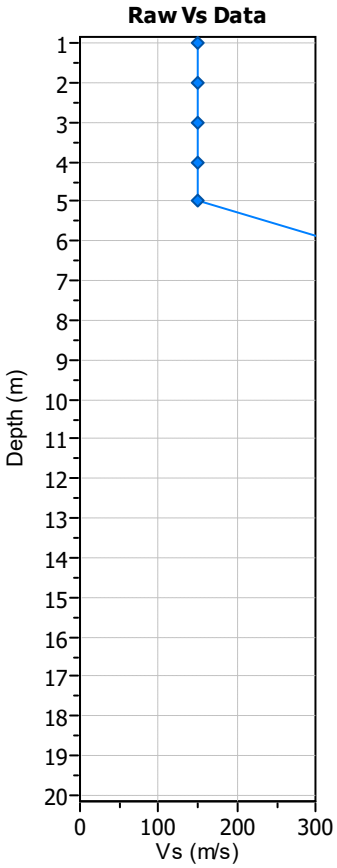
V_s BASED LIQUEFACTION ANALYSIS REPORT

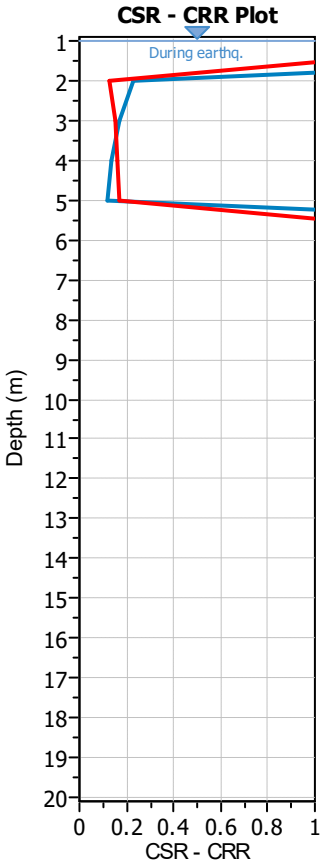
Project title : **V_s Name: L18**

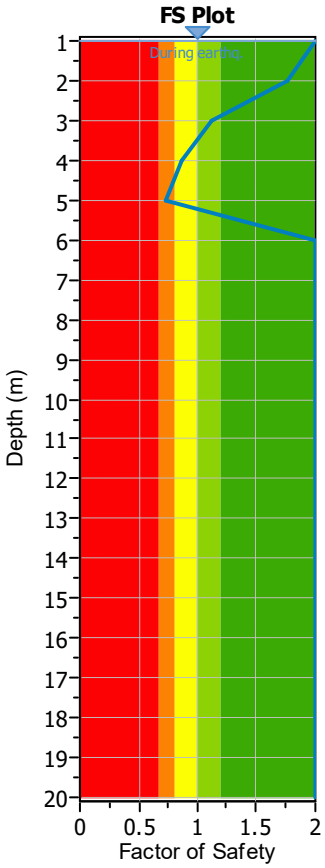
Location :

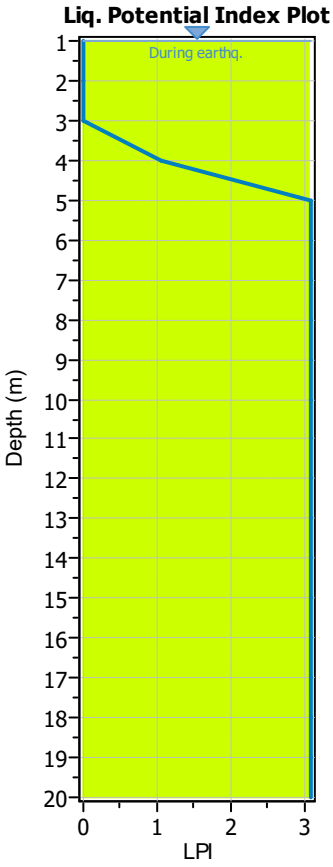
:: Input parameters and analysis properties ::

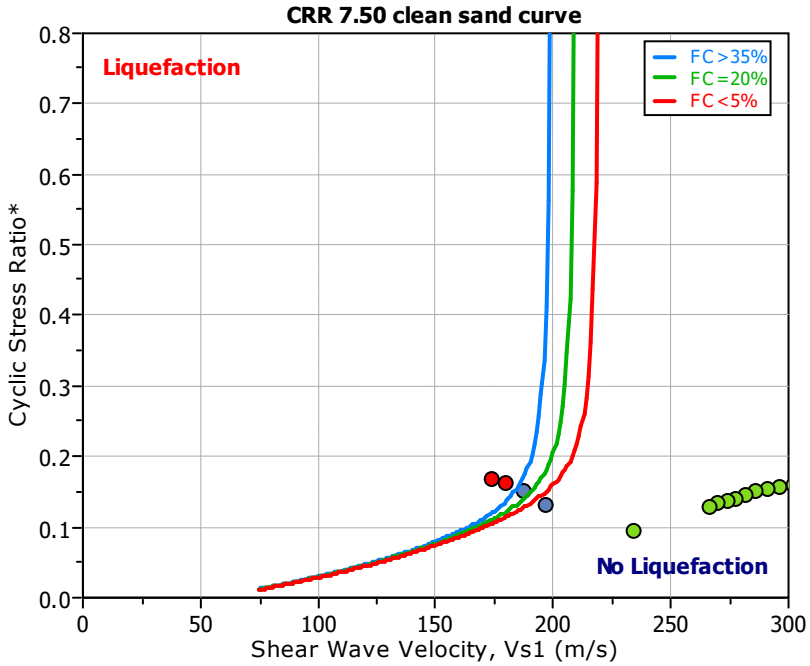
Analysis method:	NCEER 1998 (Youd et al. 2001)
G.W.T. (in-situ):	2.00 m
G.W.T. (earthq.):	1.00 m
Earthquake magnitude M_w:	6.60
Peak ground acceleration:	0.20 g
Eq. external load:	0.00 kPa











