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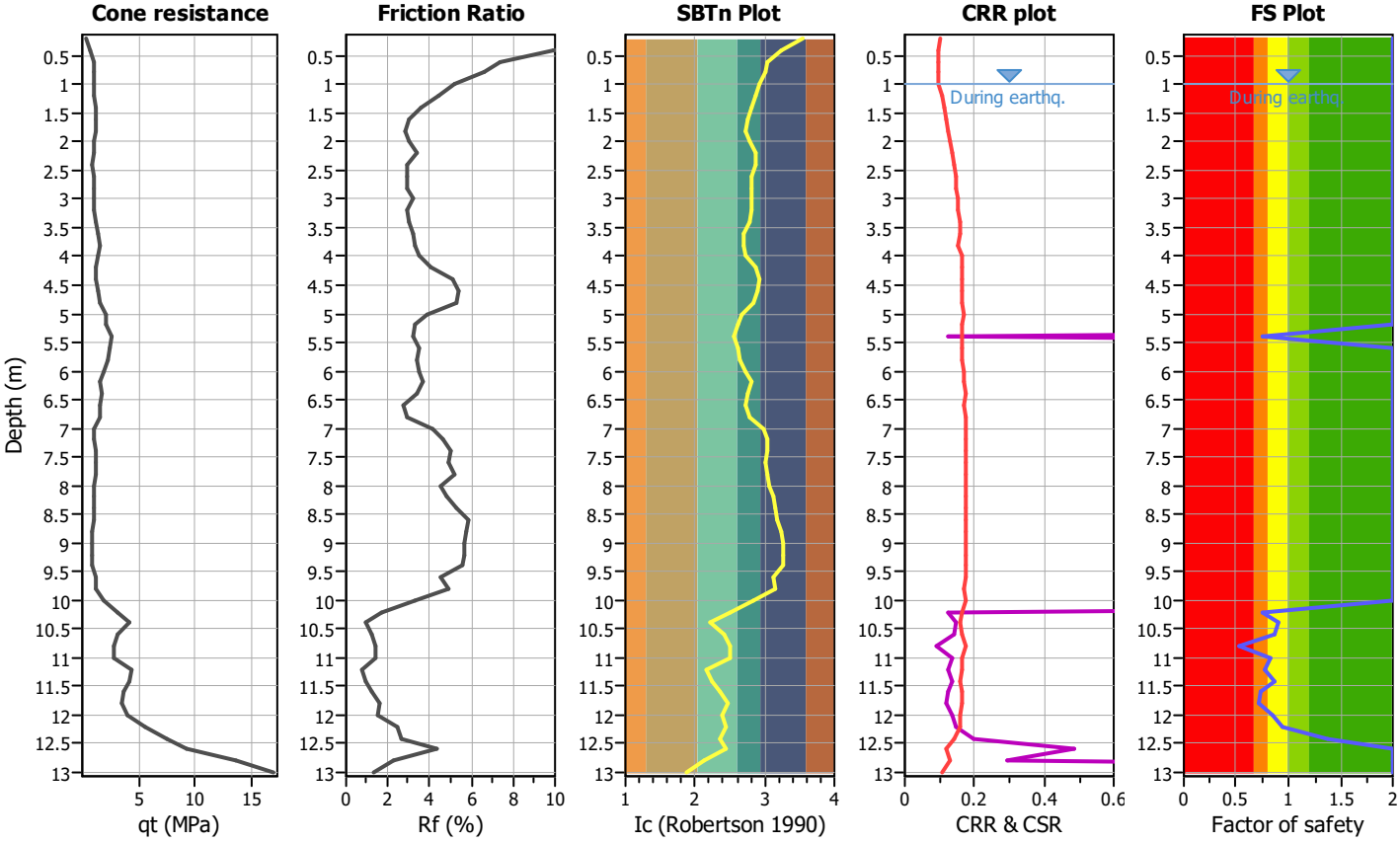
LIQUEFACTION ANALYSIS REPORT

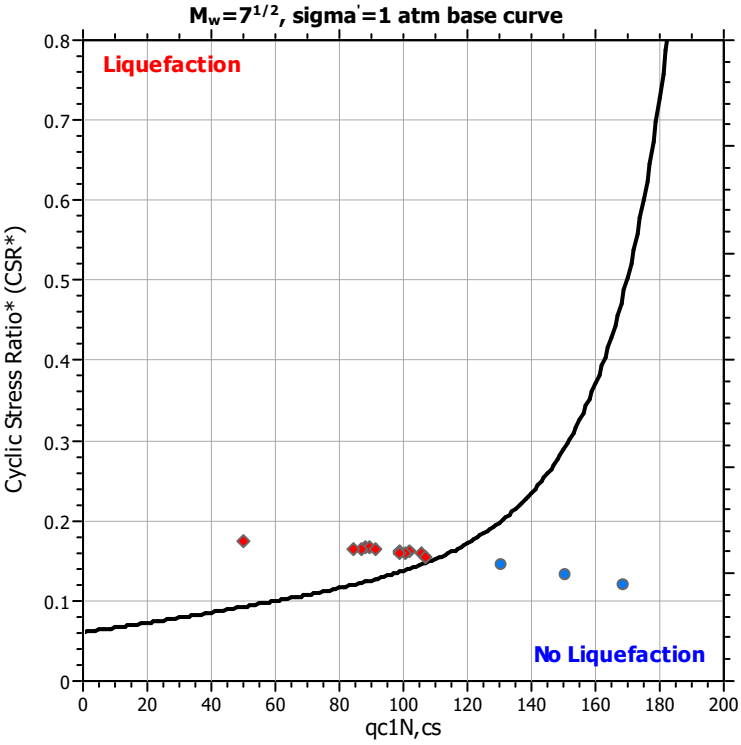
Project title : **Location :**

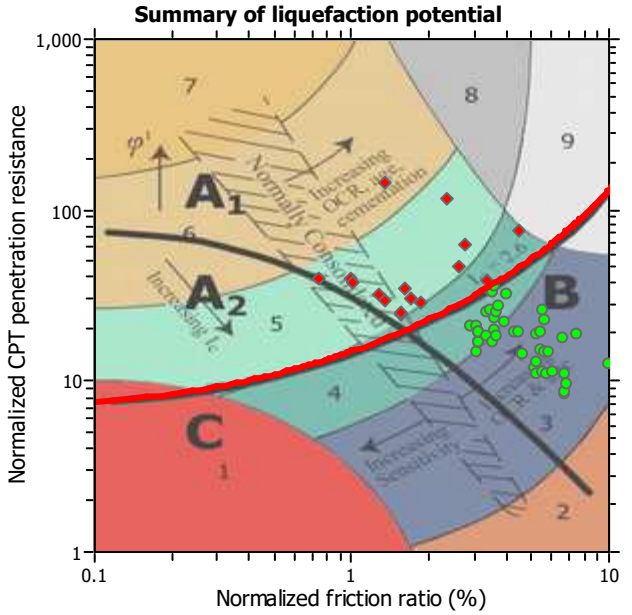
CPT file : CPT1

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

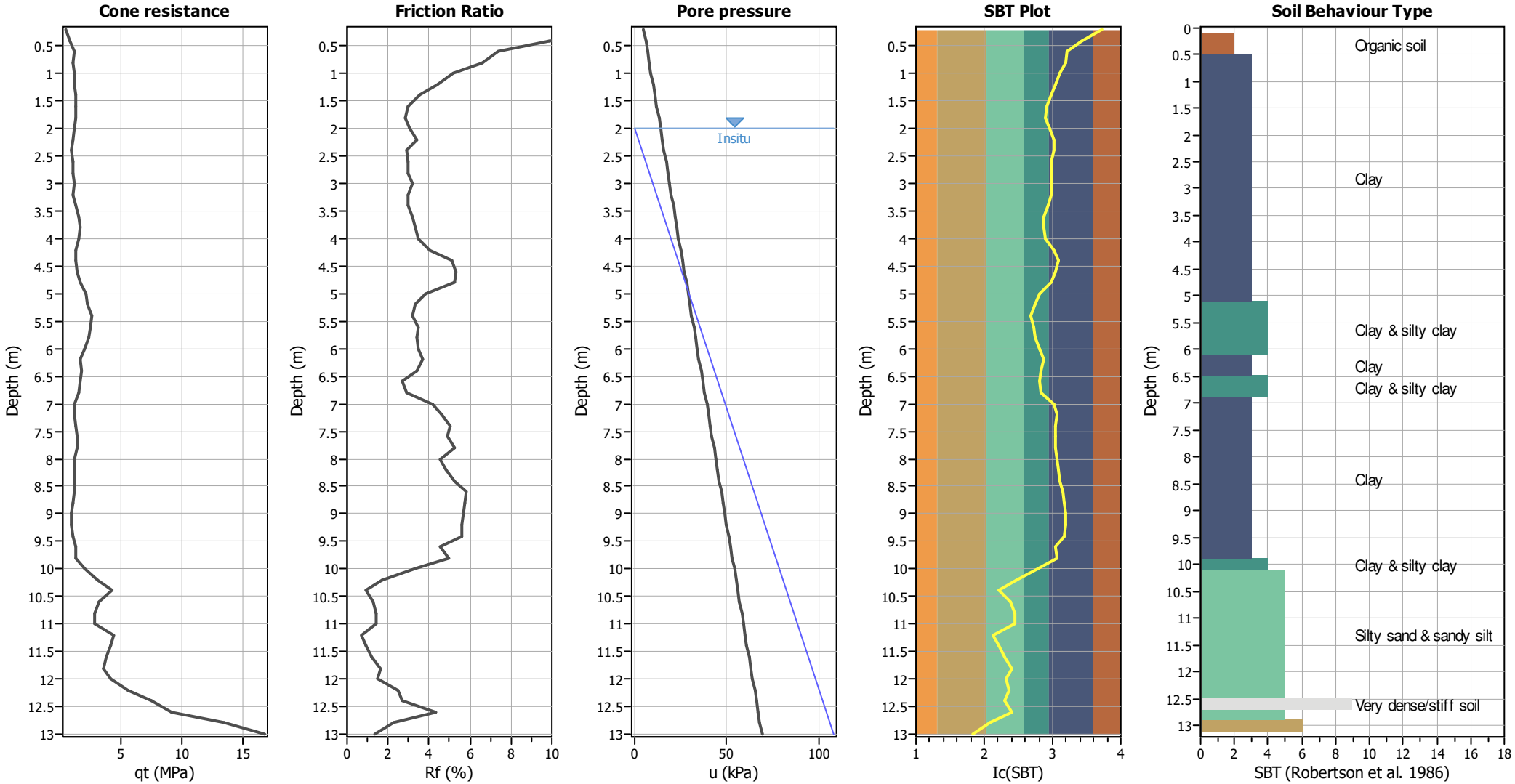






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



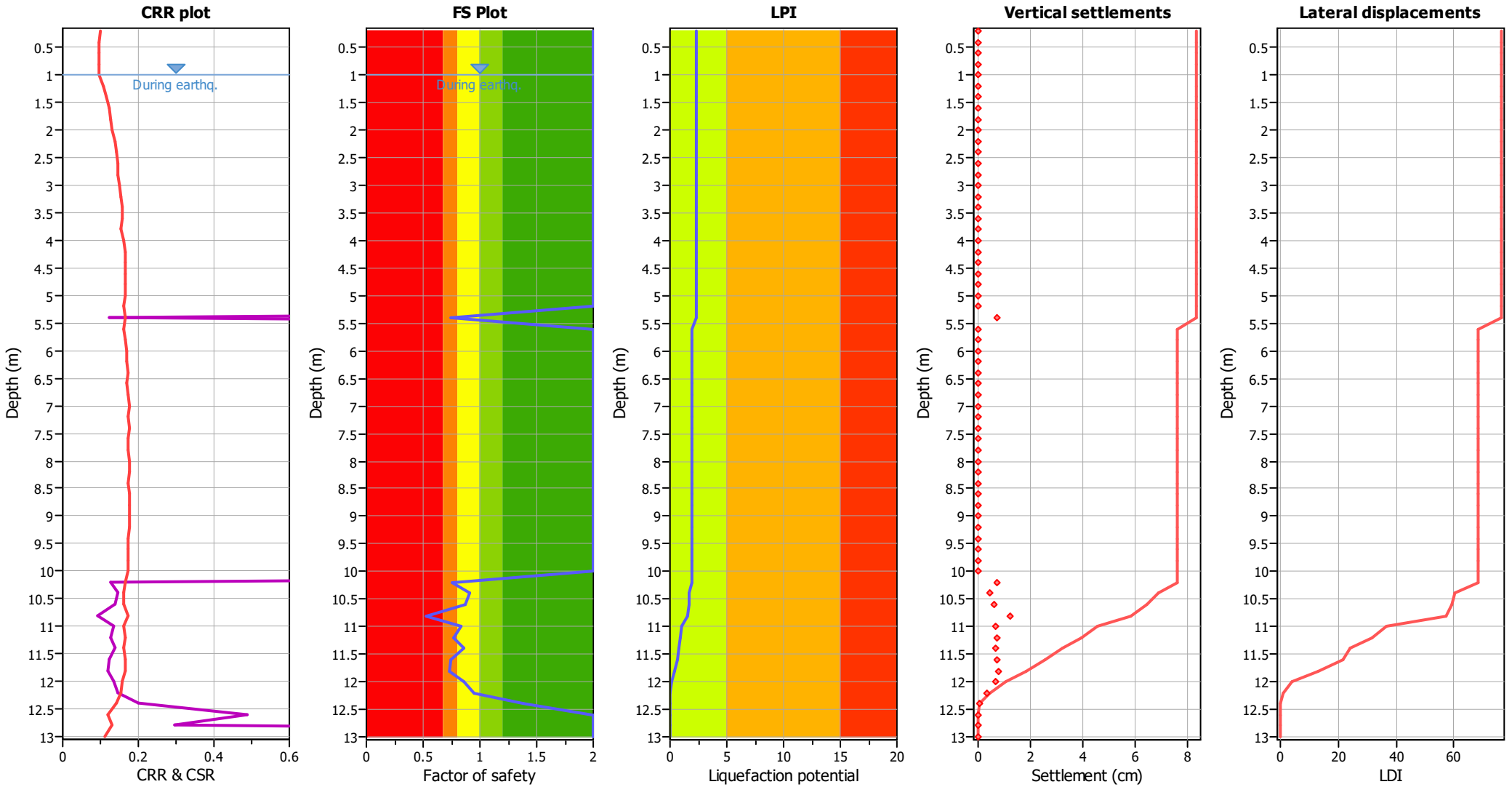
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	2.00	0.00	8.20	0.20	0.00
3.80	2.00	0.00	8.10	0.20	0.00	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	0.75	0.25	7.30	0.20	0.37	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	0.75	0.25	4.90	0.20	0.24	10.40	0.91	0.09	4.80	0.20	0.09
10.60	0.87	0.13	4.70	0.20	0.12	10.80	0.53	0.47	4.60	0.20	0.43
11.00	0.84	0.16	4.50	0.20	0.15	11.20	0.77	0.23	4.40	0.20	0.20
11.40	0.86	0.14	4.30	0.20	0.12	11.60	0.74	0.26	4.20	0.20	0.22
11.80	0.73	0.27	4.10	0.20	0.22	12.00	0.85	0.15	4.00	0.20	0.12
12.20	0.95	0.05	3.90	0.20	0.04	12.40	1.38	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00						

Overall liquefaction potential: 2.32

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	17.01	2.00	0.00	1.00	0.00	1.20	20.60	2.00	0.00	1.00	0.00
1.40	20.60	2.00	0.00	1.00	0.00	1.60	18.92	2.00	0.00	1.00	0.00
1.80	23.95	2.00	0.00	1.00	0.00	2.00	20.60	2.00	0.00	1.00	0.00
2.20	14.12	2.00	0.00	1.00	0.00	2.40	17.47	2.00	0.00	1.00	0.00
2.60	14.12	2.00	0.00	1.00	0.00	2.80	20.17	2.00	0.00	1.00	0.00
3.00	16.78	2.00	0.00	1.00	0.00	3.20	16.69	2.00	0.00	1.00	0.00
3.40	16.41	2.00	0.00	1.00	0.00	3.60	21.90	2.00	0.00	1.00	0.00
3.80	29.81	2.00	0.00	1.00	0.00	4.00	18.38	2.00	0.00	1.00	0.00
4.20	18.23	2.00	0.00	1.00	0.00	4.40	15.19	2.00	0.00	1.00	0.00
4.60	17.64	2.00	0.00	1.00	0.00	4.80	25.18	2.00	0.00	1.00	0.00
5.00	22.31	2.00	0.00	1.00	0.00	5.20	34.62	2.00	0.00	1.00	0.00
5.40	88.15	0.75	3.65	1.00	0.73	5.60	36.08	2.00	0.00	1.00	0.00
5.80	28.47	2.00	0.00	1.00	0.00	6.00	23.31	2.00	0.00	1.00	0.00
6.20	20.79	2.00	0.00	1.00	0.00	6.40	15.79	2.00	0.00	1.00	0.00
6.60	27.26	2.00	0.00	1.00	0.00	6.80	15.42	2.00	0.00	1.00	0.00
7.00	11.75	2.00	0.00	1.00	0.00	7.20	14.06	2.00	0.00	1.00	0.00
7.40	12.76	2.00	0.00	1.00	0.00	7.60	17.09	2.00	0.00	1.00	0.00
7.80	14.69	2.00	0.00	1.00	0.00	8.00	12.34	2.00	0.00	1.00	0.00
8.20	10.17	2.00	0.00	1.00	0.00	8.40	13.31	2.00	0.00	1.00	0.00
8.60	12.10	2.00	0.00	1.00	0.00	8.80	9.86	2.00	0.00	1.00	0.00
9.00	9.76	2.00	0.00	1.00	0.00	9.20	9.81	2.00	0.00	1.00	0.00
9.40	9.71	2.00	0.00	1.00	0.00	9.60	9.62	2.00	0.00	1.00	0.00
9.80	17.62	2.00	0.00	1.00	0.00	10.00	9.43	2.00	0.00	1.00	0.00
10.20	89.53	0.75	3.59	1.00	0.72	10.40	105.91	0.91	2.22	1.00	0.44
10.60	102.09	0.87	3.15	1.00	0.63	10.80	50.07	0.53	6.13	1.00	1.23
11.00	98.47	0.84	3.26	1.00	0.65	11.20	91.39	0.77	3.52	1.00	0.70
11.40	100.37	0.86	3.20	1.00	0.64	11.60	86.89	0.74	3.70	1.00	0.74
11.80	84.11	0.73	3.82	1.00	0.76	12.00	99.02	0.85	3.25	1.00	0.65
12.20	106.89	0.95	1.74	1.00	0.35	12.40	130.44	1.38	0.37	1.00	0.07
12.60	169.04	2.00	0.00	1.00	0.00	12.80	150.87	2.00	0.00	1.00	0.00
13.00	209.48	2.00	0.00	1.00	0.00						

Total estimated settlement: 8.32

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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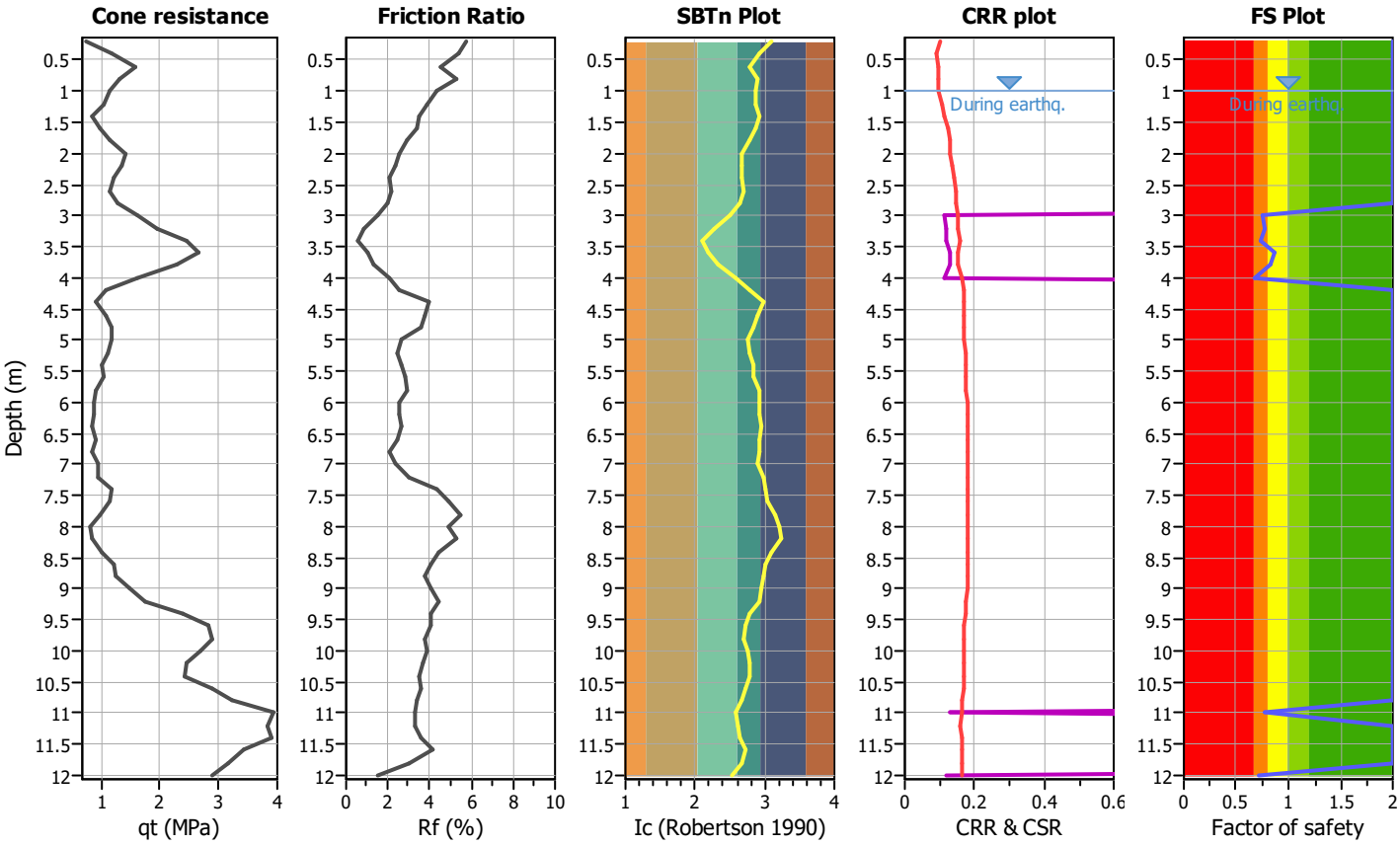
LIQUEFACTION ANALYSIS REPORT

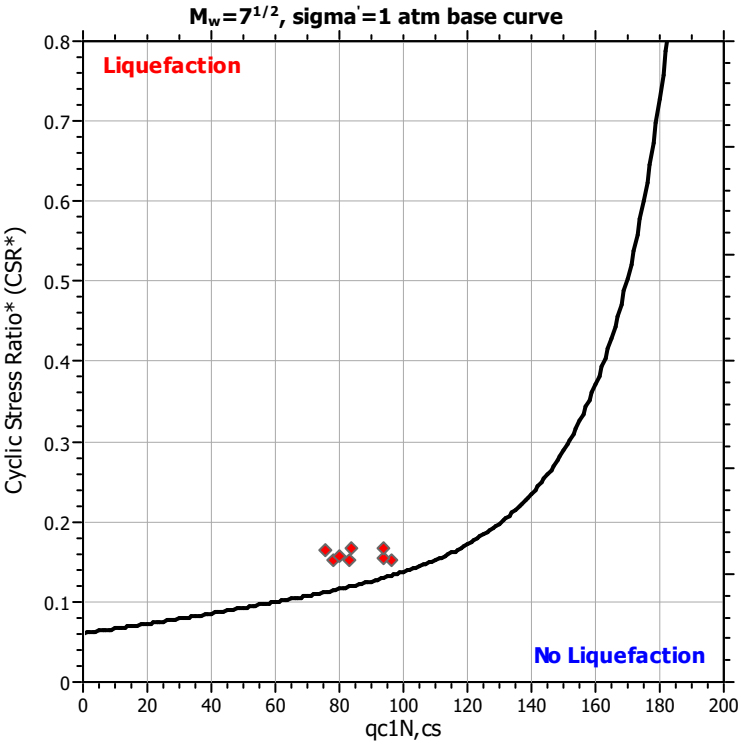
Project title : **Location :**

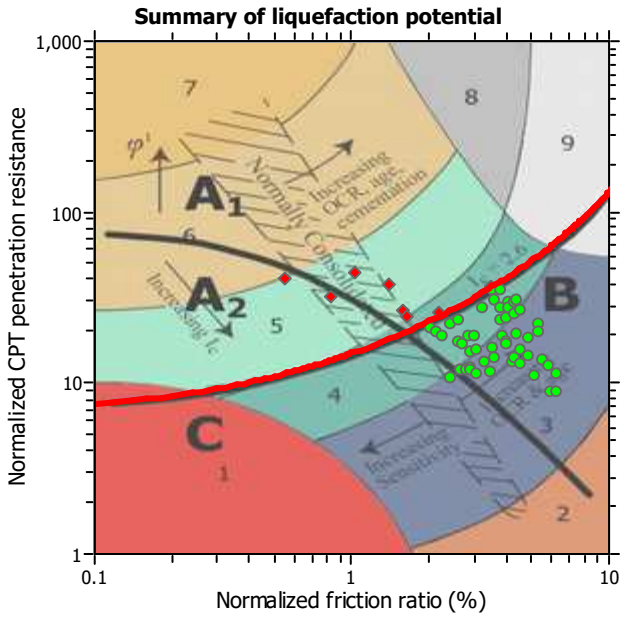
CPT file : CPT101

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

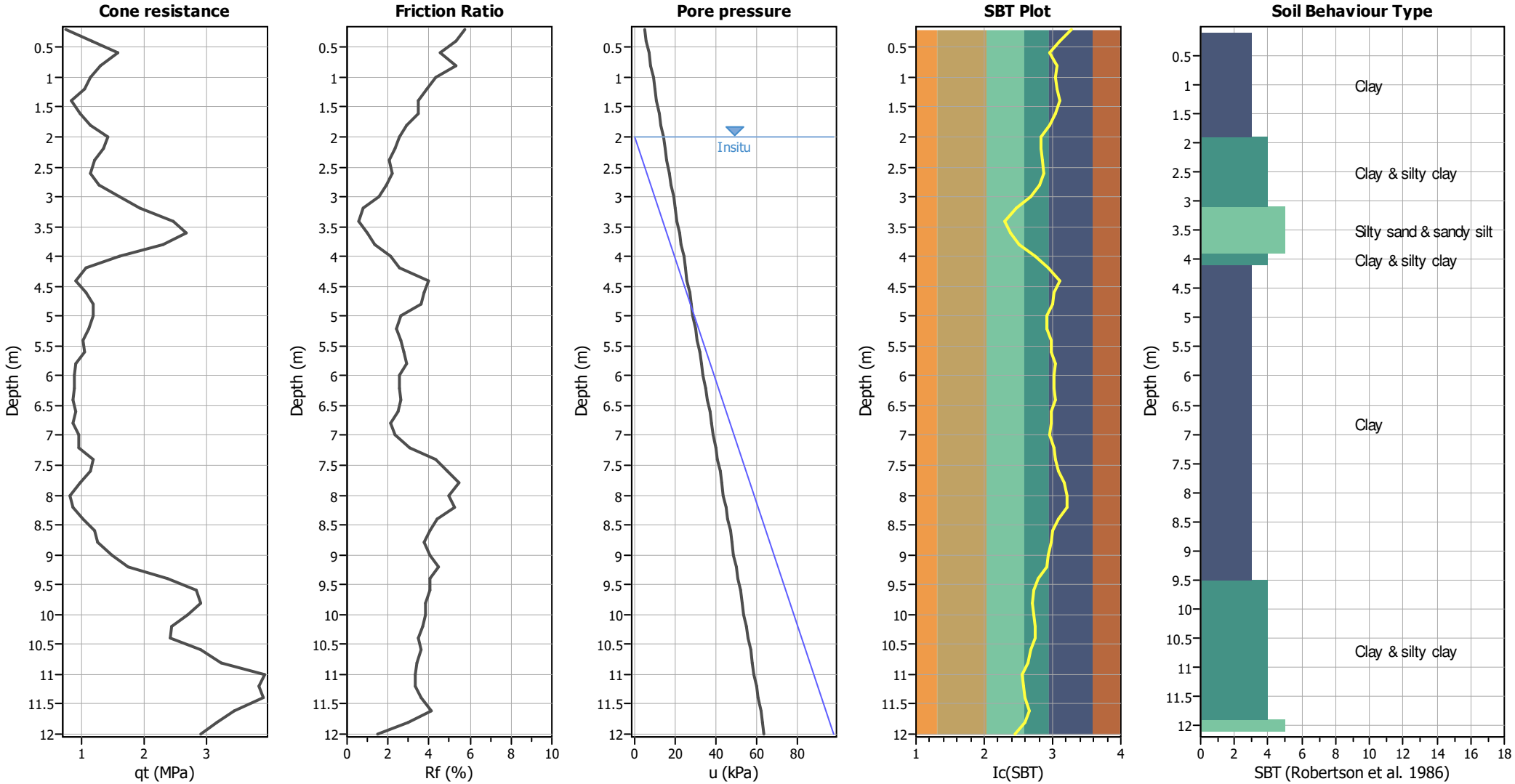






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



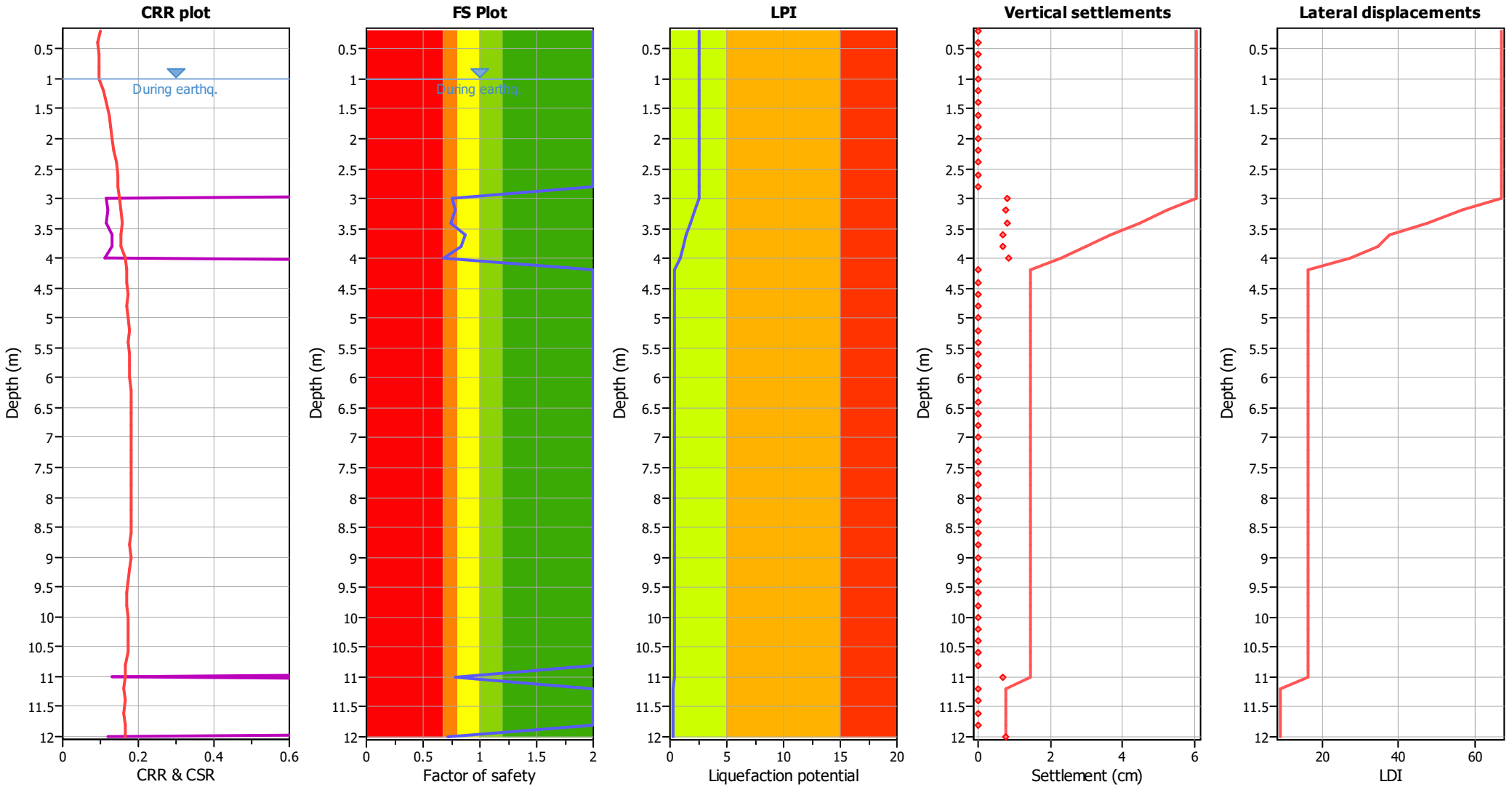
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	0.76	0.24	8.50	0.20	0.41	3.20	0.78	0.22	8.40	0.20	0.37
3.40	0.75	0.25	8.30	0.20	0.42	3.60	0.87	0.13	8.20	0.20	0.22
3.80	0.84	0.16	8.10	0.20	0.26	4.00	0.68	0.32	8.00	0.20	0.51
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	0.78	0.22	4.50	0.20	0.20	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	0.72	0.28	4.00	0.20	0.23

Overall liquefaction potential: 2.62

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	23.49	2.00	0.00	1.00	0.00	1.20	13.42	2.00	0.00	1.00	0.00
1.40	15.10	2.00	0.00	1.00	0.00	1.60	13.42	2.00	0.00	1.00	0.00
1.80	20.13	2.00	0.00	1.00	0.00	2.00	23.49	2.00	0.00	1.00	0.00
2.20	26.84	2.00	0.00	1.00	0.00	2.40	16.78	2.00	0.00	1.00	0.00
2.60	16.78	2.00	0.00	1.00	0.00	2.80	22.79	2.00	0.00	1.00	0.00
3.00	78.13	0.76	4.10	1.00	0.82	3.20	83.26	0.78	3.86	1.00	0.77
3.40	80.27	0.75	4.00	1.00	0.80	3.60	96.15	0.87	3.34	1.00	0.67
3.80	93.72	0.84	3.43	1.00	0.69	4.00	75.39	0.68	4.24	1.00	0.85
4.20	13.28	2.00	0.00	1.00	0.00	4.40	14.44	2.00	0.00	1.00	0.00
4.60	11.46	2.00	0.00	1.00	0.00	4.80	19.39	2.00	0.00	1.00	0.00
5.00	17.83	2.00	0.00	1.00	0.00	5.20	10.98	2.00	0.00	1.00	0.00
5.40	16.06	2.00	0.00	1.00	0.00	5.60	13.28	2.00	0.00	1.00	0.00
5.80	11.82	2.00	0.00	1.00	0.00	6.00	10.40	2.00	0.00	1.00	0.00
6.20	11.54	2.00	0.00	1.00	0.00	6.40	11.40	2.00	0.00	1.00	0.00
6.60	8.80	2.00	0.00	1.00	0.00	6.80	13.58	2.00	0.00	1.00	0.00
7.00	8.61	2.00	0.00	1.00	0.00	7.20	12.09	2.00	0.00	1.00	0.00
7.40	13.12	2.00	0.00	1.00	0.00	7.60	16.44	2.00	0.00	1.00	0.00
7.80	10.51	2.00	0.00	1.00	0.00	8.00	6.96	2.00	0.00	1.00	0.00
8.20	10.28	2.00	0.00	1.00	0.00	8.40	11.29	2.00	0.00	1.00	0.00
8.60	12.27	2.00	0.00	1.00	0.00	8.80	16.51	2.00	0.00	1.00	0.00
9.00	12.01	2.00	0.00	1.00	0.00	9.20	19.36	2.00	0.00	1.00	0.00
9.40	24.42	2.00	0.00	1.00	0.00	9.60	31.44	2.00	0.00	1.00	0.00
9.80	33.18	2.00	0.00	1.00	0.00	10.00	25.71	2.00	0.00	1.00	0.00
10.20	24.45	2.00	0.00	1.00	0.00	10.40	24.22	2.00	0.00	1.00	0.00
10.60	23.98	2.00	0.00	1.00	0.00	10.80	38.58	2.00	0.00	1.00	0.00
11.00	93.78	0.78	3.43	1.00	0.69	11.20	43.75	2.00	0.00	1.00	0.00
11.40	34.66	2.00	0.00	1.00	0.00	11.60	34.36	2.00	0.00	1.00	0.00
11.80	29.30	2.00	0.00	1.00	0.00	12.00	83.51	0.72	3.85	1.00	0.77

Total estimated settlement: 6.05

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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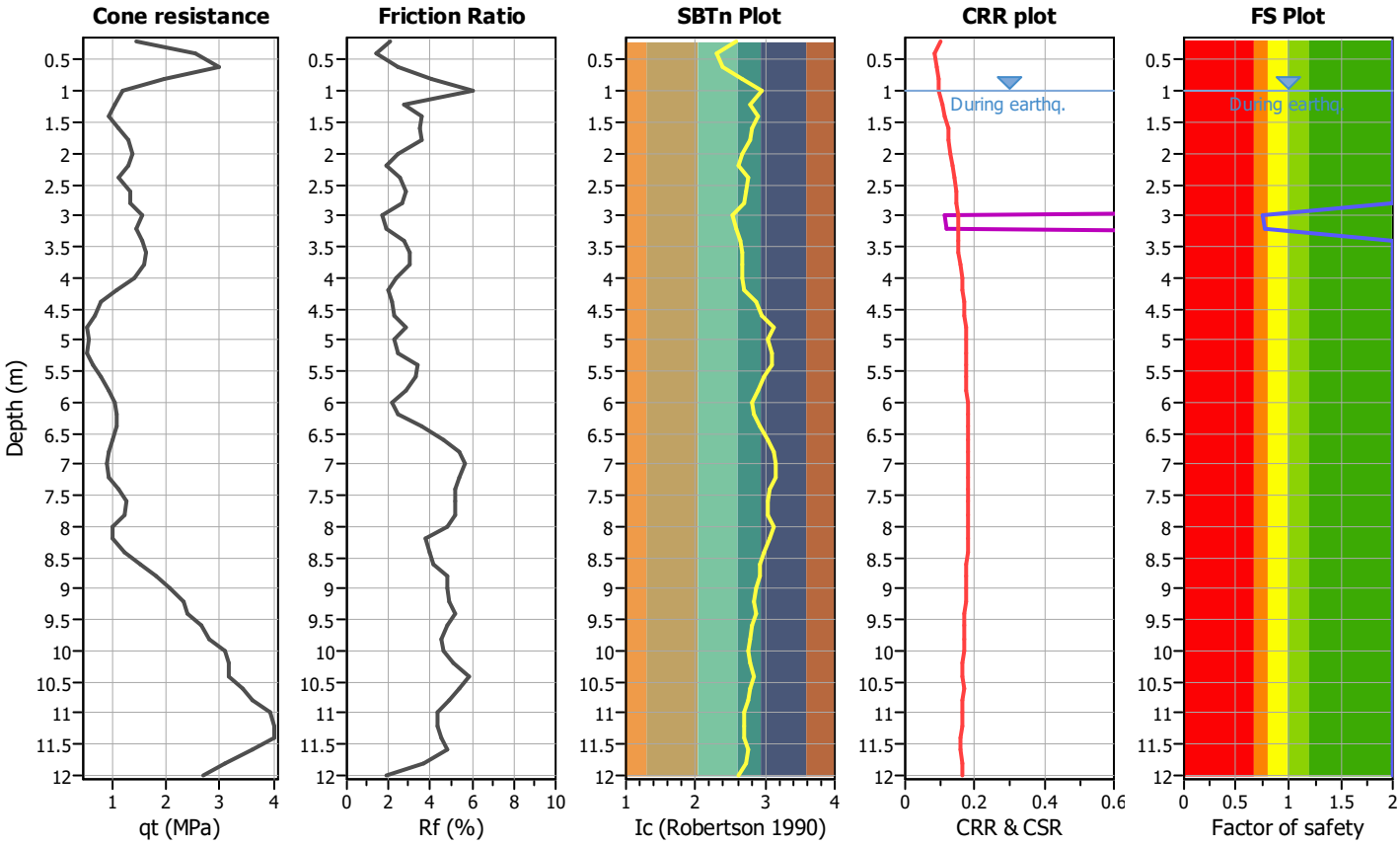
LIQUEFACTION ANALYSIS REPORT

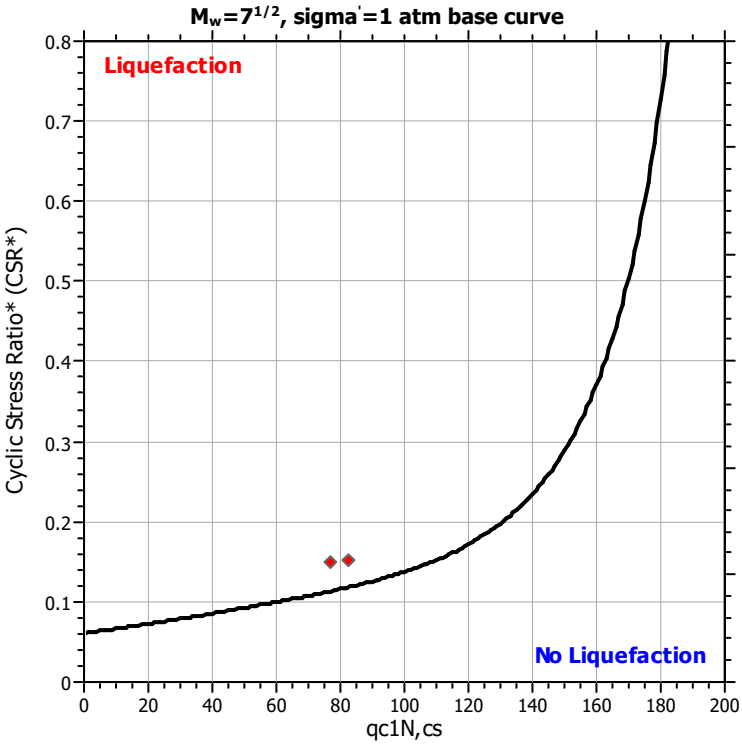
Project title : **Location :**

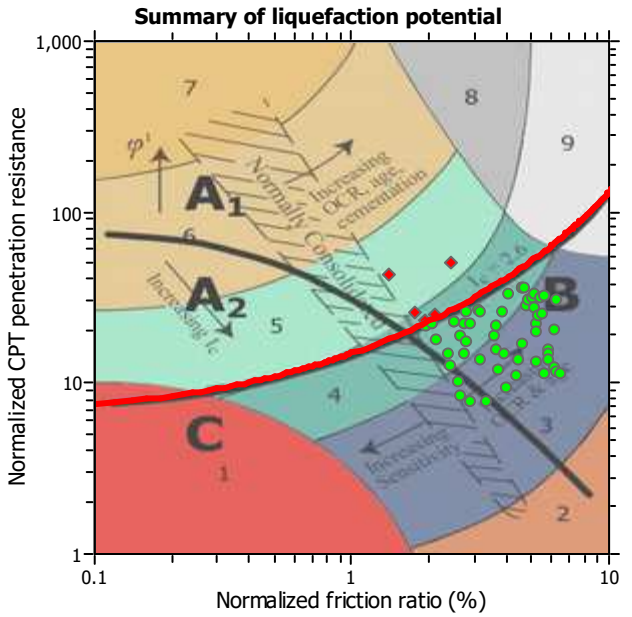
CPT file : CPT102

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

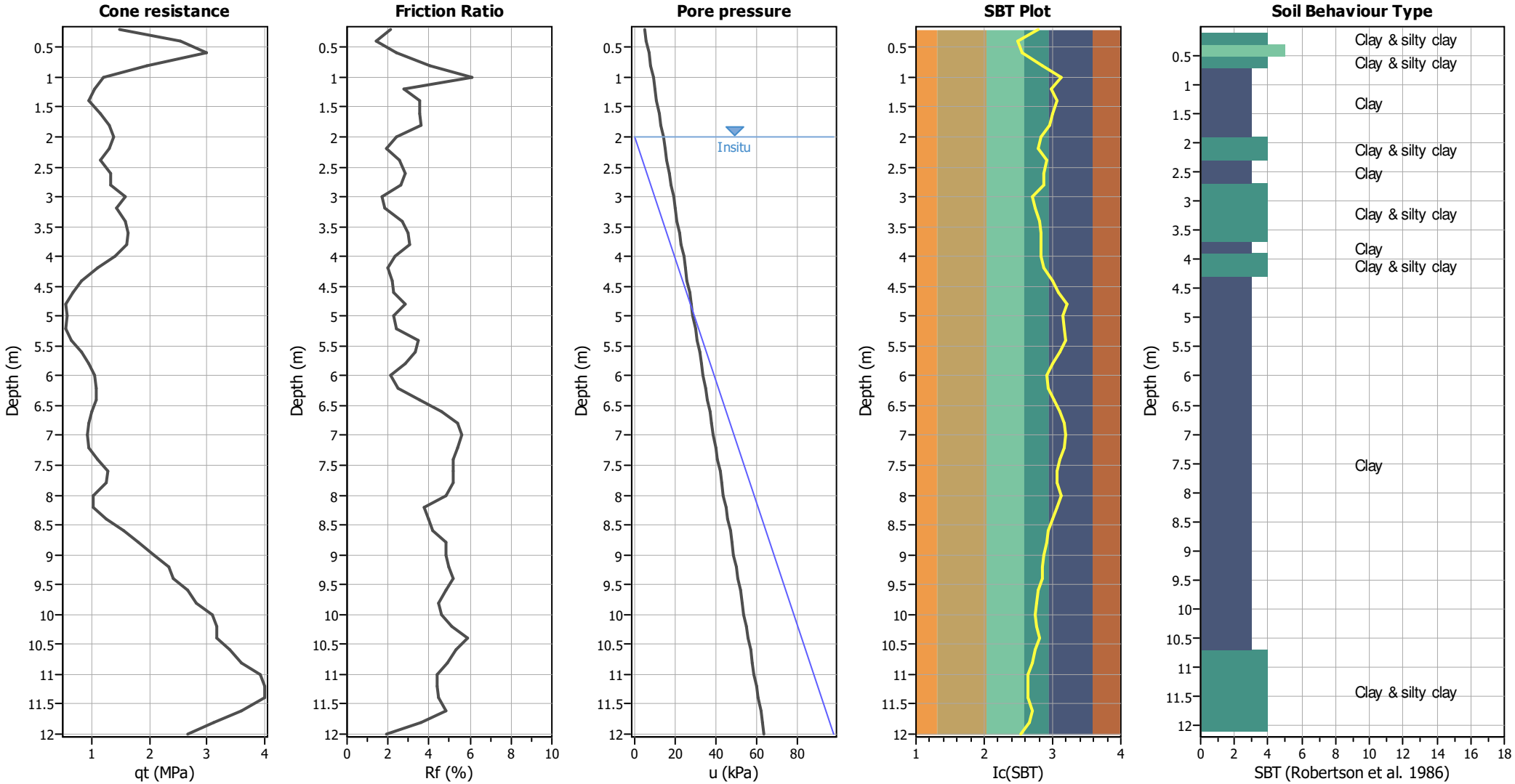






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



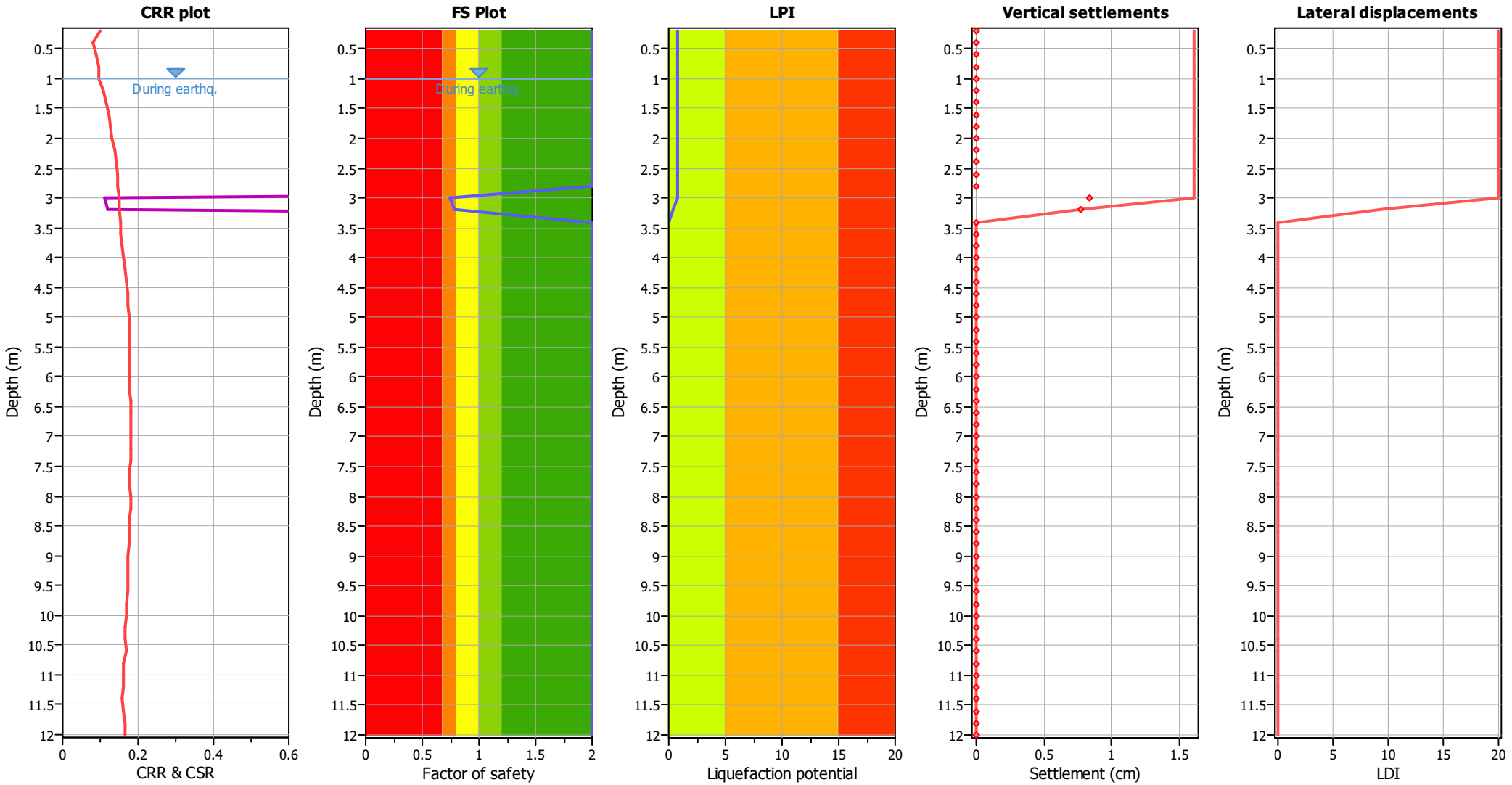
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	0.75	0.25	8.50	0.20	0.43	3.20	0.78	0.22	8.40	0.20	0.37
3.40	2.00	0.00	8.30	0.20	0.00	3.60	2.00	0.00	8.20	0.20	0.00
3.80	2.00	0.00	8.10	0.20	0.00	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00

Overall liquefaction potential: 0.80

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	21.81	2.00	0.00	1.00	0.00	1.20	15.10	2.00	0.00	1.00	0.00
1.40	15.10	2.00	0.00	1.00	0.00	1.60	16.78	2.00	0.00	1.00	0.00
1.80	25.17	2.00	0.00	1.00	0.00	2.00	23.49	2.00	0.00	1.00	0.00
2.20	20.13	2.00	0.00	1.00	0.00	2.40	21.81	2.00	0.00	1.00	0.00
2.60	15.10	2.00	0.00	1.00	0.00	2.80	28.61	2.00	0.00	1.00	0.00
3.00	76.60	0.75	4.18	1.00	0.84	3.20	82.67	0.78	3.88	1.00	0.78
3.40	21.52	2.00	0.00	1.00	0.00	3.60	25.38	2.00	0.00	1.00	0.00
3.80	26.34	2.00	0.00	1.00	0.00	4.00	19.06	2.00	0.00	1.00	0.00
4.20	15.99	2.00	0.00	1.00	0.00	4.40	12.96	2.00	0.00	1.00	0.00
4.60	5.78	2.00	0.00	1.00	0.00	4.80	9.88	2.00	0.00	1.00	0.00
5.00	7.02	2.00	0.00	1.00	0.00	5.20	6.93	2.00	0.00	1.00	0.00
5.40	8.18	2.00	0.00	1.00	0.00	5.60	10.71	2.00	0.00	1.00	0.00
5.80	13.16	2.00	0.00	1.00	0.00	6.00	13.01	2.00	0.00	1.00	0.00
6.20	14.10	2.00	0.00	1.00	0.00	6.40	13.91	2.00	0.00	1.00	0.00
6.60	12.51	2.00	0.00	1.00	0.00	6.80	11.13	2.00	0.00	1.00	0.00
7.00	10.99	2.00	0.00	1.00	0.00	7.20	10.86	2.00	0.00	1.00	0.00
7.40	11.90	2.00	0.00	1.00	0.00	7.60	16.37	2.00	0.00	1.00	0.00
7.80	16.18	2.00	0.00	1.00	0.00	8.00	10.34	2.00	0.00	1.00	0.00
8.20	7.98	2.00	0.00	1.00	0.00	8.40	15.67	2.00	0.00	1.00	0.00
8.60	17.68	2.00	0.00	1.00	0.00	8.80	17.49	2.00	0.00	1.00	0.00
9.00	23.69	2.00	0.00	1.00	0.00	9.20	25.54	2.00	0.00	1.00	0.00
9.40	25.27	2.00	0.00	1.00	0.00	9.60	25.01	2.00	0.00	1.00	0.00
9.80	32.93	2.00	0.00	1.00	0.00	10.00	28.55	2.00	0.00	1.00	0.00
10.20	33.28	2.00	0.00	1.00	0.00	10.40	33.95	2.00	0.00	1.00	0.00
10.60	27.69	2.00	0.00	1.00	0.00	10.80	39.18	2.00	0.00	1.00	0.00
11.00	38.83	2.00	0.00	1.00	0.00	11.20	36.54	2.00	0.00	1.00	0.00
11.40	40.06	2.00	0.00	1.00	0.00	11.60	37.81	2.00	0.00	1.00	0.00
11.80	24.27	2.00	0.00	1.00	0.00	12.00	25.01	2.00	0.00	1.00	0.00

Total estimated settlement: 1.61

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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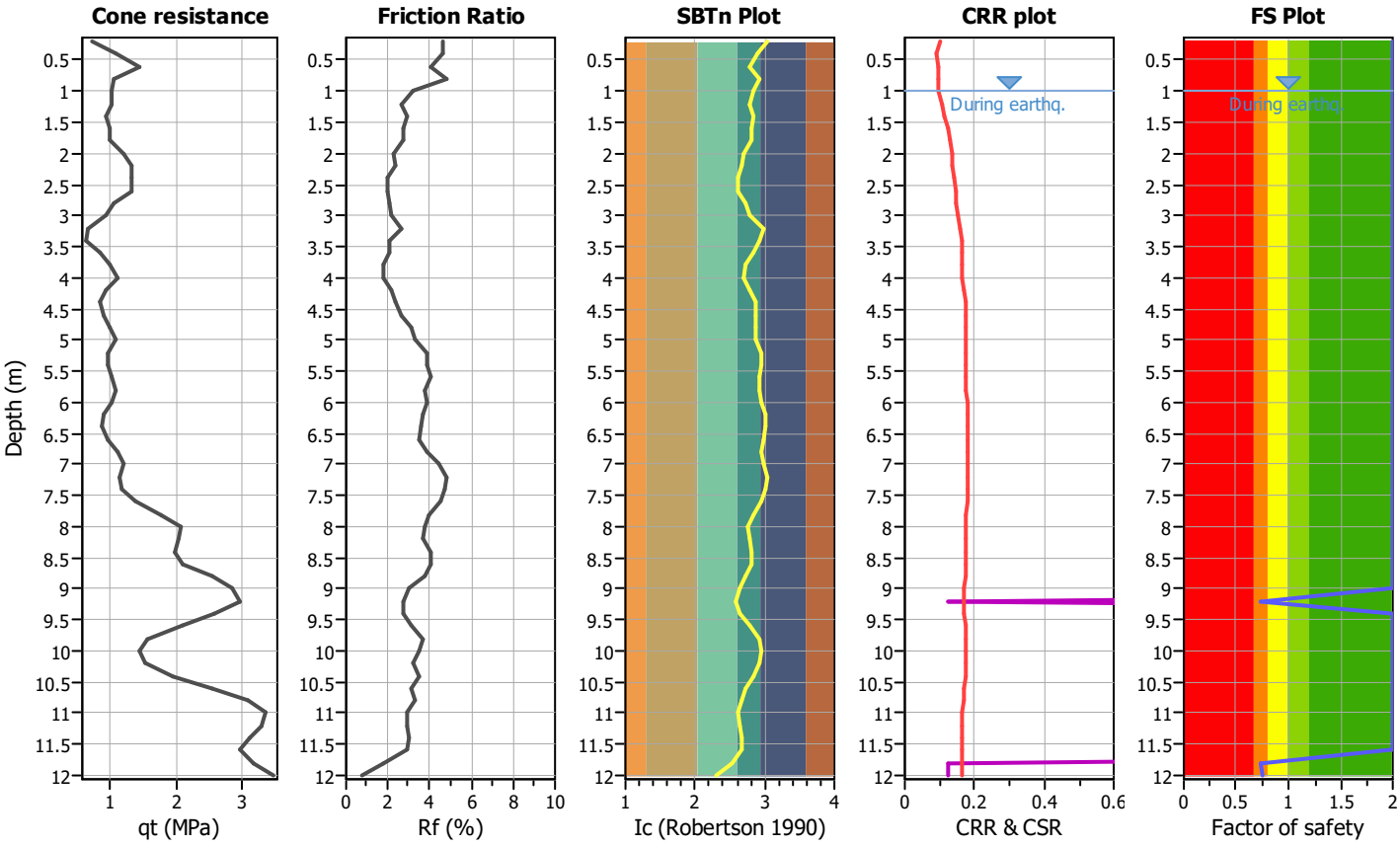
LIQUEFACTION ANALYSIS REPORT

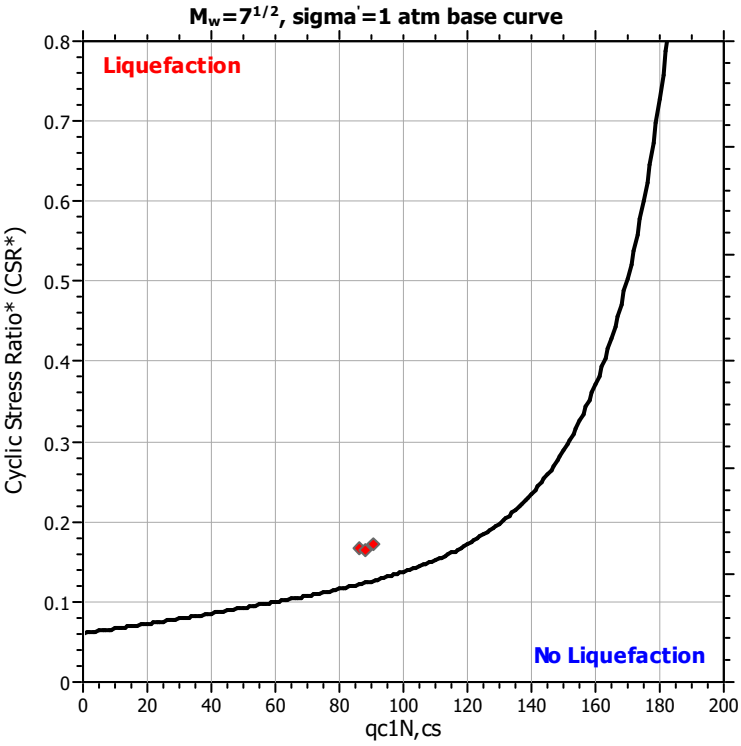
Project title : **Location :**

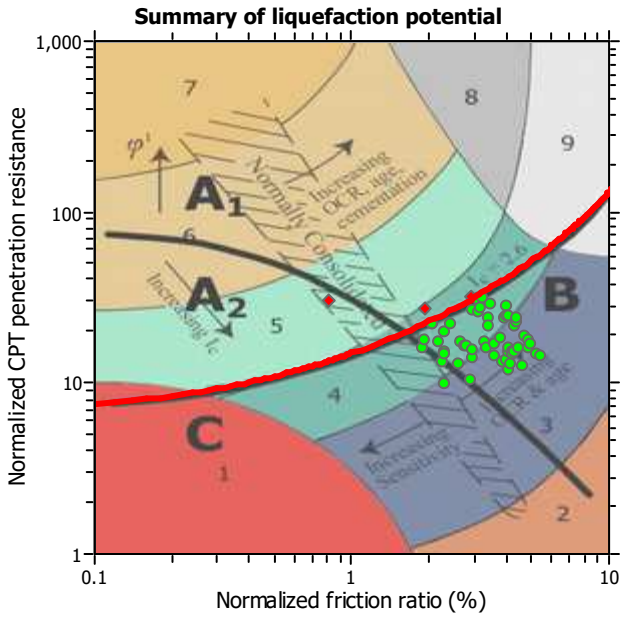
CPT file : CPT103

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

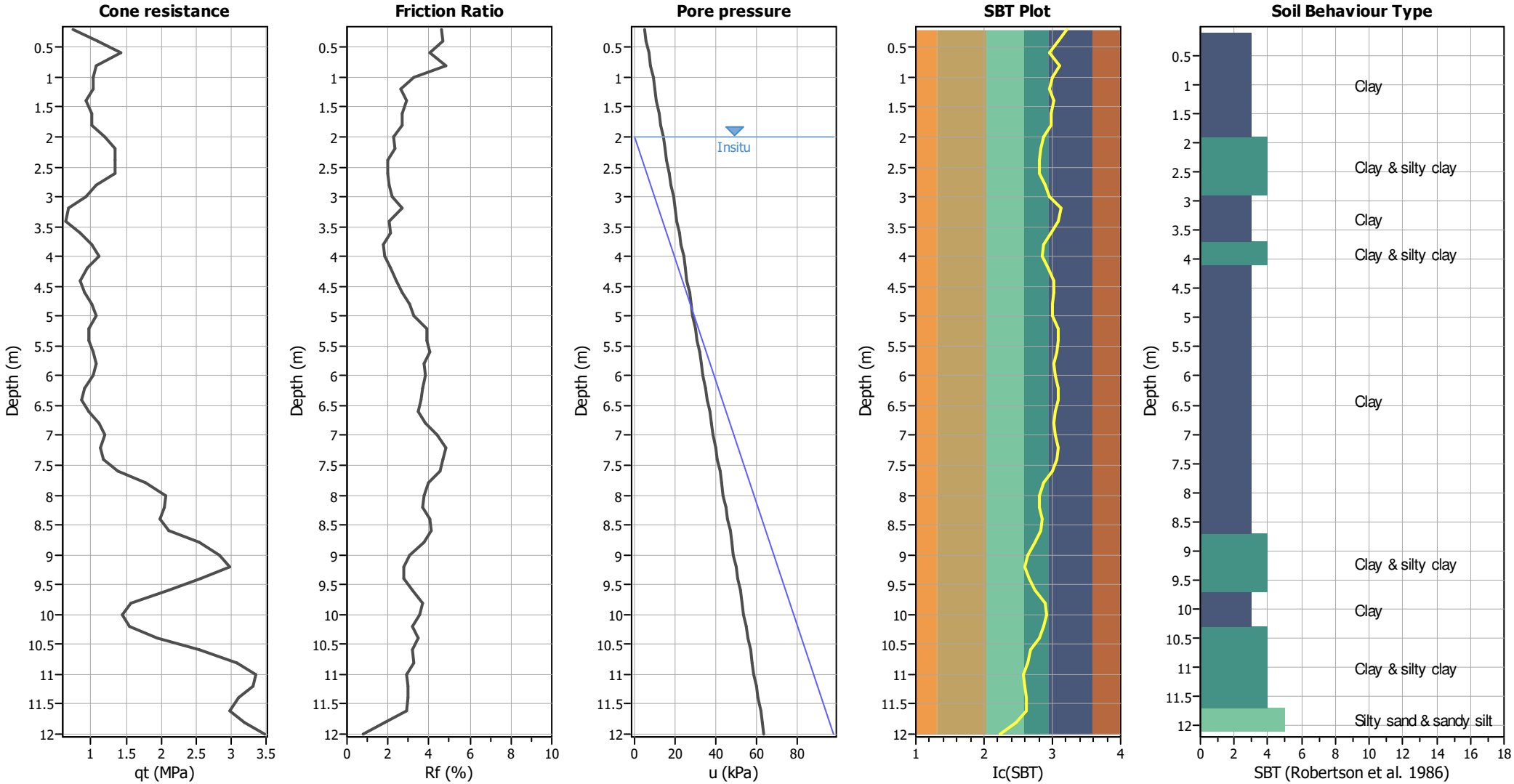






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



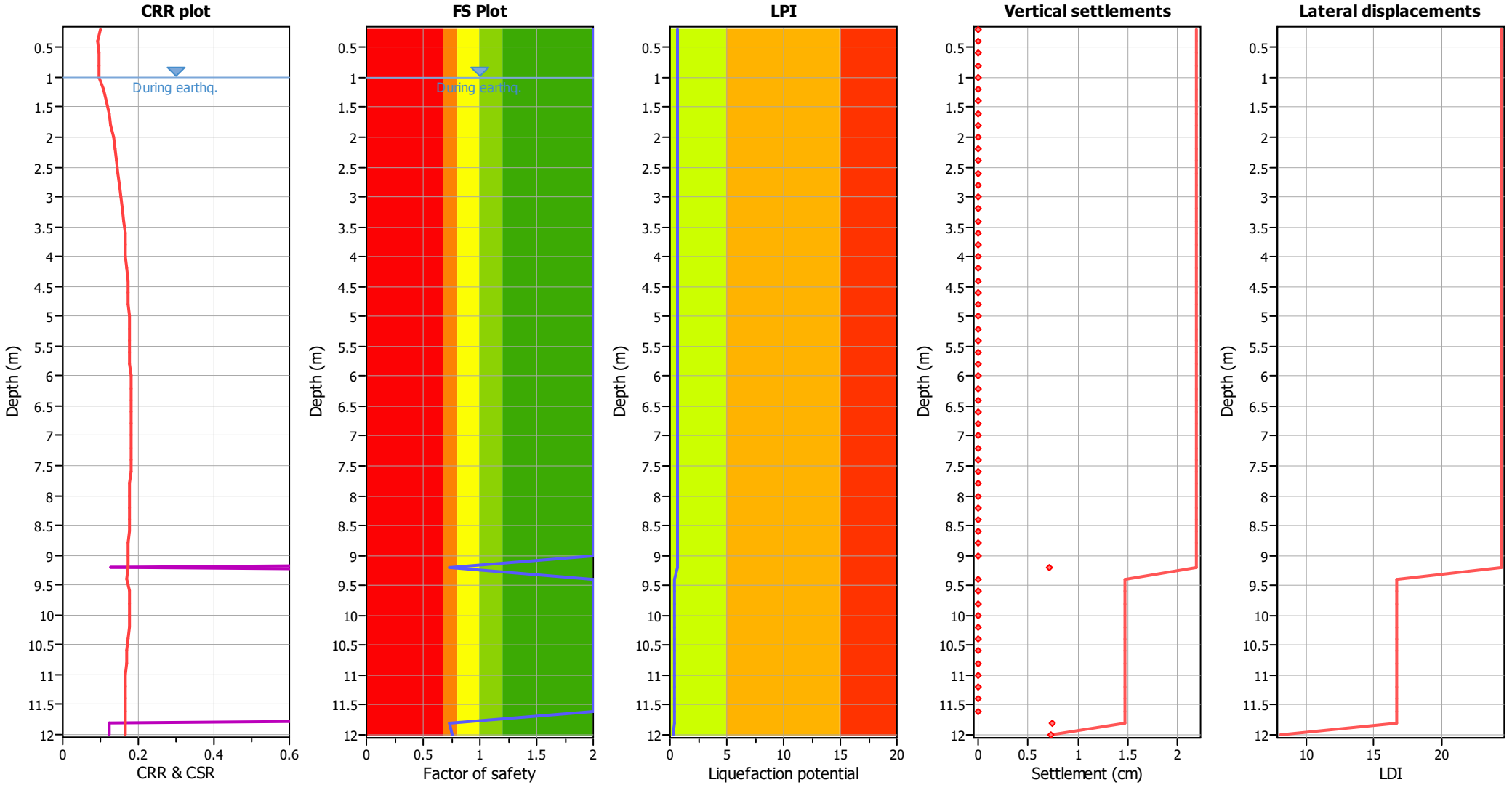
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	2.00	0.00	8.20	0.20	0.00
3.80	2.00	0.00	8.10	0.20	0.00	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	0.74	0.26	5.40	0.20	0.29
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	0.73	0.27	4.10	0.20	0.22	12.00	0.75	0.25	4.00	0.20	0.20

Overall liquefaction potential: 0.70

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	18.46	2.00	0.00	1.00	0.00	1.20	16.78	2.00	0.00	1.00	0.00
1.40	16.78	2.00	0.00	1.00	0.00	1.60	13.42	2.00	0.00	1.00	0.00
1.80	20.13	2.00	0.00	1.00	0.00	2.00	16.78	2.00	0.00	1.00	0.00
2.20	23.49	2.00	0.00	1.00	0.00	2.40	26.84	2.00	0.00	1.00	0.00
2.60	16.78	2.00	0.00	1.00	0.00	2.80	22.91	2.00	0.00	1.00	0.00
3.00	13.25	2.00	0.00	1.00	0.00	3.20	9.84	2.00	0.00	1.00	0.00
3.40	9.69	2.00	0.00	1.00	0.00	3.60	11.09	2.00	0.00	1.00	0.00
3.80	18.35	2.00	0.00	1.00	0.00	4.00	16.64	2.00	0.00	1.00	0.00
4.20	14.93	2.00	0.00	1.00	0.00	4.40	10.41	2.00	0.00	1.00	0.00
4.60	11.67	2.00	0.00	1.00	0.00	4.80	17.02	2.00	0.00	1.00	0.00
5.00	14.06	2.00	0.00	1.00	0.00	5.20	13.84	2.00	0.00	1.00	0.00
5.40	12.32	2.00	0.00	1.00	0.00	5.60	13.45	2.00	0.00	1.00	0.00
5.80	15.85	2.00	0.00	1.00	0.00	6.00	13.09	2.00	0.00	1.00	0.00
6.20	11.65	2.00	0.00	1.00	0.00	6.40	10.25	2.00	0.00	1.00	0.00
6.60	11.37	2.00	0.00	1.00	0.00	6.80	14.88	2.00	0.00	1.00	0.00
7.00	14.69	2.00	0.00	1.00	0.00	7.20	14.51	2.00	0.00	1.00	0.00
7.40	11.98	2.00	0.00	1.00	0.00	7.60	15.32	2.00	0.00	1.00	0.00
7.80	20.85	2.00	0.00	1.00	0.00	8.00	25.09	2.00	0.00	1.00	0.00
8.20	24.81	2.00	0.00	1.00	0.00	8.40	19.03	2.00	0.00	1.00	0.00
8.60	22.08	2.00	0.00	1.00	0.00	8.80	28.29	2.00	0.00	1.00	0.00
9.00	32.24	2.00	0.00	1.00	0.00	9.20	90.55	0.74	3.55	1.00	0.71
9.40	31.60	2.00	0.00	1.00	0.00	9.60	18.86	2.00	0.00	1.00	0.00
9.80	15.58	2.00	0.00	1.00	0.00	10.00	14.41	2.00	0.00	1.00	0.00
10.20	14.27	2.00	0.00	1.00	0.00	10.40	18.17	2.00	0.00	1.00	0.00
10.60	25.97	2.00	0.00	1.00	0.00	10.80	31.66	2.00	0.00	1.00	0.00
11.00	33.34	2.00	0.00	1.00	0.00	11.20	33.05	2.00	0.00	1.00	0.00
11.40	29.86	2.00	0.00	1.00	0.00	11.60	26.73	2.00	0.00	1.00	0.00
11.80	86.36	0.73	3.72	1.00	0.74	12.00	88.41	0.75	3.64	1.00	0.73

Total estimated settlement: 2.18

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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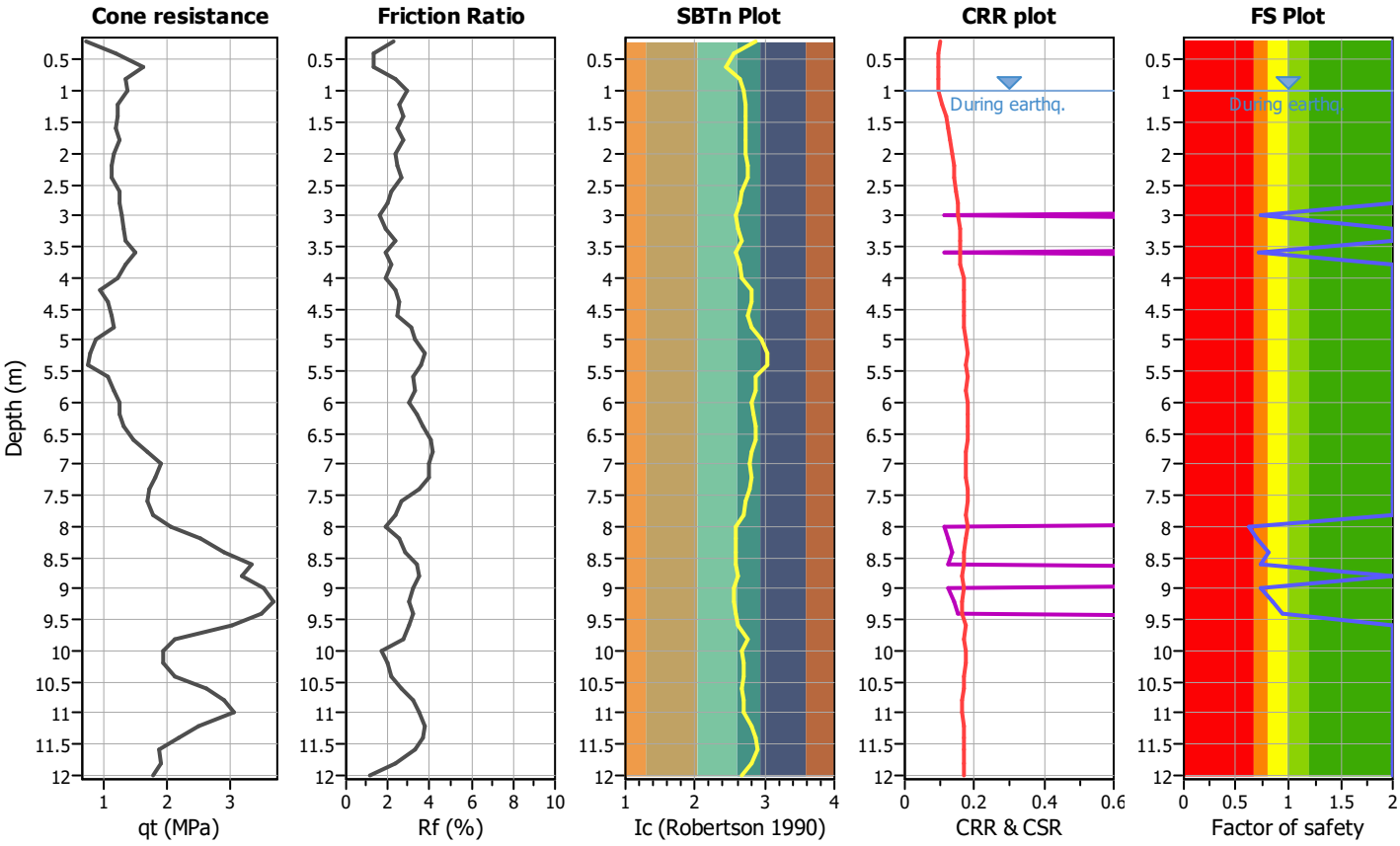
LIQUEFACTION ANALYSIS REPORT

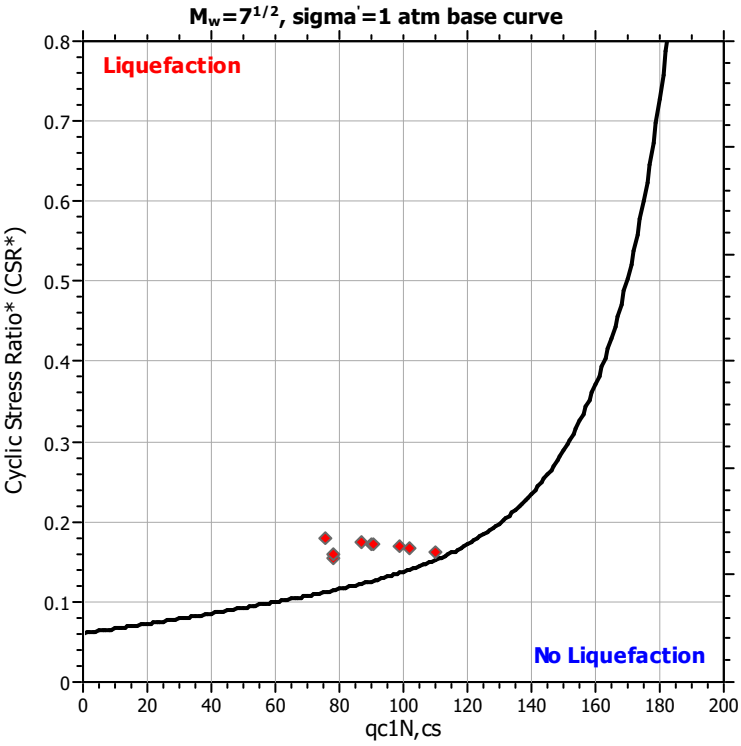
Project title : **Location :**

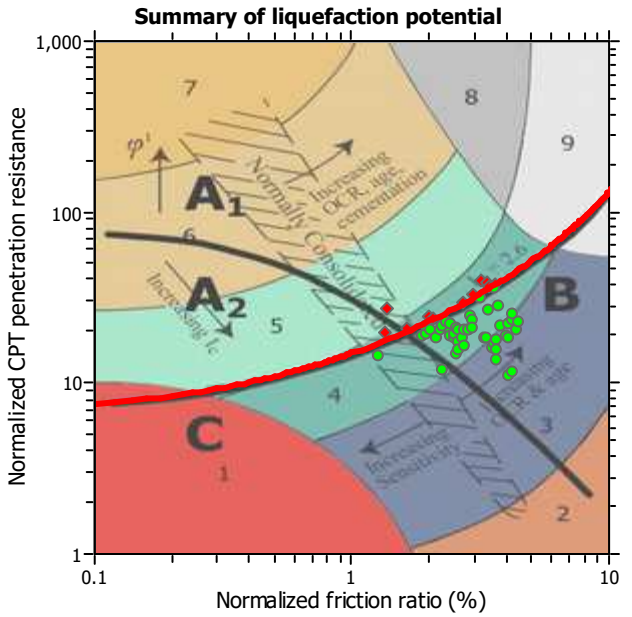
CPT file : CPT104

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

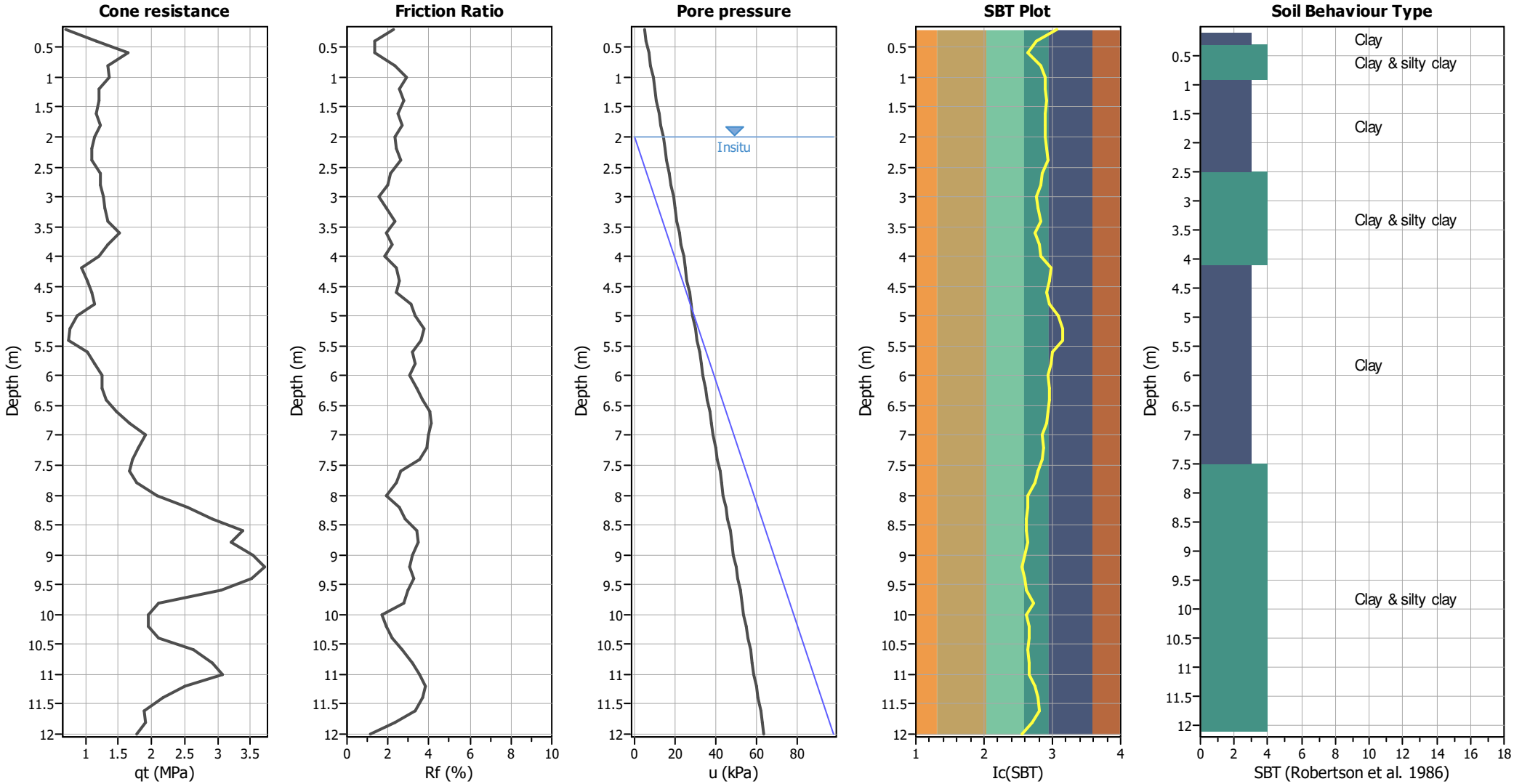






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



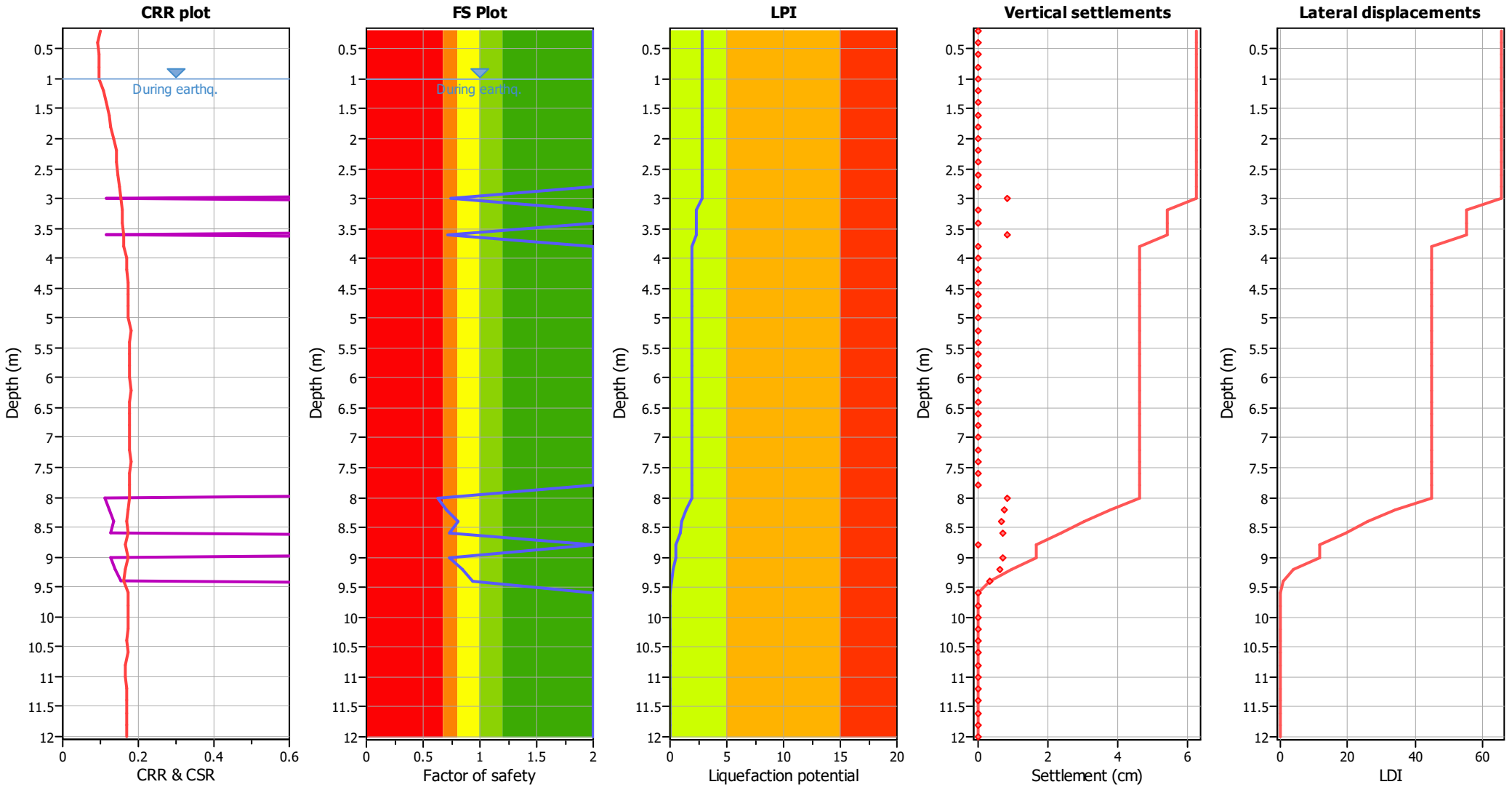
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	0.74	0.26	8.50	0.20	0.43	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	0.71	0.29	8.20	0.20	0.47
3.80	2.00	0.00	8.10	0.20	0.00	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	0.63	0.37	6.00	0.20	0.45
8.20	0.70	0.30	5.90	0.20	0.35	8.40	0.80	0.20	5.80	0.20	0.23
8.60	0.73	0.27	5.70	0.20	0.31	8.80	2.00	0.00	5.60	0.20	0.00
9.00	0.74	0.26	5.50	0.20	0.29	9.20	0.84	0.16	5.40	0.20	0.17
9.40	0.94	0.06	5.30	0.20	0.07	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00

Overall liquefaction potential: 2.77

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	20.13	2.00	0.00	1.00	0.00	1.20	25.17	2.00	0.00	1.00	0.00
1.40	15.10	2.00	0.00	1.00	0.00	1.60	20.13	2.00	0.00	1.00	0.00
1.80	23.49	2.00	0.00	1.00	0.00	2.00	18.46	2.00	0.00	1.00	0.00
2.20	15.10	2.00	0.00	1.00	0.00	2.40	21.81	2.00	0.00	1.00	0.00
2.60	18.46	2.00	0.00	1.00	0.00	2.80	21.56	2.00	0.00	1.00	0.00
3.00	78.04	0.74	4.11	1.00	0.82	3.20	19.33	2.00	0.00	1.00	0.00
3.40	21.94	2.00	0.00	1.00	0.00	3.60	78.40	0.71	4.09	1.00	0.82
3.80	25.50	2.00	0.00	1.00	0.00	4.00	13.71	2.00	0.00	1.00	0.00
4.20	14.89	2.00	0.00	1.00	0.00	4.40	13.25	2.00	0.00	1.00	0.00
4.60	17.24	2.00	0.00	1.00	0.00	4.80	16.96	2.00	0.00	1.00	0.00
5.00	14.00	2.00	0.00	1.00	0.00	5.20	5.63	2.00	0.00	1.00	0.00
5.40	12.30	2.00	0.00	1.00	0.00	5.60	12.14	2.00	0.00	1.00	0.00
5.80	17.13	2.00	0.00	1.00	0.00	6.00	15.64	2.00	0.00	1.00	0.00
6.20	15.43	2.00	0.00	1.00	0.00	6.40	16.46	2.00	0.00	1.00	0.00
6.60	17.46	2.00	0.00	1.00	0.00	6.80	20.83	2.00	0.00	1.00	0.00
7.00	22.92	2.00	0.00	1.00	0.00	7.20	24.95	2.00	0.00	1.00	0.00
7.40	16.59	2.00	0.00	1.00	0.00	7.60	18.70	2.00	0.00	1.00	0.00
7.80	23.03	2.00	0.00	1.00	0.00	8.00	75.76	0.63	4.22	1.00	0.84
8.20	86.95	0.70	3.70	1.00	0.74	8.40	98.95	0.80	3.25	1.00	0.65
8.60	90.28	0.73	3.56	1.00	0.71	8.80	41.97	2.00	0.00	1.00	0.00
9.00	90.42	0.74	3.56	1.00	0.71	9.20	101.72	0.84	3.16	1.00	0.63
9.40	109.87	0.94	1.72	1.00	0.34	9.60	23.91	2.00	0.00	1.00	0.00
9.80	24.70	2.00	0.00	1.00	0.00	10.00	16.36	2.00	0.00	1.00	0.00
10.20	18.24	2.00	0.00	1.00	0.00	10.40	24.08	2.00	0.00	1.00	0.00
10.60	20.88	2.00	0.00	1.00	0.00	10.80	33.49	2.00	0.00	1.00	0.00
11.00	31.24	2.00	0.00	1.00	0.00	11.20	25.15	2.00	0.00	1.00	0.00
11.40	16.28	2.00	0.00	1.00	0.00	11.60	20.91	2.00	0.00	1.00	0.00
11.80	16.01	2.00	0.00	1.00	0.00	12.00	16.83	2.00	0.00	1.00	0.00

Total estimated settlement: 6.27

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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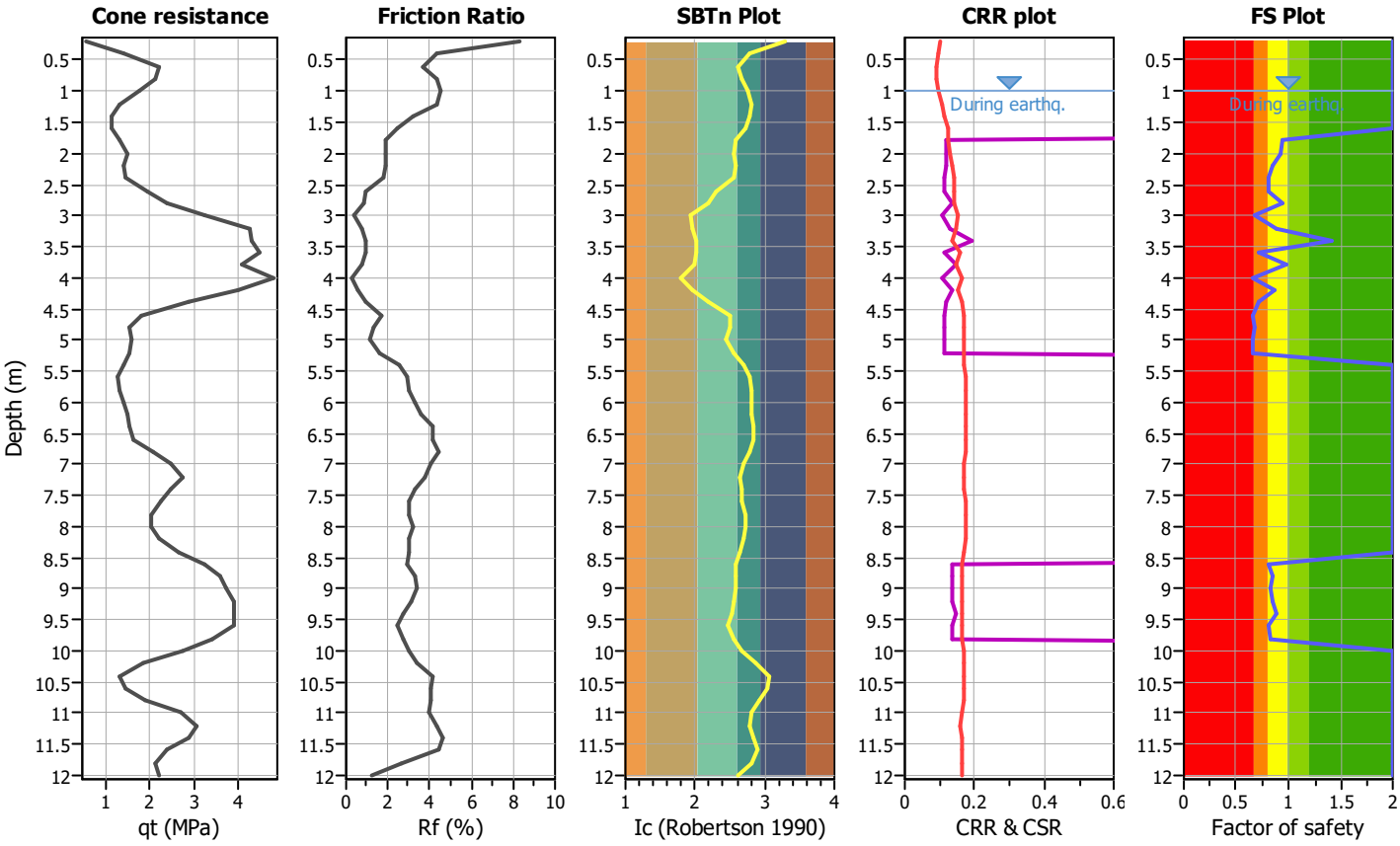
LIQUEFACTION ANALYSIS REPORT

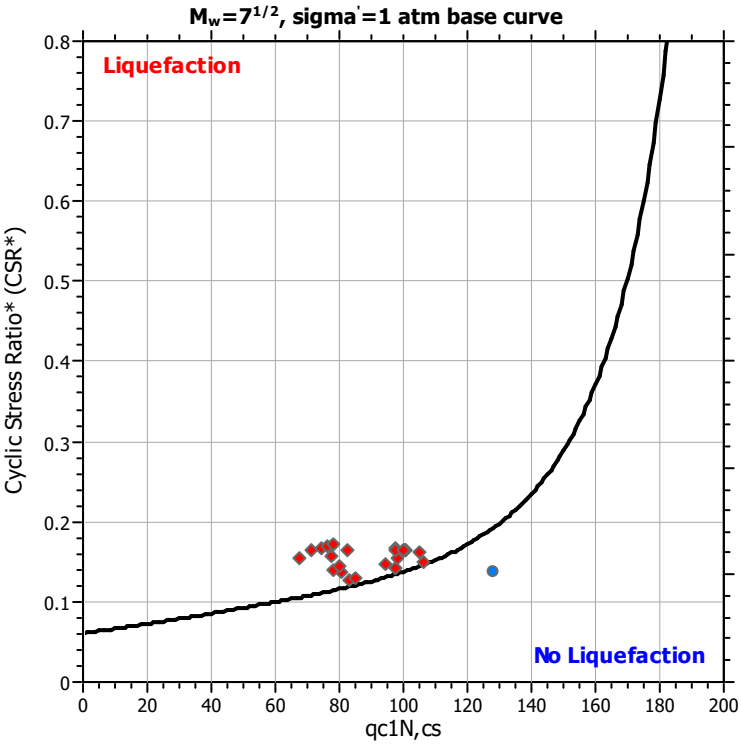
Project title : **Location :**

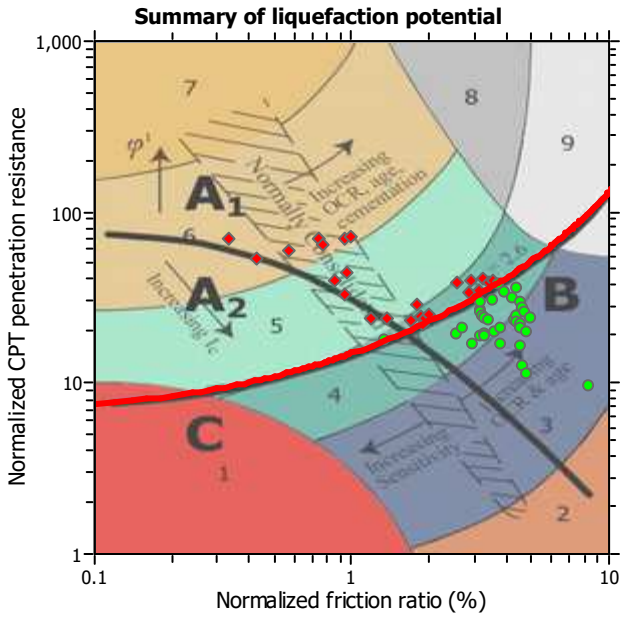
CPT file : CPT105

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

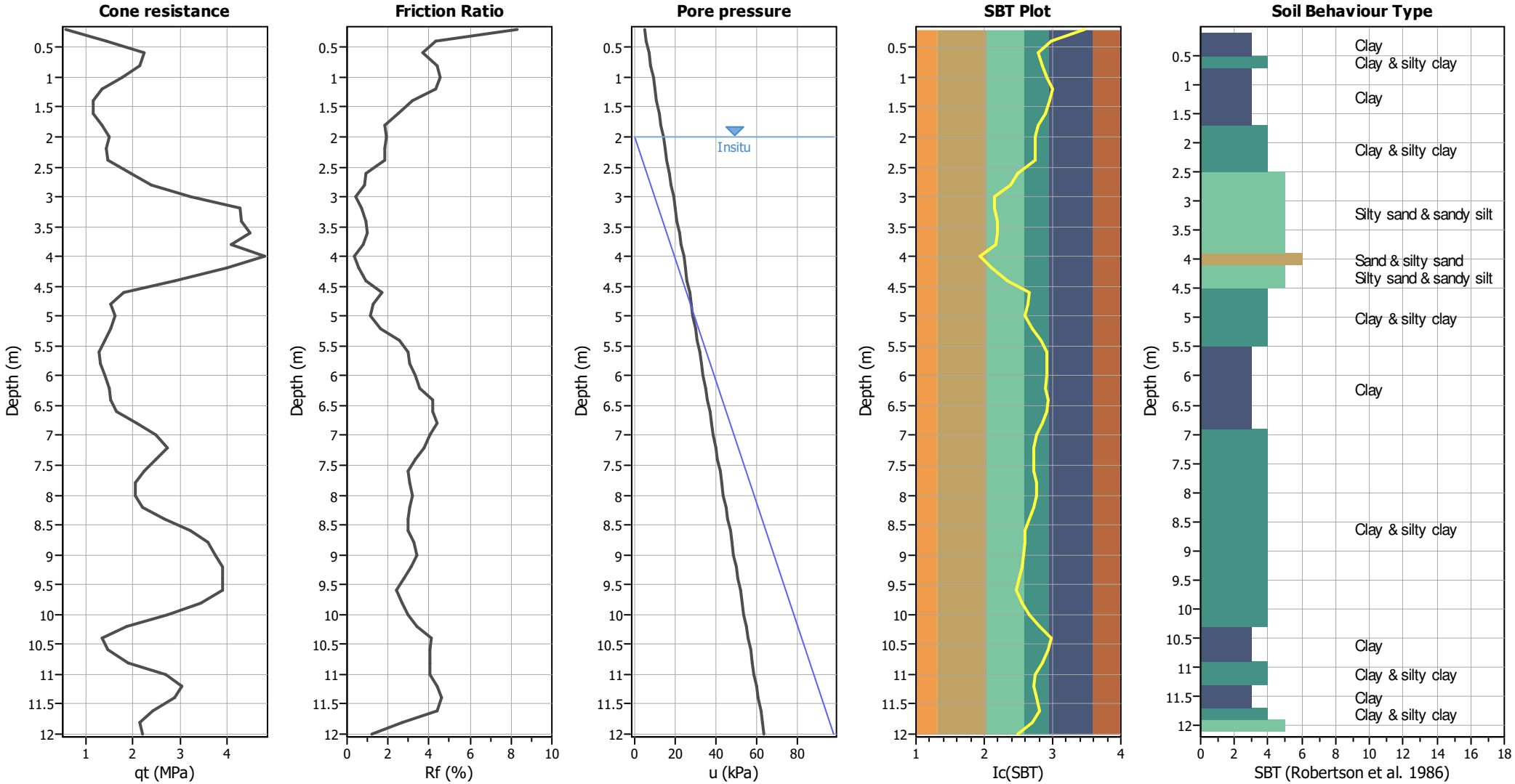






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



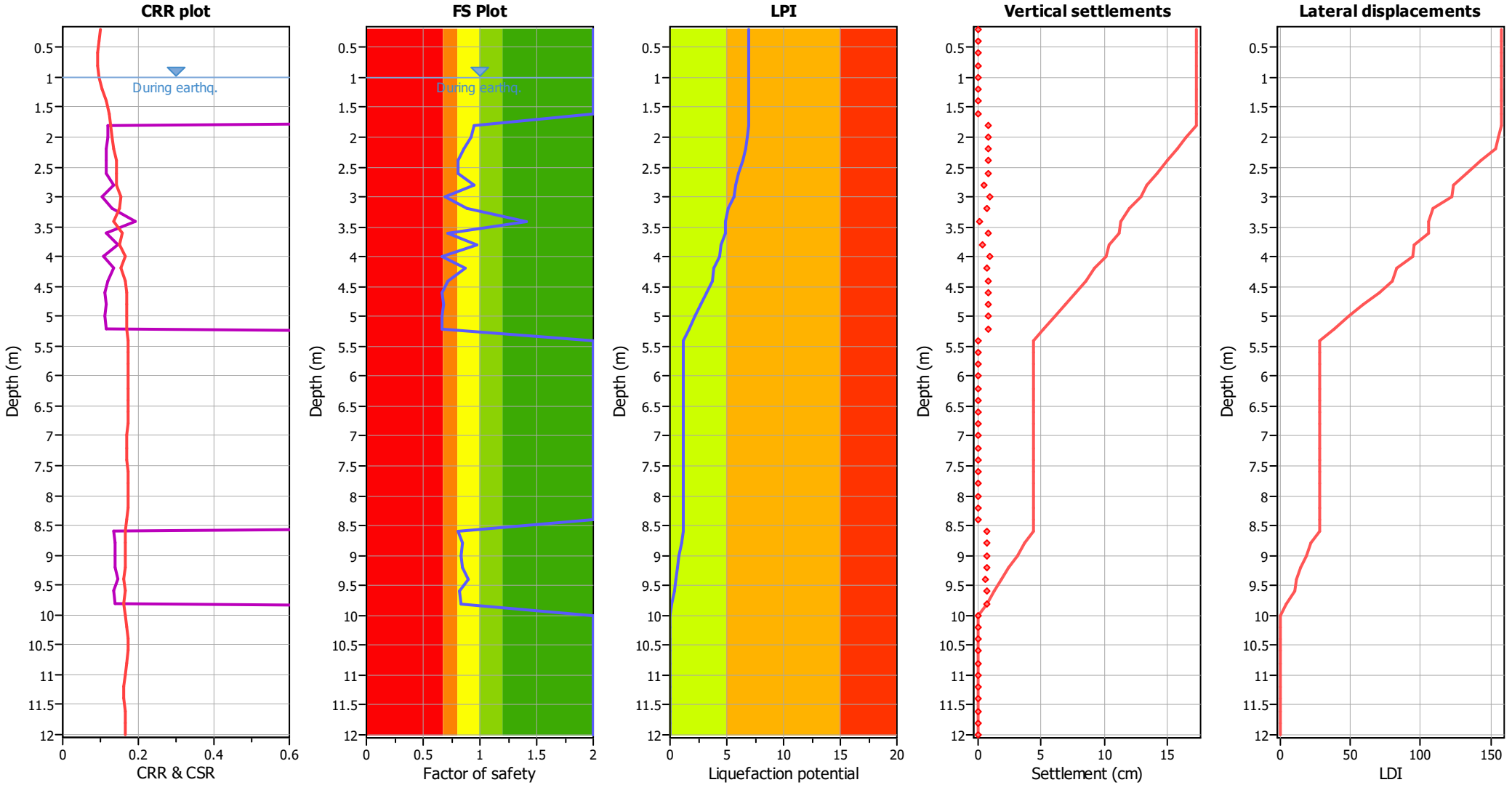
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	0.94	0.06	9.10	0.20	0.10	2.00	0.92	0.08	9.00	0.20	0.14
2.20	0.86	0.14	8.90	0.20	0.26	2.40	0.81	0.19	8.80	0.20	0.33
2.60	0.80	0.20	8.70	0.20	0.34	2.80	0.94	0.06	8.60	0.20	0.10
3.00	0.69	0.31	8.50	0.20	0.53	3.20	0.88	0.12	8.40	0.20	0.20
3.40	1.41	0.00	8.30	0.20	0.00	3.60	0.72	0.28	8.20	0.20	0.46
3.80	0.98	0.02	8.10	0.20	0.03	4.00	0.66	0.34	8.00	0.20	0.54
4.20	0.87	0.13	7.90	0.20	0.21	4.40	0.72	0.28	7.80	0.20	0.43
4.60	0.66	0.34	7.70	0.20	0.52	4.80	0.68	0.32	7.60	0.20	0.49
5.00	0.66	0.34	7.50	0.20	0.51	5.20	0.67	0.33	7.40	0.20	0.49
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	0.81	0.19	5.70	0.20	0.22	8.80	0.84	0.16	5.60	0.20	0.18
9.00	0.84	0.16	5.50	0.20	0.18	9.20	0.84	0.16	5.40	0.20	0.17
9.40	0.89	0.11	5.30	0.20	0.11	9.60	0.81	0.19	5.20	0.20	0.19
9.80	0.84	0.16	5.10	0.20	0.16	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00

Overall liquefaction potential: 6.89

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	23.49	2.00	0.00	1.00	0.00	1.20	25.17	2.00	0.00	1.00	0.00
1.40	18.46	2.00	0.00	1.00	0.00	1.60	15.10	2.00	0.00	1.00	0.00
1.80	83.28	0.94	3.86	1.00	0.77	2.00	84.98	0.92	3.78	1.00	0.76
2.20	80.78	0.86	3.97	1.00	0.79	2.40	78.42	0.81	4.09	1.00	0.82
2.60	79.97	0.80	4.01	1.00	0.80	2.80	97.32	0.94	2.21	1.00	0.44
3.00	67.62	0.69	4.70	1.00	0.94	3.20	94.61	0.88	3.40	1.00	0.68
3.40	128.03	1.41	0.35	1.00	0.07	3.60	77.55	0.72	4.13	1.00	0.83
3.80	106.02	0.98	1.46	1.00	0.29	4.00	71.51	0.66	4.46	1.00	0.89
4.20	97.99	0.87	3.28	1.00	0.66	4.40	82.36	0.72	3.90	1.00	0.78
4.60	74.47	0.66	4.29	1.00	0.86	4.80	77.56	0.68	4.13	1.00	0.83
5.00	76.46	0.66	4.19	1.00	0.84	5.20	77.86	0.67	4.11	1.00	0.82
5.40	18.54	2.00	0.00	1.00	0.00	5.60	15.73	2.00	0.00	1.00	0.00
5.80	15.52	2.00	0.00	1.00	0.00	6.00	19.03	2.00	0.00	1.00	0.00
6.20	18.78	2.00	0.00	1.00	0.00	6.40	18.53	2.00	0.00	1.00	0.00
6.60	19.48	2.00	0.00	1.00	0.00	6.80	21.58	2.00	0.00	1.00	0.00
7.00	32.75	2.00	0.00	1.00	0.00	7.20	32.37	2.00	0.00	1.00	0.00
7.40	29.78	2.00	0.00	1.00	0.00	7.60	22.78	2.00	0.00	1.00	0.00
7.80	23.63	2.00	0.00	1.00	0.00	8.00	22.27	2.00	0.00	1.00	0.00
8.20	22.04	2.00	0.00	1.00	0.00	8.40	28.24	2.00	0.00	1.00	0.00
8.60	97.40	0.81	3.30	1.00	0.66	8.80	100.92	0.84	3.18	1.00	0.64
9.00	100.47	0.84	3.20	1.00	0.64	9.20	100.77	0.84	3.19	1.00	0.64
9.40	105.01	0.89	2.61	1.00	0.52	9.60	97.40	0.81	3.30	1.00	0.66
9.80	99.71	0.84	3.22	1.00	0.64	10.00	27.99	2.00	0.00	1.00	0.00
10.20	15.86	2.00	0.00	1.00	0.00	10.40	11.79	2.00	0.00	1.00	0.00
10.60	11.68	2.00	0.00	1.00	0.00	10.80	19.31	2.00	0.00	1.00	0.00
11.00	23.94	2.00	0.00	1.00	0.00	11.20	34.24	2.00	0.00	1.00	0.00
11.40	28.25	2.00	0.00	1.00	0.00	11.60	18.62	2.00	0.00	1.00	0.00
11.80	20.33	2.00	0.00	1.00	0.00	12.00	20.17	2.00	0.00	1.00	0.00

Total estimated settlement: 17.26

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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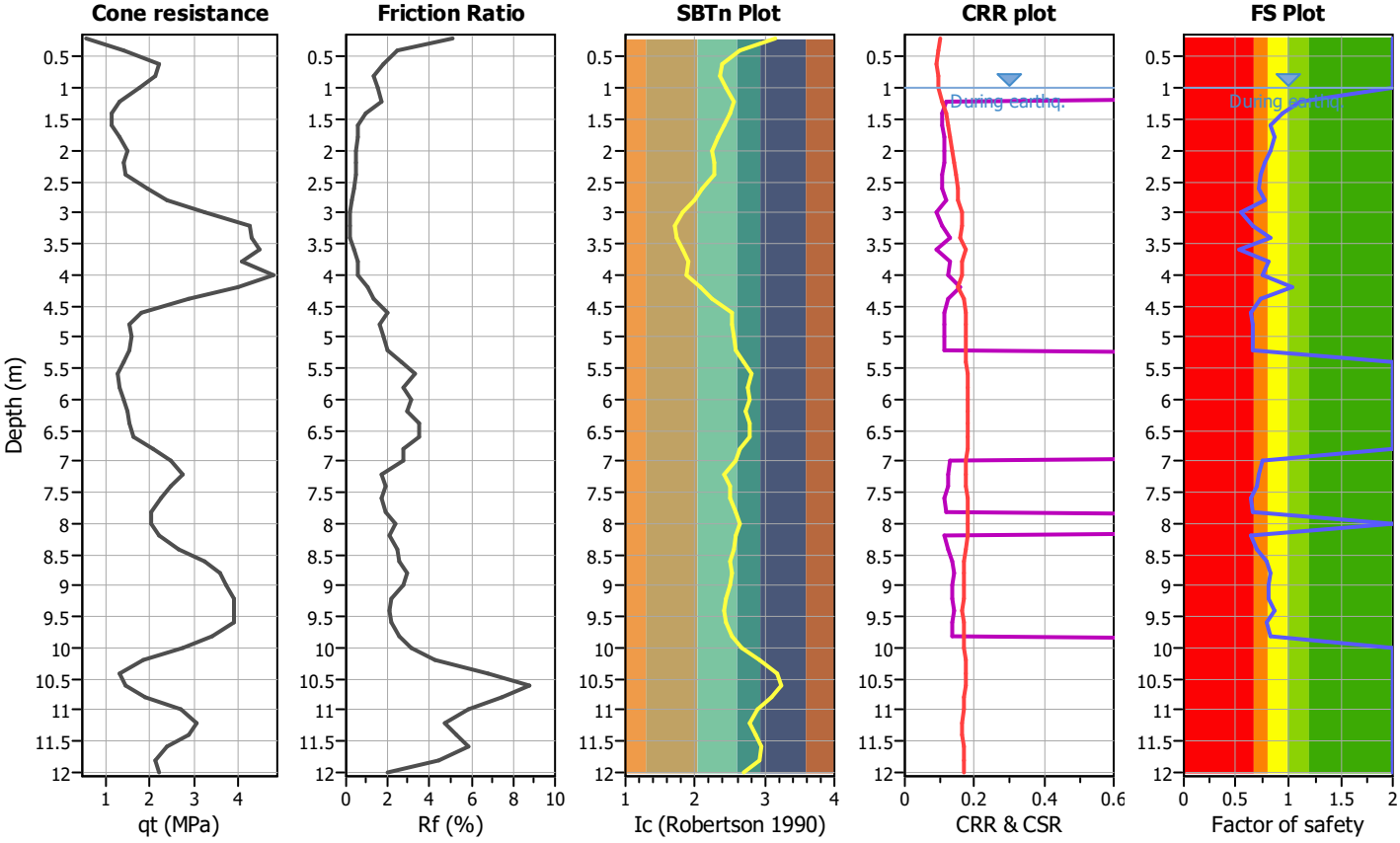
LIQUEFACTION ANALYSIS REPORT

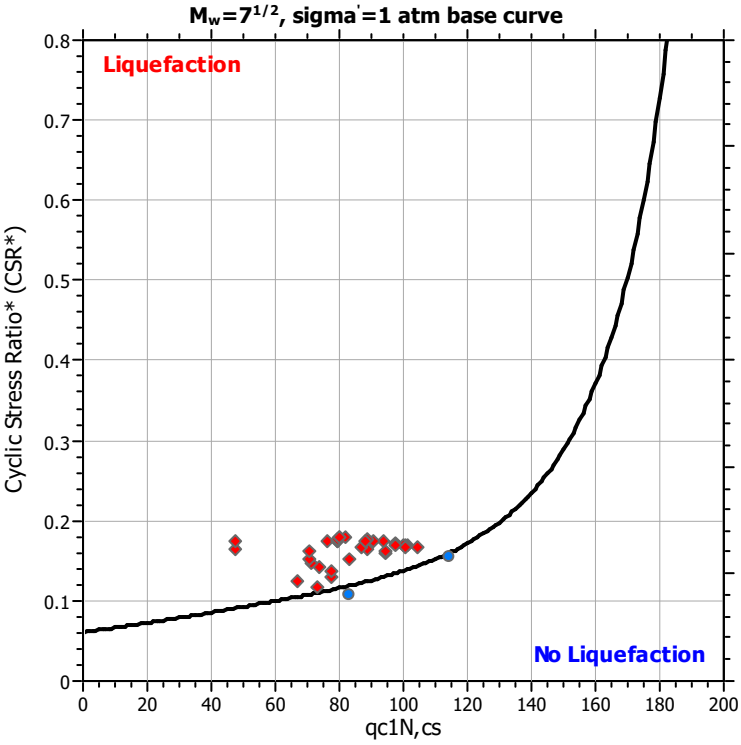
Project title : **Location :**

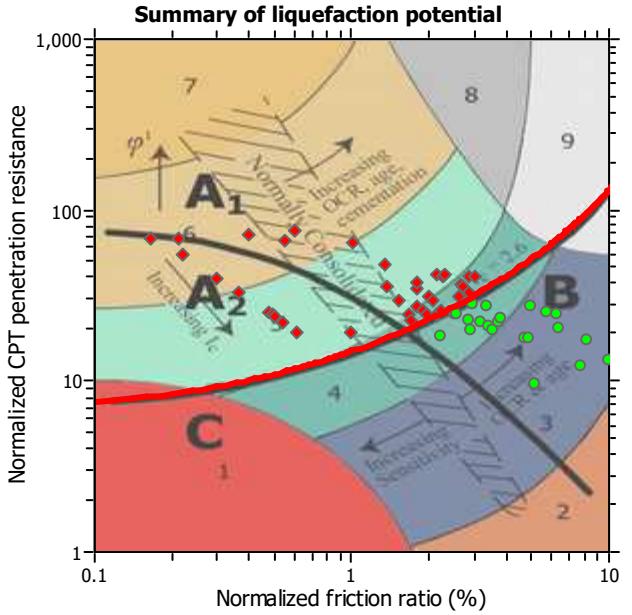
CPT file : CPT106

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

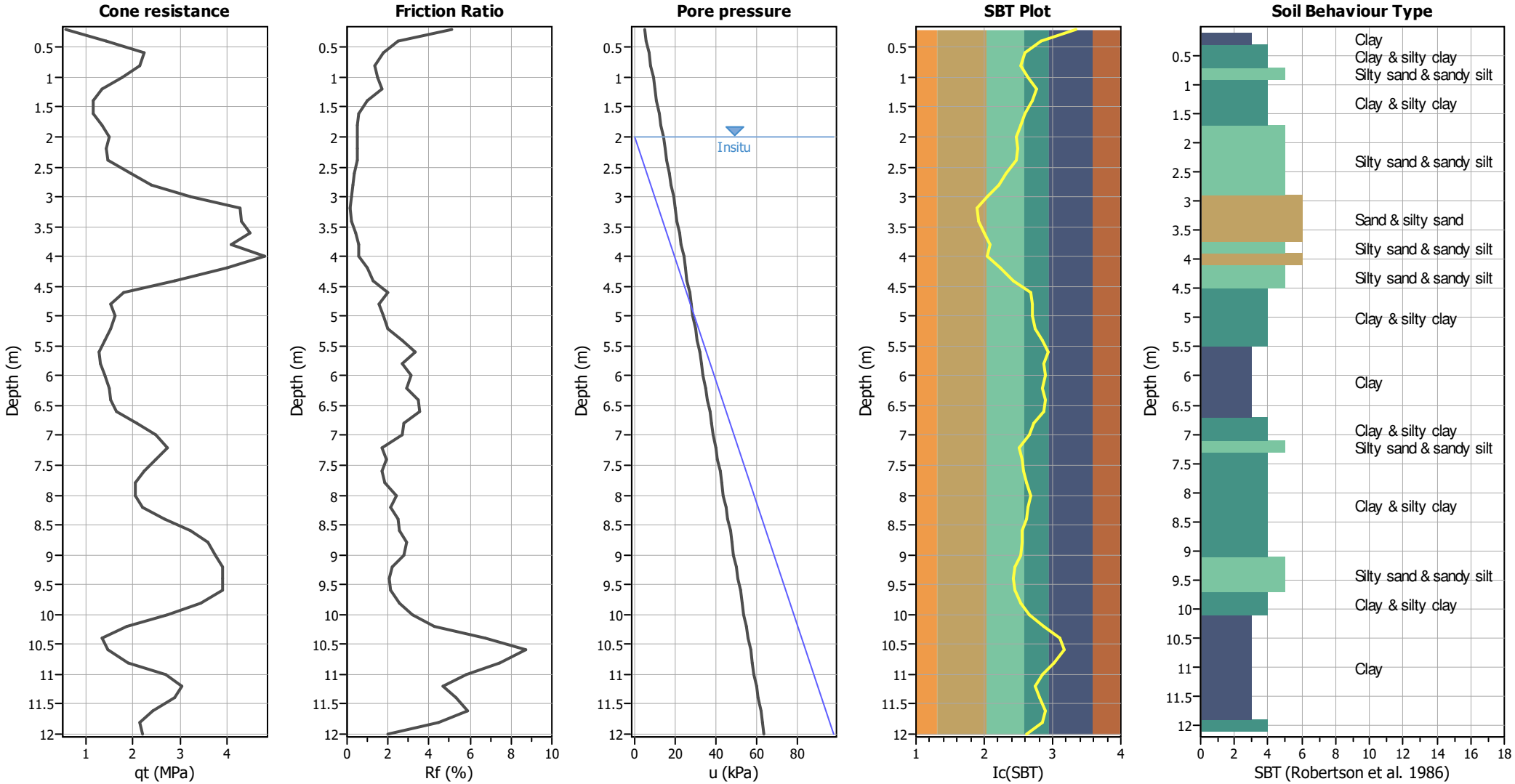






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



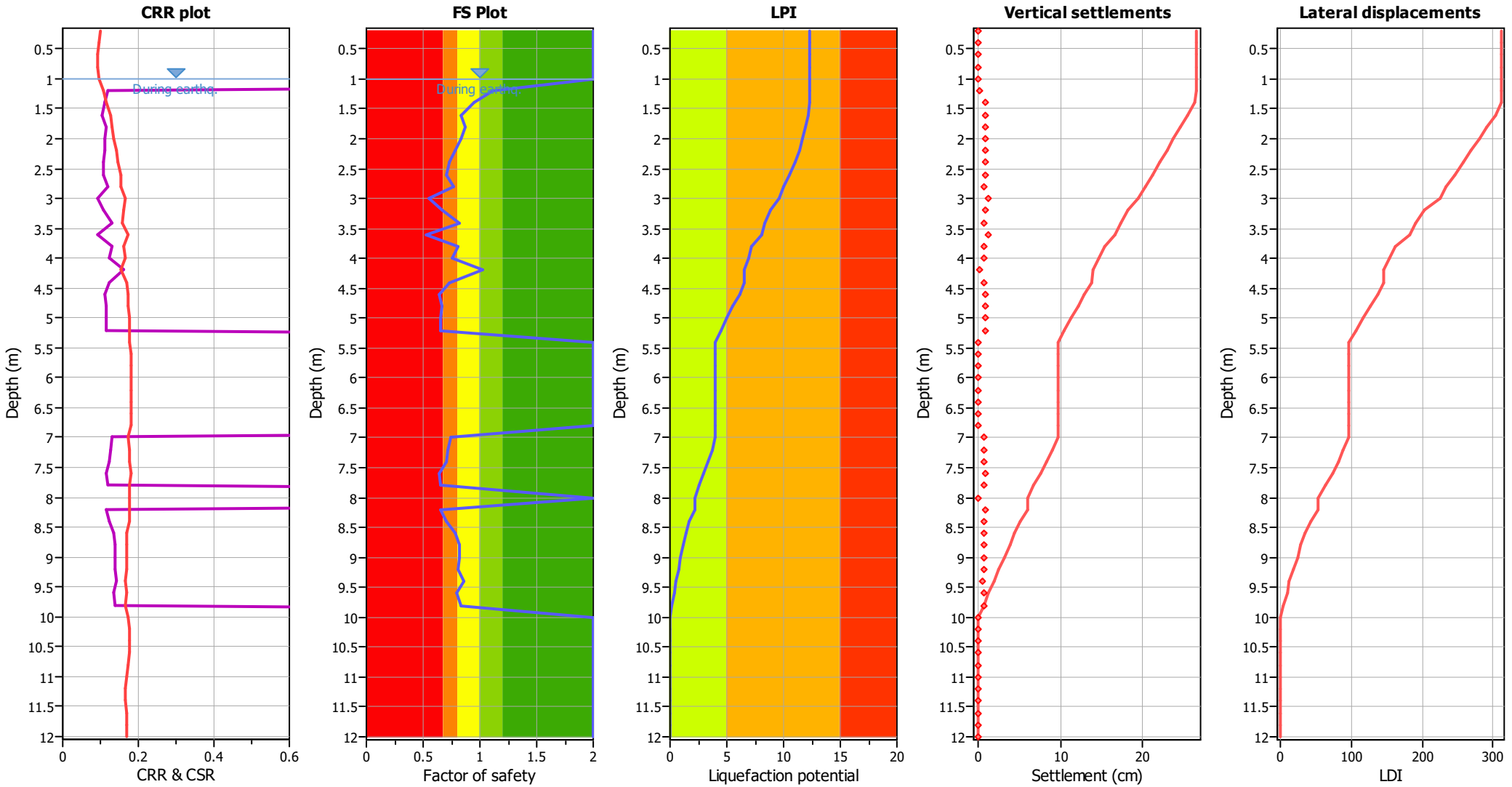
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	1.12	0.00	9.40	0.20	0.00
1.40	0.94	0.06	9.30	0.20	0.10	1.60	0.84	0.16	9.20	0.20	0.30
1.80	0.87	0.13	9.10	0.20	0.23	2.00	0.83	0.17	9.00	0.20	0.30
2.20	0.78	0.22	8.90	0.20	0.39	2.40	0.74	0.26	8.80	0.20	0.46
2.60	0.71	0.29	8.70	0.20	0.50	2.80	0.78	0.22	8.60	0.20	0.39
3.00	0.55	0.45	8.50	0.20	0.76	3.20	0.66	0.34	8.40	0.20	0.57
3.40	0.82	0.18	8.30	0.20	0.30	3.60	0.52	0.48	8.20	0.20	0.79
3.80	0.81	0.19	8.10	0.20	0.31	4.00	0.75	0.25	8.00	0.20	0.39
4.20	1.03	0.00	7.90	0.20	0.00	4.40	0.73	0.27	7.80	0.20	0.42
4.60	0.65	0.35	7.70	0.20	0.54	4.80	0.66	0.34	7.60	0.20	0.51
5.00	0.66	0.34	7.50	0.20	0.51	5.20	0.66	0.34	7.40	0.20	0.51
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	0.75	0.25	6.50	0.20	0.33	7.20	0.72	0.28	6.40	0.20	0.36
7.40	0.71	0.29	6.30	0.20	0.37	7.60	0.65	0.35	6.20	0.20	0.44
7.80	0.66	0.34	6.10	0.20	0.42	8.00	2.00	0.00	6.00	0.20	0.00
8.20	0.65	0.35	5.90	0.20	0.41	8.40	0.70	0.30	5.80	0.20	0.34
8.60	0.79	0.21	5.70	0.20	0.24	8.80	0.83	0.17	5.60	0.20	0.20
9.00	0.82	0.18	5.50	0.20	0.20	9.20	0.81	0.19	5.40	0.20	0.20
9.40	0.86	0.14	5.30	0.20	0.15	9.60	0.80	0.20	5.20	0.20	0.21
9.80	0.83	0.17	5.10	0.20	0.18	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00

