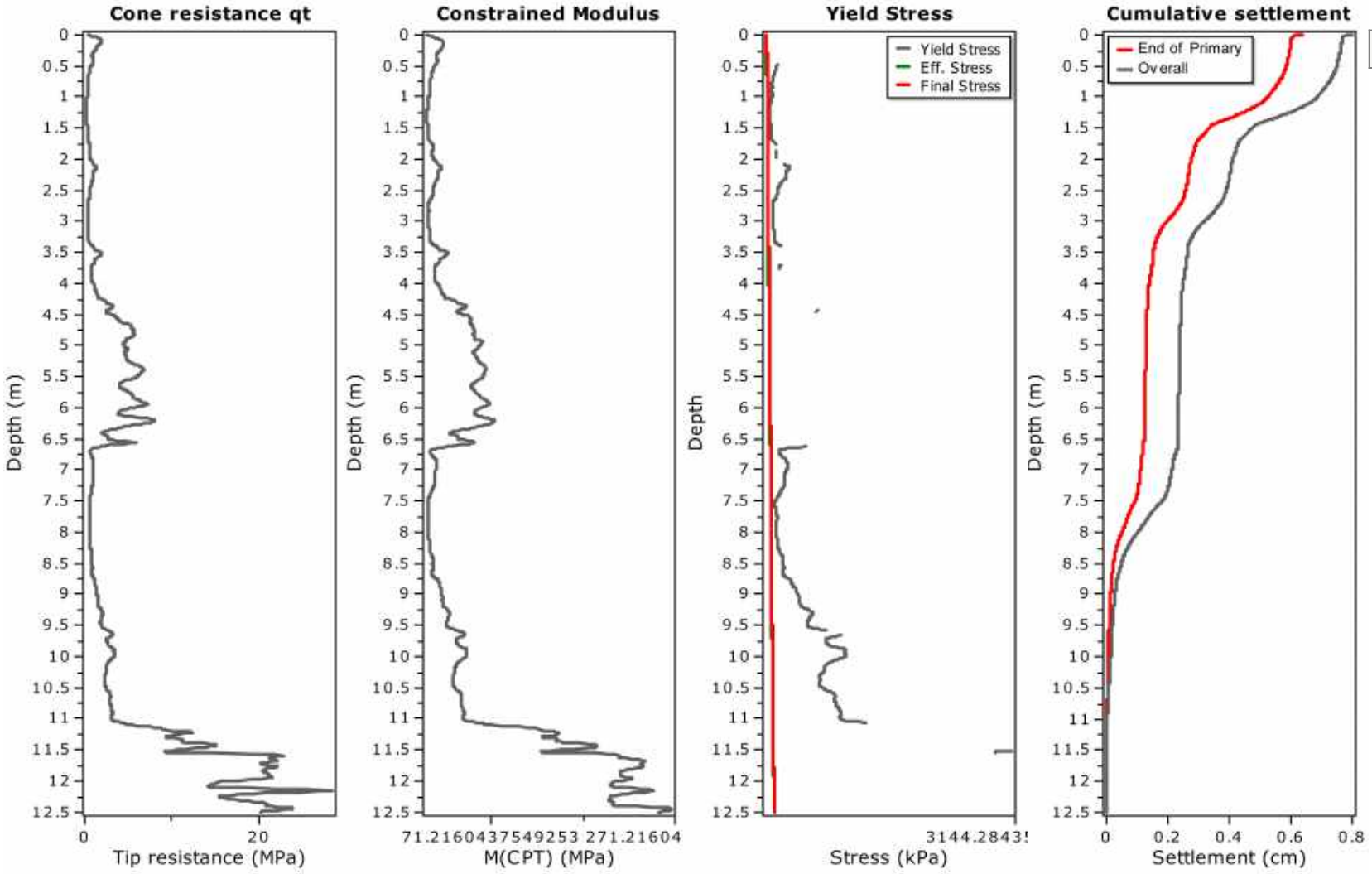
Lander Geotechnical Consultants Limited
Level 3, 3 Osterley Way
P O Box 97 385, Manukau, Auckland 2241
www.landergeotechnical.co.nz

CPT: CPT12
Total depth: 12.51 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1243	12.42	12.43	0.01	12.43	1.39	245.94	0.25	0.000	0.000	0.000
1244	12.43	12.44	0.01	12.44	1.39	257.57	0.25	0.000	0.000	0.000
1245	12.44	12.45	0.01	12.45	1.39	264.59	0.25	0.000	0.000	0.000
1246	12.45	12.46	0.01	12.46	1.39	267.60	0.25	0.000	0.000	0.000
1247	12.46	12.47	0.01	12.47	1.39	267.12	0.25	0.000	0.000	0.000
1248	12.47	12.48	0.01	12.48	1.39	265.24	0.25	0.000	0.000	0.000
1249	12.48	12.49	0.01	12.49	1.38	260.94	0.25	0.000	0.000	0.000
1250	12.49	12.50	0.01	12.50	1.38	258.77	0.25	0.000	0.000	0.000
1251	12.50	12.51	0.01	12.51	1.38	255.08	0.25	0.000	0.000	0.000

Total primary settlement: 0.63
Total secondary settlement: 0.16

Total calculated settlement: 0.80

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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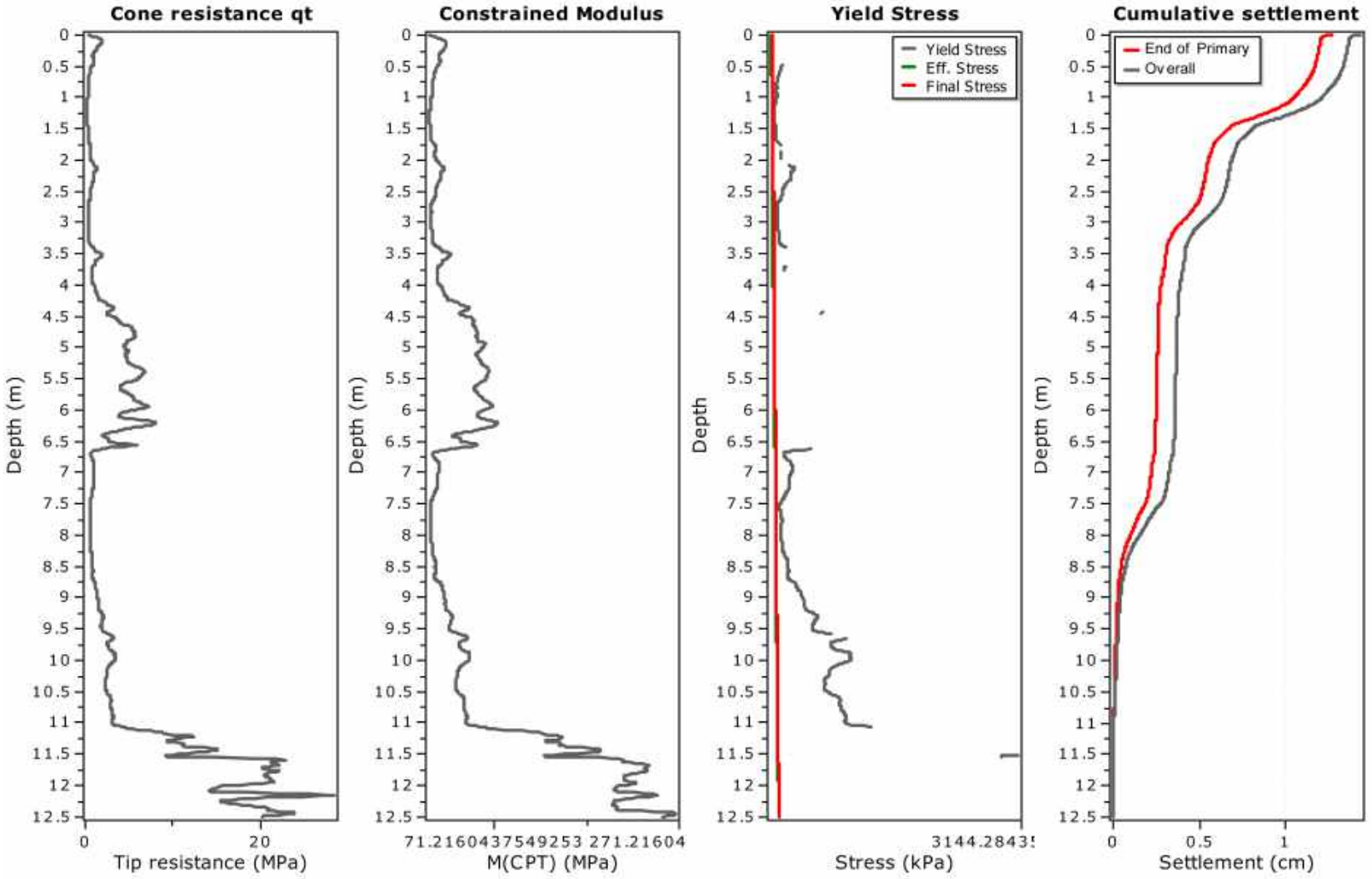
CPT: CPT12
Total depth: 12.51 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1243	12.42	12.43	0.01	12.43	2.78	245.94	0.25	0.000	0.000	0.000
1244	12.43	12.44	0.01	12.44	2.78	257.57	0.25	0.000	0.000	0.000
1245	12.44	12.45	0.01	12.45	2.78	264.59	0.25	0.000	0.000	0.000
1246	12.45	12.46	0.01	12.46	2.78	267.60	0.25	0.000	0.000	0.000
1247	12.46	12.47	0.01	12.47	2.77	267.12	0.25	0.000	0.000	0.000
1248	12.47	12.48	0.01	12.48	2.77	265.24	0.25	0.000	0.000	0.000
1249	12.48	12.49	0.01	12.49	2.77	260.94	0.25	0.000	0.000	0.000
1250	12.49	12.50	0.01	12.50	2.77	258.77	0.25	0.000	0.000	0.000
1251	12.50	12.51	0.01	12.51	2.76	255.08	0.25	0.000	0.000	0.000

Total primary settlement: 1.27
Total secondary settlement: 0.16

Total calculated settlement: 1.43

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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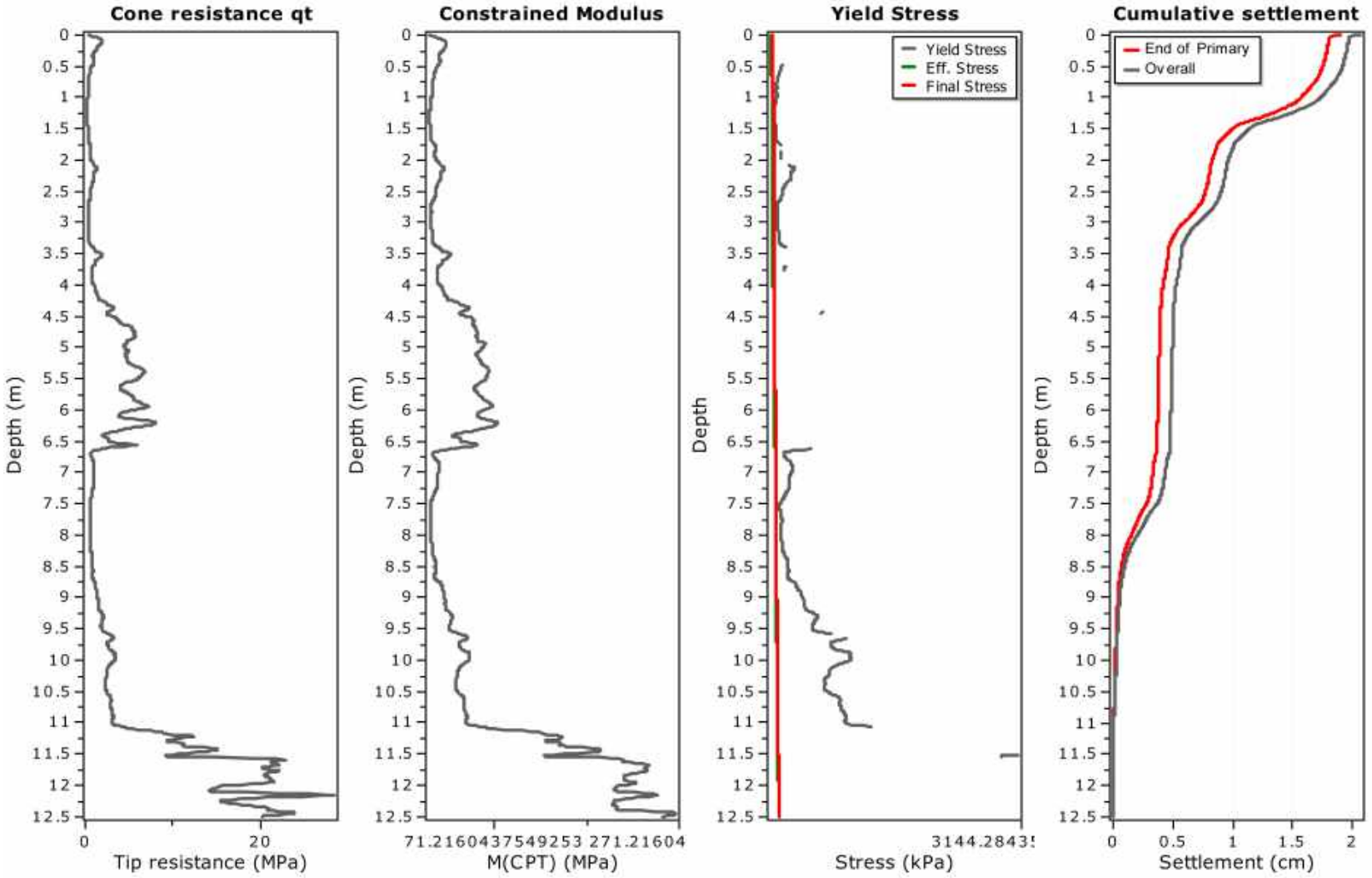
CPT: CPT12
Total depth: 12.51 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1243	12.42	12.43	0.01	12.43	4.17	245.94	0.25	0.000	0.000	0.000
1244	12.43	12.44	0.01	12.44	4.17	257.57	0.25	0.000	0.000	0.000
1245	12.44	12.45	0.01	12.45	4.17	264.59	0.25	0.000	0.000	0.000
1246	12.45	12.46	0.01	12.46	4.16	267.60	0.25	0.000	0.000	0.000
1247	12.46	12.47	0.01	12.47	4.16	267.12	0.25	0.000	0.000	0.000
1248	12.47	12.48	0.01	12.48	4.16	265.24	0.25	0.000	0.000	0.000
1249	12.48	12.49	0.01	12.49	4.15	260.94	0.25	0.000	0.000	0.000
1250	12.49	12.50	0.01	12.50	4.15	258.77	0.25	0.000	0.000	0.000
1251	12.50	12.51	0.01	12.51	4.15	255.08	0.25	0.000	0.000	0.000

Total primary settlement: 1.90
Total secondary settlement: 0.16

Total calculated settlement: 2.07

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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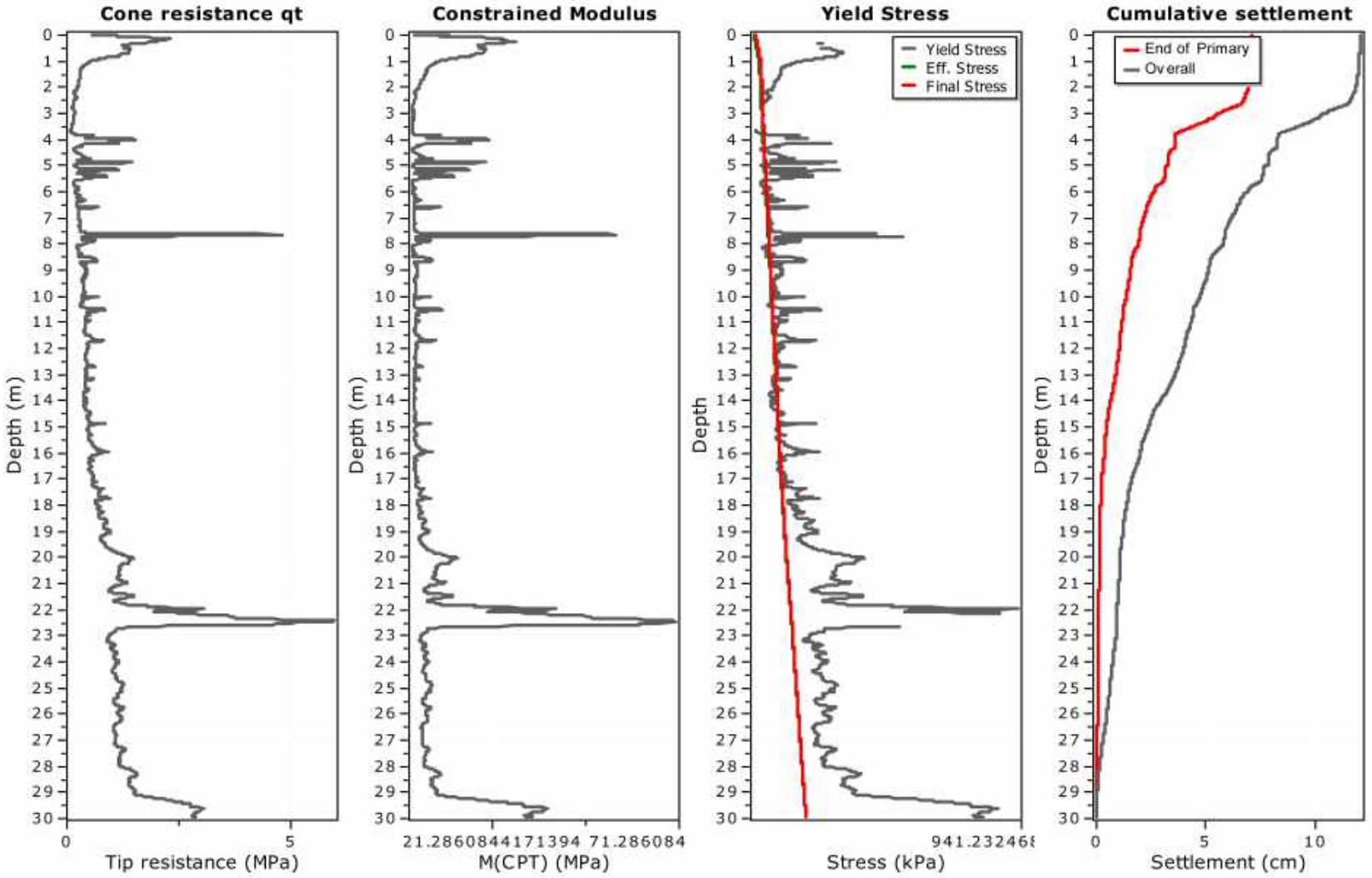
CPT: CPT13A
Total depth: 29.93 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
2991	29.90	29.91	0.01	29.91	0.45	30.19	0.08	0.000	0.000	0.000
2992	29.91	29.92	0.01	29.92	0.45	30.64	0.08	0.000	0.000	0.000
2993	29.92	29.93	0.01	29.93	0.45	31.51	0.08	0.000	0.000	0.000

Total primary settlement: 7.15
Total secondary settlement: 4.95

Total calculated settlement: 12.11

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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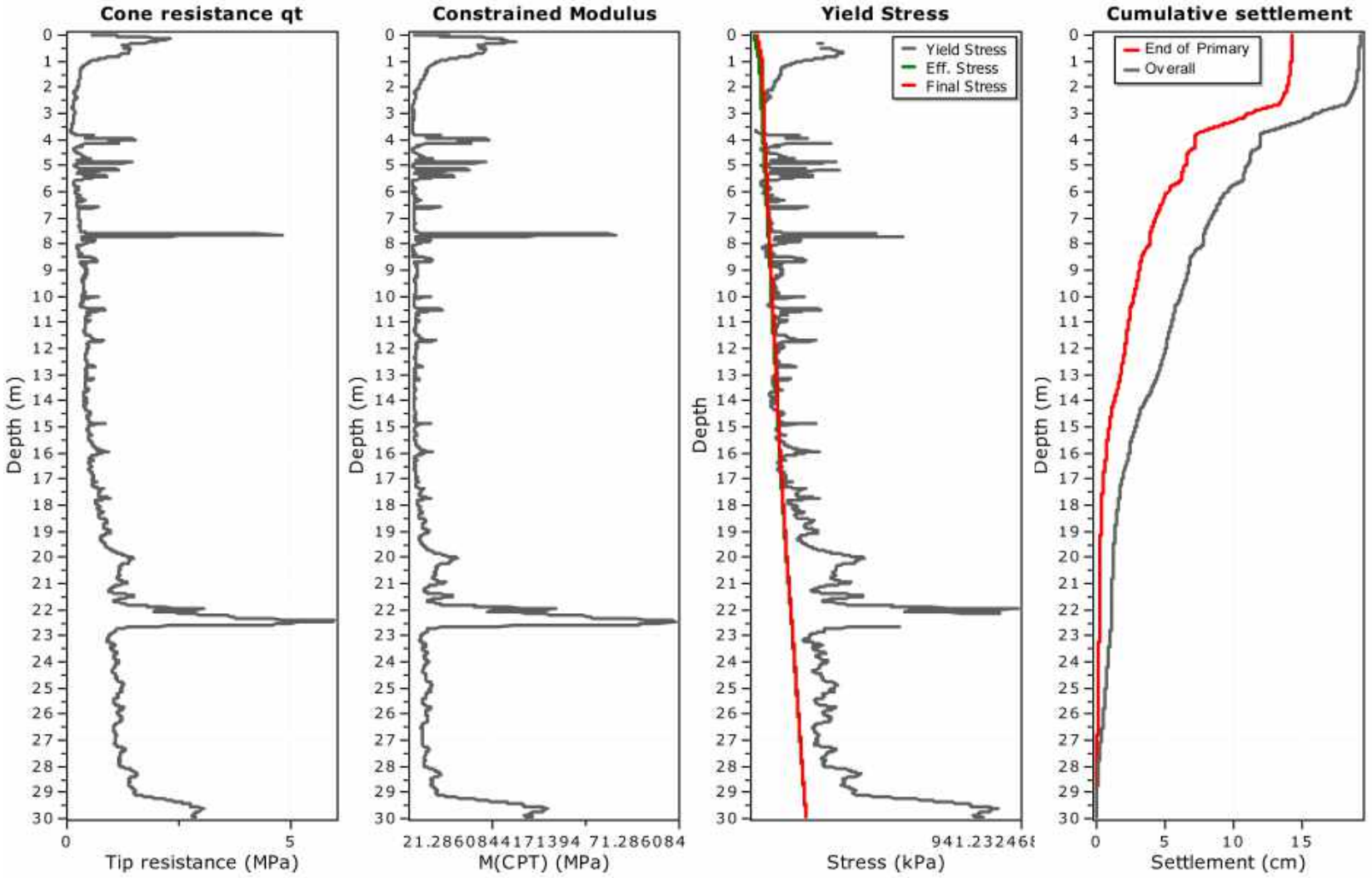
CPT: CPT13A
Total depth: 29.93 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
2991	29.90	29.91	0.01	29.91	0.91	30.19	0.08	0.000	0.000	0.000
2992	29.91	29.92	0.01	29.92	0.91	30.64	0.08	0.000	0.000	0.000
2993	29.92	29.93	0.01	29.93	0.91	31.51	0.08	0.000	0.000	0.000

Total primary settlement: 14.31
Total secondary settlement: 4.95

Total calculated settlement: 19.26

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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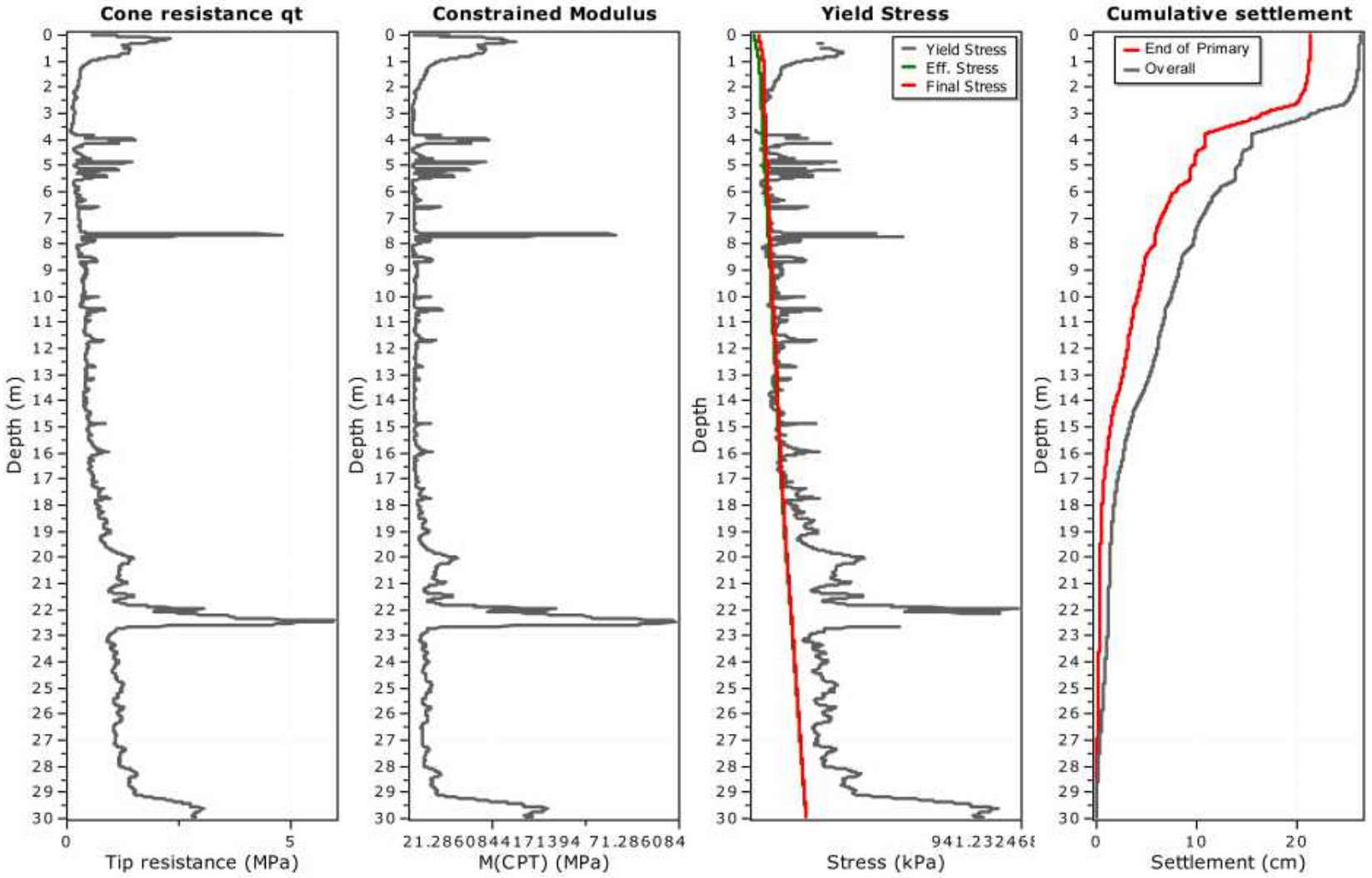
CPT: CPT13A
Total depth: 29.93 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
2991	29.90	29.91	0.01	29.91	1.36	30.19	0.08	0.000	0.000	0.000
2992	29.91	29.92	0.01	29.92	1.36	30.64	0.08	0.000	0.000	0.000
2993	29.92	29.93	0.01	29.93	1.36	31.51	0.08	0.000	0.000	0.000

Total primary settlement: 21.46
Total secondary settlement: 4.95

Total calculated settlement: 26.41

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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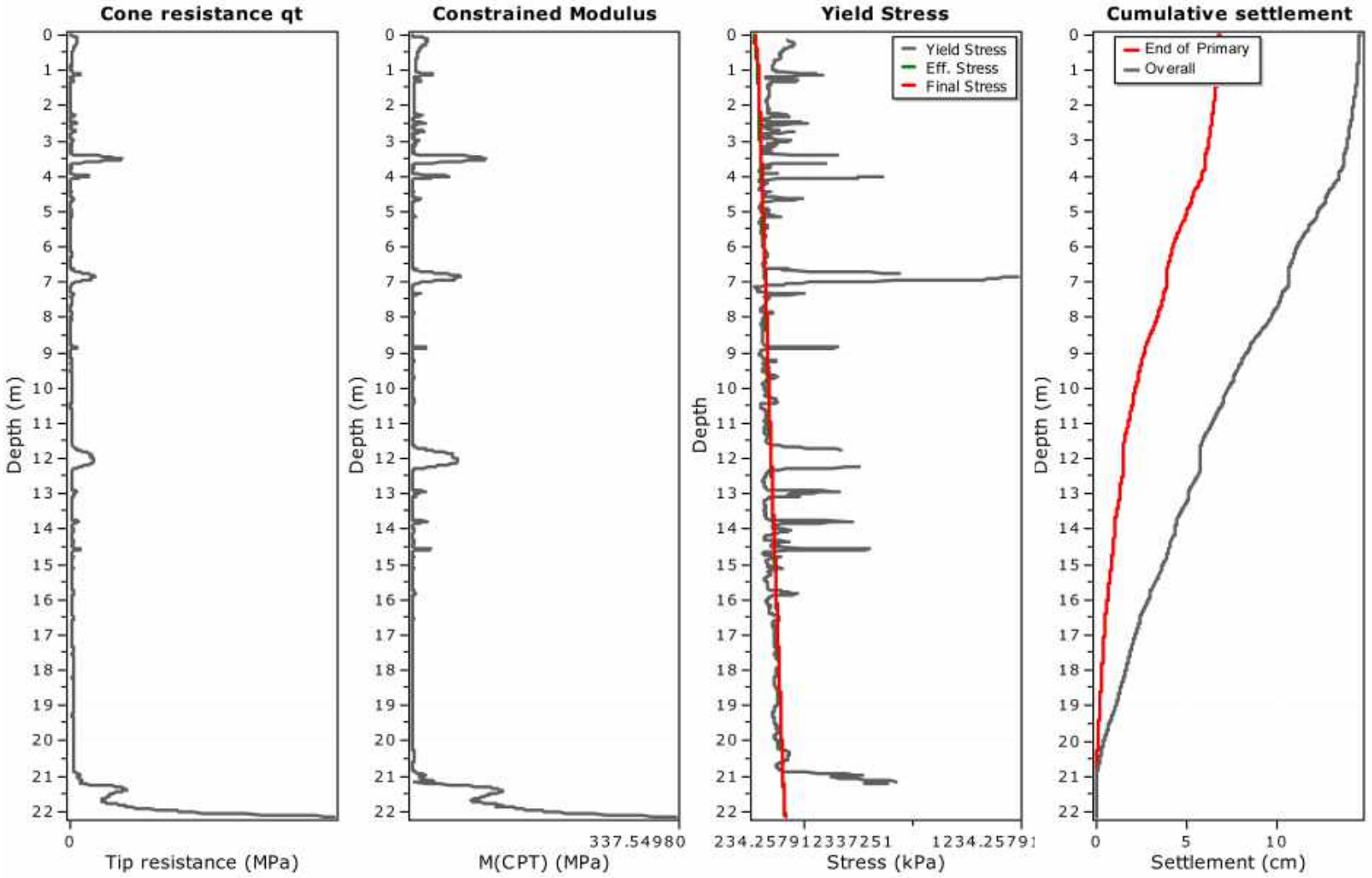
CPT: CPT14
Total depth: 22.15 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
2209	22.08	22.09	0.01	22.09	0.71	244.32	0.13	0.000	0.000	0.000
2210	22.09	22.10	0.01	22.10	0.71	256.76	0.13	0.000	0.000	0.000
2211	22.10	22.11	0.01	22.11	0.71	270.67	0.13	0.000	0.000	0.000
2212	22.11	22.12	0.01	22.12	0.71	276.51	0.13	0.000	0.000	0.000
2213	22.12	22.13	0.01	22.13	0.71	291.07	0.13	0.000	0.000	0.000
2214	22.13	22.14	0.01	22.14	0.71	304.62	0.13	0.000	0.000	0.000
2215	22.14	22.15	0.01	22.15	0.71	324.64	0.13	0.000	0.000	0.000

Total primary settlement: 6.84
Total secondary settlement: 7.75

Total calculated settlement: 14.59

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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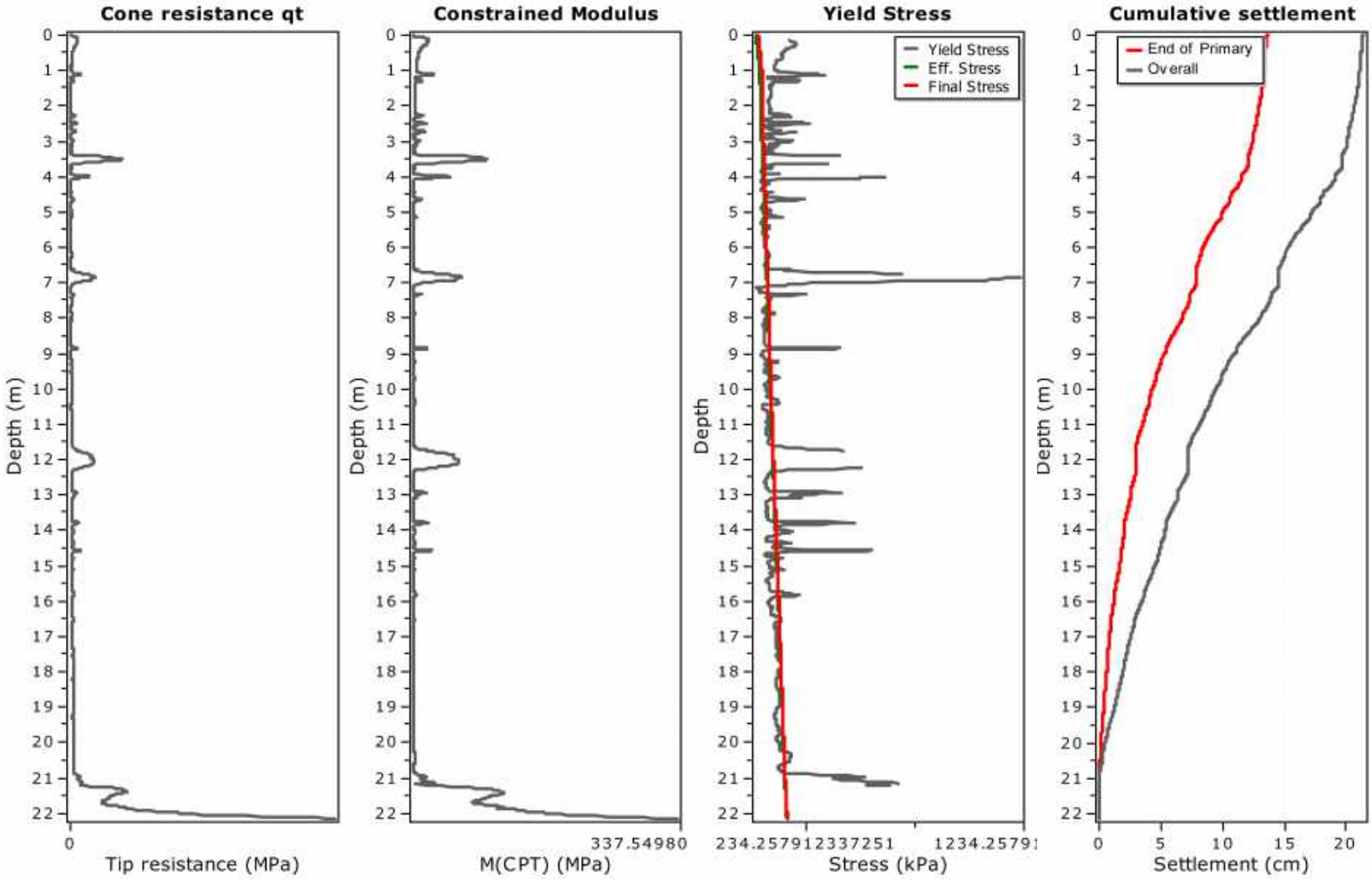
CPT: CPT14
Total depth: 22.15 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
2209	22.08	22.09	0.01	22.09	1.42	244.32	0.13	0.000	0.000	0.000
2210	22.09	22.10	0.01	22.10	1.42	256.76	0.13	0.000	0.000	0.000
2211	22.10	22.11	0.01	22.11	1.42	270.67	0.13	0.000	0.000	0.000
2212	22.11	22.12	0.01	22.12	1.42	276.51	0.13	0.000	0.000	0.000
2213	22.12	22.13	0.01	22.13	1.42	291.07	0.13	0.000	0.000	0.000
2214	22.13	22.14	0.01	22.14	1.42	304.62	0.13	0.000	0.000	0.000
2215	22.14	22.15	0.01	22.15	1.42	324.64	0.13	0.000	0.000	0.000

Total primary settlement: 13.68
Total secondary settlement: 7.75

Total calculated settlement: 21.43

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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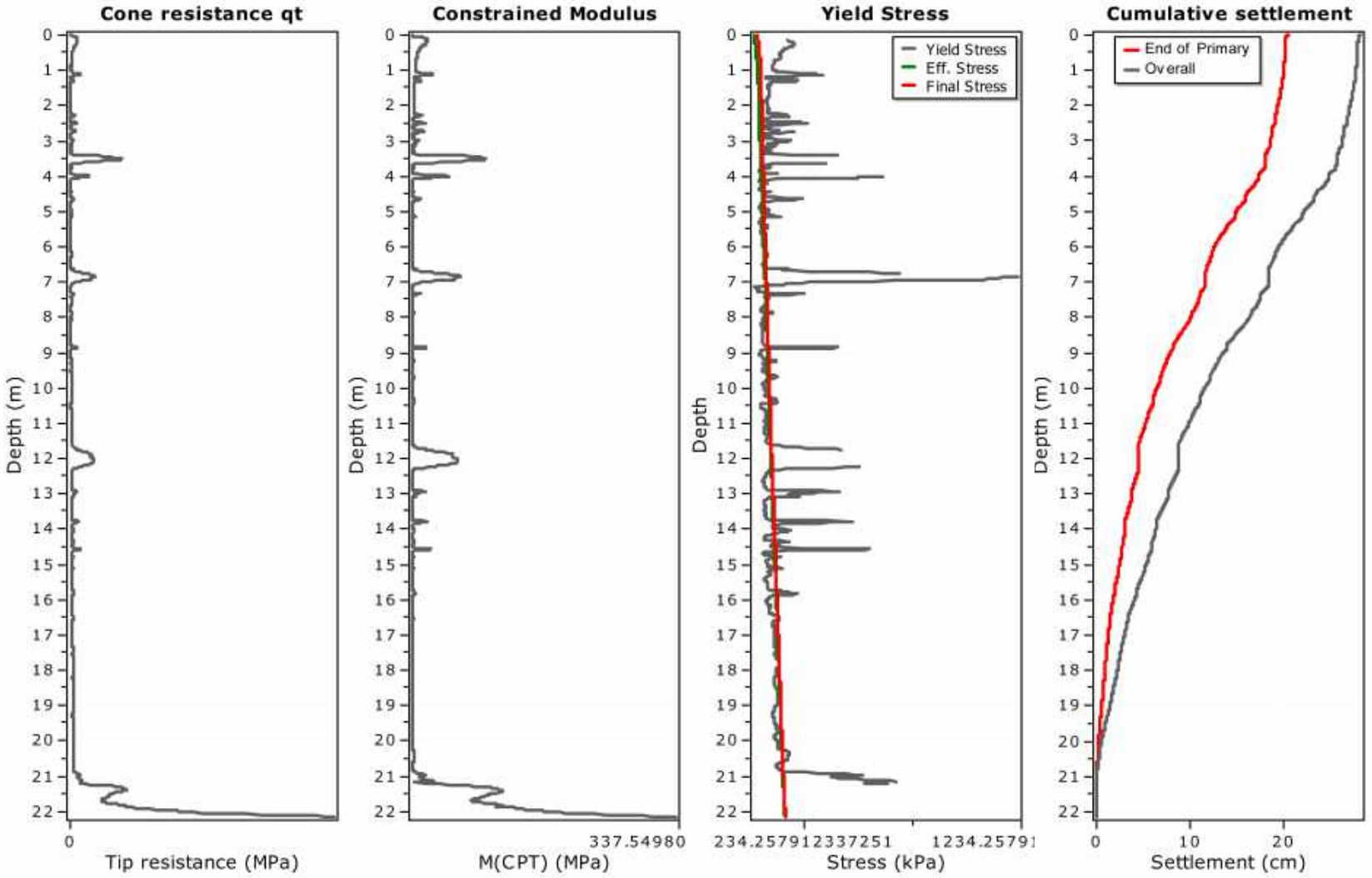
CPT: CPT14
Total depth: 22.15 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
2209	22.08	22.09	0.01	22.09	2.13	244.32	0.13	0.000	0.000	0.000
2210	22.09	22.10	0.01	22.10	2.13	256.76	0.13	0.000	0.000	0.000
2211	22.10	22.11	0.01	22.11	2.13	270.67	0.13	0.000	0.000	0.000
2212	22.11	22.12	0.01	22.12	2.13	276.51	0.13	0.000	0.000	0.000
2213	22.12	22.13	0.01	22.13	2.13	291.07	0.13	0.000	0.000	0.000
2214	22.13	22.14	0.01	22.14	2.13	304.62	0.13	0.000	0.000	0.000
2215	22.14	22.15	0.01	22.15	2.12	324.64	0.13	0.000	0.000	0.000

Total primary settlement: 20.53
Total secondary settlement: 7.75

Total calculated settlement: 28.28

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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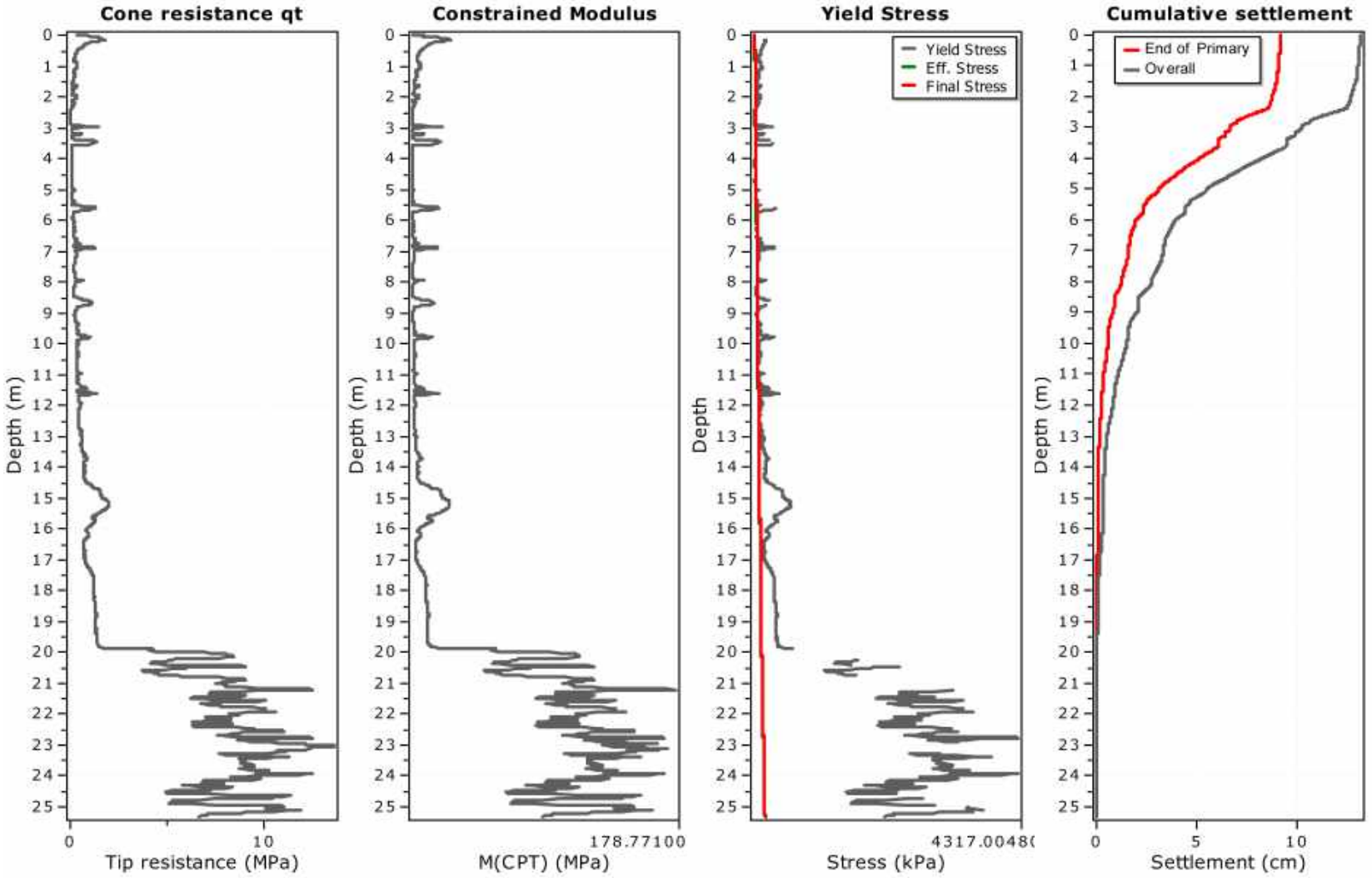
CPT: CPT15
Total depth: 25.35 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
2531	25.30	25.31	0.01	25.31	0.59	92.92	0.11	0.000	0.000	0.000
2532	25.31	25.32	0.01	25.32	0.59	91.53	0.11	0.000	0.000	0.000
2533	25.32	25.33	0.01	25.33	0.59	89.01	0.11	0.000	0.000	0.000
2534	25.33	25.34	0.01	25.34	0.59	87.49	0.11	0.000	0.000	0.000
2535	25.34	25.35	0.01	25.35	0.58	86.68	0.11	0.000	0.000	0.000

Total primary settlement: 9.20
Total secondary settlement: 3.98

Total calculated settlement: 13.18

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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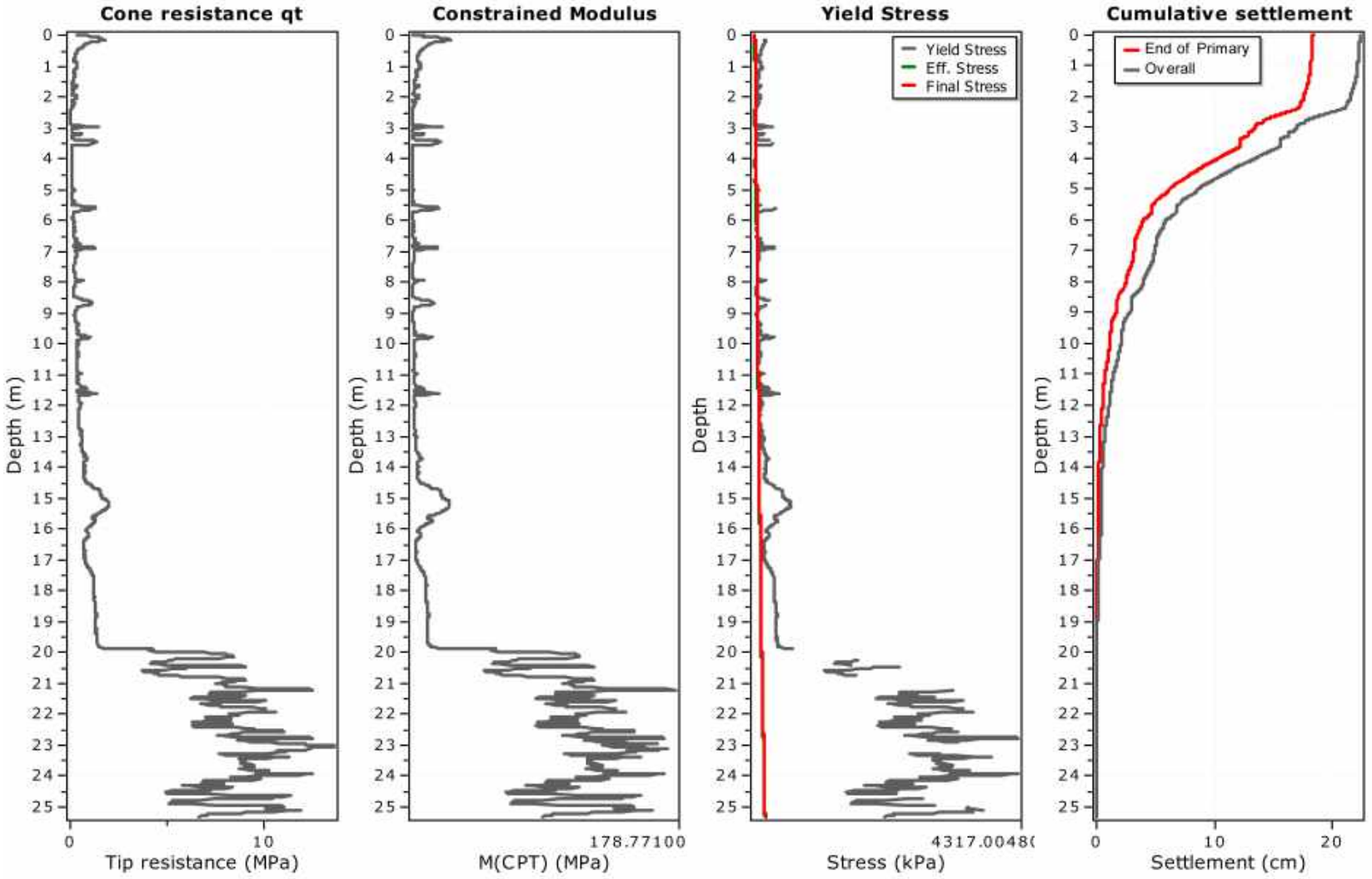
CPT: CPT15
Total depth: 25.35 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
2531	25.30	25.31	0.01	25.31	1.17	92.92	0.11	0.000	0.000	0.000
2532	25.31	25.32	0.01	25.32	1.17	91.53	0.11	0.000	0.000	0.000
2533	25.32	25.33	0.01	25.33	1.17	89.01	0.11	0.000	0.000	0.000
2534	25.33	25.34	0.01	25.34	1.17	87.49	0.11	0.000	0.000	0.000
2535	25.34	25.35	0.01	25.35	1.17	86.68	0.11	0.000	0.000	0.000

Total primary settlement: 18.40
Total secondary settlement: 3.98

Total calculated settlement: 22.39

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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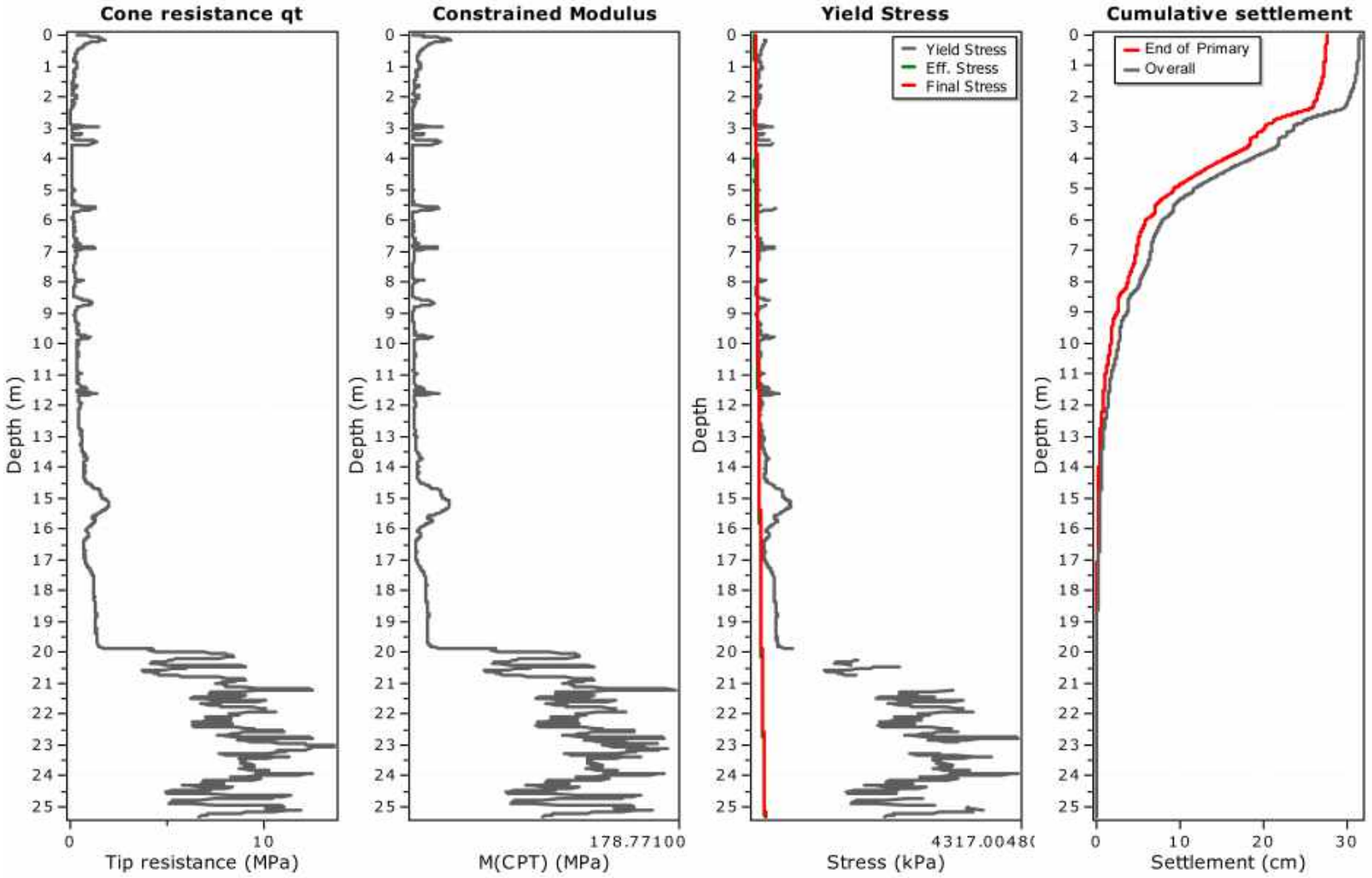
CPT: CPT15
Total depth: 25.35 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
2531	25.30	25.31	0.01	25.31	1.76	92.92	0.11	0.000	0.000	0.000
2532	25.31	25.32	0.01	25.32	1.76	91.53	0.11	0.000	0.000	0.000
2533	25.32	25.33	0.01	25.33	1.76	89.01	0.11	0.000	0.000	0.000
2534	25.33	25.34	0.01	25.34	1.76	87.49	0.11	0.000	0.000	0.000
2535	25.34	25.35	0.01	25.35	1.75	86.68	0.11	0.000	0.000	0.000

Total primary settlement: 27.61
Total secondary settlement: 3.98

Total calculated settlement: 31.59

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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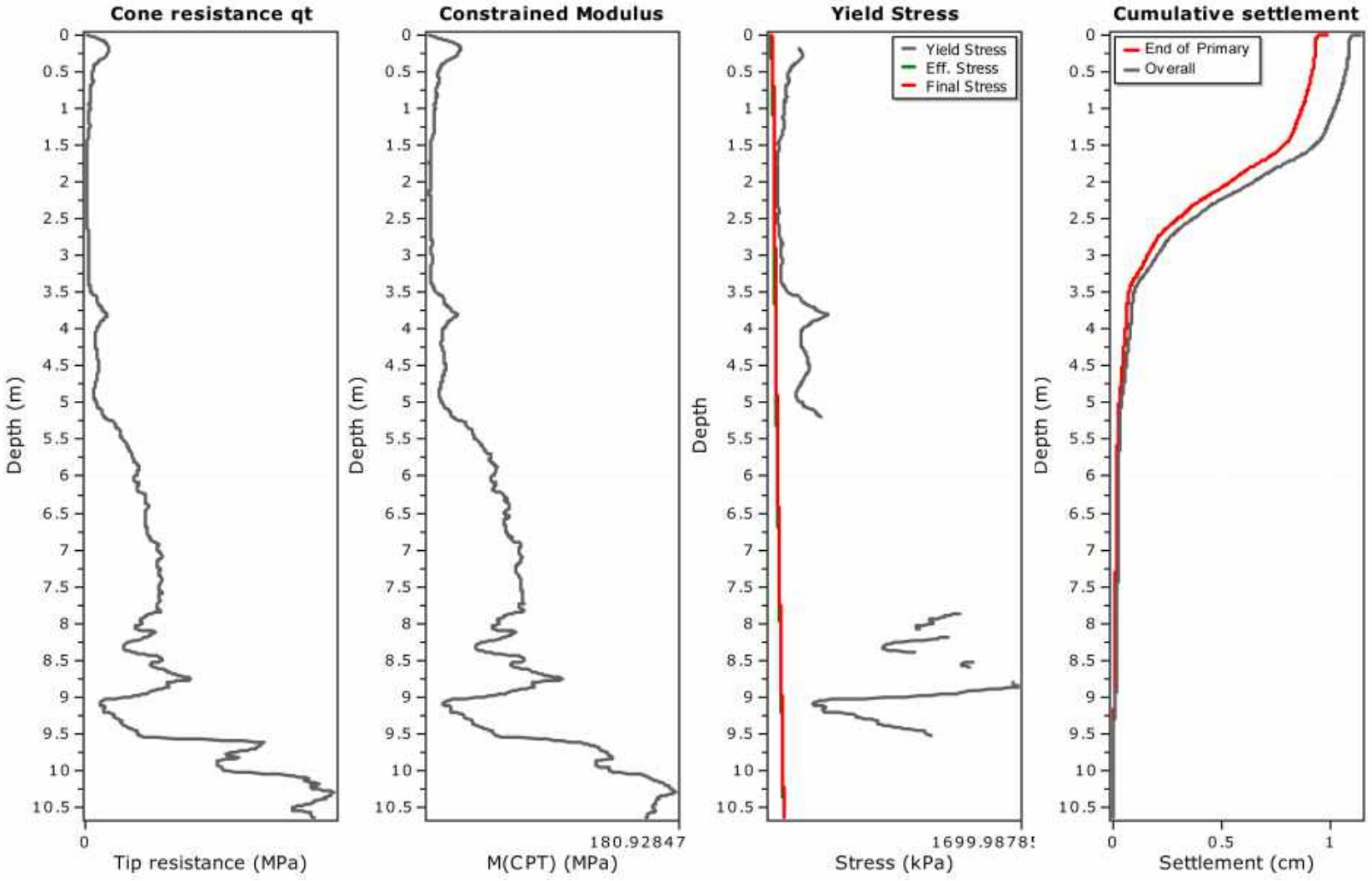
CPT: CPT16
Total depth: 10.64 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1059	10.58	10.59	0.01	10.59	1.61	160.94	0.29	0.000	0.000	0.000
1060	10.59	10.60	0.01	10.60	1.61	158.10	0.29	0.000	0.000	0.000
1061	10.60	10.61	0.01	10.61	1.61	157.55	0.29	0.000	0.000	0.000
1062	10.61	10.62	0.01	10.62	1.61	157.61	0.29	0.000	0.000	0.000
1063	10.62	10.63	0.01	10.63	1.61	157.71	0.29	0.000	0.000	0.000
1064	10.63	10.64	0.01	10.64	1.61	157.57	0.29	0.000	0.000	0.000

Total primary settlement: 0.99
Total secondary settlement: 0.15

Total calculated settlement: 1.14

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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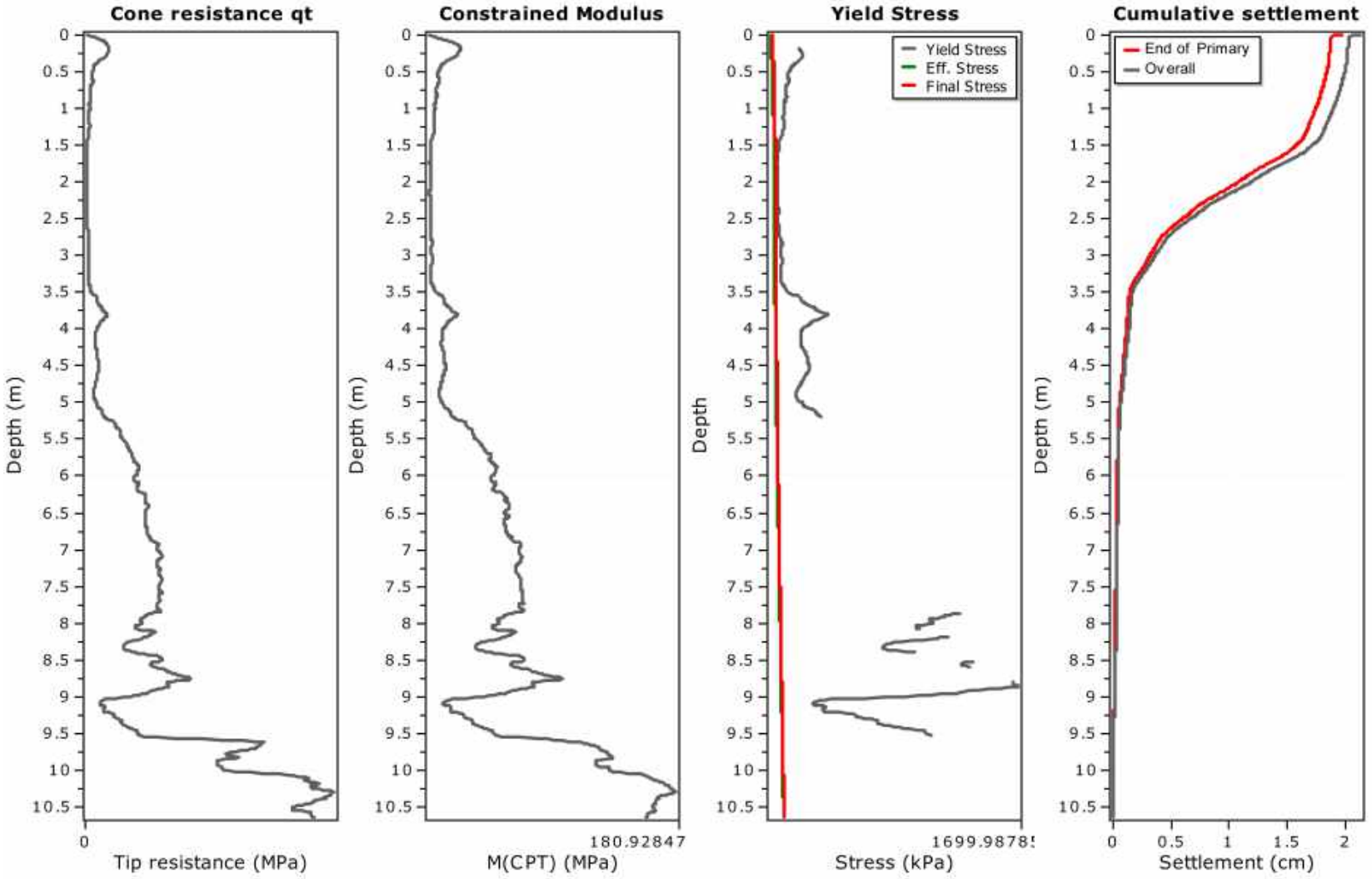
CPT: CPT16
Total depth: 10.64 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1059	10.58	10.59	0.01	10.59	3.23	160.94	0.29	0.000	0.000	0.000
1060	10.59	10.60	0.01	10.60	3.22	158.10	0.29	0.000	0.000	0.000
1061	10.60	10.61	0.01	10.61	3.22	157.55	0.29	0.000	0.000	0.000
1062	10.61	10.62	0.01	10.62	3.22	157.61	0.29	0.000	0.000	0.000
1063	10.62	10.63	0.01	10.63	3.21	157.71	0.29	0.000	0.000	0.000
1064	10.63	10.64	0.01	10.64	3.21	157.57	0.29	0.000	0.000	0.000

Total primary settlement: 1.98
Total secondary settlement: 0.15

Total calculated settlement: 2.13

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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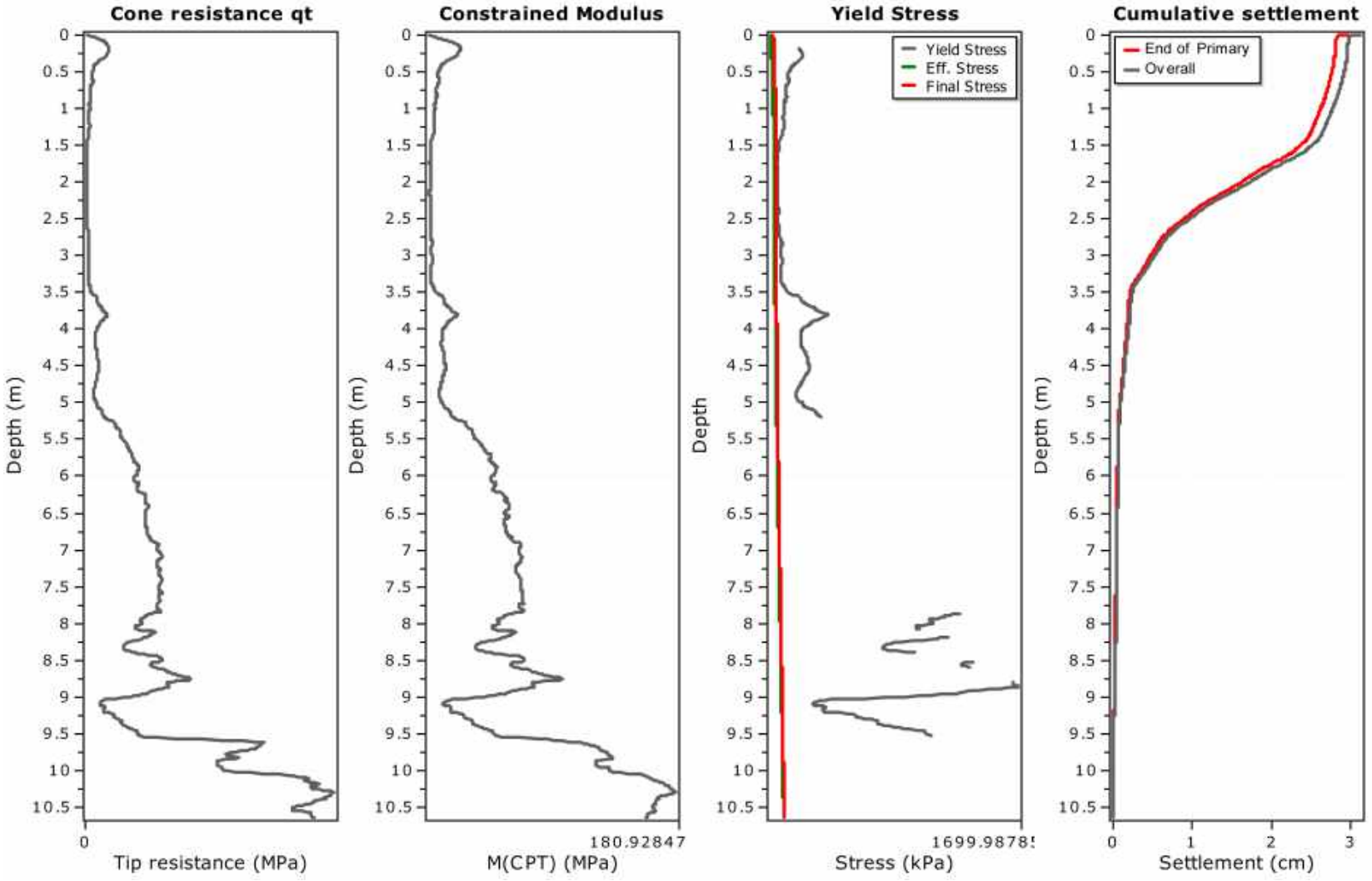
CPT: CPT16
Total depth: 10.64 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1059	10.58	10.59	0.01	10.59	4.84	160.94	0.29	0.000	0.000	0.000
1060	10.59	10.60	0.01	10.60	4.83	158.10	0.29	0.000	0.000	0.000
1061	10.60	10.61	0.01	10.61	4.83	157.55	0.29	0.000	0.000	0.000
1062	10.61	10.62	0.01	10.62	4.83	157.61	0.29	0.000	0.000	0.000
1063	10.62	10.63	0.01	10.63	4.82	157.71	0.29	0.000	0.000	0.000
1064	10.63	10.64	0.01	10.64	4.82	157.57	0.29	0.000	0.000	0.000

Total primary settlement: 2.96
Total secondary settlement: 0.15

Total calculated settlement: 3.12

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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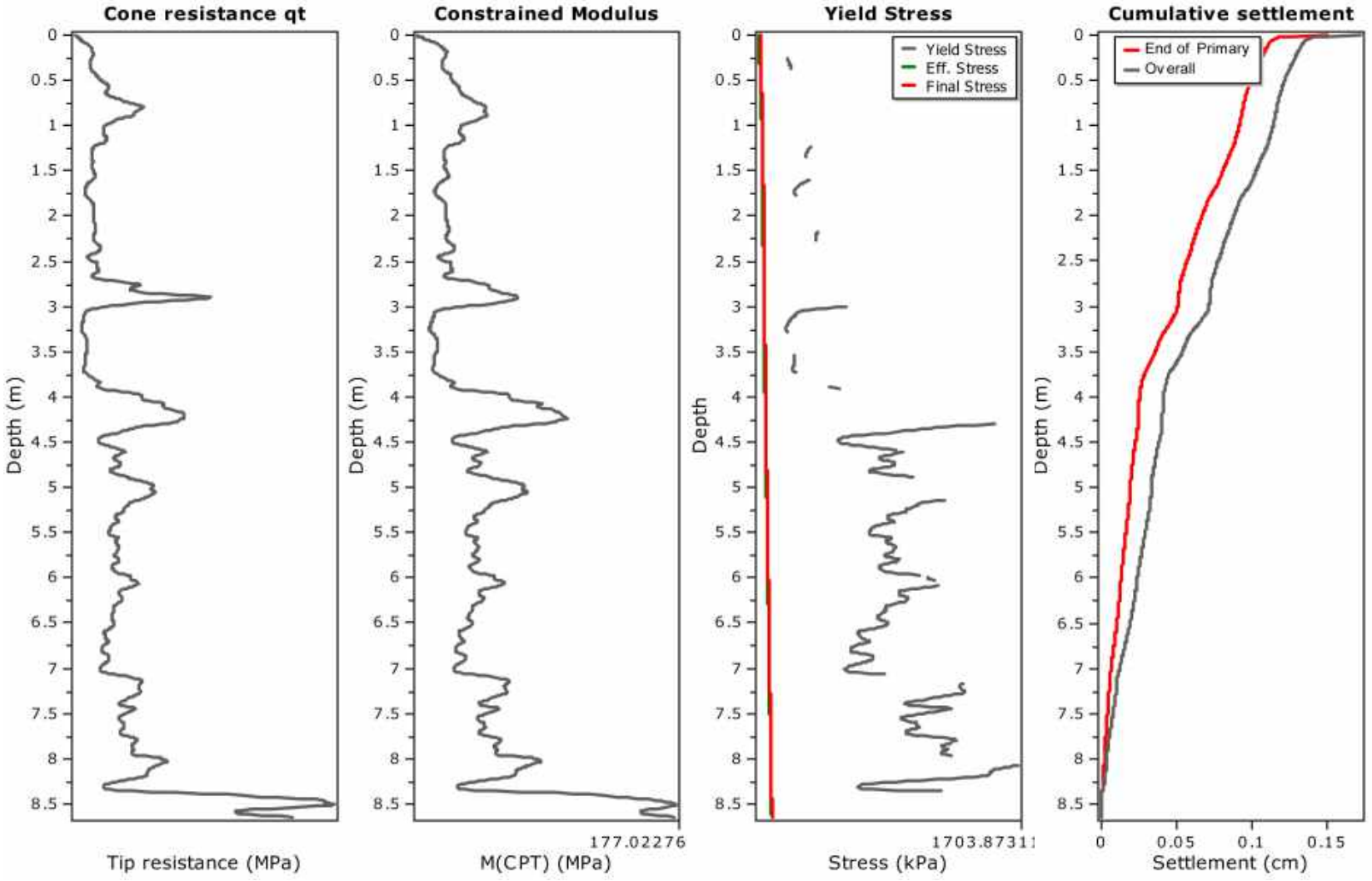
CPT: CPT17
Total depth: 8.65 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
829	8.28	8.29	0.01	8.29	1.97	31.34	0.36	0.000	0.000	0.000
830	8.29	8.30	0.01	8.29	1.97	29.12	0.36	0.000	0.000	0.000
831	8.30	8.31	0.01	8.30	1.96	27.82	0.36	0.000	0.000	0.000
832	8.31	8.32	0.01	8.31	1.96	27.51	0.36	0.000	0.000	0.000
833	8.32	8.33	0.01	8.32	1.96	27.80	0.36	0.000	0.000	0.000
834	8.33	8.34	0.01	8.34	1.96	28.44	0.36	0.000	0.000	0.000
835	8.34	8.35	0.01	8.35	1.96	32.05	0.36	0.000	0.000	0.000
836	8.35	8.36	0.01	8.36	1.96	38.61	0.36	0.000	0.000	0.000
837	8.36	8.37	0.01	8.37	1.95	52.60	0.36	0.000	0.000	0.000
838	8.37	8.38	0.01	8.38	1.95	69.91	0.35	0.000	0.000	0.000
839	8.38	8.39	0.01	8.38	1.95	93.74	0.35	0.000	0.000	0.000
840	8.39	8.40	0.01	8.39	1.95	104.92	0.35	0.000	0.000	0.000
841	8.40	8.41	0.01	8.40	1.95	116.47	0.35	0.000	0.000	0.000
842	8.41	8.42	0.01	8.41	1.94	127.86	0.35	0.000	0.000	0.000
843	8.42	8.43	0.01	8.43	1.94	134.98	0.35	0.000	0.000	0.000
844	8.43	8.44	0.01	8.44	1.94	142.29	0.35	0.000	0.000	0.000
845	8.44	8.45	0.01	8.45	1.94	149.41	0.35	0.000	0.000	0.000
846	8.45	8.46	0.01	8.46	1.94	156.63	0.35	0.000	0.000	0.000
847	8.46	8.47	0.01	8.46	1.94	161.19	0.35	0.000	0.000	0.000
848	8.47	8.48	0.01	8.47	1.93	164.78	0.35	0.000	0.000	0.000
849	8.48	8.49	0.01	8.48	1.93	167.72	0.35	0.000	0.000	0.000
850	8.49	8.50	0.01	8.49	1.93	171.20	0.35	0.000	0.000	0.000
851	8.50	8.51	0.01	8.51	1.93	173.64	0.35	0.000	0.000	0.000
852	8.51	8.52	0.01	8.52	1.93	174.77	0.35	0.000	0.000	0.000
853	8.52	8.53	0.01	8.53	1.93	174.23	0.35	0.000	0.000	0.000
854	8.53	8.54	0.01	8.54	1.92	172.09	0.35	0.000	0.000	0.000
855	8.54	8.55	0.01	8.54	1.92	168.02	0.35	0.000	0.000	0.000
856	8.55	8.56	0.01	8.55	1.92	162.09	0.35	0.000	0.000	0.000
857	8.56	8.57	0.01	8.56	1.92	156.30	0.35	0.000	0.000	0.000
858	8.57	8.58	0.01	8.57	1.92	152.53	0.35	0.000	0.000	0.000
859	8.58	8.59	0.01	8.59	1.92	151.18	0.35	0.000	0.000	0.000
860	8.59	8.60	0.01	8.60	1.91	151.07	0.35	0.000	0.000	0.000
861	8.60	8.61	0.01	8.61	1.91	151.30	0.35	0.000	0.000	0.000
862	8.61	8.62	0.01	8.62	1.91	151.89	0.35	0.000	0.000	0.000
863	8.62	8.63	0.01	8.63	1.91	153.97	0.35	0.000	0.000	0.000
864	8.63	8.64	0.01	8.63	1.91	163.16	0.35	0.000	0.000	0.000
865	8.64	8.65	0.01	8.64	1.91	168.94	0.35	0.000	0.000	0.000

Total primary settlement: 0.15
Total secondary settlement: 0.02

Total calculated settlement: 0.17

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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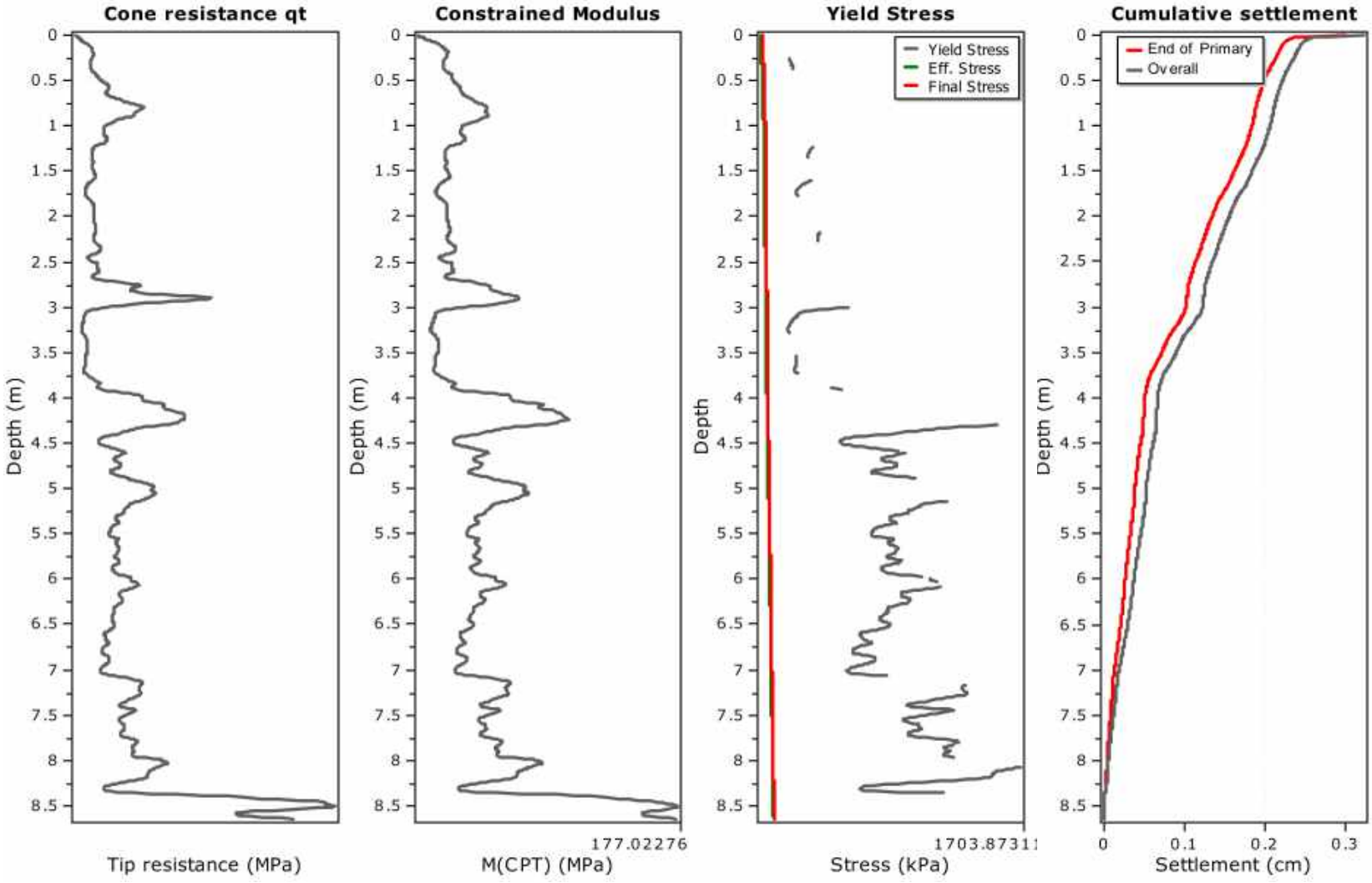
CPT: CPT17
Total depth: 8.65 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
829	8.28	8.29	0.01	8.29	3.94	31.34	0.36	0.000	0.000	0.000
830	8.29	8.30	0.01	8.29	3.93	29.12	0.36	0.000	0.000	0.000
831	8.30	8.31	0.01	8.30	3.93	27.82	0.36	0.000	0.000	0.000
832	8.31	8.32	0.01	8.31	3.93	27.51	0.36	0.000	0.000	0.000
833	8.32	8.33	0.01	8.32	3.92	27.80	0.36	0.000	0.000	0.000
834	8.33	8.34	0.01	8.34	3.92	28.44	0.36	0.000	0.000	0.000
835	8.34	8.35	0.01	8.35	3.91	32.05	0.36	0.000	0.000	0.000
836	8.35	8.36	0.01	8.36	3.91	38.61	0.36	0.000	0.000	0.000
837	8.36	8.37	0.01	8.37	3.91	52.60	0.36	0.000	0.000	0.000
838	8.37	8.38	0.01	8.38	3.90	69.91	0.35	0.000	0.000	0.000
839	8.38	8.39	0.01	8.38	3.90	93.74	0.35	0.000	0.000	0.000
840	8.39	8.40	0.01	8.39	3.90	104.92	0.35	0.000	0.000	0.000
841	8.40	8.41	0.01	8.40	3.89	116.47	0.35	0.000	0.000	0.000
842	8.41	8.42	0.01	8.41	3.89	127.86	0.35	0.000	0.000	0.000
843	8.42	8.43	0.01	8.43	3.89	134.98	0.35	0.000	0.000	0.000
844	8.43	8.44	0.01	8.44	3.88	142.29	0.35	0.000	0.000	0.000
845	8.44	8.45	0.01	8.45	3.88	149.41	0.35	0.000	0.000	0.000
846	8.45	8.46	0.01	8.46	3.88	156.63	0.35	0.000	0.000	0.000
847	8.46	8.47	0.01	8.46	3.87	161.19	0.35	0.000	0.000	0.000
848	8.47	8.48	0.01	8.47	3.87	164.78	0.35	0.000	0.000	0.000
849	8.48	8.49	0.01	8.48	3.87	167.72	0.35	0.000	0.000	0.000
850	8.49	8.50	0.01	8.49	3.86	171.20	0.35	0.000	0.000	0.000
851	8.50	8.51	0.01	8.51	3.86	173.64	0.35	0.000	0.000	0.000
852	8.51	8.52	0.01	8.52	3.85	174.77	0.35	0.000	0.000	0.000
853	8.52	8.53	0.01	8.53	3.85	174.23	0.35	0.000	0.000	0.000
854	8.53	8.54	0.01	8.54	3.85	172.09	0.35	0.000	0.000	0.000
855	8.54	8.55	0.01	8.54	3.84	168.02	0.35	0.000	0.000	0.000
856	8.55	8.56	0.01	8.55	3.84	162.09	0.35	0.000	0.000	0.000
857	8.56	8.57	0.01	8.56	3.84	156.30	0.35	0.000	0.000	0.000
858	8.57	8.58	0.01	8.57	3.83	152.53	0.35	0.000	0.000	0.000
859	8.58	8.59	0.01	8.59	3.83	151.18	0.35	0.000	0.000	0.000
860	8.59	8.60	0.01	8.60	3.83	151.07	0.35	0.000	0.000	0.000
861	8.60	8.61	0.01	8.61	3.82	151.30	0.35	0.000	0.000	0.000
862	8.61	8.62	0.01	8.62	3.82	151.89	0.35	0.000	0.000	0.000
863	8.62	8.63	0.01	8.63	3.82	153.97	0.35	0.000	0.000	0.000
864	8.63	8.64	0.01	8.63	3.81	163.16	0.35	0.000	0.000	0.000
865	8.64	8.65	0.01	8.64	3.81	168.94	0.35	0.000	0.000	0.000

