

## LIQUEFACTION ANALYSIS REPORT

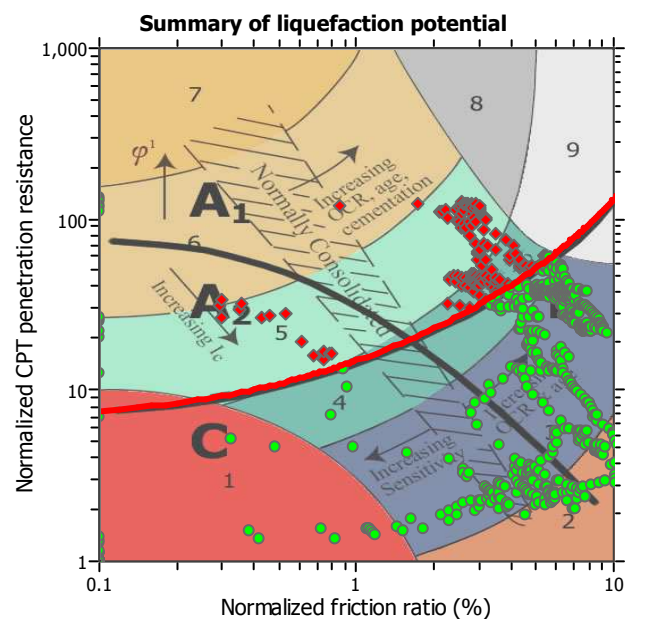
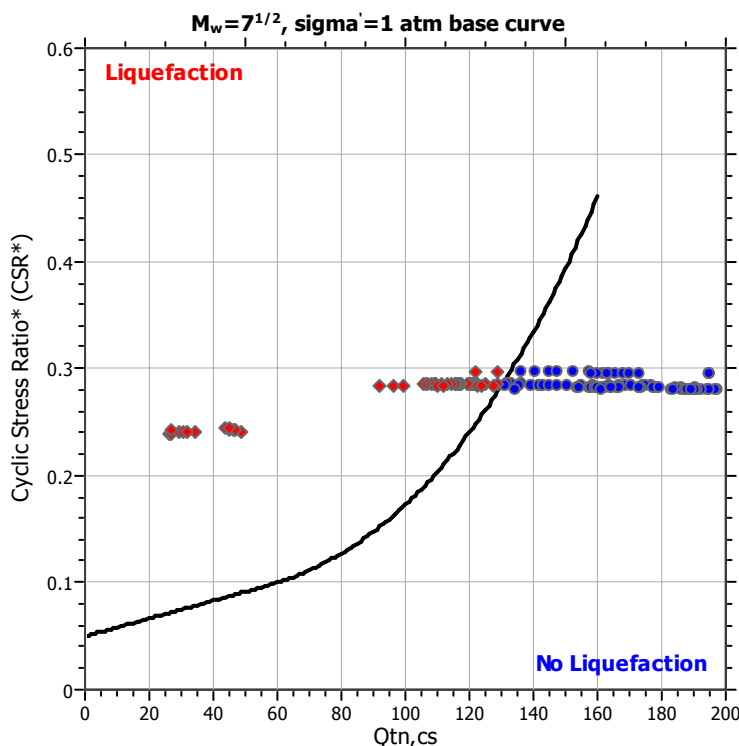
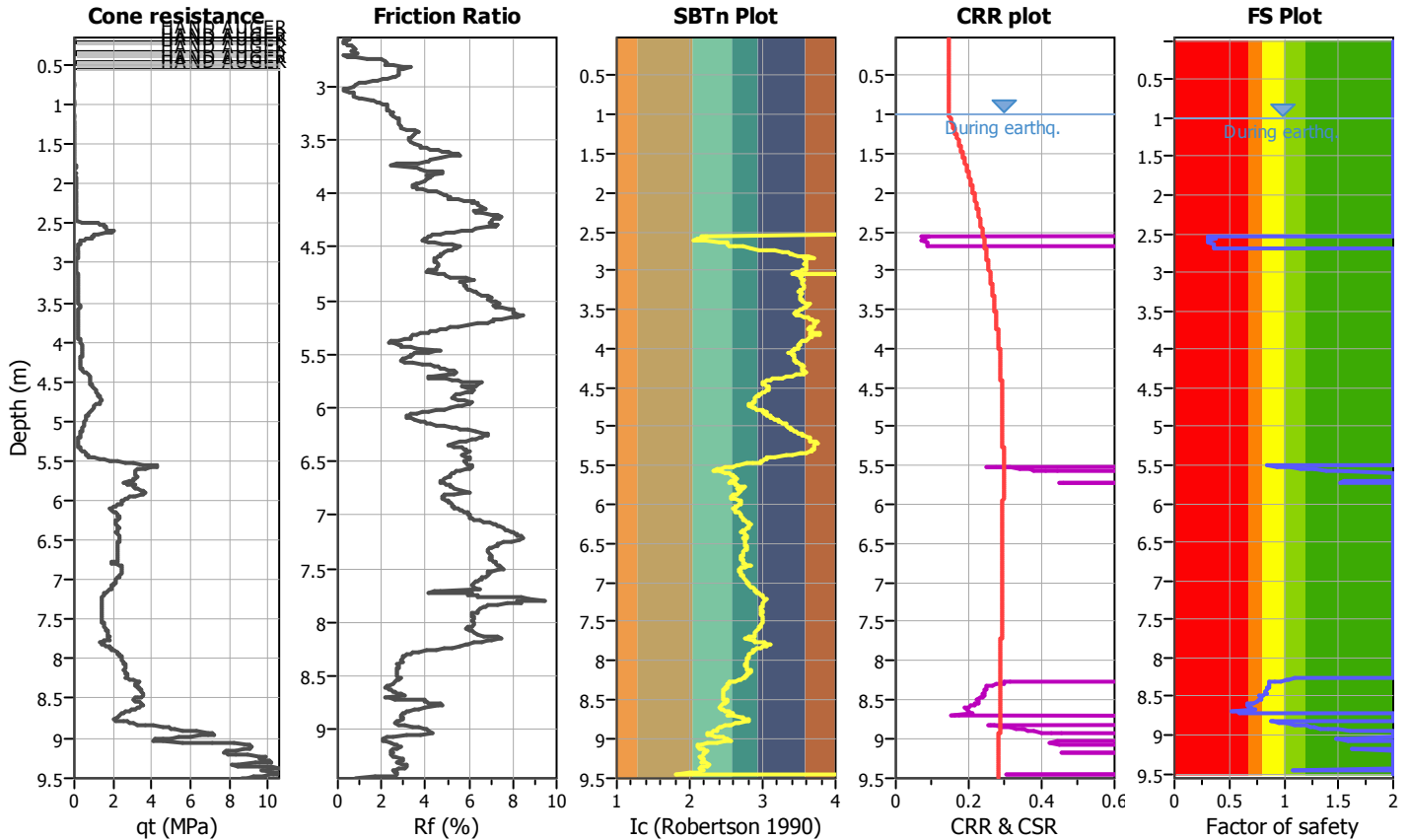
**Project title : EXTENSION MARINA ETANG Z'ABRICOTS**