Overall liquefaction potential: 12.33

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	78.31	2.00	0.00	1.00	0.00	1.20	82.83	1.12	0.67	1.00	0.13
1.40	72.99	0.94	4.37	1.00	0.87	1.60	66.79	0.84	4.75	1.00	0.95
1.80	77.49	0.87	4.13	1.00	0.83	2.00	77.23	0.83	4.15	1.00	0.83
2.20	74.05	0.78	4.32	1.00	0.86	2.40	71.51	0.74	4.46	1.00	0.89
2.60	70.87	0.71	4.50	1.00	0.90	2.80	83.01	0.78	3.87	1.00	0.77
3.00	47.65	0.55	6.39	1.00	1.28	3.20	70.47	0.66	4.52	1.00	0.90
3.40	94.09	0.82	3.42	1.00	0.68	3.60	47.35	0.52	6.43	1.00	1.29
3.80	94.65	0.81	3.40	1.00	0.68	4.00	88.57	0.75	3.63	1.00	0.73
4.20	114.44	1.03	1.09	1.00	0.22	4.40	86.80	0.73	3.70	1.00	0.74
4.60	76.03	0.65	4.21	1.00	0.84	4.80	79.24	0.66	4.05	1.00	0.81
5.00	79.11	0.66	4.05	1.00	0.81	5.20	79.38	0.66	4.04	1.00	0.81
5.40	19.23	2.00	0.00	1.00	0.00	5.60	16.32	2.00	0.00	1.00	0.00
5.80	16.10	2.00	0.00	1.00	0.00	6.00	19.70	2.00	0.00	1.00	0.00
6.20	19.45	2.00	0.00	1.00	0.00	6.40	19.17	2.00	0.00	1.00	0.00
6.60	20.14	2.00	0.00	1.00	0.00	6.80	22.33	2.00	0.00	1.00	0.00
7.00	94.02	0.75	3.42	1.00	0.68	7.20	90.73	0.72	3.54	1.00	0.71
7.40	88.76	0.71	3.62	1.00	0.72	7.60	79.79	0.65	4.02	1.00	0.80
7.80	81.97	0.66	3.92	1.00	0.78	8.00	23.05	2.00	0.00	1.00	0.00
8.20	80.09	0.65	4.00	1.00	0.80	8.40	88.00	0.70	3.65	1.00	0.73
8.60	97.79	0.79	3.29	1.00	0.66	8.80	101.52	0.83	3.16	1.00	0.63
9.00	100.56	0.82	3.19	1.00	0.64	9.20	99.93	0.81	3.22	1.00	0.64
9.40	104.33	0.86	3.08	1.00	0.62	9.60	97.70	0.80	3.29	1.00	0.66
9.80	100.61	0.83	3.19	1.00	0.64	10.00	28.81	2.00	0.00	1.00	0.00
10.20	16.35	2.00	0.00	1.00	0.00	10.40	12.15	2.00	0.00	1.00	0.00
10.60	12.02	2.00	0.00	1.00	0.00	10.80	19.82	2.00	0.00	1.00	0.00
11.00	24.53	2.00	0.00	1.00	0.00	11.20	35.02	2.00	0.00	1.00	0.00
11.40	28.90	2.00	0.00	1.00	0.00	11.60	19.06	2.00	0.00	1.00	0.00
11.80	20.79	2.00	0.00	1.00	0.00	12.00	20.62	2.00	0.00	1.00	0.00

Total estimated settlement: 26.55

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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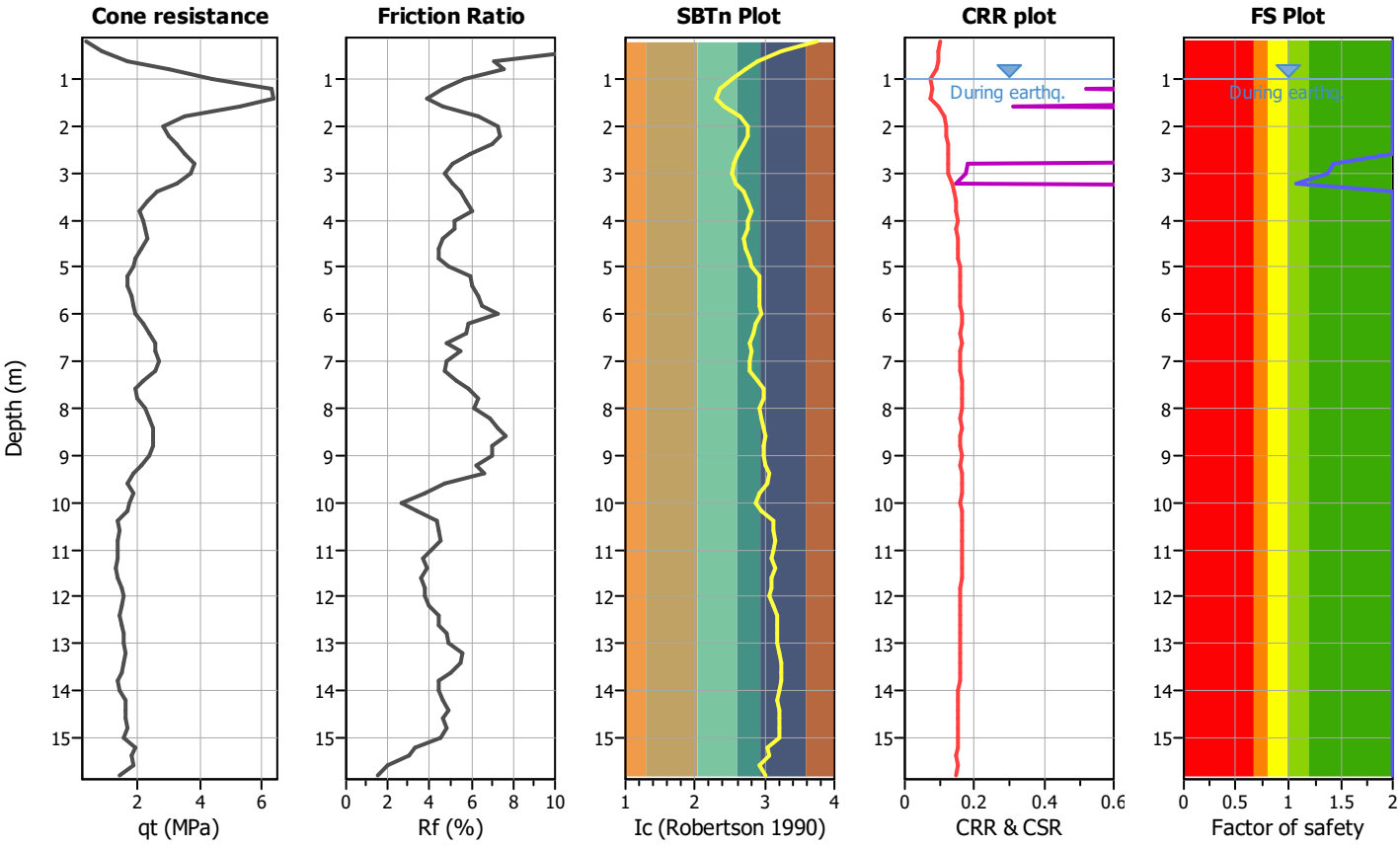
LIQUEFACTION ANALYSIS REPORT

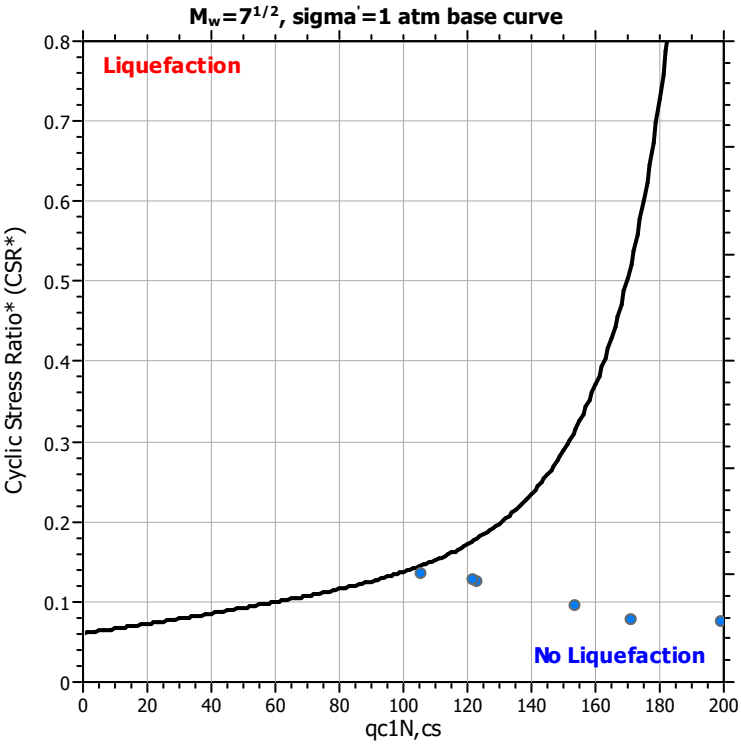
Project title : **Location :**

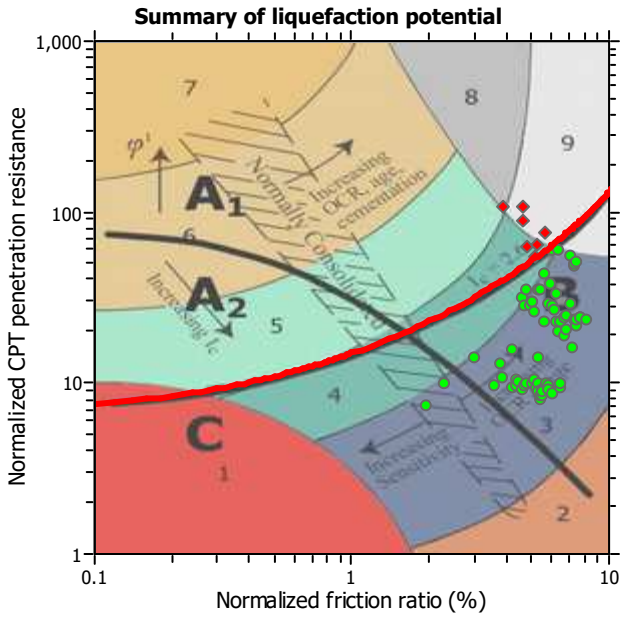
CPT file : CPT2

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

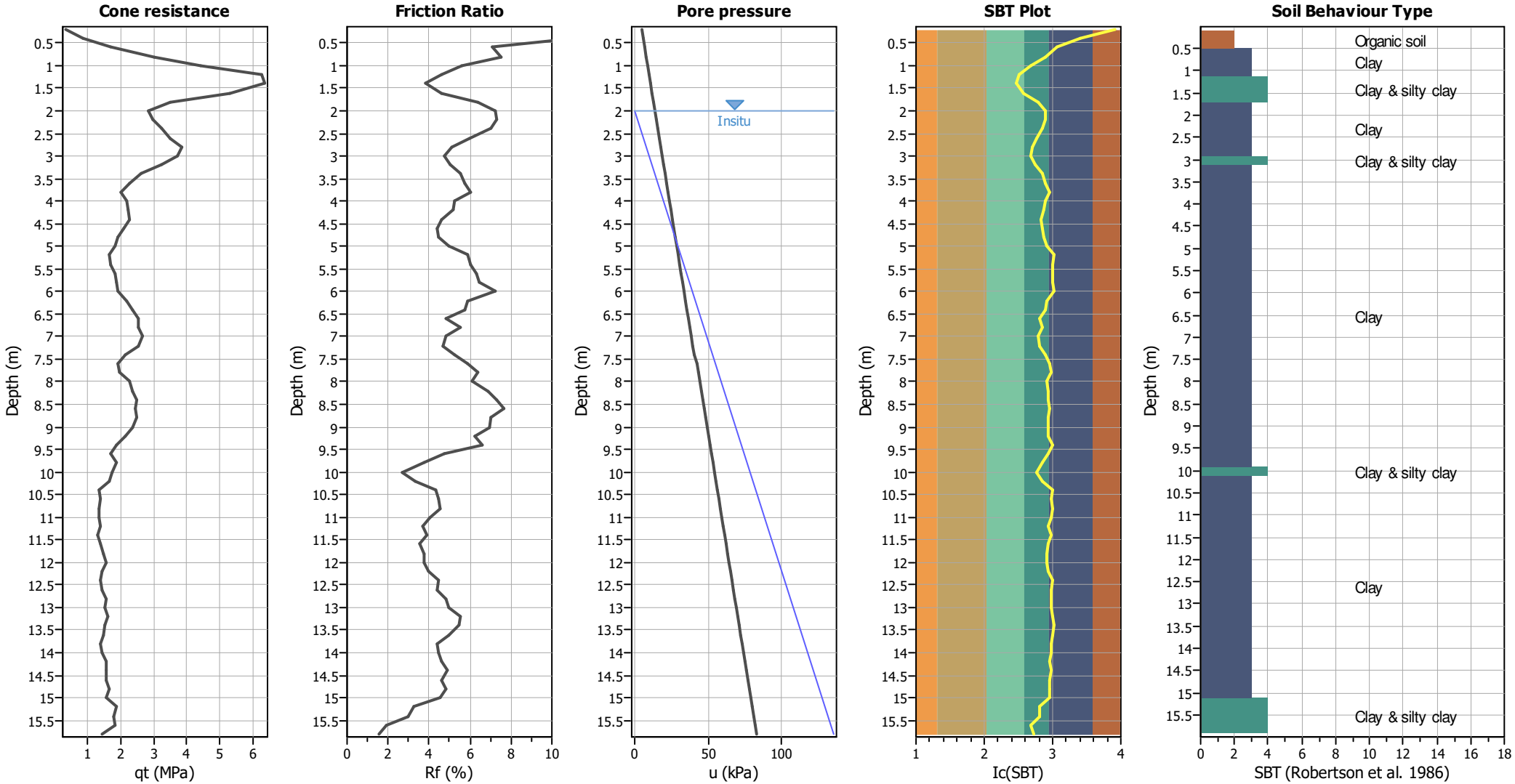






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



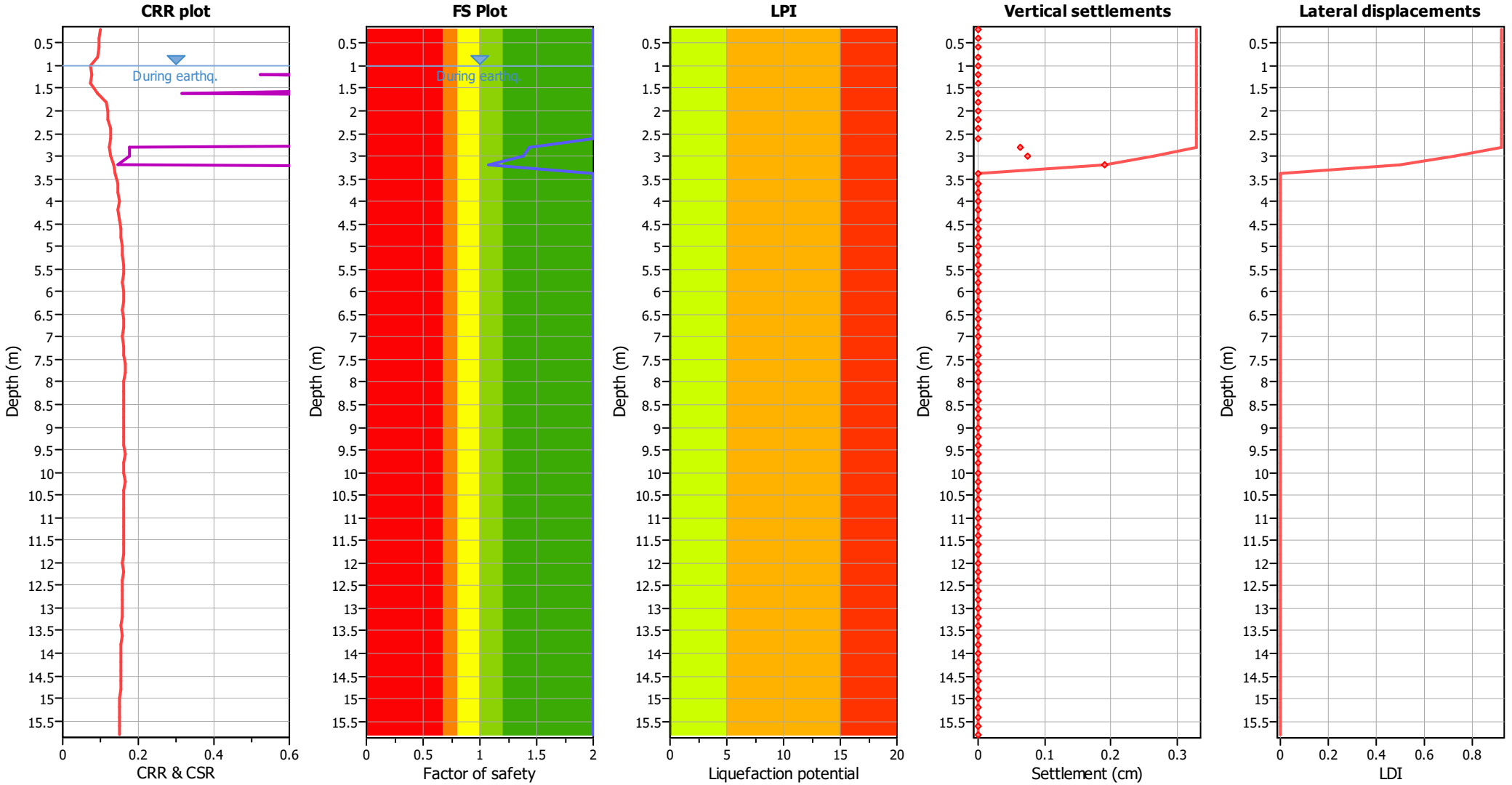
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	1.44	0.00	8.60	0.20	0.00
3.00	1.38	0.00	8.50	0.20	0.00	3.20	1.07	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	2.00	0.00	8.20	0.20	0.00
3.80	2.00	0.00	8.10	0.20	0.00	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00	15.20	2.00	0.00	2.40	0.20	0.00
15.40	2.00	0.00	2.30	0.20	0.00	15.60	2.00	0.00	2.20	0.20	0.00
15.80	2.00	0.00	2.10	0.20	0.00						

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI

Overall liquefaction potential: 0.00

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	158.21	2.00	0.00	1.00	0.00	1.20	171.01	2.00	0.00	1.00	0.00
1.40	199.61	2.00	0.00	1.00	0.00	1.60	153.50	2.00	0.00	1.00	0.00
1.80	43.43	2.00	0.00	1.00	0.00	2.00	41.37	2.00	0.00	1.00	0.00
2.20	48.94	2.00	0.00	1.00	0.00	2.40	45.32	2.00	0.00	1.00	0.00
2.60	49.80	2.00	0.00	1.00	0.00	2.80	123.16	1.44	0.32	1.00	0.06
3.00	121.66	1.38	0.37	1.00	0.07	3.20	105.48	1.07	0.95	1.00	0.19
3.40	36.51	2.00	0.00	1.00	0.00	3.60	29.49	2.00	0.00	1.00	0.00
3.80	27.71	2.00	0.00	1.00	0.00	4.00	24.76	2.00	0.00	1.00	0.00
4.20	33.27	2.00	0.00	1.00	0.00	4.40	29.14	2.00	0.00	1.00	0.00
4.60	25.07	2.00	0.00	1.00	0.00	4.80	25.92	2.00	0.00	1.00	0.00
5.00	21.96	2.00	0.00	1.00	0.00	5.20	20.63	2.00	0.00	1.00	0.00
5.40	17.99	2.00	0.00	1.00	0.00	5.60	22.41	2.00	0.00	1.00	0.00
5.80	24.41	2.00	0.00	1.00	0.00	6.00	19.55	2.00	0.00	1.00	0.00
6.20	22.84	2.00	0.00	1.00	0.00	6.40	32.48	2.00	0.00	1.00	0.00
6.60	24.49	2.00	0.00	1.00	0.00	6.80	27.44	2.00	0.00	1.00	0.00
7.00	31.41	2.00	0.00	1.00	0.00	7.20	28.05	2.00	0.00	1.00	0.00
7.40	22.48	2.00	0.00	1.00	0.00	7.60	18.06	2.00	0.00	1.00	0.00
7.80	19.94	2.00	0.00	1.00	0.00	8.00	23.83	2.00	0.00	1.00	0.00
8.20	25.75	2.00	0.00	1.00	0.00	8.40	22.46	2.00	0.00	1.00	0.00
8.60	27.21	2.00	0.00	1.00	0.00	8.80	23.98	2.00	0.00	1.00	0.00
9.00	22.76	2.00	0.00	1.00	0.00	9.20	22.68	2.00	0.00	1.00	0.00
9.40	16.69	2.00	0.00	1.00	0.00	9.60	14.64	2.00	0.00	1.00	0.00
9.80	16.41	2.00	0.00	1.00	0.00	10.00	21.93	2.00	0.00	1.00	0.00
10.20	10.68	2.00	0.00	1.00	0.00	10.40	13.37	2.00	0.00	1.00	0.00
10.60	12.34	2.00	0.00	1.00	0.00	10.80	12.24	2.00	0.00	1.00	0.00
11.00	12.15	2.00	0.00	1.00	0.00	11.20	12.18	2.00	0.00	1.00	0.00
11.40	12.09	2.00	0.00	1.00	0.00	11.60	10.23	2.00	0.00	1.00	0.00
11.80	13.68	2.00	0.00	1.00	0.00	12.00	14.46	2.00	0.00	1.00	0.00
12.20	11.86	2.00	0.00	1.00	0.00	12.40	10.91	2.00	0.00	1.00	0.00
12.60	12.55	2.00	0.00	1.00	0.00	12.80	13.31	2.00	0.00	1.00	0.00
13.00	13.22	2.00	0.00	1.00	0.00	13.20	11.55	2.00	0.00	1.00	0.00
13.40	14.82	2.00	0.00	1.00	0.00	13.60	11.39	2.00	0.00	1.00	0.00
13.80	9.67	2.00	0.00	1.00	0.00	14.00	12.06	2.00	0.00	1.00	0.00
14.20	12.91	2.00	0.00	1.00	0.00	14.40	12.83	2.00	0.00	1.00	0.00
14.60	11.93	2.00	0.00	1.00	0.00	14.80	12.66	2.00	0.00	1.00	0.00
15.00	14.18	2.00	0.00	1.00	0.00	15.20	9.45	2.00	0.00	1.00	0.00
15.40	20.51	2.00	0.00	1.00	0.00	15.60	10.89	2.00	0.00	1.00	0.00
15.80	10.84	2.00	0.00	1.00	0.00						

Total estimated settlement: 0.33

Abbreviations

$Q_{tn,cs}$: Equivalent clean sand normalized cone resistance
FS: Factor of safety against liquefaction
e_v (%): Post-liquefaction volumentric strain
DF: e_v depth weighting factor
Settlement: Calculated settlement

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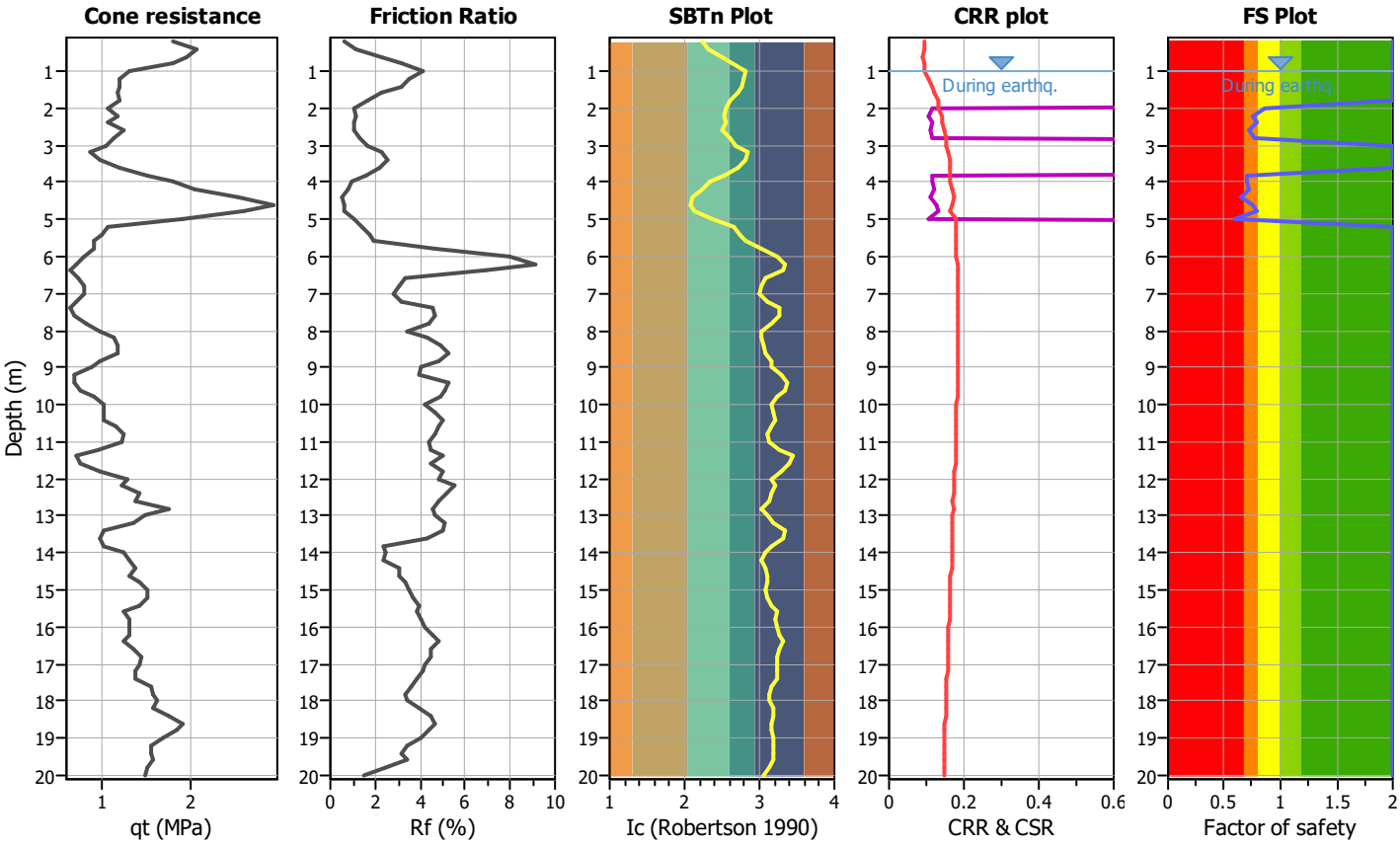
LIQUEFACTION ANALYSIS REPORT

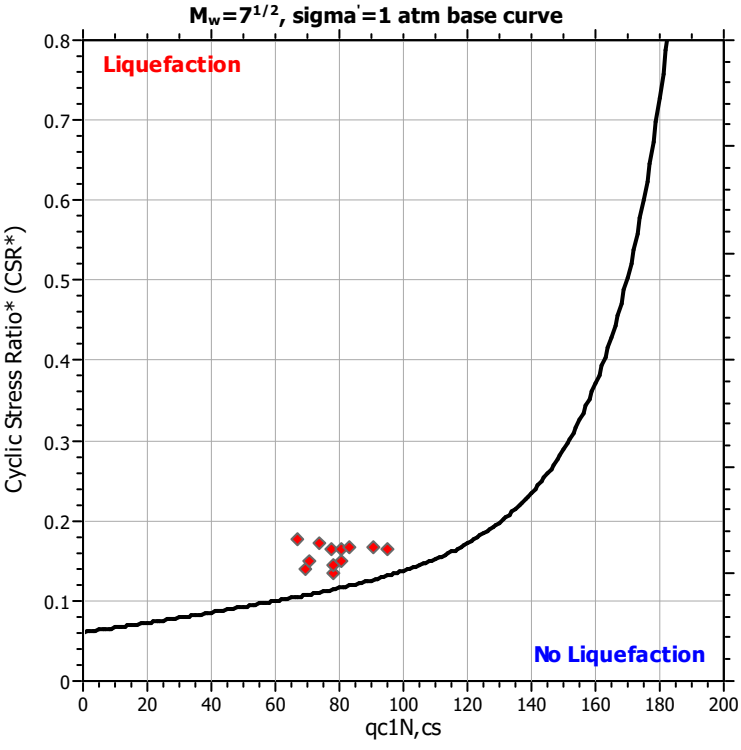
Project title : **Location :**

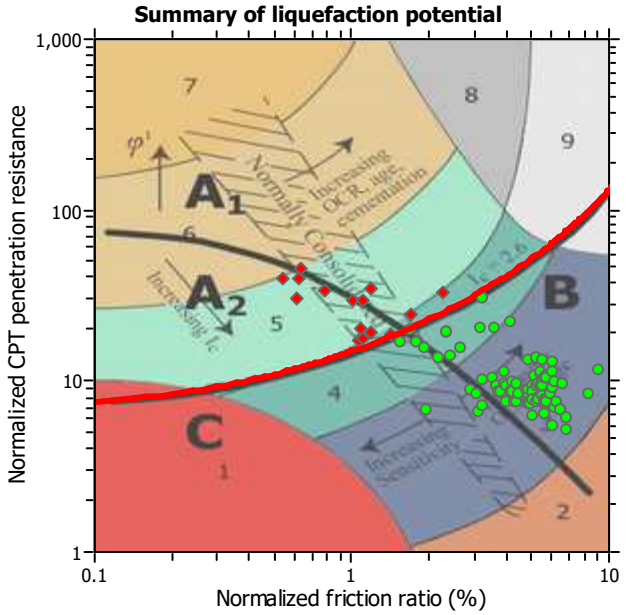
CPT file : CPT252

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

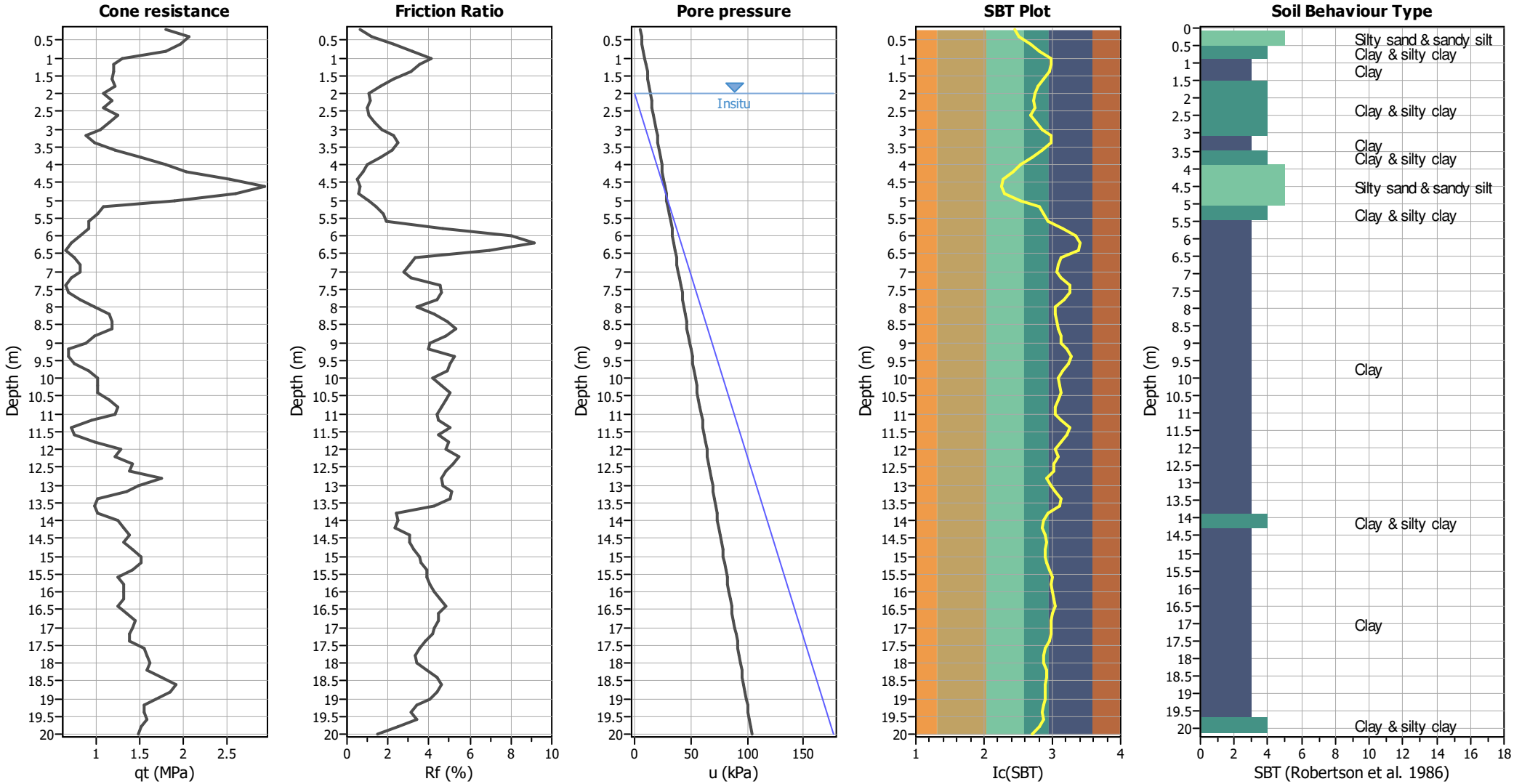






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



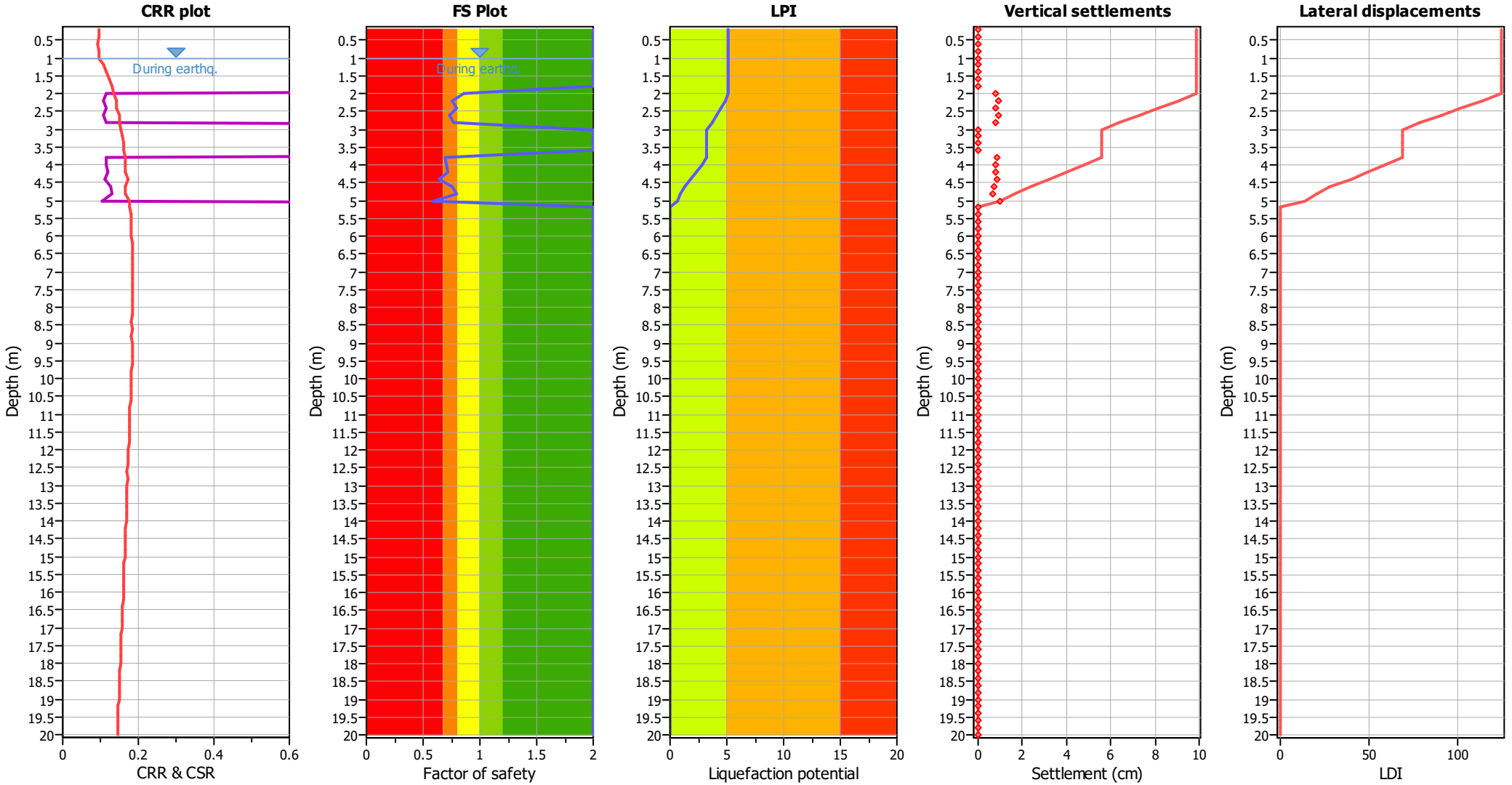
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	0.85	0.15	9.00	0.20	0.26
2.20	0.76	0.24	8.90	0.20	0.43	2.40	0.80	0.20	8.80	0.20	0.36
2.60	0.73	0.27	8.70	0.20	0.48	2.80	0.78	0.22	8.60	0.20	0.39
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	2.00	0.00	8.20	0.20	0.00
3.80	0.69	0.31	8.10	0.20	0.50	4.00	0.70	0.30	8.00	0.20	0.47
4.20	0.72	0.28	7.90	0.20	0.45	4.40	0.64	0.36	7.80	0.20	0.56
4.60	0.76	0.24	7.70	0.20	0.37	4.80	0.79	0.21	7.60	0.20	0.31
5.00	0.59	0.41	7.50	0.20	0.62	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00	15.20	2.00	0.00	2.40	0.20	0.00
15.40	2.00	0.00	2.30	0.20	0.00	15.60	2.00	0.00	2.20	0.20	0.00
15.80	2.00	0.00	2.10	0.20	0.00	16.00	2.00	0.00	2.00	0.20	0.00
16.20	2.00	0.00	1.90	0.20	0.00	16.40	2.00	0.00	1.80	0.20	0.00
16.60	2.00	0.00	1.70	0.20	0.00	16.80	2.00	0.00	1.60	0.20	0.00
17.00	2.00	0.00	1.50	0.20	0.00	17.20	2.00	0.00	1.40	0.20	0.00
17.40	2.00	0.00	1.30	0.20	0.00	17.60	2.00	0.00	1.20	0.20	0.00
17.80	2.00	0.00	1.10	0.20	0.00	18.00	2.00	0.00	1.00	0.20	0.00
18.20	2.00	0.00	0.90	0.20	0.00	18.40	2.00	0.00	0.80	0.20	0.00
18.60	2.00	0.00	0.70	0.20	0.00	18.80	2.00	0.00	0.60	0.20	0.00
19.00	2.00	0.00	0.50	0.20	0.00	19.20	2.00	0.00	0.40	0.20	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
19.40	2.00	0.00	0.30	0.20	0.00	19.60	2.00	0.00	0.20	0.20	0.00
19.80	2.00	0.00	0.10	0.20	0.00	20.00	2.00	0.00	0.00	0.20	0.00

Overall liquefaction potential: 5.18

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	21.81	2.00	0.00	1.00	0.00	1.20	18.46	2.00	0.00	1.00	0.00
1.40	20.13	2.00	0.00	1.00	0.00	1.60	21.81	2.00	0.00	1.00	0.00
1.80	16.78	2.00	0.00	1.00	0.00	2.00	78.31	0.85	4.09	1.00	0.82
2.20	69.38	0.76	4.59	1.00	0.92	2.40	78.26	0.80	4.09	1.00	0.82
2.60	70.92	0.73	4.49	1.00	0.90	2.80	80.72	0.78	3.97	1.00	0.79
3.00	16.62	2.00	0.00	1.00	0.00	3.20	11.58	2.00	0.00	1.00	0.00
3.40	14.48	2.00	0.00	1.00	0.00	3.60	20.24	2.00	0.00	1.00	0.00
3.80	77.50	0.69	4.13	1.00	0.83	4.00	80.40	0.70	3.99	1.00	0.80
4.20	83.34	0.72	3.85	1.00	0.77	4.40	73.59	0.64	4.34	1.00	0.87
4.60	90.85	0.76	3.54	1.00	0.71	4.80	95.20	0.79	3.38	1.00	0.68
5.00	66.60	0.59	4.76	1.00	0.95	5.20	16.72	2.00	0.00	1.00	0.00
5.40	12.47	2.00	0.00	1.00	0.00	5.60	12.30	2.00	0.00	1.00	0.00
5.80	12.10	2.00	0.00	1.00	0.00	6.00	11.93	2.00	0.00	1.00	0.00
6.20	7.90	2.00	0.00	1.00	0.00	6.40	7.79	2.00	0.00	1.00	0.00
6.60	8.96	2.00	0.00	1.00	0.00	6.80	11.33	2.00	0.00	1.00	0.00
7.00	9.98	2.00	0.00	1.00	0.00	7.20	8.65	2.00	0.00	1.00	0.00
7.40	7.34	2.00	0.00	1.00	0.00	7.60	7.26	2.00	0.00	1.00	0.00
7.80	9.54	2.00	0.00	1.00	0.00	8.00	11.76	2.00	0.00	1.00	0.00
8.20	12.77	2.00	0.00	1.00	0.00	8.40	14.88	2.00	0.00	1.00	0.00
8.60	12.48	2.00	0.00	1.00	0.00	8.80	12.34	2.00	0.00	1.00	0.00
9.00	7.80	2.00	0.00	1.00	0.00	9.20	8.83	2.00	0.00	1.00	0.00
9.40	5.48	2.00	0.00	1.00	0.00	9.60	7.58	2.00	0.00	1.00	0.00
9.80	10.70	2.00	0.00	1.00	0.00	10.00	10.59	2.00	0.00	1.00	0.00
10.20	10.49	2.00	0.00	1.00	0.00	10.40	10.39	2.00	0.00	1.00	0.00
10.60	10.29	2.00	0.00	1.00	0.00	10.80	14.26	2.00	0.00	1.00	0.00
11.00	13.12	2.00	0.00	1.00	0.00	11.20	9.01	2.00	0.00	1.00	0.00
11.40	5.96	2.00	0.00	1.00	0.00	11.60	5.91	2.00	0.00	1.00	0.00
11.80	9.76	2.00	0.00	1.00	0.00	12.00	12.58	2.00	0.00	1.00	0.00
12.20	14.39	2.00	0.00	1.00	0.00	12.40	7.59	2.00	0.00	1.00	0.00
12.60	17.94	2.00	0.00	1.00	0.00	12.80	13.08	2.00	0.00	1.00	0.00
13.00	17.64	2.00	0.00	1.00	0.00	13.20	10.10	2.00	0.00	1.00	0.00
13.40	9.10	2.00	0.00	1.00	0.00	13.60	8.13	2.00	0.00	1.00	0.00
13.80	8.97	2.00	0.00	1.00	0.00	14.00	9.81	2.00	0.00	1.00	0.00
14.20	14.21	2.00	0.00	1.00	0.00	14.40	10.55	2.00	0.00	1.00	0.00
14.60	11.36	2.00	0.00	1.00	0.00	14.80	12.16	2.00	0.00	1.00	0.00
15.00	12.94	2.00	0.00	1.00	0.00	15.20	13.72	2.00	0.00	1.00	0.00
15.40	11.90	2.00	0.00	1.00	0.00	15.60	10.11	2.00	0.00	1.00	0.00
15.80	9.20	2.00	0.00	1.00	0.00	16.00	13.35	2.00	0.00	1.00	0.00
16.20	9.90	2.00	0.00	1.00	0.00	16.40	9.01	2.00	0.00	1.00	0.00
16.60	11.42	2.00	0.00	1.00	0.00	16.80	12.17	2.00	0.00	1.00	0.00
17.00	11.27	2.00	0.00	1.00	0.00	17.20	10.39	2.00	0.00	1.00	0.00
17.40	11.13	2.00	0.00	1.00	0.00	17.60	11.06	2.00	0.00	1.00	0.00
17.80	14.20	2.00	0.00	1.00	0.00	18.00	11.72	2.00	0.00	1.00	0.00
18.20	11.65	2.00	0.00	1.00	0.00	18.40	13.15	2.00	0.00	1.00	0.00
18.60	15.43	2.00	0.00	1.00	0.00	18.80	15.33	2.00	0.00	1.00	0.00
19.00	11.36	2.00	0.00	1.00	0.00	19.20	11.29	2.00	0.00	1.00	0.00
19.40	11.99	2.00	0.00	1.00	0.00	19.60	11.16	2.00	0.00	1.00	0.00
19.80	11.86	2.00	0.00	1.00	0.00	20.00	10.30	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)

Total estimated settlement: 9.85

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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http://www.geologismiki.gr

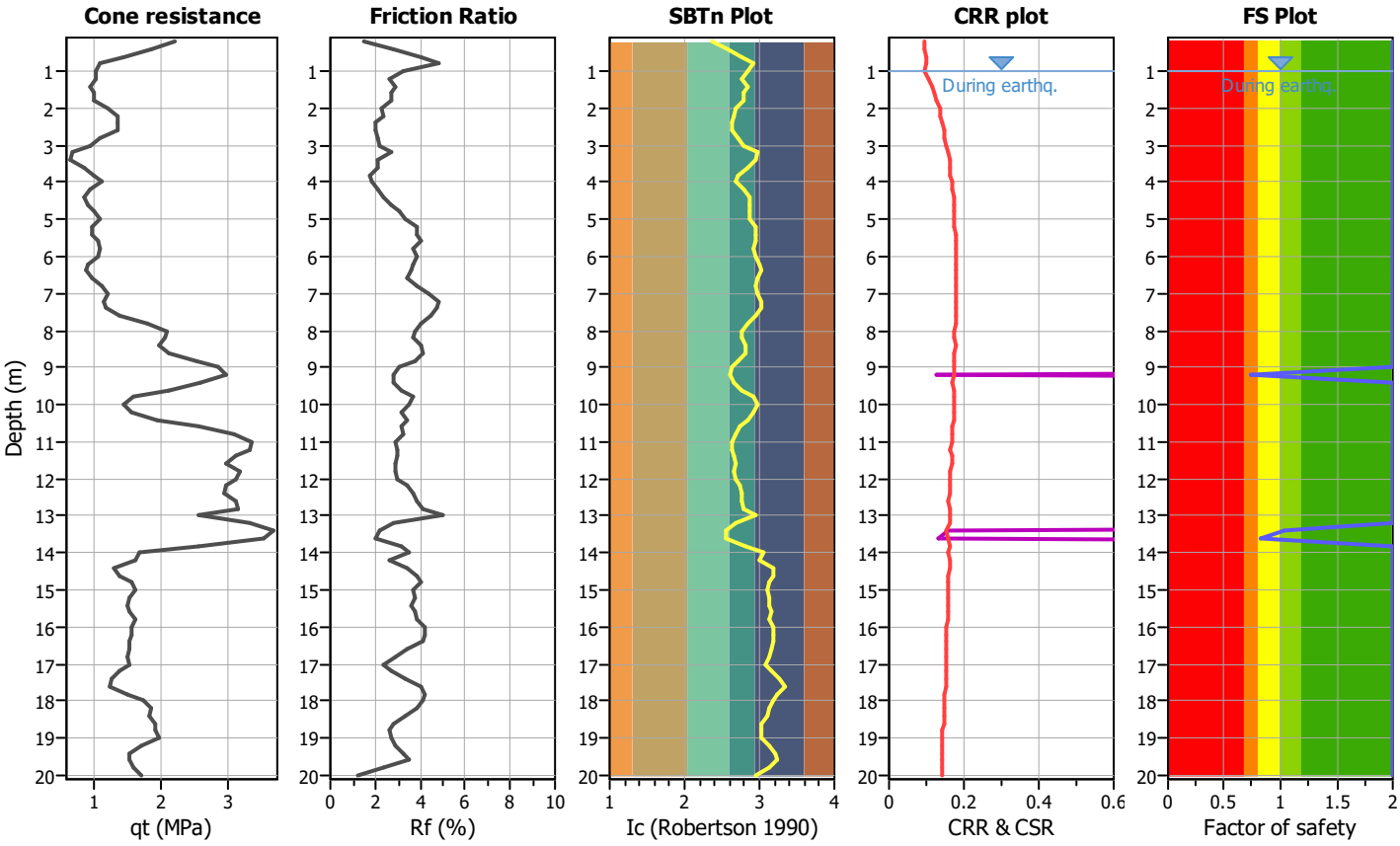
LIQUEFACTION ANALYSIS REPORT

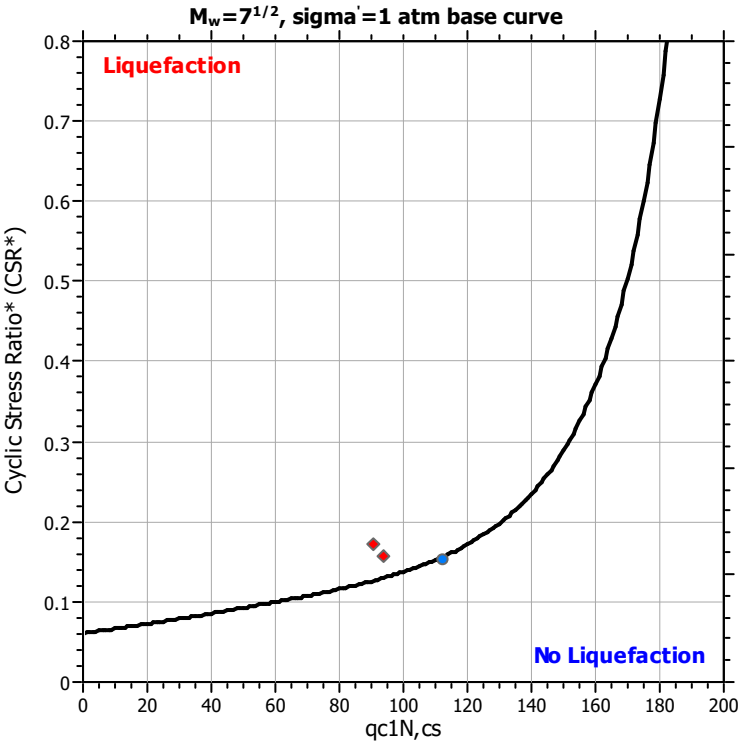
Project title : **Location :**

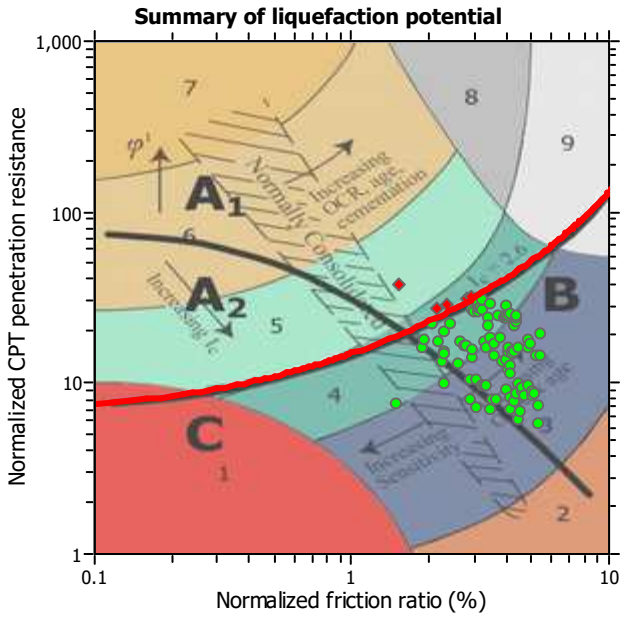
CPT file : CPT253

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

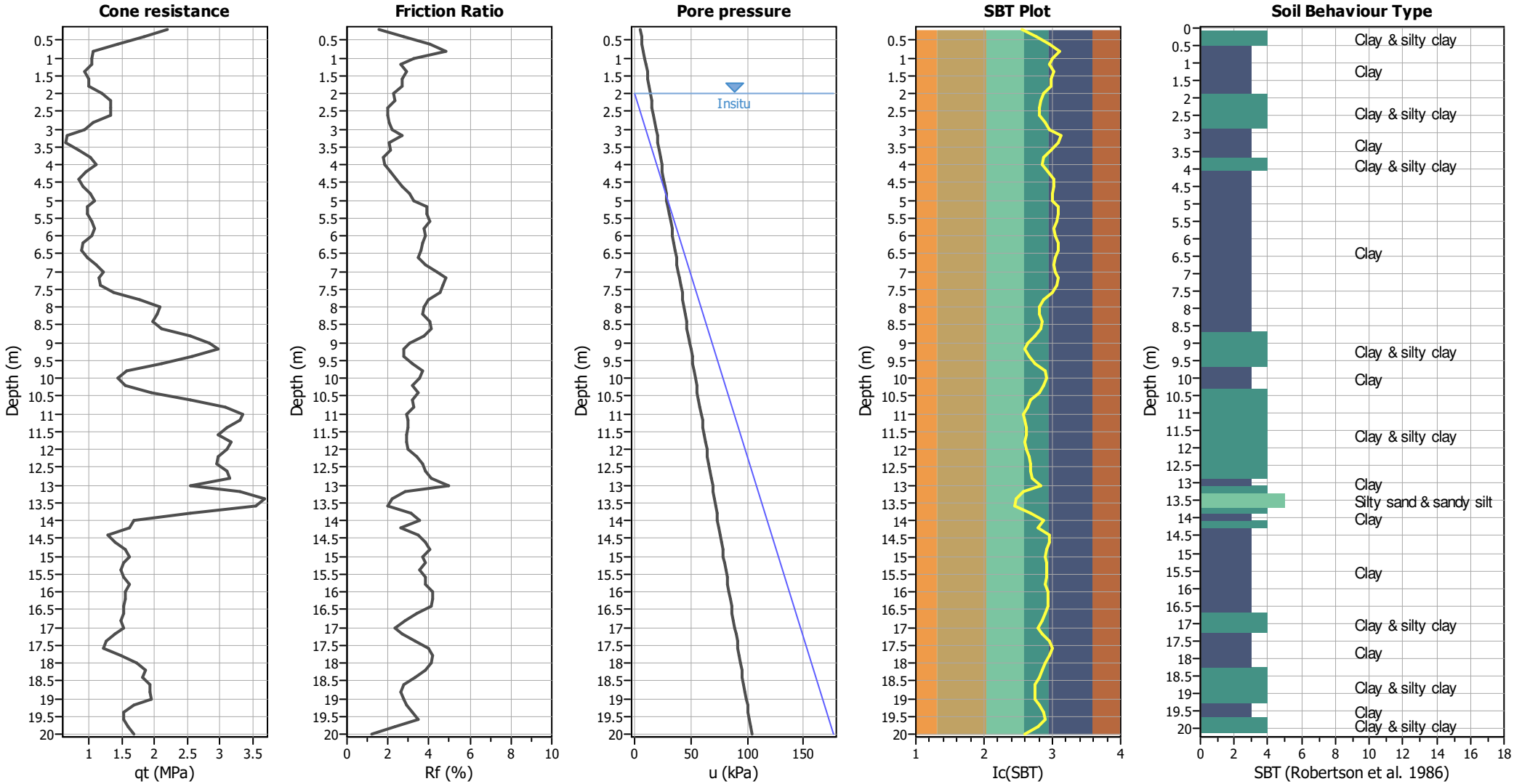






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



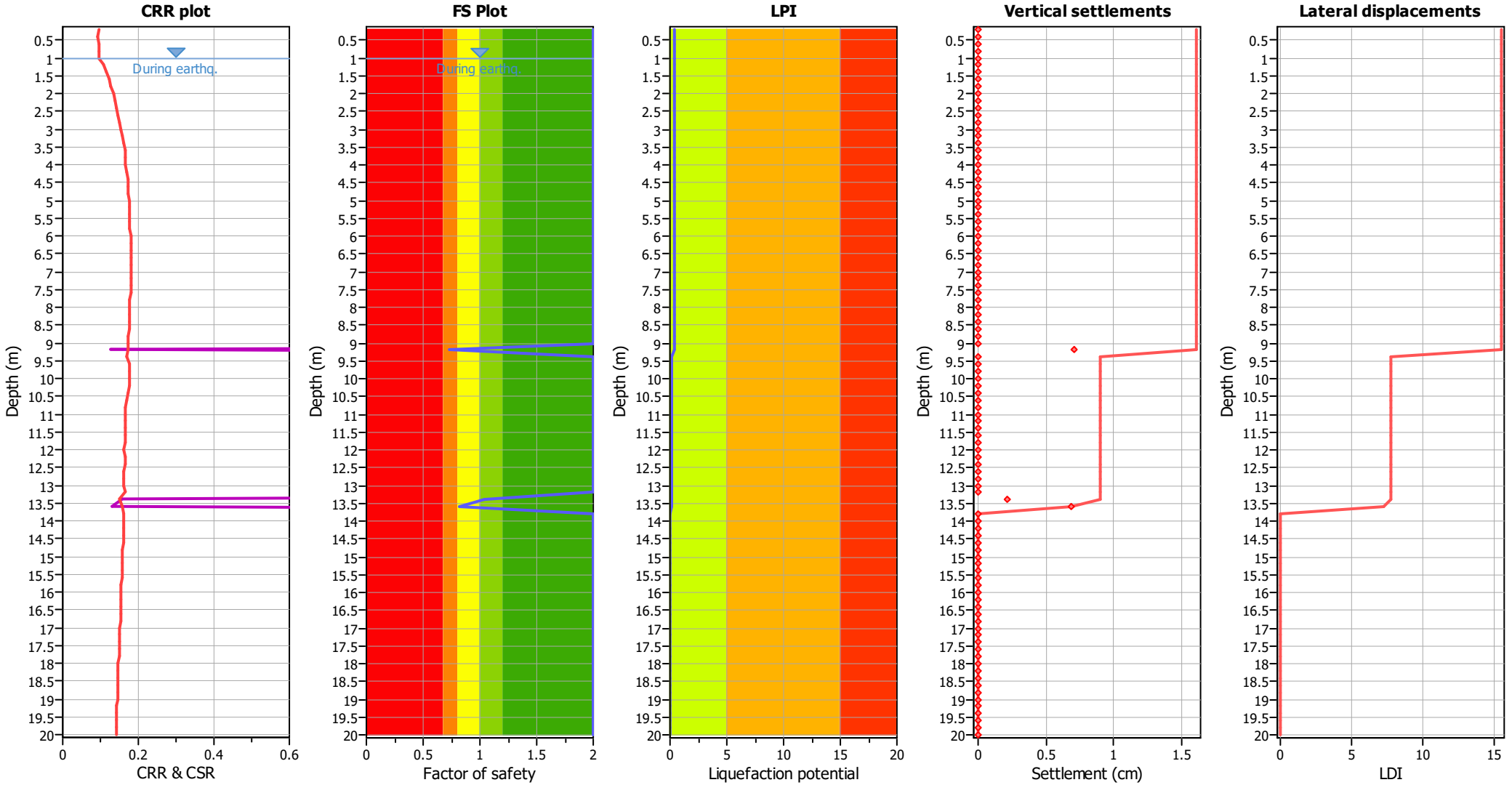
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	2.00	0.00	8.20	0.20	0.00
3.80	2.00	0.00	8.10	0.20	0.00	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	0.74	0.26	5.40	0.20	0.29
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	1.04	0.00	3.30	0.20	0.00	13.60	0.82	0.18	3.20	0.20	0.11
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00	15.20	2.00	0.00	2.40	0.20	0.00
15.40	2.00	0.00	2.30	0.20	0.00	15.60	2.00	0.00	2.20	0.20	0.00
15.80	2.00	0.00	2.10	0.20	0.00	16.00	2.00	0.00	2.00	0.20	0.00
16.20	2.00	0.00	1.90	0.20	0.00	16.40	2.00	0.00	1.80	0.20	0.00
16.60	2.00	0.00	1.70	0.20	0.00	16.80	2.00	0.00	1.60	0.20	0.00
17.00	2.00	0.00	1.50	0.20	0.00	17.20	2.00	0.00	1.40	0.20	0.00
17.40	2.00	0.00	1.30	0.20	0.00	17.60	2.00	0.00	1.20	0.20	0.00
17.80	2.00	0.00	1.10	0.20	0.00	18.00	2.00	0.00	1.00	0.20	0.00
18.20	2.00	0.00	0.90	0.20	0.00	18.40	2.00	0.00	0.80	0.20	0.00
18.60	2.00	0.00	0.70	0.20	0.00	18.80	2.00	0.00	0.60	0.20	0.00
19.00	2.00	0.00	0.50	0.20	0.00	19.20	2.00	0.00	0.40	0.20	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
19.40	2.00	0.00	0.30	0.20	0.00	19.60	2.00	0.00	0.20	0.20	0.00
19.80	2.00	0.00	0.10	0.20	0.00	20.00	2.00	0.00	0.00	0.20	0.00

Overall liquefaction potential: 0.40

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	18.46	2.00	0.00	1.00	0.00	1.20	16.78	2.00	0.00	1.00	0.00
1.40	16.78	2.00	0.00	1.00	0.00	1.60	13.42	2.00	0.00	1.00	0.00
1.80	20.13	2.00	0.00	1.00	0.00	2.00	16.78	2.00	0.00	1.00	0.00
2.20	23.49	2.00	0.00	1.00	0.00	2.40	26.84	2.00	0.00	1.00	0.00
2.60	16.78	2.00	0.00	1.00	0.00	2.80	22.88	2.00	0.00	1.00	0.00
3.00	13.22	2.00	0.00	1.00	0.00	3.20	9.82	2.00	0.00	1.00	0.00
3.40	9.68	2.00	0.00	1.00	0.00	3.60	11.07	2.00	0.00	1.00	0.00
3.80	18.32	2.00	0.00	1.00	0.00	4.00	16.62	2.00	0.00	1.00	0.00
4.20	14.91	2.00	0.00	1.00	0.00	4.40	10.40	2.00	0.00	1.00	0.00
4.60	11.66	2.00	0.00	1.00	0.00	4.80	17.00	2.00	0.00	1.00	0.00
5.00	14.04	2.00	0.00	1.00	0.00	5.20	13.83	2.00	0.00	1.00	0.00
5.40	12.30	2.00	0.00	1.00	0.00	5.60	13.44	2.00	0.00	1.00	0.00
5.80	15.83	2.00	0.00	1.00	0.00	6.00	13.07	2.00	0.00	1.00	0.00
6.20	11.64	2.00	0.00	1.00	0.00	6.40	10.24	2.00	0.00	1.00	0.00
6.60	11.35	2.00	0.00	1.00	0.00	6.80	14.87	2.00	0.00	1.00	0.00
7.00	14.68	2.00	0.00	1.00	0.00	7.20	14.50	2.00	0.00	1.00	0.00
7.40	11.97	2.00	0.00	1.00	0.00	7.60	15.31	2.00	0.00	1.00	0.00
7.80	20.83	2.00	0.00	1.00	0.00	8.00	25.07	2.00	0.00	1.00	0.00
8.20	24.79	2.00	0.00	1.00	0.00	8.40	19.02	2.00	0.00	1.00	0.00
8.60	22.07	2.00	0.00	1.00	0.00	8.80	28.27	2.00	0.00	1.00	0.00
9.00	32.22	2.00	0.00	1.00	0.00	9.20	90.53	0.74	3.55	1.00	0.71
9.40	31.58	2.00	0.00	1.00	0.00	9.60	18.85	2.00	0.00	1.00	0.00
9.80	15.57	2.00	0.00	1.00	0.00	10.00	14.40	2.00	0.00	1.00	0.00
10.20	14.26	2.00	0.00	1.00	0.00	10.40	18.15	2.00	0.00	1.00	0.00
10.60	25.95	2.00	0.00	1.00	0.00	10.80	31.64	2.00	0.00	1.00	0.00
11.00	33.32	2.00	0.00	1.00	0.00	11.20	33.03	2.00	0.00	1.00	0.00
11.40	29.84	2.00	0.00	1.00	0.00	11.60	26.71	2.00	0.00	1.00	0.00
11.80	28.39	2.00	0.00	1.00	0.00	12.00	34.78	2.00	0.00	1.00	0.00
12.20	24.16	2.00	0.00	1.00	0.00	12.40	23.96	2.00	0.00	1.00	0.00
12.60	33.03	2.00	0.00	1.00	0.00	12.80	28.15	2.00	0.00	1.00	0.00
13.00	24.29	2.00	0.00	1.00	0.00	13.20	15.96	2.00	0.00	1.00	0.00
13.40	112.78	1.04	1.06	1.00	0.21	13.60	93.55	0.82	3.44	1.00	0.69
13.80	12.10	2.00	0.00	1.00	0.00	14.00	20.76	2.00	0.00	1.00	0.00
14.20	10.21	2.00	0.00	1.00	0.00	14.40	10.14	2.00	0.00	1.00	0.00
14.60	11.77	2.00	0.00	1.00	0.00	14.80	12.54	2.00	0.00	1.00	0.00
15.00	14.14	2.00	0.00	1.00	0.00	15.20	13.21	2.00	0.00	1.00	0.00
15.40	9.80	2.00	0.00	1.00	0.00	15.60	13.03	2.00	0.00	1.00	0.00
15.80	13.77	2.00	0.00	1.00	0.00	16.00	12.05	2.00	0.00	1.00	0.00
16.20	11.16	2.00	0.00	1.00	0.00	16.40	13.51	2.00	0.00	1.00	0.00
16.60	11.02	2.00	0.00	1.00	0.00	16.80	10.95	2.00	0.00	1.00	0.00
17.00	12.47	2.00	0.00	1.00	0.00	17.20	11.61	2.00	0.00	1.00	0.00
17.40	7.65	2.00	0.00	1.00	0.00	17.60	9.15	2.00	0.00	1.00	0.00
17.80	10.64	2.00	0.00	1.00	0.00	18.00	13.67	2.00	0.00	1.00	0.00
18.20	14.36	2.00	0.00	1.00	0.00	18.40	13.51	2.00	0.00	1.00	0.00
18.60	12.67	2.00	0.00	1.00	0.00	18.80	16.41	2.00	0.00	1.00	0.00
19.00	13.28	2.00	0.00	1.00	0.00	19.20	13.21	2.00	0.00	1.00	0.00
19.40	10.16	2.00	0.00	1.00	0.00	19.60	9.37	2.00	0.00	1.00	0.00
19.80	13.00	2.00	0.00	1.00	0.00	20.00	11.47	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)

Total estimated settlement: 1.61

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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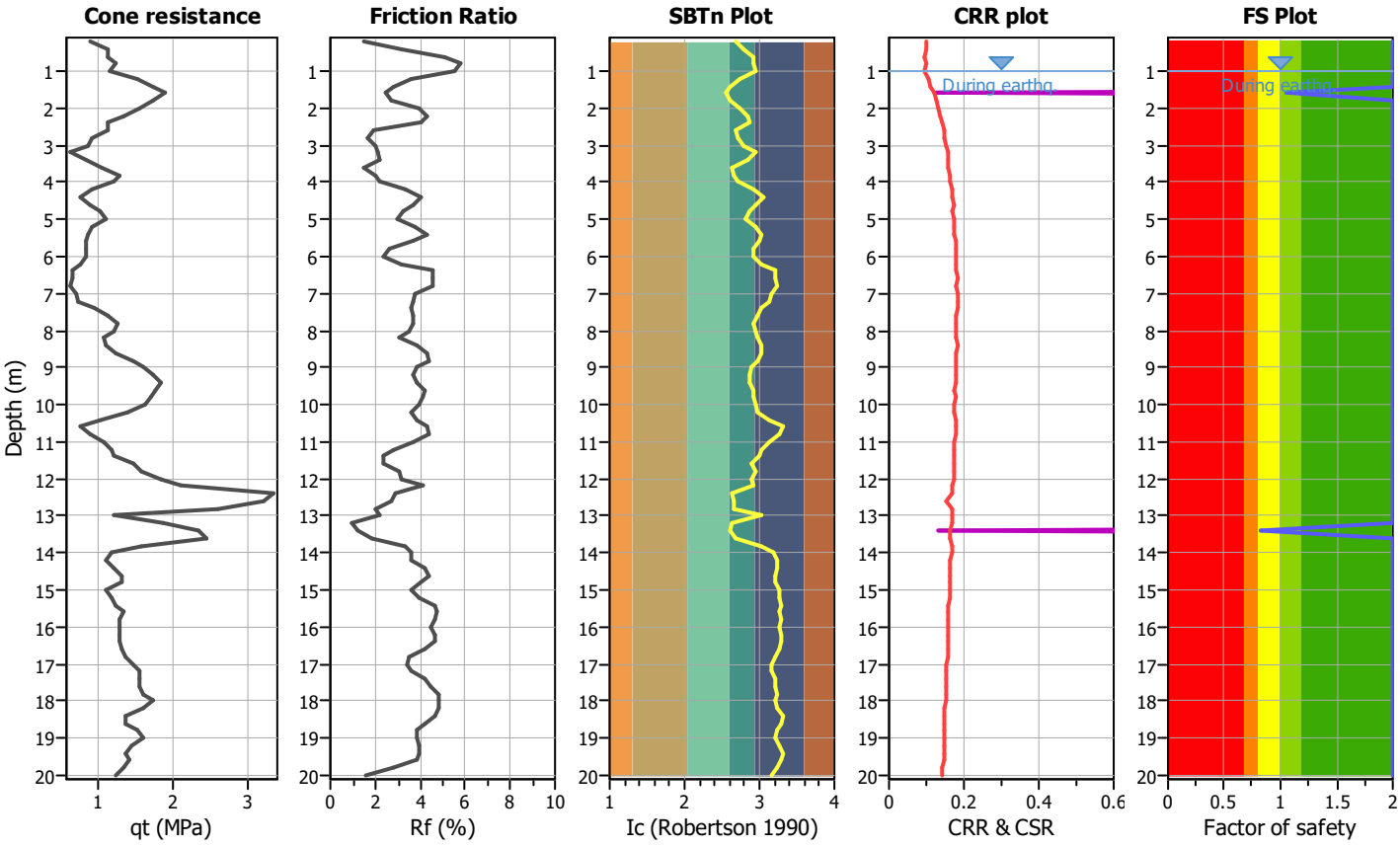
LIQUEFACTION ANALYSIS REPORT

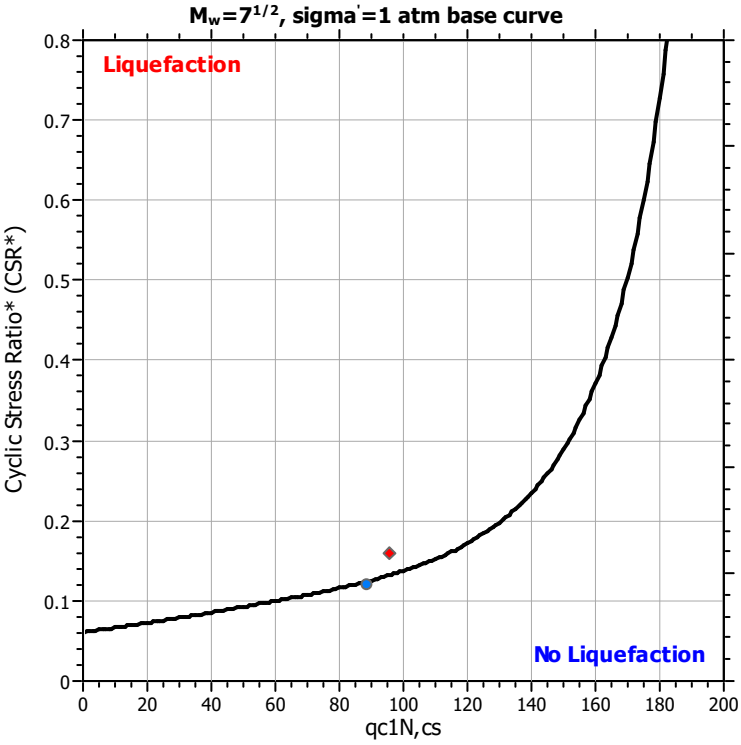
Project title : **Location :**

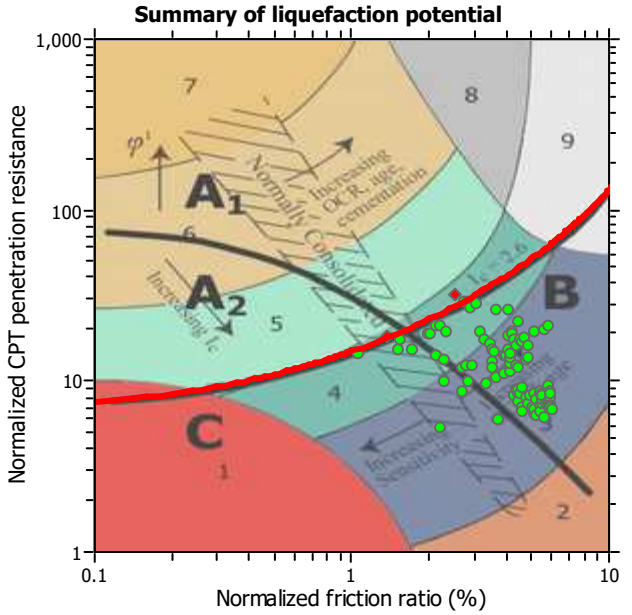
CPT file : CPT254

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

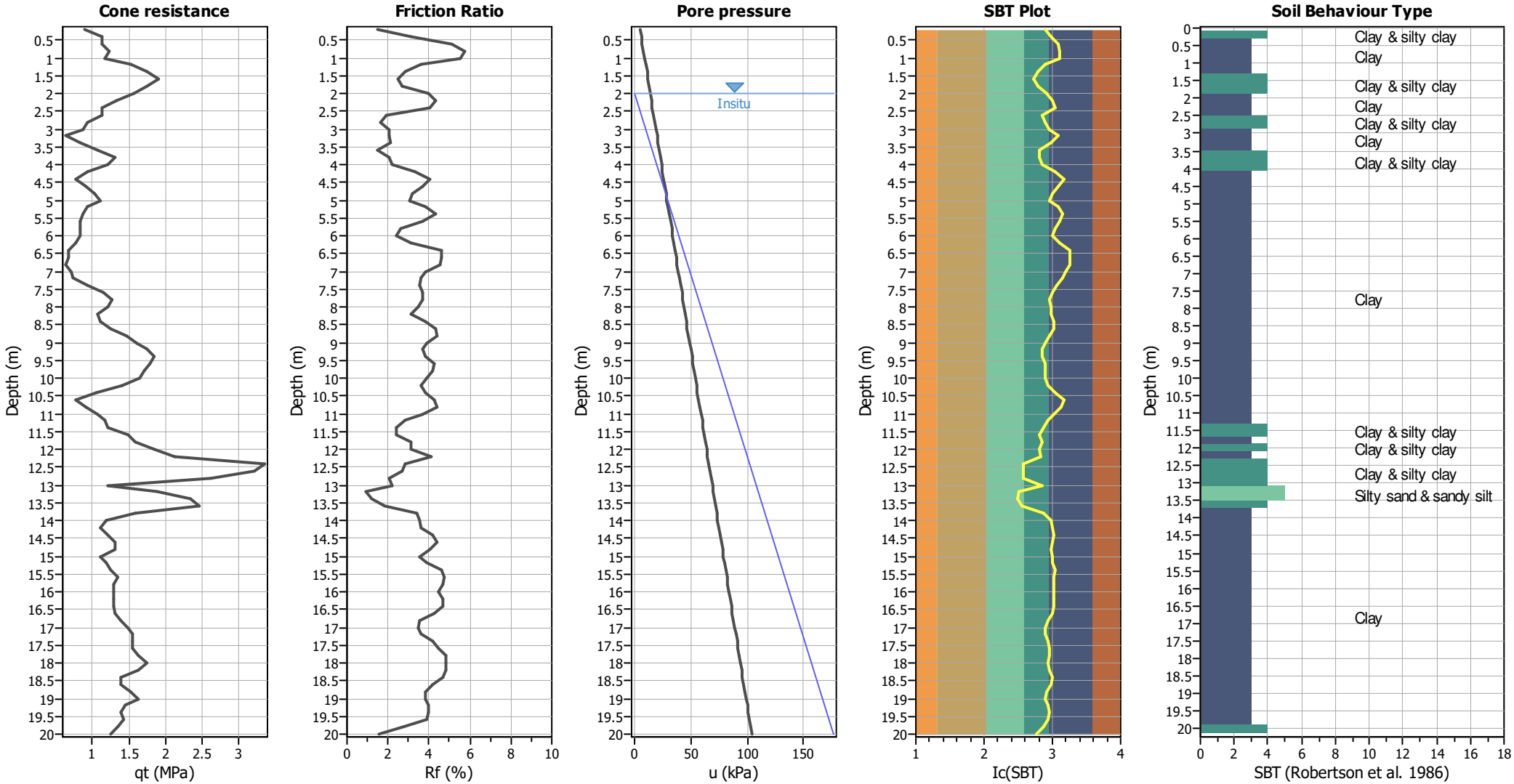






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



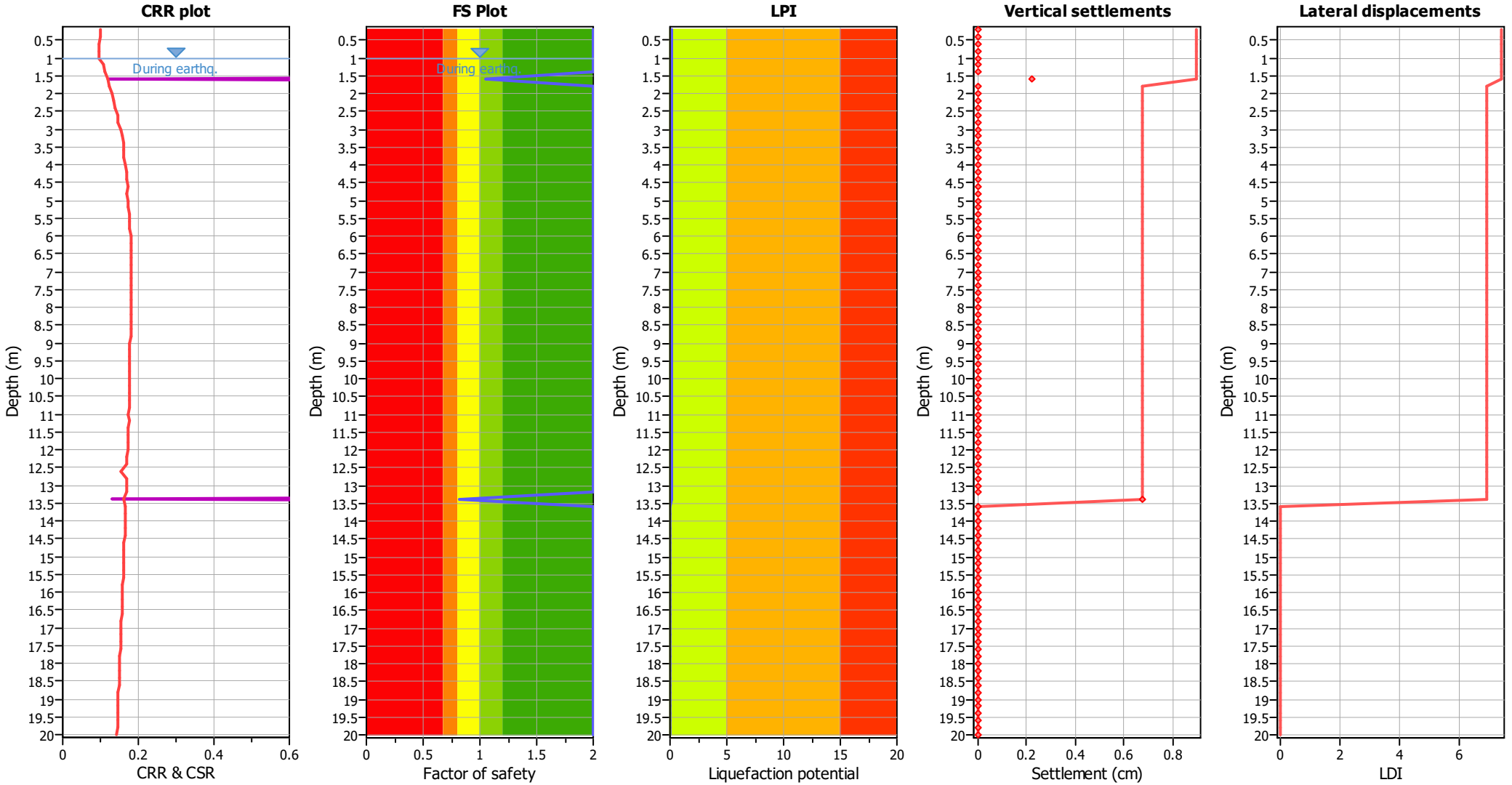
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	1.04	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	2.00	0.00	8.20	0.20	0.00
3.80	2.00	0.00	8.10	0.20	0.00	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	0.82	0.18	3.30	0.20	0.12	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00	15.20	2.00	0.00	2.40	0.20	0.00
15.40	2.00	0.00	2.30	0.20	0.00	15.60	2.00	0.00	2.20	0.20	0.00
15.80	2.00	0.00	2.10	0.20	0.00	16.00	2.00	0.00	2.00	0.20	0.00
16.20	2.00	0.00	1.90	0.20	0.00	16.40	2.00	0.00	1.80	0.20	0.00
16.60	2.00	0.00	1.70	0.20	0.00	16.80	2.00	0.00	1.60	0.20	0.00
17.00	2.00	0.00	1.50	0.20	0.00	17.20	2.00	0.00	1.40	0.20	0.00
17.40	2.00	0.00	1.30	0.20	0.00	17.60	2.00	0.00	1.20	0.20	0.00
17.80	2.00	0.00	1.10	0.20	0.00	18.00	2.00	0.00	1.00	0.20	0.00
18.20	2.00	0.00	0.90	0.20	0.00	18.40	2.00	0.00	0.80	0.20	0.00
18.60	2.00	0.00	0.70	0.20	0.00	18.80	2.00	0.00	0.60	0.20	0.00
19.00	2.00	0.00	0.50	0.20	0.00	19.20	2.00	0.00	0.40	0.20	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
19.40	2.00	0.00	0.30	0.20	0.00	19.60	2.00	0.00	0.20	0.20	0.00
19.80	2.00	0.00	0.10	0.20	0.00	20.00	2.00	0.00	0.00	0.20	0.00

Overall liquefaction potential: 0.12

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	20.13	2.00	0.00	1.00	0.00	1.20	23.49	2.00	0.00	1.00	0.00
1.40	33.56	2.00	0.00	1.00	0.00	1.60	88.98	1.04	1.12	1.00	0.22
1.80	31.88	2.00	0.00	1.00	0.00	2.00	25.17	2.00	0.00	1.00	0.00
2.20	21.81	2.00	0.00	1.00	0.00	2.40	20.13	2.00	0.00	1.00	0.00
2.60	15.10	2.00	0.00	1.00	0.00	2.80	21.11	2.00	0.00	1.00	0.00
3.00	9.91	2.00	0.00	1.00	0.00	3.20	11.29	2.00	0.00	1.00	0.00
3.40	9.59	2.00	0.00	1.00	0.00	3.60	18.45	2.00	0.00	1.00	0.00
3.80	21.02	2.00	0.00	1.00	0.00	4.00	19.27	2.00	0.00	1.00	0.00
4.20	13.28	2.00	0.00	1.00	0.00	4.40	8.81	2.00	0.00	1.00	0.00
4.60	11.48	2.00	0.00	1.00	0.00	4.80	18.12	2.00	0.00	1.00	0.00
5.00	13.87	2.00	0.00	1.00	0.00	5.20	13.65	2.00	0.00	1.00	0.00
5.40	10.83	2.00	0.00	1.00	0.00	5.60	10.68	2.00	0.00	1.00	0.00
5.80	11.84	2.00	0.00	1.00	0.00	6.00	10.43	2.00	0.00	1.00	0.00
6.20	10.30	2.00	0.00	1.00	0.00	6.40	8.92	2.00	0.00	1.00	0.00
6.60	6.32	2.00	0.00	1.00	0.00	6.80	9.94	2.00	0.00	1.00	0.00
7.00	7.39	2.00	0.00	1.00	0.00	7.20	8.51	2.00	0.00	1.00	0.00
7.40	10.79	2.00	0.00	1.00	0.00	7.60	14.15	2.00	0.00	1.00	0.00
7.80	15.14	2.00	0.00	1.00	0.00	8.00	14.97	2.00	0.00	1.00	0.00
8.20	11.44	2.00	0.00	1.00	0.00	8.40	10.19	2.00	0.00	1.00	0.00
8.60	15.61	2.00	0.00	1.00	0.00	8.80	15.44	2.00	0.00	1.00	0.00
9.00	17.43	2.00	0.00	1.00	0.00	9.20	19.39	2.00	0.00	1.00	0.00
9.40	19.19	2.00	0.00	1.00	0.00	9.60	20.03	2.00	0.00	1.00	0.00
9.80	16.72	2.00	0.00	1.00	0.00	10.00	16.56	2.00	0.00	1.00	0.00
10.20	17.43	2.00	0.00	1.00	0.00	10.40	9.16	2.00	0.00	1.00	0.00
10.60	5.05	2.00	0.00	1.00	0.00	10.80	9.00	2.00	0.00	1.00	0.00
11.00	12.89	2.00	0.00	1.00	0.00	11.20	9.83	2.00	0.00	1.00	0.00
11.40	11.71	2.00	0.00	1.00	0.00	11.60	13.55	2.00	0.00	1.00	0.00
11.80	17.29	2.00	0.00	1.00	0.00	12.00	14.27	2.00	0.00	1.00	0.00
12.20	20.79	2.00	0.00	1.00	0.00	12.40	24.36	2.00	0.00	1.00	0.00
12.60	48.71	2.00	0.00	1.00	0.00	12.80	16.54	2.00	0.00	1.00	0.00
13.00	7.27	2.00	0.00	1.00	0.00	13.20	9.03	2.00	0.00	1.00	0.00
13.40	95.34	0.82	3.37	1.00	0.67	13.60	19.70	2.00	0.00	1.00	0.00
13.80	11.51	2.00	0.00	1.00	0.00	14.00	10.54	2.00	0.00	1.00	0.00
14.20	8.71	2.00	0.00	1.00	0.00	14.40	9.52	2.00	0.00	1.00	0.00
14.60	12.93	2.00	0.00	1.00	0.00	14.80	11.11	2.00	0.00	1.00	0.00
15.00	9.32	2.00	0.00	1.00	0.00	15.20	7.56	2.00	0.00	1.00	0.00
15.40	12.58	2.00	0.00	1.00	0.00	15.60	10.81	2.00	0.00	1.00	0.00
15.80	9.90	2.00	0.00	1.00	0.00	16.00	10.66	2.00	0.00	1.00	0.00
16.20	10.59	2.00	0.00	1.00	0.00	16.40	9.70	2.00	0.00	1.00	0.00
16.60	10.45	2.00	0.00	1.00	0.00	16.80	11.20	2.00	0.00	1.00	0.00
17.00	11.13	2.00	0.00	1.00	0.00	17.20	12.67	2.00	0.00	1.00	0.00
17.40	12.59	2.00	0.00	1.00	0.00	17.60	10.92	2.00	0.00	1.00	0.00
17.80	12.43	2.00	0.00	1.00	0.00	18.00	13.93	2.00	0.00	1.00	0.00
18.20	13.84	2.00	0.00	1.00	0.00	18.40	9.10	2.00	0.00	1.00	0.00
18.60	8.28	2.00	0.00	1.00	0.00	18.80	13.60	2.00	0.00	1.00	0.00
19.00	11.99	2.00	0.00	1.00	0.00	19.20	10.40	2.00	0.00	1.00	0.00
19.40	9.59	2.00	0.00	1.00	0.00	19.60	10.28	2.00	0.00	1.00	0.00
19.80	10.98	2.00	0.00	1.00	0.00	20.00	7.96	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)

Total estimated settlement: 0.90

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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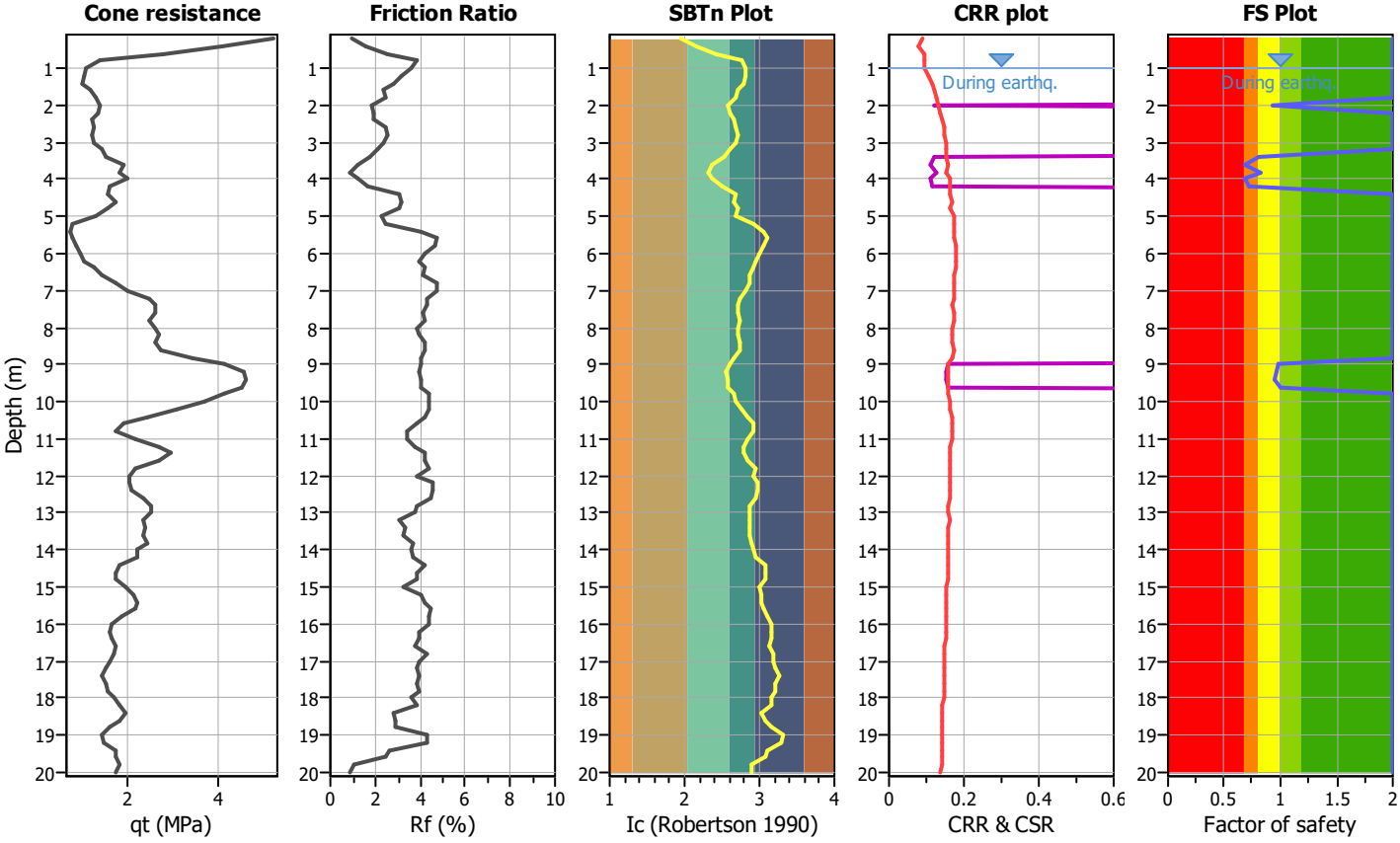
LIQUEFACTION ANALYSIS REPORT

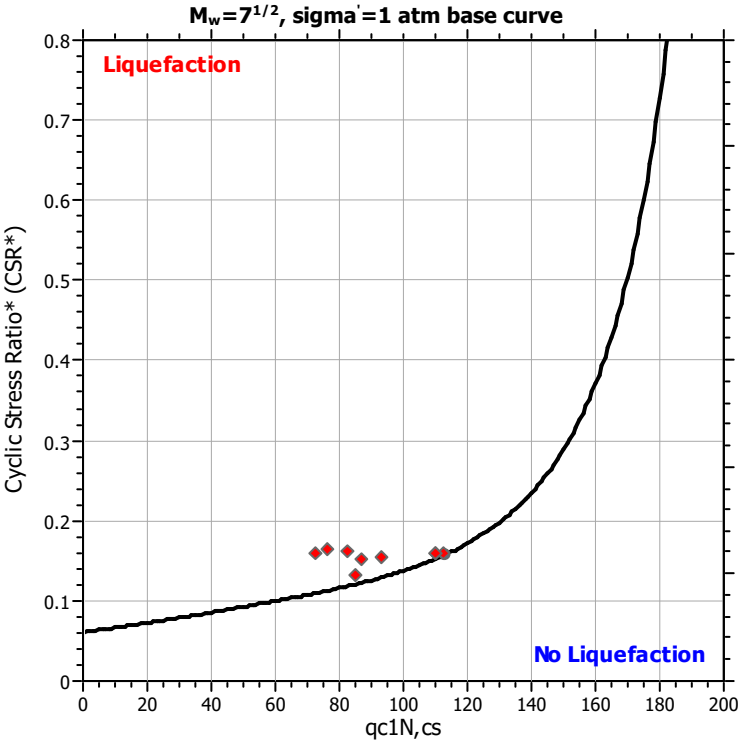
Project title : **Location :**

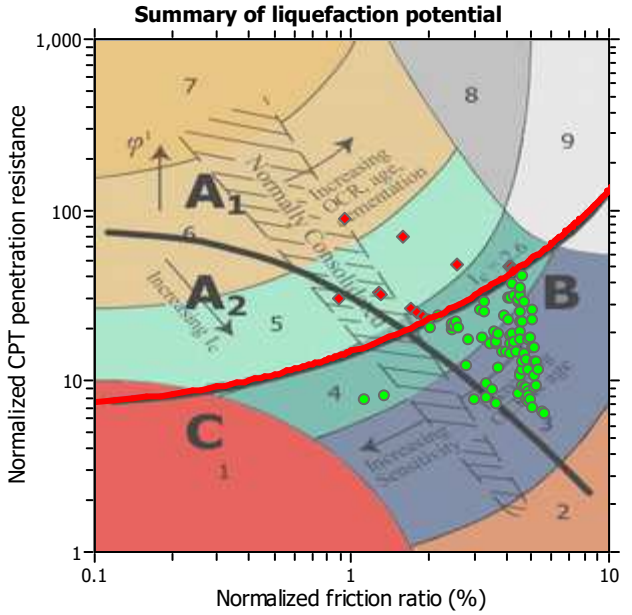
CPT file : CPT255

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

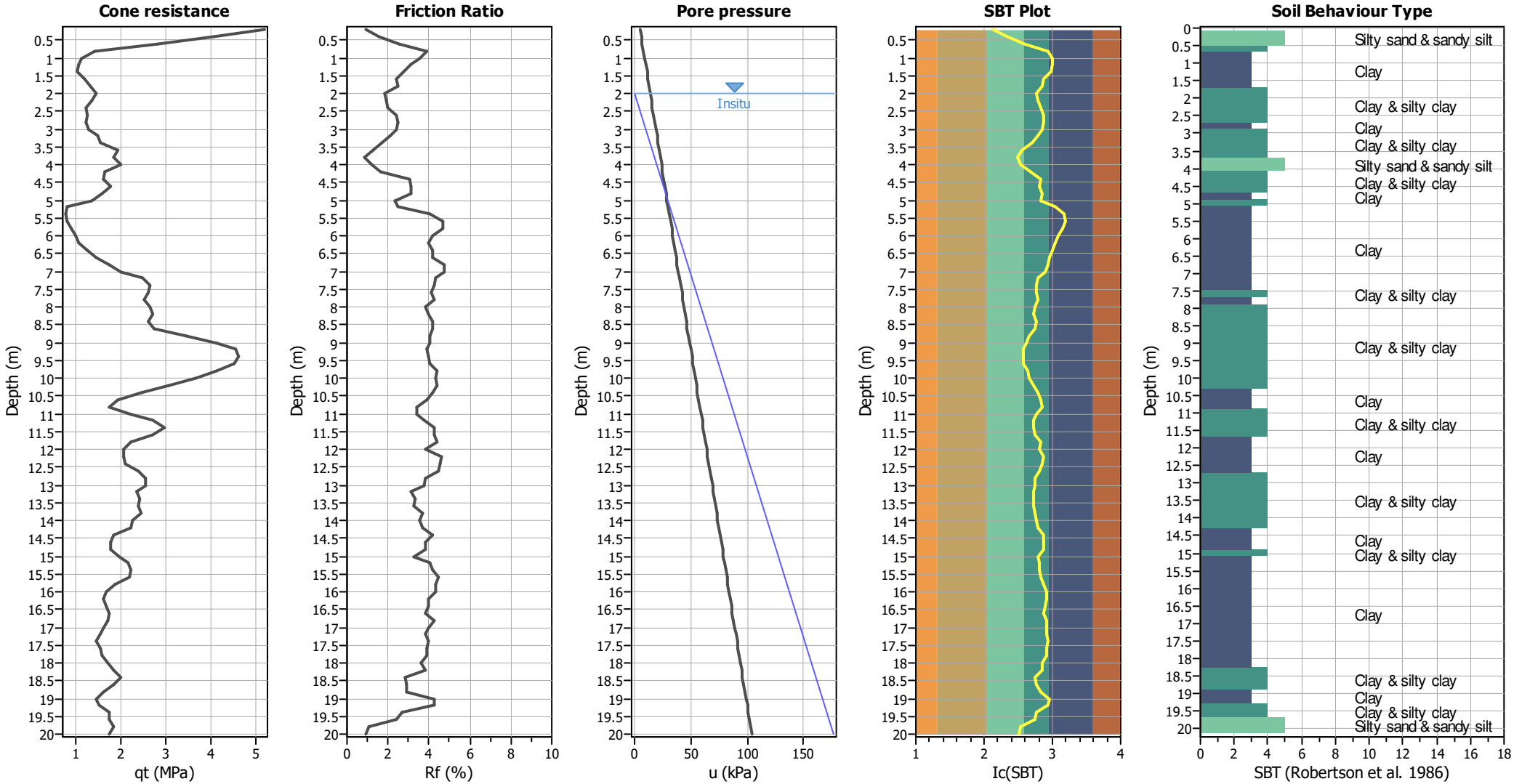






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



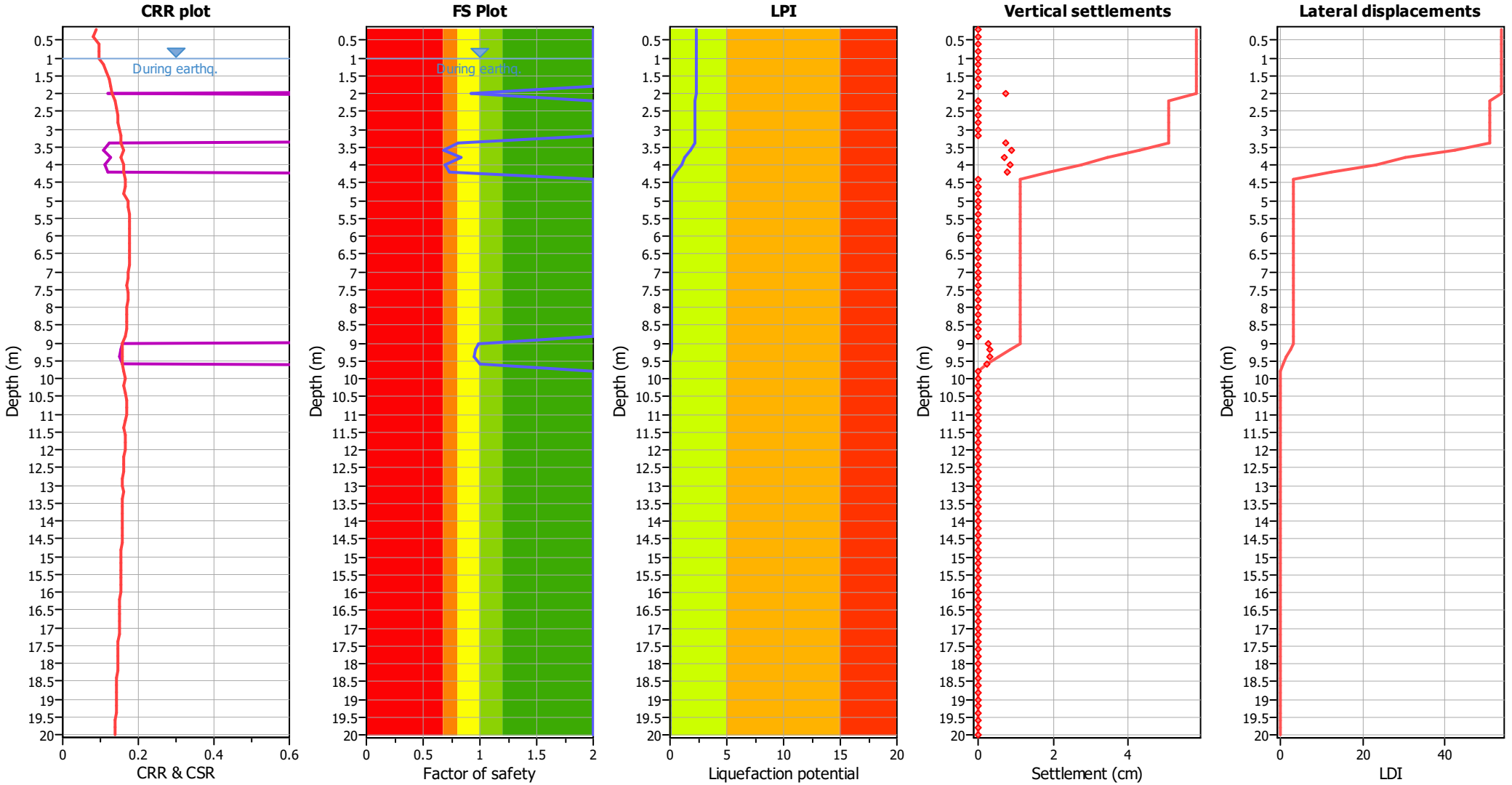
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	0.92	0.08	9.00	0.20	0.14
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	0.80	0.20	8.30	0.20	0.33	3.60	0.68	0.32	8.20	0.20	0.52
3.80	0.83	0.17	8.10	0.20	0.27	4.00	0.69	0.31	8.00	0.20	0.49
4.20	0.73	0.27	7.90	0.20	0.43	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	0.99	0.01	5.50	0.20	0.01	9.20	0.96	0.04	5.40	0.20	0.05
9.40	0.95	0.05	5.30	0.20	0.05	9.60	1.01	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00	15.20	2.00	0.00	2.40	0.20	0.00
15.40	2.00	0.00	2.30	0.20	0.00	15.60	2.00	0.00	2.20	0.20	0.00
15.80	2.00	0.00	2.10	0.20	0.00	16.00	2.00	0.00	2.00	0.20	0.00
16.20	2.00	0.00	1.90	0.20	0.00	16.40	2.00	0.00	1.80	0.20	0.00
16.60	2.00	0.00	1.70	0.20	0.00	16.80	2.00	0.00	1.60	0.20	0.00
17.00	2.00	0.00	1.50	0.20	0.00	17.20	2.00	0.00	1.40	0.20	0.00
17.40	2.00	0.00	1.30	0.20	0.00	17.60	2.00	0.00	1.20	0.20	0.00
17.80	2.00	0.00	1.10	0.20	0.00	18.00	2.00	0.00	1.00	0.20	0.00
18.20	2.00	0.00	0.90	0.20	0.00	18.40	2.00	0.00	0.80	0.20	0.00
18.60	2.00	0.00	0.70	0.20	0.00	18.80	2.00	0.00	0.60	0.20	0.00
19.00	2.00	0.00	0.50	0.20	0.00	19.20	2.00	0.00	0.40	0.20	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
19.40	2.00	0.00	0.30	0.20	0.00	19.60	2.00	0.00	0.20	0.20	0.00
19.80	2.00	0.00	0.10	0.20	0.00	20.00	2.00	0.00	0.00	0.20	0.00

Overall liquefaction potential: 2.30

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	18.46	2.00	0.00	1.00	0.00	1.20	15.10	2.00	0.00	1.00	0.00
1.40	20.13	2.00	0.00	1.00	0.00	1.60	16.78	2.00	0.00	1.00	0.00
1.80	23.49	2.00	0.00	1.00	0.00	2.00	85.09	0.92	3.78	1.00	0.76
2.20	21.81	2.00	0.00	1.00	0.00	2.40	20.13	2.00	0.00	1.00	0.00
2.60	20.01	2.00	0.00	1.00	0.00	2.80	22.68	2.00	0.00	1.00	0.00
3.00	17.76	2.00	0.00	1.00	0.00	3.20	21.96	2.00	0.00	1.00	0.00
3.40	87.04	0.80	3.69	1.00	0.74	3.60	72.33	0.68	4.41	1.00	0.88
3.80	92.84	0.83	3.46	1.00	0.69	4.00	76.51	0.69	4.18	1.00	0.84
4.20	82.68	0.73	3.88	1.00	0.78	4.40	21.31	2.00	0.00	1.00	0.00
4.60	20.99	2.00	0.00	1.00	0.00	4.80	31.04	2.00	0.00	1.00	0.00
5.00	12.43	2.00	0.00	1.00	0.00	5.20	10.91	2.00	0.00	1.00	0.00
5.40	9.44	2.00	0.00	1.00	0.00	5.60	10.61	2.00	0.00	1.00	0.00
5.80	11.74	2.00	0.00	1.00	0.00	6.00	12.85	2.00	0.00	1.00	0.00
6.20	13.92	2.00	0.00	1.00	0.00	6.40	13.74	2.00	0.00	1.00	0.00
6.60	19.57	2.00	0.00	1.00	0.00	6.80	19.32	2.00	0.00	1.00	0.00
7.00	23.71	2.00	0.00	1.00	0.00	7.20	27.98	2.00	0.00	1.00	0.00
7.40	34.35	2.00	0.00	1.00	0.00	7.60	28.42	2.00	0.00	1.00	0.00
7.80	25.89	2.00	0.00	1.00	0.00	8.00	29.95	2.00	0.00	1.00	0.00
8.20	31.77	2.00	0.00	1.00	0.00	8.40	27.16	2.00	0.00	1.00	0.00
8.60	25.80	2.00	0.00	1.00	0.00	8.80	34.95	2.00	0.00	1.00	0.00
9.00	112.78	0.99	1.30	1.00	0.26	9.20	110.25	0.96	1.55	1.00	0.31
9.40	109.80	0.95	1.59	1.00	0.32	9.60	113.40	1.01	1.20	1.00	0.24
9.80	42.16	2.00	0.00	1.00	0.00	10.00	33.82	2.00	0.00	1.00	0.00
10.20	33.51	2.00	0.00	1.00	0.00	10.40	23.43	2.00	0.00	1.00	0.00
10.60	14.50	2.00	0.00	1.00	0.00	10.80	18.23	2.00	0.00	1.00	0.00
11.00	17.11	2.00	0.00	1.00	0.00	11.20	27.39	2.00	0.00	1.00	0.00
11.40	31.88	2.00	0.00	1.00	0.00	11.60	24.12	2.00	0.00	1.00	0.00
11.80	19.29	2.00	0.00	1.00	0.00	12.00	17.29	2.00	0.00	1.00	0.00
12.20	19.89	2.00	0.00	1.00	0.00	12.40	18.82	2.00	0.00	1.00	0.00
12.60	17.77	2.00	0.00	1.00	0.00	12.80	26.60	2.00	0.00	1.00	0.00
13.00	22.82	2.00	0.00	1.00	0.00	13.20	17.35	2.00	0.00	1.00	0.00
13.40	20.73	2.00	0.00	1.00	0.00	13.60	24.08	2.00	0.00	1.00	0.00
13.80	16.11	2.00	0.00	1.00	0.00	14.00	22.02	2.00	0.00	1.00	0.00
14.20	18.44	2.00	0.00	1.00	0.00	14.40	14.93	2.00	0.00	1.00	0.00
14.60	12.32	2.00	0.00	1.00	0.00	14.80	16.40	2.00	0.00	1.00	0.00
15.00	14.63	2.00	0.00	1.00	0.00	15.20	17.00	2.00	0.00	1.00	0.00
15.40	20.19	2.00	0.00	1.00	0.00	15.60	15.96	2.00	0.00	1.00	0.00
15.80	15.85	2.00	0.00	1.00	0.00	16.00	12.54	2.00	0.00	1.00	0.00
16.20	10.88	2.00	0.00	1.00	0.00	16.40	13.97	2.00	0.00	1.00	0.00
16.60	13.89	2.00	0.00	1.00	0.00	16.80	12.24	2.00	0.00	1.00	0.00
17.00	12.94	2.00	0.00	1.00	0.00	17.20	11.32	2.00	0.00	1.00	0.00
17.40	10.49	2.00	0.00	1.00	0.00	17.60	10.43	2.00	0.00	1.00	0.00
17.80	13.41	2.00	0.00	1.00	0.00	18.00	11.06	2.00	0.00	1.00	0.00
18.20	13.25	2.00	0.00	1.00	0.00	18.40	16.20	2.00	0.00	1.00	0.00
18.60	13.86	2.00	0.00	1.00	0.00	18.80	10.08	2.00	0.00	1.00	0.00
19.00	10.76	2.00	0.00	1.00	0.00	19.20	9.97	2.00	0.00	1.00	0.00
19.40	11.37	2.00	0.00	1.00	0.00	19.60	15.70	2.00	0.00	1.00	0.00
19.80	9.81	2.00	0.00	1.00	0.00	20.00	13.37	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)

Total estimated settlement: 5.81

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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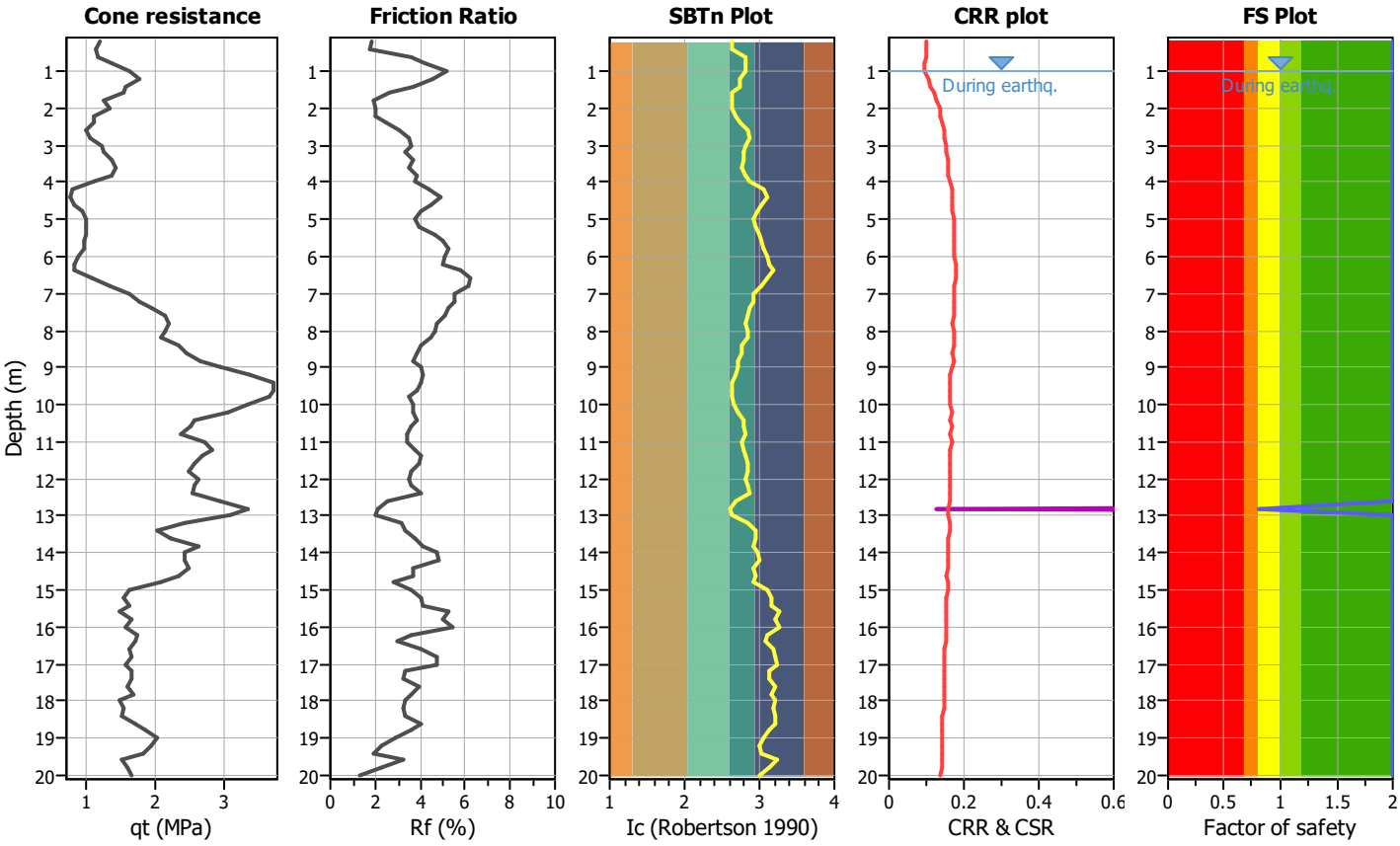
LIQUEFACTION ANALYSIS REPORT

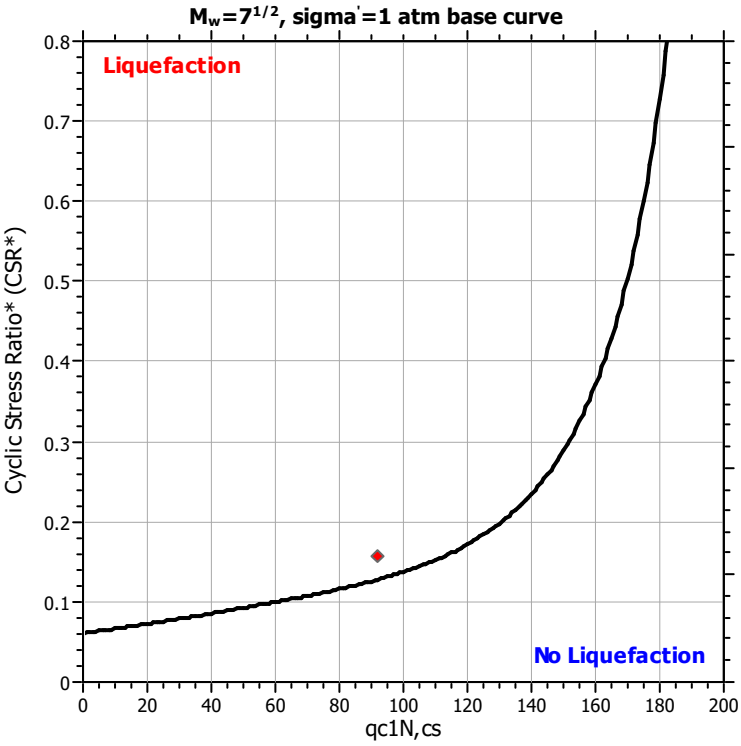
Project title : **Location :**

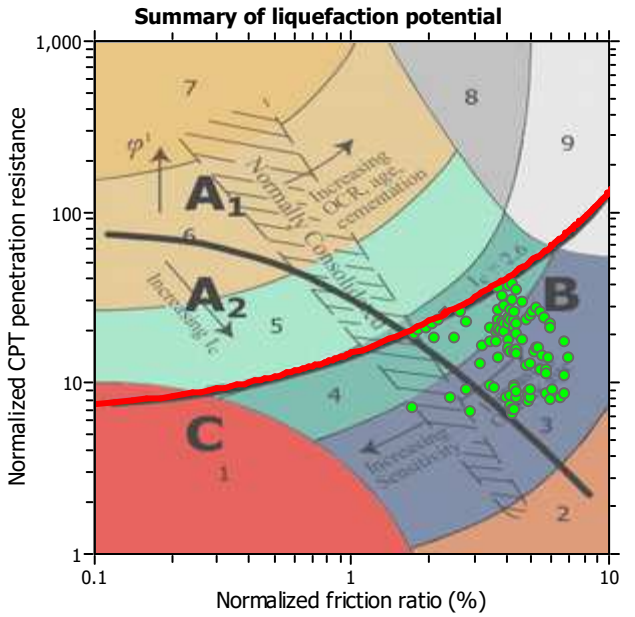
CPT file : CPT256

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

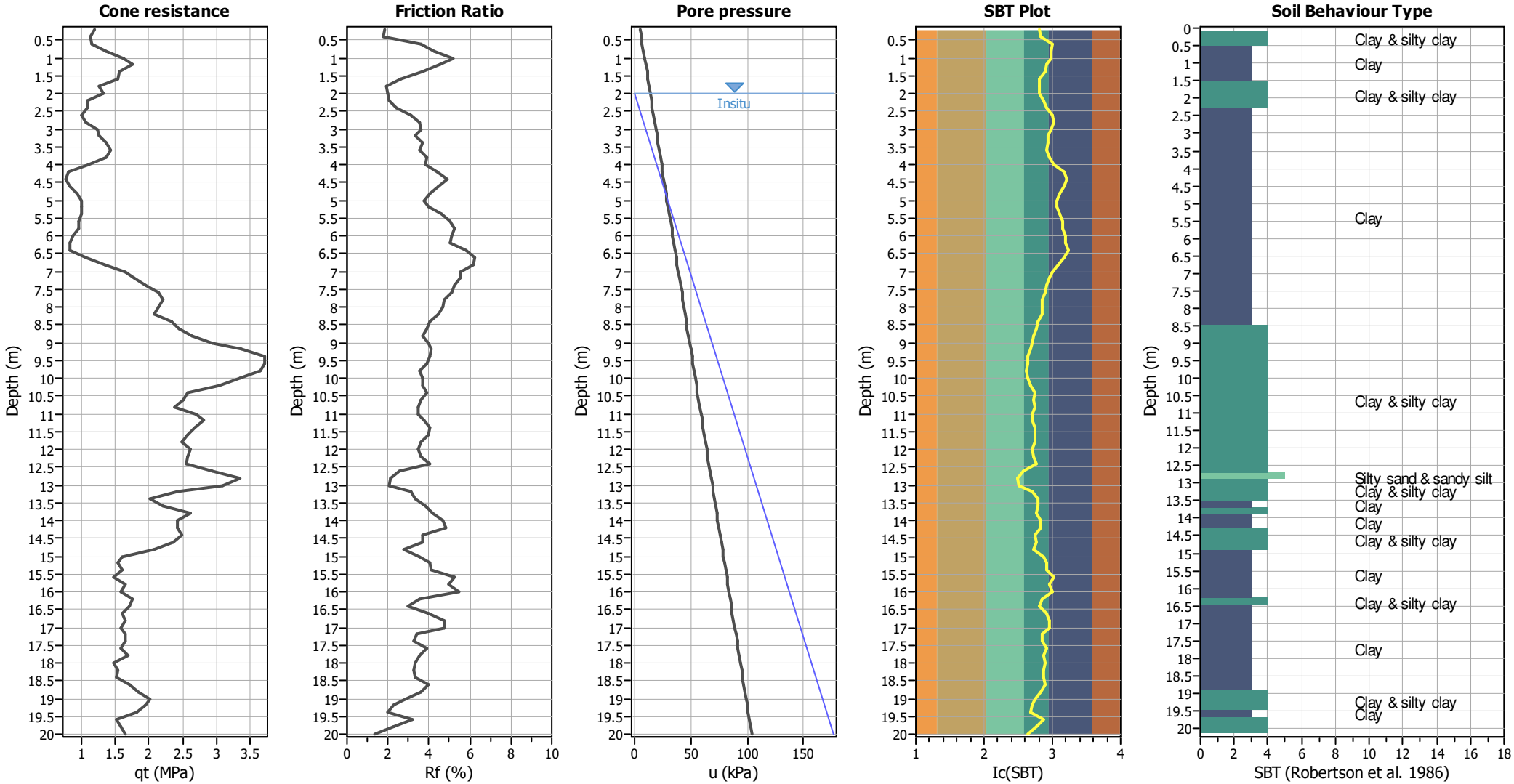






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



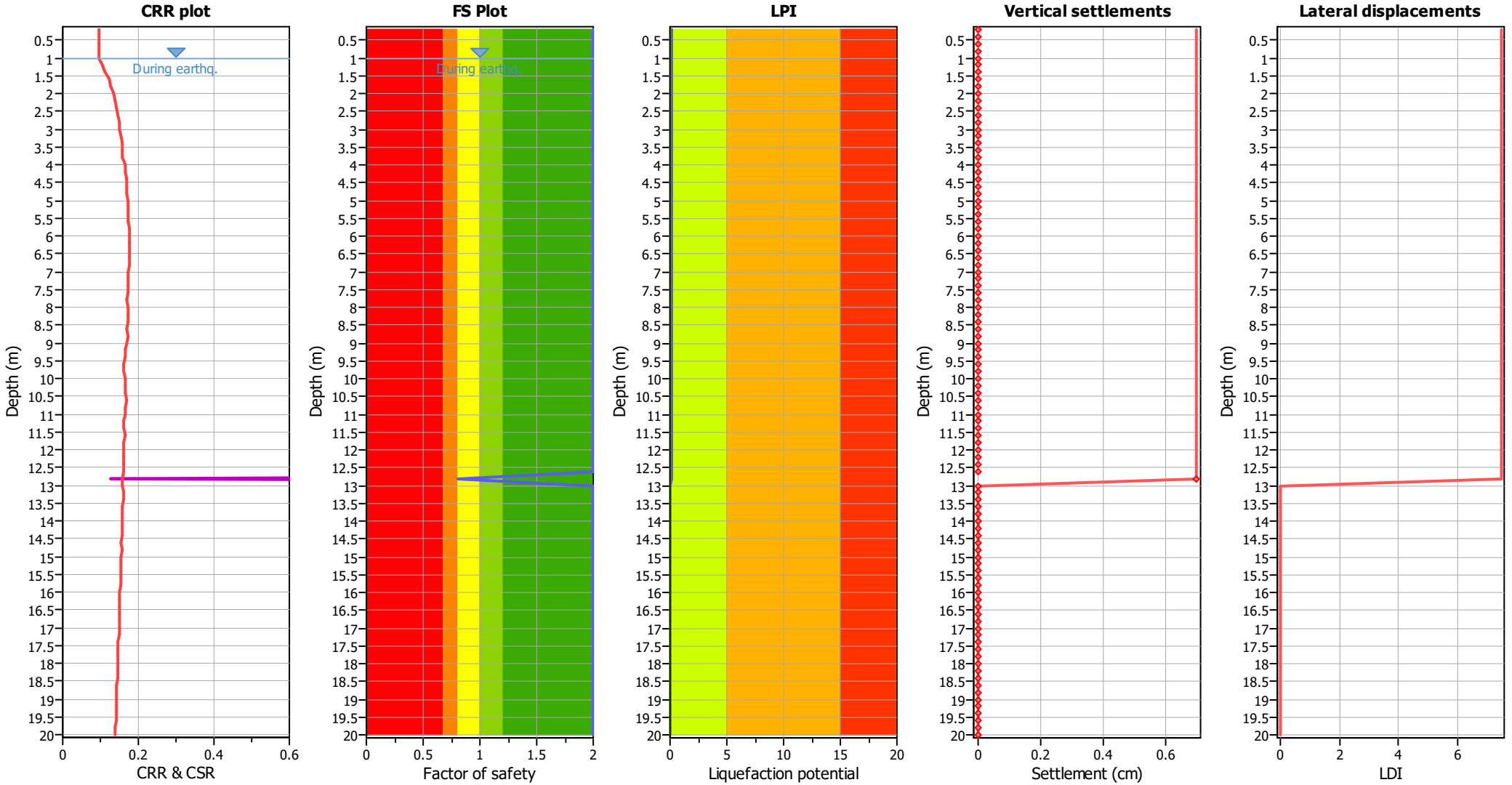
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	2.00	0.00	8.20	0.20	0.00
3.80	2.00	0.00	8.10	0.20	0.00	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	0.81	0.19	3.60	0.20	0.14
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00	15.20	2.00	0.00	2.40	0.20	0.00
15.40	2.00	0.00	2.30	0.20	0.00	15.60	2.00	0.00	2.20	0.20	0.00
15.80	2.00	0.00	2.10	0.20	0.00	16.00	2.00	0.00	2.00	0.20	0.00
16.20	2.00	0.00	1.90	0.20	0.00	16.40	2.00	0.00	1.80	0.20	0.00
16.60	2.00	0.00	1.70	0.20	0.00	16.80	2.00	0.00	1.60	0.20	0.00
17.00	2.00	0.00	1.50	0.20	0.00	17.20	2.00	0.00	1.40	0.20	0.00
17.40	2.00	0.00	1.30	0.20	0.00	17.60	2.00	0.00	1.20	0.20	0.00
17.80	2.00	0.00	1.10	0.20	0.00	18.00	2.00	0.00	1.00	0.20	0.00
18.20	2.00	0.00	0.90	0.20	0.00	18.40	2.00	0.00	0.80	0.20	0.00
18.60	2.00	0.00	0.70	0.20	0.00	18.80	2.00	0.00	0.60	0.20	0.00
19.00	2.00	0.00	0.50	0.20	0.00	19.20	2.00	0.00	0.40	0.20	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
19.40	2.00	0.00	0.30	0.20	0.00	19.60	2.00	0.00	0.20	0.20	0.00
19.80	2.00	0.00	0.10	0.20	0.00	20.00	2.00	0.00	0.00	0.20	0.00