Total primary settlement: 0.30
Total secondary settlement: 0.02

Total calculated settlement: 0.32

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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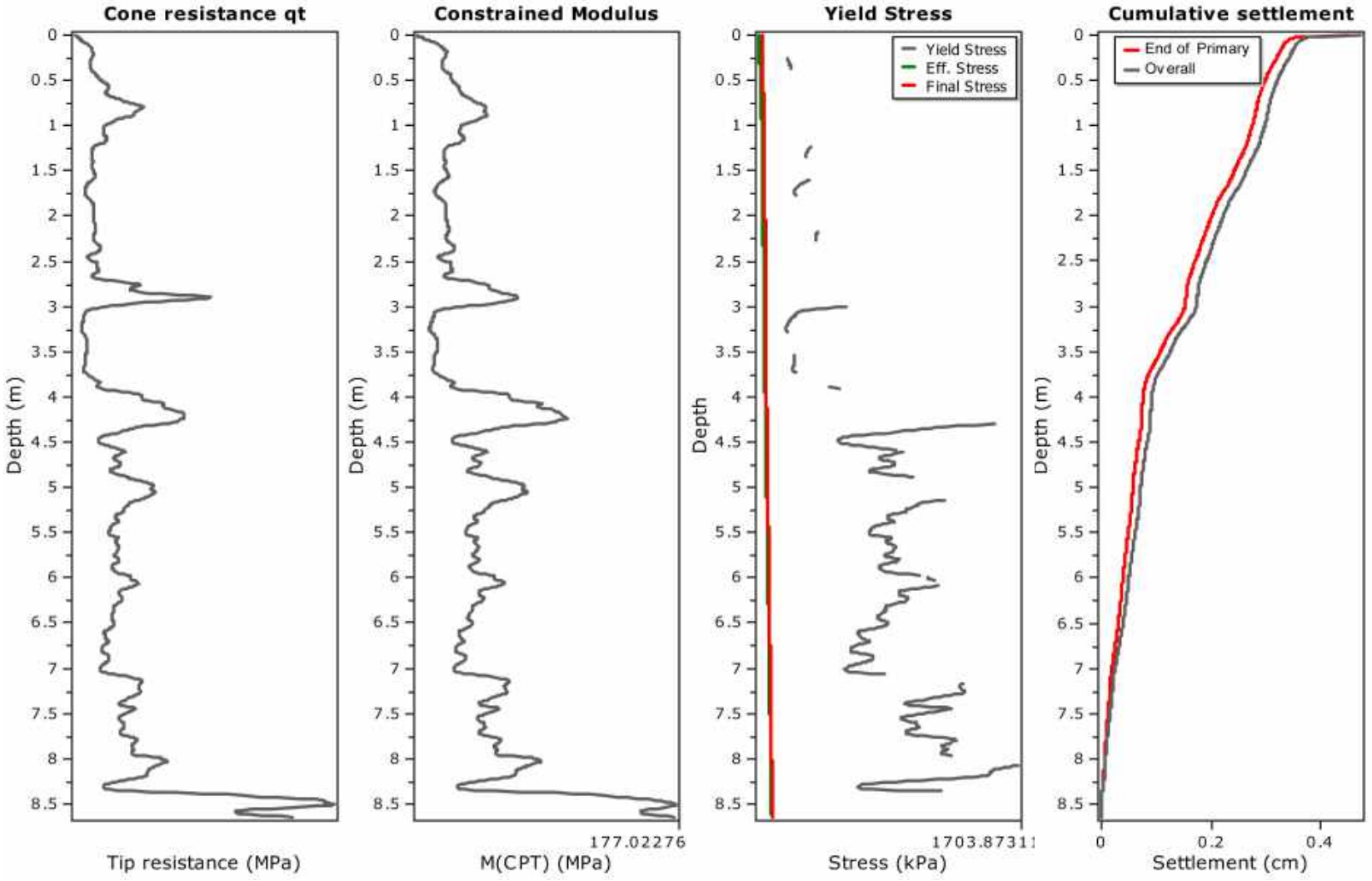
CPT: CPT17
Total depth: 8.65 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
829	8.28	8.29	0.01	8.29	5.90	31.34	0.36	0.000	0.000	0.000
830	8.29	8.30	0.01	8.29	5.90	29.12	0.36	0.000	0.000	0.000
831	8.30	8.31	0.01	8.30	5.89	27.82	0.36	0.000	0.000	0.000
832	8.31	8.32	0.01	8.31	5.89	27.51	0.36	0.000	0.000	0.000
833	8.32	8.33	0.01	8.32	5.88	27.80	0.36	0.000	0.000	0.000
834	8.33	8.34	0.01	8.34	5.88	28.44	0.36	0.000	0.000	0.000
835	8.34	8.35	0.01	8.35	5.87	32.05	0.36	0.000	0.000	0.000
836	8.35	8.36	0.01	8.36	5.87	38.61	0.36	0.000	0.000	0.000
837	8.36	8.37	0.01	8.37	5.86	52.60	0.36	0.000	0.000	0.000
838	8.37	8.38	0.01	8.38	5.86	69.91	0.35	0.000	0.000	0.000
839	8.38	8.39	0.01	8.38	5.85	93.74	0.35	0.000	0.000	0.000
840	8.39	8.40	0.01	8.39	5.85	104.92	0.35	0.000	0.000	0.000
841	8.40	8.41	0.01	8.40	5.84	116.47	0.35	0.000	0.000	0.000
842	8.41	8.42	0.01	8.41	5.83	127.86	0.35	0.000	0.000	0.000
843	8.42	8.43	0.01	8.43	5.83	134.98	0.35	0.000	0.000	0.000
844	8.43	8.44	0.01	8.44	5.82	142.29	0.35	0.000	0.000	0.000
845	8.44	8.45	0.01	8.45	5.82	149.41	0.35	0.000	0.000	0.000
846	8.45	8.46	0.01	8.46	5.81	156.63	0.35	0.000	0.000	0.000
847	8.46	8.47	0.01	8.46	5.81	161.19	0.35	0.000	0.000	0.000
848	8.47	8.48	0.01	8.47	5.80	164.78	0.35	0.000	0.000	0.000
849	8.48	8.49	0.01	8.48	5.80	167.72	0.35	0.000	0.000	0.000
850	8.49	8.50	0.01	8.49	5.79	171.20	0.35	0.000	0.000	0.000
851	8.50	8.51	0.01	8.51	5.79	173.64	0.35	0.000	0.000	0.000
852	8.51	8.52	0.01	8.52	5.78	174.77	0.35	0.000	0.000	0.000
853	8.52	8.53	0.01	8.53	5.78	174.23	0.35	0.000	0.000	0.000
854	8.53	8.54	0.01	8.54	5.77	172.09	0.35	0.000	0.000	0.000
855	8.54	8.55	0.01	8.54	5.77	168.02	0.35	0.000	0.000	0.000
856	8.55	8.56	0.01	8.55	5.76	162.09	0.35	0.000	0.000	0.000
857	8.56	8.57	0.01	8.56	5.76	156.30	0.35	0.000	0.000	0.000
858	8.57	8.58	0.01	8.57	5.75	152.53	0.35	0.000	0.000	0.000
859	8.58	8.59	0.01	8.59	5.75	151.18	0.35	0.000	0.000	0.000
860	8.59	8.60	0.01	8.60	5.74	151.07	0.35	0.000	0.000	0.000
861	8.60	8.61	0.01	8.61	5.74	151.30	0.35	0.000	0.000	0.000
862	8.61	8.62	0.01	8.62	5.73	151.89	0.35	0.000	0.000	0.000
863	8.62	8.63	0.01	8.63	5.73	153.97	0.35	0.000	0.000	0.000
864	8.63	8.64	0.01	8.63	5.72	163.16	0.35	0.000	0.000	0.000
865	8.64	8.65	0.01	8.64	5.72	168.94	0.35	0.000	0.000	0.000

Total primary settlement: 0.45
Total secondary settlement: 0.02

Total calculated settlement: 0.47

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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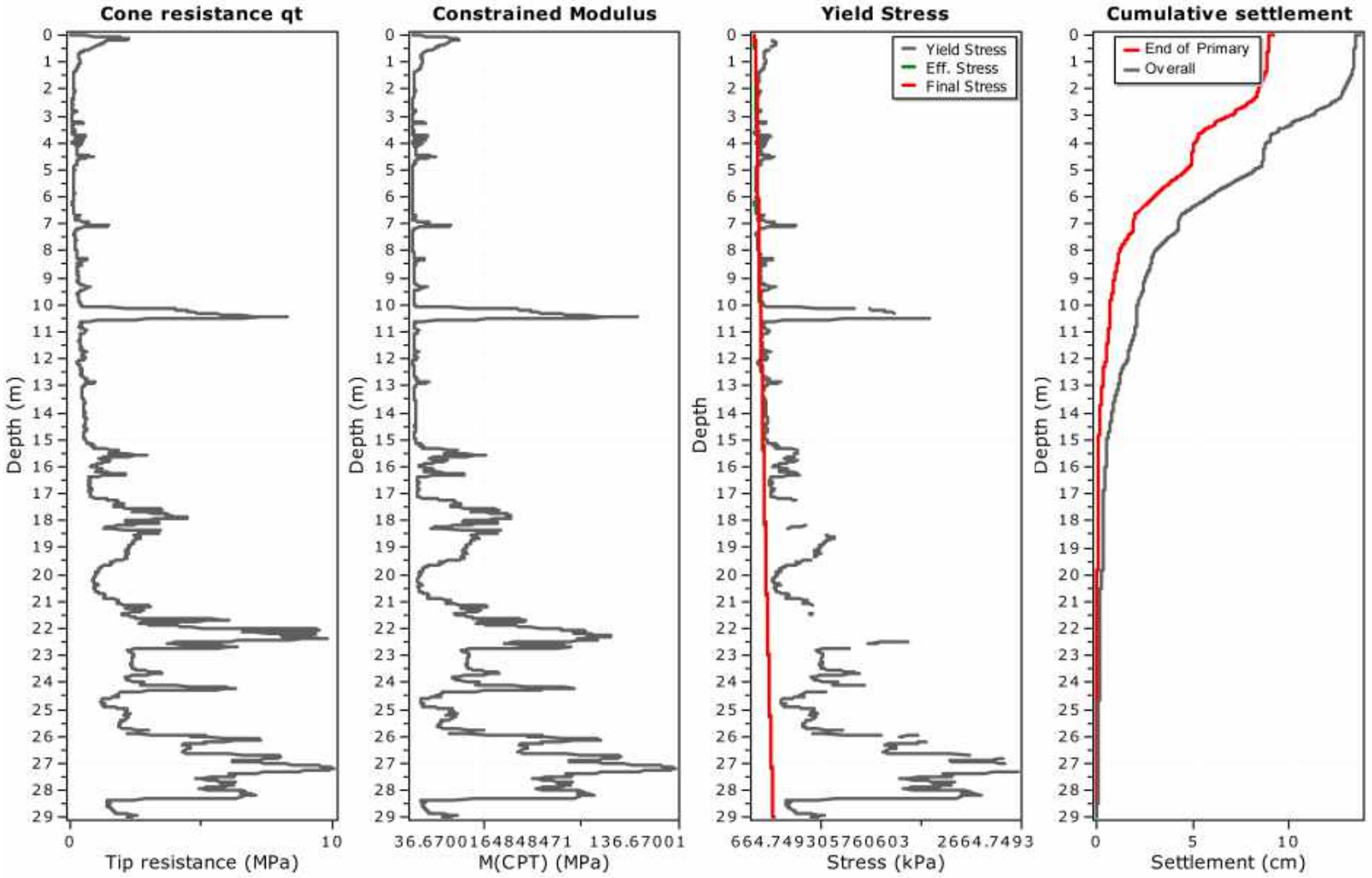
CPT: CPT18
Total depth: 28.98 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)

Total primary settlement: 9.19
Total secondary settlement: 4.50

Total calculated settlement: 13.68

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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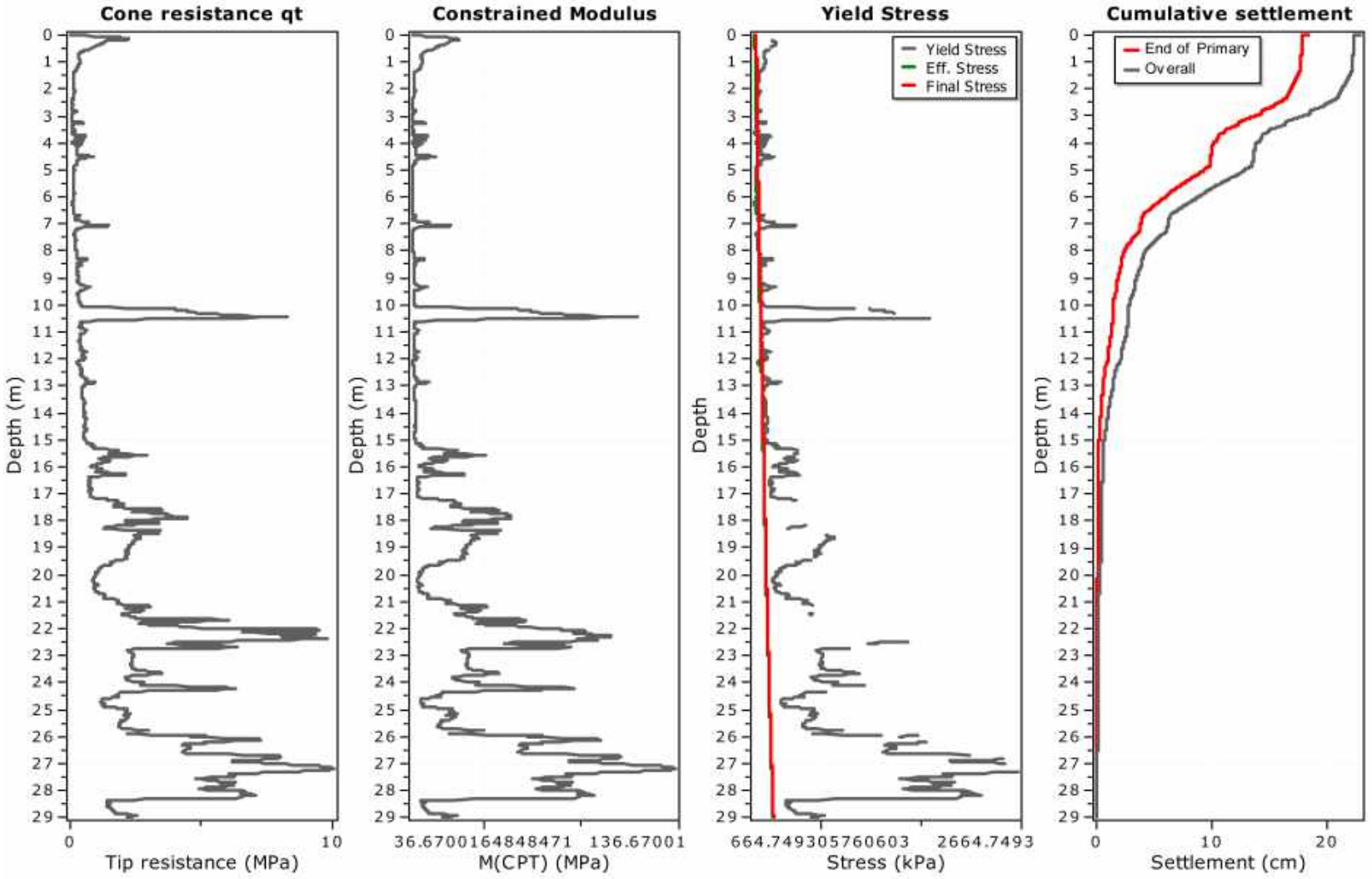
CPT: CPT18
Total depth: 28.98 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)

Total primary settlement: 18.38
Total secondary settlement: 4.50

Total calculated settlement: 22.87

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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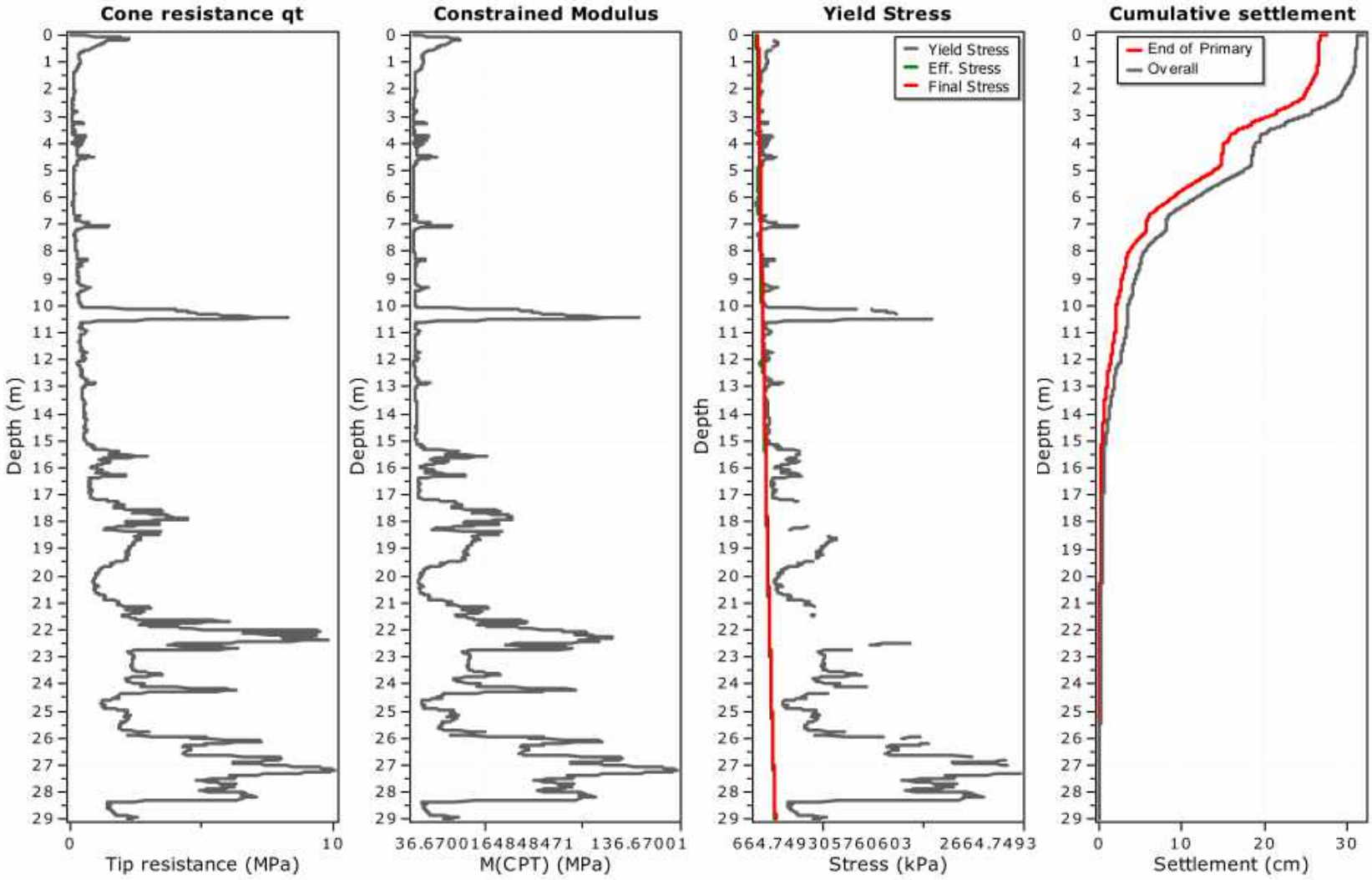
CPT: CPT18
Total depth: 28.98 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)

Total primary settlement: 27.56
Total secondary settlement: 4.50

Total calculated settlement: 32.06

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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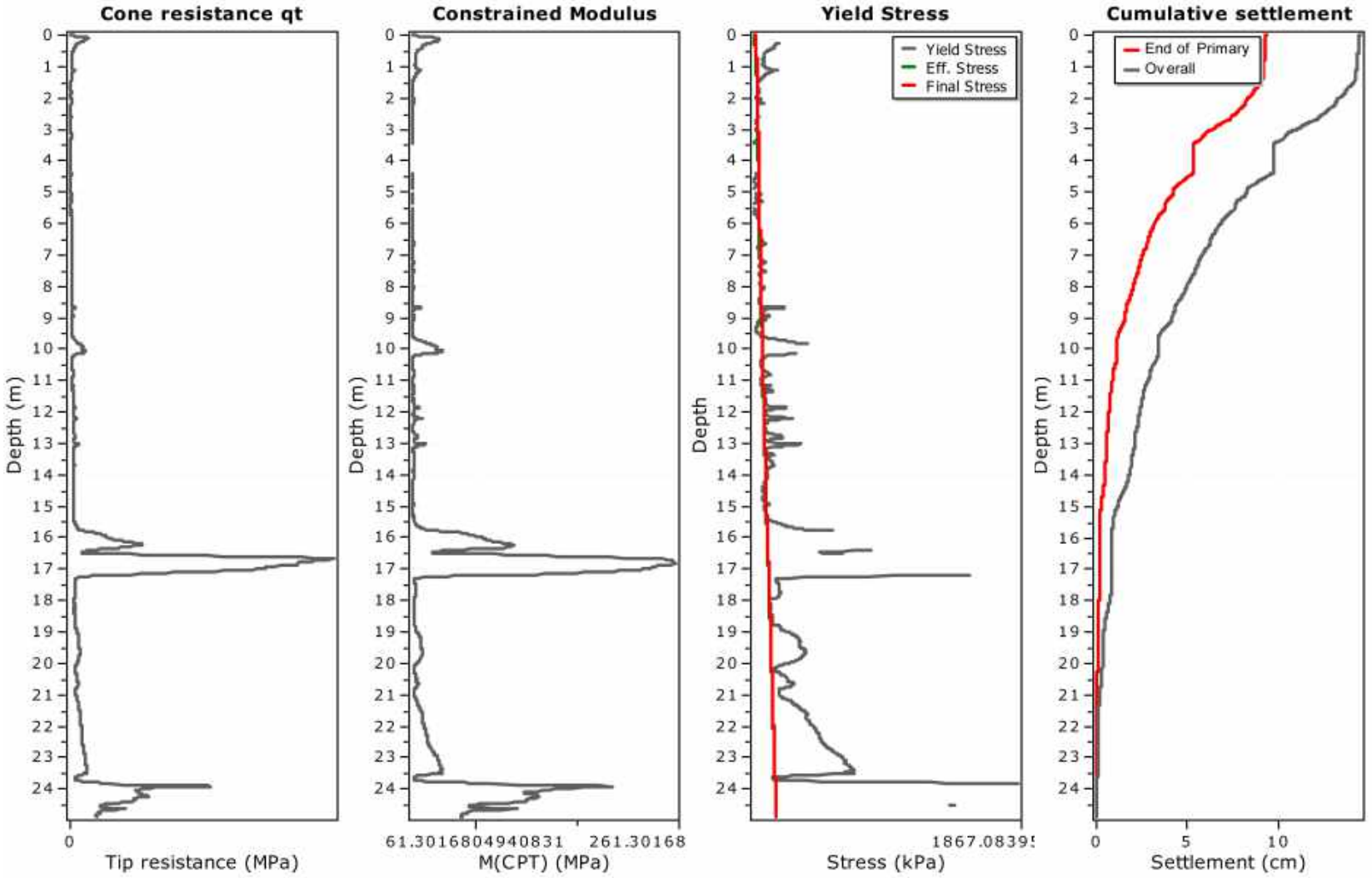
CPT: CPT19A
Total depth: 24.89 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
2485	24.84	24.85	0.01	24.85	0.60	47.00	0.11	0.000	0.000	0.000
2486	24.85	24.86	0.01	24.86	0.60	47.05	0.11	0.000	0.000	0.000
2487	24.86	24.87	0.01	24.87	0.60	47.38	0.11	0.000	0.000	0.000
2488	24.87	24.88	0.01	24.88	0.60	48.06	0.11	0.000	0.000	0.000
2489	24.88	24.89	0.01	24.89	0.60	48.94	0.11	0.000	0.000	0.000

Total primary settlement: 9.41
Total secondary settlement: 5.11

Total calculated settlement: 14.52

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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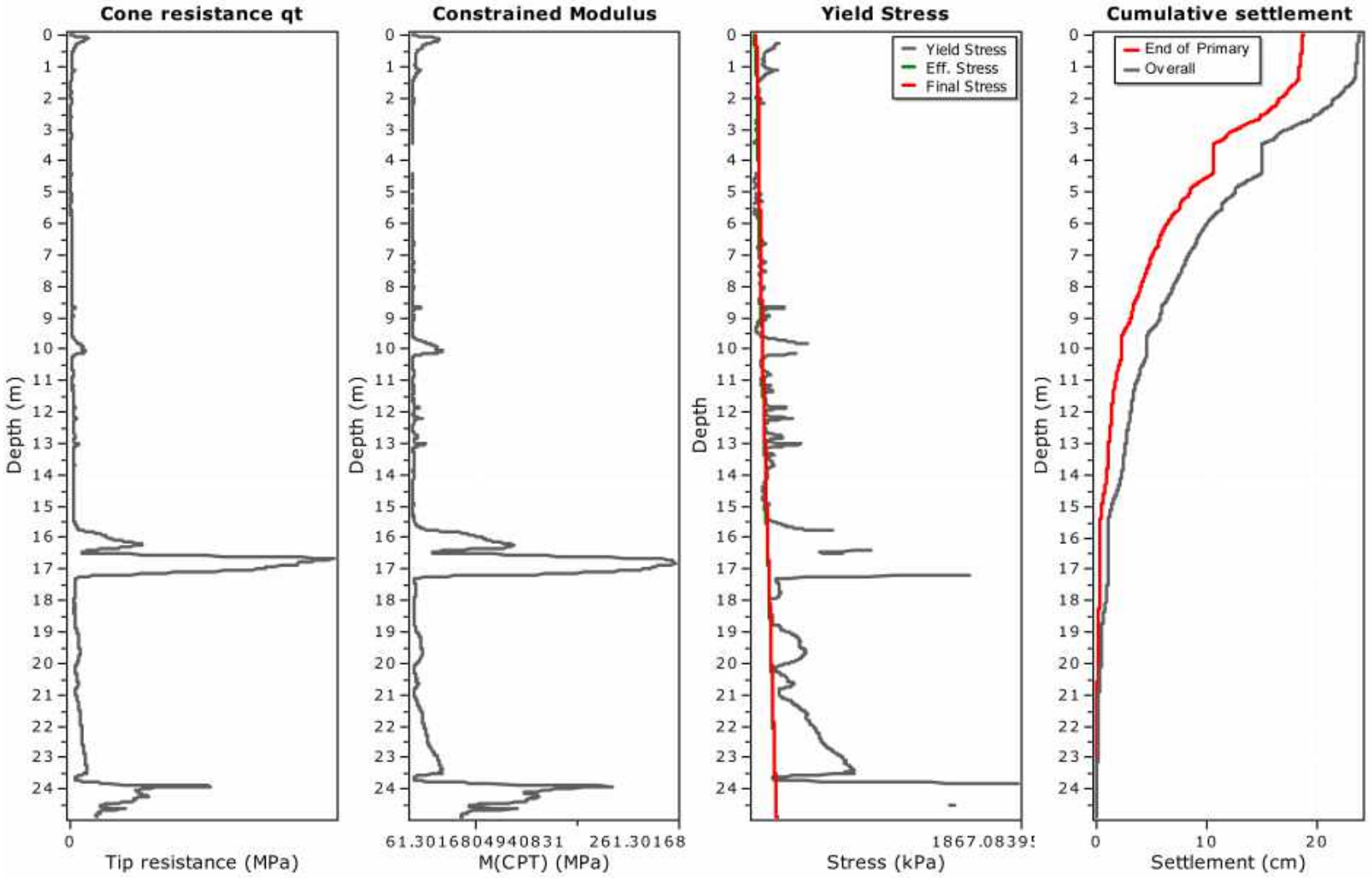
CPT: CPT19A
Total depth: 24.89 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
2485	24.84	24.85	0.01	24.85	1.20	47.00	0.11	0.000	0.000	0.000
2486	24.85	24.86	0.01	24.86	1.20	47.05	0.11	0.000	0.000	0.000
2487	24.86	24.87	0.01	24.87	1.20	47.38	0.11	0.000	0.000	0.000
2488	24.87	24.88	0.01	24.88	1.20	48.06	0.11	0.000	0.000	0.000
2489	24.88	24.89	0.01	24.89	1.20	48.94	0.11	0.000	0.000	0.000

Total primary settlement: 18.83
Total secondary settlement: 5.11

Total calculated settlement: 23.93

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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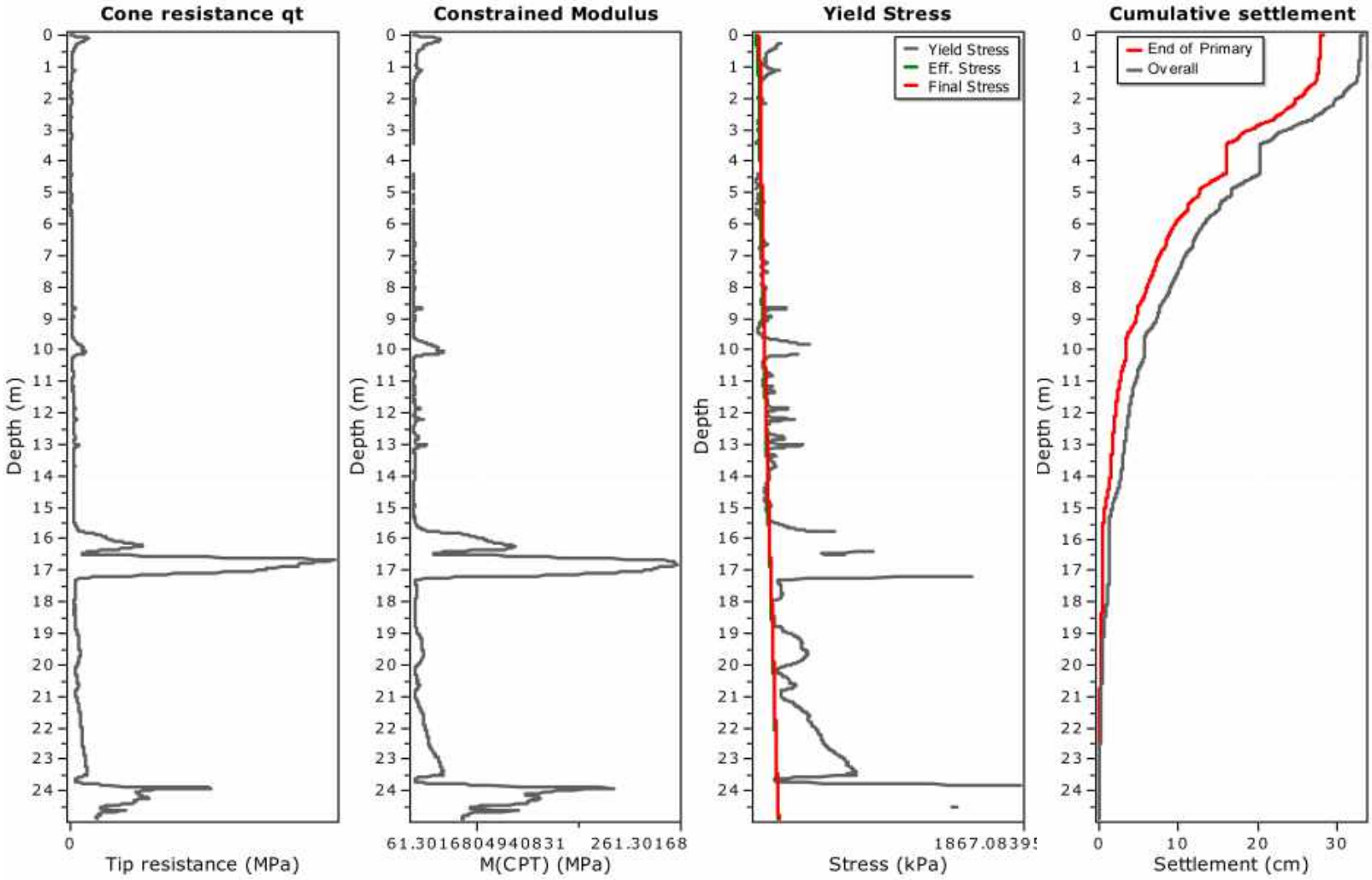
CPT: CPT19A
Total depth: 24.89 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
2485	24.84	24.85	0.01	24.85	1.81	47.00	0.11	0.000	0.000	0.000
2486	24.85	24.86	0.01	24.86	1.80	47.05	0.11	0.000	0.000	0.000
2487	24.86	24.87	0.01	24.87	1.80	47.38	0.11	0.000	0.000	0.000
2488	24.87	24.88	0.01	24.88	1.80	48.06	0.11	0.000	0.000	0.000
2489	24.88	24.89	0.01	24.89	1.80	48.94	0.11	0.000	0.000	0.000

Total primary settlement: 28.24
Total secondary settlement: 5.11

Total calculated settlement: 33.35

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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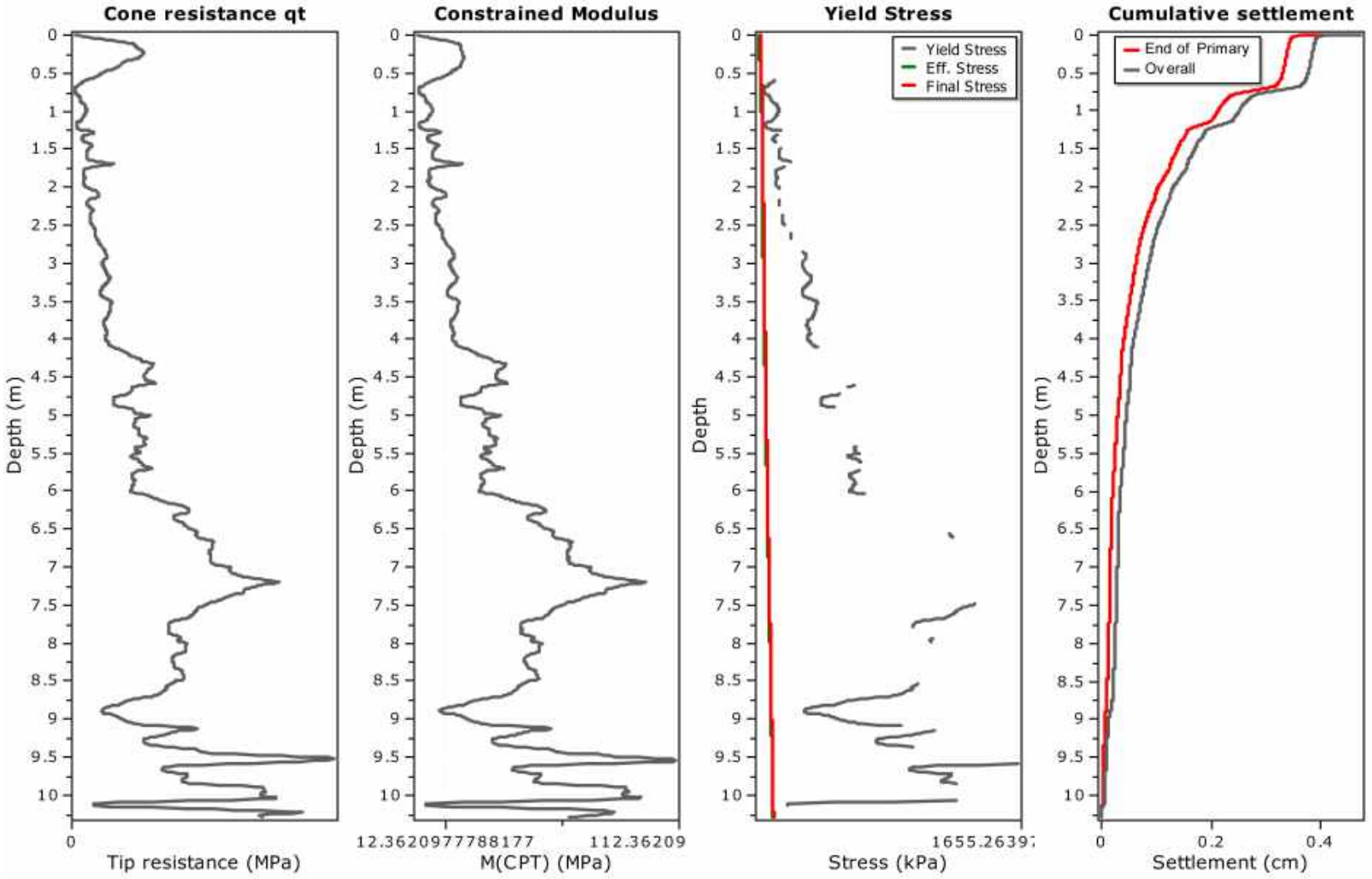
CPT: CPT20
Total depth: 10.29 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: No
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1013	10.12	10.13	0.01	10.13	1.68	3.40	0.30	0.000	0.001	0.001
1014	10.13	10.14	0.01	10.13	1.67	3.38	0.30	0.000	0.001	0.001
1015	10.14	10.15	0.01	10.14	1.67	3.38	0.30	0.000	0.001	0.001
1016	10.15	10.16	0.01	10.15	1.67	14.80	0.30	0.000	0.000	0.000
1017	10.16	10.17	0.01	10.16	1.67	36.58	0.30	0.000	0.000	0.000
1018	10.17	10.18	0.01	10.18	1.67	48.58	0.30	0.000	0.000	0.000
1019	10.18	10.19	0.01	10.19	1.67	62.36	0.30	0.000	0.000	0.000
1020	10.19	10.20	0.01	10.20	1.67	65.39	0.30	0.000	0.000	0.000
1021	10.20	10.21	0.01	10.21	1.66	77.24	0.30	0.000	0.000	0.000
1022	10.21	10.22	0.01	10.21	1.66	80.37	0.30	0.000	0.000	0.000
1023	10.22	10.23	0.01	10.22	1.66	83.48	0.30	0.000	0.000	0.000
1024	10.23	10.24	0.01	10.23	1.66	84.52	0.30	0.000	0.000	0.000
1025	10.24	10.25	0.01	10.24	1.66	83.18	0.30	0.000	0.000	0.000
1026	10.25	10.26	0.01	10.26	1.66	80.41	0.30	0.000	0.000	0.000
1027	10.26	10.27	0.01	10.27	1.66	76.76	0.30	0.000	0.000	0.000
1028	10.27	10.28	0.01	10.28	1.65	72.89	0.30	0.000	0.000	0.000
1029	10.28	10.29	0.01	10.29	1.65	68.33	0.30	0.000	0.000	0.000

Total primary settlement: 0.43
Total secondary settlement: 0.05

Total calculated settlement: 0.47

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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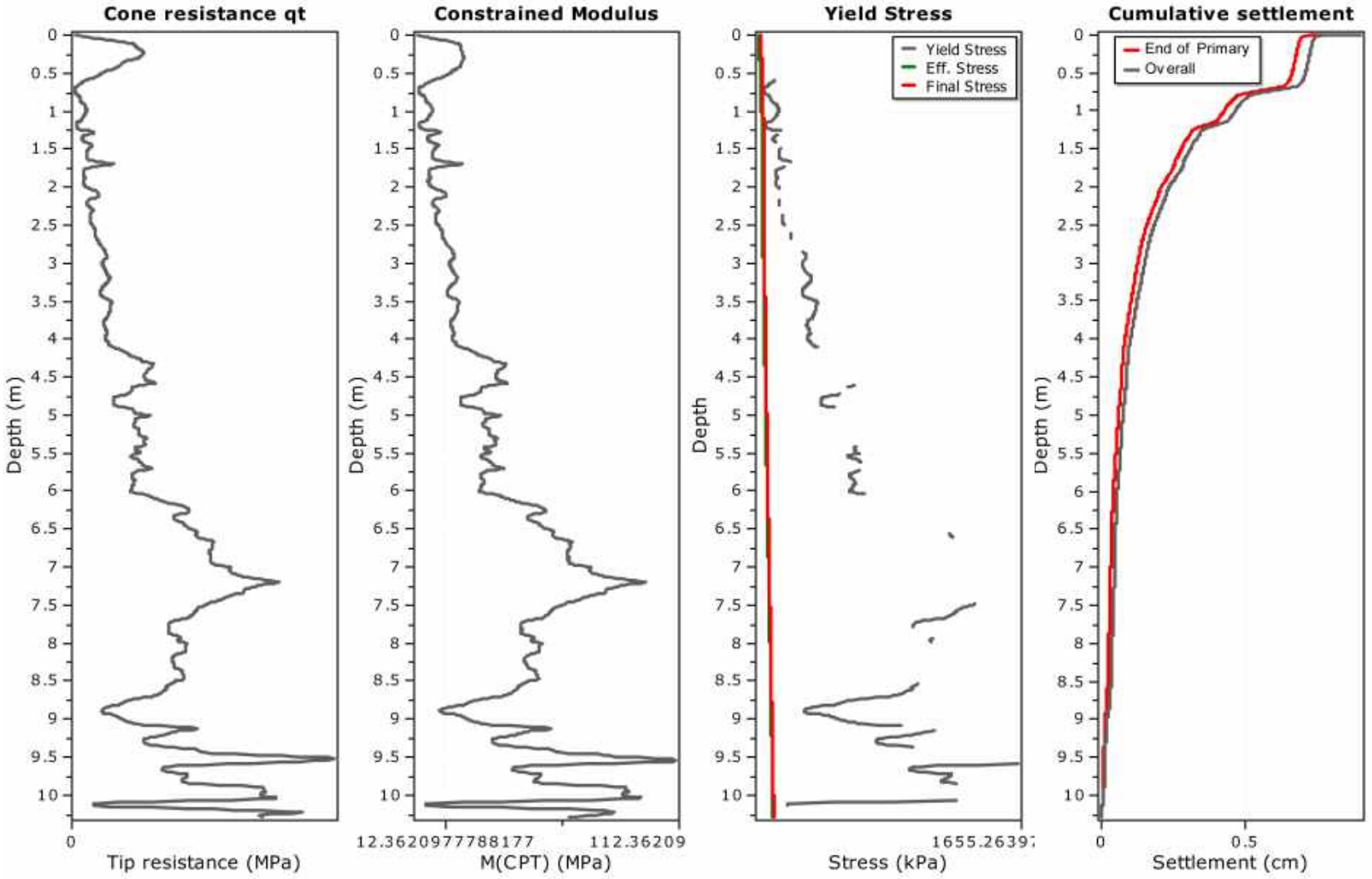
CPT: CPT20
Total depth: 10.29 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: No
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1013	10.12	10.13	0.01	10.13	3.35	3.40	0.30	0.001	0.001	0.002
1014	10.13	10.14	0.01	10.13	3.35	3.38	0.30	0.001	0.001	0.002
1015	10.14	10.15	0.01	10.14	3.35	3.38	0.30	0.001	0.001	0.002
1016	10.15	10.16	0.01	10.15	3.34	14.80	0.30	0.000	0.000	0.000
1017	10.16	10.17	0.01	10.16	3.34	36.58	0.30	0.000	0.000	0.000
1018	10.17	10.18	0.01	10.18	3.34	48.58	0.30	0.000	0.000	0.000
1019	10.18	10.19	0.01	10.19	3.33	62.36	0.30	0.000	0.000	0.000
1020	10.19	10.20	0.01	10.20	3.33	65.39	0.30	0.000	0.000	0.000
1021	10.20	10.21	0.01	10.21	3.33	77.24	0.30	0.000	0.000	0.000
1022	10.21	10.22	0.01	10.21	3.33	80.37	0.30	0.000	0.000	0.000
1023	10.22	10.23	0.01	10.22	3.32	83.48	0.30	0.000	0.000	0.000
1024	10.23	10.24	0.01	10.23	3.32	84.52	0.30	0.000	0.000	0.000
1025	10.24	10.25	0.01	10.24	3.32	83.18	0.30	0.000	0.000	0.000
1026	10.25	10.26	0.01	10.26	3.31	80.41	0.30	0.000	0.000	0.000
1027	10.26	10.27	0.01	10.27	3.31	76.76	0.30	0.000	0.000	0.000
1028	10.27	10.28	0.01	10.28	3.31	72.89	0.30	0.000	0.000	0.000
1029	10.28	10.29	0.01	10.29	3.31	68.33	0.30	0.000	0.000	0.000

Total primary settlement: 0.85
Total secondary settlement: 0.05

Total calculated settlement: 0.90

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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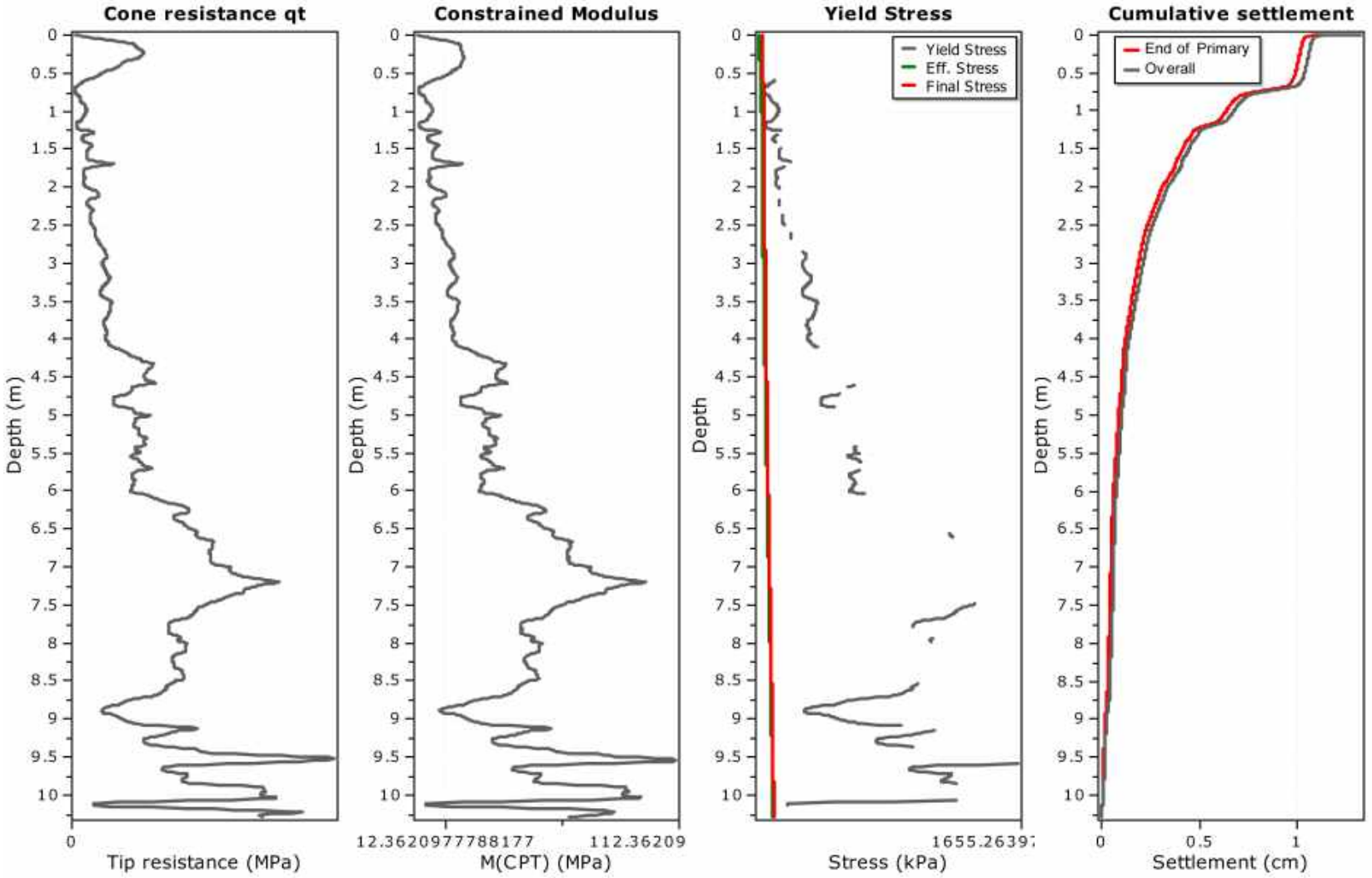
CPT: CPT20
Total depth: 10.29 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: No
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1013	10.12	10.13	0.01	10.13	5.03	3.40	0.30	0.001	0.001	0.002
1014	10.13	10.14	0.01	10.13	5.02	3.38	0.30	0.001	0.001	0.002
1015	10.14	10.15	0.01	10.14	5.02	3.38	0.30	0.001	0.001	0.002
1016	10.15	10.16	0.01	10.15	5.01	14.80	0.30	0.000	0.000	0.000
1017	10.16	10.17	0.01	10.16	5.01	36.58	0.30	0.000	0.000	0.000
1018	10.17	10.18	0.01	10.18	5.01	48.58	0.30	0.000	0.000	0.000
1019	10.18	10.19	0.01	10.19	5.00	62.36	0.30	0.000	0.000	0.000
1020	10.19	10.20	0.01	10.20	5.00	65.39	0.30	0.000	0.000	0.000
1021	10.20	10.21	0.01	10.21	4.99	77.24	0.30	0.000	0.000	0.000
1022	10.21	10.22	0.01	10.21	4.99	80.37	0.30	0.000	0.000	0.000
1023	10.22	10.23	0.01	10.22	4.98	83.48	0.30	0.000	0.000	0.000
1024	10.23	10.24	0.01	10.23	4.98	84.52	0.30	0.000	0.000	0.000
1025	10.24	10.25	0.01	10.24	4.98	83.18	0.30	0.000	0.000	0.000
1026	10.25	10.26	0.01	10.26	4.97	80.41	0.30	0.000	0.000	0.000
1027	10.26	10.27	0.01	10.27	4.97	76.76	0.30	0.000	0.000	0.000
1028	10.27	10.28	0.01	10.28	4.96	72.89	0.30	0.000	0.000	0.000
1029	10.28	10.29	0.01	10.29	4.96	68.33	0.30	0.000	0.000	0.000

Total primary settlement: 1.28
Total secondary settlement: 0.05

Total calculated settlement: 1.32

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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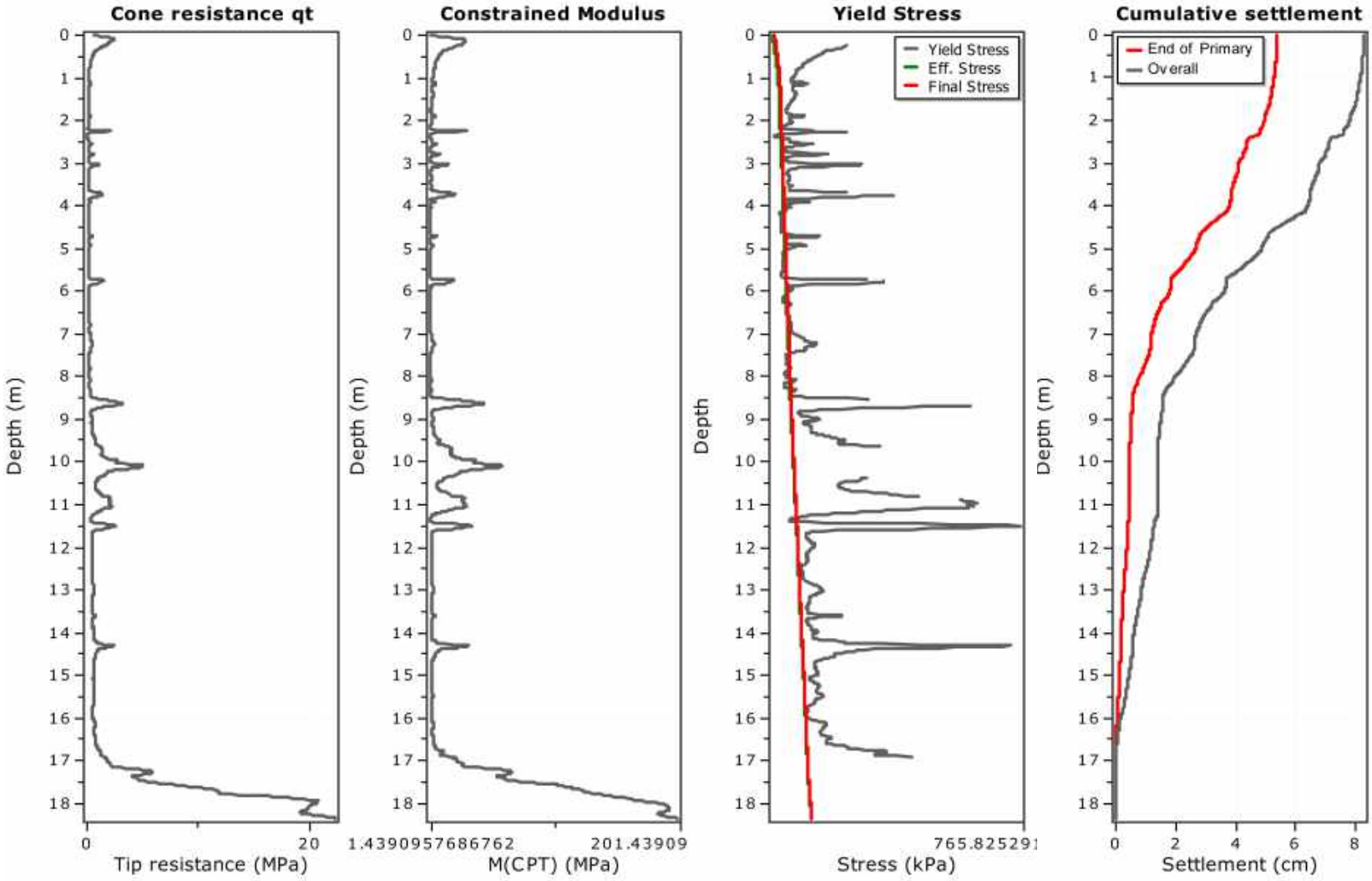
CPT: CPT21A
Total depth: 18.36 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)

Total primary settlement: 5.37
Total secondary settlement: 2.89

Total calculated settlement: 8.27

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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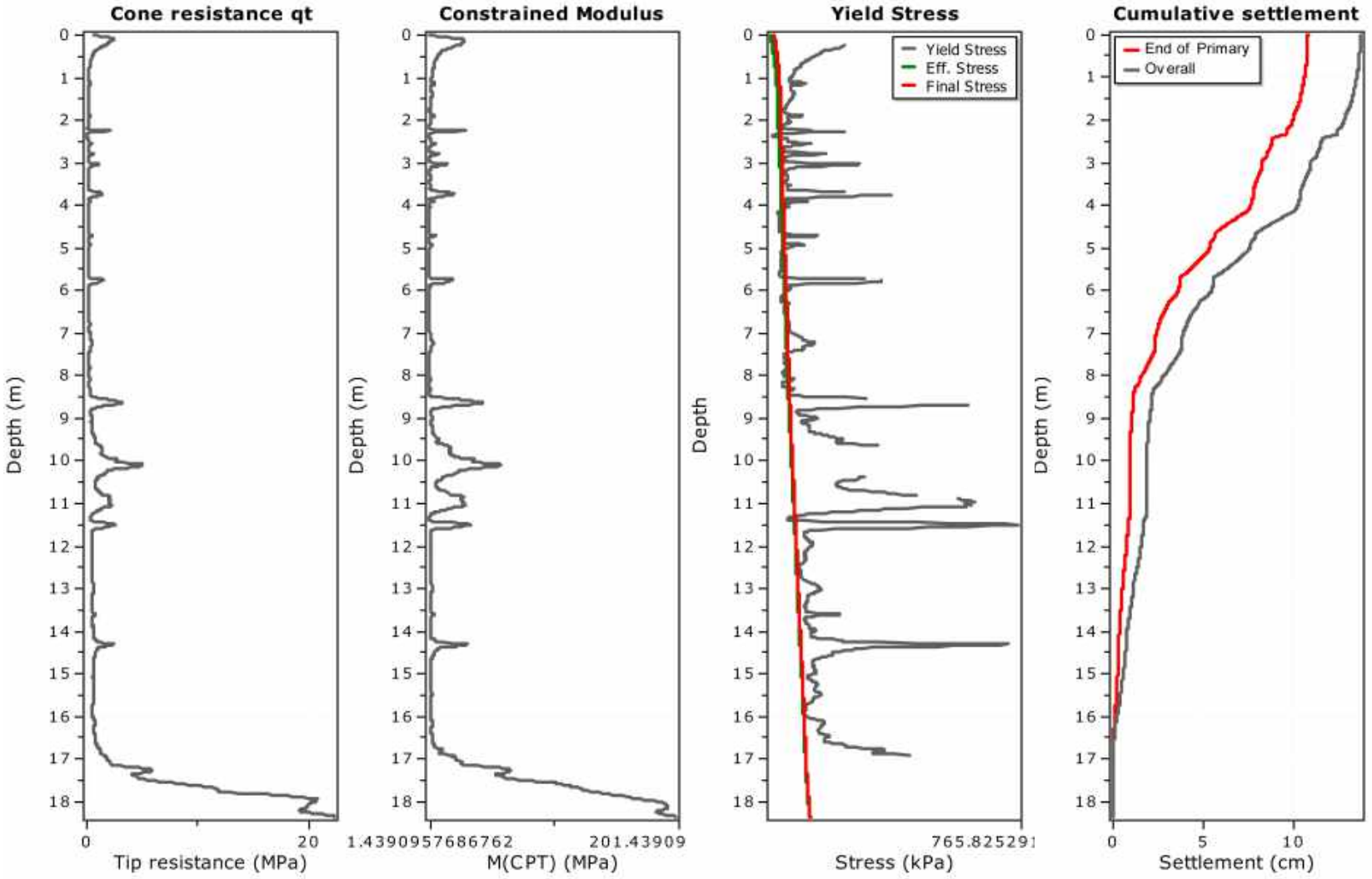
CPT: CPT21A
Total depth: 18.36 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)

Total primary settlement: 10.75
Total secondary settlement: 2.89

Total calculated settlement: 13.64

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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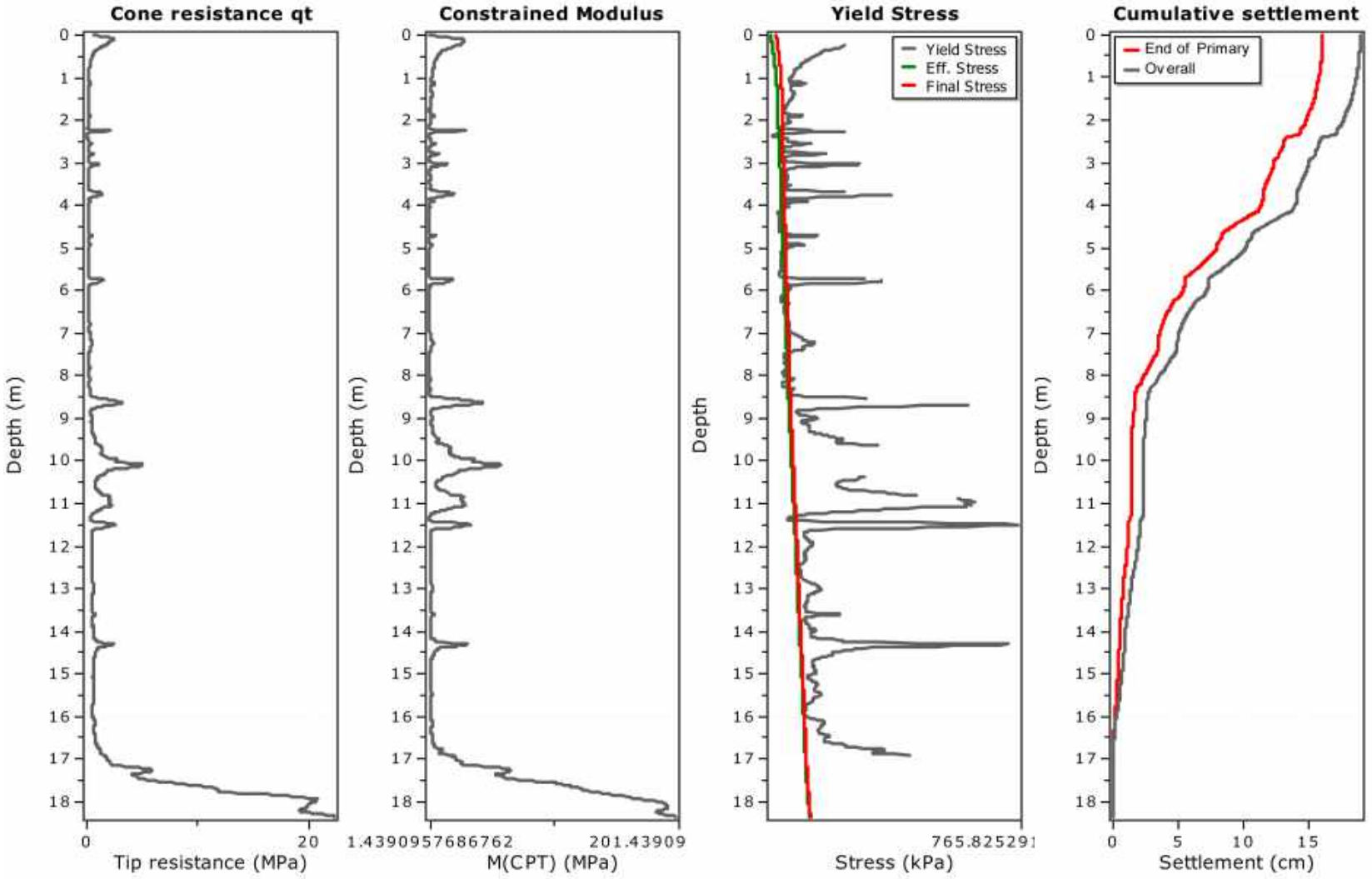
CPT: CPT21A
Total depth: 18.36 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)

Total primary settlement: 16.12
Total secondary settlement: 2.89

Total calculated settlement: 19.01

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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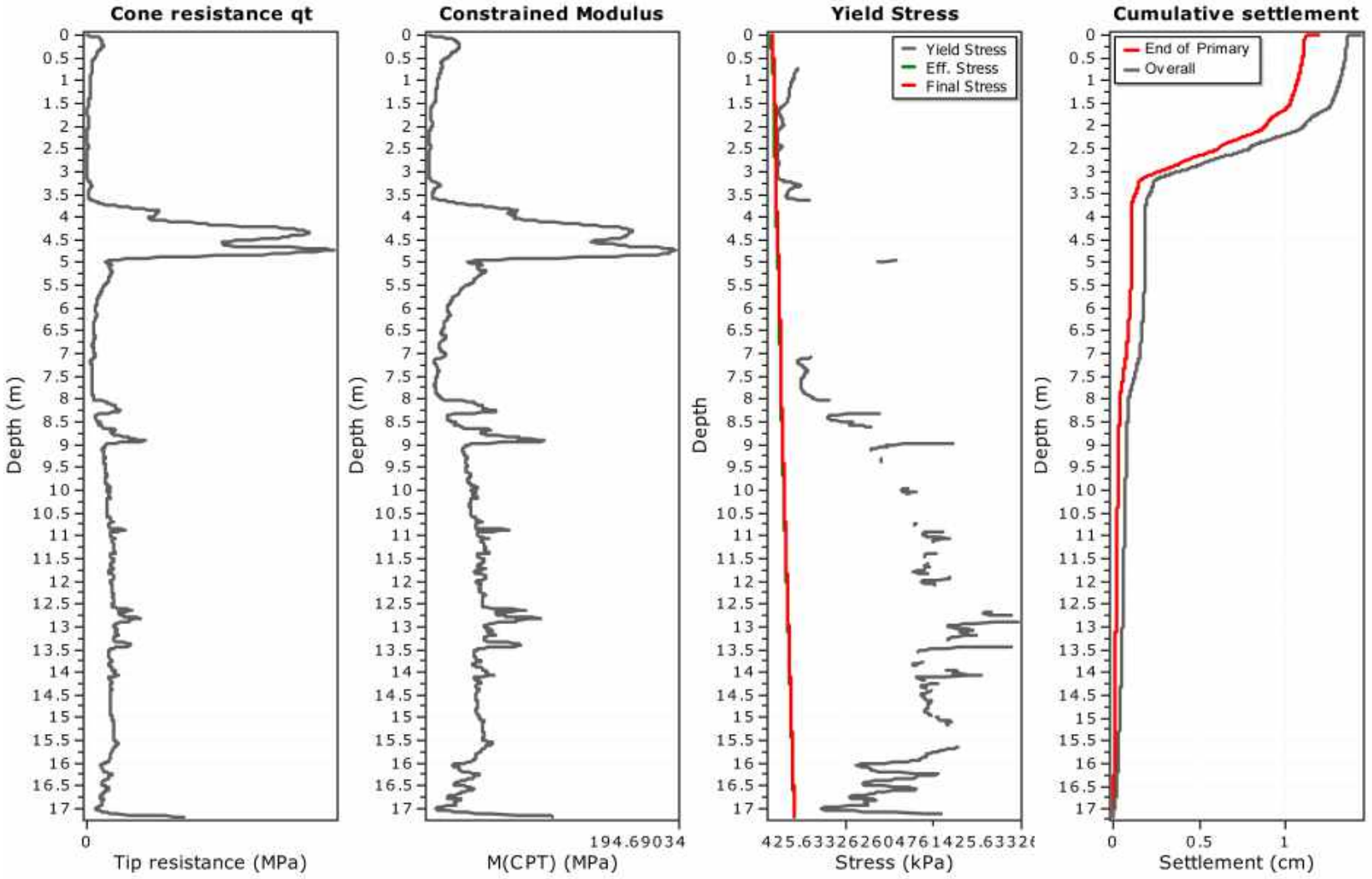
CPT: CPT22
Total depth: 17.18 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1703	17.02	17.03	0.01	17.02	0.99	6.44	0.18	0.000	0.001	0.001
1704	17.03	17.04	0.01	17.04	0.99	7.50	0.18	0.000	0.001	0.001
1705	17.04	17.05	0.01	17.05	0.99	9.25	0.18	0.000	0.000	0.001
1706	17.05	17.06	0.01	17.05	0.99	15.70	0.18	0.000	0.000	0.000
1707	17.06	17.07	0.01	17.07	0.99	18.96	0.18	0.000	0.000	0.000
1708	17.07	17.08	0.01	17.07	0.99	26.98	0.18	0.000	0.000	0.000
1709	17.08	17.09	0.01	17.09	0.99	29.56	0.18	0.000	0.000	0.000
1710	17.09	17.10	0.01	17.09	0.99	36.35	0.18	0.000	0.000	0.000
1711	17.10	17.11	0.01	17.11	0.99	40.00	0.18	0.000	0.000	0.000
1712	17.11	17.12	0.01	17.11	0.98	44.24	0.18	0.000	0.000	0.000
1713	17.12	17.13	0.01	17.13	0.98	48.13	0.18	0.000	0.000	0.000
1714	17.13	17.14	0.01	17.14	0.98	68.35	0.18	0.000	0.000	0.000
1715	17.14	17.15	0.01	17.14	0.98	83.75	0.18	0.000	0.000	0.000
1716	17.15	17.16	0.01	17.16	0.98	90.25	0.18	0.000	0.000	0.000
1717	17.16	17.17	0.01	17.16	0.98	95.39	0.18	0.000	0.000	0.000
1718	17.17	17.18	0.01	17.18	0.98	96.33	0.18	0.000	0.000	0.000

Total primary settlement: 1.18
Total secondary settlement: 0.25

Total calculated settlement: 1.43

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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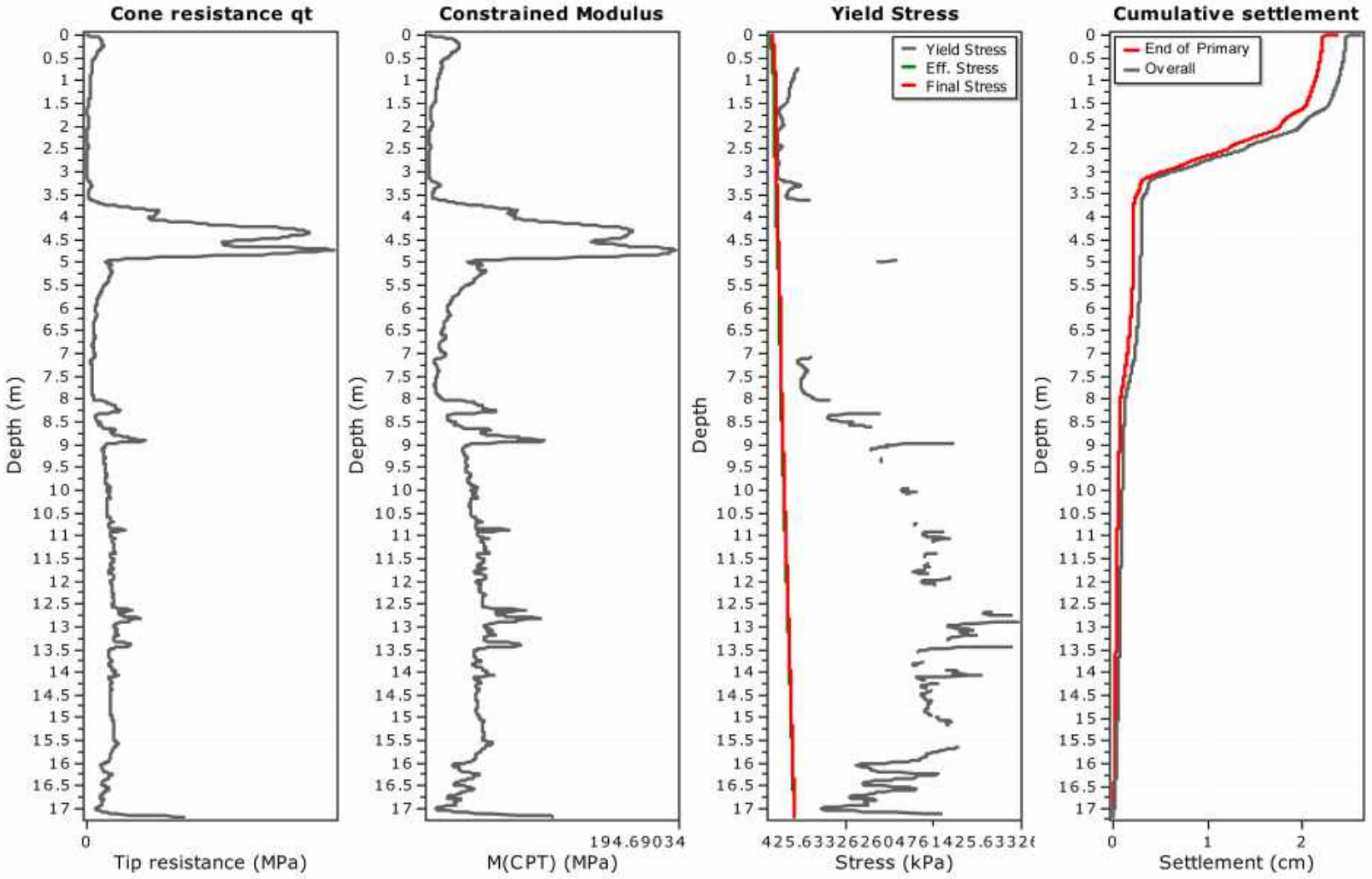
P O Box 97 385, Manukau, Auckland 2241
www.landergeotechnical.co.nz

CPT: CPT22
Total depth: 17.18 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1703	17.02	17.03	0.01	17.02	1.98	6.44	0.18	0.000	0.001	0.001
1704	17.03	17.04	0.01	17.04	1.98	7.50	0.18	0.000	0.001	0.001
1705	17.04	17.05	0.01	17.05	1.98	9.25	0.18	0.000	0.000	0.001
1706	17.05	17.06	0.01	17.05	1.98	15.70	0.18	0.000	0.000	0.000
1707	17.06	17.07	0.01	17.07	1.98	18.96	0.18	0.000	0.000	0.000
1708	17.07	17.08	0.01	17.07	1.98	26.98	0.18	0.000	0.000	0.000
1709	17.08	17.09	0.01	17.09	1.97	29.56	0.18	0.000	0.000	0.000
1710	17.09	17.10	0.01	17.09	1.97	36.35	0.18	0.000	0.000	0.000
1711	17.10	17.11	0.01	17.11	1.97	40.00	0.18	0.000	0.000	0.000
1712	17.11	17.12	0.01	17.11	1.97	44.24	0.18	0.000	0.000	0.000
1713	17.12	17.13	0.01	17.13	1.97	48.13	0.18	0.000	0.000	0.000
1714	17.13	17.14	0.01	17.14	1.97	68.35	0.18	0.000	0.000	0.000
1715	17.14	17.15	0.01	17.14	1.97	83.75	0.18	0.000	0.000	0.000
1716	17.15	17.16	0.01	17.16	1.96	90.25	0.18	0.000	0.000	0.000
1717	17.16	17.17	0.01	17.16	1.96	95.39	0.18	0.000	0.000	0.000
1718	17.17	17.18	0.01	17.18	1.96	96.33	0.18	0.000	0.000	0.000

Total primary settlement: 2.37
Total secondary settlement: 0.25

Total calculated settlement: 2.62

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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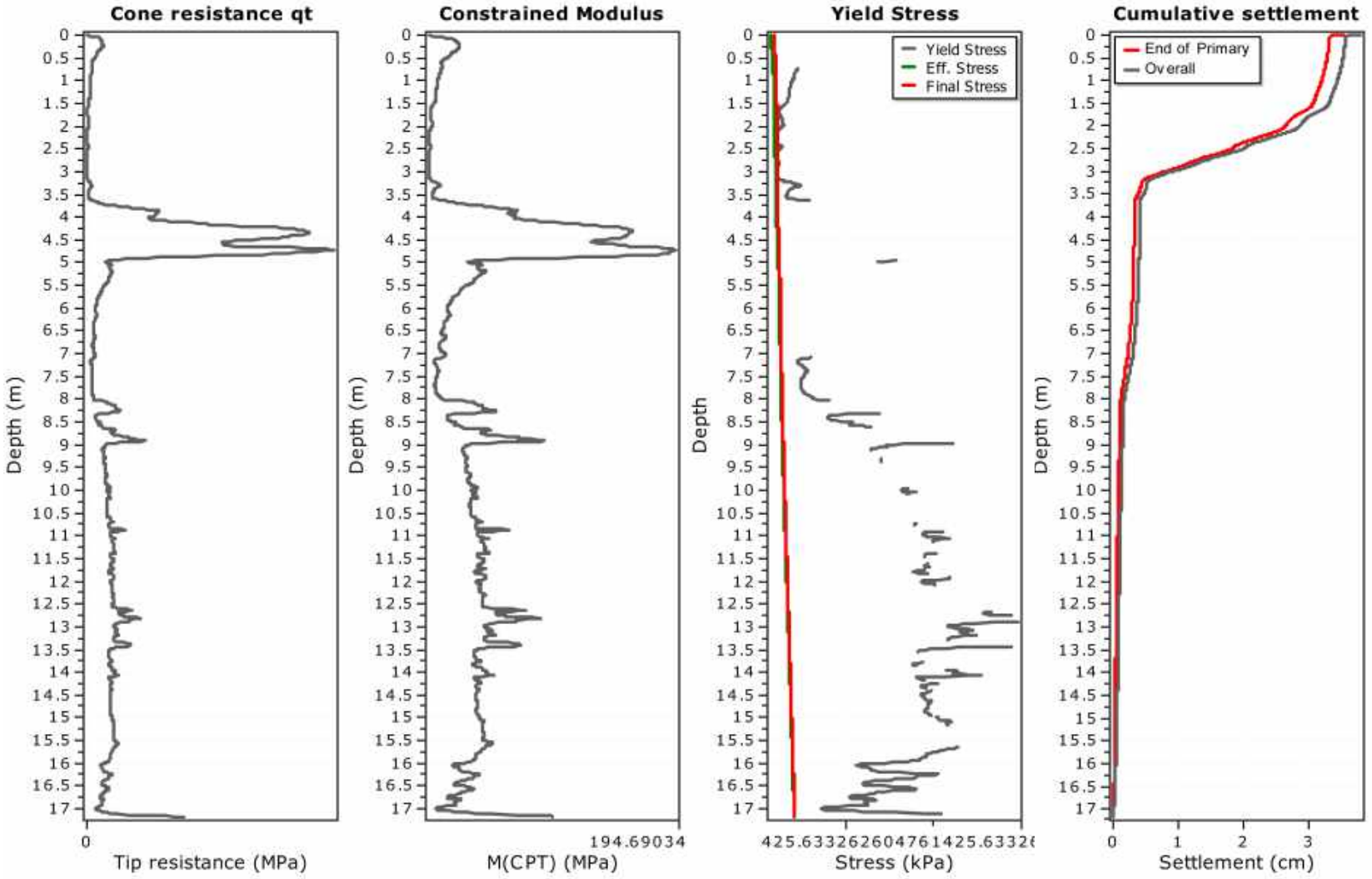
Level 3, 3 Osterley Way
P O Box 97 385, Manukau, Auckland 2241
www.landergeotechnical.co.nz

CPT: CPT22
Total depth: 17.18 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1703	17.02	17.03	0.01	17.02	2.97	6.44	0.18	0.000	0.001	0.001
1704	17.03	17.04	0.01	17.04	2.97	7.50	0.18	0.000	0.001	0.001
1705	17.04	17.05	0.01	17.05	2.97	9.25	0.18	0.000	0.000	0.001
1706	17.05	17.06	0.01	17.05	2.97	15.70	0.18	0.000	0.000	0.000
1707	17.06	17.07	0.01	17.07	2.97	18.96	0.18	0.000	0.000	0.000
1708	17.07	17.08	0.01	17.07	2.96	26.98	0.18	0.000	0.000	0.000
1709	17.08	17.09	0.01	17.09	2.96	29.56	0.18	0.000	0.000	0.000
1710	17.09	17.10	0.01	17.09	2.96	36.35	0.18	0.000	0.000	0.000
1711	17.10	17.11	0.01	17.11	2.96	40.00	0.18	0.000	0.000	0.000
1712	17.11	17.12	0.01	17.11	2.95	44.24	0.18	0.000	0.000	0.000
1713	17.12	17.13	0.01	17.13	2.95	48.13	0.18	0.000	0.000	0.000
1714	17.13	17.14	0.01	17.14	2.95	68.35	0.18	0.000	0.000	0.000
1715	17.14	17.15	0.01	17.14	2.95	83.75	0.18	0.000	0.000	0.000
1716	17.15	17.16	0.01	17.16	2.95	90.25	0.18	0.000	0.000	0.000
1717	17.16	17.17	0.01	17.16	2.94	95.39	0.18	0.000	0.000	0.000
1718	17.17	17.18	0.01	17.18	2.94	96.33	0.18	0.000	0.000	0.000

Total primary settlement: 3.55
Total secondary settlement: 0.25

Total calculated settlement: 3.80

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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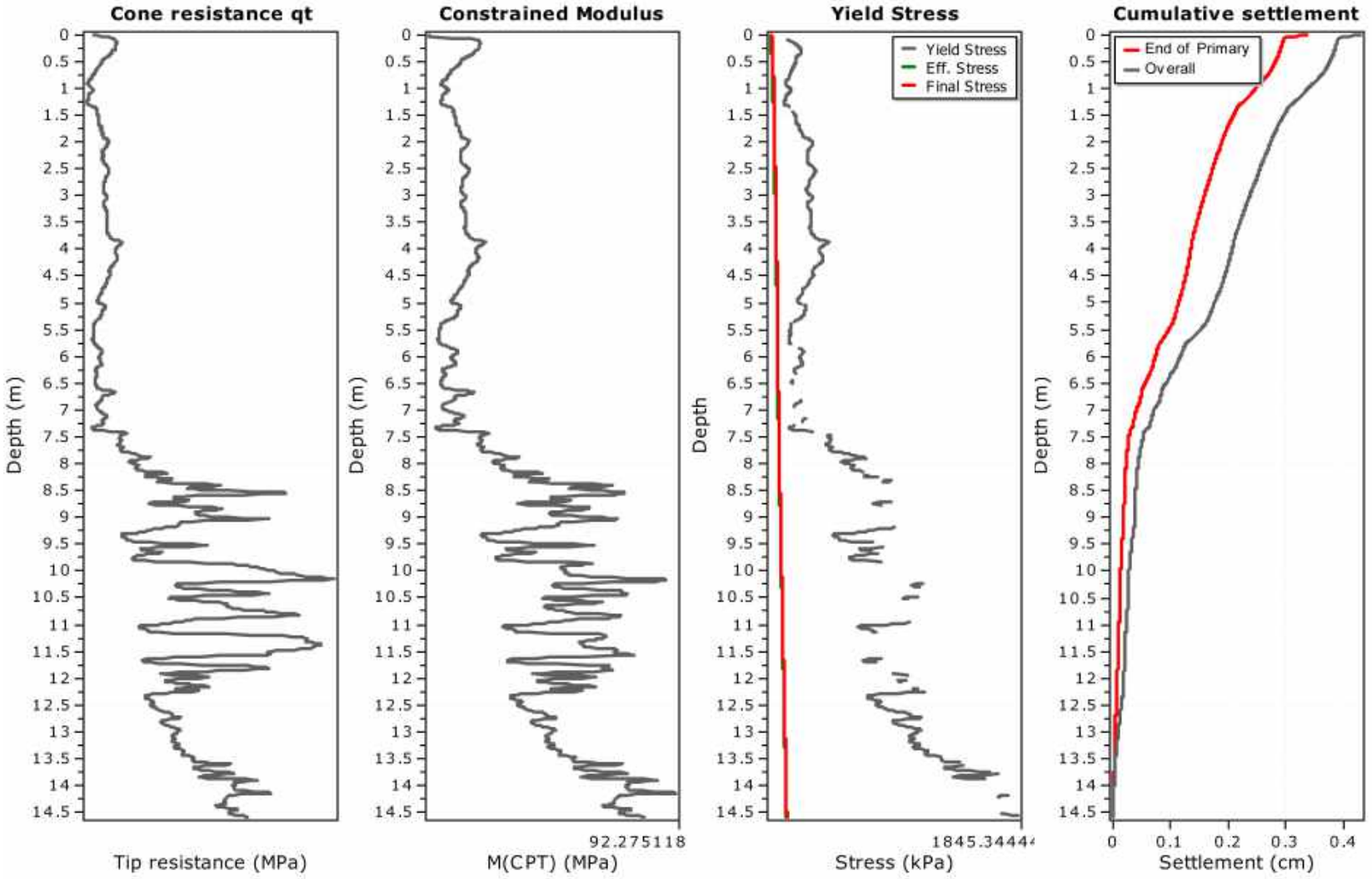
CPT: CPT401
Total depth: 14.59 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1427	14.27	14.28	0.01	14.28	1.21	68.47	0.22	0.000	0.000	0.000
1428	14.28	14.29	0.01	14.29	1.21	68.32	0.22	0.000	0.000	0.000
1429	14.29	14.30	0.01	14.30	1.21	68.30	0.22	0.000	0.000	0.000
1430	14.30	14.31	0.01	14.31	1.21	68.55	0.22	0.000	0.000	0.000
1431	14.31	14.32	0.01	14.32	1.20	68.63	0.22	0.000	0.000	0.000
1432	14.32	14.33	0.01	14.33	1.20	68.72	0.22	0.000	0.000	0.000
1433	14.33	14.34	0.01	14.34	1.20	68.61	0.22	0.000	0.000	0.000
1434	14.34	14.35	0.01	14.35	1.20	68.08	0.22	0.000	0.000	0.000
1435	14.35	14.36	0.01	14.36	1.20	67.39	0.22	0.000	0.000	0.000
1436	14.36	14.37	0.01	14.37	1.20	65.77	0.22	0.000	0.000	0.000
1437	14.37	14.38	0.01	14.38	1.20	64.66	0.22	0.000	0.000	0.000
1438	14.38	14.39	0.01	14.39	1.20	63.93	0.22	0.000	0.000	0.000
1439	14.39	14.40	0.01	14.40	1.20	64.58	0.22	0.000	0.000	0.000
1440	14.40	14.41	0.01	14.41	1.20	66.00	0.22	0.000	0.000	0.000
1441	14.41	14.42	0.01	14.42	1.20	68.09	0.22	0.000	0.000	0.000
1442	14.42	14.43	0.01	14.43	1.19	70.77	0.22	0.000	0.000	0.000
1443	14.43	14.44	0.01	14.44	1.19	72.65	0.22	0.000	0.000	0.000
1444	14.44	14.45	0.01	14.45	1.19	74.16	0.22	0.000	0.000	0.000
1445	14.45	14.46	0.01	14.46	1.19	74.56	0.22	0.000	0.000	0.000
1446	14.46	14.47	0.01	14.47	1.19	74.68	0.22	0.000	0.000	0.000
1447	14.47	14.48	0.01	14.48	1.19	73.68	0.22	0.000	0.000	0.000
1448	14.48	14.49	0.01	14.49	1.19	72.48	0.22	0.000	0.000	0.000
1449	14.49	14.50	0.01	14.50	1.19	71.37	0.22	0.000	0.000	0.000
1450	14.50	14.51	0.01	14.51	1.19	70.65	0.22	0.000	0.000	0.000
1451	14.51	14.52	0.01	14.52	1.19	70.31	0.22	0.000	0.000	0.000
1452	14.52	14.53	0.01	14.53	1.19	70.31	0.22	0.000	0.000	0.000
1453	14.53	14.54	0.01	14.54	1.18	70.64	0.22	0.000	0.000	0.000
1454	14.54	14.55	0.01	14.55	1.18	71.76	0.22	0.000	0.000	0.000
1455	14.55	14.56	0.01	14.56	1.18	73.48	0.22	0.000	0.000	0.000
1456	14.56	14.57	0.01	14.57	1.18	75.62	0.21	0.000	0.000	0.000
1457	14.57	14.58	0.01	14.58	1.18	77.80	0.21	0.000	0.000	0.000
1458	14.58	14.59	0.01	14.59	1.18	79.02	0.21	0.000	0.000	0.000