**Location : LE LAMENTIN**

**CPT file : CPTU1**

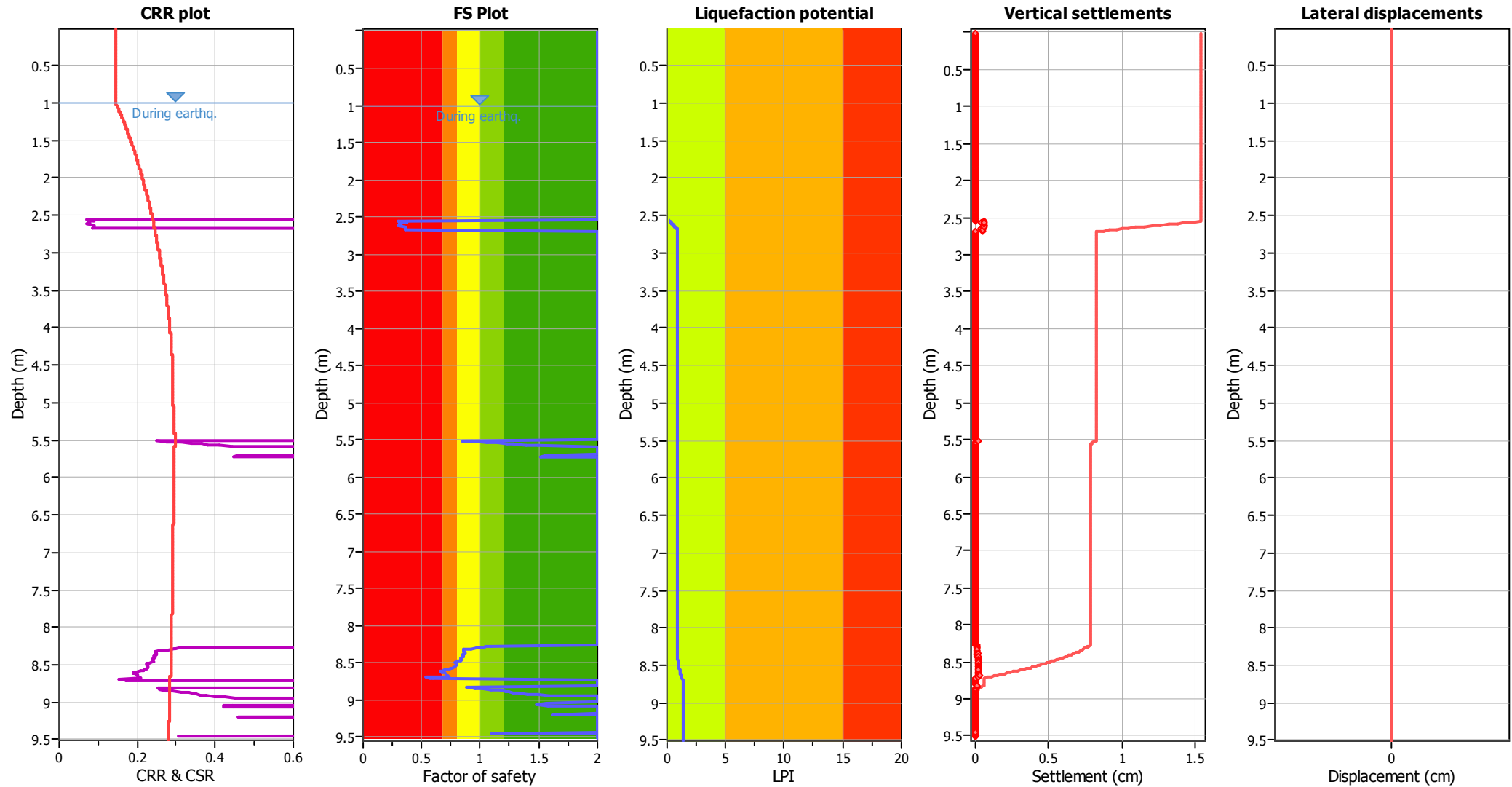
### Input parameters and analysis data

|                              |                   |                           |              |                         |     |                      |            |
|------------------------------|-------------------|---------------------------|--------------|-------------------------|-----|----------------------|------------|
| Analysis method:             | NCEER (1998)      | G.W.T. (in-situ):         | 1.00 m       | Use fill:               | No  | Clay like behavior   |            |
| Fines correction method:     | NCEER (1998)      | G.W.T. (earthq.):         | 1.00 m       | Fill height:            | N/A | applied:             | Sands only |
| Points to test:              | Based on Ic value | Average results interval: | 3            | Fill weight:            | N/A | Limit depth applied: | Yes        |
| Earthquake magnitude $M_w$ : | 7.50              | Ic cut-off value:         | 2.60         | Trans. detect. applied: | No  | Limit depth:         | 20.00 m    |
| Peak ground acceleration:    | 0.18              | Unit weight calculation:  | Based on SBT | $K_0$ applied:          | Yes |                      |            |



Zone A<sub>1</sub>: Cyclic liquefaction likely depending on size and duration of cyclic loading  
 Zone A<sub>2</sub>: 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:                      | NCEER (1998)      | Depth to water table (earthq.): | 1.00 m       | Fill weight:                | N/A        |
| Fines correction method:              | NCEER (1998)      | Average results interval:       | 3            | Transition detect. applied: | No         |
| Points to test:                       | Based on Ic value | Ic cut-off value:               | 2.60         | K <sub>0</sub> applied:     | Yes        |
| Earthquake magnitude M <sub>w</sub> : | 7.50              | 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):        | 1.00 m            | Fill height:                    | N/A          | Limit depth:                | 20.00 m    |

F.S. color scheme

|             |                                                     |
|-------------|-----------------------------------------------------|
| Red         | Almost certain it will liquefy                      |
| Orange      | Very likely to liquefy                              |
| Yellow      | Liquefaction and no liquefaction are equally likely |
| Light green | Unlike to liquefy                                   |
| Dark green  | Almost certain it will not liquefy                  |

LPI color scheme

|        |                |
|--------|----------------|
| Red    | Very high risk |
| Orange | High risk      |
| Yellow | Low risk       |

