

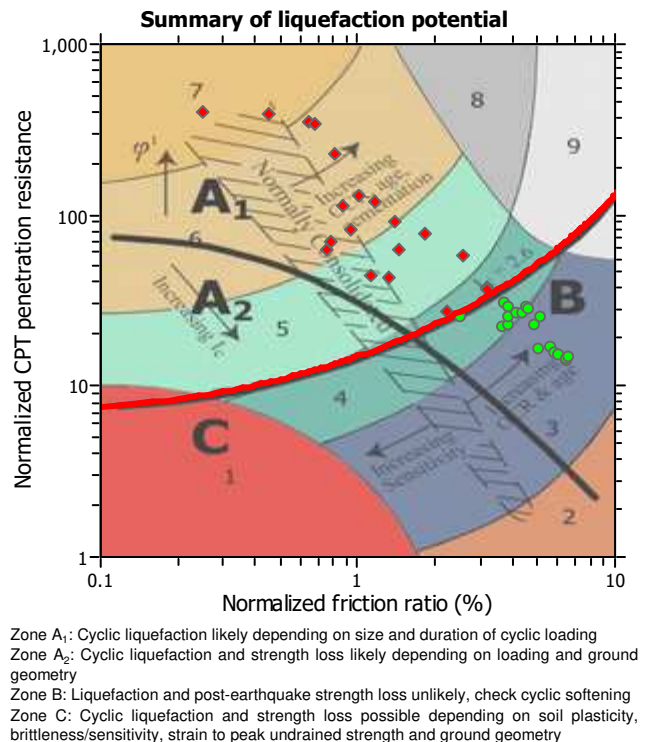
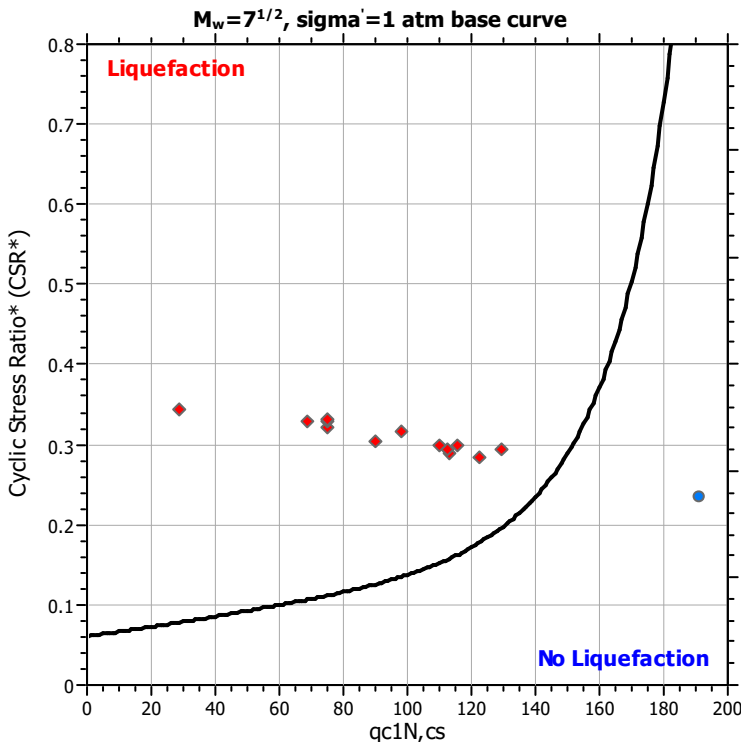
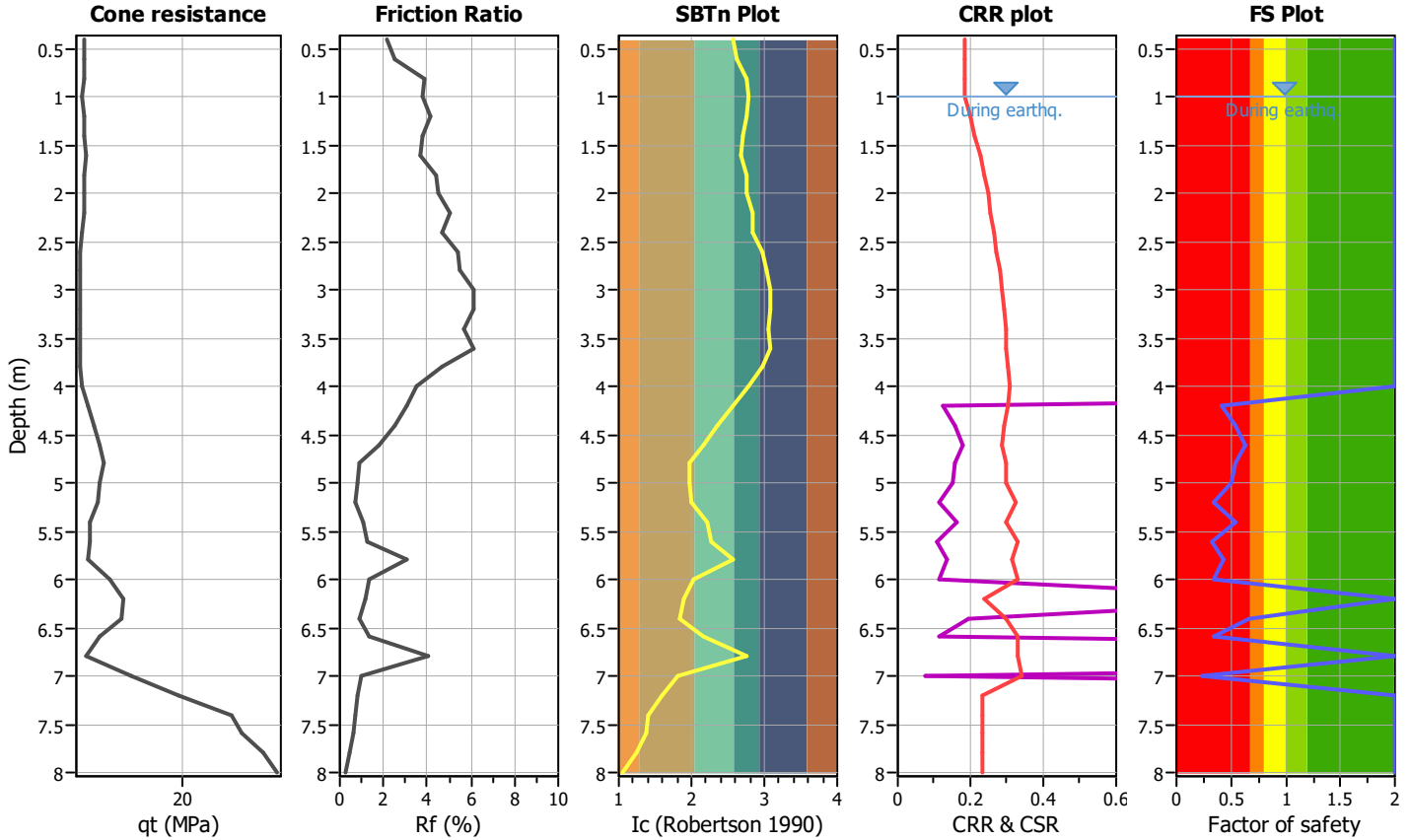
LIQUEFACTION ANALYSIS REPORT