Total primary settlement: 0.34
Total secondary settlement: 0.09

Total calculated settlement: 0.43

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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P O Box 97 385, Manukau, Auckland 2241
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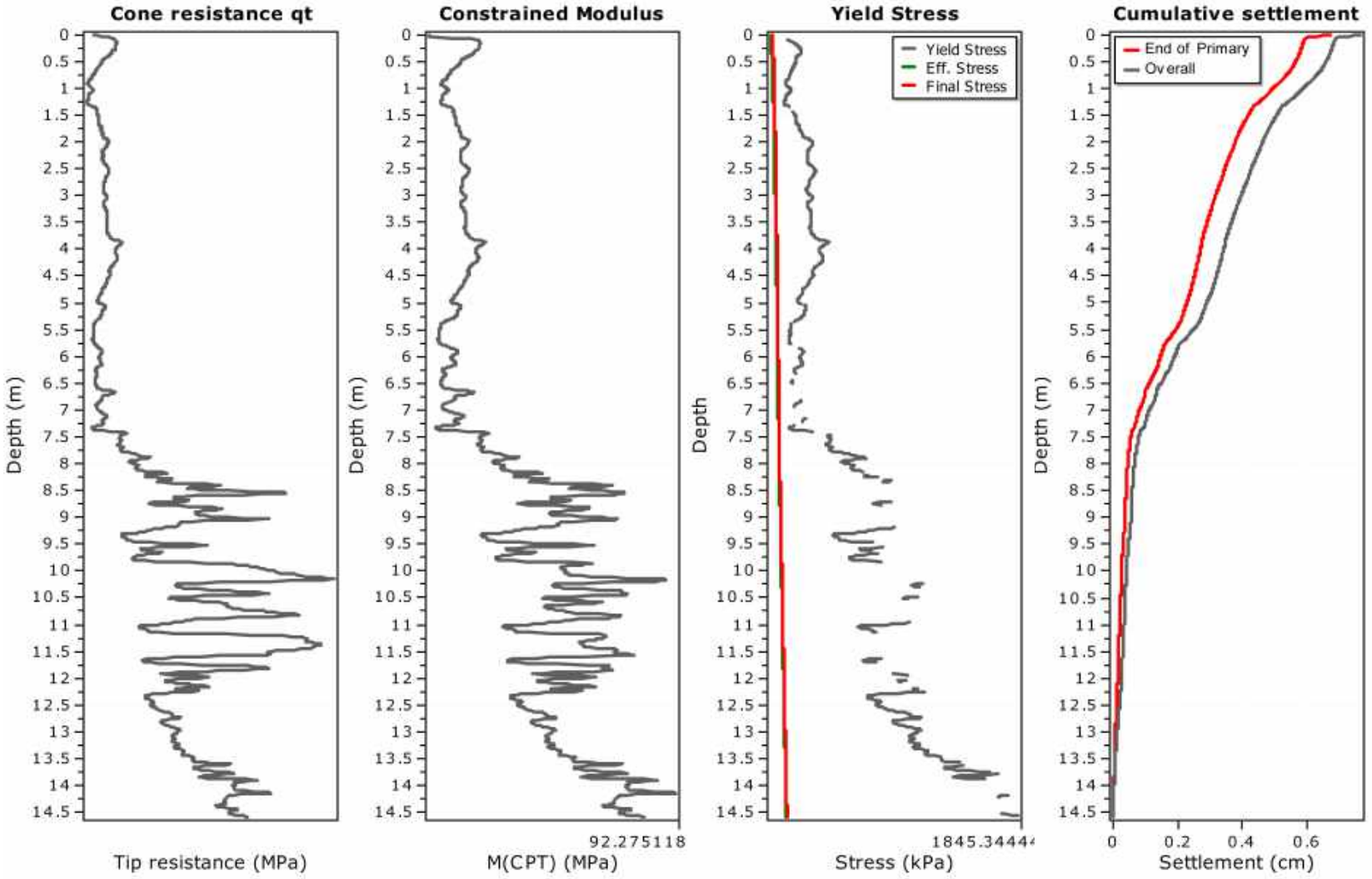
CPT: CPT401
Total depth: 14.59 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1427	14.27	14.28	0.01	14.28	2.42	68.47	0.22	0.000	0.000	0.000
1428	14.28	14.29	0.01	14.29	2.41	68.32	0.22	0.000	0.000	0.000
1429	14.29	14.30	0.01	14.30	2.41	68.30	0.22	0.000	0.000	0.000
1430	14.30	14.31	0.01	14.31	2.41	68.55	0.22	0.000	0.000	0.000
1431	14.31	14.32	0.01	14.32	2.41	68.63	0.22	0.000	0.000	0.000
1432	14.32	14.33	0.01	14.33	2.41	68.72	0.22	0.000	0.000	0.000
1433	14.33	14.34	0.01	14.34	2.41	68.61	0.22	0.000	0.000	0.000
1434	14.34	14.35	0.01	14.35	2.40	68.08	0.22	0.000	0.000	0.000
1435	14.35	14.36	0.01	14.36	2.40	67.39	0.22	0.000	0.000	0.000
1436	14.36	14.37	0.01	14.37	2.40	65.77	0.22	0.000	0.000	0.000
1437	14.37	14.38	0.01	14.38	2.40	64.66	0.22	0.000	0.000	0.000
1438	14.38	14.39	0.01	14.39	2.40	63.93	0.22	0.000	0.000	0.000
1439	14.39	14.40	0.01	14.40	2.39	64.58	0.22	0.000	0.000	0.000
1440	14.40	14.41	0.01	14.41	2.39	66.00	0.22	0.000	0.000	0.000
1441	14.41	14.42	0.01	14.42	2.39	68.09	0.22	0.000	0.000	0.000
1442	14.42	14.43	0.01	14.43	2.39	70.77	0.22	0.000	0.000	0.000
1443	14.43	14.44	0.01	14.44	2.39	72.65	0.22	0.000	0.000	0.000
1444	14.44	14.45	0.01	14.45	2.39	74.16	0.22	0.000	0.000	0.000
1445	14.45	14.46	0.01	14.46	2.38	74.56	0.22	0.000	0.000	0.000
1446	14.46	14.47	0.01	14.47	2.38	74.68	0.22	0.000	0.000	0.000
1447	14.47	14.48	0.01	14.48	2.38	73.68	0.22	0.000	0.000	0.000
1448	14.48	14.49	0.01	14.49	2.38	72.48	0.22	0.000	0.000	0.000
1449	14.49	14.50	0.01	14.50	2.38	71.37	0.22	0.000	0.000	0.000
1450	14.50	14.51	0.01	14.51	2.37	70.65	0.22	0.000	0.000	0.000
1451	14.51	14.52	0.01	14.52	2.37	70.31	0.22	0.000	0.000	0.000
1452	14.52	14.53	0.01	14.53	2.37	70.31	0.22	0.000	0.000	0.000
1453	14.53	14.54	0.01	14.54	2.37	70.64	0.22	0.000	0.000	0.000
1454	14.54	14.55	0.01	14.55	2.37	71.76	0.22	0.000	0.000	0.000
1455	14.55	14.56	0.01	14.56	2.37	73.48	0.22	0.000	0.000	0.000
1456	14.56	14.57	0.01	14.57	2.36	75.62	0.21	0.000	0.000	0.000
1457	14.57	14.58	0.01	14.58	2.36	77.80	0.21	0.000	0.000	0.000
1458	14.58	14.59	0.01	14.59	2.36	79.02	0.21	0.000	0.000	0.000

Total primary settlement: 0.67
Total secondary settlement: 0.09

Total calculated settlement: 0.76

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
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Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
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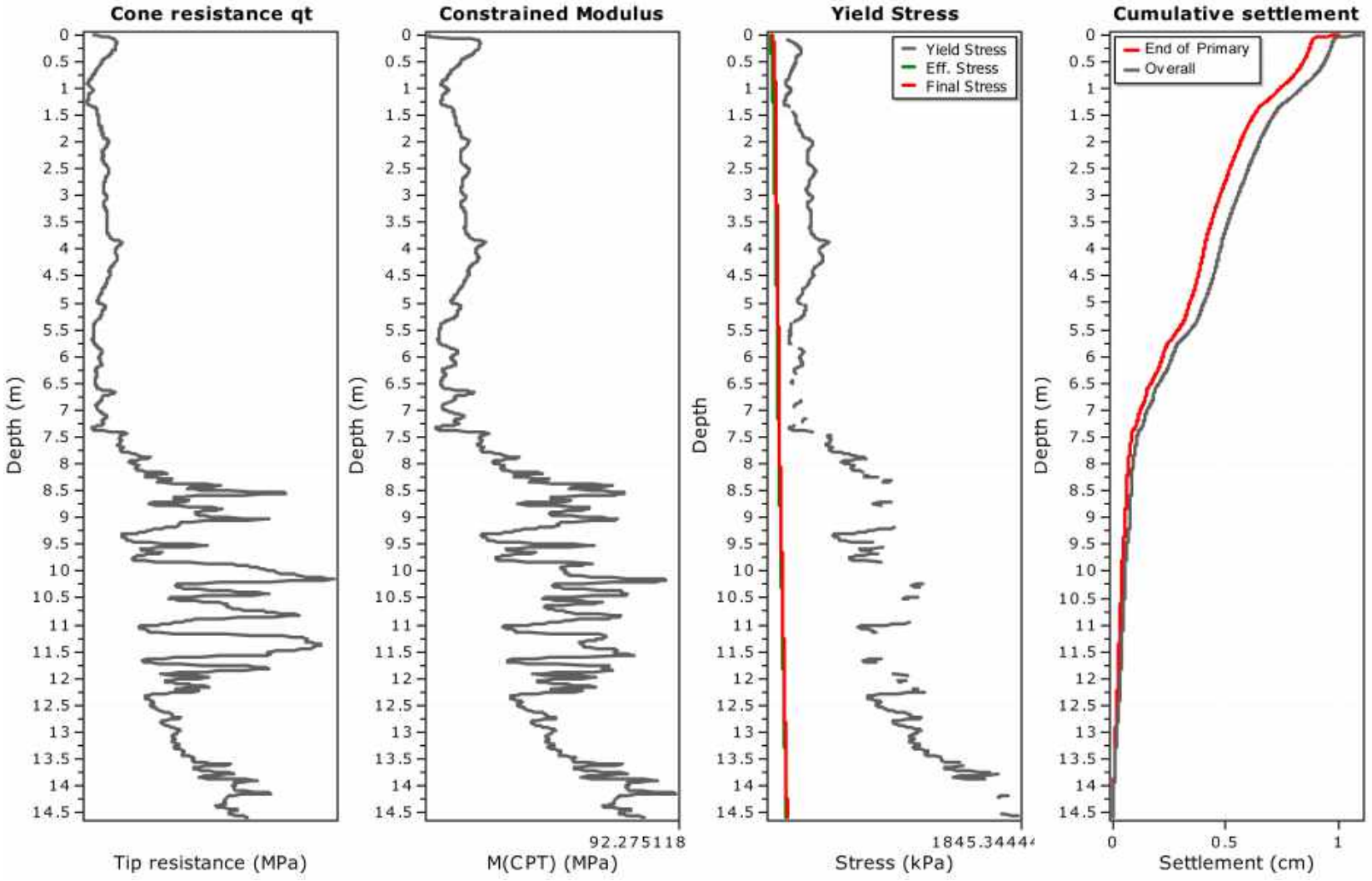
CPT: CPT401
Total depth: 14.59 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1427	14.27	14.28	0.01	14.28	3.62	68.47	0.22	0.000	0.000	0.000
1428	14.28	14.29	0.01	14.29	3.62	68.32	0.22	0.000	0.000	0.000
1429	14.29	14.30	0.01	14.30	3.62	68.30	0.22	0.000	0.000	0.000
1430	14.30	14.31	0.01	14.31	3.62	68.55	0.22	0.000	0.000	0.000
1431	14.31	14.32	0.01	14.32	3.61	68.63	0.22	0.000	0.000	0.000
1432	14.32	14.33	0.01	14.33	3.61	68.72	0.22	0.000	0.000	0.000
1433	14.33	14.34	0.01	14.34	3.61	68.61	0.22	0.000	0.000	0.000
1434	14.34	14.35	0.01	14.35	3.60	68.08	0.22	0.000	0.000	0.000
1435	14.35	14.36	0.01	14.36	3.60	67.39	0.22	0.000	0.000	0.000
1436	14.36	14.37	0.01	14.37	3.60	65.77	0.22	0.000	0.000	0.000
1437	14.37	14.38	0.01	14.38	3.60	64.66	0.22	0.000	0.000	0.000
1438	14.38	14.39	0.01	14.39	3.59	63.93	0.22	0.000	0.000	0.000
1439	14.39	14.40	0.01	14.40	3.59	64.58	0.22	0.000	0.000	0.000
1440	14.40	14.41	0.01	14.41	3.59	66.00	0.22	0.000	0.000	0.000
1441	14.41	14.42	0.01	14.42	3.59	68.09	0.22	0.000	0.000	0.000
1442	14.42	14.43	0.01	14.43	3.58	70.77	0.22	0.000	0.000	0.000
1443	14.43	14.44	0.01	14.44	3.58	72.65	0.22	0.000	0.000	0.000
1444	14.44	14.45	0.01	14.45	3.58	74.16	0.22	0.000	0.000	0.000
1445	14.45	14.46	0.01	14.46	3.58	74.56	0.22	0.000	0.000	0.000
1446	14.46	14.47	0.01	14.47	3.57	74.68	0.22	0.000	0.000	0.000
1447	14.47	14.48	0.01	14.48	3.57	73.68	0.22	0.000	0.000	0.000
1448	14.48	14.49	0.01	14.49	3.57	72.48	0.22	0.000	0.000	0.000
1449	14.49	14.50	0.01	14.50	3.57	71.37	0.22	0.000	0.000	0.000
1450	14.50	14.51	0.01	14.51	3.56	70.65	0.22	0.000	0.000	0.000
1451	14.51	14.52	0.01	14.52	3.56	70.31	0.22	0.000	0.000	0.000
1452	14.52	14.53	0.01	14.53	3.56	70.31	0.22	0.000	0.000	0.000
1453	14.53	14.54	0.01	14.54	3.55	70.64	0.22	0.000	0.000	0.000
1454	14.54	14.55	0.01	14.55	3.55	71.76	0.22	0.000	0.000	0.000
1455	14.55	14.56	0.01	14.56	3.55	73.48	0.22	0.000	0.000	0.000
1456	14.56	14.57	0.01	14.57	3.55	75.62	0.21	0.000	0.000	0.000
1457	14.57	14.58	0.01	14.58	3.54	77.80	0.21	0.000	0.000	0.000
1458	14.58	14.59	0.01	14.59	3.54	79.02	0.21	0.000	0.000	0.000

Total primary settlement: 1.01
Total secondary settlement: 0.09

Total calculated settlement: 1.10

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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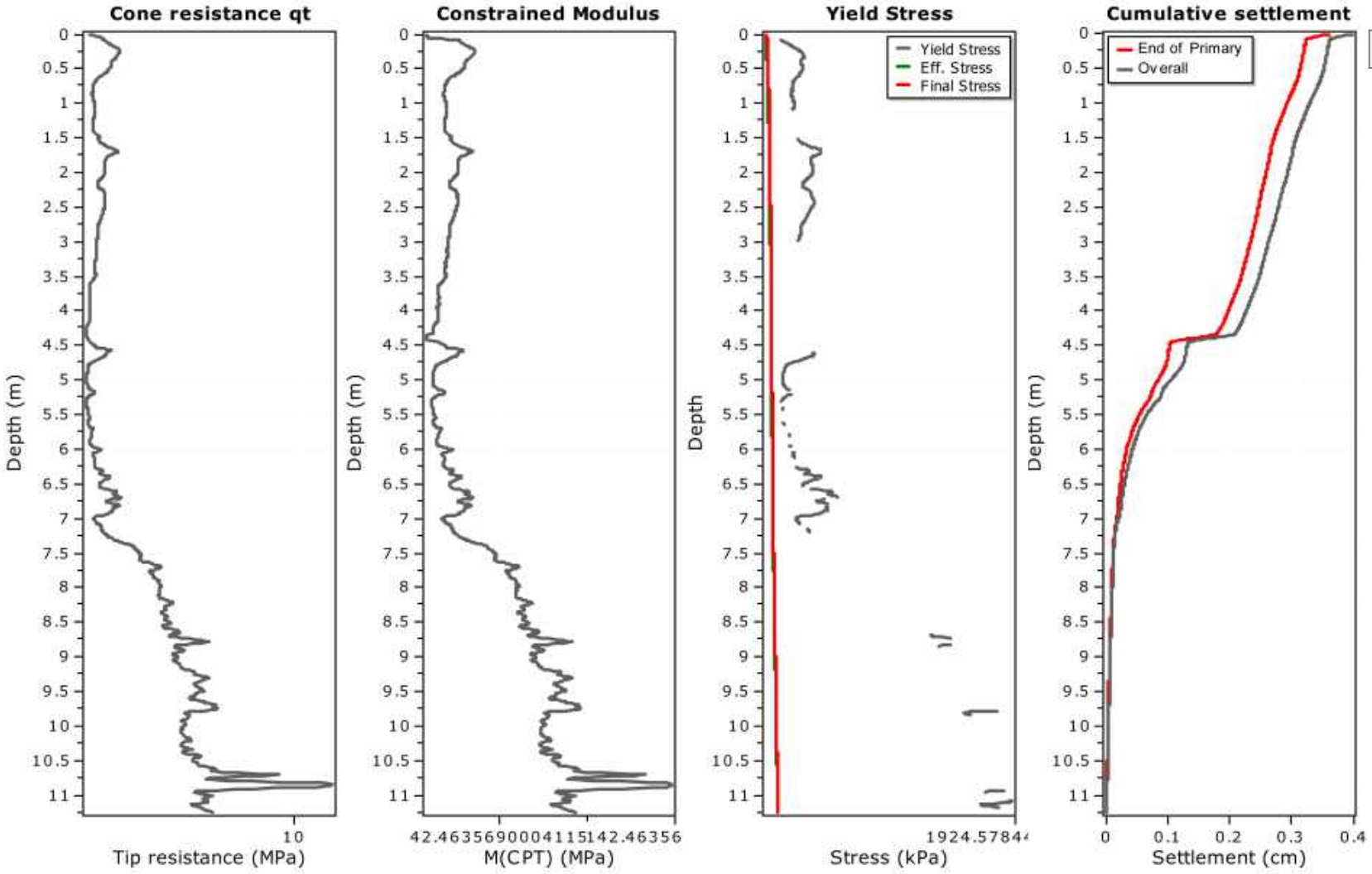
Level 3, 3 Osterley Way
P O Box 97 385, Manukau, Auckland 2241
www.landergeotechnical.co.nz

CPT: CPT402
Total depth: 11.25 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1105	11.05	11.06	0.01	11.05	1.55	78.40	0.28	0.000	0.000	0.000
1106	11.06	11.07	0.01	11.06	1.55	78.58	0.28	0.000	0.000	0.000
1107	11.07	11.08	0.01	11.07	1.55	79.69	0.28	0.000	0.000	0.000
1108	11.08	11.09	0.01	11.09	1.55	81.39	0.28	0.000	0.000	0.000
1109	11.09	11.10	0.01	11.10	1.55	82.50	0.28	0.000	0.000	0.000
1110	11.10	11.11	0.01	11.11	1.55	82.11	0.28	0.000	0.000	0.000
1111	11.11	11.12	0.01	11.12	1.54	79.44	0.28	0.000	0.000	0.000
1112	11.12	11.13	0.01	11.13	1.54	75.51	0.28	0.000	0.000	0.000
1113	11.13	11.14	0.01	11.13	1.54	72.67	0.28	0.000	0.000	0.000
1114	11.14	11.15	0.01	11.14	1.54	71.39	0.28	0.000	0.000	0.000
1115	11.15	11.16	0.01	11.15	1.54	72.35	0.28	0.000	0.000	0.000
1116	11.16	11.17	0.01	11.16	1.54	74.85	0.28	0.000	0.000	0.000
1117	11.17	11.18	0.01	11.18	1.54	76.75	0.28	0.000	0.000	0.000
1118	11.18	11.19	0.01	11.19	1.54	78.08	0.28	0.000	0.000	0.000
1119	11.19	11.20	0.01	11.20	1.53	78.03	0.28	0.000	0.000	0.000
1120	11.20	11.21	0.01	11.21	1.53	78.60	0.28	0.000	0.000	0.000
1121	11.21	11.22	0.01	11.21	1.53	79.89	0.28	0.000	0.000	0.000
1122	11.22	11.23	0.01	11.22	1.53	81.47	0.28	0.000	0.000	0.000
1123	11.23	11.24	0.01	11.23	1.53	83.42	0.28	0.000	0.000	0.000
1124	11.24	11.25	0.01	11.24	1.53	84.88	0.28	0.000	0.000	0.000

Total primary settlement: 0.36
Total secondary settlement: 0.04

Total calculated settlement: 0.40

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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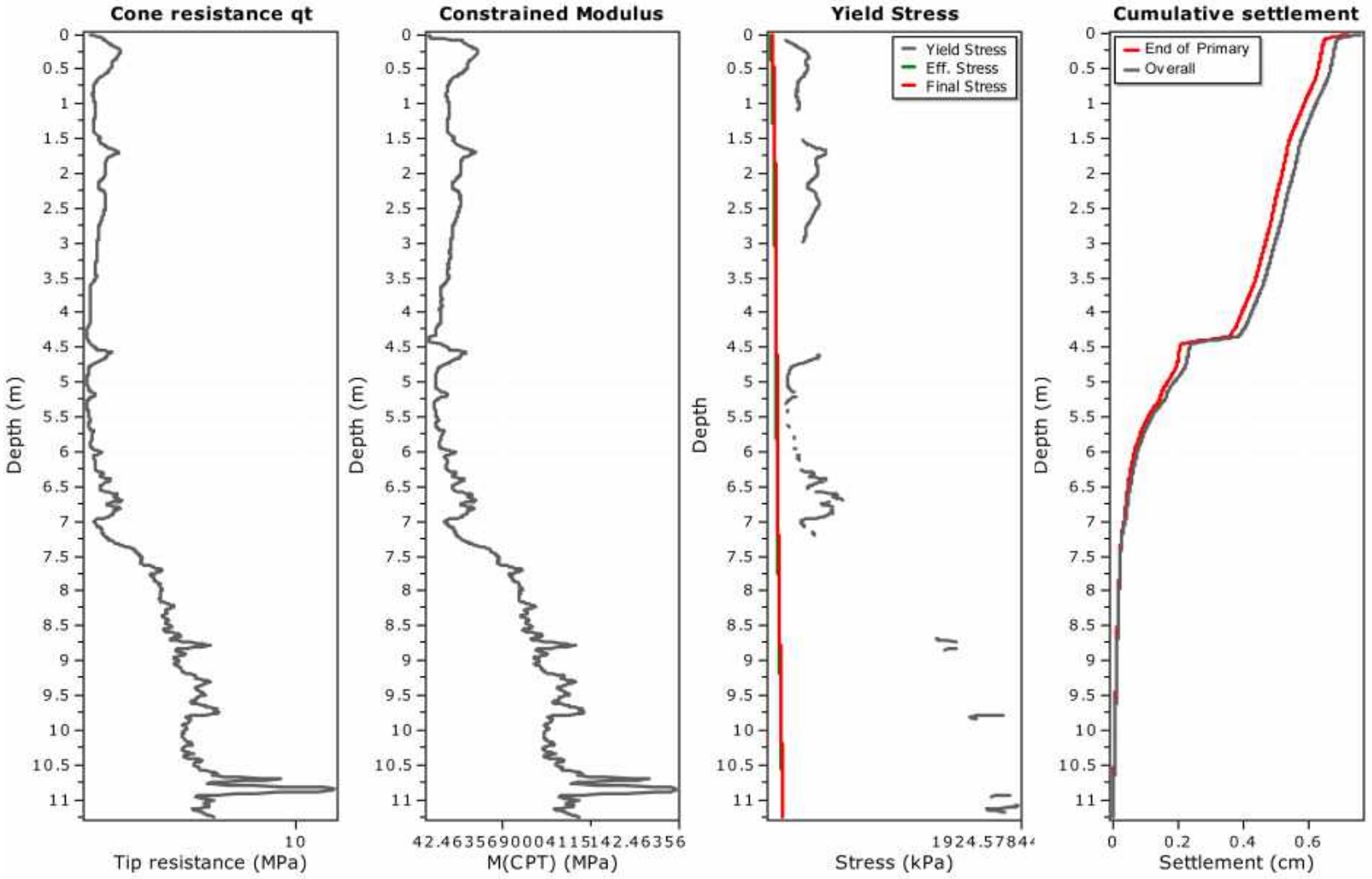
CPT: CPT402
Total depth: 11.25 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1105	11.05	11.06	0.01	11.05	3.10	78.40	0.28	0.000	0.000	0.000
1106	11.06	11.07	0.01	11.06	3.10	78.58	0.28	0.000	0.000	0.000
1107	11.07	11.08	0.01	11.07	3.10	79.69	0.28	0.000	0.000	0.000
1108	11.08	11.09	0.01	11.09	3.10	81.39	0.28	0.000	0.000	0.000
1109	11.09	11.10	0.01	11.10	3.09	82.50	0.28	0.000	0.000	0.000
1110	11.10	11.11	0.01	11.11	3.09	82.11	0.28	0.000	0.000	0.000
1111	11.11	11.12	0.01	11.12	3.09	79.44	0.28	0.000	0.000	0.000
1112	11.12	11.13	0.01	11.13	3.09	75.51	0.28	0.000	0.000	0.000
1113	11.13	11.14	0.01	11.13	3.08	72.67	0.28	0.000	0.000	0.000
1114	11.14	11.15	0.01	11.14	3.08	71.39	0.28	0.000	0.000	0.000
1115	11.15	11.16	0.01	11.15	3.08	72.35	0.28	0.000	0.000	0.000
1116	11.16	11.17	0.01	11.16	3.08	74.85	0.28	0.000	0.000	0.000
1117	11.17	11.18	0.01	11.18	3.07	76.75	0.28	0.000	0.000	0.000
1118	11.18	11.19	0.01	11.19	3.07	78.08	0.28	0.000	0.000	0.000
1119	11.19	11.20	0.01	11.20	3.07	78.03	0.28	0.000	0.000	0.000
1120	11.20	11.21	0.01	11.21	3.07	78.60	0.28	0.000	0.000	0.000
1121	11.21	11.22	0.01	11.21	3.06	79.89	0.28	0.000	0.000	0.000
1122	11.22	11.23	0.01	11.22	3.06	81.47	0.28	0.000	0.000	0.000
1123	11.23	11.24	0.01	11.23	3.06	83.42	0.28	0.000	0.000	0.000
1124	11.24	11.25	0.01	11.24	3.06	84.88	0.28	0.000	0.000	0.000

Total primary settlement: 0.72
Total secondary settlement: 0.04

Total calculated settlement: 0.76

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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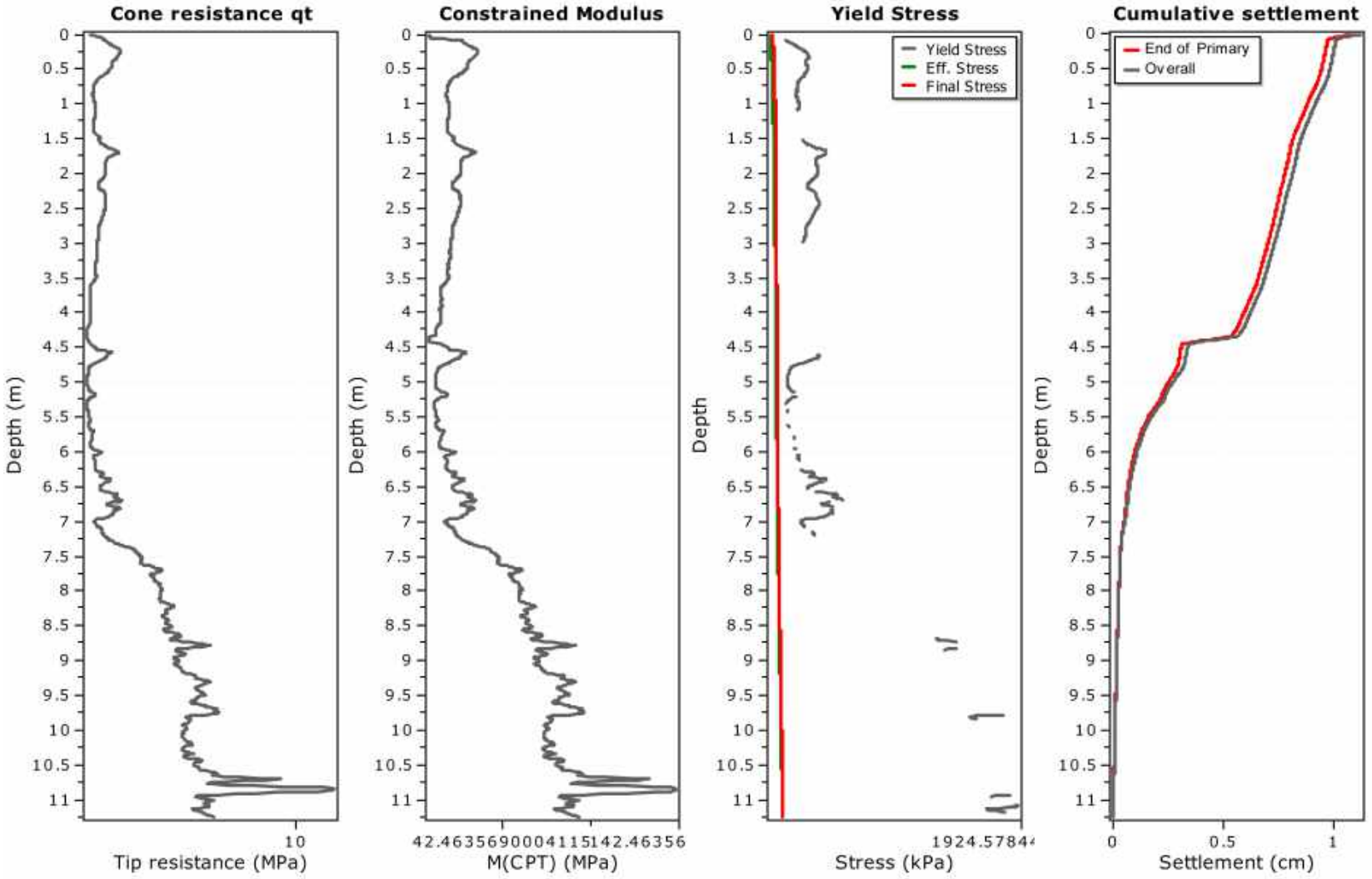
CPT: CPT402
Total depth: 11.25 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1105	11.05	11.06	0.01	11.05	4.65	78.40	0.28	0.000	0.000	0.000
1106	11.06	11.07	0.01	11.06	4.65	78.58	0.28	0.000	0.000	0.000
1107	11.07	11.08	0.01	11.07	4.65	79.69	0.28	0.000	0.000	0.000
1108	11.08	11.09	0.01	11.09	4.64	81.39	0.28	0.000	0.000	0.000
1109	11.09	11.10	0.01	11.10	4.64	82.50	0.28	0.000	0.000	0.000
1110	11.10	11.11	0.01	11.11	4.64	82.11	0.28	0.000	0.000	0.000
1111	11.11	11.12	0.01	11.12	4.63	79.44	0.28	0.000	0.000	0.000
1112	11.12	11.13	0.01	11.13	4.63	75.51	0.28	0.000	0.000	0.000
1113	11.13	11.14	0.01	11.13	4.62	72.67	0.28	0.000	0.000	0.000
1114	11.14	11.15	0.01	11.14	4.62	71.39	0.28	0.000	0.000	0.000
1115	11.15	11.16	0.01	11.15	4.62	72.35	0.28	0.000	0.000	0.000
1116	11.16	11.17	0.01	11.16	4.61	74.85	0.28	0.000	0.000	0.000
1117	11.17	11.18	0.01	11.18	4.61	76.75	0.28	0.000	0.000	0.000
1118	11.18	11.19	0.01	11.19	4.61	78.08	0.28	0.000	0.000	0.000
1119	11.19	11.20	0.01	11.20	4.60	78.03	0.28	0.000	0.000	0.000
1120	11.20	11.21	0.01	11.21	4.60	78.60	0.28	0.000	0.000	0.000
1121	11.21	11.22	0.01	11.21	4.59	79.89	0.28	0.000	0.000	0.000
1122	11.22	11.23	0.01	11.22	4.59	81.47	0.28	0.000	0.000	0.000
1123	11.23	11.24	0.01	11.23	4.59	83.42	0.28	0.000	0.000	0.000
1124	11.24	11.25	0.01	11.24	4.58	84.88	0.28	0.000	0.000	0.000

Total primary settlement: 1.08
Total secondary settlement: 0.04

Total calculated settlement: 1.12

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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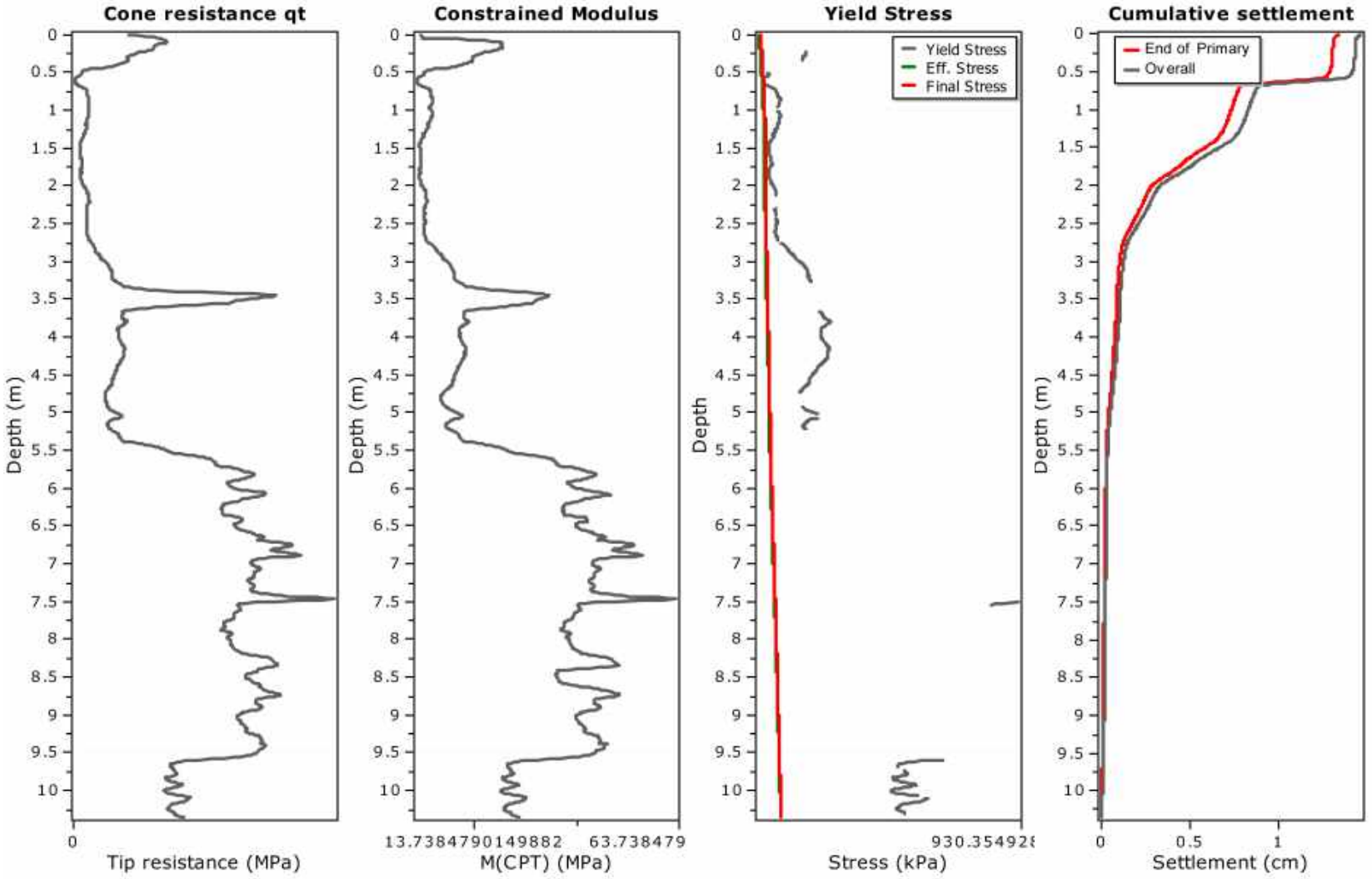
CPT: CPT403
Total depth: 10.35 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1013	10.13	10.14	0.01	10.13	1.67	25.70	0.30	0.000	0.000	0.000
1014	10.14	10.15	0.01	10.14	1.67	25.50	0.30	0.000	0.000	0.000
1015	10.15	10.16	0.01	10.15	1.67	25.00	0.30	0.000	0.000	0.000
1016	10.16	10.17	0.01	10.16	1.67	24.10	0.30	0.000	0.000	0.000
1017	10.17	10.18	0.01	10.18	1.67	23.05	0.30	0.000	0.000	0.000
1018	10.18	10.19	0.01	10.19	1.67	22.27	0.30	0.000	0.000	0.000
1019	10.19	10.20	0.01	10.20	1.67	21.98	0.30	0.000	0.000	0.000
1020	10.20	10.21	0.01	10.21	1.66	21.74	0.30	0.000	0.000	0.000
1021	10.21	10.22	0.01	10.21	1.66	21.54	0.30	0.000	0.000	0.000
1022	10.22	10.23	0.01	10.22	1.66	21.34	0.30	0.000	0.000	0.000
1023	10.23	10.24	0.01	10.23	1.66	21.20	0.30	0.000	0.000	0.000
1024	10.24	10.25	0.01	10.24	1.66	21.06	0.30	0.000	0.000	0.000
1025	10.25	10.26	0.01	10.26	1.66	21.06	0.30	0.000	0.000	0.000
1026	10.26	10.27	0.01	10.27	1.66	21.26	0.30	0.000	0.000	0.000
1027	10.27	10.28	0.01	10.28	1.65	21.70	0.30	0.000	0.000	0.000
1028	10.28	10.29	0.01	10.29	1.65	22.17	0.30	0.000	0.000	0.000
1029	10.29	10.30	0.01	10.29	1.65	22.60	0.30	0.000	0.000	0.000
1030	10.30	10.31	0.01	10.30	1.65	22.77	0.30	0.000	0.000	0.000
1031	10.31	10.32	0.01	10.31	1.65	22.95	0.30	0.000	0.000	0.000
1032	10.32	10.33	0.01	10.32	1.65	23.14	0.30	0.000	0.000	0.000
1033	10.33	10.34	0.01	10.34	1.65	23.54	0.30	0.000	0.000	0.000
1034	10.34	10.35	0.01	10.35	1.65	24.32	0.30	0.000	0.000	0.000

Total primary settlement: 1.34
Total secondary settlement: 0.13

Total calculated settlement: 1.47

Abbreviations

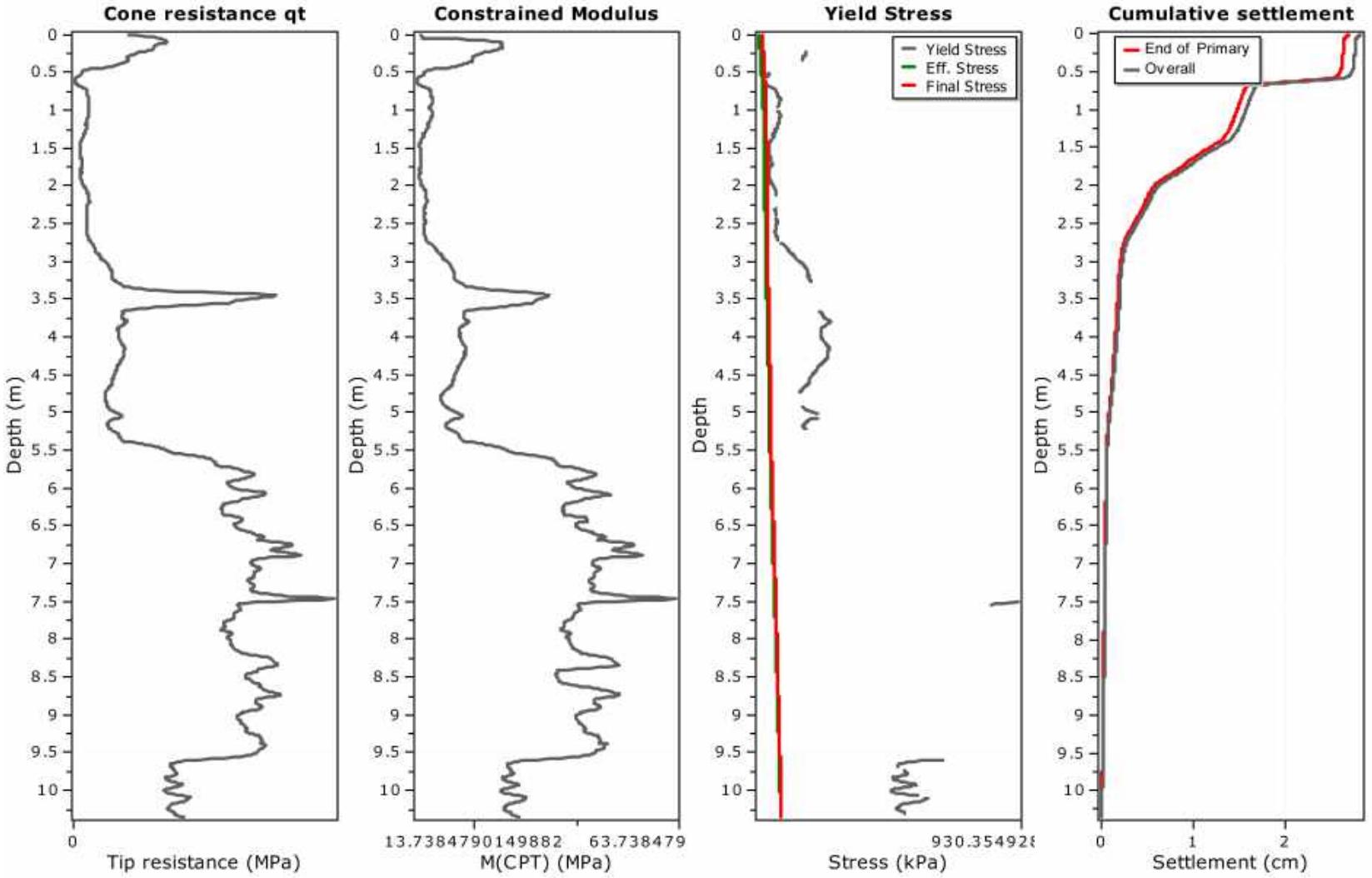
Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

Lander Geotechnical Consultants Limited
Level 3, 3 Osterley Way
P O Box 97 385, Manukau, Auckland 2241
www.landergeotechnical.co.nz

CPT: CPT403
Total depth: 10.35 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1013	10.13	10.14	0.01	10.13	3.35	25.70	0.30	0.000	0.000	0.000
1014	10.14	10.15	0.01	10.14	3.35	25.50	0.30	0.000	0.000	0.000
1015	10.15	10.16	0.01	10.15	3.34	25.00	0.30	0.000	0.000	0.000
1016	10.16	10.17	0.01	10.16	3.34	24.10	0.30	0.000	0.000	0.000
1017	10.17	10.18	0.01	10.18	3.34	23.05	0.30	0.000	0.000	0.000
1018	10.18	10.19	0.01	10.19	3.33	22.27	0.30	0.000	0.000	0.000
1019	10.19	10.20	0.01	10.20	3.33	21.98	0.30	0.000	0.000	0.000
1020	10.20	10.21	0.01	10.21	3.33	21.74	0.30	0.000	0.000	0.000
1021	10.21	10.22	0.01	10.21	3.33	21.54	0.30	0.000	0.000	0.000
1022	10.22	10.23	0.01	10.22	3.32	21.34	0.30	0.000	0.000	0.000
1023	10.23	10.24	0.01	10.23	3.32	21.20	0.30	0.000	0.000	0.000
1024	10.24	10.25	0.01	10.24	3.32	21.06	0.30	0.000	0.000	0.000
1025	10.25	10.26	0.01	10.26	3.31	21.06	0.30	0.000	0.000	0.000
1026	10.26	10.27	0.01	10.27	3.31	21.26	0.30	0.000	0.000	0.000
1027	10.27	10.28	0.01	10.28	3.31	21.70	0.30	0.000	0.000	0.000
1028	10.28	10.29	0.01	10.29	3.31	22.17	0.30	0.000	0.000	0.000
1029	10.29	10.30	0.01	10.29	3.30	22.60	0.30	0.000	0.000	0.000
1030	10.30	10.31	0.01	10.30	3.30	22.77	0.30	0.000	0.000	0.000
1031	10.31	10.32	0.01	10.31	3.30	22.95	0.30	0.000	0.000	0.000
1032	10.32	10.33	0.01	10.32	3.30	23.14	0.30	0.000	0.000	0.000
1033	10.33	10.34	0.01	10.34	3.29	23.54	0.30	0.000	0.000	0.000
1034	10.34	10.35	0.01	10.35	3.29	24.32	0.30	0.000	0.000	0.000

Total primary settlement: 2.68
Total secondary settlement: 0.13

Total calculated settlement: 2.81

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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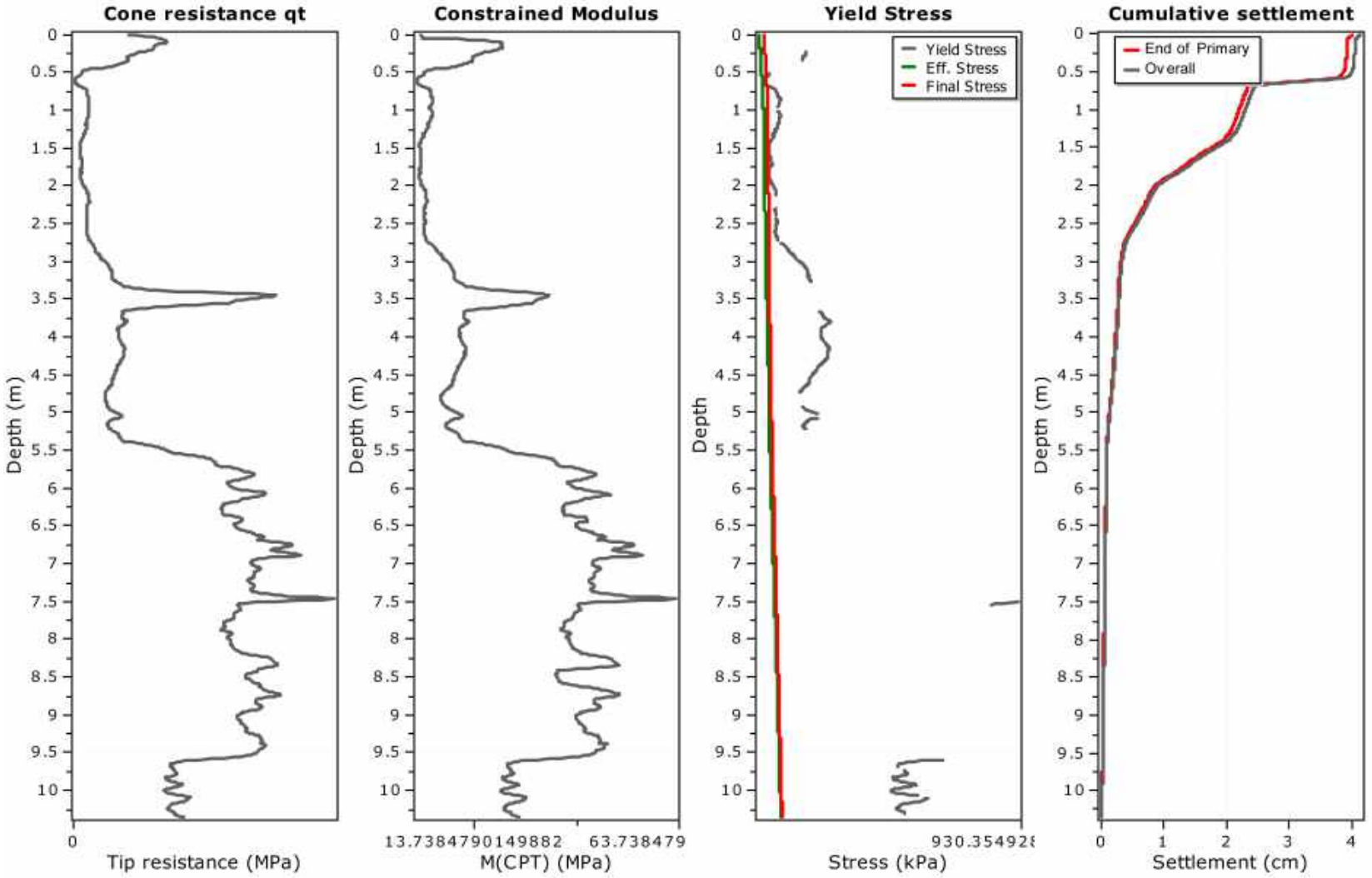
www.landergeotechnical.co.nz

CPT: CPT403
Total depth: 10.35 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1013	10.13	10.14	0.01	10.13	5.02	25.70	0.30	0.000	0.000	0.000
1014	10.14	10.15	0.01	10.14	5.02	25.50	0.30	0.000	0.000	0.000
1015	10.15	10.16	0.01	10.15	5.01	25.00	0.30	0.000	0.000	0.000
1016	10.16	10.17	0.01	10.16	5.01	24.10	0.30	0.000	0.000	0.000
1017	10.17	10.18	0.01	10.18	5.01	23.05	0.30	0.000	0.000	0.000
1018	10.18	10.19	0.01	10.19	5.00	22.27	0.30	0.000	0.000	0.000
1019	10.19	10.20	0.01	10.20	5.00	21.98	0.30	0.000	0.000	0.000
1020	10.20	10.21	0.01	10.21	4.99	21.74	0.30	0.000	0.000	0.000
1021	10.21	10.22	0.01	10.21	4.99	21.54	0.30	0.000	0.000	0.000
1022	10.22	10.23	0.01	10.22	4.98	21.34	0.30	0.000	0.000	0.000
1023	10.23	10.24	0.01	10.23	4.98	21.20	0.30	0.000	0.000	0.000
1024	10.24	10.25	0.01	10.24	4.98	21.06	0.30	0.000	0.000	0.000
1025	10.25	10.26	0.01	10.26	4.97	21.06	0.30	0.000	0.000	0.000
1026	10.26	10.27	0.01	10.27	4.97	21.26	0.30	0.000	0.000	0.000
1027	10.27	10.28	0.01	10.28	4.96	21.70	0.30	0.000	0.000	0.000
1028	10.28	10.29	0.01	10.29	4.96	22.17	0.30	0.000	0.000	0.000
1029	10.29	10.30	0.01	10.29	4.96	22.60	0.30	0.000	0.000	0.000
1030	10.30	10.31	0.01	10.30	4.95	22.77	0.30	0.000	0.000	0.000
1031	10.31	10.32	0.01	10.31	4.95	22.95	0.30	0.000	0.000	0.000
1032	10.32	10.33	0.01	10.32	4.94	23.14	0.30	0.000	0.000	0.000
1033	10.33	10.34	0.01	10.34	4.94	23.54	0.30	0.000	0.000	0.000
1034	10.34	10.35	0.01	10.35	4.94	24.32	0.30	0.000	0.000	0.000

Total primary settlement: 4.02
Total secondary settlement: 0.13

Total calculated settlement: 4.14

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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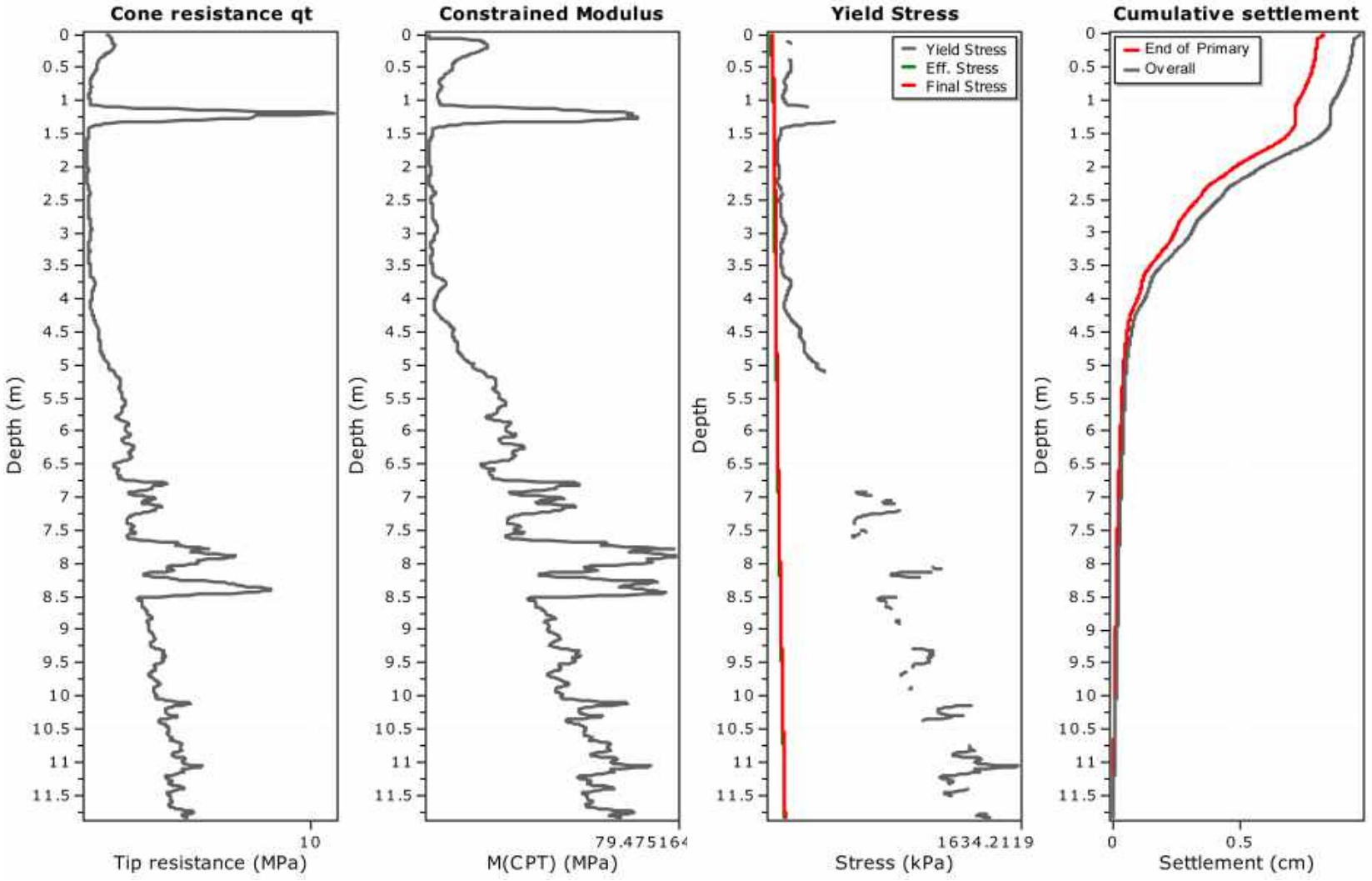
CPT: CPT404
Total depth: 11.84 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1151	11.51	11.52	0.01	11.52	1.49	50.88	0.27	0.000	0.000	0.000
1152	11.52	11.53	0.01	11.53	1.49	50.93	0.27	0.000	0.000	0.000
1153	11.53	11.54	0.01	11.54	1.49	50.76	0.27	0.000	0.000	0.000
1154	11.54	11.55	0.01	11.54	1.49	50.59	0.27	0.000	0.000	0.000
1155	11.55	11.56	0.01	11.55	1.49	50.66	0.27	0.000	0.000	0.000
1156	11.56	11.57	0.01	11.56	1.49	50.72	0.27	0.000	0.000	0.000
1157	11.57	11.58	0.01	11.57	1.49	50.86	0.27	0.000	0.000	0.000
1158	11.58	11.59	0.01	11.59	1.49	51.14	0.27	0.000	0.000	0.000
1159	11.59	11.60	0.01	11.60	1.49	51.63	0.27	0.000	0.000	0.000
1160	11.60	11.61	0.01	11.61	1.48	52.21	0.27	0.000	0.000	0.000
1161	11.61	11.62	0.01	11.62	1.48	52.41	0.27	0.000	0.000	0.000
1162	11.62	11.63	0.01	11.63	1.48	52.03	0.27	0.000	0.000	0.000
1163	11.63	11.64	0.01	11.63	1.48	51.21	0.27	0.000	0.000	0.000
1164	11.64	11.65	0.01	11.64	1.48	50.52	0.27	0.000	0.000	0.000
1165	11.65	11.66	0.01	11.65	1.48	50.19	0.27	0.000	0.000	0.000
1166	11.66	11.67	0.01	11.66	1.48	50.19	0.27	0.000	0.000	0.000
1167	11.67	11.68	0.01	11.68	1.48	50.33	0.27	0.000	0.000	0.000
1168	11.68	11.69	0.01	11.69	1.47	50.84	0.27	0.000	0.000	0.000
1169	11.69	11.70	0.01	11.70	1.47	51.69	0.27	0.000	0.000	0.000
1170	11.70	11.71	0.01	11.71	1.47	52.98	0.27	0.000	0.000	0.000
1171	11.71	11.72	0.01	11.71	1.47	54.44	0.27	0.000	0.000	0.000
1172	11.72	11.73	0.01	11.72	1.47	56.96	0.27	0.000	0.000	0.000
1173	11.73	11.74	0.01	11.73	1.47	59.82	0.27	0.000	0.000	0.000
1174	11.74	11.75	0.01	11.74	1.47	62.61	0.27	0.000	0.000	0.000
1175	11.75	11.76	0.01	11.76	1.47	64.51	0.27	0.000	0.000	0.000
1176	11.76	11.77	0.01	11.77	1.47	65.51	0.27	0.000	0.000	0.000
1177	11.77	11.78	0.01	11.78	1.46	65.18	0.27	0.000	0.000	0.000
1178	11.78	11.79	0.01	11.79	1.46	63.43	0.27	0.000	0.000	0.000
1179	11.79	11.80	0.01	11.79	1.46	60.40	0.27	0.000	0.000	0.000
1180	11.80	11.81	0.01	11.80	1.46	58.48	0.27	0.000	0.000	0.000
1181	11.81	11.82	0.01	11.81	1.46	57.60	0.27	0.000	0.000	0.000
1182	11.82	11.83	0.01	11.82	1.46	58.50	0.27	0.000	0.000	0.000
1183	11.83	11.84	0.01	11.84	1.46	60.00	0.26	0.000	0.000	0.000

Total primary settlement: 0.83
Total secondary settlement: 0.14

Total calculated settlement: 0.98

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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Level 3, 3 Osterley Way
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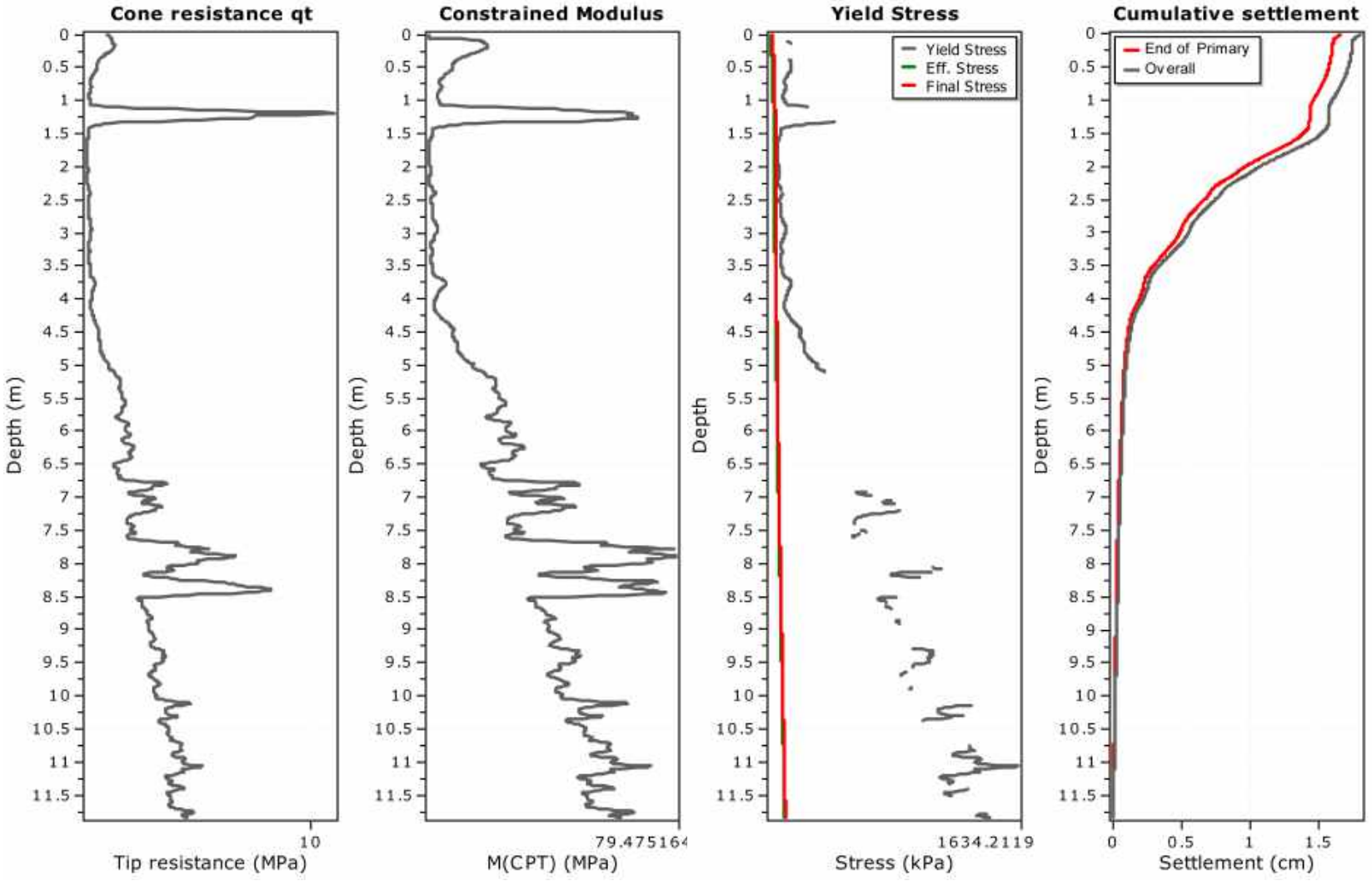
CPT: CPT404
Total depth: 11.84 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1151	11.51	11.52	0.01	11.52	2.99	50.88	0.27	0.000	0.000	0.000
1152	11.52	11.53	0.01	11.53	2.99	50.93	0.27	0.000	0.000	0.000
1153	11.53	11.54	0.01	11.54	2.98	50.76	0.27	0.000	0.000	0.000
1154	11.54	11.55	0.01	11.54	2.98	50.59	0.27	0.000	0.000	0.000
1155	11.55	11.56	0.01	11.55	2.98	50.66	0.27	0.000	0.000	0.000
1156	11.56	11.57	0.01	11.56	2.98	50.72	0.27	0.000	0.000	0.000
1157	11.57	11.58	0.01	11.57	2.98	50.86	0.27	0.000	0.000	0.000
1158	11.58	11.59	0.01	11.59	2.97	51.14	0.27	0.000	0.000	0.000
1159	11.59	11.60	0.01	11.60	2.97	51.63	0.27	0.000	0.000	0.000
1160	11.60	11.61	0.01	11.61	2.97	52.21	0.27	0.000	0.000	0.000
1161	11.61	11.62	0.01	11.62	2.97	52.41	0.27	0.000	0.000	0.000
1162	11.62	11.63	0.01	11.63	2.96	52.03	0.27	0.000	0.000	0.000
1163	11.63	11.64	0.01	11.63	2.96	51.21	0.27	0.000	0.000	0.000
1164	11.64	11.65	0.01	11.64	2.96	50.52	0.27	0.000	0.000	0.000
1165	11.65	11.66	0.01	11.65	2.96	50.19	0.27	0.000	0.000	0.000
1166	11.66	11.67	0.01	11.66	2.95	50.19	0.27	0.000	0.000	0.000
1167	11.67	11.68	0.01	11.68	2.95	50.33	0.27	0.000	0.000	0.000
1168	11.68	11.69	0.01	11.69	2.95	50.84	0.27	0.000	0.000	0.000
1169	11.69	11.70	0.01	11.70	2.95	51.69	0.27	0.000	0.000	0.000
1170	11.70	11.71	0.01	11.71	2.94	52.98	0.27	0.000	0.000	0.000
1171	11.71	11.72	0.01	11.71	2.94	54.44	0.27	0.000	0.000	0.000
1172	11.72	11.73	0.01	11.72	2.94	56.96	0.27	0.000	0.000	0.000
1173	11.73	11.74	0.01	11.73	2.94	59.82	0.27	0.000	0.000	0.000
1174	11.74	11.75	0.01	11.74	2.94	62.61	0.27	0.000	0.000	0.000
1175	11.75	11.76	0.01	11.76	2.93	64.51	0.27	0.000	0.000	0.000
1176	11.76	11.77	0.01	11.77	2.93	65.51	0.27	0.000	0.000	0.000
1177	11.77	11.78	0.01	11.78	2.93	65.18	0.27	0.000	0.000	0.000
1178	11.78	11.79	0.01	11.79	2.93	63.43	0.27	0.000	0.000	0.000
1179	11.79	11.80	0.01	11.79	2.92	60.40	0.27	0.000	0.000	0.000
1180	11.80	11.81	0.01	11.80	2.92	58.48	0.27	0.000	0.000	0.000
1181	11.81	11.82	0.01	11.81	2.92	57.60	0.27	0.000	0.000	0.000
1182	11.82	11.83	0.01	11.82	2.92	58.50	0.27	0.000	0.000	0.000
1183	11.83	11.84	0.01	11.84	2.91	60.00	0.26	0.000	0.000	0.000

Total primary settlement: 1.67
Total secondary settlement: 0.14

Total calculated settlement: 1.81

Abbreviations

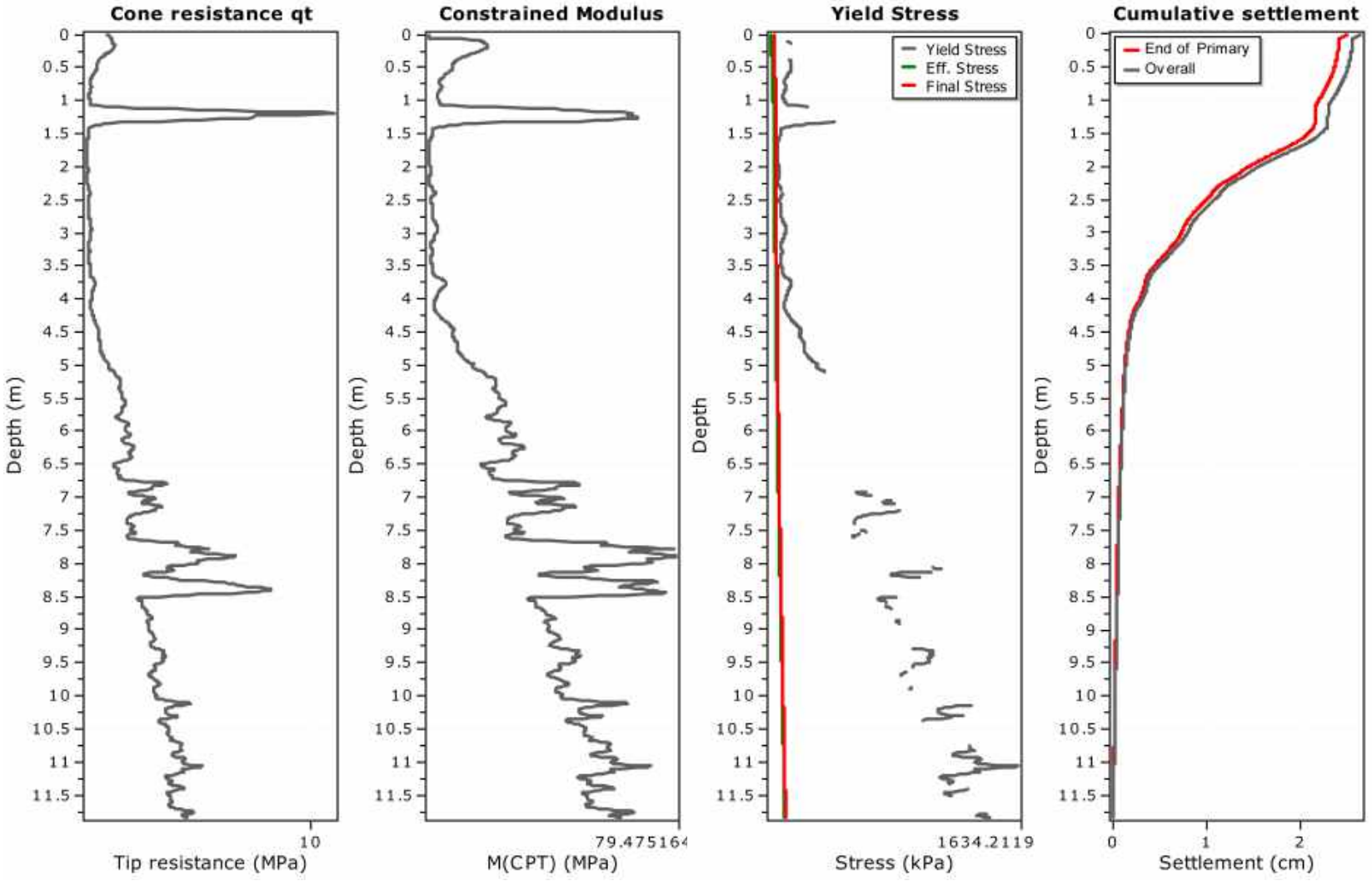
Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

Lander Geotechnical Consultants Limited
Level 3, 3 Osterley Way
P O Box 97 385, Manukau, Auckland 2241
www.landergeotechnical.co.nz

CPT: CPT404
Total depth: 11.84 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1151	11.51	11.52	0.01	11.52	4.48	50.88	0.27	0.000	0.000	0.000
1152	11.52	11.53	0.01	11.53	4.48	50.93	0.27	0.000	0.000	0.000
1153	11.53	11.54	0.01	11.54	4.48	50.76	0.27	0.000	0.000	0.000
1154	11.54	11.55	0.01	11.54	4.47	50.59	0.27	0.000	0.000	0.000
1155	11.55	11.56	0.01	11.55	4.47	50.66	0.27	0.000	0.000	0.000
1156	11.56	11.57	0.01	11.56	4.47	50.72	0.27	0.000	0.000	0.000
1157	11.57	11.58	0.01	11.57	4.46	50.86	0.27	0.000	0.000	0.000
1158	11.58	11.59	0.01	11.59	4.46	51.14	0.27	0.000	0.000	0.000
1159	11.59	11.60	0.01	11.60	4.46	51.63	0.27	0.000	0.000	0.000
1160	11.60	11.61	0.01	11.61	4.45	52.21	0.27	0.000	0.000	0.000
1161	11.61	11.62	0.01	11.62	4.45	52.41	0.27	0.000	0.000	0.000
1162	11.62	11.63	0.01	11.63	4.45	52.03	0.27	0.000	0.000	0.000
1163	11.63	11.64	0.01	11.63	4.44	51.21	0.27	0.000	0.000	0.000
1164	11.64	11.65	0.01	11.64	4.44	50.52	0.27	0.000	0.000	0.000
1165	11.65	11.66	0.01	11.65	4.43	50.19	0.27	0.000	0.000	0.000
1166	11.66	11.67	0.01	11.66	4.43	50.19	0.27	0.000	0.000	0.000
1167	11.67	11.68	0.01	11.68	4.43	50.33	0.27	0.000	0.000	0.000
1168	11.68	11.69	0.01	11.69	4.42	50.84	0.27	0.000	0.000	0.000
1169	11.69	11.70	0.01	11.70	4.42	51.69	0.27	0.000	0.000	0.000
1170	11.70	11.71	0.01	11.71	4.42	52.98	0.27	0.000	0.000	0.000
1171	11.71	11.72	0.01	11.71	4.41	54.44	0.27	0.000	0.000	0.000
1172	11.72	11.73	0.01	11.72	4.41	56.96	0.27	0.000	0.000	0.000
1173	11.73	11.74	0.01	11.73	4.41	59.82	0.27	0.000	0.000	0.000
1174	11.74	11.75	0.01	11.74	4.40	62.61	0.27	0.000	0.000	0.000
1175	11.75	11.76	0.01	11.76	4.40	64.51	0.27	0.000	0.000	0.000
1176	11.76	11.77	0.01	11.77	4.40	65.51	0.27	0.000	0.000	0.000
1177	11.77	11.78	0.01	11.78	4.39	65.18	0.27	0.000	0.000	0.000
1178	11.78	11.79	0.01	11.79	4.39	63.43	0.27	0.000	0.000	0.000
1179	11.79	11.80	0.01	11.79	4.39	60.40	0.27	0.000	0.000	0.000
1180	11.80	11.81	0.01	11.80	4.38	58.48	0.27	0.000	0.000	0.000
1181	11.81	11.82	0.01	11.81	4.38	57.60	0.27	0.000	0.000	0.000
1182	11.82	11.83	0.01	11.82	4.37	58.50	0.27	0.000	0.000	0.000
1183	11.83	11.84	0.01	11.84	4.37	60.00	0.26	0.000	0.000	0.000

Total primary settlement: 2.50
Total secondary settlement: 0.14

Total calculated settlement: 2.64

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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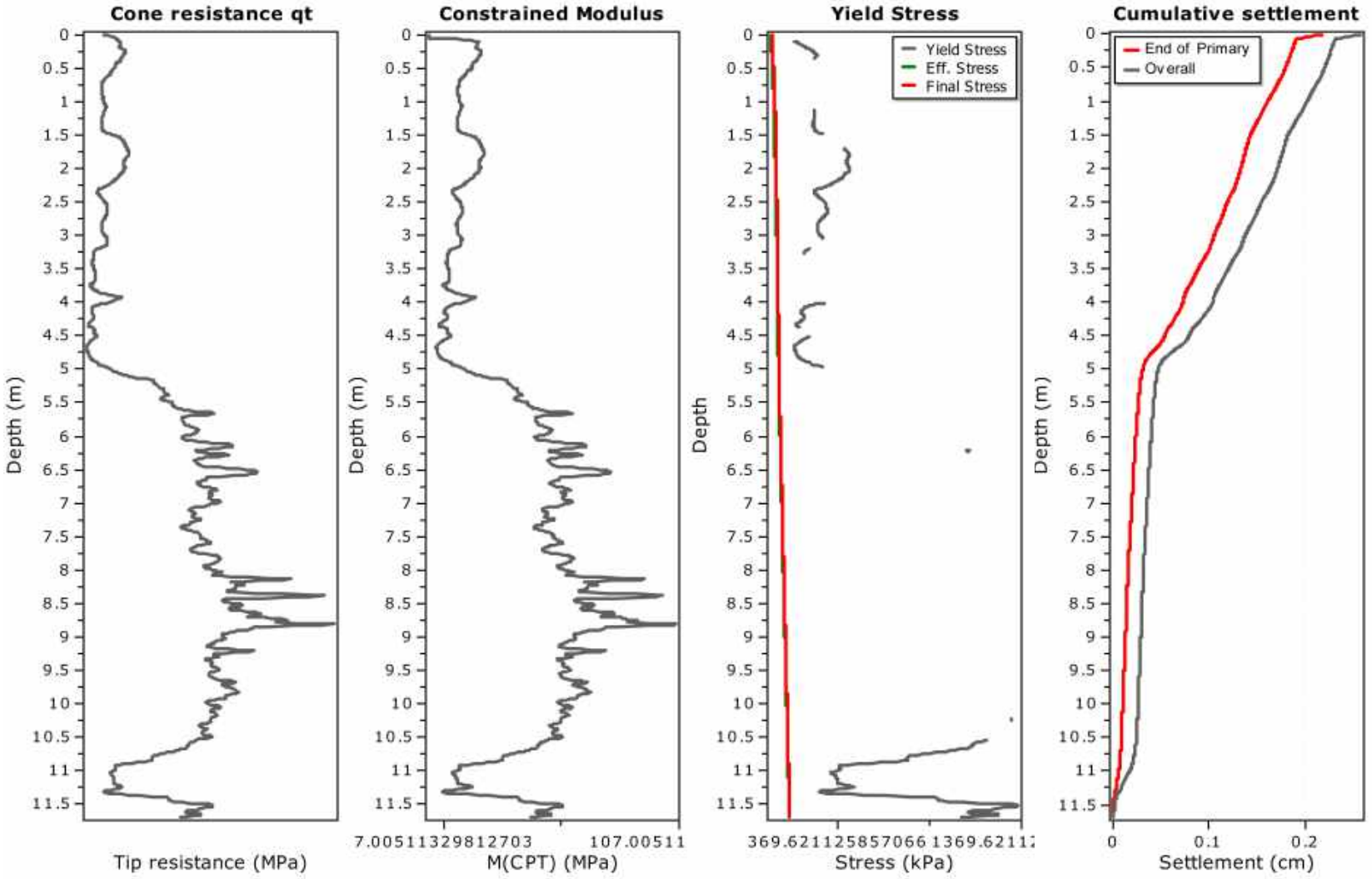
CPT: CPT405
Total depth: 11.69 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1151	11.51	11.52	0.01	11.52	1.49	57.32	0.27	0.000	0.000	0.000
1152	11.52	11.53	0.01	11.53	1.49	57.47	0.27	0.000	0.000	0.000
1153	11.53	11.54	0.01	11.54	1.49	57.15	0.27	0.000	0.000	0.000
1154	11.54	11.55	0.01	11.55	1.49	56.01	0.27	0.000	0.000	0.000
1155	11.55	11.56	0.01	11.56	1.49	54.27	0.27	0.000	0.000	0.000
1156	11.56	11.57	0.01	11.57	1.49	52.45	0.27	0.000	0.000	0.000
1157	11.57	11.58	0.01	11.58	1.49	51.89	0.27	0.000	0.000	0.000
1158	11.58	11.59	0.01	11.59	1.49	50.81	0.27	0.000	0.000	0.000
1159	11.59	11.60	0.01	11.60	1.49	48.82	0.27	0.000	0.000	0.000
1160	11.60	11.61	0.01	11.61	1.48	46.82	0.27	0.000	0.000	0.000
1161	11.61	11.62	0.01	11.62	1.48	45.83	0.27	0.000	0.000	0.000
1162	11.62	11.63	0.01	11.63	1.48	45.82	0.27	0.000	0.000	0.000
1163	11.63	11.64	0.01	11.64	1.48	46.70	0.27	0.000	0.000	0.000
1164	11.64	11.65	0.01	11.65	1.48	49.95	0.27	0.000	0.000	0.000
1165	11.65	11.66	0.01	11.66	1.48	52.66	0.27	0.000	0.000	0.000
1166	11.66	11.67	0.01	11.67	1.48	52.62	0.27	0.000	0.000	0.000
1167	11.67	11.68	0.01	11.68	1.48	50.22	0.27	0.000	0.000	0.000
1168	11.68	11.69	0.01	11.69	1.47	46.17	0.27	0.000	0.000	0.000