## LIQUEFACTION ANALYSIS REPORT

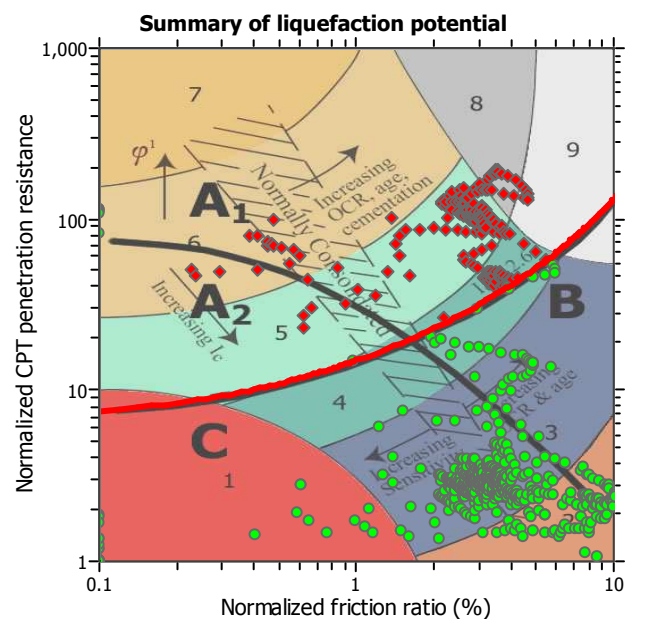
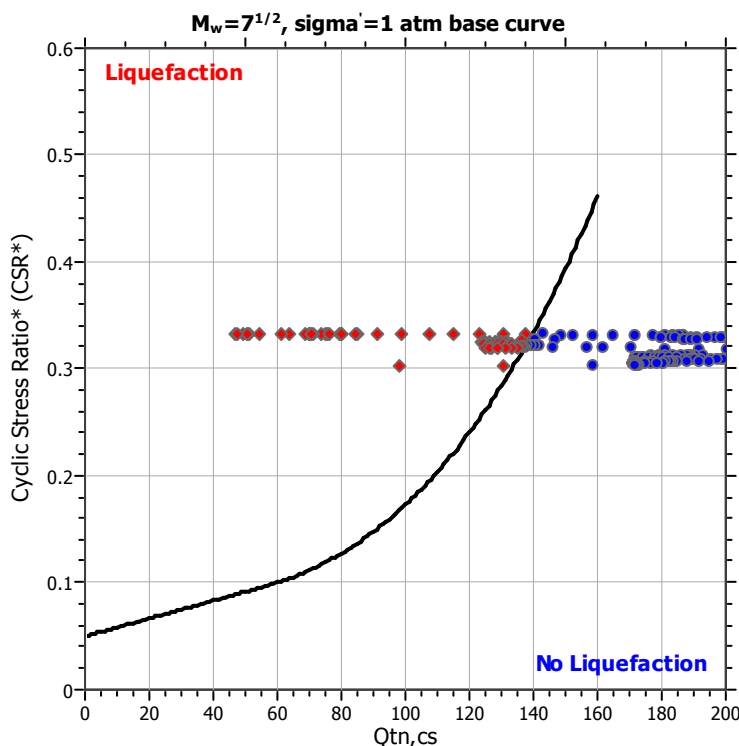
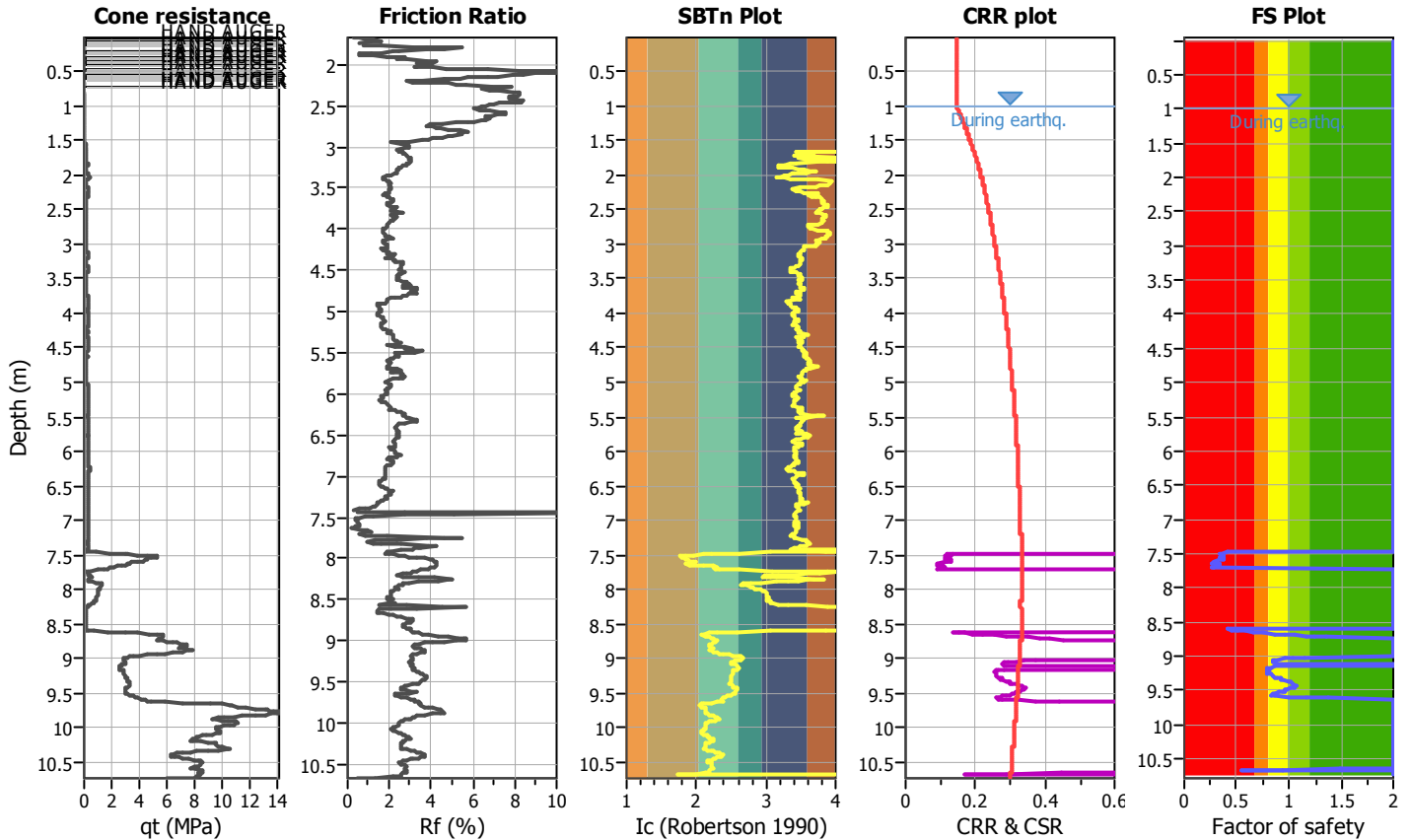
**Project title : EXTENSION MARINA ETANG Z'ABRICOTS**