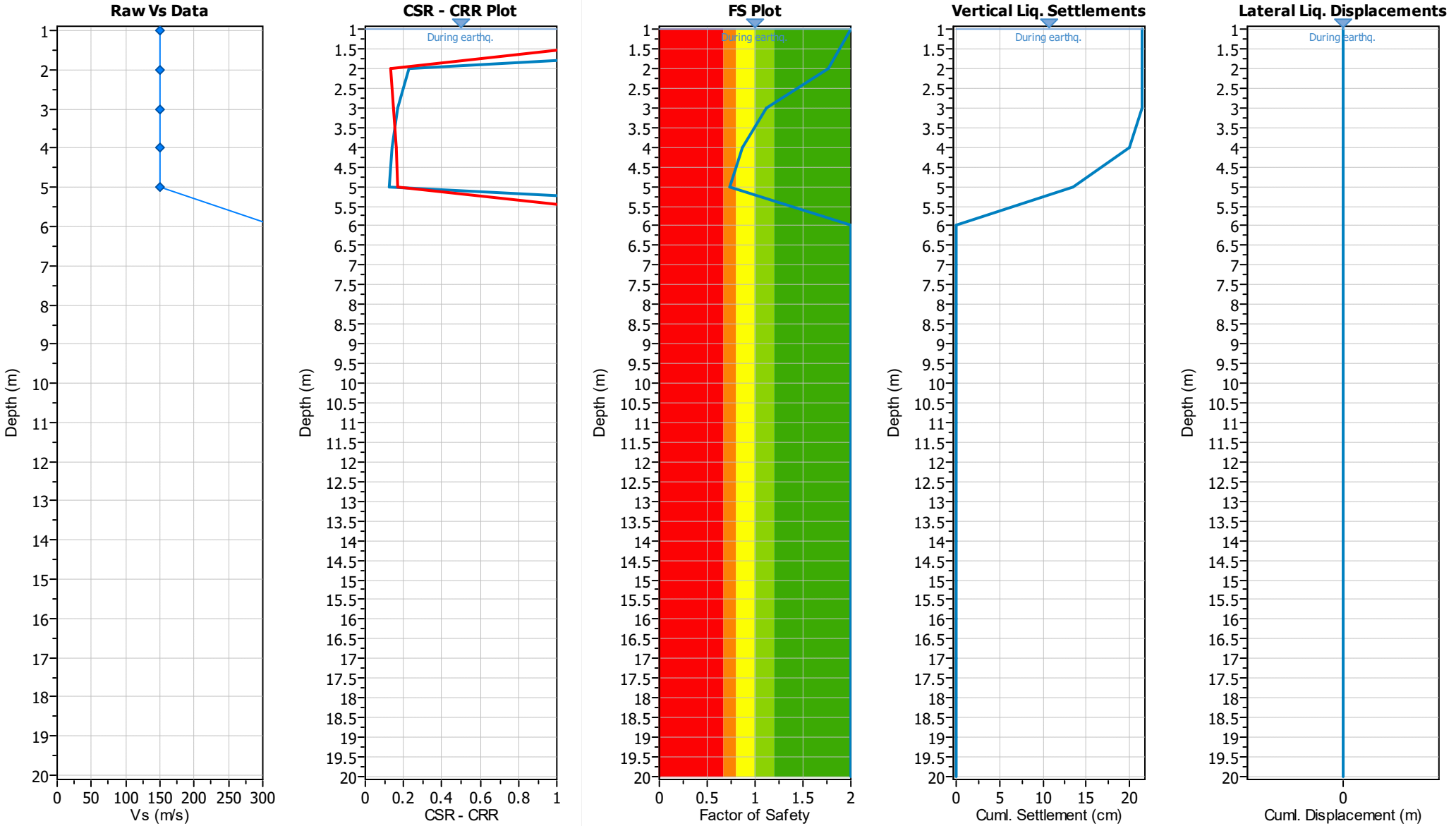
F.S. color scheme

- 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

:: Overall Liquefaction Assessment Analysis Plots ::



:: Field input data ::

Test Depth (m)	V_s Field Value (m/s)	Fines Content (%)	Unit Weight (kN/m³)	Infl. Thickness (m)	Can Liquefy
1.00	150.00	5.00	17.00	1.00	Yes
2.00	150.00	5.00	17.00	2.00	Yes
3.00	150.00	5.00	17.00	3.00	Yes
4.00	150.00	5.00	17.00	4.00	Yes
5.00	150.00	5.00	17.00	5.00	Yes
6.00	320.00	5.00	20.00	6.00	Yes
7.00	320.00	5.00	20.00	7.00	Yes
8.00	320.00	5.00	20.00	8.00	Yes
9.00	320.00	5.00	20.00	9.00	Yes
10.00	320.00	5.00	20.00	10.00	Yes
11.00	320.00	5.00	20.00	11.00	Yes
12.00	320.00	5.00	20.00	12.00	Yes
13.00	320.00	5.00	20.00	13.00	Yes
14.00	320.00	5.00	20.00	14.00	Yes
15.00	320.00	5.00	20.00	15.00	Yes
16.00	320.00	5.00	20.00	16.00	Yes
17.00	320.00	5.00	20.00	17.00	Yes
18.00	320.00	5.00	20.00	18.00	Yes
19.00	320.00	5.00	20.00	19.00	Yes
20.00	320.00	5.00	20.00	20.00	Yes

Abbreviations

Depth: Depth at which test was performed (m)
Vs Field Value: Measured shear waves velocity (m/s)
Fines Content: Fines content at test depth (%)
Unit Weight: Unit weight at test depth (kN/m³)
Infl. Thickness: Thickness of the soil layer to be considered in settlements analysis (m)
Can Liquefy: User defined switch for excluding/including test depth from the analysis procedure

:: Liquefaction potential according to Iwasaki ::

Depth (m)	FS	F	wz	Thickness (m)	I_L
1.00	2.000	0.00	9.50	1.00	0.00
2.00	1.759	0.00	9.00	1.00	0.00
3.00	1.124	0.00	8.50	1.00	0.00
4.00	0.869	0.13	8.00	1.00	1.05
5.00	0.729	0.27	7.50	1.00	2.03
6.00	2.000	0.00	7.00	1.00	0.00
7.00	2.000	0.00	6.50	1.00	0.00
8.00	2.000	0.00	6.00	1.00	0.00
9.00	2.000	0.00	5.50	1.00	0.00
10.00	2.000	0.00	5.00	1.00	0.00
11.00	2.000	0.00	4.50	1.00	0.00
12.00	2.000	0.00	4.00	1.00	0.00
13.00	2.000	0.00	3.50	1.00	0.00
14.00	2.000	0.00	3.00	1.00	0.00
15.00	2.000	0.00	2.50	1.00	0.00
16.00	2.000	0.00	2.00	1.00	0.00
17.00	2.000	0.00	1.50	1.00	0.00

:: Liquefaction potential according to Iwasaki ::

Depth (m)	FS	F	wz	Thickness (m)	I_L
18.00	2.000	0.00	1.00	1.00	0.00
19.00	2.000	0.00	0.50	1.00	0.00
20.00	2.000	0.00	0.00	1.00	0.00

Overall potential I_L : 3.08

I_L = 0.00 - No liquefaction
I_L between 0.00 and 5 - Liquefaction not probable
I_L between 5 and 15 - Liquefaction probable
I_L > 15 - Liquefaction certain