Overall liquefaction potential: 0.14

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	30.20	2.00	0.00	1.00	0.00	1.20	30.20	2.00	0.00	1.00	0.00
1.40	28.52	2.00	0.00	1.00	0.00	1.60	20.13	2.00	0.00	1.00	0.00
1.80	28.52	2.00	0.00	1.00	0.00	2.00	15.10	2.00	0.00	1.00	0.00
2.20	23.49	2.00	0.00	1.00	0.00	2.40	16.78	2.00	0.00	1.00	0.00
2.60	15.10	2.00	0.00	1.00	0.00	2.80	18.08	2.00	0.00	1.00	0.00
3.00	19.27	2.00	0.00	1.00	0.00	3.20	21.89	2.00	0.00	1.00	0.00
3.40	18.57	2.00	0.00	1.00	0.00	3.60	22.55	2.00	0.00	1.00	0.00
3.80	23.55	2.00	0.00	1.00	0.00	4.00	14.78	2.00	0.00	1.00	0.00
4.20	10.29	2.00	0.00	1.00	0.00	4.40	10.13	2.00	0.00	1.00	0.00
4.60	12.73	2.00	0.00	1.00	0.00	4.80	12.54	2.00	0.00	1.00	0.00
5.00	13.70	2.00	0.00	1.00	0.00	5.20	14.82	2.00	0.00	1.00	0.00
5.40	12.01	2.00	0.00	1.00	0.00	5.60	13.13	2.00	0.00	1.00	0.00
5.80	12.95	2.00	0.00	1.00	0.00	6.00	11.53	2.00	0.00	1.00	0.00
6.20	8.89	2.00	0.00	1.00	0.00	6.40	11.23	2.00	0.00	1.00	0.00
6.60	11.08	2.00	0.00	1.00	0.00	6.80	16.87	2.00	0.00	1.00	0.00
7.00	20.15	2.00	0.00	1.00	0.00	7.20	21.04	2.00	0.00	1.00	0.00
7.40	20.78	2.00	0.00	1.00	0.00	7.60	25.00	2.00	0.00	1.00	0.00
7.80	26.91	2.00	0.00	1.00	0.00	8.00	22.24	2.00	0.00	1.00	0.00
8.20	21.99	2.00	0.00	1.00	0.00	8.40	23.90	2.00	0.00	1.00	0.00
8.60	29.99	2.00	0.00	1.00	0.00	8.80	24.44	2.00	0.00	1.00	0.00
9.00	29.38	2.00	0.00	1.00	0.00	9.20	38.32	2.00	0.00	1.00	0.00
9.40	36.92	2.00	0.00	1.00	0.00	9.60	38.58	2.00	0.00	1.00	0.00
9.80	37.22	2.00	0.00	1.00	0.00	10.00	33.89	2.00	0.00	1.00	0.00
10.20	28.64	2.00	0.00	1.00	0.00	10.40	27.40	2.00	0.00	1.00	0.00
10.60	19.38	2.00	0.00	1.00	0.00	10.80	25.96	2.00	0.00	1.00	0.00
11.00	22.86	2.00	0.00	1.00	0.00	11.20	28.37	2.00	0.00	1.00	0.00
11.40	28.13	2.00	0.00	1.00	0.00	11.60	18.53	2.00	0.00	1.00	0.00
11.80	24.88	2.00	0.00	1.00	0.00	12.00	24.68	2.00	0.00	1.00	0.00
12.20	21.73	2.00	0.00	1.00	0.00	12.40	23.38	2.00	0.00	1.00	0.00
12.60	23.18	2.00	0.00	1.00	0.00	12.80	92.09	0.81	3.49	1.00	0.70
13.00	33.60	2.00	0.00	1.00	0.00	13.20	15.62	2.00	0.00	1.00	0.00
13.40	13.77	2.00	0.00	1.00	0.00	13.60	22.37	2.00	0.00	1.00	0.00
13.80	20.46	2.00	0.00	1.00	0.00	14.00	23.78	2.00	0.00	1.00	0.00
14.20	16.75	2.00	0.00	1.00	0.00	14.40	20.02	2.00	0.00	1.00	0.00
14.60	24.99	2.00	0.00	1.00	0.00	14.80	13.06	2.00	0.00	1.00	0.00
15.00	12.98	2.00	0.00	1.00	0.00	15.20	12.90	2.00	0.00	1.00	0.00
15.40	11.19	2.00	0.00	1.00	0.00	15.60	14.35	2.00	0.00	1.00	0.00
15.80	9.44	2.00	0.00	1.00	0.00	16.00	14.97	2.00	0.00	1.00	0.00
16.20	12.48	2.00	0.00	1.00	0.00	16.40	13.20	2.00	0.00	1.00	0.00
16.60	13.91	2.00	0.00	1.00	0.00	16.80	9.92	2.00	0.00	1.00	0.00
17.00	13.74	2.00	0.00	1.00	0.00	17.20	12.11	2.00	0.00	1.00	0.00
17.40	11.27	2.00	0.00	1.00	0.00	17.60	13.50	2.00	0.00	1.00	0.00
17.80	10.38	2.00	0.00	1.00	0.00	18.00	13.35	2.00	0.00	1.00	0.00
18.20	8.78	2.00	0.00	1.00	0.00	18.40	11.71	2.00	0.00	1.00	0.00
18.60	12.39	2.00	0.00	1.00	0.00	18.80	13.06	2.00	0.00	1.00	0.00
19.00	14.48	2.00	0.00	1.00	0.00	19.20	15.89	2.00	0.00	1.00	0.00
19.40	11.39	2.00	0.00	1.00	0.00	19.60	11.34	2.00	0.00	1.00	0.00
19.80	9.12	2.00	0.00	1.00	0.00	20.00	12.67	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)

Total estimated settlement: 0.70

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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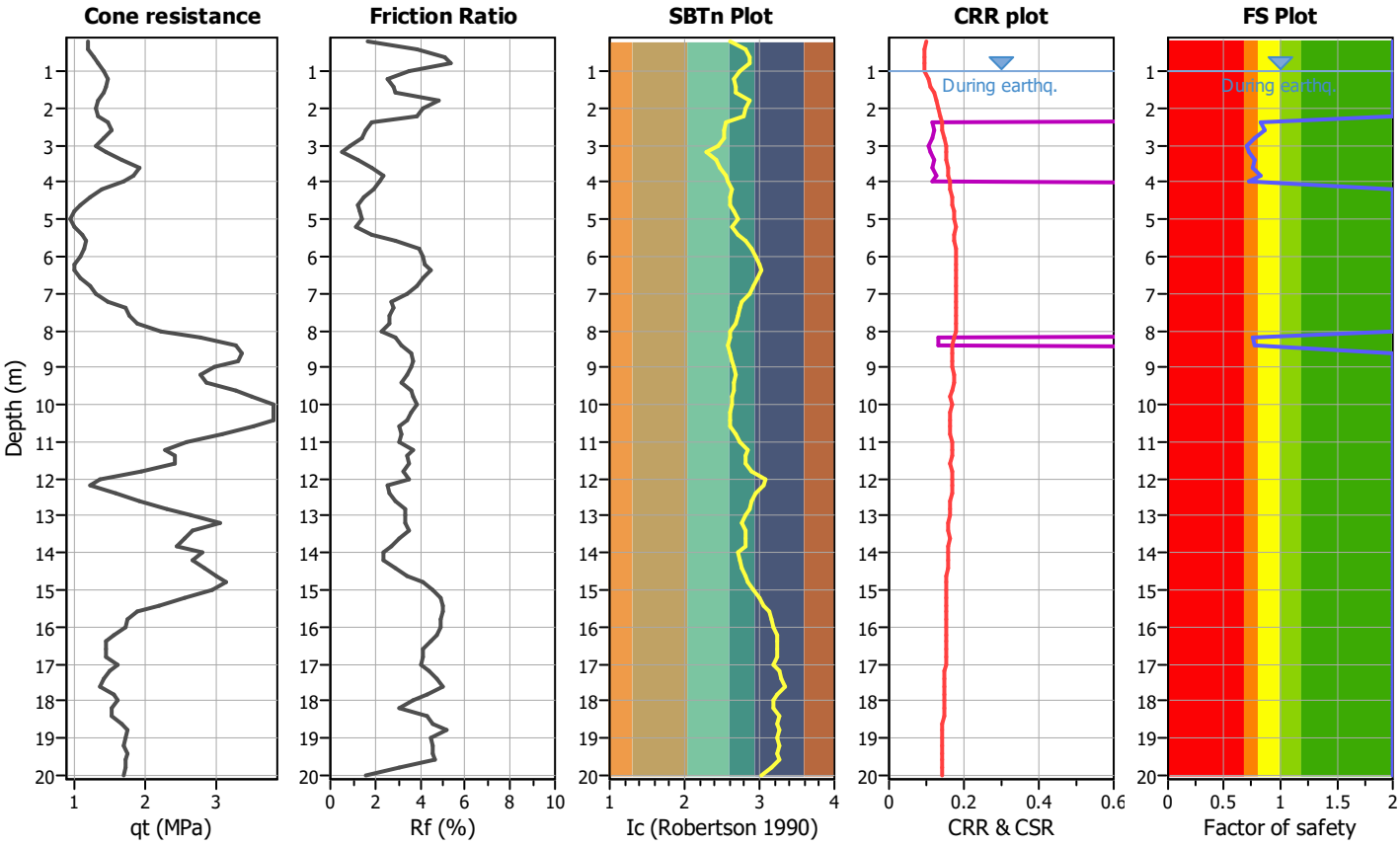
LIQUEFACTION ANALYSIS REPORT

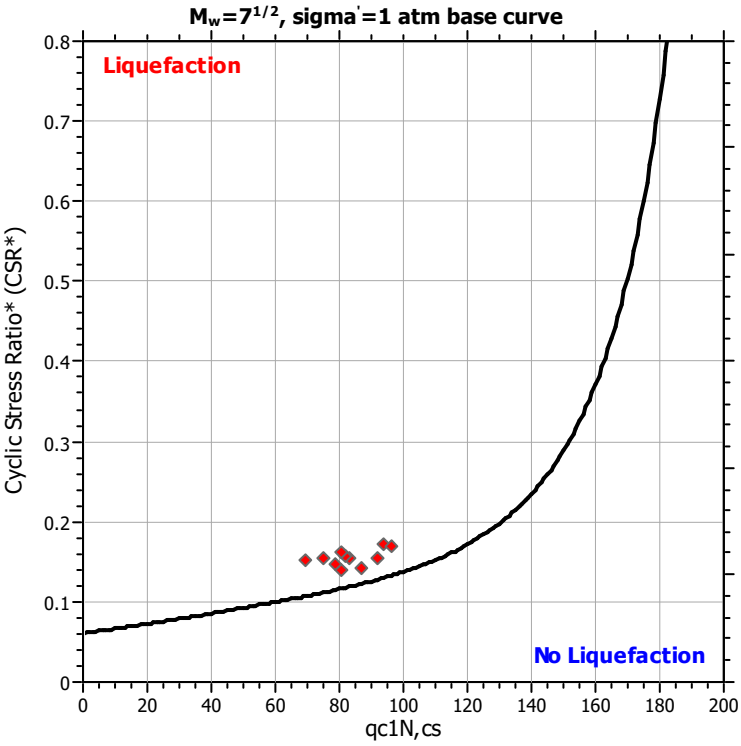
Project title : **Location :**

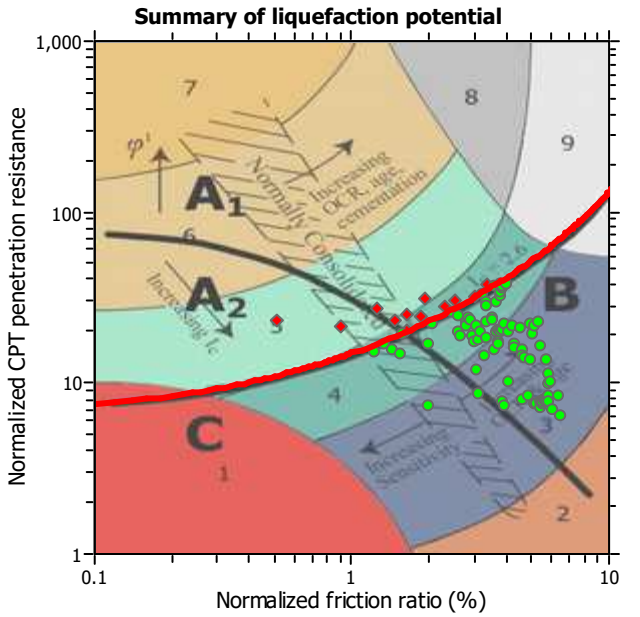
CPT file : CPT257

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

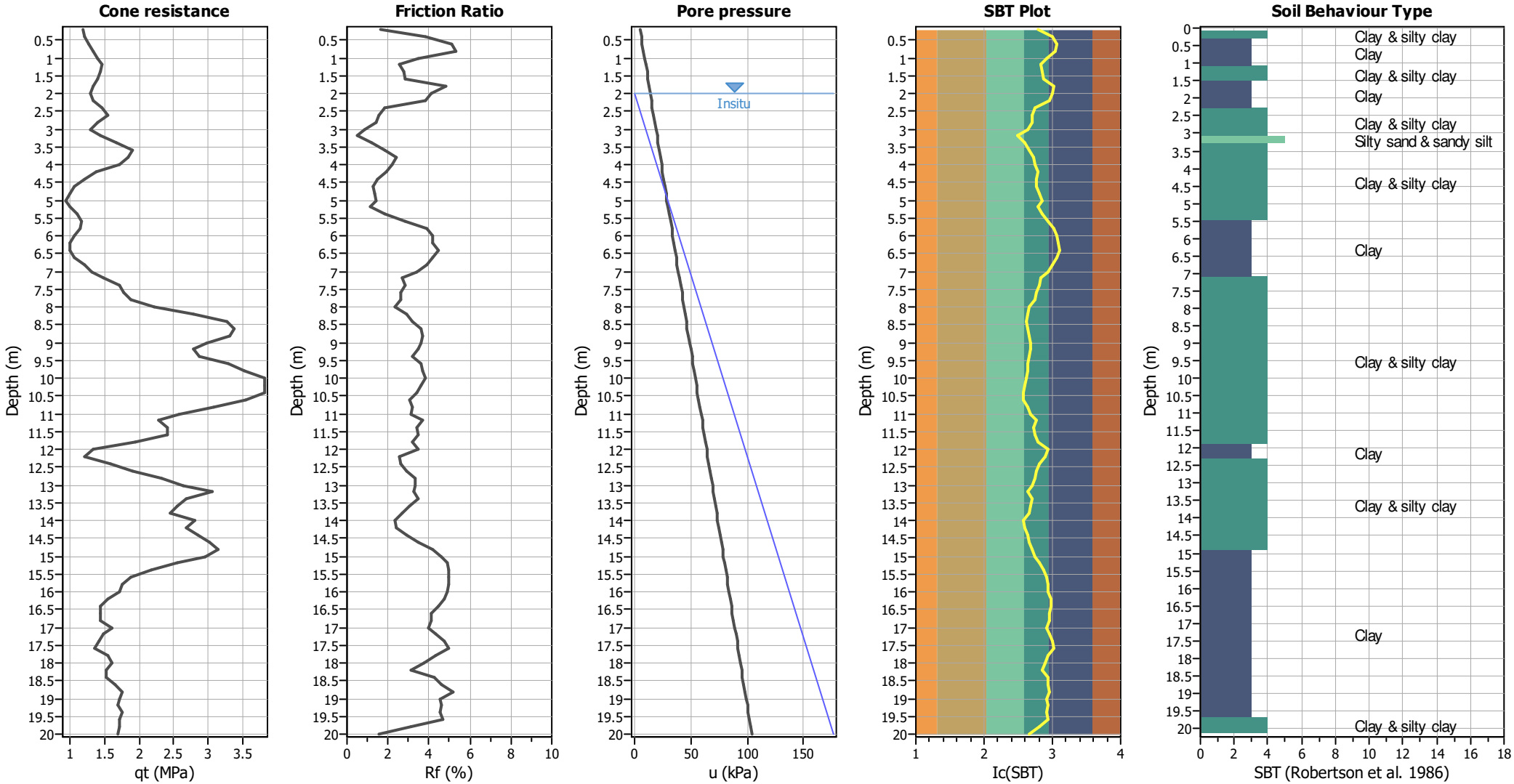






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



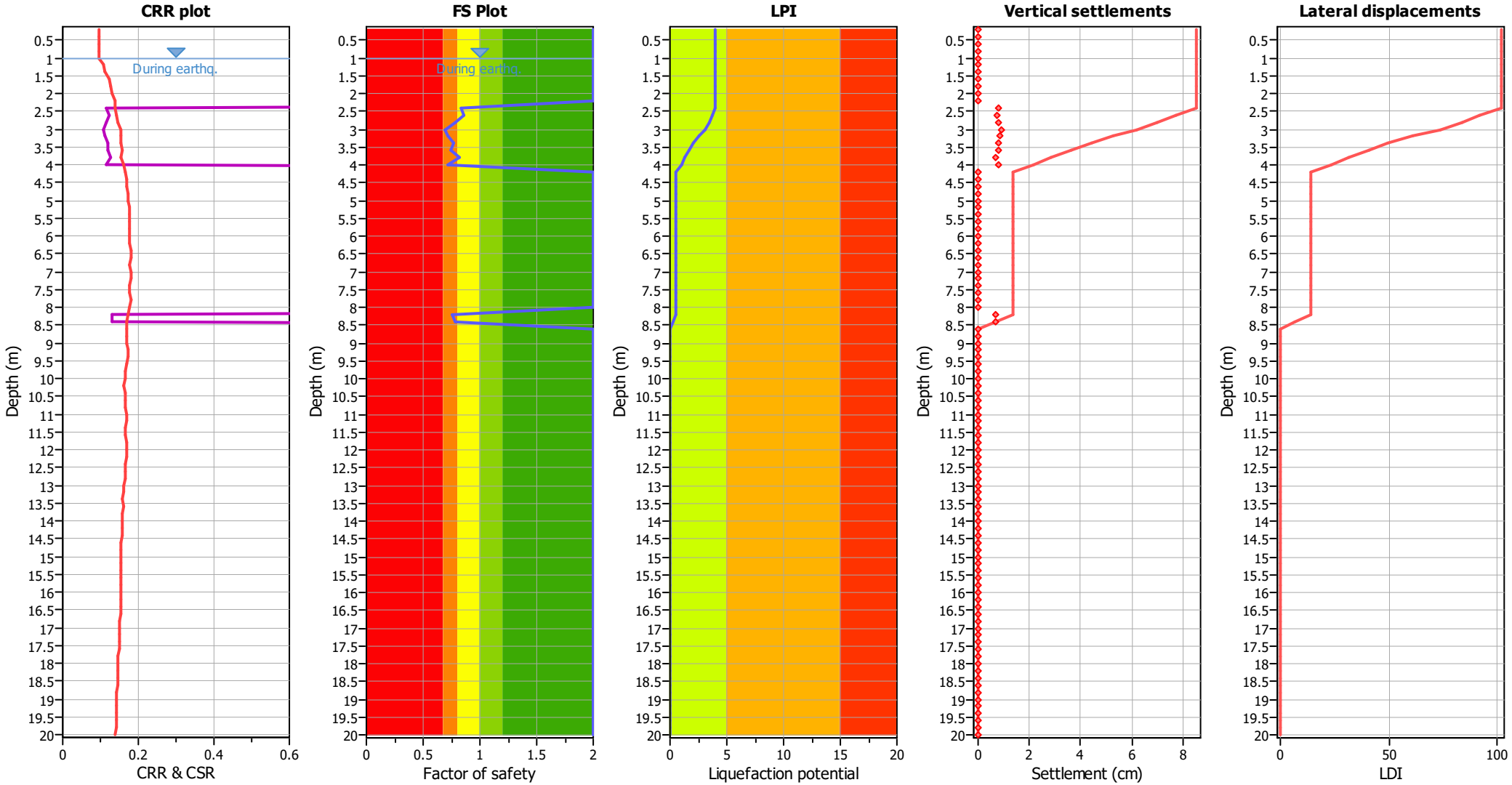
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	0.83	0.17	8.80	0.20	0.30
2.60	0.86	0.14	8.70	0.20	0.24	2.80	0.78	0.22	8.60	0.20	0.38
3.00	0.70	0.30	8.50	0.20	0.51	3.20	0.72	0.28	8.40	0.20	0.47
3.40	0.77	0.23	8.30	0.20	0.38	3.60	0.75	0.25	8.20	0.20	0.41
3.80	0.82	0.18	8.10	0.20	0.29	4.00	0.72	0.28	8.00	0.20	0.45
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	0.76	0.24	5.90	0.20	0.28	8.40	0.78	0.22	5.80	0.20	0.26
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00	15.20	2.00	0.00	2.40	0.20	0.00
15.40	2.00	0.00	2.30	0.20	0.00	15.60	2.00	0.00	2.20	0.20	0.00
15.80	2.00	0.00	2.10	0.20	0.00	16.00	2.00	0.00	2.00	0.20	0.00
16.20	2.00	0.00	1.90	0.20	0.00	16.40	2.00	0.00	1.80	0.20	0.00
16.60	2.00	0.00	1.70	0.20	0.00	16.80	2.00	0.00	1.60	0.20	0.00
17.00	2.00	0.00	1.50	0.20	0.00	17.20	2.00	0.00	1.40	0.20	0.00
17.40	2.00	0.00	1.30	0.20	0.00	17.60	2.00	0.00	1.20	0.20	0.00
17.80	2.00	0.00	1.10	0.20	0.00	18.00	2.00	0.00	1.00	0.20	0.00
18.20	2.00	0.00	0.90	0.20	0.00	18.40	2.00	0.00	0.80	0.20	0.00
18.60	2.00	0.00	0.70	0.20	0.00	18.80	2.00	0.00	0.60	0.20	0.00
19.00	2.00	0.00	0.50	0.20	0.00	19.20	2.00	0.00	0.40	0.20	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
19.40	2.00	0.00	0.30	0.20	0.00	19.60	2.00	0.00	0.20	0.20	0.00
19.80	2.00	0.00	0.10	0.20	0.00	20.00	2.00	0.00	0.00	0.20	0.00

Overall liquefaction potential: 3.98

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	23.49	2.00	0.00	1.00	0.00	1.20	23.49	2.00	0.00	1.00	0.00
1.40	26.84	2.00	0.00	1.00	0.00	1.60	21.81	2.00	0.00	1.00	0.00
1.80	21.81	2.00	0.00	1.00	0.00	2.00	23.49	2.00	0.00	1.00	0.00
2.20	20.13	2.00	0.00	1.00	0.00	2.40	80.58	0.83	3.98	1.00	0.80
2.60	87.17	0.86	3.69	1.00	0.74	2.80	79.02	0.78	4.06	1.00	0.81
3.00	69.33	0.70	4.59	1.00	0.92	3.20	74.83	0.72	4.27	1.00	0.85
3.40	83.28	0.77	3.86	1.00	0.77	3.60	82.08	0.75	3.91	1.00	0.78
3.80	91.75	0.82	3.50	1.00	0.70	4.00	80.64	0.72	3.98	1.00	0.80
4.20	18.94	2.00	0.00	1.00	0.00	4.40	17.31	2.00	0.00	1.00	0.00
4.60	15.71	2.00	0.00	1.00	0.00	4.80	12.76	2.00	0.00	1.00	0.00
5.00	13.95	2.00	0.00	1.00	0.00	5.20	12.46	2.00	0.00	1.00	0.00
5.40	14.92	2.00	0.00	1.00	0.00	5.60	17.28	2.00	0.00	1.00	0.00
5.80	14.48	2.00	0.00	1.00	0.00	6.00	13.01	2.00	0.00	1.00	0.00
6.20	14.09	2.00	0.00	1.00	0.00	6.40	11.43	2.00	0.00	1.00	0.00
6.60	12.51	2.00	0.00	1.00	0.00	6.80	15.98	2.00	0.00	1.00	0.00
7.00	15.79	2.00	0.00	1.00	0.00	7.20	15.62	2.00	0.00	1.00	0.00
7.40	21.23	2.00	0.00	1.00	0.00	7.60	23.27	2.00	0.00	1.00	0.00
7.80	17.36	2.00	0.00	1.00	0.00	8.00	23.90	2.00	0.00	1.00	0.00
8.20	94.03	0.76	3.42	1.00	0.68	8.40	96.00	0.78	3.35	1.00	0.67
8.60	39.16	2.00	0.00	1.00	0.00	8.80	35.58	2.00	0.00	1.00	0.00
9.00	32.05	2.00	0.00	1.00	0.00	9.20	27.54	2.00	0.00	1.00	0.00
9.40	28.30	2.00	0.00	1.00	0.00	9.60	34.17	2.00	0.00	1.00	0.00
9.80	38.91	2.00	0.00	1.00	0.00	10.00	34.50	2.00	0.00	1.00	0.00
10.20	42.17	2.00	0.00	1.00	0.00	10.40	37.81	2.00	0.00	1.00	0.00
10.60	33.53	2.00	0.00	1.00	0.00	10.80	33.24	2.00	0.00	1.00	0.00
11.00	23.24	2.00	0.00	1.00	0.00	11.20	18.22	2.00	0.00	1.00	0.00
11.40	23.80	2.00	0.00	1.00	0.00	11.60	26.45	2.00	0.00	1.00	0.00
11.80	17.76	2.00	0.00	1.00	0.00	12.00	10.17	2.00	0.00	1.00	0.00
12.20	9.18	2.00	0.00	1.00	0.00	12.40	13.69	2.00	0.00	1.00	0.00
12.60	19.99	2.00	0.00	1.00	0.00	12.80	18.00	2.00	0.00	1.00	0.00
13.00	24.20	2.00	0.00	1.00	0.00	13.20	28.53	2.00	0.00	1.00	0.00
13.40	28.32	2.00	0.00	1.00	0.00	13.60	13.91	2.00	0.00	1.00	0.00
13.80	24.36	2.00	0.00	1.00	0.00	14.00	25.06	2.00	0.00	1.00	0.00
14.20	23.14	2.00	0.00	1.00	0.00	14.40	20.38	2.00	0.00	1.00	0.00
14.60	28.89	2.00	0.00	1.00	0.00	14.80	26.96	2.00	0.00	1.00	0.00
15.00	23.35	2.00	0.00	1.00	0.00	15.20	23.19	2.00	0.00	1.00	0.00
15.40	16.32	2.00	0.00	1.00	0.00	15.60	13.73	2.00	0.00	1.00	0.00
15.80	15.28	2.00	0.00	1.00	0.00	16.00	12.74	2.00	0.00	1.00	0.00
16.20	12.66	2.00	0.00	1.00	0.00	16.40	10.98	2.00	0.00	1.00	0.00
16.60	10.12	2.00	0.00	1.00	0.00	16.80	12.42	2.00	0.00	1.00	0.00
17.00	10.77	2.00	0.00	1.00	0.00	17.20	13.84	2.00	0.00	1.00	0.00
17.40	9.10	2.00	0.00	1.00	0.00	17.60	9.04	2.00	0.00	1.00	0.00
17.80	12.05	2.00	0.00	1.00	0.00	18.00	13.52	2.00	0.00	1.00	0.00
18.20	10.40	2.00	0.00	1.00	0.00	18.40	9.58	2.00	0.00	1.00	0.00
18.60	13.29	2.00	0.00	1.00	0.00	18.80	13.21	2.00	0.00	1.00	0.00
19.00	11.64	2.00	0.00	1.00	0.00	19.20	12.32	2.00	0.00	1.00	0.00
19.40	12.25	2.00	0.00	1.00	0.00	19.60	12.91	2.00	0.00	1.00	0.00
19.80	11.38	2.00	0.00	1.00	0.00	20.00	12.06	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)

Total estimated settlement: 8.52

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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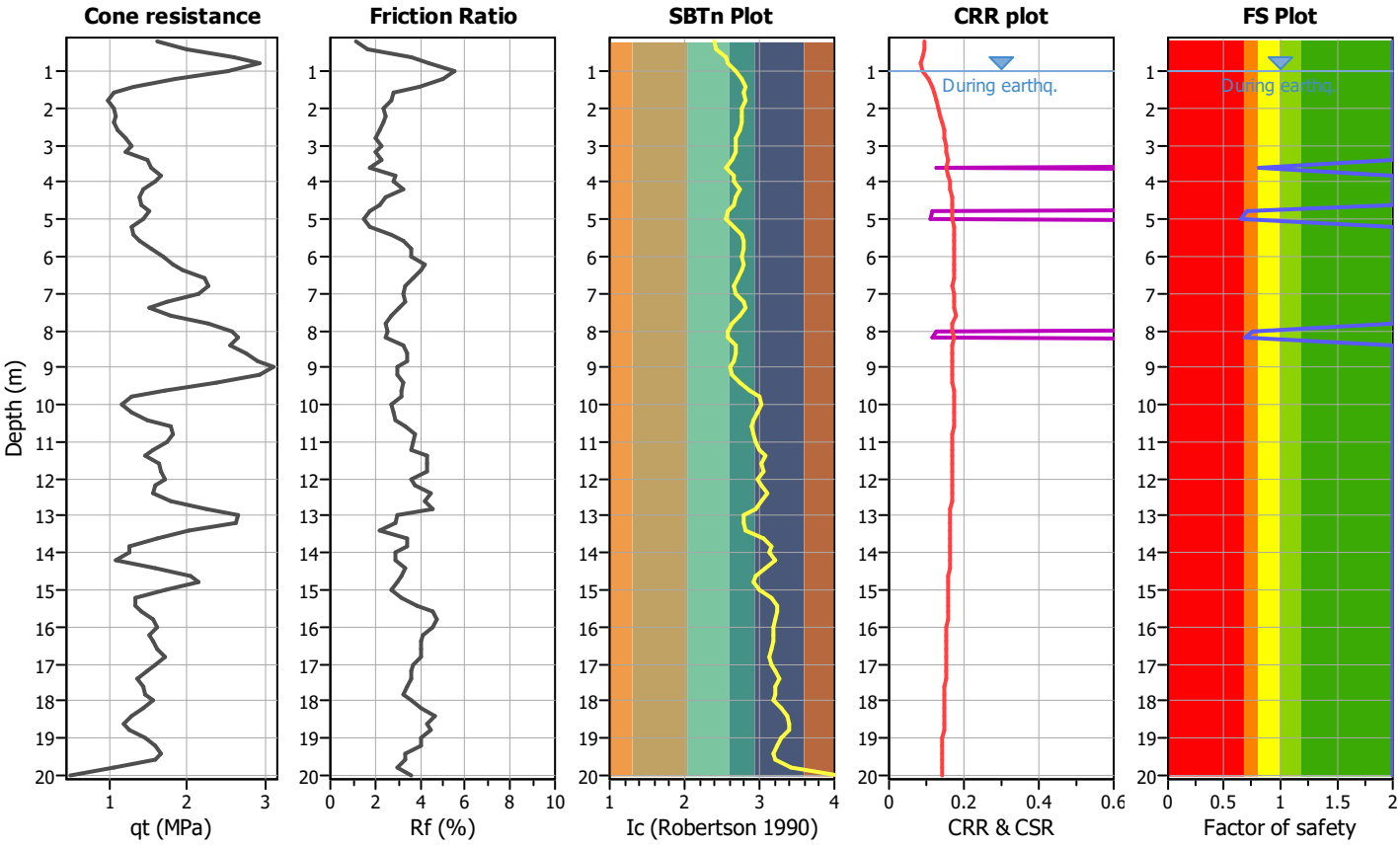
LIQUEFACTION ANALYSIS REPORT

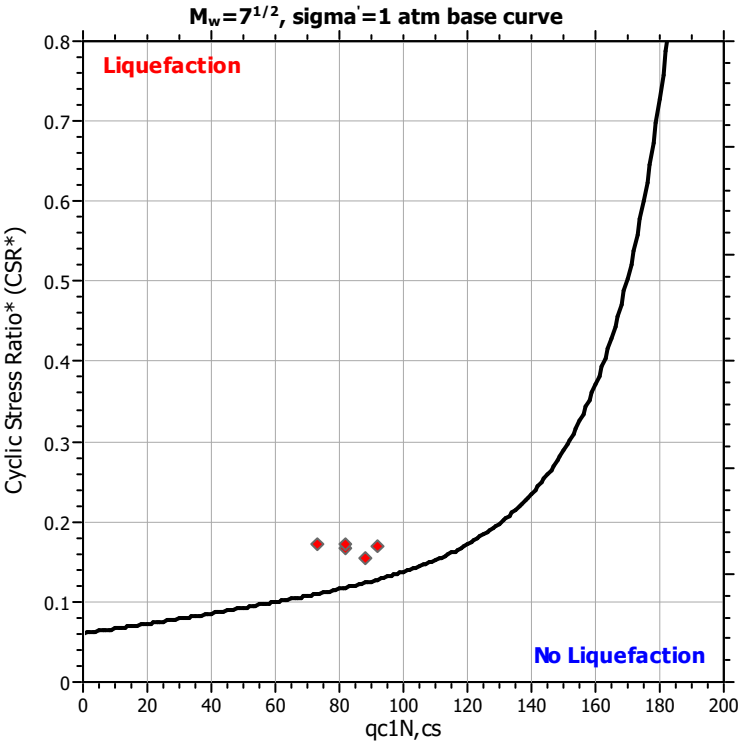
Project title : **Location :**

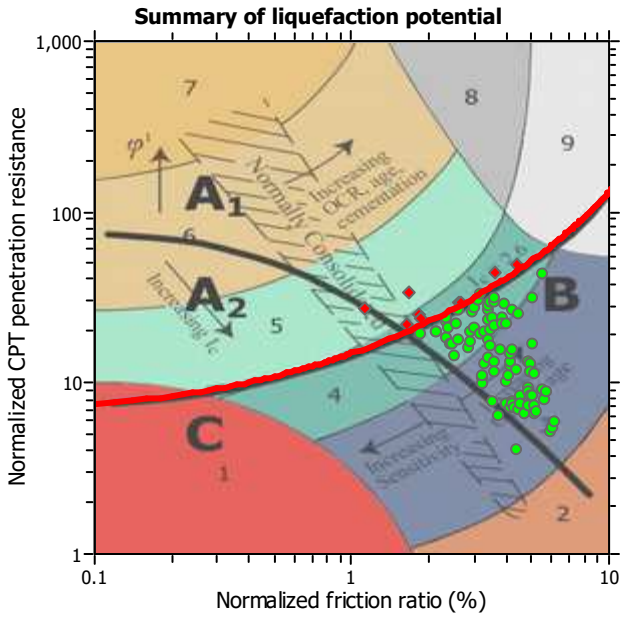
CPT file : CPT258

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

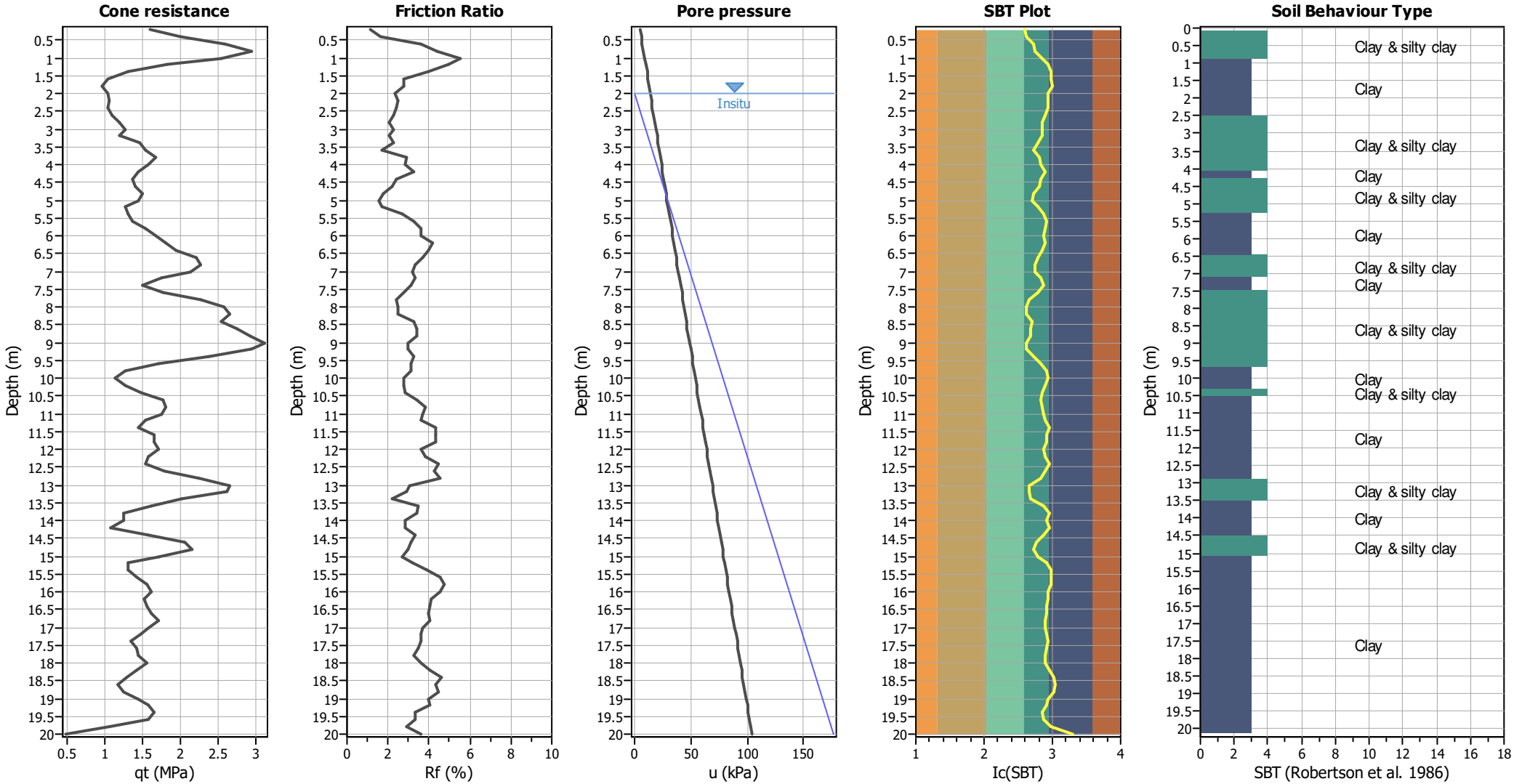






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



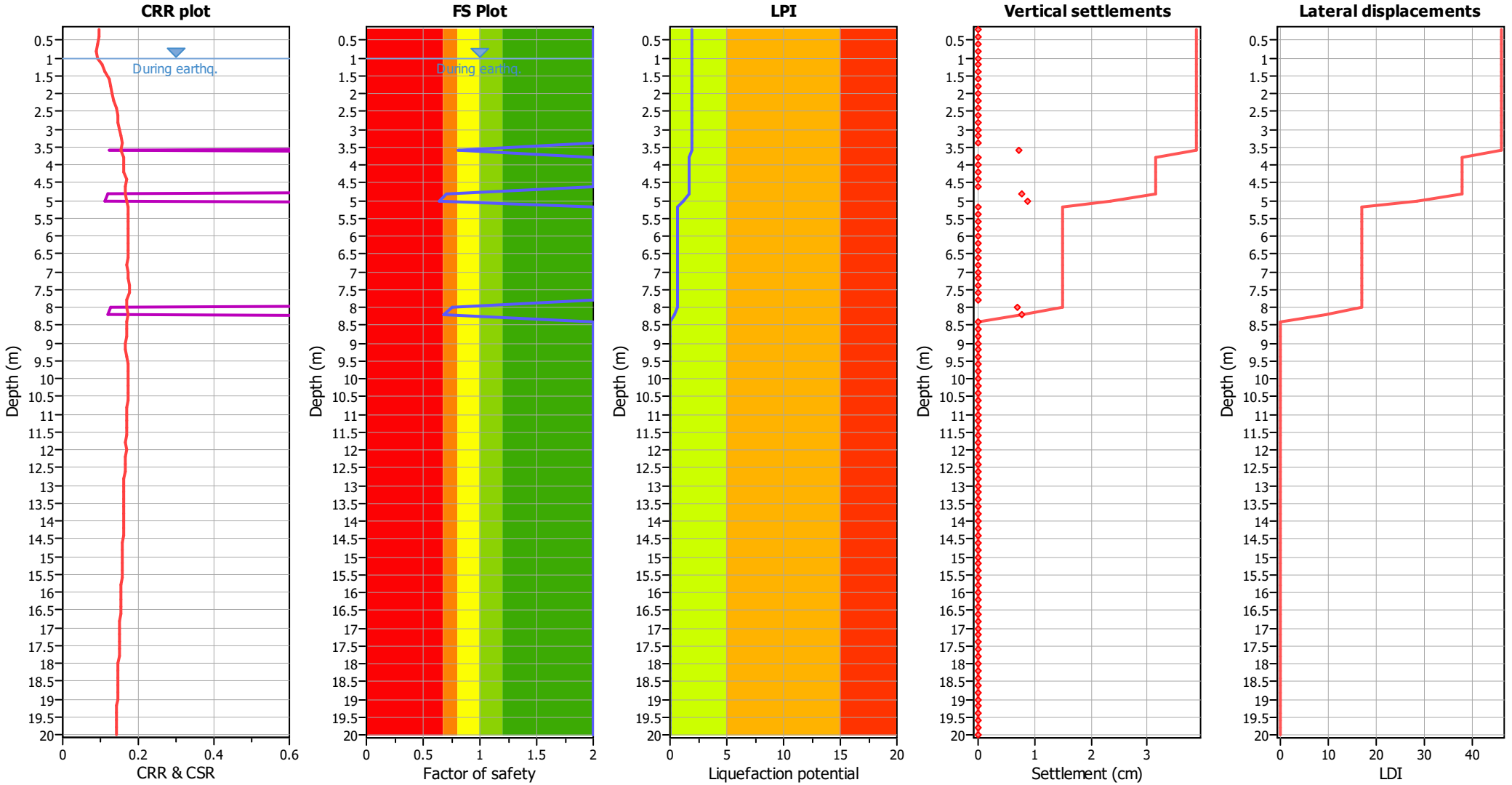
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	0.80	0.20	8.20	0.20	0.32
3.80	2.00	0.00	8.10	0.20	0.00	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	0.71	0.29	7.60	0.20	0.44
5.00	0.64	0.36	7.50	0.20	0.53	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	0.76	0.24	6.00	0.20	0.29
8.20	0.68	0.32	5.90	0.20	0.38	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00	15.20	2.00	0.00	2.40	0.20	0.00
15.40	2.00	0.00	2.30	0.20	0.00	15.60	2.00	0.00	2.20	0.20	0.00
15.80	2.00	0.00	2.10	0.20	0.00	16.00	2.00	0.00	2.00	0.20	0.00
16.20	2.00	0.00	1.90	0.20	0.00	16.40	2.00	0.00	1.80	0.20	0.00
16.60	2.00	0.00	1.70	0.20	0.00	16.80	2.00	0.00	1.60	0.20	0.00
17.00	2.00	0.00	1.50	0.20	0.00	17.20	2.00	0.00	1.40	0.20	0.00
17.40	2.00	0.00	1.30	0.20	0.00	17.60	2.00	0.00	1.20	0.20	0.00
17.80	2.00	0.00	1.10	0.20	0.00	18.00	2.00	0.00	1.00	0.20	0.00
18.20	2.00	0.00	0.90	0.20	0.00	18.40	2.00	0.00	0.80	0.20	0.00
18.60	2.00	0.00	0.70	0.20	0.00	18.80	2.00	0.00	0.60	0.20	0.00
19.00	2.00	0.00	0.50	0.20	0.00	19.20	2.00	0.00	0.40	0.20	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
19.40	2.00	0.00	0.30	0.20	0.00	19.60	2.00	0.00	0.20	0.20	0.00
19.80	2.00	0.00	0.10	0.20	0.00	20.00	2.00	0.00	0.00	0.20	0.00

Overall liquefaction potential: 1.97

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	43.62	2.00	0.00	1.00	0.00	1.20	26.84	2.00	0.00	1.00	0.00
1.40	21.81	2.00	0.00	1.00	0.00	1.60	16.78	2.00	0.00	1.00	0.00
1.80	13.42	2.00	0.00	1.00	0.00	2.00	18.46	2.00	0.00	1.00	0.00
2.20	20.13	2.00	0.00	1.00	0.00	2.40	15.10	2.00	0.00	1.00	0.00
2.60	16.77	2.00	0.00	1.00	0.00	2.80	22.63	2.00	0.00	1.00	0.00
3.00	19.23	2.00	0.00	1.00	0.00	3.20	18.91	2.00	0.00	1.00	0.00
3.40	18.60	2.00	0.00	1.00	0.00	3.60	88.25	0.80	3.64	1.00	0.73
3.80	20.81	2.00	0.00	1.00	0.00	4.00	23.23	2.00	0.00	1.00	0.00
4.20	24.18	2.00	0.00	1.00	0.00	4.40	14.35	2.00	0.00	1.00	0.00
4.60	19.56	2.00	0.00	1.00	0.00	4.80	82.12	0.71	3.91	1.00	0.78
5.00	73.23	0.64	4.36	1.00	0.87	5.20	16.20	2.00	0.00	1.00	0.00
5.40	17.24	2.00	0.00	1.00	0.00	5.60	18.26	2.00	0.00	1.00	0.00
5.80	18.01	2.00	0.00	1.00	0.00	6.00	22.67	2.00	0.00	1.00	0.00
6.20	22.36	2.00	0.00	1.00	0.00	6.40	22.08	2.00	0.00	1.00	0.00
6.60	26.49	2.00	0.00	1.00	0.00	6.80	30.78	2.00	0.00	1.00	0.00
7.00	23.56	2.00	0.00	1.00	0.00	7.20	21.00	2.00	0.00	1.00	0.00
7.40	16.22	2.00	0.00	1.00	0.00	7.60	14.92	2.00	0.00	1.00	0.00
7.80	29.17	2.00	0.00	1.00	0.00	8.00	92.16	0.76	3.49	1.00	0.70
8.20	81.83	0.68	3.92	1.00	0.78	8.40	30.38	2.00	0.00	1.00	0.00
8.60	27.95	2.00	0.00	1.00	0.00	8.80	29.75	2.00	0.00	1.00	0.00
9.00	34.65	2.00	0.00	1.00	0.00	9.20	33.28	2.00	0.00	1.00	0.00
9.40	23.75	2.00	0.00	1.00	0.00	9.60	16.40	2.00	0.00	1.00	0.00
9.80	12.20	2.00	0.00	1.00	0.00	10.00	10.08	2.00	0.00	1.00	0.00
10.20	11.99	2.00	0.00	1.00	0.00	10.40	15.85	2.00	0.00	1.00	0.00
10.60	15.71	2.00	0.00	1.00	0.00	10.80	20.44	2.00	0.00	1.00	0.00
11.00	16.39	2.00	0.00	1.00	0.00	11.20	13.38	2.00	0.00	1.00	0.00
11.40	14.22	2.00	0.00	1.00	0.00	11.60	13.15	2.00	0.00	1.00	0.00
11.80	18.67	2.00	0.00	1.00	0.00	12.00	13.86	2.00	0.00	1.00	0.00
12.20	14.68	2.00	0.00	1.00	0.00	12.40	14.56	2.00	0.00	1.00	0.00
12.60	12.62	2.00	0.00	1.00	0.00	12.80	20.66	2.00	0.00	1.00	0.00
13.00	26.83	2.00	0.00	1.00	0.00	13.20	23.03	2.00	0.00	1.00	0.00
13.40	19.30	2.00	0.00	1.00	0.00	13.60	10.39	2.00	0.00	1.00	0.00
13.80	12.05	2.00	0.00	1.00	0.00	14.00	9.38	2.00	0.00	1.00	0.00
14.20	10.18	2.00	0.00	1.00	0.00	14.40	7.56	2.00	0.00	1.00	0.00
14.60	22.01	2.00	0.00	1.00	0.00	14.80	21.86	2.00	0.00	1.00	0.00
15.00	9.90	2.00	0.00	1.00	0.00	15.20	10.66	2.00	0.00	1.00	0.00
15.40	11.42	2.00	0.00	1.00	0.00	15.60	9.70	2.00	0.00	1.00	0.00
15.80	12.91	2.00	0.00	1.00	0.00	16.00	14.46	2.00	0.00	1.00	0.00
16.20	11.12	2.00	0.00	1.00	0.00	16.40	10.25	2.00	0.00	1.00	0.00
16.60	14.99	2.00	0.00	1.00	0.00	16.80	12.50	2.00	0.00	1.00	0.00
17.00	12.42	2.00	0.00	1.00	0.00	17.20	11.56	2.00	0.00	1.00	0.00
17.40	9.94	2.00	0.00	1.00	0.00	17.60	9.11	2.00	0.00	1.00	0.00
17.80	12.91	2.00	0.00	1.00	0.00	18.00	10.53	2.00	0.00	1.00	0.00
18.20	11.23	2.00	0.00	1.00	0.00	18.40	9.65	2.00	0.00	1.00	0.00
18.60	7.35	2.00	0.00	1.00	0.00	18.80	8.80	2.00	0.00	1.00	0.00
19.00	10.98	2.00	0.00	1.00	0.00	19.20	11.67	2.00	0.00	1.00	0.00
19.40	11.60	2.00	0.00	1.00	0.00	19.60	12.28	2.00	0.00	1.00	0.00
19.80	10.02	2.00	0.00	1.00	0.00	20.00	0.00	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)

Total estimated settlement: 3.86

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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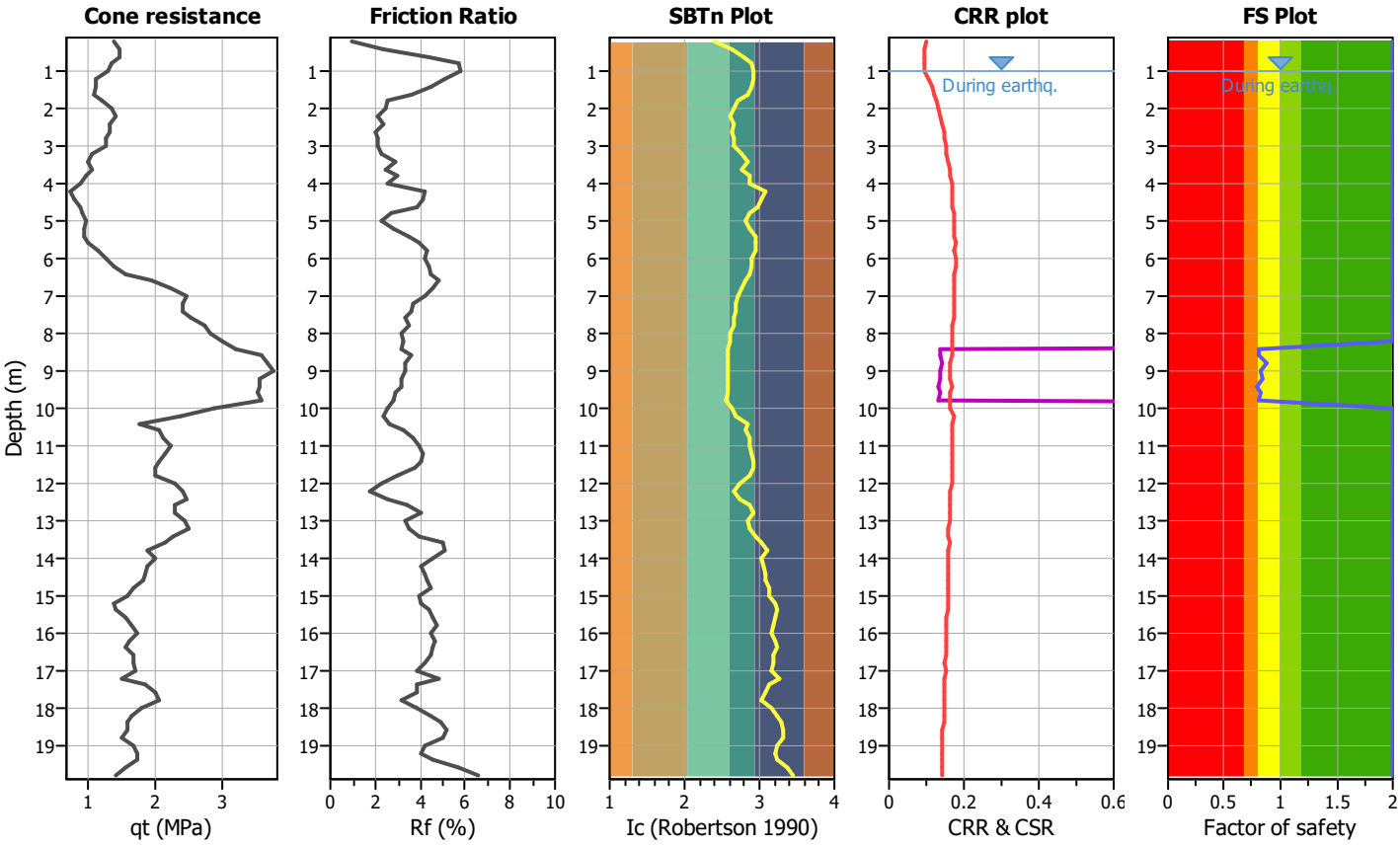
LIQUEFACTION ANALYSIS REPORT

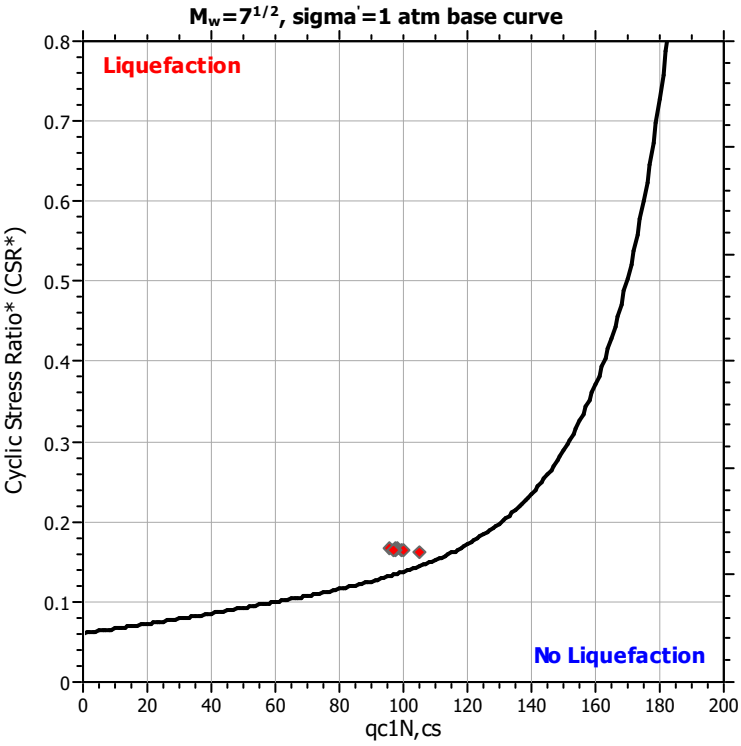
Project title : **Location :**

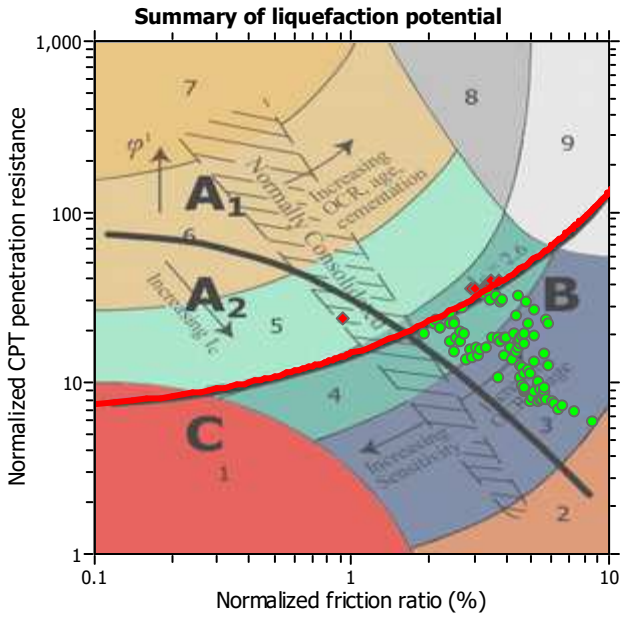
CPT file : CPT259

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

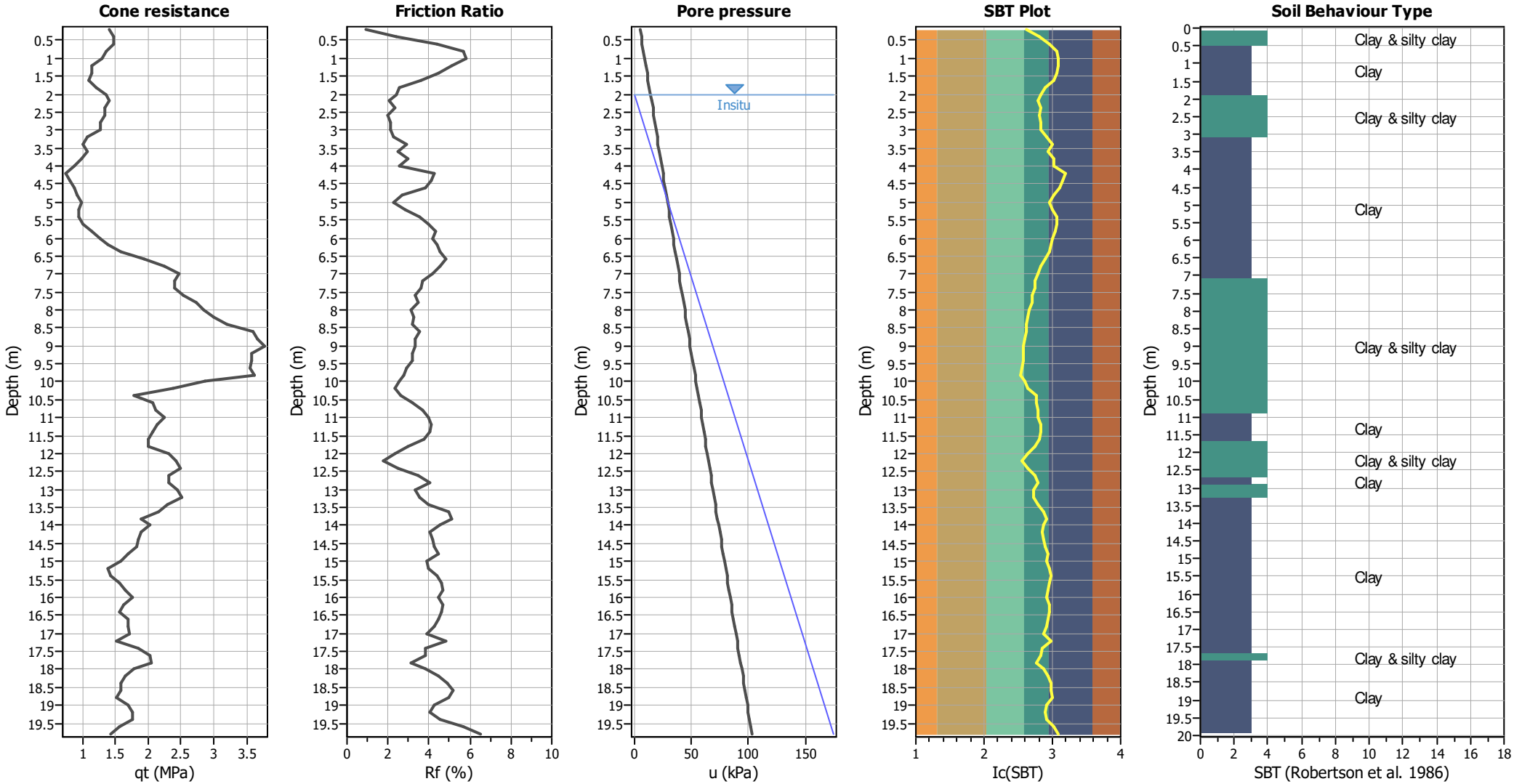






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



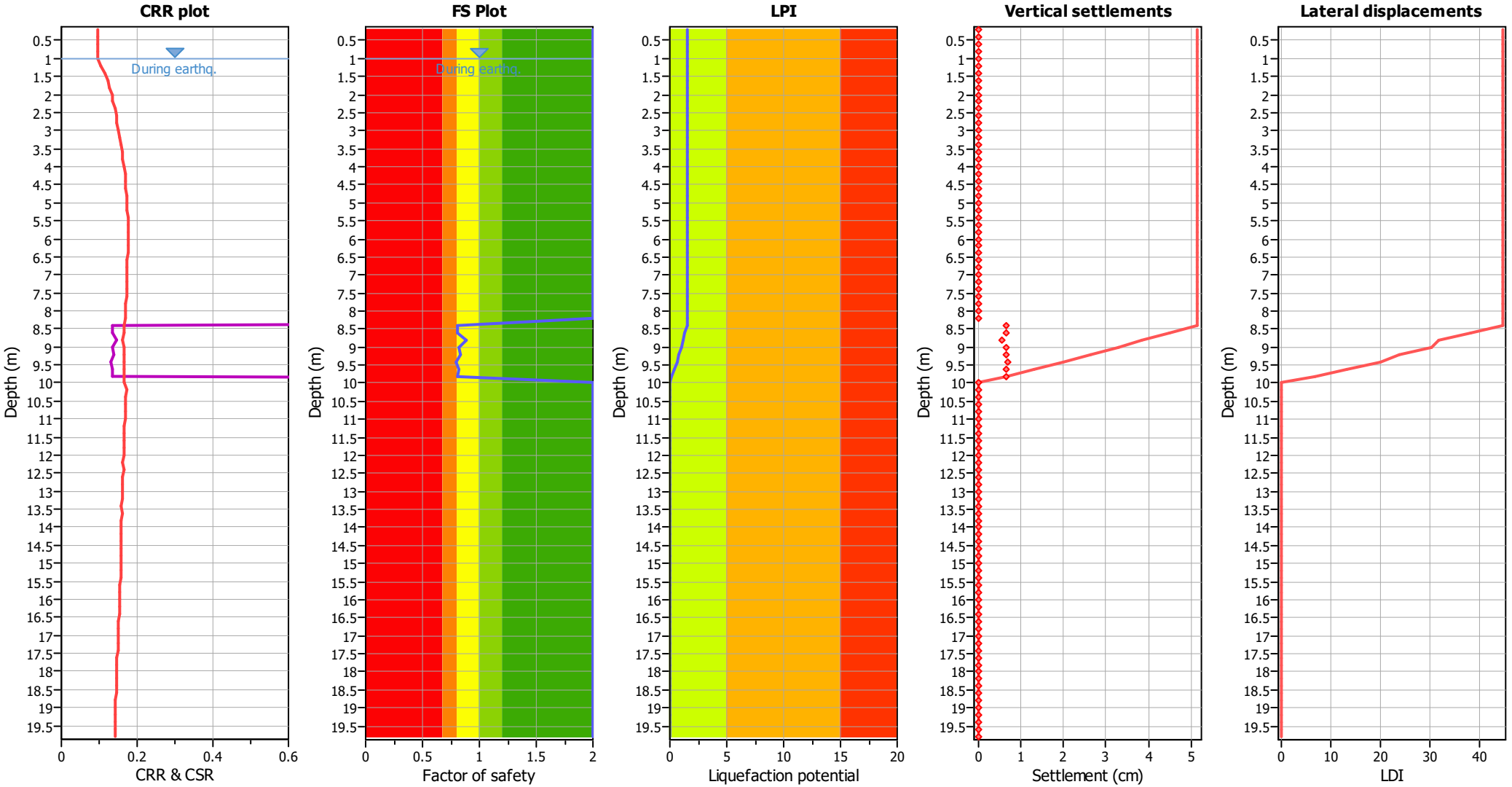
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	2.00	0.00	8.20	0.20	0.00
3.80	2.00	0.00	8.10	0.20	0.00	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	0.81	0.19	5.80	0.20	0.22
8.60	0.81	0.19	5.70	0.20	0.22	8.80	0.88	0.12	5.60	0.20	0.13
9.00	0.82	0.18	5.50	0.20	0.19	9.20	0.84	0.16	5.40	0.20	0.18
9.40	0.80	0.20	5.30	0.20	0.22	9.60	0.82	0.18	5.20	0.20	0.19
9.80	0.81	0.19	5.10	0.20	0.19	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00	15.20	2.00	0.00	2.40	0.20	0.00
15.40	2.00	0.00	2.30	0.20	0.00	15.60	2.00	0.00	2.20	0.20	0.00
15.80	2.00	0.00	2.10	0.20	0.00	16.00	2.00	0.00	2.00	0.20	0.00
16.20	2.00	0.00	1.90	0.20	0.00	16.40	2.00	0.00	1.80	0.20	0.00
16.60	2.00	0.00	1.70	0.20	0.00	16.80	2.00	0.00	1.60	0.20	0.00
17.00	2.00	0.00	1.50	0.20	0.00	17.20	2.00	0.00	1.40	0.20	0.00
17.40	2.00	0.00	1.30	0.20	0.00	17.60	2.00	0.00	1.20	0.20	0.00
17.80	2.00	0.00	1.10	0.20	0.00	18.00	2.00	0.00	1.00	0.20	0.00
18.20	2.00	0.00	0.90	0.20	0.00	18.40	2.00	0.00	0.80	0.20	0.00
18.60	2.00	0.00	0.70	0.20	0.00	18.80	2.00	0.00	0.60	0.20	0.00
19.00	2.00	0.00	0.50	0.20	0.00	19.20	2.00	0.00	0.40	0.20	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
19.40	2.00	0.00	0.30	0.20	0.00	19.60	2.00	0.00	0.20	0.20	0.00
19.80	2.00	0.00	0.10	0.20	0.00						

Overall liquefaction potential: 1.54

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	18.46	2.00	0.00	1.00	0.00	1.20	23.49	2.00	0.00	1.00	0.00
1.40	15.10	2.00	0.00	1.00	0.00	1.60	18.46	2.00	0.00	1.00	0.00
1.80	21.81	2.00	0.00	1.00	0.00	2.00	20.13	2.00	0.00	1.00	0.00
2.20	26.84	2.00	0.00	1.00	0.00	2.40	23.49	2.00	0.00	1.00	0.00
2.60	16.78	2.00	0.00	1.00	0.00	2.80	25.75	2.00	0.00	1.00	0.00
3.00	19.32	2.00	0.00	1.00	0.00	3.20	15.95	2.00	0.00	1.00	0.00
3.40	15.65	2.00	0.00	1.00	0.00	3.60	15.41	2.00	0.00	1.00	0.00
3.80	18.02	2.00	0.00	1.00	0.00	4.00	10.56	2.00	0.00	1.00	0.00
4.20	10.38	2.00	0.00	1.00	0.00	4.40	11.63	2.00	0.00	1.00	0.00
4.60	12.84	2.00	0.00	1.00	0.00	4.80	12.68	2.00	0.00	1.00	0.00
5.00	12.52	2.00	0.00	1.00	0.00	5.20	14.99	2.00	0.00	1.00	0.00
5.40	10.84	2.00	0.00	1.00	0.00	5.60	11.99	2.00	0.00	1.00	0.00
5.80	16.91	2.00	0.00	1.00	0.00	6.00	15.44	2.00	0.00	1.00	0.00
6.20	16.47	2.00	0.00	1.00	0.00	6.40	19.89	2.00	0.00	1.00	0.00
6.60	22.01	2.00	0.00	1.00	0.00	6.80	28.72	2.00	0.00	1.00	0.00
7.00	29.52	2.00	0.00	1.00	0.00	7.20	29.17	2.00	0.00	1.00	0.00
7.40	25.45	2.00	0.00	1.00	0.00	7.60	28.50	2.00	0.00	1.00	0.00
7.80	32.57	2.00	0.00	1.00	0.00	8.00	31.14	2.00	0.00	1.00	0.00
8.20	30.79	2.00	0.00	1.00	0.00	8.40	98.28	0.81	3.27	1.00	0.65
8.60	97.77	0.81	3.29	1.00	0.66	8.80	105.03	0.88	2.77	1.00	0.55
9.00	99.14	0.82	3.24	1.00	0.65	9.20	100.11	0.84	3.21	1.00	0.64
9.40	95.78	0.80	3.36	1.00	0.67	9.60	97.68	0.82	3.29	1.00	0.66
9.80	97.03	0.81	3.31	1.00	0.66	10.00	36.03	2.00	0.00	1.00	0.00
10.20	13.91	2.00	0.00	1.00	0.00	10.40	20.68	2.00	0.00	1.00	0.00
10.60	17.57	2.00	0.00	1.00	0.00	10.80	22.26	2.00	0.00	1.00	0.00
11.00	21.10	2.00	0.00	1.00	0.00	11.20	20.92	2.00	0.00	1.00	0.00
11.40	18.84	2.00	0.00	1.00	0.00	11.60	18.68	2.00	0.00	1.00	0.00
11.80	18.53	2.00	0.00	1.00	0.00	12.00	18.38	2.00	0.00	1.00	0.00
12.20	26.55	2.00	0.00	1.00	0.00	12.40	20.84	2.00	0.00	1.00	0.00
12.60	19.78	2.00	0.00	1.00	0.00	12.80	21.43	2.00	0.00	1.00	0.00
13.00	20.36	2.00	0.00	1.00	0.00	13.20	22.89	2.00	0.00	1.00	0.00
13.40	22.72	2.00	0.00	1.00	0.00	13.60	13.78	2.00	0.00	1.00	0.00
13.80	18.89	2.00	0.00	1.00	0.00	14.00	15.29	2.00	0.00	1.00	0.00
14.20	16.90	2.00	0.00	1.00	0.00	14.40	15.07	2.00	0.00	1.00	0.00
14.60	14.12	2.00	0.00	1.00	0.00	14.80	15.71	2.00	0.00	1.00	0.00
15.00	11.44	2.00	0.00	1.00	0.00	15.20	11.36	2.00	0.00	1.00	0.00
15.40	10.47	2.00	0.00	1.00	0.00	15.60	12.03	2.00	0.00	1.00	0.00
15.80	14.39	2.00	0.00	1.00	0.00	16.00	12.67	2.00	0.00	1.00	0.00
16.20	14.20	2.00	0.00	1.00	0.00	16.40	10.92	2.00	0.00	1.00	0.00
16.60	10.85	2.00	0.00	1.00	0.00	16.80	17.12	2.00	0.00	1.00	0.00
17.00	10.72	2.00	0.00	1.00	0.00	17.20	11.43	2.00	0.00	1.00	0.00
17.40	12.13	2.00	0.00	1.00	0.00	17.60	18.28	2.00	0.00	1.00	0.00
17.80	15.06	2.00	0.00	1.00	0.00	18.00	12.68	2.00	0.00	1.00	0.00
18.20	11.84	2.00	0.00	1.00	0.00	18.40	11.77	2.00	0.00	1.00	0.00
18.60	10.96	2.00	0.00	1.00	0.00	18.80	11.64	2.00	0.00	1.00	0.00
19.00	10.10	2.00	0.00	1.00	0.00	19.20	14.47	2.00	0.00	1.00	0.00
19.40	12.91	2.00	0.00	1.00	0.00	19.60	9.92	2.00	0.00	1.00	0.00
19.80	9.87	2.00	0.00	1.00	0.00						

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)

Total estimated settlement: 5.15

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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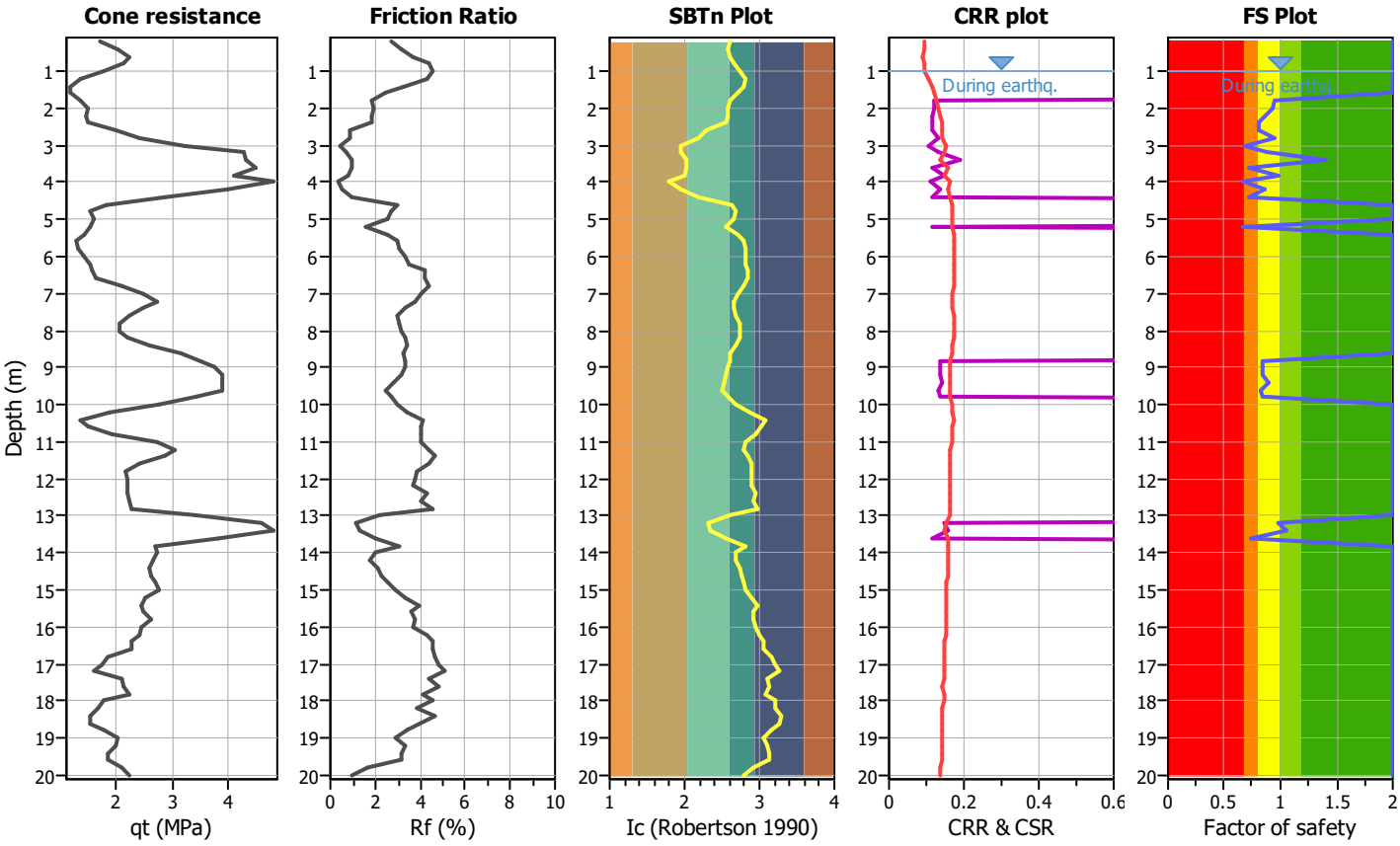
LIQUEFACTION ANALYSIS REPORT

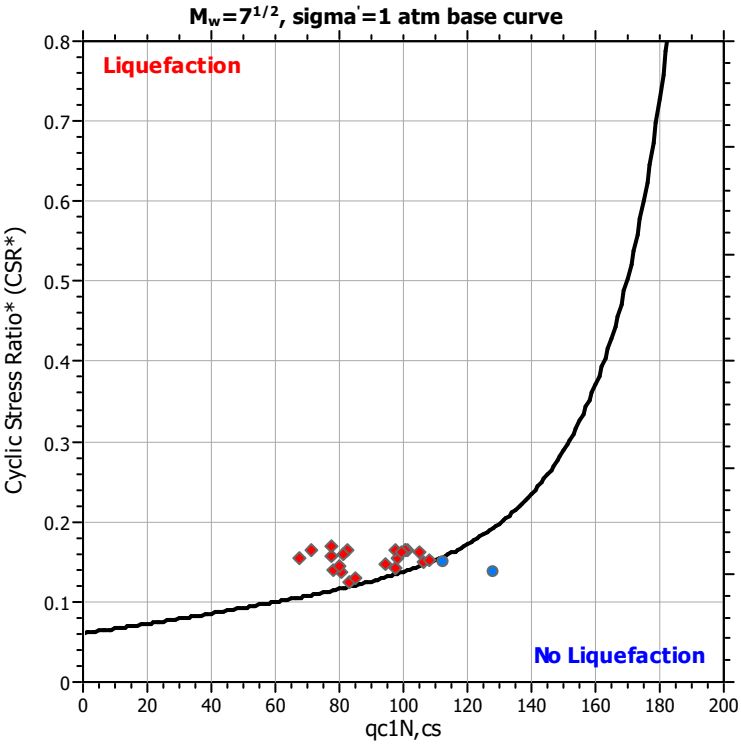
Project title : **Location :**

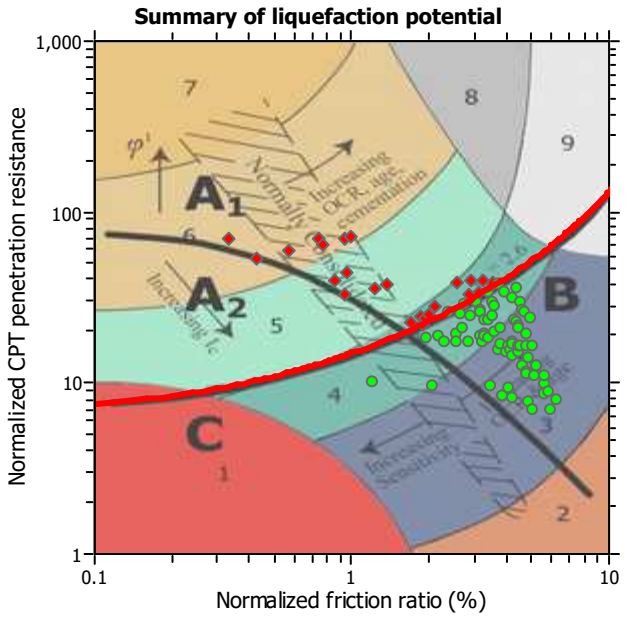
CPT file : CPT260

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

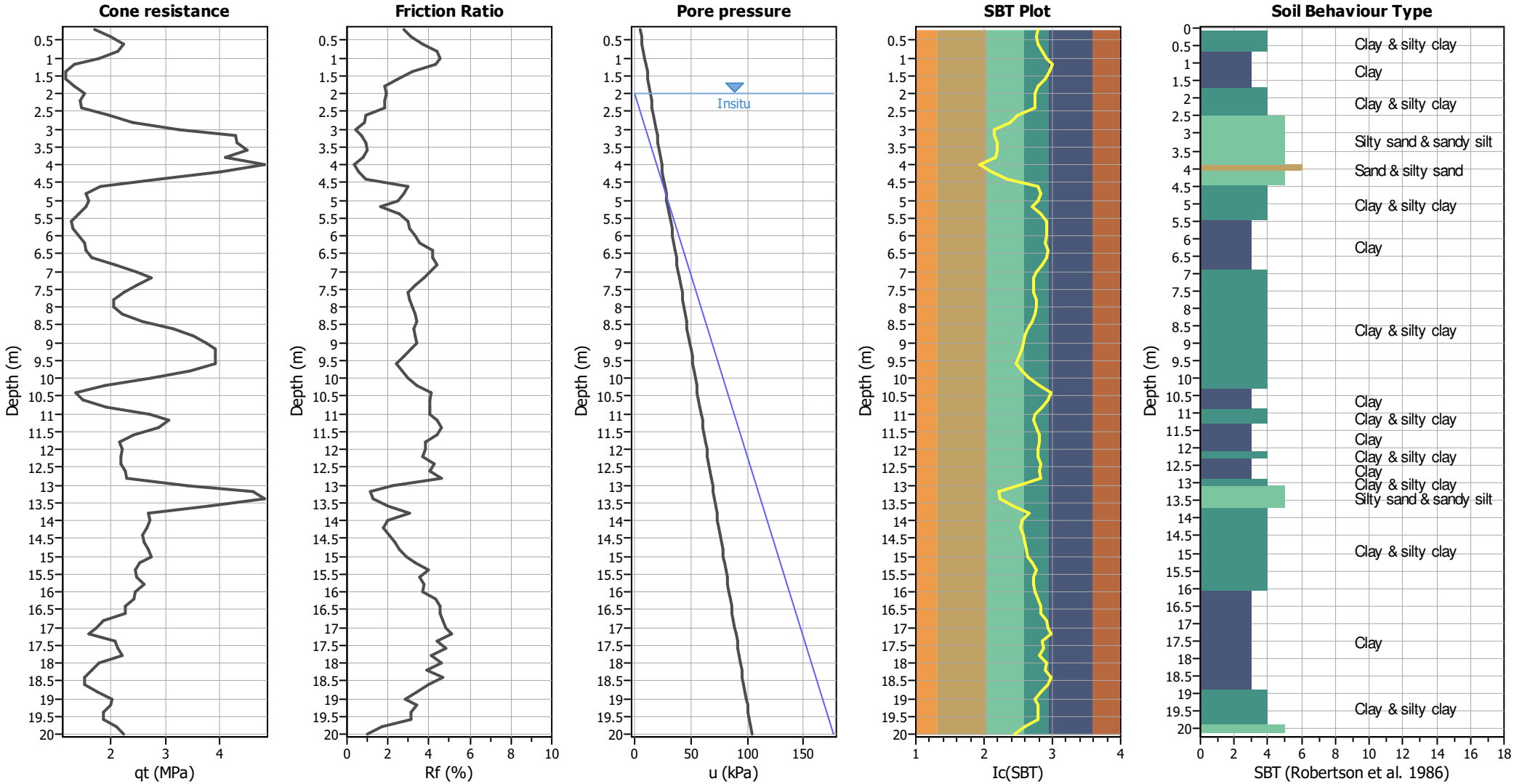






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



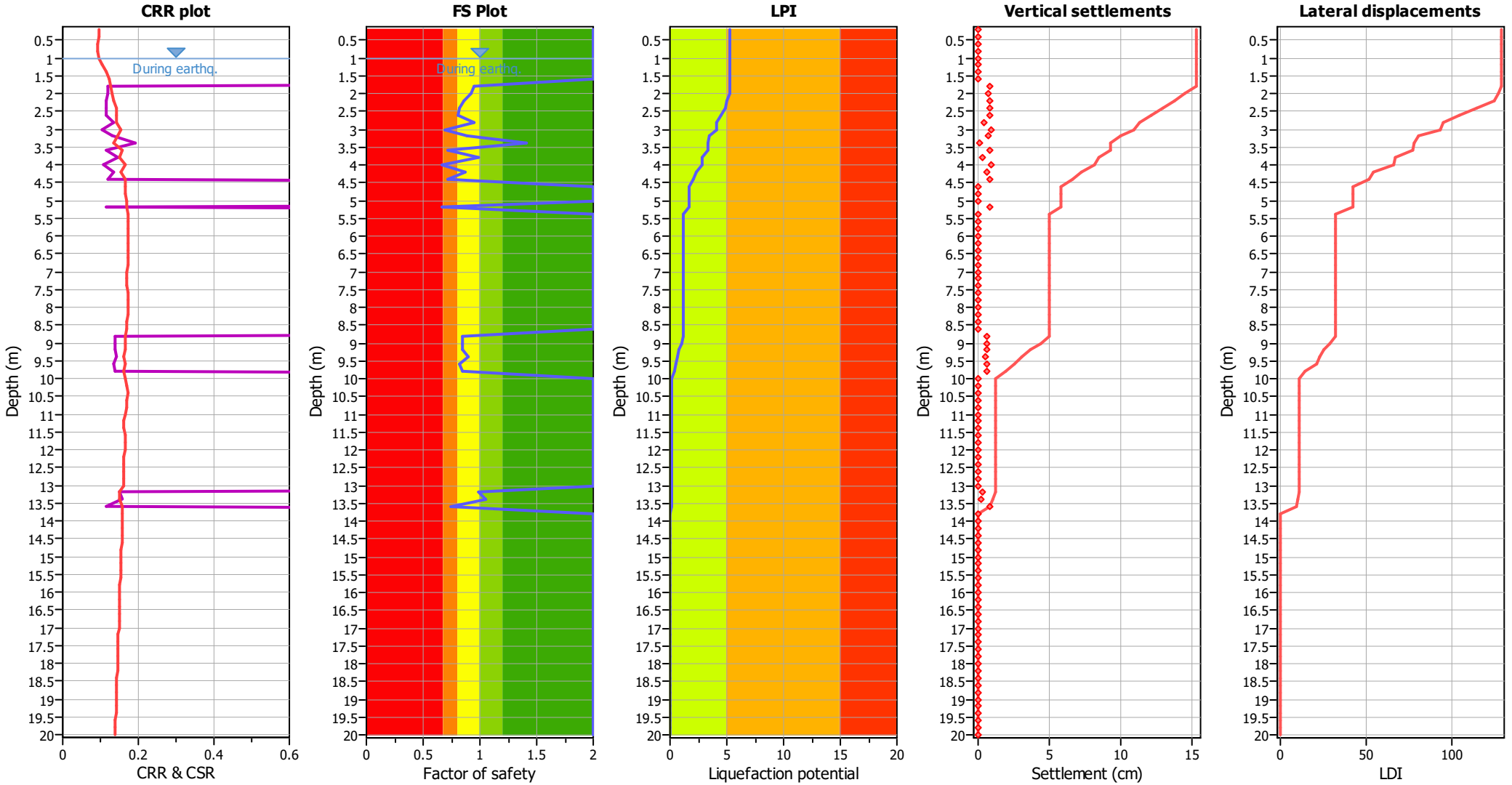
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	0.95	0.05	9.10	0.20	0.10	2.00	0.92	0.08	9.00	0.20	0.14
2.20	0.86	0.14	8.90	0.20	0.25	2.40	0.81	0.19	8.80	0.20	0.33
2.60	0.81	0.19	8.70	0.20	0.34	2.80	0.94	0.06	8.60	0.20	0.10
3.00	0.69	0.31	8.50	0.20	0.53	3.20	0.88	0.12	8.40	0.20	0.19
3.40	1.41	0.00	8.30	0.20	0.00	3.60	0.72	0.28	8.20	0.20	0.46
3.80	0.98	0.02	8.10	0.20	0.03	4.00	0.66	0.34	8.00	0.20	0.54
4.20	0.87	0.13	7.90	0.20	0.21	4.40	0.72	0.28	7.80	0.20	0.43
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	0.67	0.33	7.40	0.20	0.49
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	0.85	0.15	5.60	0.20	0.17
9.00	0.84	0.16	5.50	0.20	0.18	9.20	0.85	0.15	5.40	0.20	0.17
9.40	0.89	0.11	5.30	0.20	0.11	9.60	0.82	0.18	5.20	0.20	0.19
9.80	0.84	0.16	5.10	0.20	0.16	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	0.99	0.01	3.40	0.20	0.01
13.40	1.06	0.00	3.30	0.20	0.00	13.60	0.74	0.26	3.20	0.20	0.17
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00	15.20	2.00	0.00	2.40	0.20	0.00
15.40	2.00	0.00	2.30	0.20	0.00	15.60	2.00	0.00	2.20	0.20	0.00
15.80	2.00	0.00	2.10	0.20	0.00	16.00	2.00	0.00	2.00	0.20	0.00
16.20	2.00	0.00	1.90	0.20	0.00	16.40	2.00	0.00	1.80	0.20	0.00
16.60	2.00	0.00	1.70	0.20	0.00	16.80	2.00	0.00	1.60	0.20	0.00
17.00	2.00	0.00	1.50	0.20	0.00	17.20	2.00	0.00	1.40	0.20	0.00
17.40	2.00	0.00	1.30	0.20	0.00	17.60	2.00	0.00	1.20	0.20	0.00
17.80	2.00	0.00	1.10	0.20	0.00	18.00	2.00	0.00	1.00	0.20	0.00
18.20	2.00	0.00	0.90	0.20	0.00	18.40	2.00	0.00	0.80	0.20	0.00
18.60	2.00	0.00	0.70	0.20	0.00	18.80	2.00	0.00	0.60	0.20	0.00
19.00	2.00	0.00	0.50	0.20	0.00	19.20	2.00	0.00	0.40	0.20	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
19.40	2.00	0.00	0.30	0.20	0.00	19.60	2.00	0.00	0.20	0.20	0.00
19.80	2.00	0.00	0.10	0.20	0.00	20.00	2.00	0.00	0.00	0.20	0.00

Overall liquefaction potential: 5.30

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	23.49	2.00	0.00	1.00	0.00	1.20	25.17	2.00	0.00	1.00	0.00
1.40	18.46	2.00	0.00	1.00	0.00	1.60	15.10	2.00	0.00	1.00	0.00
1.80	83.28	0.95	3.86	1.00	0.77	2.00	84.98	0.92	3.78	1.00	0.76
2.20	80.78	0.86	3.97	1.00	0.79	2.40	78.42	0.81	4.09	1.00	0.82
2.60	79.93	0.81	4.01	1.00	0.80	2.80	97.26	0.94	2.21	1.00	0.44
3.00	67.64	0.69	4.70	1.00	0.94	3.20	94.60	0.88	3.40	1.00	0.68
3.40	128.00	1.41	0.35	1.00	0.07	3.60	77.54	0.72	4.13	1.00	0.83
3.80	106.00	0.98	1.46	1.00	0.29	4.00	71.45	0.66	4.46	1.00	0.89
4.20	97.99	0.87	3.28	1.00	0.66	4.40	82.34	0.72	3.90	1.00	0.78
4.60	19.52	2.00	0.00	1.00	0.00	4.80	21.84	2.00	0.00	1.00	0.00
5.00	21.55	2.00	0.00	1.00	0.00	5.20	77.76	0.67	4.12	1.00	0.82
5.40	18.44	2.00	0.00	1.00	0.00	5.60	15.65	2.00	0.00	1.00	0.00
5.80	15.44	2.00	0.00	1.00	0.00	6.00	18.94	2.00	0.00	1.00	0.00
6.20	18.69	2.00	0.00	1.00	0.00	6.40	18.44	2.00	0.00	1.00	0.00
6.60	19.39	2.00	0.00	1.00	0.00	6.80	21.48	2.00	0.00	1.00	0.00
7.00	32.62	2.00	0.00	1.00	0.00	7.20	32.25	2.00	0.00	1.00	0.00
7.40	29.66	2.00	0.00	1.00	0.00	7.60	22.69	2.00	0.00	1.00	0.00
7.80	23.53	2.00	0.00	1.00	0.00	8.00	22.19	2.00	0.00	1.00	0.00
8.20	21.95	2.00	0.00	1.00	0.00	8.40	28.12	2.00	0.00	1.00	0.00
8.60	33.10	2.00	0.00	1.00	0.00	8.80	101.05	0.85	3.18	1.00	0.64
9.00	100.33	0.84	3.20	1.00	0.64	9.20	100.63	0.85	3.19	1.00	0.64
9.40	104.87	0.89	2.60	1.00	0.52	9.60	97.28	0.82	3.30	1.00	0.66
9.80	99.59	0.84	3.23	1.00	0.65	10.00	27.89	2.00	0.00	1.00	0.00
10.20	15.80	2.00	0.00	1.00	0.00	10.40	11.75	2.00	0.00	1.00	0.00
10.60	11.64	2.00	0.00	1.00	0.00	10.80	19.25	2.00	0.00	1.00	0.00
11.00	23.86	2.00	0.00	1.00	0.00	11.20	34.14	2.00	0.00	1.00	0.00
11.40	28.16	2.00	0.00	1.00	0.00	11.60	18.56	2.00	0.00	1.00	0.00
11.80	20.26	2.00	0.00	1.00	0.00	12.00	20.10	2.00	0.00	1.00	0.00
12.20	19.94	2.00	0.00	1.00	0.00	12.40	18.87	2.00	0.00	1.00	0.00
12.60	19.62	2.00	0.00	1.00	0.00	12.80	21.26	2.00	0.00	1.00	0.00
13.00	19.28	2.00	0.00	1.00	0.00	13.20	107.97	0.99	1.39	1.00	0.28
13.40	112.70	1.06	1.00	1.00	0.20	13.60	81.03	0.74	3.96	1.00	0.79
13.80	22.22	2.00	0.00	1.00	0.00	14.00	22.05	2.00	0.00	1.00	0.00
14.20	24.49	2.00	0.00	1.00	0.00	14.40	20.05	2.00	0.00	1.00	0.00
14.60	19.92	2.00	0.00	1.00	0.00	14.80	24.88	2.00	0.00	1.00	0.00
15.00	21.34	2.00	0.00	1.00	0.00	15.20	21.21	2.00	0.00	1.00	0.00
15.40	18.59	2.00	0.00	1.00	0.00	15.60	19.28	2.00	0.00	1.00	0.00
15.80	21.62	2.00	0.00	1.00	0.00	16.00	21.48	2.00	0.00	1.00	0.00
16.20	14.88	2.00	0.00	1.00	0.00	16.40	20.40	2.00	0.00	1.00	0.00
16.60	17.07	2.00	0.00	1.00	0.00	16.80	14.60	2.00	0.00	1.00	0.00
17.00	10.62	2.00	0.00	1.00	0.00	17.20	13.64	2.00	0.00	1.00	0.00
17.40	11.25	2.00	0.00	1.00	0.00	17.60	22.02	2.00	0.00	1.00	0.00
17.80	14.15	2.00	0.00	1.00	0.00	18.00	13.31	2.00	0.00	1.00	0.00
18.20	11.73	2.00	0.00	1.00	0.00	18.40	10.92	2.00	0.00	1.00	0.00
18.60	10.12	2.00	0.00	1.00	0.00	18.80	11.54	2.00	0.00	1.00	0.00
19.00	15.92	2.00	0.00	1.00	0.00	19.20	15.84	2.00	0.00	1.00	0.00
19.40	10.62	2.00	0.00	1.00	0.00	19.60	12.74	2.00	0.00	1.00	0.00
19.80	15.59	2.00	0.00	1.00	0.00	20.00	15.49	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)

Total estimated settlement: 15.35

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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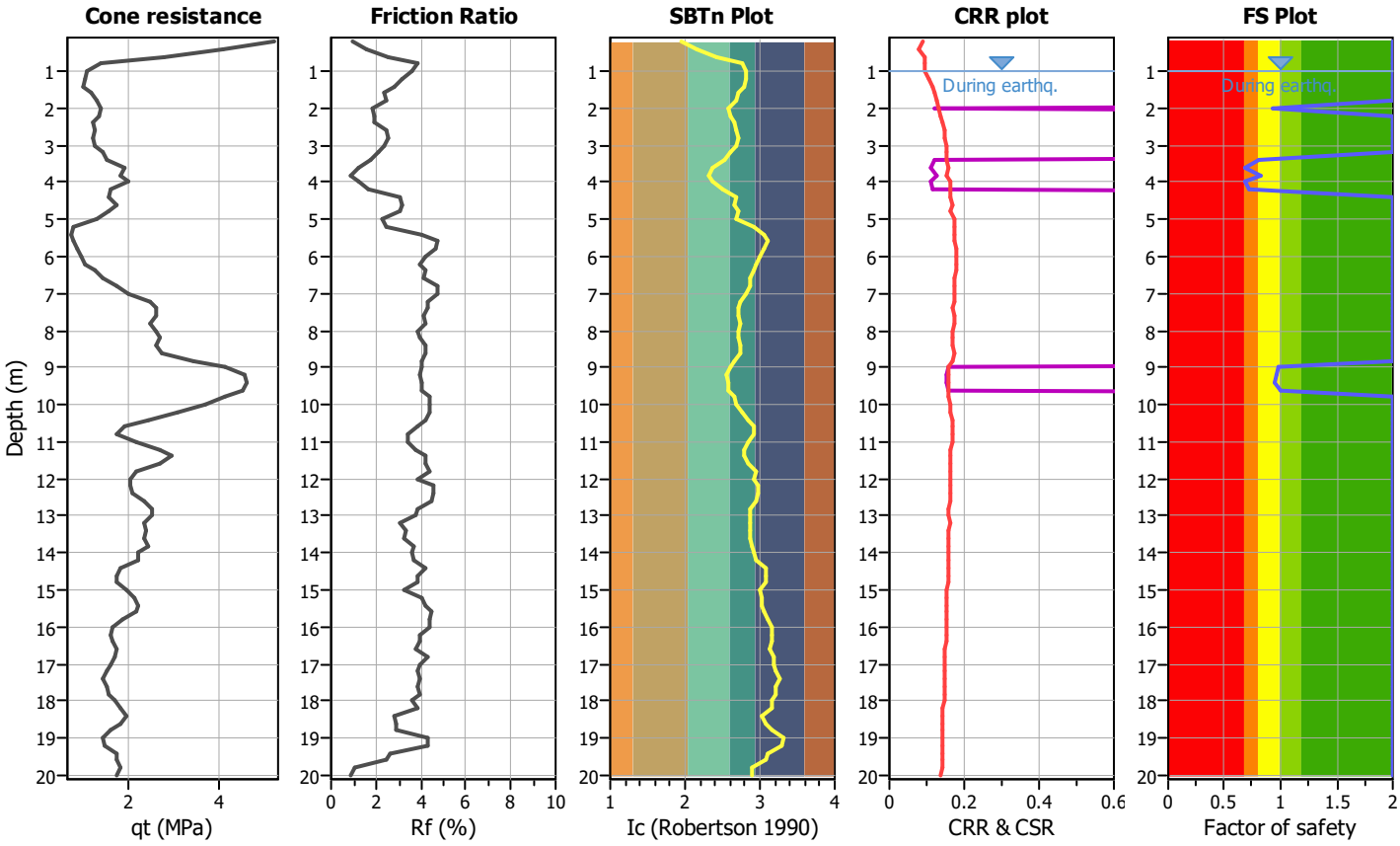
LIQUEFACTION ANALYSIS REPORT

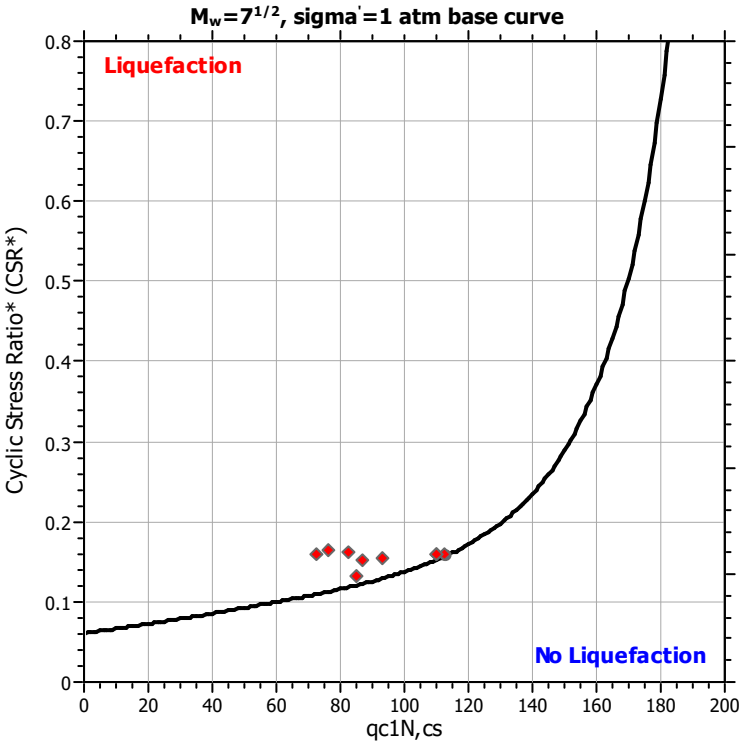
Project title : **Location :**

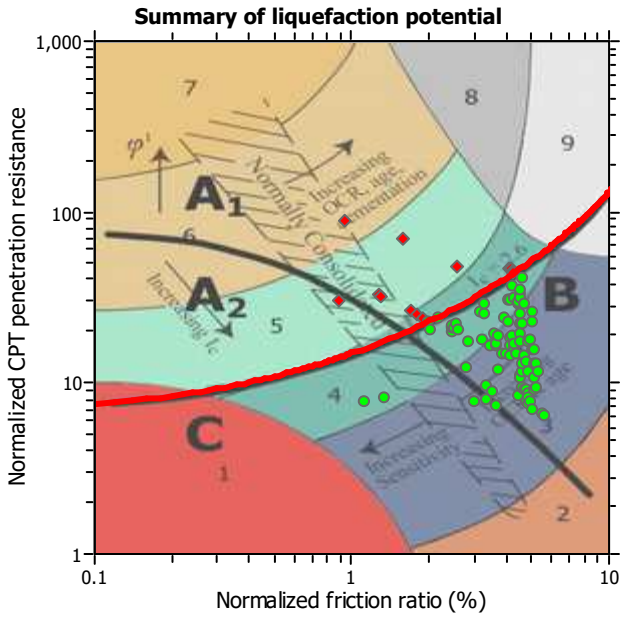
CPT file : CPT261

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

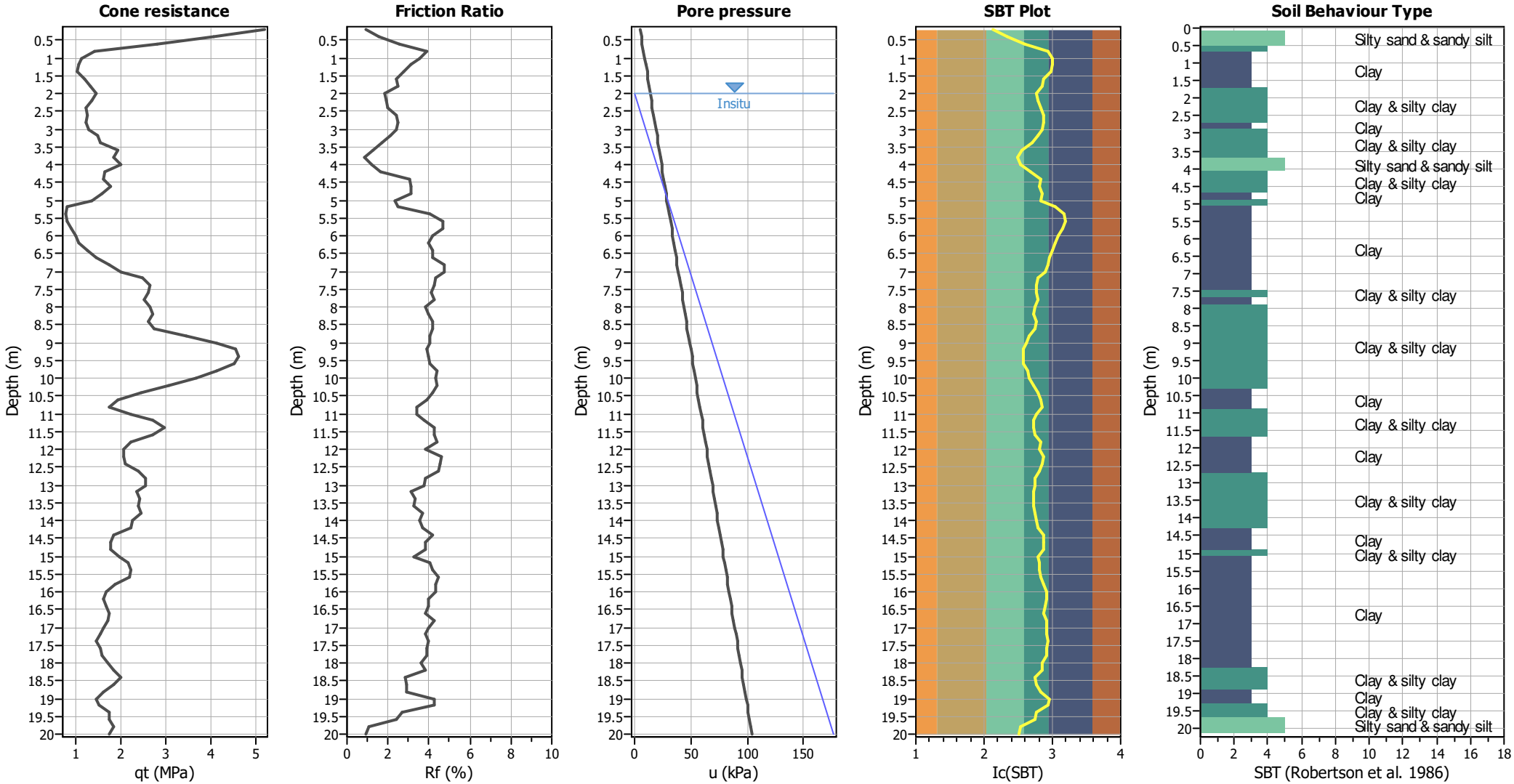






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



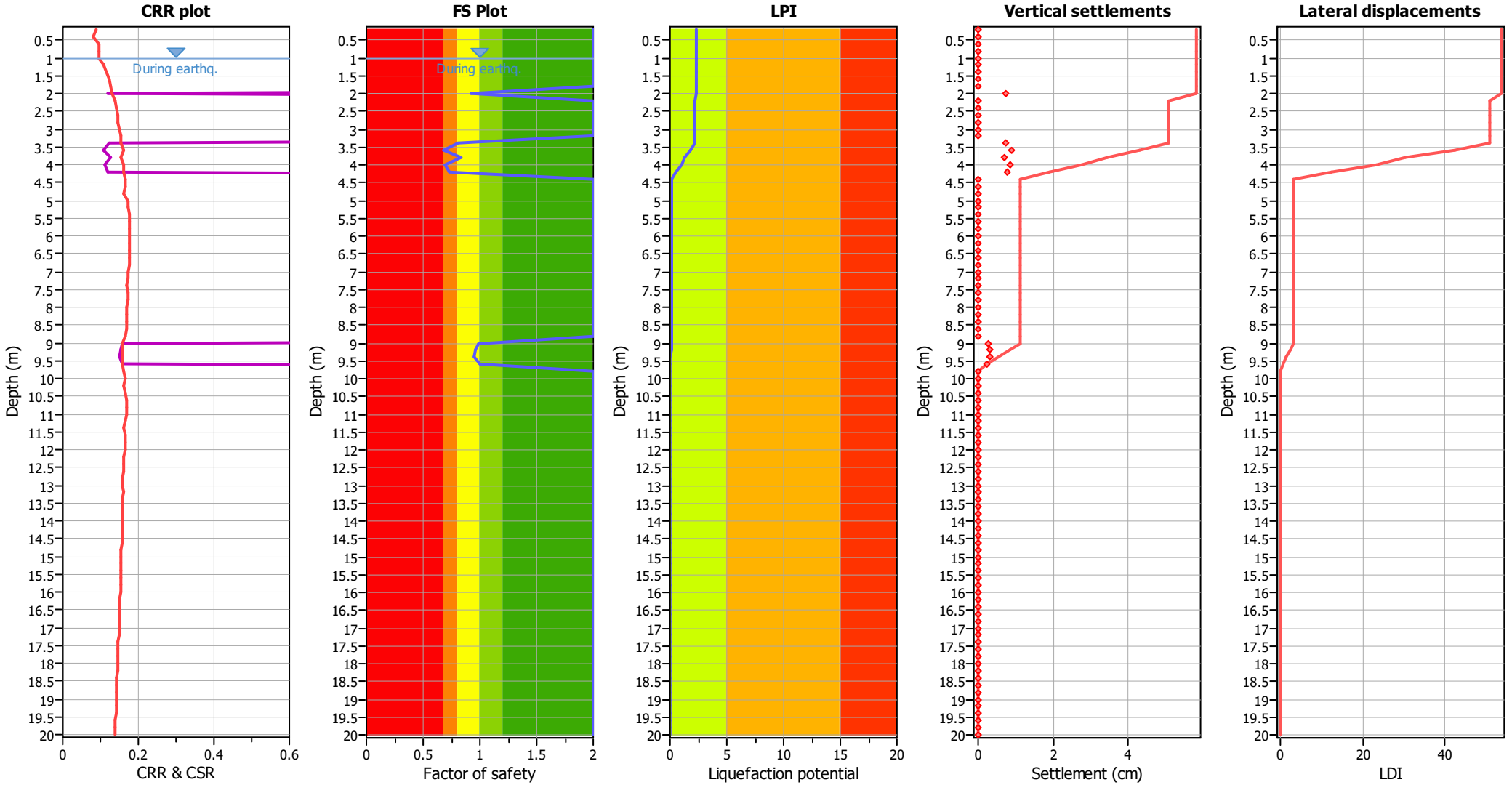
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	0.92	0.08	9.00	0.20	0.14
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	0.80	0.20	8.30	0.20	0.33	3.60	0.68	0.32	8.20	0.20	0.52
3.80	0.83	0.17	8.10	0.20	0.27	4.00	0.69	0.31	8.00	0.20	0.49
4.20	0.73	0.27	7.90	0.20	0.43	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	0.99	0.01	5.50	0.20	0.01	9.20	0.96	0.04	5.40	0.20	0.05
9.40	0.95	0.05	5.30	0.20	0.05	9.60	1.01	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00	15.20	2.00	0.00	2.40	0.20	0.00
15.40	2.00	0.00	2.30	0.20	0.00	15.60	2.00	0.00	2.20	0.20	0.00
15.80	2.00	0.00	2.10	0.20	0.00	16.00	2.00	0.00	2.00	0.20	0.00
16.20	2.00	0.00	1.90	0.20	0.00	16.40	2.00	0.00	1.80	0.20	0.00
16.60	2.00	0.00	1.70	0.20	0.00	16.80	2.00	0.00	1.60	0.20	0.00
17.00	2.00	0.00	1.50	0.20	0.00	17.20	2.00	0.00	1.40	0.20	0.00
17.40	2.00	0.00	1.30	0.20	0.00	17.60	2.00	0.00	1.20	0.20	0.00
17.80	2.00	0.00	1.10	0.20	0.00	18.00	2.00	0.00	1.00	0.20	0.00
18.20	2.00	0.00	0.90	0.20	0.00	18.40	2.00	0.00	0.80	0.20	0.00
18.60	2.00	0.00	0.70	0.20	0.00	18.80	2.00	0.00	0.60	0.20	0.00
19.00	2.00	0.00	0.50	0.20	0.00	19.20	2.00	0.00	0.40	0.20	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
19.40	2.00	0.00	0.30	0.20	0.00	19.60	2.00	0.00	0.20	0.20	0.00
19.80	2.00	0.00	0.10	0.20	0.00	20.00	2.00	0.00	0.00	0.20	0.00

Overall liquefaction potential: 2.30

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	18.46	2.00	0.00	1.00	0.00	1.20	15.10	2.00	0.00	1.00	0.00
1.40	20.13	2.00	0.00	1.00	0.00	1.60	16.78	2.00	0.00	1.00	0.00
1.80	23.49	2.00	0.00	1.00	0.00	2.00	85.09	0.92	3.78	1.00	0.76
2.20	21.81	2.00	0.00	1.00	0.00	2.40	20.13	2.00	0.00	1.00	0.00
2.60	20.01	2.00	0.00	1.00	0.00	2.80	22.68	2.00	0.00	1.00	0.00
3.00	17.76	2.00	0.00	1.00	0.00	3.20	21.96	2.00	0.00	1.00	0.00
3.40	87.04	0.80	3.69	1.00	0.74	3.60	72.33	0.68	4.41	1.00	0.88
3.80	92.84	0.83	3.46	1.00	0.69	4.00	76.51	0.69	4.18	1.00	0.84
4.20	82.68	0.73	3.88	1.00	0.78	4.40	21.31	2.00	0.00	1.00	0.00
4.60	20.99	2.00	0.00	1.00	0.00	4.80	31.04	2.00	0.00	1.00	0.00
5.00	12.43	2.00	0.00	1.00	0.00	5.20	10.91	2.00	0.00	1.00	0.00
5.40	9.44	2.00	0.00	1.00	0.00	5.60	10.61	2.00	0.00	1.00	0.00
5.80	11.74	2.00	0.00	1.00	0.00	6.00	12.85	2.00	0.00	1.00	0.00
6.20	13.92	2.00	0.00	1.00	0.00	6.40	13.74	2.00	0.00	1.00	0.00
6.60	19.57	2.00	0.00	1.00	0.00	6.80	19.32	2.00	0.00	1.00	0.00
7.00	23.71	2.00	0.00	1.00	0.00	7.20	27.98	2.00	0.00	1.00	0.00
7.40	34.35	2.00	0.00	1.00	0.00	7.60	28.42	2.00	0.00	1.00	0.00
7.80	25.89	2.00	0.00	1.00	0.00	8.00	29.95	2.00	0.00	1.00	0.00
8.20	31.77	2.00	0.00	1.00	0.00	8.40	27.16	2.00	0.00	1.00	0.00
8.60	25.80	2.00	0.00	1.00	0.00	8.80	34.95	2.00	0.00	1.00	0.00
9.00	112.78	0.99	1.30	1.00	0.26	9.20	110.25	0.96	1.55	1.00	0.31
9.40	109.80	0.95	1.59	1.00	0.32	9.60	113.40	1.01	1.20	1.00	0.24
9.80	42.16	2.00	0.00	1.00	0.00	10.00	33.82	2.00	0.00	1.00	0.00
10.20	33.51	2.00	0.00	1.00	0.00	10.40	23.43	2.00	0.00	1.00	0.00
10.60	14.50	2.00	0.00	1.00	0.00	10.80	18.23	2.00	0.00	1.00	0.00
11.00	17.11	2.00	0.00	1.00	0.00	11.20	27.39	2.00	0.00	1.00	0.00
11.40	31.88	2.00	0.00	1.00	0.00	11.60	24.12	2.00	0.00	1.00	0.00
11.80	19.29	2.00	0.00	1.00	0.00	12.00	17.29	2.00	0.00	1.00	0.00
12.20	19.89	2.00	0.00	1.00	0.00	12.40	18.82	2.00	0.00	1.00	0.00
12.60	17.77	2.00	0.00	1.00	0.00	12.80	26.60	2.00	0.00	1.00	0.00
13.00	22.82	2.00	0.00	1.00	0.00	13.20	17.35	2.00	0.00	1.00	0.00
13.40	20.73	2.00	0.00	1.00	0.00	13.60	24.08	2.00	0.00	1.00	0.00
13.80	16.11	2.00	0.00	1.00	0.00	14.00	22.02	2.00	0.00	1.00	0.00
14.20	18.44	2.00	0.00	1.00	0.00	14.40	14.93	2.00	0.00	1.00	0.00
14.60	12.32	2.00	0.00	1.00	0.00	14.80	16.40	2.00	0.00	1.00	0.00
15.00	14.63	2.00	0.00	1.00	0.00	15.20	17.00	2.00	0.00	1.00	0.00
15.40	20.19	2.00	0.00	1.00	0.00	15.60	15.96	2.00	0.00	1.00	0.00
15.80	15.85	2.00	0.00	1.00	0.00	16.00	12.54	2.00	0.00	1.00	0.00
16.20	10.88	2.00	0.00	1.00	0.00	16.40	13.97	2.00	0.00	1.00	0.00
16.60	13.89	2.00	0.00	1.00	0.00	16.80	12.24	2.00	0.00	1.00	0.00
17.00	12.94	2.00	0.00	1.00	0.00	17.20	11.32	2.00	0.00	1.00	0.00
17.40	10.49	2.00	0.00	1.00	0.00	17.60	10.43	2.00	0.00	1.00	0.00
17.80	13.41	2.00	0.00	1.00	0.00	18.00	11.06	2.00	0.00	1.00	0.00
18.20	13.25	2.00	0.00	1.00	0.00	18.40	16.20	2.00	0.00	1.00	0.00
18.60	13.86	2.00	0.00	1.00	0.00	18.80	10.08	2.00	0.00	1.00	0.00
19.00	10.76	2.00	0.00	1.00	0.00	19.20	9.97	2.00	0.00	1.00	0.00
19.40	11.37	2.00	0.00	1.00	0.00	19.60	15.70	2.00	0.00	1.00	0.00
19.80	9.81	2.00	0.00	1.00	0.00	20.00	13.37	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)

Total estimated settlement: 5.81

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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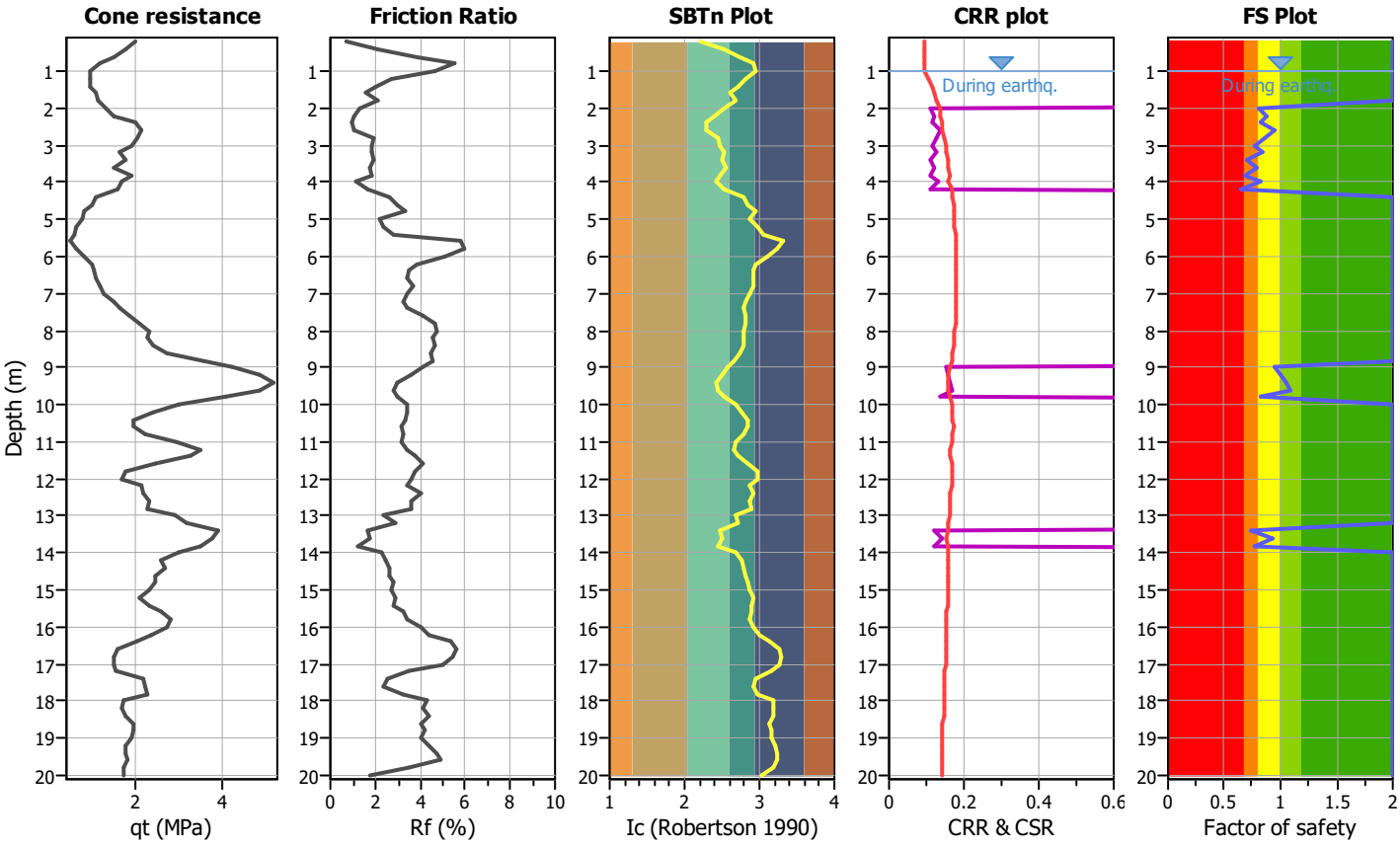
LIQUEFACTION ANALYSIS REPORT