**Location : LE LAMENTIN**

**CPT file : CPTU 2**

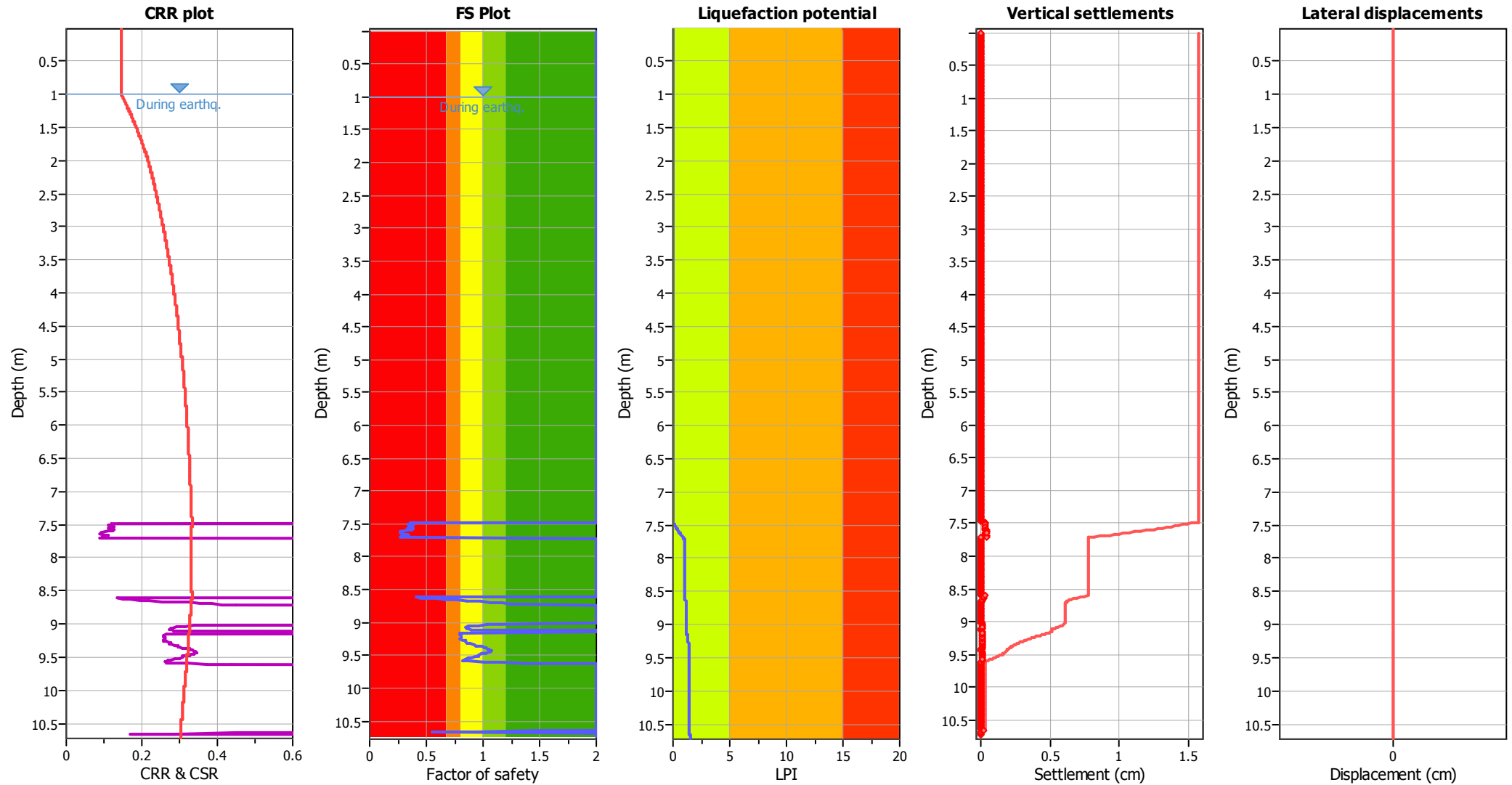
### Input parameters and analysis data

|                              |                   |                           |              |                         |     |                      |            |
|------------------------------|-------------------|---------------------------|--------------|-------------------------|-----|----------------------|------------|
| Analysis method:             | NCEER (1998)      | G.W.T. (in-situ):         | 1.00 m       | Use fill:               | No  | Clay like behavior   |            |
| Fines correction method:     | NCEER (1998)      | G.W.T. (earthq.):         | 1.00 m       | Fill height:            | N/A | applied:             | Sands only |
| Points to test:              | Based on Ic value | Average results interval: | 3            | Fill weight:            | N/A | Limit depth applied: | Yes        |
| Earthquake magnitude $M_w$ : | 7.50              | Ic cut-off value:         | 2.60         | Trans. detect. applied: | No  | Limit depth:         | 20.00 m    |
| Peak ground acceleration:    | 0.18              | Unit weight calculation:  | Based on SBT | $K_0$ applied:          | Yes |                      |            |



Zone A<sub>1</sub>: Cyclic liquefaction likely depending on size and duration of cyclic loading  
 Zone A<sub>2</sub>: 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:               | NCEER (1998)      | Depth to water table (earthq.): | 1.00 m       | Fill weight:                | N/A        |
| Fines correction method:       | NCEER (1998)      | Average results interval:       | 3            | Transition detect. applied: | No         |
| Points to test:                | Based on Ic value | Ic cut-off value:               | 2.60         | $K_0$ applied:              | Yes        |
| Earthquake magnitude $M_w$ :   | 7.50              | 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): | 1.00 m            | Fill height:                    | N/A          | Limit depth:                | 20.00 m    |

### F.S. color scheme

|                                           |                                                     |
|-------------------------------------------|-----------------------------------------------------|
| <span style="color: red;">■</span>        | Almost certain it will liquefy                      |
| <span style="color: orange;">■</span>     | Very likely to liquefy                              |
| <span style="color: yellow;">■</span>     | Liquefaction and no liquefaction are equally likely |
| <span style="color: lightgreen;">■</span> | Unlike to liquefy                                   |
| <span style="color: green;">■</span>      | Almost certain it will not liquefy                  |

### LPI color scheme

|                                       |                |
|---------------------------------------|----------------|
| <span style="color: red;">■</span>    | Very high risk |
| <span style="color: orange;">■</span> | High risk      |
| <span style="color: yellow;">■</span> | Low risk       |

## LIQUEFACTION ANALYSIS REPORT

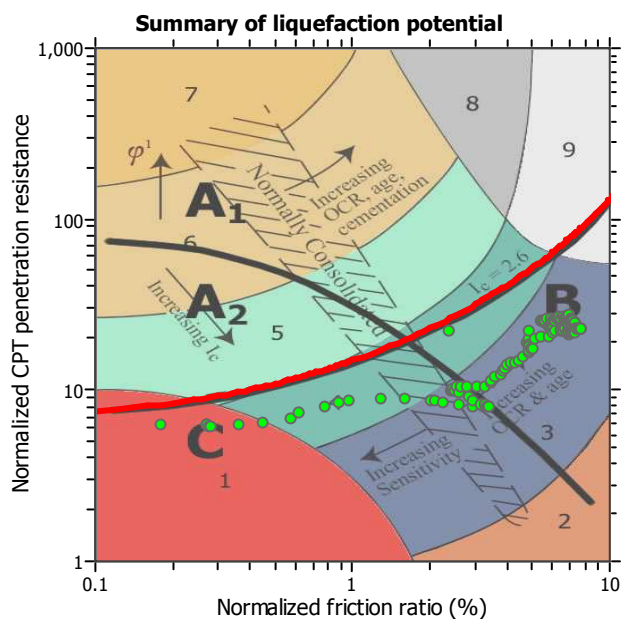
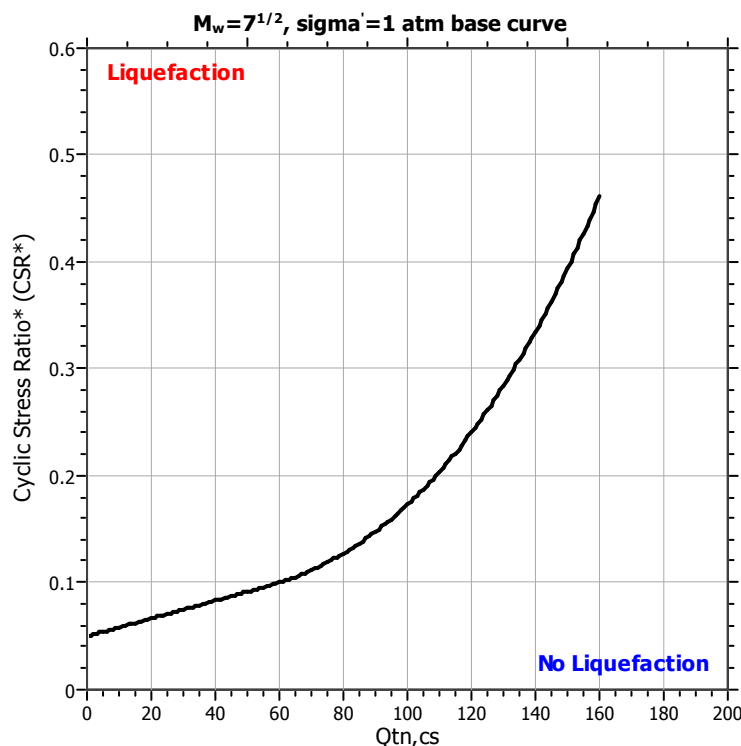
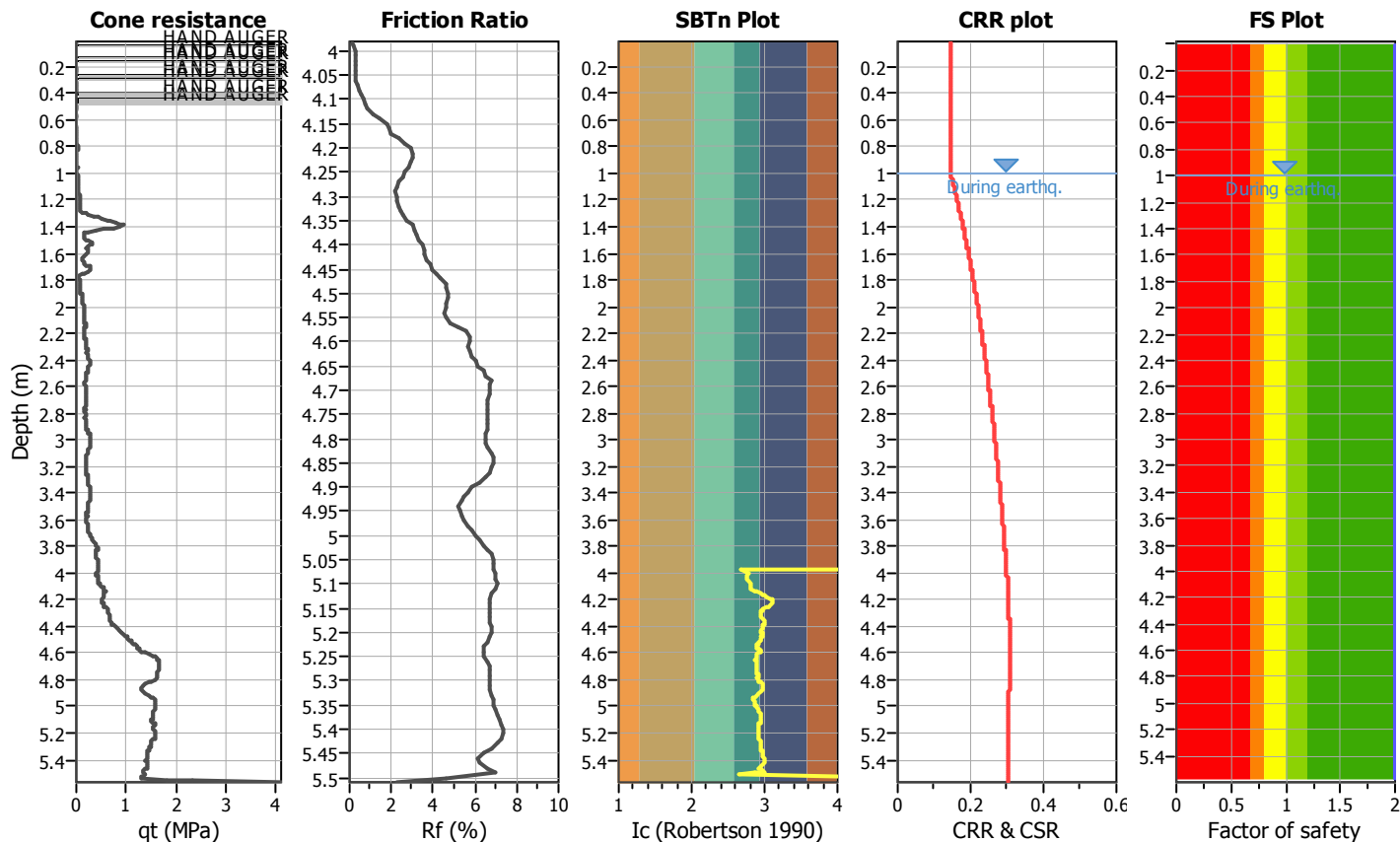
**Project title : EXTENSION MARINA ETANG Z'ABRICOTS**