Total primary settlement: 0.22
Total secondary settlement: 0.04

Total calculated settlement: 0.26

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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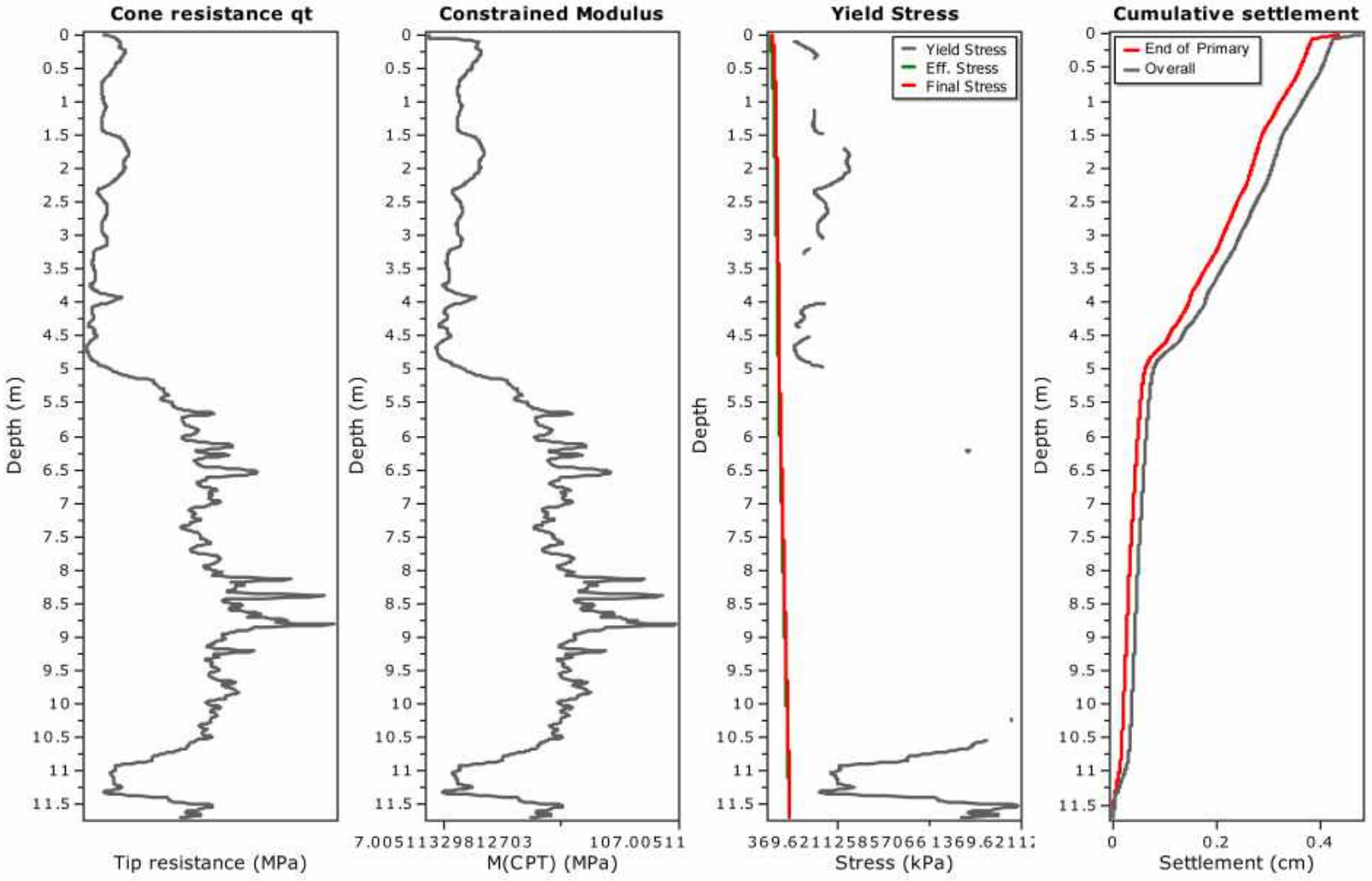
CPT: CPT405
Total depth: 11.69 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1151	11.51	11.52	0.01	11.52	2.99	57.32	0.27	0.000	0.000	0.000
1152	11.52	11.53	0.01	11.53	2.99	57.47	0.27	0.000	0.000	0.000
1153	11.53	11.54	0.01	11.54	2.98	57.15	0.27	0.000	0.000	0.000
1154	11.54	11.55	0.01	11.55	2.98	56.01	0.27	0.000	0.000	0.000
1155	11.55	11.56	0.01	11.56	2.98	54.27	0.27	0.000	0.000	0.000
1156	11.56	11.57	0.01	11.57	2.98	52.45	0.27	0.000	0.000	0.000
1157	11.57	11.58	0.01	11.58	2.98	51.89	0.27	0.000	0.000	0.000
1158	11.58	11.59	0.01	11.59	2.97	50.81	0.27	0.000	0.000	0.000
1159	11.59	11.60	0.01	11.60	2.97	48.82	0.27	0.000	0.000	0.000
1160	11.60	11.61	0.01	11.61	2.97	46.82	0.27	0.000	0.000	0.000
1161	11.61	11.62	0.01	11.62	2.97	45.83	0.27	0.000	0.000	0.000
1162	11.62	11.63	0.01	11.63	2.96	45.82	0.27	0.000	0.000	0.000
1163	11.63	11.64	0.01	11.64	2.96	46.70	0.27	0.000	0.000	0.000
1164	11.64	11.65	0.01	11.65	2.96	49.95	0.27	0.000	0.000	0.000
1165	11.65	11.66	0.01	11.66	2.96	52.66	0.27	0.000	0.000	0.000
1166	11.66	11.67	0.01	11.67	2.95	52.62	0.27	0.000	0.000	0.000
1167	11.67	11.68	0.01	11.68	2.95	50.22	0.27	0.000	0.000	0.000
1168	11.68	11.69	0.01	11.69	2.95	46.17	0.27	0.000	0.000	0.000

Total primary settlement: 0.44
Total secondary settlement: 0.04

Total calculated settlement: 0.48

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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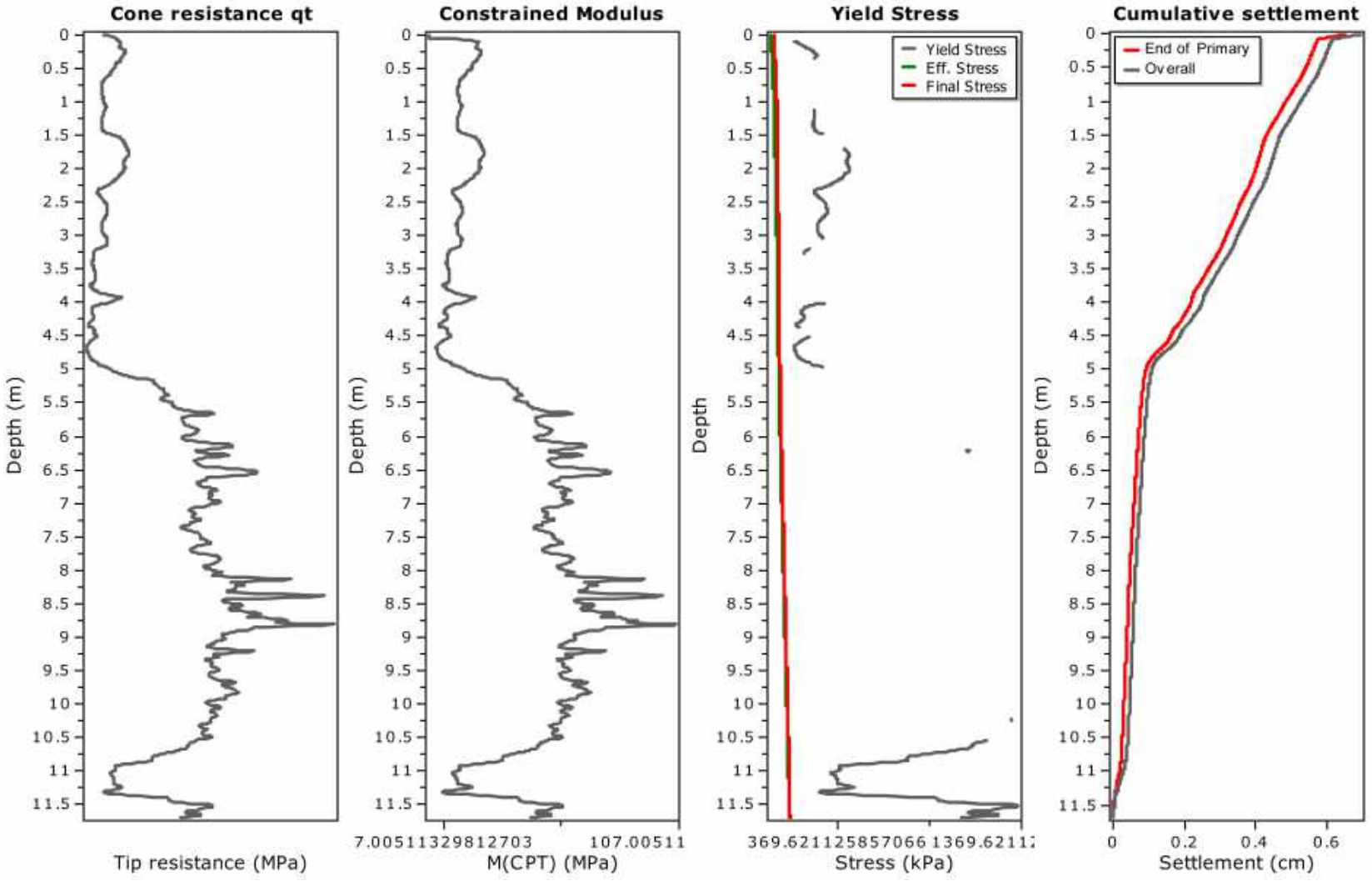
CPT: CPT405
Total depth: 11.69 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1151	11.51	11.52	0.01	11.52	4.48	57.32	0.27	0.000	0.000	0.000
1152	11.52	11.53	0.01	11.53	4.48	57.47	0.27	0.000	0.000	0.000
1153	11.53	11.54	0.01	11.54	4.48	57.15	0.27	0.000	0.000	0.000
1154	11.54	11.55	0.01	11.55	4.47	56.01	0.27	0.000	0.000	0.000
1155	11.55	11.56	0.01	11.56	4.47	54.27	0.27	0.000	0.000	0.000
1156	11.56	11.57	0.01	11.57	4.47	52.45	0.27	0.000	0.000	0.000
1157	11.57	11.58	0.01	11.58	4.46	51.89	0.27	0.000	0.000	0.000
1158	11.58	11.59	0.01	11.59	4.46	50.81	0.27	0.000	0.000	0.000
1159	11.59	11.60	0.01	11.60	4.46	48.82	0.27	0.000	0.000	0.000
1160	11.60	11.61	0.01	11.61	4.45	46.82	0.27	0.000	0.000	0.000
1161	11.61	11.62	0.01	11.62	4.45	45.83	0.27	0.000	0.000	0.000
1162	11.62	11.63	0.01	11.63	4.45	45.82	0.27	0.000	0.000	0.000
1163	11.63	11.64	0.01	11.64	4.44	46.70	0.27	0.000	0.000	0.000
1164	11.64	11.65	0.01	11.65	4.44	49.95	0.27	0.000	0.000	0.000
1165	11.65	11.66	0.01	11.66	4.43	52.66	0.27	0.000	0.000	0.000
1166	11.66	11.67	0.01	11.67	4.43	52.62	0.27	0.000	0.000	0.000
1167	11.67	11.68	0.01	11.68	4.43	50.22	0.27	0.000	0.000	0.000
1168	11.68	11.69	0.01	11.69	4.42	46.17	0.27	0.000	0.000	0.000

Total primary settlement: 0.65
Total secondary settlement: 0.04

Total calculated settlement: 0.69

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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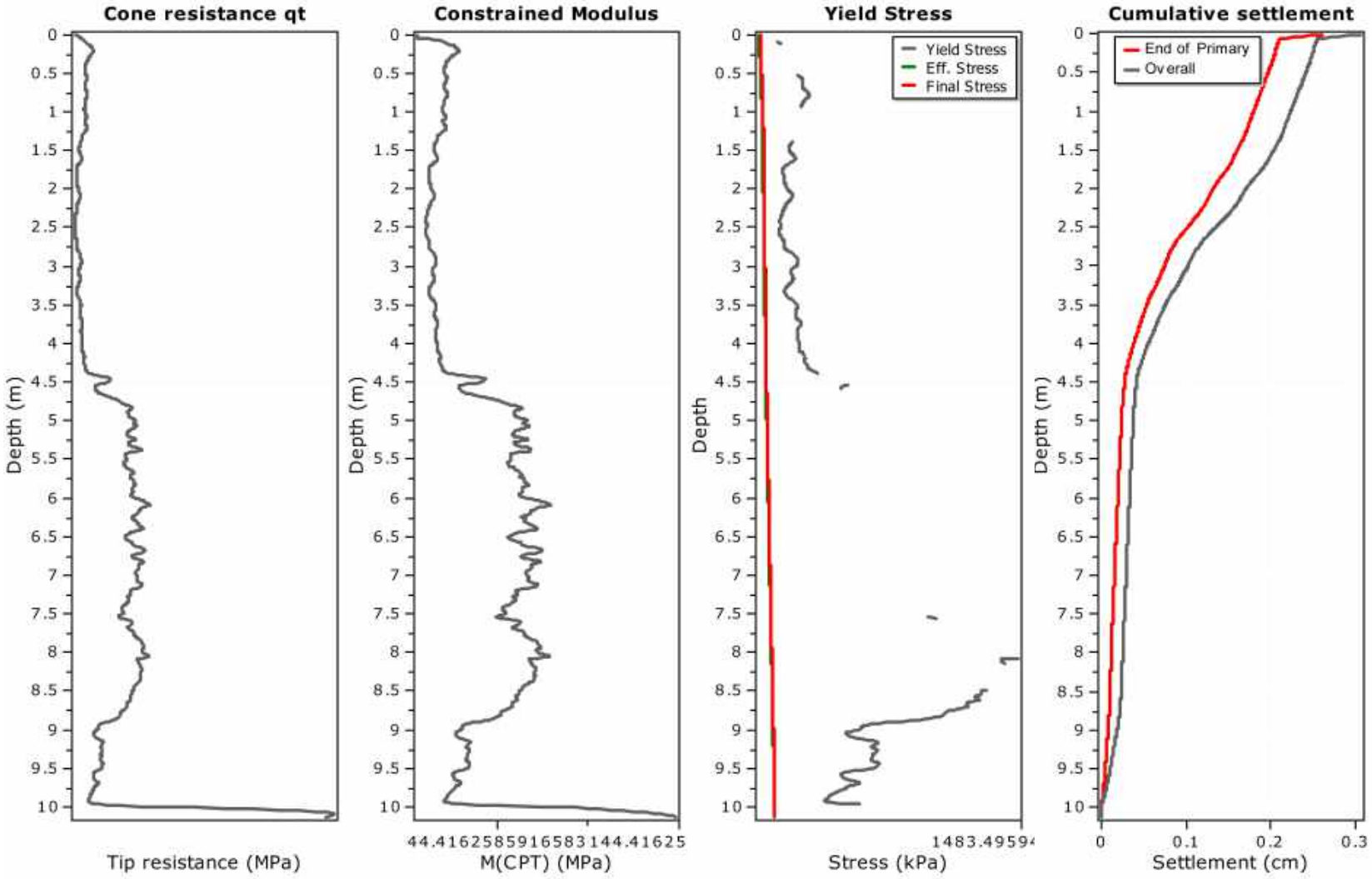
CPT: CPT406
Total depth: 10.13 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)

Total primary settlement: 0.26
Total secondary settlement: 0.04

Total calculated settlement: 0.31

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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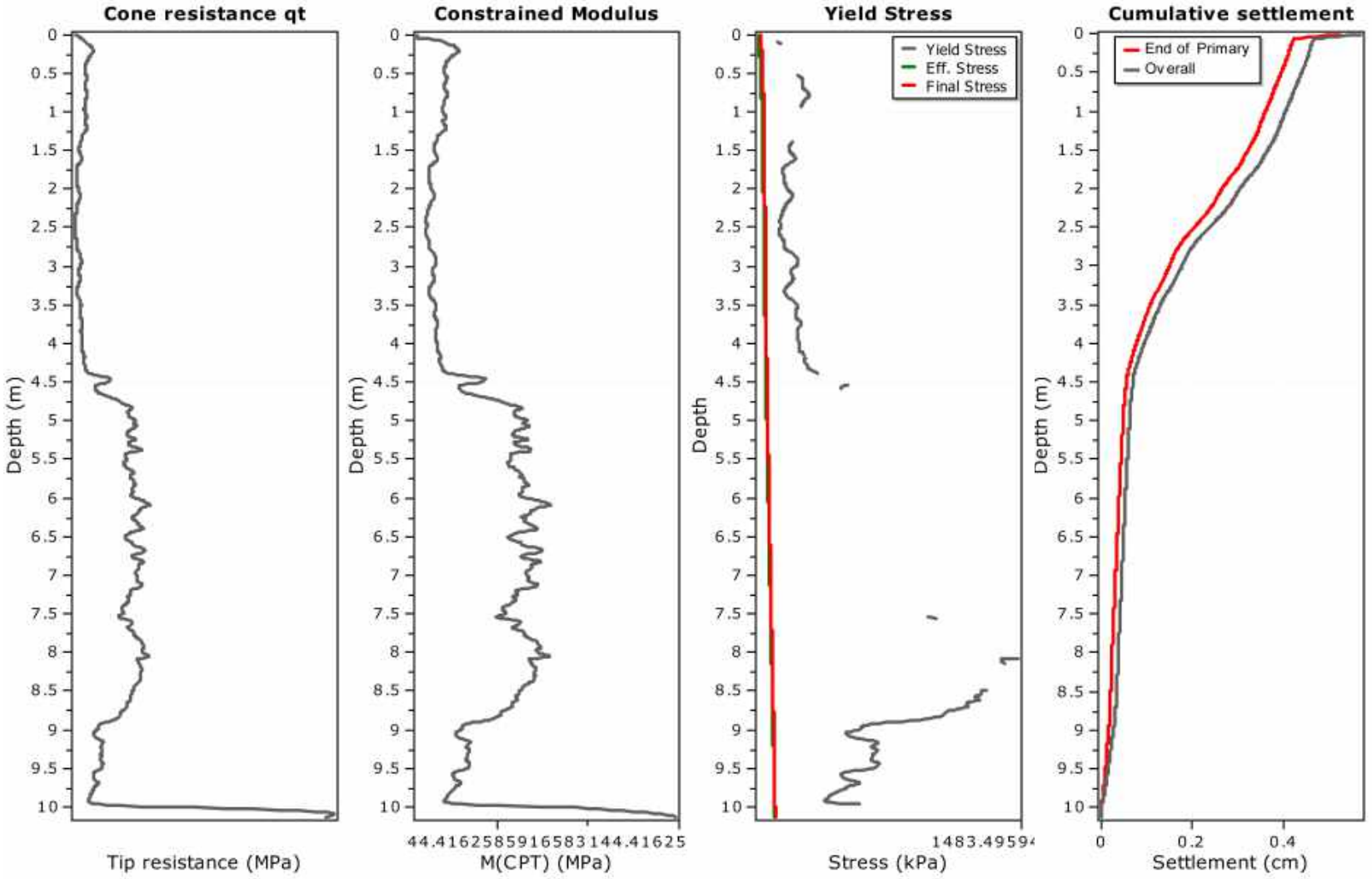
CPT: CPT406
Total depth: 10.13 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)

Total primary settlement: 0.52
Total secondary settlement: 0.04

Total calculated settlement: 0.57

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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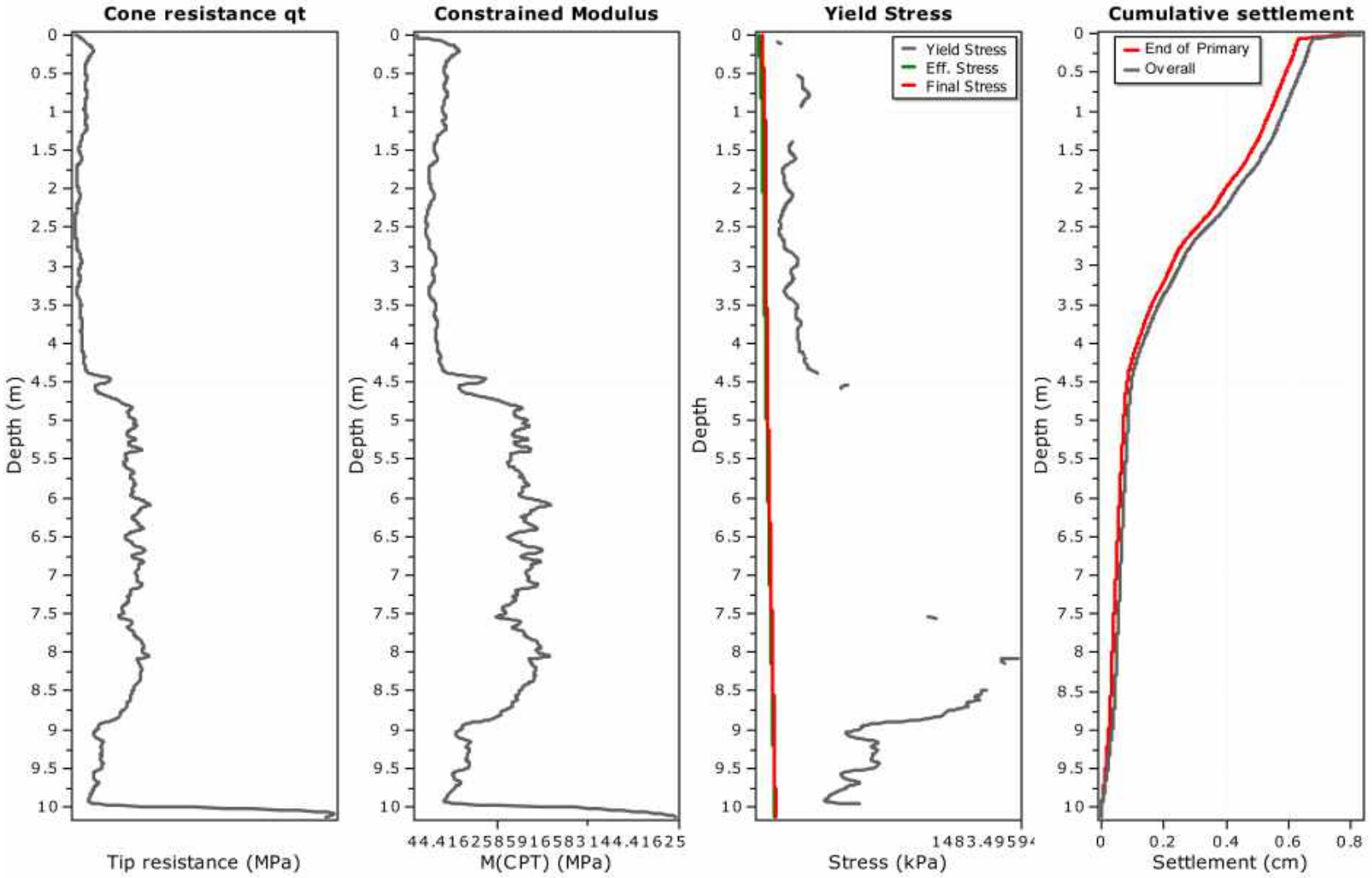
CPT: CPT406
Total depth: 10.13 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)

Total primary settlement: 0.79
Total secondary settlement: 0.04

Total calculated settlement: 0.83

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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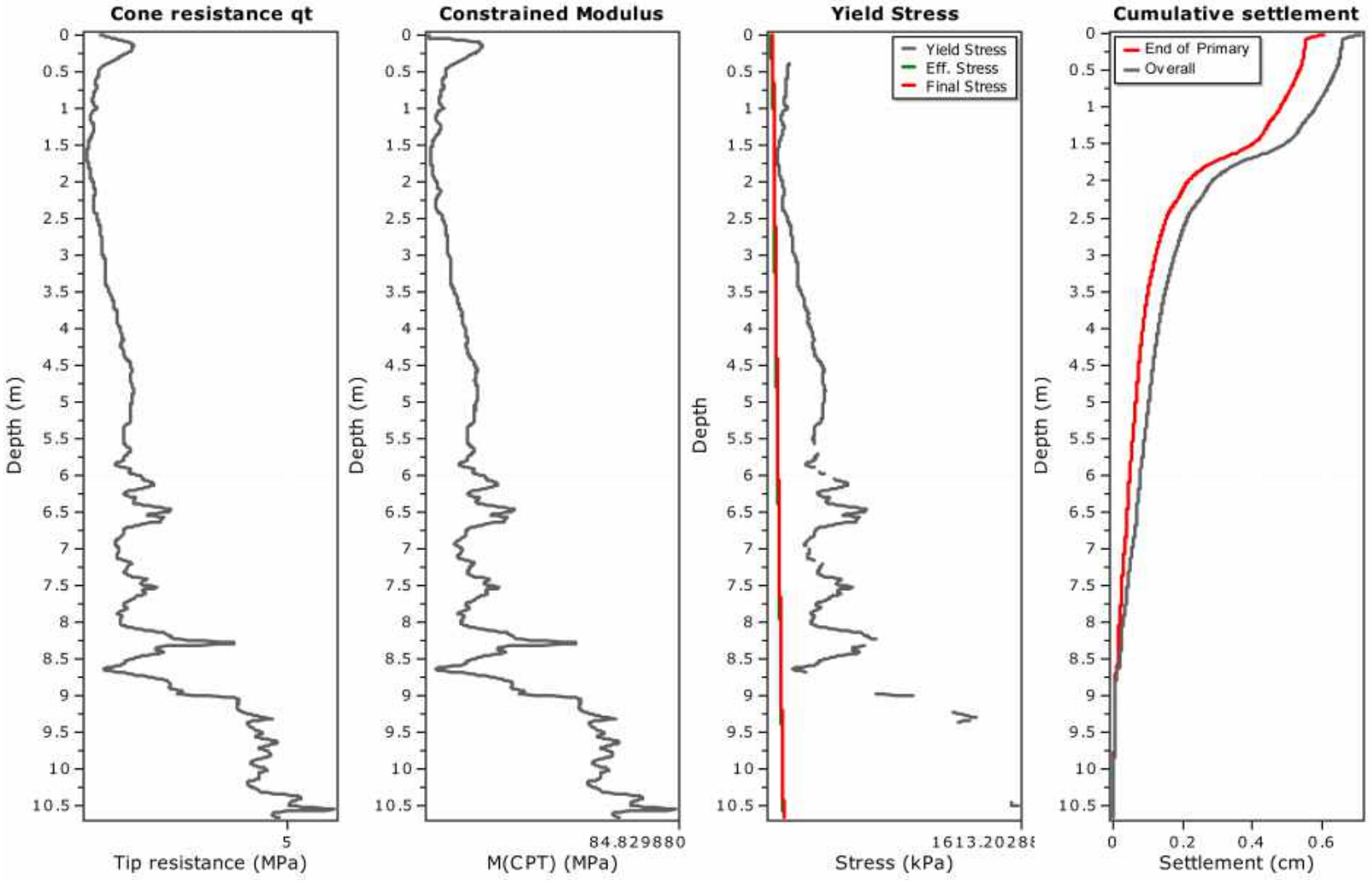
CPT: CPT407
Total depth: 10.66 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1059	10.59	10.60	0.01	10.60	1.61	64.70	0.29	0.000	0.000	0.000
1060	10.60	10.61	0.01	10.61	1.61	63.02	0.29	0.000	0.000	0.000
1061	10.61	10.62	0.01	10.62	1.61	62.54	0.29	0.000	0.000	0.000
1062	10.62	10.63	0.01	10.63	1.61	62.52	0.29	0.000	0.000	0.000
1063	10.63	10.64	0.01	10.64	1.61	62.73	0.29	0.000	0.000	0.000
1064	10.64	10.65	0.01	10.65	1.60	63.13	0.29	0.000	0.000	0.000
1065	10.65	10.66	0.01	10.66	1.60	63.97	0.29	0.000	0.000	0.000

Total primary settlement: 0.61
Total secondary settlement: 0.11

Total calculated settlement: 0.71

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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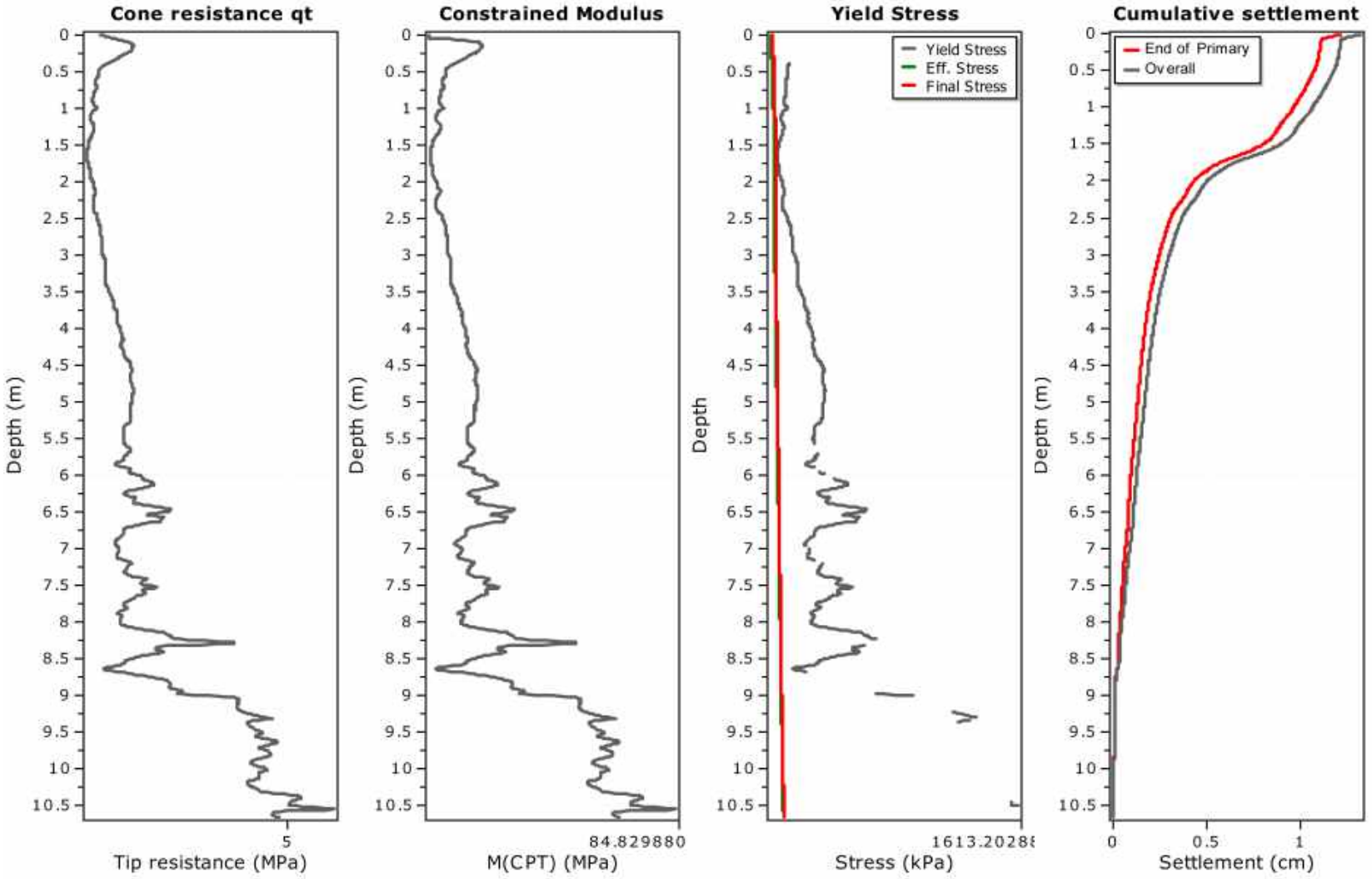
CPT: CPT407
Total depth: 10.66 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1059	10.59	10.60	0.01	10.60	3.22	64.70	0.29	0.000	0.000	0.000
1060	10.60	10.61	0.01	10.61	3.22	63.02	0.29	0.000	0.000	0.000
1061	10.61	10.62	0.01	10.62	3.22	62.54	0.29	0.000	0.000	0.000
1062	10.62	10.63	0.01	10.63	3.21	62.52	0.29	0.000	0.000	0.000
1063	10.63	10.64	0.01	10.64	3.21	62.73	0.29	0.000	0.000	0.000
1064	10.64	10.65	0.01	10.65	3.21	63.13	0.29	0.000	0.000	0.000
1065	10.65	10.66	0.01	10.66	3.21	63.97	0.29	0.000	0.000	0.000

Total primary settlement: 1.21
Total secondary settlement: 0.11

Total calculated settlement: 1.32

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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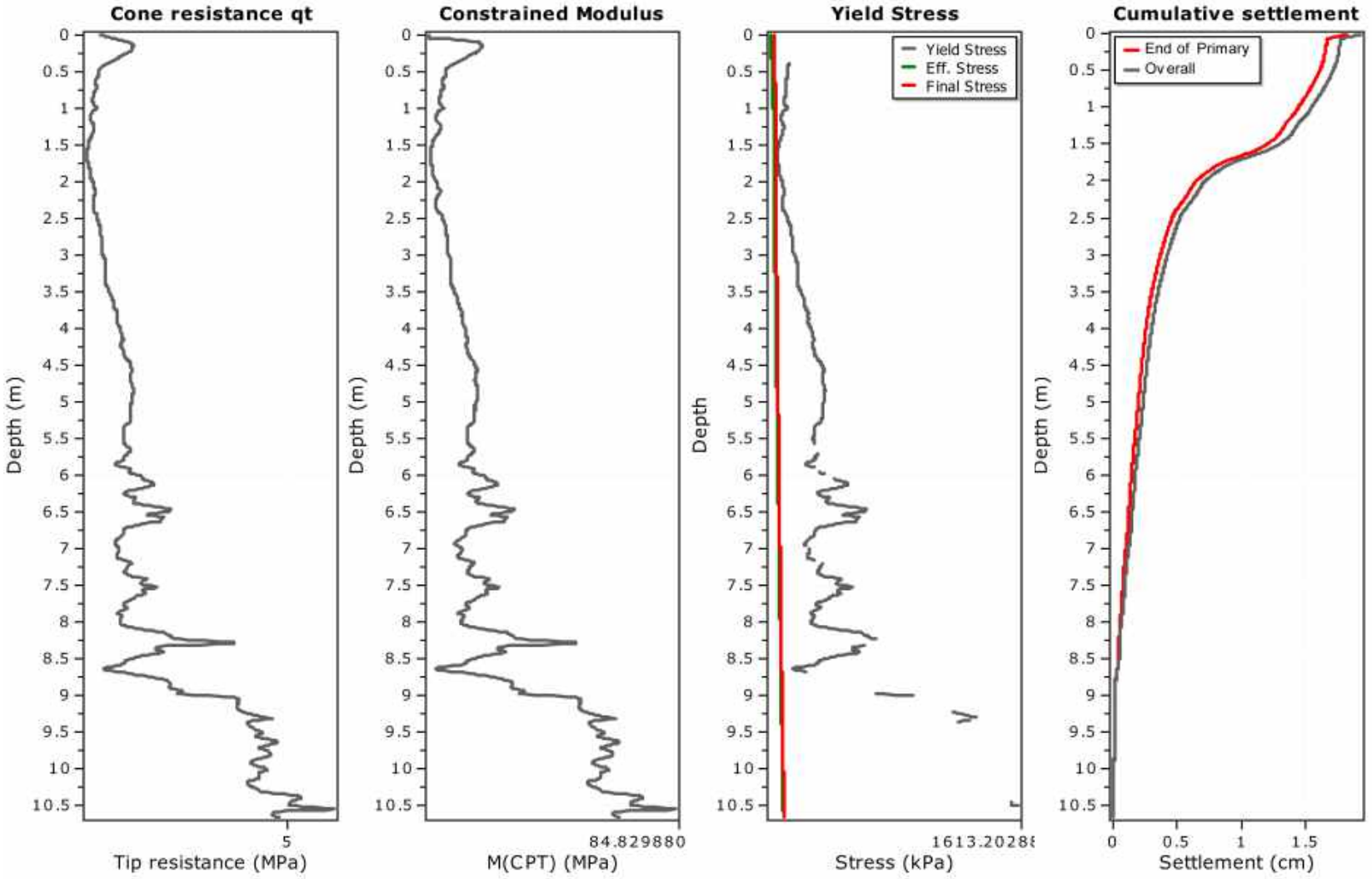
CPT: CPT407
Total depth: 10.66 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1059	10.59	10.60	0.01	10.60	4.83	64.70	0.29	0.000	0.000	0.000
1060	10.60	10.61	0.01	10.61	4.83	63.02	0.29	0.000	0.000	0.000
1061	10.61	10.62	0.01	10.62	4.83	62.54	0.29	0.000	0.000	0.000
1062	10.62	10.63	0.01	10.63	4.82	62.52	0.29	0.000	0.000	0.000
1063	10.63	10.64	0.01	10.64	4.82	62.73	0.29	0.000	0.000	0.000
1064	10.64	10.65	0.01	10.65	4.81	63.13	0.29	0.000	0.000	0.000
1065	10.65	10.66	0.01	10.66	4.81	63.97	0.29	0.000	0.000	0.000

Total primary settlement: 1.82
Total secondary settlement: 0.11

Total calculated settlement: 1.92

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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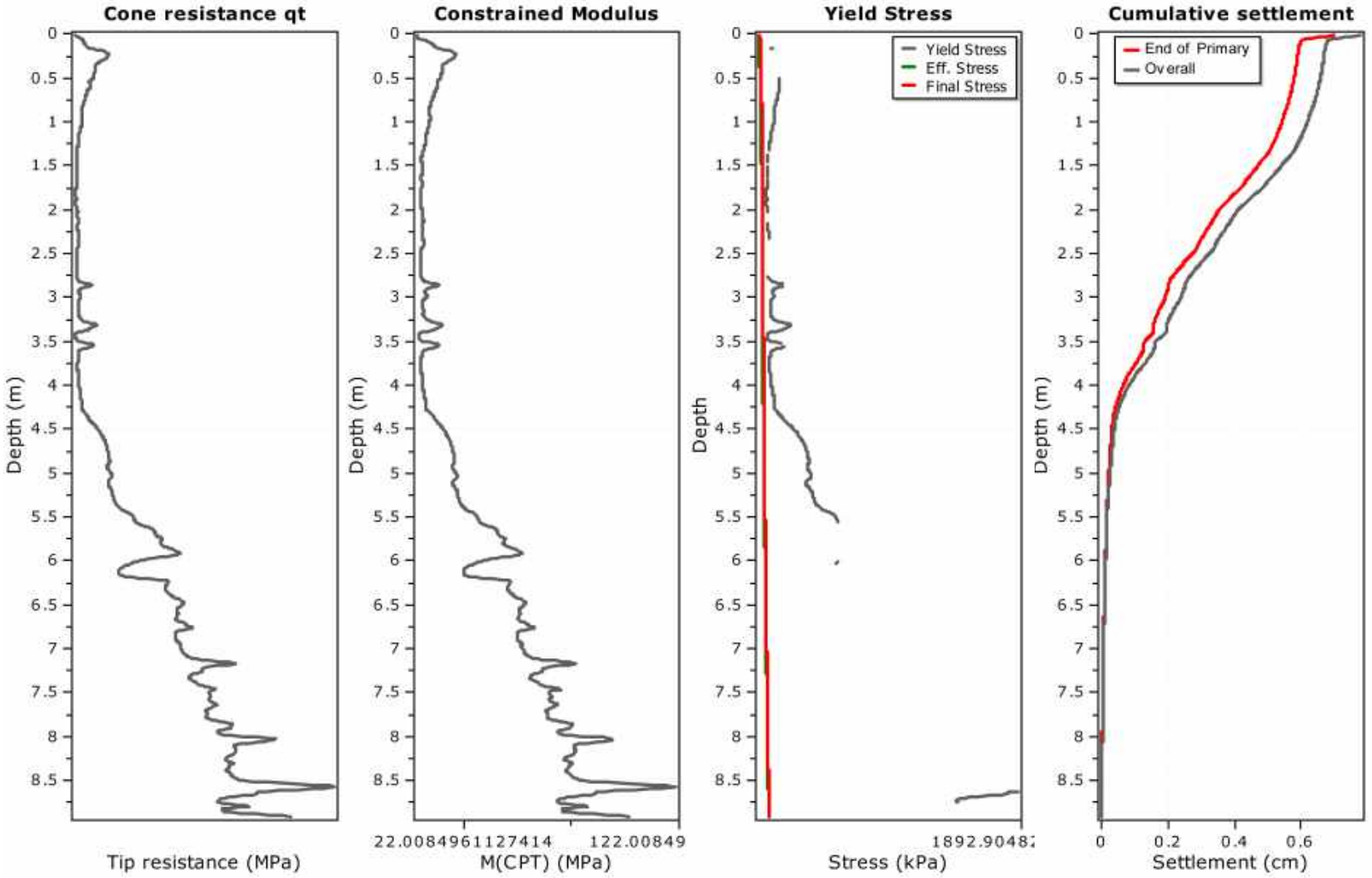
CPT: CPT408
Total depth: 8.92 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
875	8.75	8.76	0.01	8.76	1.89	65.67	0.34	0.000	0.000	0.000
876	8.76	8.77	0.01	8.77	1.88	67.20	0.34	0.000	0.000	0.000
877	8.77	8.78	0.01	8.78	1.88	69.64	0.34	0.000	0.000	0.000
878	8.78	8.79	0.01	8.79	1.88	73.94	0.34	0.000	0.000	0.000
879	8.79	8.80	0.01	8.79	1.88	77.78	0.34	0.000	0.000	0.000
880	8.80	8.81	0.01	8.80	1.88	79.07	0.34	0.000	0.000	0.000
881	8.81	8.82	0.01	8.81	1.88	75.28	0.34	0.000	0.000	0.000
882	8.82	8.83	0.01	8.82	1.87	70.60	0.34	0.000	0.000	0.000
883	8.83	8.84	0.01	8.84	1.87	67.47	0.34	0.000	0.000	0.000
884	8.84	8.85	0.01	8.85	1.87	67.33	0.34	0.000	0.000	0.000
885	8.85	8.86	0.01	8.86	1.87	67.55	0.34	0.000	0.000	0.000
886	8.86	8.87	0.01	8.87	1.87	68.09	0.34	0.000	0.000	0.000
887	8.87	8.88	0.01	8.88	1.87	71.00	0.34	0.000	0.000	0.000
888	8.88	8.89	0.01	8.88	1.86	75.89	0.34	0.000	0.000	0.000
889	8.89	8.90	0.01	8.89	1.86	82.64	0.34	0.000	0.000	0.000
890	8.90	8.91	0.01	8.90	1.86	88.69	0.34	0.000	0.000	0.000
891	8.91	8.92	0.01	8.91	1.86	94.72	0.34	0.000	0.000	0.000

Total primary settlement: 0.70
Total secondary settlement: 0.08

Total calculated settlement: 0.78

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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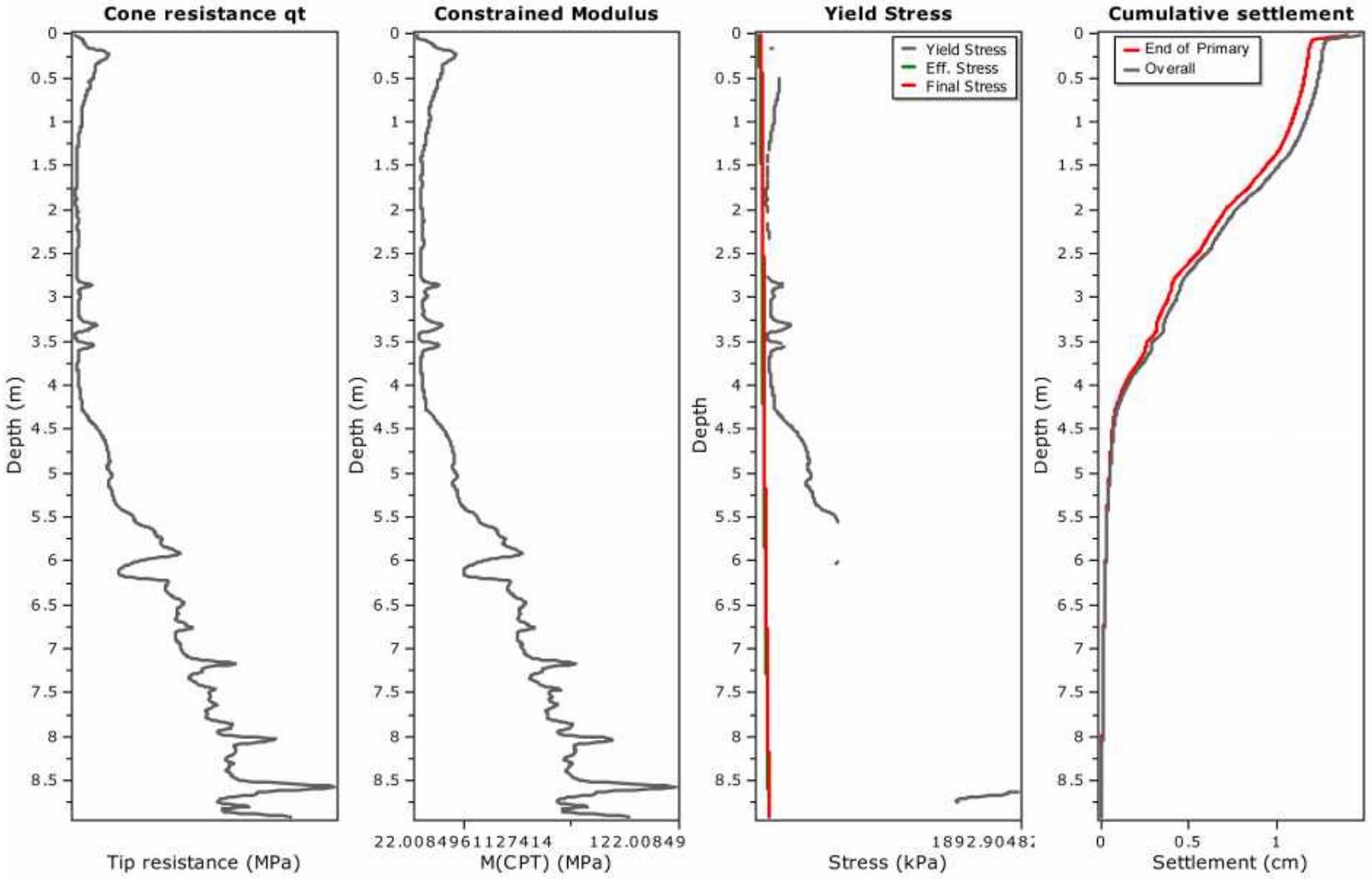
CPT: CPT408
Total depth: 8.92 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
875	8.75	8.76	0.01	8.76	3.77	65.67	0.34	0.000	0.000	0.000
876	8.76	8.77	0.01	8.77	3.77	67.20	0.34	0.000	0.000	0.000
877	8.77	8.78	0.01	8.78	3.77	69.64	0.34	0.000	0.000	0.000
878	8.78	8.79	0.01	8.79	3.76	73.94	0.34	0.000	0.000	0.000
879	8.79	8.80	0.01	8.79	3.76	77.78	0.34	0.000	0.000	0.000
880	8.80	8.81	0.01	8.80	3.76	79.07	0.34	0.000	0.000	0.000
881	8.81	8.82	0.01	8.81	3.75	75.28	0.34	0.000	0.000	0.000
882	8.82	8.83	0.01	8.82	3.75	70.60	0.34	0.000	0.000	0.000
883	8.83	8.84	0.01	8.84	3.75	67.47	0.34	0.000	0.000	0.000
884	8.84	8.85	0.01	8.85	3.74	67.33	0.34	0.000	0.000	0.000
885	8.85	8.86	0.01	8.86	3.74	67.55	0.34	0.000	0.000	0.000
886	8.86	8.87	0.01	8.87	3.74	68.09	0.34	0.000	0.000	0.000
887	8.87	8.88	0.01	8.88	3.73	71.00	0.34	0.000	0.000	0.000
888	8.88	8.89	0.01	8.88	3.73	75.89	0.34	0.000	0.000	0.000
889	8.89	8.90	0.01	8.89	3.73	82.64	0.34	0.000	0.000	0.000
890	8.90	8.91	0.01	8.90	3.72	88.69	0.34	0.000	0.000	0.000
891	8.91	8.92	0.01	8.91	3.72	94.72	0.34	0.000	0.000	0.000

Total primary settlement: 1.40
Total secondary settlement: 0.08

Total calculated settlement: 1.48

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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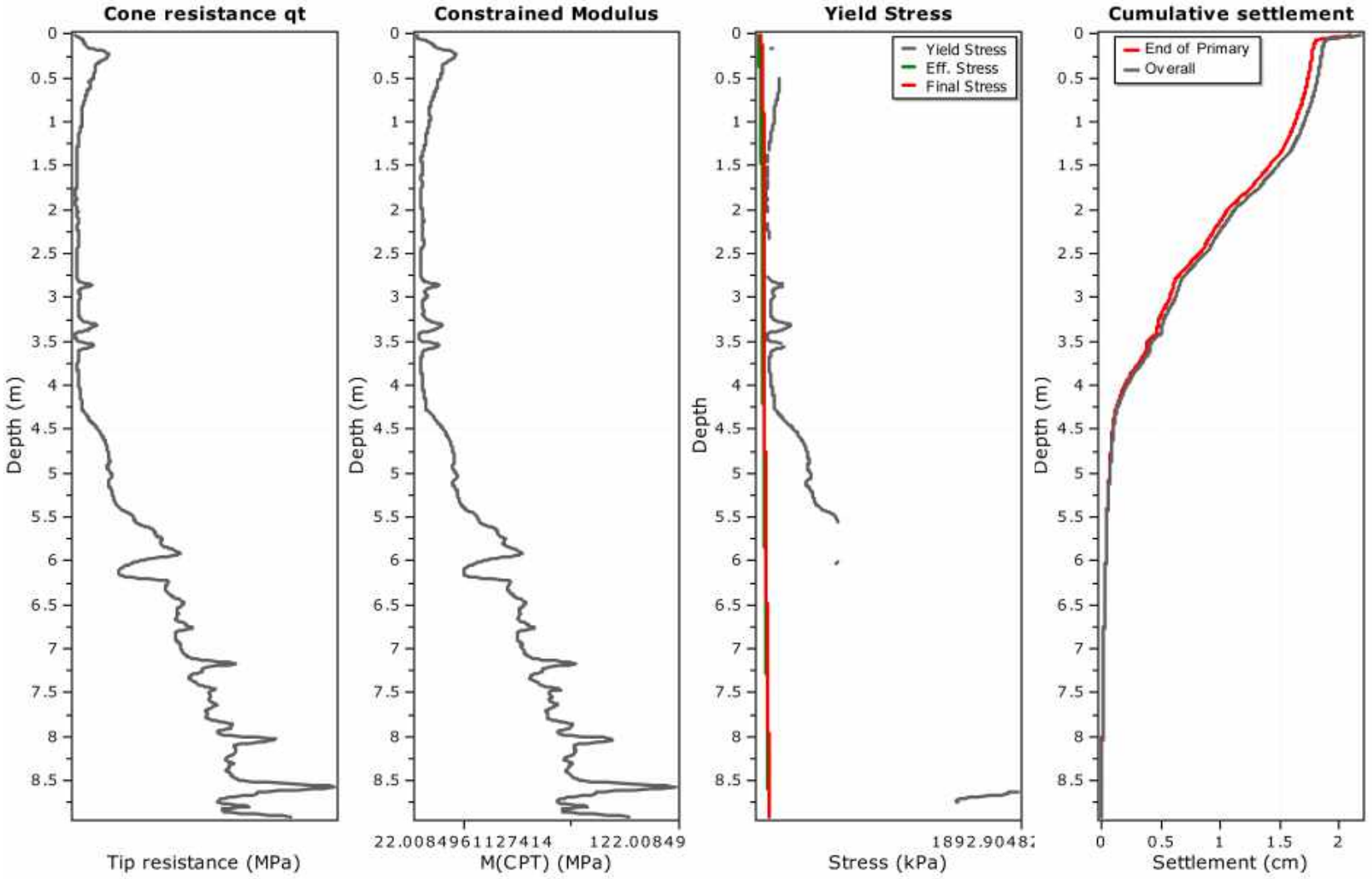
CPT: CPT408
Total depth: 8.92 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
875	8.75	8.76	0.01	8.76	5.66	65.67	0.34	0.000	0.000	0.000
876	8.76	8.77	0.01	8.77	5.65	67.20	0.34	0.000	0.000	0.000
877	8.77	8.78	0.01	8.78	5.65	69.64	0.34	0.000	0.000	0.000
878	8.78	8.79	0.01	8.79	5.64	73.94	0.34	0.000	0.000	0.000
879	8.79	8.80	0.01	8.79	5.64	77.78	0.34	0.000	0.000	0.000
880	8.80	8.81	0.01	8.80	5.63	79.07	0.34	0.000	0.000	0.000
881	8.81	8.82	0.01	8.81	5.63	75.28	0.34	0.000	0.000	0.000
882	8.82	8.83	0.01	8.82	5.62	70.60	0.34	0.000	0.000	0.000
883	8.83	8.84	0.01	8.84	5.62	67.47	0.34	0.000	0.000	0.000
884	8.84	8.85	0.01	8.85	5.61	67.33	0.34	0.000	0.000	0.000
885	8.85	8.86	0.01	8.86	5.61	67.55	0.34	0.000	0.000	0.000
886	8.86	8.87	0.01	8.87	5.60	68.09	0.34	0.000	0.000	0.000
887	8.87	8.88	0.01	8.88	5.60	71.00	0.34	0.000	0.000	0.000
888	8.88	8.89	0.01	8.88	5.59	75.89	0.34	0.000	0.000	0.000
889	8.89	8.90	0.01	8.89	5.59	82.64	0.34	0.000	0.000	0.000
890	8.90	8.91	0.01	8.90	5.58	88.69	0.34	0.000	0.000	0.000
891	8.91	8.92	0.01	8.91	5.58	94.72	0.34	0.000	0.000	0.000

Total primary settlement: 2.10
Total secondary settlement: 0.08

Total calculated settlement: 2.18

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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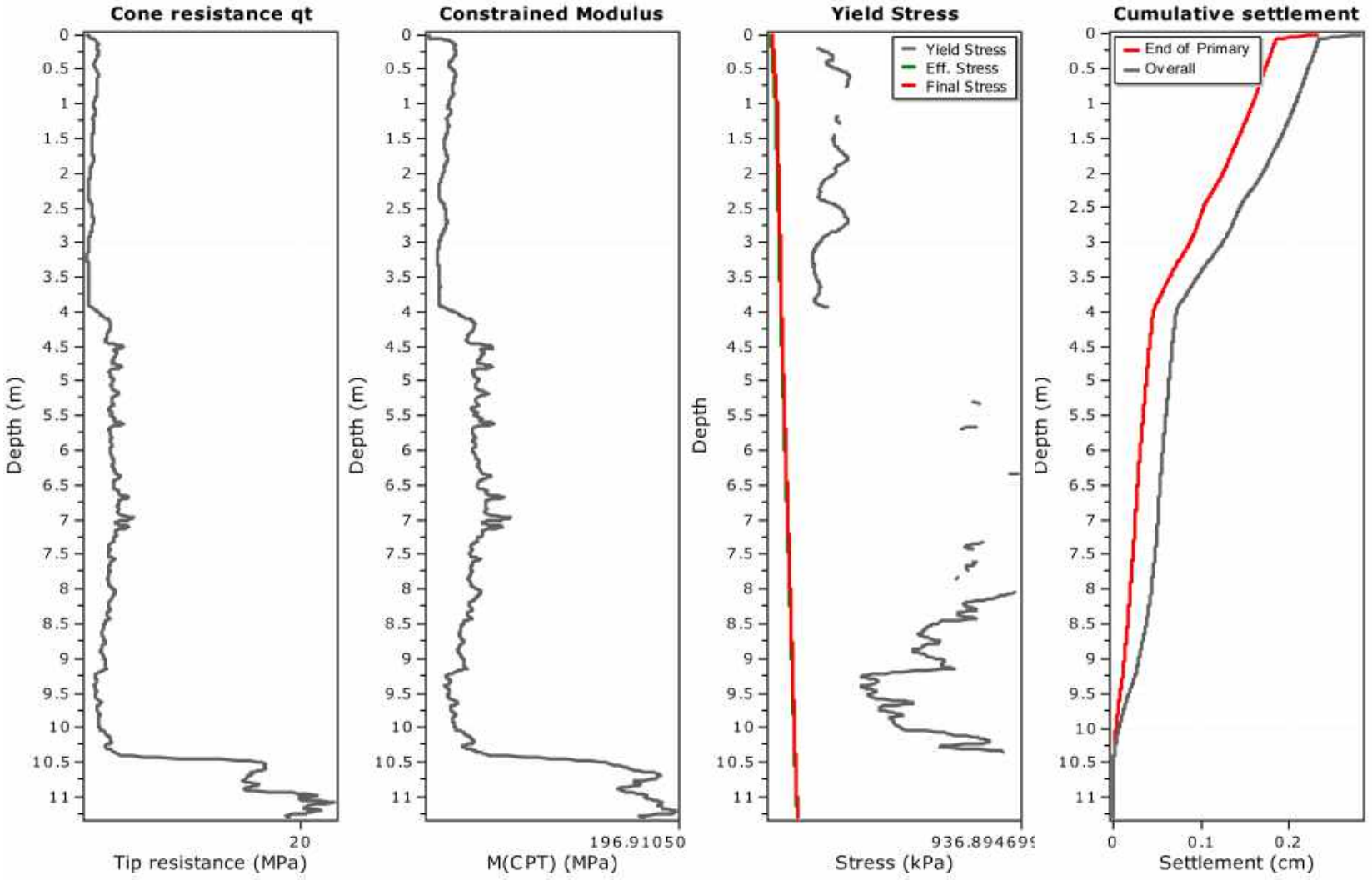
CPT: CPT409
Total depth: 11.29 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1105	11.05	11.06	0.01	11.06	1.55	178.23	0.28	0.000	0.000	0.000
1106	11.06	11.07	0.01	11.07	1.55	180.47	0.28	0.000	0.000	0.000
1107	11.07	11.08	0.01	11.08	1.55	182.39	0.28	0.000	0.000	0.000
1108	11.08	11.09	0.01	11.09	1.55	183.24	0.28	0.000	0.000	0.000
1109	11.09	11.10	0.01	11.10	1.55	181.87	0.28	0.000	0.000	0.000
1110	11.10	11.11	0.01	11.11	1.55	180.76	0.28	0.000	0.000	0.000
1111	11.11	11.12	0.01	11.12	1.54	180.40	0.28	0.000	0.000	0.000
1112	11.12	11.13	0.01	11.13	1.54	181.88	0.28	0.000	0.000	0.000
1113	11.13	11.14	0.01	11.14	1.54	182.78	0.28	0.000	0.000	0.000
1114	11.14	11.15	0.01	11.15	1.54	183.60	0.28	0.000	0.000	0.000
1115	11.15	11.16	0.01	11.16	1.54	183.46	0.28	0.000	0.000	0.000
1116	11.16	11.17	0.01	11.17	1.54	184.00	0.28	0.000	0.000	0.000
1117	11.17	11.18	0.01	11.18	1.54	185.23	0.28	0.000	0.000	0.000
1118	11.18	11.19	0.01	11.19	1.54	188.07	0.28	0.000	0.000	0.000
1119	11.19	11.20	0.01	11.20	1.53	191.79	0.28	0.000	0.000	0.000
1120	11.20	11.21	0.01	11.21	1.53	194.14	0.28	0.000	0.000	0.000
1121	11.21	11.22	0.01	11.22	1.53	194.29	0.28	0.000	0.000	0.000
1122	11.22	11.23	0.01	11.23	1.53	192.66	0.28	0.000	0.000	0.000
1123	11.23	11.24	0.01	11.24	1.53	191.25	0.28	0.000	0.000	0.000
1124	11.24	11.25	0.01	11.25	1.53	187.58	0.28	0.000	0.000	0.000
1125	11.25	11.26	0.01	11.26	1.53	180.05	0.28	0.000	0.000	0.000
1126	11.26	11.27	0.01	11.27	1.53	172.24	0.28	0.000	0.000	0.000
1127	11.27	11.28	0.01	11.28	1.52	165.92	0.28	0.000	0.000	0.000
1128	11.28	11.29	0.01	11.29	1.52	167.16	0.28	0.000	0.000	0.000

Total primary settlement: 0.23
Total secondary settlement: 0.05

Total calculated settlement: 0.28

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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Level 3, 3 Osterley Way
P O Box 97 385, Manukau, Auckland 2241
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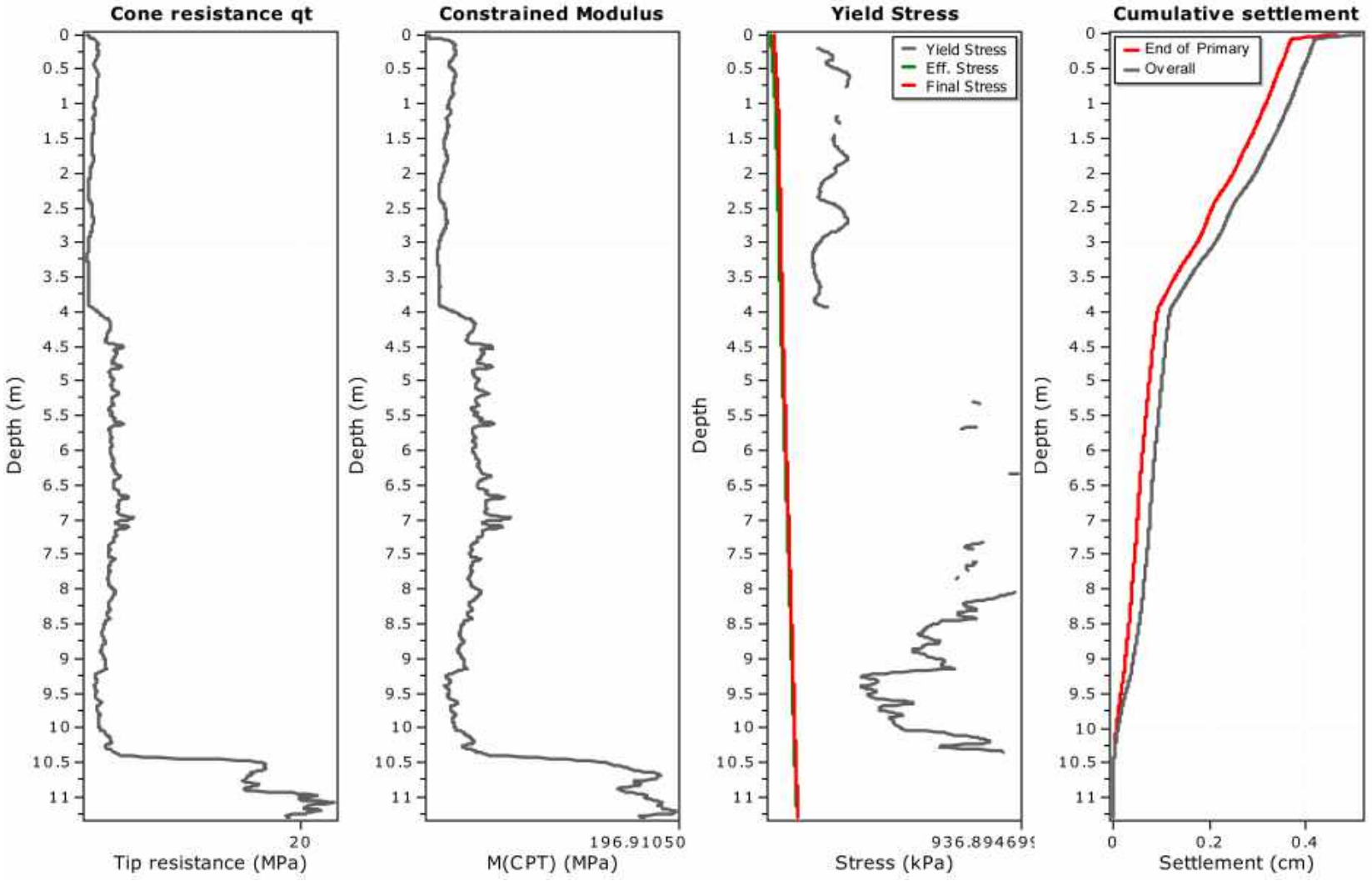
CPT: CPT409
Total depth: 11.29 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1105	11.05	11.06	0.01	11.06	3.10	178.23	0.28	0.000	0.000	0.000
1106	11.06	11.07	0.01	11.07	3.10	180.47	0.28	0.000	0.000	0.000
1107	11.07	11.08	0.01	11.08	3.10	182.39	0.28	0.000	0.000	0.000
1108	11.08	11.09	0.01	11.09	3.10	183.24	0.28	0.000	0.000	0.000
1109	11.09	11.10	0.01	11.10	3.09	181.87	0.28	0.000	0.000	0.000
1110	11.10	11.11	0.01	11.11	3.09	180.76	0.28	0.000	0.000	0.000
1111	11.11	11.12	0.01	11.12	3.09	180.40	0.28	0.000	0.000	0.000
1112	11.12	11.13	0.01	11.13	3.09	181.88	0.28	0.000	0.000	0.000
1113	11.13	11.14	0.01	11.14	3.08	182.78	0.28	0.000	0.000	0.000
1114	11.14	11.15	0.01	11.15	3.08	183.60	0.28	0.000	0.000	0.000
1115	11.15	11.16	0.01	11.16	3.08	183.46	0.28	0.000	0.000	0.000
1116	11.16	11.17	0.01	11.17	3.08	184.00	0.28	0.000	0.000	0.000
1117	11.17	11.18	0.01	11.18	3.07	185.23	0.28	0.000	0.000	0.000
1118	11.18	11.19	0.01	11.19	3.07	188.07	0.28	0.000	0.000	0.000
1119	11.19	11.20	0.01	11.20	3.07	191.79	0.28	0.000	0.000	0.000
1120	11.20	11.21	0.01	11.21	3.07	194.14	0.28	0.000	0.000	0.000
1121	11.21	11.22	0.01	11.22	3.06	194.29	0.28	0.000	0.000	0.000
1122	11.22	11.23	0.01	11.23	3.06	192.66	0.28	0.000	0.000	0.000
1123	11.23	11.24	0.01	11.24	3.06	191.25	0.28	0.000	0.000	0.000
1124	11.24	11.25	0.01	11.25	3.06	187.58	0.28	0.000	0.000	0.000
1125	11.25	11.26	0.01	11.26	3.05	180.05	0.28	0.000	0.000	0.000
1126	11.26	11.27	0.01	11.27	3.05	172.24	0.28	0.000	0.000	0.000
1127	11.27	11.28	0.01	11.28	3.05	165.92	0.28	0.000	0.000	0.000
1128	11.28	11.29	0.01	11.29	3.05	167.16	0.28	0.000	0.000	0.000

Total primary settlement: 0.46
Total secondary settlement: 0.05

Total calculated settlement: 0.51

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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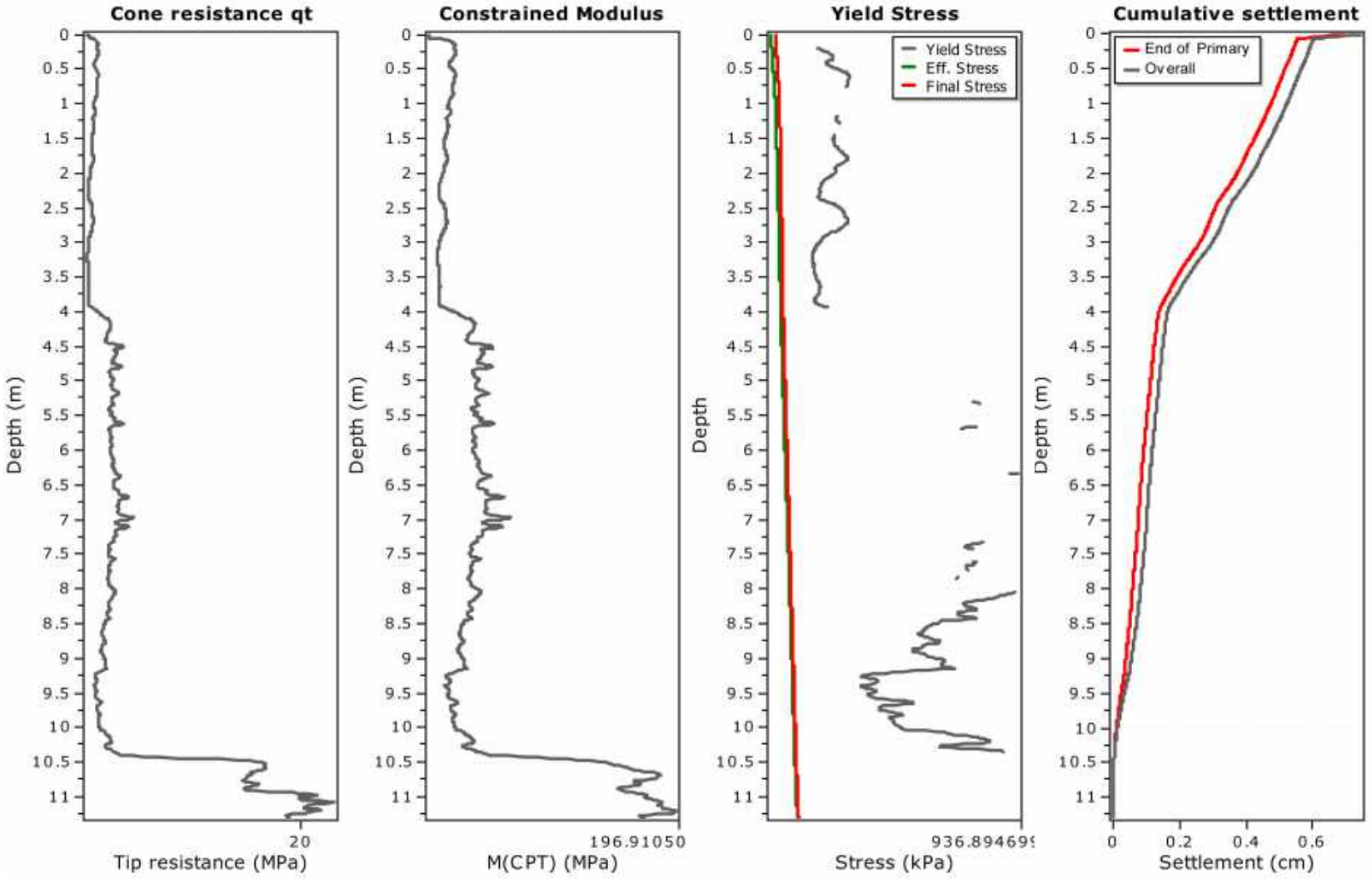
CPT: CPT409
Total depth: 11.29 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1105	11.05	11.06	0.01	11.06	4.65	178.23	0.28	0.000	0.000	0.000
1106	11.06	11.07	0.01	11.07	4.65	180.47	0.28	0.000	0.000	0.000
1107	11.07	11.08	0.01	11.08	4.65	182.39	0.28	0.000	0.000	0.000
1108	11.08	11.09	0.01	11.09	4.64	183.24	0.28	0.000	0.000	0.000
1109	11.09	11.10	0.01	11.10	4.64	181.87	0.28	0.000	0.000	0.000
1110	11.10	11.11	0.01	11.11	4.64	180.76	0.28	0.000	0.000	0.000
1111	11.11	11.12	0.01	11.12	4.63	180.40	0.28	0.000	0.000	0.000
1112	11.12	11.13	0.01	11.13	4.63	181.88	0.28	0.000	0.000	0.000
1113	11.13	11.14	0.01	11.14	4.62	182.78	0.28	0.000	0.000	0.000
1114	11.14	11.15	0.01	11.15	4.62	183.60	0.28	0.000	0.000	0.000
1115	11.15	11.16	0.01	11.16	4.62	183.46	0.28	0.000	0.000	0.000
1116	11.16	11.17	0.01	11.17	4.61	184.00	0.28	0.000	0.000	0.000
1117	11.17	11.18	0.01	11.18	4.61	185.23	0.28	0.000	0.000	0.000
1118	11.18	11.19	0.01	11.19	4.61	188.07	0.28	0.000	0.000	0.000
1119	11.19	11.20	0.01	11.20	4.60	191.79	0.28	0.000	0.000	0.000
1120	11.20	11.21	0.01	11.21	4.60	194.14	0.28	0.000	0.000	0.000
1121	11.21	11.22	0.01	11.22	4.59	194.29	0.28	0.000	0.000	0.000
1122	11.22	11.23	0.01	11.23	4.59	192.66	0.28	0.000	0.000	0.000
1123	11.23	11.24	0.01	11.24	4.59	191.25	0.28	0.000	0.000	0.000
1124	11.24	11.25	0.01	11.25	4.58	187.58	0.28	0.000	0.000	0.000
1125	11.25	11.26	0.01	11.26	4.58	180.05	0.28	0.000	0.000	0.000
1126	11.26	11.27	0.01	11.27	4.58	172.24	0.28	0.000	0.000	0.000
1127	11.27	11.28	0.01	11.28	4.57	165.92	0.28	0.000	0.000	0.000
1128	11.28	11.29	0.01	11.29	4.57	167.16	0.28	0.000	0.000	0.000

Total primary settlement: 0.70
Total secondary settlement: 0.05

Total calculated settlement: 0.74

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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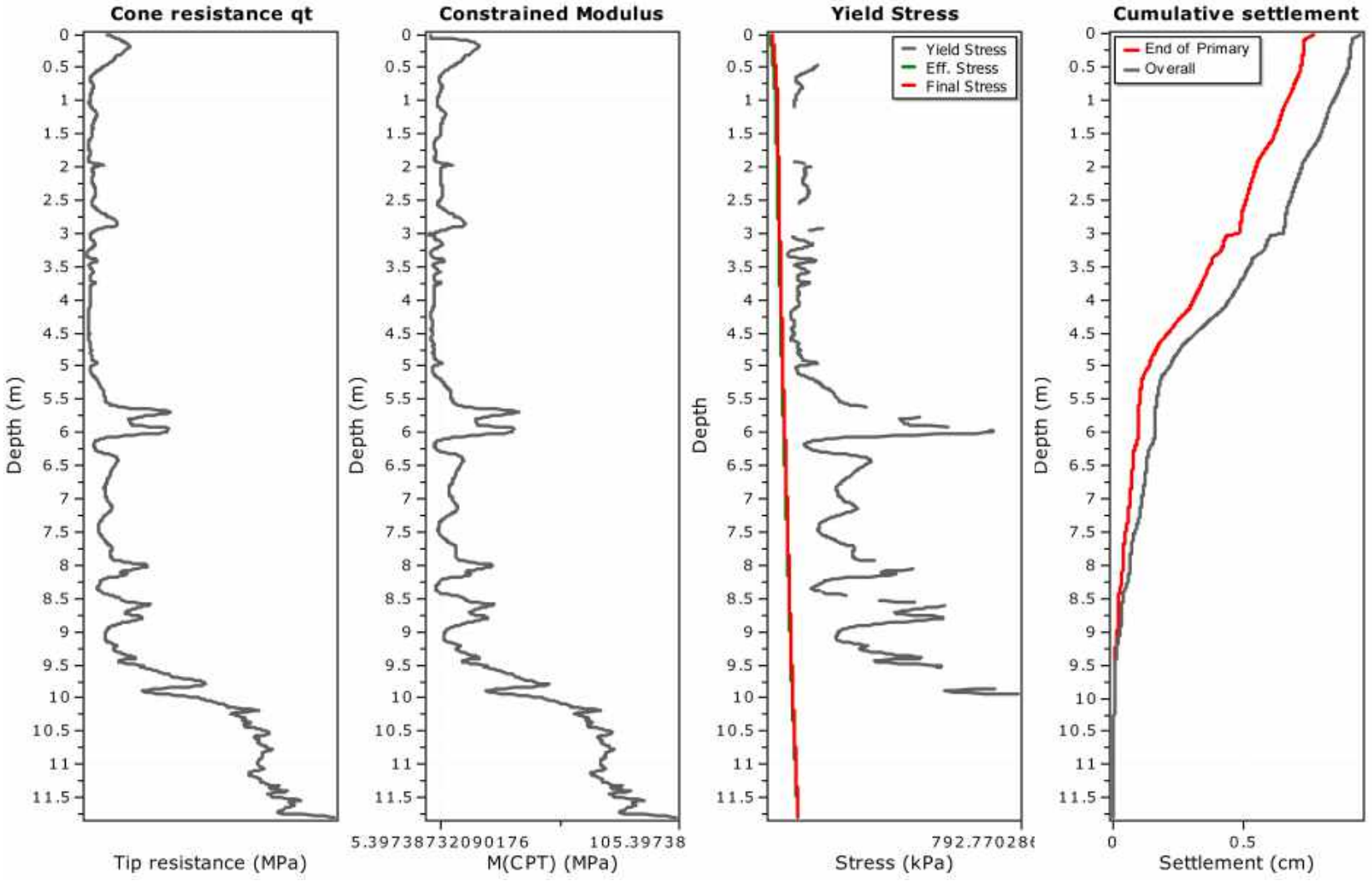
CPT: CPT410
Total depth: 11.80 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1151	11.51	11.52	0.01	11.52	1.49	81.65	0.27	0.000	0.000	0.000
1152	11.52	11.53	0.01	11.53	1.49	84.54	0.27	0.000	0.000	0.000
1153	11.53	11.54	0.01	11.54	1.49	87.97	0.27	0.000	0.000	0.000
1154	11.54	11.55	0.01	11.54	1.49	90.33	0.27	0.000	0.000	0.000
1155	11.55	11.56	0.01	11.55	1.49	90.21	0.27	0.000	0.000	0.000
1156	11.56	11.57	0.01	11.56	1.49	87.93	0.27	0.000	0.000	0.000
1157	11.57	11.58	0.01	11.57	1.49	85.79	0.27	0.000	0.000	0.000
1158	11.58	11.59	0.01	11.59	1.49	85.42	0.27	0.000	0.000	0.000
1159	11.59	11.60	0.01	11.60	1.49	85.95	0.27	0.000	0.000	0.000
1160	11.60	11.61	0.01	11.61	1.48	86.56	0.27	0.000	0.000	0.000
1161	11.61	11.62	0.01	11.62	1.48	87.11	0.27	0.000	0.000	0.000
1162	11.62	11.63	0.01	11.63	1.48	87.08	0.27	0.000	0.000	0.000
1163	11.63	11.64	0.01	11.63	1.48	86.44	0.27	0.000	0.000	0.000
1164	11.64	11.65	0.01	11.64	1.48	85.39	0.27	0.000	0.000	0.000
1165	11.65	11.66	0.01	11.65	1.48	84.33	0.27	0.000	0.000	0.000
1166	11.66	11.67	0.01	11.66	1.48	83.48	0.27	0.000	0.000	0.000
1167	11.67	11.68	0.01	11.68	1.48	82.88	0.27	0.000	0.000	0.000
1168	11.68	11.69	0.01	11.69	1.47	82.77	0.27	0.000	0.000	0.000
1169	11.69	11.70	0.01	11.70	1.47	82.61	0.27	0.000	0.000	0.000
1170	11.70	11.71	0.01	11.71	1.47	81.79	0.27	0.000	0.000	0.000
1171	11.71	11.72	0.01	11.71	1.47	80.82	0.27	0.000	0.000	0.000
1172	11.72	11.73	0.01	11.72	1.47	80.17	0.27	0.000	0.000	0.000
1173	11.73	11.74	0.01	11.73	1.47	80.40	0.27	0.000	0.000	0.000
1174	11.74	11.75	0.01	11.74	1.47	82.14	0.27	0.000	0.000	0.000
1175	11.75	11.76	0.01	11.76	1.47	85.66	0.27	0.000	0.000	0.000
1176	11.76	11.77	0.01	11.77	1.47	90.99	0.27	0.000	0.000	0.000
1177	11.77	11.78	0.01	11.78	1.46	96.00	0.27	0.000	0.000	0.000
1178	11.78	11.79	0.01	11.79	1.46	99.89	0.27	0.000	0.000	0.000
1179	11.79	11.80	0.01	11.79	1.46	102.51	0.27	0.000	0.000	0.000