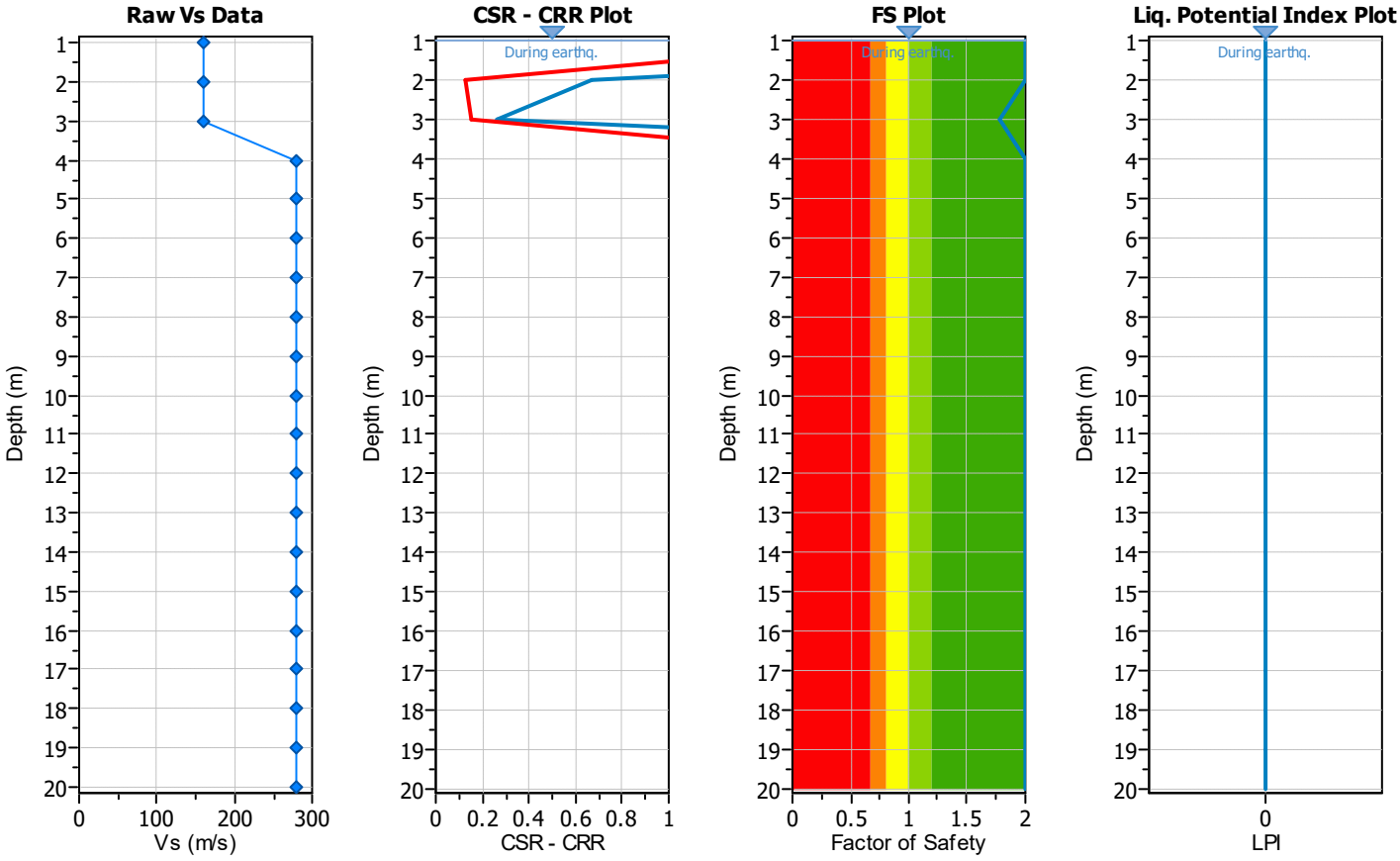
V_s BASED LIQUEFACTION ANALYSIS REPORT

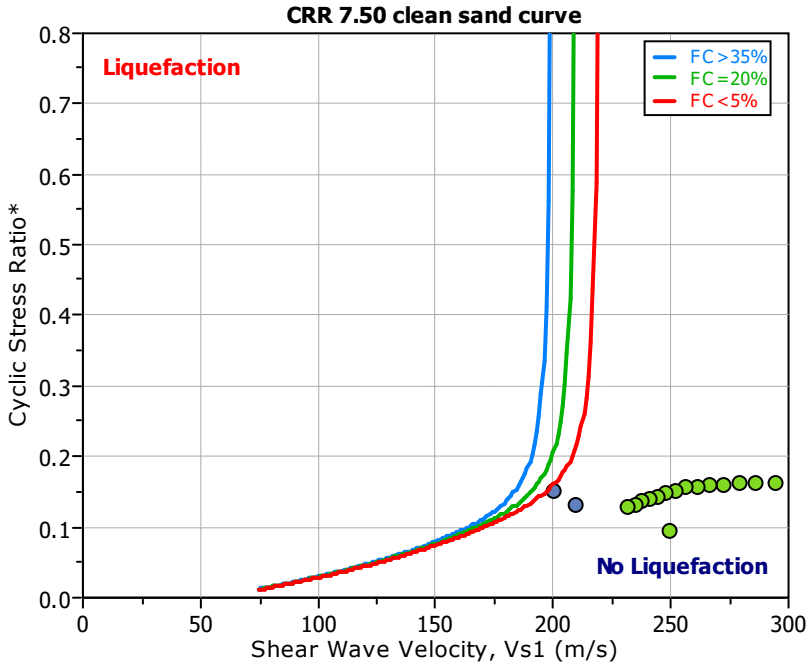
Project title : **V_s Name: L19**

Location :

:: Input parameters and analysis properties ::

Analysis method:	NCEER 1998 (Youd et al. 2001)
G.W.T. (in-situ):	2.00 m
G.W.T. (earthq.):	1.00 m
Earthquake magnitude M_w:	6.60
Peak ground acceleration:	0.20 g
Eq. external load:	0.00 kPa