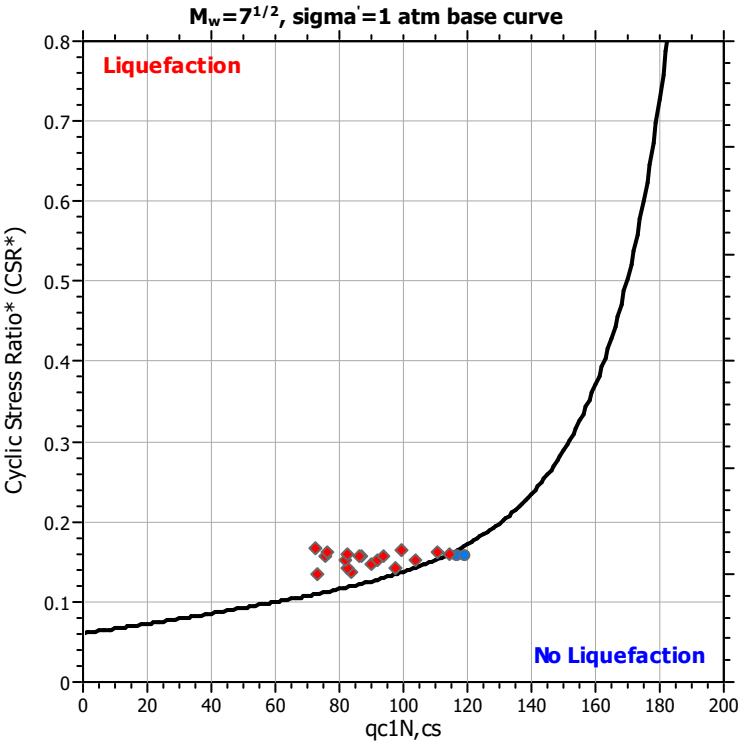
Project title : **Location :**

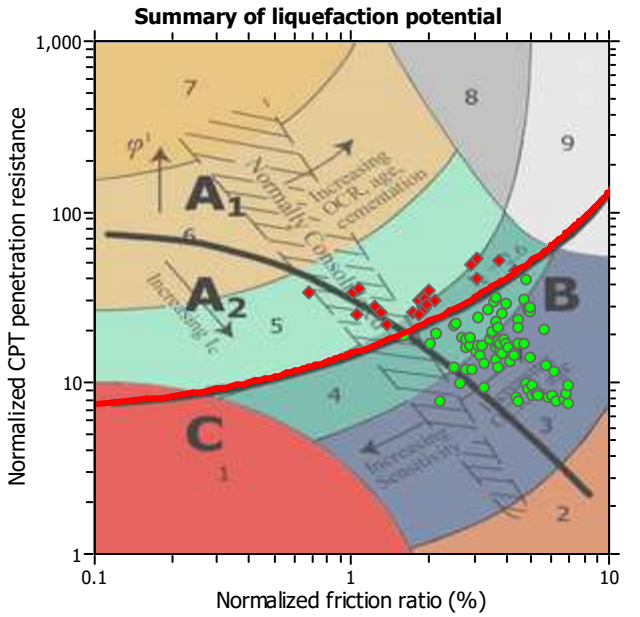
CPT file : CPT262

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

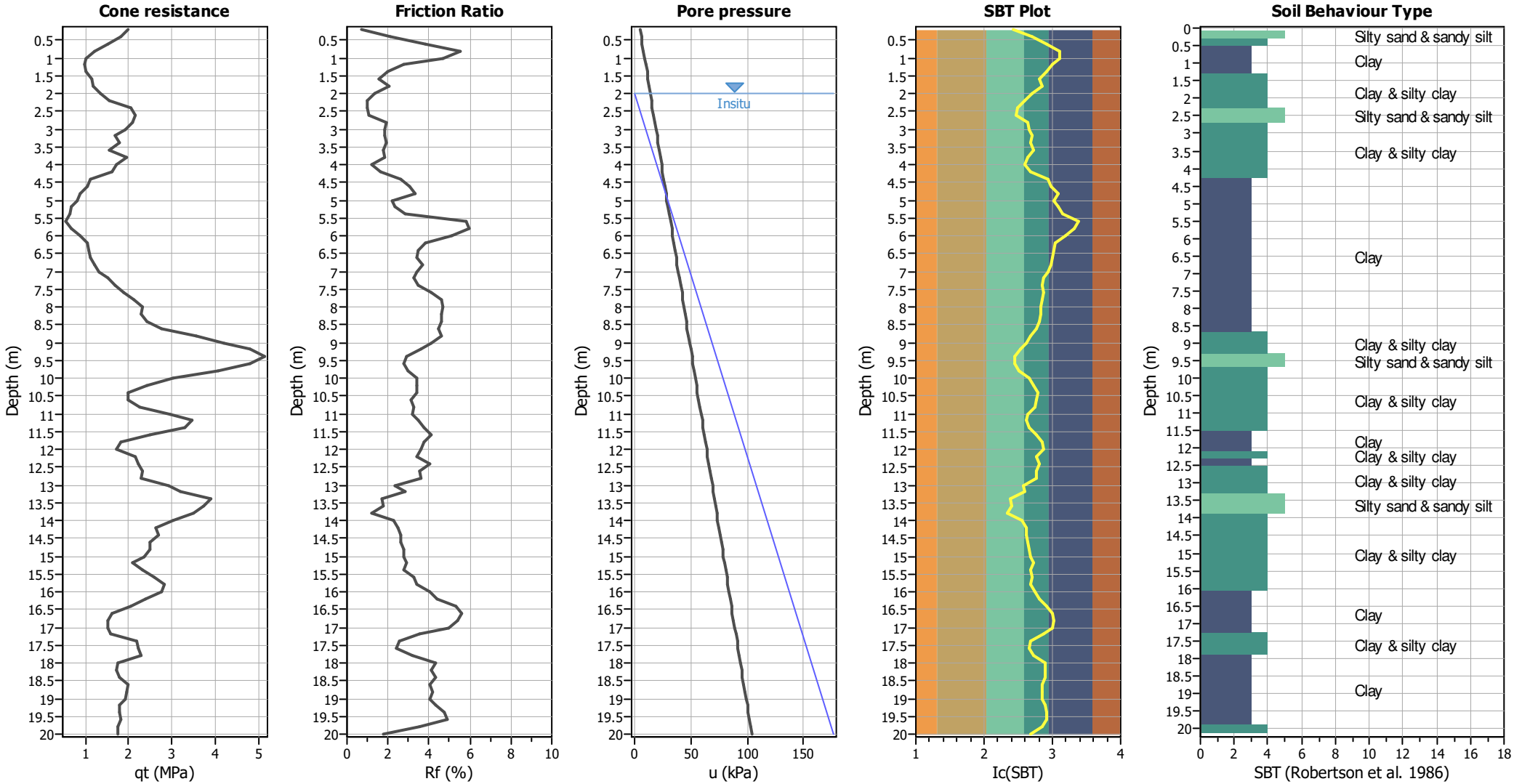






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



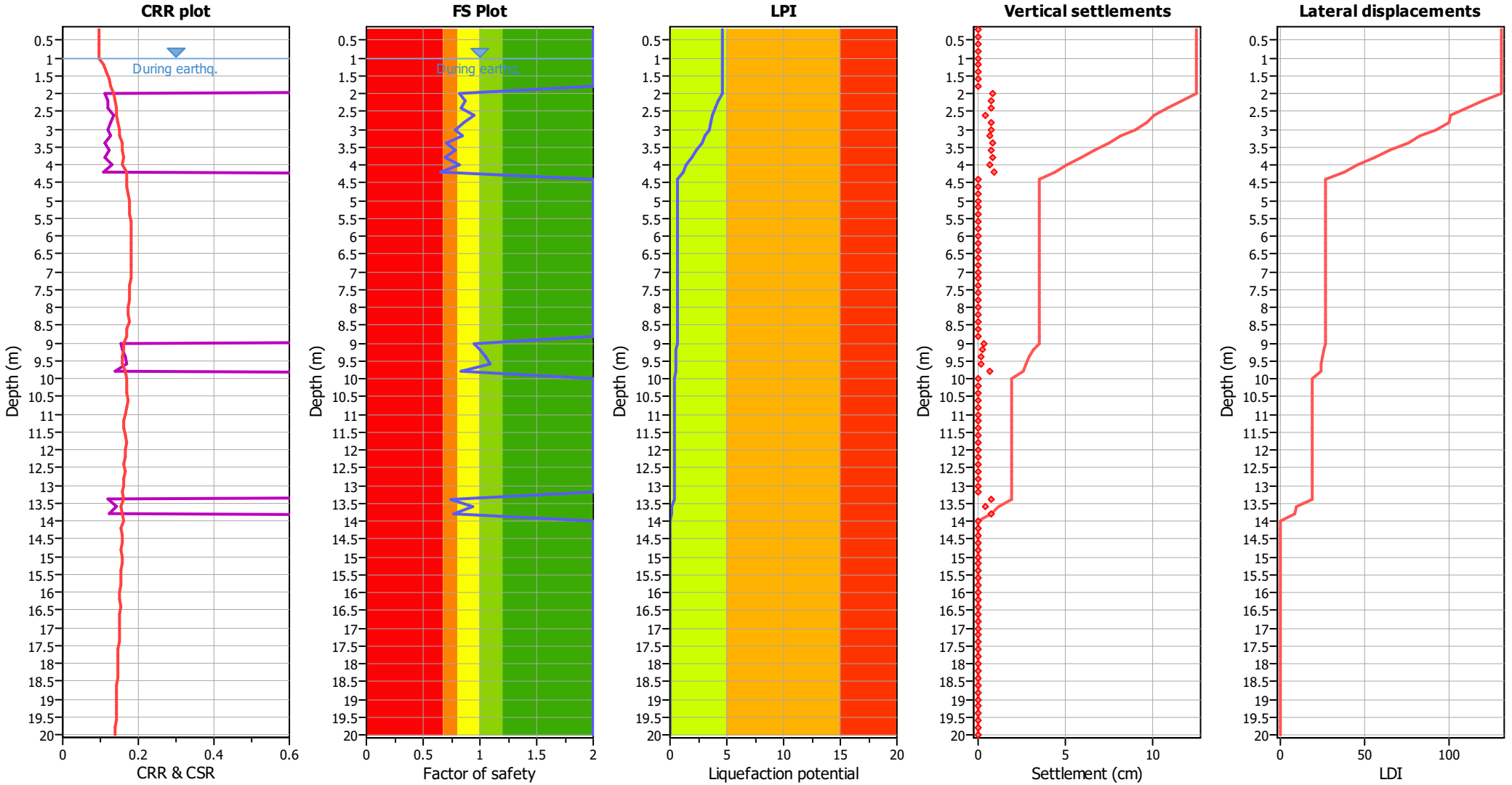
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	0.82	0.18	9.00	0.20	0.33
2.20	0.87	0.13	8.90	0.20	0.23	2.40	0.83	0.17	8.80	0.20	0.29
2.60	0.95	0.05	8.70	0.20	0.09	2.80	0.86	0.14	8.60	0.20	0.25
3.00	0.78	0.22	8.50	0.20	0.38	3.20	0.84	0.16	8.40	0.20	0.26
3.40	0.71	0.29	8.30	0.20	0.48	3.60	0.78	0.22	8.20	0.20	0.36
3.80	0.69	0.31	8.10	0.20	0.50	4.00	0.82	0.18	8.00	0.20	0.28
4.20	0.65	0.35	7.90	0.20	0.55	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	0.95	0.05	5.50	0.20	0.06	9.20	1.00	0.00	5.40	0.20	0.00
9.40	1.05	0.00	5.30	0.20	0.00	9.60	1.09	0.00	5.20	0.20	0.00
9.80	0.83	0.17	5.10	0.20	0.17	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	0.74	0.26	3.30	0.20	0.17	13.60	0.93	0.07	3.20	0.20	0.04
13.80	0.77	0.23	3.10	0.20	0.14	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00	15.20	2.00	0.00	2.40	0.20	0.00
15.40	2.00	0.00	2.30	0.20	0.00	15.60	2.00	0.00	2.20	0.20	0.00
15.80	2.00	0.00	2.10	0.20	0.00	16.00	2.00	0.00	2.00	0.20	0.00
16.20	2.00	0.00	1.90	0.20	0.00	16.40	2.00	0.00	1.80	0.20	0.00
16.60	2.00	0.00	1.70	0.20	0.00	16.80	2.00	0.00	1.60	0.20	0.00
17.00	2.00	0.00	1.50	0.20	0.00	17.20	2.00	0.00	1.40	0.20	0.00
17.40	2.00	0.00	1.30	0.20	0.00	17.60	2.00	0.00	1.20	0.20	0.00
17.80	2.00	0.00	1.10	0.20	0.00	18.00	2.00	0.00	1.00	0.20	0.00
18.20	2.00	0.00	0.90	0.20	0.00	18.40	2.00	0.00	0.80	0.20	0.00
18.60	2.00	0.00	0.70	0.20	0.00	18.80	2.00	0.00	0.60	0.20	0.00
19.00	2.00	0.00	0.50	0.20	0.00	19.20	2.00	0.00	0.40	0.20	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
19.40	2.00	0.00	0.30	0.20	0.00	19.60	2.00	0.00	0.20	0.20	0.00
19.80	2.00	0.00	0.10	0.20	0.00	20.00	2.00	0.00	0.00	0.20	0.00

Overall liquefaction potential: 4.60

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	18.46	2.00	0.00	1.00	0.00	1.20	13.42	2.00	0.00	1.00	0.00
1.40	16.78	2.00	0.00	1.00	0.00	1.60	20.13	2.00	0.00	1.00	0.00
1.80	20.13	2.00	0.00	1.00	0.00	2.00	73.38	0.82	4.35	1.00	0.87
2.20	83.98	0.87	3.82	1.00	0.76	2.40	82.69	0.83	3.88	1.00	0.78
2.60	97.54	0.95	2.08	1.00	0.42	2.80	89.89	0.86	3.58	1.00	0.72
3.00	82.03	0.78	3.91	1.00	0.78	3.20	91.61	0.84	3.51	1.00	0.70
3.40	75.80	0.71	4.22	1.00	0.84	3.60	86.97	0.78	3.70	1.00	0.74
3.80	76.08	0.69	4.21	1.00	0.84	4.00	93.69	0.82	3.43	1.00	0.69
4.20	72.46	0.65	4.40	1.00	0.88	4.40	15.96	2.00	0.00	1.00	0.00
4.60	14.33	2.00	0.00	1.00	0.00	4.80	14.11	2.00	0.00	1.00	0.00
5.00	8.47	2.00	0.00	1.00	0.00	5.20	11.07	2.00	0.00	1.00	0.00
5.40	8.25	2.00	0.00	1.00	0.00	5.60	6.80	2.00	0.00	1.00	0.00
5.80	6.70	2.00	0.00	1.00	0.00	6.00	13.05	2.00	0.00	1.00	0.00
6.20	14.14	2.00	0.00	1.00	0.00	6.40	12.72	2.00	0.00	1.00	0.00
6.60	13.79	2.00	0.00	1.00	0.00	6.80	14.83	2.00	0.00	1.00	0.00
7.00	15.85	2.00	0.00	1.00	0.00	7.20	16.84	2.00	0.00	1.00	0.00
7.40	21.28	2.00	0.00	1.00	0.00	7.60	21.02	2.00	0.00	1.00	0.00
7.80	23.02	2.00	0.00	1.00	0.00	8.00	28.29	2.00	0.00	1.00	0.00
8.20	26.87	2.00	0.00	1.00	0.00	8.40	21.12	2.00	0.00	1.00	0.00
8.60	31.64	2.00	0.00	1.00	0.00	8.80	36.59	2.00	0.00	1.00	0.00
9.00	110.87	0.95	1.60	1.00	0.32	9.20	114.18	1.00	1.23	1.00	0.25
9.40	117.07	1.05	1.01	1.00	0.20	9.60	119.29	1.09	0.87	1.00	0.17
9.80	99.61	0.83	3.23	1.00	0.65	10.00	30.36	2.00	0.00	1.00	0.00
10.20	22.08	2.00	0.00	1.00	0.00	10.40	19.89	2.00	0.00	1.00	0.00
10.60	16.76	2.00	0.00	1.00	0.00	10.80	21.49	2.00	0.00	1.00	0.00
11.00	27.12	2.00	0.00	1.00	0.00	11.20	36.52	2.00	0.00	1.00	0.00
11.40	36.22	2.00	0.00	1.00	0.00	11.60	20.72	2.00	0.00	1.00	0.00
11.80	13.04	2.00	0.00	1.00	0.00	12.00	16.66	2.00	0.00	1.00	0.00
12.20	17.44	2.00	0.00	1.00	0.00	12.40	24.67	2.00	0.00	1.00	0.00
12.60	18.07	2.00	0.00	1.00	0.00	12.80	19.74	2.00	0.00	1.00	0.00
13.00	23.18	2.00	0.00	1.00	0.00	13.20	34.76	2.00	0.00	1.00	0.00
13.40	82.79	0.74	3.88	1.00	0.78	13.60	103.98	0.93	1.99	1.00	0.40
13.80	86.25	0.77	3.73	1.00	0.75	14.00	18.84	2.00	0.00	1.00	0.00
14.20	29.20	2.00	0.00	1.00	0.00	14.40	18.59	2.00	0.00	1.00	0.00
14.60	20.18	2.00	0.00	1.00	0.00	14.80	23.47	2.00	0.00	1.00	0.00
15.00	18.22	2.00	0.00	1.00	0.00	15.20	16.43	2.00	0.00	1.00	0.00
15.40	16.32	2.00	0.00	1.00	0.00	15.60	23.71	2.00	0.00	1.00	0.00
15.80	22.71	2.00	0.00	1.00	0.00	16.00	21.74	2.00	0.00	1.00	0.00
16.20	21.60	2.00	0.00	1.00	0.00	16.40	13.36	2.00	0.00	1.00	0.00
16.60	13.27	2.00	0.00	1.00	0.00	16.80	10.82	2.00	0.00	1.00	0.00
17.00	10.75	2.00	0.00	1.00	0.00	17.20	13.03	2.00	0.00	1.00	0.00
17.40	12.17	2.00	0.00	1.00	0.00	17.60	24.69	2.00	0.00	1.00	0.00
17.80	13.57	2.00	0.00	1.00	0.00	18.00	13.49	2.00	0.00	1.00	0.00
18.20	11.89	2.00	0.00	1.00	0.00	18.40	12.57	2.00	0.00	1.00	0.00
18.60	14.77	2.00	0.00	1.00	0.00	18.80	16.20	2.00	0.00	1.00	0.00
19.00	11.61	2.00	0.00	1.00	0.00	19.20	13.77	2.00	0.00	1.00	0.00
19.40	12.95	2.00	0.00	1.00	0.00	19.60	11.41	2.00	0.00	1.00	0.00
19.80	14.28	2.00	0.00	1.00	0.00	20.00	11.30	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)

Total estimated settlement: 12.53

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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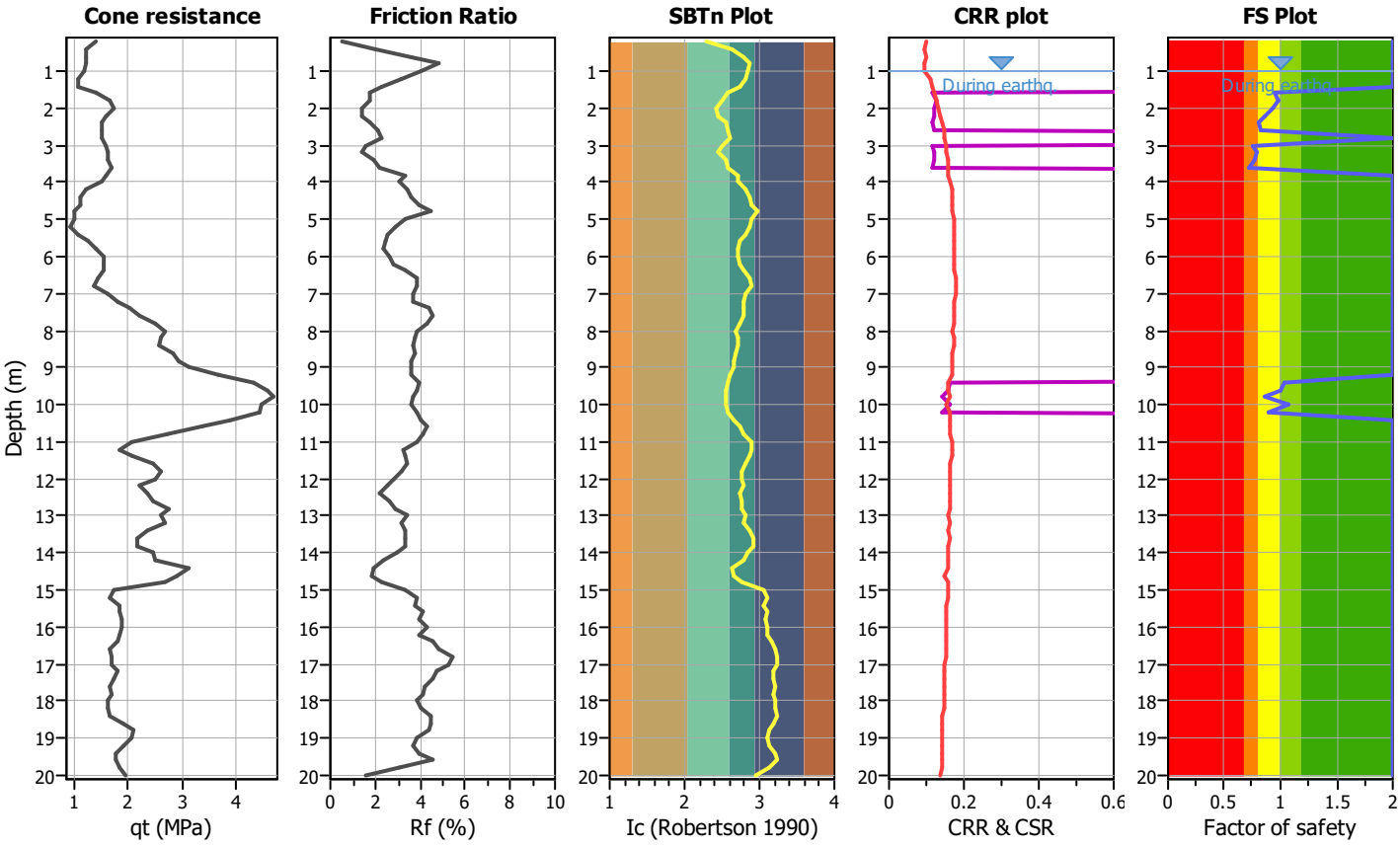
LIQUEFACTION ANALYSIS REPORT

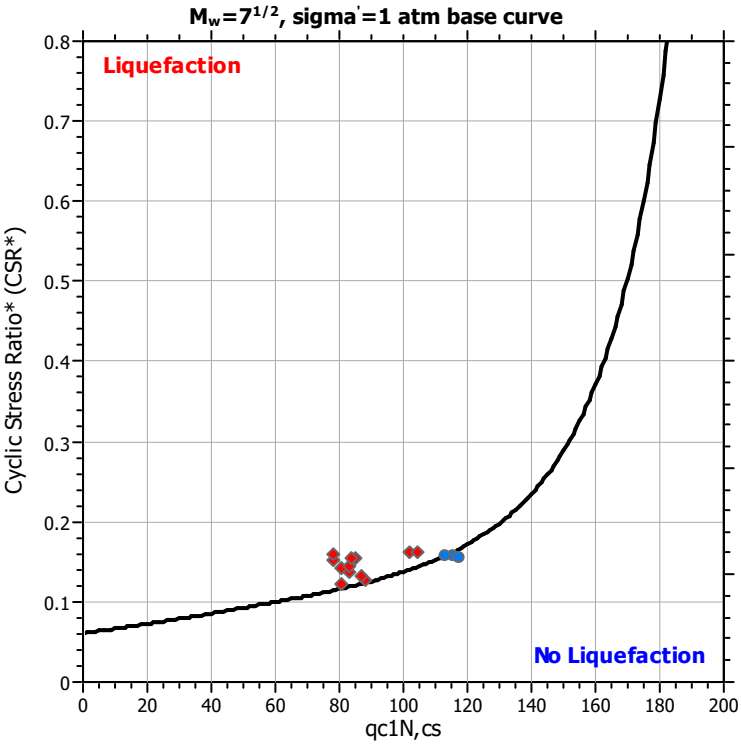
Project title : **Location :**

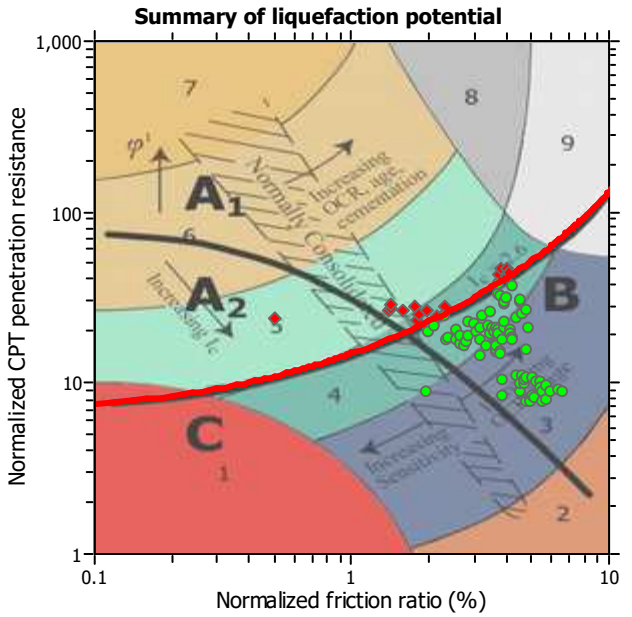
CPT file : CPT263

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

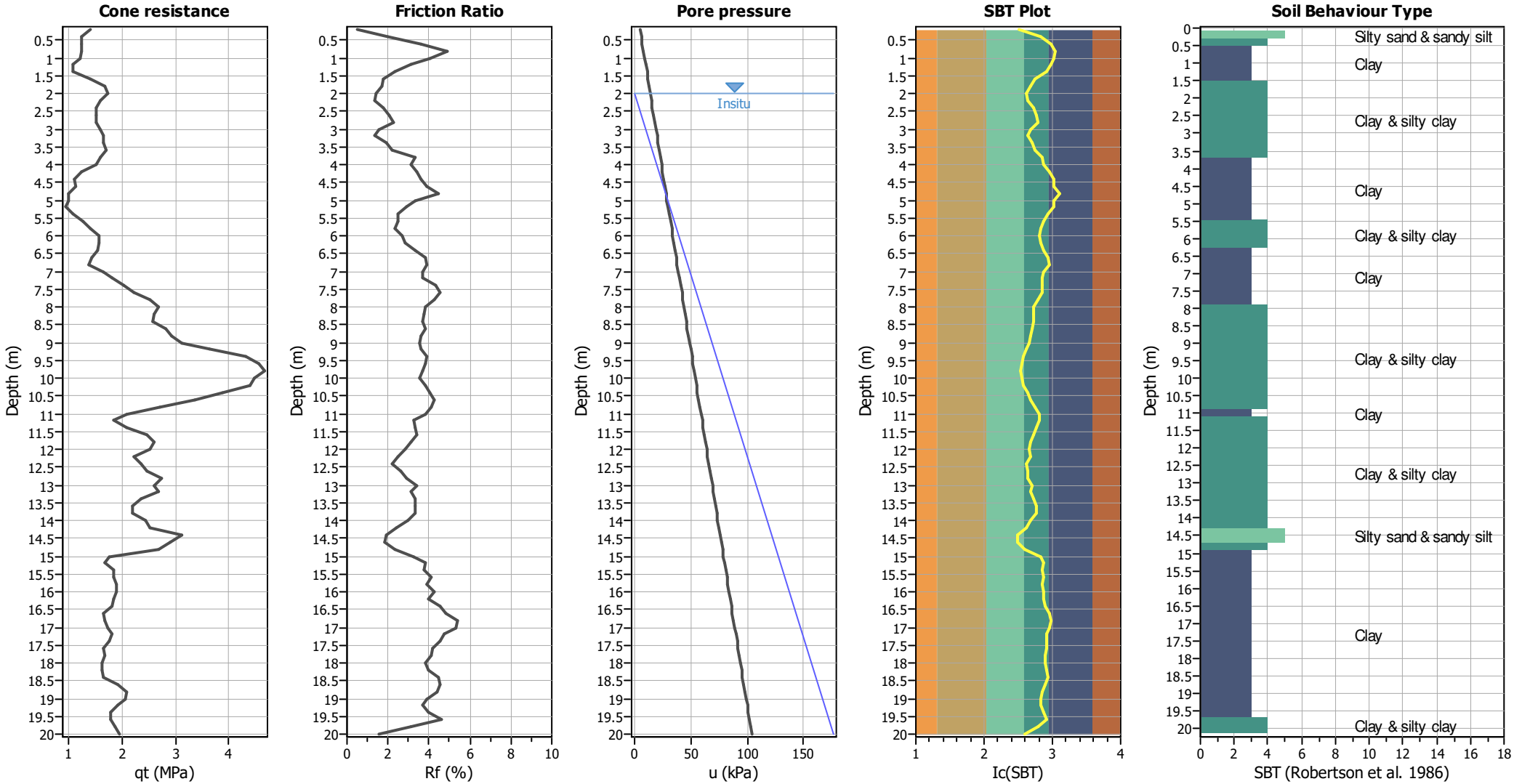






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



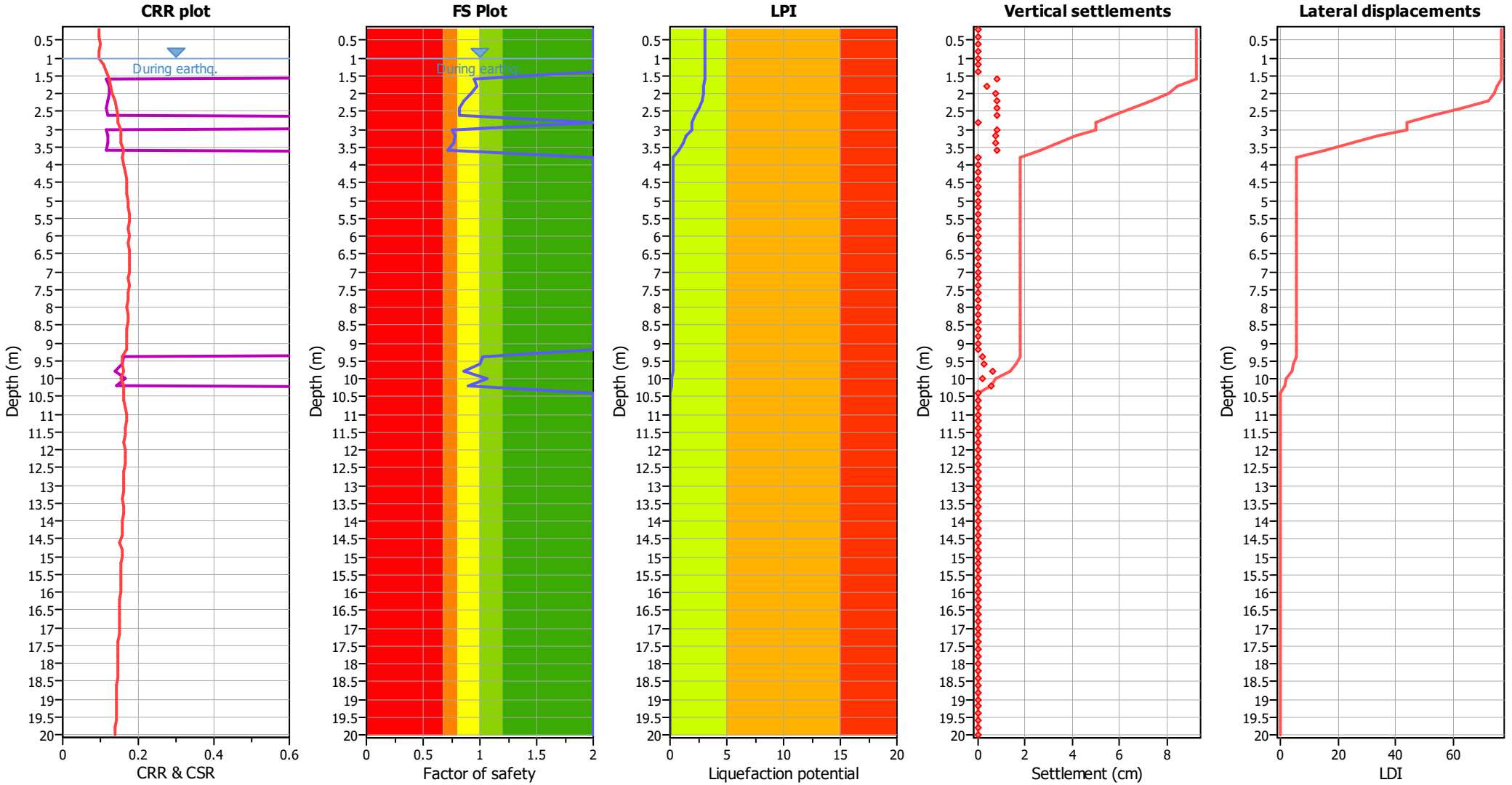
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	0.95	0.05	9.20	0.20	0.08
1.80	0.98	0.02	9.10	0.20	0.04	2.00	0.93	0.07	9.00	0.20	0.13
2.20	0.86	0.14	8.90	0.20	0.25	2.40	0.82	0.18	8.80	0.20	0.33
2.60	0.82	0.18	8.70	0.20	0.32	2.80	2.00	0.00	8.60	0.20	0.00
3.00	0.75	0.25	8.50	0.20	0.42	3.20	0.79	0.21	8.40	0.20	0.36
3.40	0.77	0.23	8.30	0.20	0.39	3.60	0.71	0.29	8.20	0.20	0.47
3.80	2.00	0.00	8.10	0.20	0.00	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	1.03	0.00	5.30	0.20	0.00	9.60	1.00	0.00	5.20	0.20	0.00
9.80	0.86	0.14	5.10	0.20	0.14	10.00	1.07	0.00	5.00	0.20	0.00
10.20	0.89	0.11	4.90	0.20	0.10	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00	15.20	2.00	0.00	2.40	0.20	0.00
15.40	2.00	0.00	2.30	0.20	0.00	15.60	2.00	0.00	2.20	0.20	0.00
15.80	2.00	0.00	2.10	0.20	0.00	16.00	2.00	0.00	2.00	0.20	0.00
16.20	2.00	0.00	1.90	0.20	0.00	16.40	2.00	0.00	1.80	0.20	0.00
16.60	2.00	0.00	1.70	0.20	0.00	16.80	2.00	0.00	1.60	0.20	0.00
17.00	2.00	0.00	1.50	0.20	0.00	17.20	2.00	0.00	1.40	0.20	0.00
17.40	2.00	0.00	1.30	0.20	0.00	17.60	2.00	0.00	1.20	0.20	0.00
17.80	2.00	0.00	1.10	0.20	0.00	18.00	2.00	0.00	1.00	0.20	0.00
18.20	2.00	0.00	0.90	0.20	0.00	18.40	2.00	0.00	0.80	0.20	0.00
18.60	2.00	0.00	0.70	0.20	0.00	18.80	2.00	0.00	0.60	0.20	0.00
19.00	2.00	0.00	0.50	0.20	0.00	19.20	2.00	0.00	0.40	0.20	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
19.40	2.00	0.00	0.30	0.20	0.00	19.60	2.00	0.00	0.20	0.20	0.00
19.80	2.00	0.00	0.10	0.20	0.00	20.00	2.00	0.00	0.00	0.20	0.00

Overall liquefaction potential: 3.03

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	23.49	2.00	0.00	1.00	0.00	1.20	13.42	2.00	0.00	1.00	0.00
1.40	16.78	2.00	0.00	1.00	0.00	1.60	80.63	0.95	3.95	1.00	0.79
1.80	88.15	0.98	1.99	1.00	0.40	2.00	86.76	0.93	3.70	1.00	0.74
2.20	83.03	0.86	3.87	1.00	0.77	2.40	80.35	0.82	3.99	1.00	0.80
2.60	83.02	0.82	3.87	1.00	0.77	2.80	26.08	2.00	0.00	1.00	0.00
3.00	78.40	0.75	4.09	1.00	0.82	3.20	84.81	0.79	3.79	1.00	0.76
3.40	83.81	0.77	3.83	1.00	0.77	3.60	78.10	0.71	4.10	1.00	0.82
3.80	29.46	2.00	0.00	1.00	0.00	4.00	20.70	2.00	0.00	1.00	0.00
4.20	16.15	2.00	0.00	1.00	0.00	4.40	17.26	2.00	0.00	1.00	0.00
4.60	14.25	2.00	0.00	1.00	0.00	4.80	16.72	2.00	0.00	1.00	0.00
5.00	11.13	2.00	0.00	1.00	0.00	5.20	13.65	2.00	0.00	1.00	0.00
5.40	13.48	2.00	0.00	1.00	0.00	5.60	15.89	2.00	0.00	1.00	0.00
5.80	20.73	2.00	0.00	1.00	0.00	6.00	17.98	2.00	0.00	1.00	0.00
6.20	21.42	2.00	0.00	1.00	0.00	6.40	19.93	2.00	0.00	1.00	0.00
6.60	16.06	2.00	0.00	1.00	0.00	6.80	17.05	2.00	0.00	1.00	0.00
7.00	16.84	2.00	0.00	1.00	0.00	7.20	24.73	2.00	0.00	1.00	0.00
7.40	22.15	2.00	0.00	1.00	0.00	7.60	24.13	2.00	0.00	1.00	0.00
7.80	29.39	2.00	0.00	1.00	0.00	8.00	31.25	2.00	0.00	1.00	0.00
8.20	28.74	2.00	0.00	1.00	0.00	8.40	26.28	2.00	0.00	1.00	0.00
8.60	29.18	2.00	0.00	1.00	0.00	8.80	35.19	2.00	0.00	1.00	0.00
9.00	29.62	2.00	0.00	1.00	0.00	9.20	33.45	2.00	0.00	1.00	0.00
9.40	115.69	1.03	1.07	1.00	0.21	9.60	113.42	1.00	1.23	1.00	0.25
9.80	102.19	0.86	3.14	1.00	0.63	10.00	117.34	1.07	0.94	1.00	0.19
10.20	104.50	0.89	2.63	1.00	0.53	10.40	37.36	2.00	0.00	1.00	0.00
10.60	35.07	2.00	0.00	1.00	0.00	10.80	26.04	2.00	0.00	1.00	0.00
11.00	17.19	2.00	0.00	1.00	0.00	11.20	16.09	2.00	0.00	1.00	0.00
11.40	18.79	2.00	0.00	1.00	0.00	11.60	23.32	2.00	0.00	1.00	0.00
11.80	26.87	2.00	0.00	1.00	0.00	12.00	22.02	2.00	0.00	1.00	0.00
12.20	20.01	2.00	0.00	1.00	0.00	12.40	18.03	2.00	0.00	1.00	0.00
12.60	25.16	2.00	0.00	1.00	0.00	12.80	23.16	2.00	0.00	1.00	0.00
13.00	24.79	2.00	0.00	1.00	0.00	13.20	21.03	2.00	0.00	1.00	0.00
13.40	24.43	2.00	0.00	1.00	0.00	13.60	15.48	2.00	0.00	1.00	0.00
13.80	16.23	2.00	0.00	1.00	0.00	14.00	23.91	2.00	0.00	1.00	0.00
14.20	22.01	2.00	0.00	1.00	0.00	14.40	17.56	2.00	0.00	1.00	0.00
14.60	39.01	2.00	0.00	1.00	0.00	14.80	16.50	2.00	0.00	1.00	0.00
15.00	11.42	2.00	0.00	1.00	0.00	15.20	14.65	2.00	0.00	1.00	0.00
15.40	14.55	2.00	0.00	1.00	0.00	15.60	15.27	2.00	0.00	1.00	0.00
15.80	14.36	2.00	0.00	1.00	0.00	16.00	15.07	2.00	0.00	1.00	0.00
16.20	14.98	2.00	0.00	1.00	0.00	16.40	13.28	2.00	0.00	1.00	0.00
16.60	13.99	2.00	0.00	1.00	0.00	16.80	10.76	2.00	0.00	1.00	0.00
17.00	13.81	2.00	0.00	1.00	0.00	17.20	14.51	2.00	0.00	1.00	0.00
17.40	12.87	2.00	0.00	1.00	0.00	17.60	12.02	2.00	0.00	1.00	0.00
17.80	11.95	2.00	0.00	1.00	0.00	18.00	13.41	2.00	0.00	1.00	0.00
18.20	10.31	2.00	0.00	1.00	0.00	18.40	11.75	2.00	0.00	1.00	0.00
18.60	13.93	2.00	0.00	1.00	0.00	18.80	16.10	2.00	0.00	1.00	0.00
19.00	15.26	2.00	0.00	1.00	0.00	19.20	12.95	2.00	0.00	1.00	0.00
19.40	12.88	2.00	0.00	1.00	0.00	19.60	12.08	2.00	0.00	1.00	0.00
19.80	12.74	2.00	0.00	1.00	0.00	20.00	14.13	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)

Total estimated settlement: 9.24

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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http://www.geologismiki.gr

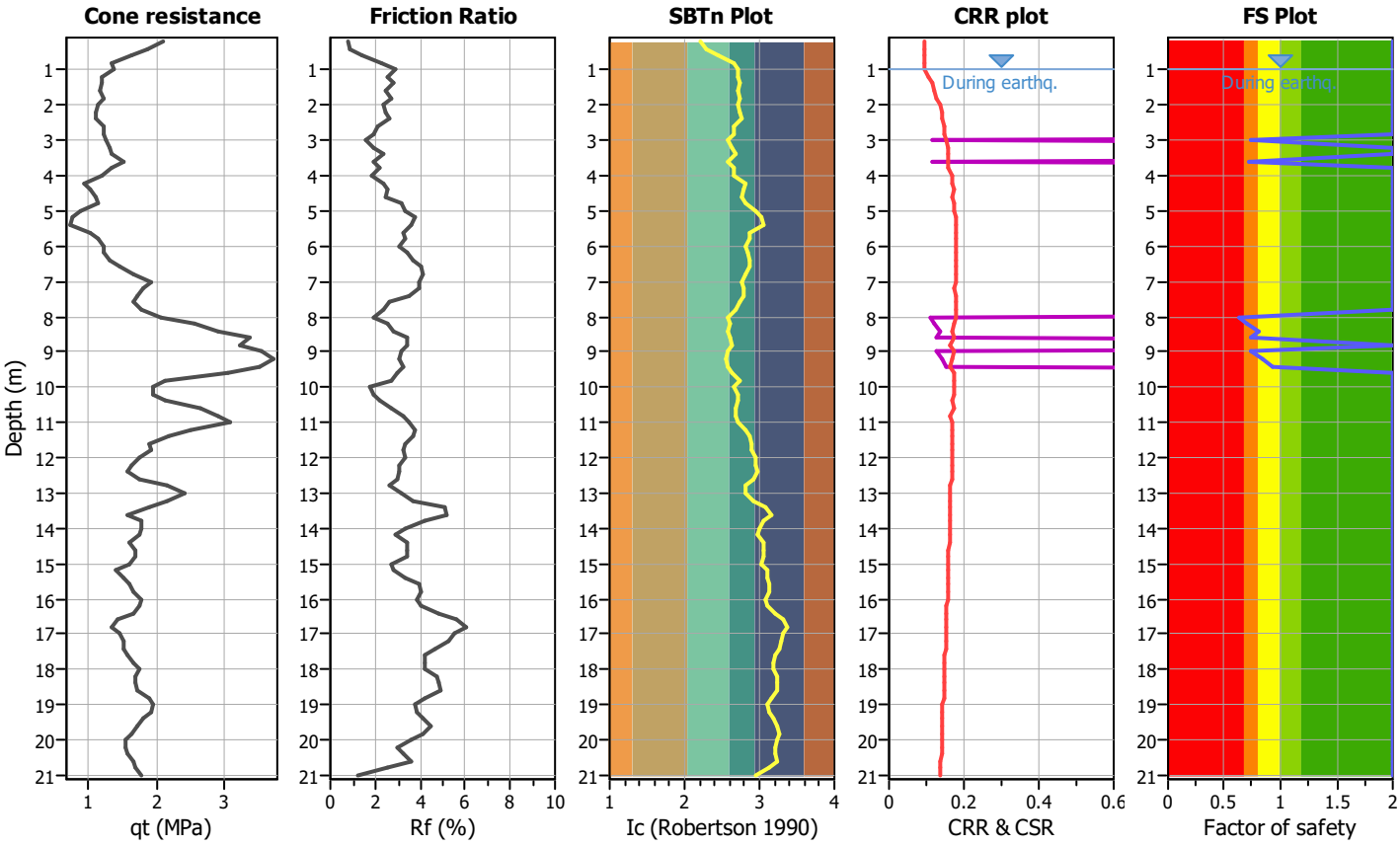
LIQUEFACTION ANALYSIS REPORT

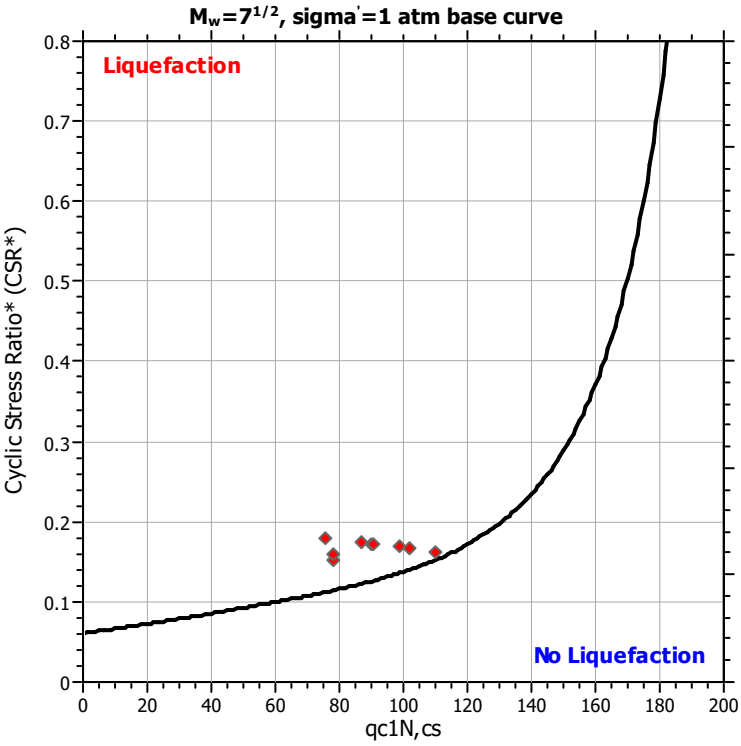
Project title : **Location :**

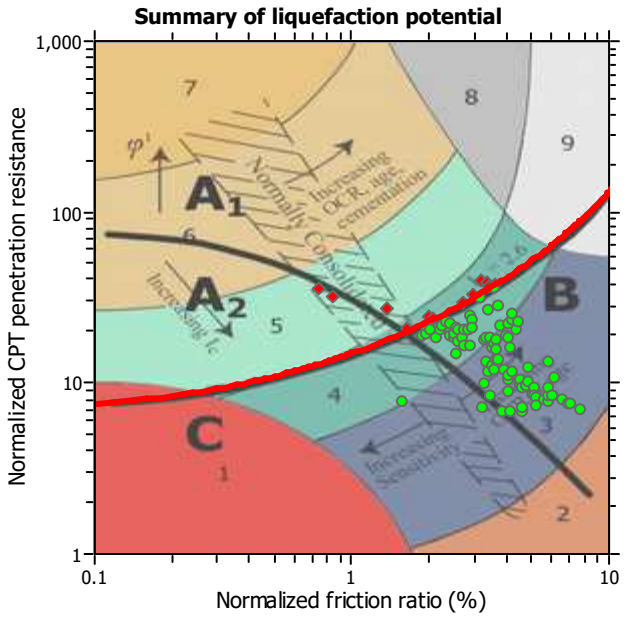
CPT file : CPT264

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

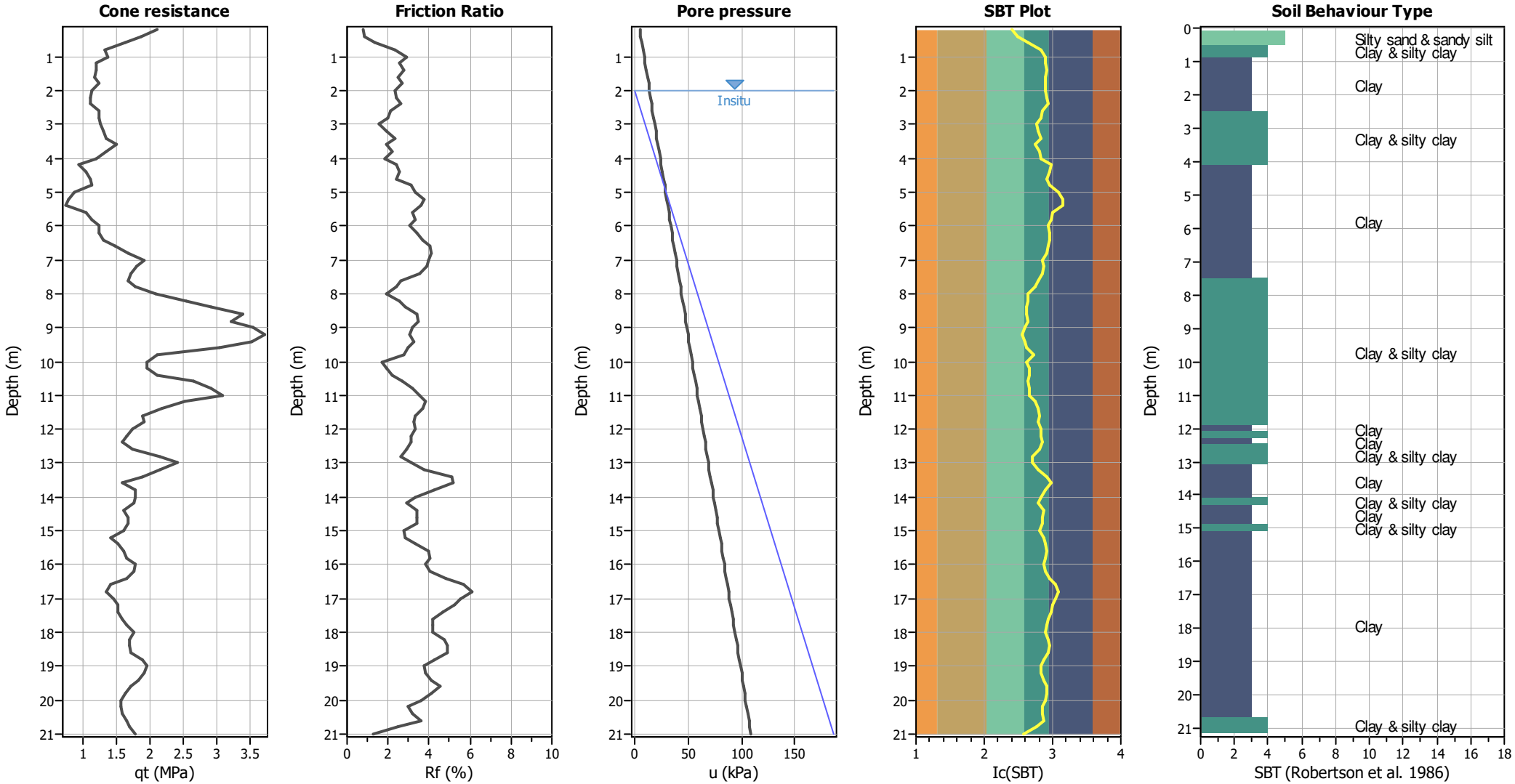






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



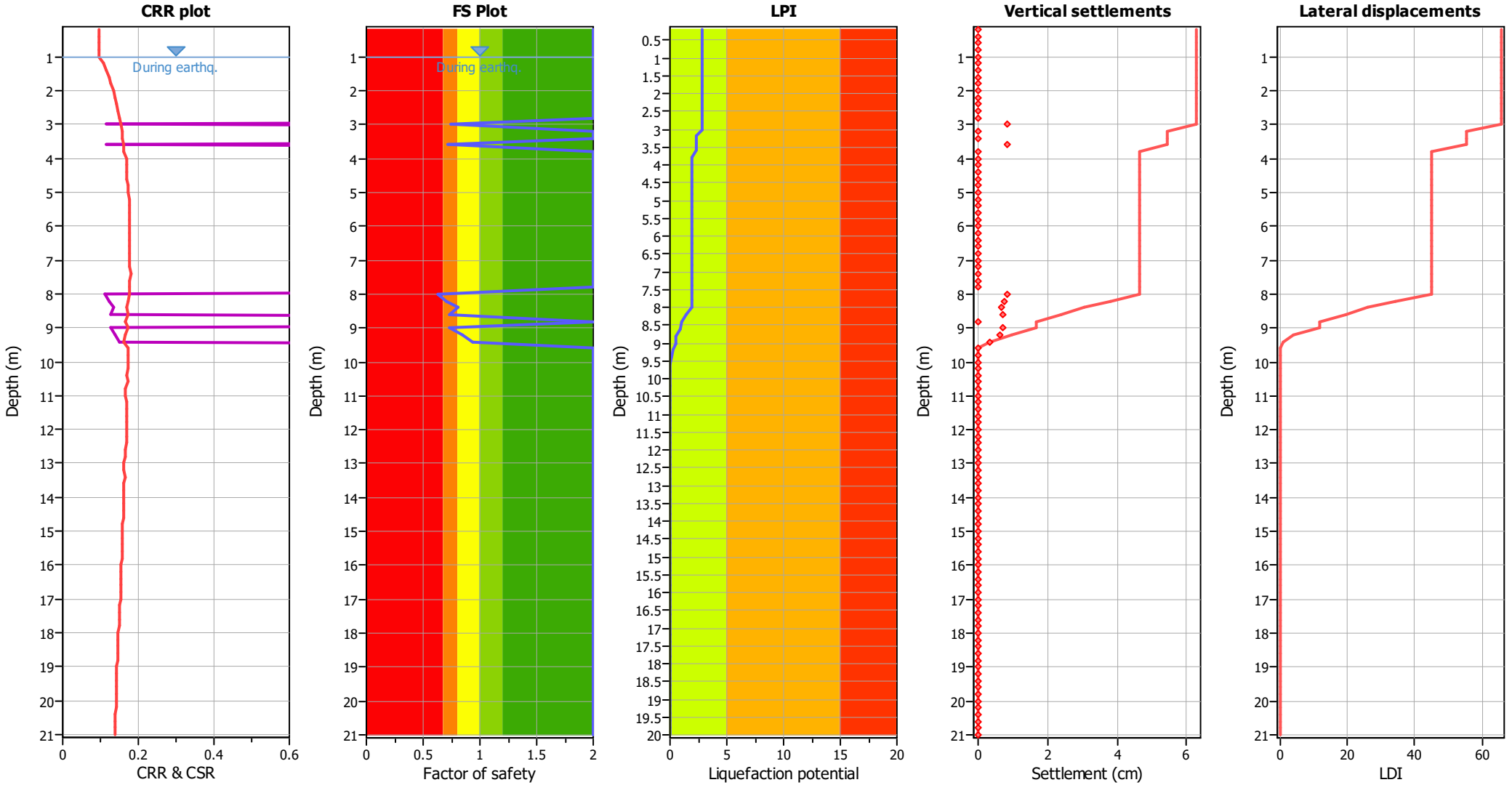
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	0.75	0.25	8.50	0.20	0.43	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	0.71	0.29	8.20	0.20	0.47
3.80	2.00	0.00	8.10	0.20	0.00	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	0.63	0.37	6.00	0.20	0.45
8.20	0.70	0.30	5.90	0.20	0.35	8.40	0.80	0.20	5.80	0.20	0.23
8.60	0.73	0.27	5.70	0.20	0.31	8.80	2.00	0.00	5.60	0.20	0.00
9.00	0.74	0.26	5.50	0.20	0.29	9.20	0.84	0.16	5.40	0.20	0.17
9.40	0.94	0.06	5.30	0.20	0.07	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00	15.20	2.00	0.00	2.40	0.20	0.00
15.40	2.00	0.00	2.30	0.20	0.00	15.60	2.00	0.00	2.20	0.20	0.00
15.80	2.00	0.00	2.10	0.20	0.00	16.00	2.00	0.00	2.00	0.20	0.00
16.20	2.00	0.00	1.90	0.20	0.00	16.40	2.00	0.00	1.80	0.20	0.00
16.60	2.00	0.00	1.70	0.20	0.00	16.80	2.00	0.00	1.60	0.20	0.00
17.00	2.00	0.00	1.50	0.20	0.00	17.20	2.00	0.00	1.40	0.20	0.00
17.40	2.00	0.00	1.30	0.20	0.00	17.60	2.00	0.00	1.20	0.20	0.00
17.80	2.00	0.00	1.10	0.20	0.00	18.00	2.00	0.00	1.00	0.20	0.00
18.20	2.00	0.00	0.90	0.20	0.00	18.40	2.00	0.00	0.80	0.20	0.00
18.60	2.00	0.00	0.70	0.20	0.00	18.80	2.00	0.00	0.60	0.20	0.00
19.00	2.00	0.00	0.50	0.20	0.00	19.20	2.00	0.00	0.40	0.20	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
19.40	2.00	0.00	0.30	0.20	0.00	19.60	2.00	0.00	0.20	0.20	0.00
19.80	2.00	0.00	0.10	0.20	0.00	20.00	2.00	0.00	0.00	0.20	0.00
20.20	2.00	0.00	0.00	0.00	0.00	20.40	2.00	0.00	0.00	0.00	0.00
20.60	2.00	0.00	0.00	0.00	0.00	20.80	2.00	0.00	0.00	0.00	0.00
21.00	2.00	0.00	0.00	0.00	0.00						

Overall liquefaction potential: 2.76

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	20.13	2.00	0.00	1.00	0.00	1.20	25.17	2.00	0.00	1.00	0.00
1.40	15.10	2.00	0.00	1.00	0.00	1.60	20.13	2.00	0.00	1.00	0.00
1.80	23.49	2.00	0.00	1.00	0.00	2.00	18.46	2.00	0.00	1.00	0.00
2.20	15.10	2.00	0.00	1.00	0.00	2.40	21.81	2.00	0.00	1.00	0.00
2.60	18.46	2.00	0.00	1.00	0.00	2.80	21.53	2.00	0.00	1.00	0.00
3.00	78.00	0.75	4.11	1.00	0.82	3.20	19.30	2.00	0.00	1.00	0.00
3.40	21.90	2.00	0.00	1.00	0.00	3.60	78.36	0.71	4.09	1.00	0.82
3.80	25.46	2.00	0.00	1.00	0.00	4.00	13.69	2.00	0.00	1.00	0.00
4.20	14.87	2.00	0.00	1.00	0.00	4.40	13.23	2.00	0.00	1.00	0.00
4.60	17.21	2.00	0.00	1.00	0.00	4.80	16.94	2.00	0.00	1.00	0.00
5.00	13.99	2.00	0.00	1.00	0.00	5.20	5.62	2.00	0.00	1.00	0.00
5.40	12.28	2.00	0.00	1.00	0.00	5.60	12.12	2.00	0.00	1.00	0.00
5.80	17.11	2.00	0.00	1.00	0.00	6.00	15.63	2.00	0.00	1.00	0.00
6.20	15.42	2.00	0.00	1.00	0.00	6.40	16.44	2.00	0.00	1.00	0.00
6.60	17.45	2.00	0.00	1.00	0.00	6.80	20.81	2.00	0.00	1.00	0.00
7.00	22.90	2.00	0.00	1.00	0.00	7.20	24.93	2.00	0.00	1.00	0.00
7.40	16.57	2.00	0.00	1.00	0.00	7.60	18.69	2.00	0.00	1.00	0.00
7.80	23.01	2.00	0.00	1.00	0.00	8.00	75.75	0.63	4.22	1.00	0.84
8.20	86.93	0.70	3.70	1.00	0.74	8.40	98.92	0.80	3.25	1.00	0.65
8.60	90.25	0.73	3.56	1.00	0.71	8.80	41.94	2.00	0.00	1.00	0.00
9.00	90.40	0.74	3.56	1.00	0.71	9.20	101.69	0.84	3.16	1.00	0.63
9.40	109.84	0.94	1.72	1.00	0.34	9.60	23.90	2.00	0.00	1.00	0.00
9.80	24.69	2.00	0.00	1.00	0.00	10.00	16.35	2.00	0.00	1.00	0.00
10.20	18.22	2.00	0.00	1.00	0.00	10.40	24.07	2.00	0.00	1.00	0.00
10.60	20.87	2.00	0.00	1.00	0.00	10.80	33.47	2.00	0.00	1.00	0.00
11.00	31.22	2.00	0.00	1.00	0.00	11.20	25.13	2.00	0.00	1.00	0.00
11.40	16.27	2.00	0.00	1.00	0.00	11.60	20.90	2.00	0.00	1.00	0.00
11.80	15.99	2.00	0.00	1.00	0.00	12.00	16.80	2.00	0.00	1.00	0.00
12.20	15.74	2.00	0.00	1.00	0.00	12.40	12.85	2.00	0.00	1.00	0.00
12.60	14.58	2.00	0.00	1.00	0.00	12.80	19.94	2.00	0.00	1.00	0.00
13.00	23.43	2.00	0.00	1.00	0.00	13.20	21.45	2.00	0.00	1.00	0.00
13.40	12.34	2.00	0.00	1.00	0.00	13.60	15.78	2.00	0.00	1.00	0.00
13.80	13.03	2.00	0.00	1.00	0.00	14.00	17.31	2.00	0.00	1.00	0.00
14.20	15.44	2.00	0.00	1.00	0.00	14.40	11.89	2.00	0.00	1.00	0.00
14.60	13.51	2.00	0.00	1.00	0.00	14.80	16.84	2.00	0.00	1.00	0.00
15.00	11.64	2.00	0.00	1.00	0.00	15.20	11.57	2.00	0.00	1.00	0.00
15.40	11.49	2.00	0.00	1.00	0.00	15.60	13.91	2.00	0.00	1.00	0.00
15.80	13.81	2.00	0.00	1.00	0.00	16.00	12.08	2.00	0.00	1.00	0.00
16.20	16.91	2.00	0.00	1.00	0.00	16.40	12.73	2.00	0.00	1.00	0.00
16.60	9.44	2.00	0.00	1.00	0.00	16.80	10.97	2.00	0.00	1.00	0.00
17.00	10.90	2.00	0.00	1.00	0.00	17.20	11.61	2.00	0.00	1.00	0.00
17.40	12.33	2.00	0.00	1.00	0.00	17.60	10.69	2.00	0.00	1.00	0.00
17.80	12.96	2.00	0.00	1.00	0.00	18.00	13.65	2.00	0.00	1.00	0.00
18.20	12.80	2.00	0.00	1.00	0.00	18.40	11.19	2.00	0.00	1.00	0.00
18.60	13.41	2.00	0.00	1.00	0.00	18.80	13.33	2.00	0.00	1.00	0.00
19.00	14.77	2.00	0.00	1.00	0.00	19.20	14.68	2.00	0.00	1.00	0.00
19.40	12.36	2.00	0.00	1.00	0.00	19.60	12.29	2.00	0.00	1.00	0.00
19.80	12.22	2.00	0.00	1.00	0.00	20.00	9.96	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
20.20	10.63	2.00	0.00	1.00	0.00	20.40	12.03	2.00	0.00	1.00	0.00
20.60	10.52	2.00	0.00	1.00	0.00	20.80	11.91	2.00	0.00	1.00	0.00
21.00	12.57	2.00	0.00	1.00	0.00						

Total estimated settlement: 6.27

Abbreviations

$Q_{tn,cs}$: Equivalent clean sand normalized cone resistance
FS: Factor of safety against liquefaction
e_v (%): Post-liquefaction volumentric strain
DF: e_v depth weighting factor
Settlement: Calculated settlement

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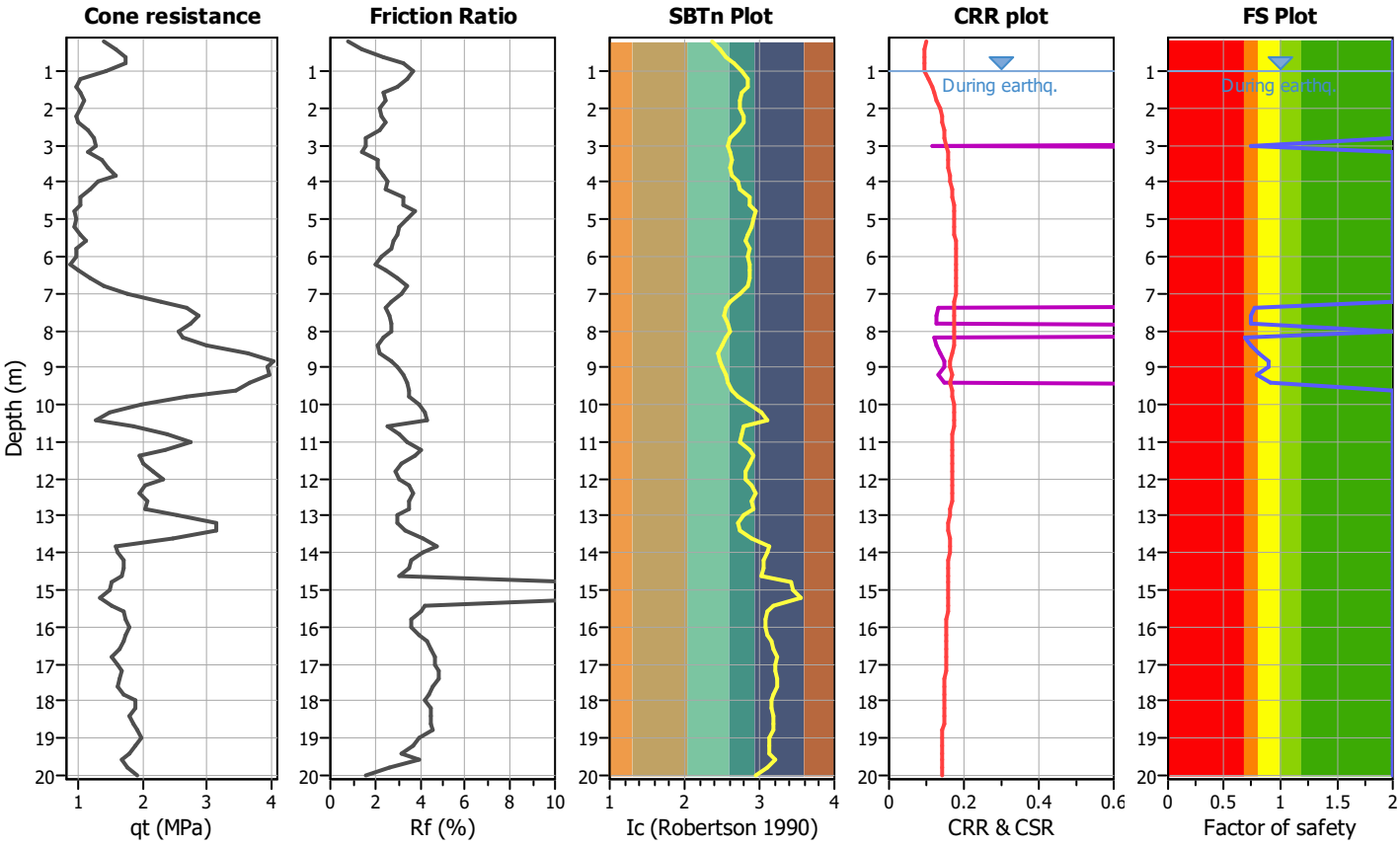
LIQUEFACTION ANALYSIS REPORT

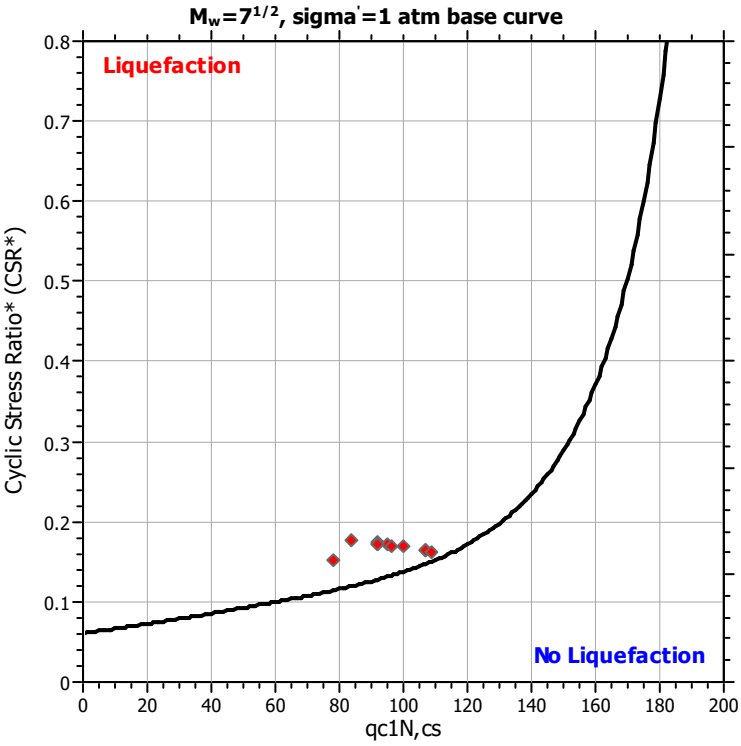
Project title : **Location :**

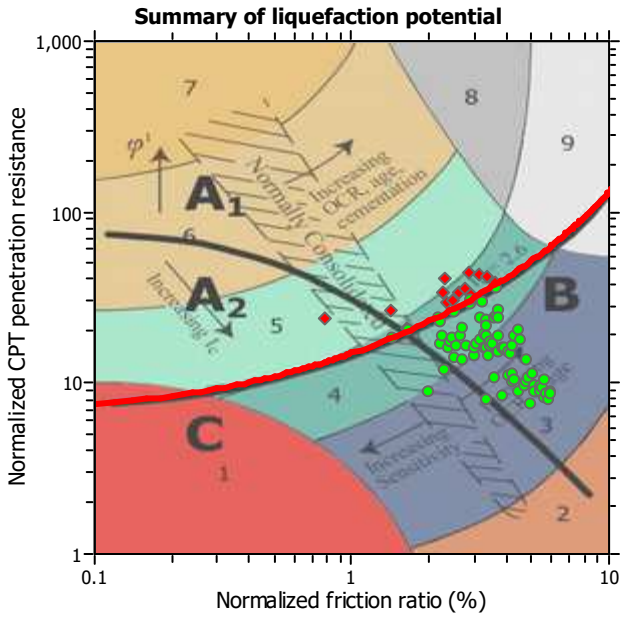
CPT file : CPT265

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

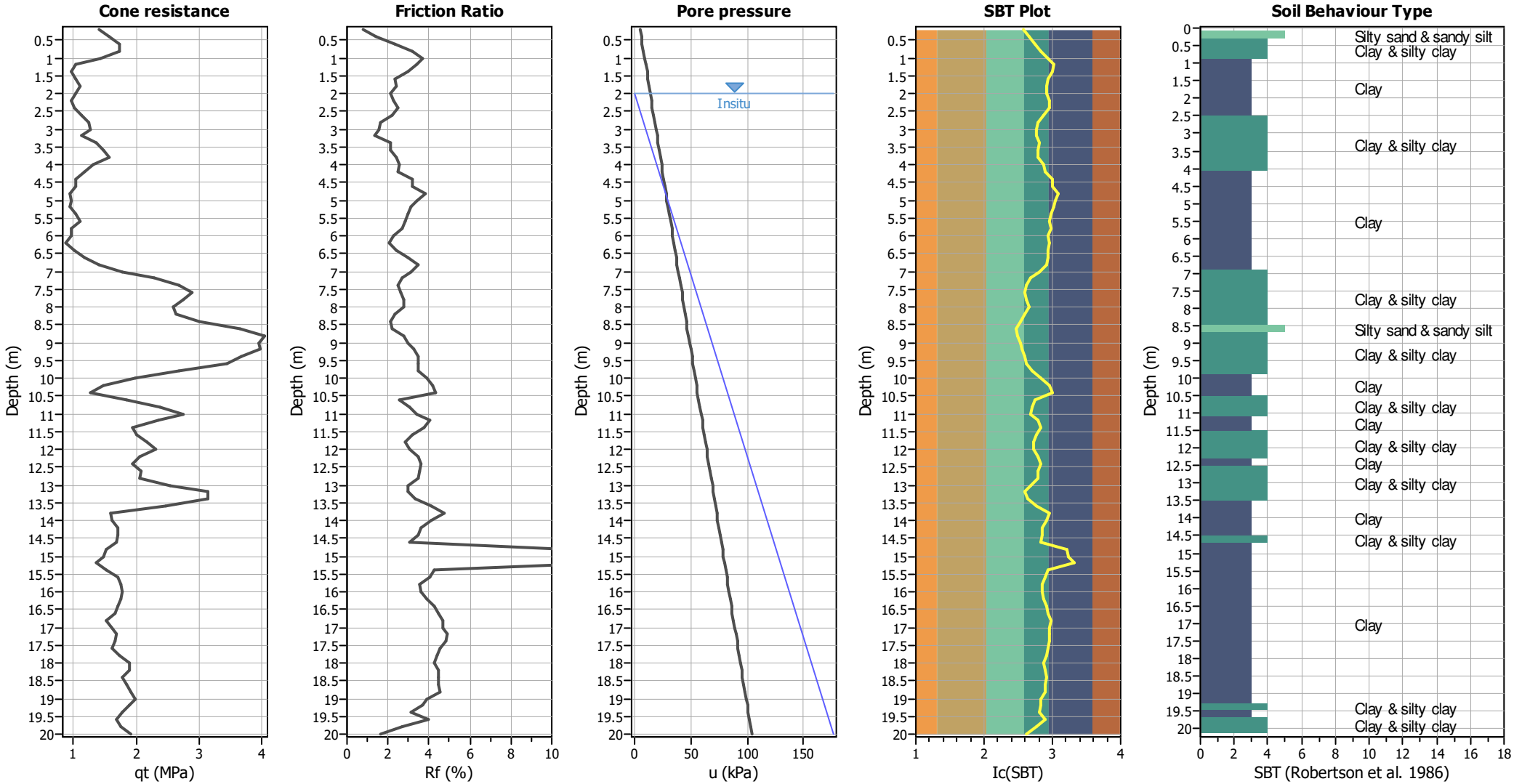






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



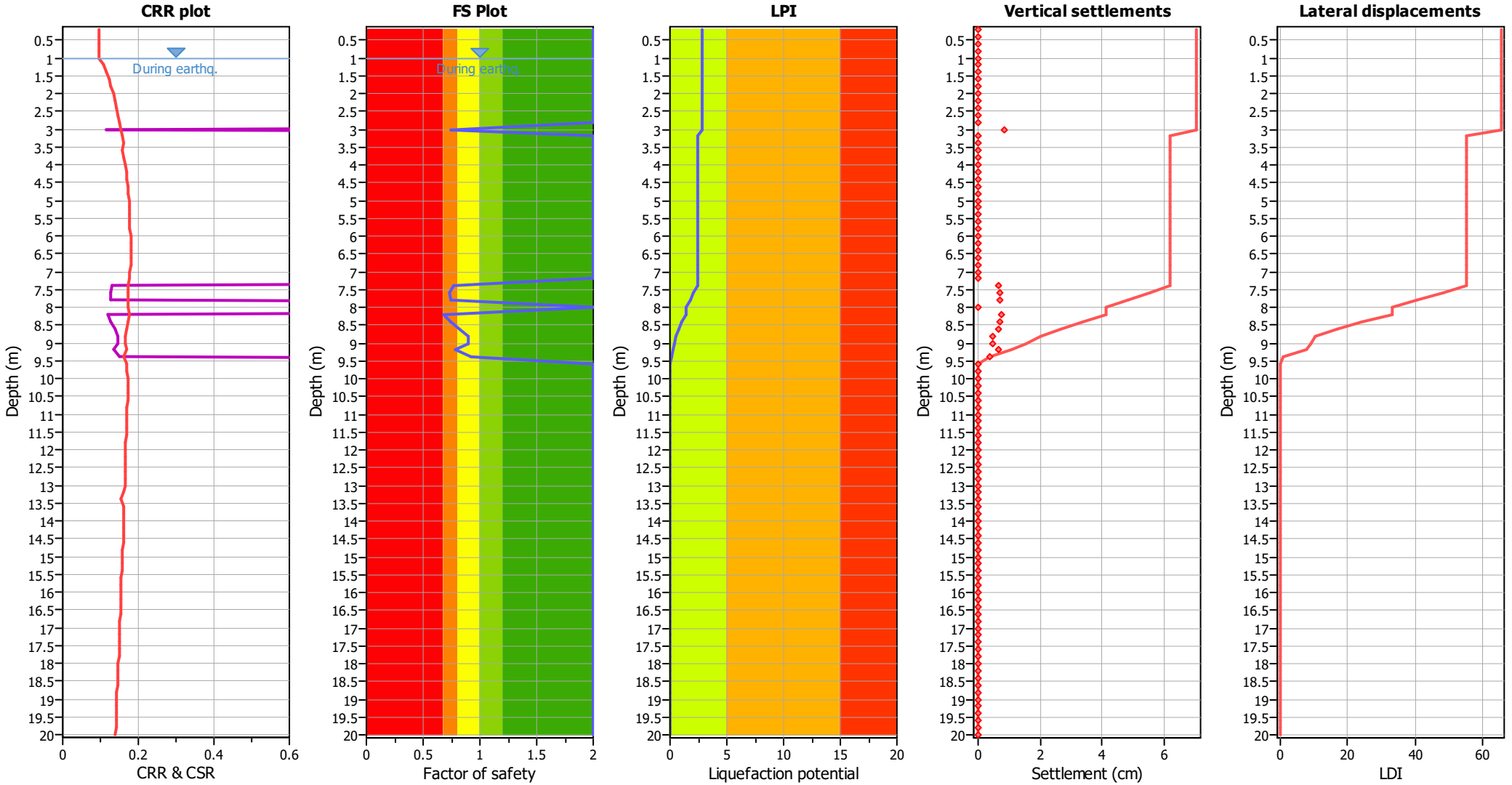
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	0.75	0.25	8.50	0.20	0.43	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	2.00	0.00	8.20	0.20	0.00
3.80	2.00	0.00	8.10	0.20	0.00	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	0.76	0.24	6.30	0.20	0.30	7.60	0.74	0.26	6.20	0.20	0.33
7.80	0.74	0.26	6.10	0.20	0.32	8.00	2.00	0.00	6.00	0.20	0.00
8.20	0.68	0.32	5.90	0.20	0.38	8.40	0.74	0.26	5.80	0.20	0.30
8.60	0.81	0.19	5.70	0.20	0.21	8.80	0.89	0.11	5.60	0.20	0.12
9.00	0.90	0.10	5.50	0.20	0.11	9.20	0.79	0.21	5.40	0.20	0.23
9.40	0.92	0.08	5.30	0.20	0.08	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00	15.20	2.00	0.00	2.40	0.20	0.00
15.40	2.00	0.00	2.30	0.20	0.00	15.60	2.00	0.00	2.20	0.20	0.00
15.80	2.00	0.00	2.10	0.20	0.00	16.00	2.00	0.00	2.00	0.20	0.00
16.20	2.00	0.00	1.90	0.20	0.00	16.40	2.00	0.00	1.80	0.20	0.00
16.60	2.00	0.00	1.70	0.20	0.00	16.80	2.00	0.00	1.60	0.20	0.00
17.00	2.00	0.00	1.50	0.20	0.00	17.20	2.00	0.00	1.40	0.20	0.00
17.40	2.00	0.00	1.30	0.20	0.00	17.60	2.00	0.00	1.20	0.20	0.00
17.80	2.00	0.00	1.10	0.20	0.00	18.00	2.00	0.00	1.00	0.20	0.00
18.20	2.00	0.00	0.90	0.20	0.00	18.40	2.00	0.00	0.80	0.20	0.00
18.60	2.00	0.00	0.70	0.20	0.00	18.80	2.00	0.00	0.60	0.20	0.00
19.00	2.00	0.00	0.50	0.20	0.00	19.20	2.00	0.00	0.40	0.20	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
19.40	2.00	0.00	0.30	0.20	0.00	19.60	2.00	0.00	0.20	0.20	0.00
19.80	2.00	0.00	0.10	0.20	0.00	20.00	2.00	0.00	0.00	0.20	0.00

Overall liquefaction potential: 2.82

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	23.49	2.00	0.00	1.00	0.00	1.20	16.78	2.00	0.00	1.00	0.00
1.40	11.74	2.00	0.00	1.00	0.00	1.60	20.13	2.00	0.00	1.00	0.00
1.80	20.13	2.00	0.00	1.00	0.00	2.00	15.10	2.00	0.00	1.00	0.00
2.20	16.78	2.00	0.00	1.00	0.00	2.40	16.78	2.00	0.00	1.00	0.00
2.60	16.78	2.00	0.00	1.00	0.00	2.80	23.11	2.00	0.00	1.00	0.00
3.00	78.01	0.75	4.11	1.00	0.82	3.20	17.82	2.00	0.00	1.00	0.00
3.40	15.97	2.00	0.00	1.00	0.00	3.60	30.18	2.00	0.00	1.00	0.00
3.80	21.24	2.00	0.00	1.00	0.00	4.00	19.44	2.00	0.00	1.00	0.00
4.20	17.72	2.00	0.00	1.00	0.00	4.40	14.61	2.00	0.00	1.00	0.00
4.60	12.99	2.00	0.00	1.00	0.00	4.80	16.88	2.00	0.00	1.00	0.00
5.00	9.86	2.00	0.00	1.00	0.00	5.20	13.77	2.00	0.00	1.00	0.00
5.40	14.90	2.00	0.00	1.00	0.00	5.60	13.41	2.00	0.00	1.00	0.00
5.80	15.80	2.00	0.00	1.00	0.00	6.00	9.22	2.00	0.00	1.00	0.00
6.20	12.92	2.00	0.00	1.00	0.00	6.40	11.51	2.00	0.00	1.00	0.00
6.60	13.84	2.00	0.00	1.00	0.00	6.80	18.50	2.00	0.00	1.00	0.00
7.00	19.48	2.00	0.00	1.00	0.00	7.20	26.25	2.00	0.00	1.00	0.00
7.40	95.15	0.76	3.38	1.00	0.68	7.60	91.69	0.74	3.51	1.00	0.70
7.80	91.80	0.74	3.50	1.00	0.70	8.00	29.48	2.00	0.00	1.00	0.00
8.20	83.58	0.68	3.84	1.00	0.77	8.40	91.88	0.74	3.50	1.00	0.70
8.60	99.89	0.81	3.22	1.00	0.64	8.80	106.86	0.89	2.44	1.00	0.49
9.00	107.06	0.90	2.35	1.00	0.47	9.20	96.27	0.79	3.34	1.00	0.67
9.40	108.60	0.92	1.94	1.00	0.39	9.60	34.20	2.00	0.00	1.00	0.00
9.80	27.75	2.00	0.00	1.00	0.00	10.00	20.39	2.00	0.00	1.00	0.00
10.20	12.14	2.00	0.00	1.00	0.00	10.40	12.02	2.00	0.00	1.00	0.00
10.60	13.90	2.00	0.00	1.00	0.00	10.80	28.53	2.00	0.00	1.00	0.00
11.00	27.30	2.00	0.00	1.00	0.00	11.20	24.15	2.00	0.00	1.00	0.00
11.40	16.26	2.00	0.00	1.00	0.00	11.60	15.17	2.00	0.00	1.00	0.00
11.80	25.46	2.00	0.00	1.00	0.00	12.00	20.55	2.00	0.00	1.00	0.00
12.20	18.52	2.00	0.00	1.00	0.00	12.40	17.44	2.00	0.00	1.00	0.00
12.60	17.30	2.00	0.00	1.00	0.00	12.80	21.74	2.00	0.00	1.00	0.00
13.00	16.11	2.00	0.00	1.00	0.00	13.20	30.45	2.00	0.00	1.00	0.00
13.40	37.50	2.00	0.00	1.00	0.00	13.60	15.73	2.00	0.00	1.00	0.00
13.80	12.11	2.00	0.00	1.00	0.00	14.00	12.89	2.00	0.00	1.00	0.00
14.20	16.26	2.00	0.00	1.00	0.00	14.40	14.42	2.00	0.00	1.00	0.00
14.60	12.62	2.00	0.00	1.00	0.00	14.80	15.06	2.00	0.00	1.00	0.00
15.00	9.91	2.00	0.00	1.00	0.00	15.20	11.49	2.00	0.00	1.00	0.00
15.40	11.41	2.00	0.00	1.00	0.00	15.60	13.81	2.00	0.00	1.00	0.00
15.80	16.19	2.00	0.00	1.00	0.00	16.00	12.00	2.00	0.00	1.00	0.00
16.20	14.36	2.00	0.00	1.00	0.00	16.40	15.07	2.00	0.00	1.00	0.00
16.60	10.97	2.00	0.00	1.00	0.00	16.80	12.49	2.00	0.00	1.00	0.00
17.00	11.62	2.00	0.00	1.00	0.00	17.20	13.12	2.00	0.00	1.00	0.00
17.40	13.82	2.00	0.00	1.00	0.00	17.60	10.63	2.00	0.00	1.00	0.00
17.80	12.10	2.00	0.00	1.00	0.00	18.00	15.90	2.00	0.00	1.00	0.00
18.20	14.26	2.00	0.00	1.00	0.00	18.40	11.88	2.00	0.00	1.00	0.00
18.60	13.33	2.00	0.00	1.00	0.00	18.80	15.52	2.00	0.00	1.00	0.00
19.00	13.17	2.00	0.00	1.00	0.00	19.20	14.60	2.00	0.00	1.00	0.00
19.40	13.03	2.00	0.00	1.00	0.00	19.60	10.75	2.00	0.00	1.00	0.00
19.80	12.15	2.00	0.00	1.00	0.00	20.00	14.29	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)

Total estimated settlement: 7.03

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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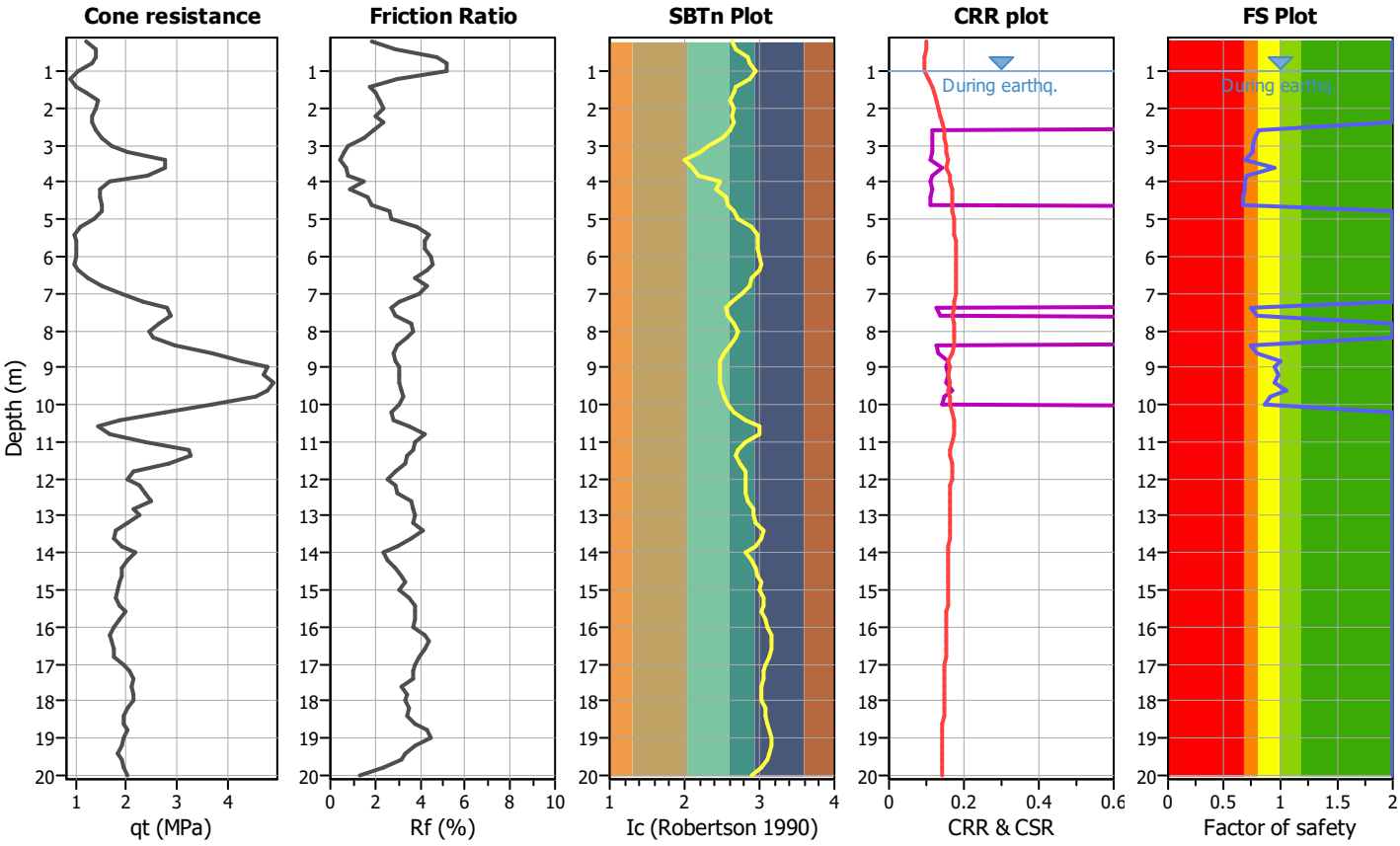
LIQUEFACTION ANALYSIS REPORT

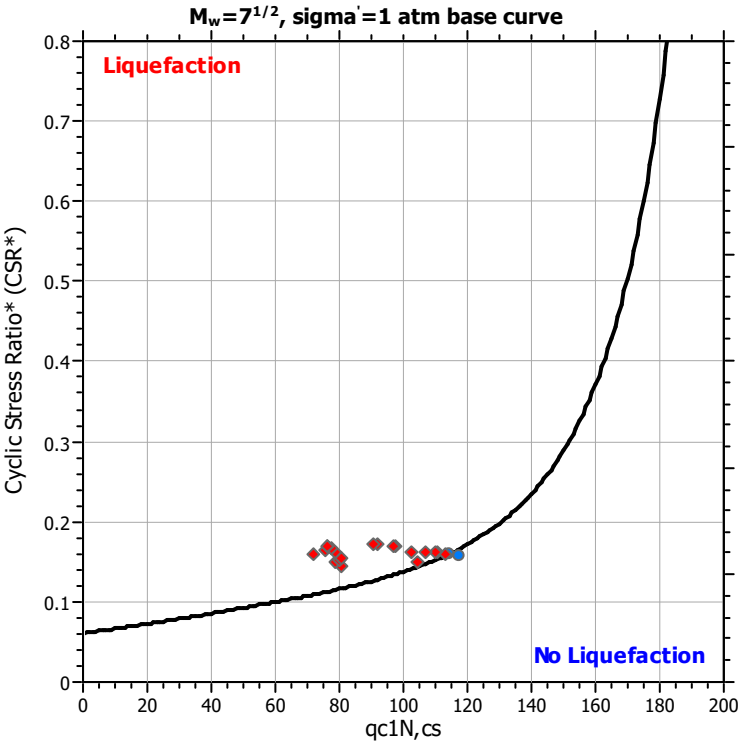
Project title : **Location :**

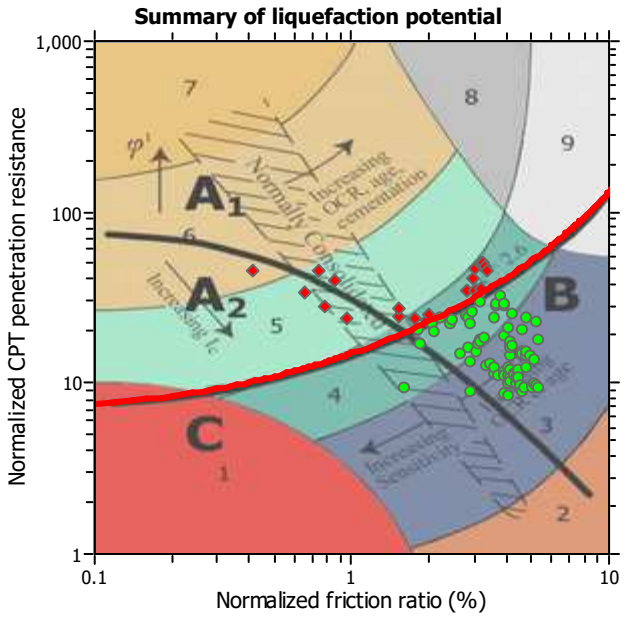
CPT file : CPT266

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

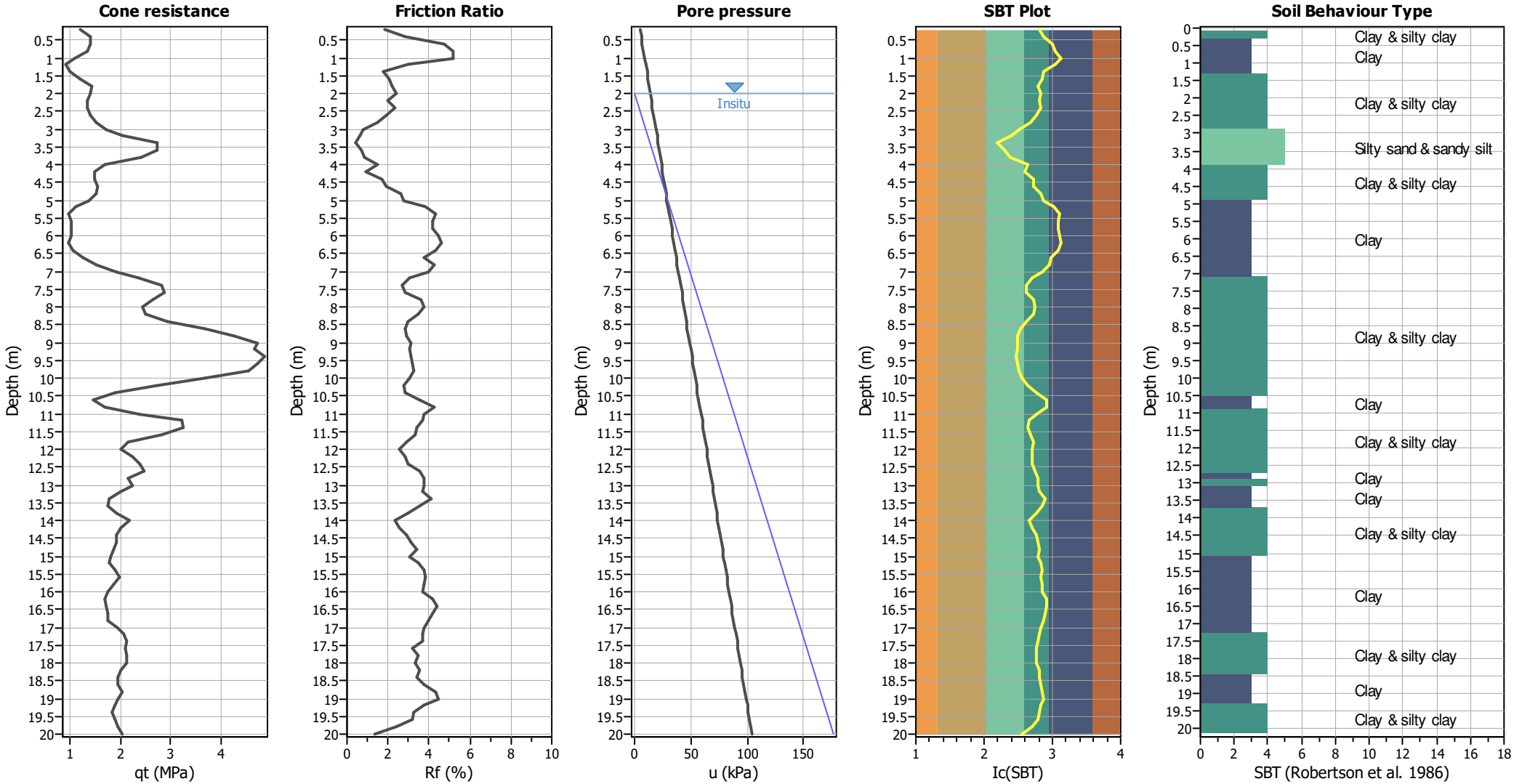






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



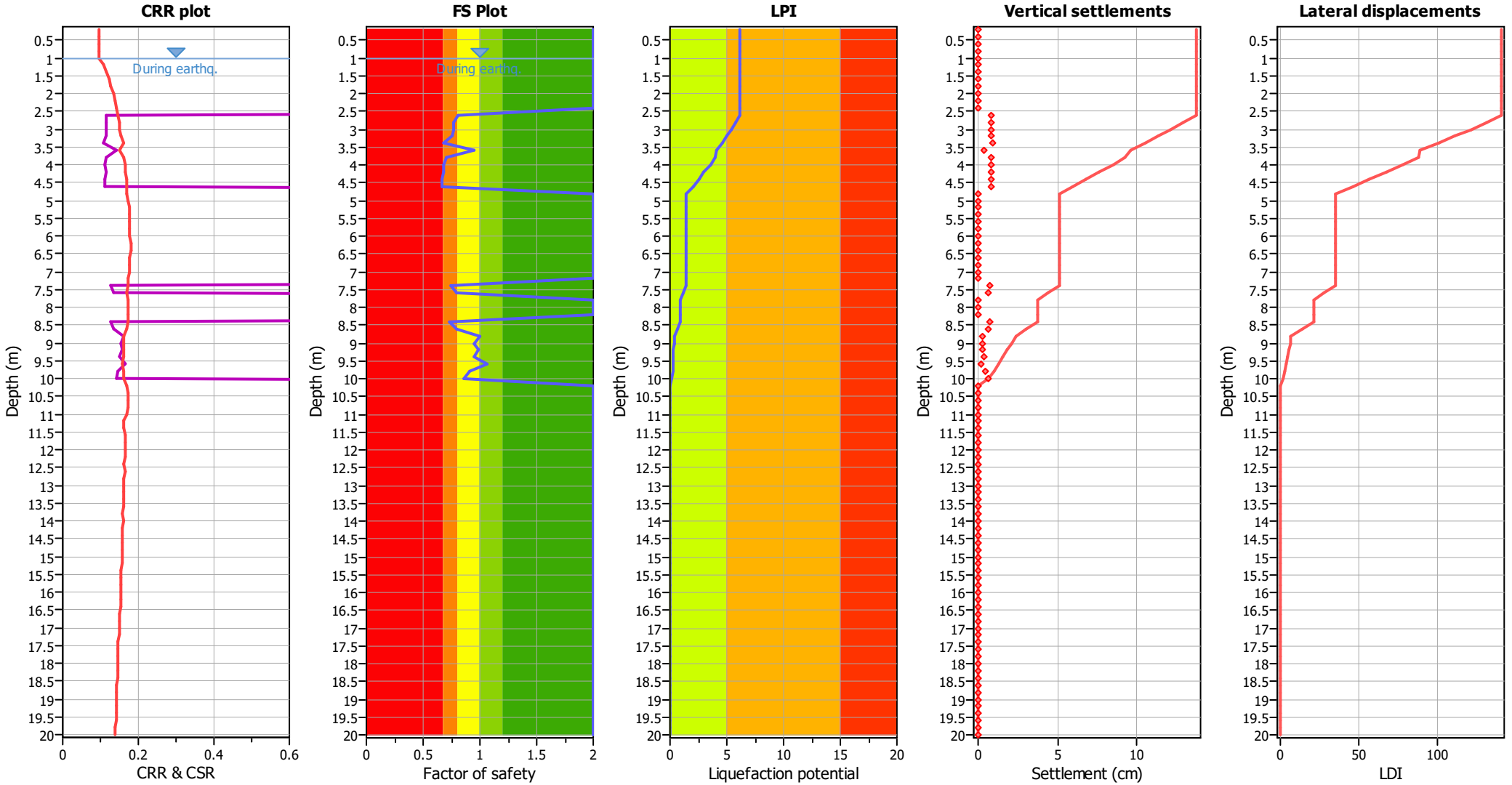
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	0.80	0.20	8.70	0.20	0.34	2.80	0.77	0.23	8.60	0.20	0.39
3.00	0.76	0.24	8.50	0.20	0.40	3.20	0.76	0.24	8.40	0.20	0.41
3.40	0.68	0.32	8.30	0.20	0.53	3.60	0.95	0.05	8.20	0.20	0.08
3.80	0.71	0.29	8.10	0.20	0.47	4.00	0.68	0.32	8.00	0.20	0.51
4.20	0.68	0.32	7.90	0.20	0.50	4.40	0.67	0.33	7.80	0.20	0.52
4.60	0.66	0.34	7.70	0.20	0.52	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	0.74	0.26	6.30	0.20	0.32	7.60	0.79	0.21	6.20	0.20	0.26
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	0.74	0.26	5.80	0.20	0.31
8.60	0.79	0.21	5.70	0.20	0.24	8.80	1.00	0.00	5.60	0.20	0.00
9.00	0.95	0.05	5.50	0.20	0.05	9.20	0.99	0.01	5.40	0.20	0.01
9.40	0.94	0.06	5.30	0.20	0.06	9.60	1.06	0.00	5.20	0.20	0.00
9.80	0.91	0.09	5.10	0.20	0.09	10.00	0.86	0.14	5.00	0.20	0.14
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00	15.20	2.00	0.00	2.40	0.20	0.00
15.40	2.00	0.00	2.30	0.20	0.00	15.60	2.00	0.00	2.20	0.20	0.00
15.80	2.00	0.00	2.10	0.20	0.00	16.00	2.00	0.00	2.00	0.20	0.00
16.20	2.00	0.00	1.90	0.20	0.00	16.40	2.00	0.00	1.80	0.20	0.00
16.60	2.00	0.00	1.70	0.20	0.00	16.80	2.00	0.00	1.60	0.20	0.00
17.00	2.00	0.00	1.50	0.20	0.00	17.20	2.00	0.00	1.40	0.20	0.00
17.40	2.00	0.00	1.30	0.20	0.00	17.60	2.00	0.00	1.20	0.20	0.00
17.80	2.00	0.00	1.10	0.20	0.00	18.00	2.00	0.00	1.00	0.20	0.00
18.20	2.00	0.00	0.90	0.20	0.00	18.40	2.00	0.00	0.80	0.20	0.00
18.60	2.00	0.00	0.70	0.20	0.00	18.80	2.00	0.00	0.60	0.20	0.00
19.00	2.00	0.00	0.50	0.20	0.00	19.20	2.00	0.00	0.40	0.20	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
19.40	2.00	0.00	0.30	0.20	0.00	19.60	2.00	0.00	0.20	0.20	0.00
19.80	2.00	0.00	0.10	0.20	0.00	20.00	2.00	0.00	0.00	0.20	0.00

Overall liquefaction potential: 6.15

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	16.78	2.00	0.00	1.00	0.00	1.20	16.78	2.00	0.00	1.00	0.00
1.40	11.74	2.00	0.00	1.00	0.00	1.60	21.81	2.00	0.00	1.00	0.00
1.80	26.84	2.00	0.00	1.00	0.00	2.00	23.49	2.00	0.00	1.00	0.00
2.20	20.13	2.00	0.00	1.00	0.00	2.40	23.49	2.00	0.00	1.00	0.00
2.60	80.85	0.80	3.97	1.00	0.79	2.80	78.98	0.77	4.06	1.00	0.81
3.00	79.78	0.76	4.02	1.00	0.80	3.20	80.68	0.76	3.98	1.00	0.80
3.40	71.64	0.68	4.45	1.00	0.89	3.60	104.64	0.95	1.73	1.00	0.35
3.80	78.68	0.71	4.07	1.00	0.81	4.00	75.70	0.68	4.23	1.00	0.85
4.20	77.72	0.68	4.12	1.00	0.82	4.40	76.38	0.67	4.19	1.00	0.84
4.60	76.20	0.66	4.20	1.00	0.84	4.80	24.98	2.00	0.00	1.00	0.00
5.00	18.02	2.00	0.00	1.00	0.00	5.20	13.75	2.00	0.00	1.00	0.00
5.40	13.54	2.00	0.00	1.00	0.00	5.60	12.05	2.00	0.00	1.00	0.00
5.80	14.45	2.00	0.00	1.00	0.00	6.00	12.99	2.00	0.00	1.00	0.00
6.20	11.56	2.00	0.00	1.00	0.00	6.40	12.65	2.00	0.00	1.00	0.00
6.60	14.94	2.00	0.00	1.00	0.00	6.80	18.34	2.00	0.00	1.00	0.00
7.00	21.64	2.00	0.00	1.00	0.00	7.20	28.32	2.00	0.00	1.00	0.00
7.40	92.05	0.74	3.49	1.00	0.70	7.60	97.56	0.79	3.29	1.00	0.66
7.80	29.54	2.00	0.00	1.00	0.00	8.00	23.68	2.00	0.00	1.00	0.00
8.20	28.88	2.00	0.00	1.00	0.00	8.40	90.41	0.74	3.56	1.00	0.71
8.60	96.89	0.79	3.32	1.00	0.66	8.80	114.45	1.00	1.21	1.00	0.24
9.00	110.92	0.95	1.56	1.00	0.31	9.20	113.05	0.99	1.31	1.00	0.26
9.40	109.75	0.94	1.67	1.00	0.33	9.60	117.46	1.06	0.96	1.00	0.19
9.80	106.99	0.91	2.10	1.00	0.42	10.00	102.37	0.86	3.14	1.00	0.63
10.20	25.94	2.00	0.00	1.00	0.00	10.40	15.83	2.00	0.00	1.00	0.00
10.60	13.73	2.00	0.00	1.00	0.00	10.80	12.63	2.00	0.00	1.00	0.00
11.00	22.17	2.00	0.00	1.00	0.00	11.20	33.49	2.00	0.00	1.00	0.00
11.40	36.08	2.00	0.00	1.00	0.00	11.60	22.52	2.00	0.00	1.00	0.00
11.80	20.47	2.00	0.00	1.00	0.00	12.00	16.59	2.00	0.00	1.00	0.00
12.20	18.30	2.00	0.00	1.00	0.00	12.40	26.43	2.00	0.00	1.00	0.00
12.60	19.83	2.00	0.00	1.00	0.00	12.80	20.59	2.00	0.00	1.00	0.00
13.00	16.83	2.00	0.00	1.00	0.00	13.20	22.07	2.00	0.00	1.00	0.00
13.40	13.93	2.00	0.00	1.00	0.00	13.60	10.34	2.00	0.00	1.00	0.00
13.80	20.72	2.00	0.00	1.00	0.00	14.00	17.96	2.00	0.00	1.00	0.00
14.20	16.98	2.00	0.00	1.00	0.00	14.40	16.01	2.00	0.00	1.00	0.00
14.60	15.05	2.00	0.00	1.00	0.00	14.80	16.64	2.00	0.00	1.00	0.00
15.00	14.01	2.00	0.00	1.00	0.00	15.20	13.92	2.00	0.00	1.00	0.00
15.40	15.48	2.00	0.00	1.00	0.00	15.60	16.20	2.00	0.00	1.00	0.00
15.80	16.10	2.00	0.00	1.00	0.00	16.00	11.93	2.00	0.00	1.00	0.00
16.20	13.46	2.00	0.00	1.00	0.00	16.40	14.18	2.00	0.00	1.00	0.00
16.60	12.49	2.00	0.00	1.00	0.00	16.80	14.00	2.00	0.00	1.00	0.00
17.00	13.92	2.00	0.00	1.00	0.00	17.20	16.99	2.00	0.00	1.00	0.00
17.40	16.10	2.00	0.00	1.00	0.00	17.60	15.22	2.00	0.00	1.00	0.00
17.80	15.90	2.00	0.00	1.00	0.00	18.00	16.59	2.00	0.00	1.00	0.00
18.20	14.95	2.00	0.00	1.00	0.00	18.40	13.34	2.00	0.00	1.00	0.00
18.60	14.78	2.00	0.00	1.00	0.00	18.80	14.69	2.00	0.00	1.00	0.00
19.00	14.61	2.00	0.00	1.00	0.00	19.20	13.03	2.00	0.00	1.00	0.00
19.40	12.96	2.00	0.00	1.00	0.00	19.60	12.89	2.00	0.00	1.00	0.00
19.80	14.30	2.00	0.00	1.00	0.00	20.00	14.22	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)

Total estimated settlement: 13.72

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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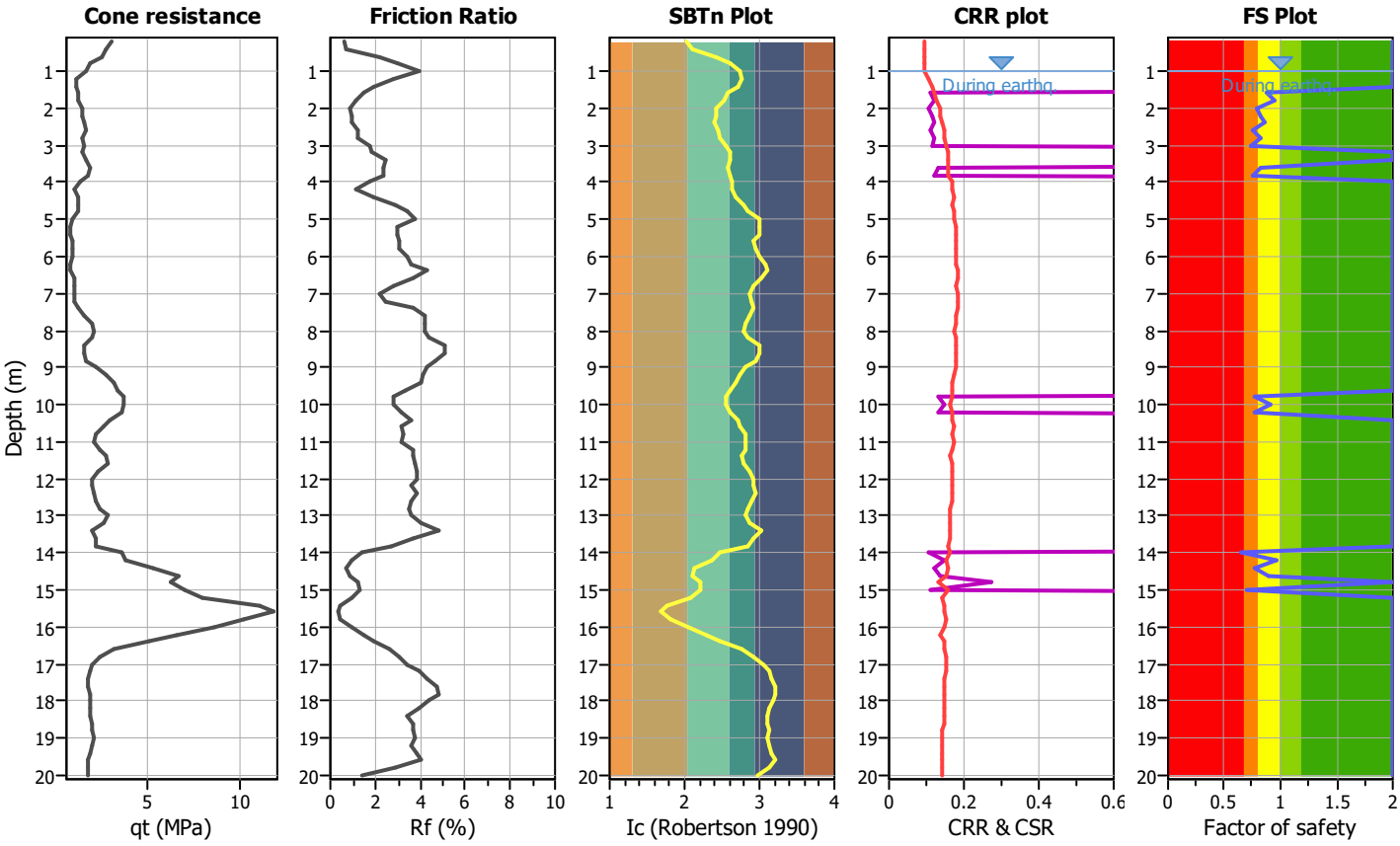
LIQUEFACTION ANALYSIS REPORT

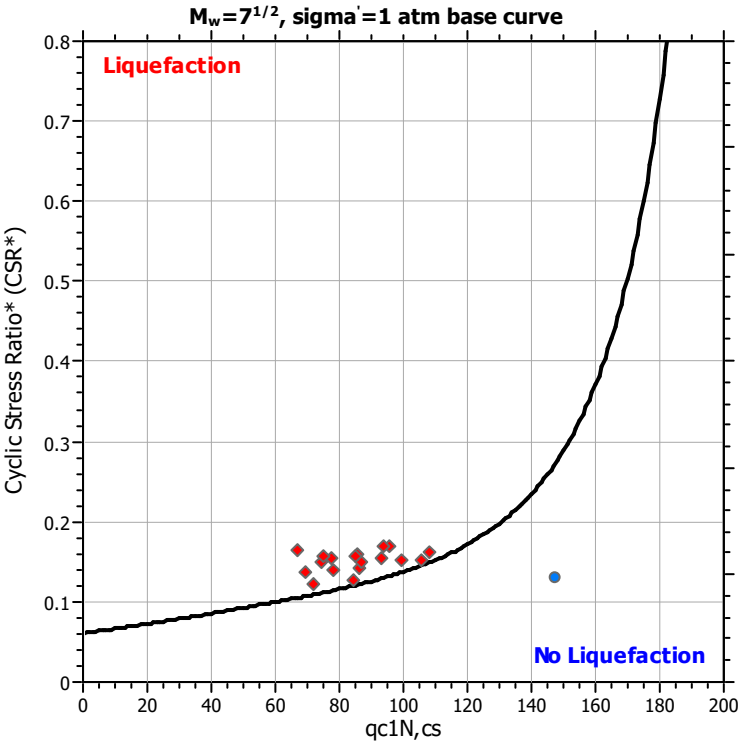
Project title : **Location :**

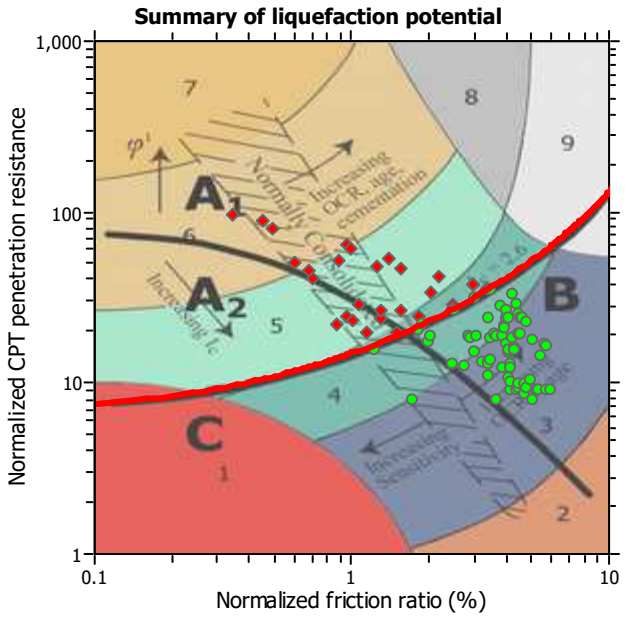
CPT file : CPT267

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

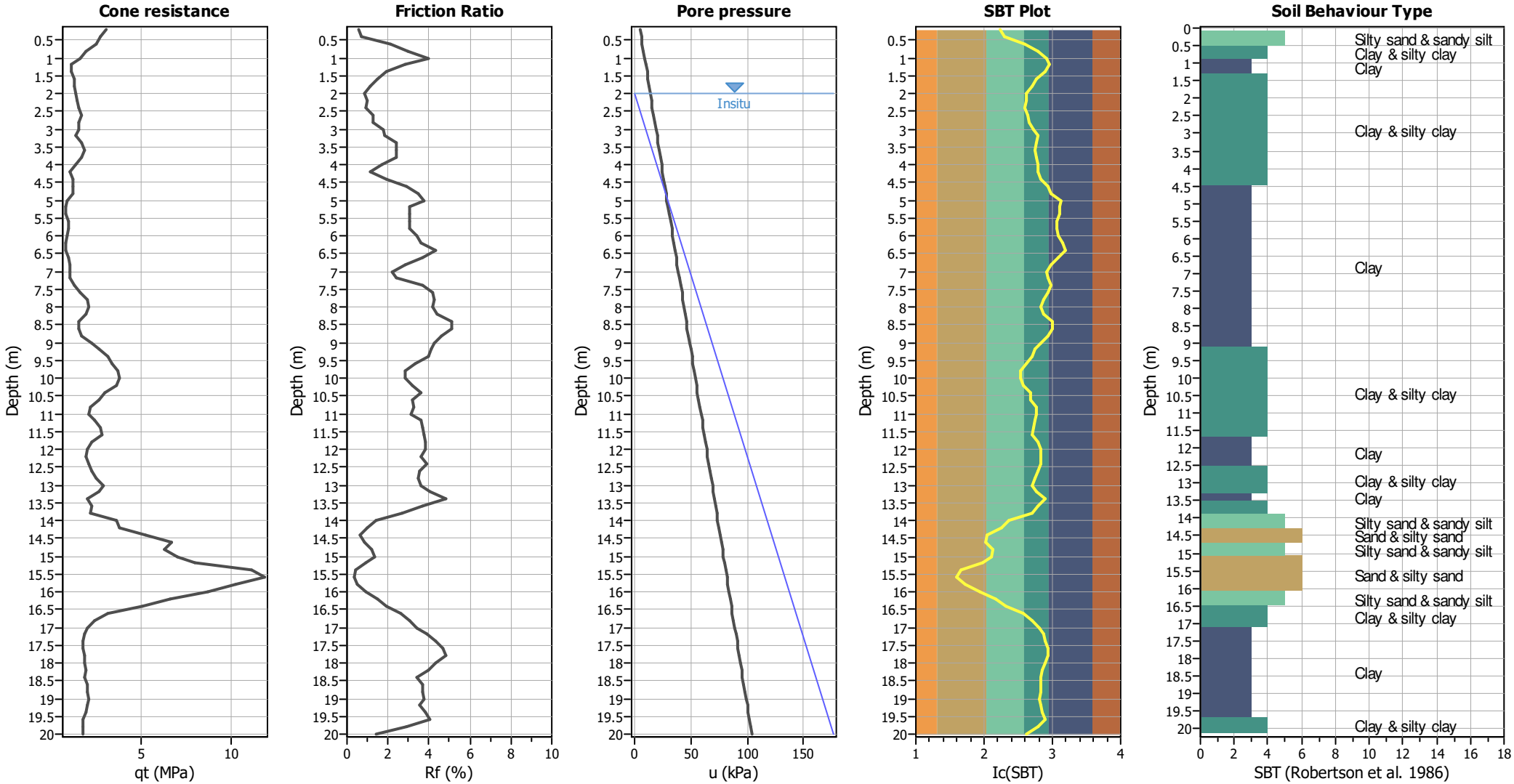






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



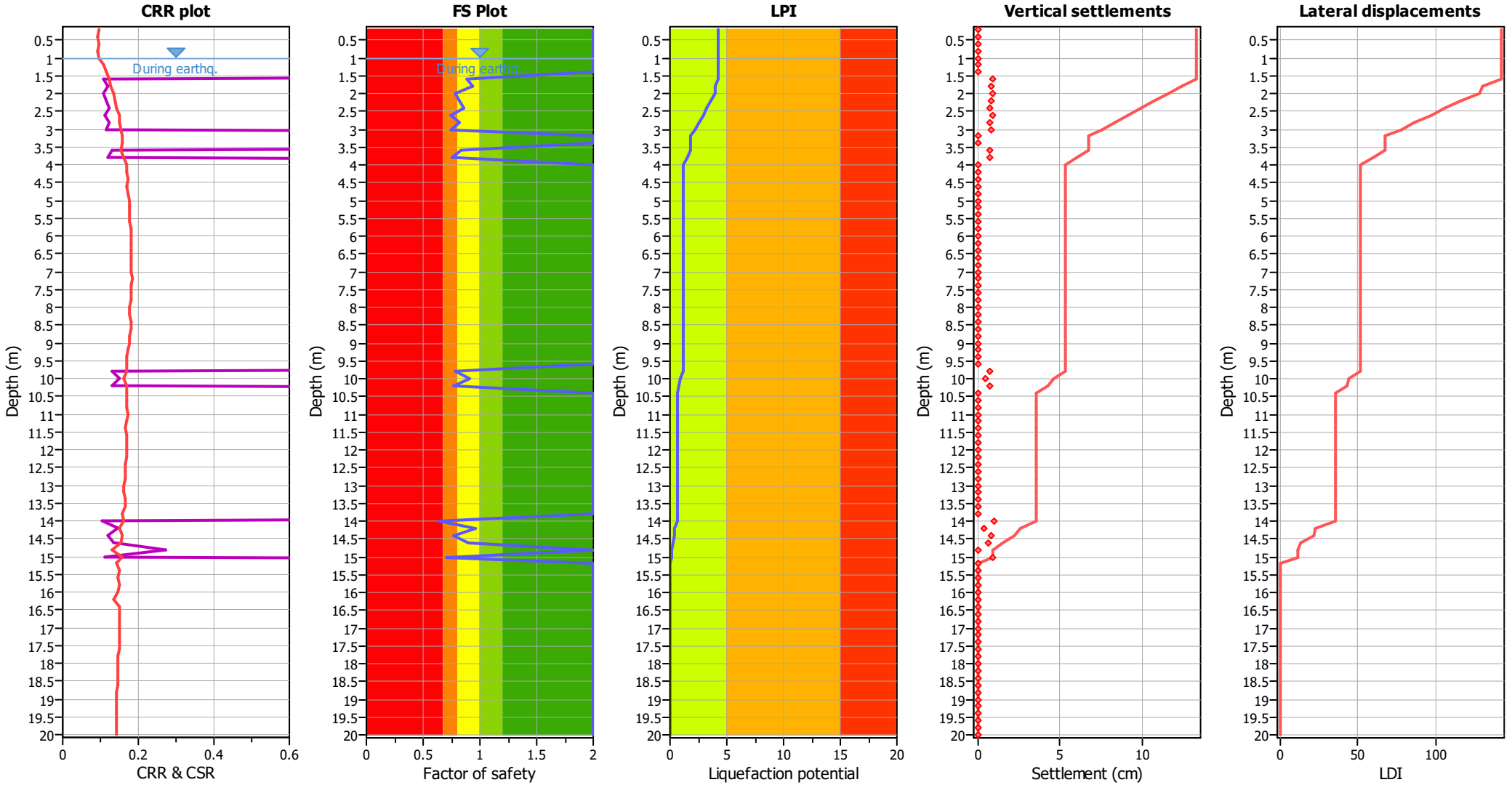
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	0.89	0.11	9.20	0.20	0.21
1.80	0.94	0.06	9.10	0.20	0.11	2.00	0.79	0.21	9.00	0.20	0.39
2.20	0.82	0.18	8.90	0.20	0.32	2.40	0.86	0.14	8.80	0.20	0.25
2.60	0.75	0.25	8.70	0.20	0.44	2.80	0.82	0.18	8.60	0.20	0.30
3.00	0.74	0.26	8.50	0.20	0.44	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	0.83	0.17	8.20	0.20	0.28
3.80	0.76	0.24	8.10	0.20	0.39	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	0.78	0.22	5.10	0.20	0.23	10.00	0.91	0.09	5.00	0.20	0.09
10.20	0.77	0.23	4.90	0.20	0.22	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	0.64	0.36	3.00	0.20	0.21
14.20	0.96	0.04	2.90	0.20	0.03	14.40	0.76	0.24	2.80	0.20	0.13
14.60	0.89	0.11	2.70	0.20	0.06	14.80	2.00	0.00	2.60	0.20	0.00
15.00	0.71	0.29	2.50	0.20	0.15	15.20	2.00	0.00	2.40	0.20	0.00
15.40	2.00	0.00	2.30	0.20	0.00	15.60	2.00	0.00	2.20	0.20	0.00
15.80	2.00	0.00	2.10	0.20	0.00	16.00	2.00	0.00	2.00	0.20	0.00
16.20	2.00	0.00	1.90	0.20	0.00	16.40	2.00	0.00	1.80	0.20	0.00
16.60	2.00	0.00	1.70	0.20	0.00	16.80	2.00	0.00	1.60	0.20	0.00
17.00	2.00	0.00	1.50	0.20	0.00	17.20	2.00	0.00	1.40	0.20	0.00
17.40	2.00	0.00	1.30	0.20	0.00	17.60	2.00	0.00	1.20	0.20	0.00
17.80	2.00	0.00	1.10	0.20	0.00	18.00	2.00	0.00	1.00	0.20	0.00
18.20	2.00	0.00	0.90	0.20	0.00	18.40	2.00	0.00	0.80	0.20	0.00
18.60	2.00	0.00	0.70	0.20	0.00	18.80	2.00	0.00	0.60	0.20	0.00
19.00	2.00	0.00	0.50	0.20	0.00	19.20	2.00	0.00	0.40	0.20	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
19.40	2.00	0.00	0.30	0.20	0.00	19.60	2.00	0.00	0.20	0.20	0.00
19.80	2.00	0.00	0.10	0.20	0.00	20.00	2.00	0.00	0.00	0.20	0.00