Total primary settlement: 0.77
Total secondary settlement: 0.18

Total calculated settlement: 0.95

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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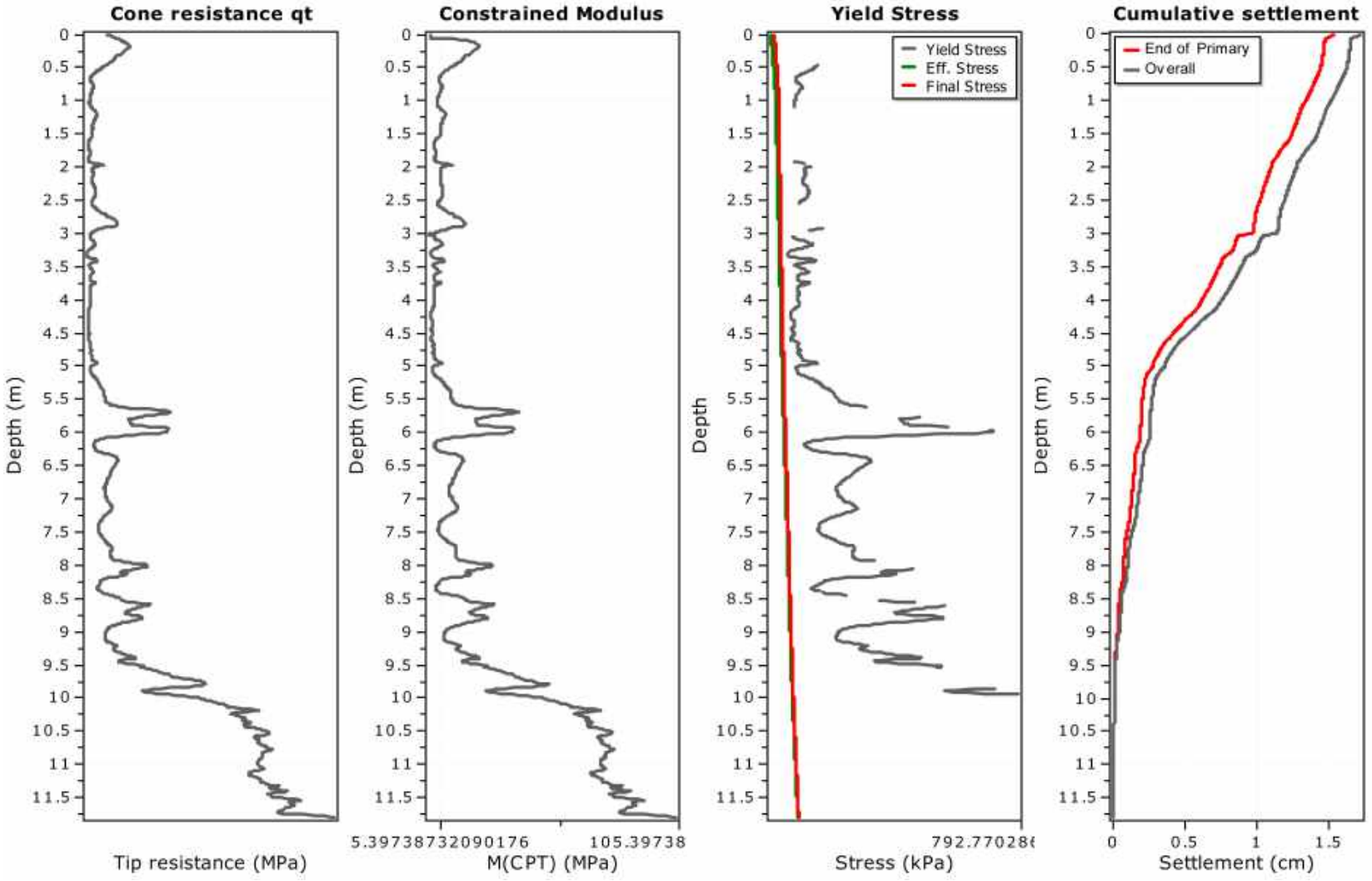
CPT: CPT410
Total depth: 11.80 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1151	11.51	11.52	0.01	11.52	2.99	81.65	0.27	0.000	0.000	0.000
1152	11.52	11.53	0.01	11.53	2.99	84.54	0.27	0.000	0.000	0.000
1153	11.53	11.54	0.01	11.54	2.98	87.97	0.27	0.000	0.000	0.000
1154	11.54	11.55	0.01	11.54	2.98	90.33	0.27	0.000	0.000	0.000
1155	11.55	11.56	0.01	11.55	2.98	90.21	0.27	0.000	0.000	0.000
1156	11.56	11.57	0.01	11.56	2.98	87.93	0.27	0.000	0.000	0.000
1157	11.57	11.58	0.01	11.57	2.98	85.79	0.27	0.000	0.000	0.000
1158	11.58	11.59	0.01	11.59	2.97	85.42	0.27	0.000	0.000	0.000
1159	11.59	11.60	0.01	11.60	2.97	85.95	0.27	0.000	0.000	0.000
1160	11.60	11.61	0.01	11.61	2.97	86.56	0.27	0.000	0.000	0.000
1161	11.61	11.62	0.01	11.62	2.97	87.11	0.27	0.000	0.000	0.000
1162	11.62	11.63	0.01	11.63	2.96	87.08	0.27	0.000	0.000	0.000
1163	11.63	11.64	0.01	11.63	2.96	86.44	0.27	0.000	0.000	0.000
1164	11.64	11.65	0.01	11.64	2.96	85.39	0.27	0.000	0.000	0.000
1165	11.65	11.66	0.01	11.65	2.96	84.33	0.27	0.000	0.000	0.000
1166	11.66	11.67	0.01	11.66	2.95	83.48	0.27	0.000	0.000	0.000
1167	11.67	11.68	0.01	11.68	2.95	82.88	0.27	0.000	0.000	0.000
1168	11.68	11.69	0.01	11.69	2.95	82.77	0.27	0.000	0.000	0.000
1169	11.69	11.70	0.01	11.70	2.95	82.61	0.27	0.000	0.000	0.000
1170	11.70	11.71	0.01	11.71	2.94	81.79	0.27	0.000	0.000	0.000
1171	11.71	11.72	0.01	11.71	2.94	80.82	0.27	0.000	0.000	0.000
1172	11.72	11.73	0.01	11.72	2.94	80.17	0.27	0.000	0.000	0.000
1173	11.73	11.74	0.01	11.73	2.94	80.40	0.27	0.000	0.000	0.000
1174	11.74	11.75	0.01	11.74	2.94	82.14	0.27	0.000	0.000	0.000
1175	11.75	11.76	0.01	11.76	2.93	85.66	0.27	0.000	0.000	0.000
1176	11.76	11.77	0.01	11.77	2.93	90.99	0.27	0.000	0.000	0.000
1177	11.77	11.78	0.01	11.78	2.93	96.00	0.27	0.000	0.000	0.000
1178	11.78	11.79	0.01	11.79	2.93	99.89	0.27	0.000	0.000	0.000
1179	11.79	11.80	0.01	11.79	2.92	102.51	0.27	0.000	0.000	0.000

Total primary settlement: 1.54
Total secondary settlement: 0.18

Total calculated settlement: 1.72

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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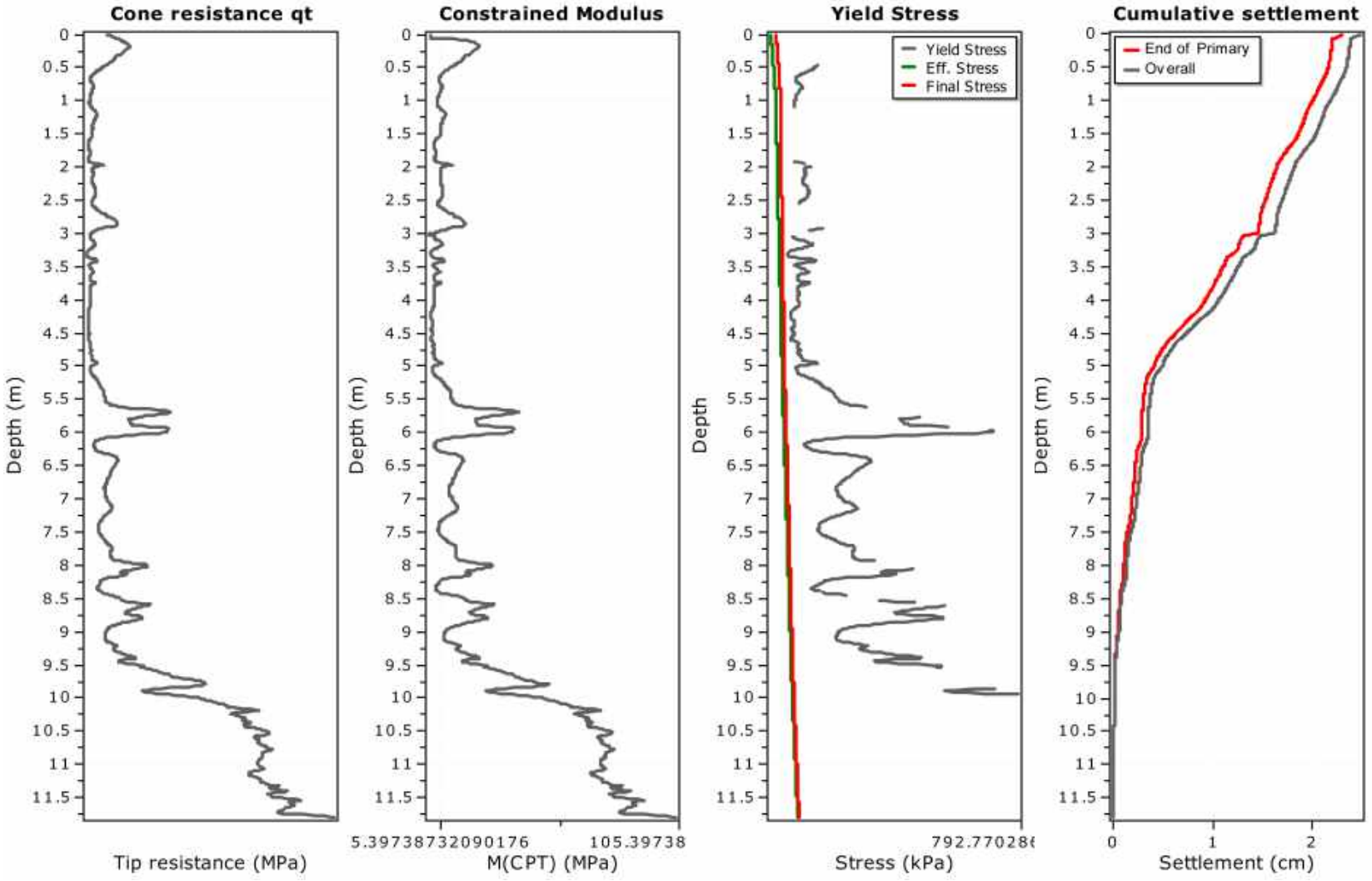
CPT: CPT410
Total depth: 11.80 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1151	11.51	11.52	0.01	11.52	4.48	81.65	0.27	0.000	0.000	0.000
1152	11.52	11.53	0.01	11.53	4.48	84.54	0.27	0.000	0.000	0.000
1153	11.53	11.54	0.01	11.54	4.48	87.97	0.27	0.000	0.000	0.000
1154	11.54	11.55	0.01	11.54	4.47	90.33	0.27	0.000	0.000	0.000
1155	11.55	11.56	0.01	11.55	4.47	90.21	0.27	0.000	0.000	0.000
1156	11.56	11.57	0.01	11.56	4.47	87.93	0.27	0.000	0.000	0.000
1157	11.57	11.58	0.01	11.57	4.46	85.79	0.27	0.000	0.000	0.000
1158	11.58	11.59	0.01	11.59	4.46	85.42	0.27	0.000	0.000	0.000
1159	11.59	11.60	0.01	11.60	4.46	85.95	0.27	0.000	0.000	0.000
1160	11.60	11.61	0.01	11.61	4.45	86.56	0.27	0.000	0.000	0.000
1161	11.61	11.62	0.01	11.62	4.45	87.11	0.27	0.000	0.000	0.000
1162	11.62	11.63	0.01	11.63	4.45	87.08	0.27	0.000	0.000	0.000
1163	11.63	11.64	0.01	11.63	4.44	86.44	0.27	0.000	0.000	0.000
1164	11.64	11.65	0.01	11.64	4.44	85.39	0.27	0.000	0.000	0.000
1165	11.65	11.66	0.01	11.65	4.43	84.33	0.27	0.000	0.000	0.000
1166	11.66	11.67	0.01	11.66	4.43	83.48	0.27	0.000	0.000	0.000
1167	11.67	11.68	0.01	11.68	4.43	82.88	0.27	0.000	0.000	0.000
1168	11.68	11.69	0.01	11.69	4.42	82.77	0.27	0.000	0.000	0.000
1169	11.69	11.70	0.01	11.70	4.42	82.61	0.27	0.000	0.000	0.000
1170	11.70	11.71	0.01	11.71	4.42	81.79	0.27	0.000	0.000	0.000
1171	11.71	11.72	0.01	11.71	4.41	80.82	0.27	0.000	0.000	0.000
1172	11.72	11.73	0.01	11.72	4.41	80.17	0.27	0.000	0.000	0.000
1173	11.73	11.74	0.01	11.73	4.41	80.40	0.27	0.000	0.000	0.000
1174	11.74	11.75	0.01	11.74	4.40	82.14	0.27	0.000	0.000	0.000
1175	11.75	11.76	0.01	11.76	4.40	85.66	0.27	0.000	0.000	0.000
1176	11.76	11.77	0.01	11.77	4.40	90.99	0.27	0.000	0.000	0.000
1177	11.77	11.78	0.01	11.78	4.39	96.00	0.27	0.000	0.000	0.000
1178	11.78	11.79	0.01	11.79	4.39	99.89	0.27	0.000	0.000	0.000
1179	11.79	11.80	0.01	11.79	4.39	102.51	0.27	0.000	0.000	0.000

Total primary settlement: 2.30
Total secondary settlement: 0.18

Total calculated settlement: 2.48

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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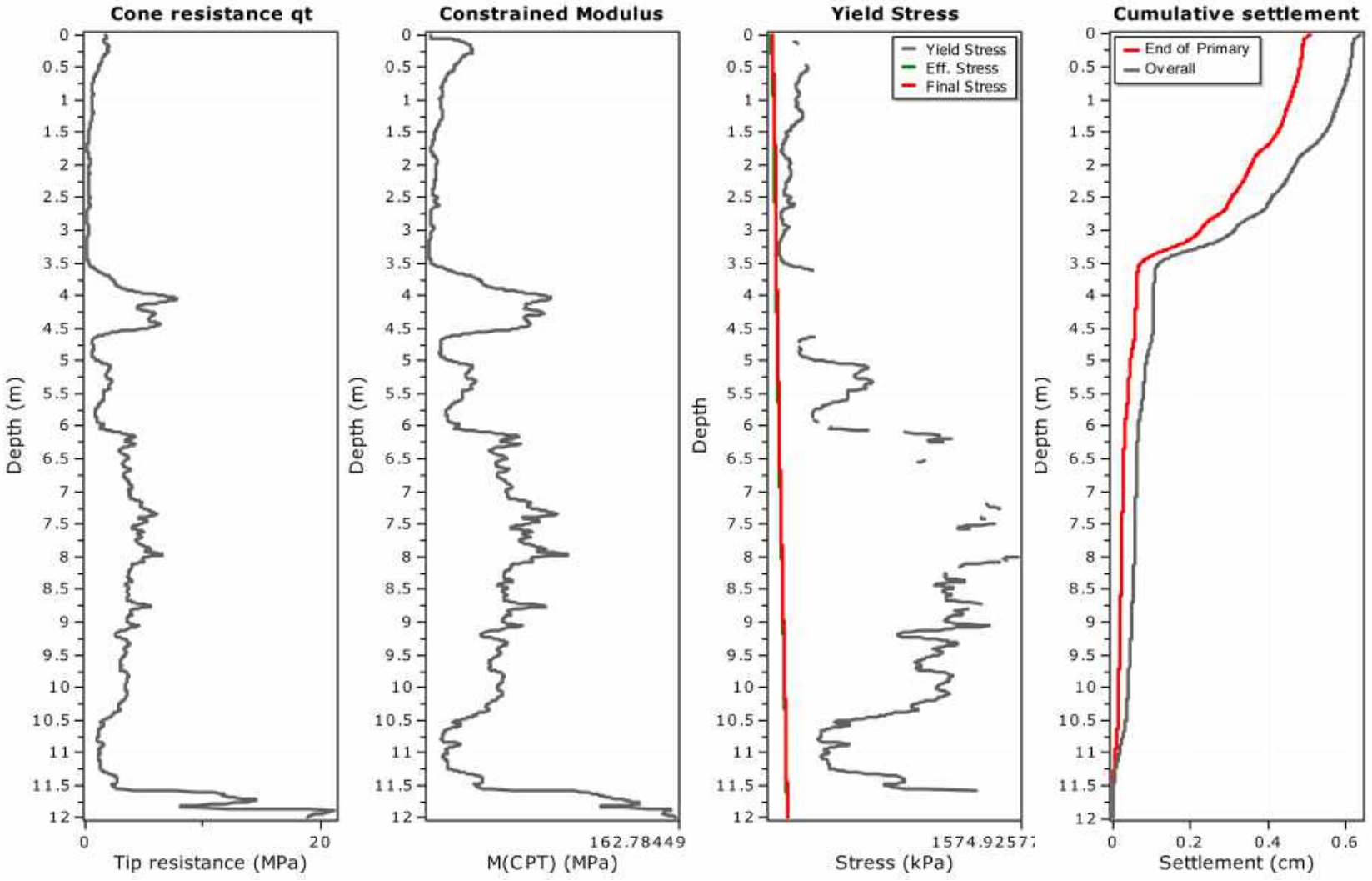
CPT: CPT411
Total depth: 11.99 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1197	11.97	11.98	0.01	11.97	1.44	158.89	0.26	0.000	0.000	0.000
1198	11.98	11.99	0.01	11.98	1.44	160.62	0.26	0.000	0.000	0.000

Total primary settlement: 0.51
Total secondary settlement: 0.13

Total calculated settlement: 0.64

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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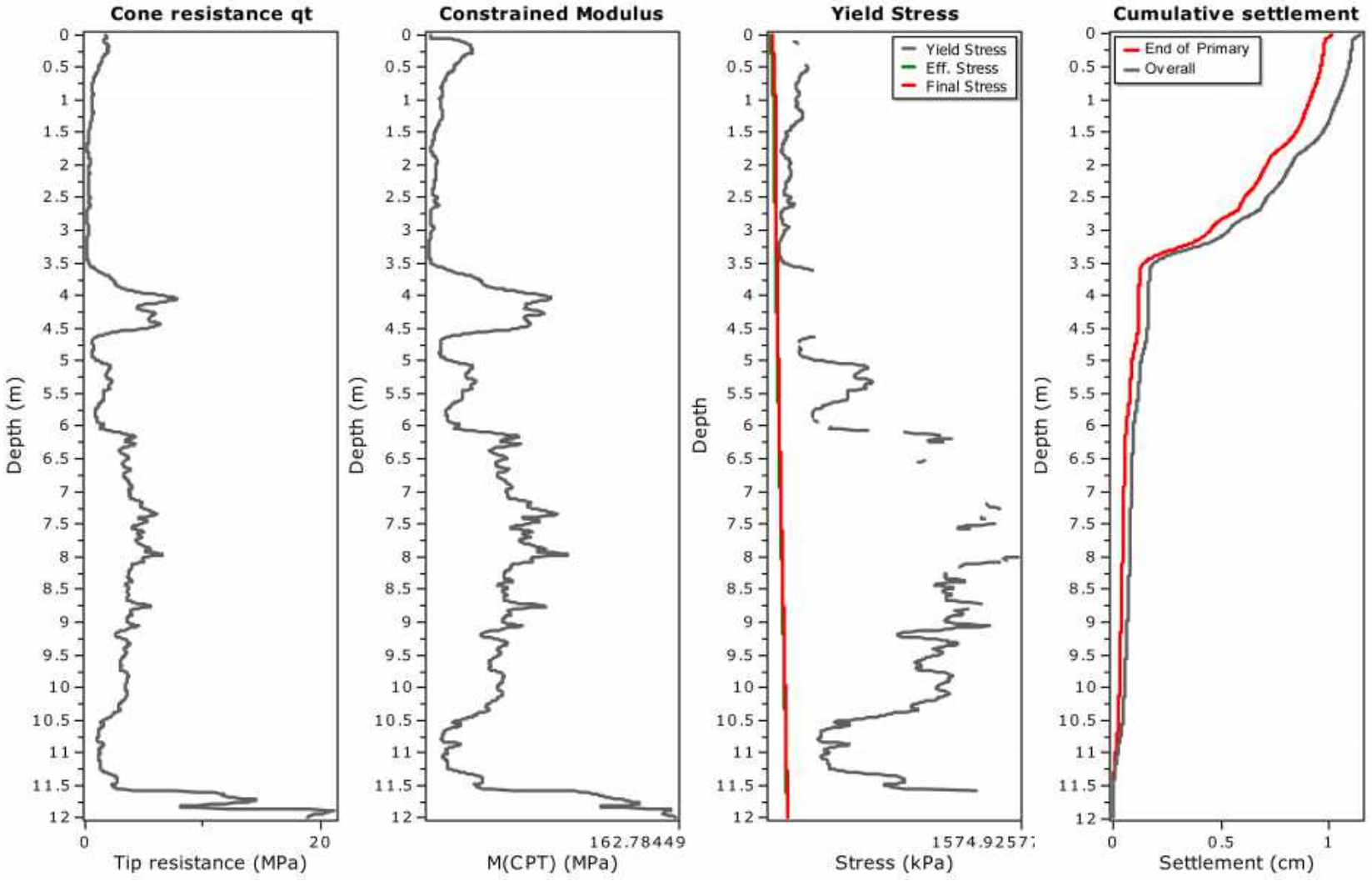
CPT: CPT411
Total depth: 11.99 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1197	11.97	11.98	0.01	11.97	2.88	158.89	0.26	0.000	0.000	0.000
1198	11.98	11.99	0.01	11.98	2.88	160.62	0.26	0.000	0.000	0.000

Total primary settlement: 1.02
Total secondary settlement: 0.13

Total calculated settlement: 1.15

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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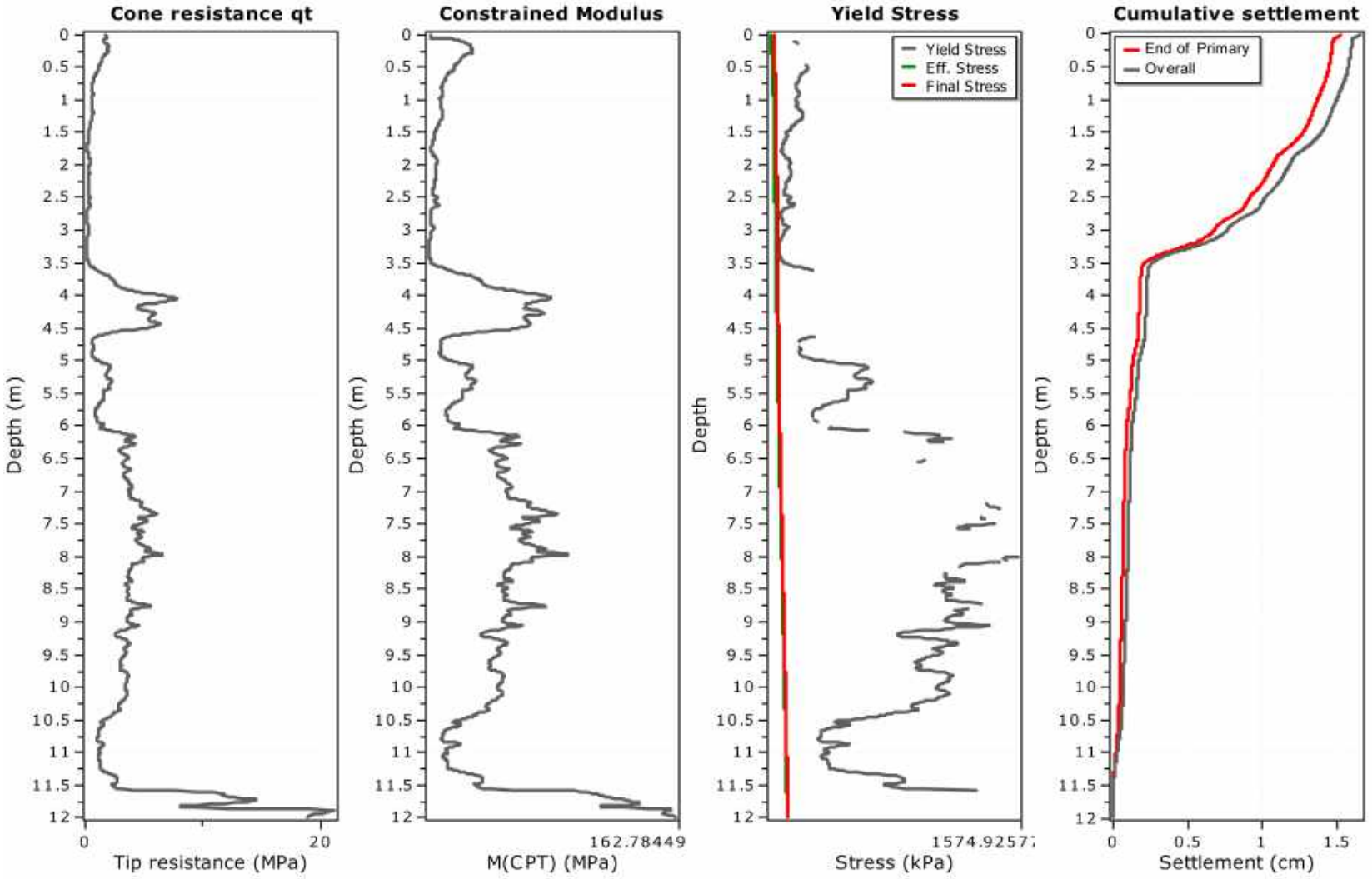
CPT: CPT411
Total depth: 11.99 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1197	11.97	11.98	0.01	11.97	4.32	158.89	0.26	0.000	0.000	0.000
1198	11.98	11.99	0.01	11.98	4.32	160.62	0.26	0.000	0.000	0.000

Total primary settlement: 1.53
Total secondary settlement: 0.13

Total calculated settlement: 1.65

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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P O Box 97 385, Manukau, Auckland 2241
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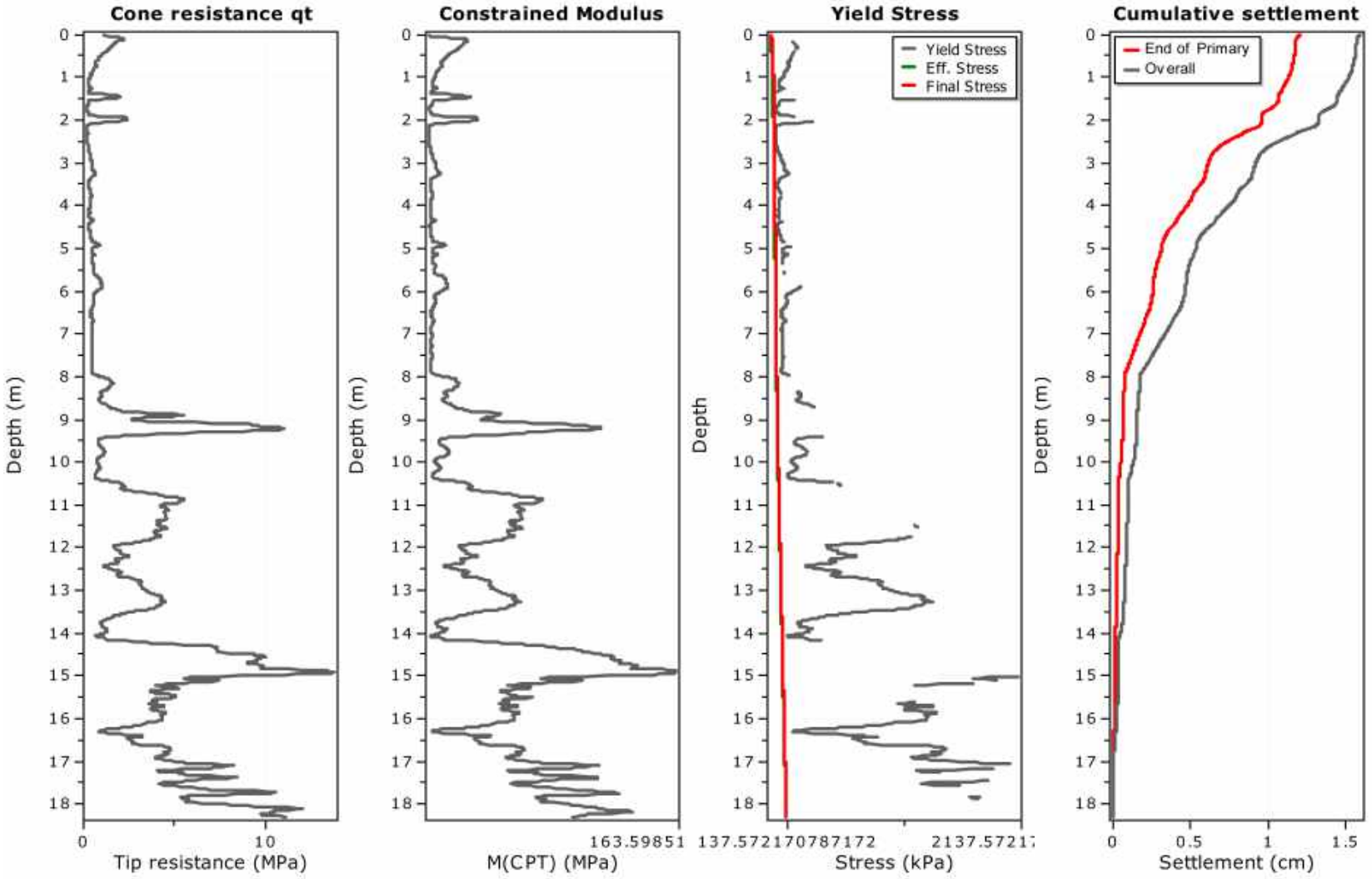
CPT: CPT412
Total depth: 18.30 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1795	17.95	17.96	0.01	17.95	0.93	76.26	0.17	0.000	0.000	0.000
1796	17.96	17.97	0.01	17.96	0.93	80.50	0.17	0.000	0.000	0.000
1797	17.97	17.98	0.01	17.98	0.93	89.32	0.17	0.000	0.000	0.000
1798	17.98	17.99	0.01	17.98	0.93	90.28	0.17	0.000	0.000	0.000
1799	17.99	18.00	0.01	18.00	0.93	91.27	0.17	0.000	0.000	0.000
1800	18.00	18.01	0.01	18.00	0.93	92.00	0.17	0.000	0.000	0.000
1801	18.01	18.02	0.01	18.02	0.93	92.60	0.17	0.000	0.000	0.000
1802	18.02	18.03	0.01	18.02	0.93	93.37	0.17	0.000	0.000	0.000
1803	18.03	18.04	0.01	18.04	0.92	95.14	0.17	0.000	0.000	0.000
1804	18.04	18.05	0.01	18.05	0.92	98.91	0.17	0.000	0.000	0.000
1805	18.05	18.06	0.01	18.05	0.92	103.07	0.17	0.000	0.000	0.000
1806	18.06	18.07	0.01	18.07	0.92	106.70	0.17	0.000	0.000	0.000
1807	18.07	18.08	0.01	18.07	0.92	108.46	0.17	0.000	0.000	0.000
1808	18.08	18.09	0.01	18.09	0.92	109.51	0.17	0.000	0.000	0.000
1809	18.09	18.10	0.01	18.09	0.92	110.25	0.17	0.000	0.000	0.000
1810	18.10	18.11	0.01	18.11	0.92	110.92	0.17	0.000	0.000	0.000
1811	18.11	18.12	0.01	18.11	0.92	111.73	0.17	0.000	0.000	0.000
1812	18.12	18.13	0.01	18.13	0.92	113.20	0.17	0.000	0.000	0.000
1813	18.13	18.14	0.01	18.14	0.92	116.61	0.17	0.000	0.000	0.000
1814	18.14	18.15	0.01	18.14	0.92	121.47	0.17	0.000	0.000	0.000
1815	18.15	18.16	0.01	18.16	0.92	127.22	0.17	0.000	0.000	0.000
1816	18.16	18.17	0.01	18.16	0.92	130.73	0.17	0.000	0.000	0.000
1817	18.17	18.18	0.01	18.18	0.92	132.62	0.17	0.000	0.000	0.000
1818	18.18	18.19	0.01	18.18	0.92	132.84	0.17	0.000	0.000	0.000
1819	18.19	18.20	0.01	18.20	0.91	131.43	0.17	0.000	0.000	0.000
1820	18.20	18.21	0.01	18.20	0.91	127.89	0.17	0.000	0.000	0.000
1821	18.21	18.22	0.01	18.21	0.91	118.96	0.17	0.000	0.000	0.000
1822	18.22	18.23	0.01	18.23	0.91	111.03	0.17	0.000	0.000	0.000
1823	18.23	18.24	0.01	18.23	0.91	104.77	0.17	0.000	0.000	0.000
1824	18.24	18.25	0.01	18.25	0.91	103.77	0.17	0.000	0.000	0.000
1825	18.25	18.26	0.01	18.25	0.91	103.15	0.17	0.000	0.000	0.000
1826	18.26	18.27	0.01	18.27	0.91	102.52	0.17	0.000	0.000	0.000
1827	18.27	18.28	0.01	18.27	0.91	101.23	0.17	0.000	0.000	0.000
1828	18.28	18.29	0.01	18.29	0.91	99.35	0.17	0.000	0.000	0.000
1829	18.29	18.30	0.01	18.30	0.91	96.31	0.17	0.000	0.000	0.000

Total primary settlement: 1.20
Total secondary settlement: 0.39

Total calculated settlement: 1.60

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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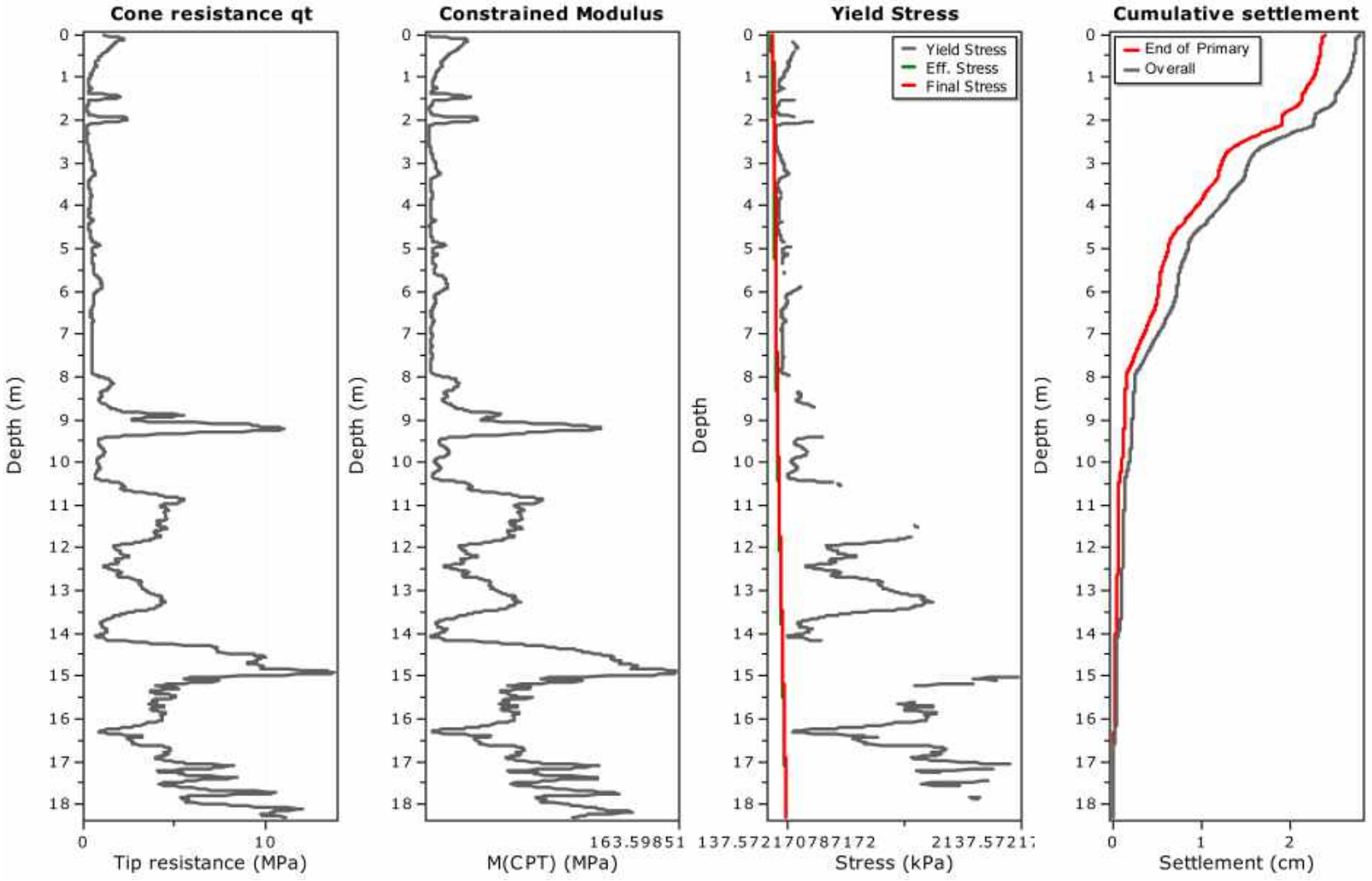
CPT: CPT412
Total depth: 18.30 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1795	17.95	17.96	0.01	17.95	1.86	76.26	0.17	0.000	0.000	0.000
1796	17.96	17.97	0.01	17.96	1.86	80.50	0.17	0.000	0.000	0.000
1797	17.97	17.98	0.01	17.98	1.86	89.32	0.17	0.000	0.000	0.000
1798	17.98	17.99	0.01	17.98	1.86	90.28	0.17	0.000	0.000	0.000
1799	17.99	18.00	0.01	18.00	1.85	91.27	0.17	0.000	0.000	0.000
1800	18.00	18.01	0.01	18.00	1.85	92.00	0.17	0.000	0.000	0.000
1801	18.01	18.02	0.01	18.02	1.85	92.60	0.17	0.000	0.000	0.000
1802	18.02	18.03	0.01	18.02	1.85	93.37	0.17	0.000	0.000	0.000
1803	18.03	18.04	0.01	18.04	1.85	95.14	0.17	0.000	0.000	0.000
1804	18.04	18.05	0.01	18.05	1.85	98.91	0.17	0.000	0.000	0.000
1805	18.05	18.06	0.01	18.05	1.85	103.07	0.17	0.000	0.000	0.000
1806	18.06	18.07	0.01	18.07	1.85	106.70	0.17	0.000	0.000	0.000
1807	18.07	18.08	0.01	18.07	1.84	108.46	0.17	0.000	0.000	0.000
1808	18.08	18.09	0.01	18.09	1.84	109.51	0.17	0.000	0.000	0.000
1809	18.09	18.10	0.01	18.09	1.84	110.25	0.17	0.000	0.000	0.000
1810	18.10	18.11	0.01	18.11	1.84	110.92	0.17	0.000	0.000	0.000
1811	18.11	18.12	0.01	18.11	1.84	111.73	0.17	0.000	0.000	0.000
1812	18.12	18.13	0.01	18.13	1.84	113.20	0.17	0.000	0.000	0.000
1813	18.13	18.14	0.01	18.14	1.84	116.61	0.17	0.000	0.000	0.000
1814	18.14	18.15	0.01	18.14	1.84	121.47	0.17	0.000	0.000	0.000
1815	18.15	18.16	0.01	18.16	1.83	127.22	0.17	0.000	0.000	0.000
1816	18.16	18.17	0.01	18.16	1.83	130.73	0.17	0.000	0.000	0.000
1817	18.17	18.18	0.01	18.18	1.83	132.62	0.17	0.000	0.000	0.000
1818	18.18	18.19	0.01	18.18	1.83	132.84	0.17	0.000	0.000	0.000
1819	18.19	18.20	0.01	18.20	1.83	131.43	0.17	0.000	0.000	0.000
1820	18.20	18.21	0.01	18.20	1.83	127.89	0.17	0.000	0.000	0.000
1821	18.21	18.22	0.01	18.21	1.83	118.96	0.17	0.000	0.000	0.000
1822	18.22	18.23	0.01	18.23	1.83	111.03	0.17	0.000	0.000	0.000
1823	18.23	18.24	0.01	18.23	1.82	104.77	0.17	0.000	0.000	0.000
1824	18.24	18.25	0.01	18.25	1.82	103.77	0.17	0.000	0.000	0.000
1825	18.25	18.26	0.01	18.25	1.82	103.15	0.17	0.000	0.000	0.000
1826	18.26	18.27	0.01	18.27	1.82	102.52	0.17	0.000	0.000	0.000
1827	18.27	18.28	0.01	18.27	1.82	101.23	0.17	0.000	0.000	0.000
1828	18.28	18.29	0.01	18.29	1.82	99.35	0.17	0.000	0.000	0.000
1829	18.29	18.30	0.01	18.30	1.82	96.31	0.17	0.000	0.000	0.000

Total primary settlement: 2.41
Total secondary settlement: 0.39

Total calculated settlement: 2.80

Abbreviations

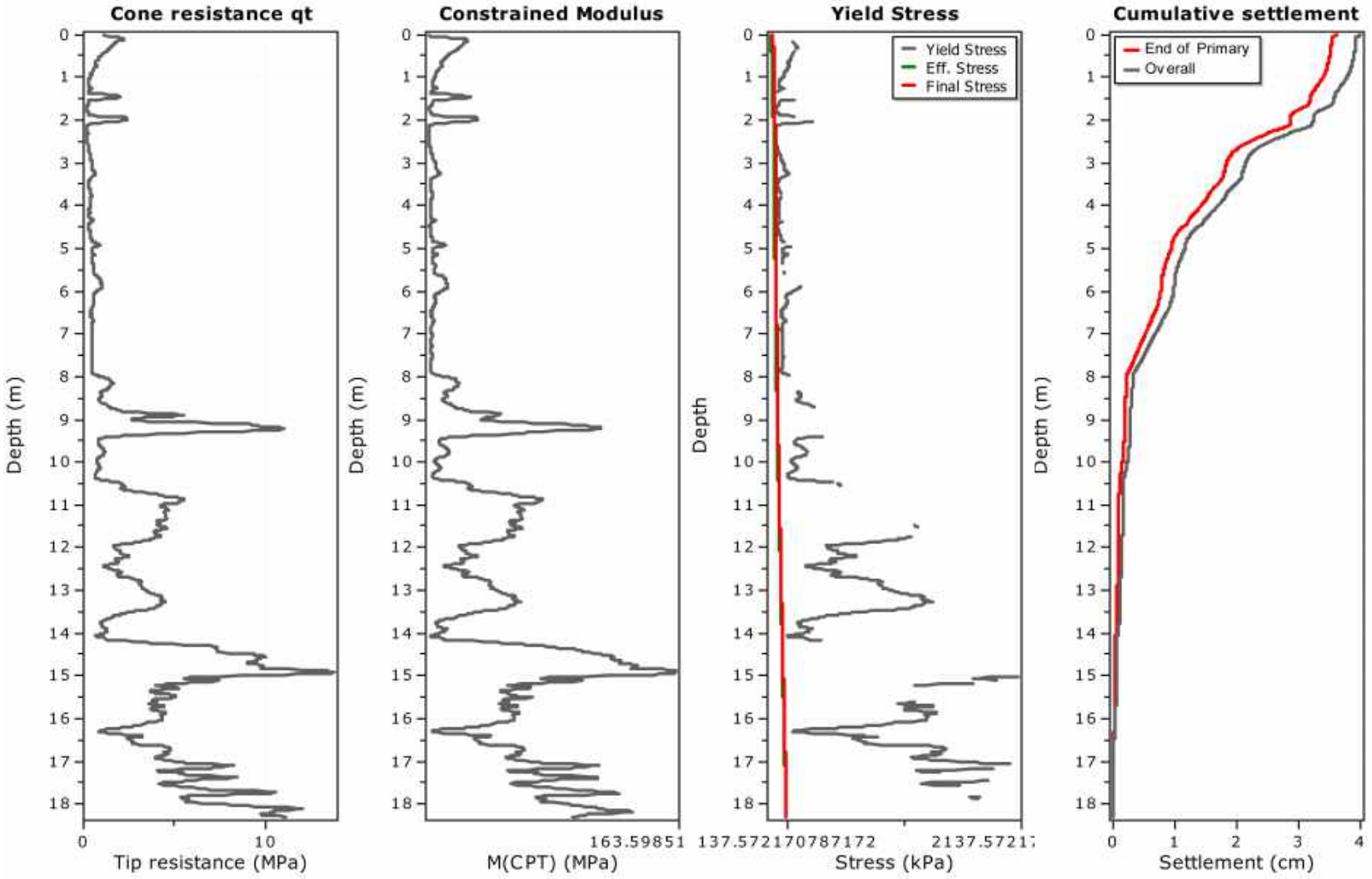
Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

Lander Geotechnical Consultants Limited
Level 3, 3 Osterley Way
P O Box 97 385, Manukau, Auckland 2241
www.landergeotechnical.co.nz

CPT: CPT412
Total depth: 18.30 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1795	17.95	17.96	0.01	17.95	2.79	76.26	0.17	0.000	0.000	0.000
1796	17.96	17.97	0.01	17.96	2.79	80.50	0.17	0.000	0.000	0.000
1797	17.97	17.98	0.01	17.98	2.79	89.32	0.17	0.000	0.000	0.000
1798	17.98	17.99	0.01	17.98	2.78	90.28	0.17	0.000	0.000	0.000
1799	17.99	18.00	0.01	18.00	2.78	91.27	0.17	0.000	0.000	0.000
1800	18.00	18.01	0.01	18.00	2.78	92.00	0.17	0.000	0.000	0.000
1801	18.01	18.02	0.01	18.02	2.78	92.60	0.17	0.000	0.000	0.000
1802	18.02	18.03	0.01	18.02	2.78	93.37	0.17	0.000	0.000	0.000
1803	18.03	18.04	0.01	18.04	2.77	95.14	0.17	0.000	0.000	0.000
1804	18.04	18.05	0.01	18.05	2.77	98.91	0.17	0.000	0.000	0.000
1805	18.05	18.06	0.01	18.05	2.77	103.07	0.17	0.000	0.000	0.000
1806	18.06	18.07	0.01	18.07	2.77	106.70	0.17	0.000	0.000	0.000
1807	18.07	18.08	0.01	18.07	2.77	108.46	0.17	0.000	0.000	0.000
1808	18.08	18.09	0.01	18.09	2.76	109.51	0.17	0.000	0.000	0.000
1809	18.09	18.10	0.01	18.09	2.76	110.25	0.17	0.000	0.000	0.000
1810	18.10	18.11	0.01	18.11	2.76	110.92	0.17	0.000	0.000	0.000
1811	18.11	18.12	0.01	18.11	2.76	111.73	0.17	0.000	0.000	0.000
1812	18.12	18.13	0.01	18.13	2.76	113.20	0.17	0.000	0.000	0.000
1813	18.13	18.14	0.01	18.14	2.76	116.61	0.17	0.000	0.000	0.000
1814	18.14	18.15	0.01	18.14	2.75	121.47	0.17	0.000	0.000	0.000
1815	18.15	18.16	0.01	18.16	2.75	127.22	0.17	0.000	0.000	0.000
1816	18.16	18.17	0.01	18.16	2.75	130.73	0.17	0.000	0.000	0.000
1817	18.17	18.18	0.01	18.18	2.75	132.62	0.17	0.000	0.000	0.000
1818	18.18	18.19	0.01	18.18	2.75	132.84	0.17	0.000	0.000	0.000
1819	18.19	18.20	0.01	18.20	2.74	131.43	0.17	0.000	0.000	0.000
1820	18.20	18.21	0.01	18.20	2.74	127.89	0.17	0.000	0.000	0.000
1821	18.21	18.22	0.01	18.21	2.74	118.96	0.17	0.000	0.000	0.000
1822	18.22	18.23	0.01	18.23	2.74	111.03	0.17	0.000	0.000	0.000
1823	18.23	18.24	0.01	18.23	2.74	104.77	0.17	0.000	0.000	0.000
1824	18.24	18.25	0.01	18.25	2.73	103.77	0.17	0.000	0.000	0.000
1825	18.25	18.26	0.01	18.25	2.73	103.15	0.17	0.000	0.000	0.000
1826	18.26	18.27	0.01	18.27	2.73	102.52	0.17	0.000	0.000	0.000
1827	18.27	18.28	0.01	18.27	2.73	101.23	0.17	0.000	0.000	0.000
1828	18.28	18.29	0.01	18.29	2.73	99.35	0.17	0.000	0.000	0.000
1829	18.29	18.30	0.01	18.30	2.73	96.31	0.17	0.000	0.000	0.000

Total primary settlement: 3.61
Total secondary settlement: 0.39

Total calculated settlement: 4.01

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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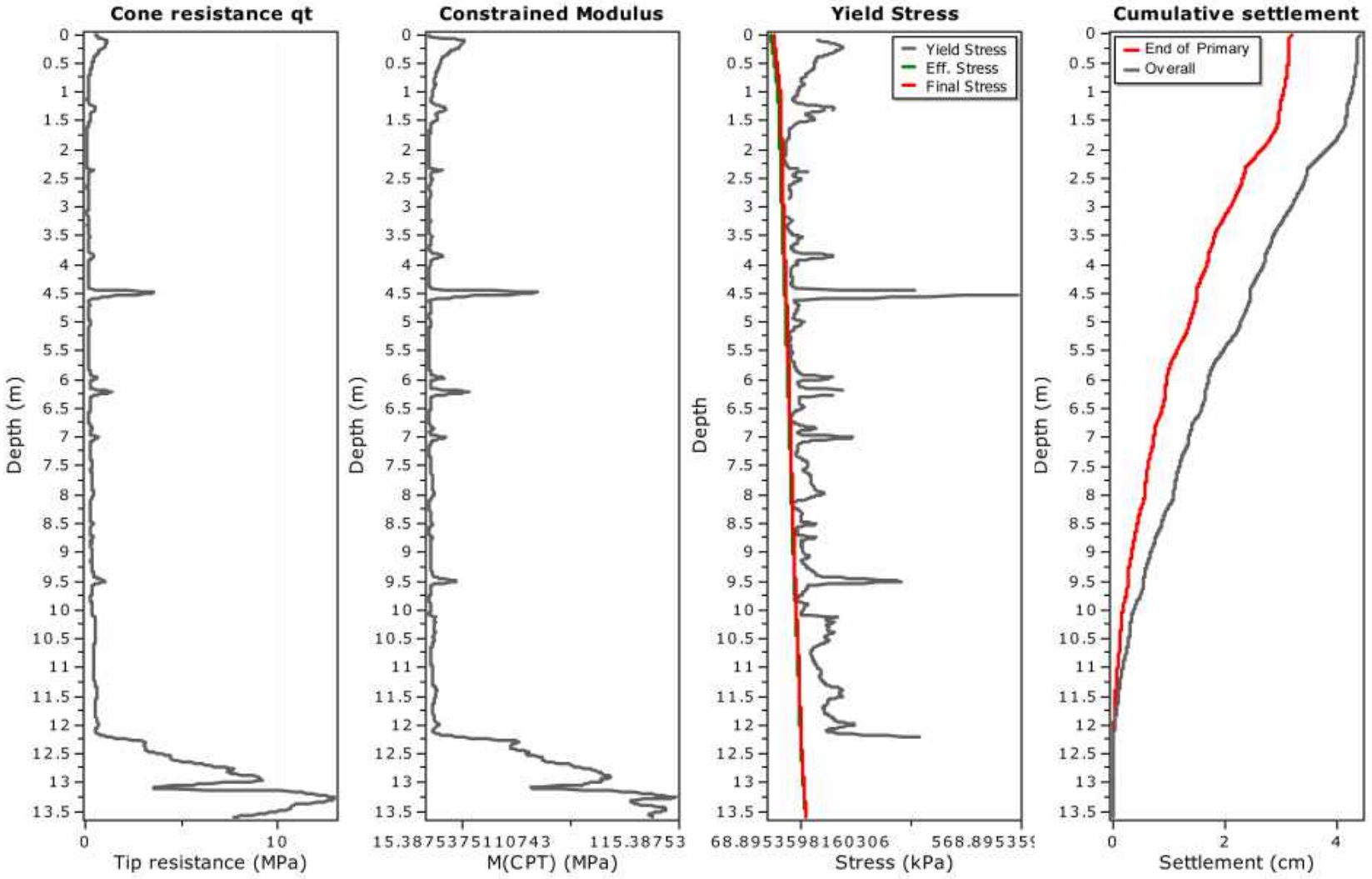
Level 3, 3 Osterley Way
P O Box 97 385, Manukau, Auckland 2241
www.landergeotechnical.co.nz

CPT: CPT413
Total depth: 13.60 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1335	13.35	13.36	0.01	13.36	1.29	94.31	0.24	0.000	0.000	0.000
1336	13.36	13.37	0.01	13.37	1.29	94.71	0.24	0.000	0.000	0.000
1337	13.37	13.38	0.01	13.38	1.29	95.32	0.24	0.000	0.000	0.000
1338	13.38	13.39	0.01	13.38	1.29	95.88	0.23	0.000	0.000	0.000
1339	13.39	13.40	0.01	13.39	1.29	97.66	0.23	0.000	0.000	0.000
1340	13.40	13.41	0.01	13.40	1.29	99.72	0.23	0.000	0.000	0.000
1341	13.41	13.42	0.01	13.41	1.29	102.63	0.23	0.000	0.000	0.000
1342	13.42	13.43	0.01	13.43	1.29	105.06	0.23	0.000	0.000	0.000
1343	13.43	13.44	0.01	13.44	1.29	107.47	0.23	0.000	0.000	0.000
1344	13.44	13.45	0.01	13.45	1.29	108.86	0.23	0.000	0.000	0.000
1345	13.45	13.46	0.01	13.46	1.28	109.58	0.23	0.000	0.000	0.000
1346	13.46	13.47	0.01	13.46	1.28	109.58	0.23	0.000	0.000	0.000
1347	13.47	13.48	0.01	13.47	1.28	109.25	0.23	0.000	0.000	0.000
1348	13.48	13.49	0.01	13.48	1.28	108.65	0.23	0.000	0.000	0.000
1349	13.49	13.50	0.01	13.49	1.28	107.85	0.23	0.000	0.000	0.000
1350	13.50	13.51	0.01	13.51	1.28	106.61	0.23	0.000	0.000	0.000
1351	13.51	13.52	0.01	13.52	1.28	105.14	0.23	0.000	0.000	0.000
1352	13.52	13.53	0.01	13.53	1.28	103.73	0.23	0.000	0.000	0.000
1353	13.53	13.54	0.01	13.54	1.28	102.84	0.23	0.000	0.000	0.000
1354	13.54	13.55	0.01	13.54	1.28	102.15	0.23	0.000	0.000	0.000
1355	13.55	13.56	0.01	13.55	1.28	101.56	0.23	0.000	0.000	0.000
1356	13.56	13.57	0.01	13.56	1.27	101.83	0.23	0.000	0.000	0.000
1357	13.57	13.58	0.01	13.57	1.27	102.58	0.23	0.000	0.000	0.000
1358	13.58	13.59	0.01	13.59	1.27	103.04	0.23	0.000	0.000	0.000
1359	13.59	13.60	0.01	13.60	1.27	102.98	0.23	0.000	0.000	0.000

Total primary settlement: 3.20
Total secondary settlement: 1.22

Total calculated settlement: 4.42

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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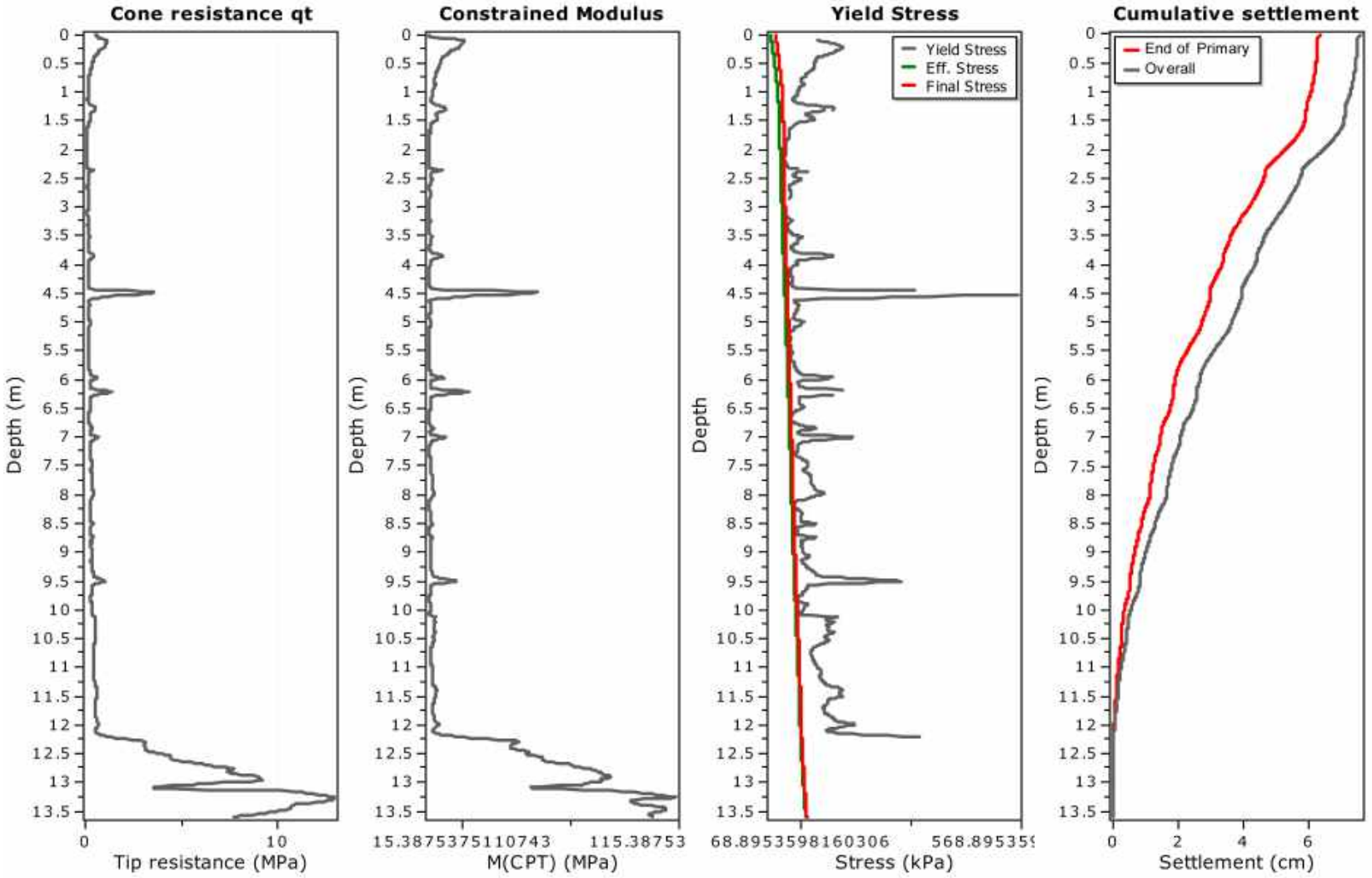
Level 3, 3 Osterley Way
P O Box 97 385, Manukau, Auckland 2241
www.landergeotechnical.co.nz

CPT: CPT413
Total depth: 13.60 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1335	13.35	13.36	0.01	13.36	2.59	94.31	0.24	0.000	0.000	0.000
1336	13.36	13.37	0.01	13.37	2.59	94.71	0.24	0.000	0.000	0.000
1337	13.37	13.38	0.01	13.38	2.59	95.32	0.24	0.000	0.000	0.000
1338	13.38	13.39	0.01	13.38	2.58	95.88	0.23	0.000	0.000	0.000
1339	13.39	13.40	0.01	13.39	2.58	97.66	0.23	0.000	0.000	0.000
1340	13.40	13.41	0.01	13.40	2.58	99.72	0.23	0.000	0.000	0.000
1341	13.41	13.42	0.01	13.41	2.58	102.63	0.23	0.000	0.000	0.000
1342	13.42	13.43	0.01	13.43	2.58	105.06	0.23	0.000	0.000	0.000
1343	13.43	13.44	0.01	13.44	2.57	107.47	0.23	0.000	0.000	0.000
1344	13.44	13.45	0.01	13.45	2.57	108.86	0.23	0.000	0.000	0.000
1345	13.45	13.46	0.01	13.46	2.57	109.58	0.23	0.000	0.000	0.000
1346	13.46	13.47	0.01	13.46	2.57	109.58	0.23	0.000	0.000	0.000
1347	13.47	13.48	0.01	13.47	2.57	109.25	0.23	0.000	0.000	0.000
1348	13.48	13.49	0.01	13.48	2.56	108.65	0.23	0.000	0.000	0.000
1349	13.49	13.50	0.01	13.49	2.56	107.85	0.23	0.000	0.000	0.000
1350	13.50	13.51	0.01	13.51	2.56	106.61	0.23	0.000	0.000	0.000
1351	13.51	13.52	0.01	13.52	2.56	105.14	0.23	0.000	0.000	0.000
1352	13.52	13.53	0.01	13.53	2.56	103.73	0.23	0.000	0.000	0.000
1353	13.53	13.54	0.01	13.54	2.55	102.84	0.23	0.000	0.000	0.000
1354	13.54	13.55	0.01	13.54	2.55	102.15	0.23	0.000	0.000	0.000
1355	13.55	13.56	0.01	13.55	2.55	101.56	0.23	0.000	0.000	0.000
1356	13.56	13.57	0.01	13.56	2.55	101.83	0.23	0.000	0.000	0.000
1357	13.57	13.58	0.01	13.57	2.55	102.58	0.23	0.000	0.000	0.000
1358	13.58	13.59	0.01	13.59	2.54	103.04	0.23	0.000	0.000	0.000
1359	13.59	13.60	0.01	13.60	2.54	102.98	0.23	0.000	0.000	0.000

Total primary settlement: 6.40
Total secondary settlement: 1.22

Total calculated settlement: 7.62

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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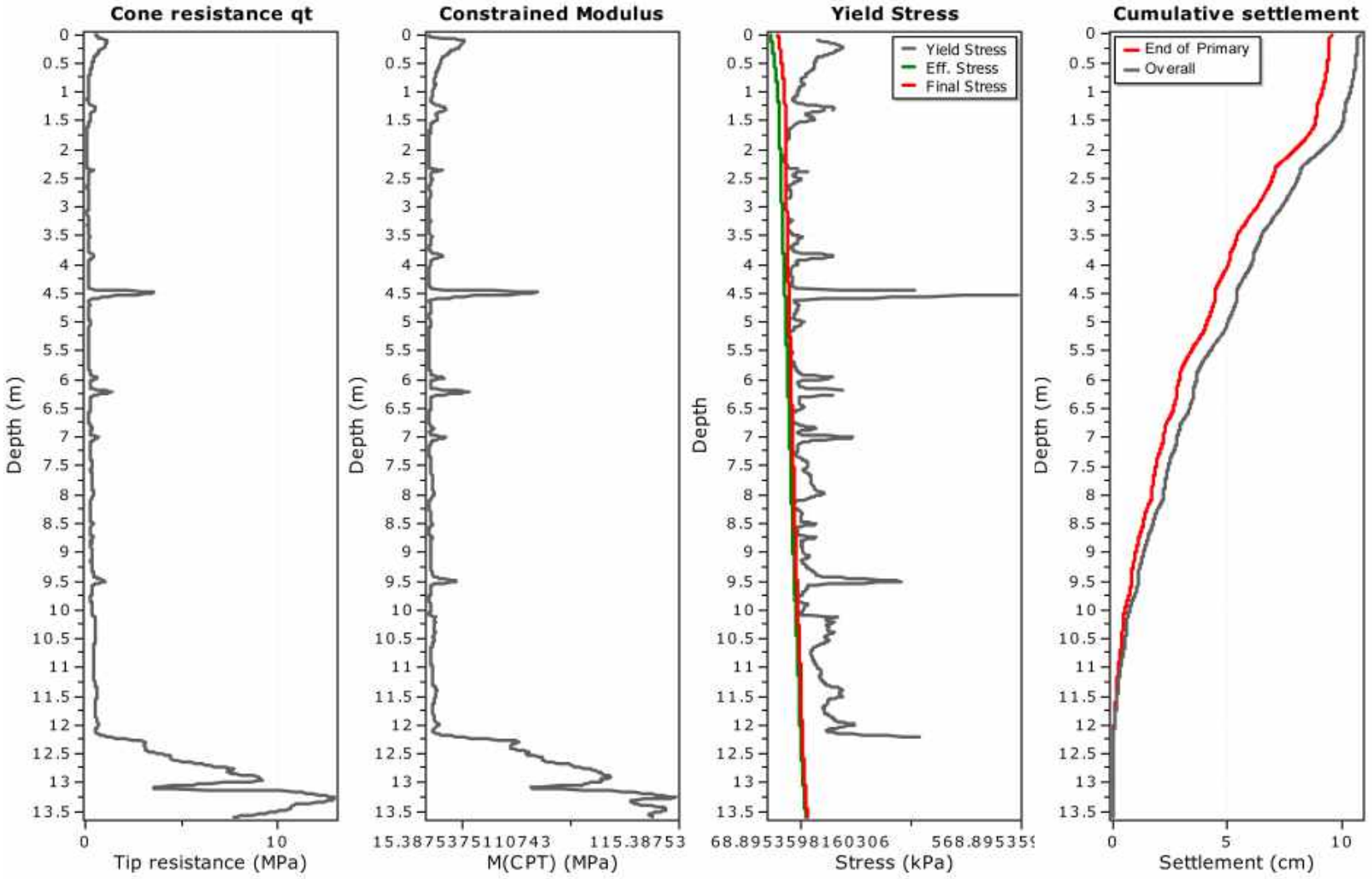
CPT: CPT413
Total depth: 13.60 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1335	13.35	13.36	0.01	13.36	3.88	94.31	0.24	0.000	0.000	0.000
1336	13.36	13.37	0.01	13.37	3.88	94.71	0.24	0.000	0.000	0.000
1337	13.37	13.38	0.01	13.38	3.88	95.32	0.24	0.000	0.000	0.000
1338	13.38	13.39	0.01	13.38	3.87	95.88	0.23	0.000	0.000	0.000
1339	13.39	13.40	0.01	13.39	3.87	97.66	0.23	0.000	0.000	0.000
1340	13.40	13.41	0.01	13.40	3.87	99.72	0.23	0.000	0.000	0.000
1341	13.41	13.42	0.01	13.41	3.87	102.63	0.23	0.000	0.000	0.000
1342	13.42	13.43	0.01	13.43	3.86	105.06	0.23	0.000	0.000	0.000
1343	13.43	13.44	0.01	13.44	3.86	107.47	0.23	0.000	0.000	0.000
1344	13.44	13.45	0.01	13.45	3.86	108.86	0.23	0.000	0.000	0.000
1345	13.45	13.46	0.01	13.46	3.85	109.58	0.23	0.000	0.000	0.000
1346	13.46	13.47	0.01	13.46	3.85	109.58	0.23	0.000	0.000	0.000
1347	13.47	13.48	0.01	13.47	3.85	109.25	0.23	0.000	0.000	0.000
1348	13.48	13.49	0.01	13.48	3.85	108.65	0.23	0.000	0.000	0.000
1349	13.49	13.50	0.01	13.49	3.84	107.85	0.23	0.000	0.000	0.000
1350	13.50	13.51	0.01	13.51	3.84	106.61	0.23	0.000	0.000	0.000
1351	13.51	13.52	0.01	13.52	3.84	105.14	0.23	0.000	0.000	0.000
1352	13.52	13.53	0.01	13.53	3.83	103.73	0.23	0.000	0.000	0.000
1353	13.53	13.54	0.01	13.54	3.83	102.84	0.23	0.000	0.000	0.000
1354	13.54	13.55	0.01	13.54	3.83	102.15	0.23	0.000	0.000	0.000
1355	13.55	13.56	0.01	13.55	3.83	101.56	0.23	0.000	0.000	0.000
1356	13.56	13.57	0.01	13.56	3.82	101.83	0.23	0.000	0.000	0.000
1357	13.57	13.58	0.01	13.57	3.82	102.58	0.23	0.000	0.000	0.000
1358	13.58	13.59	0.01	13.59	3.82	103.04	0.23	0.000	0.000	0.000
1359	13.59	13.60	0.01	13.60	3.81	102.98	0.23	0.000	0.000	0.000

Total primary settlement: 9.60
Total secondary settlement: 1.22

Total calculated settlement: 10.82

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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P O Box 97 385, Manukau, Auckland 2241
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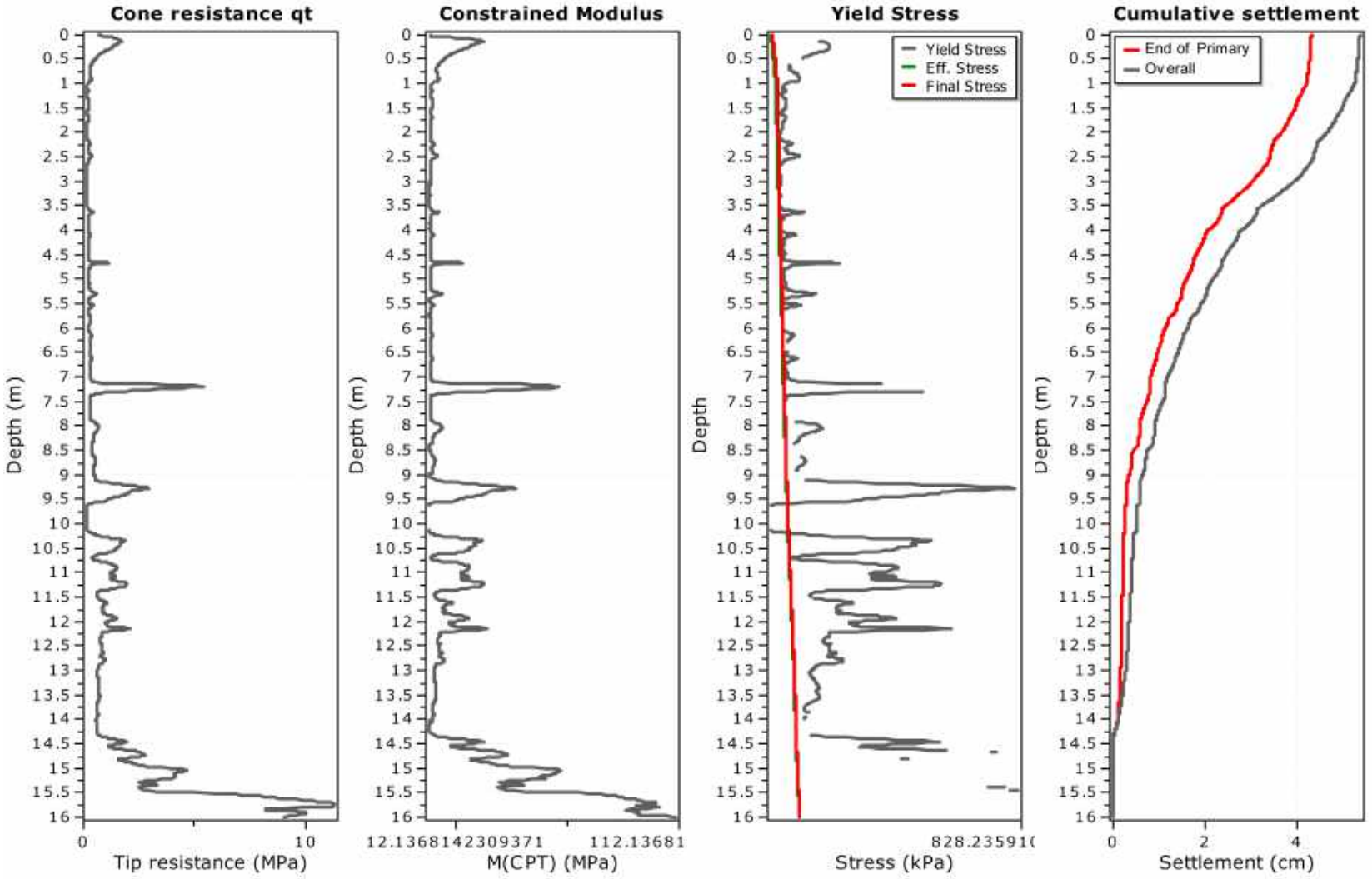
CPT: CPT414
Total depth: 16.00 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1565	15.65	15.66	0.01	15.65	1.09	93.54	0.20	0.000	0.000	0.000
1566	15.66	15.67	0.01	15.66	1.09	94.54	0.20	0.000	0.000	0.000
1567	15.67	15.68	0.01	15.68	1.09	95.30	0.20	0.000	0.000	0.000
1568	15.68	15.69	0.01	15.69	1.09	96.68	0.20	0.000	0.000	0.000
1569	15.69	15.70	0.01	15.70	1.09	98.34	0.20	0.000	0.000	0.000
1570	15.70	15.71	0.01	15.71	1.09	100.47	0.20	0.000	0.000	0.000
1571	15.71	15.72	0.01	15.71	1.09	101.64	0.20	0.000	0.000	0.000
1572	15.72	15.73	0.01	15.72	1.09	101.67	0.20	0.000	0.000	0.000
1573	15.73	15.74	0.01	15.73	1.09	100.57	0.20	0.000	0.000	0.000
1574	15.74	15.75	0.01	15.74	1.08	97.91	0.20	0.000	0.000	0.000
1575	15.75	15.76	0.01	15.76	1.08	95.13	0.20	0.000	0.000	0.000
1576	15.76	15.77	0.01	15.77	1.08	93.03	0.20	0.000	0.000	0.000
1577	15.77	15.78	0.01	15.78	1.08	94.43	0.20	0.000	0.000	0.000
1578	15.78	15.79	0.01	15.79	1.08	97.78	0.20	0.000	0.000	0.000
1579	15.79	15.80	0.01	15.79	1.08	101.54	0.20	0.000	0.000	0.000
1580	15.80	15.81	0.01	15.80	1.08	102.93	0.20	0.000	0.000	0.000
1581	15.81	15.82	0.01	15.81	1.08	101.44	0.20	0.000	0.000	0.000
1582	15.82	15.83	0.01	15.82	1.08	97.82	0.20	0.000	0.000	0.000
1583	15.83	15.84	0.01	15.84	1.08	93.95	0.20	0.000	0.000	0.000
1584	15.84	15.85	0.01	15.85	1.08	90.70	0.20	0.000	0.000	0.000
1585	15.85	15.86	0.01	15.86	1.08	88.28	0.20	0.000	0.000	0.000
1586	15.86	15.87	0.01	15.87	1.08	87.92	0.20	0.000	0.000	0.000
1587	15.87	15.88	0.01	15.88	1.07	88.70	0.20	0.000	0.000	0.000
1588	15.88	15.89	0.01	15.88	1.07	90.68	0.20	0.000	0.000	0.000
1589	15.89	15.90	0.01	15.89	1.07	92.21	0.20	0.000	0.000	0.000
1590	15.90	15.91	0.01	15.90	1.07	93.54	0.20	0.000	0.000	0.000
1591	15.91	15.92	0.01	15.91	1.07	94.32	0.19	0.000	0.000	0.000
1592	15.92	15.93	0.01	15.93	1.07	94.24	0.19	0.000	0.000	0.000
1593	15.93	15.94	0.01	15.94	1.07	93.98	0.19	0.000	0.000	0.000
1594	15.94	15.95	0.01	15.95	1.07	93.74	0.19	0.000	0.000	0.000
1595	15.95	15.96	0.01	15.96	1.07	93.97	0.19	0.000	0.000	0.000
1596	15.96	15.97	0.01	15.96	1.07	97.12	0.19	0.000	0.000	0.000
1597	15.97	15.98	0.01	15.97	1.07	101.49	0.19	0.000	0.000	0.000
1598	15.98	15.99	0.01	15.98	1.07	106.33	0.19	0.000	0.000	0.000
1599	15.99	16.00	0.01	15.99	1.07	109.15	0.19	0.000	0.000	0.000

Total primary settlement: 4.31
Total secondary settlement: 1.05

Total calculated settlement: 5.36

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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Level 3, 3 Osterley Way
P O Box 97 385, Manukau, Auckland 2241
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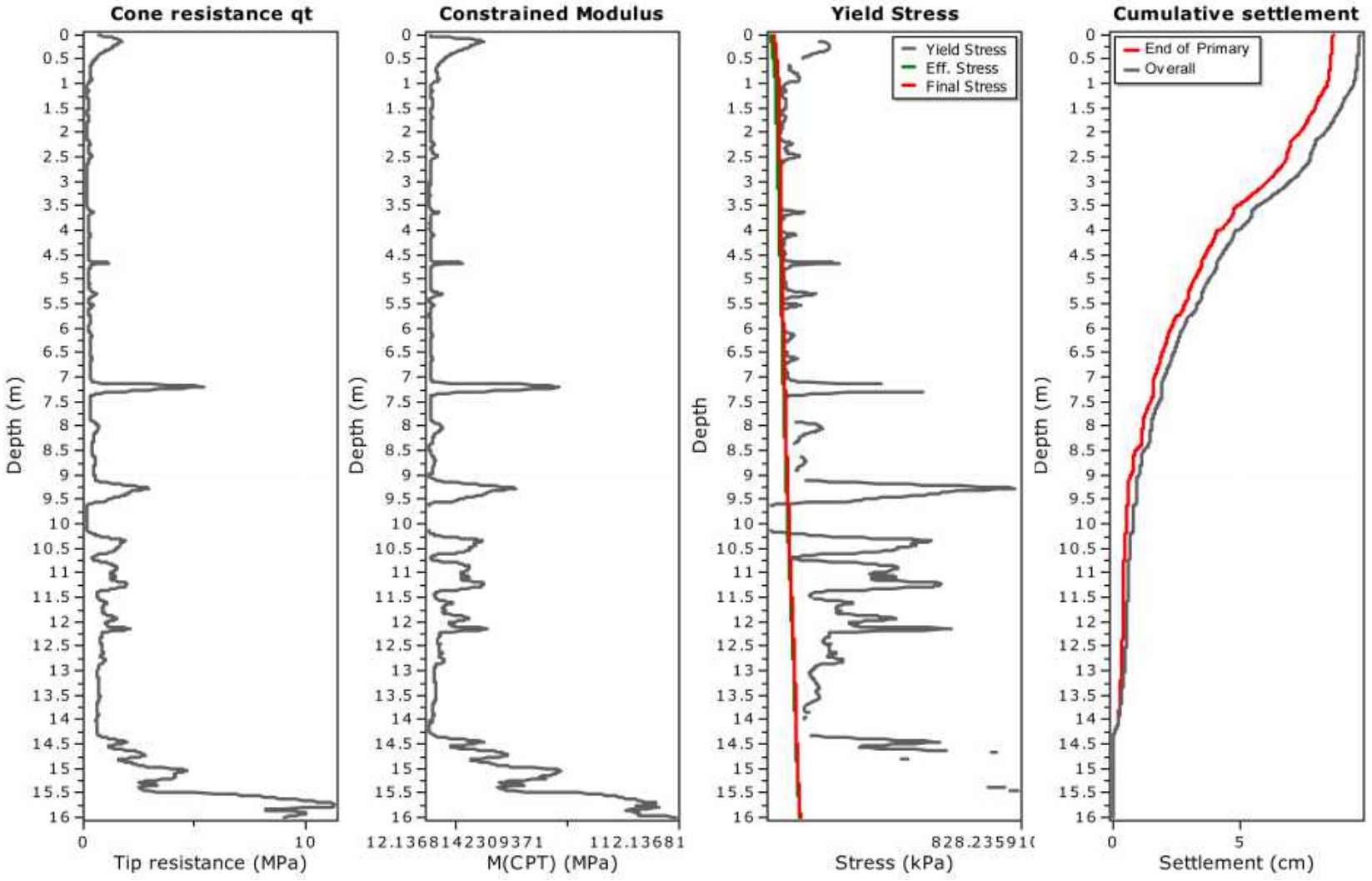
CPT: CPT414
Total depth: 16.00 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1565	15.65	15.66	0.01	15.65	2.18	93.54	0.20	0.000	0.000	0.000
1566	15.66	15.67	0.01	15.66	2.18	94.54	0.20	0.000	0.000	0.000
1567	15.67	15.68	0.01	15.68	2.18	95.30	0.20	0.000	0.000	0.000
1568	15.68	15.69	0.01	15.69	2.18	96.68	0.20	0.000	0.000	0.000
1569	15.69	15.70	0.01	15.70	2.18	98.34	0.20	0.000	0.000	0.000
1570	15.70	15.71	0.01	15.71	2.18	100.47	0.20	0.000	0.000	0.000
1571	15.71	15.72	0.01	15.71	2.17	101.64	0.20	0.000	0.000	0.000
1572	15.72	15.73	0.01	15.72	2.17	101.67	0.20	0.000	0.000	0.000
1573	15.73	15.74	0.01	15.73	2.17	100.57	0.20	0.000	0.000	0.000
1574	15.74	15.75	0.01	15.74	2.17	97.91	0.20	0.000	0.000	0.000
1575	15.75	15.76	0.01	15.76	2.17	95.13	0.20	0.000	0.000	0.000
1576	15.76	15.77	0.01	15.77	2.17	93.03	0.20	0.000	0.000	0.000
1577	15.77	15.78	0.01	15.78	2.17	94.43	0.20	0.000	0.000	0.000
1578	15.78	15.79	0.01	15.79	2.16	97.78	0.20	0.000	0.000	0.000
1579	15.79	15.80	0.01	15.79	2.16	101.54	0.20	0.000	0.000	0.000
1580	15.80	15.81	0.01	15.80	2.16	102.93	0.20	0.000	0.000	0.000
1581	15.81	15.82	0.01	15.81	2.16	101.44	0.20	0.000	0.000	0.000
1582	15.82	15.83	0.01	15.82	2.16	97.82	0.20	0.000	0.000	0.000
1583	15.83	15.84	0.01	15.84	2.16	93.95	0.20	0.000	0.000	0.000
1584	15.84	15.85	0.01	15.85	2.15	90.70	0.20	0.000	0.000	0.000
1585	15.85	15.86	0.01	15.86	2.15	88.28	0.20	0.000	0.000	0.000
1586	15.86	15.87	0.01	15.87	2.15	87.92	0.20	0.000	0.000	0.000
1587	15.87	15.88	0.01	15.88	2.15	88.70	0.20	0.000	0.000	0.000
1588	15.88	15.89	0.01	15.88	2.15	90.68	0.20	0.000	0.000	0.000
1589	15.89	15.90	0.01	15.89	2.15	92.21	0.20	0.000	0.000	0.000
1590	15.90	15.91	0.01	15.90	2.15	93.54	0.20	0.000	0.000	0.000
1591	15.91	15.92	0.01	15.91	2.14	94.32	0.19	0.000	0.000	0.000
1592	15.92	15.93	0.01	15.93	2.14	94.24	0.19	0.000	0.000	0.000
1593	15.93	15.94	0.01	15.94	2.14	93.98	0.19	0.000	0.000	0.000
1594	15.94	15.95	0.01	15.95	2.14	93.74	0.19	0.000	0.000	0.000
1595	15.95	15.96	0.01	15.96	2.14	93.97	0.19	0.000	0.000	0.000
1596	15.96	15.97	0.01	15.96	2.14	97.12	0.19	0.000	0.000	0.000
1597	15.97	15.98	0.01	15.97	2.13	101.49	0.19	0.000	0.000	0.000
1598	15.98	15.99	0.01	15.98	2.13	106.33	0.19	0.000	0.000	0.000
1599	15.99	16.00	0.01	15.99	2.13	109.15	0.19	0.000	0.000	0.000