Project title :
CPT file : P15

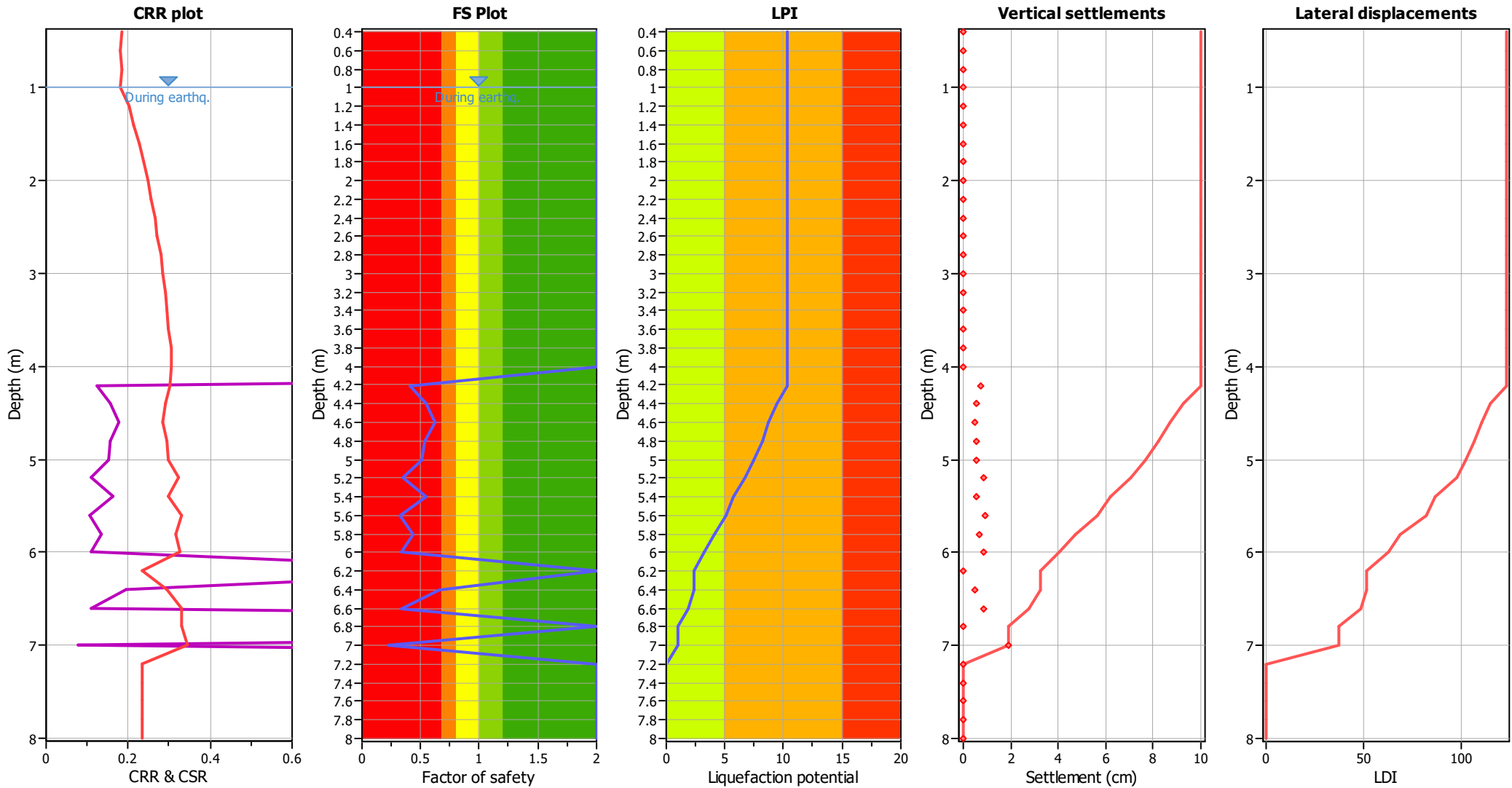
Location :

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.00 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:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.33	Unit weight calculation:	Based on SBT	K_G applied:	Yes		



Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (earthq.):	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 :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.33	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.00 m	Fill height:	N/A	Limit depth:	N/A

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
0.40	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	0.42	0.58	7.90	0.20	0.92
4.40	0.54	0.46	7.80	0.20	0.72	4.60	0.62	0.38	7.70	0.20	0.58
4.80	0.53	0.47	7.60	0.20	0.71	5.00	0.51	0.49	7.50	0.20	0.74
5.20	0.35	0.65	7.40	0.20	0.97	5.40	0.54	0.46	7.30	0.20	0.67
5.60	0.32	0.68	7.20	0.20	0.97	5.80	0.43	0.57	7.10	0.20	0.81
6.00	0.34	0.66	7.00	0.20	0.92	6.20	2.00	0.00	6.90	0.20	0.00
6.40	0.66	0.34	6.80	0.20	0.46	6.60	0.34	0.66	6.70	0.20	0.89
6.80	2.00	0.00	6.60	0.20	0.00	7.00	0.23	0.77	6.50	0.20	1.00
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						