Overall liquefaction potential: 4.25

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	20.13	2.00	0.00	1.00	0.00	1.20	18.46	2.00	0.00	1.00	0.00
1.40	16.78	2.00	0.00	1.00	0.00	1.60	72.18	0.89	4.42	1.00	0.88
1.80	84.15	0.94	3.82	1.00	0.76	2.00	69.32	0.79	4.59	1.00	0.92
2.20	78.15	0.82	4.10	1.00	0.82	2.40	86.08	0.86	3.73	1.00	0.75
2.60	74.10	0.75	4.31	1.00	0.86	2.80	86.84	0.82	3.70	1.00	0.74
3.00	77.61	0.74	4.13	1.00	0.83	3.20	22.42	2.00	0.00	1.00	0.00
3.40	20.52	2.00	0.00	1.00	0.00	3.60	93.03	0.83	3.46	1.00	0.69
3.80	85.52	0.76	3.76	1.00	0.75	4.00	15.17	2.00	0.00	1.00	0.00
4.20	14.96	2.00	0.00	1.00	0.00	4.40	13.30	2.00	0.00	1.00	0.00
4.60	22.70	2.00	0.00	1.00	0.00	4.80	14.23	2.00	0.00	1.00	0.00
5.00	12.64	2.00	0.00	1.00	0.00	5.20	8.40	2.00	0.00	1.00	0.00
5.40	9.63	2.00	0.00	1.00	0.00	5.60	12.15	2.00	0.00	1.00	0.00
5.80	13.29	2.00	0.00	1.00	0.00	6.00	9.25	2.00	0.00	1.00	0.00
6.20	10.42	2.00	0.00	1.00	0.00	6.40	9.02	2.00	0.00	1.00	0.00
6.60	10.16	2.00	0.00	1.00	0.00	6.80	14.94	2.00	0.00	1.00	0.00
7.00	12.37	2.00	0.00	1.00	0.00	7.20	9.81	2.00	0.00	1.00	0.00
7.40	14.44	2.00	0.00	1.00	0.00	7.60	18.92	2.00	0.00	1.00	0.00
7.80	20.98	2.00	0.00	1.00	0.00	8.00	27.47	2.00	0.00	1.00	0.00
8.20	22.71	2.00	0.00	1.00	0.00	8.40	14.69	2.00	0.00	1.00	0.00
8.60	12.31	2.00	0.00	1.00	0.00	8.80	21.97	2.00	0.00	1.00	0.00
9.00	19.59	2.00	0.00	1.00	0.00	9.20	28.92	2.00	0.00	1.00	0.00
9.40	35.92	2.00	0.00	1.00	0.00	9.60	33.50	2.00	0.00	1.00	0.00
9.80	95.34	0.78	3.37	1.00	0.67	10.00	107.98	0.91	2.06	1.00	0.41
10.20	94.02	0.77	3.42	1.00	0.68	10.40	30.21	2.00	0.00	1.00	0.00
10.60	23.96	2.00	0.00	1.00	0.00	10.80	22.75	2.00	0.00	1.00	0.00
11.00	15.69	2.00	0.00	1.00	0.00	11.20	21.38	2.00	0.00	1.00	0.00
11.40	31.82	2.00	0.00	1.00	0.00	11.60	24.82	2.00	0.00	1.00	0.00
11.80	22.71	2.00	0.00	1.00	0.00	12.00	14.98	2.00	0.00	1.00	0.00
12.20	17.66	2.00	0.00	1.00	0.00	12.40	20.31	2.00	0.00	1.00	0.00
12.60	17.37	2.00	0.00	1.00	0.00	12.80	21.81	2.00	0.00	1.00	0.00
13.00	26.20	2.00	0.00	1.00	0.00	13.20	27.82	2.00	0.00	1.00	0.00
13.40	15.02	2.00	0.00	1.00	0.00	13.60	9.60	2.00	0.00	1.00	0.00
13.80	32.61	2.00	0.00	1.00	0.00	14.00	66.71	0.64	4.76	1.00	0.95
14.20	105.68	0.96	1.67	1.00	0.33	14.40	84.94	0.76	3.78	1.00	0.76
14.60	99.16	0.89	3.24	1.00	0.65	14.80	147.21	2.00	0.00	1.00	0.00
15.00	75.10	0.71	4.26	1.00	0.85	15.20	118.48	2.00	0.00	1.00	0.00
15.40	104.42	2.00	0.00	1.00	0.00	15.60	107.39	2.00	0.00	1.00	0.00
15.80	88.20	2.00	0.00	1.00	0.00	16.00	106.90	2.00	0.00	1.00	0.00
16.20	128.73	2.00	0.00	1.00	0.00	16.40	92.36	2.00	0.00	1.00	0.00
16.60	23.92	2.00	0.00	1.00	0.00	16.80	15.69	2.00	0.00	1.00	0.00
17.00	15.60	2.00	0.00	1.00	0.00	17.20	13.92	2.00	0.00	1.00	0.00
17.40	12.26	2.00	0.00	1.00	0.00	17.60	13.75	2.00	0.00	1.00	0.00
17.80	13.66	2.00	0.00	1.00	0.00	18.00	12.81	2.00	0.00	1.00	0.00
18.20	13.50	2.00	0.00	1.00	0.00	18.40	14.95	2.00	0.00	1.00	0.00
18.60	11.83	2.00	0.00	1.00	0.00	18.80	15.54	2.00	0.00	1.00	0.00
19.00	14.70	2.00	0.00	1.00	0.00	19.20	13.86	2.00	0.00	1.00	0.00
19.40	13.04	2.00	0.00	1.00	0.00	19.60	12.97	2.00	0.00	1.00	0.00
19.80	11.43	2.00	0.00	1.00	0.00	20.00	12.84	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)

Total estimated settlement: 13.31

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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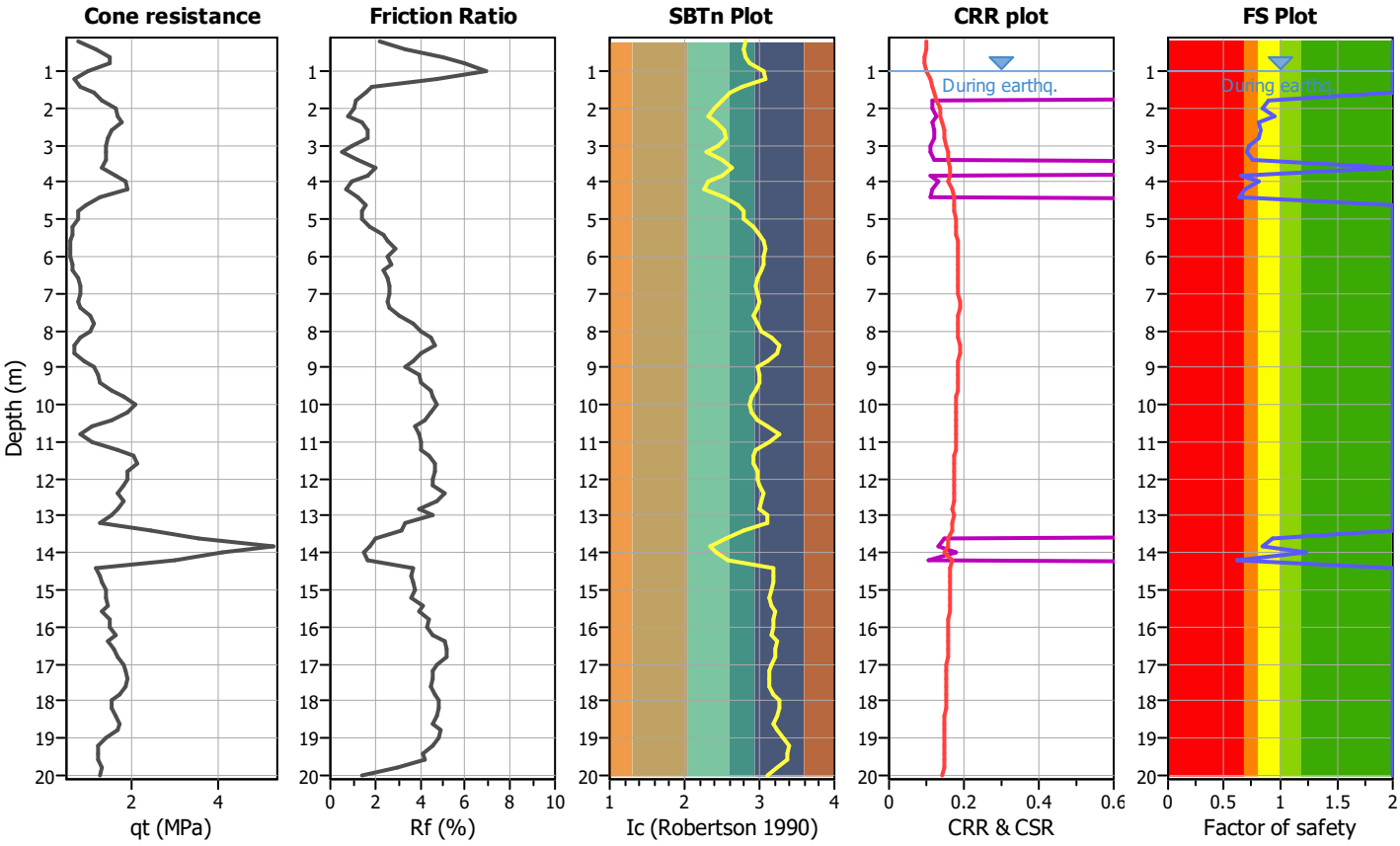
LIQUEFACTION ANALYSIS REPORT

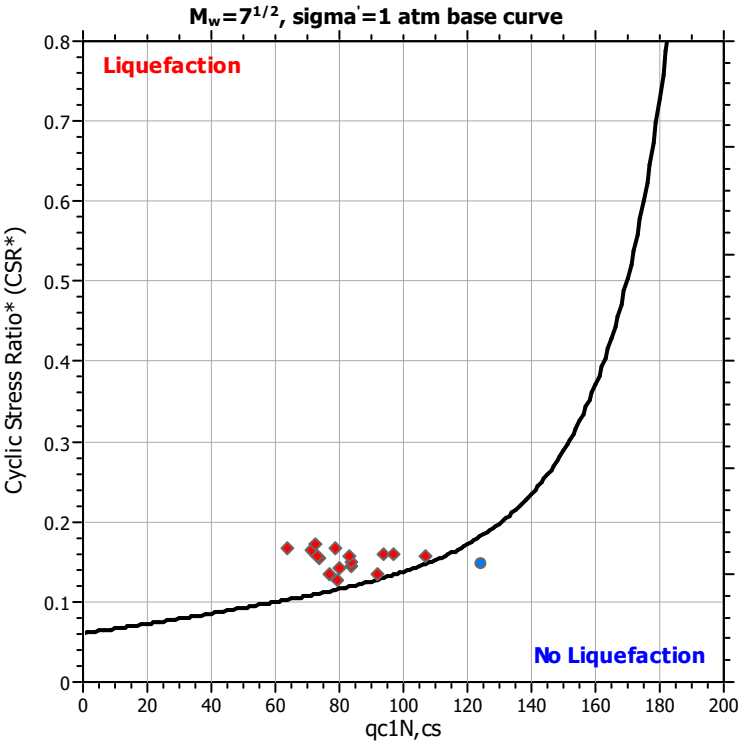
Project title : **Location :**

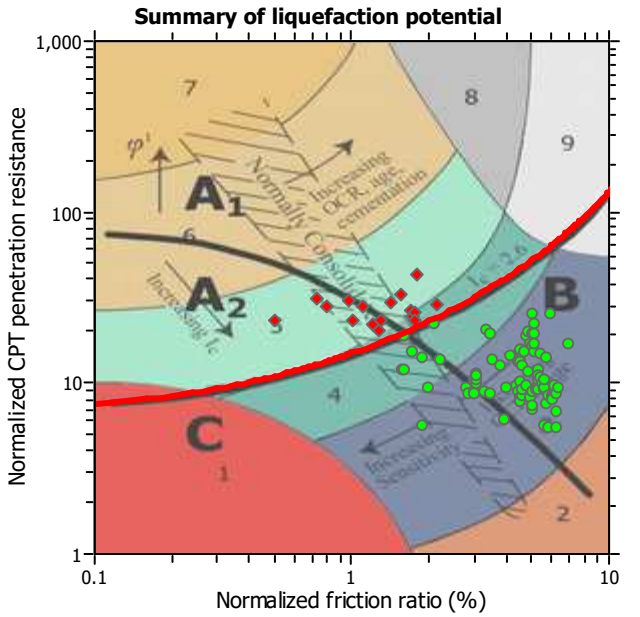
CPT file : CPT268

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

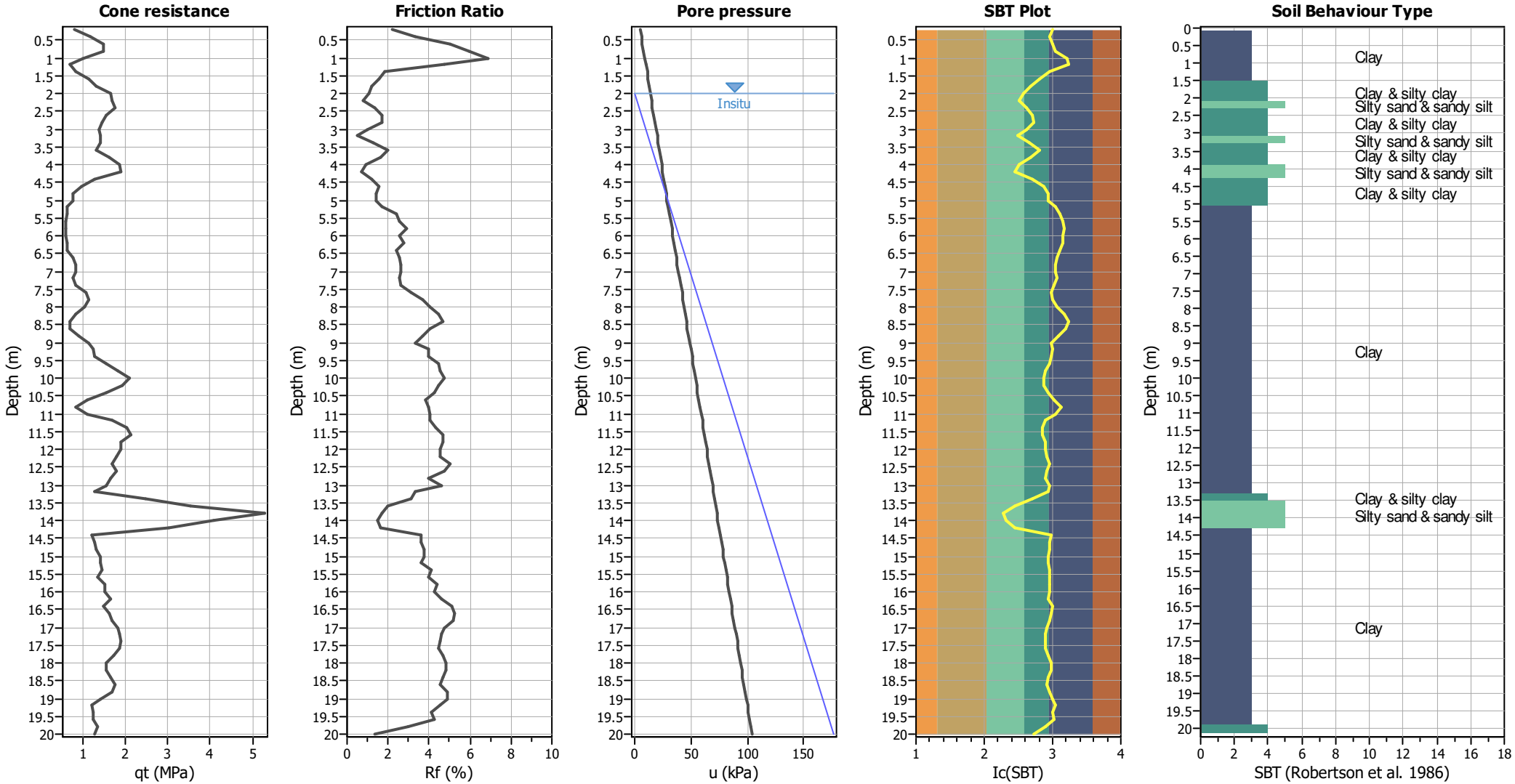






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



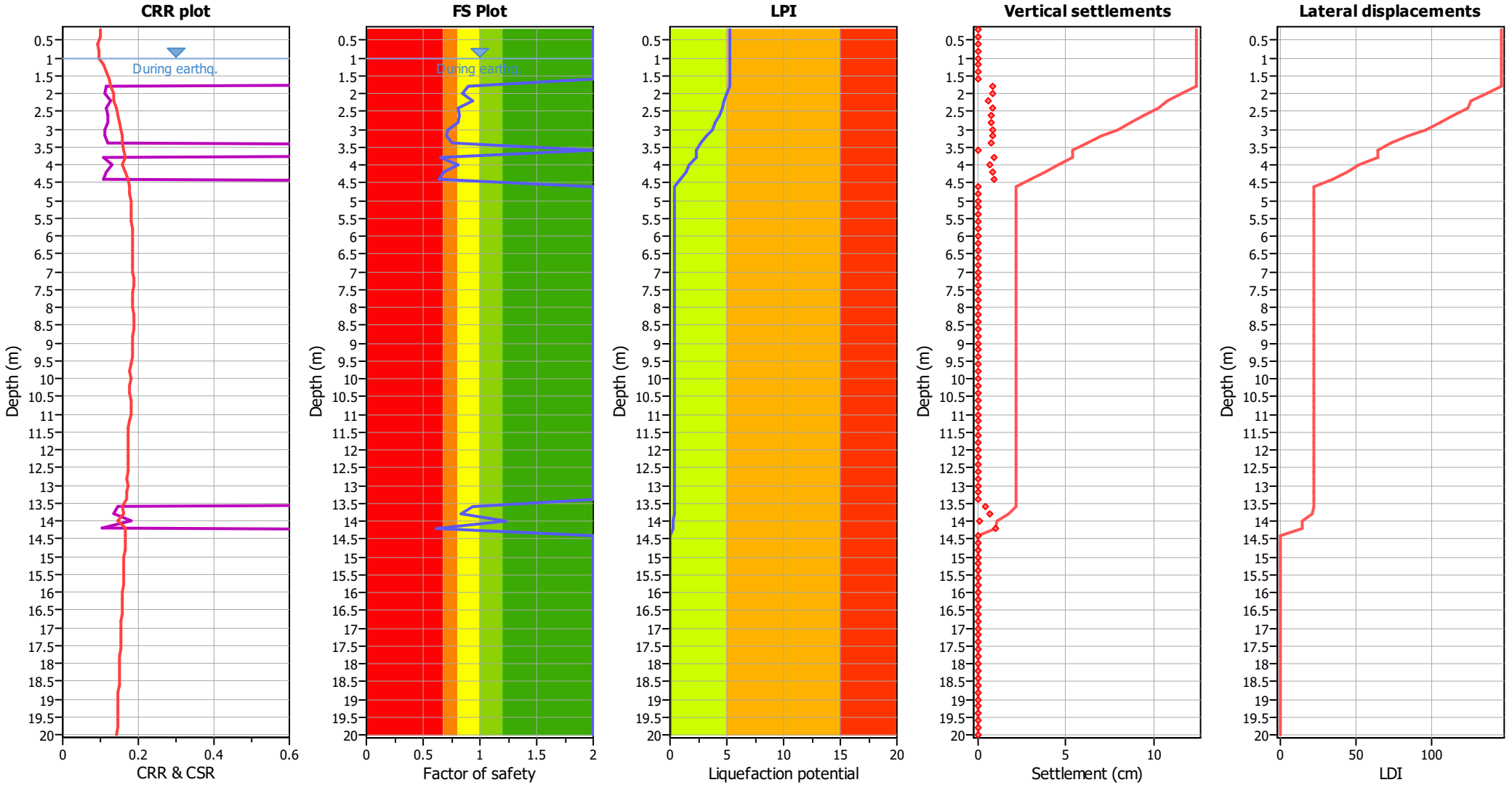
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	0.90	0.10	9.10	0.20	0.18	2.00	0.84	0.16	9.00	0.20	0.28
2.20	0.94	0.06	8.90	0.20	0.10	2.40	0.81	0.19	8.80	0.20	0.33
2.60	0.82	0.18	8.70	0.20	0.31	2.80	0.80	0.20	8.60	0.20	0.34
3.00	0.72	0.28	8.50	0.20	0.48	3.20	0.70	0.30	8.40	0.20	0.50
3.40	0.76	0.24	8.30	0.20	0.40	3.60	2.00	0.00	8.20	0.20	0.00
3.80	0.65	0.35	8.10	0.20	0.56	4.00	0.81	0.19	8.00	0.20	0.30
4.20	0.69	0.31	7.90	0.20	0.50	4.40	0.64	0.36	7.80	0.20	0.56
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	0.93	0.07	3.20	0.20	0.04
13.80	0.83	0.17	3.10	0.20	0.10	14.00	1.23	0.00	3.00	0.20	0.00
14.20	0.61	0.39	2.90	0.20	0.22	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00	15.20	2.00	0.00	2.40	0.20	0.00
15.40	2.00	0.00	2.30	0.20	0.00	15.60	2.00	0.00	2.20	0.20	0.00
15.80	2.00	0.00	2.10	0.20	0.00	16.00	2.00	0.00	2.00	0.20	0.00
16.20	2.00	0.00	1.90	0.20	0.00	16.40	2.00	0.00	1.80	0.20	0.00
16.60	2.00	0.00	1.70	0.20	0.00	16.80	2.00	0.00	1.60	0.20	0.00
17.00	2.00	0.00	1.50	0.20	0.00	17.20	2.00	0.00	1.40	0.20	0.00
17.40	2.00	0.00	1.30	0.20	0.00	17.60	2.00	0.00	1.20	0.20	0.00
17.80	2.00	0.00	1.10	0.20	0.00	18.00	2.00	0.00	1.00	0.20	0.00
18.20	2.00	0.00	0.90	0.20	0.00	18.40	2.00	0.00	0.80	0.20	0.00
18.60	2.00	0.00	0.70	0.20	0.00	18.80	2.00	0.00	0.60	0.20	0.00
19.00	2.00	0.00	0.50	0.20	0.00	19.20	2.00	0.00	0.40	0.20	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
19.40	2.00	0.00	0.30	0.20	0.00	19.60	2.00	0.00	0.20	0.20	0.00
19.80	2.00	0.00	0.10	0.20	0.00	20.00	2.00	0.00	0.00	0.20	0.00

Overall liquefaction potential: 5.22

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	13.42	2.00	0.00	1.00	0.00	1.20	8.39	2.00	0.00	1.00	0.00
1.40	13.42	2.00	0.00	1.00	0.00	1.60	20.13	2.00	0.00	1.00	0.00
1.80	79.32	0.90	4.04	1.00	0.81	2.00	77.07	0.84	4.16	1.00	0.83
2.20	91.77	0.94	2.72	1.00	0.54	2.40	80.12	0.81	4.00	1.00	0.80
2.60	84.01	0.82	3.82	1.00	0.76	2.80	83.77	0.80	3.83	1.00	0.77
3.00	73.54	0.72	4.34	1.00	0.87	3.20	73.36	0.70	4.35	1.00	0.87
3.40	83.20	0.76	3.86	1.00	0.77	3.60	18.73	2.00	0.00	1.00	0.00
3.80	71.28	0.65	4.47	1.00	0.89	4.00	93.49	0.81	3.44	1.00	0.69
4.20	78.56	0.69	4.08	1.00	0.82	4.40	72.66	0.64	4.39	1.00	0.88
4.60	10.31	2.00	0.00	1.00	0.00	4.80	14.37	2.00	0.00	1.00	0.00
5.00	8.64	2.00	0.00	1.00	0.00	5.20	9.90	2.00	0.00	1.00	0.00
5.40	8.40	2.00	0.00	1.00	0.00	5.60	8.30	2.00	0.00	1.00	0.00
5.80	8.19	2.00	0.00	1.00	0.00	6.00	8.10	2.00	0.00	1.00	0.00
6.20	8.00	2.00	0.00	1.00	0.00	6.40	9.20	2.00	0.00	1.00	0.00
6.60	7.81	2.00	0.00	1.00	0.00	6.80	12.75	2.00	0.00	1.00	0.00
7.00	11.37	2.00	0.00	1.00	0.00	7.20	7.54	2.00	0.00	1.00	0.00
7.40	9.90	2.00	0.00	1.00	0.00	7.60	13.38	2.00	0.00	1.00	0.00
7.80	15.58	2.00	0.00	1.00	0.00	8.00	11.90	2.00	0.00	1.00	0.00
8.20	9.44	2.00	0.00	1.00	0.00	8.40	8.18	2.00	0.00	1.00	0.00
8.60	6.95	2.00	0.00	1.00	0.00	8.80	9.14	2.00	0.00	1.00	0.00
9.00	14.62	2.00	0.00	1.00	0.00	9.20	14.47	2.00	0.00	1.00	0.00
9.40	12.13	2.00	0.00	1.00	0.00	9.60	15.24	2.00	0.00	1.00	0.00
9.80	23.58	2.00	0.00	1.00	0.00	10.00	20.18	2.00	0.00	1.00	0.00
10.20	23.10	2.00	0.00	1.00	0.00	10.40	17.71	2.00	0.00	1.00	0.00
10.60	8.28	2.00	0.00	1.00	0.00	10.80	8.21	2.00	0.00	1.00	0.00
11.00	9.15	2.00	0.00	1.00	0.00	11.20	16.09	2.00	0.00	1.00	0.00
11.40	25.87	2.00	0.00	1.00	0.00	11.60	18.73	2.00	0.00	1.00	0.00
11.80	18.56	2.00	0.00	1.00	0.00	12.00	18.39	2.00	0.00	1.00	0.00
12.20	18.23	2.00	0.00	1.00	0.00	12.40	15.21	2.00	0.00	1.00	0.00
12.60	15.07	2.00	0.00	1.00	0.00	12.80	20.59	2.00	0.00	1.00	0.00
13.00	11.10	2.00	0.00	1.00	0.00	13.20	11.02	2.00	0.00	1.00	0.00
13.40	12.75	2.00	0.00	1.00	0.00	13.60	106.59	0.93	1.88	1.00	0.38
13.80	96.88	0.83	3.32	1.00	0.66	14.00	124.26	1.23	0.57	1.00	0.11
14.20	63.97	0.61	4.94	1.00	0.99	14.40	10.49	2.00	0.00	1.00	0.00
14.60	10.41	2.00	0.00	1.00	0.00	14.80	12.08	2.00	0.00	1.00	0.00
15.00	11.13	2.00	0.00	1.00	0.00	15.20	12.77	2.00	0.00	1.00	0.00
15.40	11.83	2.00	0.00	1.00	0.00	15.60	11.75	2.00	0.00	1.00	0.00
15.80	9.98	2.00	0.00	1.00	0.00	16.00	15.80	2.00	0.00	1.00	0.00
16.20	11.50	2.00	0.00	1.00	0.00	16.40	13.08	2.00	0.00	1.00	0.00
16.60	11.34	2.00	0.00	1.00	0.00	16.80	14.55	2.00	0.00	1.00	0.00
17.00	14.45	2.00	0.00	1.00	0.00	17.20	14.35	2.00	0.00	1.00	0.00
17.40	15.88	2.00	0.00	1.00	0.00	17.60	14.97	2.00	0.00	1.00	0.00
17.80	13.28	2.00	0.00	1.00	0.00	18.00	11.61	2.00	0.00	1.00	0.00
18.20	10.75	2.00	0.00	1.00	0.00	18.40	13.03	2.00	0.00	1.00	0.00
18.60	13.73	2.00	0.00	1.00	0.00	18.80	12.87	2.00	0.00	1.00	0.00
19.00	11.26	2.00	0.00	1.00	0.00	19.20	7.41	2.00	0.00	1.00	0.00
19.40	8.12	2.00	0.00	1.00	0.00	19.60	11.82	2.00	0.00	1.00	0.00
19.80	7.29	2.00	0.00	1.00	0.00	20.00	10.21	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)

Total estimated settlement: 12.44

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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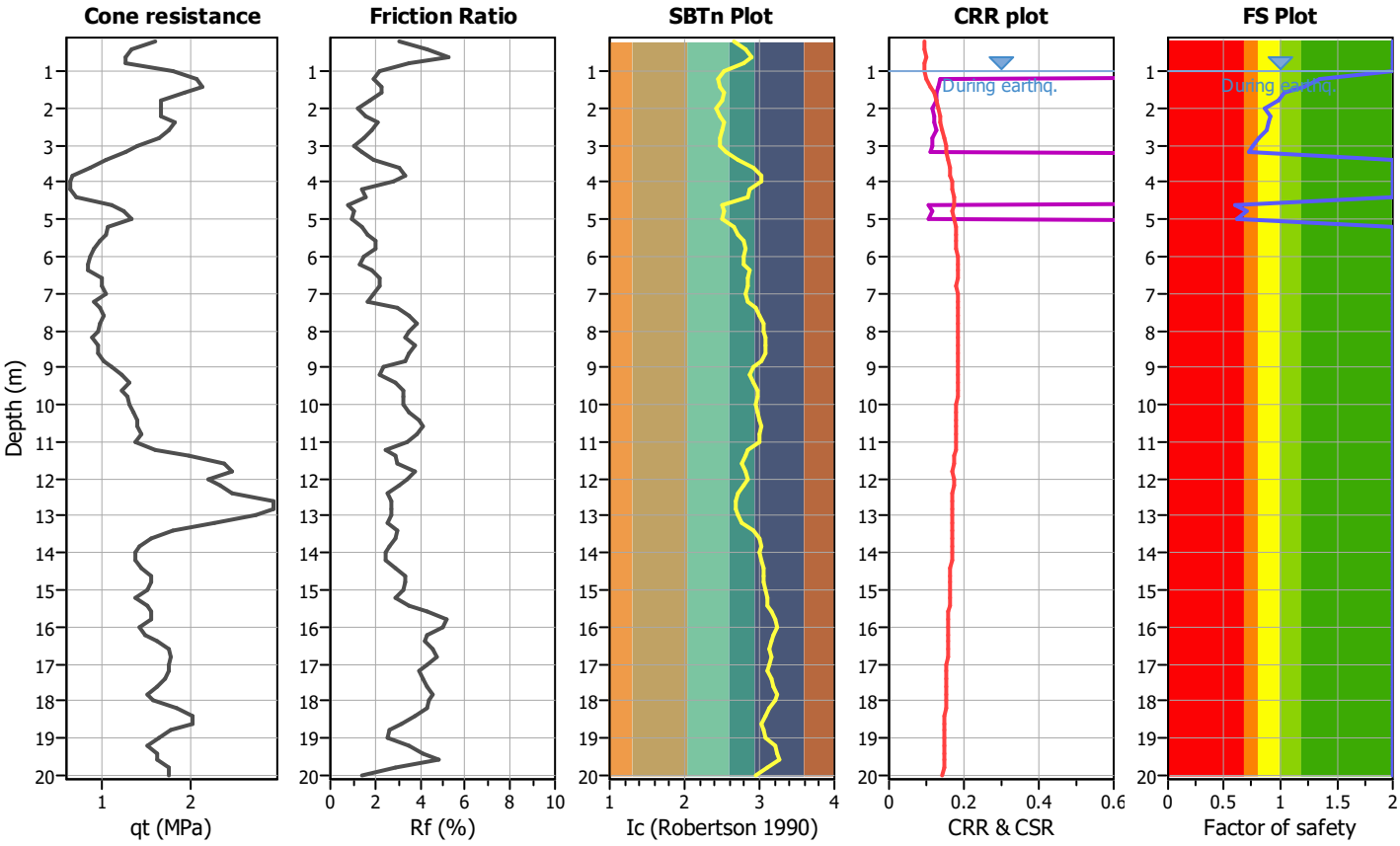
LIQUEFACTION ANALYSIS REPORT

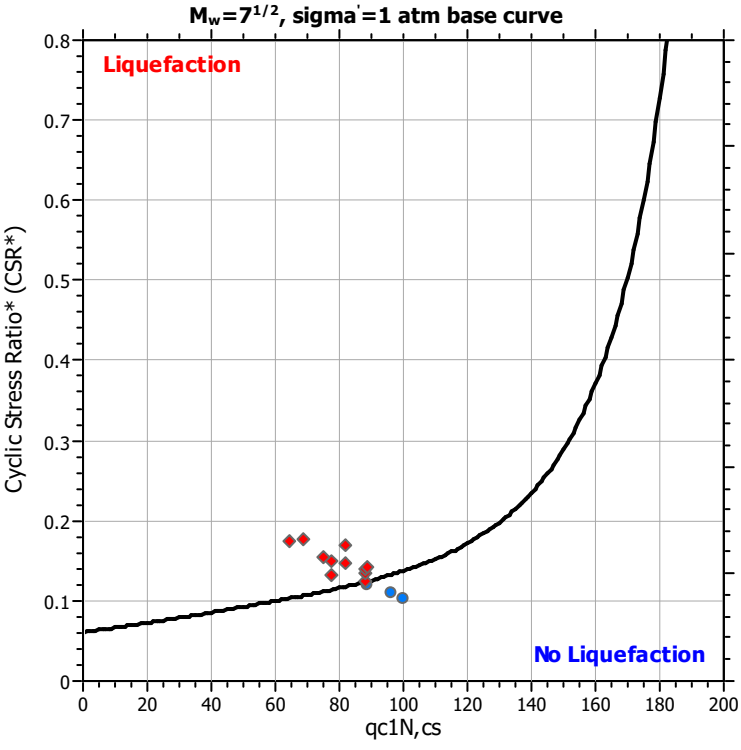
Project title : **Location :**

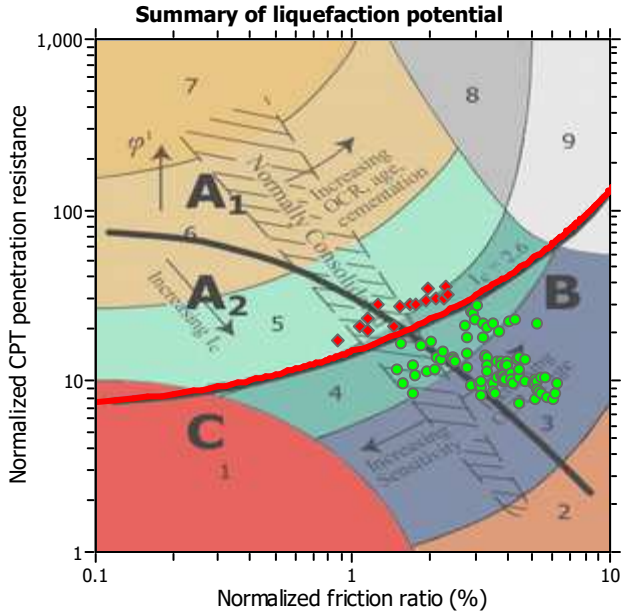
CPT file : CPT269

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

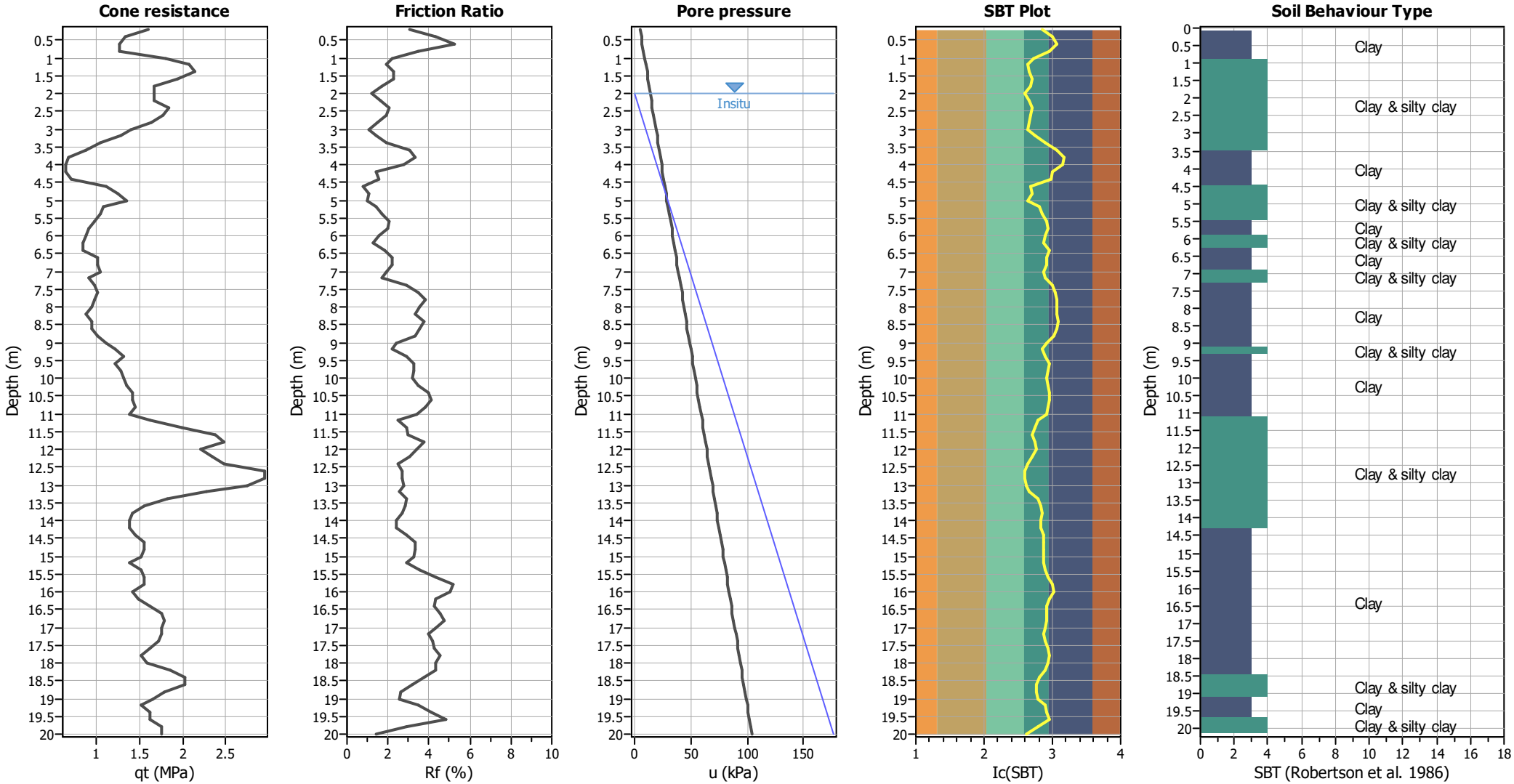






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



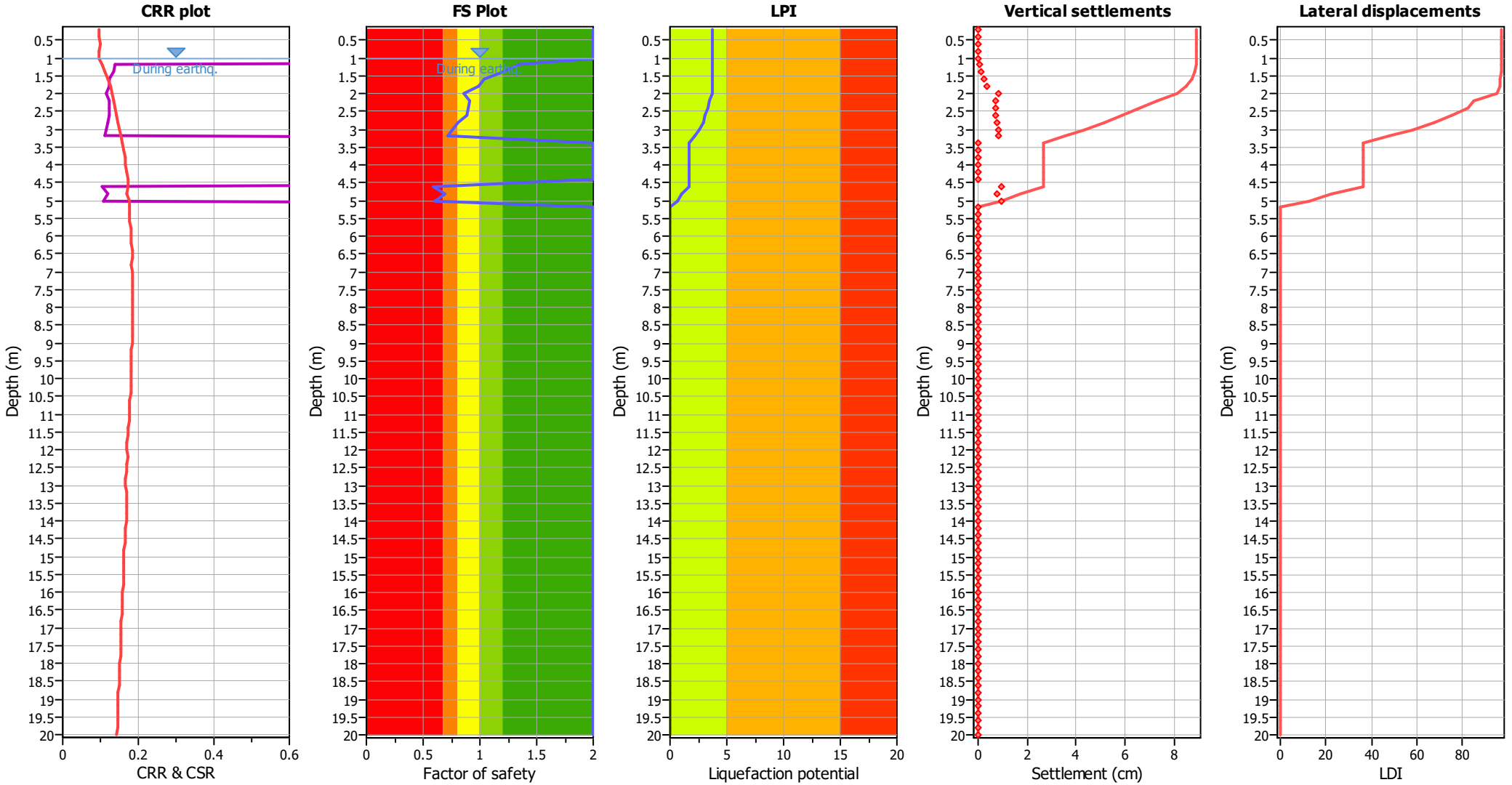
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	1.35	0.00	9.40	0.20	0.00
1.40	1.20	0.00	9.30	0.20	0.00	1.60	1.04	0.00	9.20	0.20	0.00
1.80	0.99	0.01	9.10	0.20	0.02	2.00	0.86	0.14	9.00	0.20	0.25
2.20	0.92	0.08	8.90	0.20	0.15	2.40	0.89	0.11	8.80	0.20	0.19
2.60	0.88	0.12	8.70	0.20	0.21	2.80	0.80	0.20	8.60	0.20	0.34
3.00	0.75	0.25	8.50	0.20	0.42	3.20	0.72	0.28	8.40	0.20	0.47
3.40	2.00	0.00	8.30	0.20	0.00	3.60	2.00	0.00	8.20	0.20	0.00
3.80	2.00	0.00	8.10	0.20	0.00	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	0.59	0.41	7.70	0.20	0.63	4.80	0.69	0.31	7.60	0.20	0.46
5.00	0.61	0.39	7.50	0.20	0.59	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00	15.20	2.00	0.00	2.40	0.20	0.00
15.40	2.00	0.00	2.30	0.20	0.00	15.60	2.00	0.00	2.20	0.20	0.00
15.80	2.00	0.00	2.10	0.20	0.00	16.00	2.00	0.00	2.00	0.20	0.00
16.20	2.00	0.00	1.90	0.20	0.00	16.40	2.00	0.00	1.80	0.20	0.00
16.60	2.00	0.00	1.70	0.20	0.00	16.80	2.00	0.00	1.60	0.20	0.00
17.00	2.00	0.00	1.50	0.20	0.00	17.20	2.00	0.00	1.40	0.20	0.00
17.40	2.00	0.00	1.30	0.20	0.00	17.60	2.00	0.00	1.20	0.20	0.00
17.80	2.00	0.00	1.10	0.20	0.00	18.00	2.00	0.00	1.00	0.20	0.00
18.20	2.00	0.00	0.90	0.20	0.00	18.40	2.00	0.00	0.80	0.20	0.00
18.60	2.00	0.00	0.70	0.20	0.00	18.80	2.00	0.00	0.60	0.20	0.00
19.00	2.00	0.00	0.50	0.20	0.00	19.20	2.00	0.00	0.40	0.20	0.00

:: Liquefaction Potential Index calculation data :: (continued)

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
19.40	2.00	0.00	0.30	0.20	0.00	19.60	2.00	0.00	0.20	0.20	0.00
19.80	2.00	0.00	0.10	0.20	0.00	20.00	2.00	0.00	0.00	0.20	0.00

Overall liquefaction potential: 3.73

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	84.42	2.00	0.00	1.00	0.00	1.20	99.98	1.35	0.34	1.00	0.07
1.40	96.44	1.20	0.55	1.00	0.11	1.60	88.51	1.04	1.14	1.00	0.23
1.80	88.16	0.99	1.75	1.00	0.35	2.00	77.76	0.86	4.12	1.00	0.82
2.20	87.85	0.92	3.66	1.00	0.73	2.40	87.91	0.89	3.66	1.00	0.73
2.60	88.95	0.88	3.61	1.00	0.72	2.80	82.05	0.80	3.91	1.00	0.78
3.00	77.49	0.75	4.13	1.00	0.83	3.20	74.79	0.72	4.27	1.00	0.85
3.40	18.66	2.00	0.00	1.00	0.00	3.60	10.90	2.00	0.00	1.00	0.00
3.80	10.72	2.00	0.00	1.00	0.00	4.00	9.10	2.00	0.00	1.00	0.00
4.20	8.99	2.00	0.00	1.00	0.00	4.40	10.32	2.00	0.00	1.00	0.00
4.60	64.57	0.59	4.90	1.00	0.98	4.80	82.09	0.69	3.91	1.00	0.78
5.00	69.06	0.61	4.61	1.00	0.92	5.20	15.24	2.00	0.00	1.00	0.00
5.40	13.71	2.00	0.00	1.00	0.00	5.60	13.52	2.00	0.00	1.00	0.00
5.80	12.04	2.00	0.00	1.00	0.00	6.00	10.62	2.00	0.00	1.00	0.00
6.20	11.79	2.00	0.00	1.00	0.00	6.40	10.37	2.00	0.00	1.00	0.00
6.60	10.25	2.00	0.00	1.00	0.00	6.80	17.52	2.00	0.00	1.00	0.00
7.00	10.02	2.00	0.00	1.00	0.00	7.20	11.13	2.00	0.00	1.00	0.00
7.40	12.19	2.00	0.00	1.00	0.00	7.60	12.05	2.00	0.00	1.00	0.00
7.80	11.91	2.00	0.00	1.00	0.00	8.00	10.62	2.00	0.00	1.00	0.00
8.20	10.50	2.00	0.00	1.00	0.00	8.40	9.25	2.00	0.00	1.00	0.00
8.60	12.54	2.00	0.00	1.00	0.00	8.80	10.17	2.00	0.00	1.00	0.00
9.00	11.18	2.00	0.00	1.00	0.00	9.20	15.46	2.00	0.00	1.00	0.00
9.40	13.14	2.00	0.00	1.00	0.00	9.60	14.08	2.00	0.00	1.00	0.00
9.80	11.81	2.00	0.00	1.00	0.00	10.00	14.86	2.00	0.00	1.00	0.00
10.20	14.72	2.00	0.00	1.00	0.00	10.40	12.50	2.00	0.00	1.00	0.00
10.60	16.49	2.00	0.00	1.00	0.00	10.80	14.30	2.00	0.00	1.00	0.00
11.00	13.16	2.00	0.00	1.00	0.00	11.20	14.05	2.00	0.00	1.00	0.00
11.40	20.87	2.00	0.00	1.00	0.00	11.60	23.64	2.00	0.00	1.00	0.00
11.80	25.38	2.00	0.00	1.00	0.00	12.00	23.22	2.00	0.00	1.00	0.00
12.20	15.32	2.00	0.00	1.00	0.00	12.40	28.57	2.00	0.00	1.00	0.00
12.60	26.42	2.00	0.00	1.00	0.00	12.80	28.09	2.00	0.00	1.00	0.00
13.00	27.87	2.00	0.00	1.00	0.00	13.20	20.23	2.00	0.00	1.00	0.00
13.40	14.56	2.00	0.00	1.00	0.00	13.60	14.46	2.00	0.00	1.00	0.00
13.80	12.55	2.00	0.00	1.00	0.00	14.00	10.66	2.00	0.00	1.00	0.00
14.20	13.26	2.00	0.00	1.00	0.00	14.40	12.28	2.00	0.00	1.00	0.00
14.60	12.19	2.00	0.00	1.00	0.00	14.80	15.61	2.00	0.00	1.00	0.00
15.00	12.02	2.00	0.00	1.00	0.00	15.20	11.08	2.00	0.00	1.00	0.00
15.40	11.86	2.00	0.00	1.00	0.00	15.60	15.19	2.00	0.00	1.00	0.00
15.80	11.69	2.00	0.00	1.00	0.00	16.00	11.61	2.00	0.00	1.00	0.00
16.20	11.53	2.00	0.00	1.00	0.00	16.40	13.11	2.00	0.00	1.00	0.00
16.60	14.68	2.00	0.00	1.00	0.00	16.80	14.58	2.00	0.00	1.00	0.00
17.00	13.66	2.00	0.00	1.00	0.00	17.20	13.57	2.00	0.00	1.00	0.00
17.40	14.29	2.00	0.00	1.00	0.00	17.60	12.59	2.00	0.00	1.00	0.00
17.80	10.92	2.00	0.00	1.00	0.00	18.00	11.64	2.00	0.00	1.00	0.00
18.20	13.94	2.00	0.00	1.00	0.00	18.40	17.01	2.00	0.00	1.00	0.00
18.60	15.33	2.00	0.00	1.00	0.00	18.80	13.69	2.00	0.00	1.00	0.00
19.00	11.30	2.00	0.00	1.00	0.00	19.20	12.00	2.00	0.00	1.00	0.00
19.40	10.41	2.00	0.00	1.00	0.00	19.60	13.38	2.00	0.00	1.00	0.00
19.80	11.79	2.00	0.00	1.00	0.00	20.00	13.24	2.00	0.00	1.00	0.00

:: Post-earthquake settlement due to soil liquefaction :: (continued)

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)

Total estimated settlement: 8.91

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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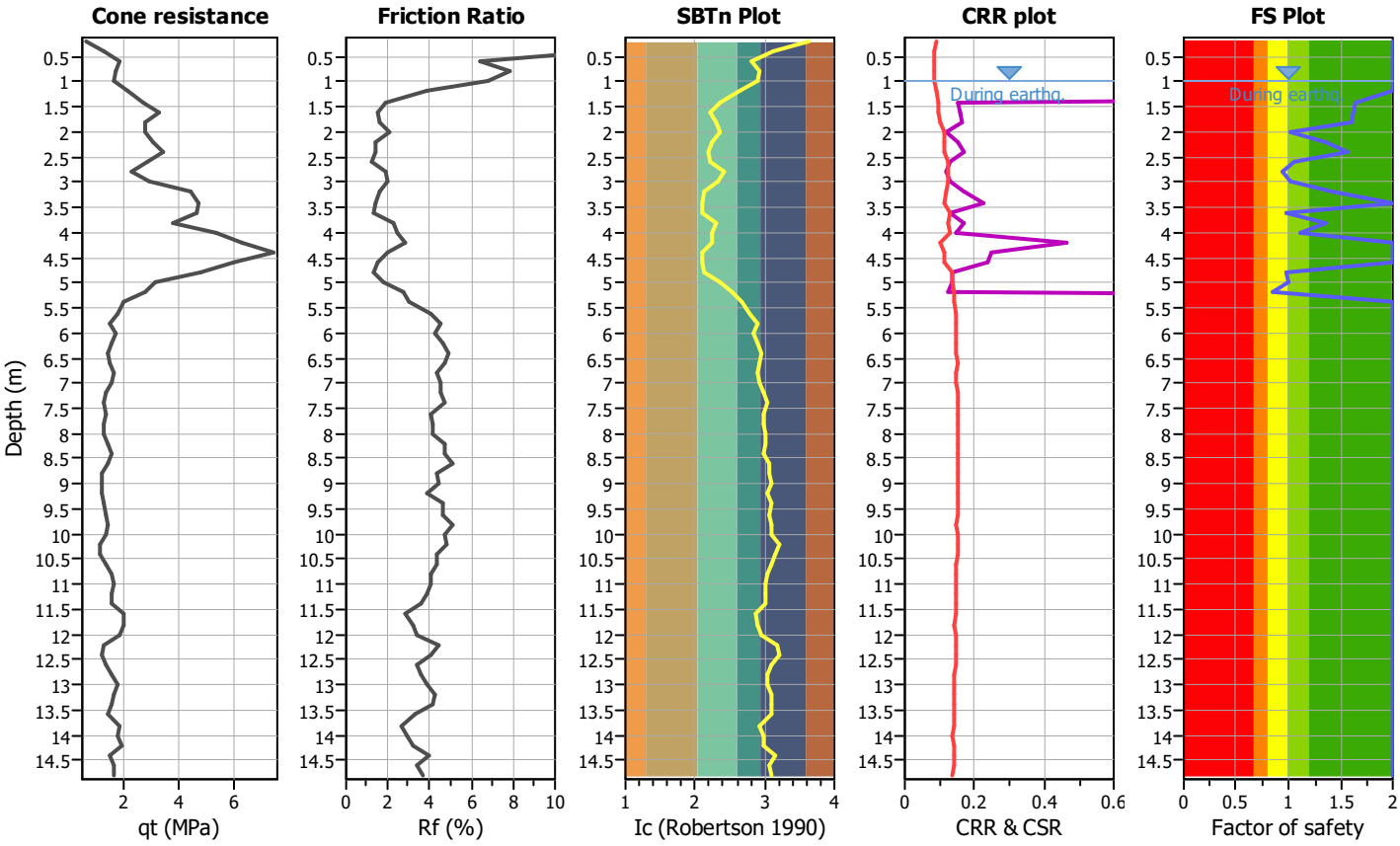
LIQUEFACTION ANALYSIS REPORT

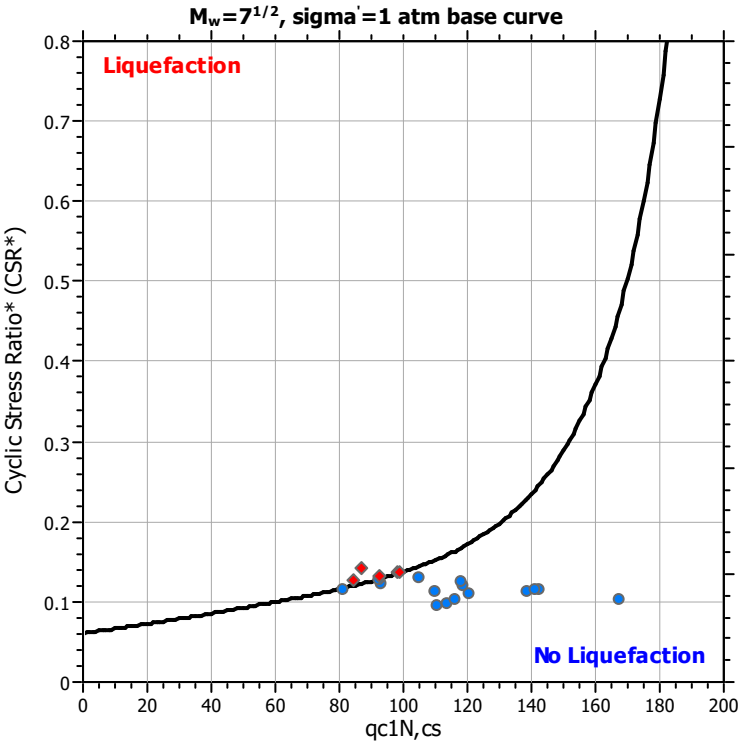
Project title : **Location :**

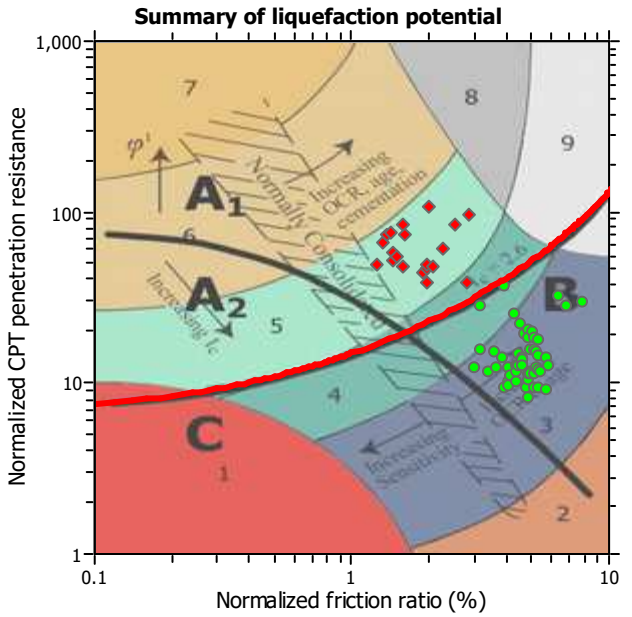
CPT file : CPT4

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.16	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

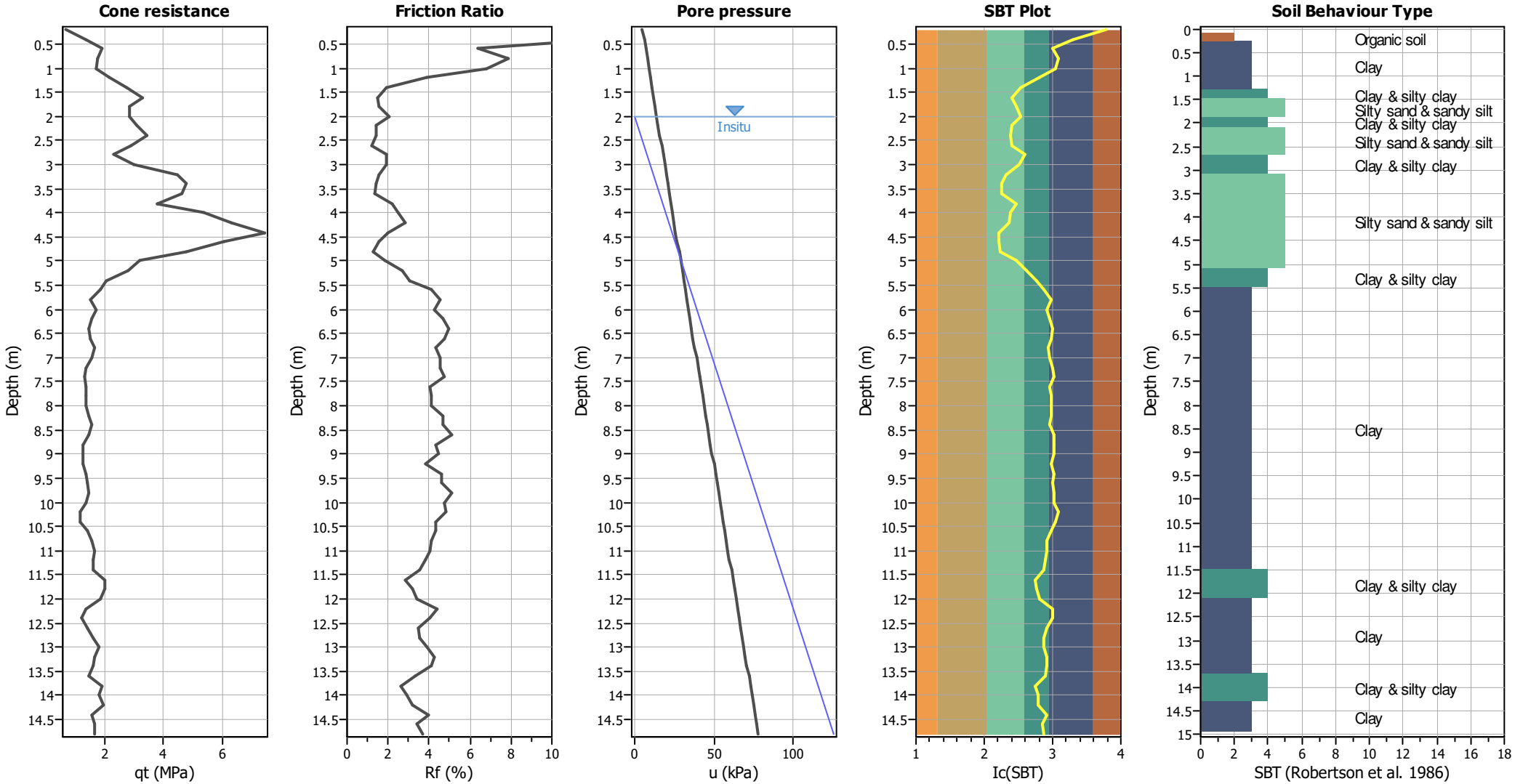






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



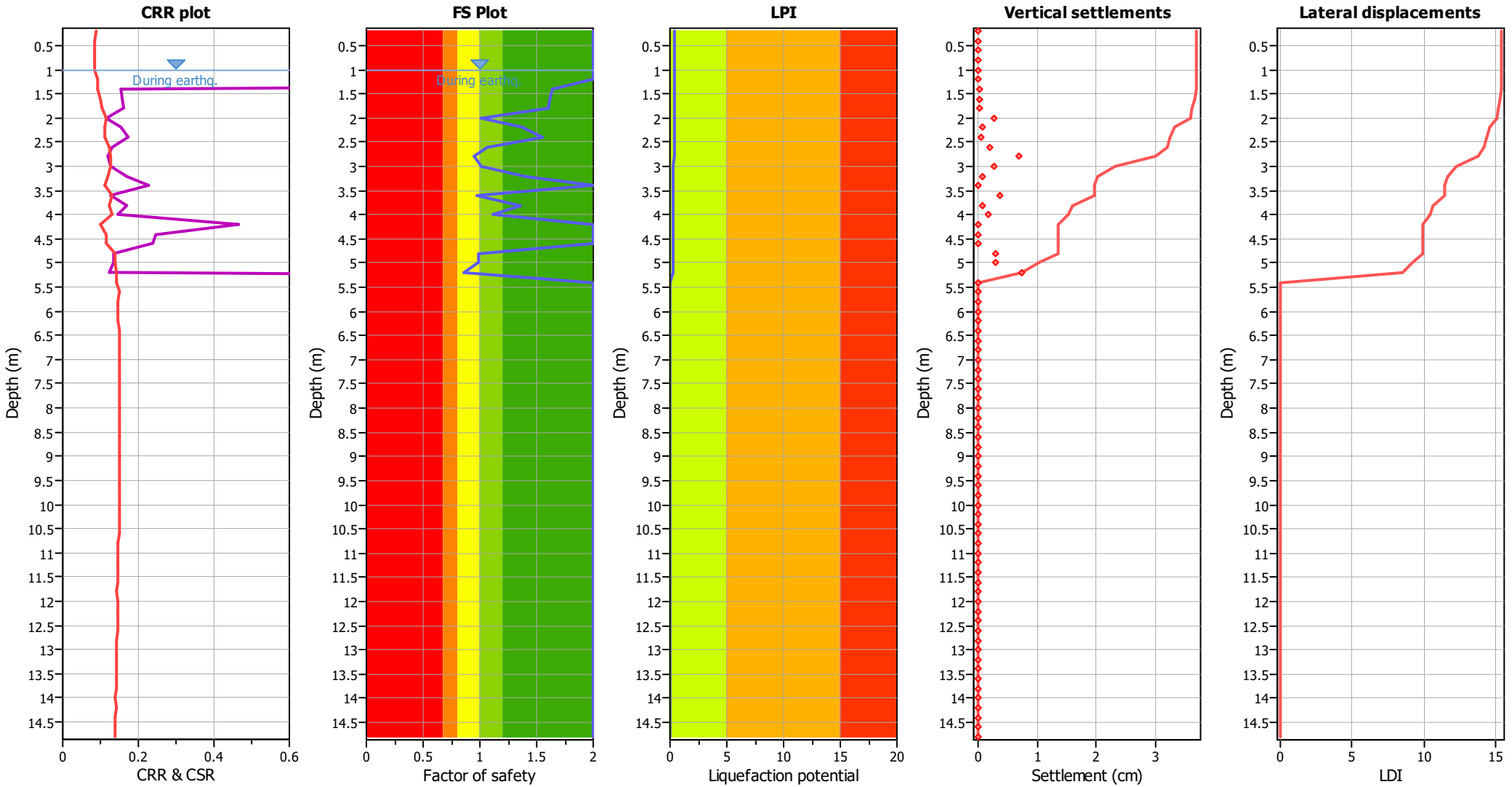
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.16	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.16	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	1.64	0.00	9.30	0.20	0.00	1.60	1.61	0.00	9.20	0.20	0.00
1.80	1.60	0.00	9.10	0.20	0.00	2.00	1.02	0.00	9.00	0.20	0.00
2.20	1.37	0.00	8.90	0.20	0.00	2.40	1.56	0.00	8.80	0.20	0.00
2.60	1.06	0.00	8.70	0.20	0.00	2.80	0.95	0.05	8.60	0.20	0.09
3.00	1.01	0.00	8.50	0.20	0.00	3.20	1.41	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	0.98	0.02	8.20	0.20	0.04
3.80	1.36	0.00	8.10	0.20	0.00	4.00	1.11	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	0.99	0.01	7.60	0.20	0.02
5.00	0.99	0.01	7.50	0.20	0.01	5.20	0.86	0.14	7.40	0.20	0.21
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00

Overall liquefaction potential: 0.37

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	27.08	2.00	0.00	1.00	0.00	1.20	30.66	2.00	0.00	1.00	0.00
1.40	110.69	1.64	0.15	1.00	0.03	1.60	113.65	1.61	0.17	1.00	0.03
1.80	115.99	1.60	0.18	1.00	0.04	2.00	81.22	1.02	1.40	1.00	0.28
2.20	109.92	1.37	0.36	1.00	0.07	2.40	120.32	1.56	0.21	1.00	0.04
2.60	93.14	1.06	1.03	1.00	0.21	2.80	84.43	0.95	3.41	1.00	0.68
3.00	92.25	1.01	1.39	1.00	0.28	3.20	118.88	1.41	0.33	1.00	0.07
3.40	138.51	2.00	0.00	1.00	0.00	3.60	92.74	0.98	1.83	1.00	0.37
3.80	118.10	1.36	0.39	1.00	0.08	4.00	105.18	1.11	0.81	1.00	0.16
4.20	167.56	2.00	0.00	1.00	0.00	4.40	142.71	2.00	0.00	1.00	0.00
4.60	141.26	2.00	0.00	1.00	0.00	4.80	98.31	0.99	1.53	1.00	0.31
5.00	98.99	0.99	1.50	1.00	0.30	5.20	86.69	0.86	3.71	1.00	0.74
5.40	33.15	2.00	0.00	1.00	0.00	5.60	13.67	2.00	0.00	1.00	0.00
5.80	20.62	2.00	0.00	1.00	0.00	6.00	20.37	2.00	0.00	1.00	0.00
6.20	20.11	2.00	0.00	1.00	0.00	6.40	15.27	2.00	0.00	1.00	0.00
6.60	15.09	2.00	0.00	1.00	0.00	6.80	21.66	2.00	0.00	1.00	0.00
7.00	19.19	2.00	0.00	1.00	0.00	7.20	12.35	2.00	0.00	1.00	0.00
7.40	14.41	2.00	0.00	1.00	0.00	7.60	16.43	2.00	0.00	1.00	0.00
7.80	14.11	2.00	0.00	1.00	0.00	8.00	12.90	2.00	0.00	1.00	0.00
8.20	15.93	2.00	0.00	1.00	0.00	8.40	17.85	2.00	0.00	1.00	0.00
8.60	15.61	2.00	0.00	1.00	0.00	8.80	11.35	2.00	0.00	1.00	0.00
9.00	11.24	2.00	0.00	1.00	0.00	9.20	15.18	2.00	0.00	1.00	0.00
9.40	12.03	2.00	0.00	1.00	0.00	9.60	12.92	2.00	0.00	1.00	0.00
9.80	16.73	2.00	0.00	1.00	0.00	10.00	12.68	2.00	0.00	1.00	0.00
10.20	10.17	2.00	0.00	1.00	0.00	10.40	10.08	2.00	0.00	1.00	0.00
10.60	13.31	2.00	0.00	1.00	0.00	10.80	16.04	2.00	0.00	1.00	0.00
11.00	14.97	2.00	0.00	1.00	0.00	11.20	14.85	2.00	0.00	1.00	0.00
11.40	14.73	2.00	0.00	1.00	0.00	11.60	14.61	2.00	0.00	1.00	0.00
11.80	25.50	2.00	0.00	1.00	0.00	12.00	14.38	2.00	0.00	1.00	0.00
12.20	10.68	2.00	0.00	1.00	0.00	12.40	10.60	2.00	0.00	1.00	0.00
12.60	10.52	2.00	0.00	1.00	0.00	12.80	15.73	2.00	0.00	1.00	0.00
13.00	15.61	2.00	0.00	1.00	0.00	13.20	15.50	2.00	0.00	1.00	0.00
13.40	11.93	2.00	0.00	1.00	0.00	13.60	13.56	2.00	0.00	1.00	0.00
13.80	11.76	2.00	0.00	1.00	0.00	14.00	21.93	2.00	0.00	1.00	0.00
14.20	11.60	2.00	0.00	1.00	0.00	14.40	14.88	2.00	0.00	1.00	0.00
14.60	11.45	2.00	0.00	1.00	0.00	14.80	14.68	2.00	0.00	1.00	0.00

Total estimated settlement: 3.68

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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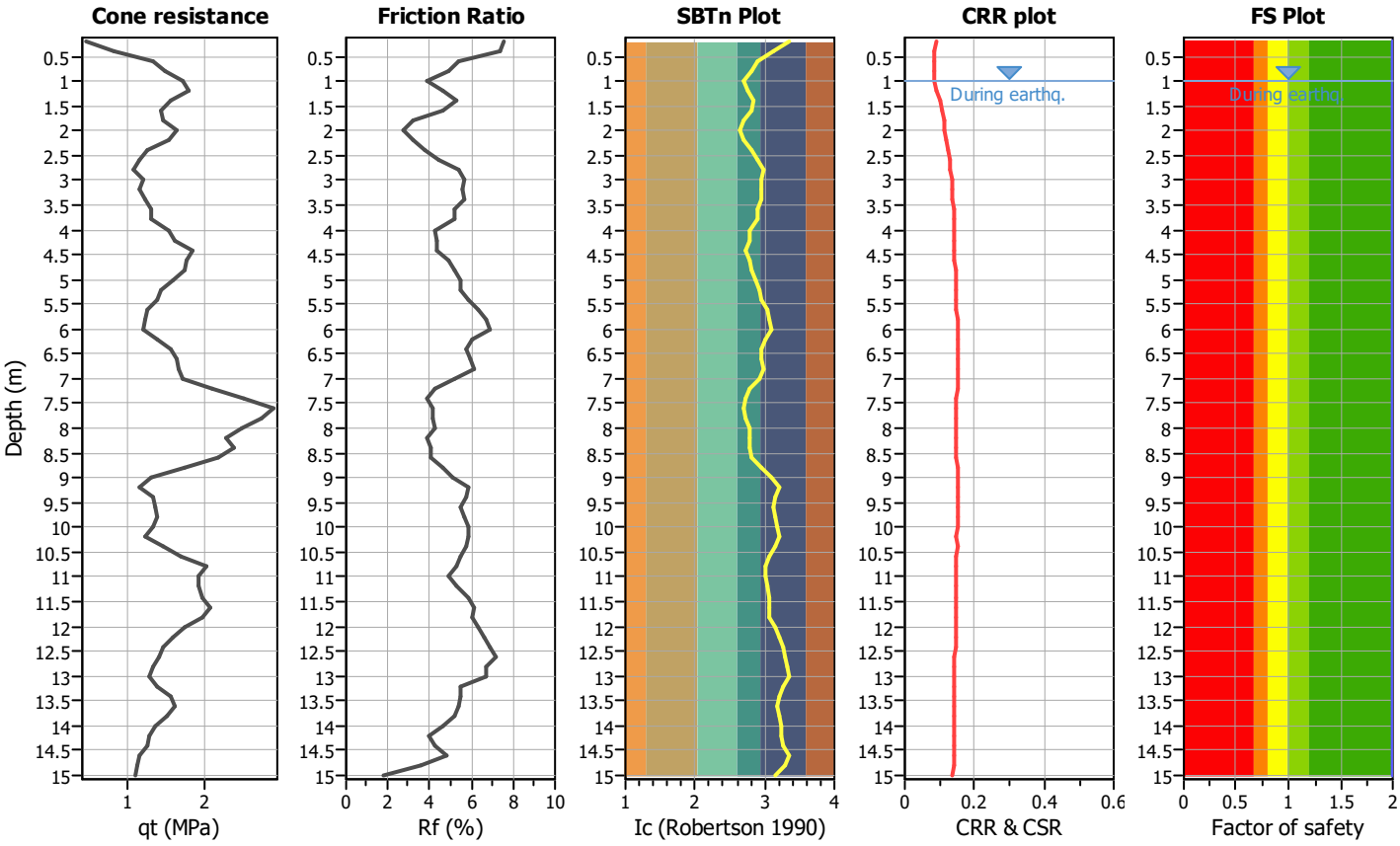
LIQUEFACTION ANALYSIS REPORT

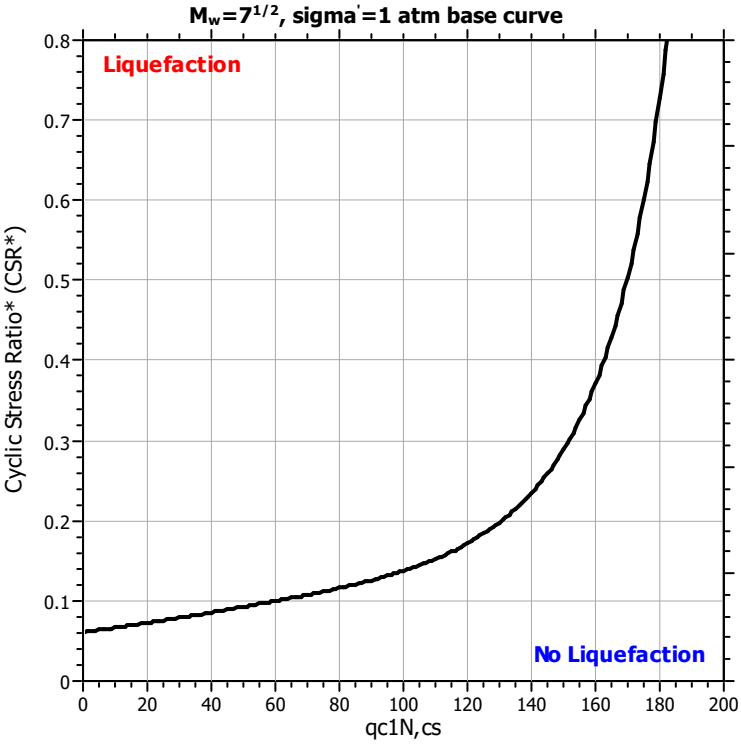
Project title : **Location :**

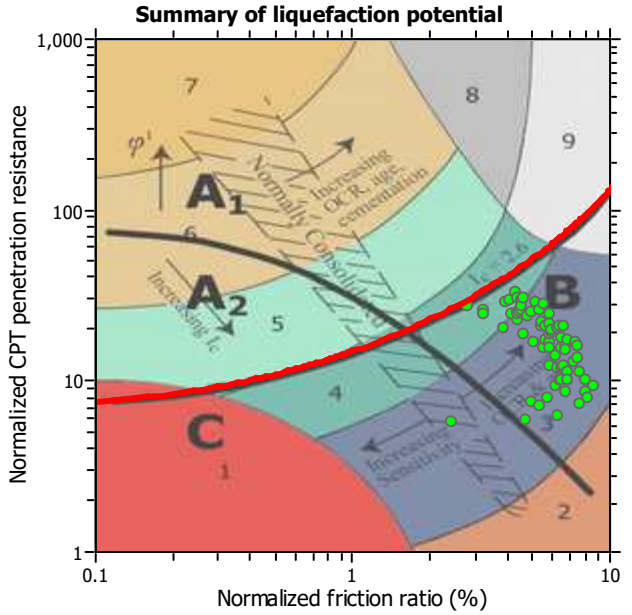
CPT file : CPT7

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.16	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

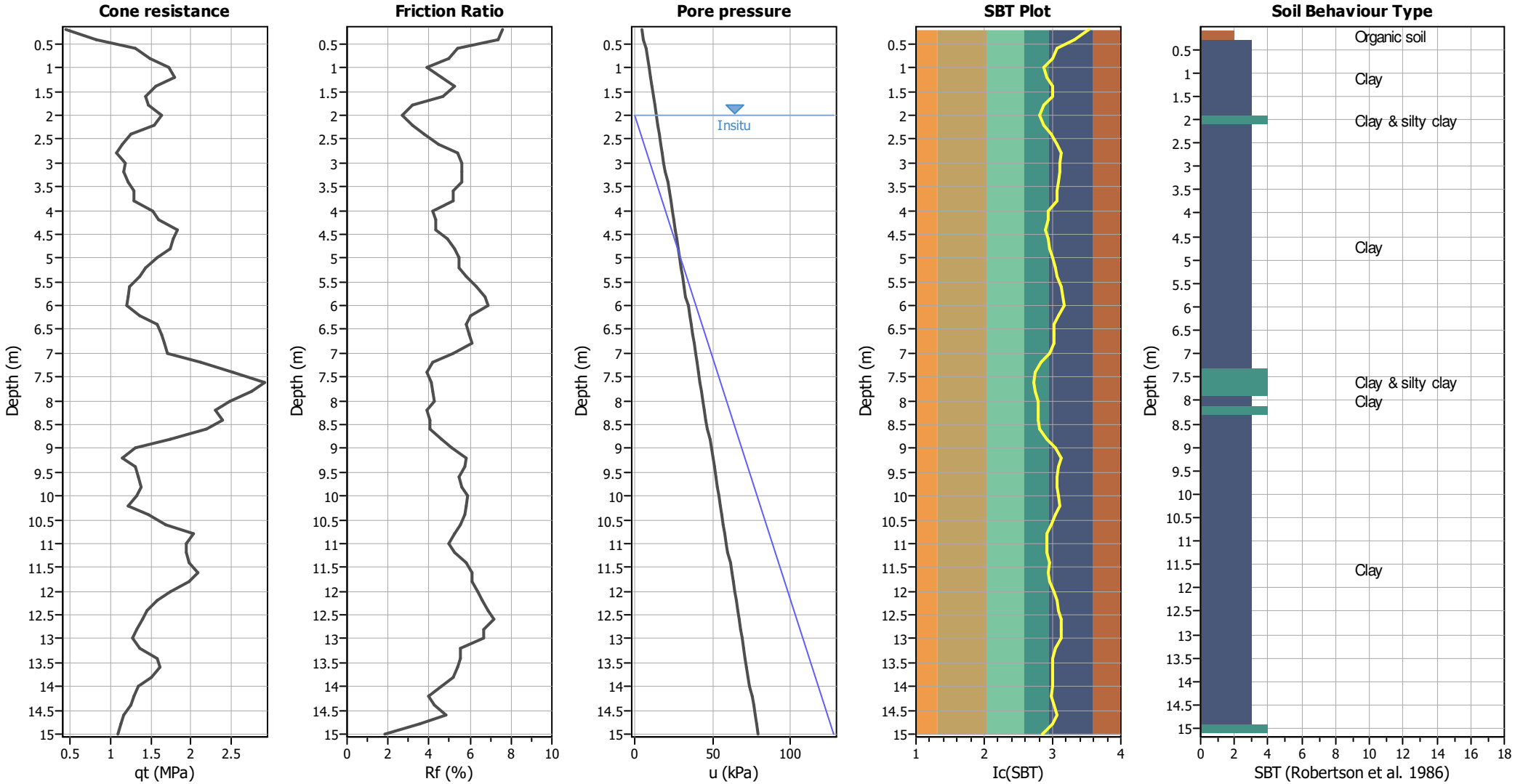






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



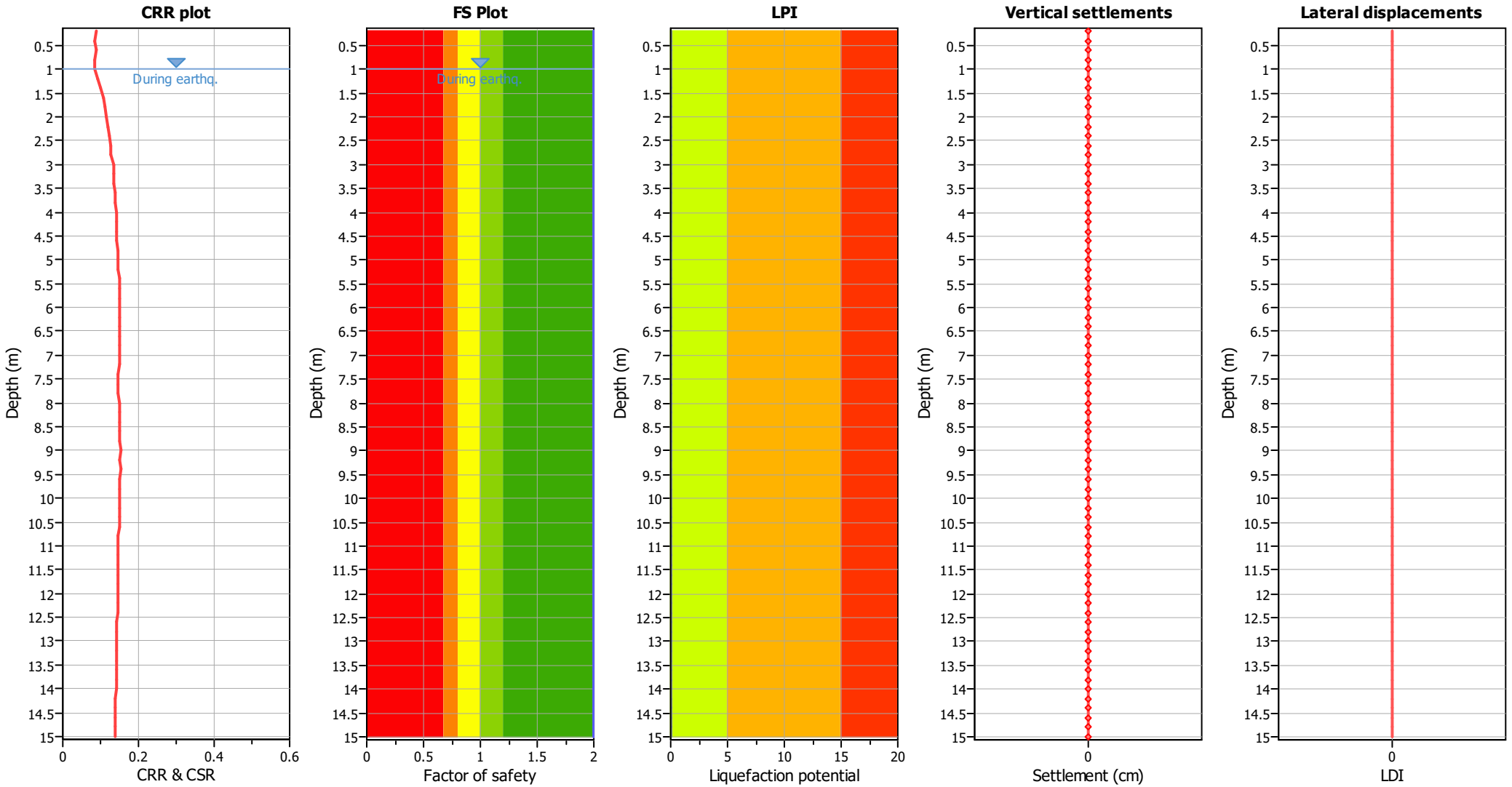
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.16	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.16	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	2.00	0.00	8.20	0.20	0.00
3.80	2.00	0.00	8.10	0.20	0.00	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00						

Overall liquefaction potential: 0.00

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	30.43	2.00	0.00	1.00	0.00	1.20	30.66	2.00	0.00	1.00	0.00
1.40	28.99	2.00	0.00	1.00	0.00	1.60	18.92	2.00	0.00	1.00	0.00
1.80	23.95	2.00	0.00	1.00	0.00	2.00	30.66	2.00	0.00	1.00	0.00
2.20	27.48	2.00	0.00	1.00	0.00	2.40	19.15	2.00	0.00	1.00	0.00
2.60	15.61	2.00	0.00	1.00	0.00	2.80	21.37	2.00	0.00	1.00	0.00
3.00	14.97	2.00	0.00	1.00	0.00	3.20	19.32	2.00	0.00	1.00	0.00
3.40	18.97	2.00	0.00	1.00	0.00	3.60	17.22	2.00	0.00	1.00	0.00
3.80	21.10	2.00	0.00	1.00	0.00	4.00	18.04	2.00	0.00	1.00	0.00
4.20	25.95	2.00	0.00	1.00	0.00	4.40	22.95	2.00	0.00	1.00	0.00
4.60	26.43	2.00	0.00	1.00	0.00	4.80	22.21	2.00	0.00	1.00	0.00
5.00	20.61	2.00	0.00	1.00	0.00	5.20	19.23	2.00	0.00	1.00	0.00
5.40	15.78	2.00	0.00	1.00	0.00	5.60	17.46	2.00	0.00	1.00	0.00
5.80	13.56	2.00	0.00	1.00	0.00	6.00	14.59	2.00	0.00	1.00	0.00
6.20	15.75	2.00	0.00	1.00	0.00	6.40	19.05	2.00	0.00	1.00	0.00
6.60	21.11	2.00	0.00	1.00	0.00	6.80	17.43	2.00	0.00	1.00	0.00
7.00	19.48	2.00	0.00	1.00	0.00	7.20	21.65	2.00	0.00	1.00	0.00
7.40	30.17	2.00	0.00	1.00	0.00	7.60	31.98	2.00	0.00	1.00	0.00
7.80	33.76	2.00	0.00	1.00	0.00	8.00	23.86	2.00	0.00	1.00	0.00
8.20	22.70	2.00	0.00	1.00	0.00	8.40	26.64	2.00	0.00	1.00	0.00
8.60	26.37	2.00	0.00	1.00	0.00	8.80	15.82	2.00	0.00	1.00	0.00
9.00	11.57	2.00	0.00	1.00	0.00	9.20	12.61	2.00	0.00	1.00	0.00
9.40	10.47	2.00	0.00	1.00	0.00	9.60	16.36	2.00	0.00	1.00	0.00
9.80	13.24	2.00	0.00	1.00	0.00	10.00	11.16	2.00	0.00	1.00	0.00
10.20	14.11	2.00	0.00	1.00	0.00	10.40	10.12	2.00	0.00	1.00	0.00
10.60	17.68	2.00	0.00	1.00	0.00	10.80	20.38	2.00	0.00	1.00	0.00
11.00	19.26	2.00	0.00	1.00	0.00	11.20	14.54	2.00	0.00	1.00	0.00
11.40	19.99	2.00	0.00	1.00	0.00	11.60	19.81	2.00	0.00	1.00	0.00
11.80	16.90	2.00	0.00	1.00	0.00	12.00	16.76	2.00	0.00	1.00	0.00
12.20	13.15	2.00	0.00	1.00	0.00	12.40	12.16	2.00	0.00	1.00	0.00
12.60	12.94	2.00	0.00	1.00	0.00	12.80	11.09	2.00	0.00	1.00	0.00
13.00	10.14	2.00	0.00	1.00	0.00	13.20	11.04	2.00	0.00	1.00	0.00
13.40	13.54	2.00	0.00	1.00	0.00	13.60	15.15	2.00	0.00	1.00	0.00
13.80	11.64	2.00	0.00	1.00	0.00	14.00	10.72	2.00	0.00	1.00	0.00
14.20	10.77	2.00	0.00	1.00	0.00	14.40	9.87	2.00	0.00	1.00	0.00
14.60	9.80	2.00	0.00	1.00	0.00	14.80	8.11	2.00	0.00	1.00	0.00
15.00	8.88	2.00	0.00	1.00	0.00						

Total estimated settlement: 0.00

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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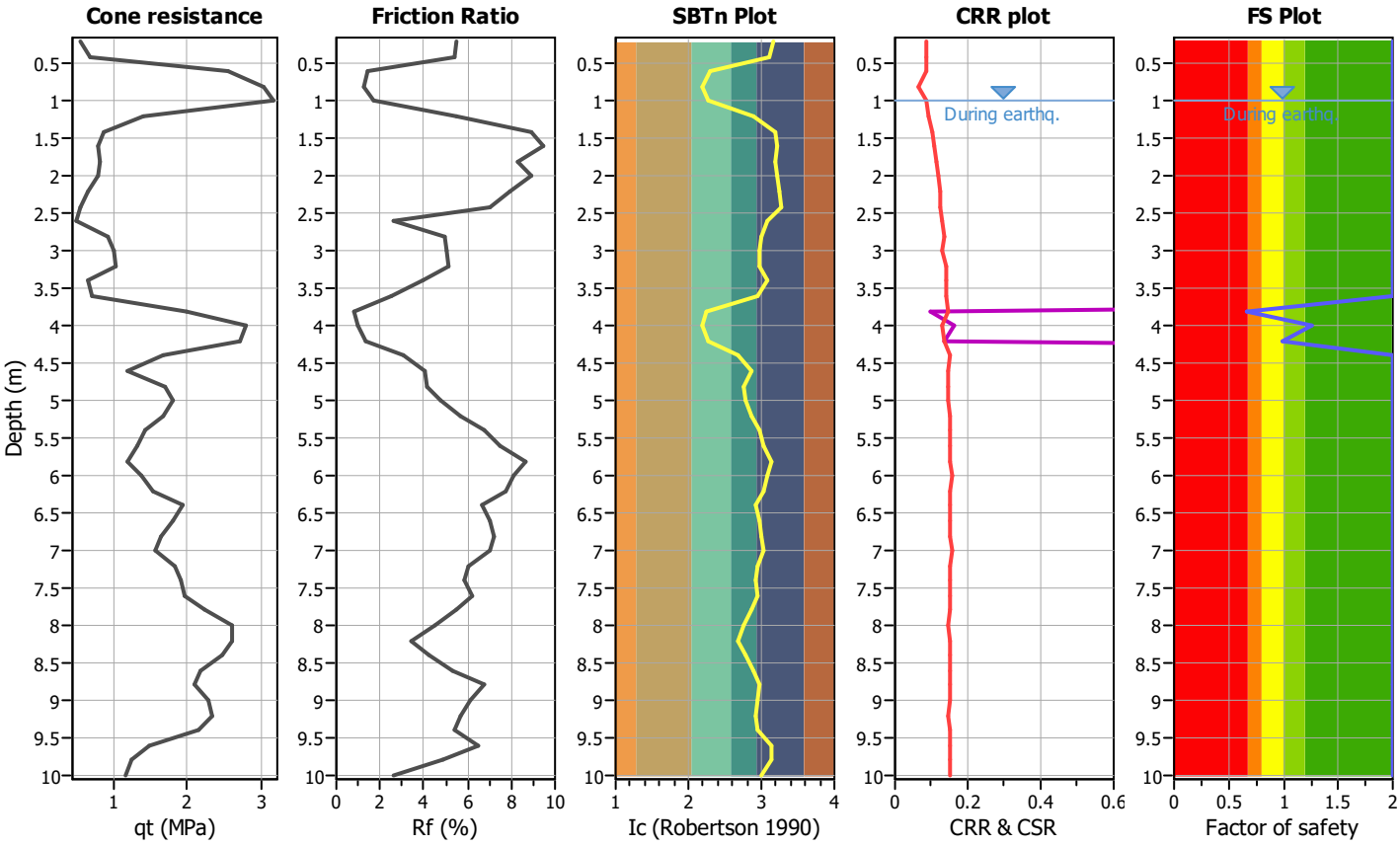
LIQUEFACTION ANALYSIS REPORT

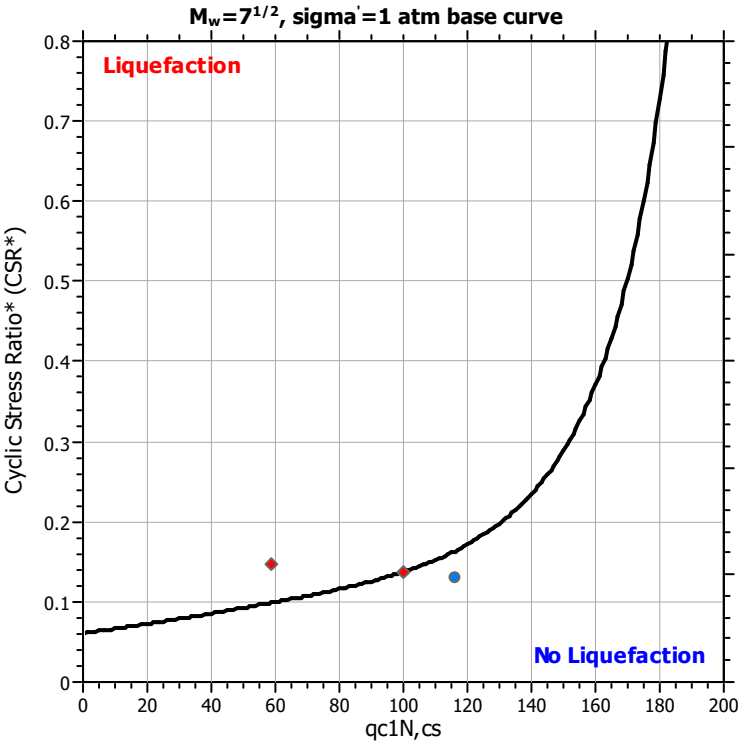
Project title : **Location :**

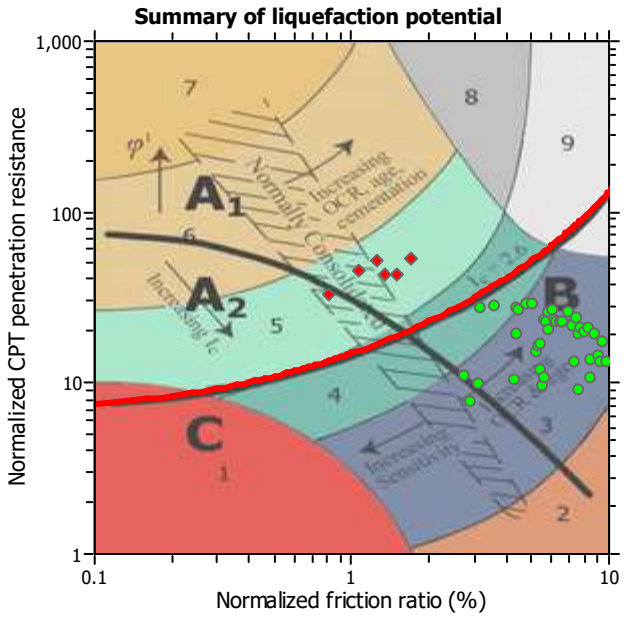
CPT file : CPT158

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.16	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

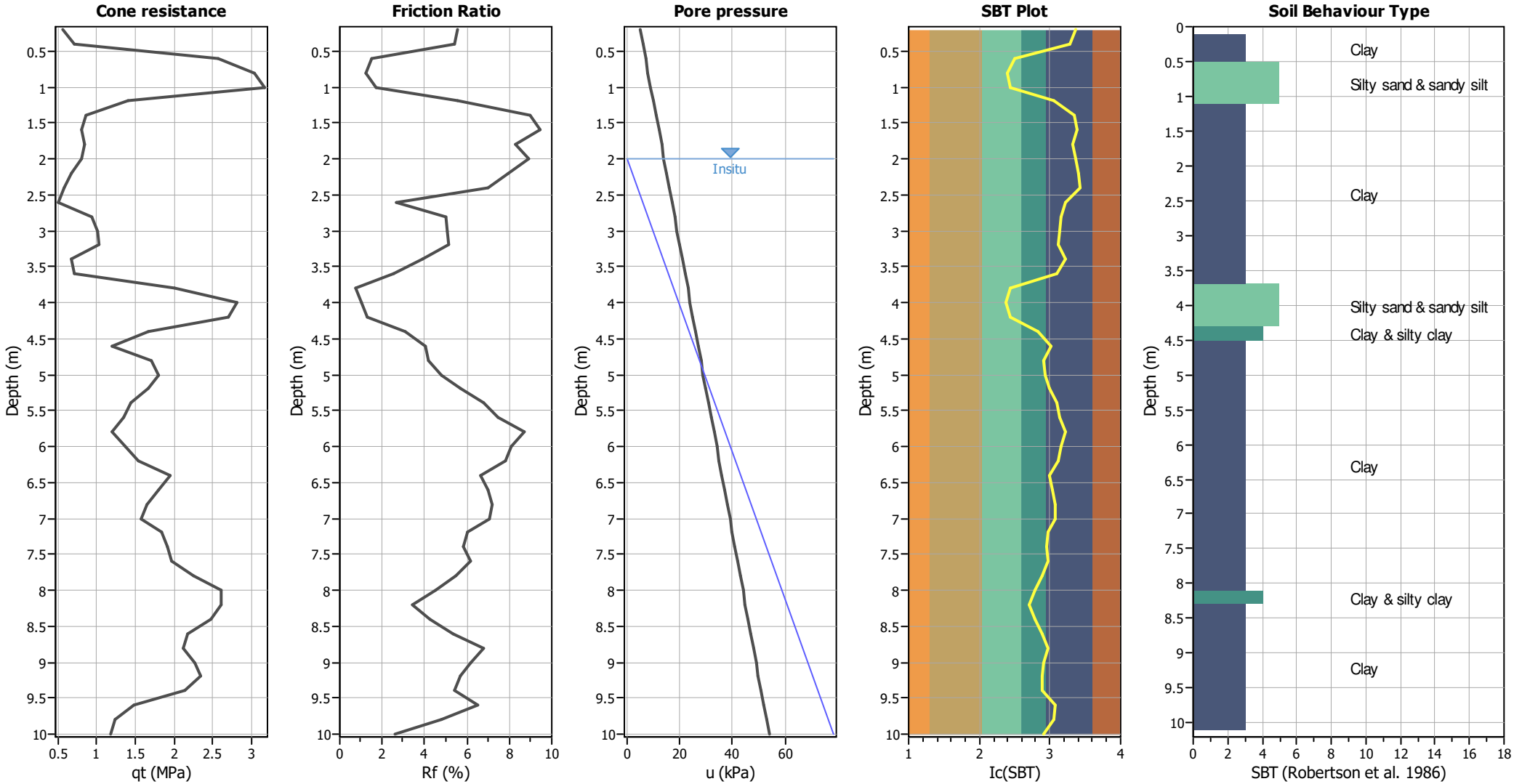






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



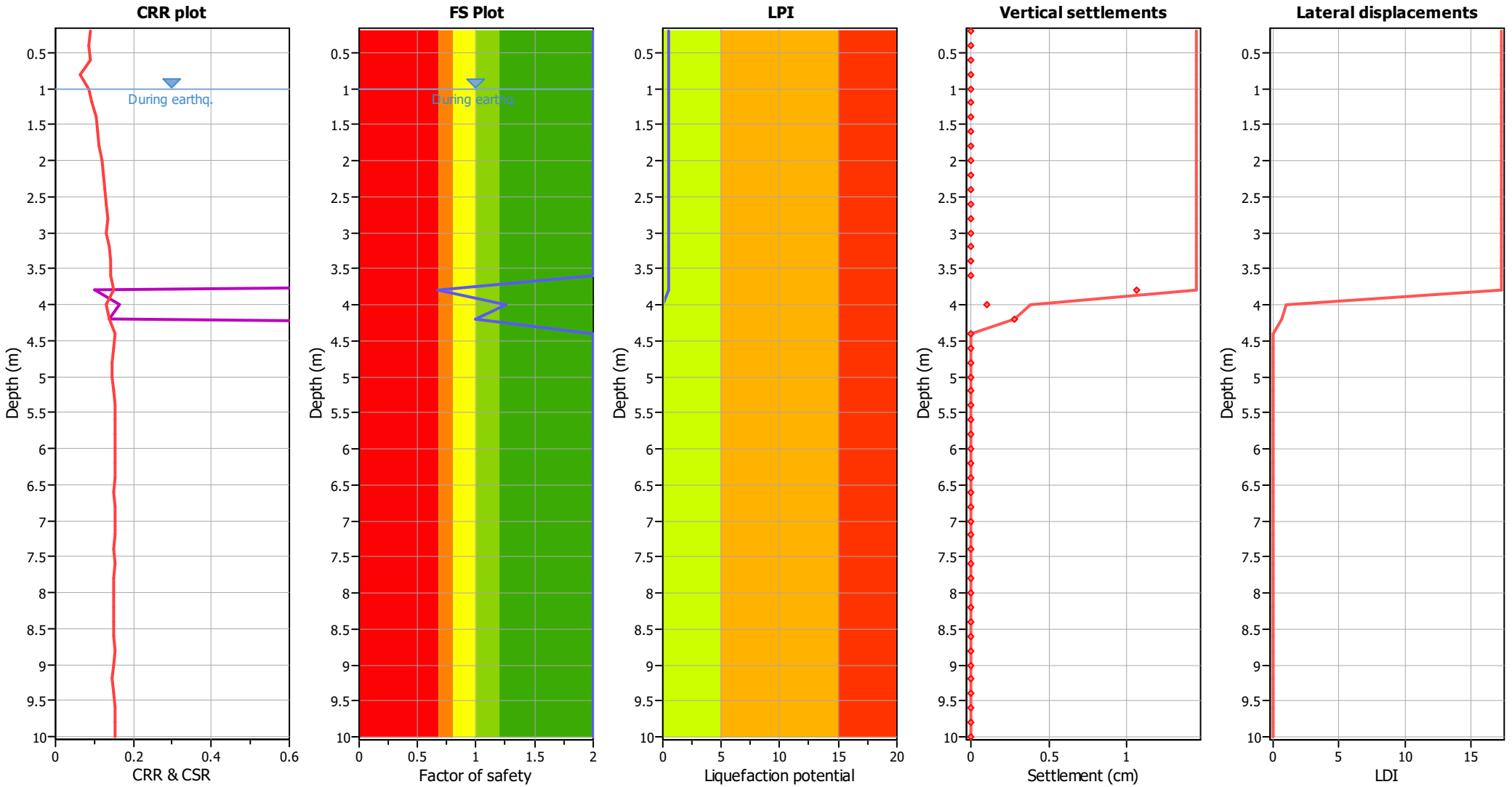
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.16	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.16	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	2.00	0.00	8.20	0.20	0.00
3.80	0.67	0.33	8.10	0.20	0.53	4.00	1.26	0.00	8.00	0.20	0.00
4.20	1.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00

Overall liquefaction potential: 0.54

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	92.19	2.00	0.00	1.00	0.00	1.20	20.13	2.00	0.00	1.00	0.00
1.40	11.74	2.00	0.00	1.00	0.00	1.60	11.74	2.00	0.00	1.00	0.00
1.80	16.78	2.00	0.00	1.00	0.00	2.00	13.42	2.00	0.00	1.00	0.00
2.20	10.07	2.00	0.00	1.00	0.00	2.40	10.07	2.00	0.00	1.00	0.00
2.60	8.39	2.00	0.00	1.00	0.00	2.80	6.71	2.00	0.00	1.00	0.00
3.00	29.35	2.00	0.00	1.00	0.00	3.20	11.18	2.00	0.00	1.00	0.00
3.40	7.93	2.00	0.00	1.00	0.00	3.60	12.32	2.00	0.00	1.00	0.00
3.80	59.03	0.67	5.31	1.00	1.06	4.00	116.46	1.26	0.51	1.00	0.10
4.20	100.03	1.00	1.41	1.00	0.28	4.40	7.32	2.00	0.00	1.00	0.00
4.60	18.16	2.00	0.00	1.00	0.00	4.80	24.45	2.00	0.00	1.00	0.00
5.00	26.62	2.00	0.00	1.00	0.00	5.20	21.15	2.00	0.00	1.00	0.00
5.40	18.29	2.00	0.00	1.00	0.00	5.60	16.77	2.00	0.00	1.00	0.00
5.80	16.52	2.00	0.00	1.00	0.00	6.00	12.60	2.00	0.00	1.00	0.00
6.20	22.04	2.00	0.00	1.00	0.00	6.40	21.75	2.00	0.00	1.00	0.00
6.60	26.08	2.00	0.00	1.00	0.00	6.80	16.56	2.00	0.00	1.00	0.00
7.00	15.20	2.00	0.00	1.00	0.00	7.20	22.91	2.00	0.00	1.00	0.00
7.40	24.85	2.00	0.00	1.00	0.00	7.60	16.85	2.00	0.00	1.00	0.00
7.80	24.28	2.00	0.00	1.00	0.00	8.00	32.59	2.00	0.00	1.00	0.00
8.20	28.02	2.00	0.00	1.00	0.00	8.40	23.50	2.00	0.00	1.00	0.00
8.60	27.42	2.00	0.00	1.00	0.00	8.80	17.80	2.00	0.00	1.00	0.00
9.00	20.69	2.00	0.00	1.00	0.00	9.20	31.66	2.00	0.00	1.00	0.00
9.40	19.26	2.00	0.00	1.00	0.00	9.60	14.06	2.00	0.00	1.00	0.00
9.80	10.95	2.00	0.00	1.00	0.00	10.00	11.85	2.00	0.00	1.00	0.00

Total estimated settlement: 1.45

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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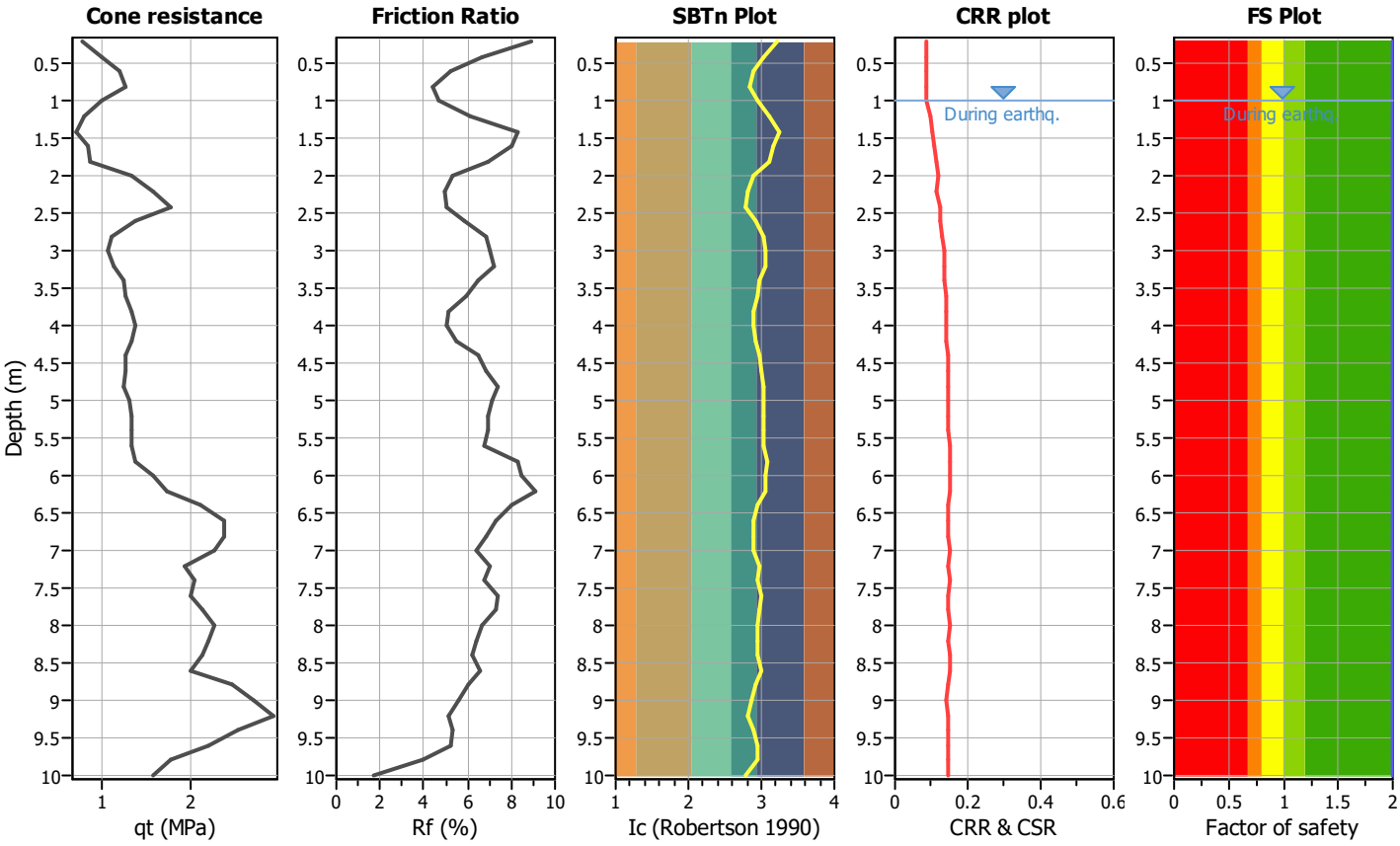
LIQUEFACTION ANALYSIS REPORT

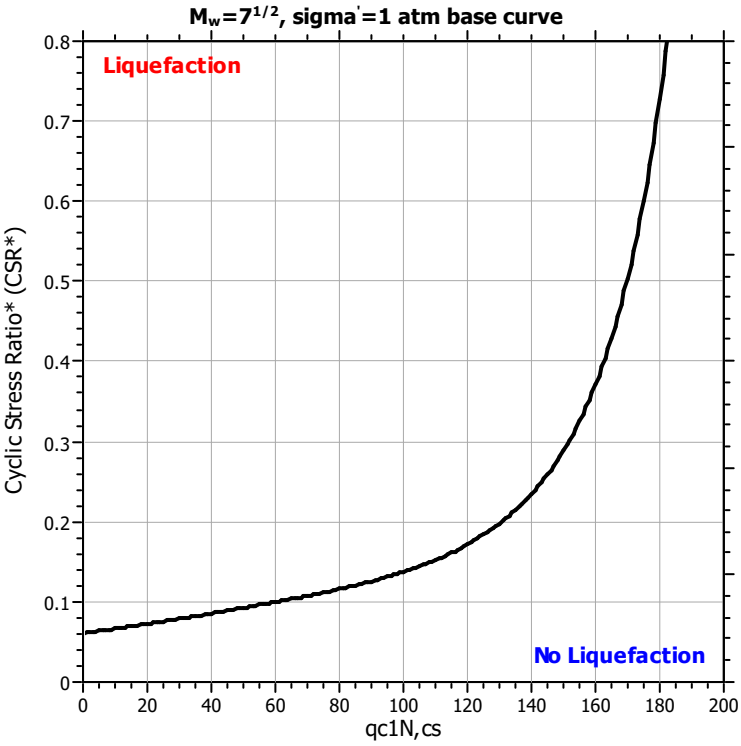
Project title : **Location :**

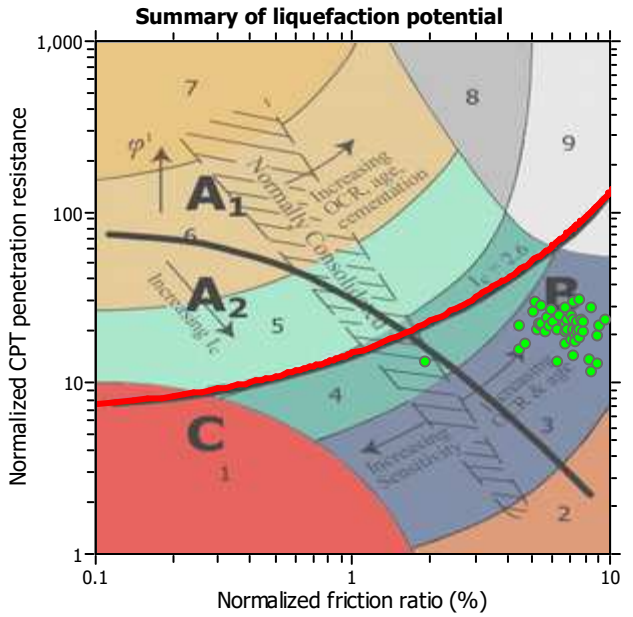
CPT file : CPT159

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.16	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

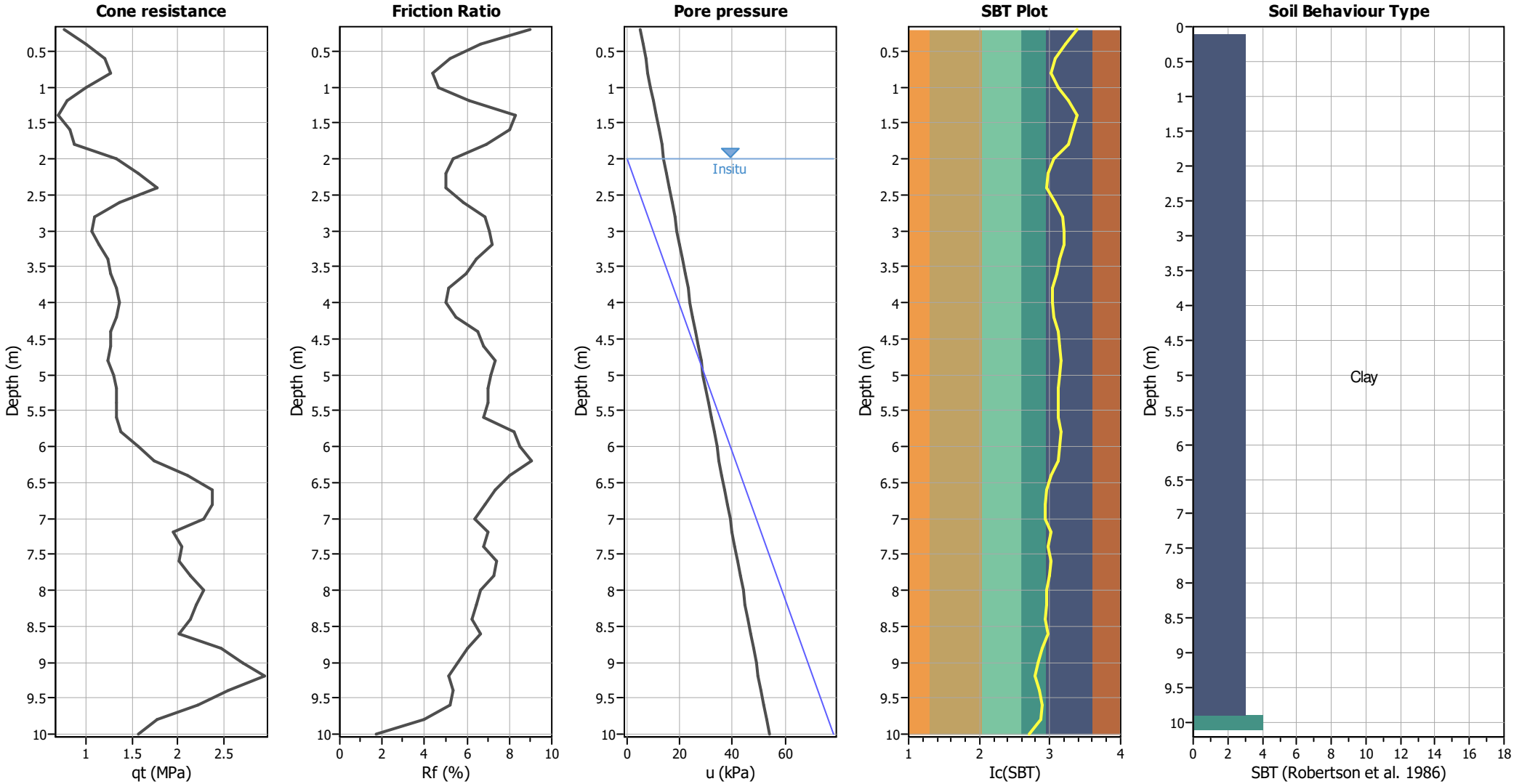






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



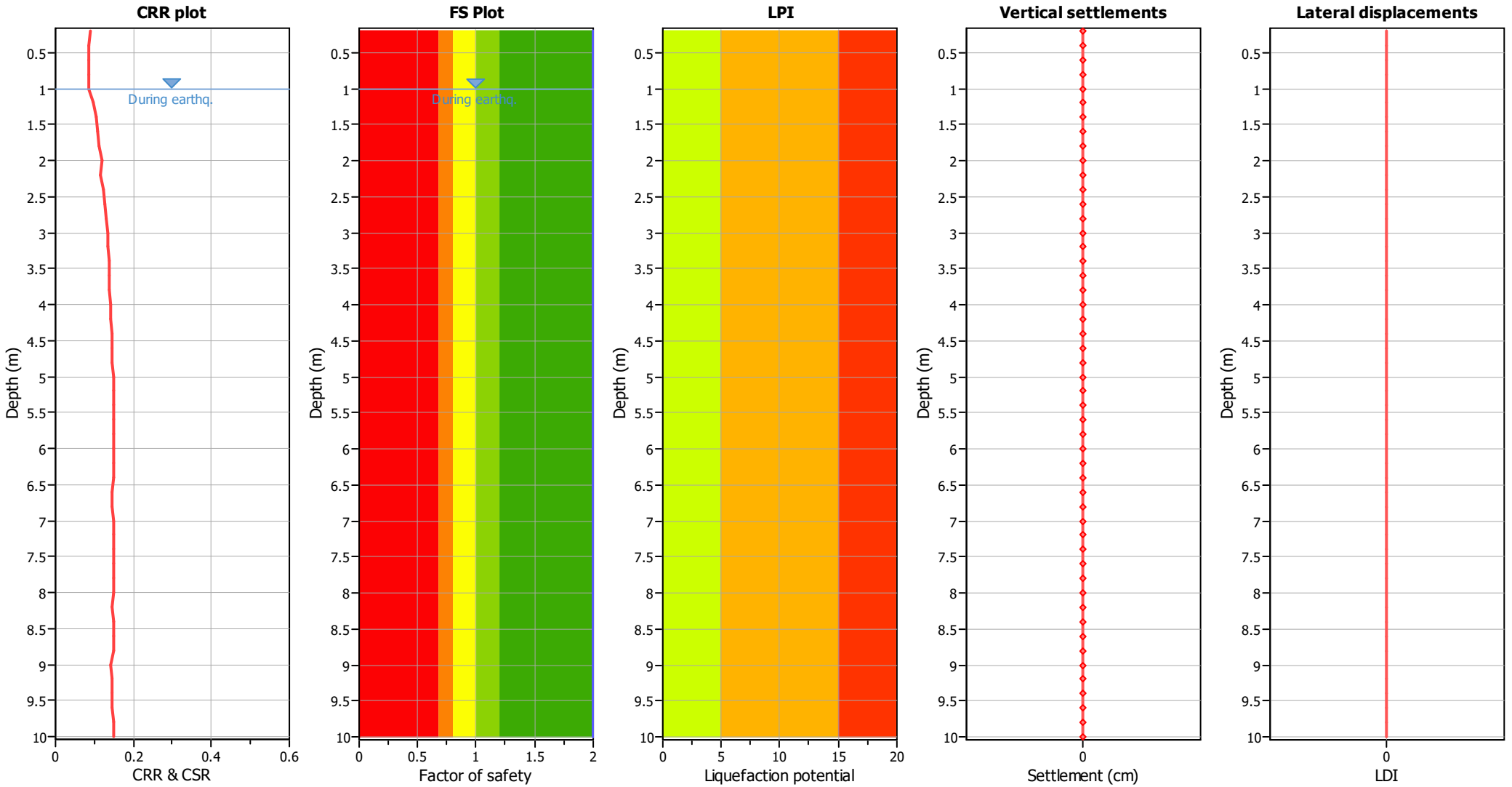
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.16	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.16	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	2.00	0.00	8.20	0.20	0.00
3.80	2.00	0.00	8.10	0.20	0.00	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00

Overall liquefaction potential: 0.00

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	18.46	2.00	0.00	1.00	0.00	1.20	10.07	2.00	0.00	1.00	0.00
1.40	11.74	2.00	0.00	1.00	0.00	1.60	13.42	2.00	0.00	1.00	0.00
1.80	16.78	2.00	0.00	1.00	0.00	2.00	13.42	2.00	0.00	1.00	0.00
2.20	35.86	2.00	0.00	1.00	0.00	2.40	27.76	2.00	0.00	1.00	0.00
2.60	22.65	2.00	0.00	1.00	0.00	2.80	16.14	2.00	0.00	1.00	0.00
3.00	14.30	2.00	0.00	1.00	0.00	3.20	19.90	2.00	0.00	1.00	0.00
3.40	18.10	2.00	0.00	1.00	0.00	3.60	17.78	2.00	0.00	1.00	0.00
3.80	20.26	2.00	0.00	1.00	0.00	4.00	19.92	2.00	0.00	1.00	0.00
4.20	18.25	2.00	0.00	1.00	0.00	4.40	17.94	2.00	0.00	1.00	0.00
4.60	16.34	2.00	0.00	1.00	0.00	4.80	17.38	2.00	0.00	1.00	0.00
5.00	15.84	2.00	0.00	1.00	0.00	5.20	18.12	2.00	0.00	1.00	0.00
5.40	17.86	2.00	0.00	1.00	0.00	5.60	15.15	2.00	0.00	1.00	0.00
5.80	17.36	2.00	0.00	1.00	0.00	6.00	18.31	2.00	0.00	1.00	0.00
6.20	21.56	2.00	0.00	1.00	0.00	6.40	22.42	2.00	0.00	1.00	0.00
6.60	30.05	2.00	0.00	1.00	0.00	6.80	29.68	2.00	0.00	1.00	0.00
7.00	21.57	2.00	0.00	1.00	0.00	7.20	25.70	2.00	0.00	1.00	0.00
7.40	17.76	2.00	0.00	1.00	0.00	7.60	24.03	2.00	0.00	1.00	0.00
7.80	23.75	2.00	0.00	1.00	0.00	8.00	21.38	2.00	0.00	1.00	0.00
8.20	27.41	2.00	0.00	1.00	0.00	8.40	20.91	2.00	0.00	1.00	0.00
8.60	18.63	2.00	0.00	1.00	0.00	8.80	22.51	2.00	0.00	1.00	0.00
9.00	34.36	2.00	0.00	1.00	0.00	9.20	25.04	2.00	0.00	1.00	0.00
9.40	28.76	2.00	0.00	1.00	0.00	9.60	21.62	2.00	0.00	1.00	0.00
9.80	14.60	2.00	0.00	1.00	0.00	10.00	15.46	2.00	0.00	1.00	0.00

Total estimated settlement: 0.00

Abbreviations

$Q_{tn,cs}$: Equivalent clean sand normalized cone resistance
FS: Factor of safety against liquefaction
e_v (%): Post-liquefaction volumentric strain
DF: e_v depth weighting factor
Settlement: Calculated settlement