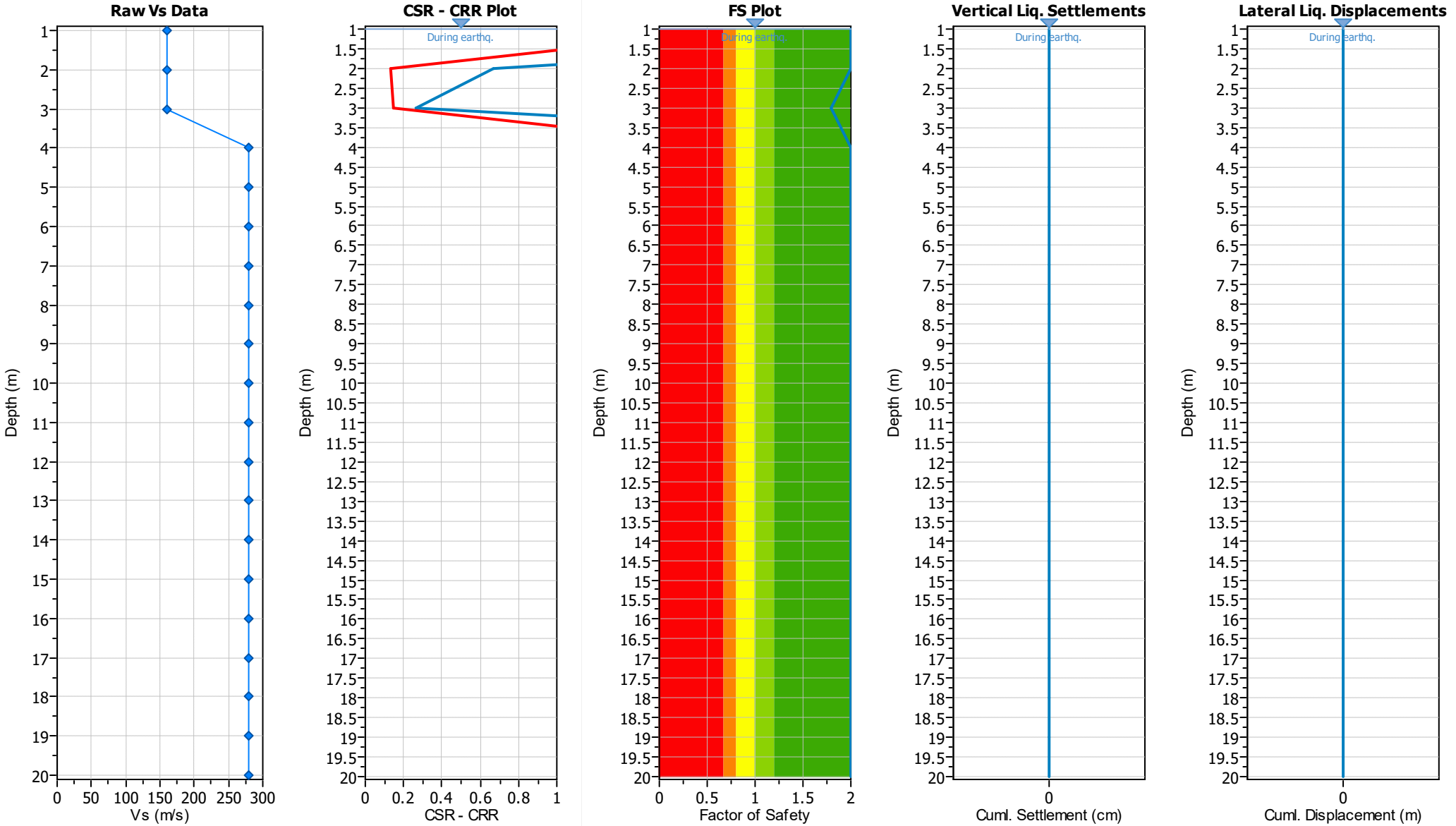
F.S. color scheme

- 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

:: Overall Liquefaction Assessment Analysis Plots ::



:: Field input data ::

Test Depth (m)	V_s Field Value (m/s)	Fines Content (%)	Unit Weight (kN/m³)	Infl. Thickness (m)	Can Liquefy
1.00	160.00	5.00	17.00	1.00	Yes
2.00	160.00	5.00	17.00	2.00	Yes
3.00	160.00	5.00	17.00	3.00	Yes
4.00	280.00	5.00	20.00	4.00	Yes
5.00	280.00	5.00	20.00	5.00	Yes
6.00	280.00	5.00	20.00	6.00	Yes
7.00	280.00	5.00	20.00	7.00	Yes
8.00	280.00	5.00	20.00	8.00	Yes
9.00	280.00	5.00	20.00	9.00	Yes
10.00	280.00	5.00	20.00	10.00	Yes
11.00	280.00	5.00	20.00	11.00	Yes
12.00	280.00	5.00	20.00	12.00	Yes
13.00	280.00	5.00	20.00	13.00	Yes
14.00	280.00	5.00	20.00	14.00	Yes
15.00	280.00	5.00	20.00	15.00	Yes
16.00	280.00	5.00	20.00	16.00	Yes
17.00	280.00	5.00	20.00	17.00	Yes
18.00	280.00	5.00	20.00	18.00	Yes
19.00	280.00	5.00	20.00	19.00	Yes
20.00	280.00	5.00	20.00	20.00	Yes

Abbreviations

Depth: Depth at which test was performed (m)
Vs Field Value: Measured shear waves velocity (m/s)
Fines Content: Fines content at test depth (%)
Unit Weight: Unit weight at test depth (kN/m³)
Infl. Thickness: Thickness of the soil layer to be considered in settlements analysis (m)
Can Liquefy: User defined switch for excluding/including test depth from the analysis procedure

:: Liquefaction potential according to Iwasaki ::

Depth (m)	FS	F	wz	Thickness (m)	I_L
1.00	2.000	0.00	9.50	1.00	0.00
2.00	2.000	0.00	9.00	1.00	0.00
3.00	1.788	0.00	8.50	1.00	0.00
4.00	2.000	0.00	8.00	1.00	0.00
5.00	2.000	0.00	7.50	1.00	0.00
6.00	2.000	0.00	7.00	1.00	0.00
7.00	2.000	0.00	6.50	1.00	0.00
8.00	2.000	0.00	6.00	1.00	0.00
9.00	2.000	0.00	5.50	1.00	0.00
10.00	2.000	0.00	5.00	1.00	0.00
11.00	2.000	0.00	4.50	1.00	0.00
12.00	2.000	0.00	4.00	1.00	0.00
13.00	2.000	0.00	3.50	1.00	0.00
14.00	2.000	0.00	3.00	1.00	0.00
15.00	2.000	0.00	2.50	1.00	0.00
16.00	2.000	0.00	2.00	1.00	0.00
17.00	2.000	0.00	1.50	1.00	0.00

:: Liquefaction potential according to Iwasaki ::

Depth (m)	FS	F	wz	Thickness (m)	I_L
18.00	2.000	0.00	1.00	1.00	0.00
19.00	2.000	0.00	0.50	1.00	0.00
20.00	2.000	0.00	0.00	1.00	0.00

Overall potential I_L : 0.00

I_L = 0.00 - No liquefaction
I_L between 0.00 and 5 - Liquefaction not probable
I_L between 5 and 15 - Liquefaction probable
I_L > 15 - Liquefaction certain