Overall liquefaction potential: 10.37

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

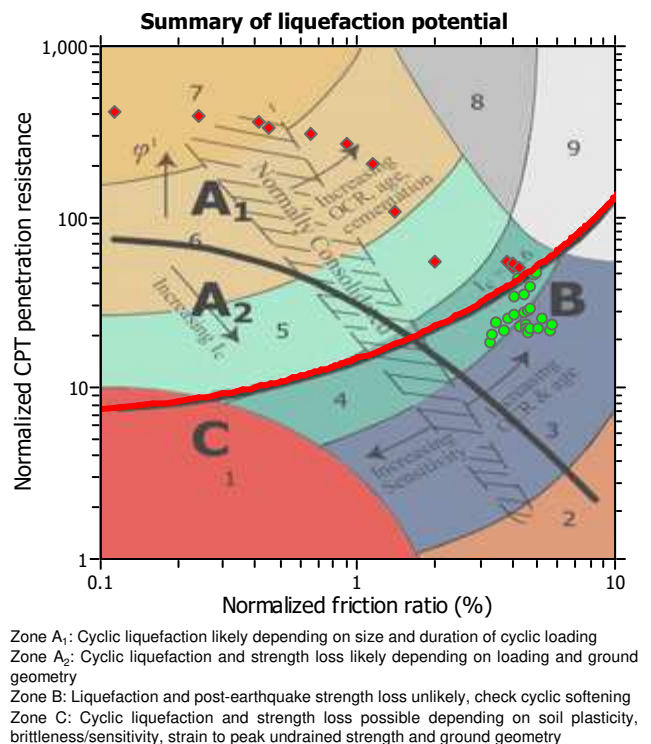
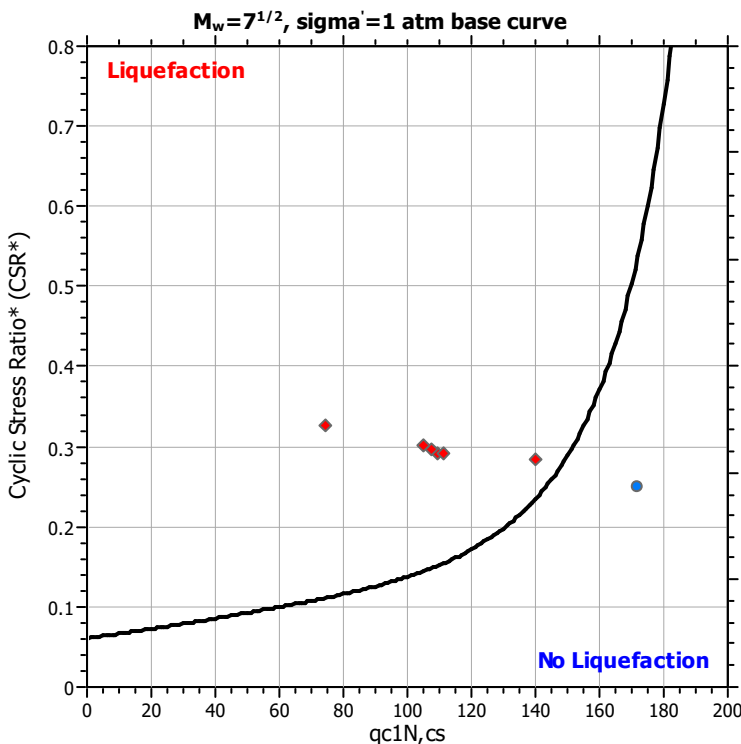
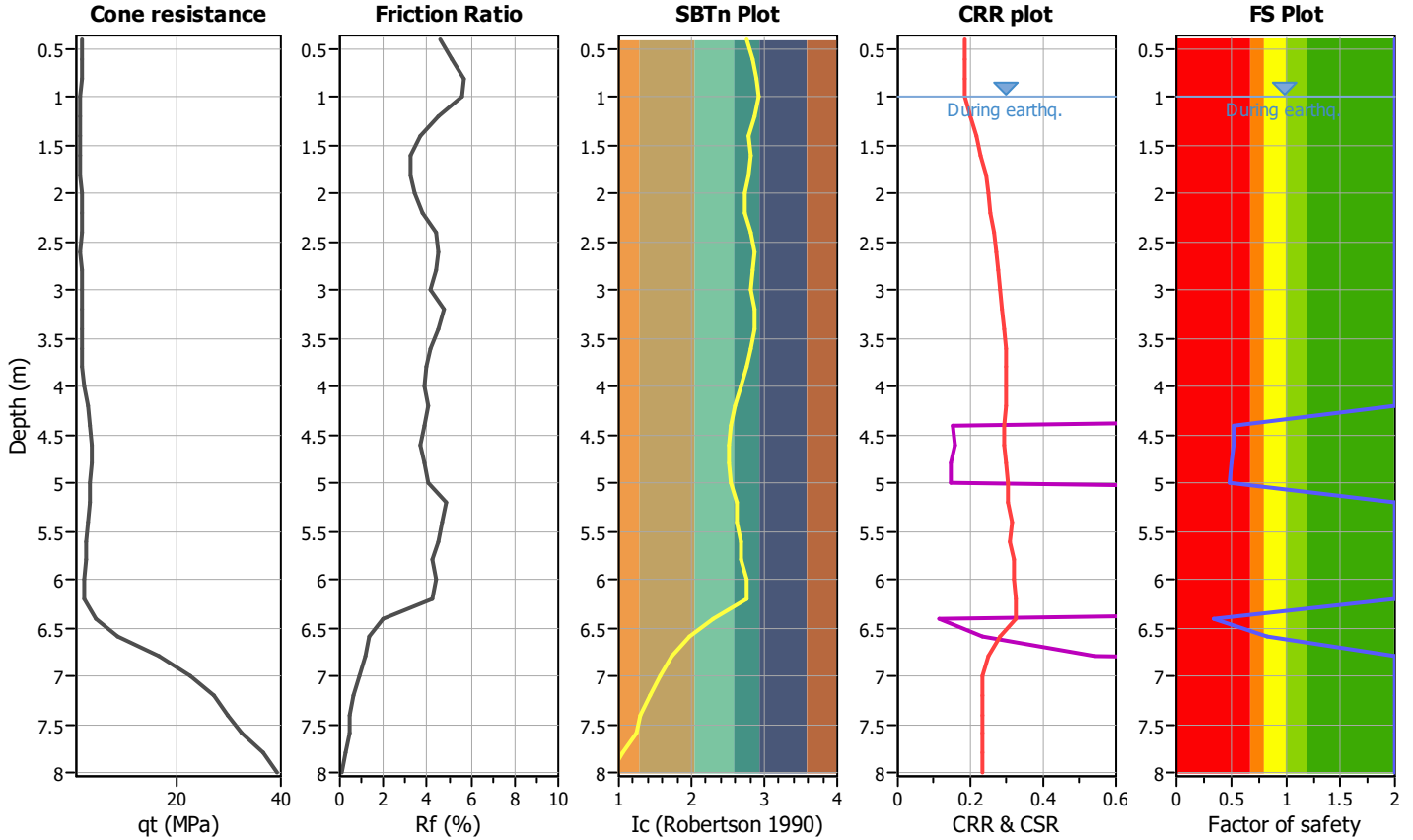
LIQUEFACTION ANALYSIS REPORT

Project title :
CPT file : P16

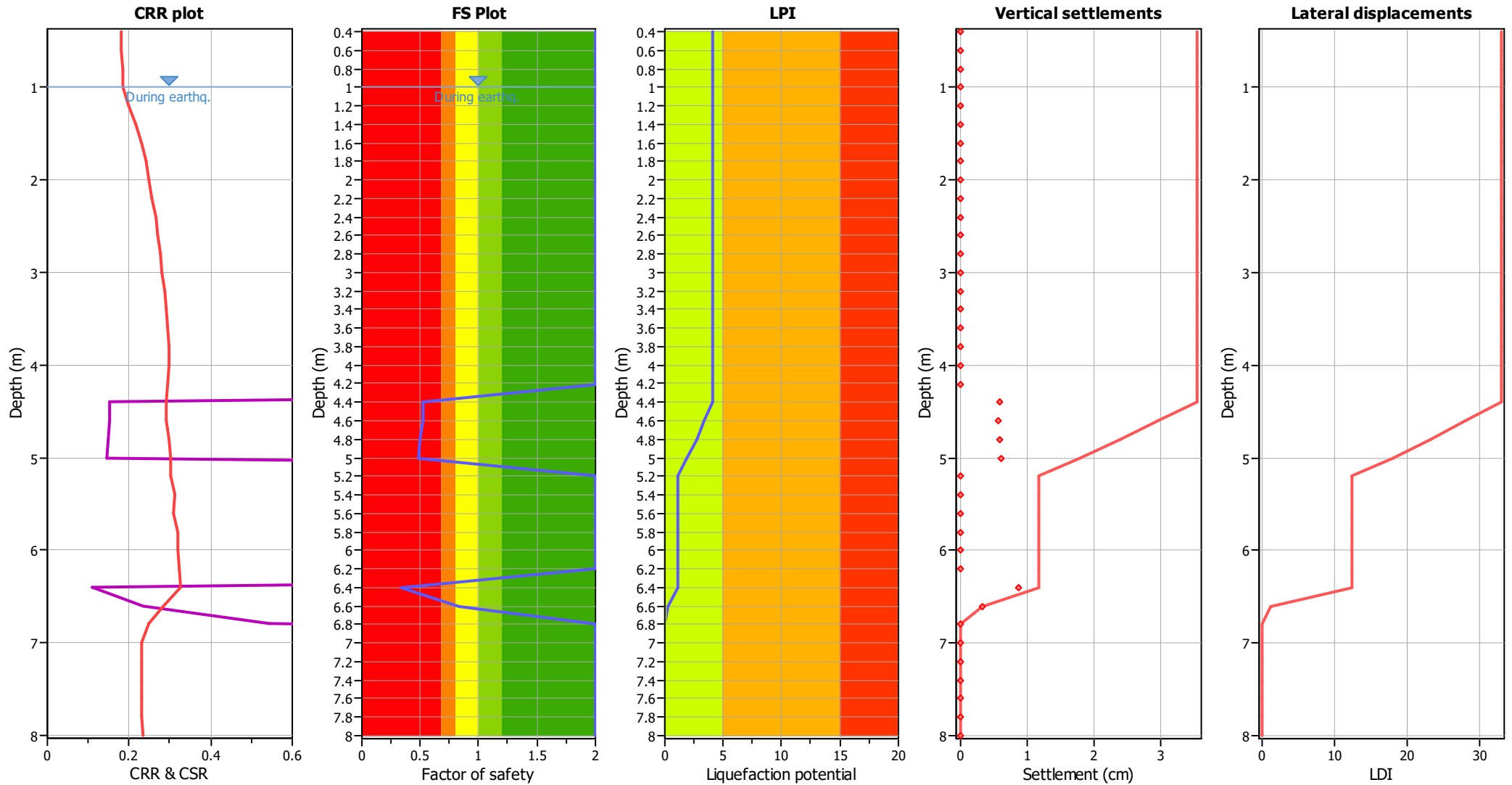
Location :