Total primary settlement: 8.63
Total secondary settlement: 1.05

Total calculated settlement: 9.68

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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P O Box 97 385, Manukau, Auckland 2241
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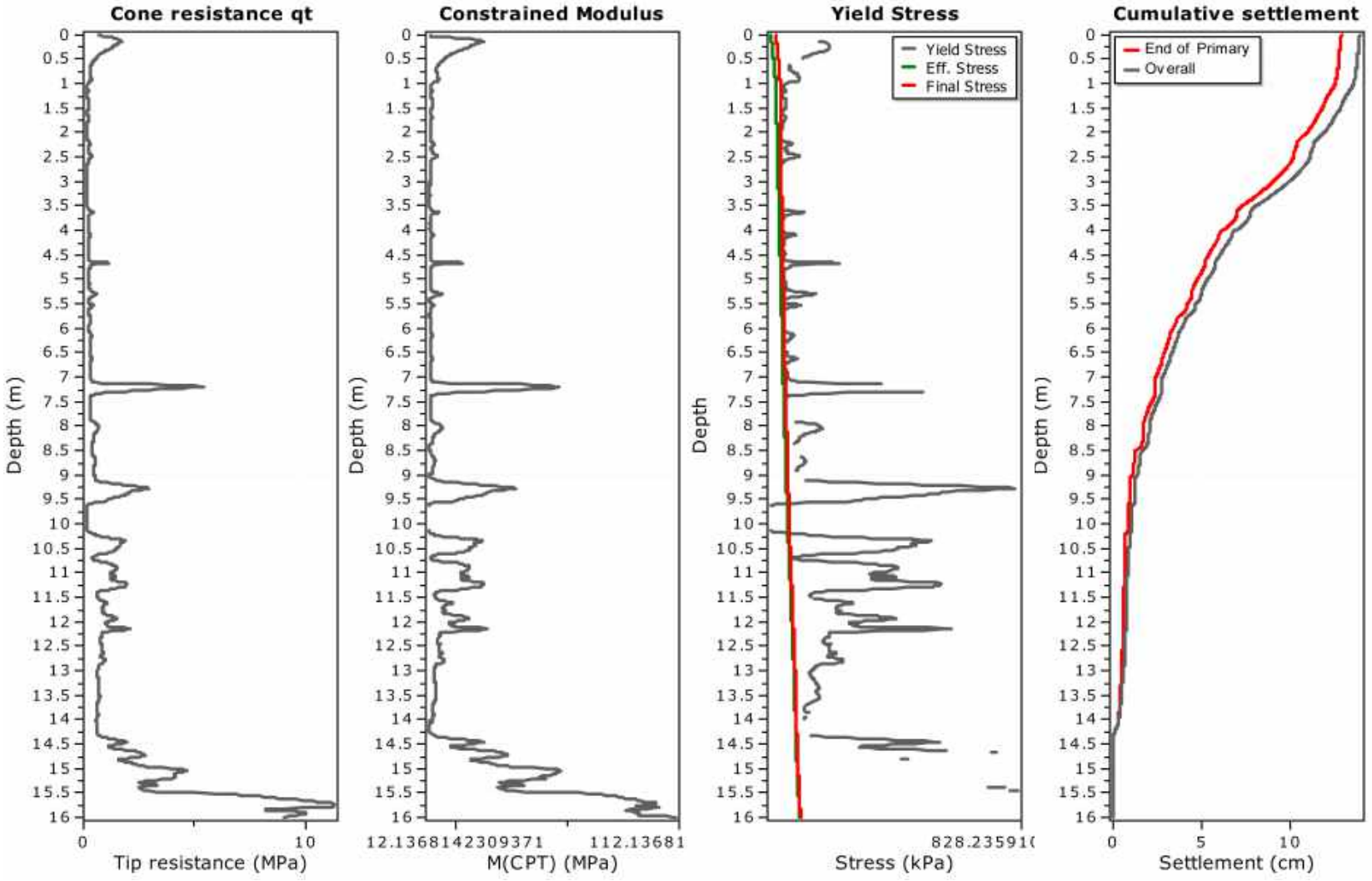
CPT: CPT414
Total depth: 16.00 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1565	15.65	15.66	0.01	15.65	3.28	93.54	0.20	0.000	0.000	0.000
1566	15.66	15.67	0.01	15.66	3.27	94.54	0.20	0.000	0.000	0.000
1567	15.67	15.68	0.01	15.68	3.27	95.30	0.20	0.000	0.000	0.000
1568	15.68	15.69	0.01	15.69	3.27	96.68	0.20	0.000	0.000	0.000
1569	15.69	15.70	0.01	15.70	3.27	98.34	0.20	0.000	0.000	0.000
1570	15.70	15.71	0.01	15.71	3.26	100.47	0.20	0.000	0.000	0.000
1571	15.71	15.72	0.01	15.71	3.26	101.64	0.20	0.000	0.000	0.000
1572	15.72	15.73	0.01	15.72	3.26	101.67	0.20	0.000	0.000	0.000
1573	15.73	15.74	0.01	15.73	3.26	100.57	0.20	0.000	0.000	0.000
1574	15.74	15.75	0.01	15.74	3.25	97.91	0.20	0.000	0.000	0.000
1575	15.75	15.76	0.01	15.76	3.25	95.13	0.20	0.000	0.000	0.000
1576	15.76	15.77	0.01	15.77	3.25	93.03	0.20	0.000	0.000	0.000
1577	15.77	15.78	0.01	15.78	3.25	94.43	0.20	0.000	0.000	0.000
1578	15.78	15.79	0.01	15.79	3.25	97.78	0.20	0.000	0.000	0.000
1579	15.79	15.80	0.01	15.79	3.24	101.54	0.20	0.000	0.000	0.000
1580	15.80	15.81	0.01	15.80	3.24	102.93	0.20	0.000	0.000	0.000
1581	15.81	15.82	0.01	15.81	3.24	101.44	0.20	0.000	0.000	0.000
1582	15.82	15.83	0.01	15.82	3.24	97.82	0.20	0.000	0.000	0.000
1583	15.83	15.84	0.01	15.84	3.23	93.95	0.20	0.000	0.000	0.000
1584	15.84	15.85	0.01	15.85	3.23	90.70	0.20	0.000	0.000	0.000
1585	15.85	15.86	0.01	15.86	3.23	88.28	0.20	0.000	0.000	0.000
1586	15.86	15.87	0.01	15.87	3.23	87.92	0.20	0.000	0.000	0.000
1587	15.87	15.88	0.01	15.88	3.22	88.70	0.20	0.000	0.000	0.000
1588	15.88	15.89	0.01	15.88	3.22	90.68	0.20	0.000	0.000	0.000
1589	15.89	15.90	0.01	15.89	3.22	92.21	0.20	0.000	0.000	0.000
1590	15.90	15.91	0.01	15.90	3.22	93.54	0.20	0.000	0.000	0.000
1591	15.91	15.92	0.01	15.91	3.22	94.32	0.19	0.000	0.000	0.000
1592	15.92	15.93	0.01	15.93	3.21	94.24	0.19	0.000	0.000	0.000
1593	15.93	15.94	0.01	15.94	3.21	93.98	0.19	0.000	0.000	0.000
1594	15.94	15.95	0.01	15.95	3.21	93.74	0.19	0.000	0.000	0.000
1595	15.95	15.96	0.01	15.96	3.21	93.97	0.19	0.000	0.000	0.000
1596	15.96	15.97	0.01	15.96	3.20	97.12	0.19	0.000	0.000	0.000
1597	15.97	15.98	0.01	15.97	3.20	101.49	0.19	0.000	0.000	0.000
1598	15.98	15.99	0.01	15.98	3.20	106.33	0.19	0.000	0.000	0.000
1599	15.99	16.00	0.01	15.99	3.20	109.15	0.19	0.000	0.000	0.000

Total primary settlement: 12.94
Total secondary settlement: 1.05

Total calculated settlement: 13.99

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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Level 3, 3 Osterley Way
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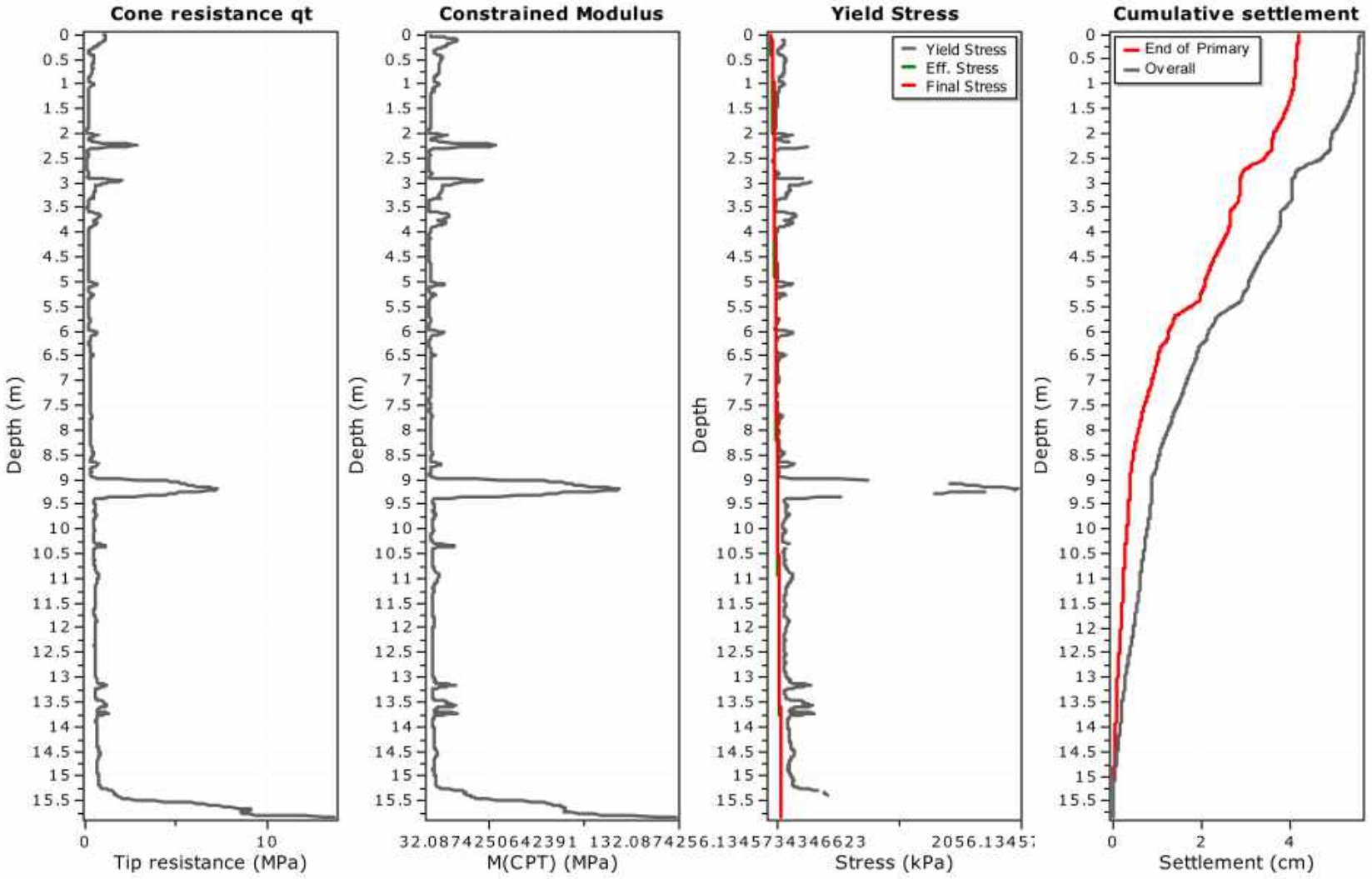
CPT: CPT415A
Total depth: 15.83 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 5.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1565	15.65	15.66	0.01	15.65	1.09	72.12	0.20	0.000	0.000	0.000
1566	15.66	15.67	0.01	15.66	1.09	72.54	0.20	0.000	0.000	0.000
1567	15.67	15.68	0.01	15.68	1.09	72.49	0.20	0.000	0.000	0.000
1568	15.68	15.69	0.01	15.69	1.09	71.92	0.20	0.000	0.000	0.000
1569	15.69	15.70	0.01	15.70	1.09	71.69	0.20	0.000	0.000	0.000
1570	15.70	15.71	0.01	15.71	1.09	71.70	0.20	0.000	0.000	0.000
1571	15.71	15.72	0.01	15.71	1.09	71.79	0.20	0.000	0.000	0.000
1572	15.72	15.73	0.01	15.72	1.09	71.77	0.20	0.000	0.000	0.000
1573	15.73	15.74	0.01	15.73	1.09	72.11	0.20	0.000	0.000	0.000
1574	15.74	15.75	0.01	15.74	1.08	74.81	0.20	0.000	0.000	0.000
1575	15.75	15.76	0.01	15.76	1.08	79.11	0.20	0.000	0.000	0.000
1576	15.76	15.77	0.01	15.77	1.08	83.79	0.20	0.000	0.000	0.000
1577	15.77	15.78	0.01	15.78	1.08	87.50	0.20	0.000	0.000	0.000
1578	15.78	15.79	0.01	15.79	1.08	91.03	0.20	0.000	0.000	0.000
1579	15.79	15.80	0.01	15.79	1.08	95.37	0.20	0.000	0.000	0.000
1580	15.80	15.81	0.01	15.80	1.08	100.63	0.20	0.000	0.000	0.000
1581	15.81	15.82	0.01	15.81	1.08	106.93	0.20	0.000	0.000	0.000
1582	15.82	15.83	0.01	15.82	1.08	120.03	0.20	0.000	0.000	0.000

Total primary settlement: 4.19
Total secondary settlement: 1.38

Total calculated settlement: 5.56

Abbreviations

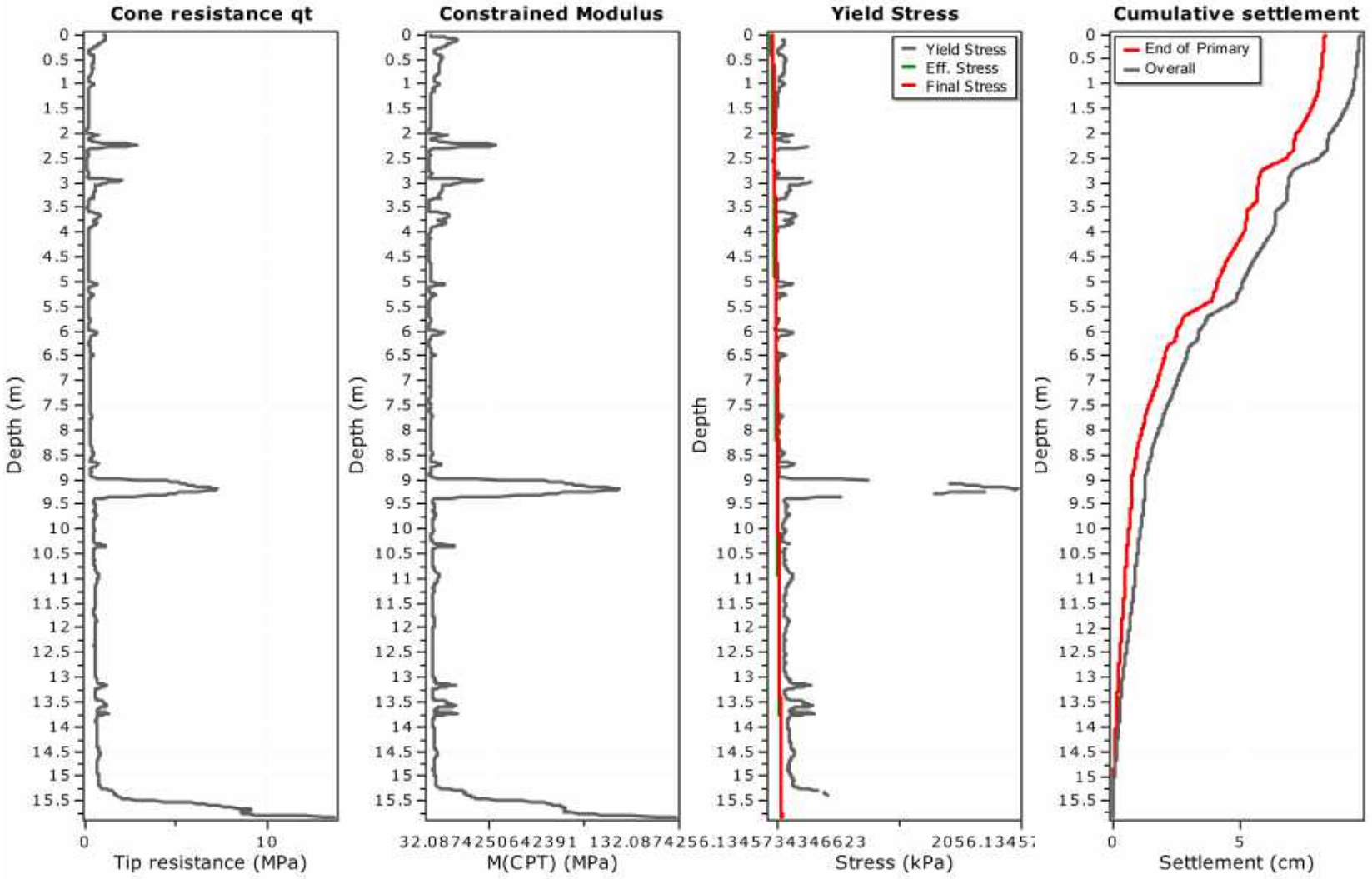
Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

Lander Geotechnical Consultants Limited
Level 3, 3 Osterley Way
P O Box 97 385, Manukau, Auckland 2241
www.landergeotechnical.co.nz

CPT: CPT415A
Total depth: 15.83 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 11.00 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1565	15.65	15.66	0.01	15.65	2.18	72.12	0.20	0.000	0.000	0.000
1566	15.66	15.67	0.01	15.66	2.18	72.54	0.20	0.000	0.000	0.000
1567	15.67	15.68	0.01	15.68	2.18	72.49	0.20	0.000	0.000	0.000
1568	15.68	15.69	0.01	15.69	2.18	71.92	0.20	0.000	0.000	0.000
1569	15.69	15.70	0.01	15.70	2.18	71.69	0.20	0.000	0.000	0.000
1570	15.70	15.71	0.01	15.71	2.18	71.70	0.20	0.000	0.000	0.000
1571	15.71	15.72	0.01	15.71	2.17	71.79	0.20	0.000	0.000	0.000
1572	15.72	15.73	0.01	15.72	2.17	71.77	0.20	0.000	0.000	0.000
1573	15.73	15.74	0.01	15.73	2.17	72.11	0.20	0.000	0.000	0.000
1574	15.74	15.75	0.01	15.74	2.17	74.81	0.20	0.000	0.000	0.000
1575	15.75	15.76	0.01	15.76	2.17	79.11	0.20	0.000	0.000	0.000
1576	15.76	15.77	0.01	15.77	2.17	83.79	0.20	0.000	0.000	0.000
1577	15.77	15.78	0.01	15.78	2.17	87.50	0.20	0.000	0.000	0.000
1578	15.78	15.79	0.01	15.79	2.16	91.03	0.20	0.000	0.000	0.000
1579	15.79	15.80	0.01	15.79	2.16	95.37	0.20	0.000	0.000	0.000
1580	15.80	15.81	0.01	15.80	2.16	100.63	0.20	0.000	0.000	0.000
1581	15.81	15.82	0.01	15.81	2.16	106.93	0.20	0.000	0.000	0.000
1582	15.82	15.83	0.01	15.82	2.16	120.03	0.20	0.000	0.000	0.000

Total primary settlement: 8.38
Total secondary settlement: 1.38

Total calculated settlement: 9.75

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

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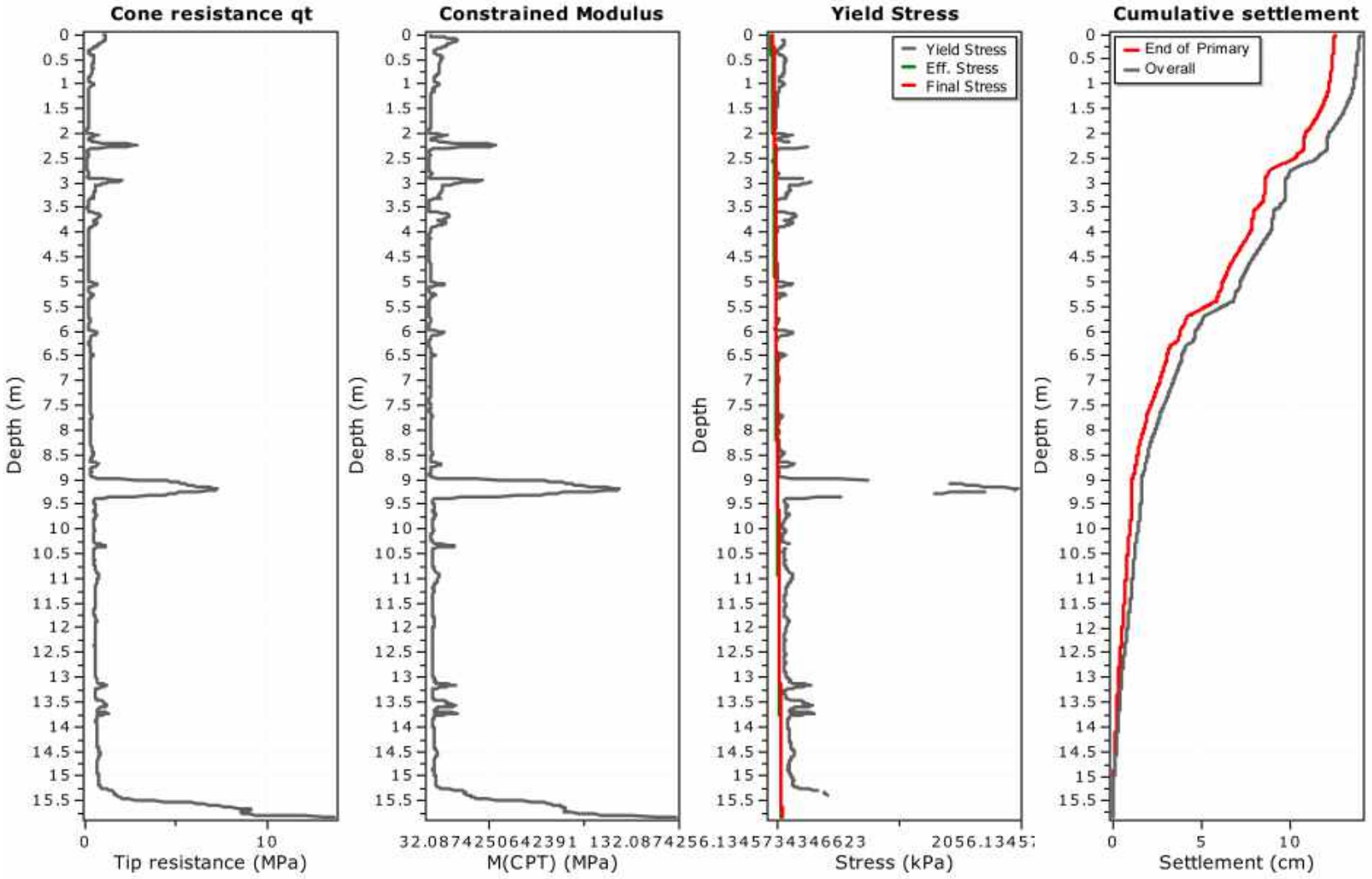
P O Box 97 385, Manukau, Auckland 2241
www.landergeotechnical.co.nz

CPT: CPT415A
Total depth: 15.83 m, Date: 16/02/2023
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

Settlements calculation according to theory of elasticity*



Calculation properties

Footing type: Rectangular
Footing width: 10.00 (m)
L/B: 2.0
Footing pressure: 16.50 (kPa)
Embedment depth: 0.00 (m)
Footing is rigid: Yes
Remove excavation load: Yes
Apply 20% rule: No
Calculate secondary settlements: Yes
Time period for primary consolidation: 6 months
Time period for second. settlements: 12 months

* Primary settlement calculation is performed according to the following formula:

$$S = \sum \frac{\Delta\sigma_v}{M_{CPT}} \Delta z$$

* Secondary (creep) settlement calculation is performed according to the following formula:

where t_p is the duration of primary consolidation

:: Tabular results ::

Point No	Start depth (m)	End depth (m)	Thickness (m)	Relative depth (m)	Delta P (kPa)	$M_{(CPT)}$ (MPa)	Iz	Settlement (cm)	Second. settlement (cm)	Overall settlement (cm)
1565	15.65	15.66	0.01	15.65	3.28	72.12	0.20	0.000	0.000	0.000
1566	15.66	15.67	0.01	15.66	3.27	72.54	0.20	0.000	0.000	0.000
1567	15.67	15.68	0.01	15.68	3.27	72.49	0.20	0.000	0.000	0.000
1568	15.68	15.69	0.01	15.69	3.27	71.92	0.20	0.000	0.000	0.000
1569	15.69	15.70	0.01	15.70	3.27	71.69	0.20	0.000	0.000	0.000
1570	15.70	15.71	0.01	15.71	3.26	71.70	0.20	0.000	0.000	0.000
1571	15.71	15.72	0.01	15.71	3.26	71.79	0.20	0.000	0.000	0.000
1572	15.72	15.73	0.01	15.72	3.26	71.77	0.20	0.000	0.000	0.000
1573	15.73	15.74	0.01	15.73	3.26	72.11	0.20	0.000	0.000	0.000
1574	15.74	15.75	0.01	15.74	3.25	74.81	0.20	0.000	0.000	0.000
1575	15.75	15.76	0.01	15.76	3.25	79.11	0.20	0.000	0.000	0.000
1576	15.76	15.77	0.01	15.77	3.25	83.79	0.20	0.000	0.000	0.000
1577	15.77	15.78	0.01	15.78	3.25	87.50	0.20	0.000	0.000	0.000
1578	15.78	15.79	0.01	15.79	3.25	91.03	0.20	0.000	0.000	0.000
1579	15.79	15.80	0.01	15.79	3.24	95.37	0.20	0.000	0.000	0.000
1580	15.80	15.81	0.01	15.80	3.24	100.63	0.20	0.000	0.000	0.000
1581	15.81	15.82	0.01	15.81	3.24	106.93	0.20	0.000	0.000	0.000
1582	15.82	15.83	0.01	15.82	3.24	120.03	0.20	0.000	0.000	0.000

Total primary settlement: 12.56
Total secondary settlement: 1.38

Total calculated settlement: 13.94

Abbreviations

Start depth:	Start depth of soil layer (penetration depth measured from ground free surface)
End depth:	End depth of soil layer (penetration depth measured from ground free surface)
Thickness:	Thickness of soil layer
Relative depth:	Depth of calculation relative to footing
Iz:	Stress influence factor
Delta P:	Footing impossed stress:
Eff. stress:	Effective stress
$M_{(CPT)}$:	Constrained modulus from CPT
Settlement:	Primary settlement
Second. settlement:	Secondary settlemends due to creep

APPENDIX 6.3

DMT CONSOLIDATION SETTLEMENT ANALYSIS RESULTS

Settlements Calculation

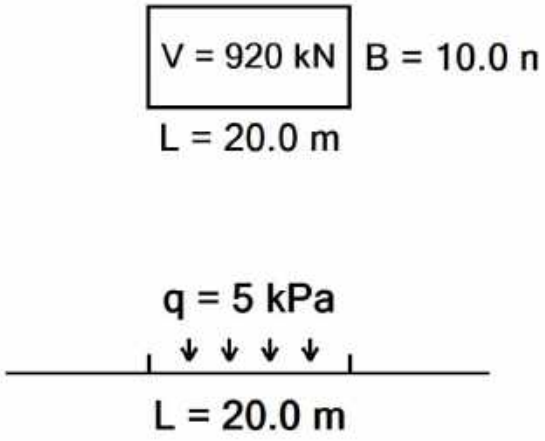
Drill Force NZ

DF21GE034 - DMT01: Case 1

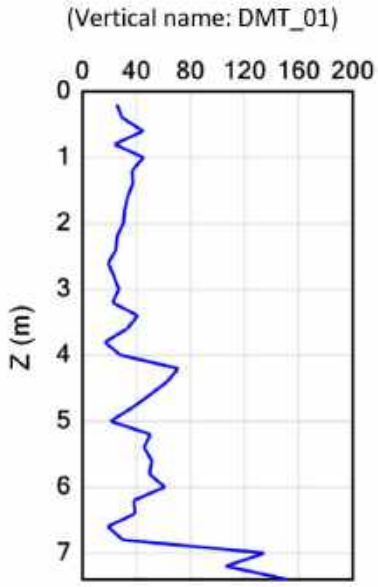
Lander Geotechnical

Hamlin Rd, Ardmore

LOAD DESCRIPTION



CONSTRAINED MODULUS M (MPa)



CALCULATION OPTIONS

Lower limit of Constrained Modulus assigned in the calculation	0.70 MPa
Thickness of calculation layer	0.20 m
End of Calculation	at end of assigned profile

SETTLEMENTS CALCULATION

(one-dimensional conventional method)

$$S = \sum \frac{\Delta\sigma_v}{M} \Delta z$$

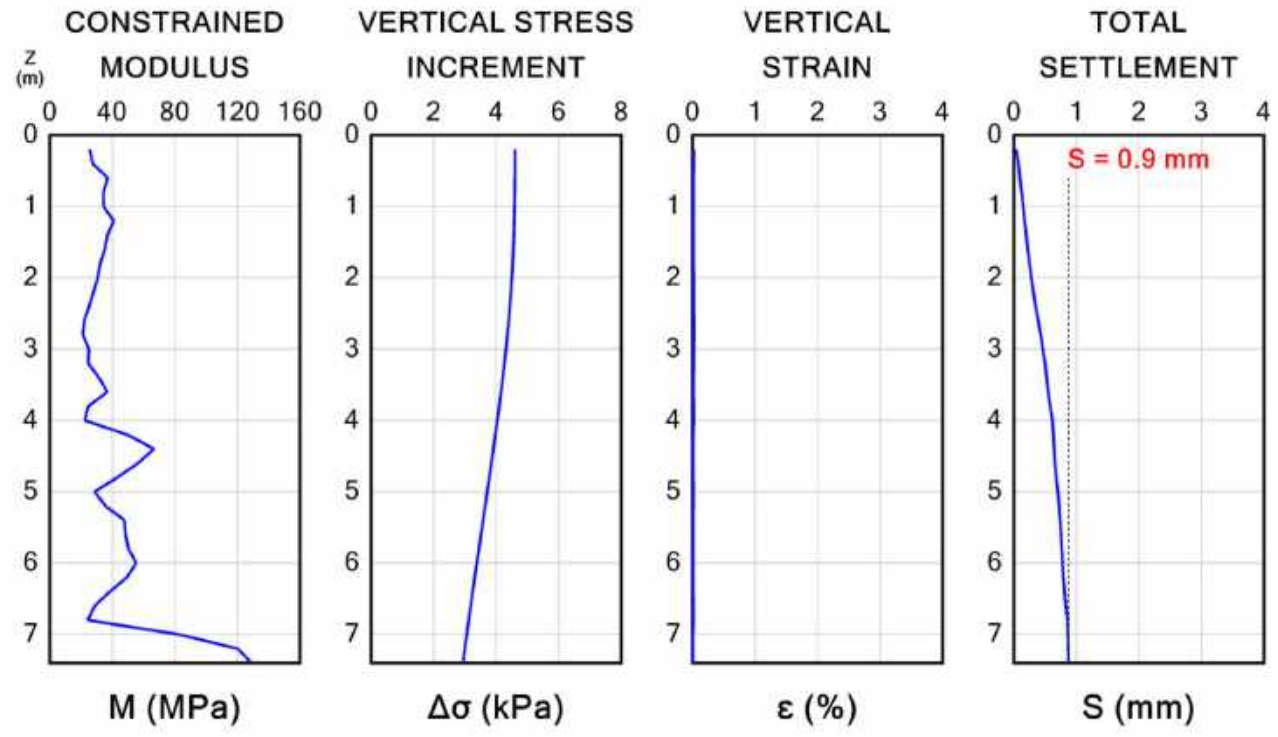
Calculation Point	Settlements [mm]	Z Stop [m]
below the center	0.9	7.40
below the corner	0.2	7.40
below the median point of short side	0.4	7.40
below the median point of long side	0.5	7.40

The calculated settlements are obtained using the interpretation formulae and the calculation method recommended in the TC16 DMT Report(2001). It is the designer's responsability to use alternative procedures if considered preferable.

SETTLEMENTS CALCULATION - below the center

Drill Force NZ — DF21GE034

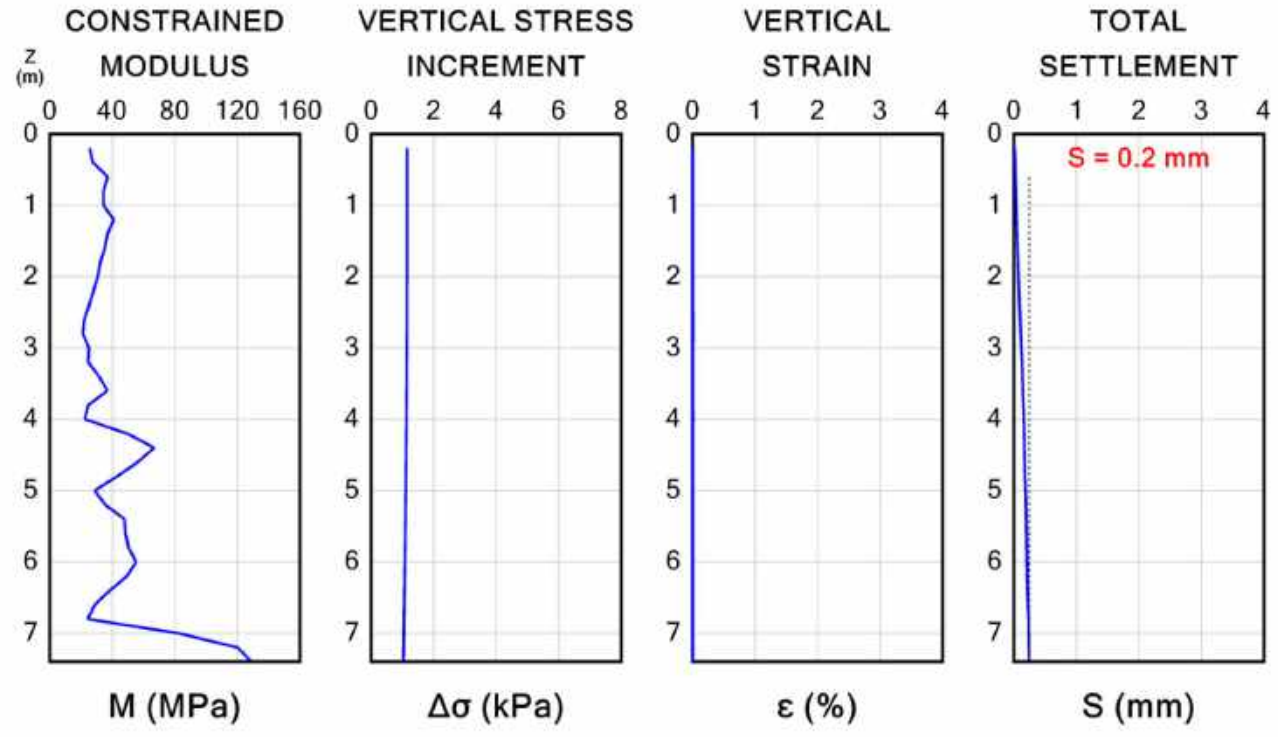
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the corner

Drill Force NZ — DF21GE034

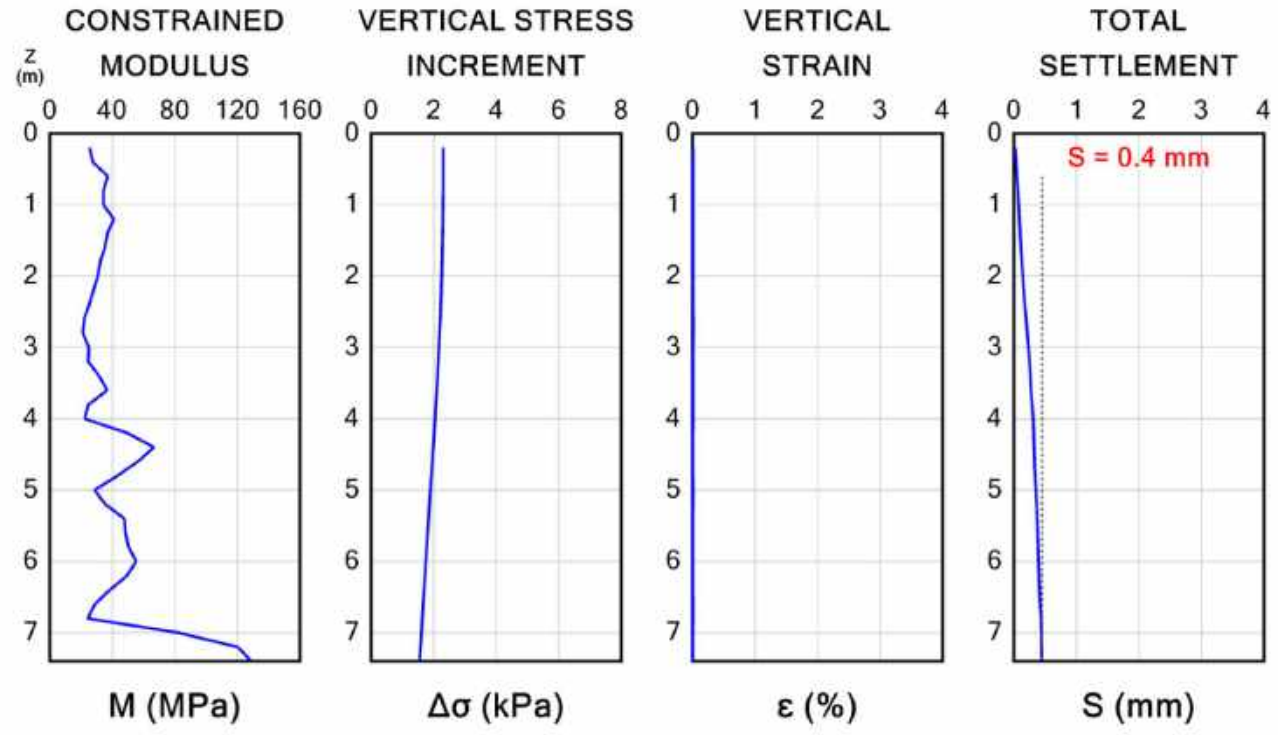
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of short side

Drill Force NZ | DF21GE034

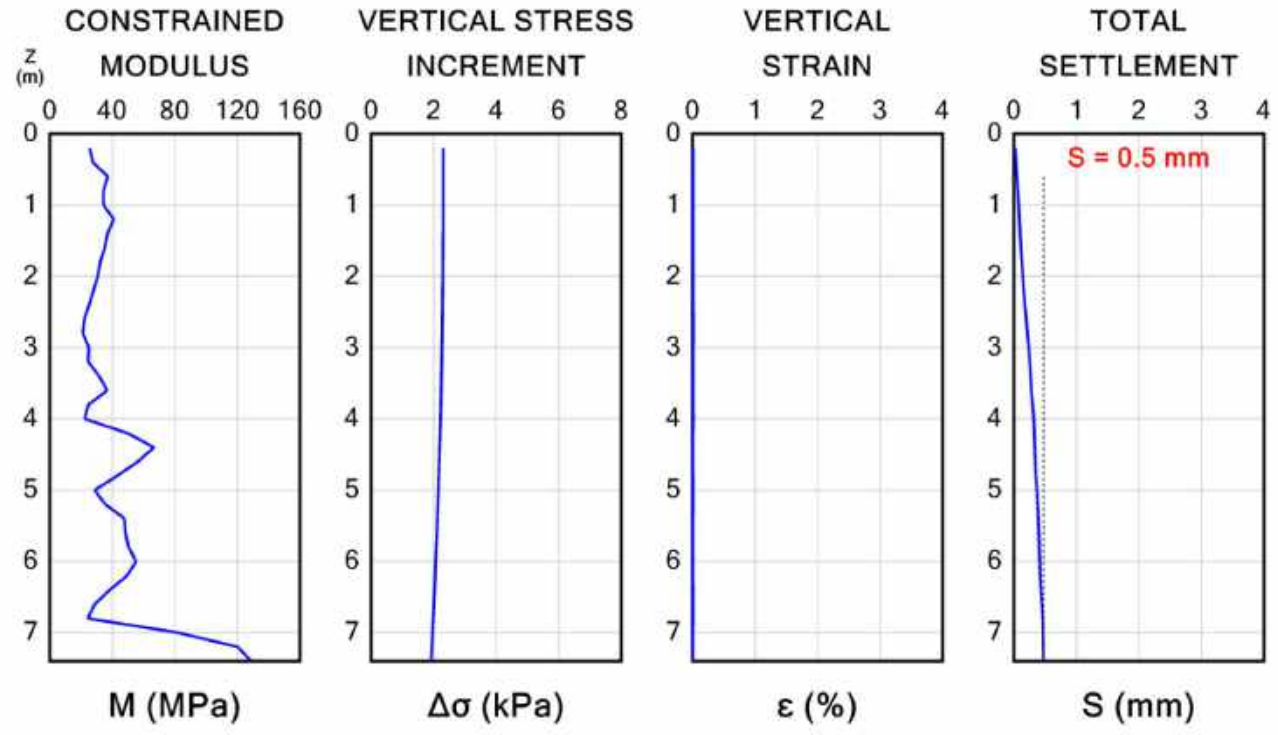
Lander Geotechnical | Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of long side

Drill Force NZ | DF21GE034

Lander Geotechnical | Hamlin Rd, Ardmore



Settlements Calculation

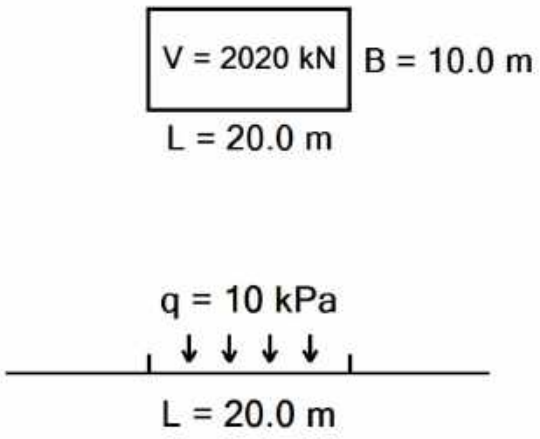
Drill Force NZ

Lander Geotechnical

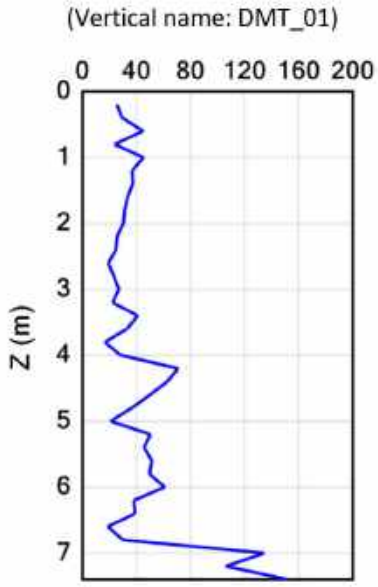
DF21GE034 - DMT01: Case 2

Hamlin Rd, Ardmore

LOAD DESCRIPTION



CONSTRAINED MODULUS M (MPa)



CALCULATION OPTIONS

Lower limit of Constrained Modulus assigned in the calculation	0.70 MPa
Thickness of calculation layer	0.20 m
End of Calculation	at end of assigned profile

SETTLEMENTS CALCULATION

(one-dimensional conventional method)

$$S = \sum \frac{\Delta\sigma_v}{M} \Delta z$$

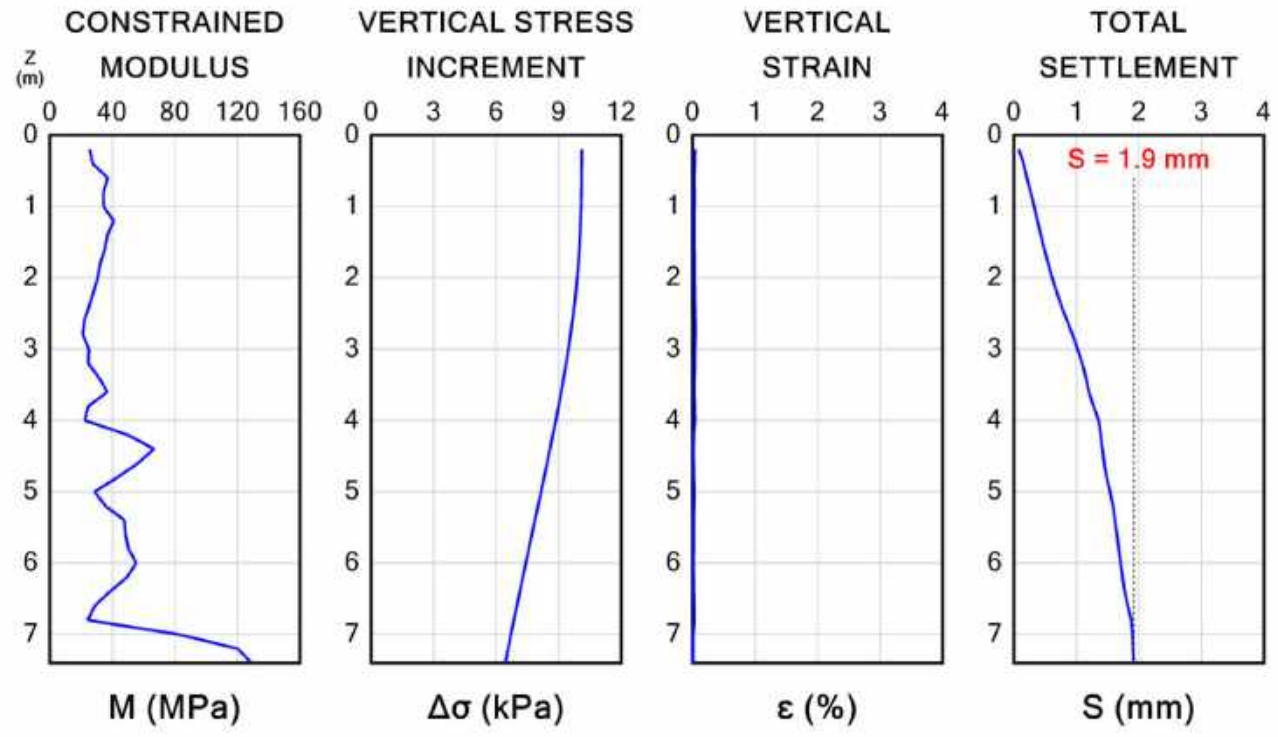
Calculation Point	Settlements [mm]	Z Stop [m]
below the center	1.9	7.40
below the corner	0.5	7.40
below the median point of short side	1.0	7.40
below the median point of long side	1.0	7.40

The calculated settlements are obtained using the interpretation formulae and the calculation method recommended in the TC16 DMT Report(2001). It is the designer's responsability to use alternative procedures if considered preferable.

SETTLEMENTS CALCULATION - below the center

Drill Force NZ — DF21GE034

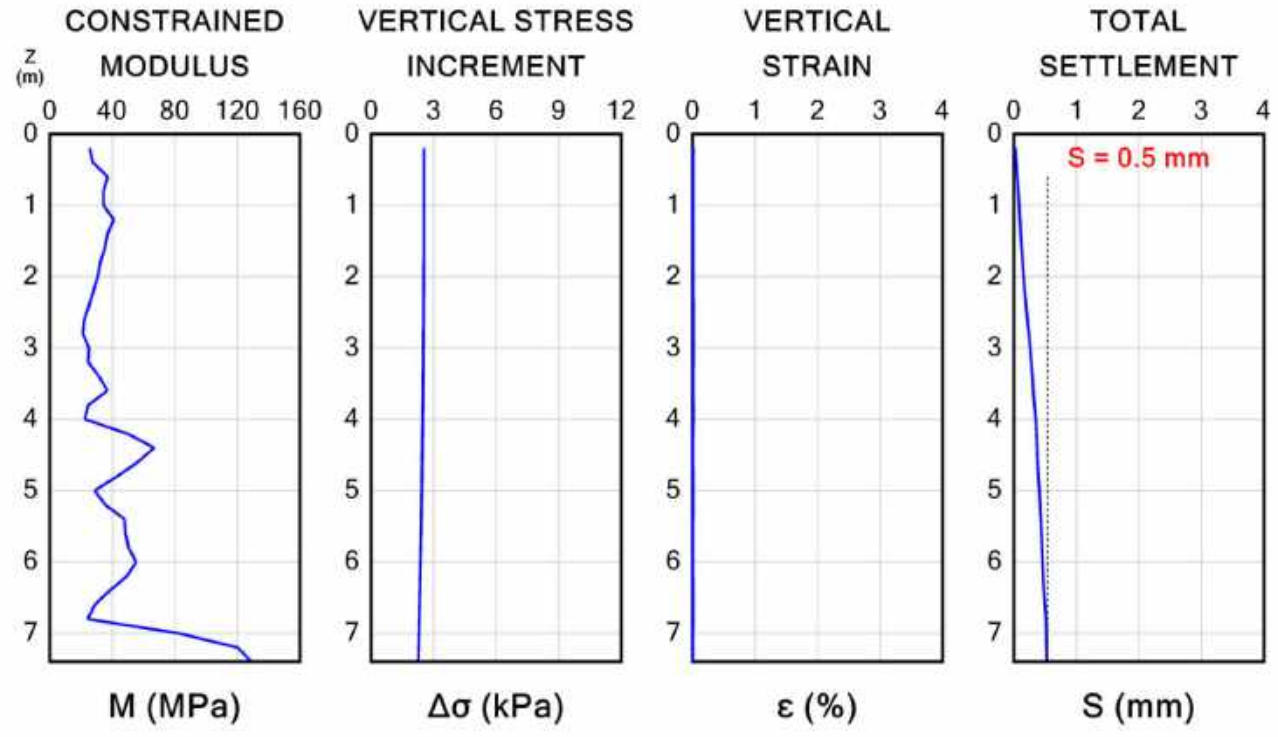
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the corner

Drill Force NZ — DF21GE034

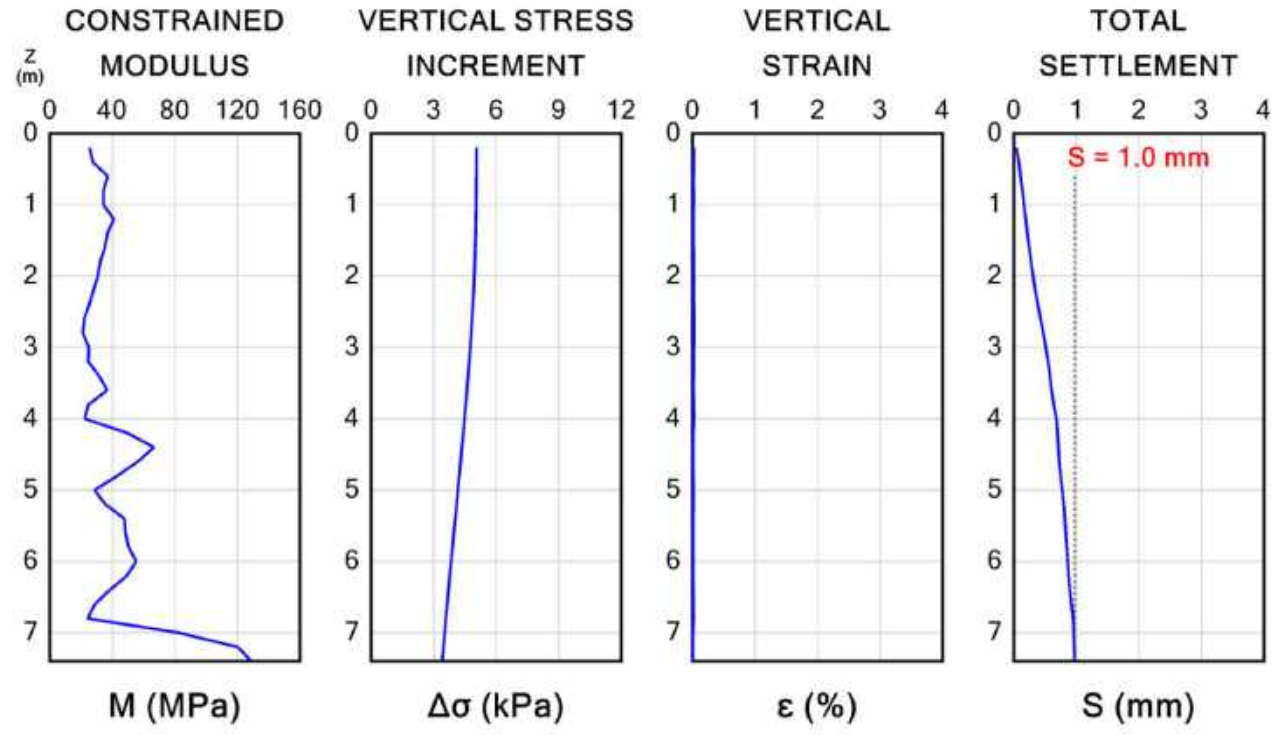
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of short side

Drill Force NZ | DF21GE034

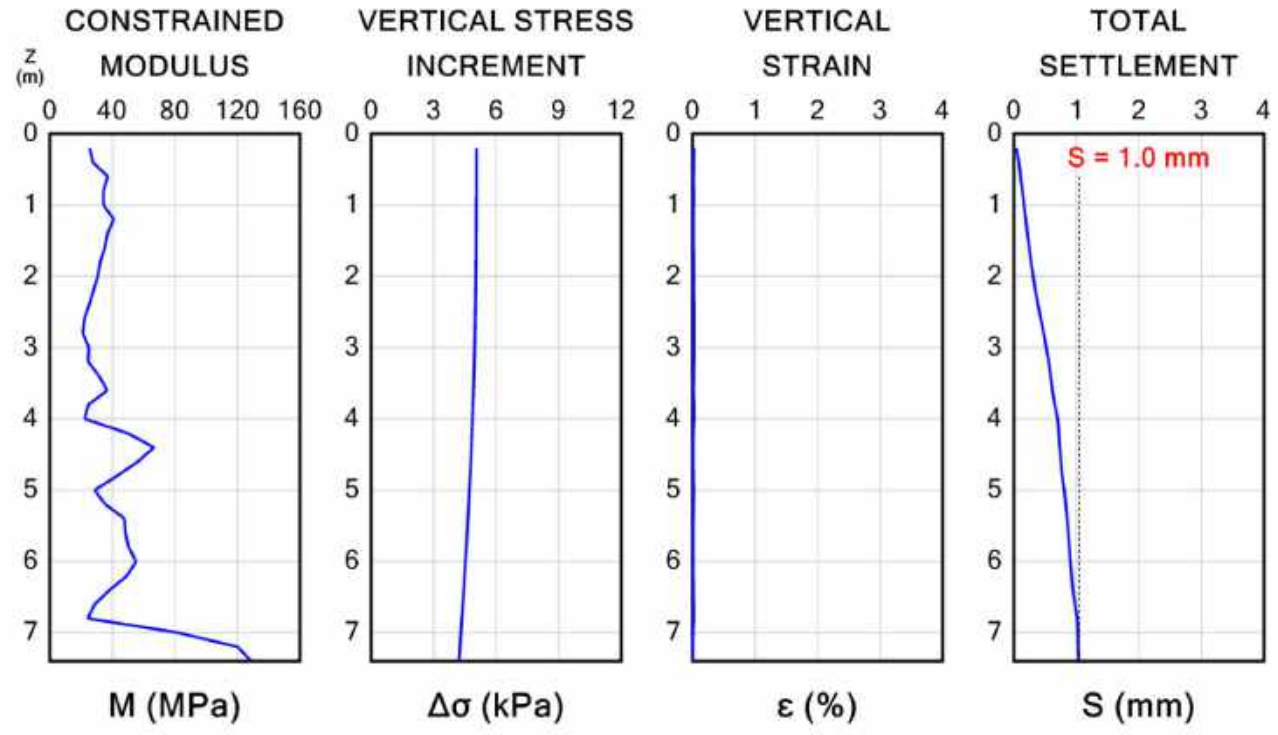
Lander Geotechnical | Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of long side

Drill Force NZ | DF21GE034

Lander Geotechnical | Hamlin Rd, Ardmore



Settlements Calculation

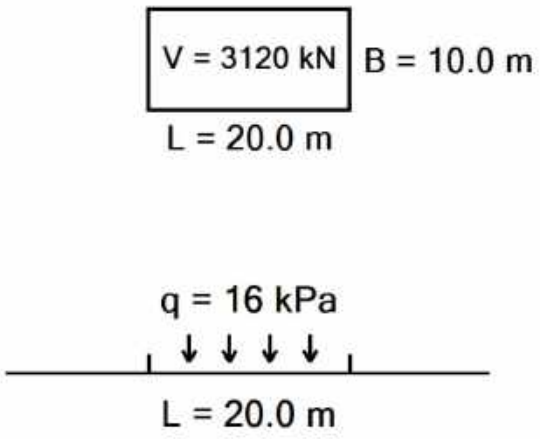
Drill Force NZ

Lander Geotechnical

DF21GE034 - DMT01: Case 3

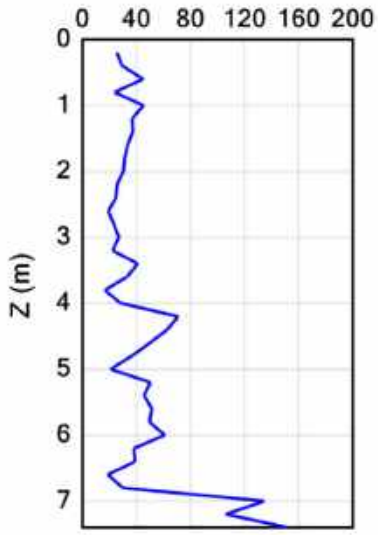
Hamlin Rd, Ardmore

LOAD DESCRIPTION



CONSTRAINED MODULUS M (MPa)

(Vertical name: DMT_01)



CALCULATION OPTIONS

Lower limit of Constrained Modulus assigned in the calculation	0.70 MPa
Thickness of calculation layer	0.20 m
End of Calculation	at end of assigned profile

SETTLEMENTS CALCULATION

(one-dimensional conventional method)

$$S = \sum \frac{\Delta\sigma_v}{M} \Delta z$$

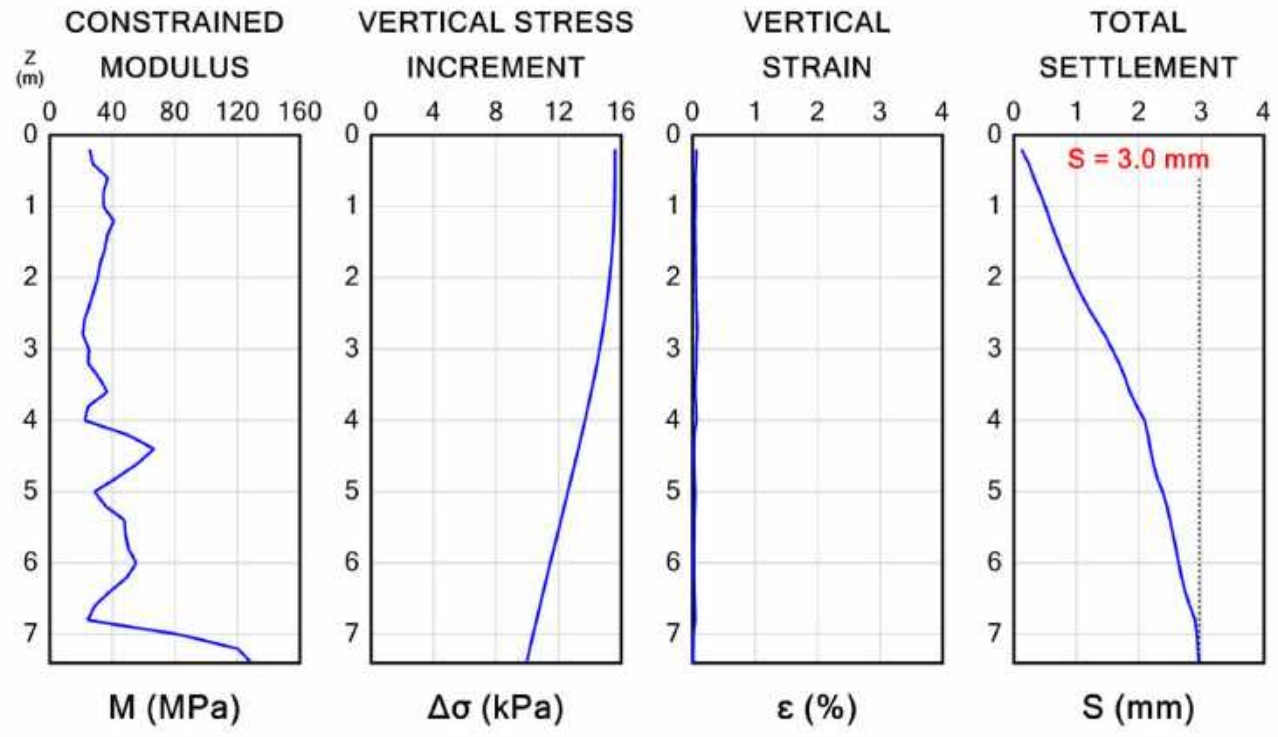
Calculation Point	Settlements [mm]	Z Stop [m]
below the center	3.0	7.40
below the corner	0.8	7.40
below the median point of short side	1.5	7.40
below the median point of long side	1.6	7.40

The calculated settlements are obtained using the interpretation formulae and the calculation method recommended in the TC16 DMT Report(2001). It is the designer's responsability to use alternative procedures if considered preferable.

SETTLEMENTS CALCULATION - below the center

Drill Force NZ — DF21GE034

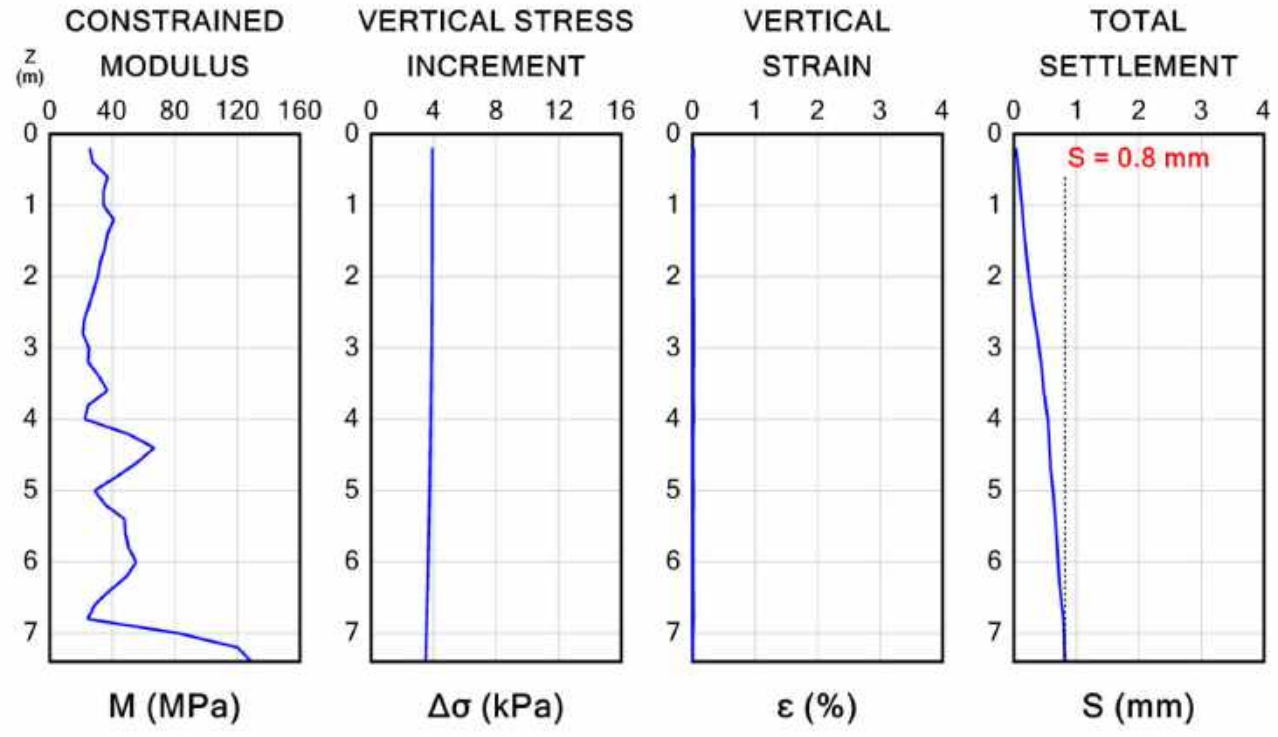
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the corner

Drill Force NZ — DF21GE034

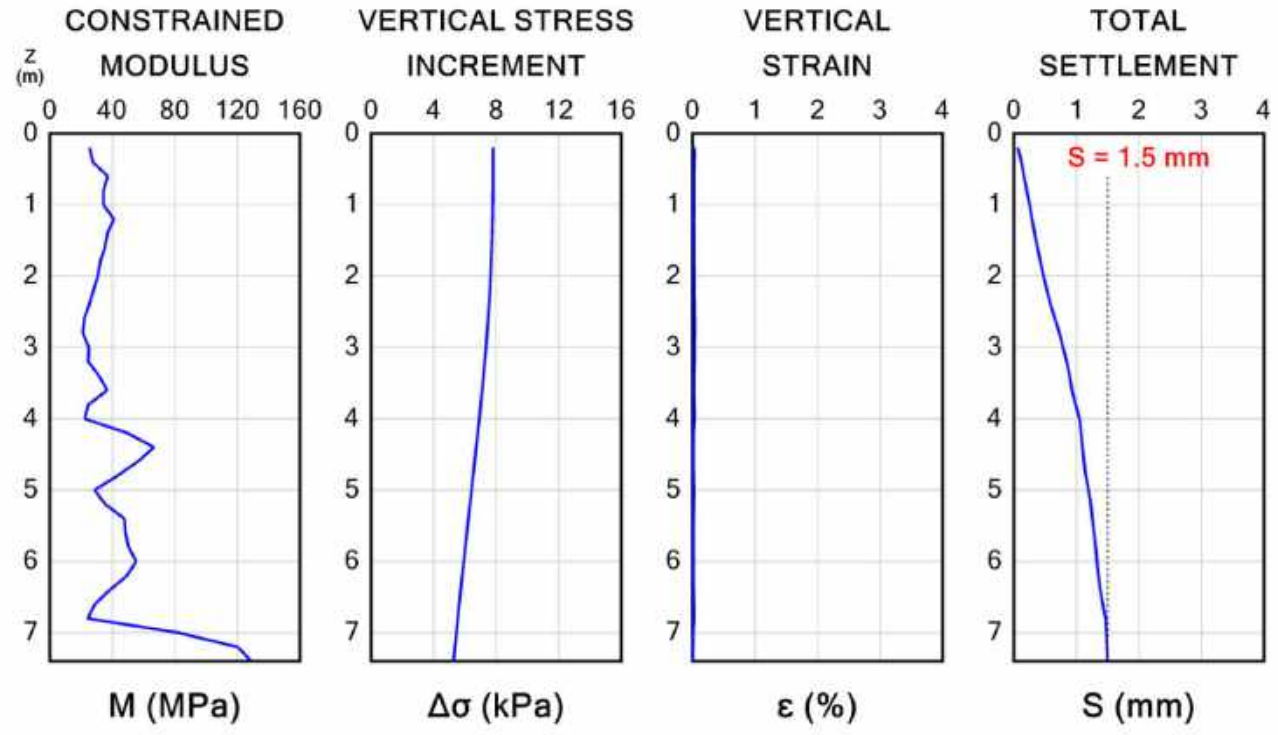
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of short side

Drill Force NZ | DF21GE034

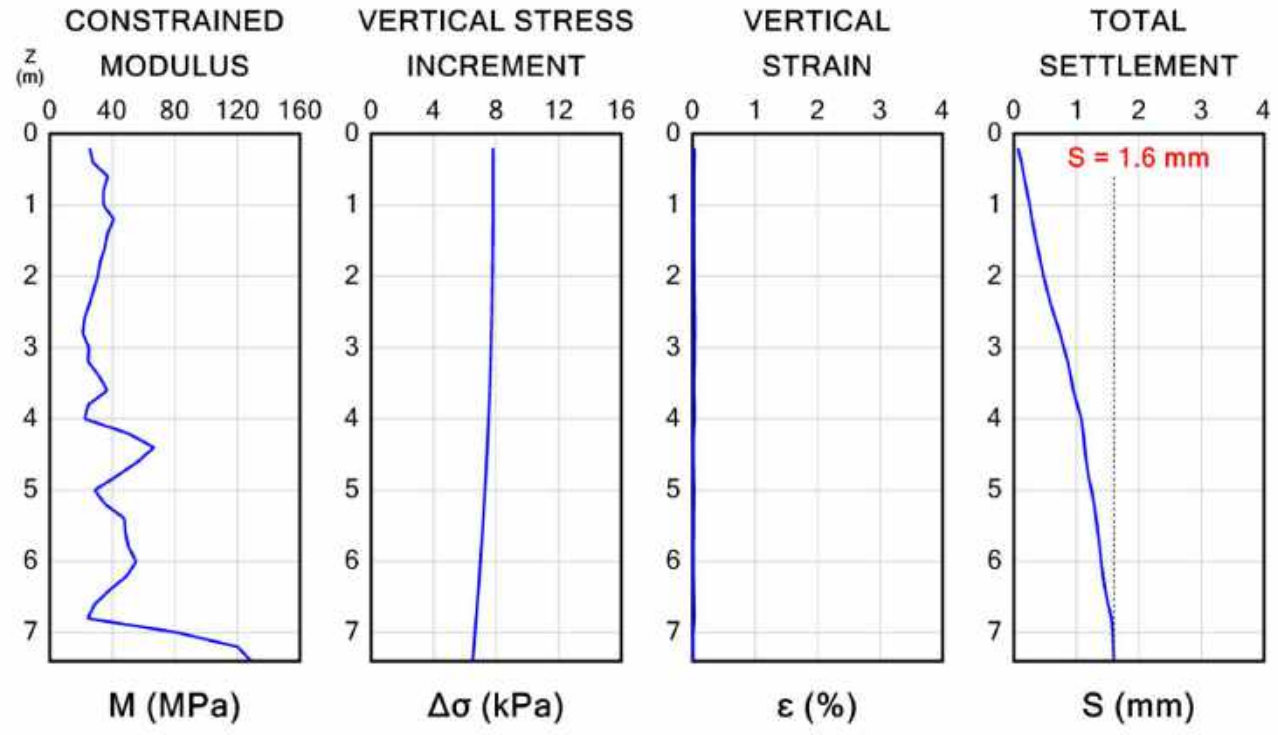
Lander Geotechnical | Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of long side

Drill Force NZ | DF21GE034

Lander Geotechnical | Hamlin Rd, Ardmore



Settlements Calculation

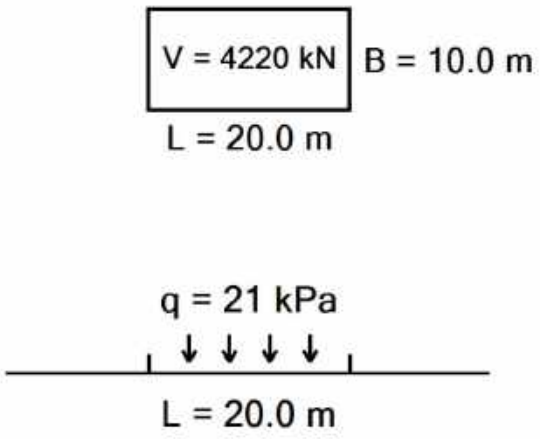
Drill Force NZ

Lander Geotechnical

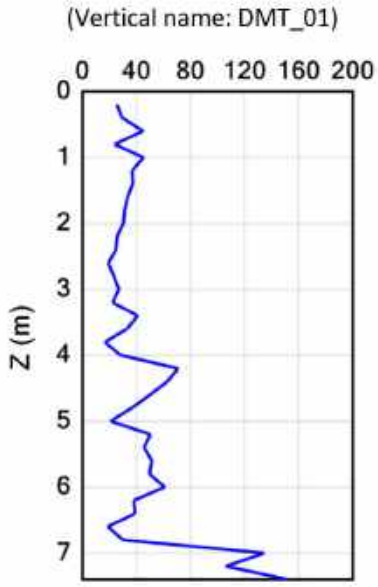
DF21GE034 – DMT01: Case 4

Hamlin Rd, Ardmore

LOAD DESCRIPTION



CONSTRAINED MODULUS M (MPa)



CALCULATION OPTIONS

Lower limit of Constrained Modulus assigned in the calculation	0.70 MPa
Thickness of calculation layer	0.20 m
End of Calculation	at end of assigned profile

SETTLEMENTS CALCULATION

(one-dimensional conventional method)

$$S = \sum \frac{\Delta\sigma_v}{M} \Delta z$$

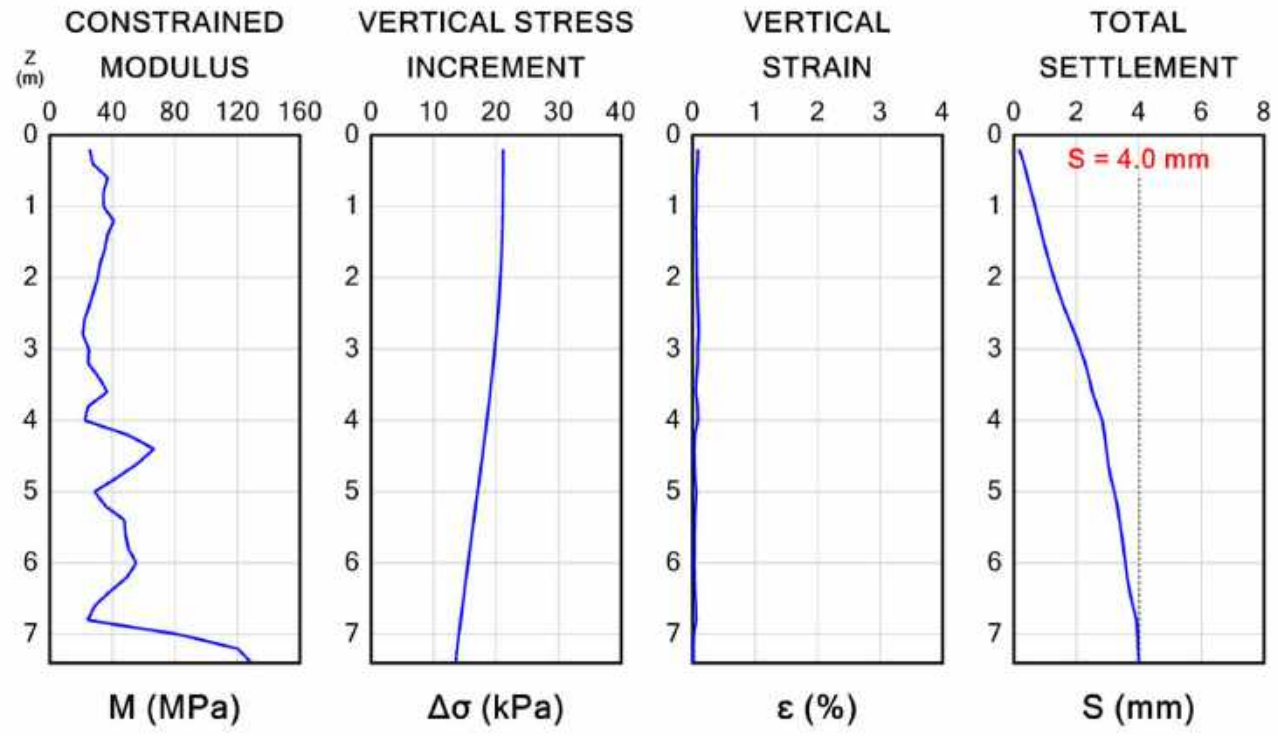
Calculation Point	Settlements [mm]	Z Stop [m]
below the center	4.0	7.40
below the corner	1.1	7.40
below the median point of short side	2.0	7.40
below the median point of long side	2.2	7.40

The calculated settlements are obtained using the interpretation formulae and the calculation method recommended in the TC16 DMT Report(2001). It is the designer's responsability to use alternative procedures if considered preferable.

SETTLEMENTS CALCULATION - below the center

Drill Force NZ — DF21GE034

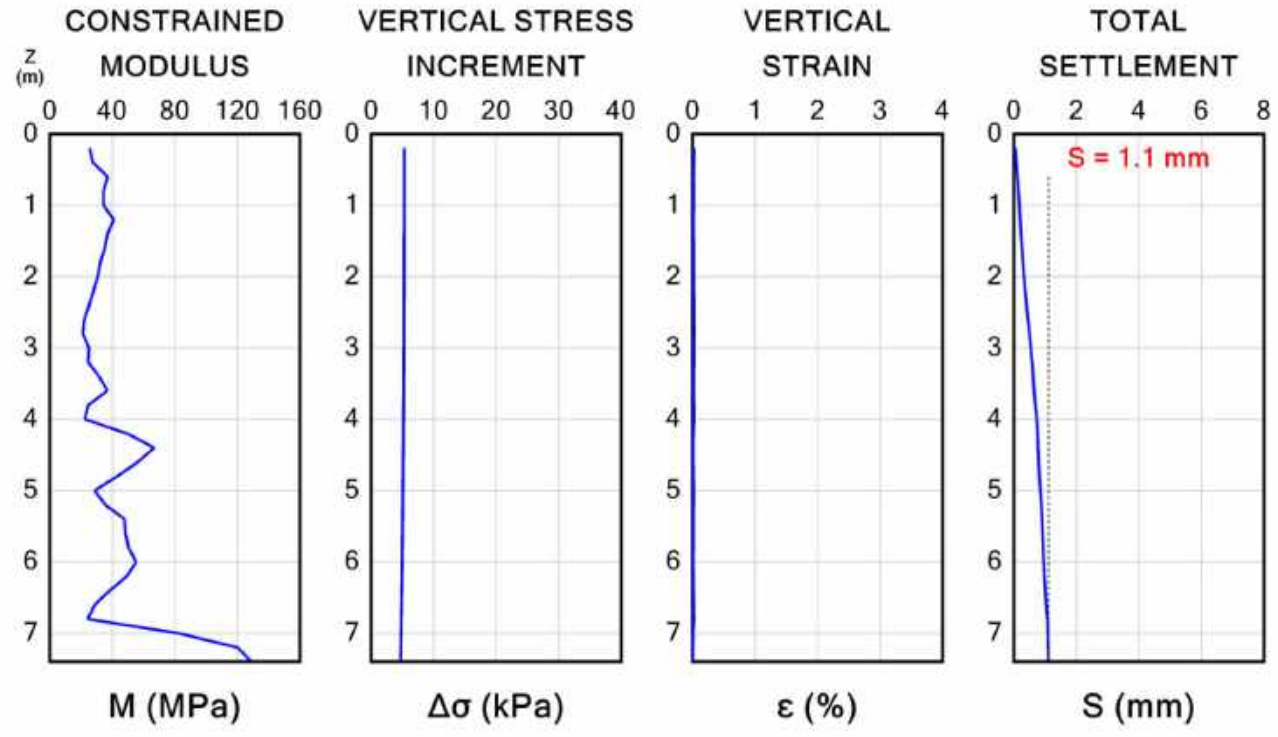
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the corner

Drill Force NZ — DF21GE034

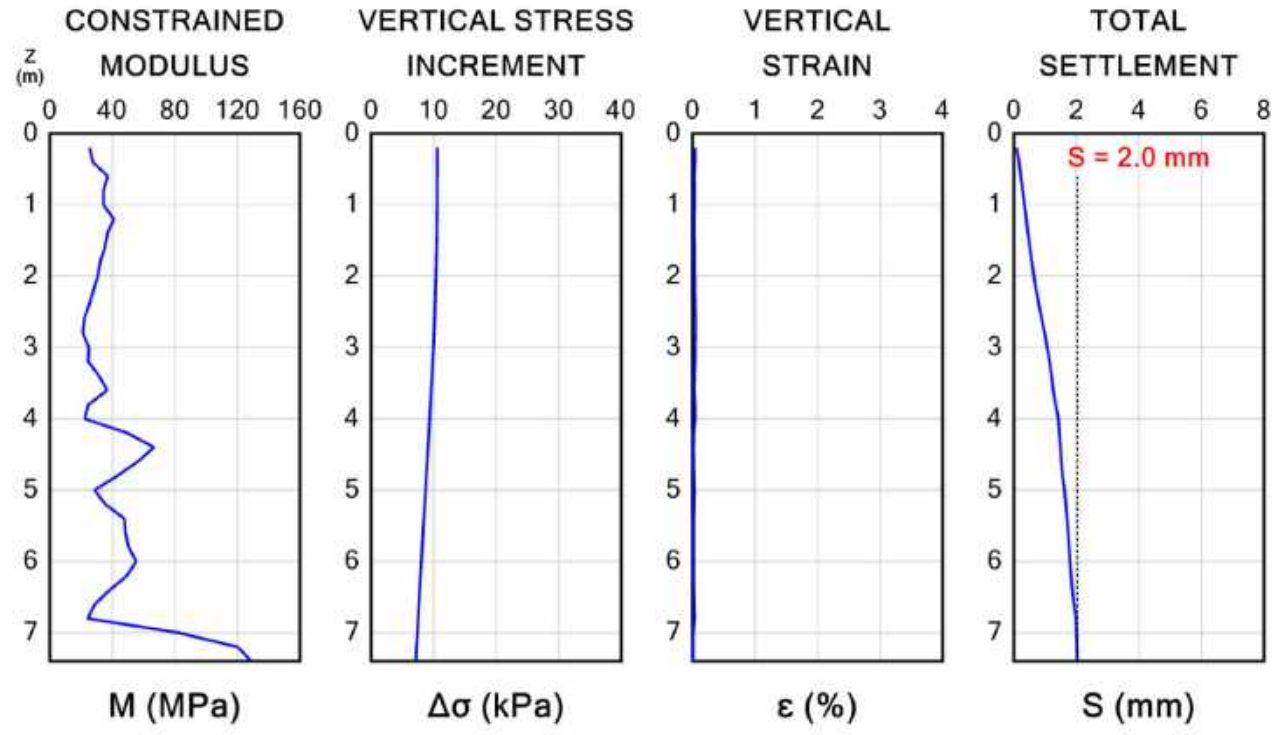
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of short side

Drill Force NZ | DF21GE034

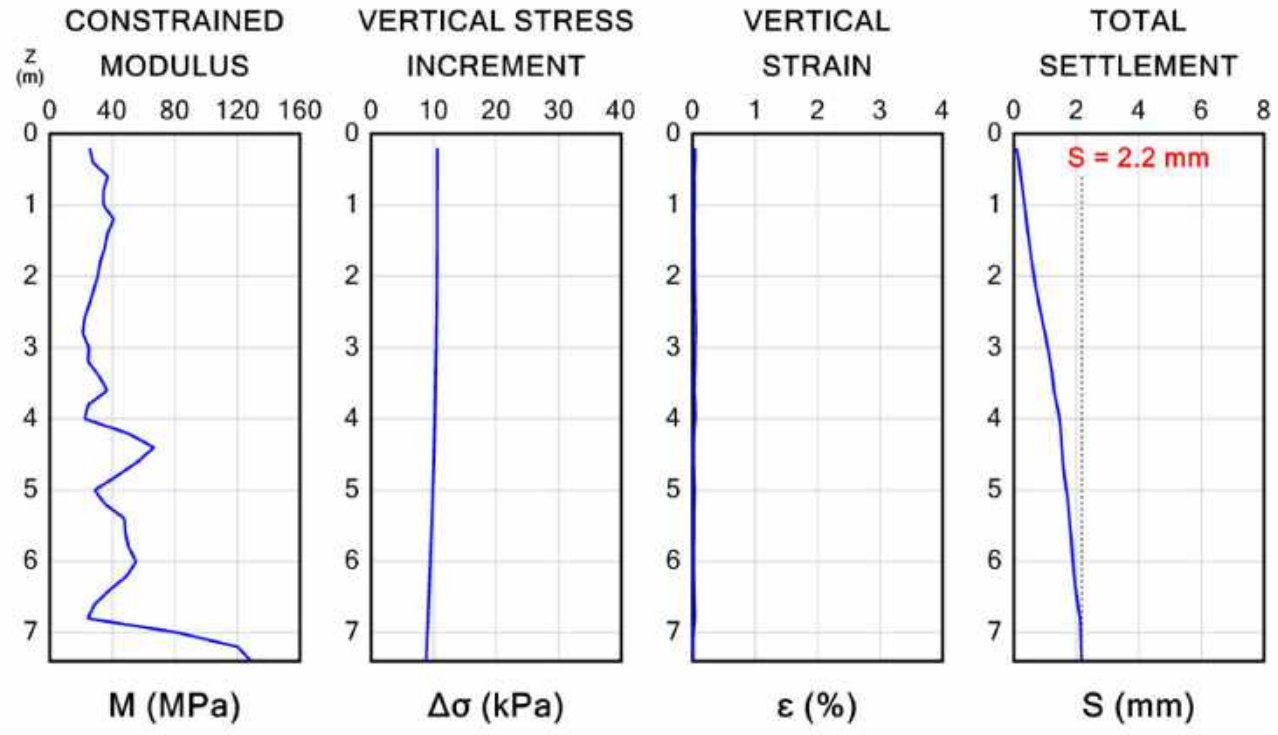
Lander Geotechnical | Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of long side

Drill Force NZ | DF21GE034

Lander Geotechnical | Hamlin Rd, Ardmore



Settlements Calculation

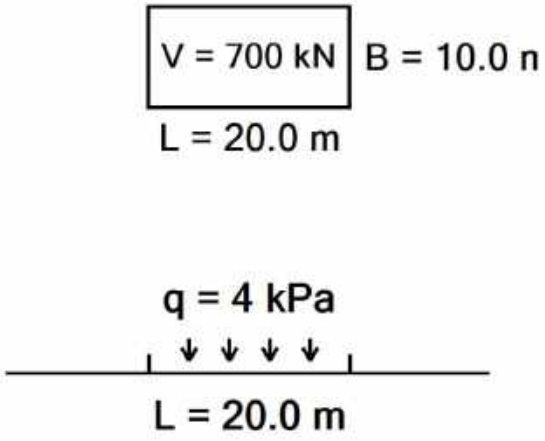
Drill Force NZ

Lander Geotechnical

DF21GE034 - DMT02: Case 1

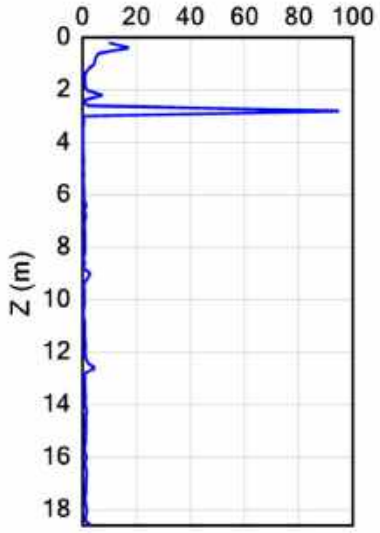
Hamlin Rd, Ardmore

LOAD DESCRIPTION



CONSTRAINED MODULUS M (MPa)

(Vertical name: DMT_02)



CALCULATION OPTIONS

Lower limit of Constrained Modulus assigned in the calculation	0.70 MPa
Thickness of calculation layer	0.20 m
End of Calculation	at end of assigned profile

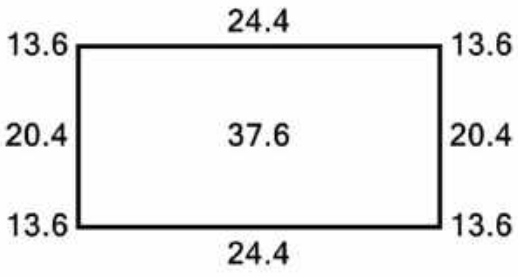
SETTLEMENTS CALCULATION

(one-dimensional conventional method)

$$S = \sum \frac{\Delta\sigma_v}{M} \Delta z$$

Calculation Point	Settlements [mm]	Z Stop [m]
below the center	37.6	18.60
below the corner	13.6	18.60
below the median point of short side	20.4	18.60
below the median point of long side	24.4	18.60

Settlements [mm]

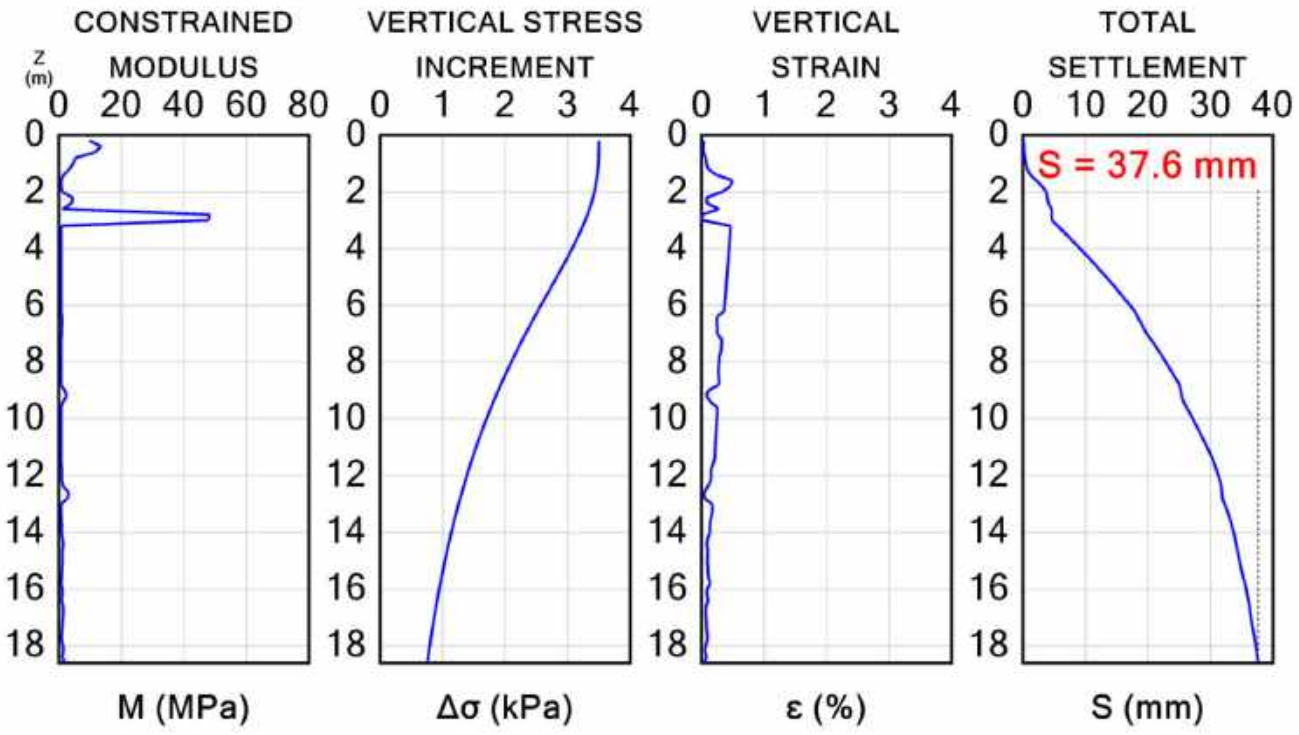


The calculated settlements are obtained using the interpretation formulae and the calculation method recommended in the TC16 DMT Report(2001). It is the designer's responsability to use alternative procedures if considered preferable.