**Location : LE LAMENTIN**

**CPT file : CPTU 3**

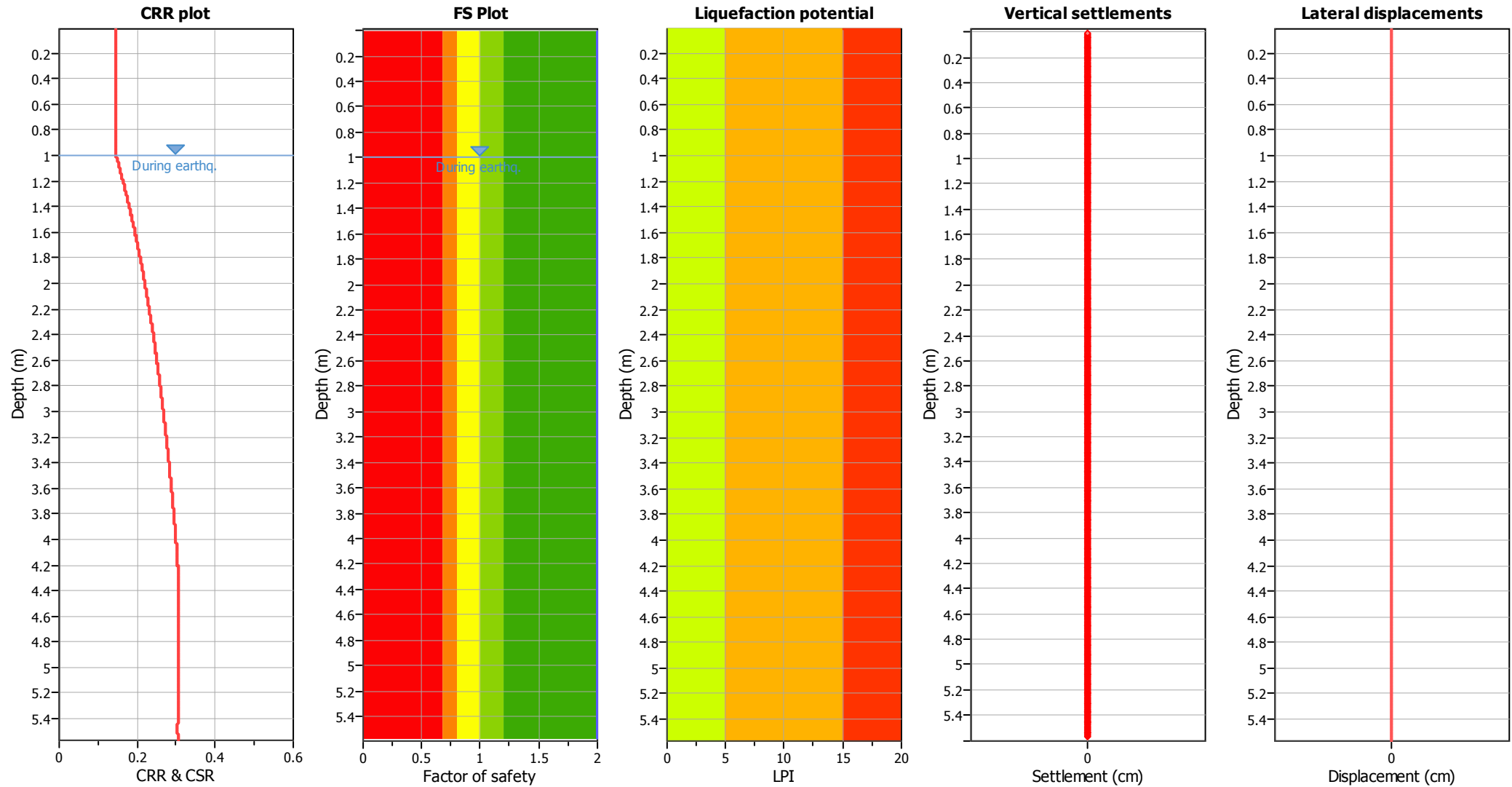
### Input parameters and analysis data

|                              |                   |                           |              |                         |     |                      |            |
|------------------------------|-------------------|---------------------------|--------------|-------------------------|-----|----------------------|------------|
| Analysis method:             | NCEER (1998)      | G.W.T. (in-situ):         | 1.00 m       | Use fill:               | No  | Clay like behavior   |            |
| Fines correction method:     | NCEER (1998)      | G.W.T. (earthq.):         | 1.00 m       | Fill height:            | N/A | applied:             | Sands only |
| Points to test:              | Based on Ic value | Average results interval: | 3            | Fill weight:            | N/A | Limit depth applied: | Yes        |
| Earthquake magnitude $M_w$ : | 7.50              | Ic cut-off value:         | 2.60         | Trans. detect. applied: | No  | Limit depth:         | 20.00 m    |
| Peak ground acceleration:    | 0.18              | Unit weight calculation:  | Based on SBT | $K_0$ applied:          | Yes |                      |            |



Zone A<sub>1</sub>: Cyclic liquefaction likely depending on size and duration of cyclic loading  
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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:                      | NCEER (1998)      | Depth to water table (earthq.): | 1.00 m       | Fill weight:                | N/A        |
| Fines correction method:              | NCEER (1998)      | Average results interval:       | 3            | Transition detect. applied: | No         |
| Points to test:                       | Based on Ic value | Ic cut-off value:               | 2.60         | K <sub>g</sub> applied:     | Yes        |
| Earthquake magnitude M <sub>w</sub> : | 7.50              | 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):        | 1.00 m            | Fill height:                    | N/A          | Limit depth:                | 20.00 m    |