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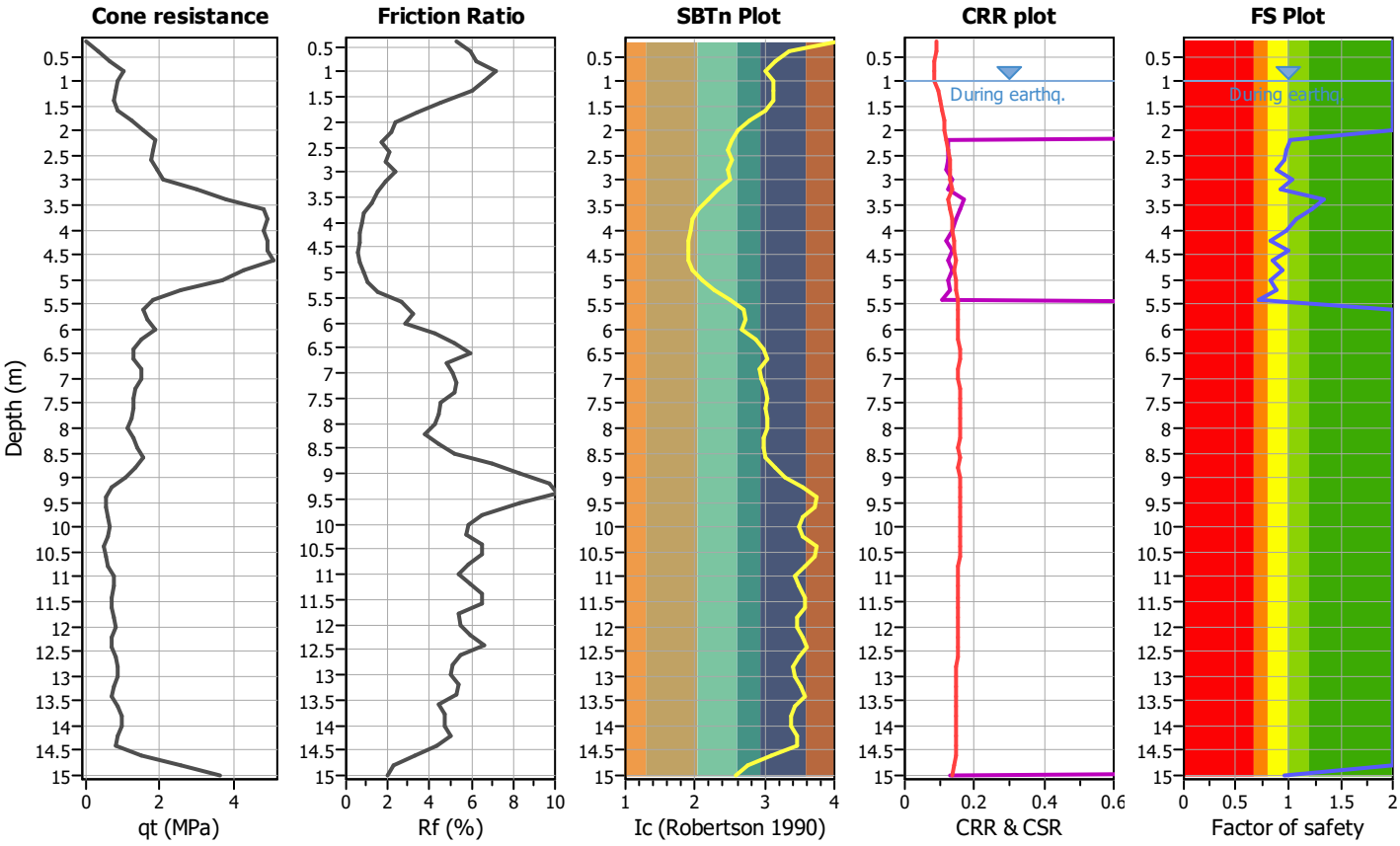
LIQUEFACTION ANALYSIS REPORT

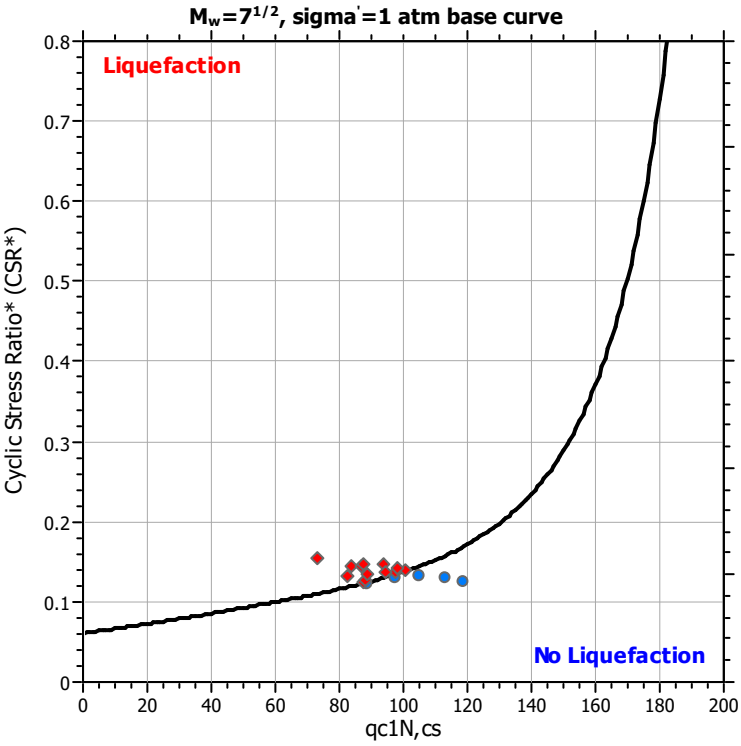
Project title : **Location :**

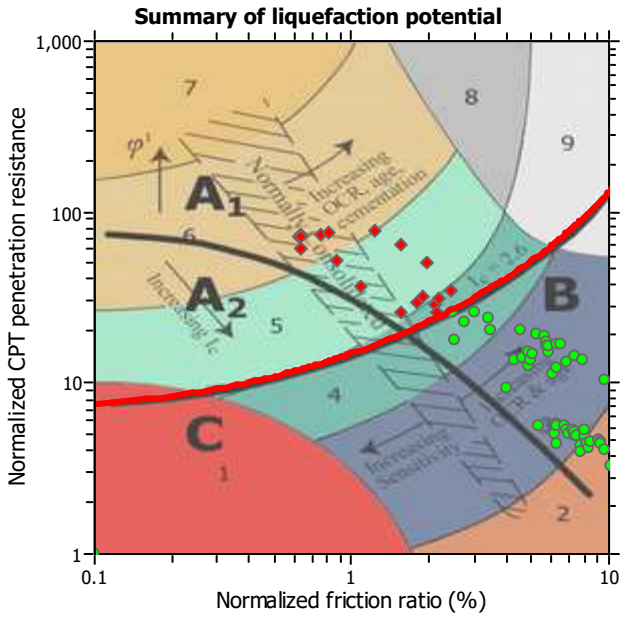
CPT file : CPT181

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.16	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

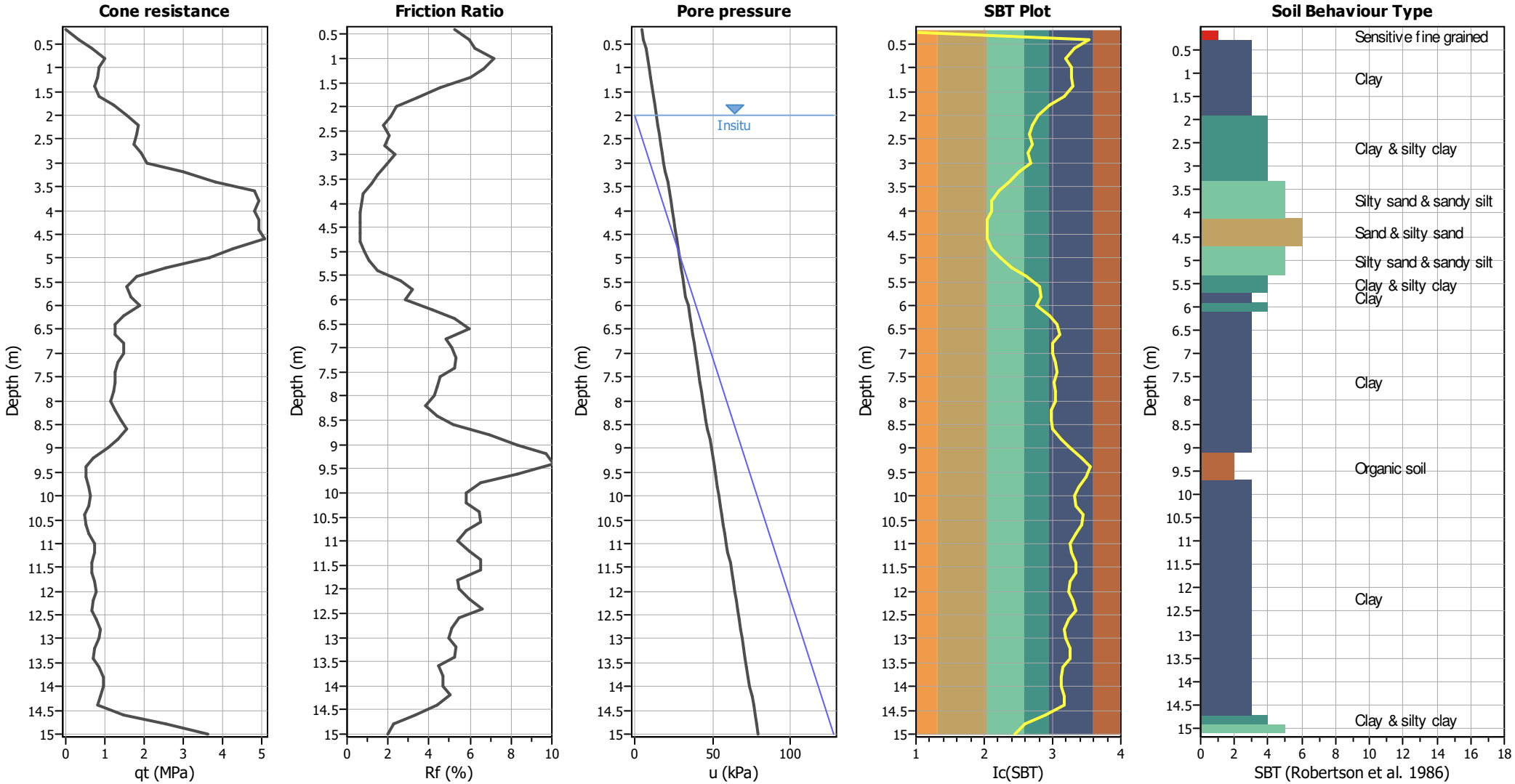






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



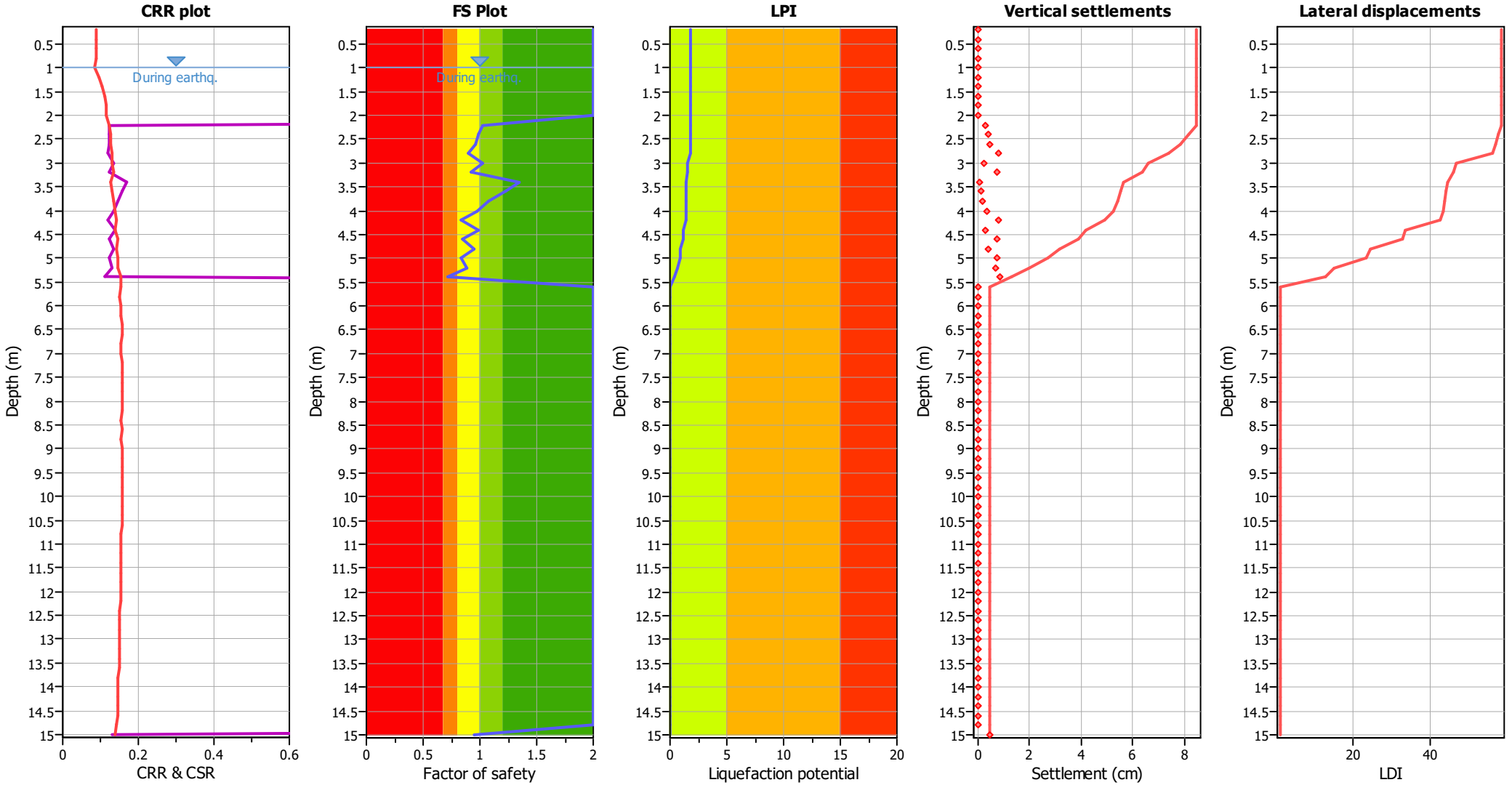
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.16	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.16	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	1.02	0.00	8.90	0.20	0.00	2.40	0.99	0.01	8.80	0.20	0.02
2.60	0.97	0.03	8.70	0.20	0.06	2.80	0.89	0.11	8.60	0.20	0.18
3.00	1.03	0.00	8.50	0.20	0.00	3.20	0.93	0.07	8.40	0.20	0.12
3.40	1.34	0.00	8.30	0.20	0.00	3.60	1.22	0.00	8.20	0.20	0.00
3.80	1.08	0.00	8.10	0.20	0.00	4.00	0.98	0.02	8.00	0.20	0.03
4.20	0.83	0.17	7.90	0.20	0.27	4.40	0.99	0.01	7.80	0.20	0.01
4.60	0.84	0.16	7.70	0.20	0.24	4.80	0.95	0.05	7.60	0.20	0.08
5.00	0.84	0.16	7.50	0.20	0.24	5.20	0.89	0.11	7.40	0.20	0.16
5.40	0.72	0.28	7.30	0.20	0.42	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	0.95	0.05	2.50	0.20	0.02						

Overall liquefaction potential: 1.86

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	16.78	2.00	0.00	1.00	0.00	1.20	10.07	2.00	0.00	1.00	0.00
1.40	13.42	2.00	0.00	1.00	0.00	1.60	13.42	2.00	0.00	1.00	0.00
1.80	15.10	2.00	0.00	1.00	0.00	2.00	33.56	2.00	0.00	1.00	0.00
2.20	88.45	1.02	1.31	1.00	0.26	2.40	87.67	0.99	1.84	1.00	0.37
2.60	88.06	0.97	2.26	1.00	0.45	2.80	82.34	0.89	3.90	1.00	0.78
3.00	97.42	1.03	1.20	1.00	0.24	3.20	88.78	0.93	3.62	1.00	0.72
3.40	118.73	1.34	0.41	1.00	0.08	3.60	113.36	1.22	0.57	1.00	0.11
3.80	105.00	1.08	0.92	1.00	0.18	4.00	97.55	0.98	1.65	1.00	0.33
4.20	83.84	0.83	3.83	1.00	0.77	4.40	100.33	0.99	1.46	1.00	0.29
4.60	86.86	0.84	3.70	1.00	0.74	4.80	98.06	0.95	2.04	1.00	0.41
5.00	87.72	0.84	3.66	1.00	0.73	5.20	93.70	0.89	3.43	1.00	0.69
5.40	73.03	0.72	4.37	1.00	0.87	5.60	13.15	2.00	0.00	1.00	0.00
5.80	27.82	2.00	0.00	1.00	0.00	6.00	22.65	2.00	0.00	1.00	0.00
6.20	19.90	2.00	0.00	1.00	0.00	6.40	12.40	2.00	0.00	1.00	0.00
6.60	14.63	2.00	0.00	1.00	0.00	6.80	19.15	2.00	0.00	1.00	0.00
7.00	18.91	2.00	0.00	1.00	0.00	7.20	14.08	2.00	0.00	1.00	0.00
7.40	13.92	2.00	0.00	1.00	0.00	7.60	16.01	2.00	0.00	1.00	0.00
7.80	13.60	2.00	0.00	1.00	0.00	8.00	11.24	2.00	0.00	1.00	0.00
8.20	13.31	2.00	0.00	1.00	0.00	8.40	17.51	2.00	0.00	1.00	0.00
8.60	15.17	2.00	0.00	1.00	0.00	8.80	17.13	2.00	0.00	1.00	0.00
9.00	10.63	2.00	0.00	1.00	0.00	9.20	6.32	2.00	0.00	1.00	0.00
9.40	5.22	2.00	0.00	1.00	0.00	9.60	4.14	2.00	0.00	1.00	0.00
9.80	6.15	2.00	0.00	1.00	0.00	10.00	8.12	2.00	0.00	1.00	0.00
10.20	5.04	2.00	0.00	1.00	0.00	10.40	4.99	2.00	0.00	1.00	0.00
10.60	3.96	2.00	0.00	1.00	0.00	10.80	5.89	2.00	0.00	1.00	0.00
11.00	7.79	2.00	0.00	1.00	0.00	11.20	7.73	2.00	0.00	1.00	0.00
11.40	5.74	2.00	0.00	1.00	0.00	11.60	5.70	2.00	0.00	1.00	0.00
11.80	7.54	2.00	0.00	1.00	0.00	12.00	7.48	2.00	0.00	1.00	0.00
12.20	6.49	2.00	0.00	1.00	0.00	12.40	5.52	2.00	0.00	1.00	0.00
12.60	6.39	2.00	0.00	1.00	0.00	12.80	9.07	2.00	0.00	1.00	0.00
13.00	8.10	2.00	0.00	1.00	0.00	13.20	5.35	2.00	0.00	1.00	0.00
13.40	6.20	2.00	0.00	1.00	0.00	13.60	7.04	2.00	0.00	1.00	0.00
13.80	8.75	2.00	0.00	1.00	0.00	14.00	8.69	2.00	0.00	1.00	0.00
14.20	6.89	2.00	0.00	1.00	0.00	14.40	6.85	2.00	0.00	1.00	0.00
14.60	6.80	2.00	0.00	1.00	0.00	14.80	23.98	2.00	0.00	1.00	0.00
15.00	94.68	0.95	2.17	1.00	0.43						

Total estimated settlement: 8.47

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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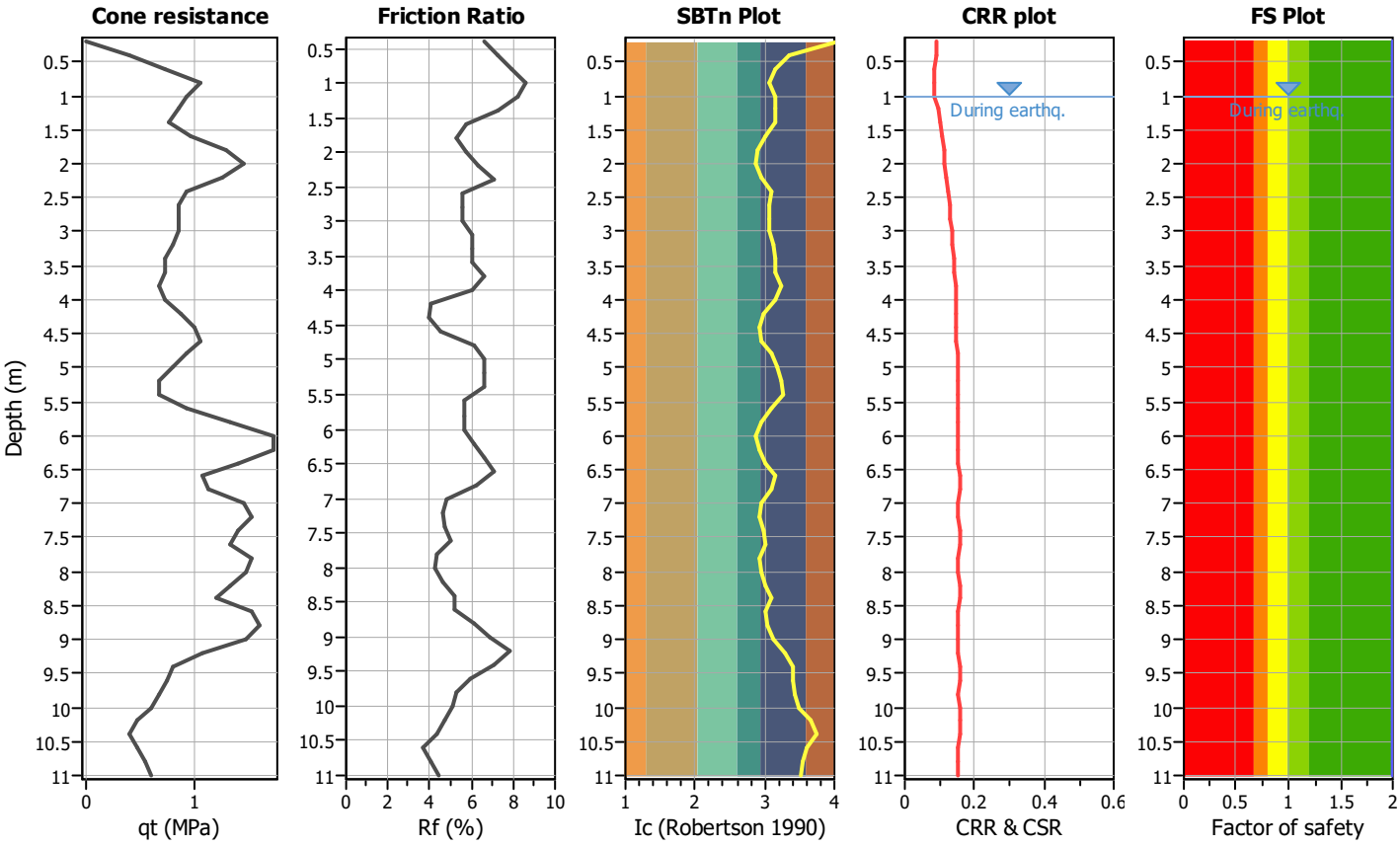
LIQUEFACTION ANALYSIS REPORT

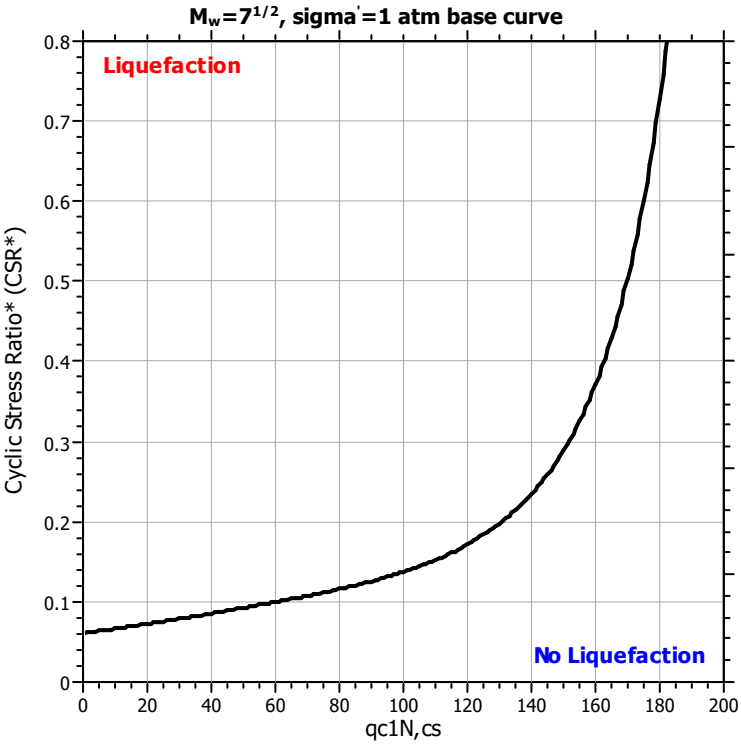
Project title : **Location :**

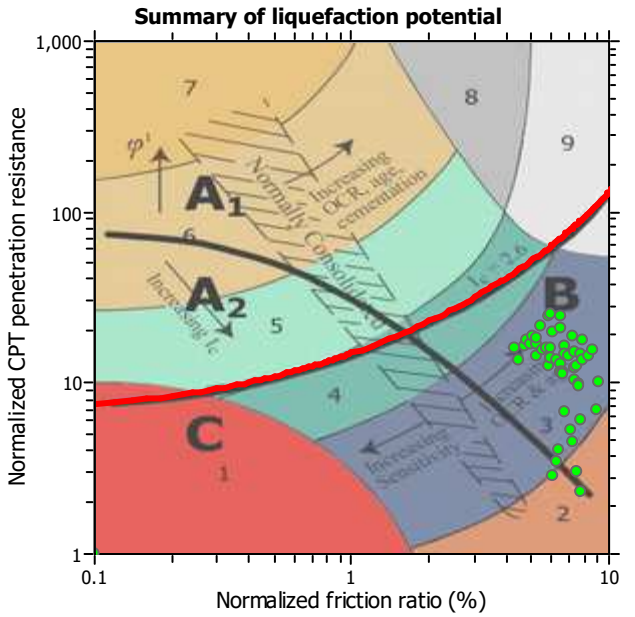
CPT file : CPT182

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.16	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

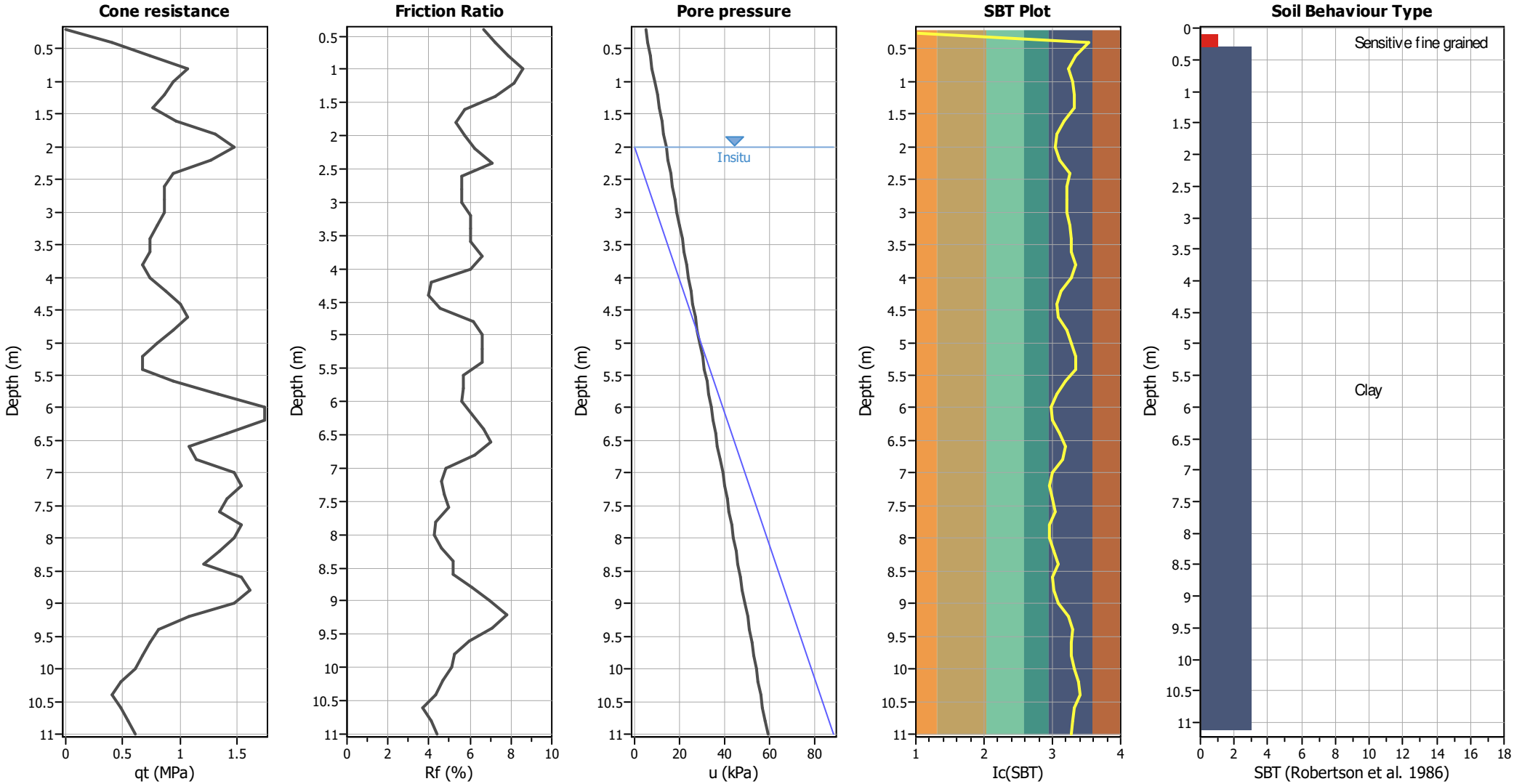






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



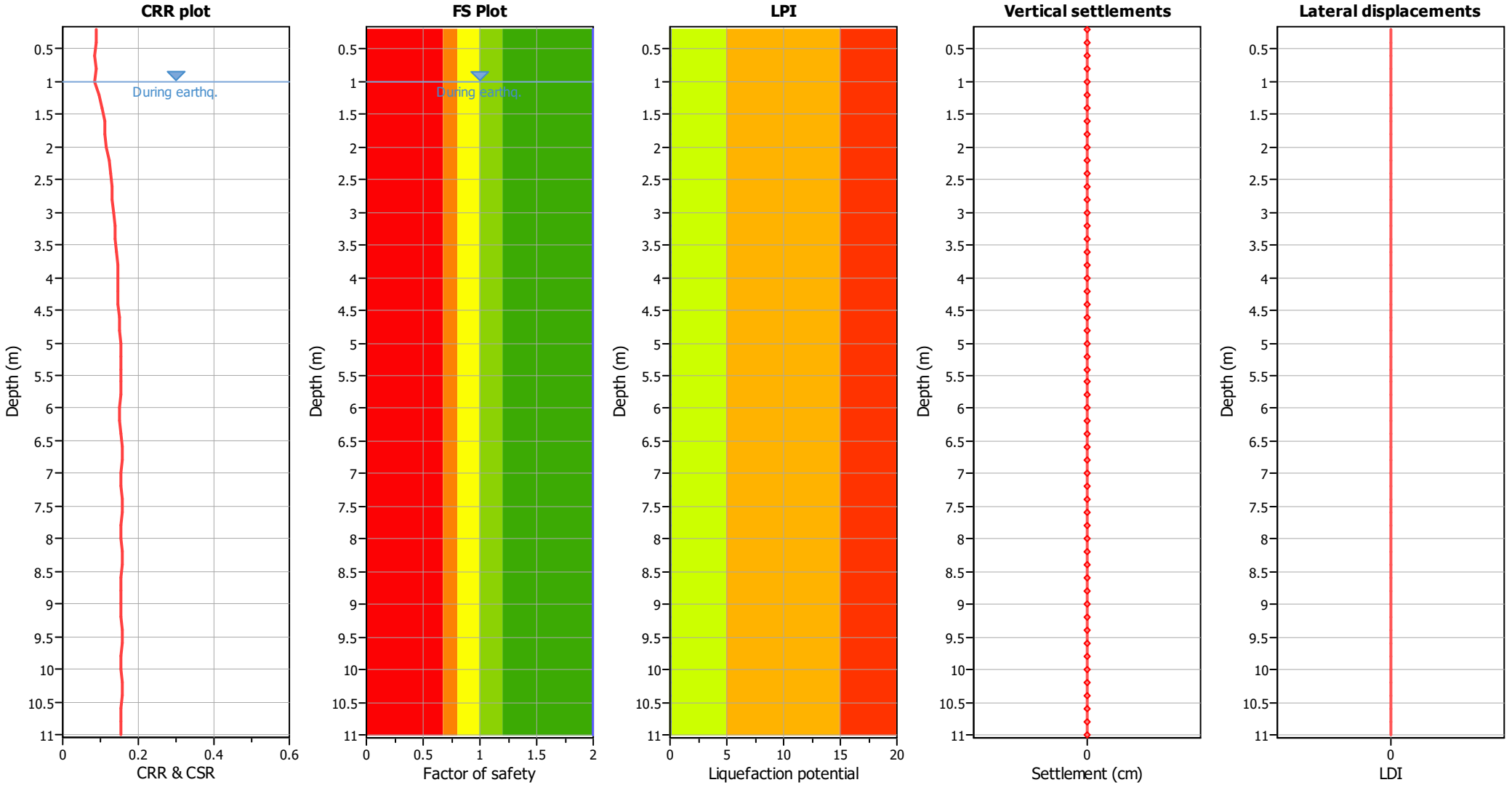
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.16	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.16	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	2.00	0.00	8.20	0.20	0.00
3.80	2.00	0.00	8.10	0.20	0.00	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00						

Overall liquefaction potential: 0.00

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	16.78	2.00	0.00	1.00	0.00	1.20	13.42	2.00	0.00	1.00	0.00
1.40	13.42	2.00	0.00	1.00	0.00	1.60	11.74	2.00	0.00	1.00	0.00
1.80	23.49	2.00	0.00	1.00	0.00	2.00	30.20	2.00	0.00	1.00	0.00
2.20	20.13	2.00	0.00	1.00	0.00	2.40	13.42	2.00	0.00	1.00	0.00
2.60	13.42	2.00	0.00	1.00	0.00	2.80	16.39	2.00	0.00	1.00	0.00
3.00	12.98	2.00	0.00	1.00	0.00	3.20	12.74	2.00	0.00	1.00	0.00
3.40	12.51	2.00	0.00	1.00	0.00	3.60	9.30	2.00	0.00	1.00	0.00
3.80	12.08	2.00	0.00	1.00	0.00	4.00	8.98	2.00	0.00	1.00	0.00
4.20	11.69	2.00	0.00	1.00	0.00	4.40	17.03	2.00	0.00	1.00	0.00
4.60	14.06	2.00	0.00	1.00	0.00	4.80	13.84	2.00	0.00	1.00	0.00
5.00	10.97	2.00	0.00	1.00	0.00	5.20	8.16	2.00	0.00	1.00	0.00
5.40	8.04	2.00	0.00	1.00	0.00	5.60	10.51	2.00	0.00	1.00	0.00
5.80	17.88	2.00	0.00	1.00	0.00	6.00	22.51	2.00	0.00	1.00	0.00
6.20	24.58	2.00	0.00	1.00	0.00	6.40	17.14	2.00	0.00	1.00	0.00
6.60	9.77	2.00	0.00	1.00	0.00	6.80	12.01	2.00	0.00	1.00	0.00
7.00	18.82	2.00	0.00	1.00	0.00	7.20	20.88	2.00	0.00	1.00	0.00
7.40	13.85	2.00	0.00	1.00	0.00	7.60	13.69	2.00	0.00	1.00	0.00
7.80	17.97	2.00	0.00	1.00	0.00	8.00	19.97	2.00	0.00	1.00	0.00
8.20	11.04	2.00	0.00	1.00	0.00	8.40	13.09	2.00	0.00	1.00	0.00
8.60	15.09	2.00	0.00	1.00	0.00	8.80	21.25	2.00	0.00	1.00	0.00
9.00	14.76	2.00	0.00	1.00	0.00	9.20	10.45	2.00	0.00	1.00	0.00
9.40	8.29	2.00	0.00	1.00	0.00	9.60	6.16	2.00	0.00	1.00	0.00
9.80	8.14	2.00	0.00	1.00	0.00	10.00	6.05	2.00	0.00	1.00	0.00
10.20	4.00	2.00	0.00	1.00	0.00	10.40	3.97	2.00	0.00	1.00	0.00
10.60	3.95	2.00	0.00	1.00	0.00	10.80	5.87	2.00	0.00	1.00	0.00
11.00	5.83	2.00	0.00	1.00	0.00						

Total estimated settlement: 0.00

Abbreviations

$Q_{tn,cs}$: Equivalent clean sand normalized cone resistance
FS: Factor of safety against liquefaction
e_v (%): Post-liquefaction volumentric strain
DF: e_v depth weighting factor
Settlement: Calculated settlement

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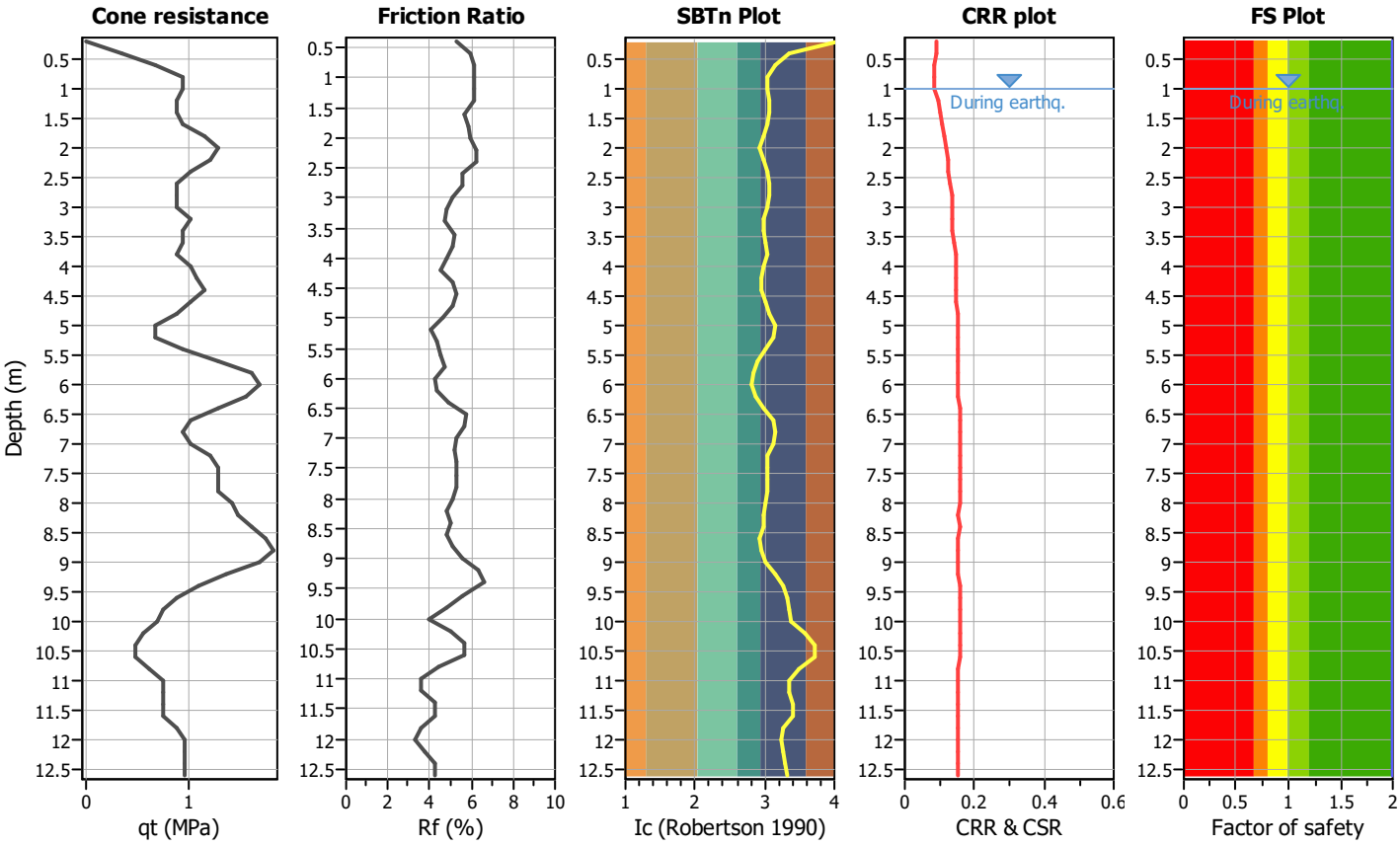
LIQUEFACTION ANALYSIS REPORT

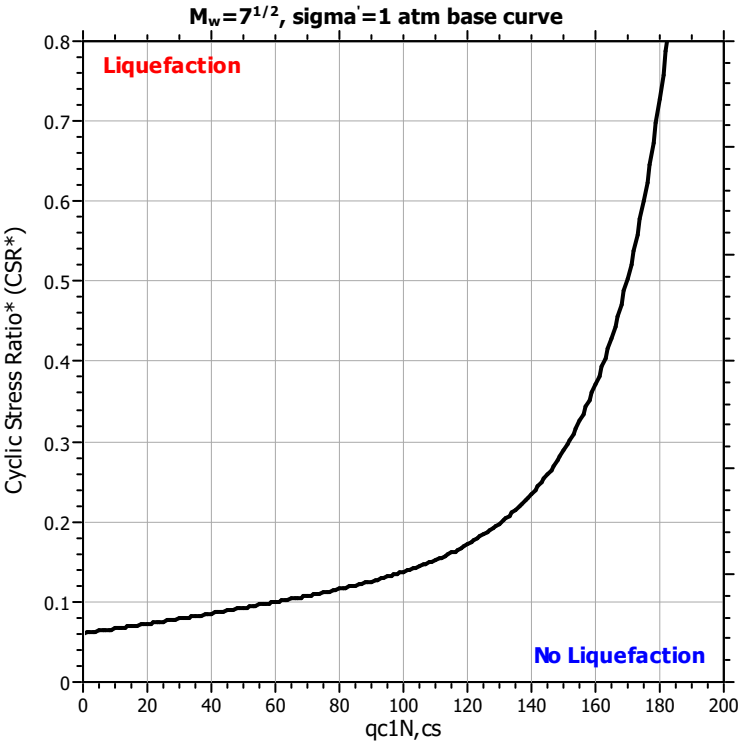
Project title : **Location :**

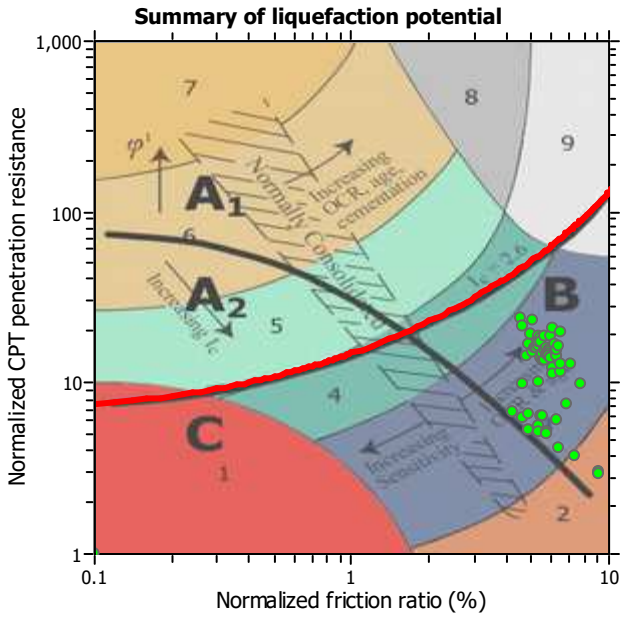
CPT file : CPT183

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.16	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

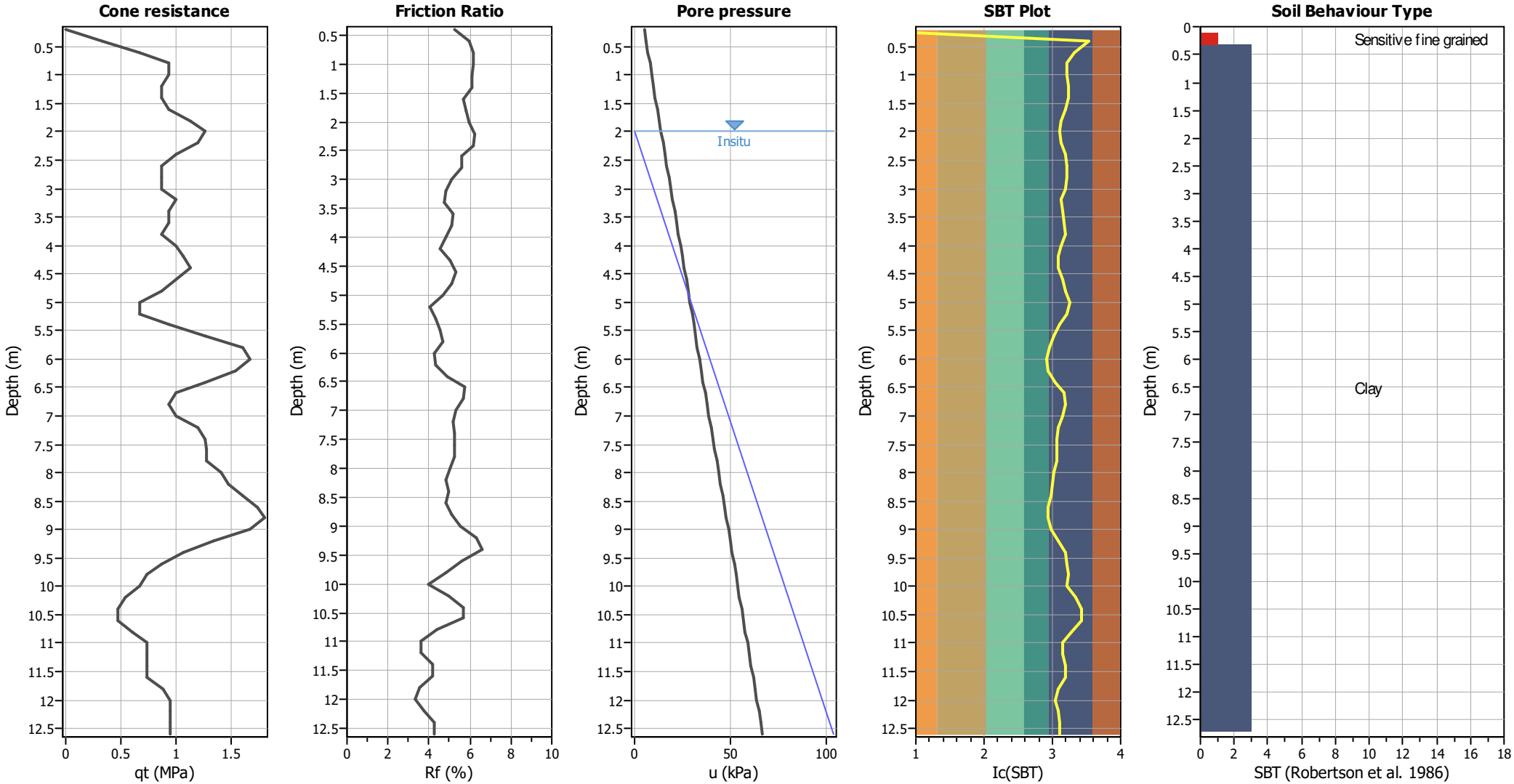






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



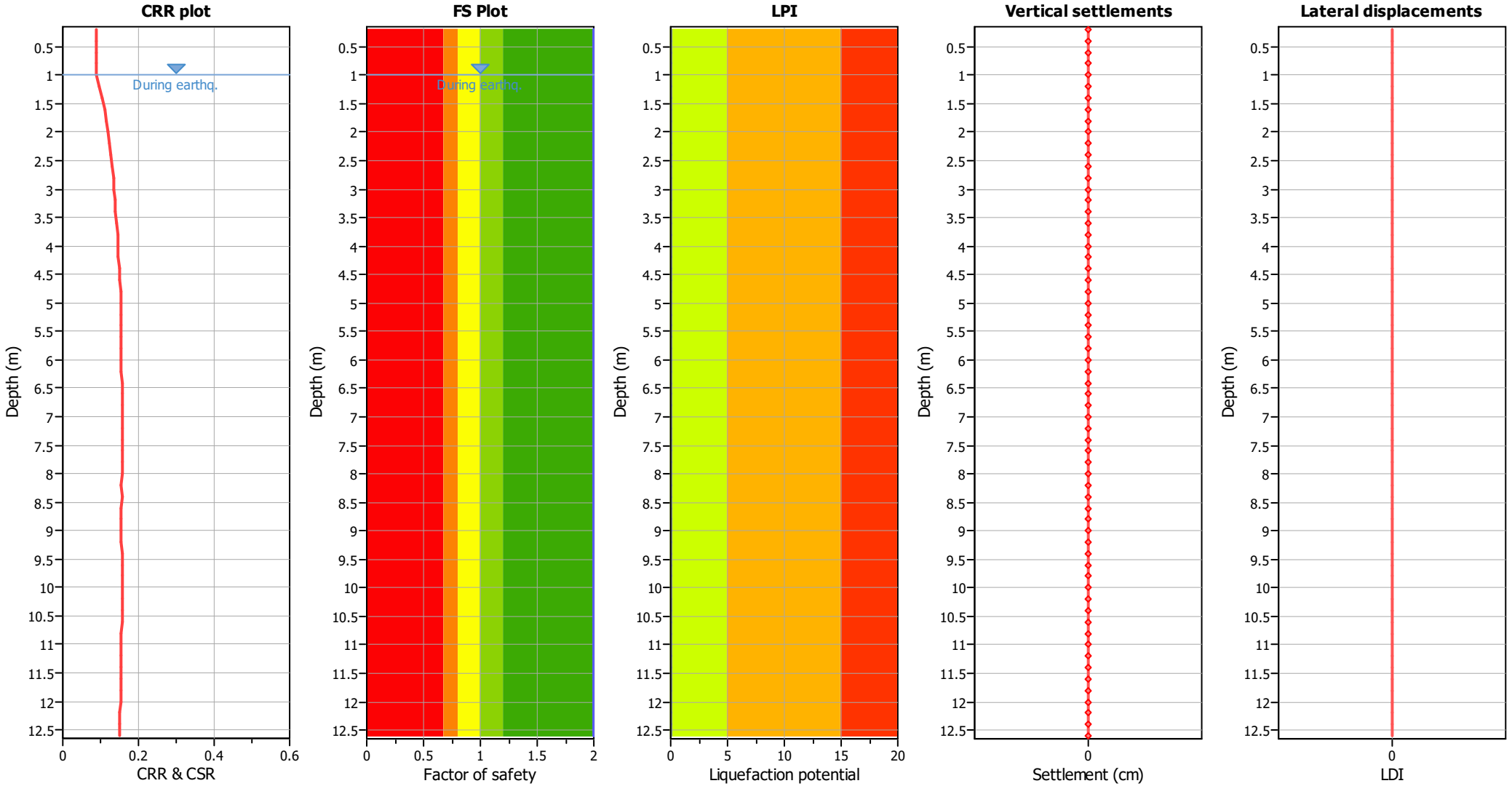
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.16	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.16	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	2.00	0.00	8.20	0.20	0.00
3.80	2.00	0.00	8.10	0.20	0.00	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00						

Overall liquefaction potential: 0.00

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	13.42	2.00	0.00	1.00	0.00	1.20	16.78	2.00	0.00	1.00	0.00
1.40	13.42	2.00	0.00	1.00	0.00	1.60	13.42	2.00	0.00	1.00	0.00
1.80	20.13	2.00	0.00	1.00	0.00	2.00	23.49	2.00	0.00	1.00	0.00
2.20	20.13	2.00	0.00	1.00	0.00	2.40	16.78	2.00	0.00	1.00	0.00
2.60	13.42	2.00	0.00	1.00	0.00	2.80	13.34	2.00	0.00	1.00	0.00
3.00	16.18	2.00	0.00	1.00	0.00	3.20	12.82	2.00	0.00	1.00	0.00
3.40	18.55	2.00	0.00	1.00	0.00	3.60	12.35	2.00	0.00	1.00	0.00
3.80	12.14	2.00	0.00	1.00	0.00	4.00	14.80	2.00	0.00	1.00	0.00
4.20	17.35	2.00	0.00	1.00	0.00	4.40	14.31	2.00	0.00	1.00	0.00
4.60	16.80	2.00	0.00	1.00	0.00	4.80	11.17	2.00	0.00	1.00	0.00
5.00	8.31	2.00	0.00	1.00	0.00	5.20	8.20	2.00	0.00	1.00	0.00
5.40	10.71	2.00	0.00	1.00	0.00	5.60	18.22	2.00	0.00	1.00	0.00
5.80	20.46	2.00	0.00	1.00	0.00	6.00	22.63	2.00	0.00	1.00	0.00
6.20	19.91	2.00	0.00	1.00	0.00	6.40	14.83	2.00	0.00	1.00	0.00
6.60	12.25	2.00	0.00	1.00	0.00	6.80	9.71	2.00	0.00	1.00	0.00
7.00	11.95	2.00	0.00	1.00	0.00	7.20	14.12	2.00	0.00	1.00	0.00
7.40	16.24	2.00	0.00	1.00	0.00	7.60	13.79	2.00	0.00	1.00	0.00
7.80	13.63	2.00	0.00	1.00	0.00	8.00	15.69	2.00	0.00	1.00	0.00
8.20	17.71	2.00	0.00	1.00	0.00	8.40	15.34	2.00	0.00	1.00	0.00
8.60	19.46	2.00	0.00	1.00	0.00	8.80	21.37	2.00	0.00	1.00	0.00
9.00	16.95	2.00	0.00	1.00	0.00	9.20	14.69	2.00	0.00	1.00	0.00
9.40	10.40	2.00	0.00	1.00	0.00	9.60	8.25	2.00	0.00	1.00	0.00
9.80	8.18	2.00	0.00	1.00	0.00	10.00	6.08	2.00	0.00	1.00	0.00
10.20	6.03	2.00	0.00	1.00	0.00	10.40	3.99	2.00	0.00	1.00	0.00
10.60	3.96	2.00	0.00	1.00	0.00	10.80	5.89	2.00	0.00	1.00	0.00
11.00	7.79	2.00	0.00	1.00	0.00	11.20	7.73	2.00	0.00	1.00	0.00
11.40	5.75	2.00	0.00	1.00	0.00	11.60	7.61	2.00	0.00	1.00	0.00
11.80	7.55	2.00	0.00	1.00	0.00	12.00	9.38	2.00	0.00	1.00	0.00
12.20	9.30	2.00	0.00	1.00	0.00	12.40	7.38	2.00	0.00	1.00	0.00
12.60	9.16	2.00	0.00	1.00	0.00						

Total estimated settlement: 0.00

Abbreviations

$Q_{tn,cs}$: Equivalent clean sand normalized cone resistance
FS: Factor of safety against liquefaction
e_v (%): Post-liquefaction volumentric strain
DF: e_v depth weighting factor
Settlement: Calculated settlement

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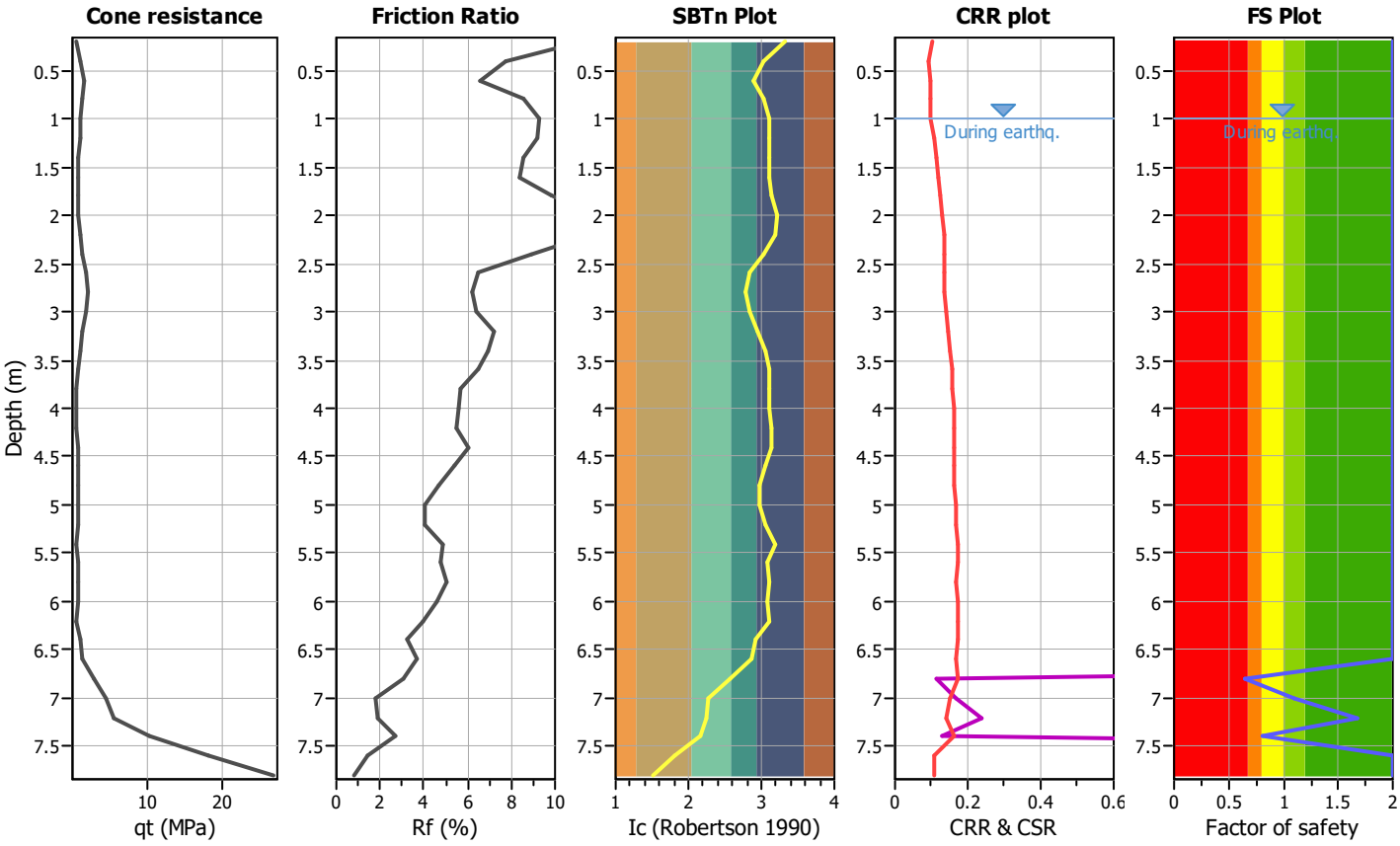
LIQUEFACTION ANALYSIS REPORT

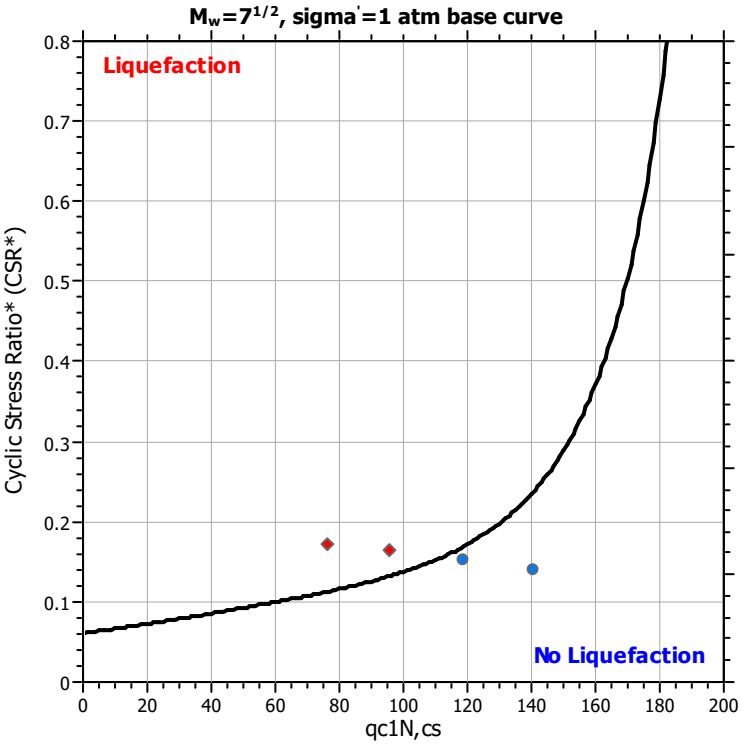
Project title : **Location :**

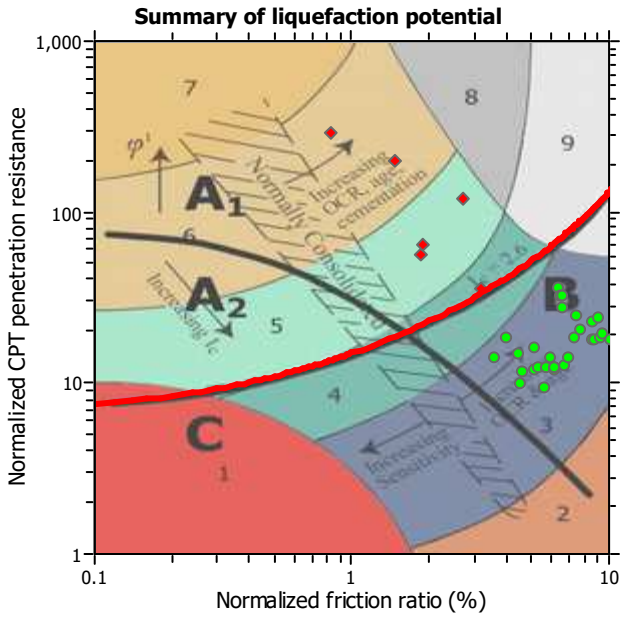
CPT file : CPT3

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.18	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

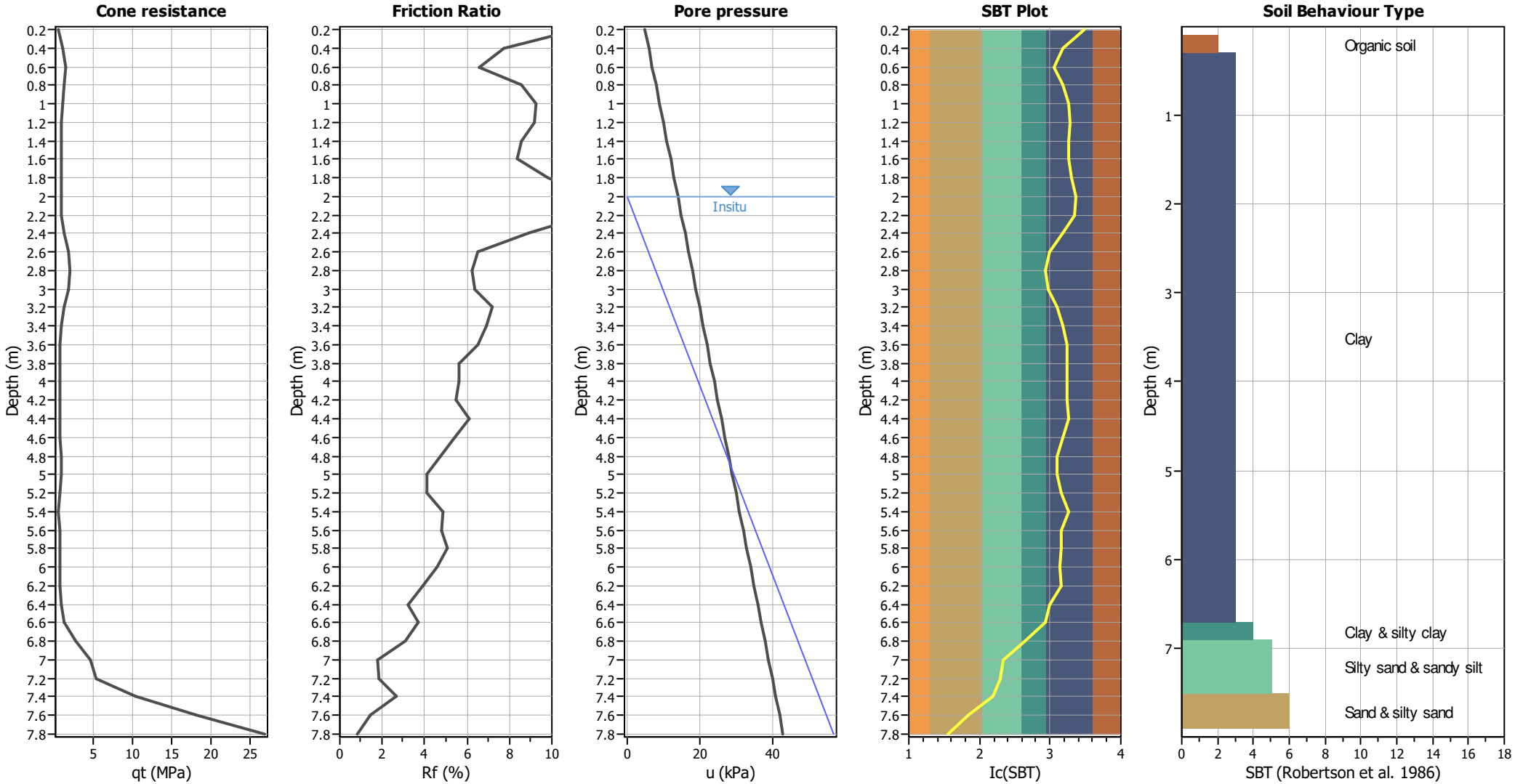






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



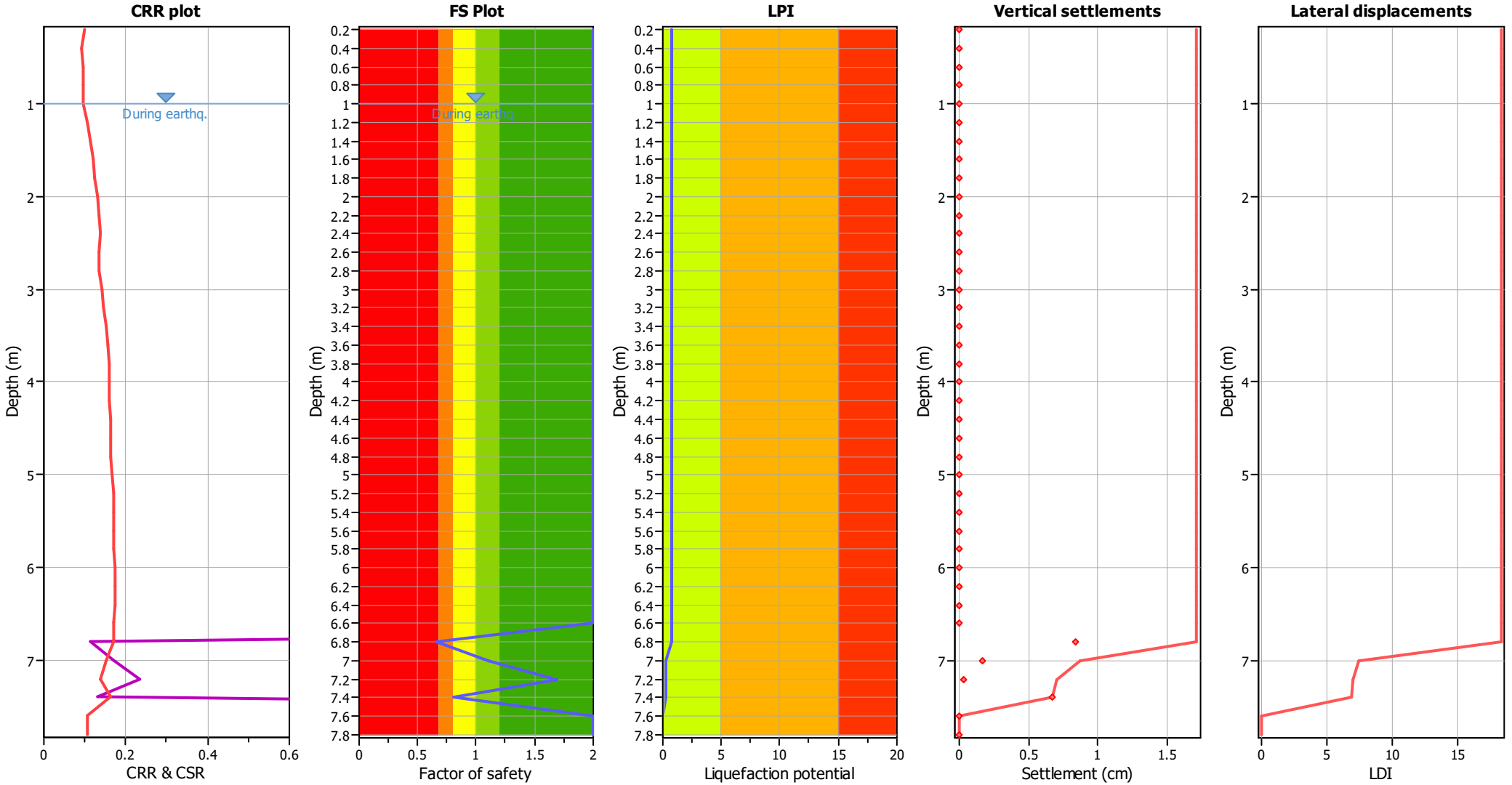
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.18	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	2.00	0.00	8.20	0.20	0.00
3.80	2.00	0.00	8.10	0.20	0.00	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	0.66	0.34	6.60	0.20	0.45
7.00	1.10	0.00	6.50	0.20	0.00	7.20	1.68	0.00	6.40	0.20	0.00
7.40	0.80	0.20	6.30	0.20	0.25	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00						

Overall liquefaction potential: 0.70

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	20.36	2.00	0.00	1.00	0.00	1.20	17.24	2.00	0.00	1.00	0.00
1.40	17.24	2.00	0.00	1.00	0.00	1.60	18.92	2.00	0.00	1.00	0.00
1.80	17.24	2.00	0.00	1.00	0.00	2.00	17.24	2.00	0.00	1.00	0.00
2.20	17.47	2.00	0.00	1.00	0.00	2.40	20.28	2.00	0.00	1.00	0.00
2.60	31.60	2.00	0.00	1.00	0.00	2.80	36.56	2.00	0.00	1.00	0.00
3.00	29.00	2.00	0.00	1.00	0.00	3.20	21.67	2.00	0.00	1.00	0.00
3.40	15.66	2.00	0.00	1.00	0.00	3.60	12.57	2.00	0.00	1.00	0.00
3.80	10.96	2.00	0.00	1.00	0.00	4.00	10.79	2.00	0.00	1.00	0.00
4.20	12.18	2.00	0.00	1.00	0.00	4.40	9.29	2.00	0.00	1.00	0.00
4.60	11.82	2.00	0.00	1.00	0.00	4.80	15.55	2.00	0.00	1.00	0.00
5.00	14.06	2.00	0.00	1.00	0.00	5.20	8.95	2.00	0.00	1.00	0.00
5.40	8.83	2.00	0.00	1.00	0.00	5.60	8.72	2.00	0.00	1.00	0.00
5.80	15.97	2.00	0.00	1.00	0.00	6.00	9.72	2.00	0.00	1.00	0.00
6.20	8.56	2.00	0.00	1.00	0.00	6.40	10.85	2.00	0.00	1.00	0.00
6.60	20.06	2.00	0.00	1.00	0.00	6.80	76.09	0.66	4.21	1.00	0.84
7.00	118.75	1.10	0.83	1.00	0.17	7.20	140.33	1.68	0.15	1.00	0.03
7.40	95.54	0.80	3.37	1.00	0.67	7.60	216.44	2.00	0.00	1.00	0.00
7.80	254.00	2.00	0.00	1.00	0.00						

Total estimated settlement: 1.71

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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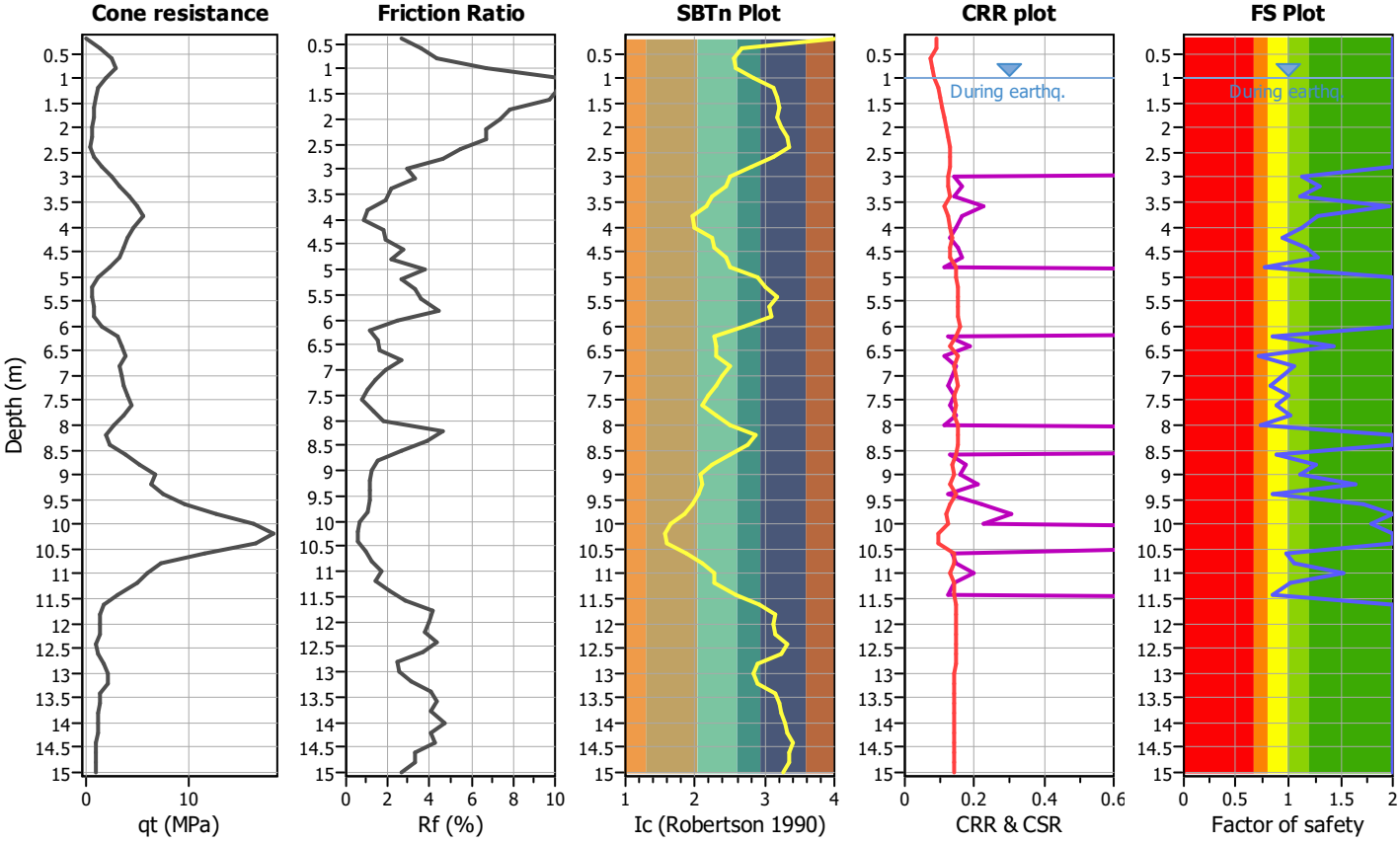
LIQUEFACTION ANALYSIS REPORT

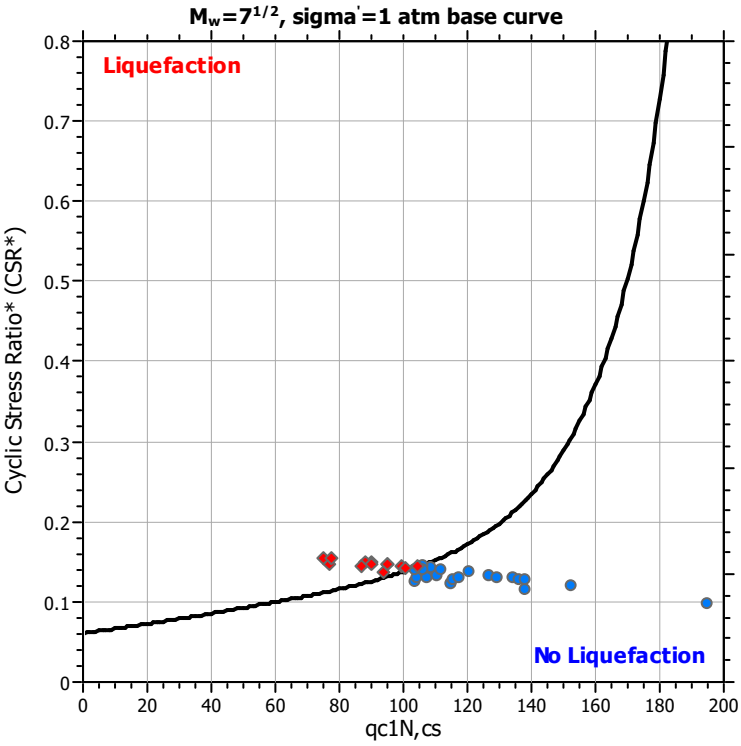
Project title : **Location :**

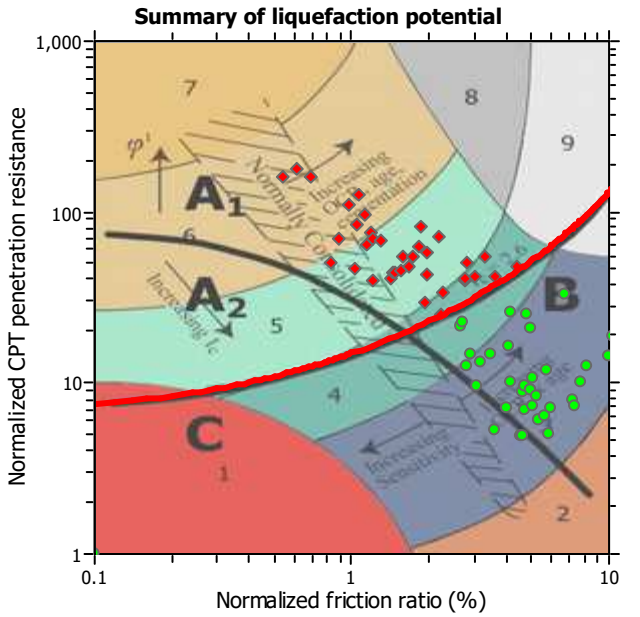
CPT file : CPT168

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.16	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

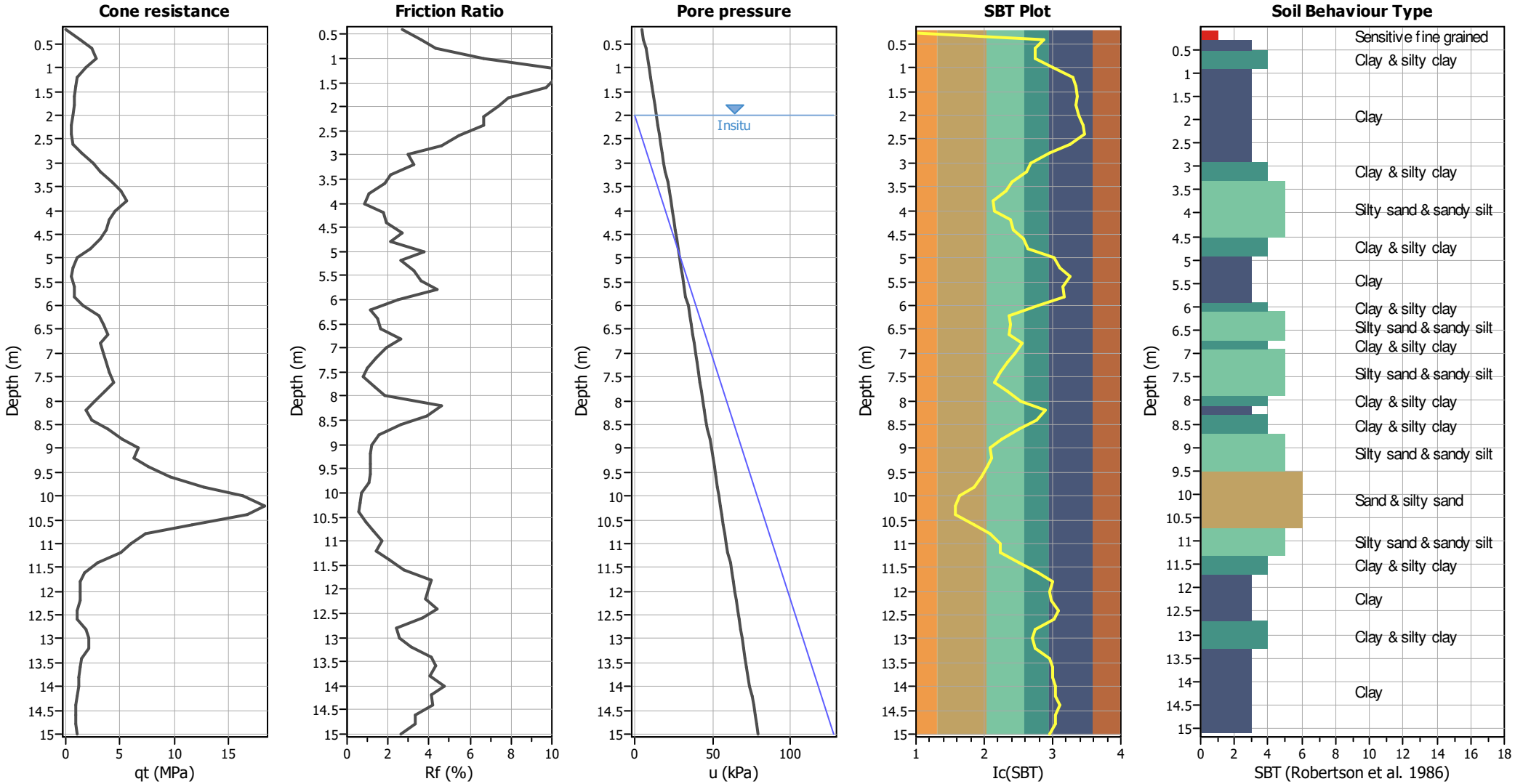






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



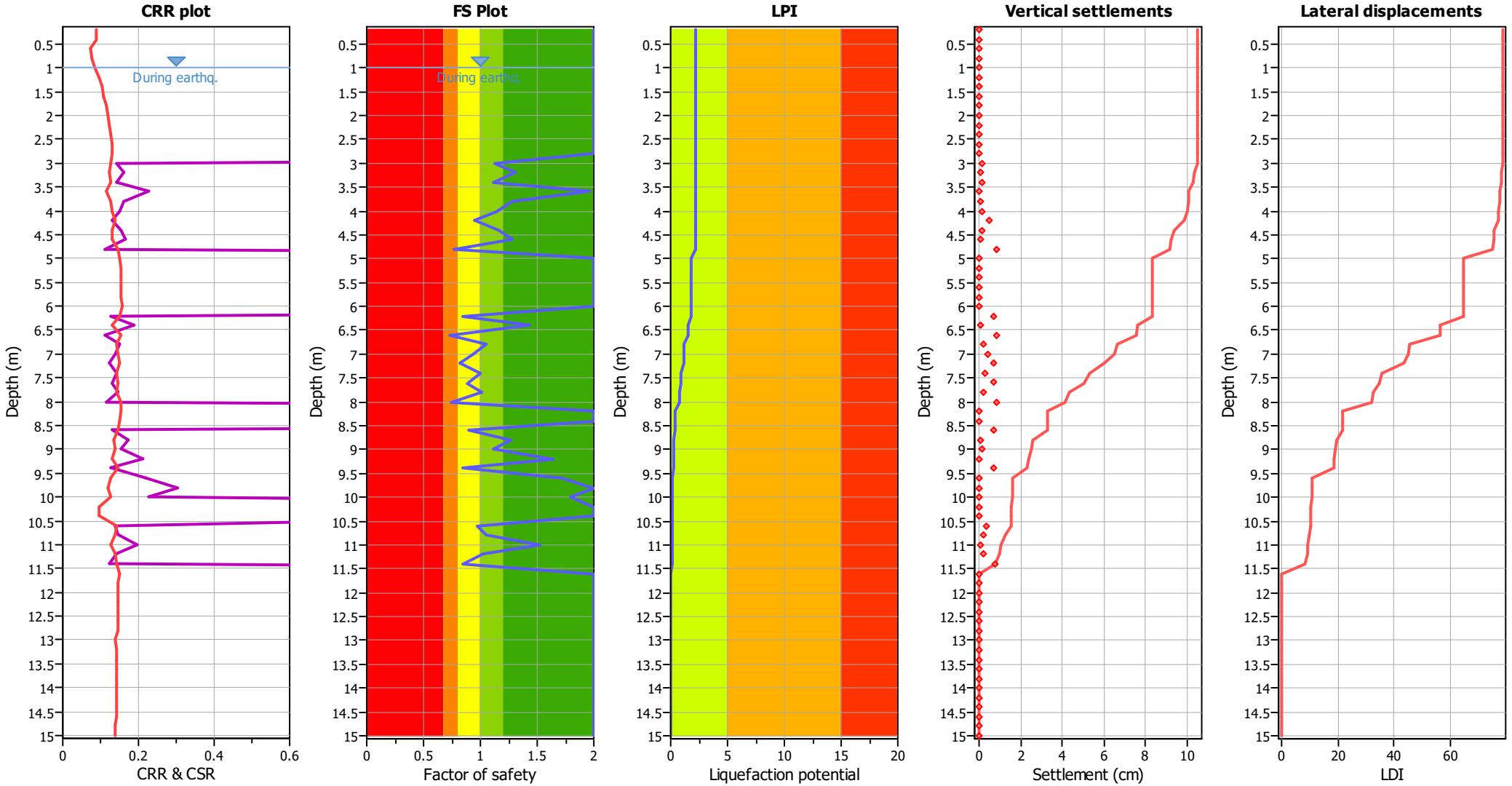
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.16	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.16	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	1.13	0.00	8.50	0.20	0.00	3.20	1.31	0.00	8.40	0.20	0.00
3.40	1.12	0.00	8.30	0.20	0.00	3.60	1.97	0.00	8.20	0.20	0.00
3.80	1.29	0.00	8.10	0.20	0.00	4.00	1.14	0.00	8.00	0.20	0.00
4.20	0.95	0.05	7.90	0.20	0.08	4.40	1.17	0.00	7.80	0.20	0.00
4.60	1.28	0.00	7.70	0.20	0.00	4.80	0.77	0.23	7.60	0.20	0.35
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	0.85	0.15	6.90	0.20	0.21	6.40	1.43	0.00	6.80	0.20	0.00
6.60	0.73	0.27	6.70	0.20	0.37	6.80	1.06	0.00	6.60	0.20	0.00
7.00	0.94	0.06	6.50	0.20	0.08	7.20	0.82	0.18	6.40	0.20	0.23
7.40	1.00	0.00	6.30	0.20	0.01	7.60	0.89	0.11	6.20	0.20	0.14
7.80	1.02	0.00	6.10	0.20	0.00	8.00	0.74	0.26	6.00	0.20	0.31
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	0.89	0.11	5.70	0.20	0.12	8.80	1.27	0.00	5.60	0.20	0.00
9.00	1.11	0.00	5.50	0.20	0.00	9.20	1.64	0.00	5.40	0.20	0.00
9.40	0.85	0.15	5.30	0.20	0.16	9.60	1.72	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	1.80	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	0.98	0.02	4.70	0.20	0.02	10.80	1.05	0.00	4.60	0.20	0.00
11.00	1.52	0.00	4.50	0.20	0.00	11.20	1.02	0.00	4.40	0.20	0.00
11.40	0.85	0.15	4.30	0.20	0.13	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00						

Overall liquefaction potential: 2.20

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	20.13	2.00	0.00	1.00	0.00	1.20	20.13	2.00	0.00	1.00	0.00
1.40	16.78	2.00	0.00	1.00	0.00	1.60	13.42	2.00	0.00	1.00	0.00
1.80	13.42	2.00	0.00	1.00	0.00	2.00	11.74	2.00	0.00	1.00	0.00
2.20	6.71	2.00	0.00	1.00	0.00	2.40	6.71	2.00	0.00	1.00	0.00
2.60	10.07	2.00	0.00	1.00	0.00	2.80	19.43	2.00	0.00	1.00	0.00
3.00	103.59	1.13	0.76	1.00	0.15	3.20	115.17	1.31	0.44	1.00	0.09
3.40	104.21	1.12	0.81	1.00	0.16	3.60	138.29	1.97	0.01	1.00	0.00
3.80	115.81	1.29	0.47	1.00	0.09	4.00	107.56	1.14	0.75	1.00	0.15
4.20	94.06	0.95	2.35	1.00	0.47	4.40	110.70	1.17	0.68	1.00	0.14
4.60	117.23	1.28	0.49	1.00	0.10	4.80	76.75	0.77	4.17	1.00	0.83
5.00	13.32	2.00	0.00	1.00	0.00	5.20	7.97	2.00	0.00	1.00	0.00
5.40	5.28	2.00	0.00	1.00	0.00	5.60	7.78	2.00	0.00	1.00	0.00
5.80	15.17	2.00	0.00	1.00	0.00	6.00	7.60	2.00	0.00	1.00	0.00
6.20	90.01	0.85	3.57	1.00	0.71	6.40	127.00	1.43	0.33	1.00	0.07
6.60	74.91	0.73	4.27	1.00	0.85	6.80	108.45	1.06	1.02	1.00	0.20
7.00	99.44	0.94	2.16	1.00	0.43	7.20	87.85	0.82	3.66	1.00	0.73
7.40	104.36	1.00	1.38	1.00	0.28	7.60	95.17	0.89	3.38	1.00	0.68
7.80	106.11	1.02	1.22	1.00	0.24	8.00	77.67	0.74	4.12	1.00	0.82
8.20	17.43	2.00	0.00	1.00	0.00	8.40	23.62	2.00	0.00	1.00	0.00
8.60	95.29	0.89	3.37	1.00	0.67	8.80	120.88	1.27	0.50	1.00	0.10
9.00	112.08	1.11	0.82	1.00	0.16	9.20	134.32	1.64	0.17	1.00	0.03
9.40	90.10	0.85	3.57	1.00	0.71	9.60	136.37	1.72	0.13	1.00	0.03
9.80	152.27	2.00	0.00	1.00	0.00	10.00	138.16	1.80	0.09	1.00	0.02
10.20	205.98	2.00	0.00	1.00	0.00	10.40	194.93	2.00	0.00	1.00	0.00
10.60	100.82	0.98	1.58	1.00	0.32	10.80	106.09	1.05	1.06	1.00	0.21
11.00	129.55	1.52	0.25	1.00	0.05	11.20	103.49	1.02	1.22	1.00	0.24
11.40	86.66	0.85	3.71	1.00	0.74	11.60	9.13	2.00	0.00	1.00	0.00
11.80	10.88	2.00	0.00	1.00	0.00	12.00	14.43	2.00	0.00	1.00	0.00
12.20	10.72	2.00	0.00	1.00	0.00	12.40	8.85	2.00	0.00	1.00	0.00
12.60	7.02	2.00	0.00	1.00	0.00	12.80	12.25	2.00	0.00	1.00	0.00
13.00	28.12	2.00	0.00	1.00	0.00	13.20	13.81	2.00	0.00	1.00	0.00
13.40	13.72	2.00	0.00	1.00	0.00	13.60	8.47	2.00	0.00	1.00	0.00
13.80	11.82	2.00	0.00	1.00	0.00	14.00	10.04	2.00	0.00	1.00	0.00
14.20	8.30	2.00	0.00	1.00	0.00	14.40	8.24	2.00	0.00	1.00	0.00
14.60	6.54	2.00	0.00	1.00	0.00	14.80	8.14	2.00	0.00	1.00	0.00
15.00	8.09	2.00	0.00	1.00	0.00						

Total estimated settlement: 10.50

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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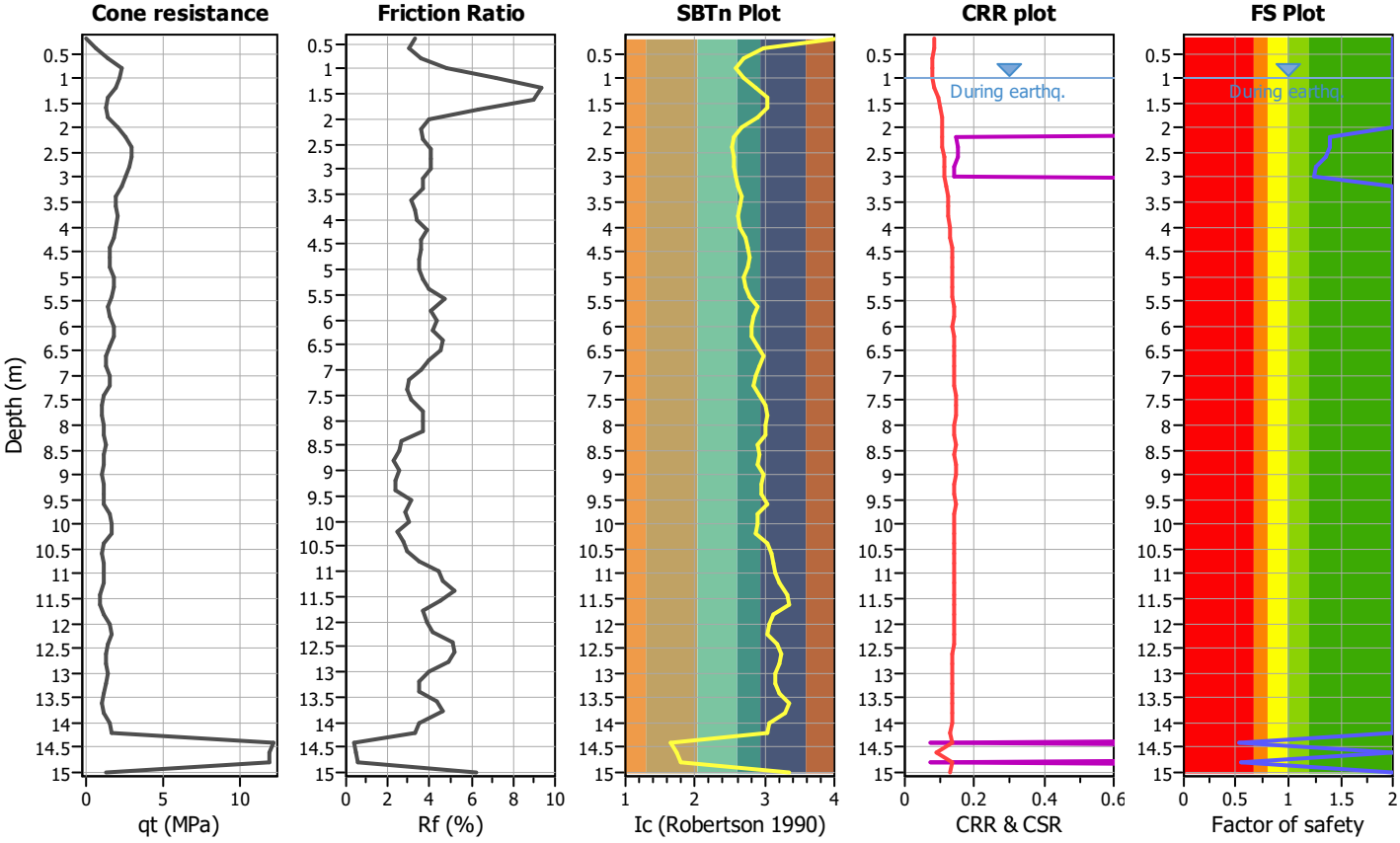
LIQUEFACTION ANALYSIS REPORT

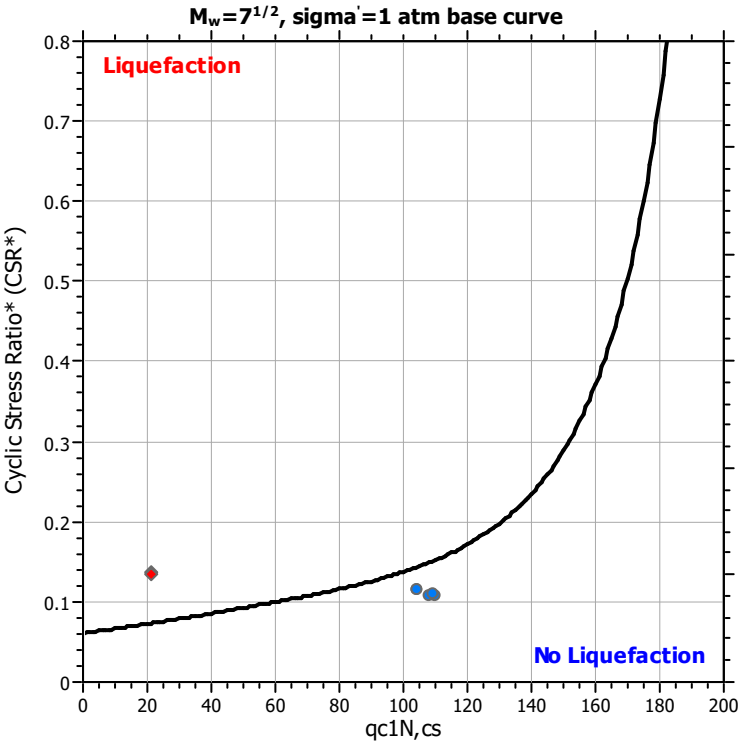
Project title : **Location :**

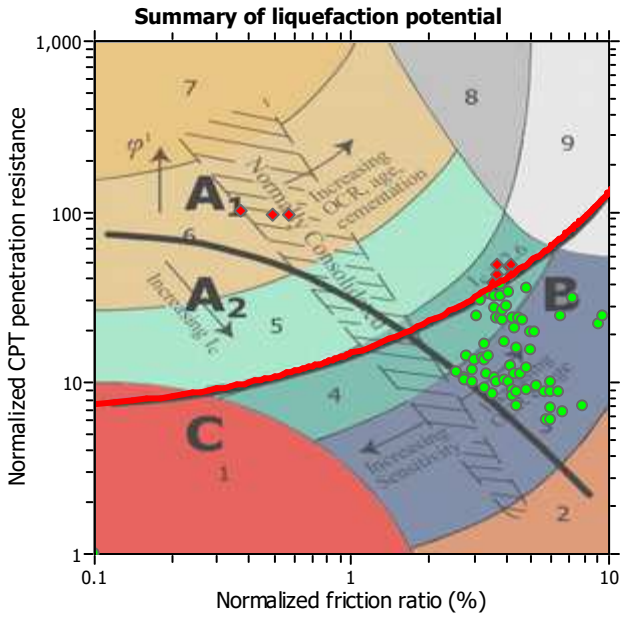
CPT file : CPT214

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

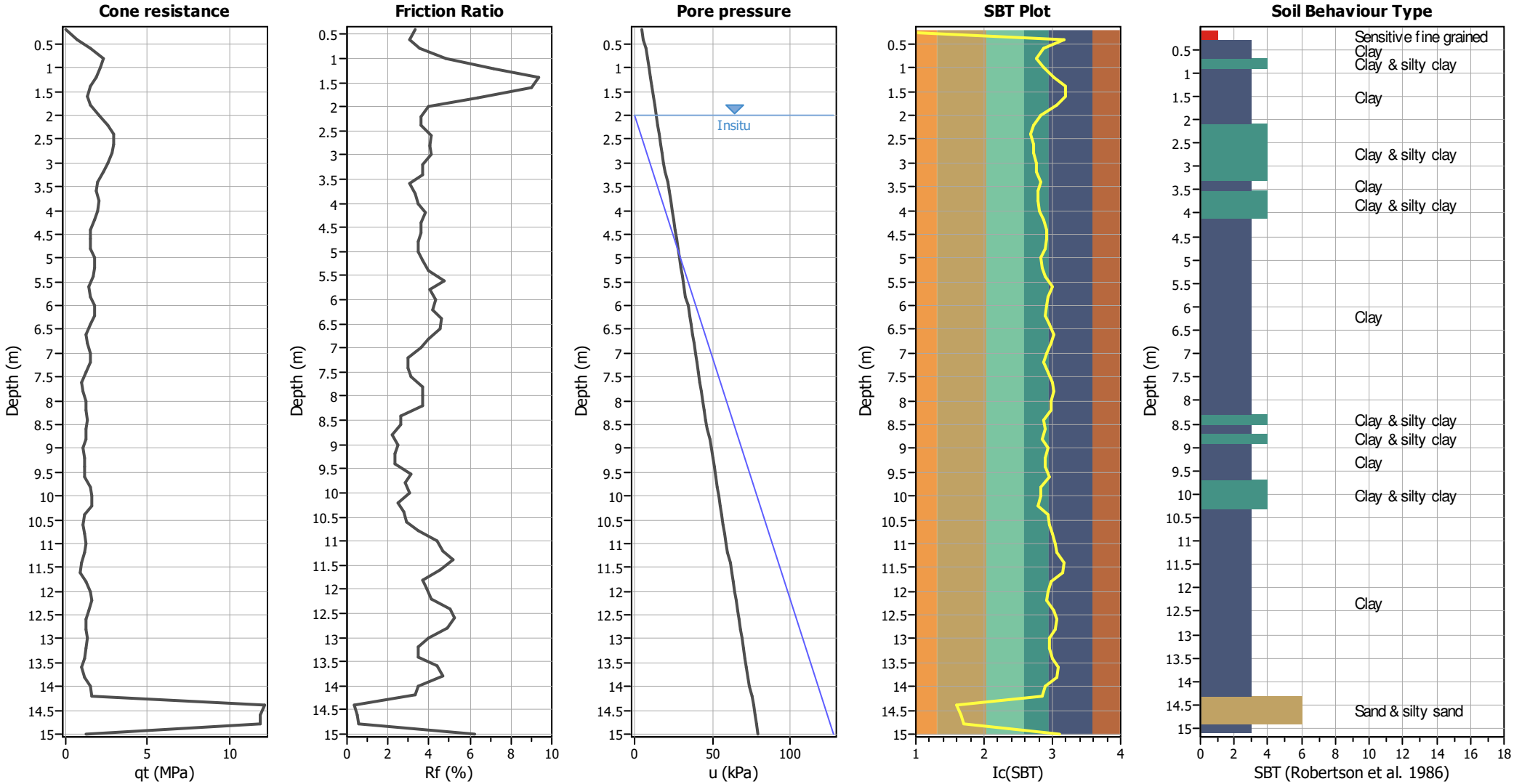






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



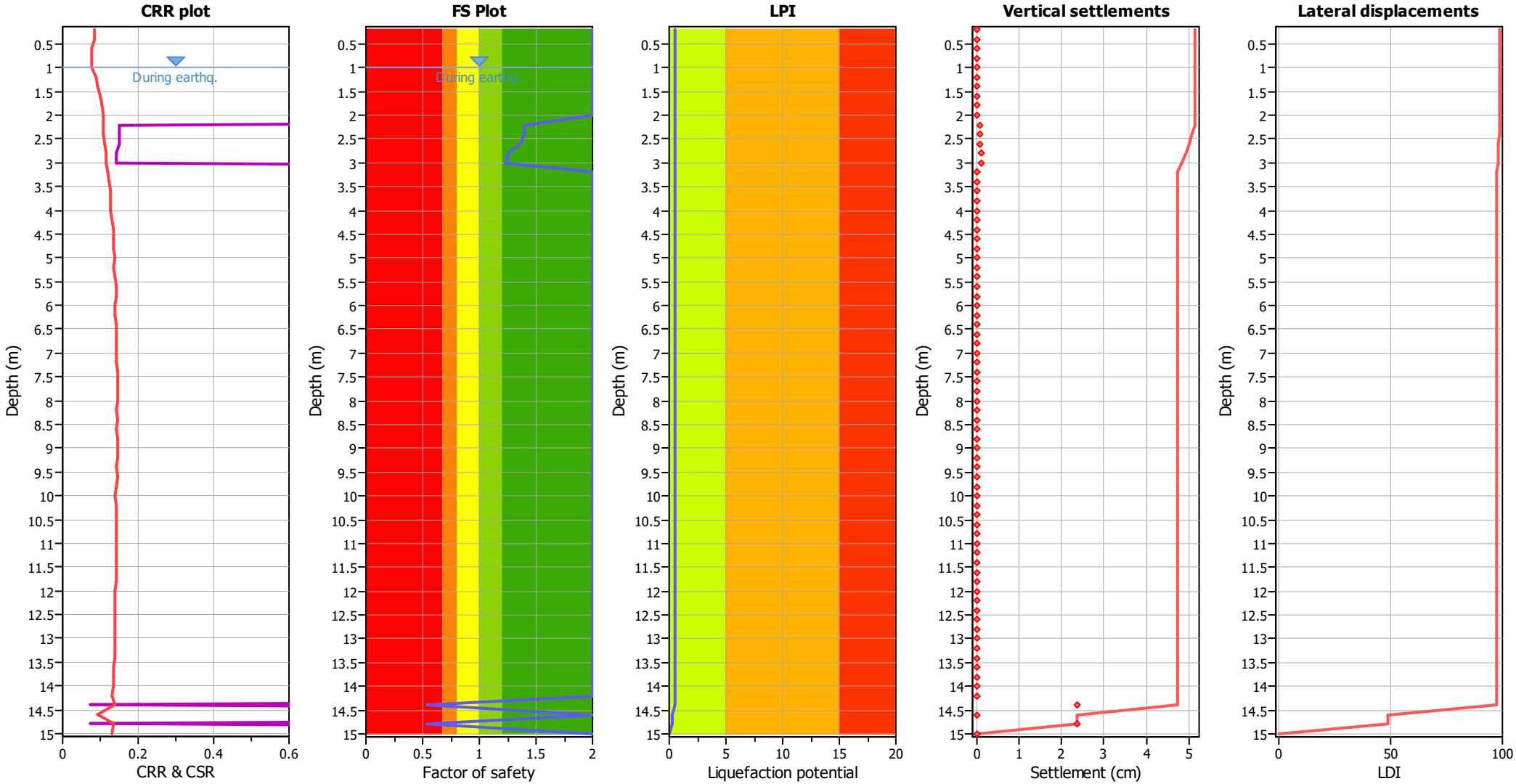
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	1.40	0.00	8.90	0.20	0.00	2.40	1.40	0.00	8.80	0.20	0.00
2.60	1.36	0.00	8.70	0.20	0.00	2.80	1.26	0.00	8.60	0.20	0.00
3.00	1.24	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	2.00	0.00	8.20	0.20	0.00
3.80	2.00	0.00	8.10	0.20	0.00	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	0.54	0.46	2.80	0.20	0.26
14.60	2.00	0.00	2.70	0.20	0.00	14.80	0.54	0.46	2.60	0.20	0.24
15.00	2.00	0.00	2.50	0.20	0.00						

Overall liquefaction potential: 0.50

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	40.27	2.00	0.00	1.00	0.00	1.20	26.84	2.00	0.00	1.00	0.00
1.40	26.84	2.00	0.00	1.00	0.00	1.60	20.13	2.00	0.00	1.00	0.00
1.80	20.13	2.00	0.00	1.00	0.00	2.00	33.56	2.00	0.00	1.00	0.00
2.20	107.83	1.40	0.32	1.00	0.06	2.40	109.72	1.40	0.32	1.00	0.06
2.60	109.17	1.36	0.36	1.00	0.07	2.80	104.61	1.26	0.48	1.00	0.10
3.00	104.18	1.24	0.52	1.00	0.10	3.20	32.52	2.00	0.00	1.00	0.00
3.40	26.46	2.00	0.00	1.00	0.00	3.60	26.05	2.00	0.00	1.00	0.00
3.80	28.30	2.00	0.00	1.00	0.00	4.00	30.46	2.00	0.00	1.00	0.00
4.20	22.14	2.00	0.00	1.00	0.00	4.40	19.18	2.00	0.00	1.00	0.00
4.60	18.89	2.00	0.00	1.00	0.00	4.80	21.19	2.00	0.00	1.00	0.00
5.00	20.90	2.00	0.00	1.00	0.00	5.20	27.99	2.00	0.00	1.00	0.00
5.40	20.30	2.00	0.00	1.00	0.00	5.60	15.12	2.00	0.00	1.00	0.00
5.80	17.35	2.00	0.00	1.00	0.00	6.00	24.24	2.00	0.00	1.00	0.00
6.20	21.61	2.00	0.00	1.00	0.00	6.40	19.01	2.00	0.00	1.00	0.00
6.60	14.16	2.00	0.00	1.00	0.00	6.80	11.69	2.00	0.00	1.00	0.00
7.00	20.62	2.00	0.00	1.00	0.00	7.20	18.18	2.00	0.00	1.00	0.00
7.40	11.31	2.00	0.00	1.00	0.00	7.60	11.19	2.00	0.00	1.00	0.00
7.80	11.08	2.00	0.00	1.00	0.00	8.00	13.13	2.00	0.00	1.00	0.00
8.20	15.15	2.00	0.00	1.00	0.00	8.40	10.75	2.00	0.00	1.00	0.00
8.60	16.98	2.00	0.00	1.00	0.00	8.80	10.55	2.00	0.00	1.00	0.00
9.00	10.45	2.00	0.00	1.00	0.00	9.20	12.43	2.00	0.00	1.00	0.00
9.40	12.32	2.00	0.00	1.00	0.00	9.60	10.18	2.00	0.00	1.00	0.00
9.80	12.10	2.00	0.00	1.00	0.00	10.00	23.96	2.00	0.00	1.00	0.00
10.20	11.89	2.00	0.00	1.00	0.00	10.40	11.79	2.00	0.00	1.00	0.00
10.60	9.75	2.00	0.00	1.00	0.00	10.80	9.66	2.00	0.00	1.00	0.00
11.00	13.42	2.00	0.00	1.00	0.00	11.20	11.41	2.00	0.00	1.00	0.00
11.40	7.53	2.00	0.00	1.00	0.00	11.60	7.47	2.00	0.00	1.00	0.00
11.80	9.27	2.00	0.00	1.00	0.00	12.00	16.61	2.00	0.00	1.00	0.00
12.20	14.63	2.00	0.00	1.00	0.00	12.40	12.69	2.00	0.00	1.00	0.00
12.60	10.78	2.00	0.00	1.00	0.00	12.80	10.70	2.00	0.00	1.00	0.00
13.00	12.40	2.00	0.00	1.00	0.00	13.20	12.31	2.00	0.00	1.00	0.00
13.40	8.71	2.00	0.00	1.00	0.00	13.60	8.65	2.00	0.00	1.00	0.00
13.80	8.58	2.00	0.00	1.00	0.00	14.00	11.97	2.00	0.00	1.00	0.00
14.20	18.80	2.00	0.00	1.00	0.00	14.40	21.00	0.54	11.87	1.00	2.37
14.60	254.00	2.00	0.00	1.00	0.00	14.80	21.00	0.54	11.87	1.00	2.37
15.00	9.87	2.00	0.00	1.00	0.00						

Total estimated settlement: 5.15

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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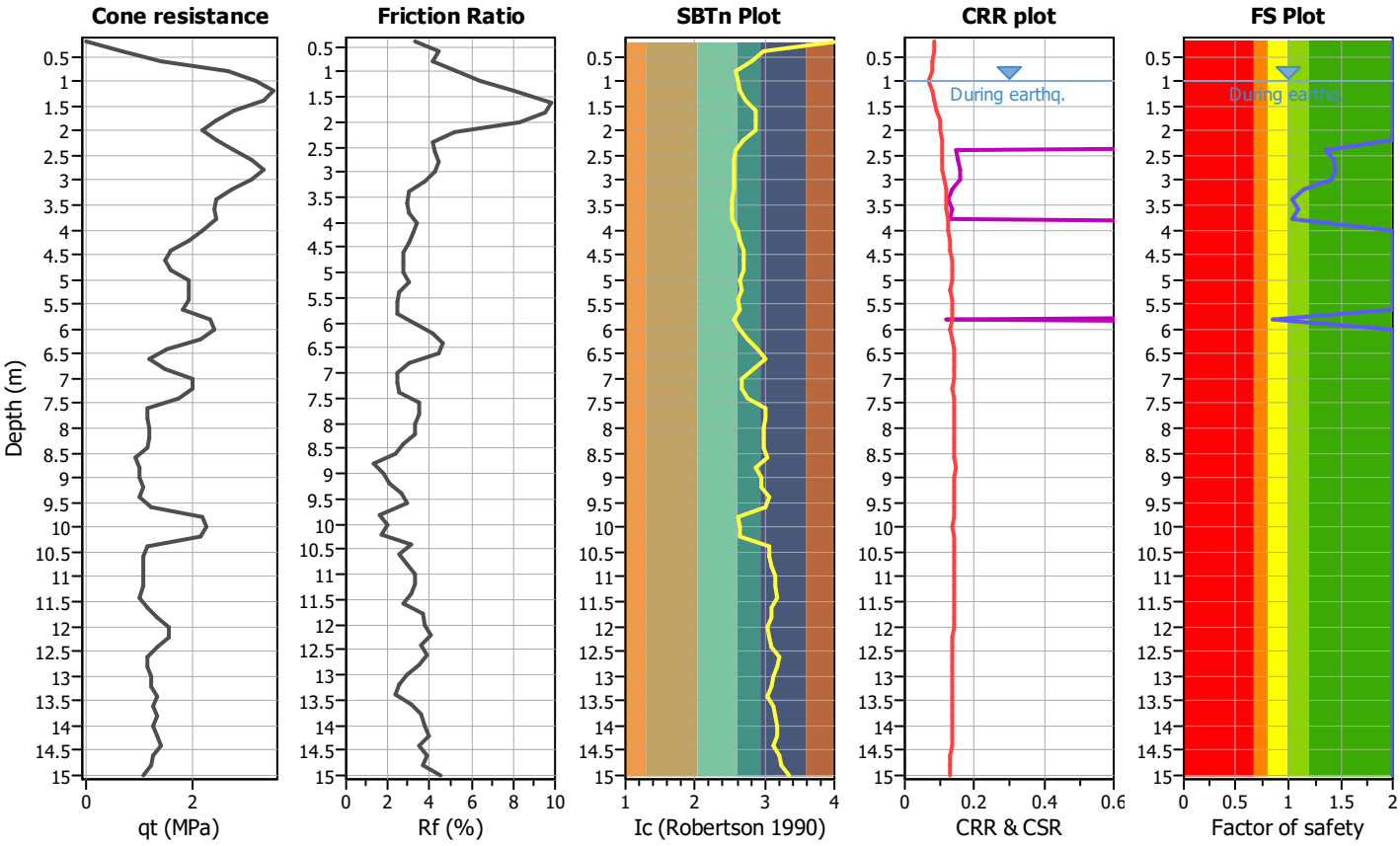
LIQUEFACTION ANALYSIS REPORT

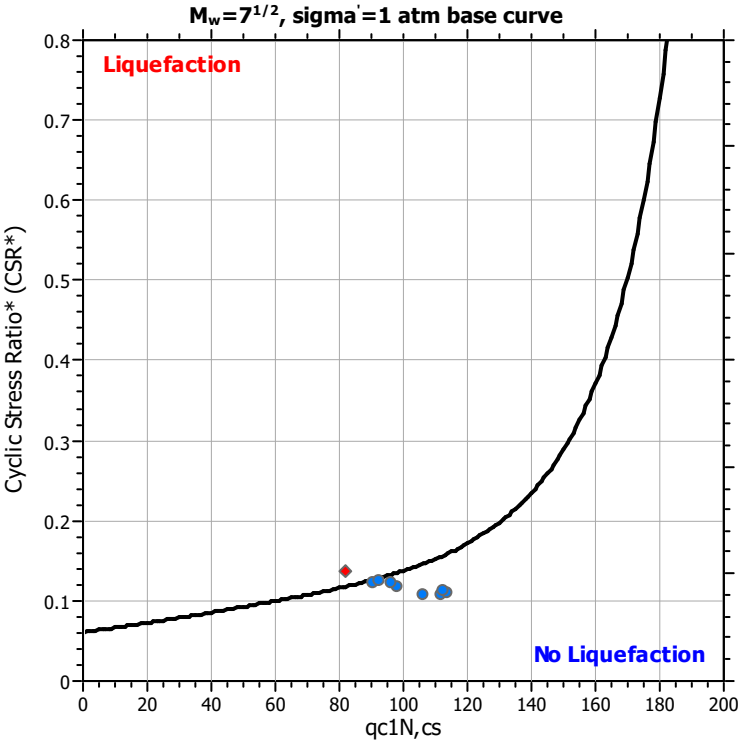
Project title : **Location :**

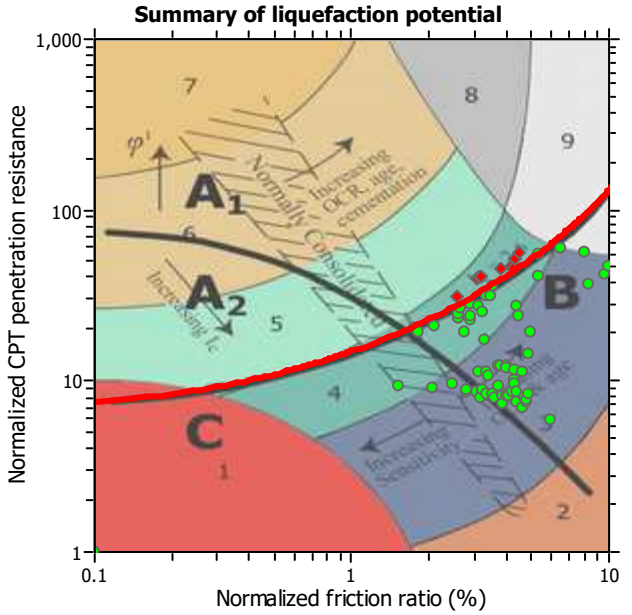
CPT file : CPT215

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

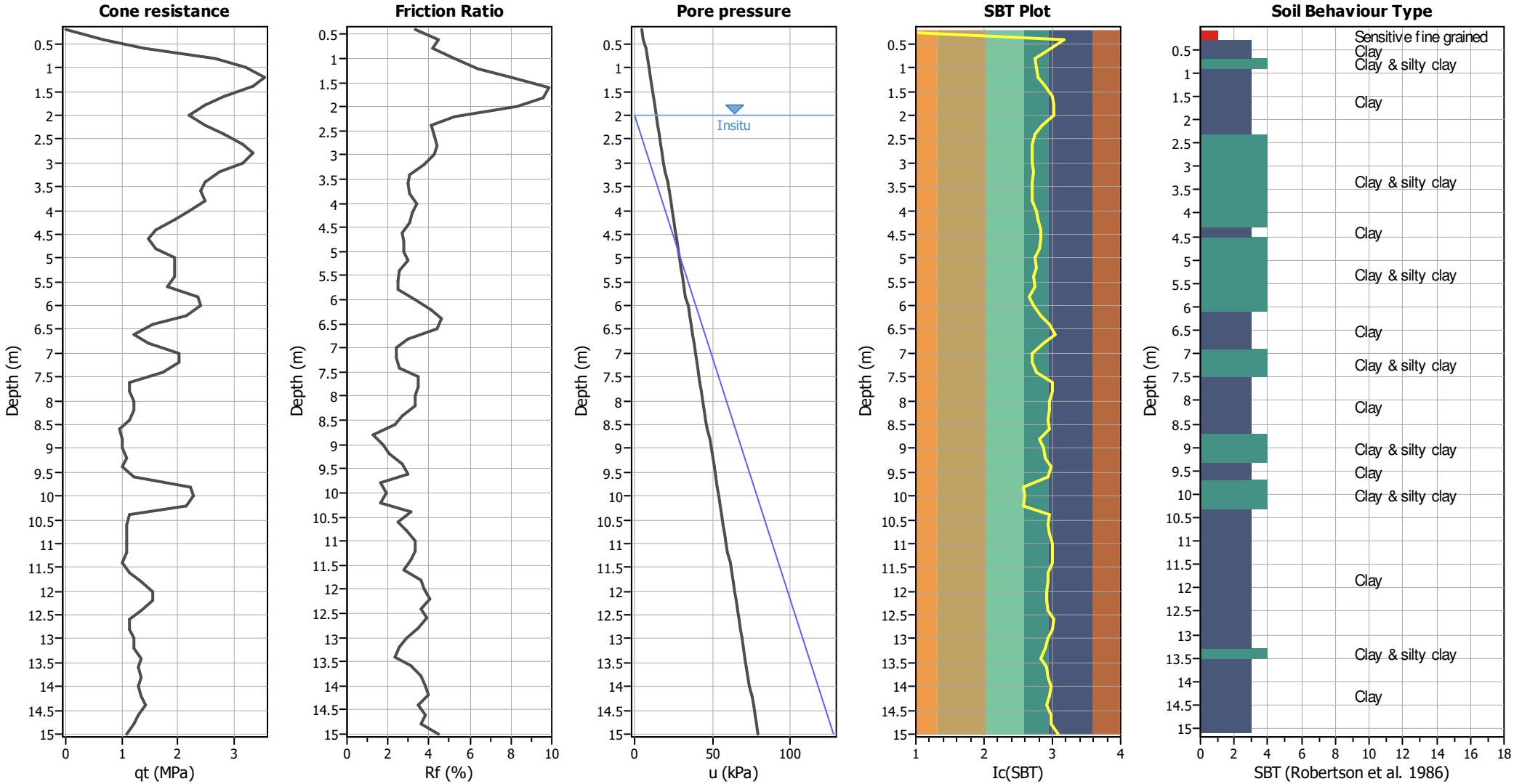






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



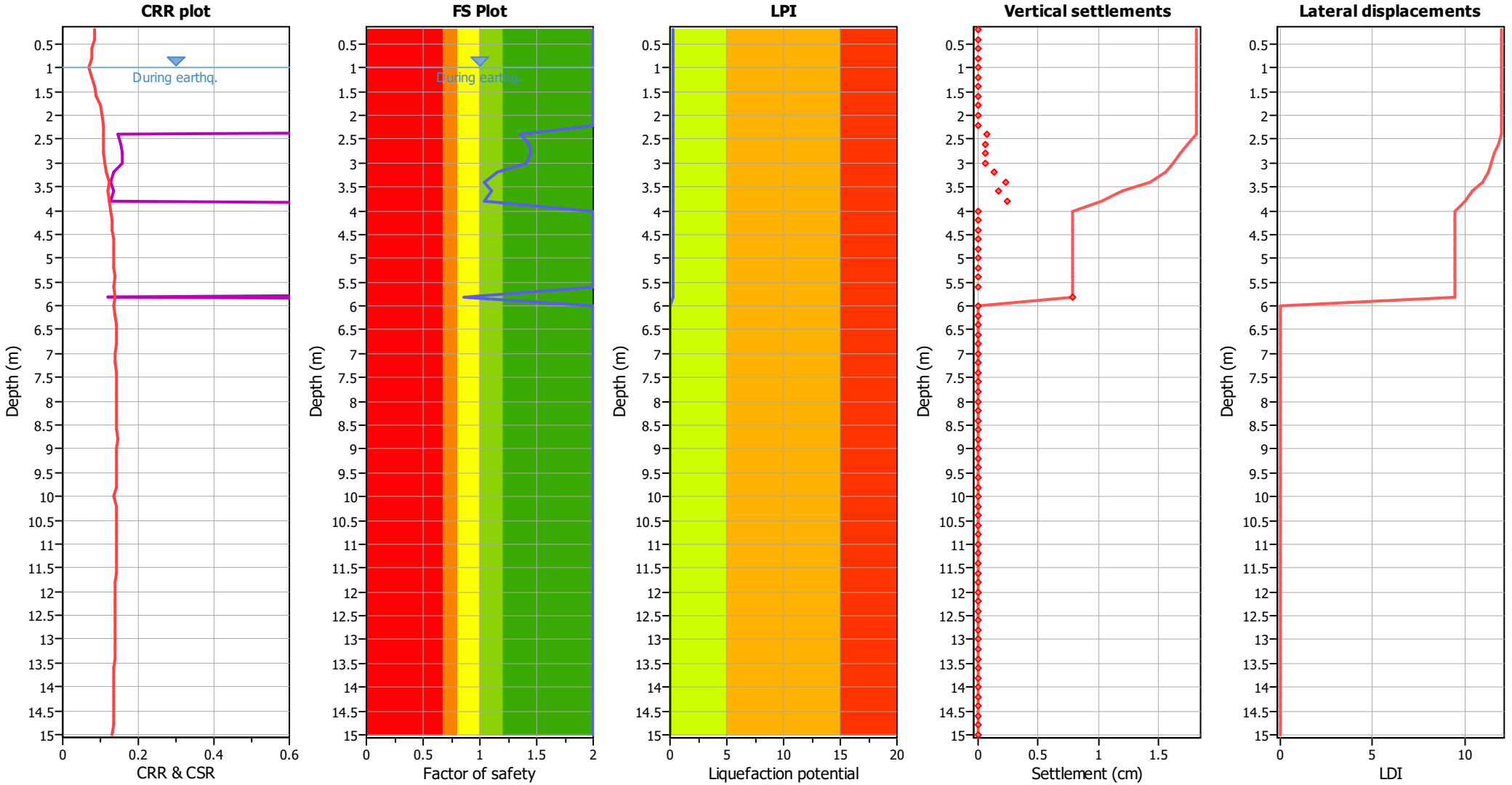
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	1.36	0.00	8.80	0.20	0.00
2.60	1.43	0.00	8.70	0.20	0.00	2.80	1.45	0.00	8.60	0.20	0.00
3.00	1.41	0.00	8.50	0.20	0.00	3.20	1.16	0.00	8.40	0.20	0.00
3.40	1.04	0.00	8.30	0.20	0.00	3.60	1.10	0.00	8.20	0.20	0.00
3.80	1.03	0.00	8.10	0.20	0.00	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	0.85	0.15	7.10	0.20	0.21	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00						