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.00 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:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.33	Unit weight calculation:	Based on SBT	K_G applied:	Yes		



Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (earthq.):	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_f applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.33	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.00 m	Fill height:	N/A	Limit depth:	N/A

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
0.40	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	0.52	0.48	7.80	0.20	0.75	4.60	0.53	0.47	7.70	0.20	0.73
4.80	0.50	0.50	7.60	0.20	0.76	5.00	0.48	0.52	7.50	0.20	0.78
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	0.34	0.66	6.80	0.20	0.90	6.60	0.83	0.17	6.70	0.20	0.23
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						

Overall liquefaction potential: 4.15

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

LIQUEFACTION ANALYSIS REPORT

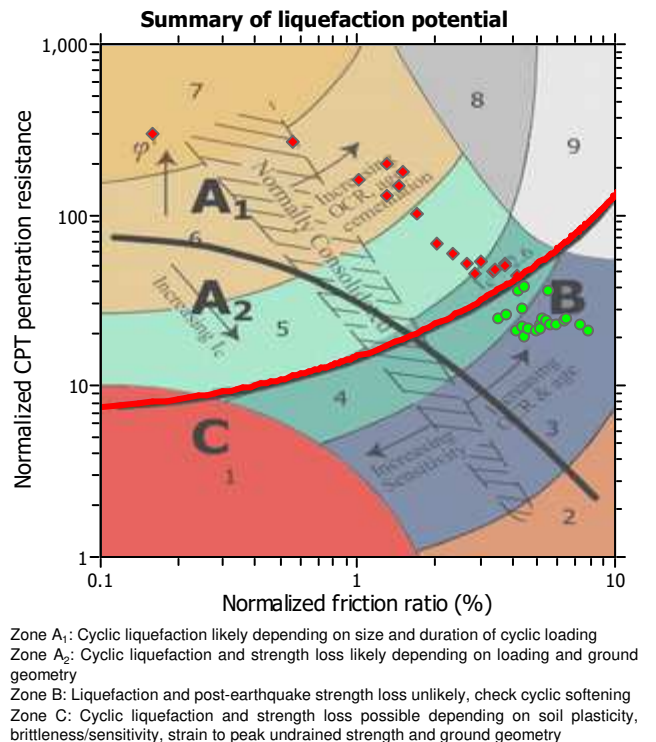
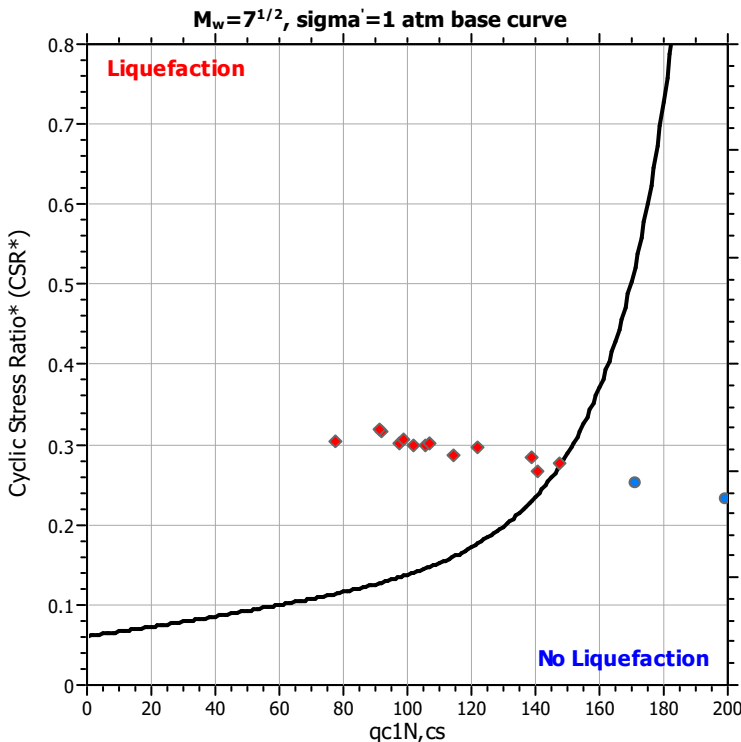
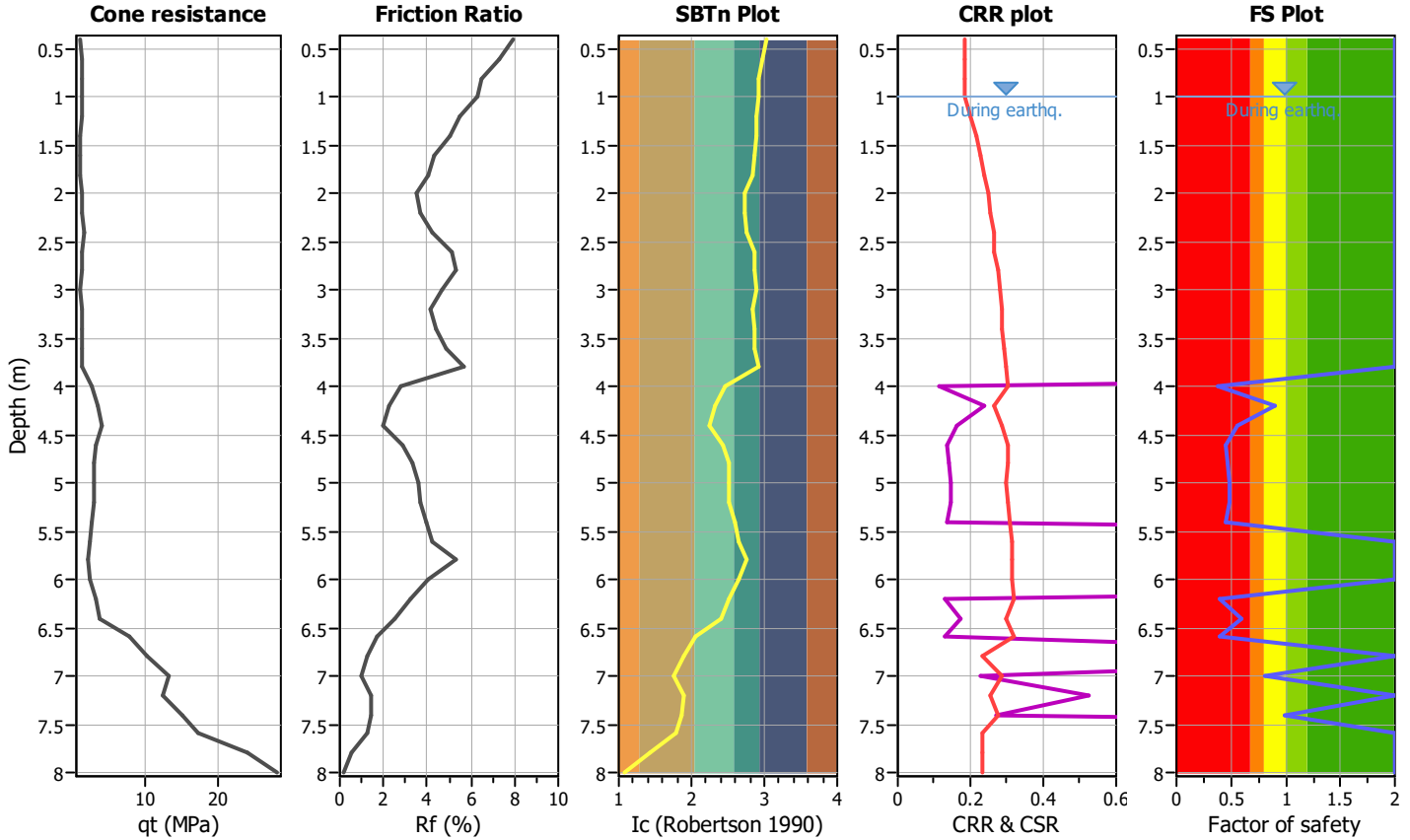
Project title :