F.S. color scheme

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

LPI color scheme

- Very high risk
- High risk
- Low risk

## LIQUEFACTION ANALYSIS REPORT

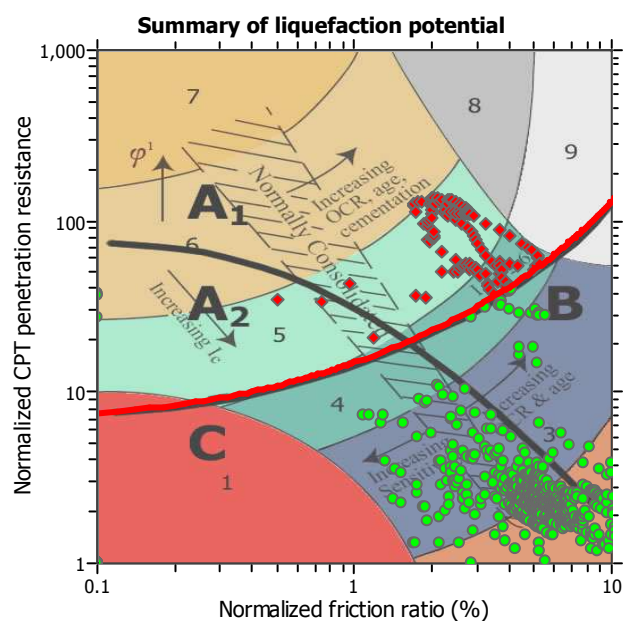
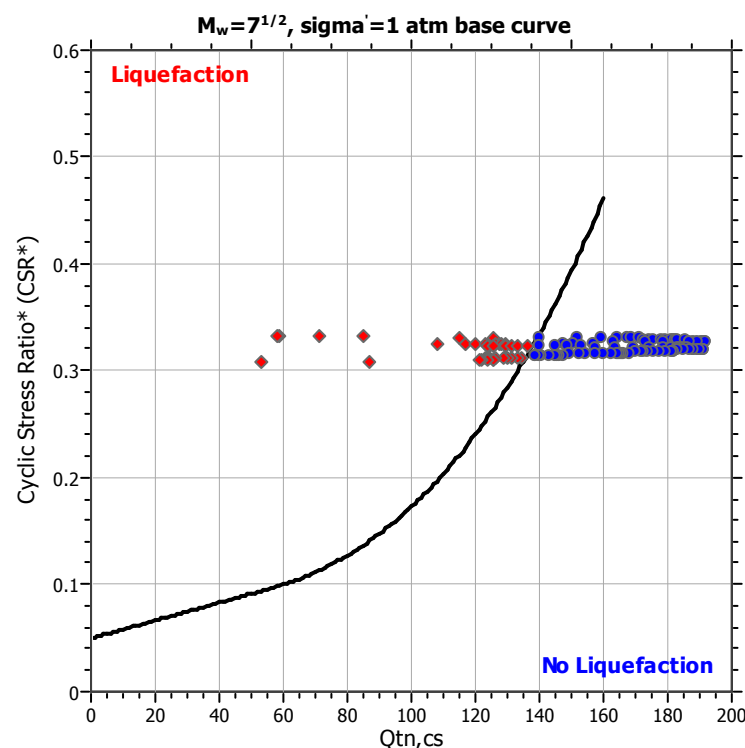
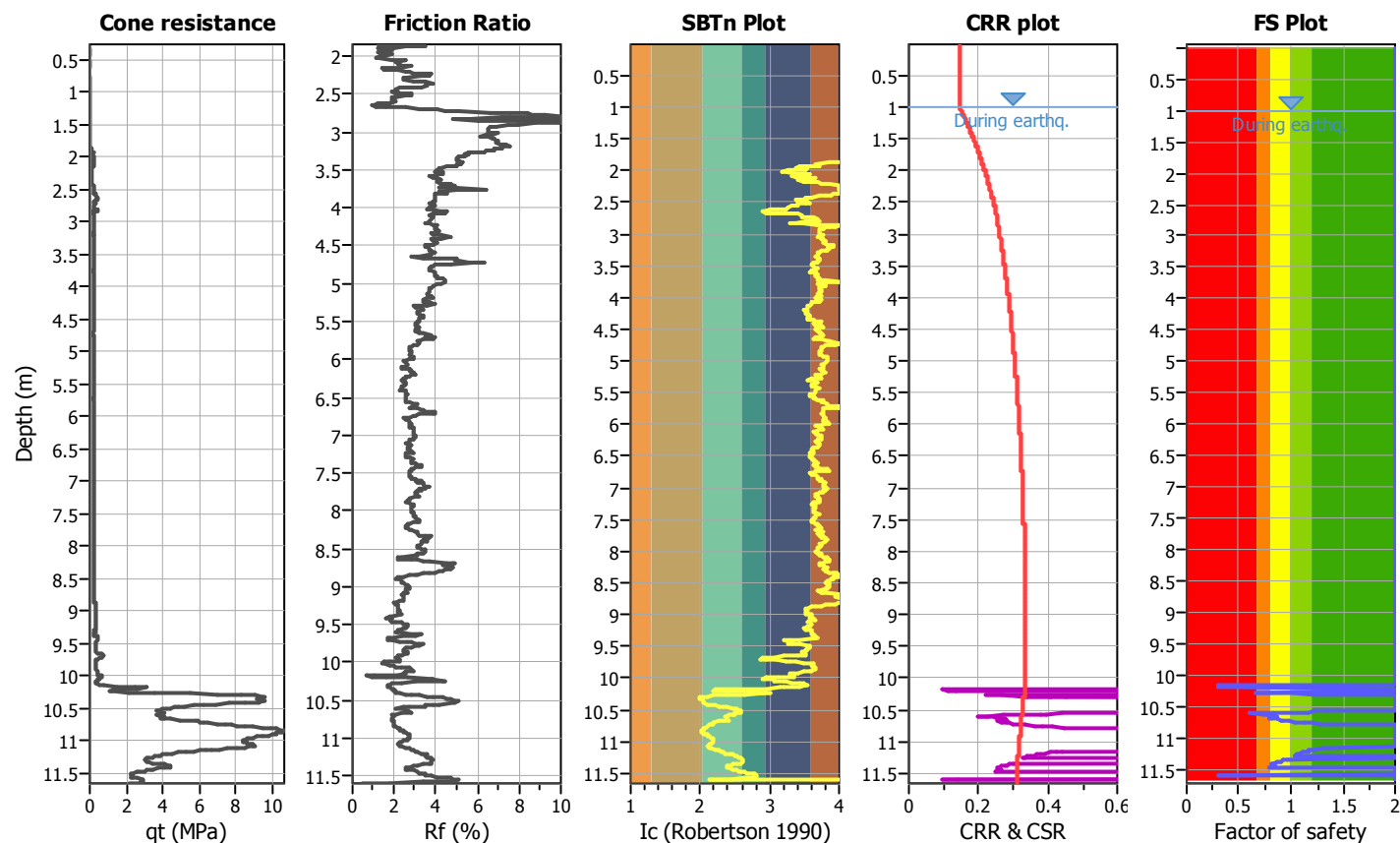
**Project title : EXTENSION MARINA ETANG Z'ABRICOTS**