SETTLEMENTS CALCULATION - below the center

Drill Force NZ | DF21GE034

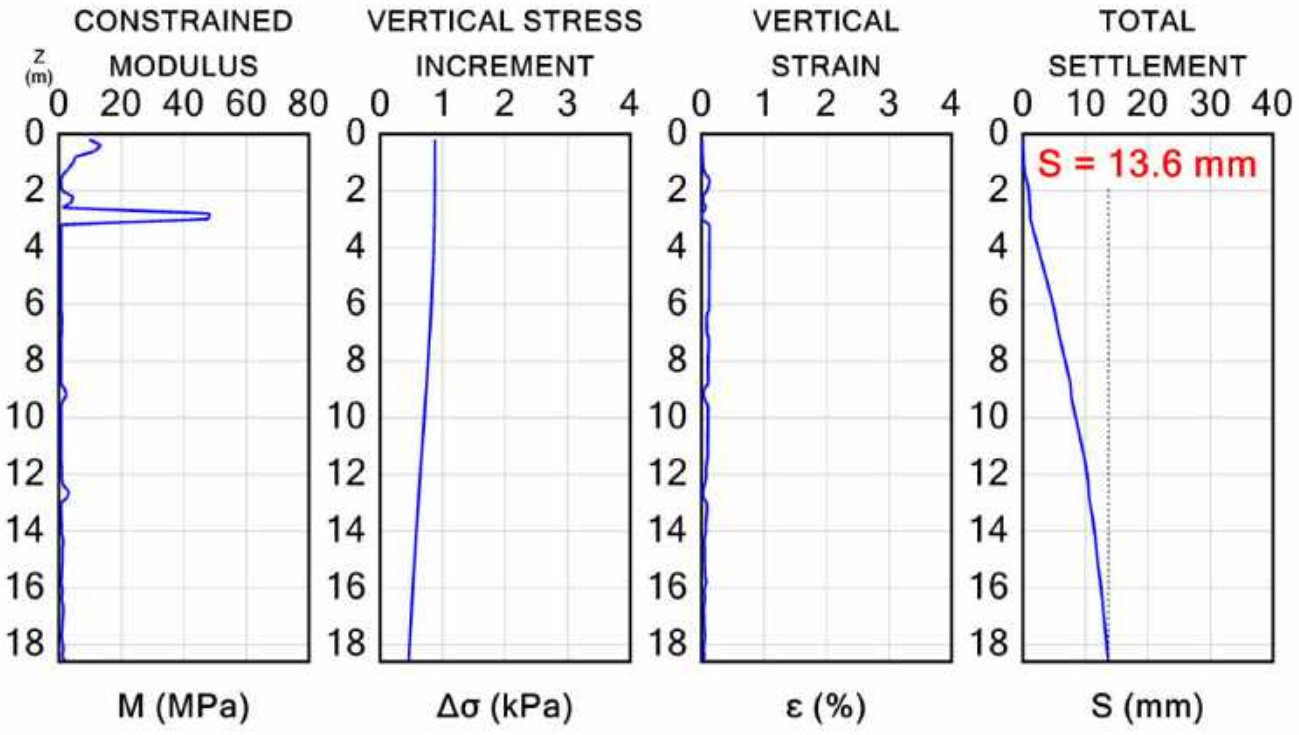
Lander Geotechnical | Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the corner

Drill Force NZ | DF21GE034

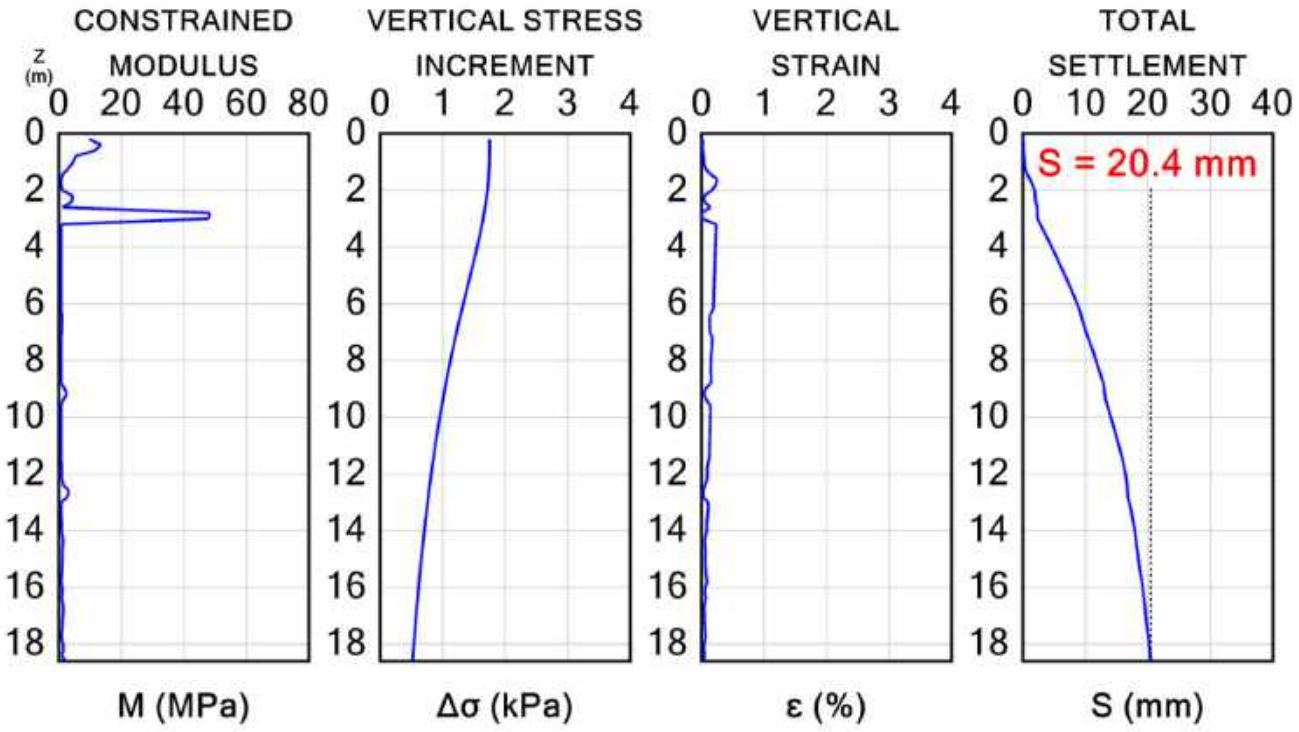
Lander Geotechnical | Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of short side

Drill Force NZ | DF21GE034

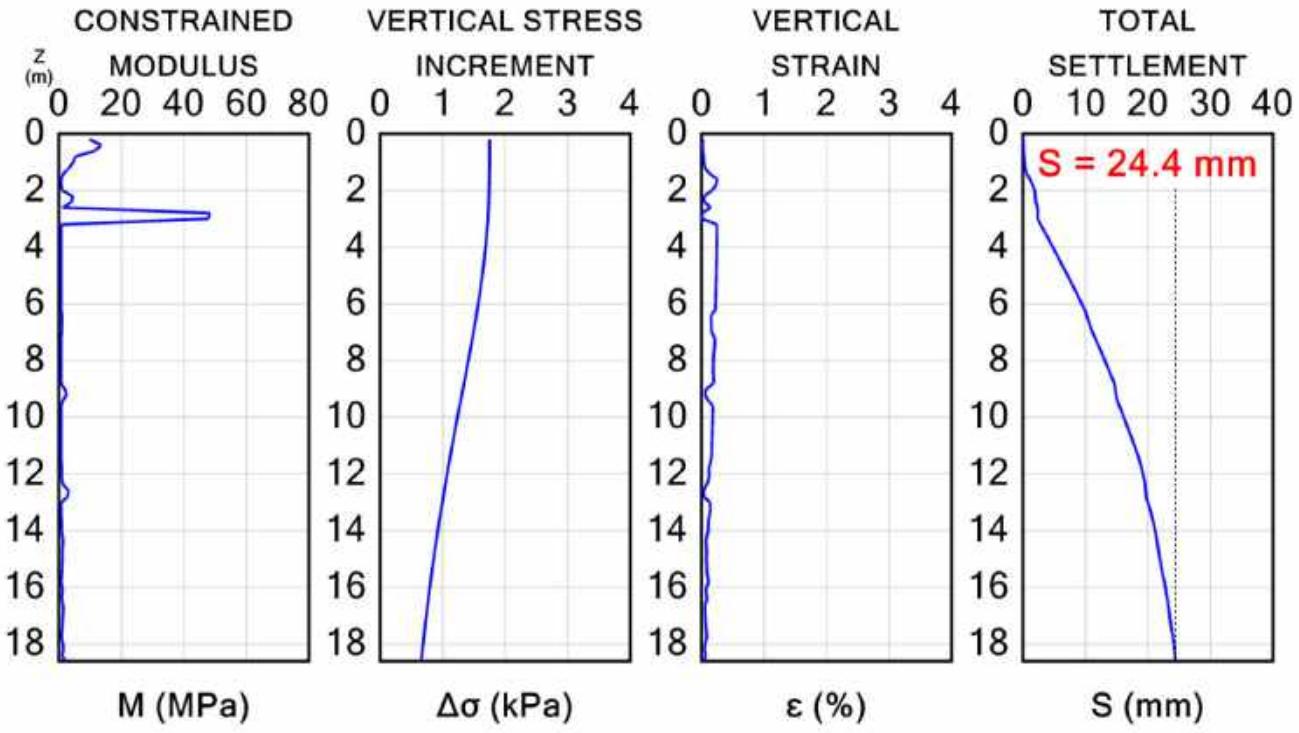
Lander Geotechnical | Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of long side

Drill Force NZ | DF21GE034

Lander Geotechnical | Hamlin Rd, Ardmore



Settlements Calculation

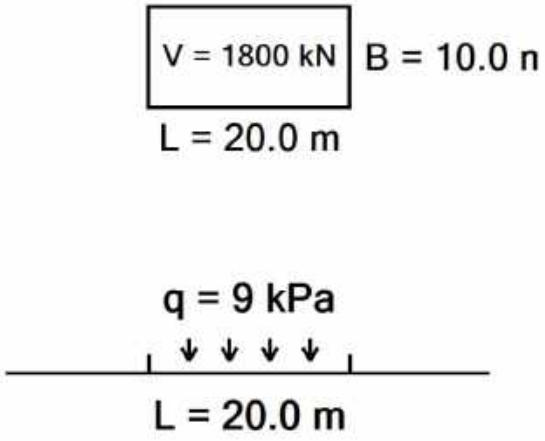
Drill Force NZ

Lander Geotechnical

DF21GE034 - DMT02: Case 2

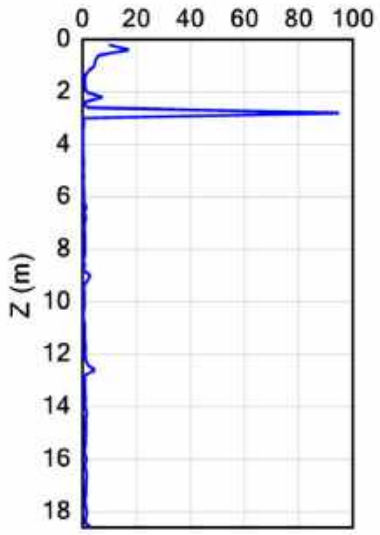
Hamlin Rd, Ardmore

LOAD DESCRIPTION



CONSTRAINED MODULUS M (MPa)

(Vertical name: DMT_02)



CALCULATION OPTIONS

Lower limit of Constrained Modulus assigned in the calculation	0.70 MPa
Thickness of calculation layer	0.20 m
End of Calculation	at end of assigned profile

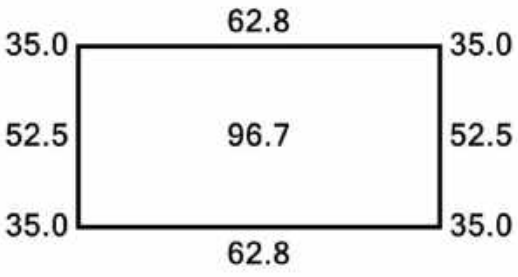
SETTLEMENTS CALCULATION

(one-dimensional conventional method)

$$S = \sum \frac{\Delta\sigma_v}{M} \Delta z$$

Calculation Point	Settlements [mm]	Z Stop [m]
below the center	96.7	18.60
below the corner	35.0	18.60
below the median point of short side	52.5	18.60
below the median point of long side	62.8	18.60

Settlements [mm]

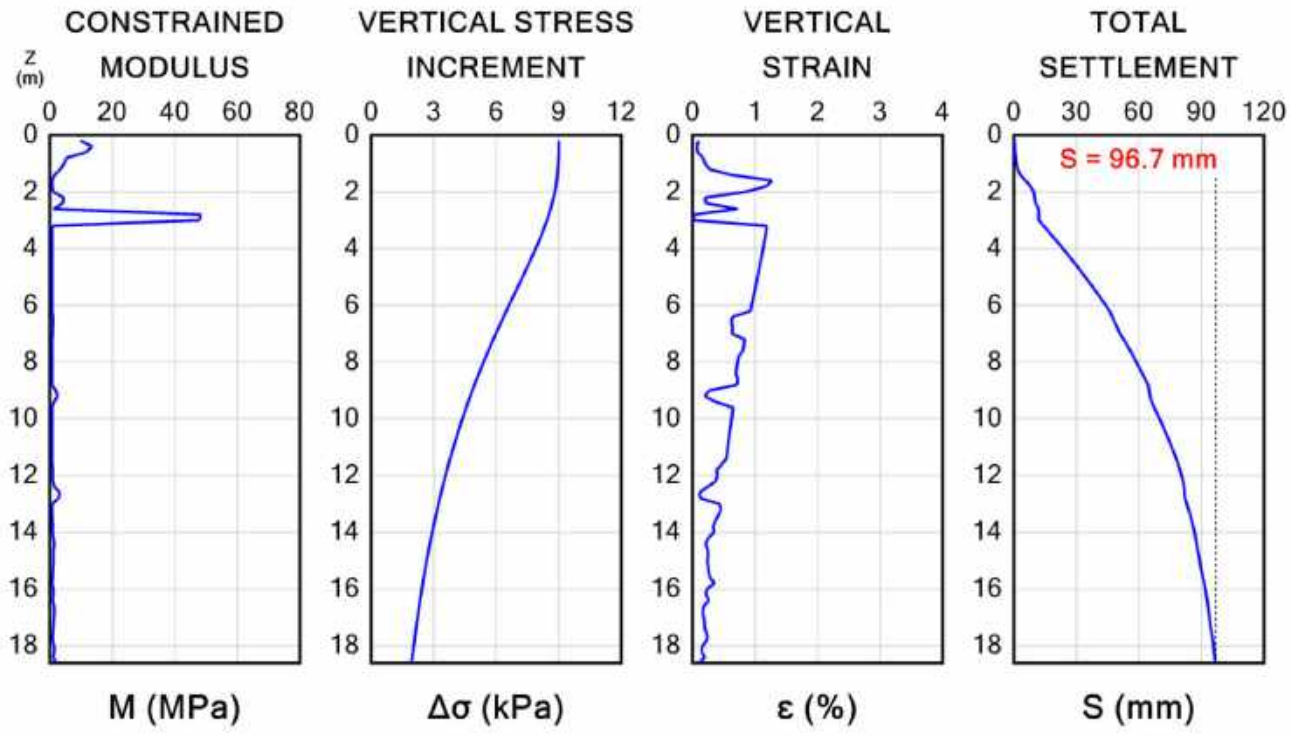


The calculated settlements are obtained using the interpretation formulae and the calculation method recommended in the TC16 DMT Report(2001). It is the designer's responsability to use alternative procedures if considered preferable.

SETTLEMENTS CALCULATION - below the center

Drill Force NZ — DF21GE034

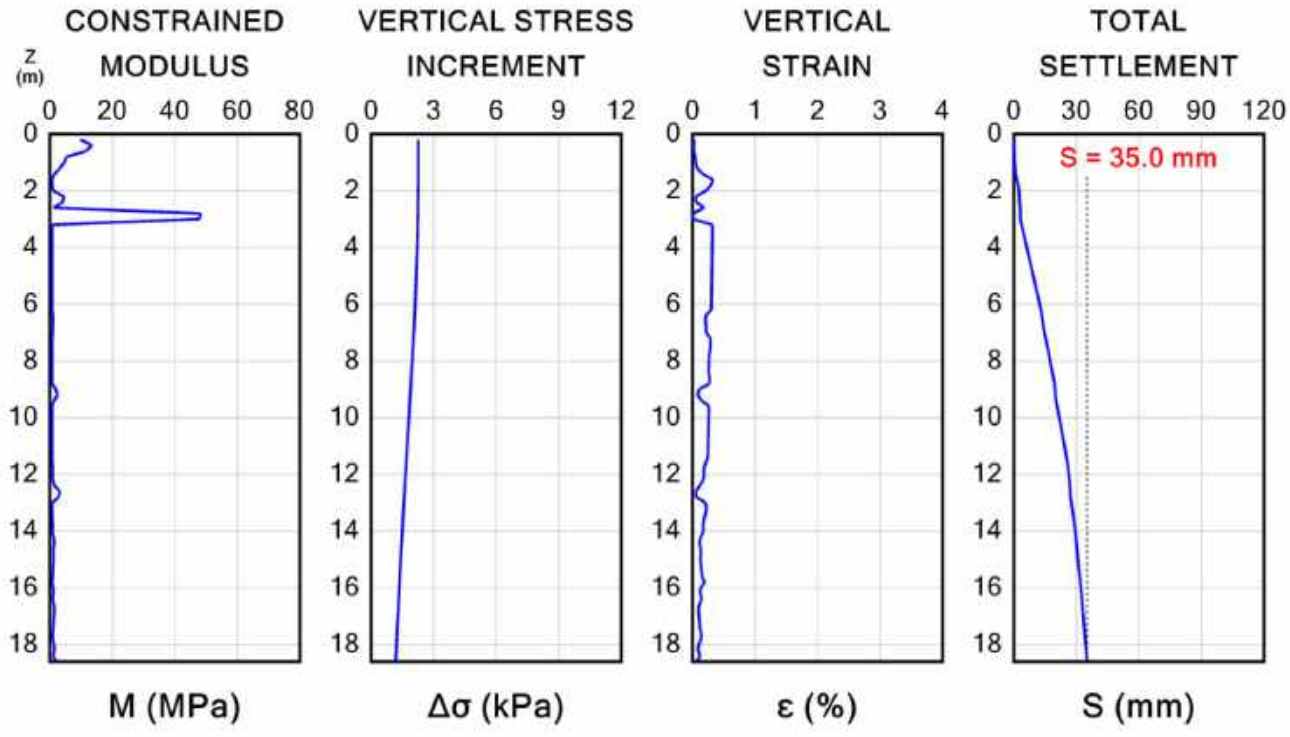
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the corner

Drill Force NZ — DF21GE034

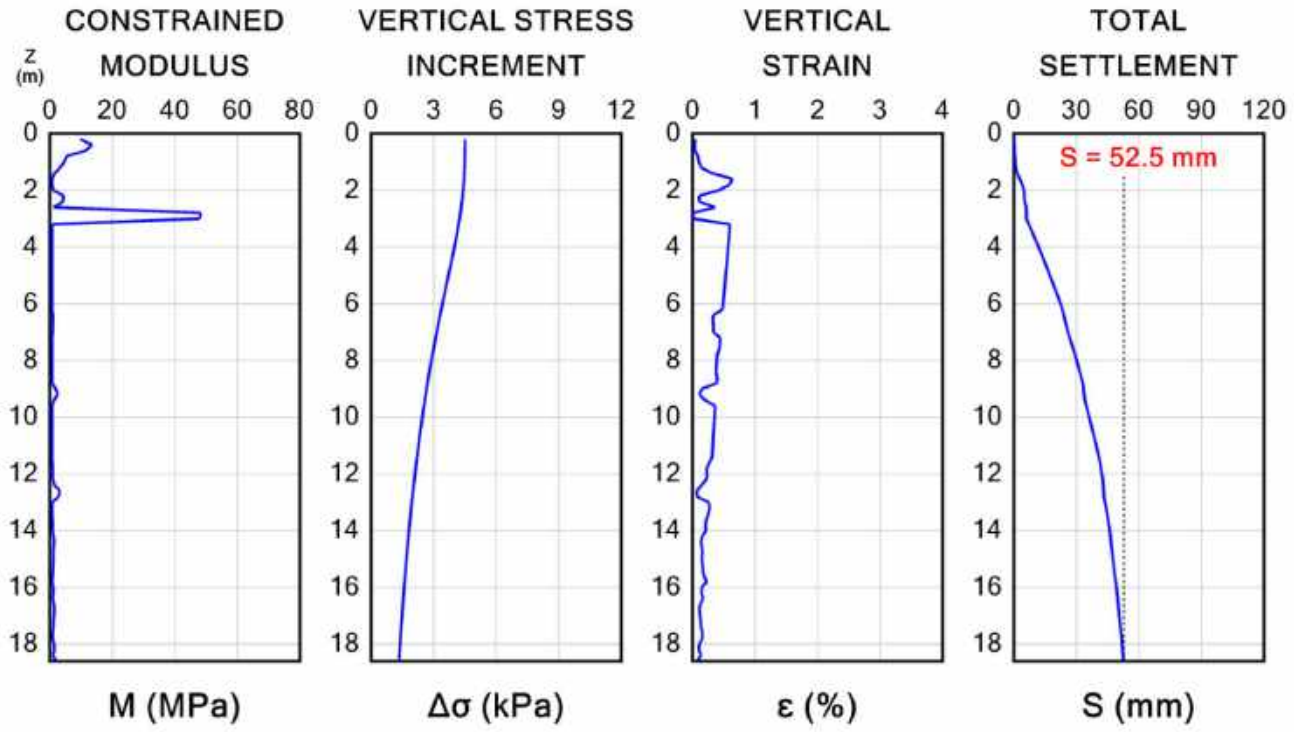
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of short side

Drill Force NZ | DF21GE034

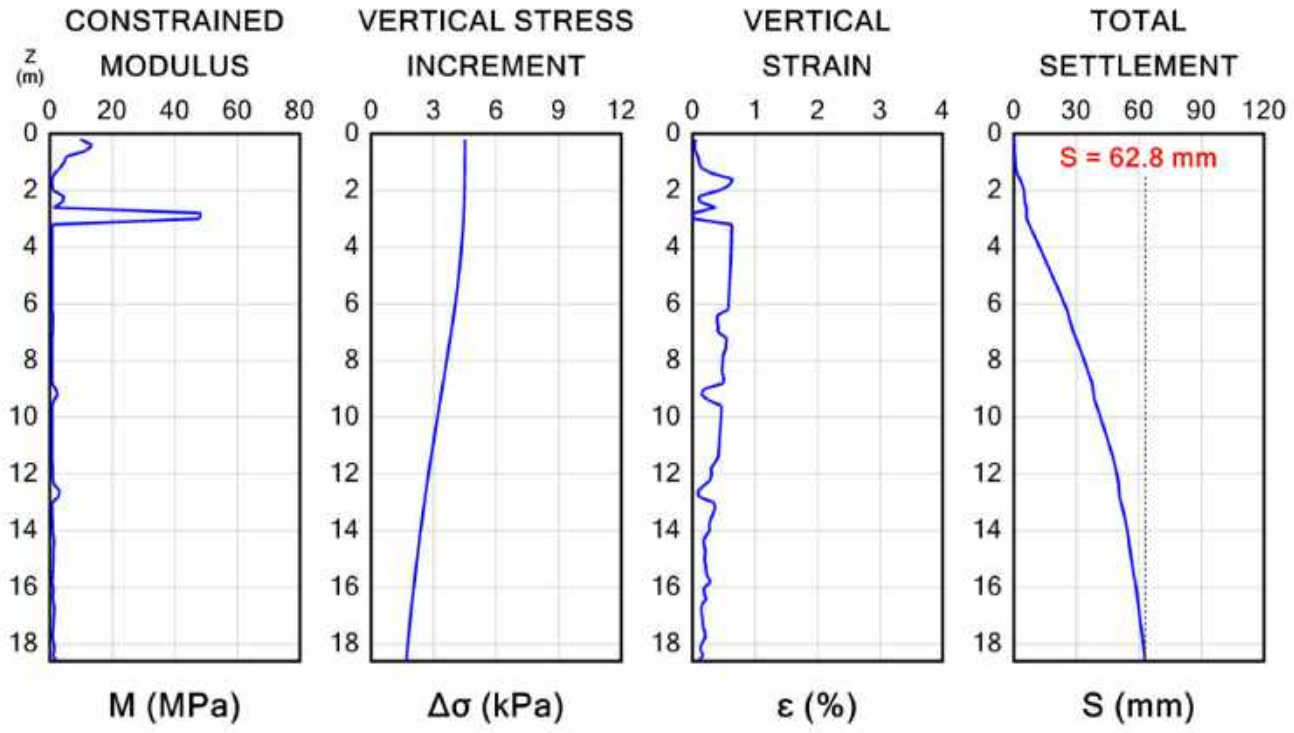
Lander Geotechnical | Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of long side

Drill Force NZ | DF21GE034

Lander Geotechnical | Hamlin Rd, Ardmore



Settlements Calculation

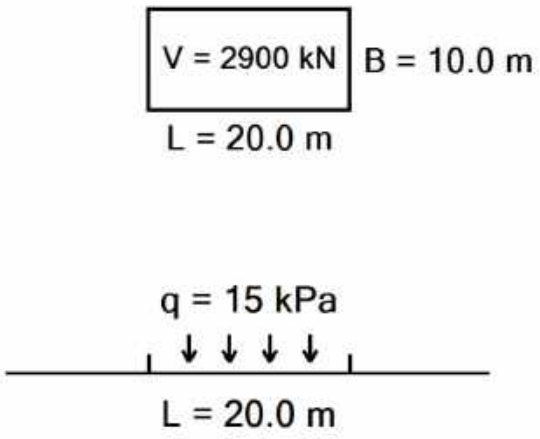
Drill Force NZ

Lander Geotechnical

DF21GE034 - DMT02: Case 3

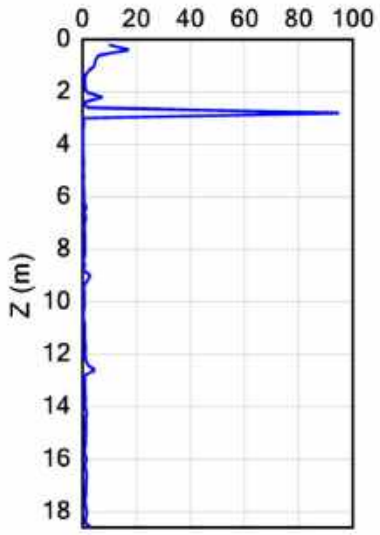
Hamlin Rd, Ardmore

LOAD DESCRIPTION



CONSTRAINED MODULUS M (MPa)

(Vertical name: DMT_02)



CALCULATION OPTIONS

Lower limit of Constrained Modulus assigned in the calculation	0.70 MPa
Thickness of calculation layer	0.20 m
End of Calculation	at end of assigned profile

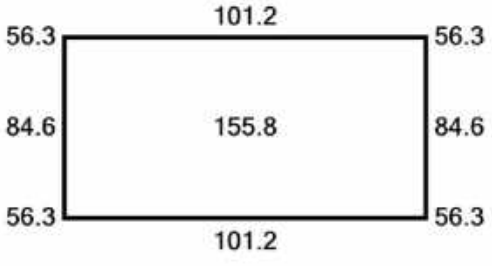
SETTLEMENTS CALCULATION

(one-dimensional conventional method)

$$S = \sum \frac{\Delta\sigma_v}{M} \Delta z$$

Calculation Point	Settlements [mm]	Z Stop [m]
below the center	155.8	18.60
below the corner	56.3	18.60
below the median point of short side	84.6	18.60
below the median point of long side	101.2	18.60

Settlements [mm]

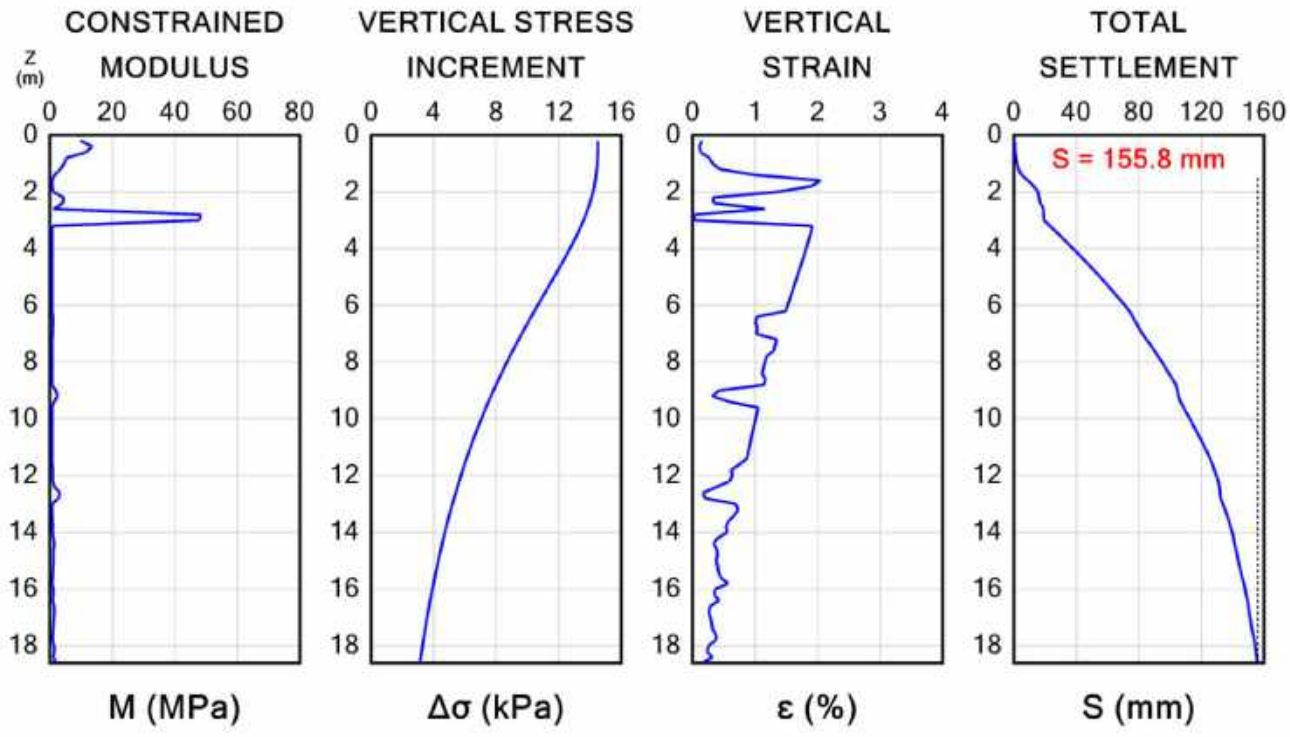


The calculated settlements are obtained using the interpretation formulae and the calculation method recommended in the TC16 DMT Report(2001). It is the designer's responsability to use alternative procedures if considered preferable.

SETTLEMENTS CALCULATION - below the center

Drill Force NZ — DF21GE034

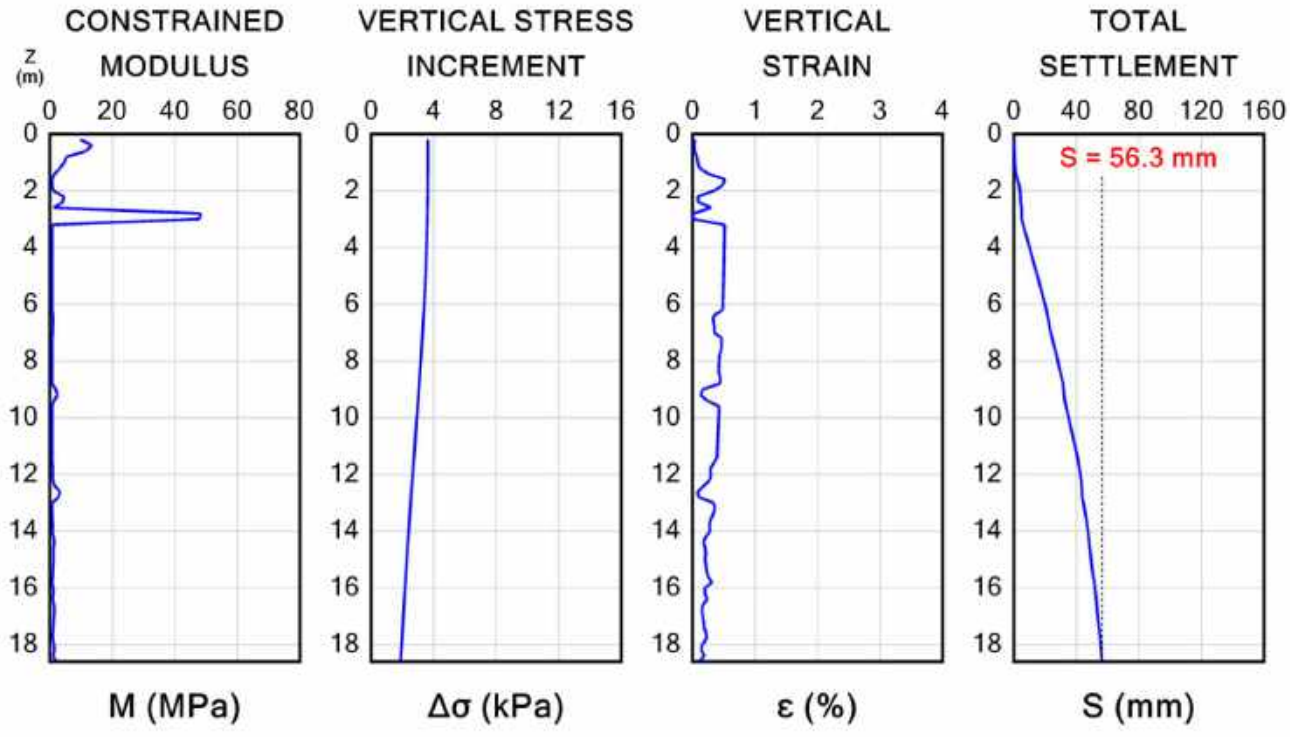
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the corner

Drill Force NZ — DF21GE034

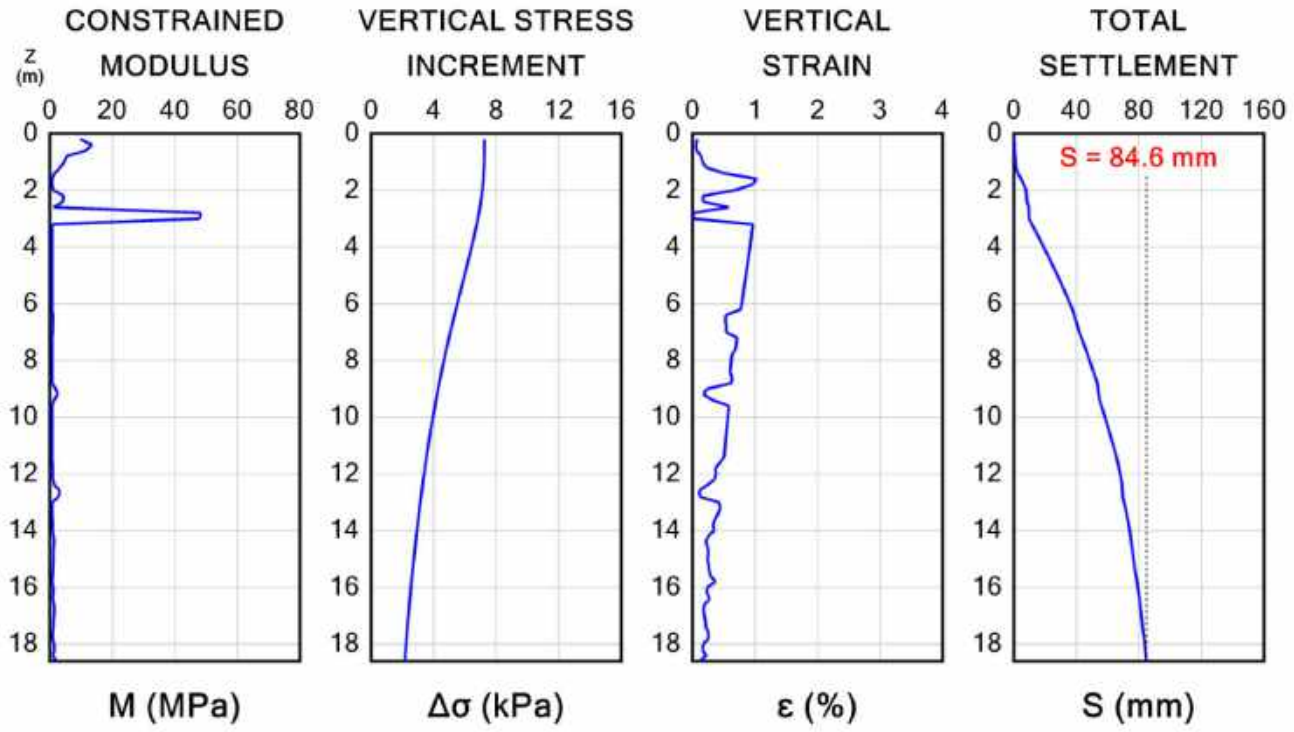
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of short side

Drill Force NZ | DF21GE034

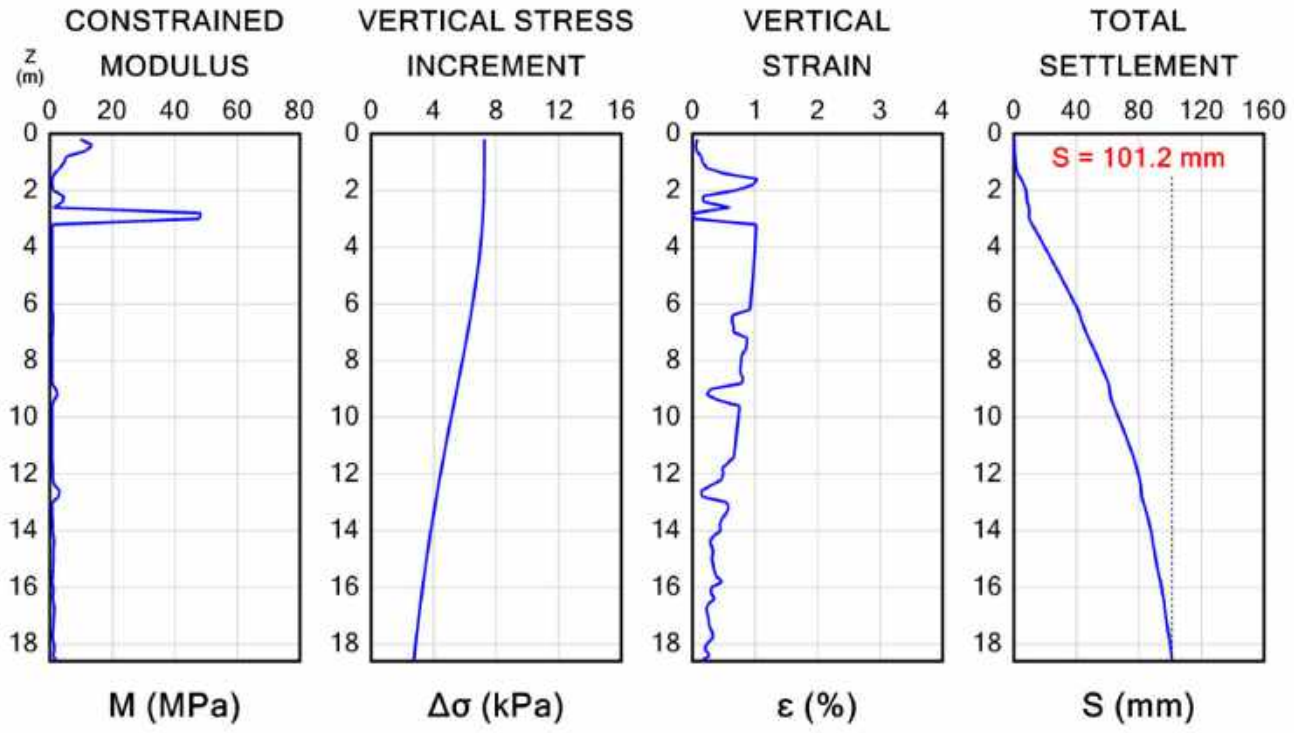
Lander Geotechnical | Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of long side

Drill Force NZ | DF21GE034

Lander Geotechnical | Hamlin Rd, Ardmore



Settlements Calculation

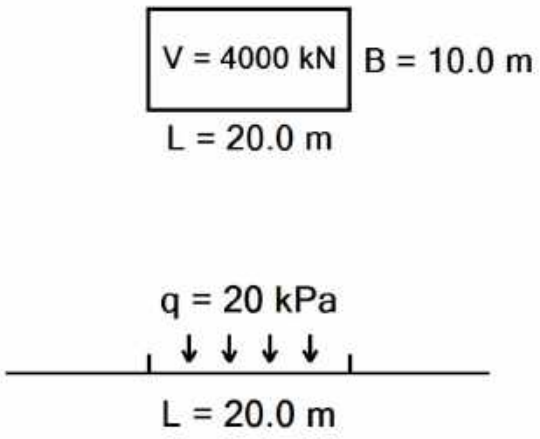
Drill Force NZ

Lander Geotechnical

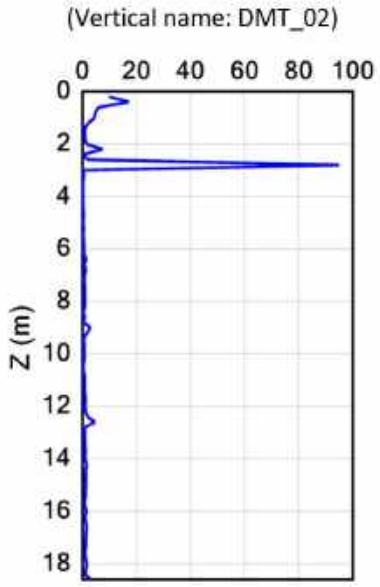
DF21GE034 - DMT02: Case 4

Hamlin Rd, Ardmore

LOAD DESCRIPTION



CONSTRAINED MODULUS M (MPa)



CALCULATION OPTIONS

Lower limit of Constrained Modulus assigned in the calculation	0.70 MPa
Thickness of calculation layer	0.20 m
End of Calculation	at end of assigned profile

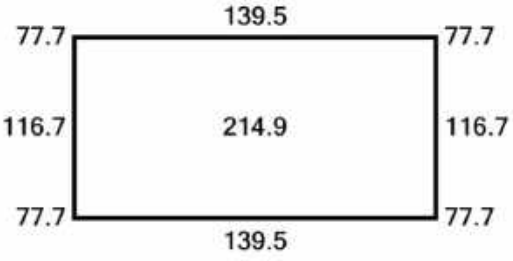
SETTLEMENTS CALCULATION

(one-dimensional conventional method)

$$S = \sum \frac{\Delta\sigma_v}{M} \Delta z$$

Calculation Point	Settlements [mm]	Z Stop [m]
below the center	214.9	18.60
below the corner	77.7	18.60
below the median point of short side	116.7	18.60
below the median point of long side	139.5	18.60

Settlements [mm]

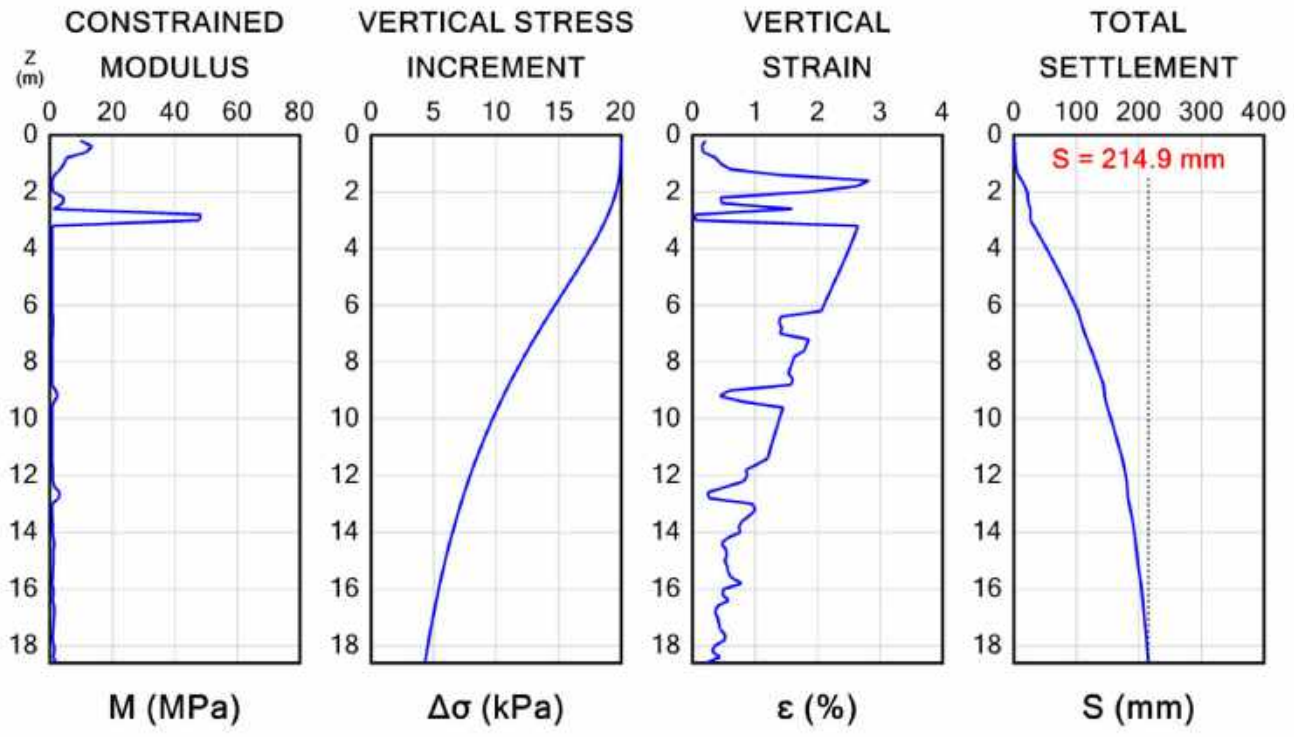


The calculated settlements are obtained using the interpretation formulae and the calculation method recommended in the TC16 DMT Report(2001). It is the designer's responsability to use alternative procedures if considered preferable.

SETTLEMENTS CALCULATION - below the center

Drill Force NZ — DF21GE034

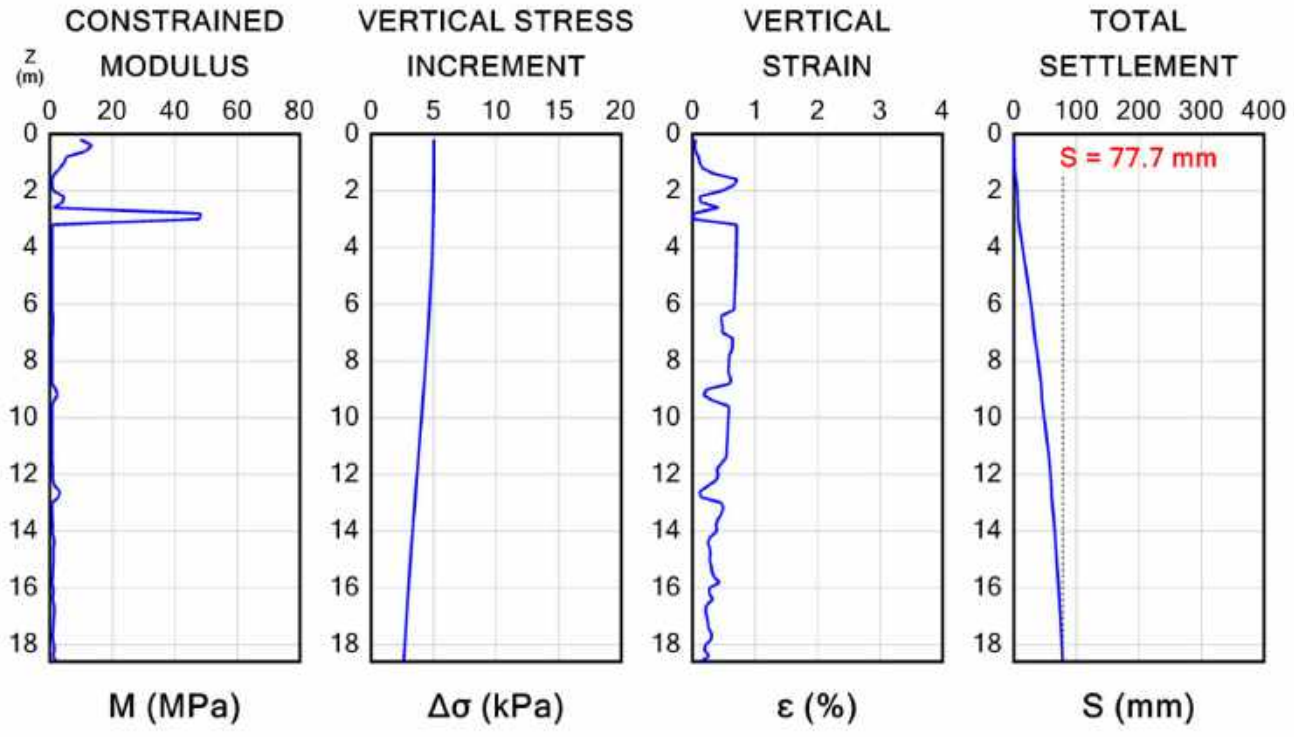
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the corner

Drill Force NZ — DF21GE034

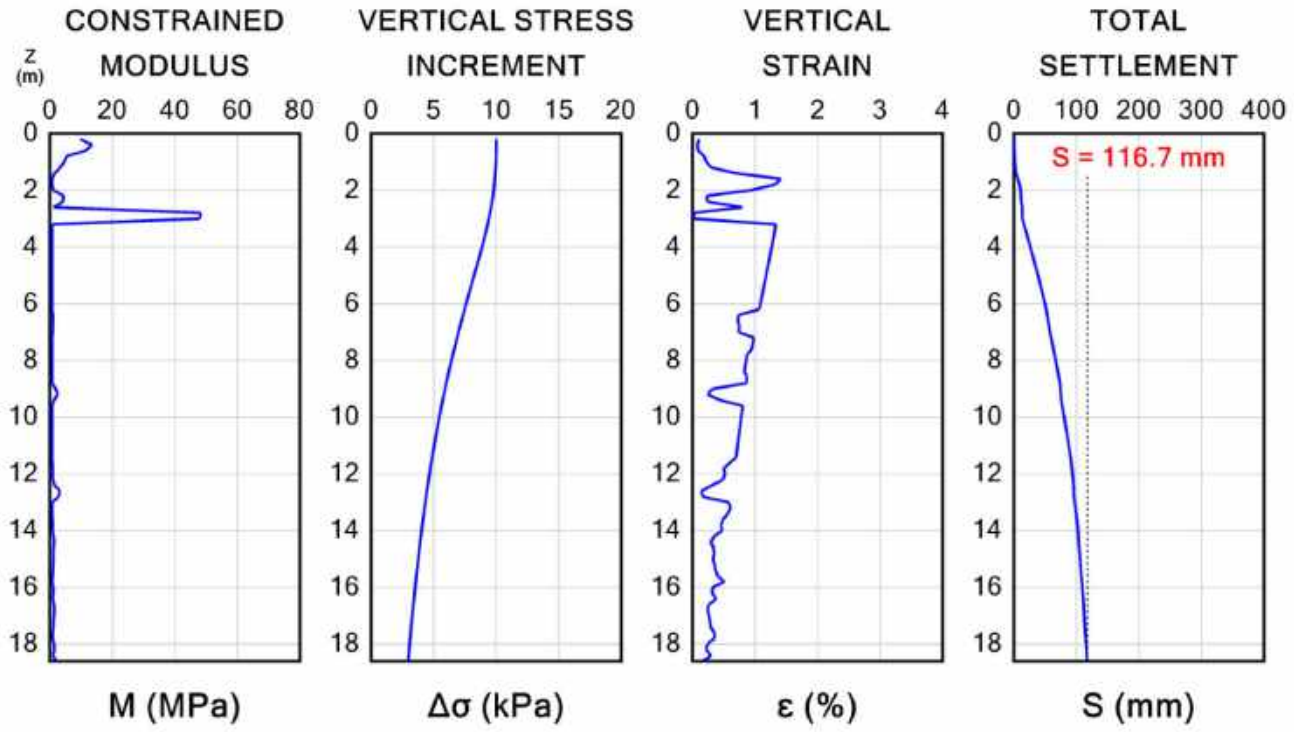
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of short side

Drill Force NZ | DF21GE034

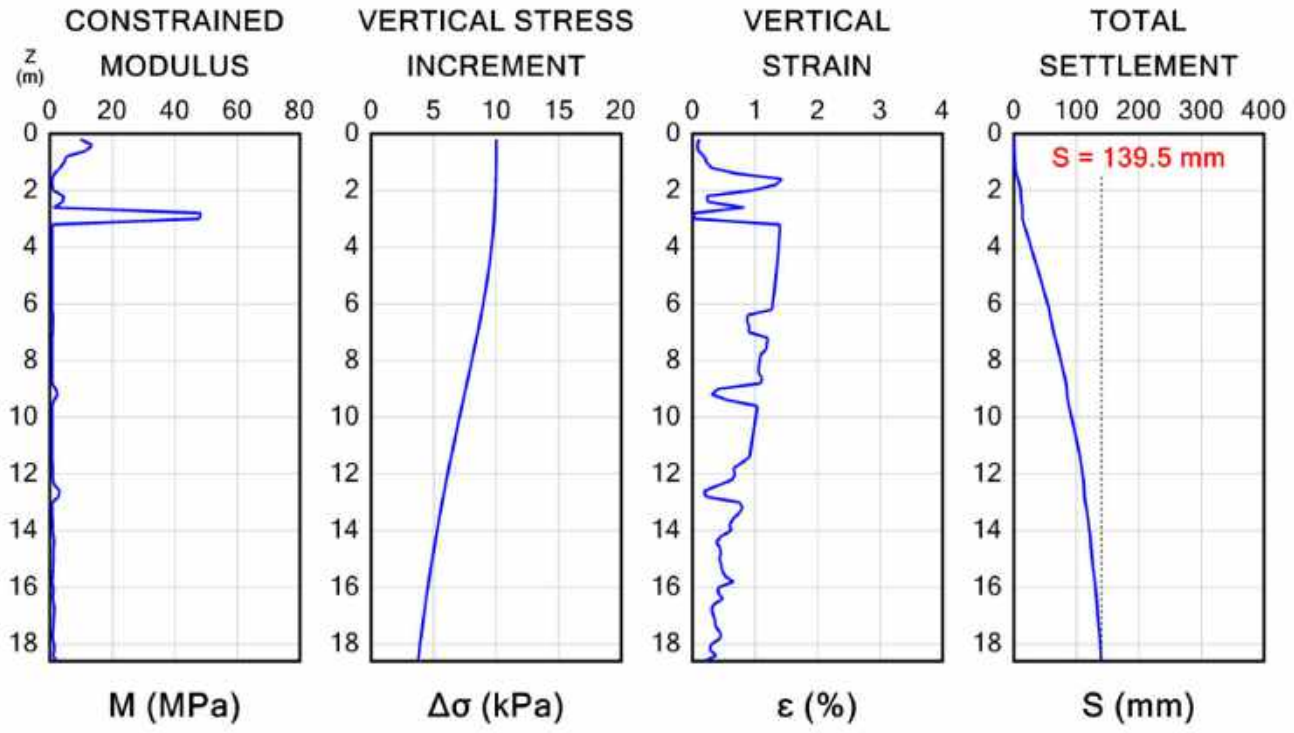
Lander Geotechnical | Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of long side

Drill Force NZ | DF21GE034

Lander Geotechnical | Hamlin Rd, Ardmore



Settlements Calculation

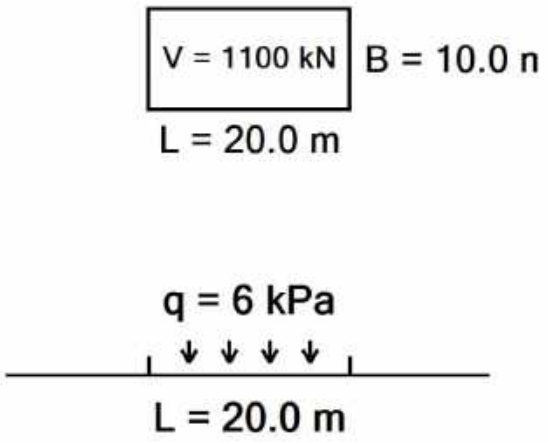
Drill Force NZ

Lander Geotechnical

DF21GE034 - DMT04: Case 2

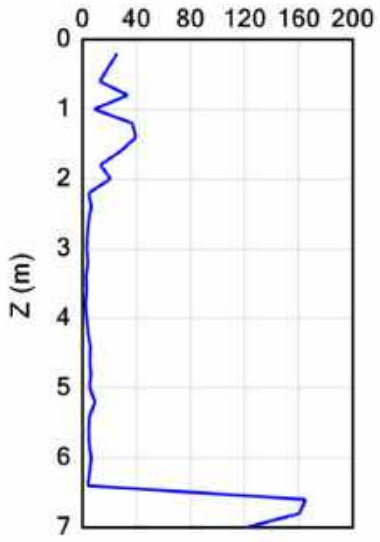
Hamlin Rd, Ardmore

LOAD DESCRIPTION



CONSTRAINED MODULUS M (MPa)

(Vertical name: DMT_04)



CALCULATION OPTIONS

Lower limit of Constrained Modulus assigned in the calculation	0.70 MPa
Thickness of calculation layer	0.20 m
End of Calculation	at end of assigned profile

SETTLEMENTS CALCULATION

(one-dimensional conventional method)

$$S = \sum \frac{\Delta\sigma_v}{M} \Delta z$$

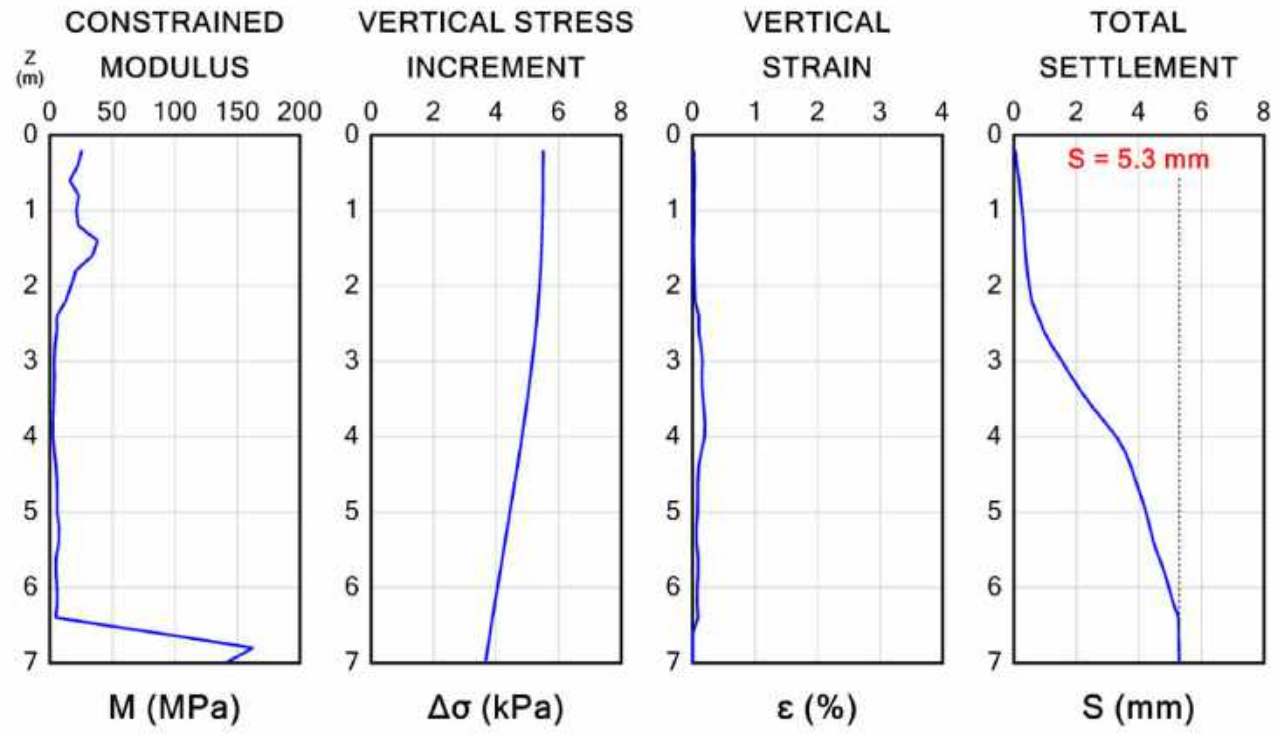
Calculation Point	Settlements [mm]	Z Stop [m]
below the center	5.3	7.00
below the corner	1.5	7.00
below the median point of short side	2.7	7.00
below the median point of long side	2.9	7.00

The calculated settlements are obtained using the interpretation formulae and the calculation method recommended in the TC16 DMT Report(2001). It is the designer's responsability to use alternative procedures if considered preferable.

SETTLEMENTS CALCULATION - below the center

Drill Force NZ — DF21GE034

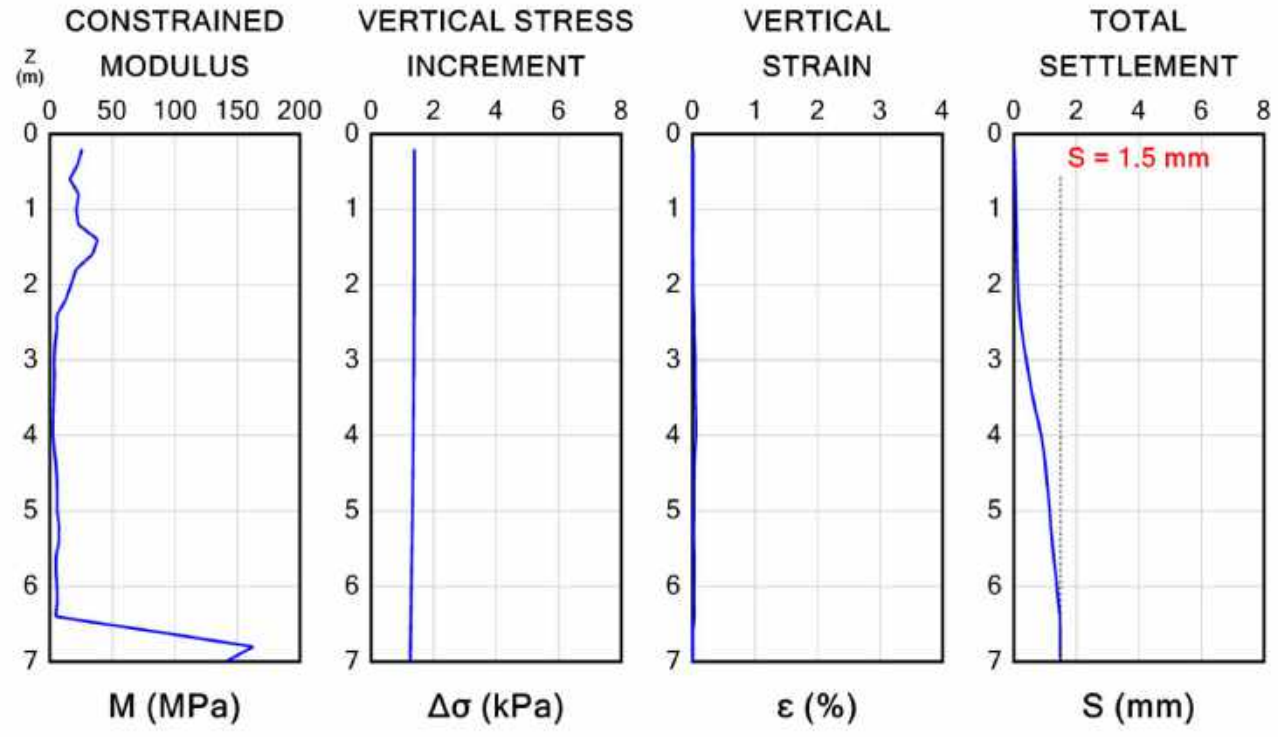
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the corner

Drill Force NZ — DF21GE034

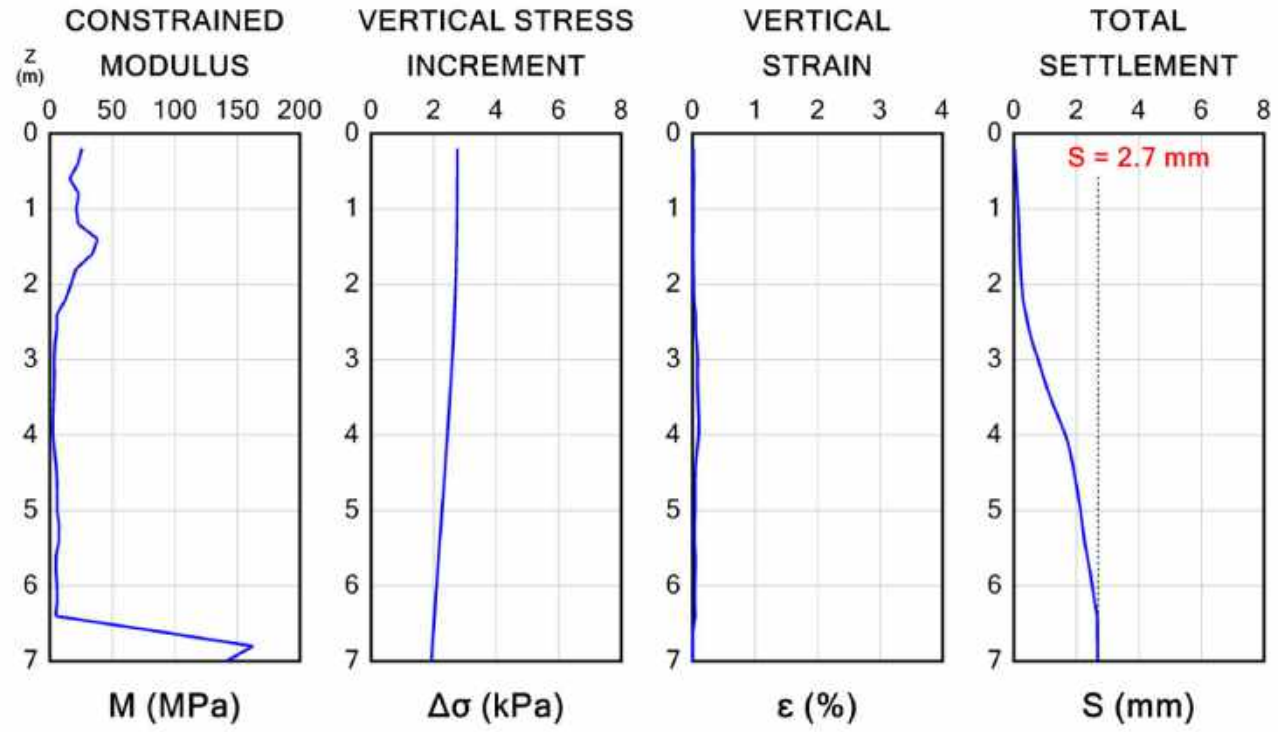
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of short side

Drill Force NZ | DF21GE034

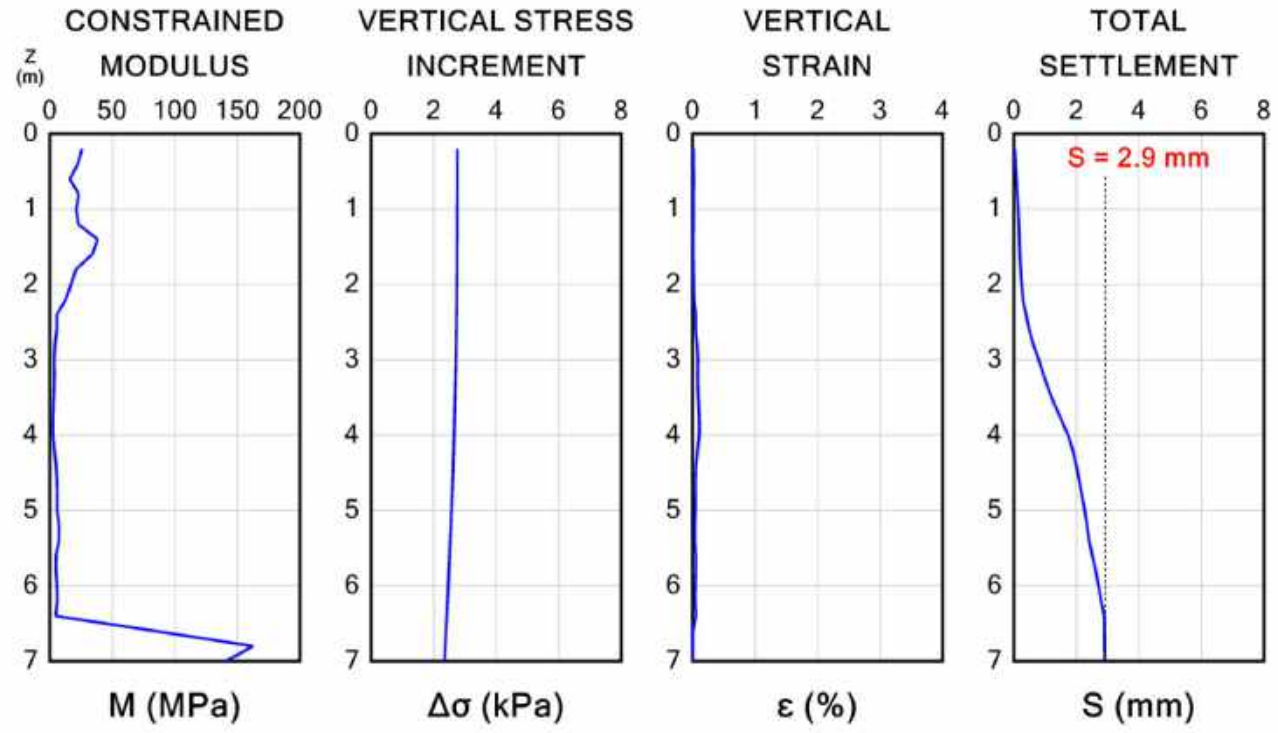
Lander Geotechnical | Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of long side

Drill Force NZ | DF21GE034

Lander Geotechnical | Hamlin Rd, Ardmore



Settlements Calculation

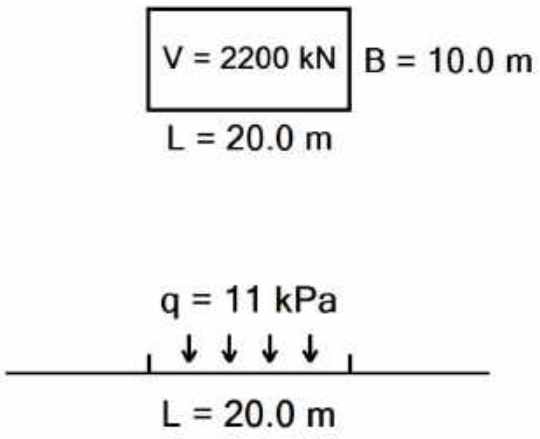
Drill Force NZ

Lander Geotechnical

DF21GE034 - DMT04: Case 3

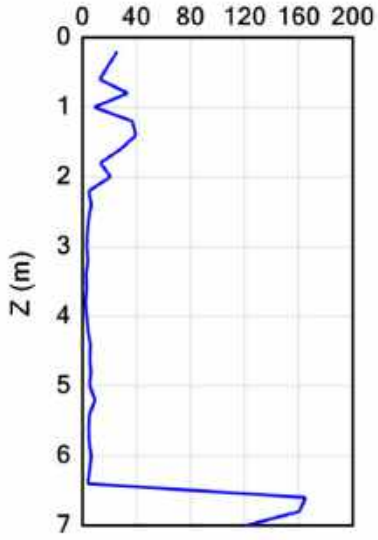
Hamlin Rd, Ardmore

LOAD DESCRIPTION



CONSTRAINED MODULUS M (MPa)

(Vertical name: DMT_04)



CALCULATION OPTIONS

Lower limit of Constrained Modulus assigned in the calculation	0.70 MPa
Thickness of calculation layer	0.20 m
End of Calculation	at end of assigned profile

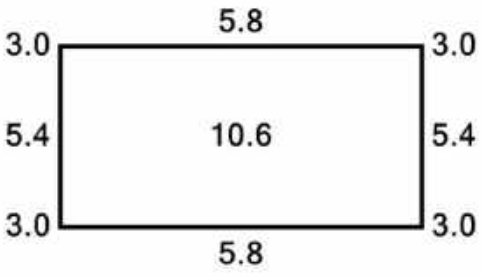
SETTLEMENTS CALCULATION

(one-dimensional conventional method)

$$S = \sum \frac{\Delta\sigma_v}{M} \Delta z$$

Calculation Point	Settlements [mm]	Z Stop [m]
below the center	10.6	7.00
below the corner	3.0	7.00
below the median point of short side	5.4	7.00
below the median point of long side	5.8	7.00

Settlements [mm]

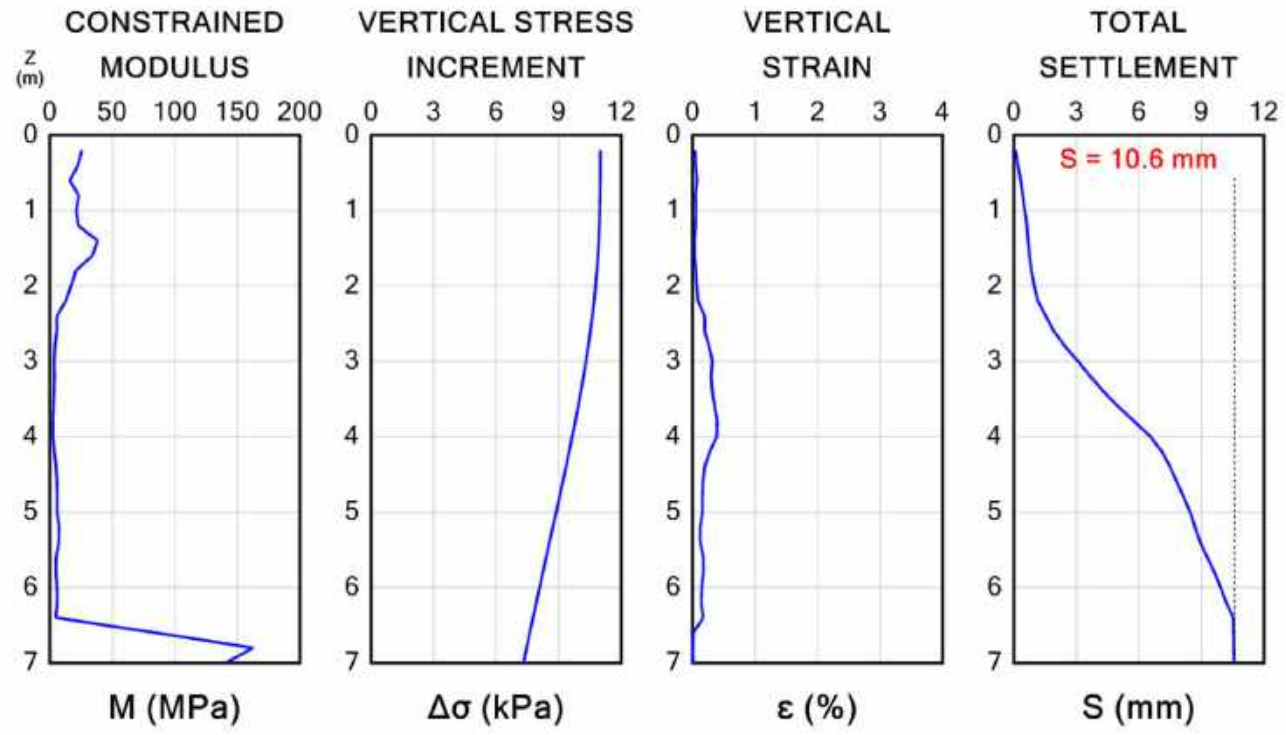


The calculated settlements are obtained using the interpretation formulae and the calculation method recommended in the TC16 DMT Report(2001). It is the designer's responsability to use alternative procedures if considered preferable.