Location :

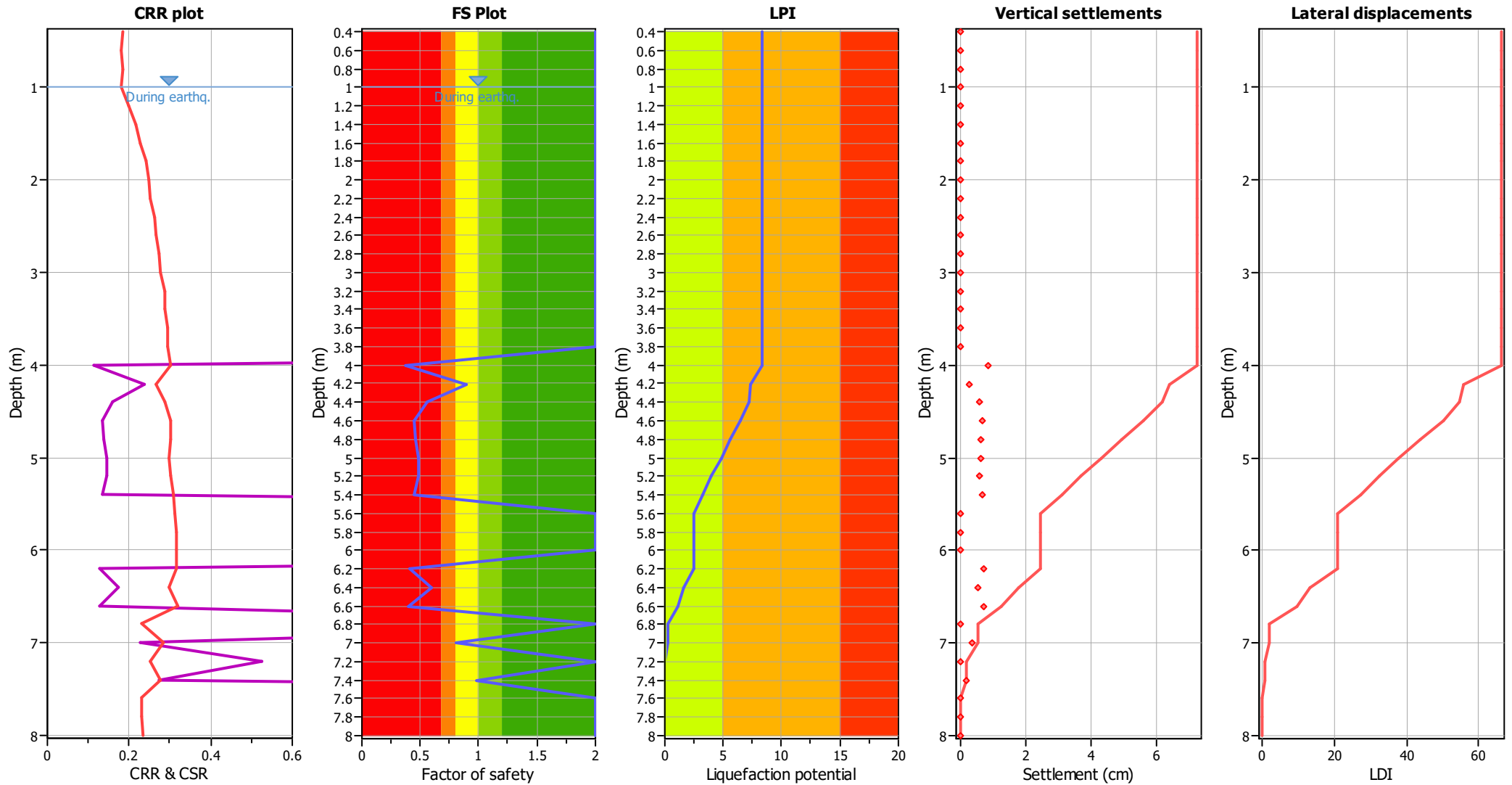
CPT file : P18

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.00 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:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.33	Unit weight calculation:	Based on SBT	K_G applied:	Yes		



Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (earthq.):	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_f applied:	Yes
Earthquake magnitude M_w :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.33	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.00 m	Fill height:	N/A	Limit depth:	N/A

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
0.40	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	0.37	0.63	8.00	0.20	1.00	4.20	0.89	0.11	7.90	0.20	0.17
4.40	0.56	0.44	7.80	0.20	0.69	4.60	0.45	0.55	7.70	0.20	0.85
4.80	0.47	0.53	7.60	0.20	0.81	5.00	0.49	0.51	7.50	0.20	0.77
5.20	0.49	0.51	7.40	0.20	0.76	5.40	0.44	0.56	7.30	0.20	0.81
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	0.40	0.60	6.90	0.20	0.82
6.40	0.59	0.41	6.80	0.20	0.56	6.60	0.40	0.60	6.70	0.20	0.80
6.80	2.00	0.00	6.60	0.20	0.00	7.00	0.80	0.20	6.50	0.20	0.26
7.20	2.00	0.00	6.40	0.20	0.00	7.40	0.98	0.02	6.30	0.20	0.02
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						