V_s BASED LIQUEFACTION ANALYSIS REPORT

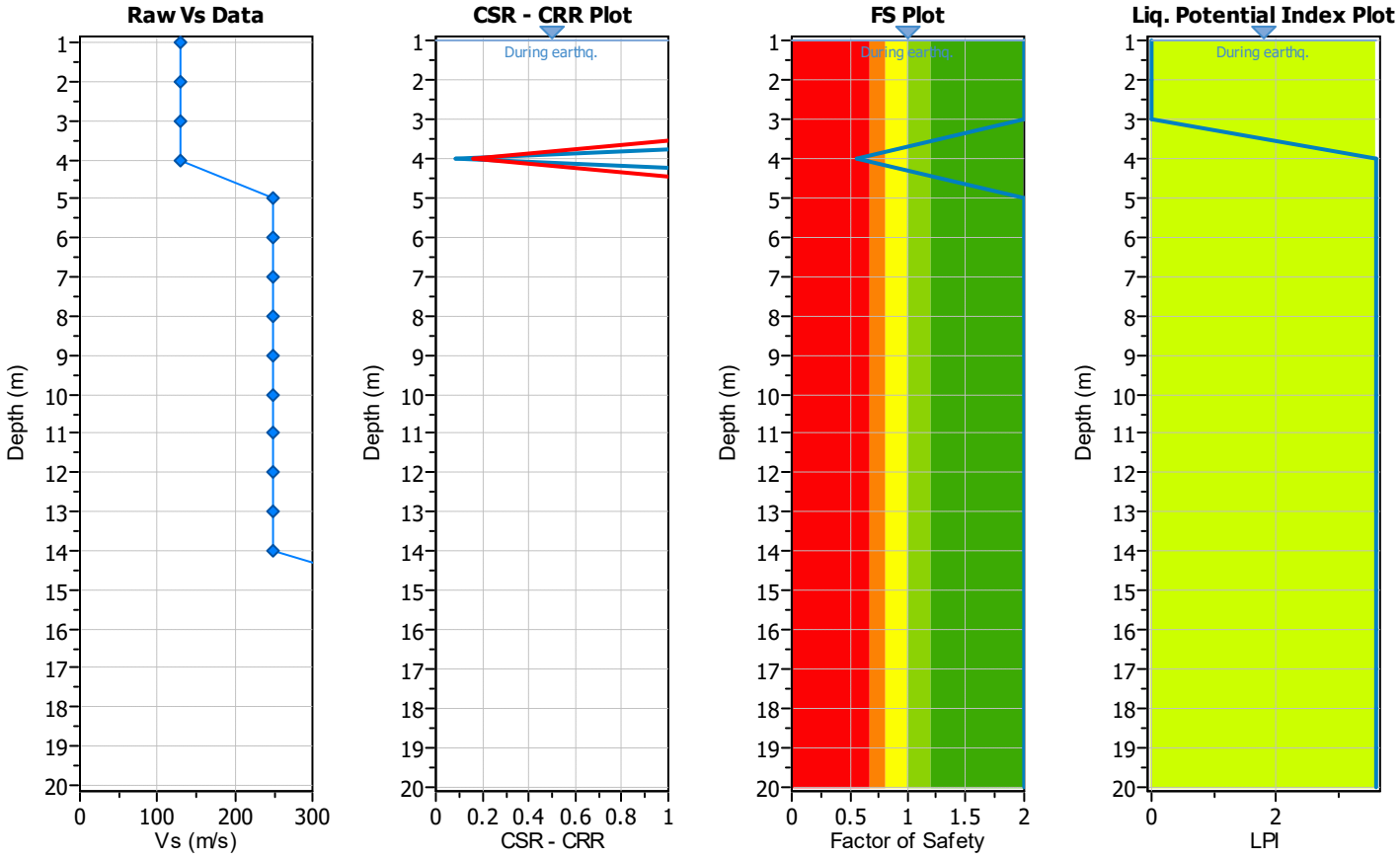
Project title :

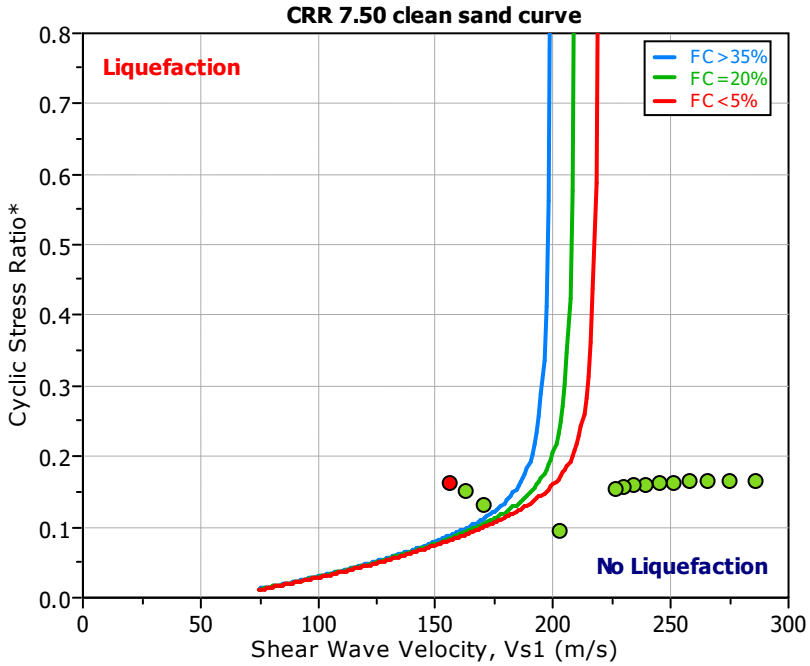
V_s Name: L20

Location :

:: Input parameters and analysis properties ::

Analysis method:	NCEER 1998 (Youd et al. 2001)
G.W.T. (in-situ):	2.00 m
G.W.T. (earthq.):	1.00 m
Earthquake magnitude M_w:	6.60
Peak ground acceleration:	0.20 g
Eq. external load:	0.00 kPa