Overall liquefaction potential: 0.21

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	63.76	2.00	0.00	1.00	0.00	1.20	60.40	2.00	0.00	1.00	0.00
1.40	53.69	2.00	0.00	1.00	0.00	1.60	53.69	2.00	0.00	1.00	0.00
1.80	33.56	2.00	0.00	1.00	0.00	2.00	35.89	2.00	0.00	1.00	0.00
2.20	38.13	2.00	0.00	1.00	0.00	2.40	106.08	1.36	0.36	1.00	0.07
2.60	111.61	1.43	0.30	1.00	0.06	2.80	113.76	1.45	0.28	1.00	0.06
3.00	112.80	1.41	0.32	1.00	0.06	3.20	98.37	1.16	0.67	1.00	0.13
3.40	90.34	1.04	1.17	1.00	0.23	3.60	96.46	1.10	0.85	1.00	0.17
3.80	92.43	1.03	1.20	1.00	0.24	4.00	32.54	2.00	0.00	1.00	0.00
4.20	24.38	2.00	0.00	1.00	0.00	4.40	21.45	2.00	0.00	1.00	0.00
4.60	18.60	2.00	0.00	1.00	0.00	4.80	18.35	2.00	0.00	1.00	0.00
5.00	25.56	2.00	0.00	1.00	0.00	5.20	30.05	2.00	0.00	1.00	0.00
5.40	17.63	2.00	0.00	1.00	0.00	5.60	24.60	2.00	0.00	1.00	0.00
5.80	81.72	0.85	3.93	1.00	0.79	6.00	35.52	2.00	0.00	1.00	0.00
6.20	25.96	2.00	0.00	1.00	0.00	6.40	14.16	2.00	0.00	1.00	0.00
6.60	13.99	2.00	0.00	1.00	0.00	6.80	13.84	2.00	0.00	1.00	0.00
7.00	22.65	2.00	0.00	1.00	0.00	7.20	31.17	2.00	0.00	1.00	0.00
7.40	13.39	2.00	0.00	1.00	0.00	7.60	13.24	2.00	0.00	1.00	0.00
7.80	10.94	2.00	0.00	1.00	0.00	8.00	12.98	2.00	0.00	1.00	0.00
8.20	14.98	2.00	0.00	1.00	0.00	8.40	10.62	2.00	0.00	1.00	0.00
8.60	10.53	2.00	0.00	1.00	0.00	8.80	8.37	2.00	0.00	1.00	0.00
9.00	12.43	2.00	0.00	1.00	0.00	9.20	10.28	2.00	0.00	1.00	0.00
9.40	10.19	2.00	0.00	1.00	0.00	9.60	10.10	2.00	0.00	1.00	0.00
9.80	16.02	2.00	0.00	1.00	0.00	10.00	39.65	2.00	0.00	1.00	0.00
10.20	11.80	2.00	0.00	1.00	0.00	10.40	11.71	2.00	0.00	1.00	0.00
10.60	9.68	2.00	0.00	1.00	0.00	10.80	9.60	2.00	0.00	1.00	0.00
11.00	11.43	2.00	0.00	1.00	0.00	11.20	9.45	2.00	0.00	1.00	0.00
11.40	9.38	2.00	0.00	1.00	0.00	11.60	9.31	2.00	0.00	1.00	0.00
11.80	12.95	2.00	0.00	1.00	0.00	12.00	14.69	2.00	0.00	1.00	0.00
12.20	14.57	2.00	0.00	1.00	0.00	12.40	12.64	2.00	0.00	1.00	0.00
12.60	8.94	2.00	0.00	1.00	0.00	12.80	8.88	2.00	0.00	1.00	0.00
13.00	12.37	2.00	0.00	1.00	0.00	13.20	10.52	2.00	0.00	1.00	0.00
13.40	8.69	2.00	0.00	1.00	0.00	13.60	15.63	2.00	0.00	1.00	0.00
13.80	8.57	2.00	0.00	1.00	0.00	14.00	10.23	2.00	0.00	1.00	0.00
14.20	13.59	2.00	0.00	1.00	0.00	14.40	10.09	2.00	0.00	1.00	0.00
14.60	11.71	2.00	0.00	1.00	0.00	14.80	9.95	2.00	0.00	1.00	0.00
15.00	8.22	2.00	0.00	1.00	0.00						

Total estimated settlement: 1.82

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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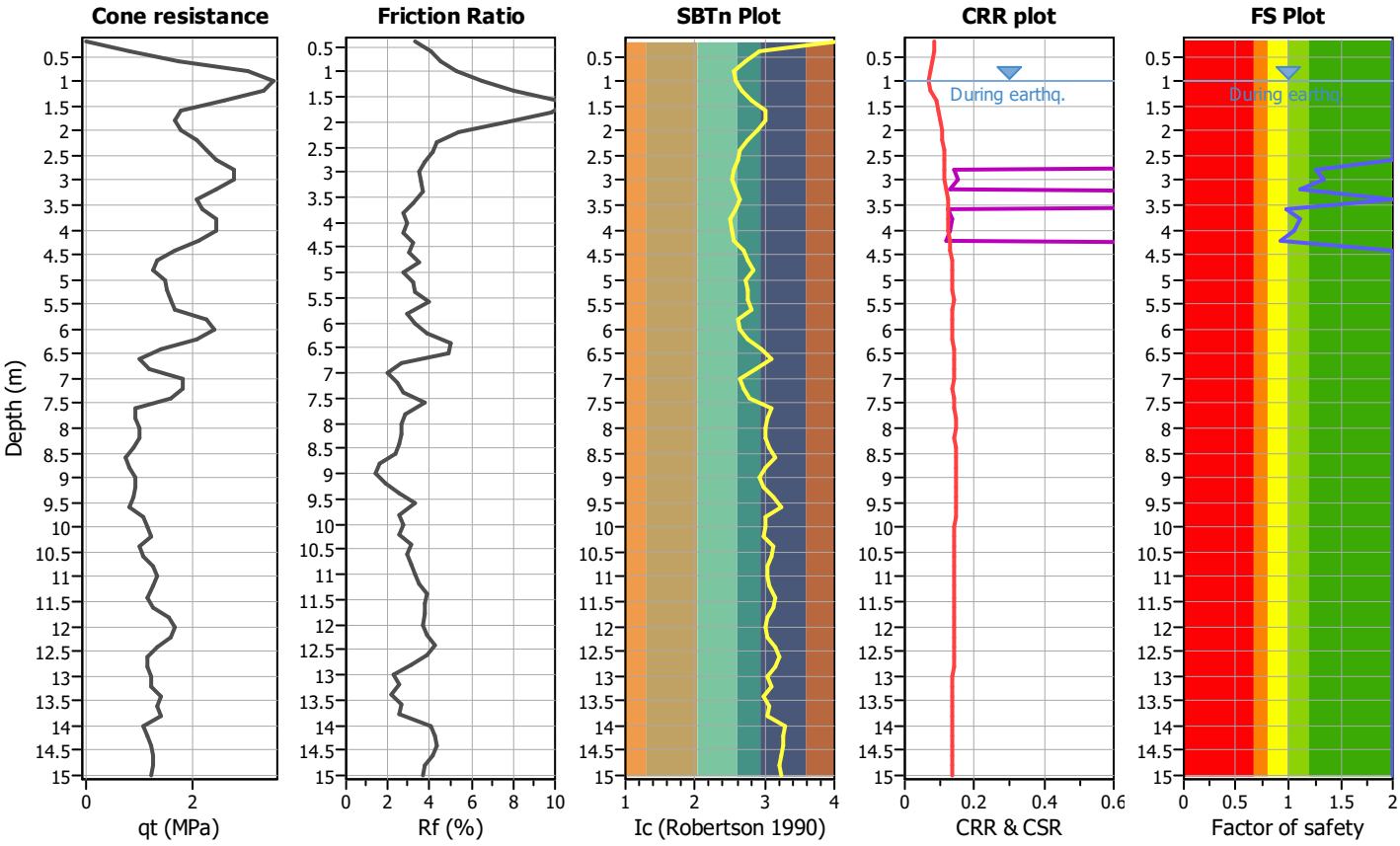
LIQUEFACTION ANALYSIS REPORT

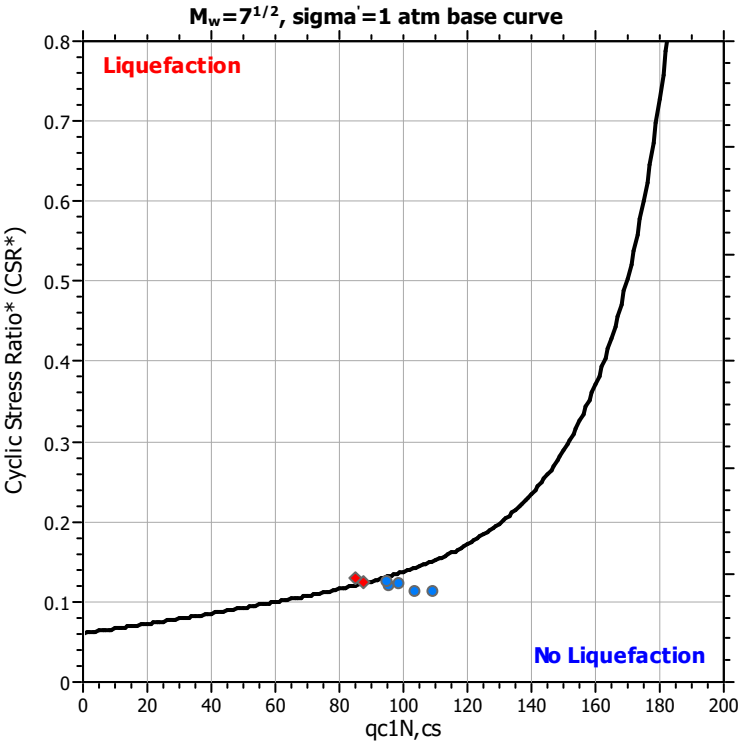
Project title : **Location :**

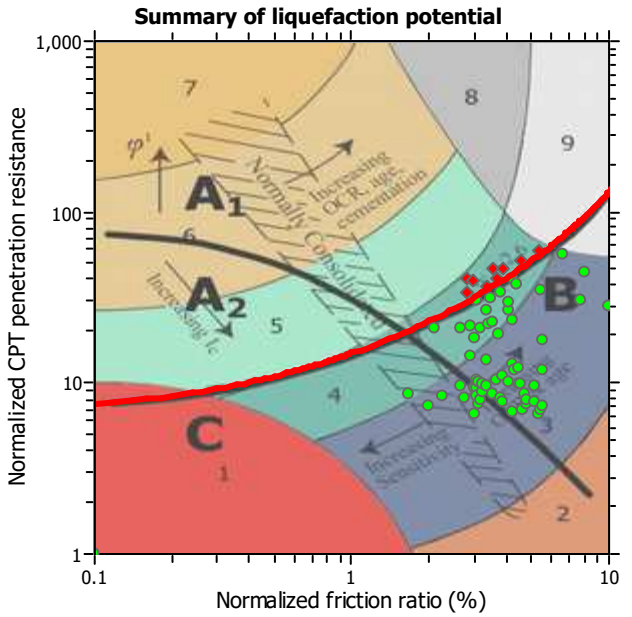
CPT file : CPT216

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

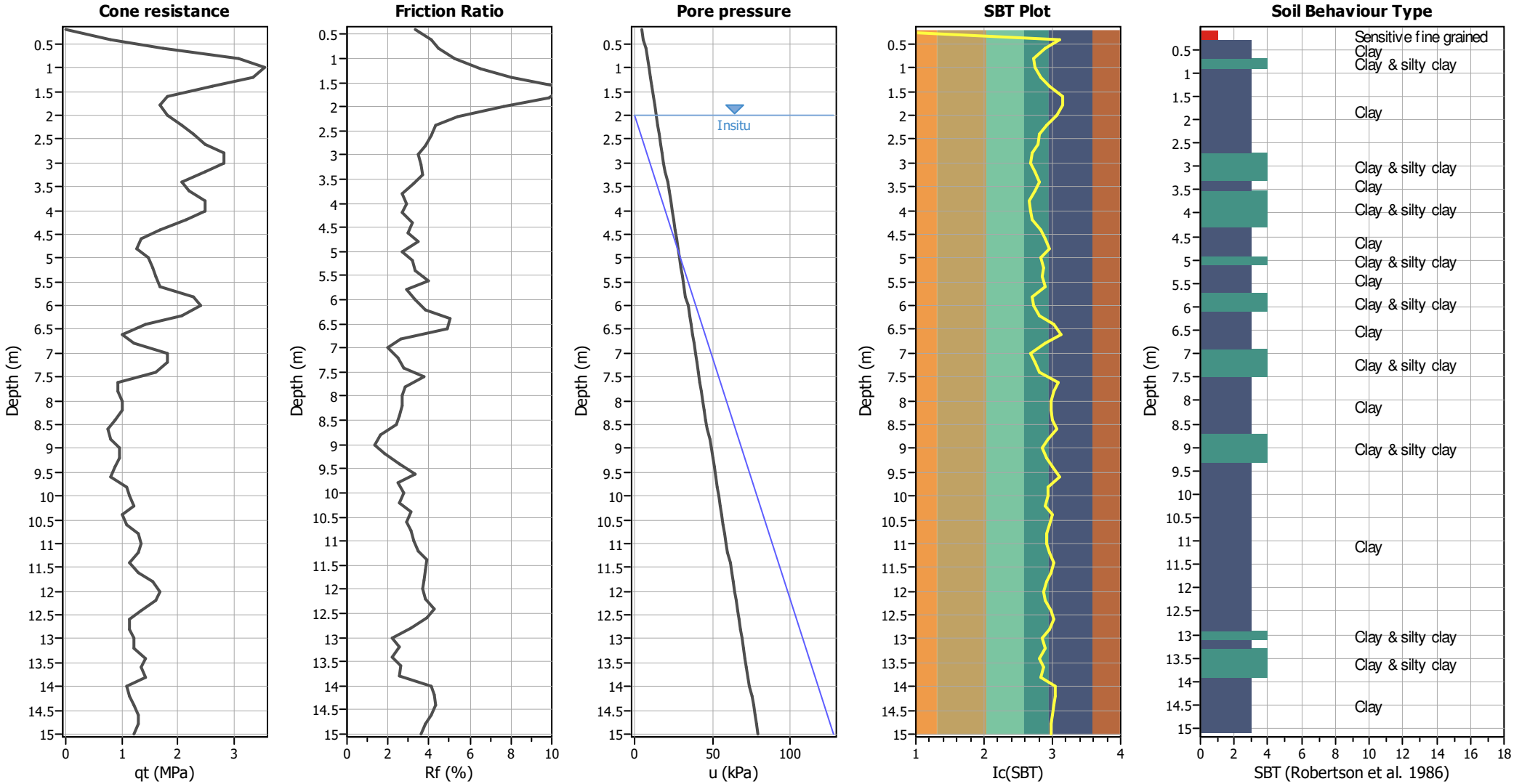






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



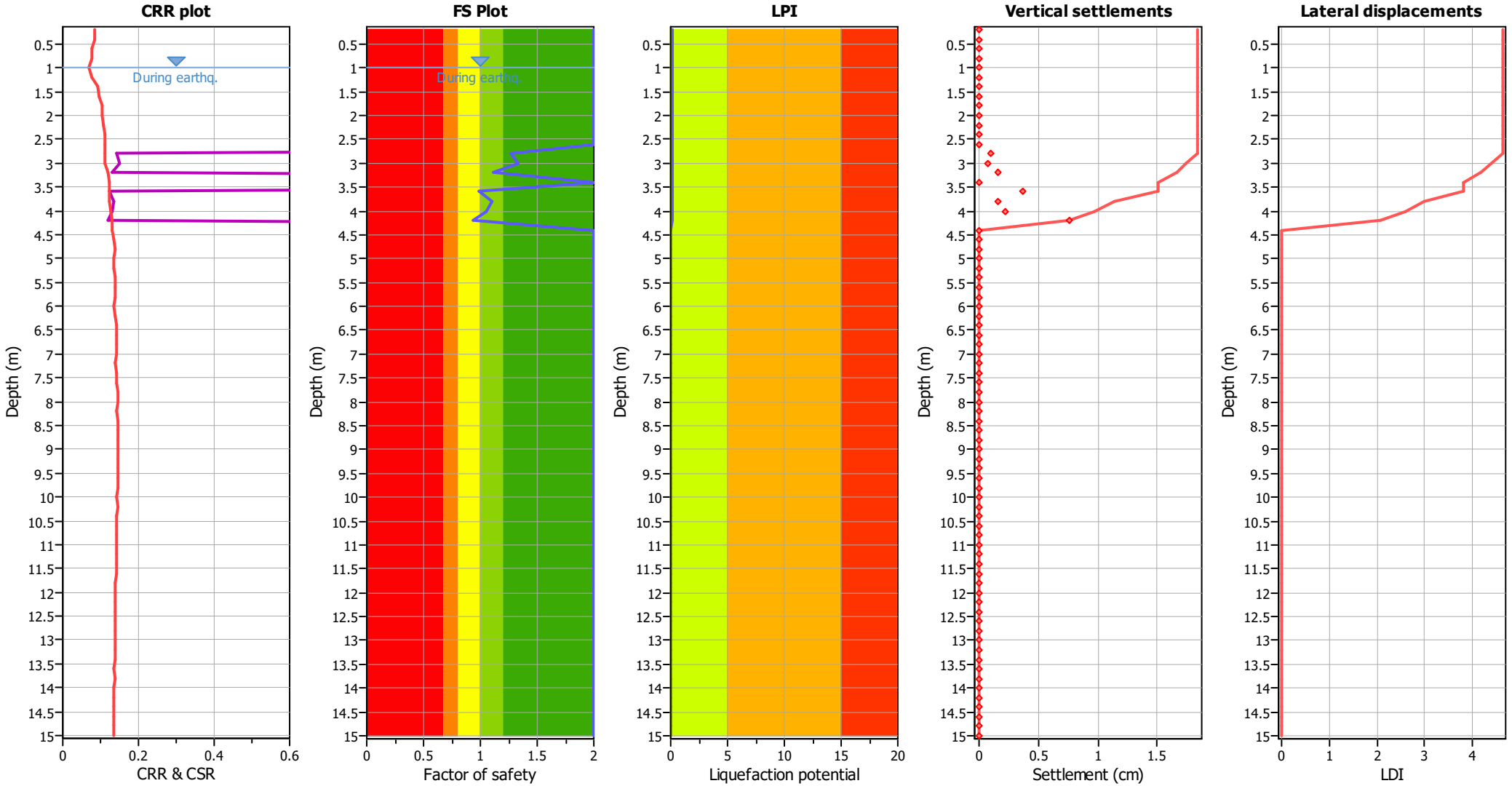
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	1.26	0.00	8.60	0.20	0.00
3.00	1.34	0.00	8.50	0.20	0.00	3.20	1.11	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	0.99	0.01	8.20	0.20	0.02
3.80	1.11	0.00	8.10	0.20	0.00	4.00	1.05	0.00	8.00	0.20	0.00
4.20	0.93	0.07	7.90	0.20	0.11	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00						

Overall liquefaction potential: 0.13

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	137.12	2.00	0.00	1.00	0.00	1.20	63.76	2.00	0.00	1.00	0.00
1.40	36.91	2.00	0.00	1.00	0.00	1.60	30.20	2.00	0.00	1.00	0.00
1.80	23.49	2.00	0.00	1.00	0.00	2.00	29.96	2.00	0.00	1.00	0.00
2.20	35.31	2.00	0.00	1.00	0.00	2.40	34.69	2.00	0.00	1.00	0.00
2.60	36.84	2.00	0.00	1.00	0.00	2.80	103.86	1.26	0.47	1.00	0.09
3.00	109.32	1.34	0.39	1.00	0.08	3.20	95.54	1.11	0.79	1.00	0.16
3.40	26.17	2.00	0.00	1.00	0.00	3.60	87.34	0.99	1.86	1.00	0.37
3.80	98.69	1.11	0.82	1.00	0.16	4.00	95.14	1.05	1.08	1.00	0.22
4.20	85.25	0.93	3.77	1.00	0.75	4.40	24.16	2.00	0.00	1.00	0.00
4.60	16.11	2.00	0.00	1.00	0.00	4.80	13.29	2.00	0.00	1.00	0.00
5.00	20.72	2.00	0.00	1.00	0.00	5.20	22.90	2.00	0.00	1.00	0.00
5.40	15.24	2.00	0.00	1.00	0.00	5.60	22.30	2.00	0.00	1.00	0.00
5.80	24.43	2.00	0.00	1.00	0.00	6.00	35.69	2.00	0.00	1.00	0.00
6.20	26.10	2.00	0.00	1.00	0.00	6.40	11.89	2.00	0.00	1.00	0.00
6.60	11.75	2.00	0.00	1.00	0.00	6.80	11.63	2.00	0.00	1.00	0.00
7.00	18.31	2.00	0.00	1.00	0.00	7.20	31.35	2.00	0.00	1.00	0.00
7.40	11.25	2.00	0.00	1.00	0.00	7.60	11.13	2.00	0.00	1.00	0.00
7.80	8.83	2.00	0.00	1.00	0.00	8.00	10.92	2.00	0.00	1.00	0.00
8.20	12.96	2.00	0.00	1.00	0.00	8.40	8.59	2.00	0.00	1.00	0.00
8.60	6.39	2.00	0.00	1.00	0.00	8.80	8.45	2.00	0.00	1.00	0.00
9.00	10.47	2.00	0.00	1.00	0.00	9.20	10.38	2.00	0.00	1.00	0.00
9.40	8.24	2.00	0.00	1.00	0.00	9.60	8.17	2.00	0.00	1.00	0.00
9.80	8.10	2.00	0.00	1.00	0.00	10.00	16.05	2.00	0.00	1.00	0.00
10.20	9.96	2.00	0.00	1.00	0.00	10.40	9.87	2.00	0.00	1.00	0.00
10.60	9.79	2.00	0.00	1.00	0.00	10.80	11.65	2.00	0.00	1.00	0.00
11.00	15.42	2.00	0.00	1.00	0.00	11.20	11.46	2.00	0.00	1.00	0.00
11.40	9.47	2.00	0.00	1.00	0.00	11.60	11.28	2.00	0.00	1.00	0.00
11.80	14.93	2.00	0.00	1.00	0.00	12.00	16.67	2.00	0.00	1.00	0.00
12.20	14.69	2.00	0.00	1.00	0.00	12.40	12.74	2.00	0.00	1.00	0.00
12.60	9.01	2.00	0.00	1.00	0.00	12.80	8.95	2.00	0.00	1.00	0.00
13.00	12.47	2.00	0.00	1.00	0.00	13.20	10.60	2.00	0.00	1.00	0.00
13.40	8.76	2.00	0.00	1.00	0.00	13.60	17.53	2.00	0.00	1.00	0.00
13.80	8.64	2.00	0.00	1.00	0.00	14.00	10.31	2.00	0.00	1.00	0.00
14.20	8.52	2.00	0.00	1.00	0.00	14.40	10.17	2.00	0.00	1.00	0.00
14.60	11.81	2.00	0.00	1.00	0.00	14.80	10.03	2.00	0.00	1.00	0.00
15.00	9.97	2.00	0.00	1.00	0.00						

Total estimated settlement: 1.84

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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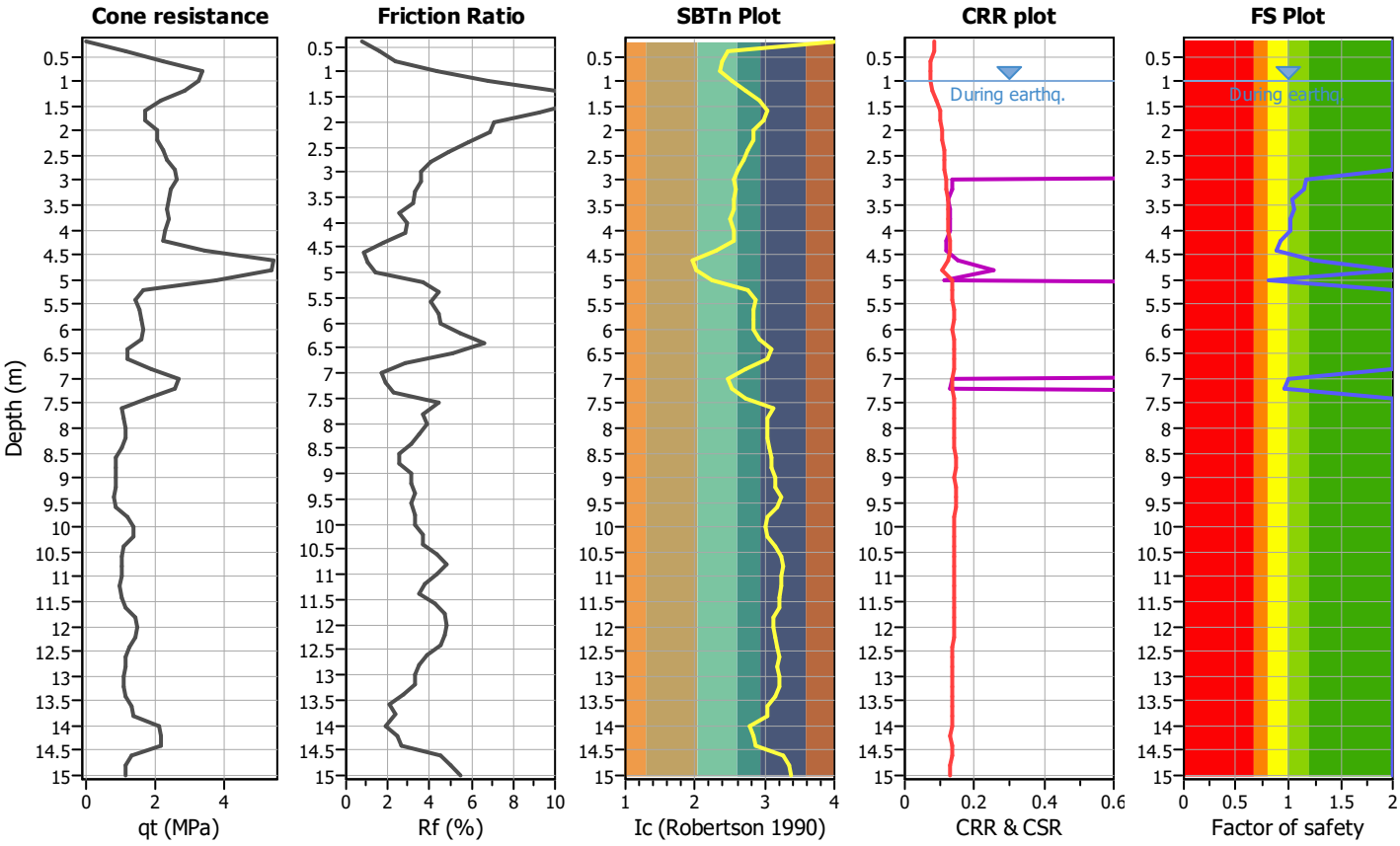
LIQUEFACTION ANALYSIS REPORT

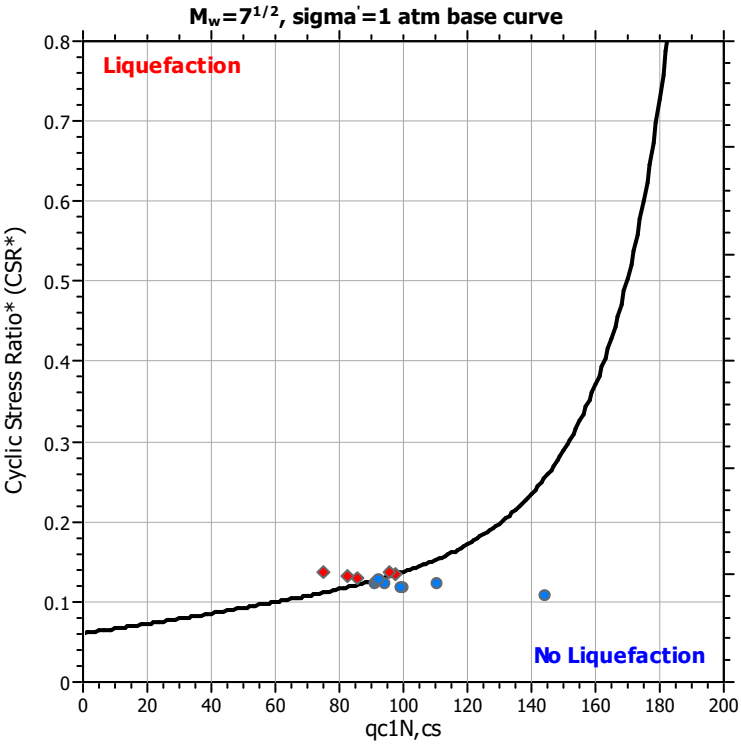
Project title : **Location :**

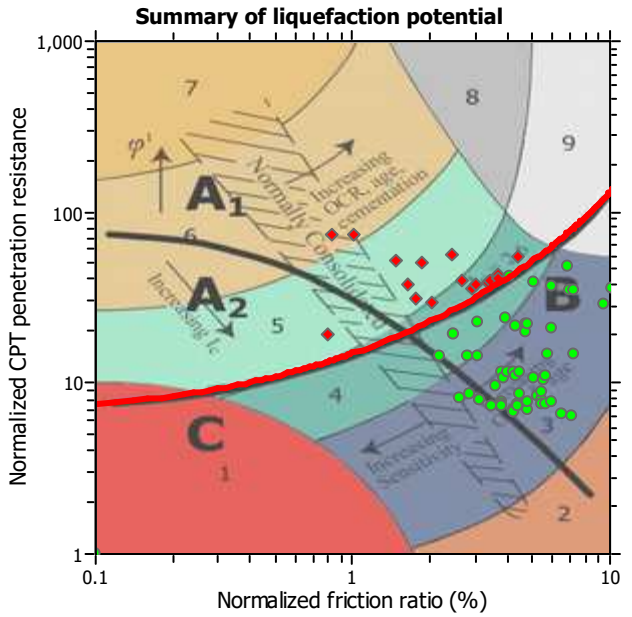
CPT file : CPT217

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

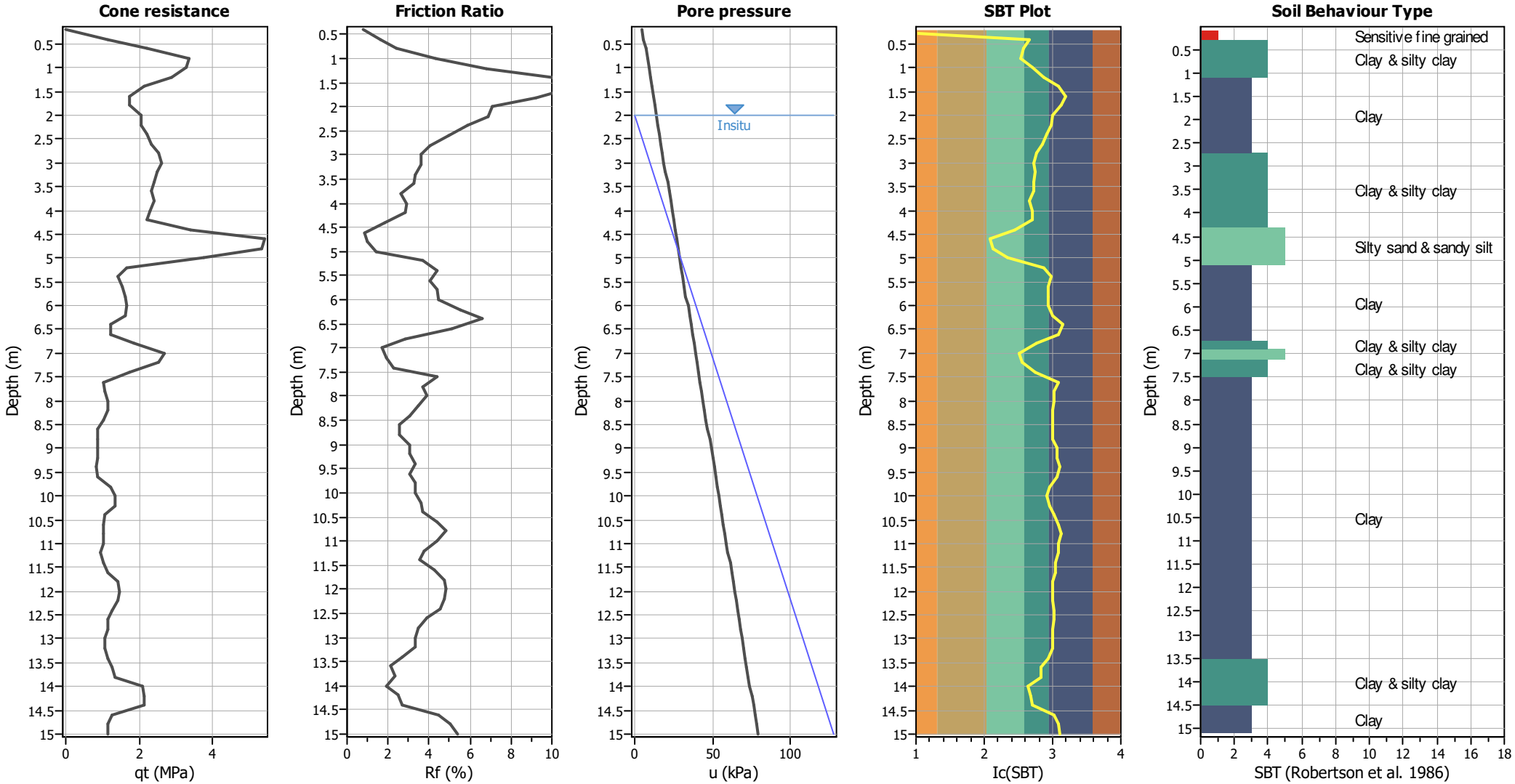






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



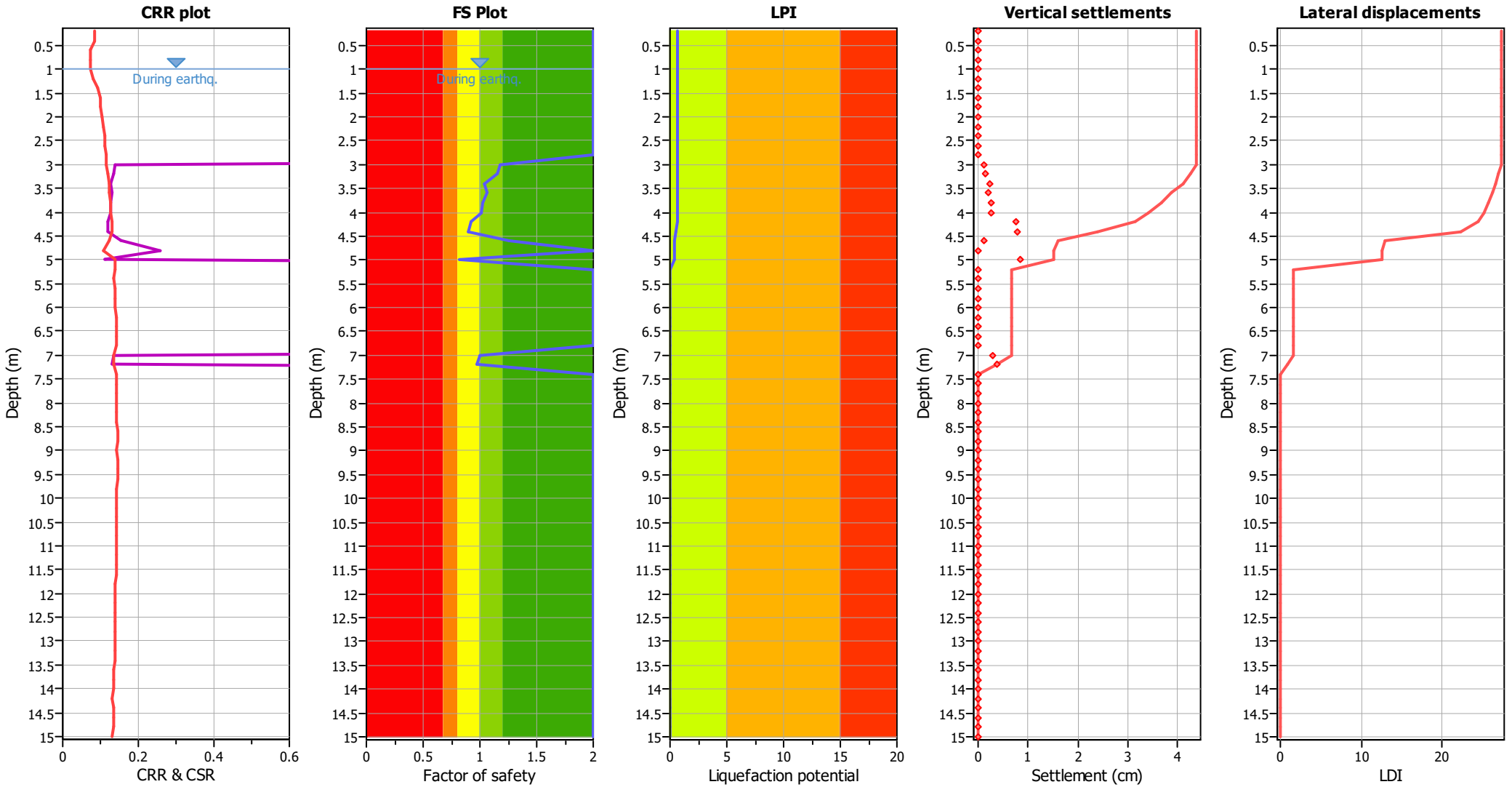
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	1.18	0.00	8.50	0.20	0.00	3.20	1.15	0.00	8.40	0.20	0.00
3.40	1.04	0.00	8.30	0.20	0.00	3.60	1.06	0.00	8.20	0.20	0.00
3.80	1.02	0.00	8.10	0.20	0.00	4.00	1.02	0.00	8.00	0.20	0.00
4.20	0.93	0.07	7.90	0.20	0.11	4.40	0.90	0.10	7.80	0.20	0.16
4.60	1.25	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	0.82	0.18	7.50	0.20	0.28	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	1.00	0.00	6.50	0.20	0.01	7.20	0.97	0.03	6.40	0.20	0.04
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00						

Overall liquefaction potential: 0.60

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	123.39	2.00	0.00	1.00	0.00	1.20	53.69	2.00	0.00	1.00	0.00
1.40	33.56	2.00	0.00	1.00	0.00	1.60	20.13	2.00	0.00	1.00	0.00
1.80	33.56	2.00	0.00	1.00	0.00	2.00	33.29	2.00	0.00	1.00	0.00
2.20	35.47	2.00	0.00	1.00	0.00	2.40	31.86	2.00	0.00	1.00	0.00
2.60	36.94	2.00	0.00	1.00	0.00	2.80	39.07	2.00	0.00	1.00	0.00
3.00	99.75	1.18	0.62	1.00	0.12	3.20	99.19	1.15	0.68	1.00	0.14
3.40	91.30	1.04	1.15	1.00	0.23	3.60	94.07	1.06	1.03	1.00	0.21
3.80	92.17	1.02	1.29	1.00	0.26	4.00	92.49	1.02	1.36	1.00	0.27
4.20	85.35	0.93	3.76	1.00	0.75	4.40	82.58	0.90	3.89	1.00	0.78
4.60	110.90	1.25	0.52	1.00	0.10	4.80	144.65	2.00	0.00	1.00	0.00
5.00	75.25	0.82	4.25	1.00	0.85	5.20	15.44	2.00	0.00	1.00	0.00
5.40	22.55	2.00	0.00	1.00	0.00	5.60	15.01	2.00	0.00	1.00	0.00
5.80	19.61	2.00	0.00	1.00	0.00	6.00	24.05	2.00	0.00	1.00	0.00
6.20	16.76	2.00	0.00	1.00	0.00	6.40	16.54	2.00	0.00	1.00	0.00
6.60	9.42	2.00	0.00	1.00	0.00	6.80	16.19	2.00	0.00	1.00	0.00
7.00	97.60	1.00	1.48	1.00	0.30	7.20	95.54	0.97	1.83	1.00	0.37
7.40	11.22	2.00	0.00	1.00	0.00	7.60	11.09	2.00	0.00	1.00	0.00
7.80	10.98	2.00	0.00	1.00	0.00	8.00	13.02	2.00	0.00	1.00	0.00
8.20	12.90	2.00	0.00	1.00	0.00	8.40	10.66	2.00	0.00	1.00	0.00
8.60	8.46	2.00	0.00	1.00	0.00	8.80	8.39	2.00	0.00	1.00	0.00
9.00	10.39	2.00	0.00	1.00	0.00	9.20	8.24	2.00	0.00	1.00	0.00
9.40	8.17	2.00	0.00	1.00	0.00	9.60	8.11	2.00	0.00	1.00	0.00
9.80	10.04	2.00	0.00	1.00	0.00	10.00	17.90	2.00	0.00	1.00	0.00
10.20	11.83	2.00	0.00	1.00	0.00	10.40	9.78	2.00	0.00	1.00	0.00
10.60	9.69	2.00	0.00	1.00	0.00	10.80	9.61	2.00	0.00	1.00	0.00
11.00	9.53	2.00	0.00	1.00	0.00	11.20	9.46	2.00	0.00	1.00	0.00
11.40	7.50	2.00	0.00	1.00	0.00	11.60	11.18	2.00	0.00	1.00	0.00
11.80	12.94	2.00	0.00	1.00	0.00	12.00	14.68	2.00	0.00	1.00	0.00
12.20	12.73	2.00	0.00	1.00	0.00	12.40	10.82	2.00	0.00	1.00	0.00
12.60	10.74	2.00	0.00	1.00	0.00	12.80	8.87	2.00	0.00	1.00	0.00
13.00	10.59	2.00	0.00	1.00	0.00	13.20	8.75	2.00	0.00	1.00	0.00
13.40	8.69	2.00	0.00	1.00	0.00	13.60	12.12	2.00	0.00	1.00	0.00
13.80	12.04	2.00	0.00	1.00	0.00	14.00	10.22	2.00	0.00	1.00	0.00
14.20	31.04	2.00	0.00	1.00	0.00	14.40	13.49	2.00	0.00	1.00	0.00
14.60	10.02	2.00	0.00	1.00	0.00	14.80	8.27	2.00	0.00	1.00	0.00
15.00	9.88	2.00	0.00	1.00	0.00						

Total estimated settlement: 4.37

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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http://www.geologismiki.gr

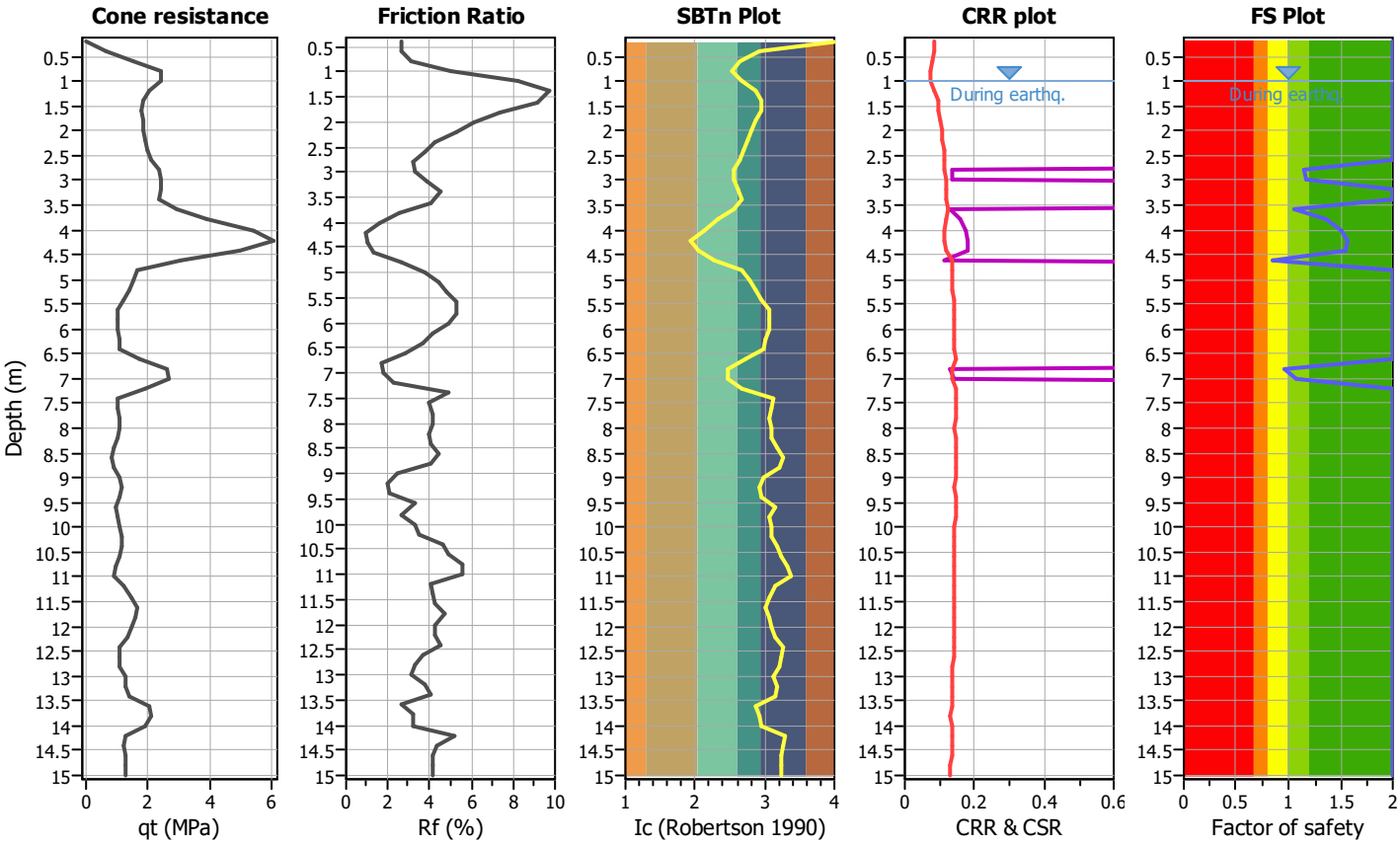
LIQUEFACTION ANALYSIS REPORT

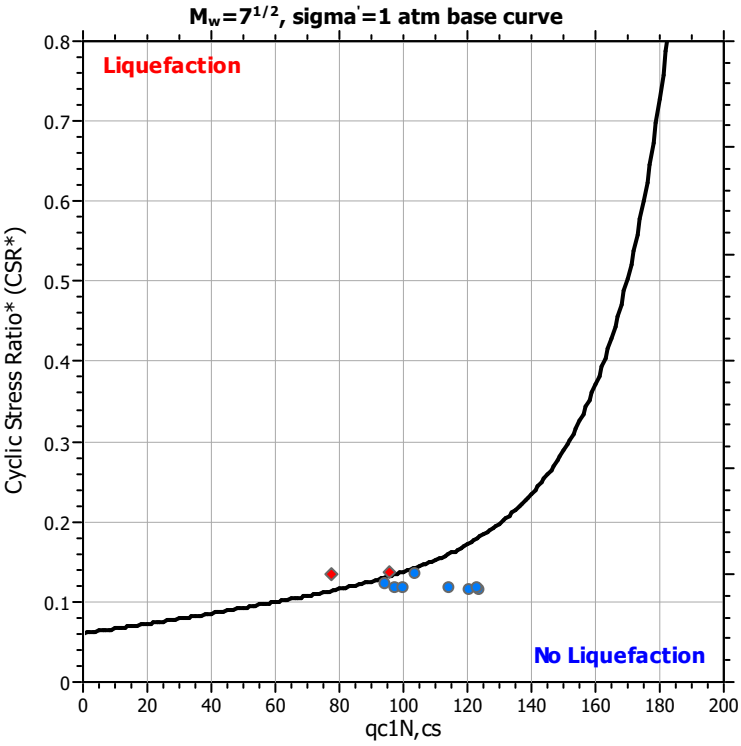
Project title : **Location :**

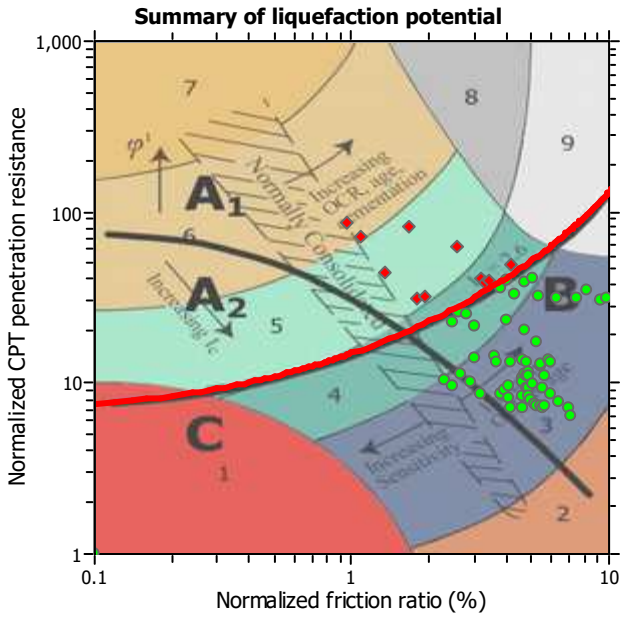
CPT file : CPT218

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

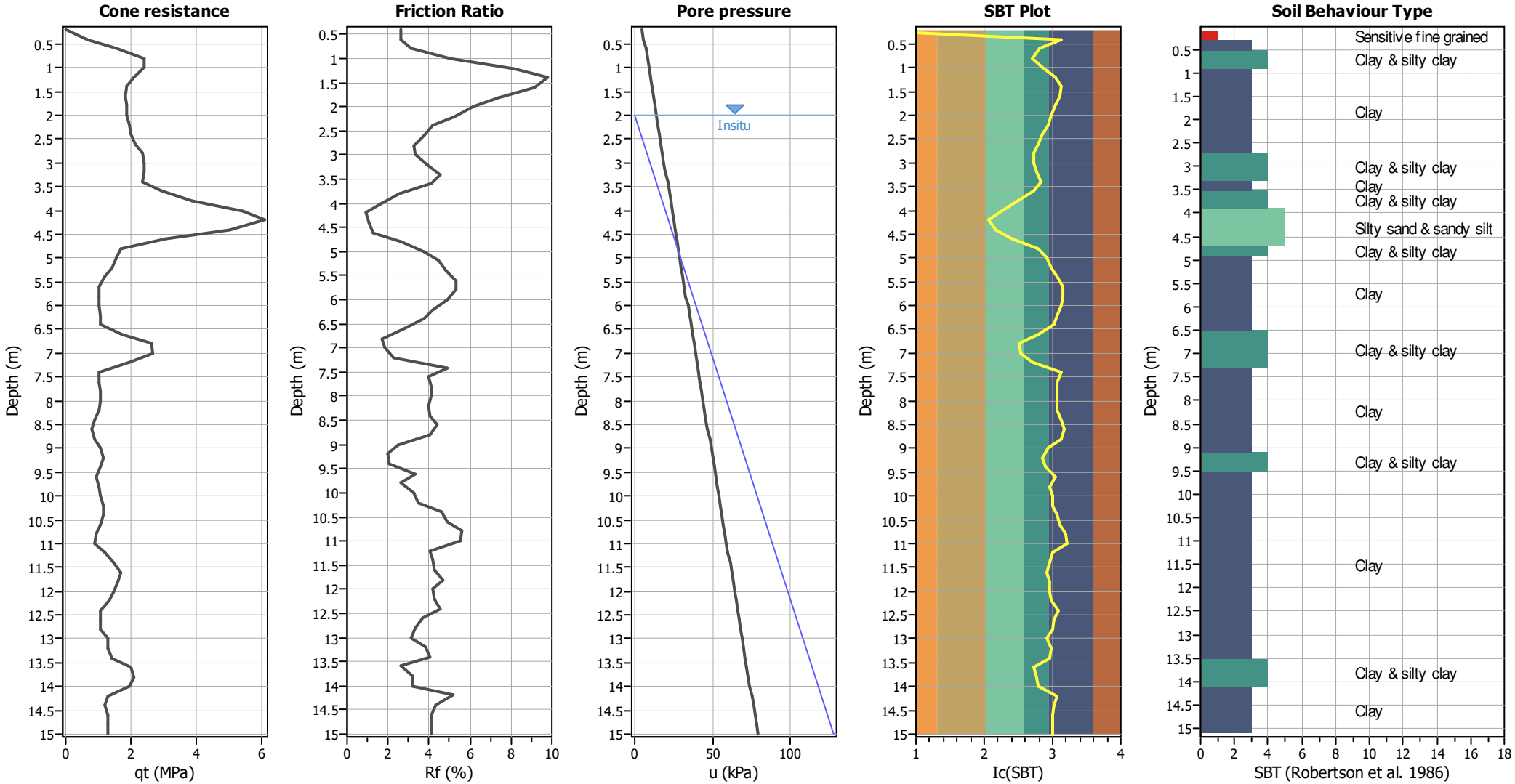






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



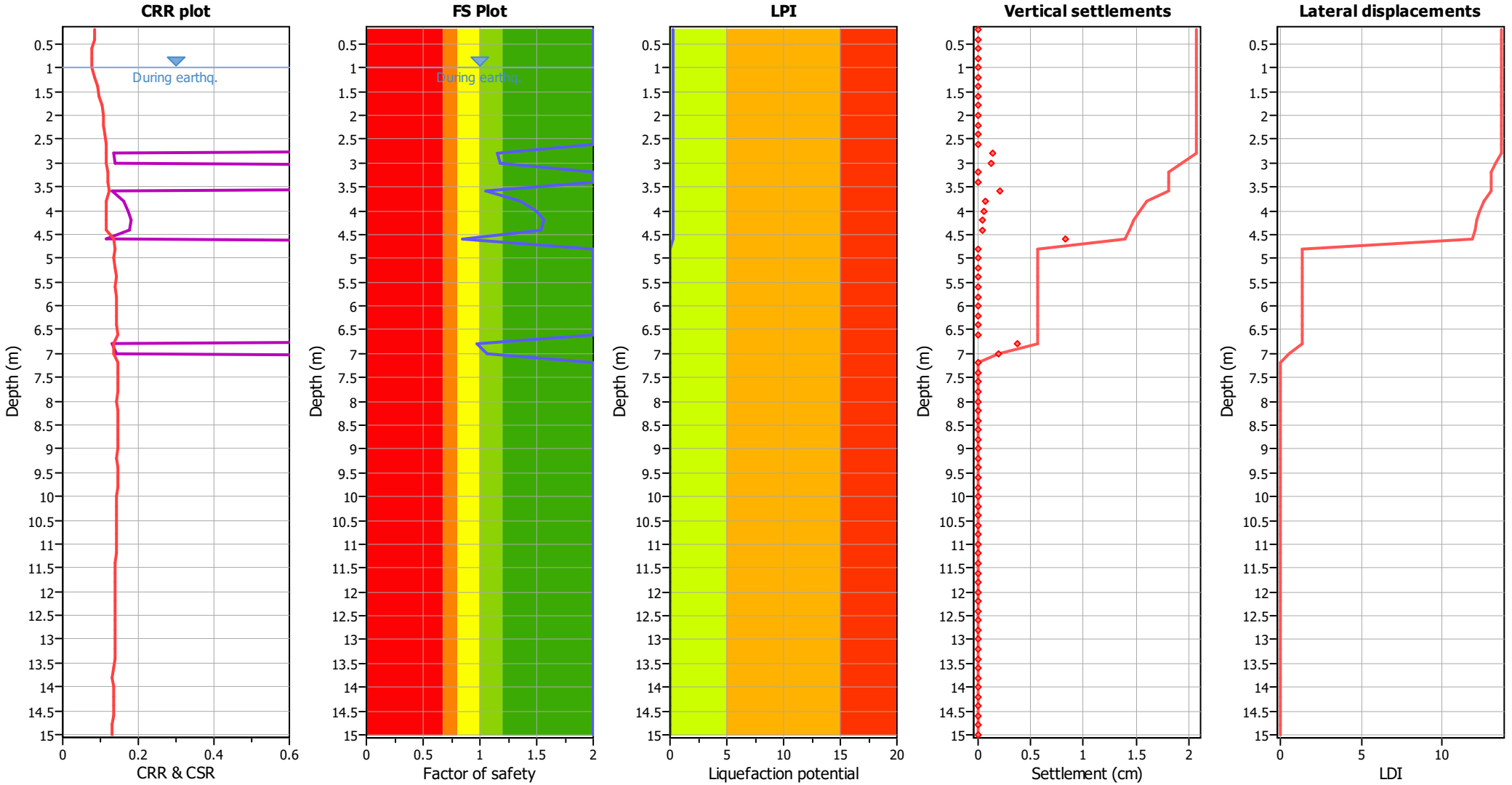
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	1.16	0.00	8.60	0.20	0.00
3.00	1.18	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	1.06	0.00	8.20	0.20	0.00
3.80	1.36	0.00	8.10	0.20	0.00	4.00	1.50	0.00	8.00	0.20	0.00
4.20	1.57	0.00	7.90	0.20	0.00	4.40	1.54	0.00	7.80	0.20	0.00
4.60	0.84	0.16	7.70	0.20	0.24	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	0.97	0.03	6.60	0.20	0.04
7.00	1.07	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00						

Overall liquefaction potential: 0.28

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	43.62	2.00	0.00	1.00	0.00	1.20	33.56	2.00	0.00	1.00	0.00
1.40	26.84	2.00	0.00	1.00	0.00	1.60	33.56	2.00	0.00	1.00	0.00
1.80	30.20	2.00	0.00	1.00	0.00	2.00	30.20	2.00	0.00	1.00	0.00
2.20	32.68	2.00	0.00	1.00	0.00	2.40	32.07	2.00	0.00	1.00	0.00
2.60	31.48	2.00	0.00	1.00	0.00	2.80	97.46	1.16	0.66	1.00	0.13
3.00	100.12	1.18	0.63	1.00	0.13	3.20	32.51	2.00	0.00	1.00	0.00
3.40	34.59	2.00	0.00	1.00	0.00	3.60	94.18	1.06	1.04	1.00	0.21
3.80	114.36	1.36	0.37	1.00	0.07	4.00	120.92	1.50	0.26	1.00	0.05
4.20	123.78	1.57	0.21	1.00	0.04	4.40	123.18	1.54	0.23	1.00	0.05
4.60	77.40	0.84	4.14	1.00	0.83	4.80	15.96	2.00	0.00	1.00	0.00
5.00	23.25	2.00	0.00	1.00	0.00	5.20	20.45	2.00	0.00	1.00	0.00
5.40	10.25	2.00	0.00	1.00	0.00	5.60	15.05	2.00	0.00	1.00	0.00
5.80	12.43	2.00	0.00	1.00	0.00	6.00	9.85	2.00	0.00	1.00	0.00
6.20	14.50	2.00	0.00	1.00	0.00	6.40	14.33	2.00	0.00	1.00	0.00
6.60	9.51	2.00	0.00	1.00	0.00	6.80	95.66	0.97	1.84	1.00	0.37
7.00	103.95	1.07	0.97	1.00	0.19	7.20	11.44	2.00	0.00	1.00	0.00
7.40	11.30	2.00	0.00	1.00	0.00	7.60	11.18	2.00	0.00	1.00	0.00
7.80	11.06	2.00	0.00	1.00	0.00	8.00	13.12	2.00	0.00	1.00	0.00
8.20	10.84	2.00	0.00	1.00	0.00	8.40	8.60	2.00	0.00	1.00	0.00
8.60	8.52	2.00	0.00	1.00	0.00	8.80	8.44	2.00	0.00	1.00	0.00
9.00	10.44	2.00	0.00	1.00	0.00	9.20	14.48	2.00	0.00	1.00	0.00
9.40	10.27	2.00	0.00	1.00	0.00	9.60	8.15	2.00	0.00	1.00	0.00
9.80	10.10	2.00	0.00	1.00	0.00	10.00	12.01	2.00	0.00	1.00	0.00
10.20	9.92	2.00	0.00	1.00	0.00	10.40	11.80	2.00	0.00	1.00	0.00
10.60	11.70	2.00	0.00	1.00	0.00	10.80	7.73	2.00	0.00	1.00	0.00
11.00	7.66	2.00	0.00	1.00	0.00	11.20	9.50	2.00	0.00	1.00	0.00
11.40	16.99	2.00	0.00	1.00	0.00	11.60	14.97	2.00	0.00	1.00	0.00
11.80	14.84	2.00	0.00	1.00	0.00	12.00	14.73	2.00	0.00	1.00	0.00
12.20	10.94	2.00	0.00	1.00	0.00	12.40	10.85	2.00	0.00	1.00	0.00
12.60	7.17	2.00	0.00	1.00	0.00	12.80	10.70	2.00	0.00	1.00	0.00
13.00	10.62	2.00	0.00	1.00	0.00	13.20	12.32	2.00	0.00	1.00	0.00
13.40	10.46	2.00	0.00	1.00	0.00	13.60	13.89	2.00	0.00	1.00	0.00
13.80	27.89	2.00	0.00	1.00	0.00	14.00	11.96	2.00	0.00	1.00	0.00
14.20	10.16	2.00	0.00	1.00	0.00	14.40	10.09	2.00	0.00	1.00	0.00
14.60	10.02	2.00	0.00	1.00	0.00	14.80	11.63	2.00	0.00	1.00	0.00
15.00	9.88	2.00	0.00	1.00	0.00						

Total estimated settlement: 2.07

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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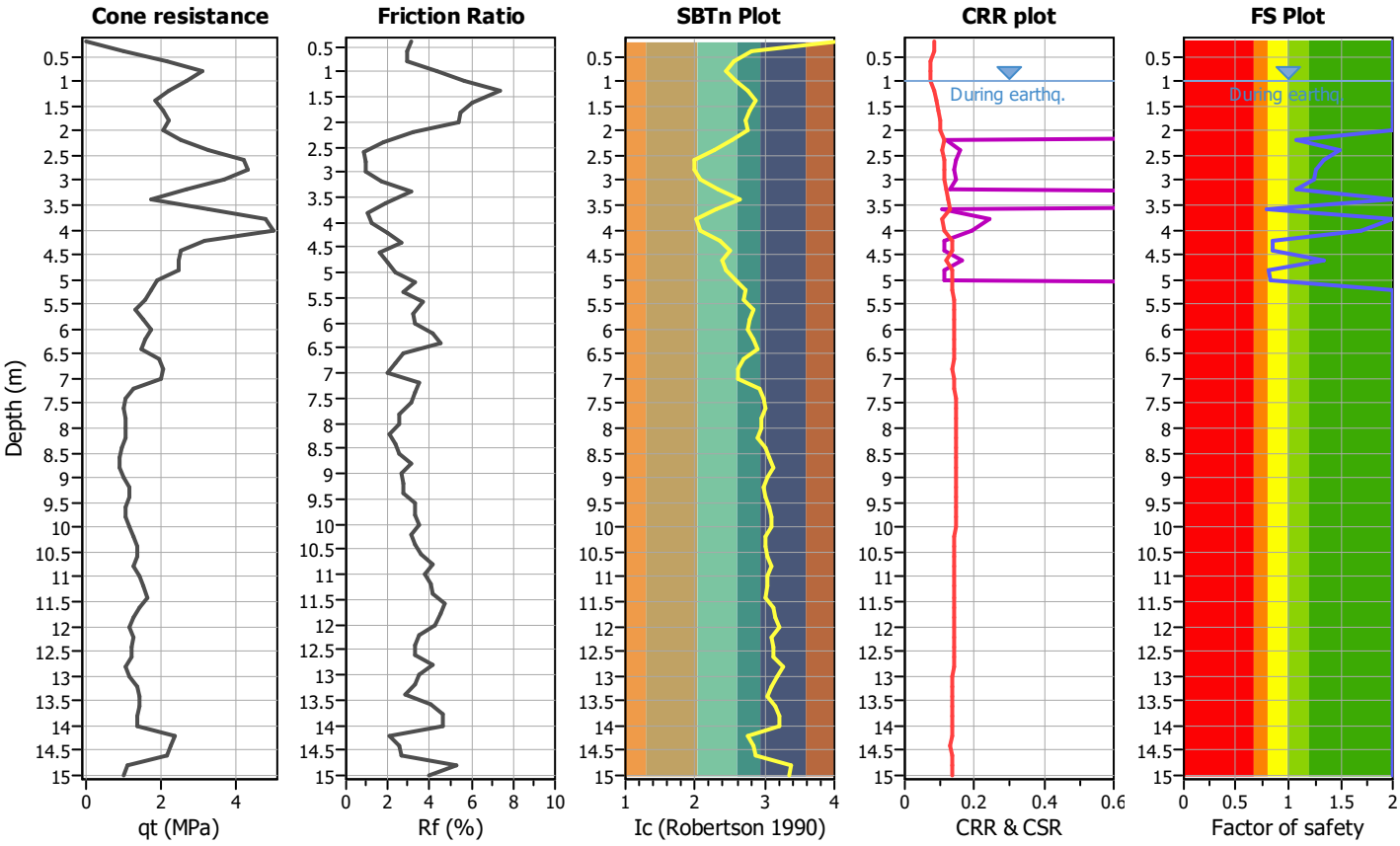
LIQUEFACTION ANALYSIS REPORT

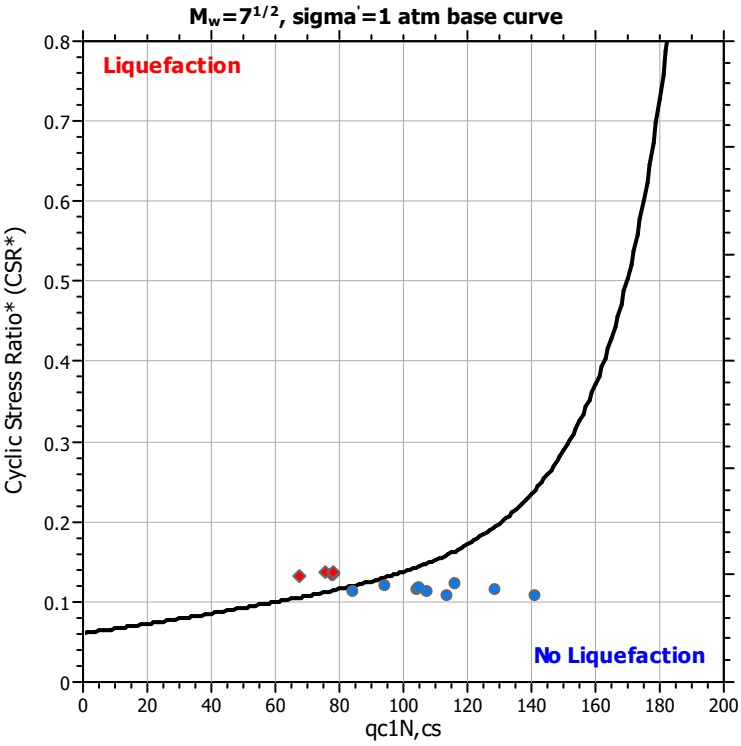
Project title : **Location :**

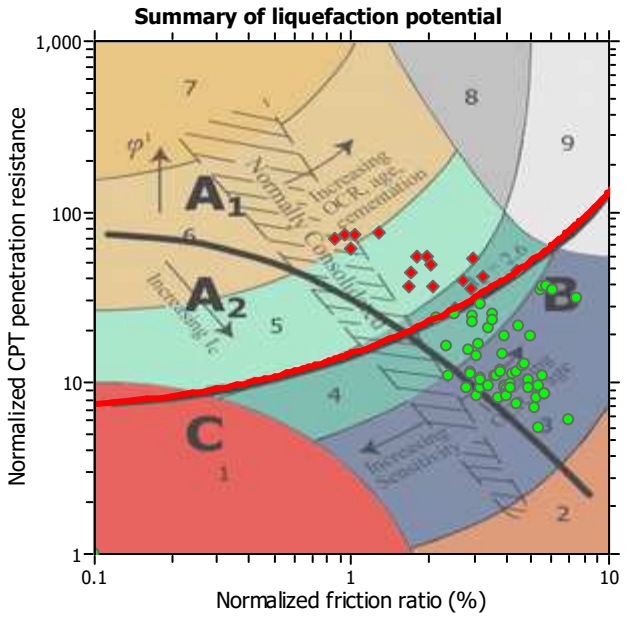
CPT file : CPT219

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

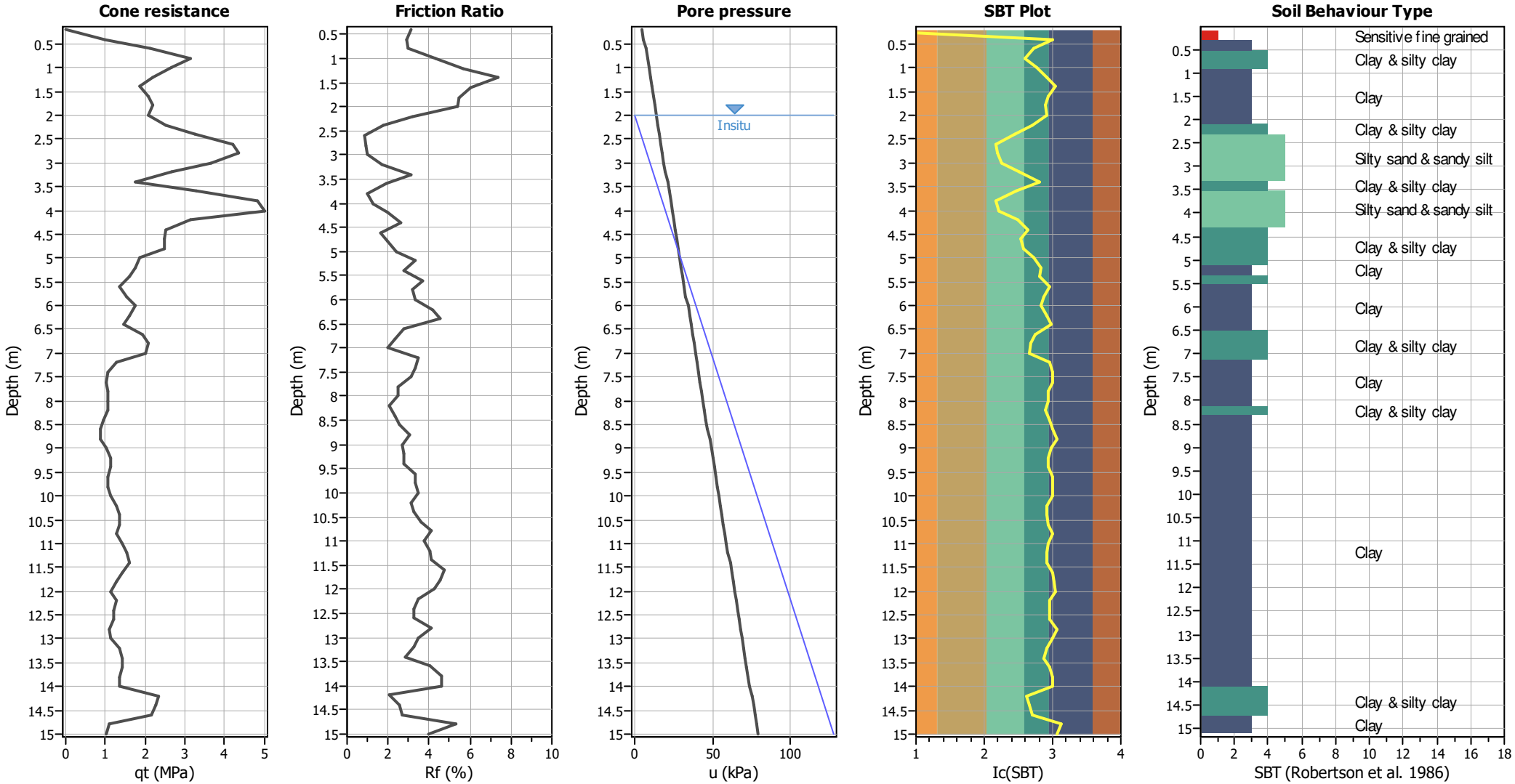






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



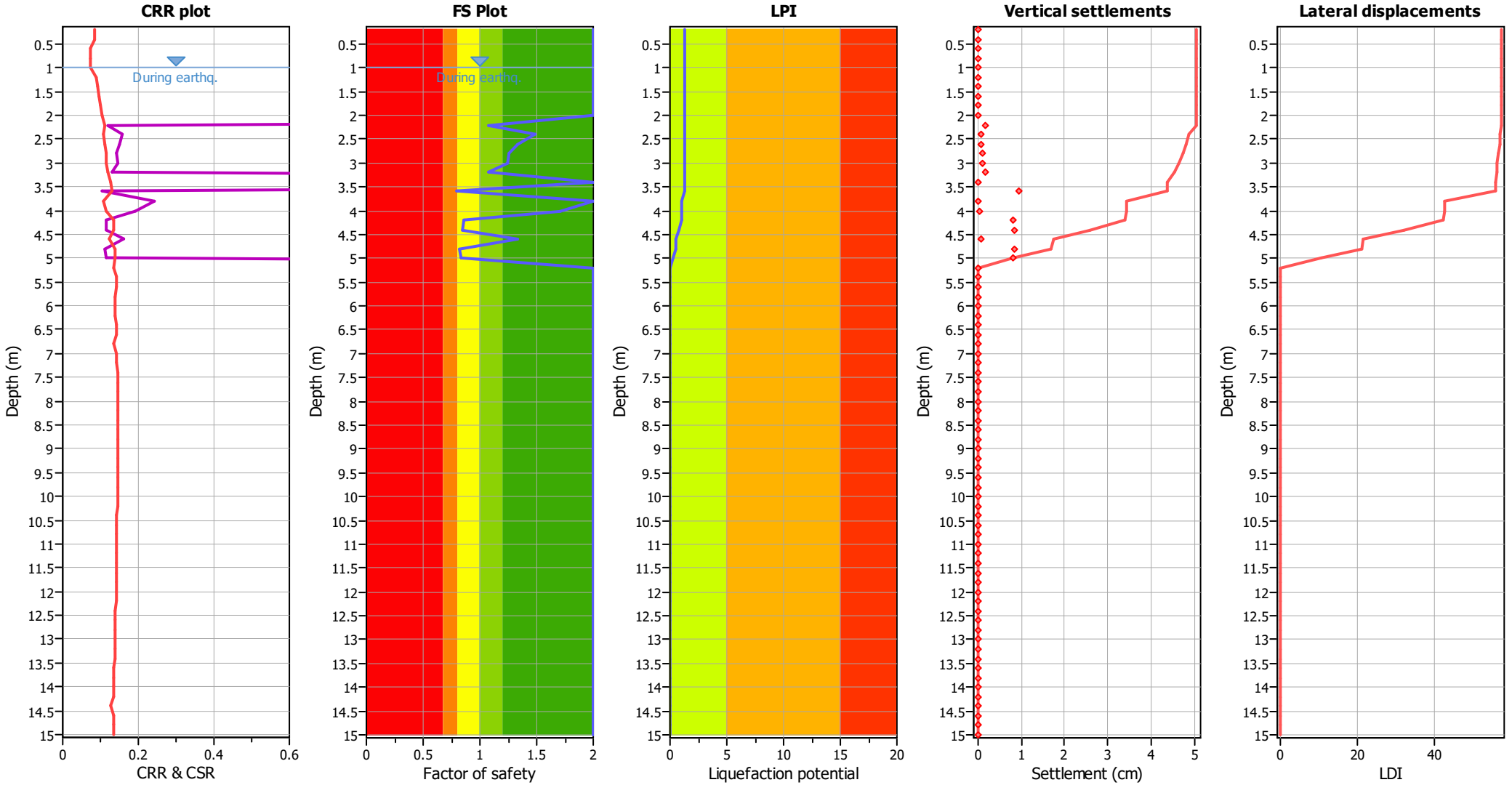
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	1.08	0.00	8.90	0.20	0.00	2.40	1.49	0.00	8.80	0.20	0.00
2.60	1.34	0.00	8.70	0.20	0.00	2.80	1.26	0.00	8.60	0.20	0.00
3.00	1.25	0.00	8.50	0.20	0.00	3.20	1.08	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	0.80	0.20	8.20	0.20	0.33
3.80	2.00	0.00	8.10	0.20	0.00	4.00	1.70	0.00	8.00	0.20	0.00
4.20	0.86	0.14	7.90	0.20	0.23	4.40	0.84	0.16	7.80	0.20	0.24
4.60	1.34	0.00	7.70	0.20	0.00	4.80	0.82	0.18	7.60	0.20	0.28
5.00	0.83	0.17	7.50	0.20	0.26	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00						

Overall liquefaction potential: 1.34

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	115.79	2.00	0.00	1.00	0.00	1.20	26.84	2.00	0.00	1.00	0.00
1.40	33.56	2.00	0.00	1.00	0.00	1.60	33.56	2.00	0.00	1.00	0.00
1.80	36.91	2.00	0.00	1.00	0.00	2.00	39.33	2.00	0.00	1.00	0.00
2.20	84.20	1.08	0.88	1.00	0.18	2.40	113.60	1.49	0.26	1.00	0.05
2.60	107.65	1.34	0.39	1.00	0.08	2.80	104.68	1.26	0.48	1.00	0.10
3.00	105.13	1.25	0.51	1.00	0.10	3.20	94.51	1.08	0.91	1.00	0.18
3.40	21.00	2.00	0.00	1.00	0.00	3.60	67.63	0.80	4.70	1.00	0.94
3.80	141.51	2.00	0.00	1.00	0.00	4.00	128.52	1.70	0.13	1.00	0.03
4.20	78.00	0.86	4.11	1.00	0.82	4.40	77.48	0.84	4.13	1.00	0.83
4.60	115.94	1.34	0.41	1.00	0.08	4.80	75.73	0.82	4.22	1.00	0.84
5.00	77.85	0.83	4.11	1.00	0.82	5.20	30.53	2.00	0.00	1.00	0.00
5.40	15.43	2.00	0.00	1.00	0.00	5.60	15.20	2.00	0.00	1.00	0.00
5.80	19.88	2.00	0.00	1.00	0.00	6.00	22.01	2.00	0.00	1.00	0.00
6.20	21.72	2.00	0.00	1.00	0.00	6.40	14.42	2.00	0.00	1.00	0.00
6.60	16.60	2.00	0.00	1.00	0.00	6.80	36.78	2.00	0.00	1.00	0.00
7.00	18.51	2.00	0.00	1.00	0.00	7.20	13.76	2.00	0.00	1.00	0.00
7.40	11.37	2.00	0.00	1.00	0.00	7.60	11.25	2.00	0.00	1.00	0.00
7.80	11.14	2.00	0.00	1.00	0.00	8.00	13.22	2.00	0.00	1.00	0.00
8.20	10.94	2.00	0.00	1.00	0.00	8.40	10.84	2.00	0.00	1.00	0.00
8.60	8.60	2.00	0.00	1.00	0.00	8.80	8.52	2.00	0.00	1.00	0.00
9.00	10.55	2.00	0.00	1.00	0.00	9.20	12.53	2.00	0.00	1.00	0.00
9.40	12.42	2.00	0.00	1.00	0.00	9.60	10.27	2.00	0.00	1.00	0.00
9.80	10.18	2.00	0.00	1.00	0.00	10.00	12.10	2.00	0.00	1.00	0.00
10.20	11.99	2.00	0.00	1.00	0.00	10.40	13.87	2.00	0.00	1.00	0.00
10.60	13.75	2.00	0.00	1.00	0.00	10.80	11.68	2.00	0.00	1.00	0.00
11.00	11.58	2.00	0.00	1.00	0.00	11.20	17.24	2.00	0.00	1.00	0.00
11.40	15.18	2.00	0.00	1.00	0.00	11.60	13.17	2.00	0.00	1.00	0.00
11.80	11.19	2.00	0.00	1.00	0.00	12.00	11.10	2.00	0.00	1.00	0.00
12.20	9.17	2.00	0.00	1.00	0.00	12.40	14.60	2.00	0.00	1.00	0.00
12.60	9.03	2.00	0.00	1.00	0.00	12.80	8.96	2.00	0.00	1.00	0.00
13.00	10.69	2.00	0.00	1.00	0.00	13.20	10.61	2.00	0.00	1.00	0.00
13.40	14.09	2.00	0.00	1.00	0.00	13.60	12.22	2.00	0.00	1.00	0.00
13.80	10.38	2.00	0.00	1.00	0.00	14.00	12.04	2.00	0.00	1.00	0.00
14.20	11.94	2.00	0.00	1.00	0.00	14.40	36.34	2.00	0.00	1.00	0.00
14.60	10.08	2.00	0.00	1.00	0.00	14.80	8.33	2.00	0.00	1.00	0.00
15.00	8.27	2.00	0.00	1.00	0.00						

Total estimated settlement: 5.05

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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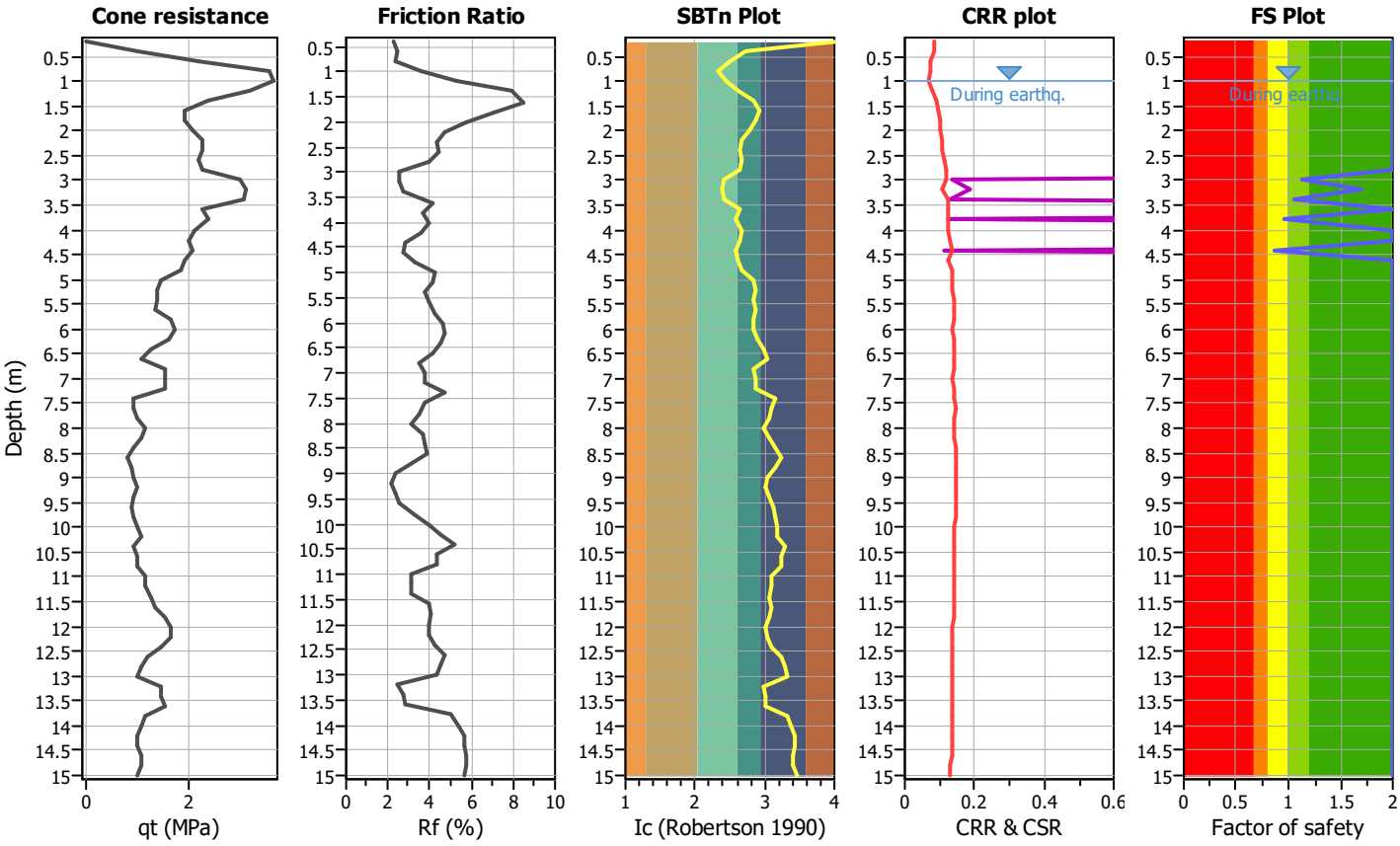
LIQUEFACTION ANALYSIS REPORT

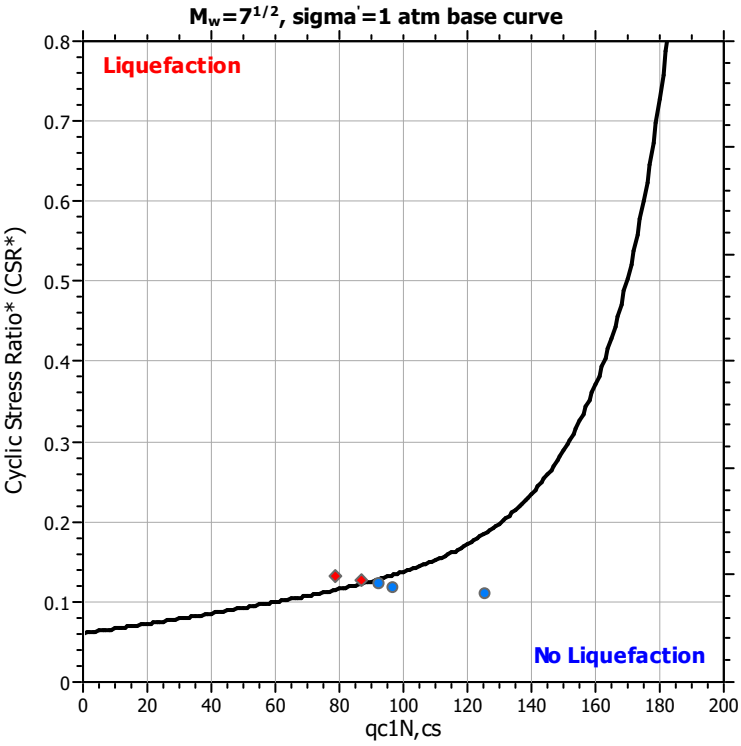
Project title : **Location :**

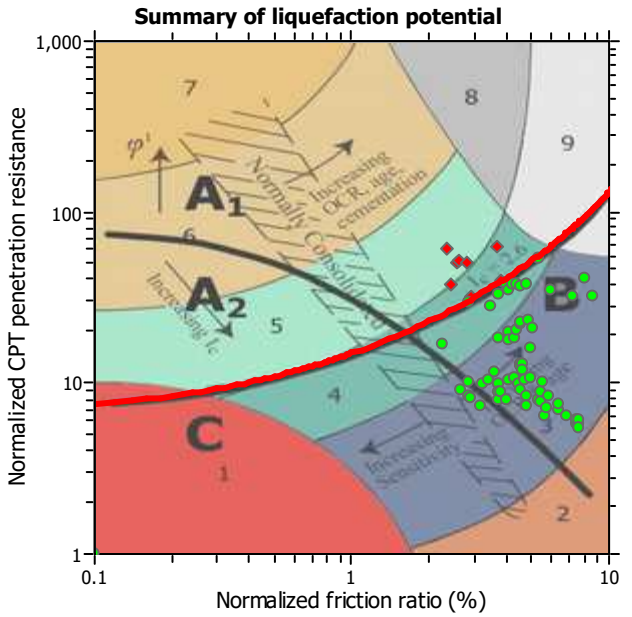
CPT file : CPT220

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

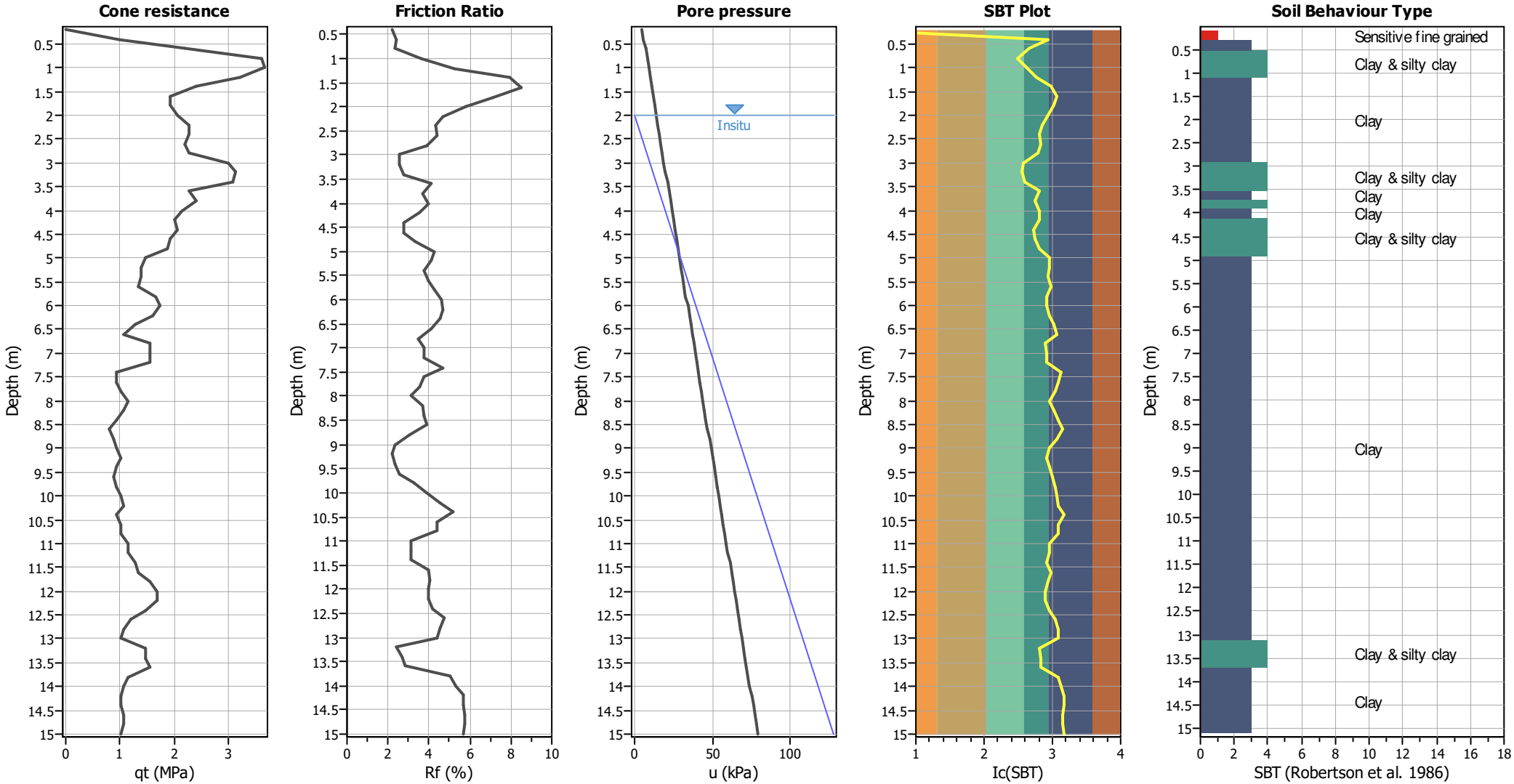






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



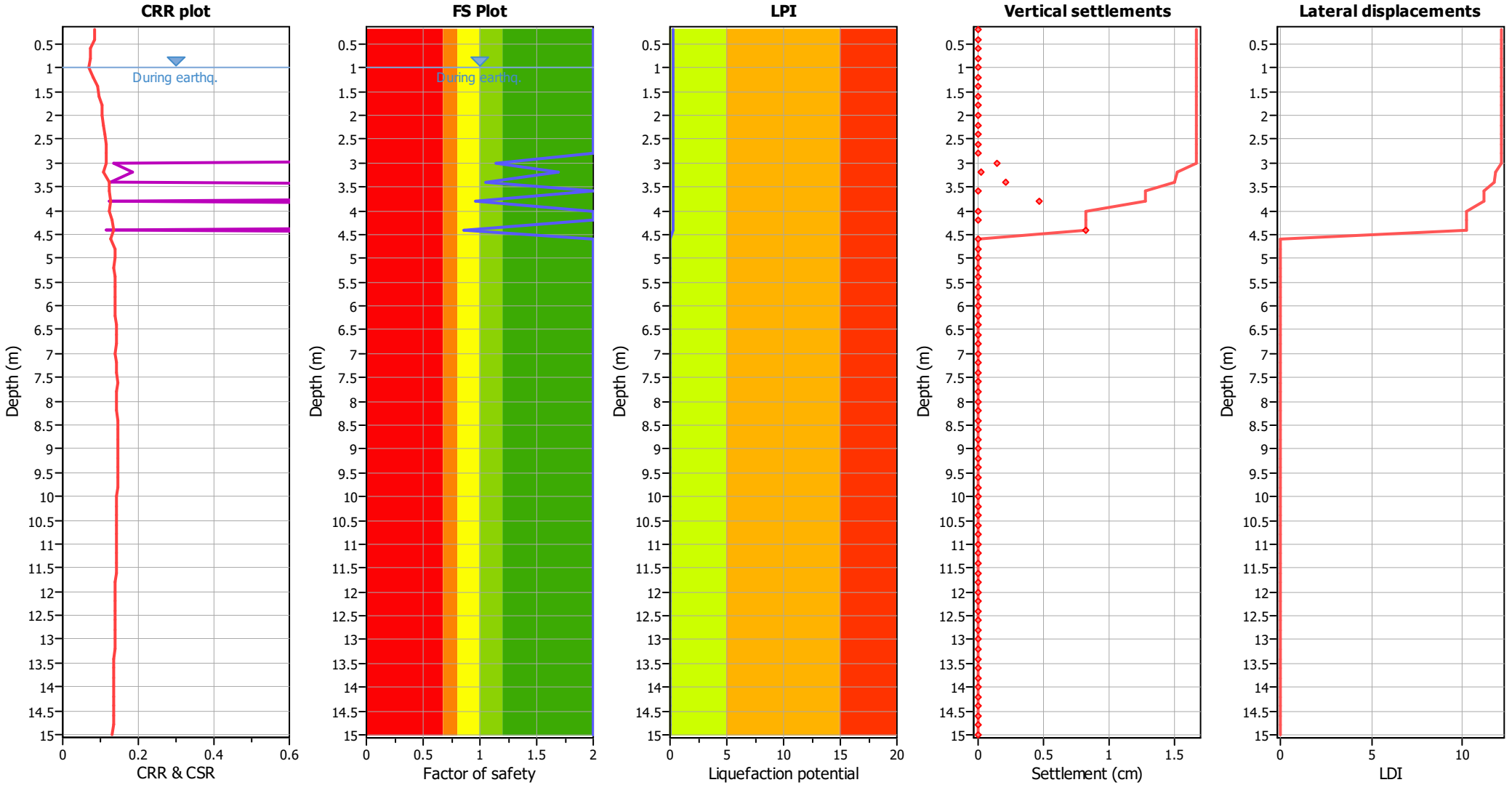
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	1.14	0.00	8.50	0.20	0.00	3.20	1.69	0.00	8.40	0.20	0.00
3.40	1.05	0.00	8.30	0.20	0.00	3.60	2.00	0.00	8.20	0.20	0.00
3.80	0.97	0.03	8.10	0.20	0.05	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	0.86	0.14	7.80	0.20	0.22
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00						

Overall liquefaction potential: 0.27

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	138.53	2.00	0.00	1.00	0.00	1.20	53.69	2.00	0.00	1.00	0.00
1.40	36.91	2.00	0.00	1.00	0.00	1.60	30.20	2.00	0.00	1.00	0.00
1.80	30.20	2.00	0.00	1.00	0.00	2.00	36.23	2.00	0.00	1.00	0.00
2.20	35.55	2.00	0.00	1.00	0.00	2.40	37.70	2.00	0.00	1.00	0.00
2.60	34.15	2.00	0.00	1.00	0.00	2.80	30.70	2.00	0.00	1.00	0.00
3.00	96.89	1.14	0.71	1.00	0.14	3.20	125.52	1.69	0.14	1.00	0.03
3.40	92.24	1.05	1.07	1.00	0.21	3.60	33.88	2.00	0.00	1.00	0.00
3.80	87.04	0.97	2.31	1.00	0.46	4.00	37.89	2.00	0.00	1.00	0.00
4.20	21.98	2.00	0.00	1.00	0.00	4.40	78.56	0.86	4.08	1.00	0.82
4.60	38.85	2.00	0.00	1.00	0.00	4.80	15.91	2.00	0.00	1.00	0.00
5.00	18.18	2.00	0.00	1.00	0.00	5.20	22.86	2.00	0.00	1.00	0.00
5.40	12.74	2.00	0.00	1.00	0.00	5.60	17.46	2.00	0.00	1.00	0.00
5.80	19.63	2.00	0.00	1.00	0.00	6.00	24.07	2.00	0.00	1.00	0.00
6.20	19.12	2.00	0.00	1.00	0.00	6.40	14.24	2.00	0.00	1.00	0.00
6.60	11.77	2.00	0.00	1.00	0.00	6.80	11.63	2.00	0.00	1.00	0.00
7.00	29.41	2.00	0.00	1.00	0.00	7.20	11.36	2.00	0.00	1.00	0.00
7.40	11.24	2.00	0.00	1.00	0.00	7.60	8.91	2.00	0.00	1.00	0.00
7.80	11.01	2.00	0.00	1.00	0.00	8.00	13.06	2.00	0.00	1.00	0.00
8.20	12.94	2.00	0.00	1.00	0.00	8.40	8.56	2.00	0.00	1.00	0.00
8.60	8.48	2.00	0.00	1.00	0.00	8.80	8.41	2.00	0.00	1.00	0.00
9.00	10.41	2.00	0.00	1.00	0.00	9.20	10.32	2.00	0.00	1.00	0.00
9.40	10.24	2.00	0.00	1.00	0.00	9.60	8.13	2.00	0.00	1.00	0.00
9.80	8.06	2.00	0.00	1.00	0.00	10.00	11.98	2.00	0.00	1.00	0.00
10.20	9.89	2.00	0.00	1.00	0.00	10.40	9.81	2.00	0.00	1.00	0.00
10.60	7.78	2.00	0.00	1.00	0.00	10.80	11.58	2.00	0.00	1.00	0.00
11.00	9.57	2.00	0.00	1.00	0.00	11.20	11.39	2.00	0.00	1.00	0.00
11.40	11.30	2.00	0.00	1.00	0.00	11.60	13.09	2.00	0.00	1.00	0.00
11.80	12.98	2.00	0.00	1.00	0.00	12.00	16.58	2.00	0.00	1.00	0.00
12.20	16.45	2.00	0.00	1.00	0.00	12.40	12.67	2.00	0.00	1.00	0.00
12.60	10.76	2.00	0.00	1.00	0.00	12.80	8.89	2.00	0.00	1.00	0.00
13.00	8.83	2.00	0.00	1.00	0.00	13.20	8.76	2.00	0.00	1.00	0.00
13.40	21.08	2.00	0.00	1.00	0.00	13.60	8.64	2.00	0.00	1.00	0.00
13.80	10.31	2.00	0.00	1.00	0.00	14.00	10.23	2.00	0.00	1.00	0.00
14.20	6.75	2.00	0.00	1.00	0.00	14.40	8.39	2.00	0.00	1.00	0.00
14.60	10.02	2.00	0.00	1.00	0.00	14.80	8.28	2.00	0.00	1.00	0.00
15.00	8.22	2.00	0.00	1.00	0.00						

Total estimated settlement: 1.66

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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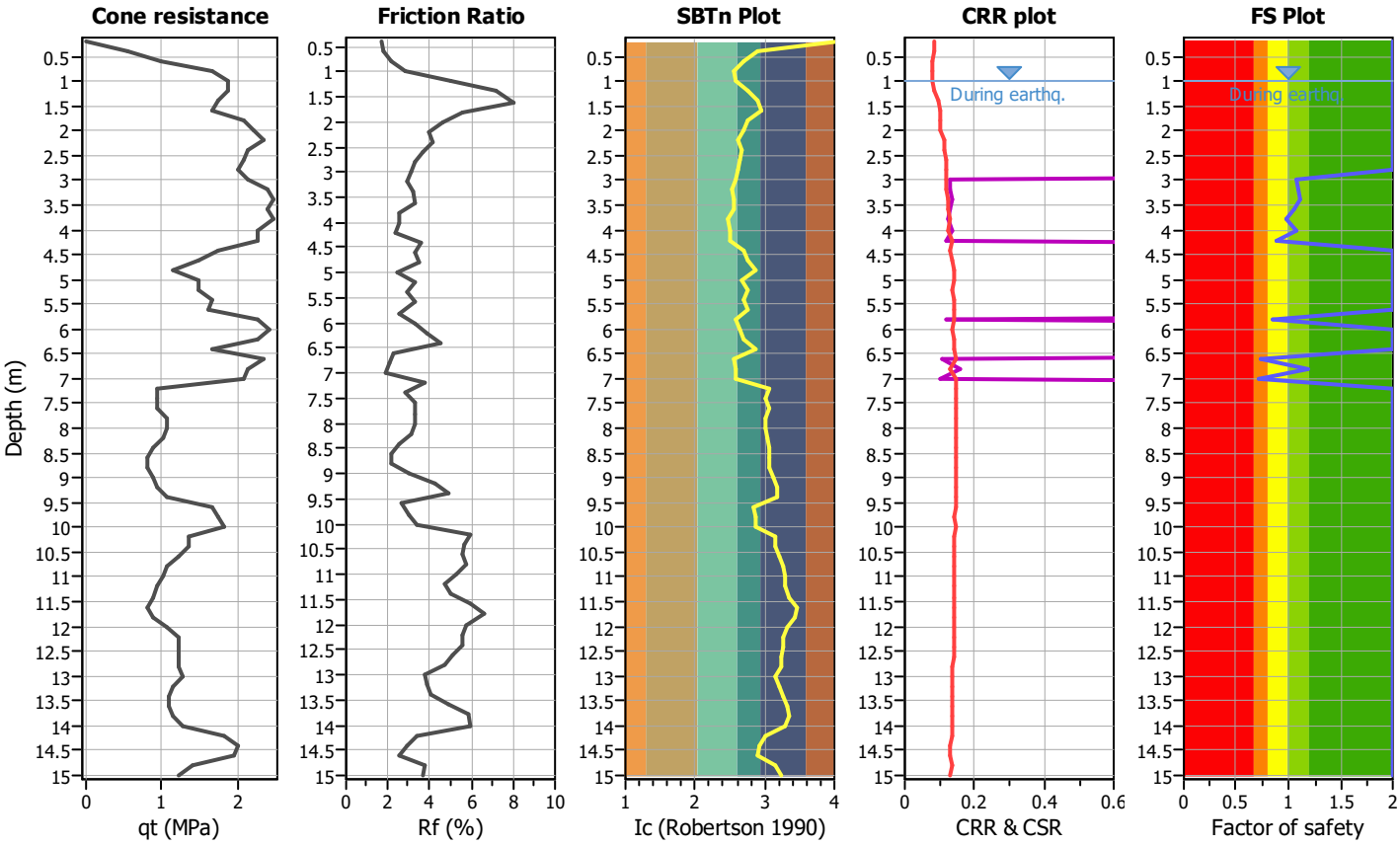
LIQUEFACTION ANALYSIS REPORT

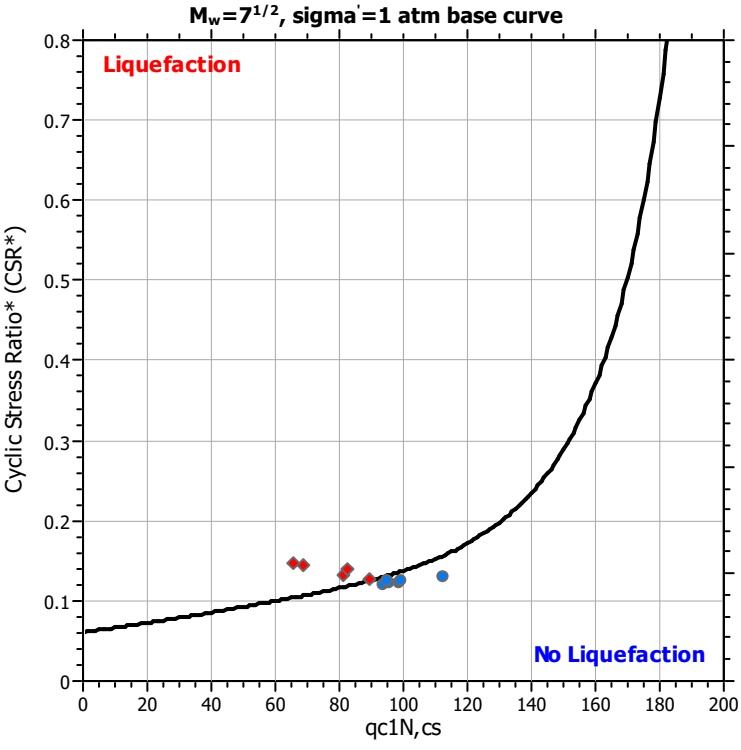
Project title : **Location :**

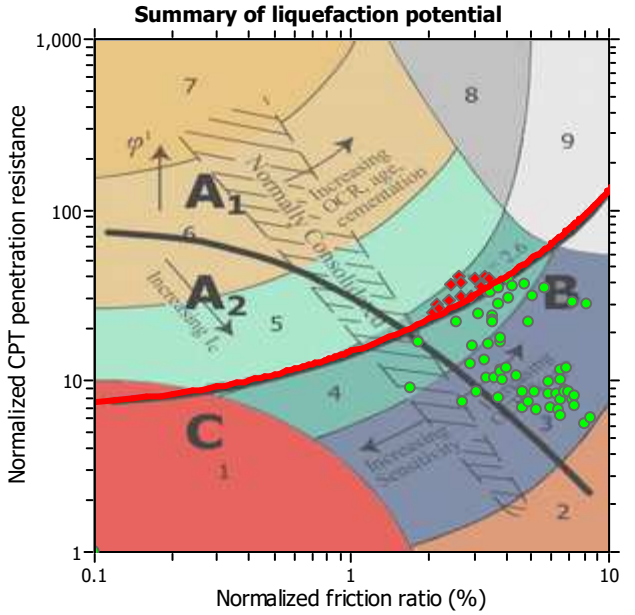
CPT file : CPT221

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

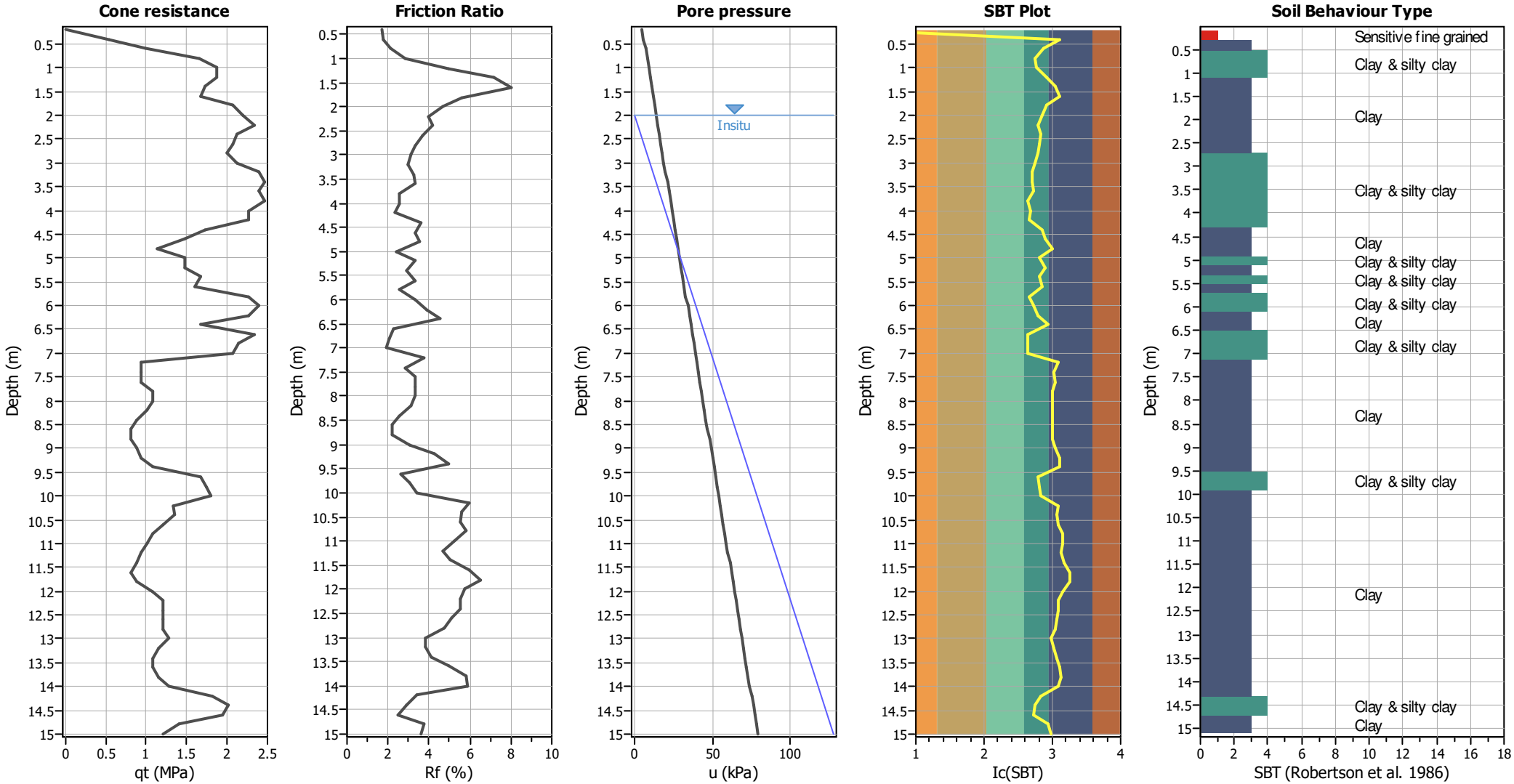






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



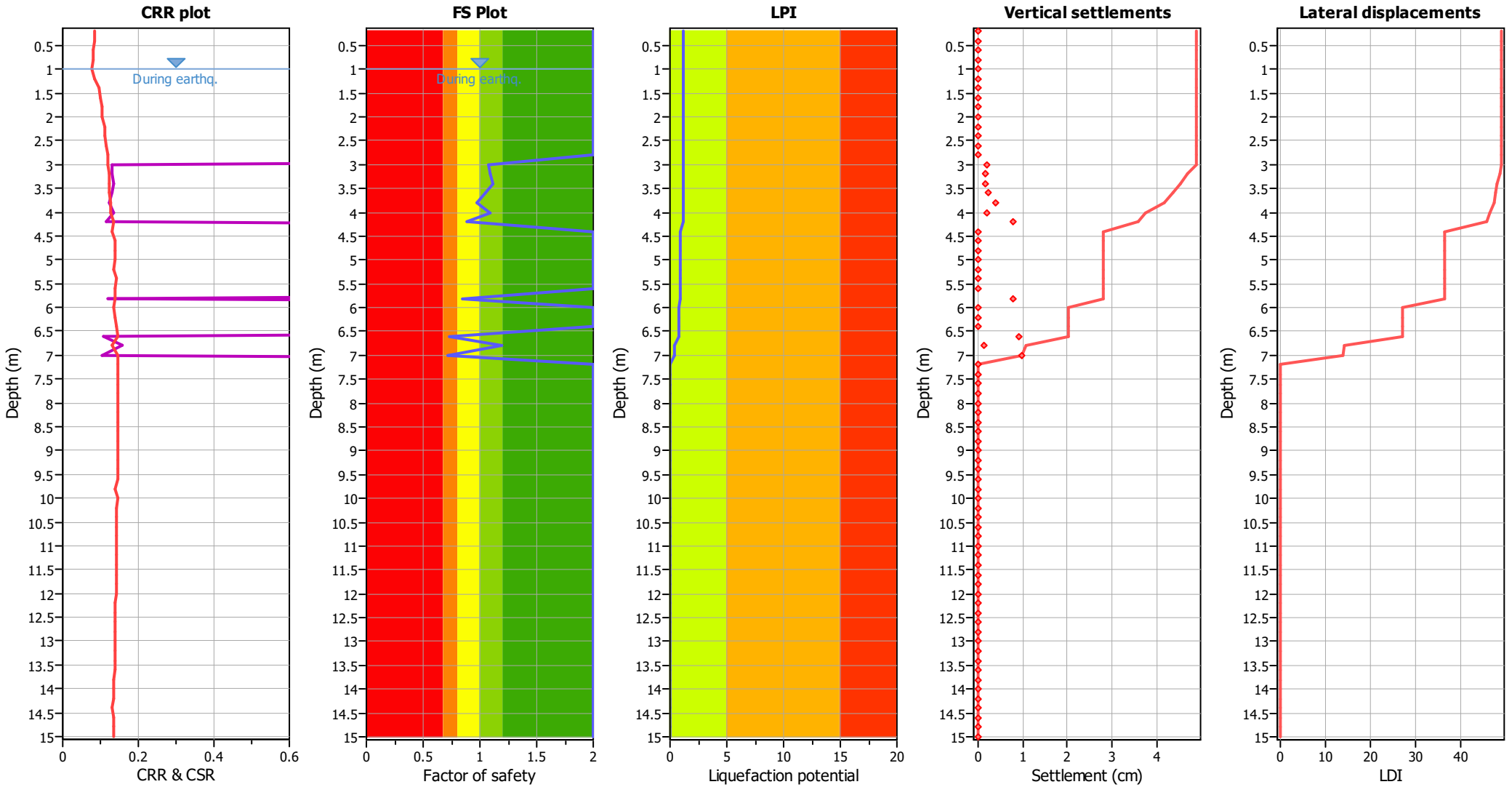
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	1.08	0.00	8.50	0.20	0.00	3.20	1.09	0.00	8.40	0.20	0.00
3.40	1.11	0.00	8.30	0.20	0.00	3.60	1.05	0.00	8.20	0.20	0.00
3.80	0.98	0.02	8.10	0.20	0.04	4.00	1.08	0.00	8.00	0.20	0.00
4.20	0.88	0.12	7.90	0.20	0.19	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	0.84	0.16	7.10	0.20	0.22	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	0.74	0.26	6.70	0.20	0.35	6.80	1.20	0.00	6.60	0.20	0.00
7.00	0.71	0.29	6.50	0.20	0.37	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00						

Overall liquefaction potential: 1.18

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	93.99	2.00	0.00	1.00	0.00	1.20	36.91	2.00	0.00	1.00	0.00
1.40	23.49	2.00	0.00	1.00	0.00	1.60	26.84	2.00	0.00	1.00	0.00
1.80	33.56	2.00	0.00	1.00	0.00	2.00	42.98	2.00	0.00	1.00	0.00
2.20	33.27	2.00	0.00	1.00	0.00	2.40	38.37	2.00	0.00	1.00	0.00
2.60	31.90	2.00	0.00	1.00	0.00	2.80	28.40	2.00	0.00	1.00	0.00
3.00	93.89	1.08	0.92	1.00	0.18	3.20	95.85	1.09	0.88	1.00	0.18
3.40	98.81	1.11	0.80	1.00	0.16	3.60	94.85	1.05	1.06	1.00	0.21
3.80	89.19	0.98	1.98	1.00	0.40	4.00	99.22	1.08	0.91	1.00	0.18
4.20	81.51	0.88	3.94	1.00	0.79	4.40	29.86	2.00	0.00	1.00	0.00
4.60	16.47	2.00	0.00	1.00	0.00	4.80	13.58	2.00	0.00	1.00	0.00
5.00	16.03	2.00	0.00	1.00	0.00	5.20	28.31	2.00	0.00	1.00	0.00
5.40	13.04	2.00	0.00	1.00	0.00	5.60	22.75	2.00	0.00	1.00	0.00
5.80	82.55	0.84	3.89	1.00	0.78	6.00	36.32	2.00	0.00	1.00	0.00
6.20	26.57	2.00	0.00	1.00	0.00	6.40	19.22	2.00	0.00	1.00	0.00
6.60	68.82	0.74	4.62	1.00	0.92	6.80	112.51	1.20	0.62	1.00	0.12
7.00	65.63	0.71	4.83	1.00	0.97	7.20	11.56	2.00	0.00	1.00	0.00
7.40	9.17	2.00	0.00	1.00	0.00	7.60	11.32	2.00	0.00	1.00	0.00
7.80	11.21	2.00	0.00	1.00	0.00	8.00	13.29	2.00	0.00	1.00	0.00
8.20	10.98	2.00	0.00	1.00	0.00	8.40	8.72	2.00	0.00	1.00	0.00
8.60	8.64	2.00	0.00	1.00	0.00	8.80	8.57	2.00	0.00	1.00	0.00
9.00	8.49	2.00	0.00	1.00	0.00	9.20	10.51	2.00	0.00	1.00	0.00
9.40	10.40	2.00	0.00	1.00	0.00	9.60	12.36	2.00	0.00	1.00	0.00
9.80	28.47	2.00	0.00	1.00	0.00	10.00	12.12	2.00	0.00	1.00	0.00
10.20	14.00	2.00	0.00	1.00	0.00	10.40	13.87	2.00	0.00	1.00	0.00
10.60	11.78	2.00	0.00	1.00	0.00	10.80	9.73	2.00	0.00	1.00	0.00
11.00	9.65	2.00	0.00	1.00	0.00	11.20	9.57	2.00	0.00	1.00	0.00
11.40	7.59	2.00	0.00	1.00	0.00	11.60	7.52	2.00	0.00	1.00	0.00
11.80	7.46	2.00	0.00	1.00	0.00	12.00	9.26	2.00	0.00	1.00	0.00
12.20	12.87	2.00	0.00	1.00	0.00	12.40	10.94	2.00	0.00	1.00	0.00
12.60	9.03	2.00	0.00	1.00	0.00	12.80	12.57	2.00	0.00	1.00	0.00
13.00	10.68	2.00	0.00	1.00	0.00	13.20	10.61	2.00	0.00	1.00	0.00
13.40	8.76	2.00	0.00	1.00	0.00	13.60	8.70	2.00	0.00	1.00	0.00
13.80	10.38	2.00	0.00	1.00	0.00	14.00	10.30	2.00	0.00	1.00	0.00
14.20	11.95	2.00	0.00	1.00	0.00	14.40	23.99	2.00	0.00	1.00	0.00
14.60	15.19	2.00	0.00	1.00	0.00	14.80	10.01	2.00	0.00	1.00	0.00
15.00	9.94	2.00	0.00	1.00	0.00						

Total estimated settlement: 4.89

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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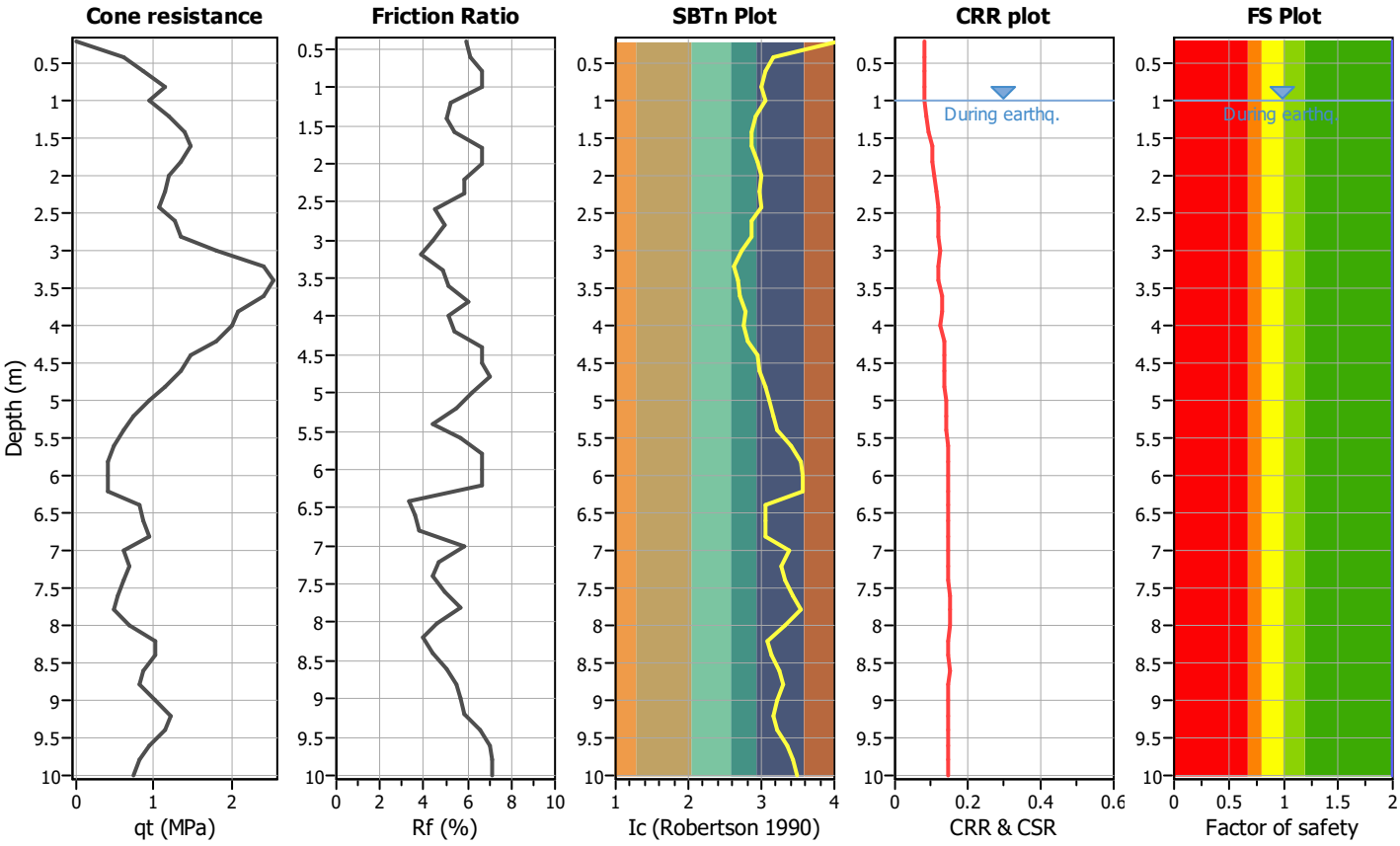
LIQUEFACTION ANALYSIS REPORT