**Location : LE LAMENTIN**

**CPT file : CPTU 4**

### Input parameters and analysis data

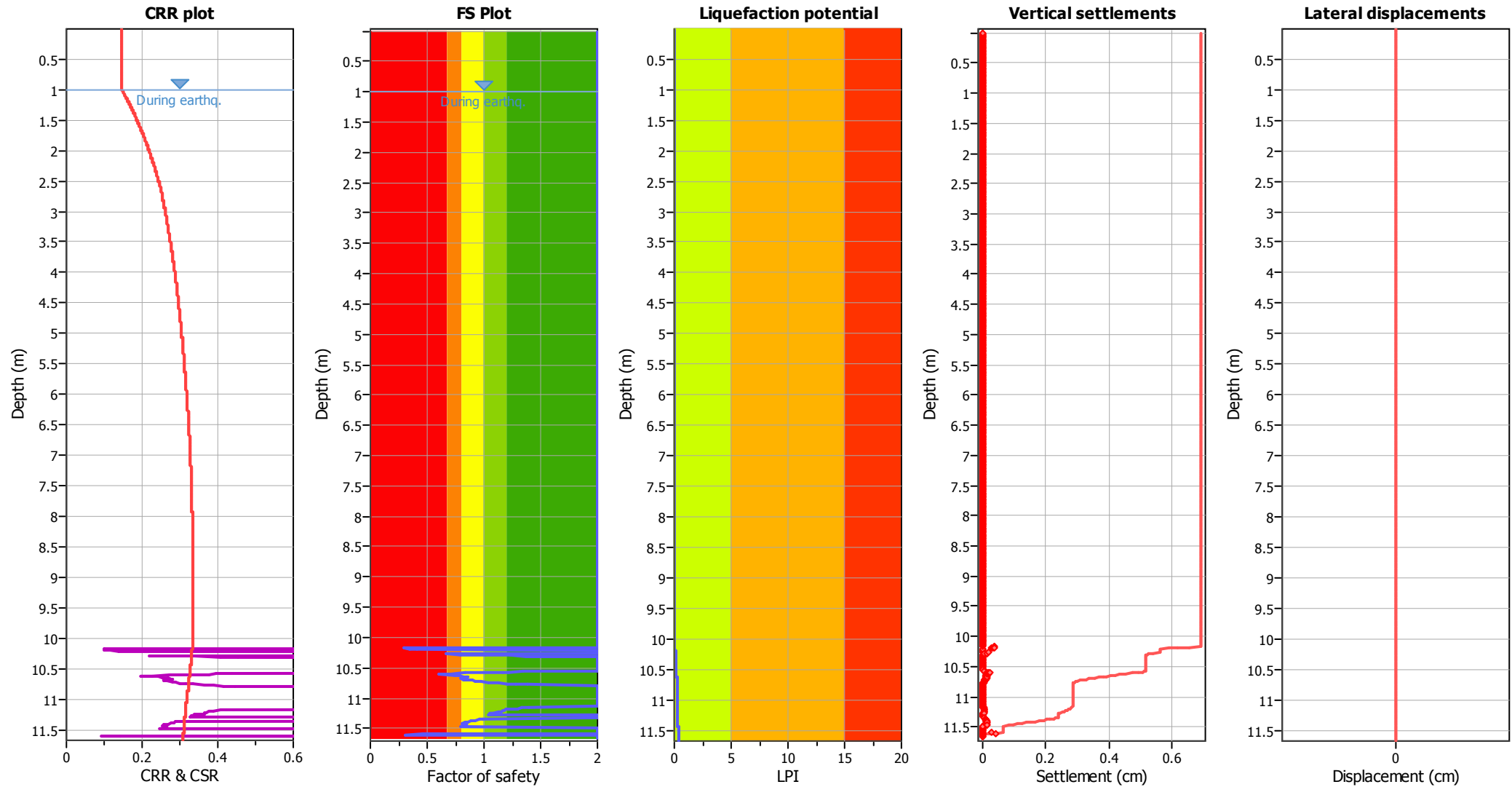
|                              |                   |                           |              |                         |     |                      |            |
|------------------------------|-------------------|---------------------------|--------------|-------------------------|-----|----------------------|------------|
| Analysis method:             | NCEER (1998)      | G.W.T. (in-situ):         | 1.00 m       | Use fill:               | No  | Clay like behavior   |            |
| Fines correction method:     | NCEER (1998)      | G.W.T. (earthq.):         | 1.00 m       | Fill height:            | N/A | applied:             | Sands only |
| Points to test:              | Based on Ic value | Average results interval: | 3            | Fill weight:            | N/A | Limit depth applied: | Yes        |
| Earthquake magnitude $M_w$ : | 7.50              | Ic cut-off value:         | 2.60         | Trans. detect. applied: | No  | Limit depth:         | 20.00 m    |
| Peak ground acceleration:    | 0.18              | Unit weight calculation:  | Based on SBT | $K_g$ applied:          | Yes |                      |            |



Zone A<sub>1</sub>: Cyclic liquefaction likely depending on size and duration of cyclic loading  
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Liquefaction analysis overall plots



Input parameters and analysis data

|                                       |                   |                                 |              |                             |            |
|---------------------------------------|-------------------|---------------------------------|--------------|-----------------------------|------------|
| Analysis method:                      | NCEER (1998)      | Depth to water table (earthq.): | 1.00 m       | Fill weight:                | N/A        |
| Fines correction method:              | NCEER (1998)      | Average results interval:       | 3            | Transition detect. applied: | No         |
| Points to test:                       | Based on Ic value | Ic cut-off value:               | 2.60         | K <sub>0</sub> applied:     | Yes        |
| Earthquake magnitude M <sub>w</sub> : | 7.50              | Unit weight calculation:        | Based on SBT | Clay like behavior applied: | Sands only |
| Peak ground acceleration:             | 0.18              | Use fill:                       | No           | Limit depth applied:        | Yes        |
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F.S. color scheme

|                |
|----------------|
| Very high risk |
| High risk      |
| Low risk       |

