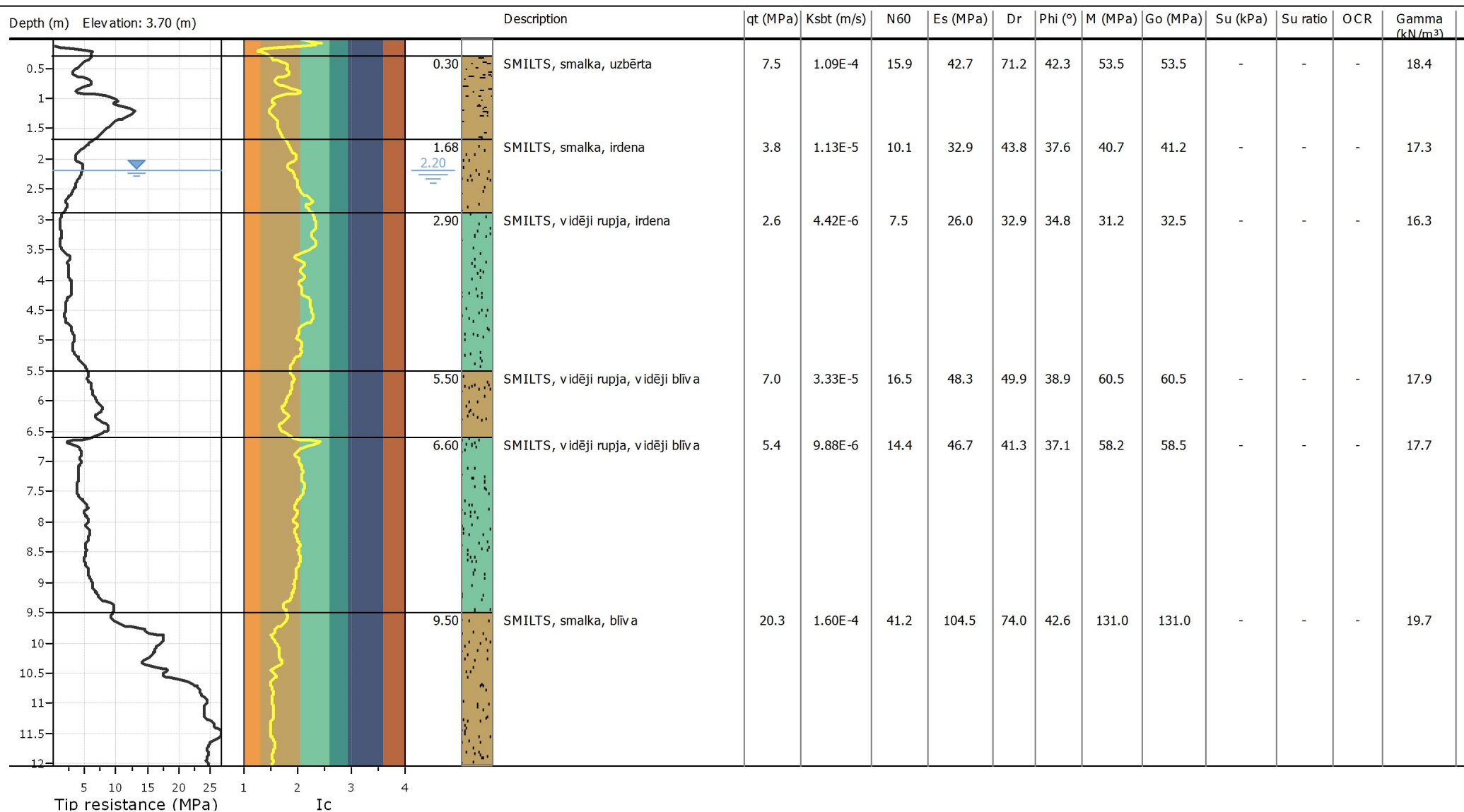
Coords: X:326238.00, Y:519782.00

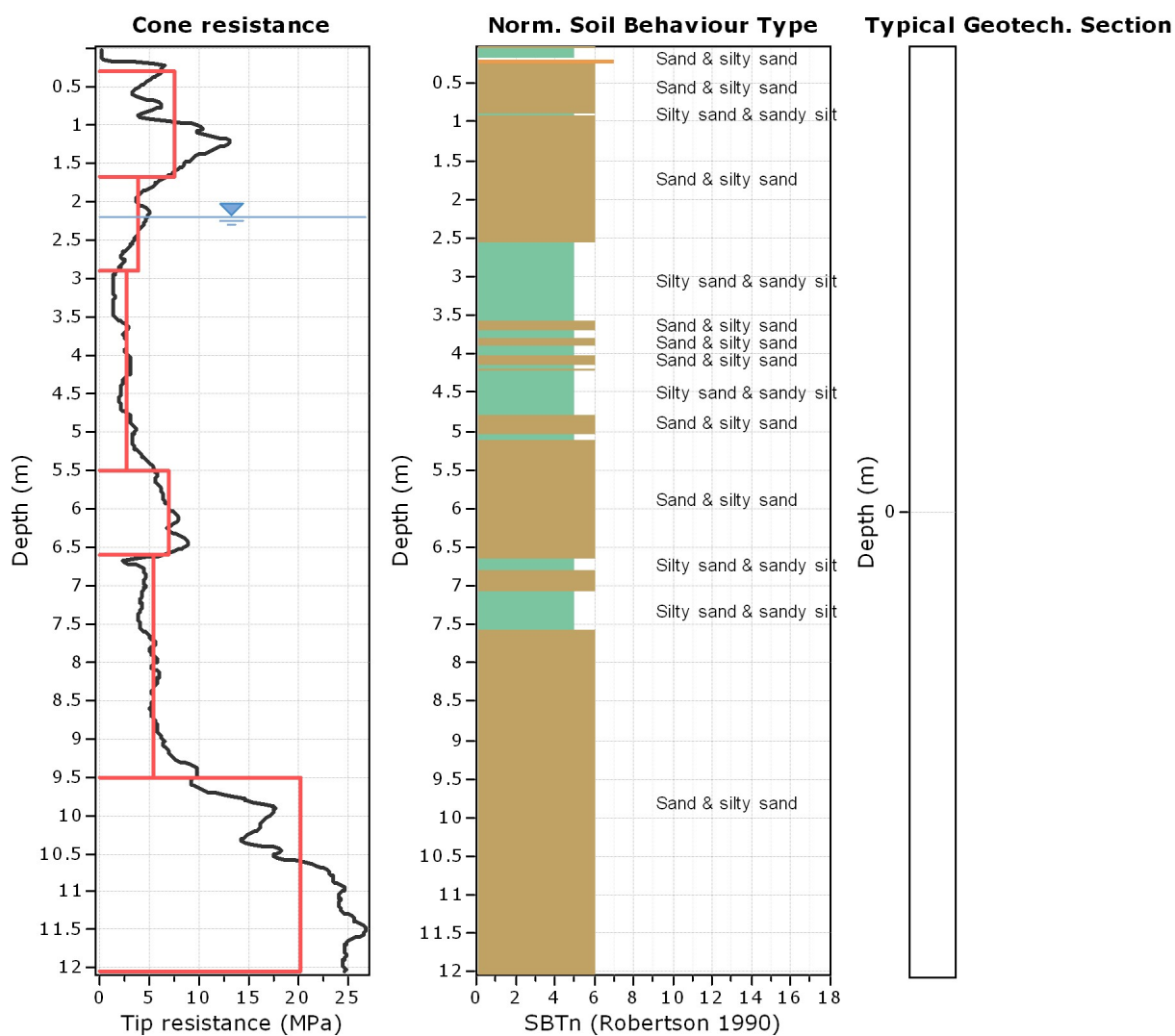
Cone Type: Type II, Nr.3908

Cone Operator: J.Ertners

Project: Ģeotehniskā priekšizpēte

Location: Attekas iela 16, Ādaži





Tabular results

::: Layer No: 1 :::

Code: T7 **Start depth:** 0.30 (m), **End depth:** 1.68 (m)

Description: SMILTS, smalka, uzbērtā

Basic results

Total cone resistance: 7.50 ±2.95 MPa

Sleeve friction: 59.21 ±19.84 kPa

SBT_n: 6

SBT_n description: Sand & silty sand

Estimation results

Permeability: 1.09E-04 ±8.17E-05 m/s

N₆₀: 15.89 ±5.35 blows

Es: 42.72 ±12.11 MPa

Dr (%): 71.25 ±8.02

ö (degrees): 42.29 ±1.08 °

Unit weight: 18.35 ±0.54 kN/m³

Constrained Mod.: 53.54 ±15.17 MPa

Go: 53.54 ±15.17 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 2 :::**Code:** 7i **Start depth:** 1.68 (m), **End depth:** 2.90 (m)**Description:** SMILTS, smalka, irdena**Basic results**

Total cone resistance: 3.82 ±1.19 MPa