Overall liquefaction potential: 8.32

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

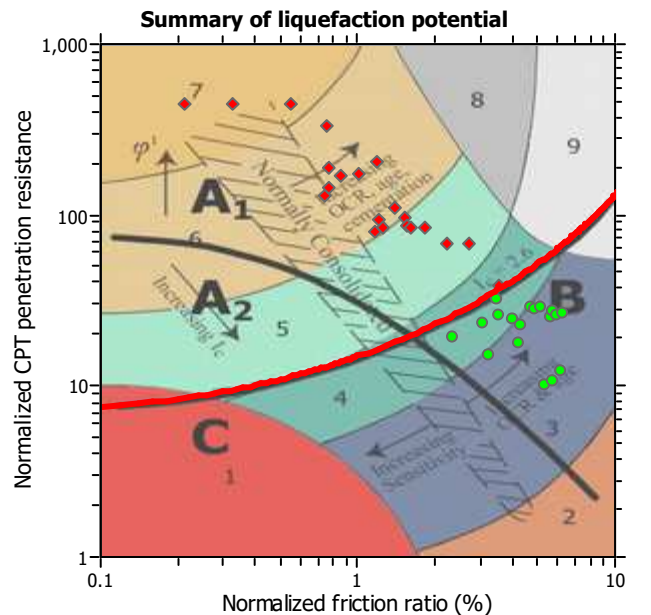
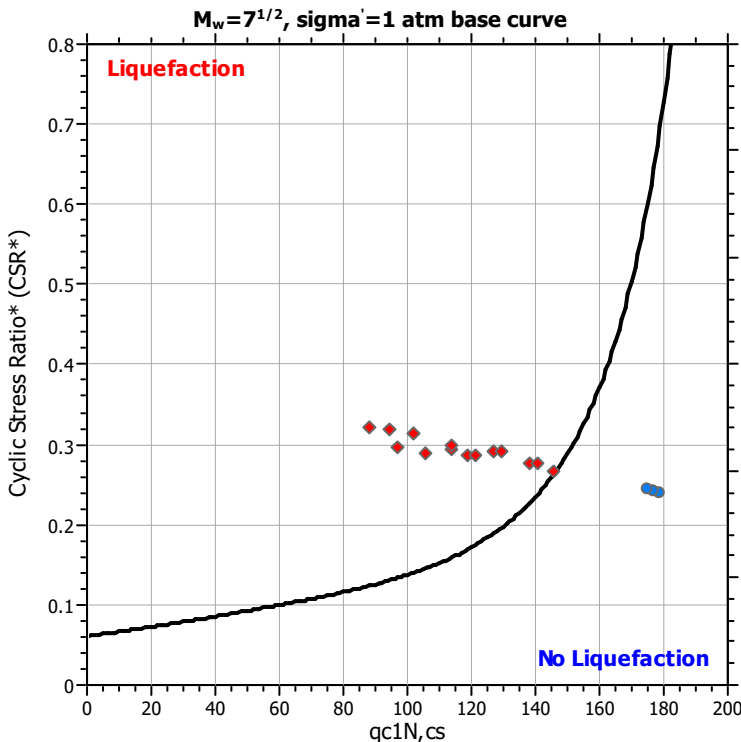
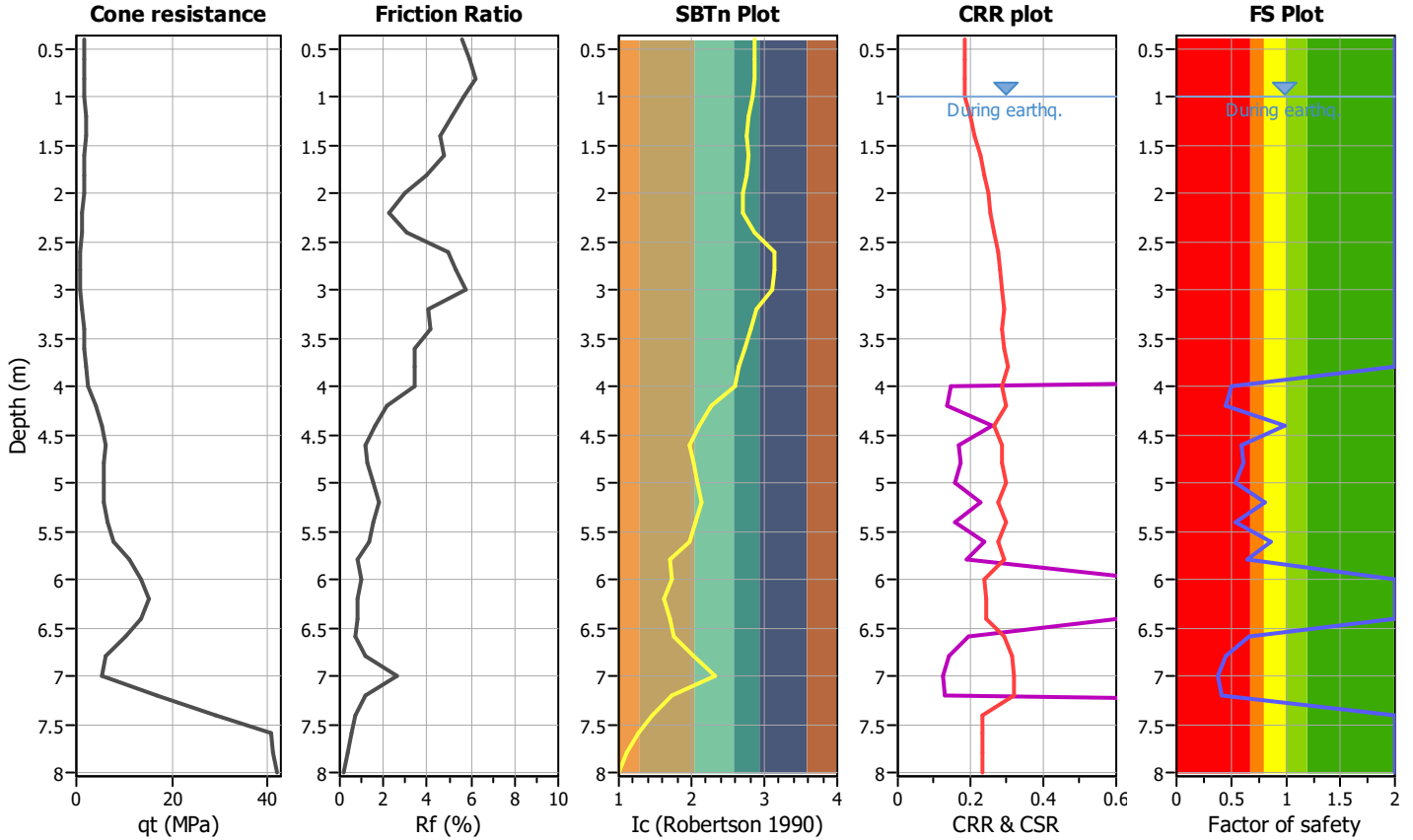
LIQUEFACTION ANALYSIS REPORT

Project title :
CPT file : P19

Location :