LPI color scheme

|                |
|----------------|
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| High risk      |
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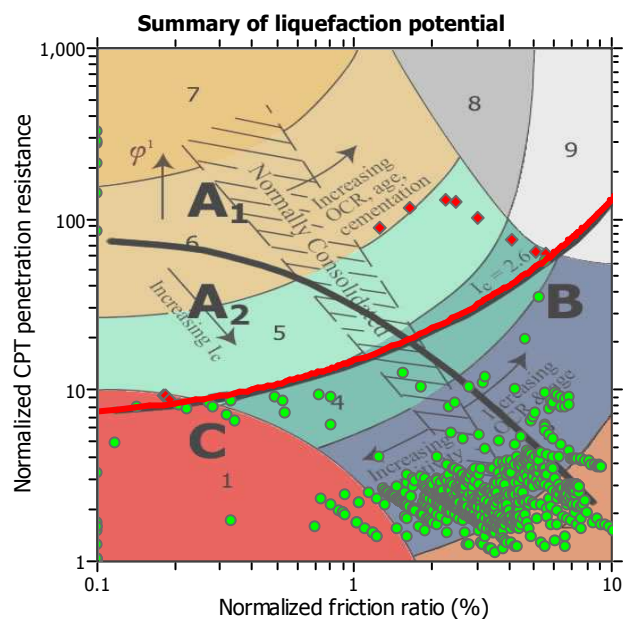
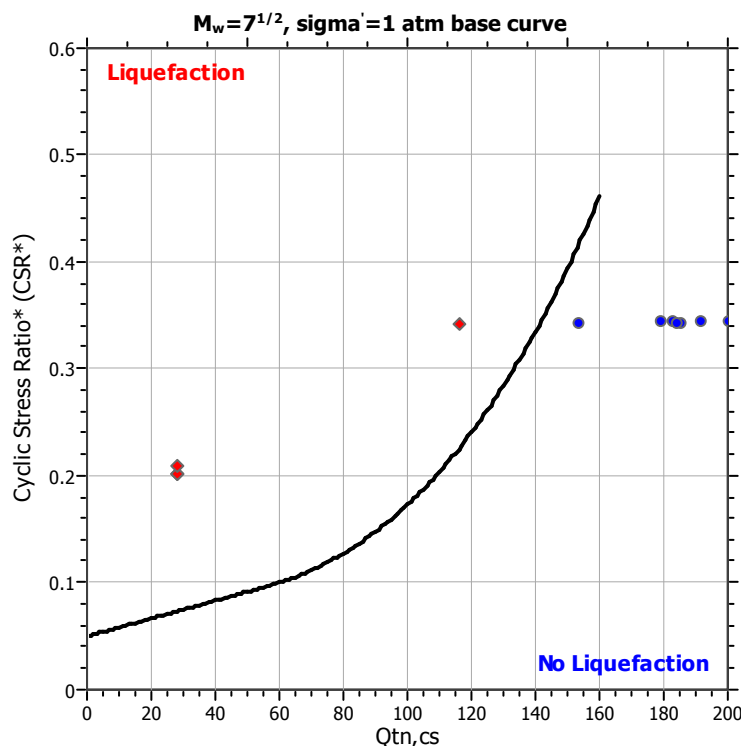
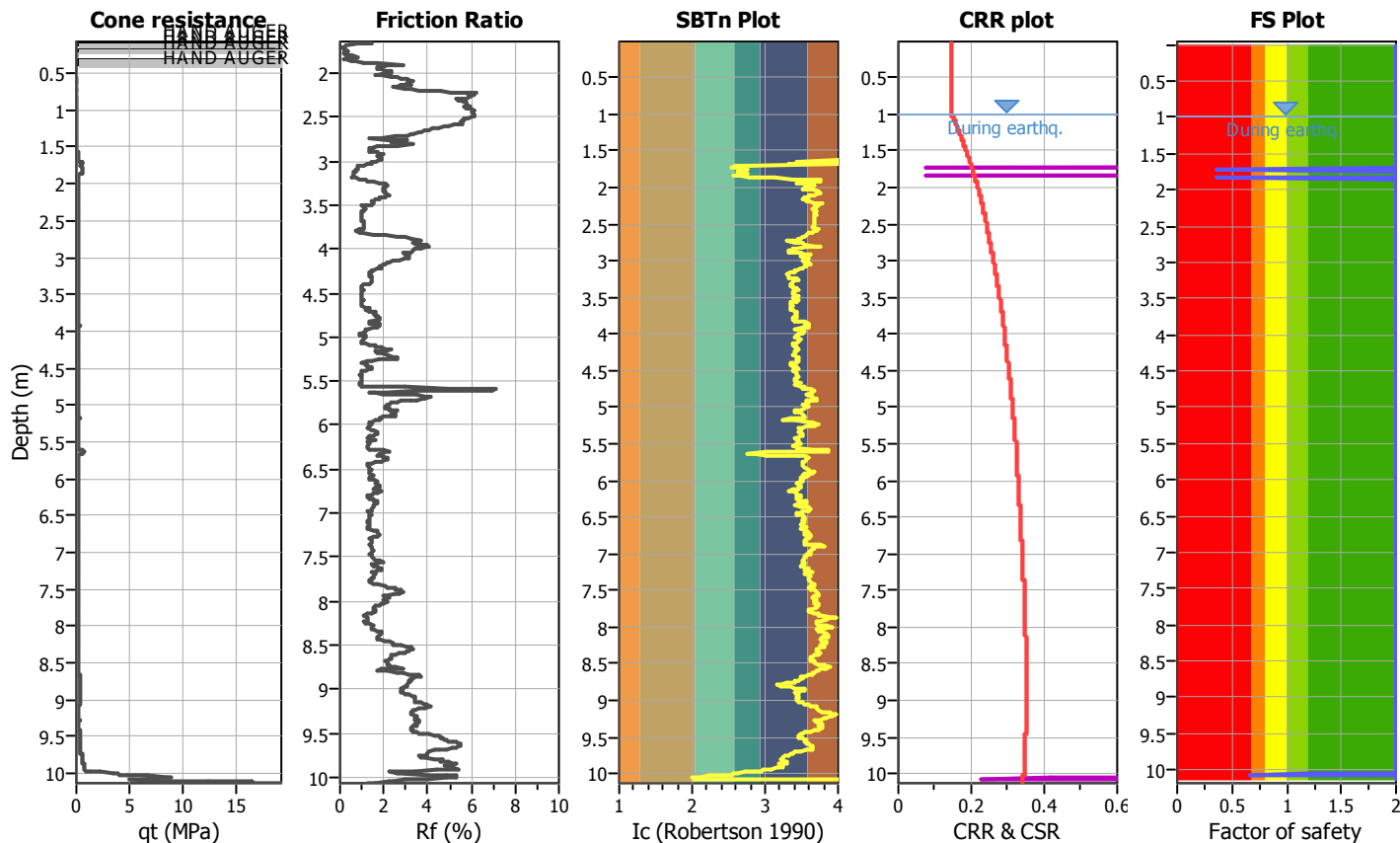
**Project title : EXTENSION MARINA ETANG Z'ABRICOTS**

**Location : LE LAMENTIN**

**CPT file : CPTU 5**

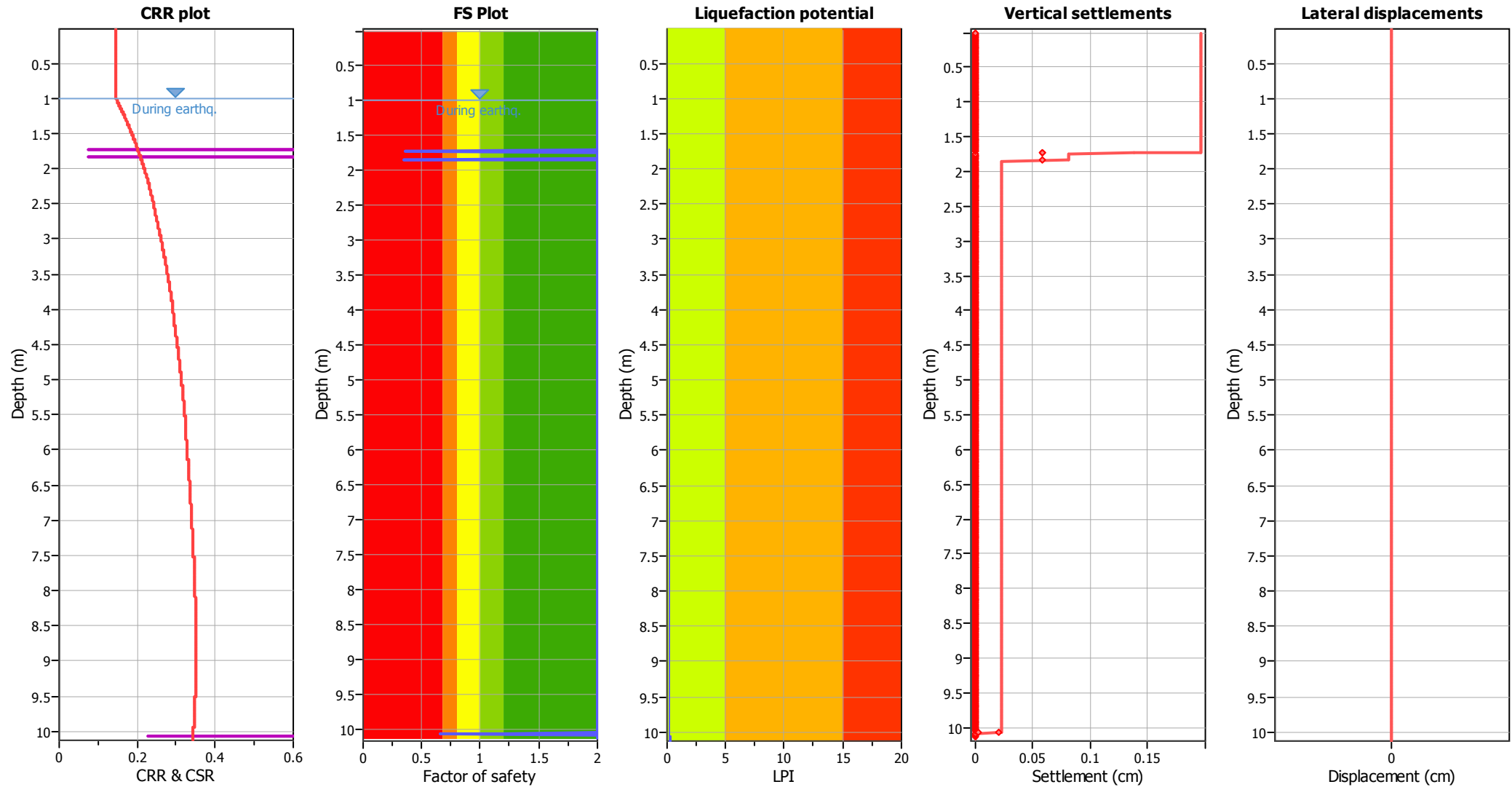
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| Analysis method:             | NCEER (1998)      | G.W.T. (in-situ):         | 1.00 m       | Use fill:               | No  | Clay like behavior   |            |
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Liquefaction analysis overall plots



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