Sleeve friction: 29.87 ±8.75 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 1.13E-05 ±9.38E-06 m/s

N60: 10.06 ±2.36 blows

Es: 32.87 ±5.19 MPa

Dr (%): 43.82 ±7.41

ö (degrees): 37.56 ±1.66 °

Unit weight: 17.34 ±0.46 kN/m³

Constrained Mod.: 40.70 ±7.25 MPa

Go: 41.20 ±6.51 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 3 :::**Code:** 8i **Start depth:** 2.90 (m), **End depth:** 5.50 (m)**Description:** SMILTS, vidēji rupja, irdena**Basic results**

Total cone resistance: 2.61 ±1.01 MPa

Sleeve friction: 14.35 ±5.73 kPa

SBT_n: 5SBT_n description: Silty sand & sandy silt**Estimation results**

Permeability: 4.42E-06 ±4.27E-06 m/s

N60: 7.46 ±2.33 blows

Es: 25.96 ±6.23 MPa

Dr (%): 32.91 ±5.19

ö (degrees): 34.85 ±1.52 °

Unit weight: 16.29 ±0.65 kN/m³

Constrained Mod.: 31.18 ±9.09 MPa

Go: 32.54 ±7.81 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 4 :::**Code:** 8v **Start depth:** 5.50 (m), **End depth:** 6.60 (m)**Description:** SMILTS, vidēji rupja, vidēji blīva**Basic results**