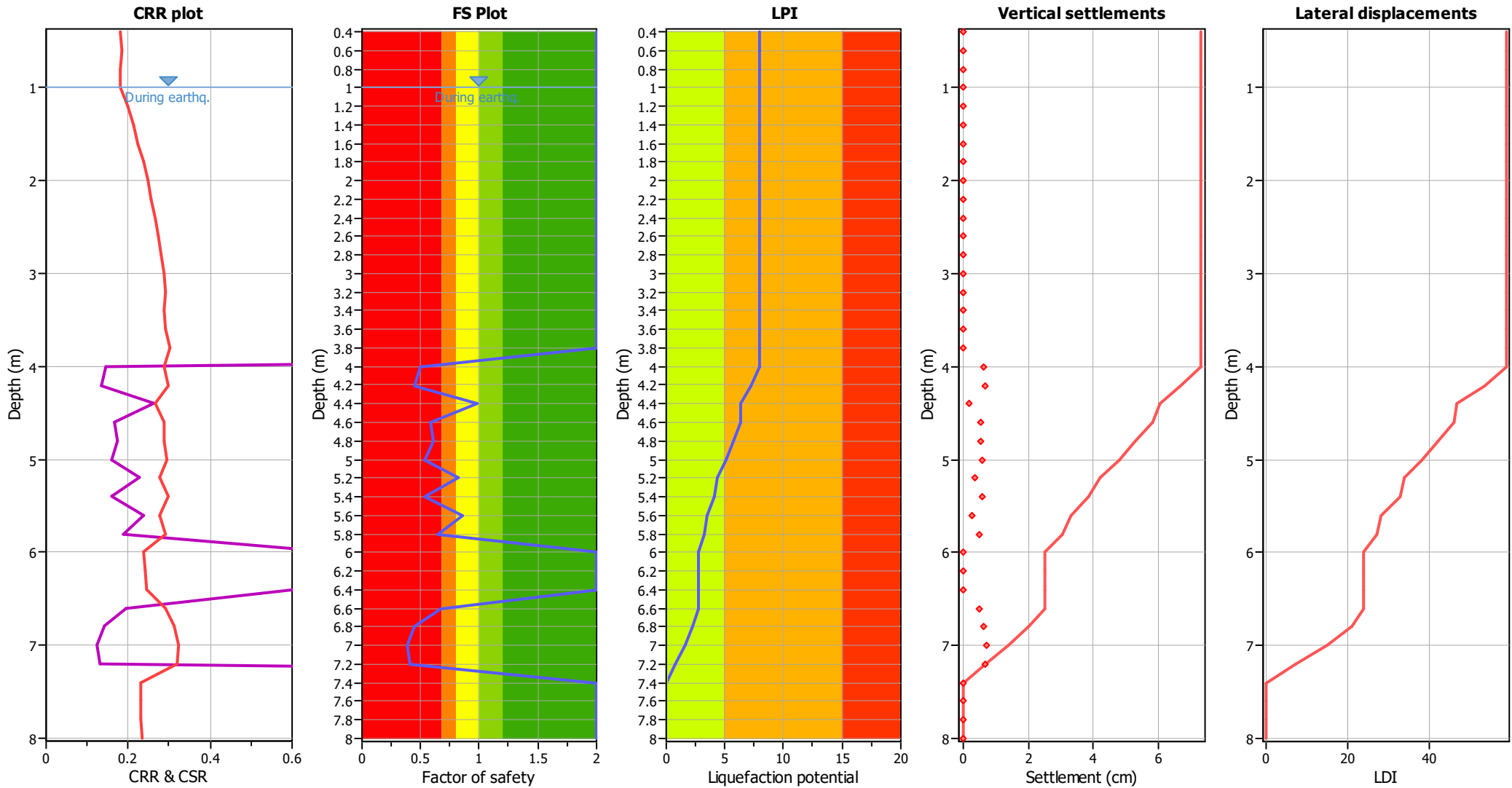
Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.00 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:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.33	Unit weight calculation:	Based on SBT	K_G applied:	Yes		



Zone A₁: Cyclic liquefaction likely depending on size and duration of cyclic loading
 Zone A₂: 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

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (earthq.):	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 :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.33	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.00 m	Fill height:	N/A	Limit depth:	N/A

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
0.40	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	0.50	0.50	8.00	0.20	0.80	4.20	0.45	0.55	7.90	0.20	0.87
4.40	0.99	0.01	7.80	0.20	0.02	4.60	0.59	0.41	7.70	0.20	0.64
4.80	0.60	0.40	7.60	0.20	0.60	5.00	0.54	0.46	7.50	0.20	0.69
5.20	0.82	0.18	7.40	0.20	0.27	5.40	0.53	0.47	7.30	0.20	0.68
5.60	0.86	0.14	7.20	0.20	0.20	5.80	0.65	0.35	7.10	0.20	0.50
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	0.67	0.33	6.70	0.20	0.45
6.80	0.45	0.55	6.60	0.20	0.73	7.00	0.39	0.61	6.50	0.20	0.80
7.20	0.41	0.59	6.40	0.20	0.75	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						

Overall liquefaction potential: 8.00

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

LIQUEFACTION ANALYSIS REPORT

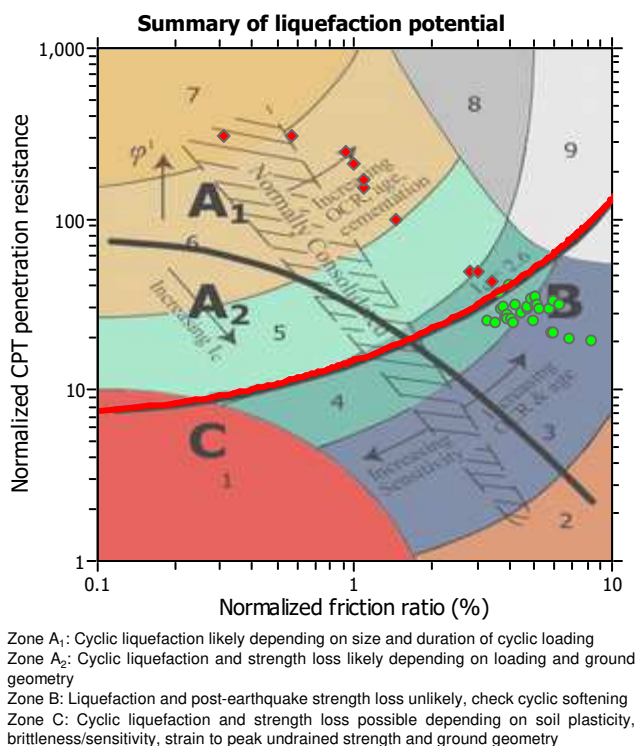
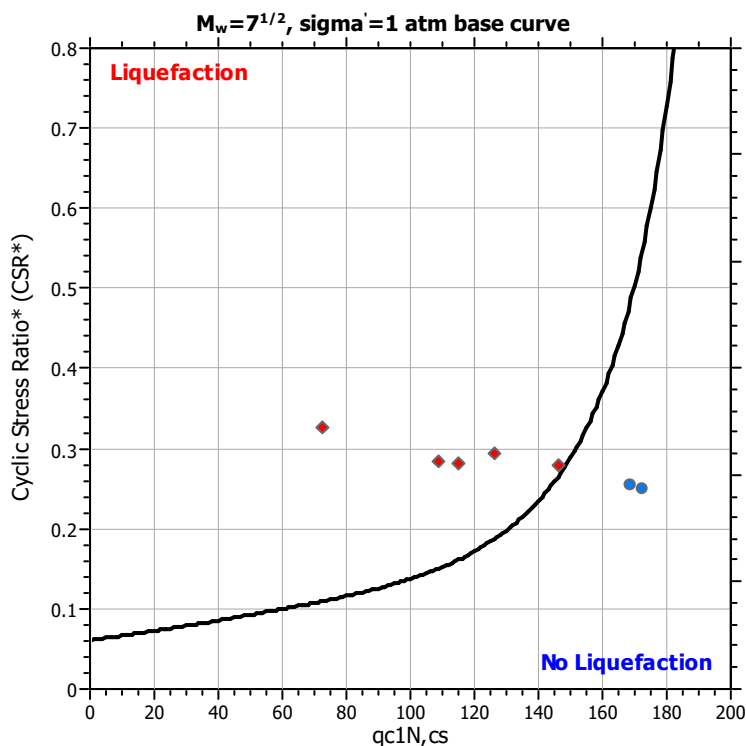
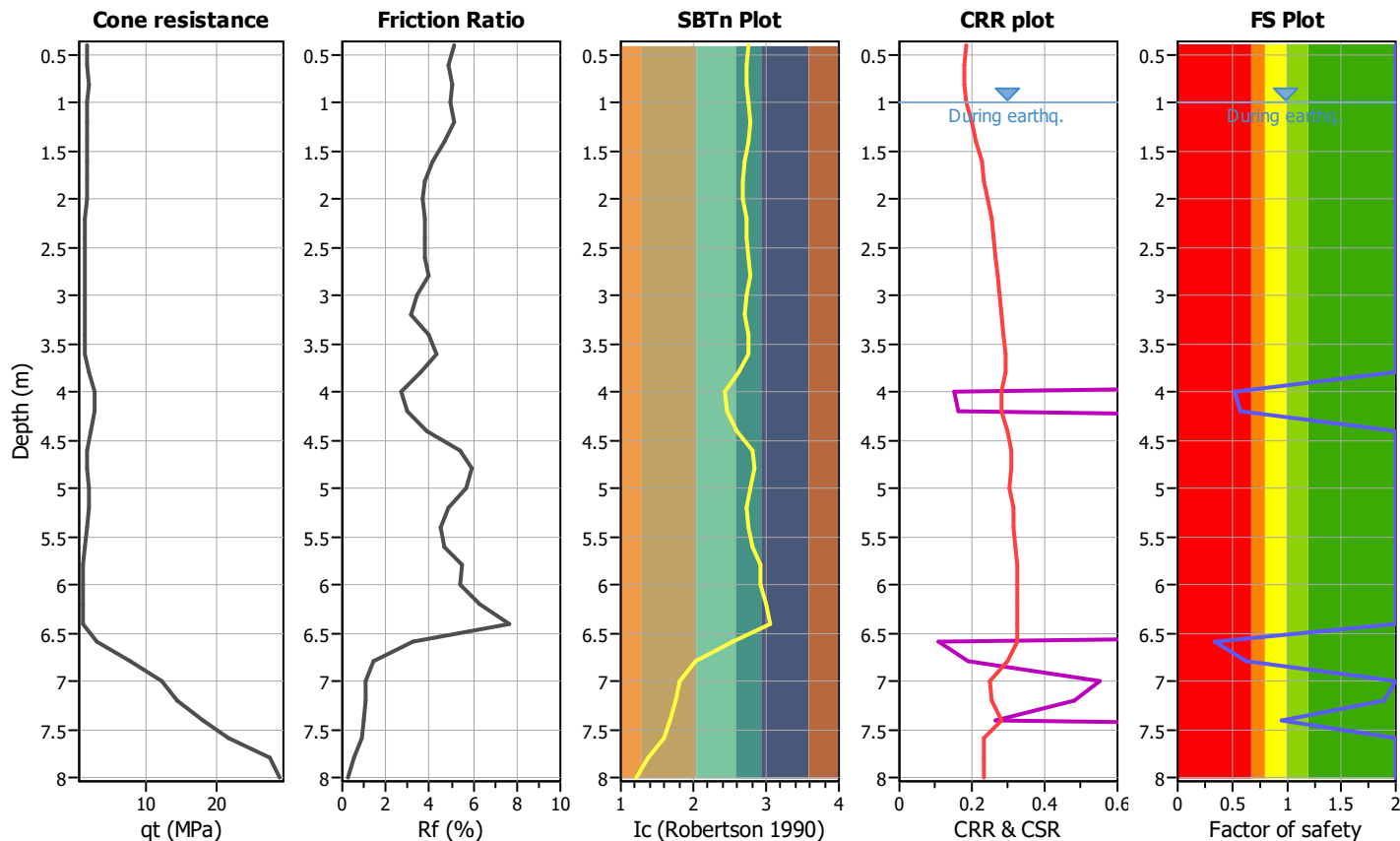
Project title :