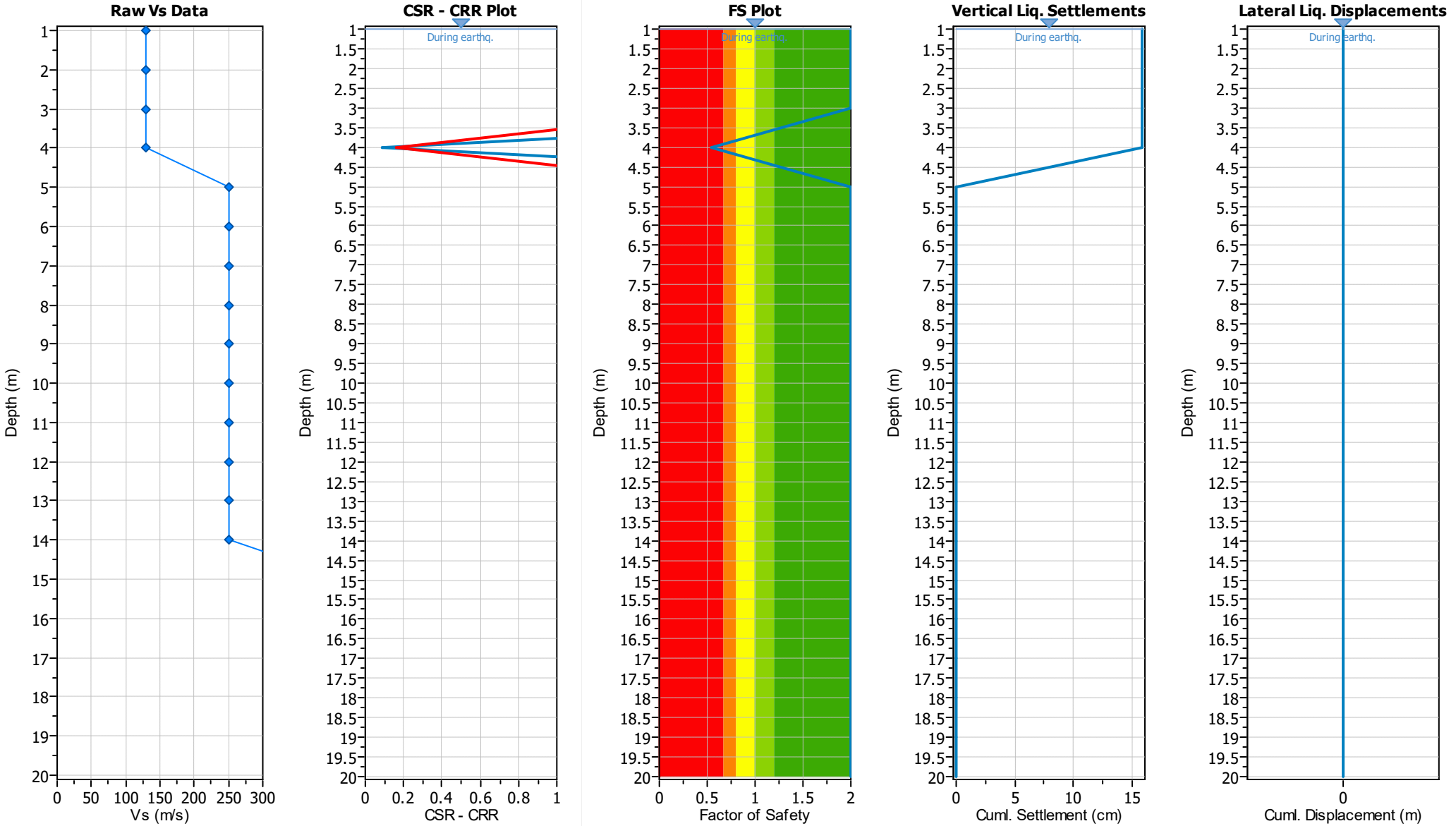
F.S. color scheme

- 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

:: Overall Liquefaction Assessment Analysis Plots ::



:: Field input data ::

Test Depth (m)	V_s Field Value (m/s)	Fines Content (%)	Unit Weight (kN/m³)	Infl. Thickness (m)	Can Liquefy
1.00	130.00	5.00	17.00	1.00	No
2.00	130.00	5.00	17.00	2.00	No
3.00	130.00	5.00	17.00	3.00	No
4.00	130.00	5.00	17.00	4.00	Yes
5.00	250.00	5.00	20.00	5.00	Yes
6.00	250.00	5.00	20.00	6.00	Yes
7.00	250.00	5.00	20.00	7.00	Yes
8.00	250.00	5.00	20.00	8.00	Yes
9.00	250.00	5.00	20.00	9.00	Yes
10.00	250.00	5.00	20.00	10.00	Yes
11.00	250.00	5.00	20.00	11.00	Yes
12.00	250.00	5.00	20.00	12.00	Yes
13.00	250.00	5.00	20.00	13.00	Yes
14.00	250.00	5.00	20.00	14.00	Yes
15.00	420.00	5.00	20.00	15.00	Yes
16.00	420.00	5.00	20.00	16.00	Yes
17.00	420.00	5.00	20.00	17.00	Yes
18.00	420.00	5.00	20.00	18.00	Yes
19.00	420.00	5.00	20.00	19.00	Yes
20.00	420.00	5.00	20.00	20.00	Yes

Abbreviations

Depth: Depth at which test was performed (m)
Vs Field Value: Measured shear waves velocity (m/s)
Fines Content: Fines content at test depth (%)
Unit Weight: Unit weight at test depth (kN/m³)
Infl. Thickness: Thickness of the soil layer to be considered in settlements analysis (m)
Can Liquefy: User defined switch for excluding/including test depth from the analysis procedure

:: Liquefaction potential according to Iwasaki ::

Depth (m)	FS	F	wz	Thickness (m)	I_L
1.00	2.000	0.00	9.50	1.00	0.00
2.00	2.000	0.00	9.00	1.00	0.00
3.00	2.000	0.00	8.50	1.00	0.00
4.00	0.551	0.45	8.00	1.00	3.59
5.00	2.000	0.00	7.50	1.00	0.00
6.00	2.000	0.00	7.00	1.00	0.00
7.00	2.000	0.00	6.50	1.00	0.00
8.00	2.000	0.00	6.00	1.00	0.00
9.00	2.000	0.00	5.50	1.00	0.00
10.00	2.000	0.00	5.00	1.00	0.00
11.00	2.000	0.00	4.50	1.00	0.00
12.00	2.000	0.00	4.00	1.00	0.00
13.00	2.000	0.00	3.50	1.00	0.00
14.00	2.000	0.00	3.00	1.00	0.00
15.00	2.000	0.00	2.50	1.00	0.00
16.00	2.000	0.00	2.00	1.00	0.00
17.00	2.000	0.00	1.50	1.00	0.00

:: Liquefaction potential according to Iwasaki ::

Depth (m)	FS	F	wz	Thickness (m)	I_L
18.00	2.000	0.00	1.00	1.00	0.00
19.00	2.000	0.00	0.50	1.00	0.00
20.00	2.000	0.00	0.00	1.00	0.00

Overall potential I_L : 3.59

I_L = 0.00 - No liquefaction
I_L between 0.00 and 5 - Liquefaction not probable
I_L between 5 and 15 - Liquefaction probable
I_L > 15 - Liquefaction certain