Total cone resistance: 6.97 ±1.00 MPa

Sleeve friction: 37.54 ±3.85 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 3.33E-05 ±1.91E-05 m/s

N60: 16.50 ±1.54 blows

Es: 48.27 ±2.70 MPa

Dr (%): 49.87 ±2.82

ö (degrees): 38.92 ±0.54 °

Unit weight: 17.89 ±0.12 kN/m³

Constrained Mod.: 60.50 ±3.39 MPa

Go: 60.50 ±3.39 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 5 :::**Code:** 8v **Start depth:** 6.60 (m), **End depth:** 9.50 (m)**Description:** SMILTS, vidēji rupja, vidēji blīva**Basic results**

Total cone resistance: 5.44 ±1.47 MPa

Sleeve friction: 35.37 ±7.17 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 9.88E-06 ±8.94E-06 m/s

N60: 14.44 ±2.91 blows

Es: 46.66 ±6.55 MPa

Dr (%): 41.28 ±4.40

ö (degrees): 37.08 ±0.99 °

Unit weight: 17.71 ±0.30 kN/m³

Constrained Mod.: 58.25 ±8.73 MPa

Go: 58.48 ±8.21 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00

::: Layer No: 6 :::**Code:** 7b **Start depth:** 9.50 (m), **End depth:** 12.04 (m)**Description:** SMILTS, smalka, blīva**Basic results**

Total cone resistance: 20.26 ±5.23 MPa

Sleeve friction: 132.43 ±43.68 kPa

SBT_n: 6SBT_n description: Sand & silty sand**Estimation results**

Permeability: 1.60E-04 ±6.54E-05 m/s

N60: 41.16 ±9.27 blows

Es: 104.49 ±20.56 MPa

Dr (%): 74.04 ±9.33

ö (degrees): 42.63 ±1.30 °

Unit weight: 19.67 ±0.55 kN/m³

Constrained Mod.: 130.96 ±25.77 MPa

Go: 130.96 ±25.77 MPa

Su: 0.00 ±0.00 kPa

Su ratio: 0.00 ±0.00

O.C.R.: 0.00 ±0.00



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Summary table of mean values

From depth To depth (m)	Thickness (m)	Permeability (m/s)	SPT _{N60} (blows/30cm)	E _s (MPa)	D _r	Friction angle	Constrained modulus, M (MPa)	Shear modulus, G ₀ (MPa)	Undrained strength, S _u (kPa)	Undrained strength ratio	OCR	Unit weight (kN/m ³)
0.30	1.38	1.09E-04	15.9	42.7	71.2	42.3	53.5	53.5	0.0	0.0	0.0	18.4
1.68		(±8.17E-05)	(±5.4)	(±12.1)	(±8.0)	(±1.1)	(±15.2)	(±15.2)	(±0.0)	(±0.0)	(±0.0)	(±0.5)
1.68	1.22	1.13E-05	10.1	32.9	43.8	37.6	40.7	41.2	0.0	0.0	0.0	17.3
2.90		(±9.38E-06)	(±2.4)	(±5.2)	(±7.4)	(±1.7)	(±7.2)	(±6.5)	(±0.0)	(±0.0)	(±0.0)	(±0.5)
2.90	2.60	4.42E-06	7.5	26.0	32.9	34.8	31.2	32.5	0.0	0.0	0.0	16.3
5.50		(±4.27E-06)	(±2.3)	(±6.2)	(±5.2)	(±1.5)	(±9.1)	(±7.8)	(±0.0)	(±0.0)	(±0.0)	(±0.7)
5.50	1.10	3.33E-05	16.5	48.3	49.9	38.9	60.5	60.5	0.0	0.0	0.0	17.9
6.60		(±1.91E-05)	(±1.5)	(±2.7)	(±2.8)	(±0.5)	(±3.4)	(±3.4)	(±0.0)	(±0.0)	(±0.0)	(±0.1)
6.60	2.90	9.88E-06	14.4	46.7	41.3	37.1	58.2	58.5	0.0	0.0	0.0	17.7
9.50		(±8.94E-06)	(±2.9)	(±6.6)	(±4.4)	(±1.0)	(±8.7)	(±8.2)	(±0.0)	(±0.0)	(±0.0)	(±0.3)
9.50	2.54	1.60E-04	41.2	104.5	74.0	42.6	131.0	131.0	0.0	0.0	0.0	19.7
12.04		(±6.54E-05)	(±9.3)	(±20.6)	(±9.3)	(±1.3)	(±25.8)	(±25.8)	(±0.0)	(±0.0)	(±0.0)	(±0.5)

Depth values presented in this table are measured from free ground surface