Location :

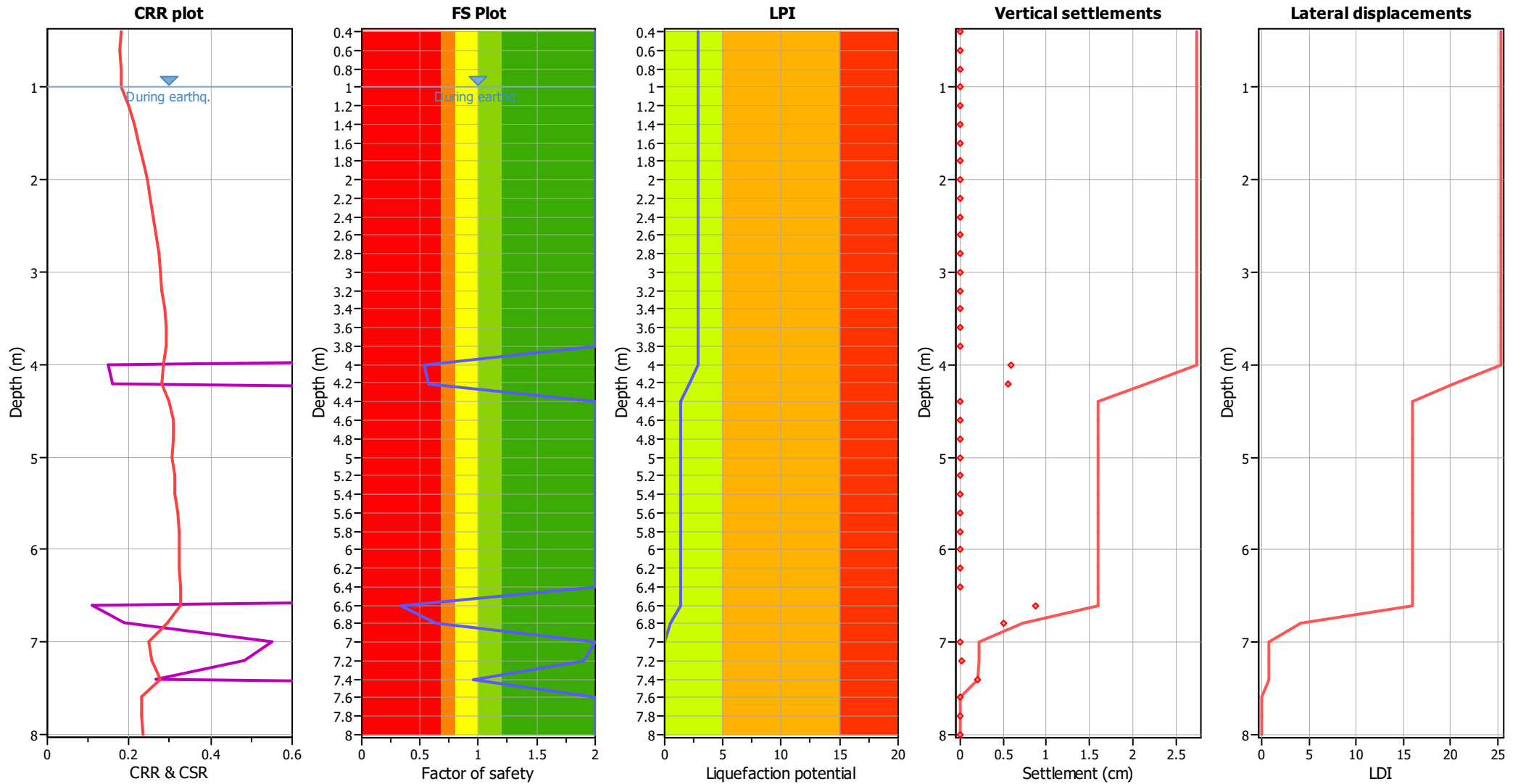
CPT file : P20

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.00 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:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w :	6.60	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method
Peak ground acceleration:	0.33	Unit weight calculation:	Based on SBT	K_G applied:	Yes		



Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (earthq.):	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 :	6.60	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.33	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	1.00 m	Fill height:	N/A	Limit depth:	N/A

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
0.40	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	0.53	0.47	8.00	0.20	0.75	4.20	0.57	0.43	7.90	0.20	0.68
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	0.34	0.66	6.70	0.20	0.89
6.80	0.63	0.37	6.60	0.20	0.48	7.00	2.00	0.00	6.50	0.20	0.00
7.20	1.89	0.00	6.40	0.20	0.00	7.40	0.96	0.04	6.30	0.20	0.06
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						

Overall liquefaction potential: 2.86

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