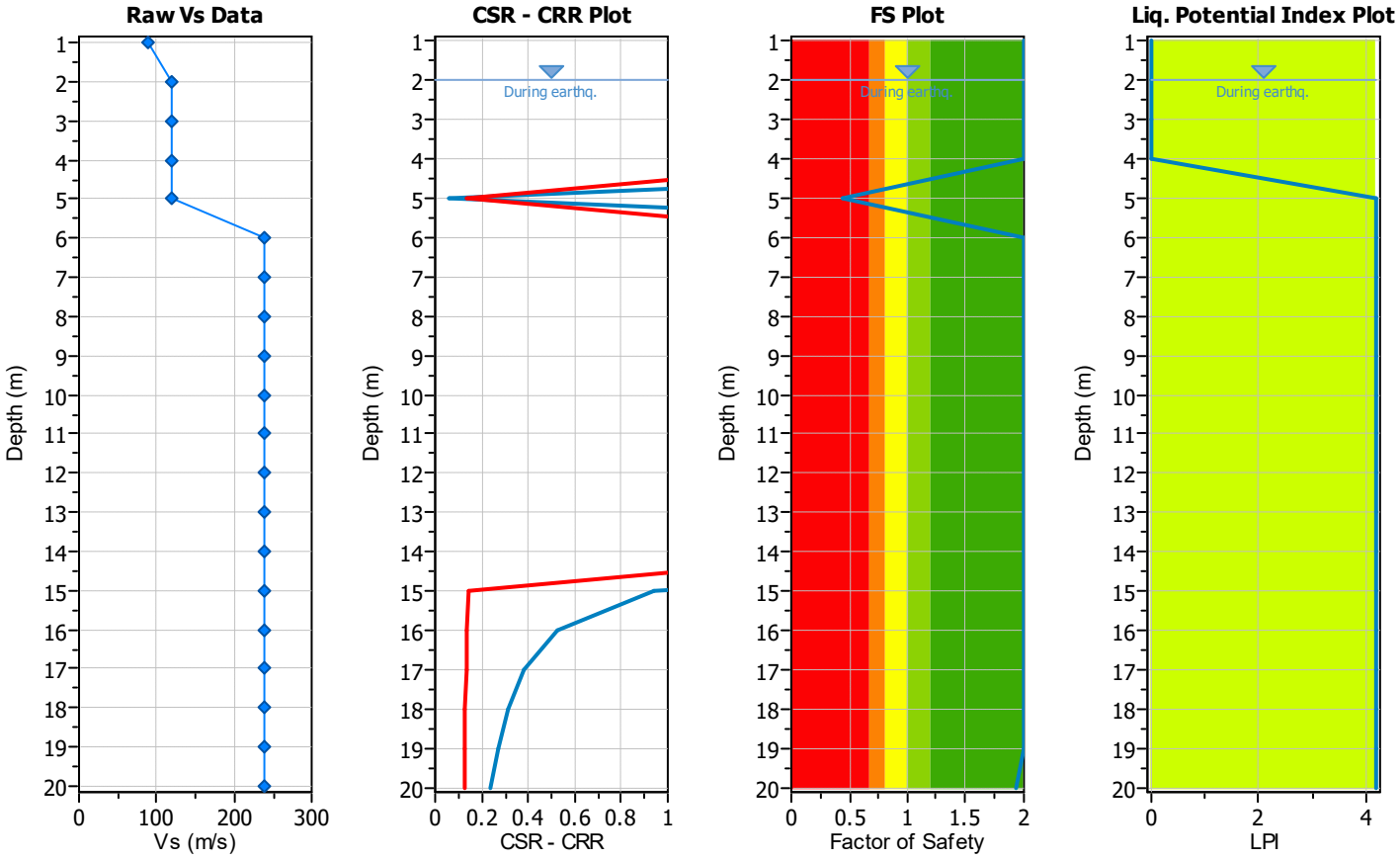
V_s BASED LIQUEFACTION ANALYSIS REPORT

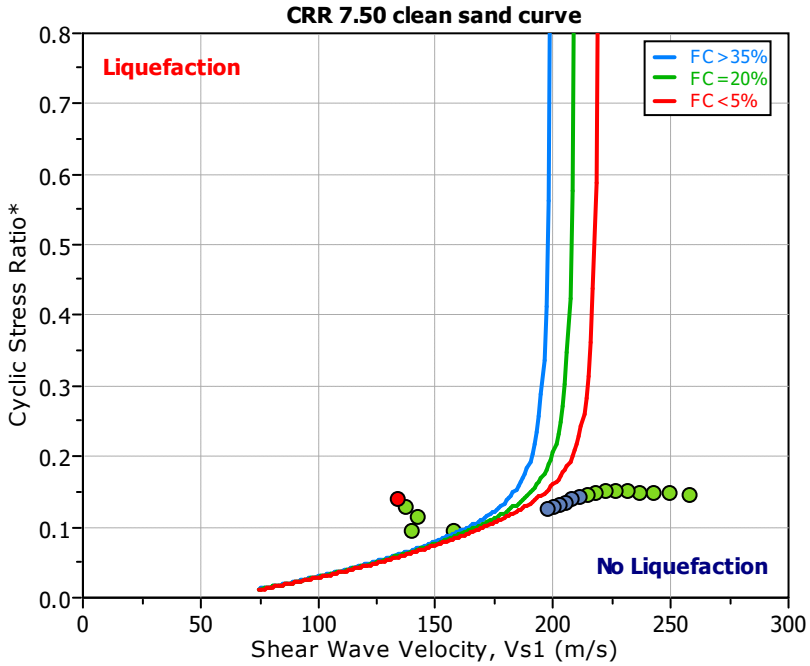
Project title : **V_s Name: L21**

Location :

:: Input parameters and analysis properties ::

Analysis method:	NCEER 1998 (Youd et al. 2001)
G.W.T. (in-situ):	3.00 m
G.W.T. (earthq.):	2.00 m
Earthquake magnitude M_w:	6.60
Peak ground acceleration:	0.20 g
Eq. external load:	0.00 kPa