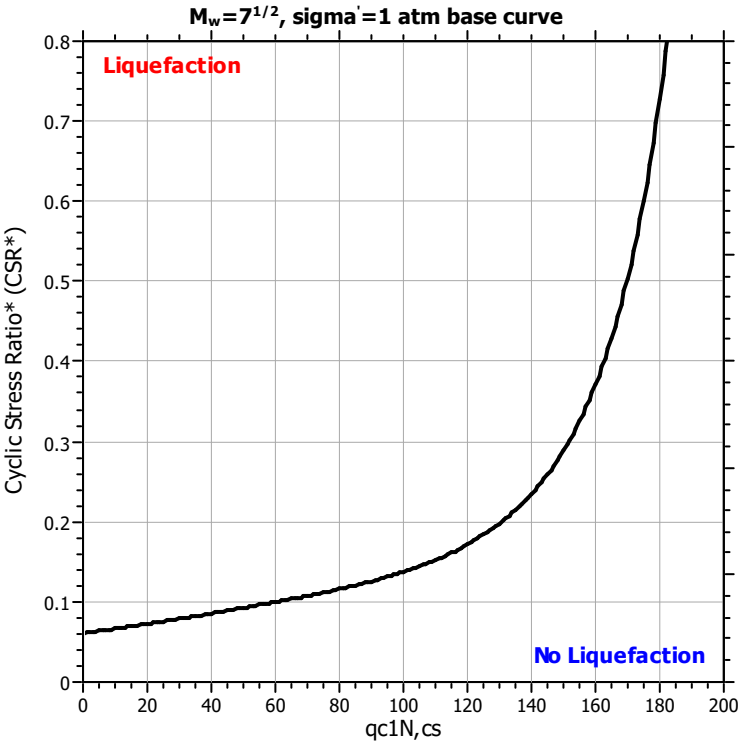
Project title : **Location :**

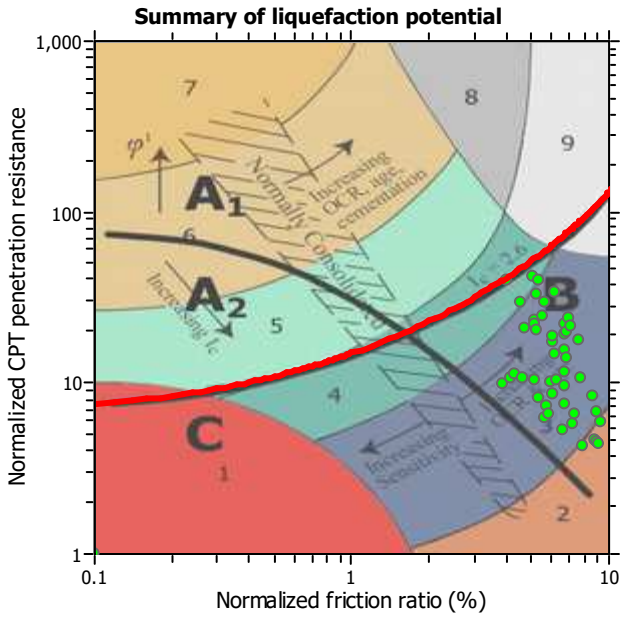
CPT file : CPT222

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

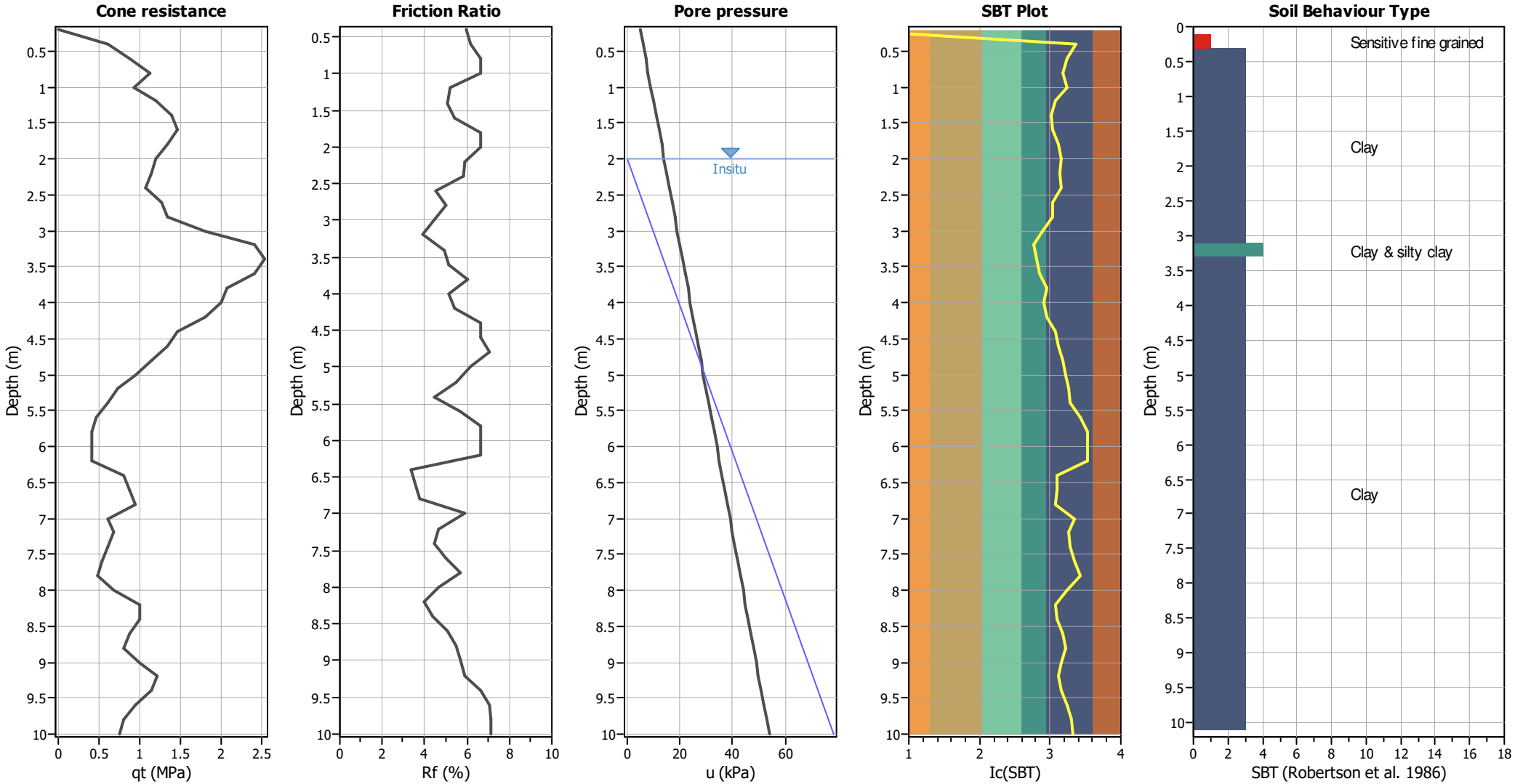






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



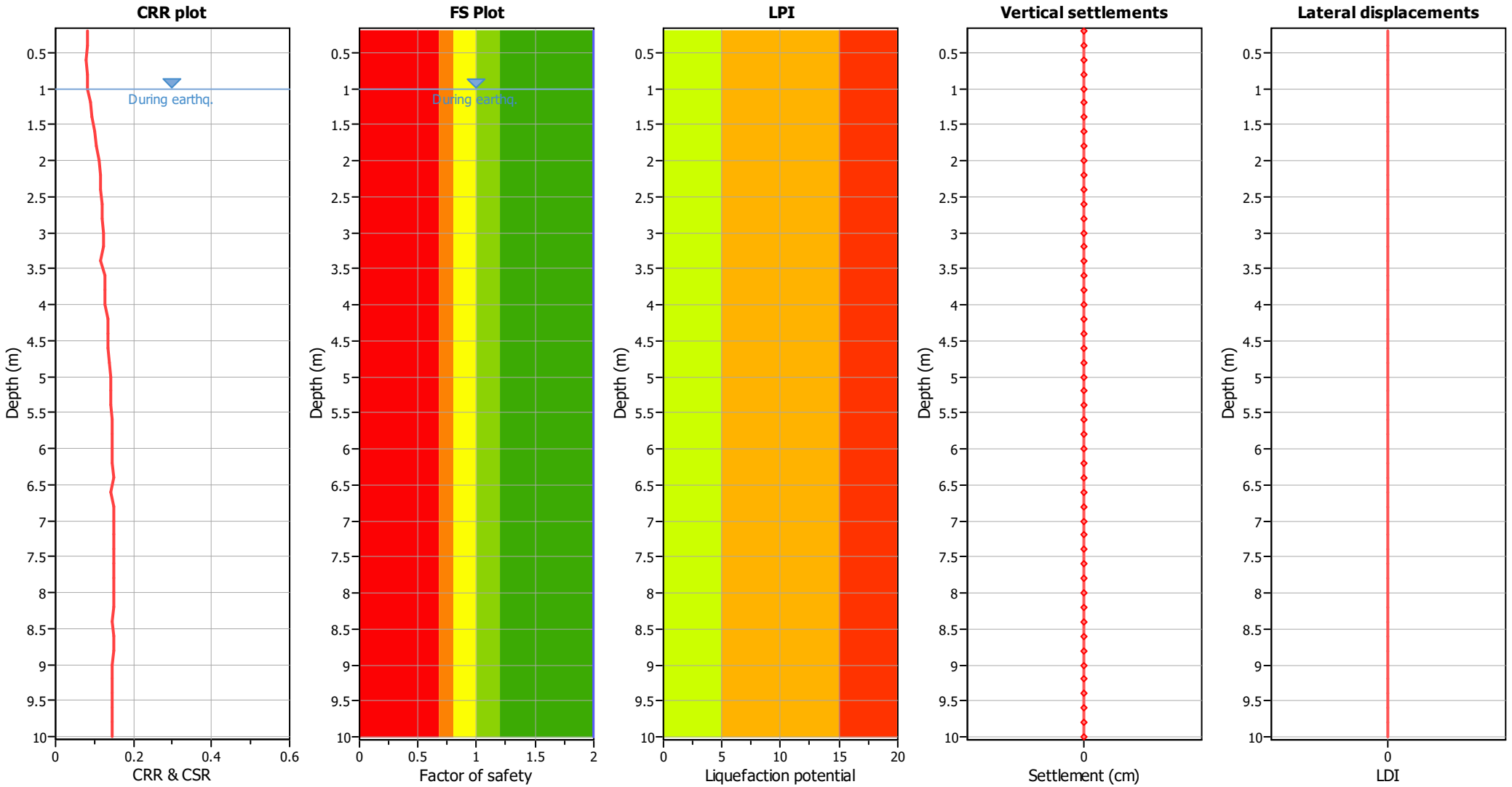
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	2.00	0.00	8.20	0.20	0.00
3.80	2.00	0.00	8.10	0.20	0.00	4.00	2.00	0.00	8.00	0.20	0.00
4.20	2.00	0.00	7.90	0.20	0.00	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	2.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	2.00	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00

Overall liquefaction potential: 0.00

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	13.42	2.00	0.00	1.00	0.00	1.20	20.13	2.00	0.00	1.00	0.00
1.40	26.84	2.00	0.00	1.00	0.00	1.60	23.49	2.00	0.00	1.00	0.00
1.80	23.49	2.00	0.00	1.00	0.00	2.00	20.13	2.00	0.00	1.00	0.00
2.20	16.78	2.00	0.00	1.00	0.00	2.40	20.13	2.00	0.00	1.00	0.00
2.60	16.68	2.00	0.00	1.00	0.00	2.80	25.41	2.00	0.00	1.00	0.00
3.00	22.03	2.00	0.00	1.00	0.00	3.20	35.81	2.00	0.00	1.00	0.00
3.40	48.33	2.00	0.00	1.00	0.00	3.60	26.31	2.00	0.00	1.00	0.00
3.80	28.49	2.00	0.00	1.00	0.00	4.00	33.29	2.00	0.00	1.00	0.00
4.20	22.28	2.00	0.00	1.00	0.00	4.40	19.26	2.00	0.00	1.00	0.00
4.60	18.95	2.00	0.00	1.00	0.00	4.80	16.08	2.00	0.00	1.00	0.00
5.00	10.67	2.00	0.00	1.00	0.00	5.20	10.53	2.00	0.00	1.00	0.00
5.40	7.84	2.00	0.00	1.00	0.00	5.60	5.19	2.00	0.00	1.00	0.00
5.80	5.12	2.00	0.00	1.00	0.00	6.00	5.06	2.00	0.00	1.00	0.00
6.20	5.00	2.00	0.00	1.00	0.00	6.40	4.94	2.00	0.00	1.00	0.00
6.60	19.17	2.00	0.00	1.00	0.00	6.80	7.22	2.00	0.00	1.00	0.00
7.00	7.13	2.00	0.00	1.00	0.00	7.20	7.06	2.00	0.00	1.00	0.00
7.40	9.29	2.00	0.00	1.00	0.00	7.60	4.62	2.00	0.00	1.00	0.00
7.80	4.57	2.00	0.00	1.00	0.00	8.00	6.77	2.00	0.00	1.00	0.00
8.20	11.12	2.00	0.00	1.00	0.00	8.40	15.37	2.00	0.00	1.00	0.00
8.60	6.56	2.00	0.00	1.00	0.00	8.80	6.49	2.00	0.00	1.00	0.00
9.00	12.80	2.00	0.00	1.00	0.00	9.20	12.67	2.00	0.00	1.00	0.00
9.40	12.54	2.00	0.00	1.00	0.00	9.60	10.35	2.00	0.00	1.00	0.00
9.80	6.16	2.00	0.00	1.00	0.00	10.00	8.13	2.00	0.00	1.00	0.00

Total estimated settlement: 0.00

Abbreviations

$Q_{tn,cs}$: Equivalent clean sand normalized cone resistance
FS: Factor of safety against liquefaction
e_v (%): Post-liquefaction volumentric strain
DF: e_v depth weighting factor
Settlement: Calculated settlement

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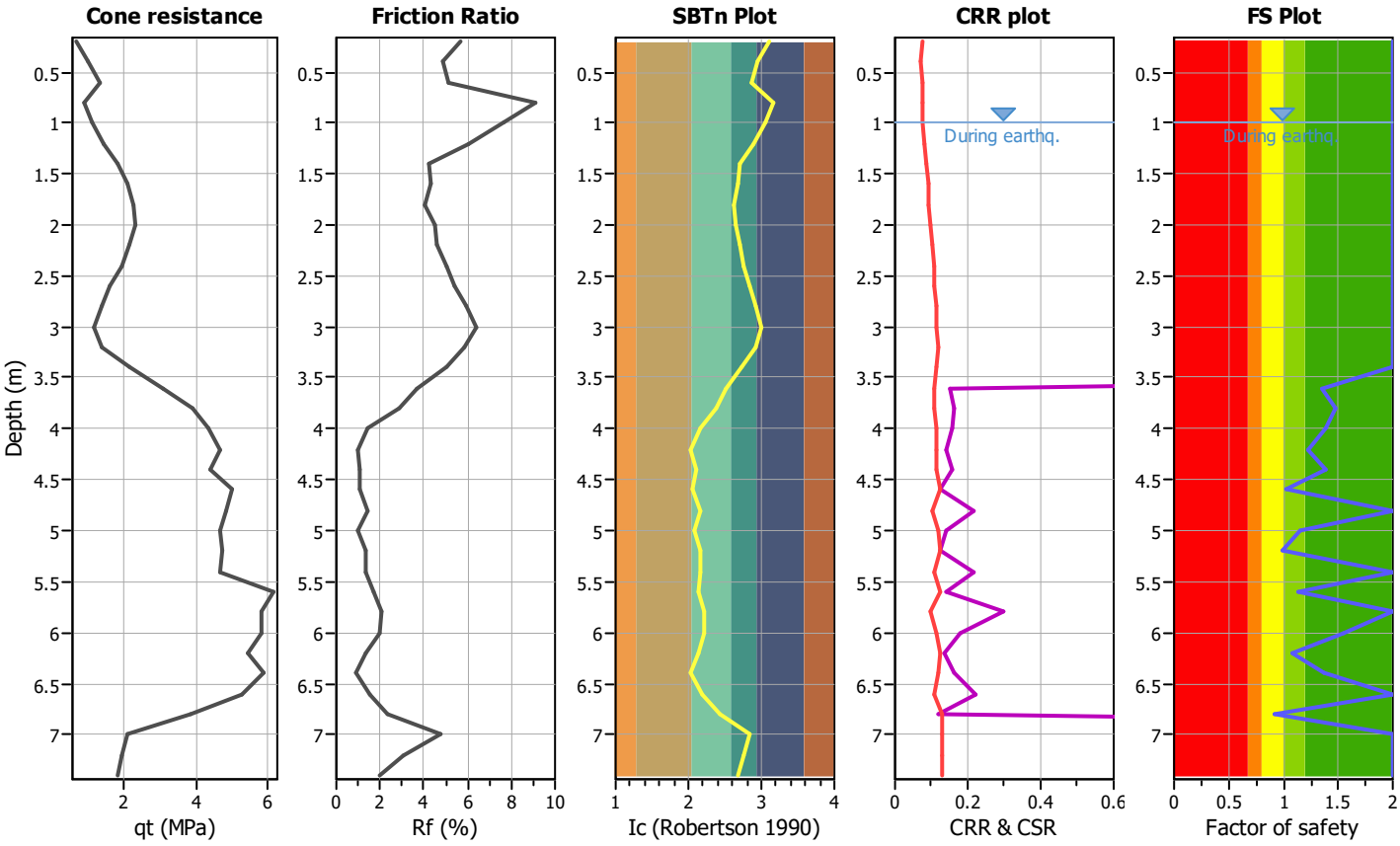
LIQUEFACTION ANALYSIS REPORT

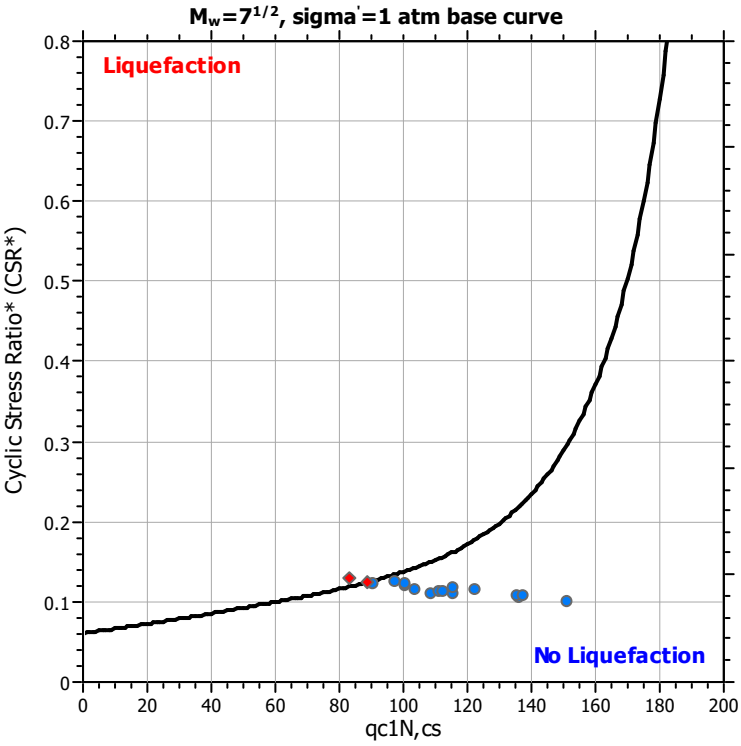
Project title : **Location :**

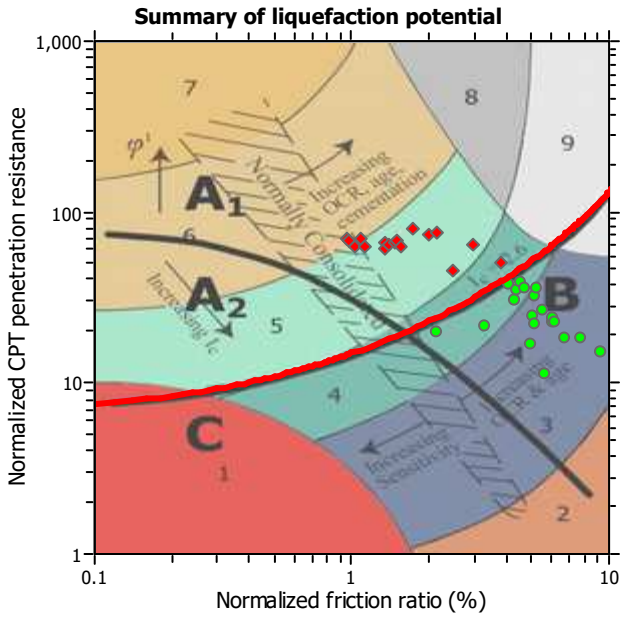
CPT file : CPT274

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.14	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

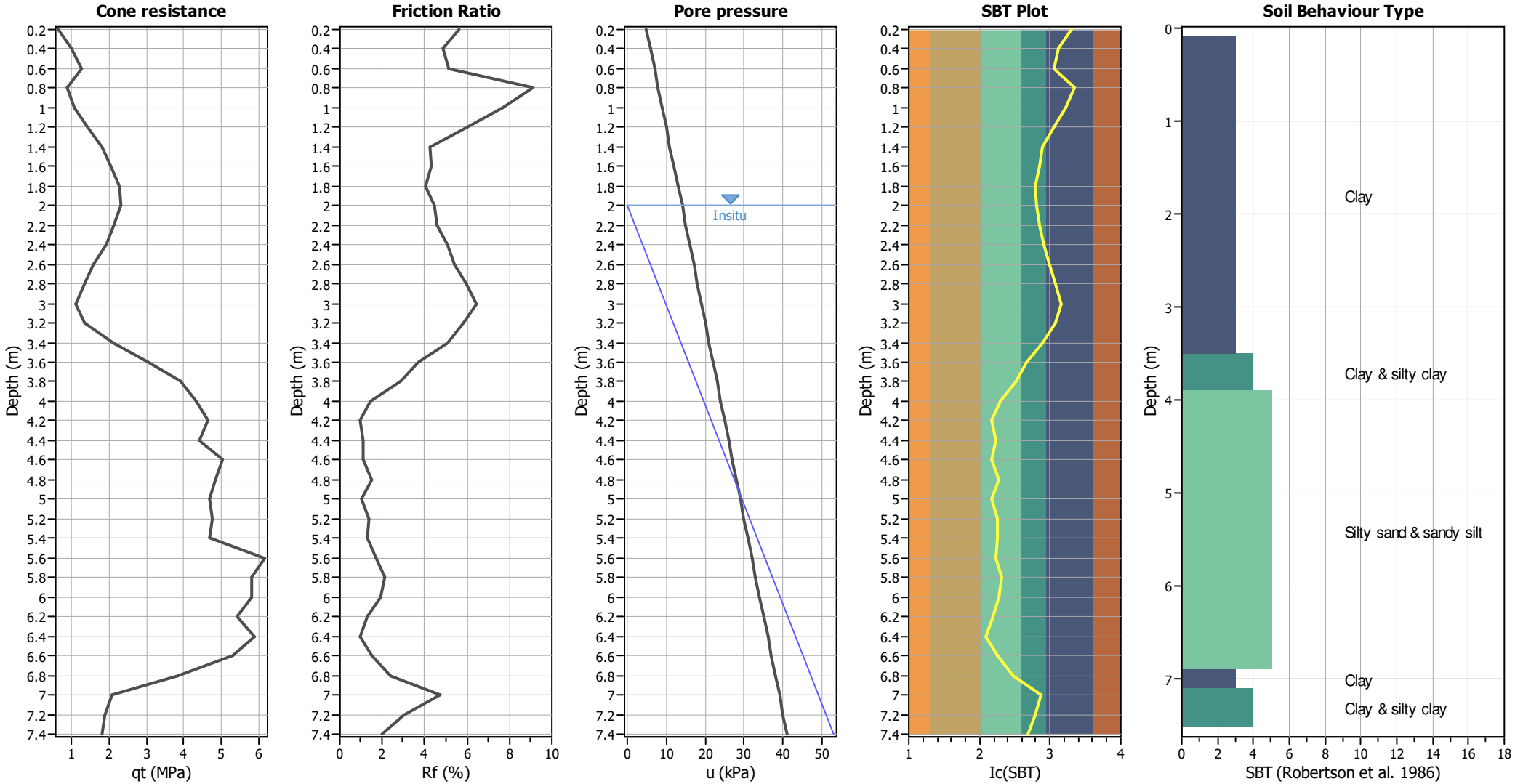






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



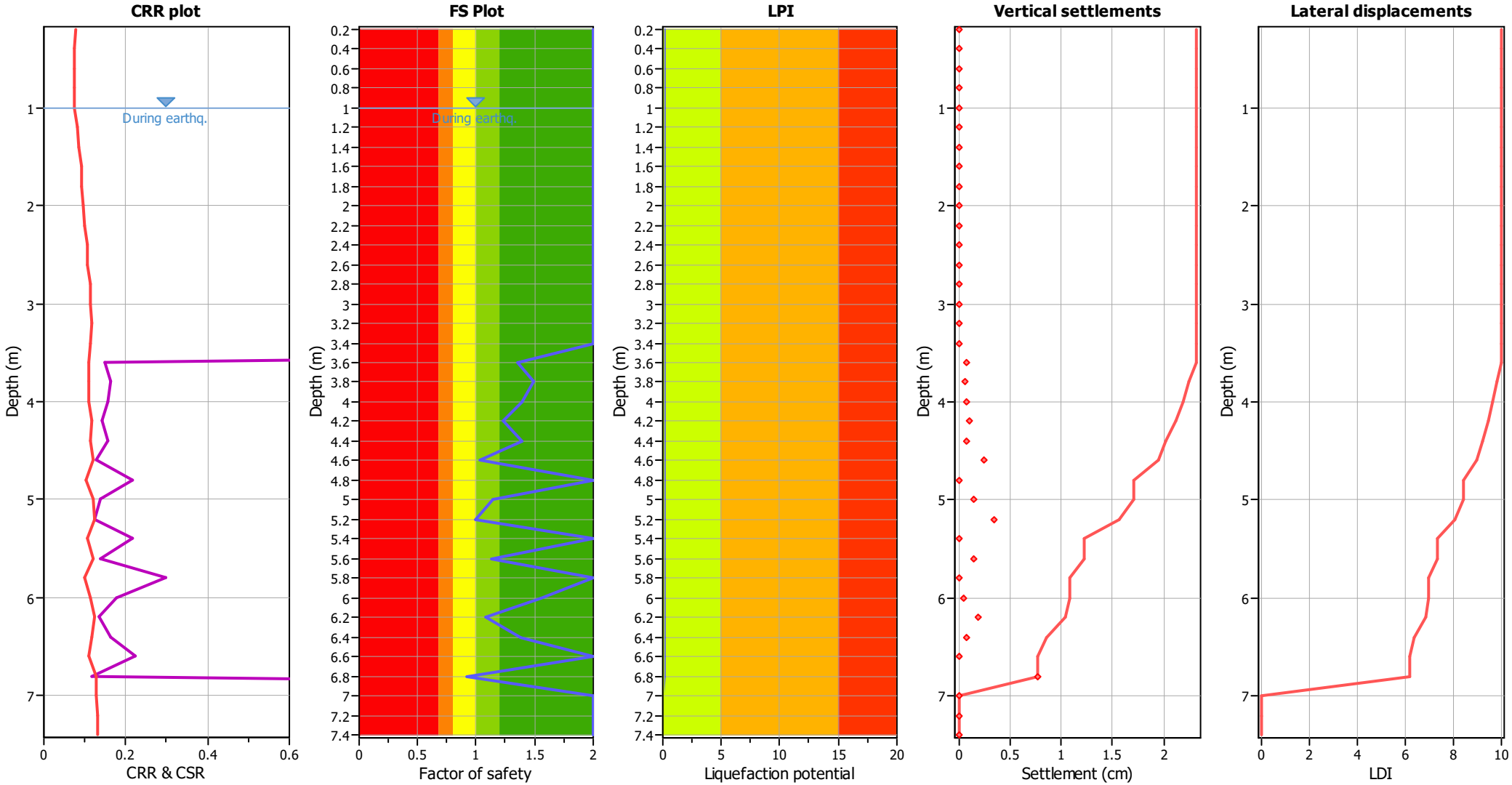
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.14	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.14	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	1.36	0.00	8.20	0.20	0.00
3.80	1.49	0.00	8.10	0.20	0.00	4.00	1.39	0.00	8.00	0.20	0.00
4.20	1.23	0.00	7.90	0.20	0.00	4.40	1.39	0.00	7.80	0.20	0.00
4.60	1.03	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	1.15	0.00	7.50	0.20	0.00	5.20	0.99	0.01	7.40	0.20	0.01
5.40	2.00	0.00	7.30	0.20	0.00	5.60	1.13	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	1.55	0.00	7.00	0.20	0.00
6.20	1.08	0.00	6.90	0.20	0.00	6.40	1.37	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	0.92	0.08	6.60	0.20	0.11
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00						

Overall liquefaction potential: 0.12

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	13.42	2.00	0.00	1.00	0.00	1.20	26.84	2.00	0.00	1.00	0.00
1.40	31.88	2.00	0.00	1.00	0.00	1.60	33.56	2.00	0.00	1.00	0.00
1.80	38.59	2.00	0.00	1.00	0.00	2.00	40.85	2.00	0.00	1.00	0.00
2.20	35.61	2.00	0.00	1.00	0.00	2.40	27.48	2.00	0.00	1.00	0.00
2.60	29.80	2.00	0.00	1.00	0.00	2.80	18.98	2.00	0.00	1.00	0.00
3.00	15.64	2.00	0.00	1.00	0.00	3.20	18.26	2.00	0.00	1.00	0.00
3.40	27.75	2.00	0.00	1.00	0.00	3.60	108.45	1.36	0.37	1.00	0.07
3.80	115.43	1.49	0.26	1.00	0.05	4.00	111.37	1.39	0.34	1.00	0.07
4.20	103.68	1.23	0.53	1.00	0.11	4.40	112.74	1.39	0.35	1.00	0.07
4.60	90.36	1.03	1.22	1.00	0.24	4.80	135.97	2.00	0.00	1.00	0.00
5.00	100.59	1.15	0.70	1.00	0.14	5.20	88.51	0.99	1.71	1.00	0.34
5.40	135.81	2.00	0.00	1.00	0.00	5.60	100.71	1.13	0.75	1.00	0.15
5.80	151.43	2.00	0.00	1.00	0.00	6.00	122.48	1.55	0.22	1.00	0.04
6.20	97.67	1.08	0.92	1.00	0.18	6.40	115.51	1.37	0.37	1.00	0.07
6.60	137.32	2.00	0.00	1.00	0.00	6.80	82.85	0.92	3.88	1.00	0.78
7.00	23.61	2.00	0.00	1.00	0.00	7.20	20.08	2.00	0.00	1.00	0.00
7.40	19.89	2.00	0.00	1.00	0.00						

Total estimated settlement: 2.32

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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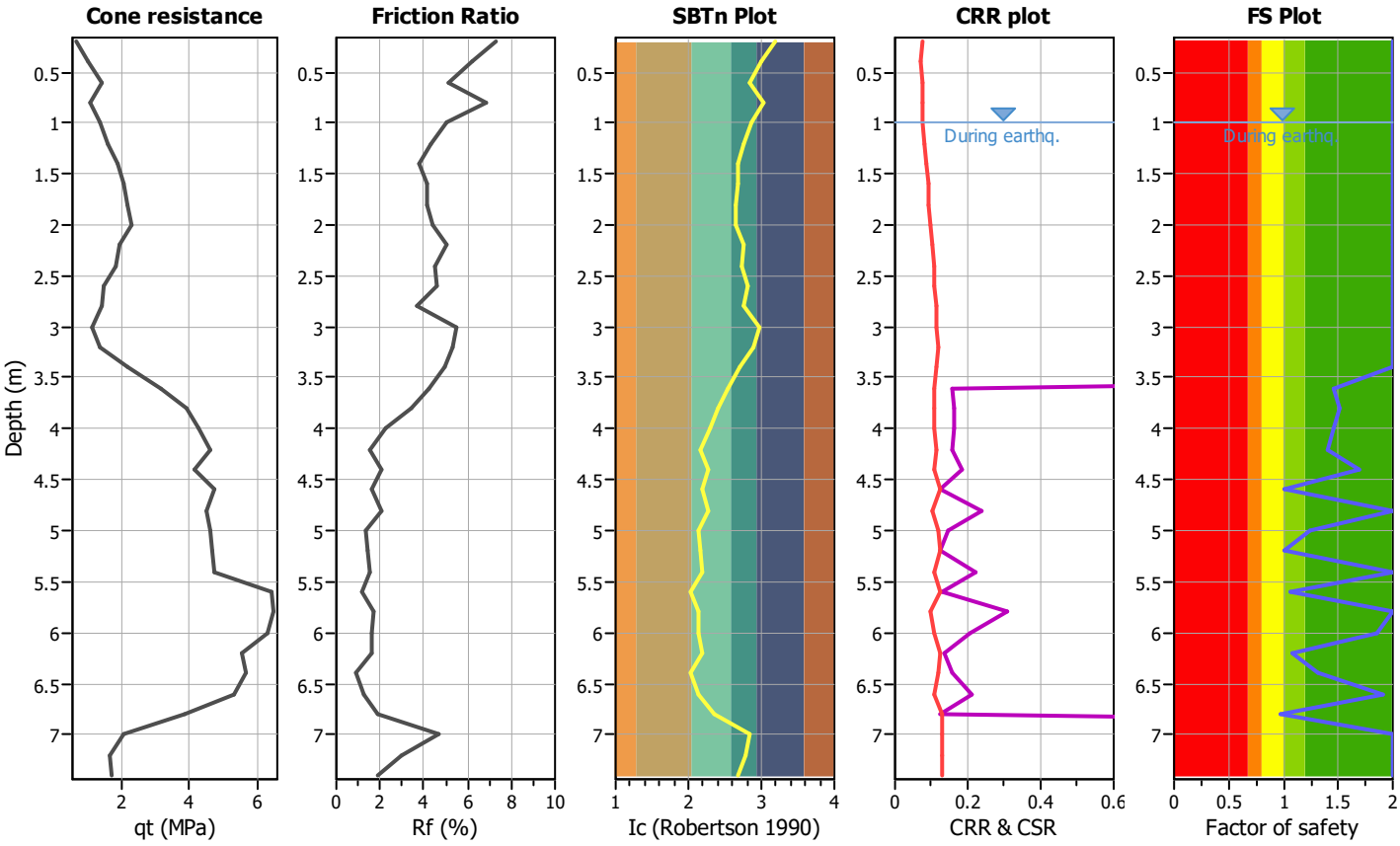
LIQUEFACTION ANALYSIS REPORT

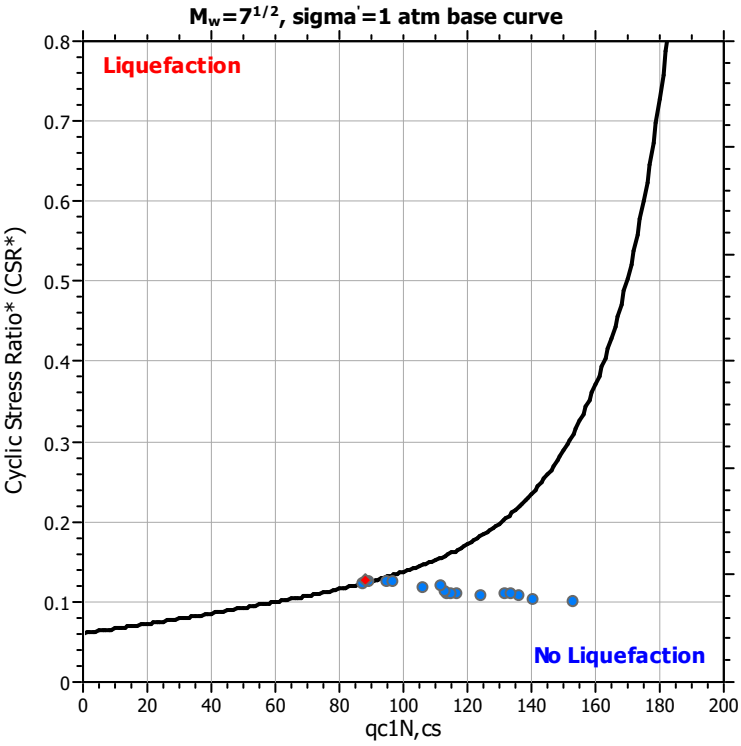
Project title : **Location :**

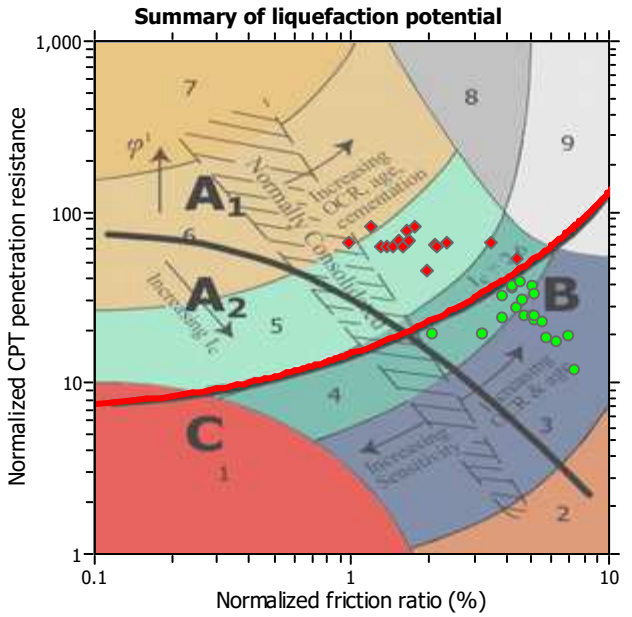
CPT file : CPT275

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.14	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

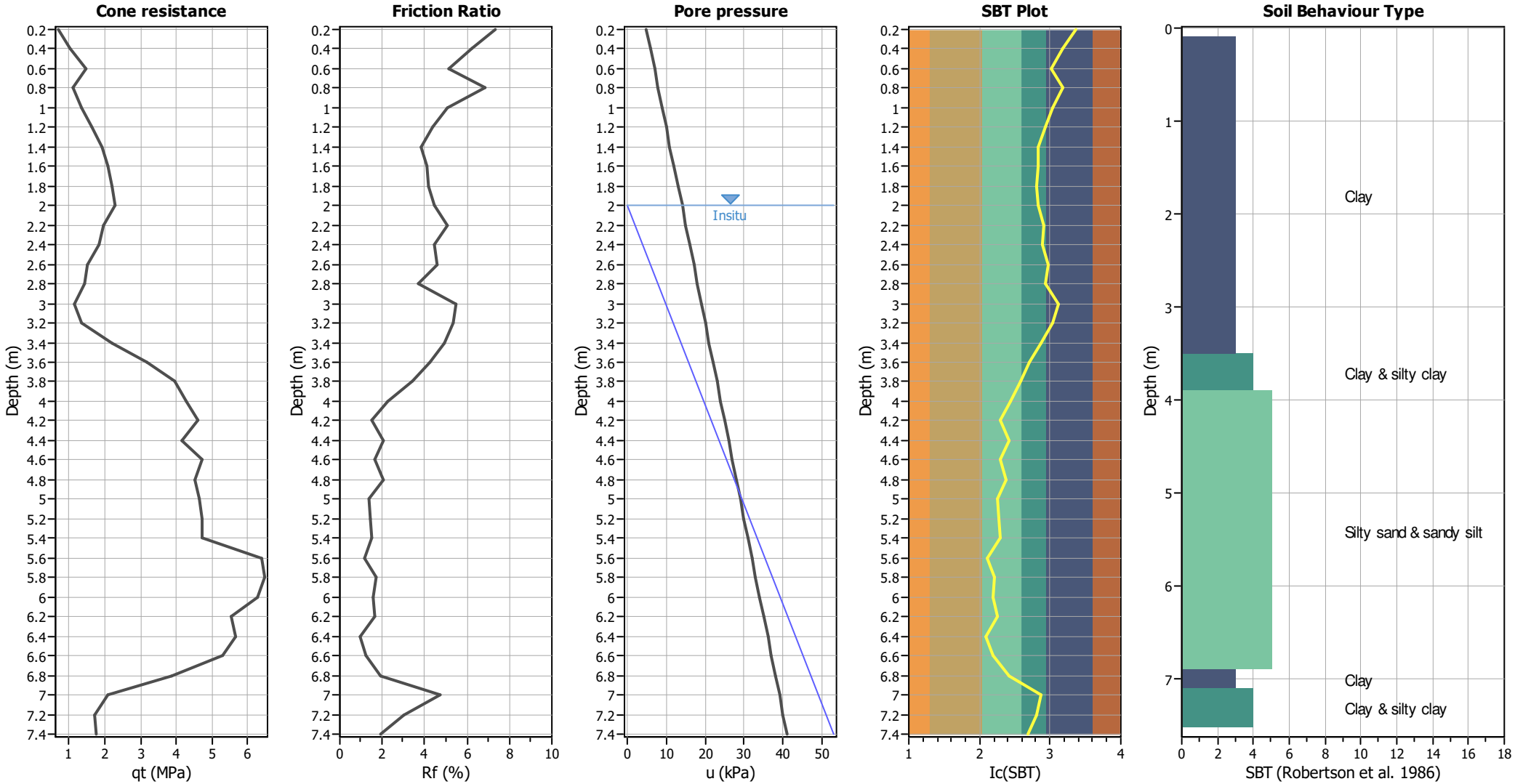






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



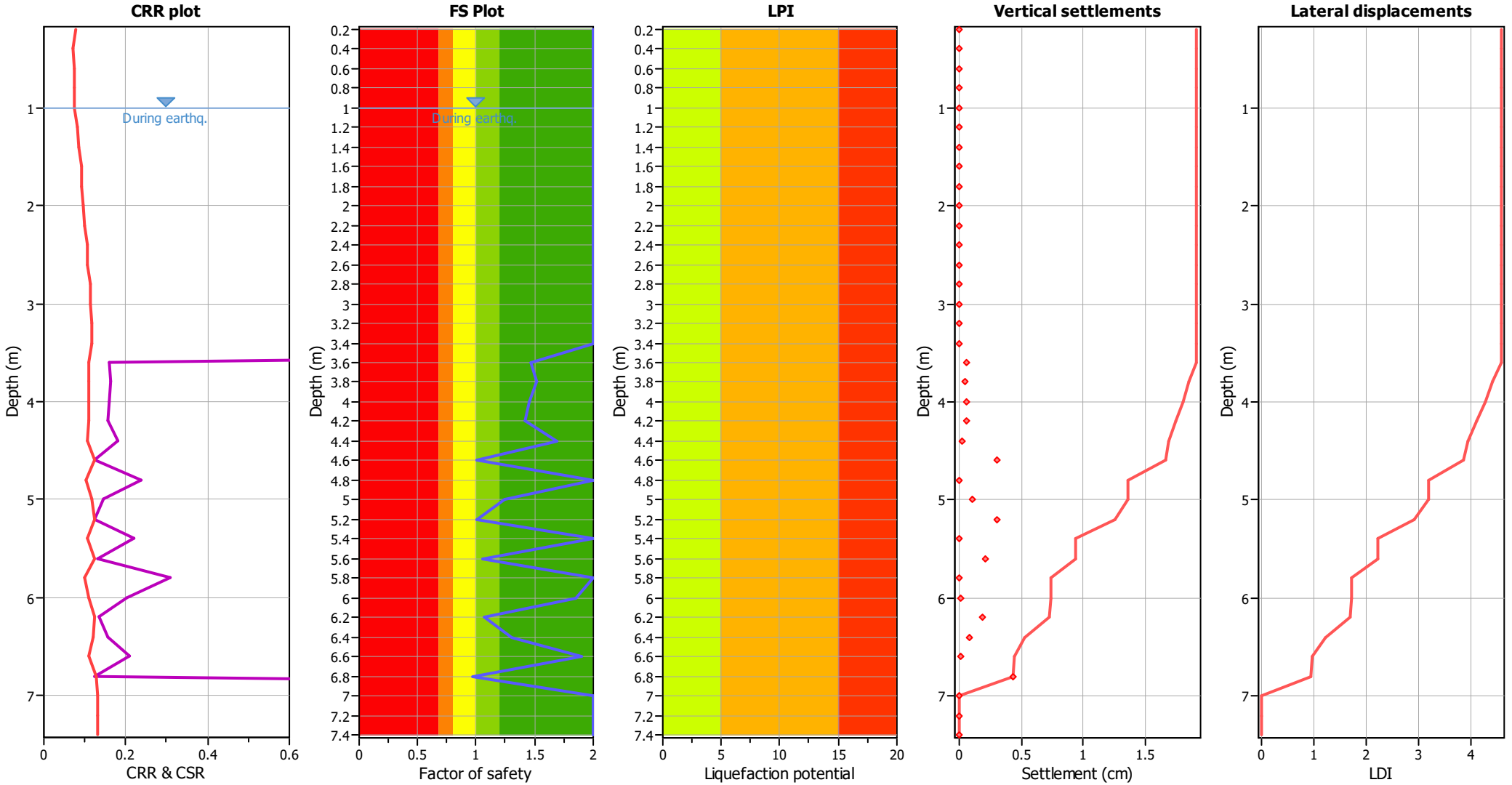
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.14	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.14	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	1.46	0.00	8.20	0.20	0.00
3.80	1.51	0.00	8.10	0.20	0.00	4.00	1.46	0.00	8.00	0.20	0.00
4.20	1.41	0.00	7.90	0.20	0.00	4.40	1.69	0.00	7.80	0.20	0.00
4.60	1.01	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	1.24	0.00	7.50	0.20	0.00	5.20	1.00	0.00	7.40	0.20	0.00
5.40	2.00	0.00	7.30	0.20	0.00	5.60	1.06	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	1.86	0.00	7.00	0.20	0.00
6.20	1.07	0.00	6.90	0.20	0.00	6.40	1.31	0.00	6.80	0.20	0.00
6.60	1.91	0.00	6.70	0.20	0.00	6.80	0.97	0.03	6.60	0.20	0.04
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00						

Overall liquefaction potential: 0.04

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	16.78	2.00	0.00	1.00	0.00	1.20	30.20	2.00	0.00	1.00	0.00
1.40	35.23	2.00	0.00	1.00	0.00	1.60	31.88	2.00	0.00	1.00	0.00
1.80	38.59	2.00	0.00	1.00	0.00	2.00	39.30	2.00	0.00	1.00	0.00
2.20	35.52	2.00	0.00	1.00	0.00	2.40	21.41	2.00	0.00	1.00	0.00
2.60	31.26	2.00	0.00	1.00	0.00	2.80	19.06	2.00	0.00	1.00	0.00
3.00	17.15	2.00	0.00	1.00	0.00	3.20	16.84	2.00	0.00	1.00	0.00
3.40	27.80	2.00	0.00	1.00	0.00	3.60	114.03	1.46	0.27	1.00	0.05
3.80	116.69	1.51	0.24	1.00	0.05	4.00	114.72	1.46	0.28	1.00	0.06
4.20	113.28	1.41	0.32	1.00	0.06	4.40	124.61	1.69	0.13	1.00	0.03
4.60	87.76	1.01	1.53	1.00	0.31	4.80	140.57	2.00	0.00	1.00	0.00
5.00	106.31	1.24	0.52	1.00	0.10	5.20	89.15	1.00	1.55	1.00	0.31
5.40	136.48	2.00	0.00	1.00	0.00	5.60	94.73	1.06	1.04	1.00	0.21
5.80	153.02	2.00	0.00	1.00	0.00	6.00	131.82	1.86	0.06	1.00	0.01
6.20	96.76	1.07	0.96	1.00	0.19	6.40	112.18	1.31	0.43	1.00	0.09
6.60	133.58	1.91	0.04	1.00	0.01	6.80	88.18	0.97	2.18	1.00	0.44
7.00	19.14	2.00	0.00	1.00	0.00	7.20	17.84	2.00	0.00	1.00	0.00
7.40	19.86	2.00	0.00	1.00	0.00						

Total estimated settlement: 1.91

Abbreviations

$Q_{tn,cs}$: Equivalent clean sand normalized cone resistance
FS: Factor of safety against liquefaction
e_v (%): Post-liquefaction volumentric strain
DF: e_v depth weighting factor
Settlement: Calculated settlement

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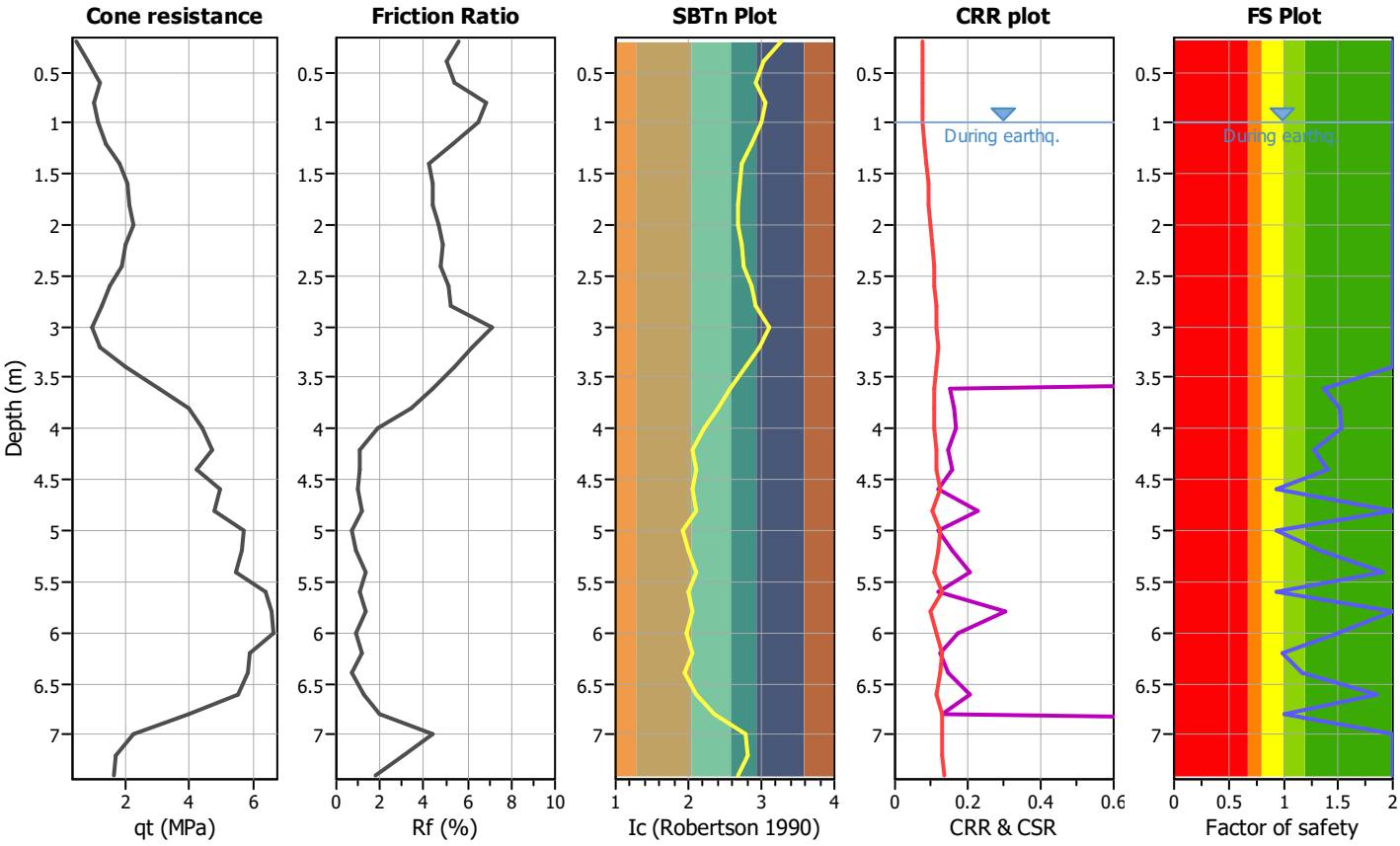
LIQUEFACTION ANALYSIS REPORT

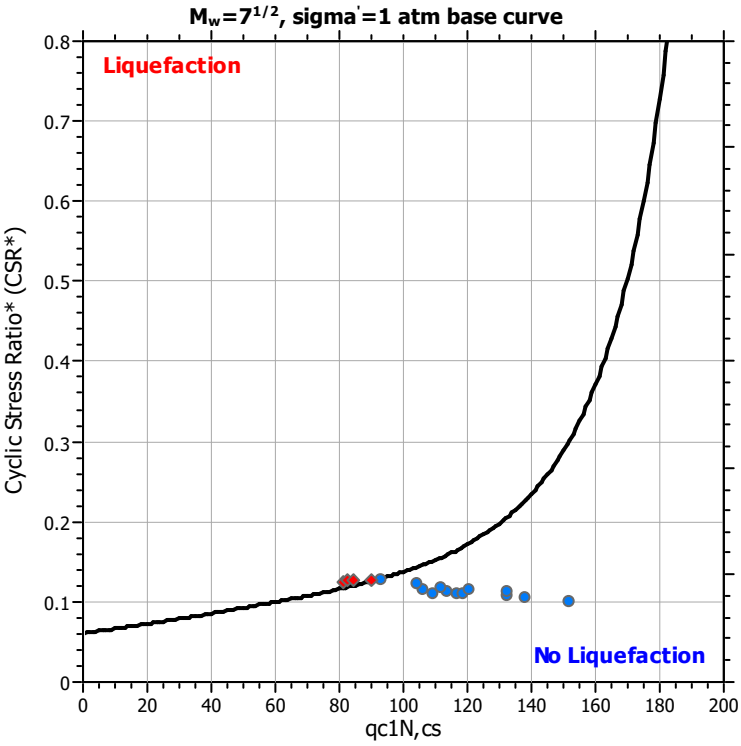
Project title : **Location :**

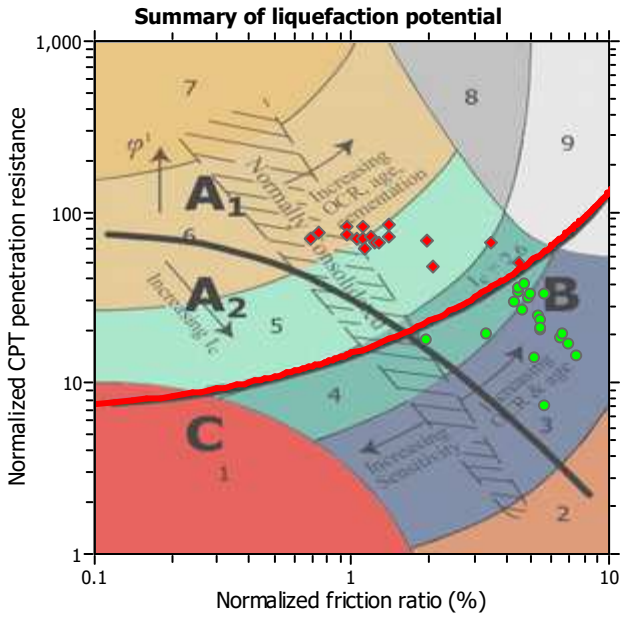
CPT file : CPT276

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.14	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

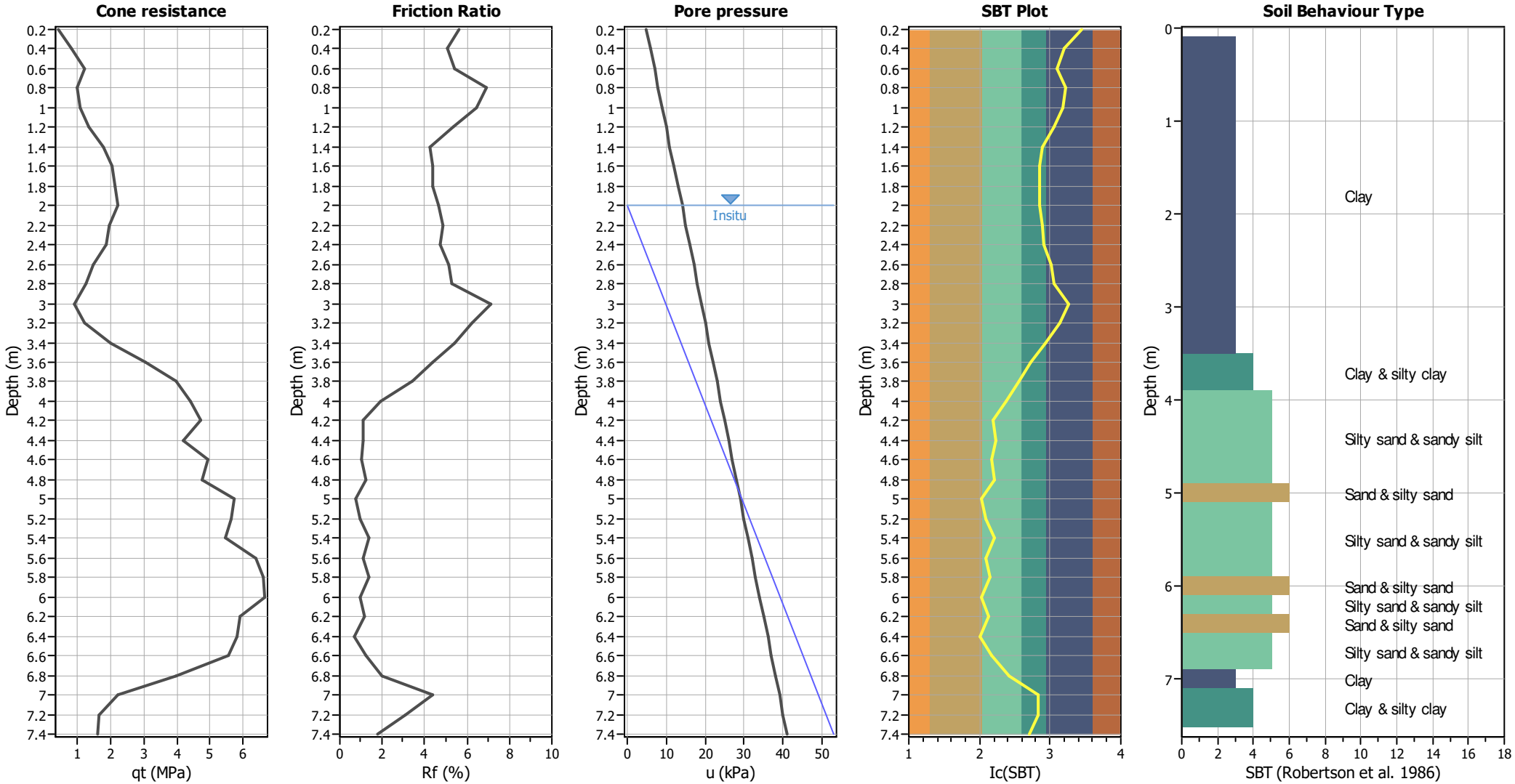






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



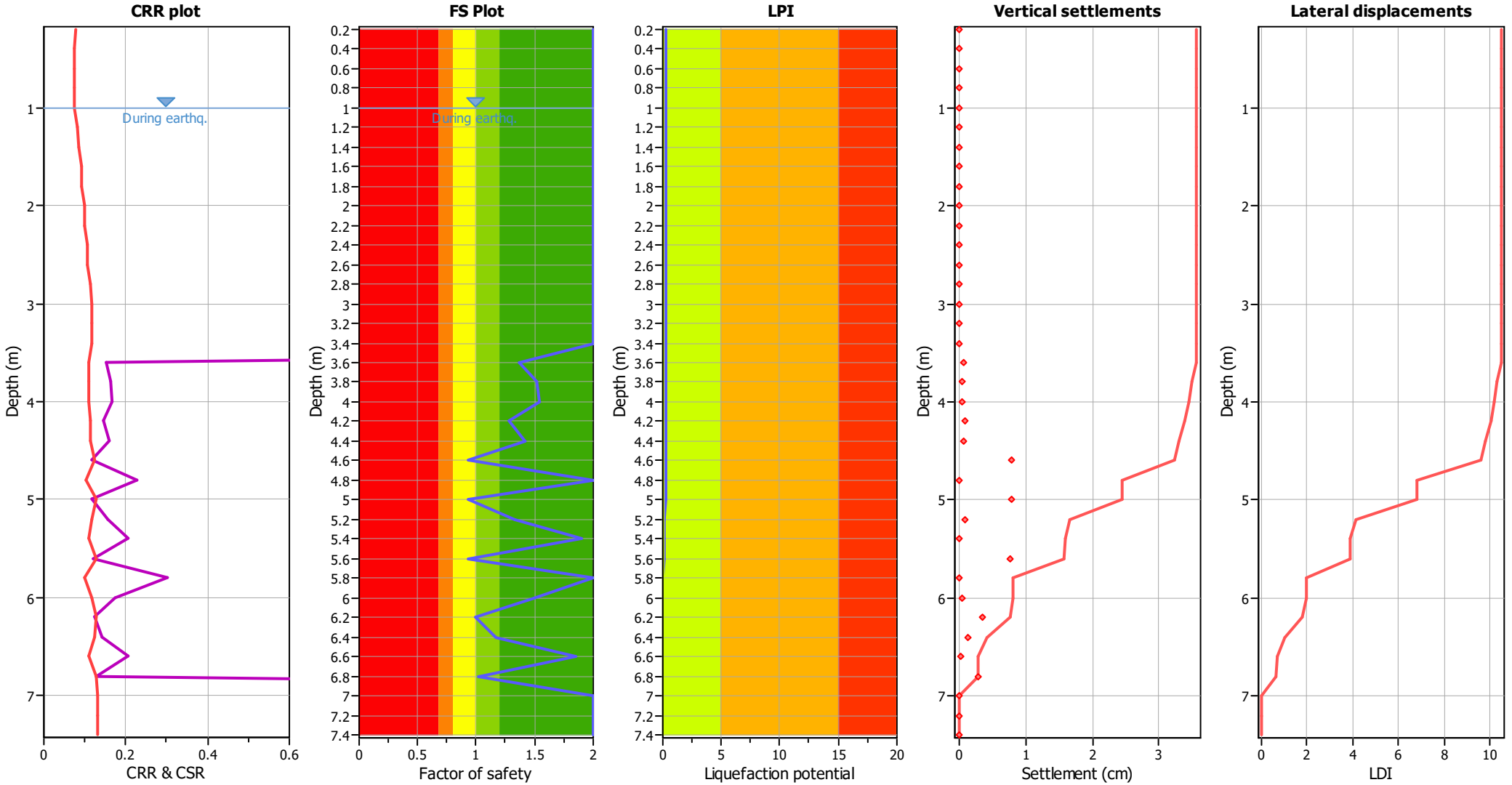
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.14	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.14	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	1.37	0.00	8.20	0.20	0.00
3.80	1.51	0.00	8.10	0.20	0.00	4.00	1.54	0.00	8.00	0.20	0.00
4.20	1.28	0.00	7.90	0.20	0.00	4.40	1.41	0.00	7.80	0.20	0.00
4.60	0.94	0.06	7.70	0.20	0.10	4.80	2.00	0.00	7.60	0.20	0.00
5.00	0.93	0.07	7.50	0.20	0.10	5.20	1.33	0.00	7.40	0.20	0.00
5.40	1.90	0.00	7.30	0.20	0.00	5.60	0.94	0.06	7.20	0.20	0.09
5.80	2.00	0.00	7.10	0.20	0.00	6.00	1.50	0.00	7.00	0.20	0.00
6.20	0.99	0.01	6.90	0.20	0.02	6.40	1.17	0.00	6.80	0.20	0.00
6.60	1.85	0.00	6.70	0.20	0.00	6.80	1.01	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00						

Overall liquefaction potential: 0.30

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	11.74	2.00	0.00	1.00	0.00	1.20	25.17	2.00	0.00	1.00	0.00
1.40	31.88	2.00	0.00	1.00	0.00	1.60	31.88	2.00	0.00	1.00	0.00
1.80	38.59	2.00	0.00	1.00	0.00	2.00	36.53	2.00	0.00	1.00	0.00
2.20	35.71	2.00	0.00	1.00	0.00	2.40	24.58	2.00	0.00	1.00	0.00
2.60	29.93	2.00	0.00	1.00	0.00	2.80	16.05	2.00	0.00	1.00	0.00
3.00	14.22	2.00	0.00	1.00	0.00	3.20	12.45	2.00	0.00	1.00	0.00
3.40	27.88	2.00	0.00	1.00	0.00	3.60	109.64	1.37	0.35	1.00	0.07
3.80	116.74	1.51	0.24	1.00	0.05	4.00	118.47	1.54	0.22	1.00	0.04
4.20	106.37	1.28	0.47	1.00	0.09	4.40	114.03	1.41	0.32	1.00	0.06
4.60	81.28	0.94	3.95	1.00	0.79	4.80	137.98	2.00	0.00	1.00	0.00
5.00	82.32	0.93	3.90	1.00	0.78	5.20	112.02	1.33	0.41	1.00	0.08
5.40	132.72	1.90	0.04	1.00	0.01	5.60	84.17	0.94	3.82	1.00	0.76
5.80	152.03	2.00	0.00	1.00	0.00	6.00	120.59	1.50	0.26	1.00	0.05
6.20	90.06	0.99	1.72	1.00	0.34	6.40	104.47	1.17	0.66	1.00	0.13
6.60	132.44	1.85	0.06	1.00	0.01	6.80	92.83	1.01	1.38	1.00	0.28
7.00	19.30	2.00	0.00	1.00	0.00	7.20	20.19	2.00	0.00	1.00	0.00
7.40	16.72	2.00	0.00	1.00	0.00						

Total estimated settlement: 3.56

Abbreviations

$Q_{tn,cs}$: Equivalent clean sand normalized cone resistance
FS: Factor of safety against liquefaction
e_v (%): Post-liquefaction volumentric strain
DF: e_v depth weighting factor
Settlement: Calculated settlement

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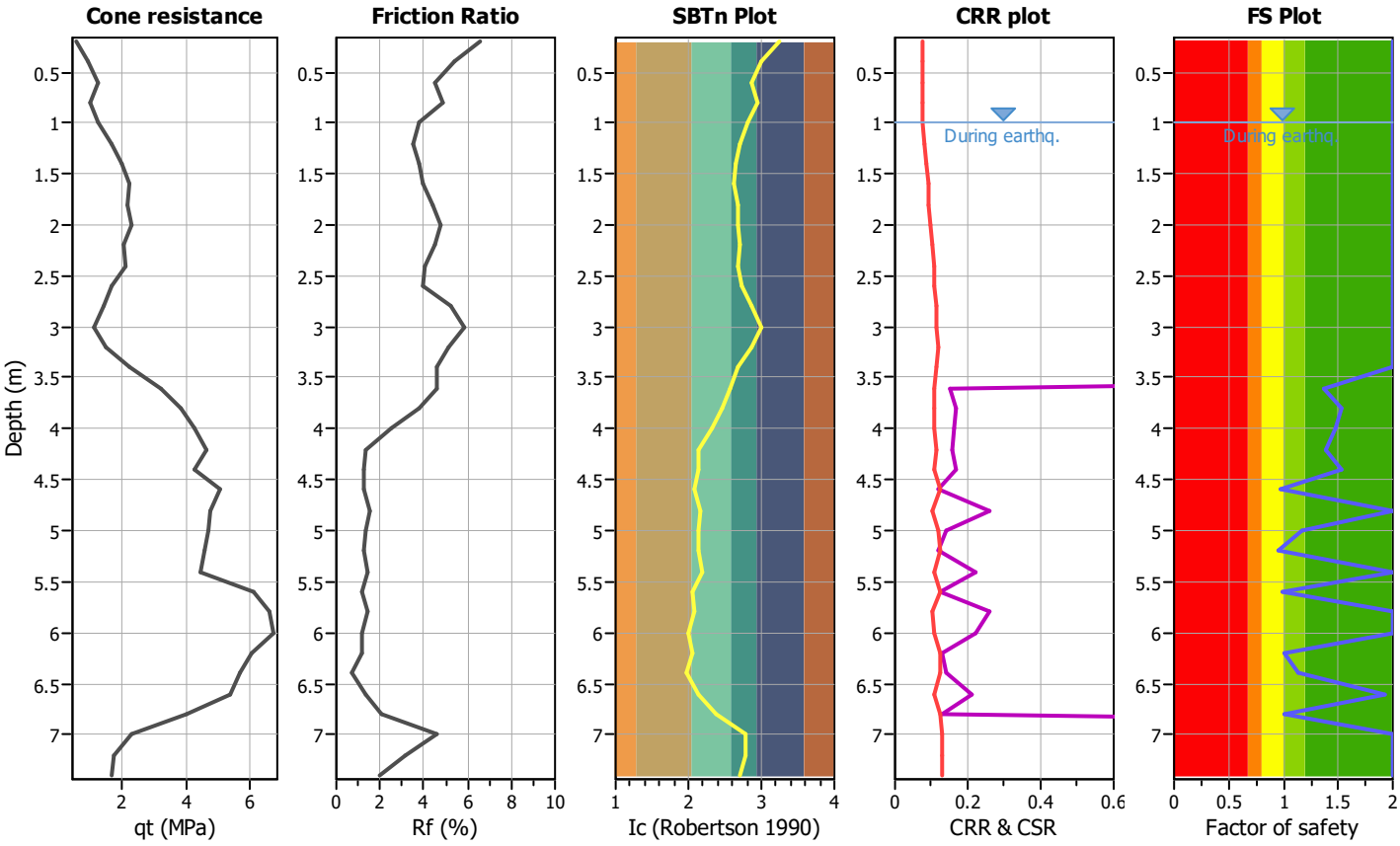
LIQUEFACTION ANALYSIS REPORT

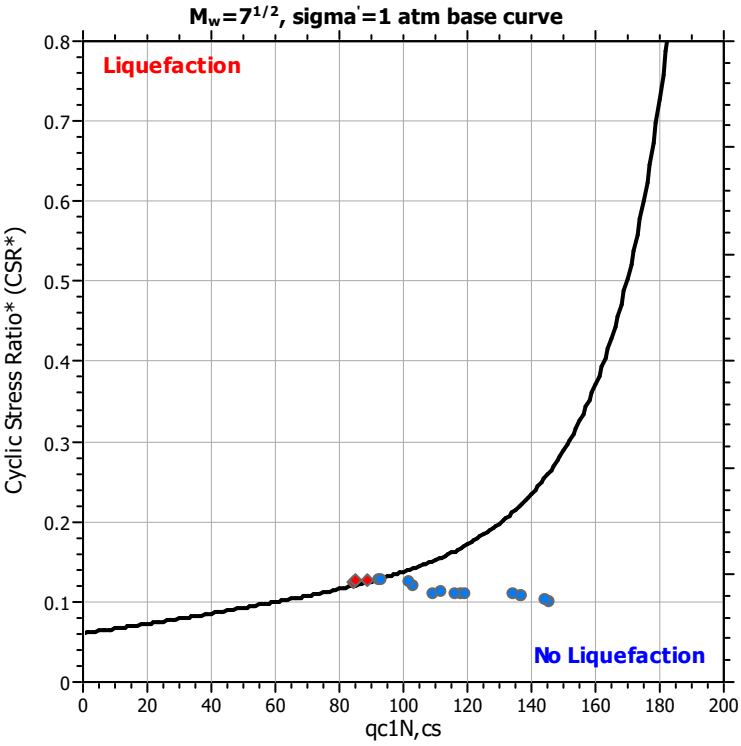
Project title : **Location :**

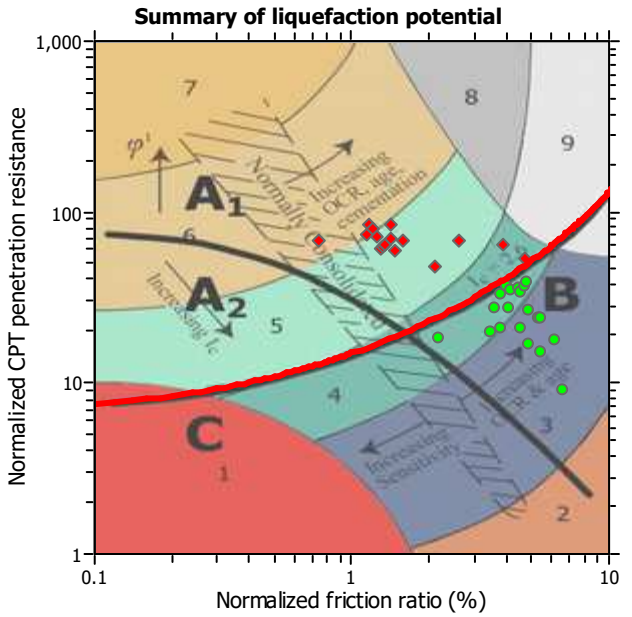
CPT file : CPT277

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.14	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

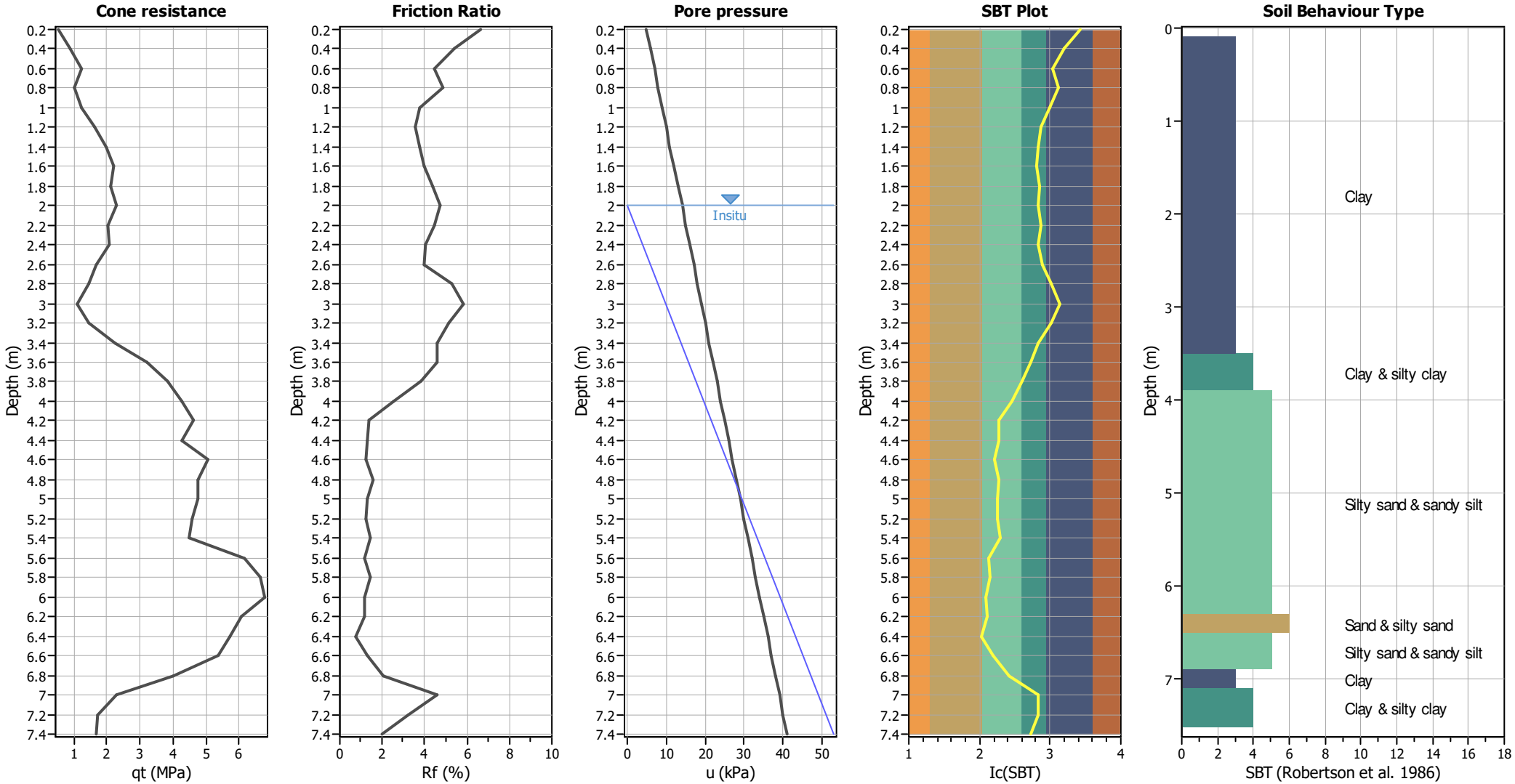






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



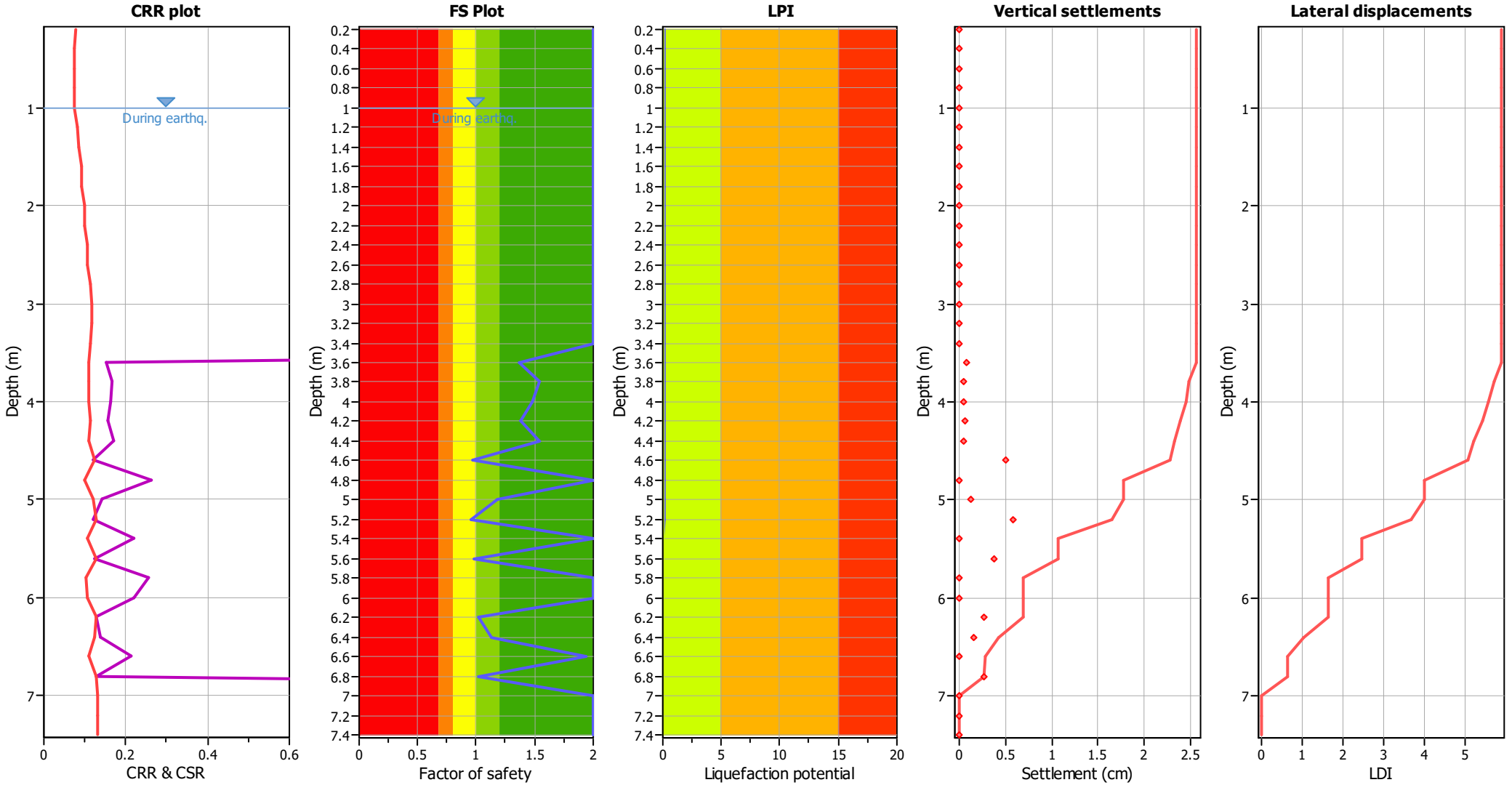
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.14	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.14	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	1.37	0.00	8.20	0.20	0.00
3.80	1.54	0.00	8.10	0.20	0.00	4.00	1.48	0.00	8.00	0.20	0.00
4.20	1.38	0.00	7.90	0.20	0.00	4.40	1.54	0.00	7.80	0.20	0.00
4.60	0.97	0.03	7.70	0.20	0.05	4.80	2.00	0.00	7.60	0.20	0.00
5.00	1.18	0.00	7.50	0.20	0.00	5.20	0.96	0.04	7.40	0.20	0.06
5.40	2.00	0.00	7.30	0.20	0.00	5.60	0.98	0.02	7.20	0.20	0.02
5.80	2.00	0.00	7.10	0.20	0.00	6.00	2.00	0.00	7.00	0.20	0.00
6.20	1.02	0.00	6.90	0.20	0.00	6.40	1.13	0.00	6.80	0.20	0.00
6.60	1.93	0.00	6.70	0.20	0.00	6.80	1.02	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00						

Overall liquefaction potential: 0.14

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	15.10	2.00	0.00	1.00	0.00	1.20	30.20	2.00	0.00	1.00	0.00
1.40	36.91	2.00	0.00	1.00	0.00	1.60	31.88	2.00	0.00	1.00	0.00
1.80	41.94	2.00	0.00	1.00	0.00	2.00	33.56	2.00	0.00	1.00	0.00
2.20	38.68	2.00	0.00	1.00	0.00	2.40	27.69	2.00	0.00	1.00	0.00
2.60	32.94	2.00	0.00	1.00	0.00	2.80	19.12	2.00	0.00	1.00	0.00
3.00	15.74	2.00	0.00	1.00	0.00	3.20	16.93	2.00	0.00	1.00	0.00
3.40	33.40	2.00	0.00	1.00	0.00	3.60	109.64	1.37	0.35	1.00	0.07
3.80	117.85	1.54	0.23	1.00	0.05	4.00	115.99	1.48	0.26	1.00	0.05
4.20	111.89	1.38	0.35	1.00	0.07	4.40	119.39	1.54	0.23	1.00	0.05
4.60	84.38	0.97	2.54	1.00	0.51	4.80	145.48	2.00	0.00	1.00	0.00
5.00	102.82	1.18	0.63	1.00	0.13	5.20	85.16	0.96	2.88	1.00	0.58
5.40	136.78	2.00	0.00	1.00	0.00	5.60	88.58	0.98	1.86	1.00	0.37
5.80	144.66	2.00	0.00	1.00	0.00	6.00	136.61	2.00	0.00	1.00	0.00
6.20	92.42	1.02	1.34	1.00	0.27	6.40	101.68	1.13	0.75	1.00	0.15
6.60	134.50	1.93	0.03	1.00	0.01	6.80	92.83	1.02	1.36	1.00	0.27
7.00	20.36	2.00	0.00	1.00	0.00	7.20	20.14	2.00	0.00	1.00	0.00
7.40	17.76	2.00	0.00	1.00	0.00						

Total estimated settlement: 2.56

Abbreviations

$Q_{tn,cs}$: Equivalent clean sand normalized cone resistance
FS: Factor of safety against liquefaction
e_v (%): Post-liquefaction volumentric strain
DF: e_v depth weighting factor
Settlement: Calculated settlement

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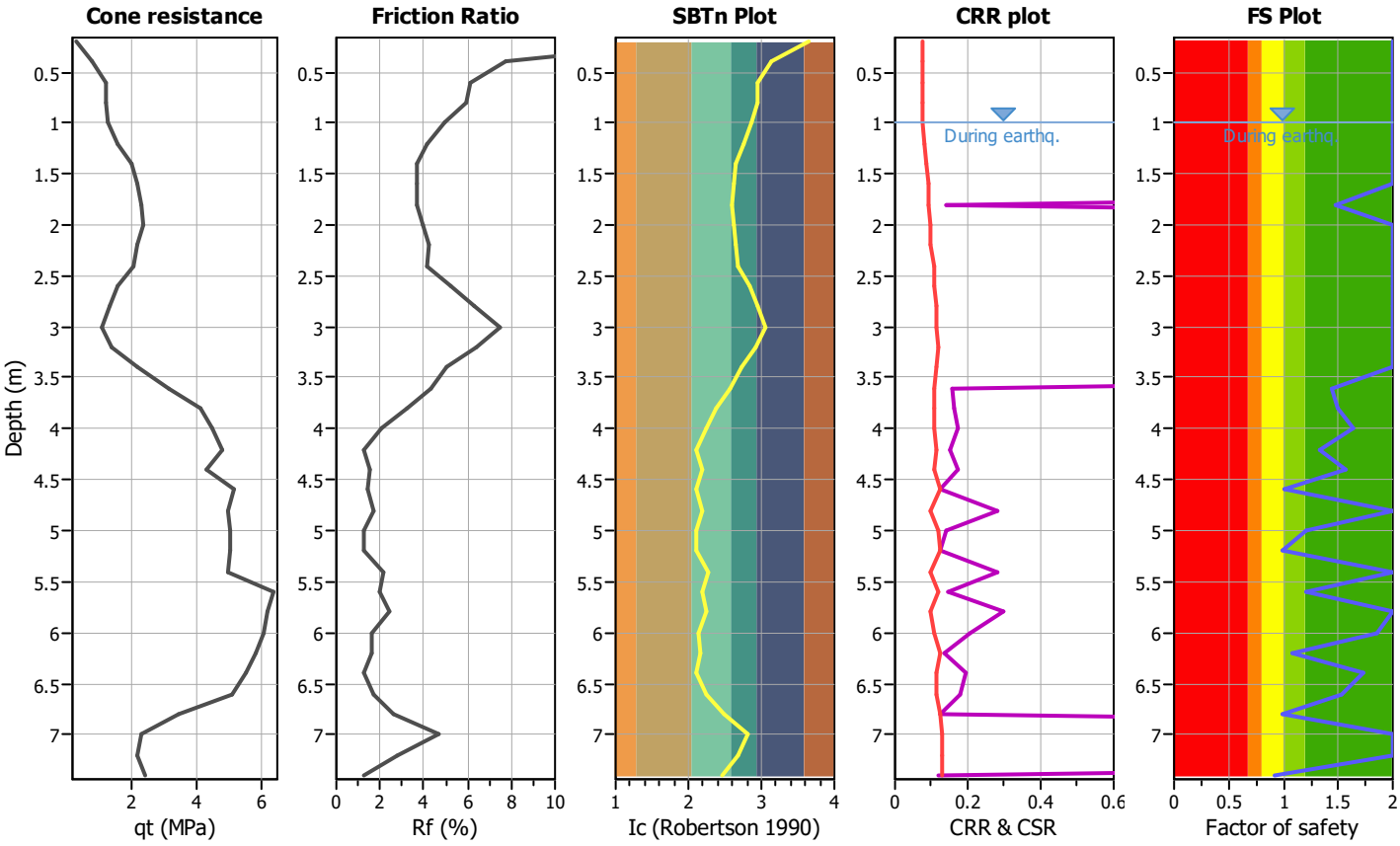
LIQUEFACTION ANALYSIS REPORT

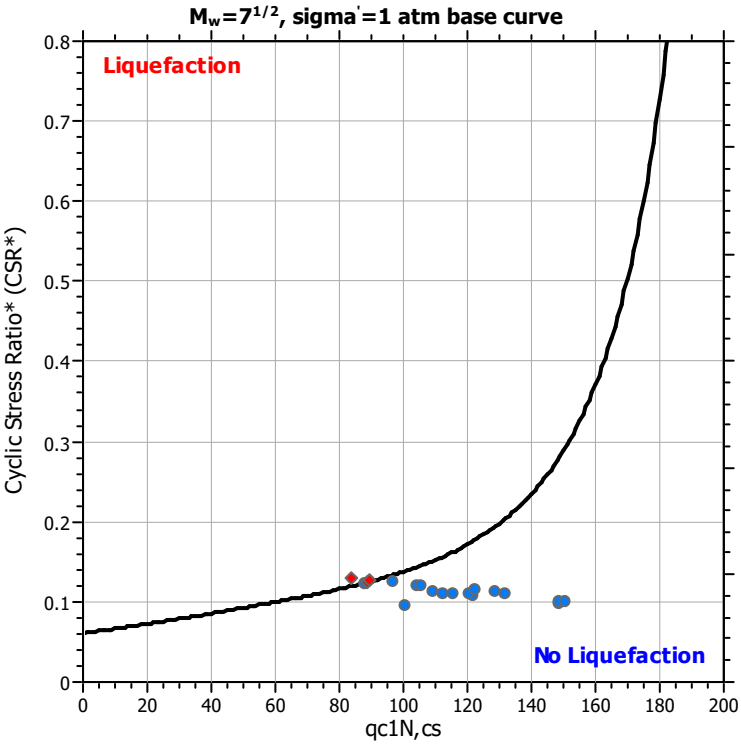
Project title : **Location :**

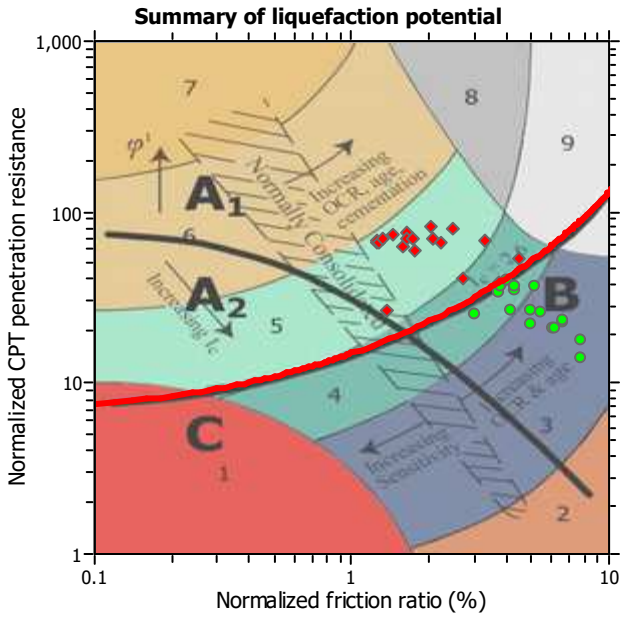
CPT file : CPT278

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.14	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

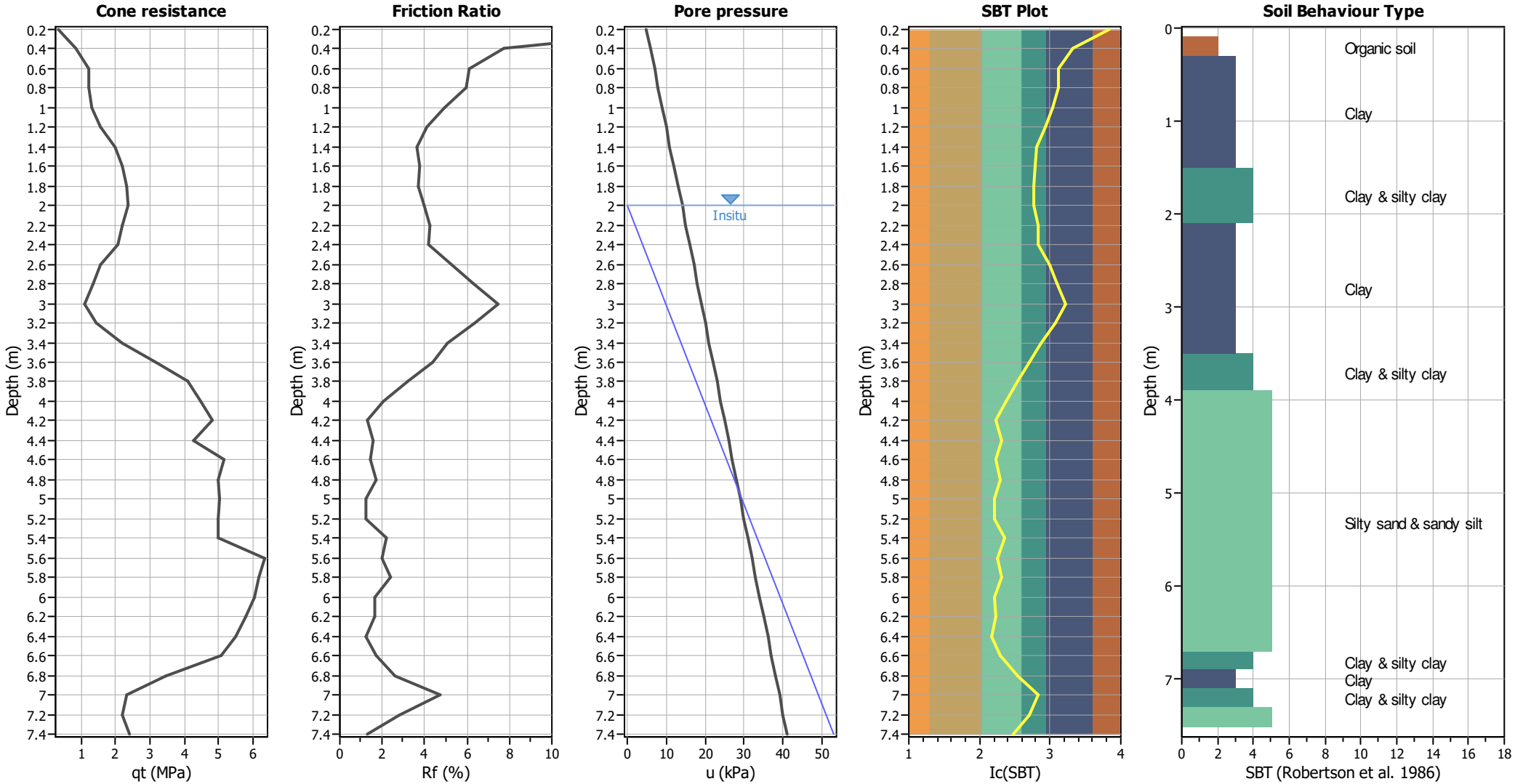






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



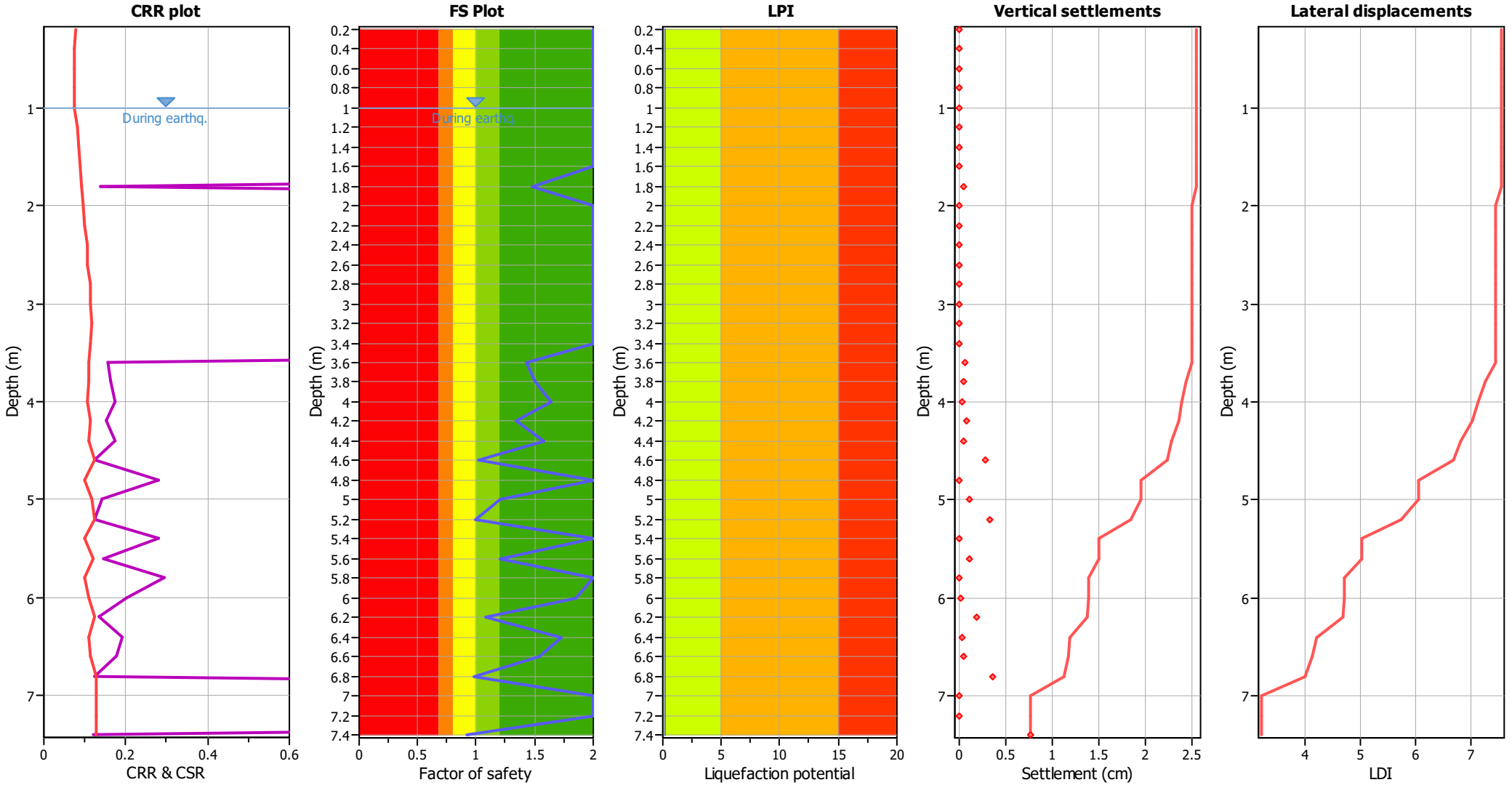
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.14	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.14	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	1.47	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	1.43	0.00	8.20	0.20	0.00
3.80	1.50	0.00	8.10	0.20	0.00	4.00	1.64	0.00	8.00	0.20	0.00
4.20	1.34	0.00	7.90	0.20	0.00	4.40	1.58	0.00	7.80	0.20	0.00
4.60	1.01	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	1.21	0.00	7.50	0.20	0.00	5.20	1.00	0.00	7.40	0.20	0.01
5.40	2.00	0.00	7.30	0.20	0.00	5.60	1.21	0.00	7.20	0.20	0.00
5.80	2.00	0.00	7.10	0.20	0.00	6.00	1.85	0.00	7.00	0.20	0.00
6.20	1.08	0.00	6.90	0.20	0.00	6.40	1.73	0.00	6.80	0.20	0.00
6.60	1.54	0.00	6.70	0.20	0.00	6.80	0.99	0.01	6.60	0.20	0.02
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	0.92	0.08	6.30	0.20	0.10						

Overall liquefaction potential: 0.12

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	16.78	2.00	0.00	1.00	0.00	1.20	28.52	2.00	0.00	1.00	0.00
1.40	33.56	2.00	0.00	1.00	0.00	1.60	38.59	2.00	0.00	1.00	0.00
1.80	100.63	1.47	0.23	1.00	0.05	2.00	37.97	2.00	0.00	1.00	0.00
2.20	40.04	2.00	0.00	1.00	0.00	2.40	29.06	2.00	0.00	1.00	0.00
2.60	29.84	2.00	0.00	1.00	0.00	2.80	15.98	2.00	0.00	1.00	0.00
3.00	18.62	2.00	0.00	1.00	0.00	3.20	16.81	2.00	0.00	1.00	0.00
3.40	29.13	2.00	0.00	1.00	0.00	3.60	112.43	1.43	0.30	1.00	0.06
3.80	115.90	1.50	0.25	1.00	0.05	4.00	121.84	1.64	0.16	1.00	0.03
4.20	109.49	1.34	0.39	1.00	0.08	4.40	120.58	1.58	0.20	1.00	0.04
4.60	88.42	1.01	1.42	1.00	0.28	4.80	148.79	2.00	0.00	1.00	0.00
5.00	104.21	1.21	0.58	1.00	0.12	5.20	88.53	1.00	1.65	1.00	0.33
5.40	148.87	2.00	0.00	1.00	0.00	5.60	105.58	1.21	0.57	1.00	0.11
5.80	150.86	2.00	0.00	1.00	0.00	6.00	131.62	1.85	0.06	1.00	0.01
6.20	97.05	1.08	0.93	1.00	0.19	6.40	128.54	1.73	0.12	1.00	0.02
6.60	122.33	1.54	0.23	1.00	0.05	6.80	89.64	0.99	1.76	1.00	0.35
7.00	21.29	2.00	0.00	1.00	0.00	7.20	24.34	2.00	0.00	1.00	0.00
7.40	83.65	0.92	3.84	1.00	0.77						

Total estimated settlement: 2.54

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement

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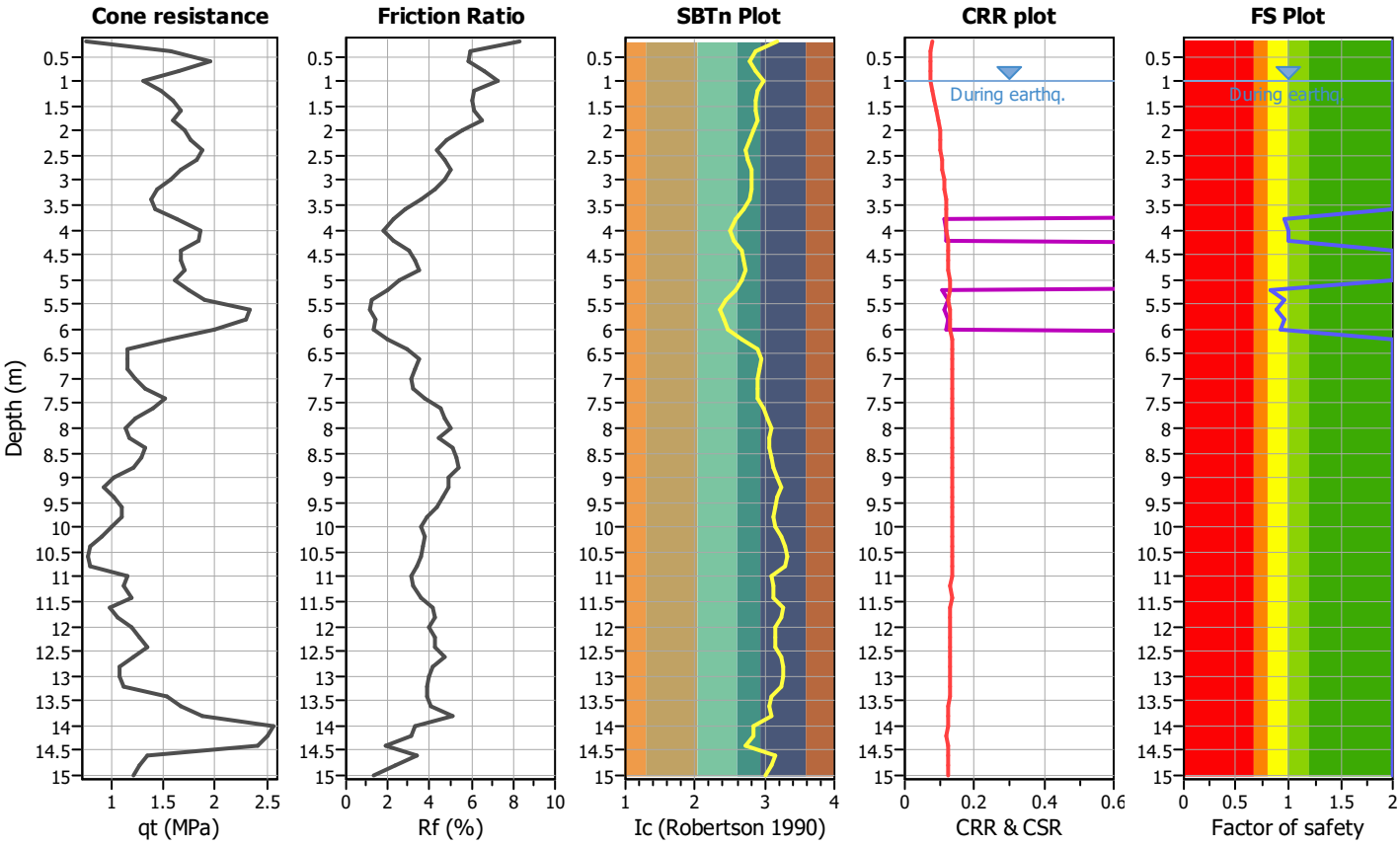
LIQUEFACTION ANALYSIS REPORT

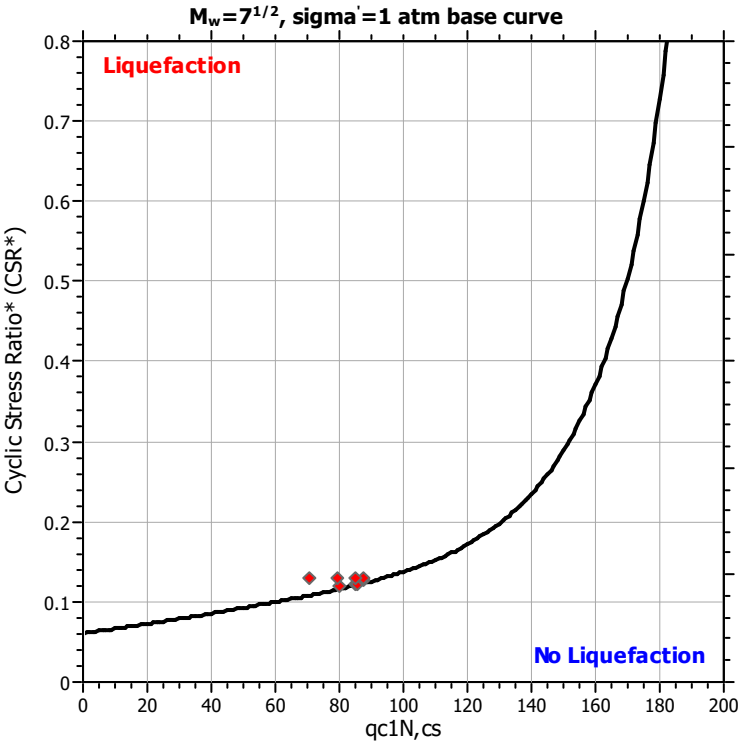
Project title : **Location :**

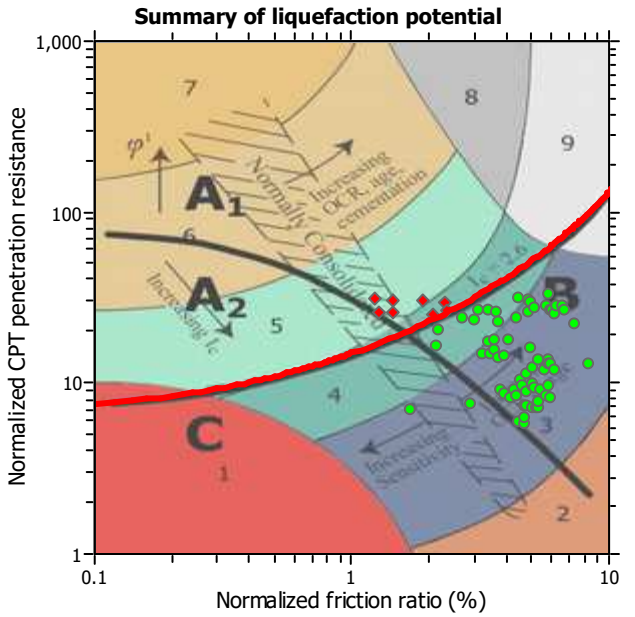
CPT file : CPT8

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.00 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	15.00 m
Earthquake magnitude M_w:	6.14	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.14	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

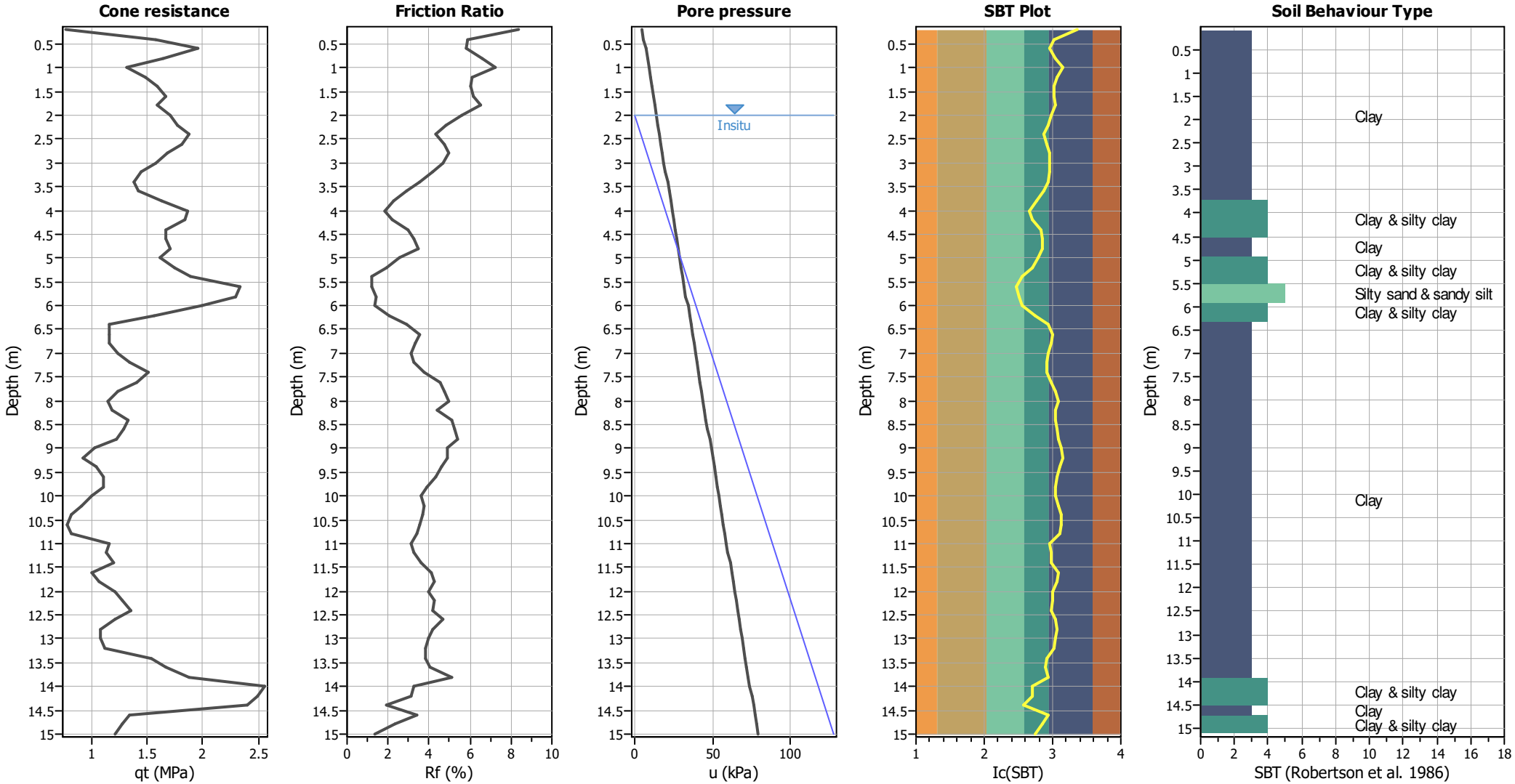






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



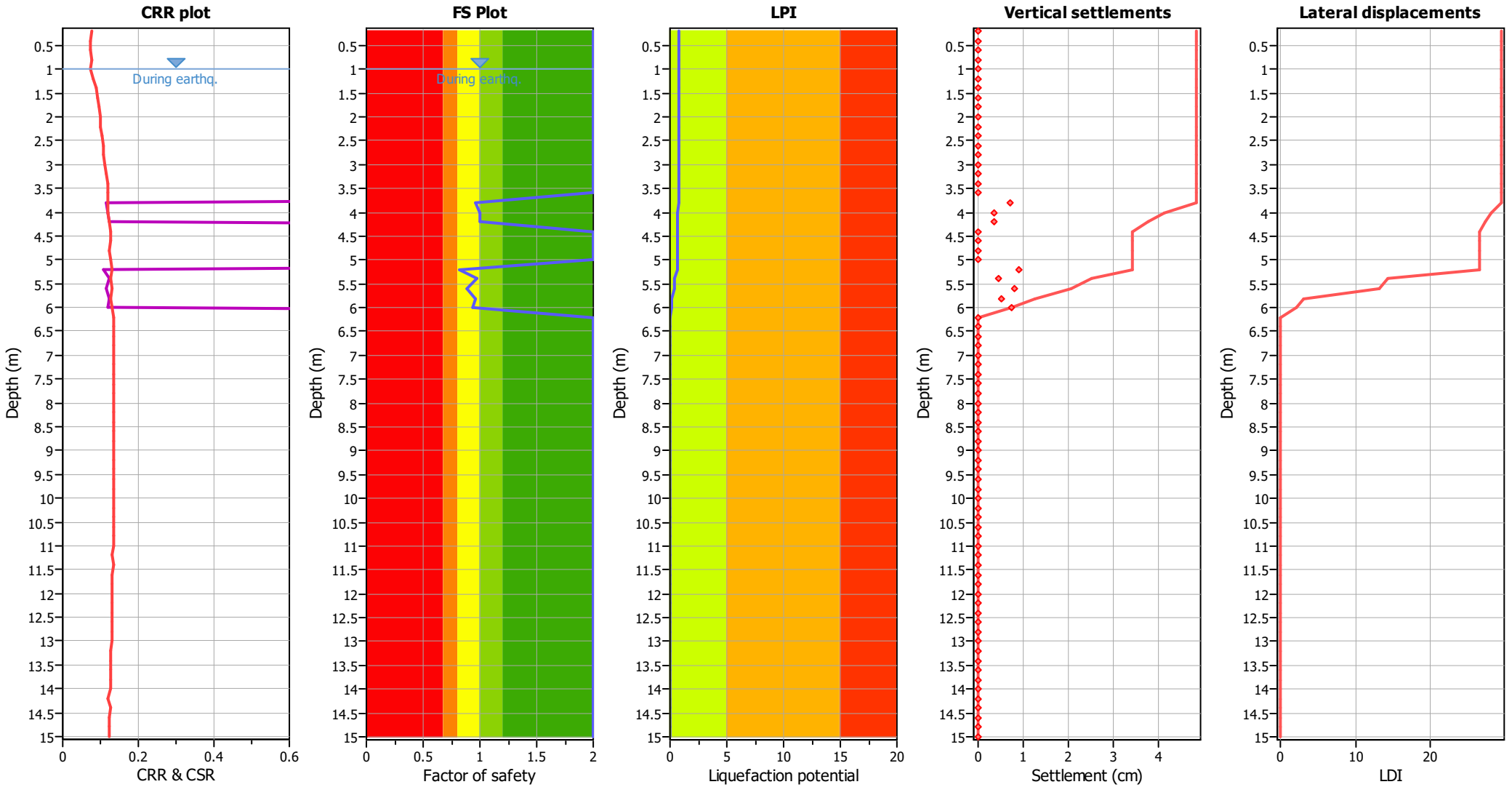
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.14	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.00 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.14	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.14	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	2.00 m	Fill height:	N/A	Limit depth:	15.00 m

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

:: Liquefaction Potential Index calculation data ::

Depth (m)	FS	F_L	w_z	d_z	LPI	Depth (m)	FS	F_L	w_z	d_z	LPI
0.20	2.00	0.00	9.90	0.20	0.00	0.40	2.00	0.00	9.80	0.20	0.00
0.60	2.00	0.00	9.70	0.20	0.00	0.80	2.00	0.00	9.60	0.20	0.00
1.00	2.00	0.00	9.50	0.20	0.00	1.20	2.00	0.00	9.40	0.20	0.00
1.40	2.00	0.00	9.30	0.20	0.00	1.60	2.00	0.00	9.20	0.20	0.00
1.80	2.00	0.00	9.10	0.20	0.00	2.00	2.00	0.00	9.00	0.20	0.00
2.20	2.00	0.00	8.90	0.20	0.00	2.40	2.00	0.00	8.80	0.20	0.00
2.60	2.00	0.00	8.70	0.20	0.00	2.80	2.00	0.00	8.60	0.20	0.00
3.00	2.00	0.00	8.50	0.20	0.00	3.20	2.00	0.00	8.40	0.20	0.00
3.40	2.00	0.00	8.30	0.20	0.00	3.60	2.00	0.00	8.20	0.20	0.00
3.80	0.96	0.04	8.10	0.20	0.07	4.00	1.00	0.00	8.00	0.20	0.01
4.20	0.99	0.01	7.90	0.20	0.01	4.40	2.00	0.00	7.80	0.20	0.00
4.60	2.00	0.00	7.70	0.20	0.00	4.80	2.00	0.00	7.60	0.20	0.00
5.00	2.00	0.00	7.50	0.20	0.00	5.20	0.83	0.17	7.40	0.20	0.26
5.40	0.97	0.03	7.30	0.20	0.05	5.60	0.88	0.12	7.20	0.20	0.17
5.80	0.96	0.04	7.10	0.20	0.06	6.00	0.93	0.07	7.00	0.20	0.10
6.20	2.00	0.00	6.90	0.20	0.00	6.40	2.00	0.00	6.80	0.20	0.00
6.60	2.00	0.00	6.70	0.20	0.00	6.80	2.00	0.00	6.60	0.20	0.00
7.00	2.00	0.00	6.50	0.20	0.00	7.20	2.00	0.00	6.40	0.20	0.00
7.40	2.00	0.00	6.30	0.20	0.00	7.60	2.00	0.00	6.20	0.20	0.00
7.80	2.00	0.00	6.10	0.20	0.00	8.00	2.00	0.00	6.00	0.20	0.00
8.20	2.00	0.00	5.90	0.20	0.00	8.40	2.00	0.00	5.80	0.20	0.00
8.60	2.00	0.00	5.70	0.20	0.00	8.80	2.00	0.00	5.60	0.20	0.00
9.00	2.00	0.00	5.50	0.20	0.00	9.20	2.00	0.00	5.40	0.20	0.00
9.40	2.00	0.00	5.30	0.20	0.00	9.60	2.00	0.00	5.20	0.20	0.00
9.80	2.00	0.00	5.10	0.20	0.00	10.00	2.00	0.00	5.00	0.20	0.00
10.20	2.00	0.00	4.90	0.20	0.00	10.40	2.00	0.00	4.80	0.20	0.00
10.60	2.00	0.00	4.70	0.20	0.00	10.80	2.00	0.00	4.60	0.20	0.00
11.00	2.00	0.00	4.50	0.20	0.00	11.20	2.00	0.00	4.40	0.20	0.00
11.40	2.00	0.00	4.30	0.20	0.00	11.60	2.00	0.00	4.20	0.20	0.00
11.80	2.00	0.00	4.10	0.20	0.00	12.00	2.00	0.00	4.00	0.20	0.00
12.20	2.00	0.00	3.90	0.20	0.00	12.40	2.00	0.00	3.80	0.20	0.00
12.60	2.00	0.00	3.70	0.20	0.00	12.80	2.00	0.00	3.60	0.20	0.00
13.00	2.00	0.00	3.50	0.20	0.00	13.20	2.00	0.00	3.40	0.20	0.00
13.40	2.00	0.00	3.30	0.20	0.00	13.60	2.00	0.00	3.20	0.20	0.00
13.80	2.00	0.00	3.10	0.20	0.00	14.00	2.00	0.00	3.00	0.20	0.00
14.20	2.00	0.00	2.90	0.20	0.00	14.40	2.00	0.00	2.80	0.20	0.00
14.60	2.00	0.00	2.70	0.20	0.00	14.80	2.00	0.00	2.60	0.20	0.00
15.00	2.00	0.00	2.50	0.20	0.00						

Overall liquefaction potential: 0.71

LPI = 0.00 - Liquefaction risk very low
LPI between 0.00 and 5.00 - Liquefaction risk low
LPI between 5.00 and 15.00 - Liquefaction risk high
LPI > 15.00 - Liquefaction risk very high

Abbreviations

FS: Calculated factor of safety for test point
F_L: 1 - FS
w_z: Function value of the extend of soil liquefaction according to depth
d_z: Layer thickness (m)
LPI: Liquefaction potential index value for test point

:: Post-earthquake settlement due to soil liquefaction ::

Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)	Depth (m)	$q_{c1N,cs}$	FS	e_v (%)	DF	Settlement (cm)
1.00	22.47	2.00	0.00	1.00	0.00	1.20	24.41	2.00	0.00	1.00	0.00
1.40	27.84	2.00	0.00	1.00	0.00	1.60	27.84	2.00	0.00	1.00	0.00
1.80	27.84	2.00	0.00	1.00	0.00	2.00	24.41	2.00	0.00	1.00	0.00
2.20	32.04	2.00	0.00	1.00	0.00	2.40	29.93	2.00	0.00	1.00	0.00
2.60	27.84	2.00	0.00	1.00	0.00	2.80	27.28	2.00	0.00	1.00	0.00
3.00	22.42	2.00	0.00	1.00	0.00	3.20	22.22	2.00	0.00	1.00	0.00
3.40	20.43	2.00	0.00	1.00	0.00	3.60	18.71	2.00	0.00	1.00	0.00
3.80	79.94	0.96	3.60	1.00	0.72	4.00	84.87	1.00	1.72	1.00	0.34
4.20	85.64	0.99	1.75	1.00	0.35	4.40	20.48	2.00	0.00	1.00	0.00
4.60	20.16	2.00	0.00	1.00	0.00	4.80	26.32	2.00	0.00	1.00	0.00
5.00	20.90	2.00	0.00	1.00	0.00	5.20	70.76	0.83	4.50	1.00	0.90
5.40	87.56	0.97	2.25	1.00	0.45	5.60	79.08	0.88	4.05	1.00	0.81
5.80	87.65	0.96	2.53	1.00	0.51	6.00	85.29	0.93	3.77	1.00	0.75
6.20	13.69	2.00	0.00	1.00	0.00	6.40	14.71	2.00	0.00	1.00	0.00
6.60	13.34	2.00	0.00	1.00	0.00	6.80	13.19	2.00	0.00	1.00	0.00
7.00	14.21	2.00	0.00	1.00	0.00	7.20	15.37	2.00	0.00	1.00	0.00
7.40	16.34	2.00	0.00	1.00	0.00	7.60	19.54	2.00	0.00	1.00	0.00
7.80	11.48	2.00	0.00	1.00	0.00	8.00	10.24	2.00	0.00	1.00	0.00
8.20	15.80	2.00	0.00	1.00	0.00	8.40	12.36	2.00	0.00	1.00	0.00
8.60	14.39	2.00	0.00	1.00	0.00	8.80	14.25	2.00	0.00	1.00	0.00
9.00	9.86	2.00	0.00	1.00	0.00	9.20	7.79	2.00	0.00	1.00	0.00
9.40	10.86	2.00	0.00	1.00	0.00	9.60	12.83	2.00	0.00	1.00	0.00
9.80	9.63	2.00	0.00	1.00	0.00	10.00	10.57	2.00	0.00	1.00	0.00
10.20	9.61	2.00	0.00	1.00	0.00	10.40	6.52	2.00	0.00	1.00	0.00
10.60	7.46	2.00	0.00	1.00	0.00	10.80	8.39	2.00	0.00	1.00	0.00
11.00	7.34	2.00	0.00	1.00	0.00	11.20	17.17	2.00	0.00	1.00	0.00
11.40	7.35	2.00	0.00	1.00	0.00	11.60	9.21	2.00	0.00	1.00	0.00
11.80	11.04	2.00	0.00	1.00	0.00	12.00	9.06	2.00	0.00	1.00	0.00
12.20	12.88	2.00	0.00	1.00	0.00	12.40	12.78	2.00	0.00	1.00	0.00
12.60	10.82	2.00	0.00	1.00	0.00	12.80	8.91	2.00	0.00	1.00	0.00
13.00	8.84	2.00	0.00	1.00	0.00	13.20	10.71	2.00	0.00	1.00	0.00
13.40	9.73	2.00	0.00	1.00	0.00	13.60	19.56	2.00	0.00	1.00	0.00
13.80	14.03	2.00	0.00	1.00	0.00	14.00	14.80	2.00	0.00	1.00	0.00
14.20	37.23	2.00	0.00	1.00	0.00	14.40	12.08	2.00	0.00	1.00	0.00
14.60	12.01	2.00	0.00	1.00	0.00	14.80	9.36	2.00	0.00	1.00	0.00
15.00	10.16	2.00	0.00	1.00	0.00						

Total estimated settlement: 4.84

Abbreviations

$Q_{tn,cs}$:	Equivalent clean sand normalized cone resistance
FS:	Factor of safety against liquefaction
e_v (%):	Post-liquefaction volumentric strain
DF:	e_v depth weighting factor
Settlement:	Calculated settlement