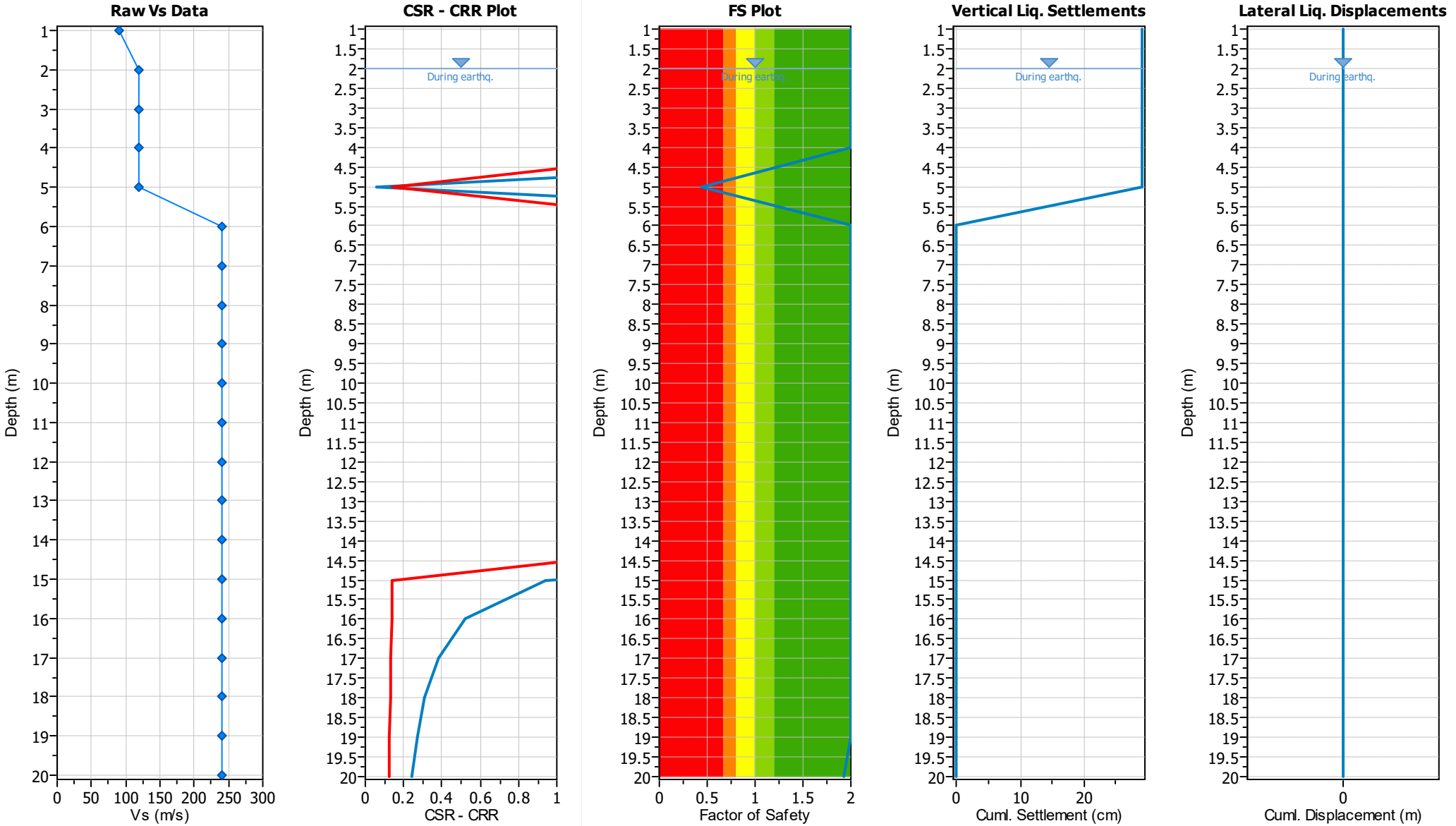
F.S. color scheme

- 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

:: Overall Liquefaction Assessment Analysis Plots ::



:: Field input data ::

Test Depth (m)	V_s Field Value (m/s)	Fines Content (%)	Unit Weight (kN/m³)	Infl. Thickness (m)	Can Liquefy
1.00	90.00	5.00	17.00	1.00	No
2.00	120.00	5.00	17.00	2.00	No
3.00	120.00	5.00	17.00	3.00	No
4.00	120.00	5.00	17.00	4.00	No
5.00	120.00	5.00	17.00	5.00	Yes
6.00	240.00	5.00	20.00	6.00	Yes
7.00	240.00	5.00	20.00	7.00	Yes
8.00	240.00	5.00	20.00	8.00	Yes
9.00	240.00	5.00	20.00	9.00	Yes
10.00	240.00	5.00	20.00	10.00	Yes
11.00	240.00	5.00	20.00	11.00	Yes
12.00	240.00	5.00	20.00	12.00	Yes
13.00	240.00	5.00	20.00	13.00	Yes
14.00	240.00	5.00	20.00	14.00	Yes
15.00	240.00	5.00	20.00	15.00	Yes
16.00	240.00	5.00	20.00	16.00	Yes
17.00	240.00	5.00	20.00	17.00	Yes
18.00	240.00	5.00	20.00	18.00	Yes
19.00	240.00	5.00	20.00	19.00	Yes
20.00	240.00	5.00	20.00	20.00	Yes

Abbreviations

Depth: Depth at which test was performed (m)
Vs Field Value: Measured shear waves velocity (m/s)
Fines Content: Fines content at test depth (%)
Unit Weight: Unit weight at test depth (kN/m³)
Infl. Thickness: Thickness of the soil layer to be considered in settlements analysis (m)
Can Liquefy: User defined switch for excluding/including test depth from the analysis procedure

:: Liquefaction potential according to Iwasaki ::

Depth (m)	FS	F	wz	Thickness (m)	I_L
1.00	2.000	0.00	9.50	1.00	0.00
2.00	2.000	0.00	9.00	1.00	0.00
3.00	2.000	0.00	8.50	1.00	0.00
4.00	2.000	0.00	8.00	1.00	0.00
5.00	0.440	0.56	7.50	1.00	4.20
6.00	2.000	0.00	7.00	1.00	0.00
7.00	2.000	0.00	6.50	1.00	0.00
8.00	2.000	0.00	6.00	1.00	0.00
9.00	2.000	0.00	5.50	1.00	0.00
10.00	2.000	0.00	5.00	1.00	0.00
11.00	2.000	0.00	4.50	1.00	0.00
12.00	2.000	0.00	4.00	1.00	0.00
13.00	2.000	0.00	3.50	1.00	0.00
14.00	2.000	0.00	3.00	1.00	0.00
15.00	2.000	0.00	2.50	1.00	0.00
16.00	2.000	0.00	2.00	1.00	0.00
17.00	2.000	0.00	1.50	1.00	0.00

:: Liquefaction potential according to Iwasaki ::

Depth (m)	FS	F	wz	Thickness (m)	I_L
18.00	2.000	0.00	1.00	1.00	0.00
19.00	2.000	0.00	0.50	1.00	0.00
20.00	1.933	0.00	0.00	1.00	0.00

Overall potential I_L : 4.20

I_L = 0.00 - No liquefaction
I_L between 0.00 and 5 - Liquefaction not probable
I_L between 5 and 15 - Liquefaction probable
I_L > 15 - Liquefaction certain