SETTLEMENTS CALCULATION - below the center

Drill Force NZ — DF21GE034

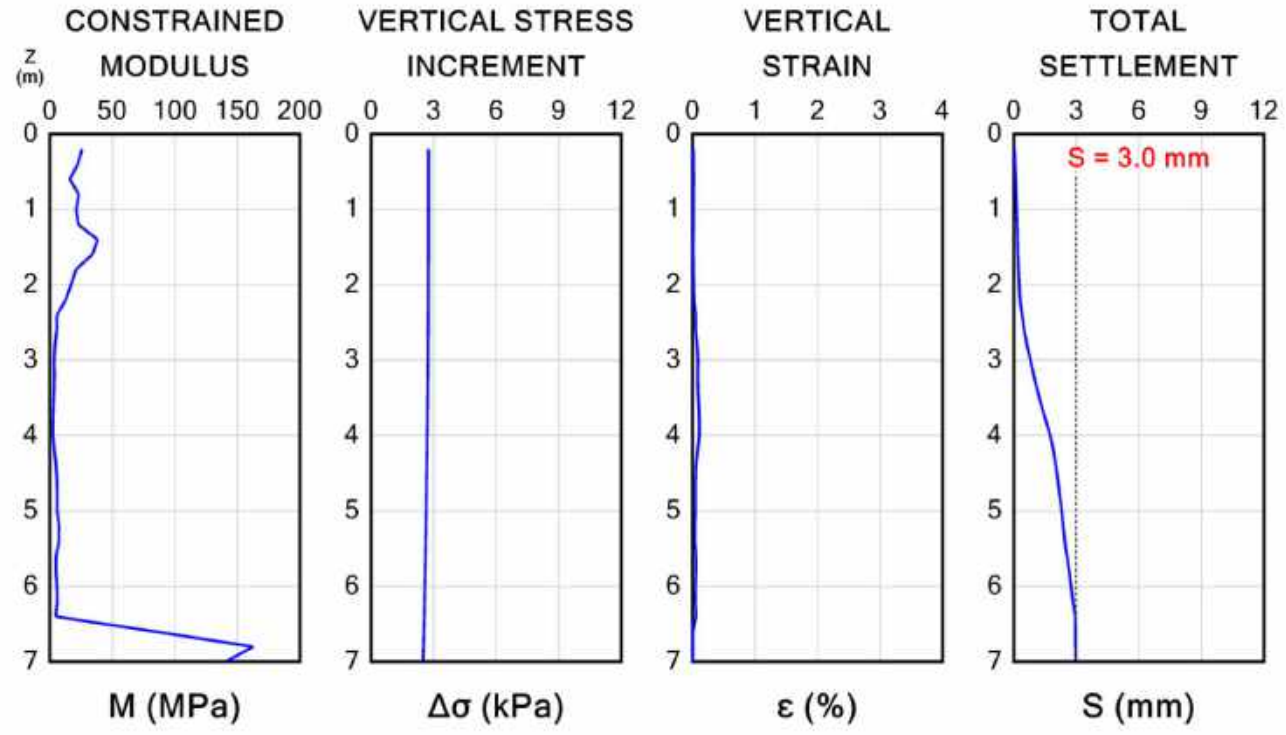
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the corner

Drill Force NZ — DF21GE034

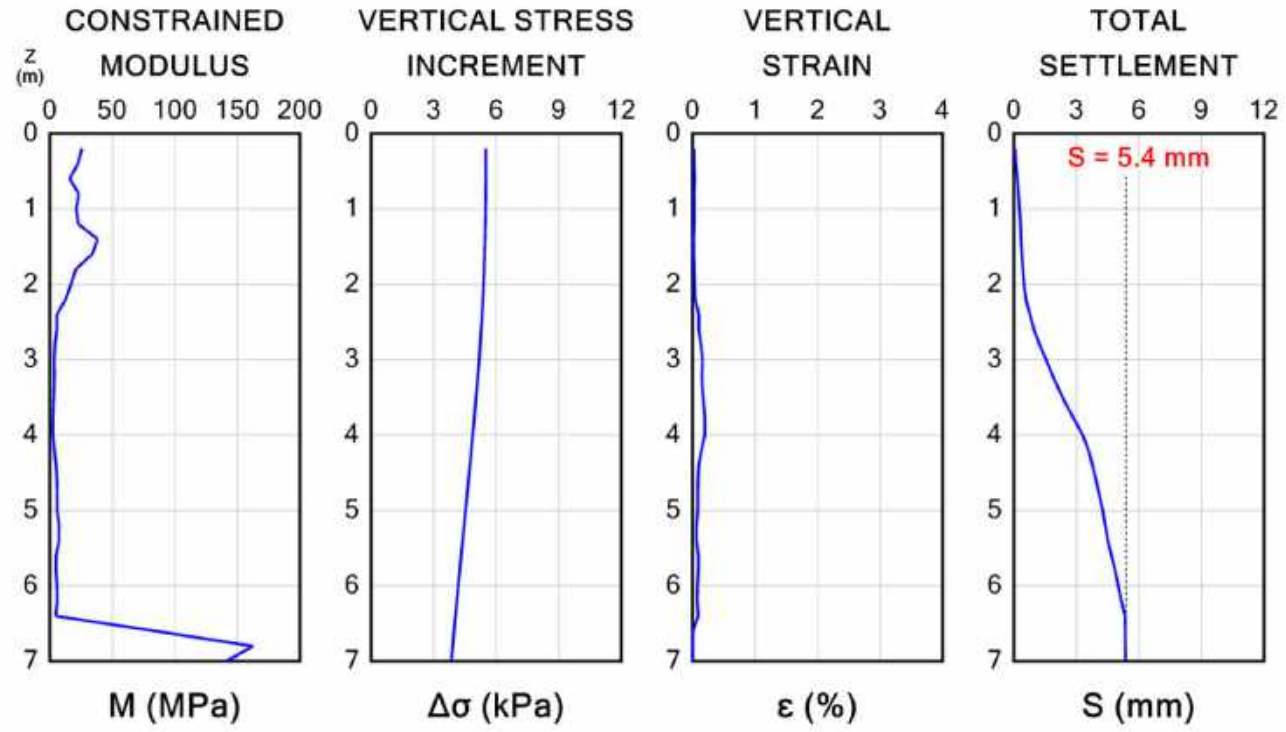
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of short side

Drill Force NZ | DF21GE034

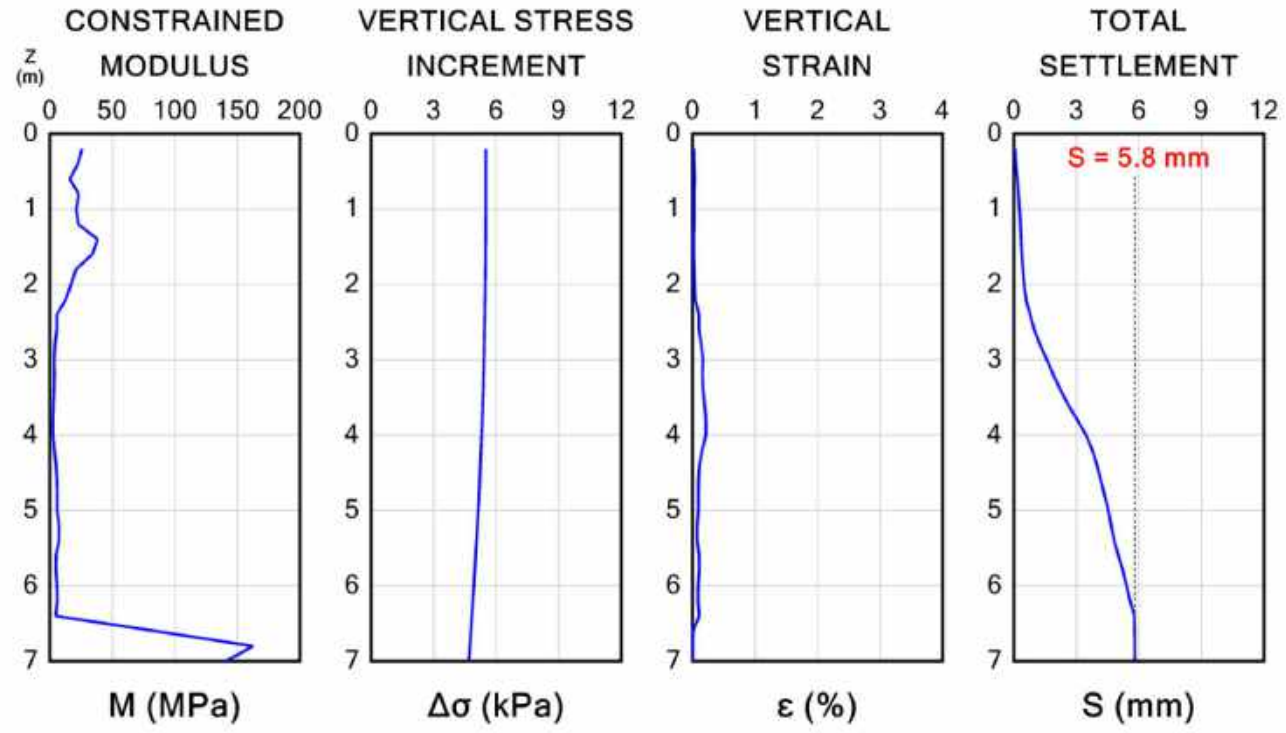
Lander Geotechnical | Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of long side

Drill Force NZ | DF21GE034

Lander Geotechnical | Hamlin Rd, Ardmore



Settlements Calculation

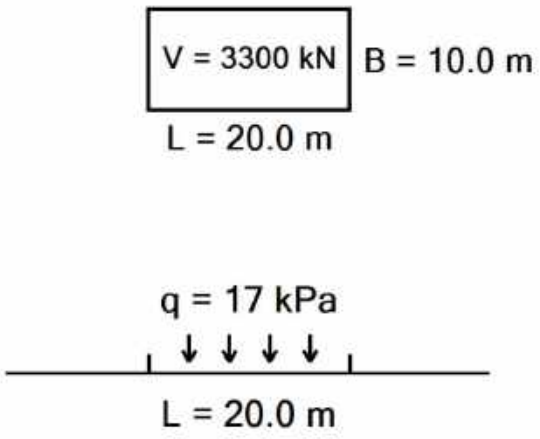
Drill Force NZ

Lander Geotechnical

DF21GE034 - DMT04: Case 4

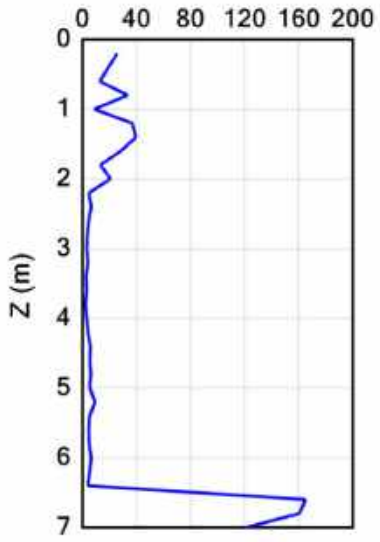
Hamlin Rd, Ardmore

LOAD DESCRIPTION



CONSTRAINED MODULUS M (MPa)

(Vertical name: DMT_04)



CALCULATION OPTIONS

Lower limit of Constrained Modulus assigned in the calculation	0.70 MPa
Thickness of calculation layer	0.20 m
End of Calculation	at end of assigned profile

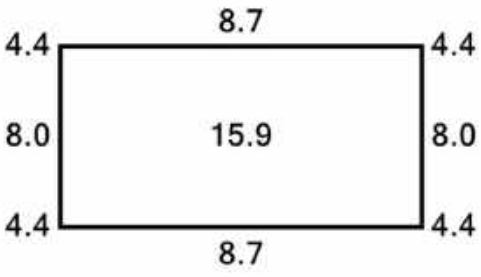
SETTLEMENTS CALCULATION

(one-dimensional conventional method)

$$S = \sum \frac{\Delta\sigma_v}{M} \Delta z$$

Calculation Point	Settlements [mm]	Z Stop [m]
below the center	15.9	7.00
below the corner	4.4	7.00
below the median point of short side	8.0	7.00
below the median point of long side	8.7	7.00

Settlements [mm]

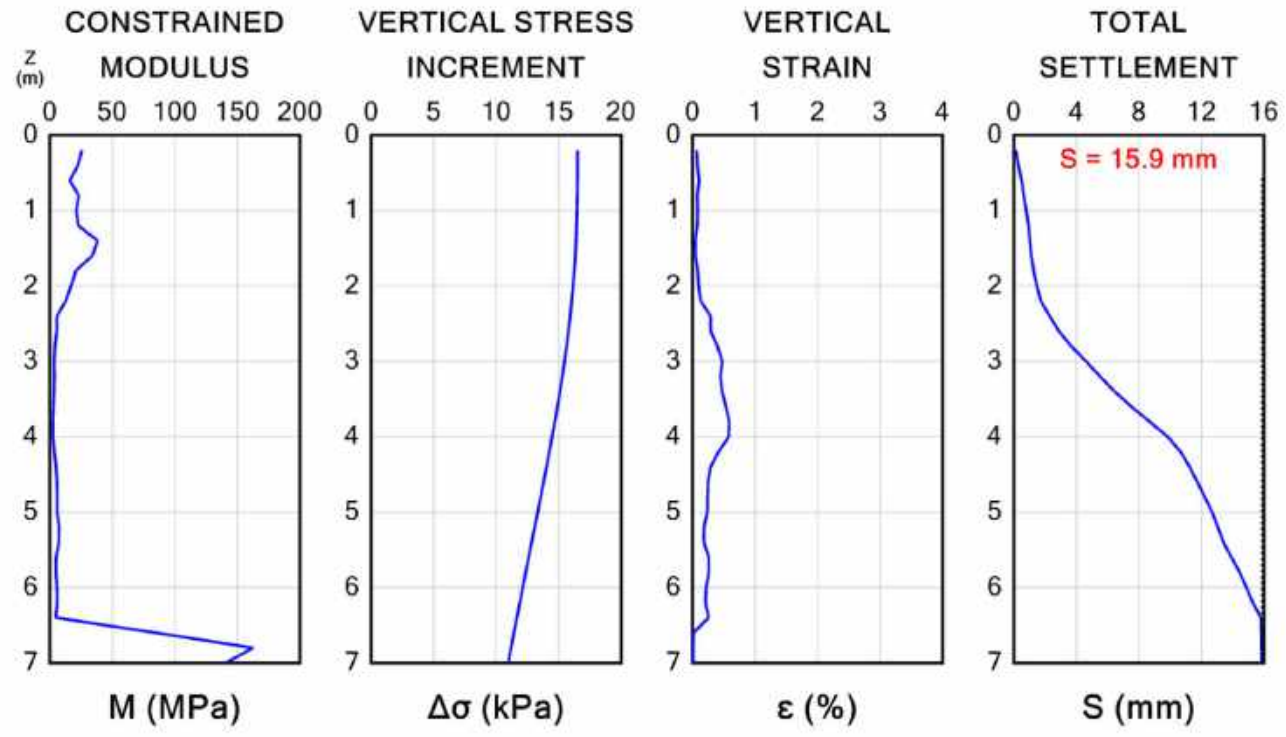


The calculated settlements are obtained using the interpretation formulae and the calculation method recommended in the TC16 DMT Report(2001). It is the designer's responsability to use alternative procedures if considered preferable.

SETTLEMENTS CALCULATION - below the center

Drill Force NZ — DF21GE034

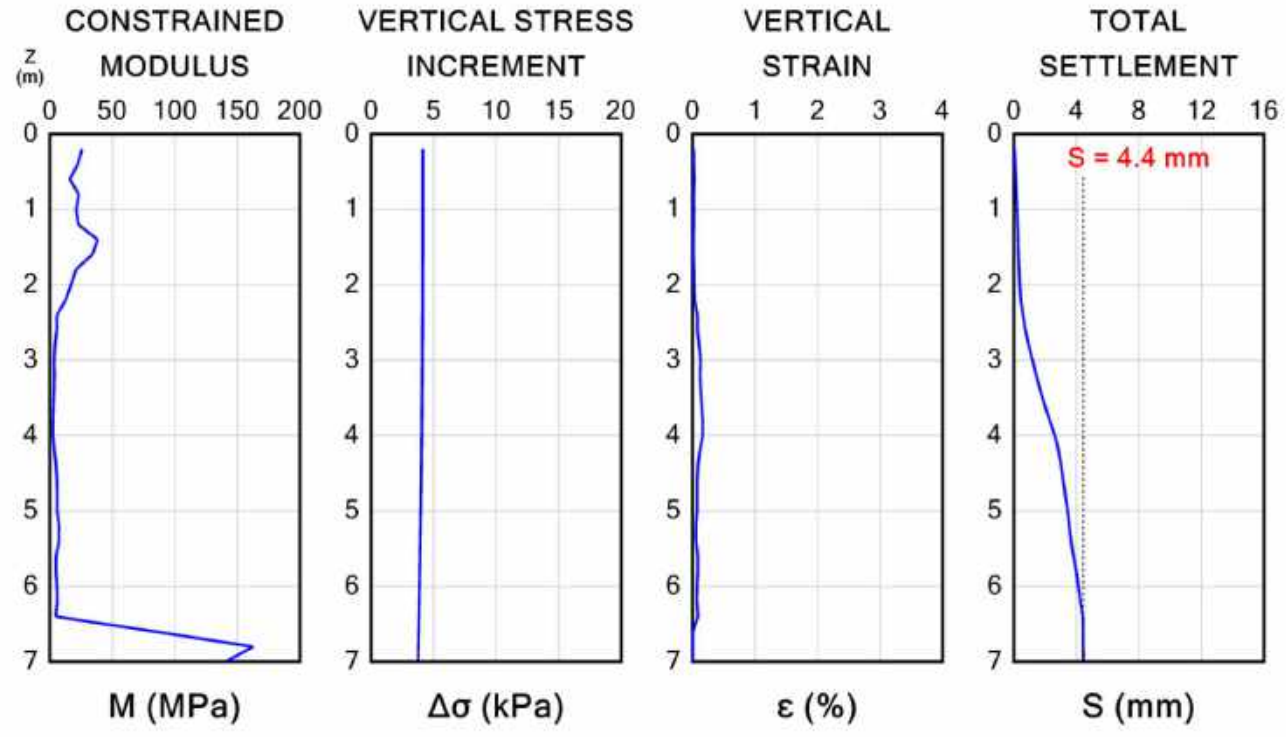
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the corner

Drill Force NZ — DF21GE034

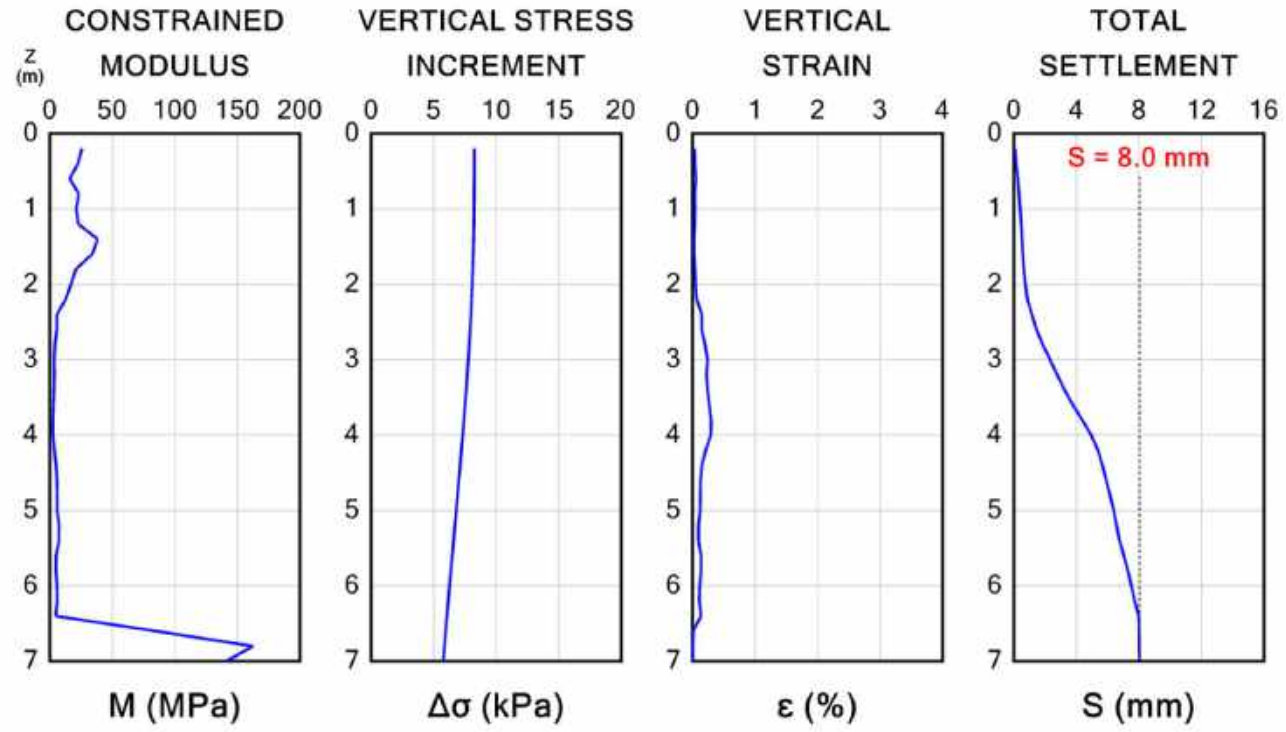
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of short side

Drill Force NZ | DF21GE034

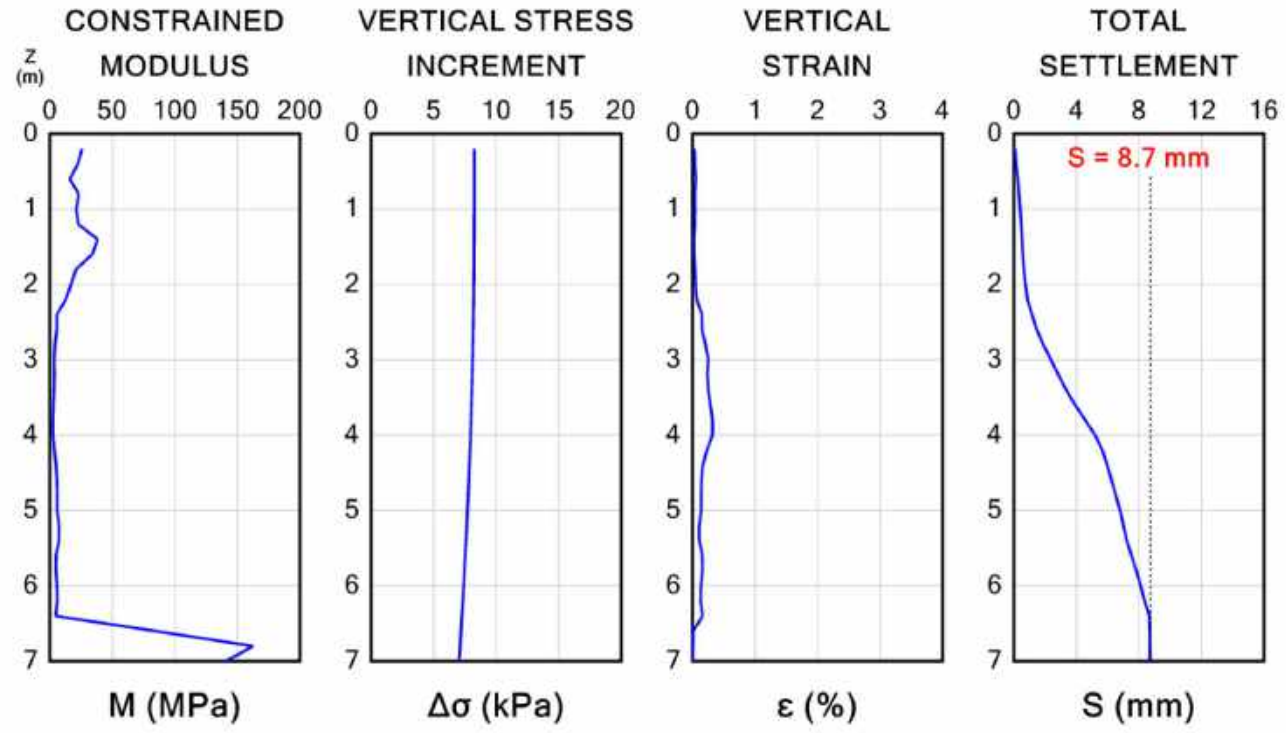
Lander Geotechnical | Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of long side

Drill Force NZ | DF21GE034

Lander Geotechnical | Hamlin Rd, Ardmore



Settlements Calculation

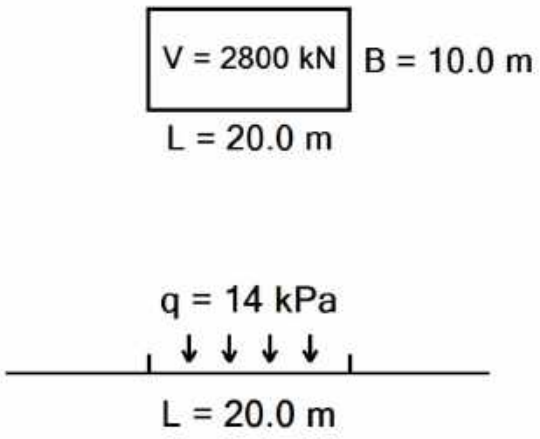
Drill Force NZ

DF21GE034 - DMT05: Case 1

Lander Geotechnical

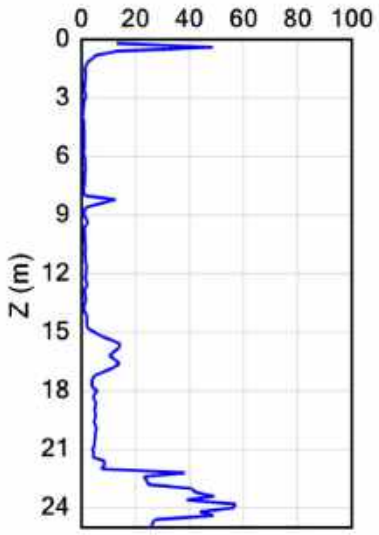
Hamlin Rd, Ardmore

LOAD DESCRIPTION



CONSTRAINED MODULUS M (MPa)

(Vertical name: DMT_05)



CALCULATION OPTIONS

Lower limit of Constrained Modulus assigned in the calculation	0.70 MPa
Thickness of calculation layer	0.20 m
End of Calculation	at end of assigned profile

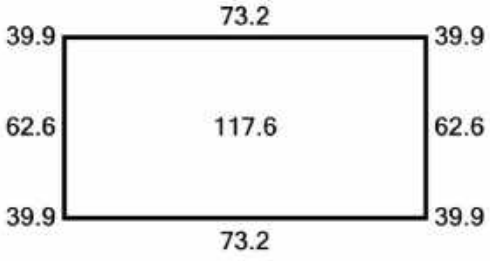
SETTLEMENTS CALCULATION

(one-dimensional conventional method)

$$S = \sum \frac{\Delta\sigma_v}{M} \Delta z$$

Calculation Point	Settlements [mm]	Z Stop [m]
below the center	117.6	25.00
below the corner	39.9	25.00
below the median point of short side	62.6	25.00
below the median point of long side	73.2	25.00

Settlements [mm]

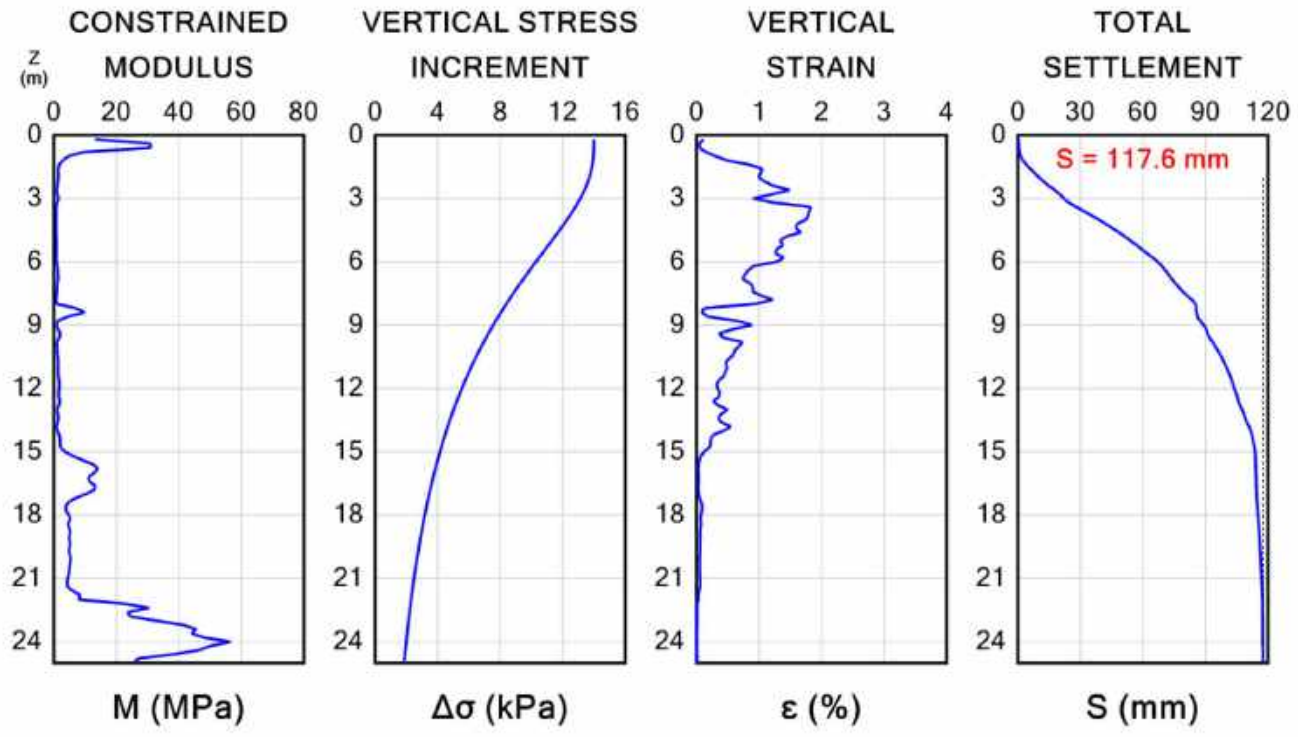


The calculated settlements are obtained using the interpretation formulae and the calculation method recommended in the TC16 DMT Report(2001). It is the designer's responsability to use alternative procedures if considered preferable.

SETTLEMENTS CALCULATION - below the center

Drill Force NZ — DF21GE034

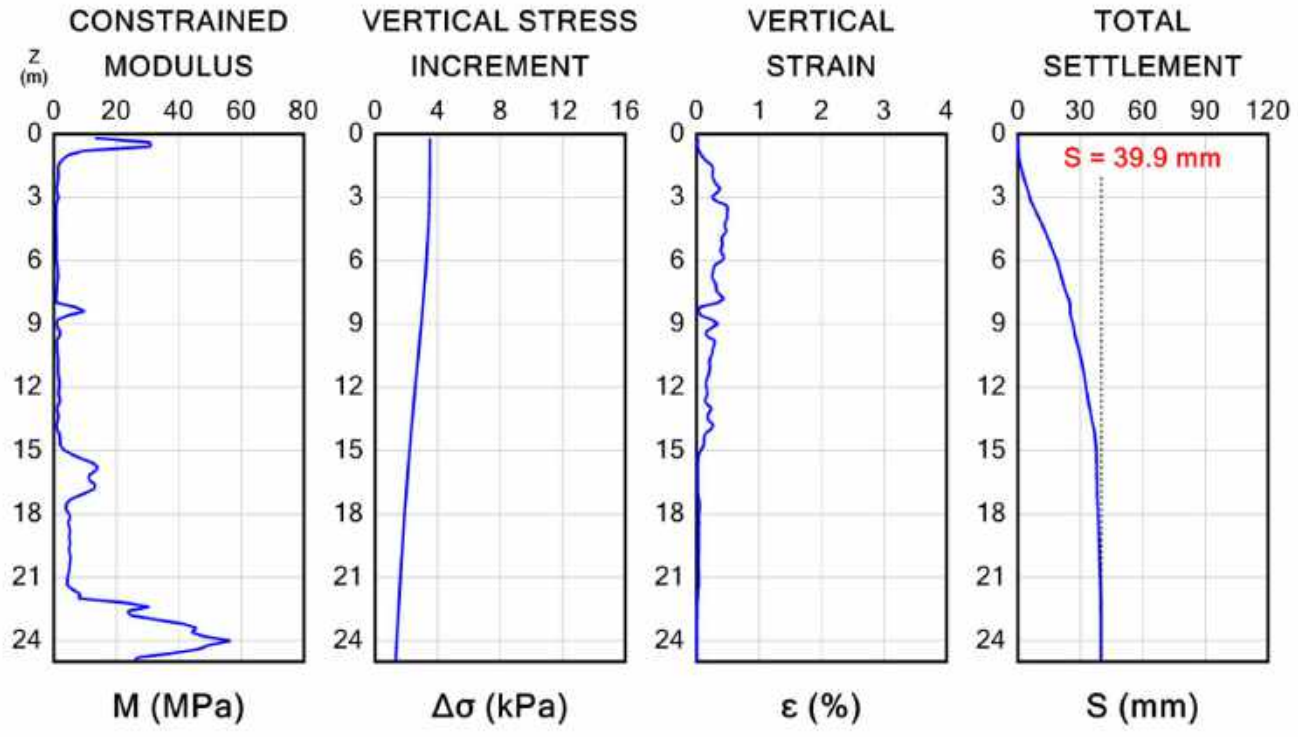
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the corner

Drill Force NZ — DF21GE034

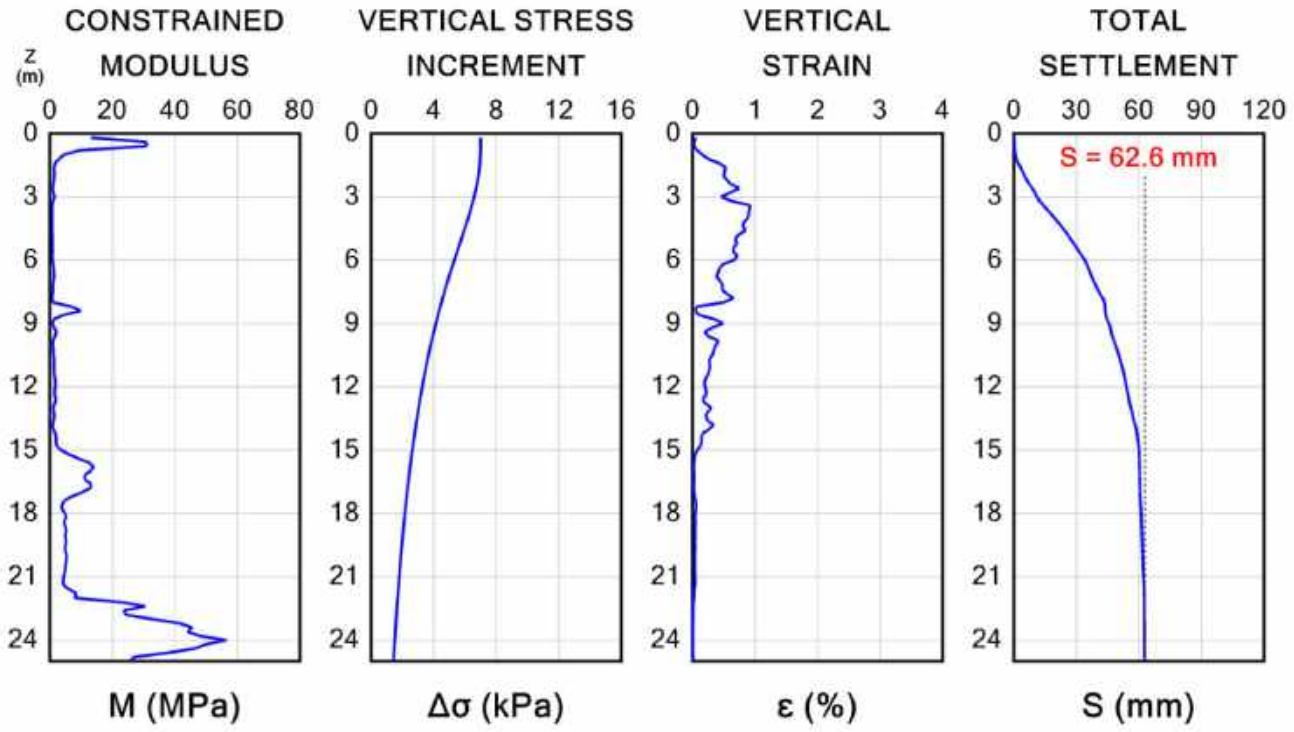
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of short side

Drill Force NZ | DF21GE034

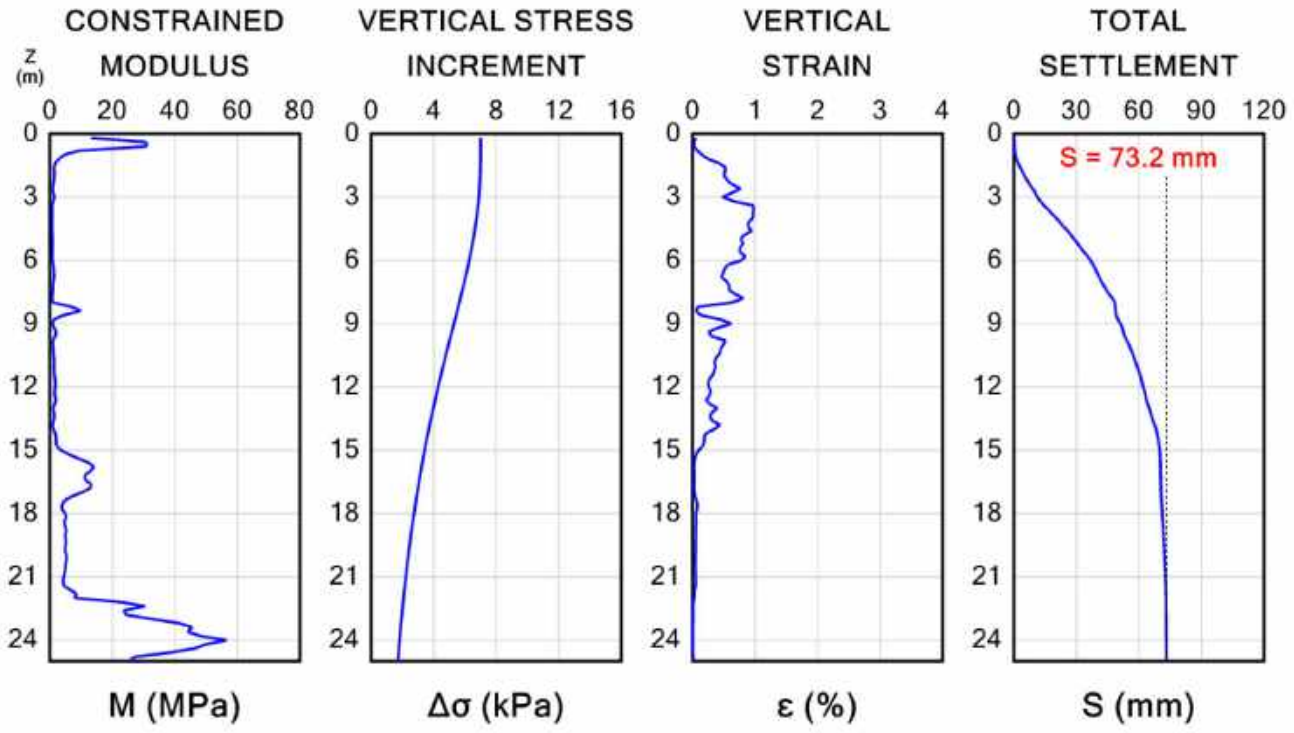
Lander Geotechnical | Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of long side

Drill Force NZ | DF21GE034

Lander Geotechnical | Hamlin Rd, Ardmore



Settlements Calculation

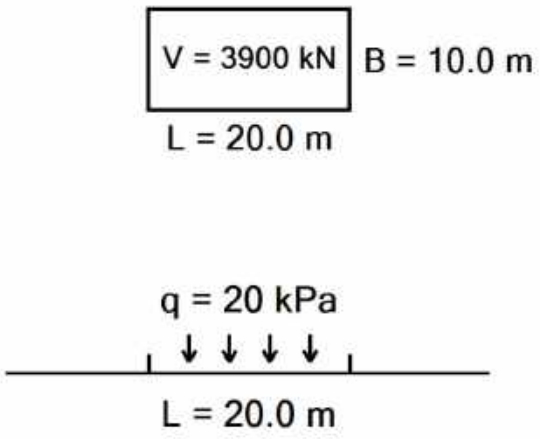
Drill Force NZ

Lander Geotechnical

DF21GE034 - DMT05: Case 2

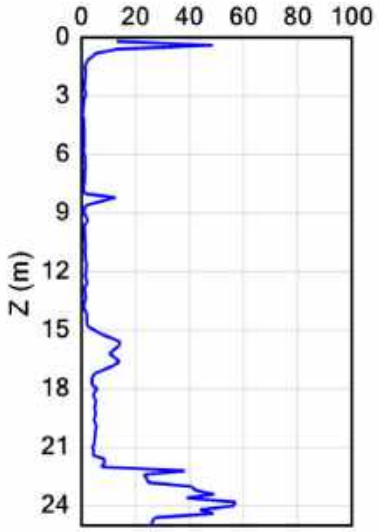
Hamlin Rd, Ardmore

LOAD DESCRIPTION



CONSTRAINED MODULUS M (MPa)

(Vertical name: DMT_05)



CALCULATION OPTIONS

Lower limit of Constrained Modulus assigned in the calculation	0.70 MPa
Thickness of calculation layer	0.20 m
End of Calculation	at end of assigned profile

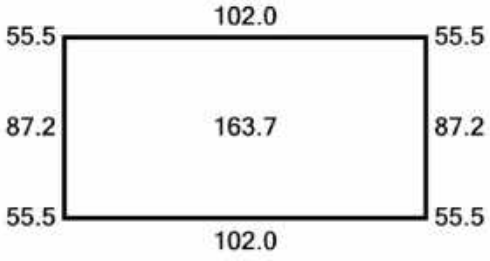
SETTLEMENTS CALCULATION

(one-dimensional conventional method)

$$S = \sum \frac{\Delta\sigma_v}{M} \Delta z$$

Calculation Point	Settlements	Z Stop
	[mm]	[m]
below the center	163.7	25.00
below the corner	55.5	25.00
below the median point of short side	87.2	25.00
below the median point of long side	102.0	25.00

Settlements [mm]

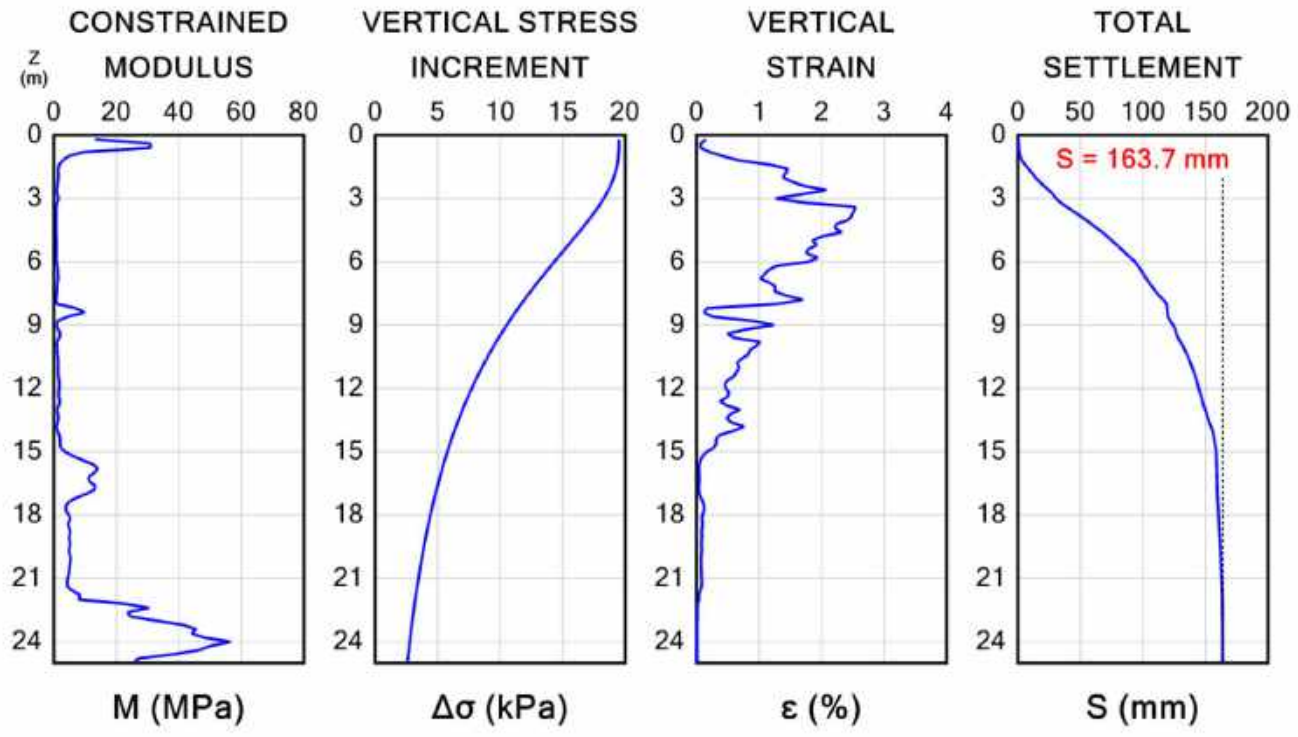


The calculated settlements are obtained using the interpretation formulae and the calculation method recommended in the TC16 DMT Report(2001). It is the designer's responsability to use alternative procedures if considered preferable.

SETTLEMENTS CALCULATION - below the center

Drill Force NZ — DF21GE034

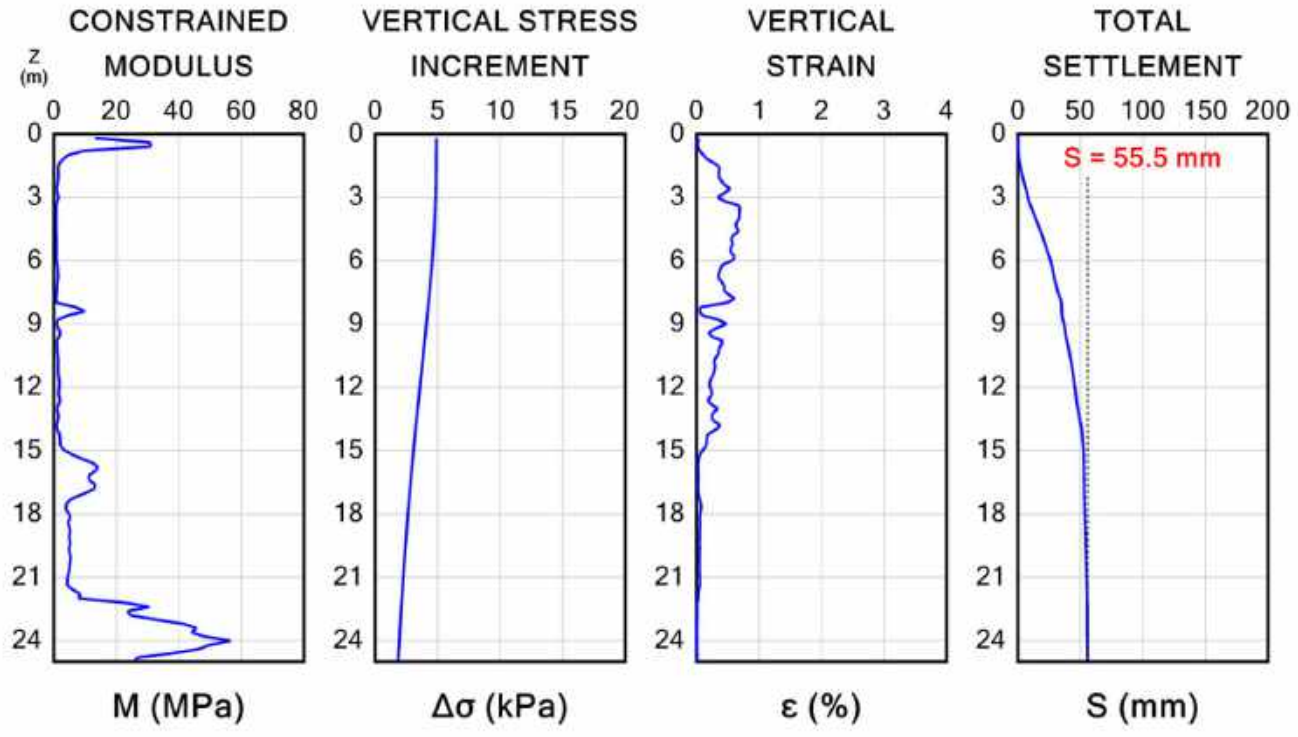
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the corner

Drill Force NZ — DF21GE034

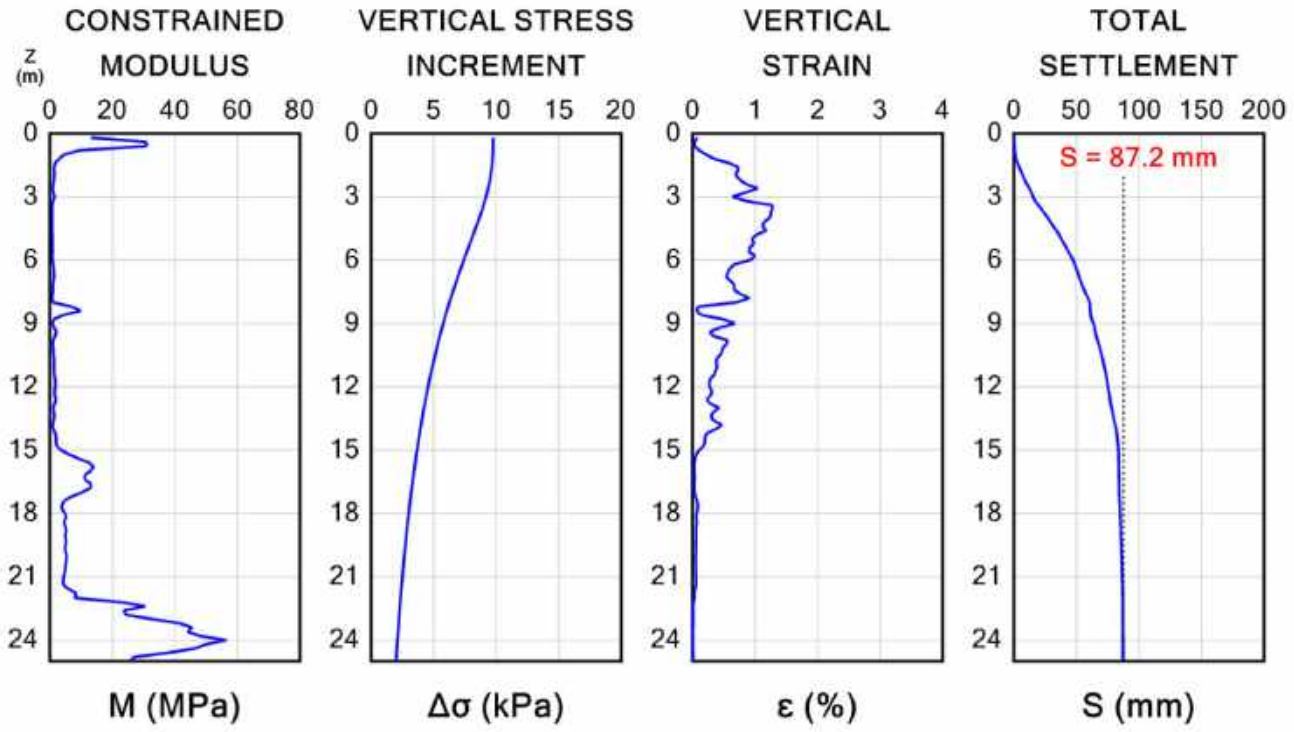
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of short side

Drill Force NZ — DF21GE034

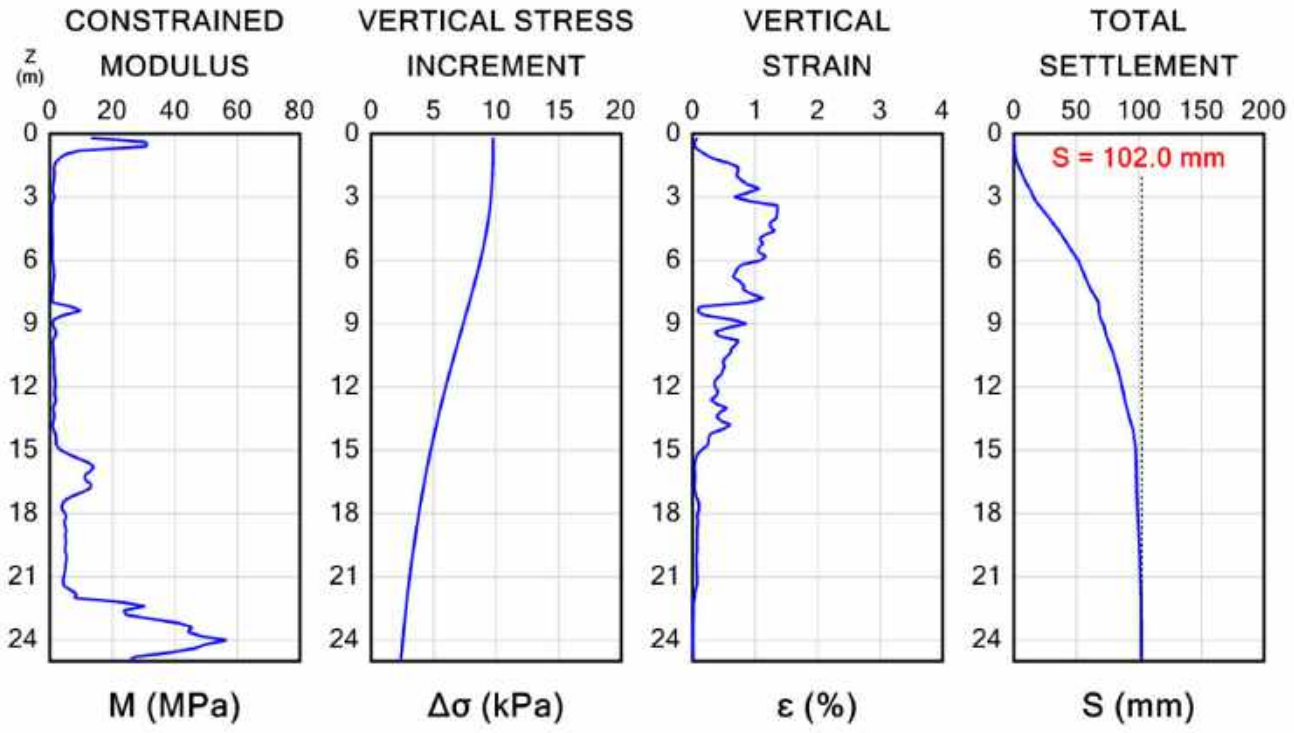
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of long side

Drill Force NZ — DF21GE034

Lander Geotechnical — Hamlin Rd, Ardmore



Settlements Calculation

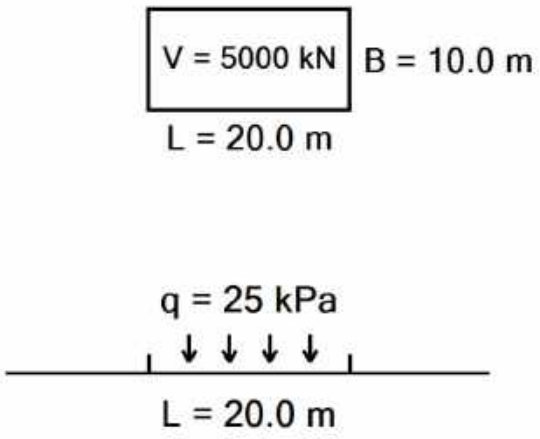
Drill Force NZ

DF21GE034 - DMT05: Case 3

Lander Geotechnical

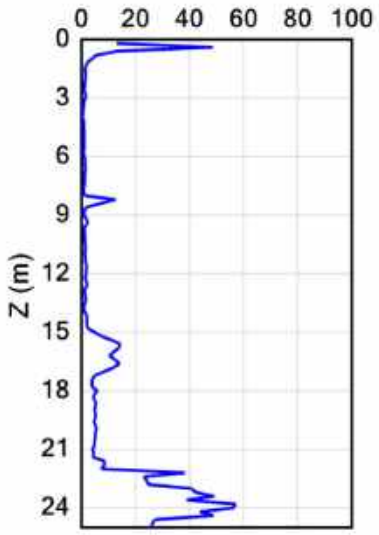
Hamlin Rd, Ardmore

LOAD DESCRIPTION



CONSTRAINED MODULUS M (MPa)

(Vertical name: DMT_05)



CALCULATION OPTIONS

Lower limit of Constrained Modulus assigned in the calculation	0.70 MPa
Thickness of calculation layer	0.20 m
End of Calculation	at end of assigned profile

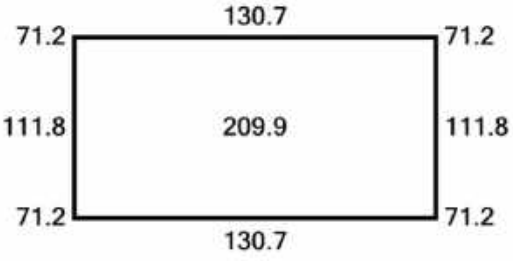
SETTLEMENTS CALCULATION

(one-dimensional conventional method)

$$S = \sum \frac{\Delta\sigma_v}{M} \Delta z$$

Calculation Point	Settlements [mm]	Z Stop [m]
below the center	209.9	25.00
below the corner	71.2	25.00
below the median point of short side	111.8	25.00
below the median point of long side	130.7	25.00

Settlements [mm]

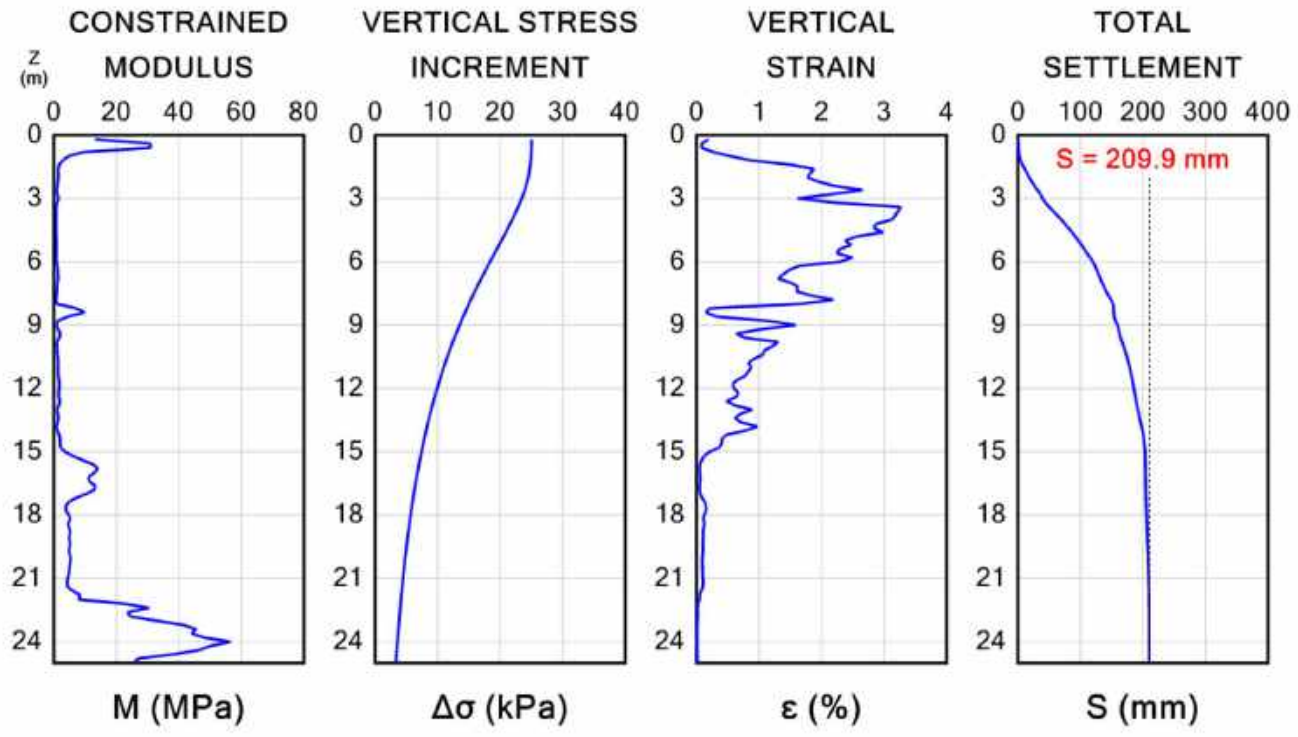


The calculated settlements are obtained using the interpretation formulae and the calculation method recommended in the TC16 DMT Report(2001). It is the designer's responsability to use alternative procedures if considered preferable.

SETTLEMENTS CALCULATION - below the center

Drill Force NZ — DF21GE034

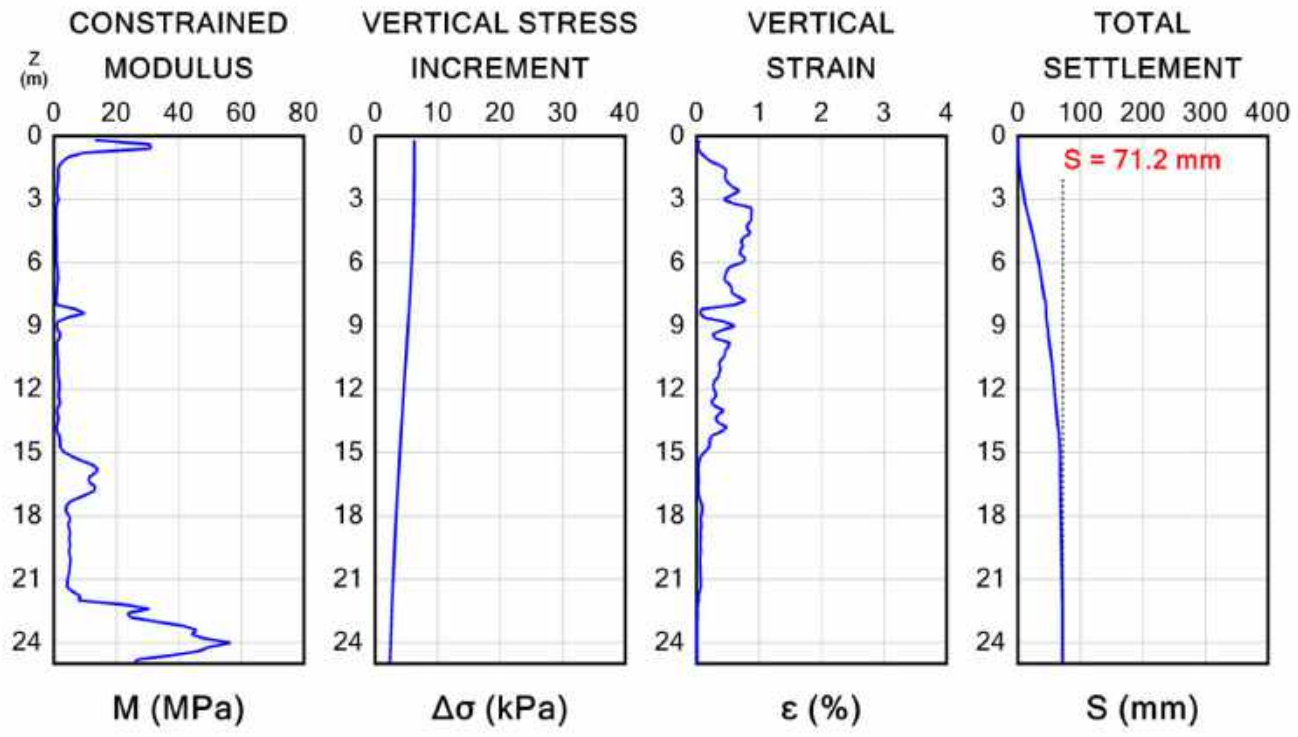
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the corner

Drill Force NZ — DF21GE034

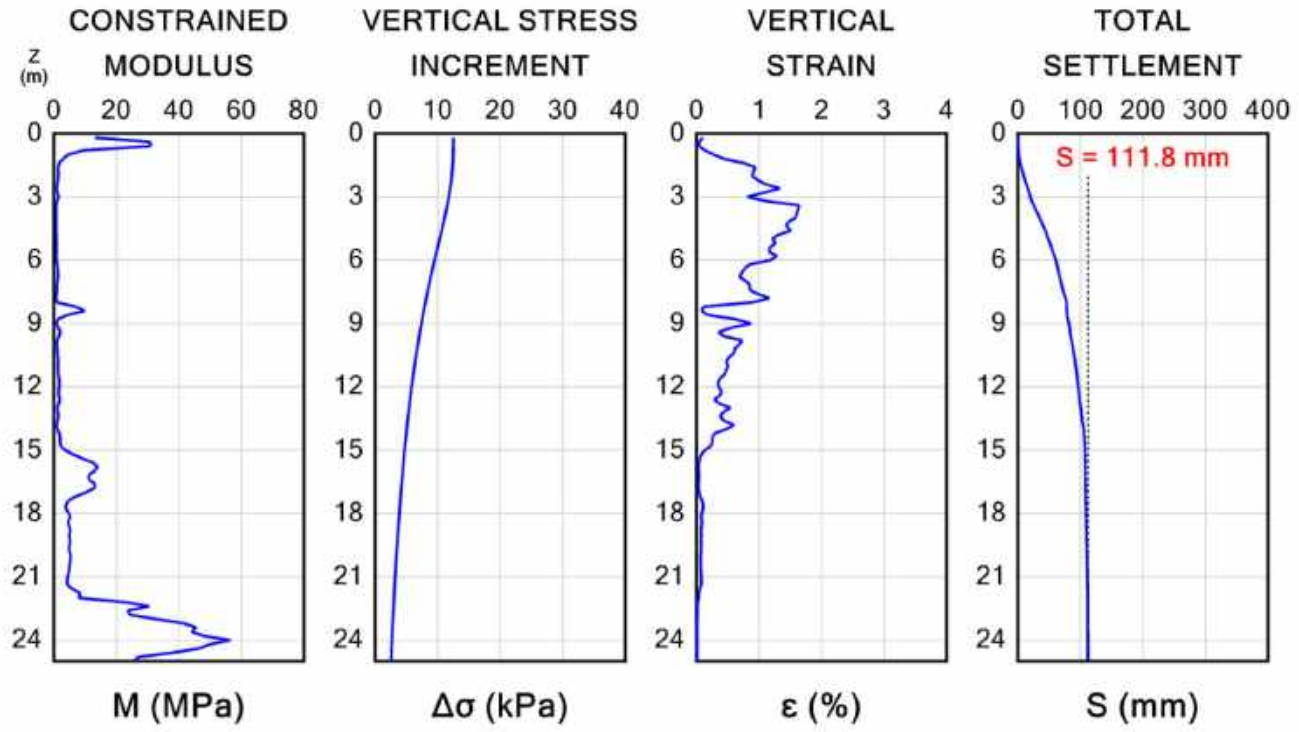
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of short side

Drill Force NZ | DF21GE034

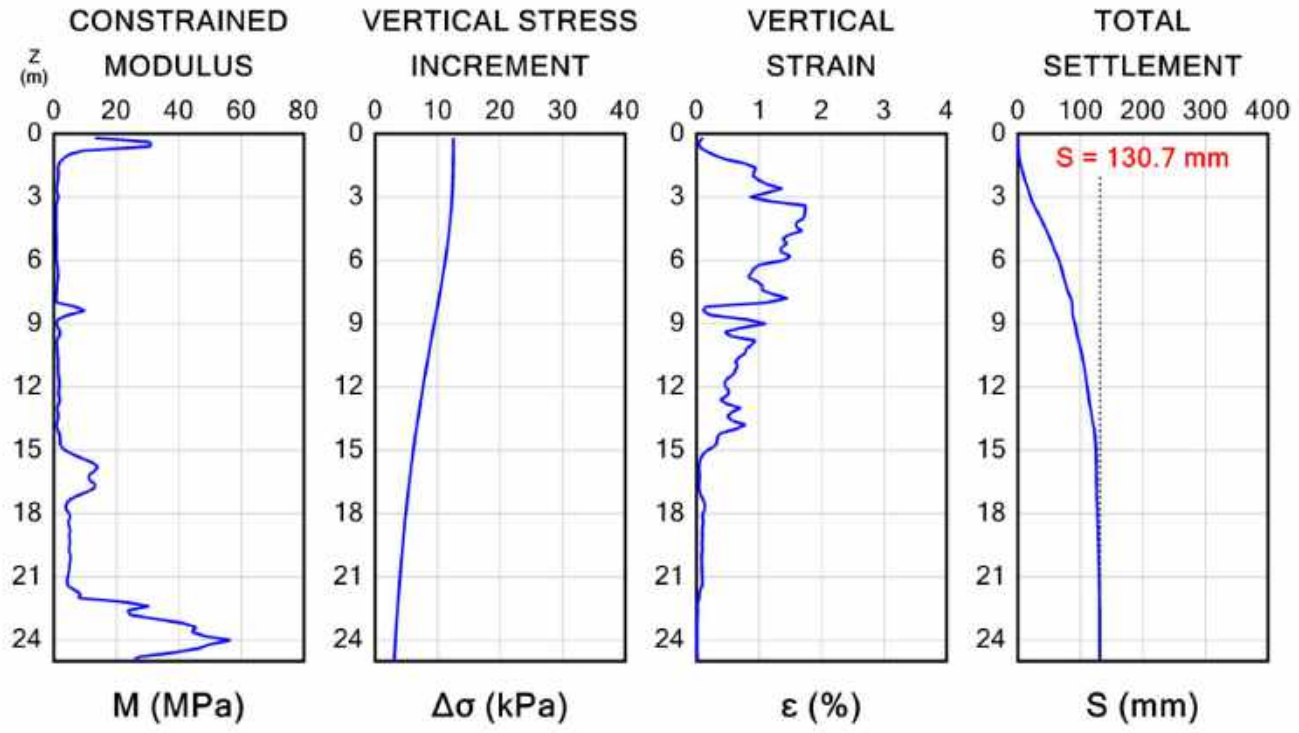
Lander Geotechnical | Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of long side

Drill Force NZ | DF21GE034

Lander Geotechnical | Hamlin Rd, Ardmore



Settlements Calculation

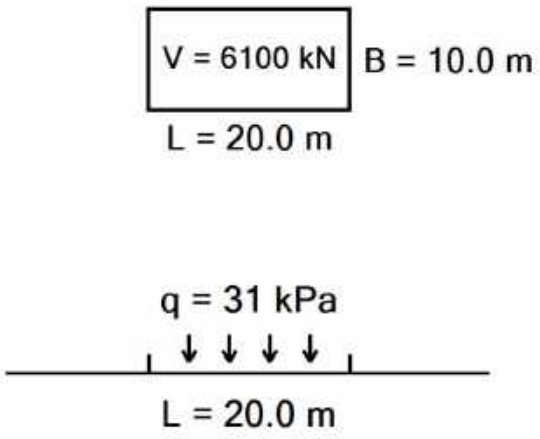
Drill Force NZ

DF21GE034 - DMT05: Case 4

Lander Geotechnical

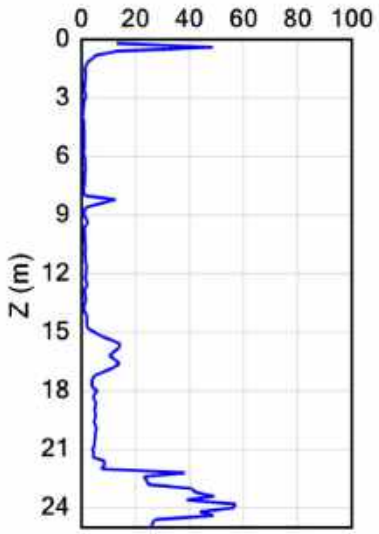
Hamlin Rd, Ardmore

LOAD DESCRIPTION



CONSTRAINED MODULUS M (MPa)

(Vertical name: DMT_05)



CALCULATION OPTIONS

Lower limit of Constrained Modulus assigned in the calculation	0.70 MPa
Thickness of calculation layer	0.20 m
End of Calculation	at end of assigned profile

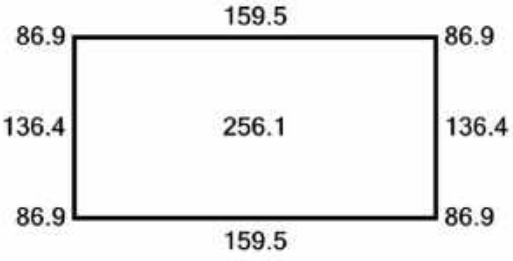
SETTLEMENTS CALCULATION

(one-dimensional conventional method)

$$S = \sum \frac{\Delta\sigma_v}{M} \Delta z$$

Calculation Point	Settlements [mm]	Z Stop [m]
below the center	256.1	25.00
below the corner	86.9	25.00
below the median point of short side	136.4	25.00
below the median point of long side	159.5	25.00

Settlements [mm]

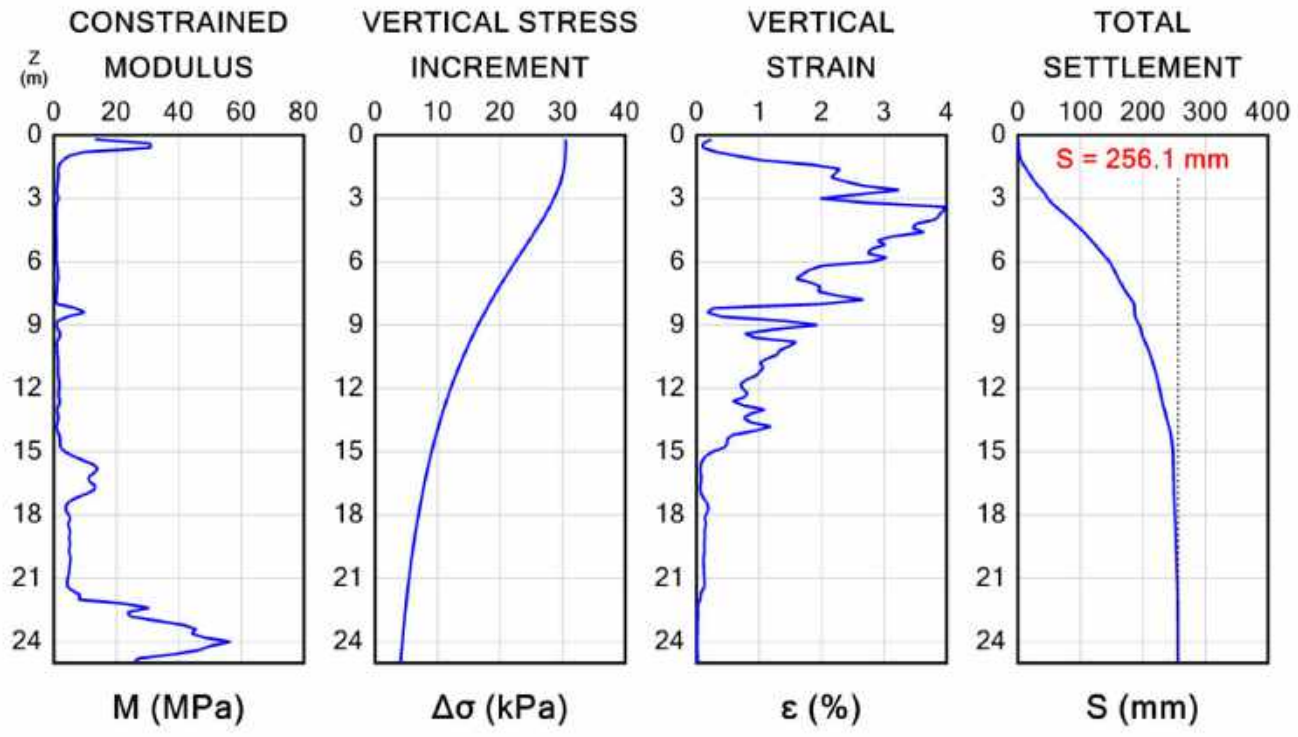


The calculated settlements are obtained using the interpretation formulae and the calculation method recommended in the TC16 DMT Report(2001). It is the designer's responsability to use alternative procedures if considered preferable.

SETTLEMENTS CALCULATION - below the center

Drill Force NZ — DF21GE034

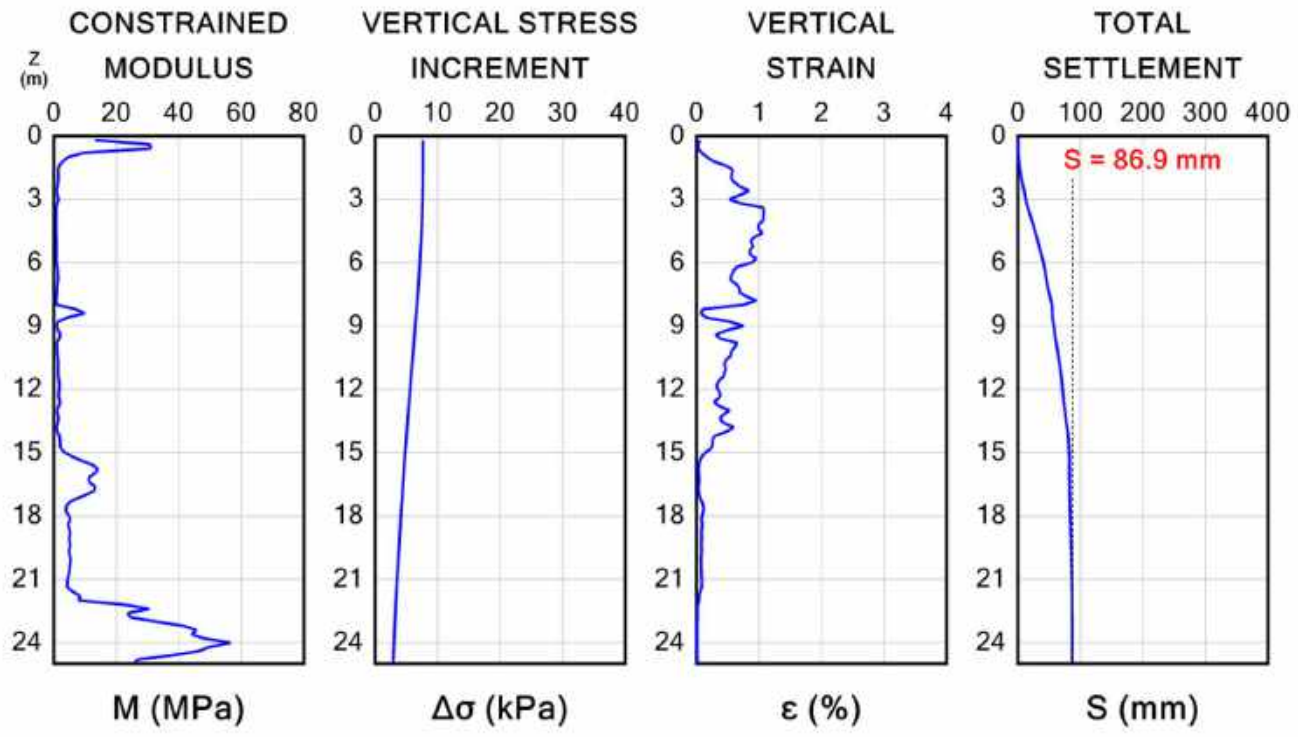
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the corner

Drill Force NZ — DF21GE034

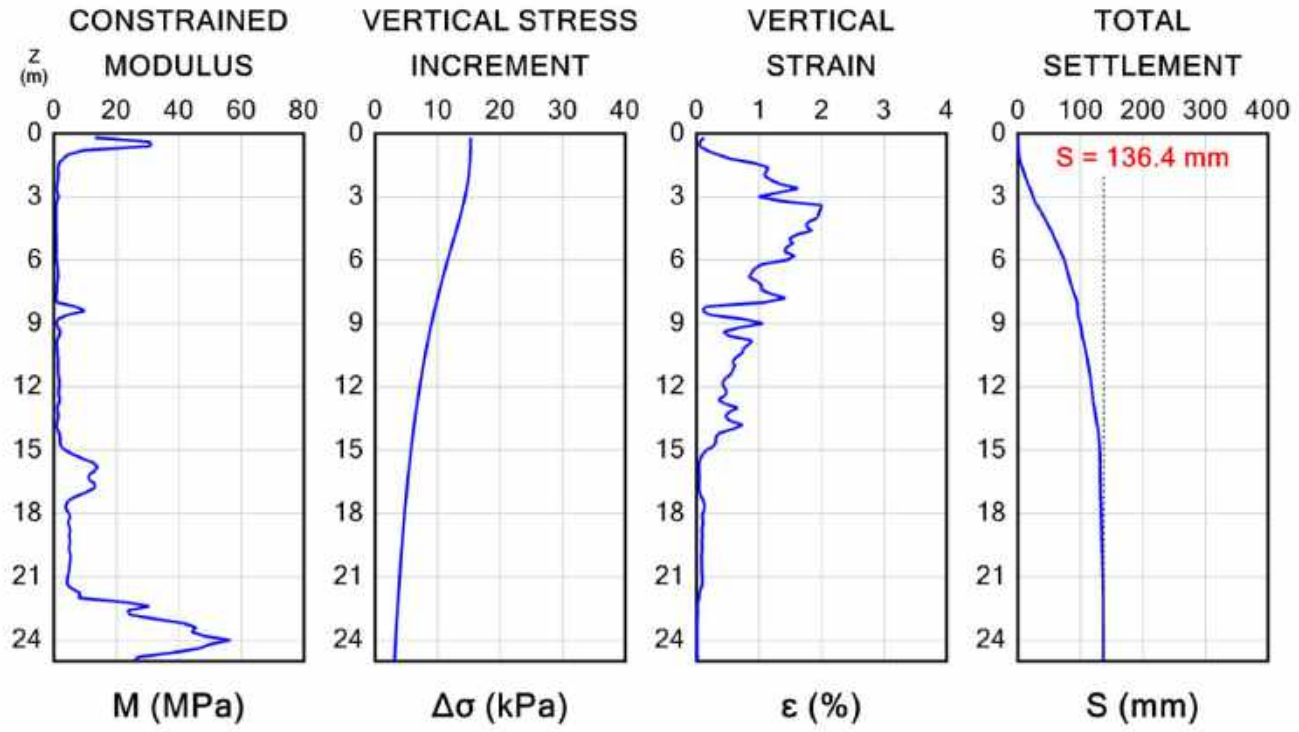
Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of short side

Drill Force NZ | DF21GE034

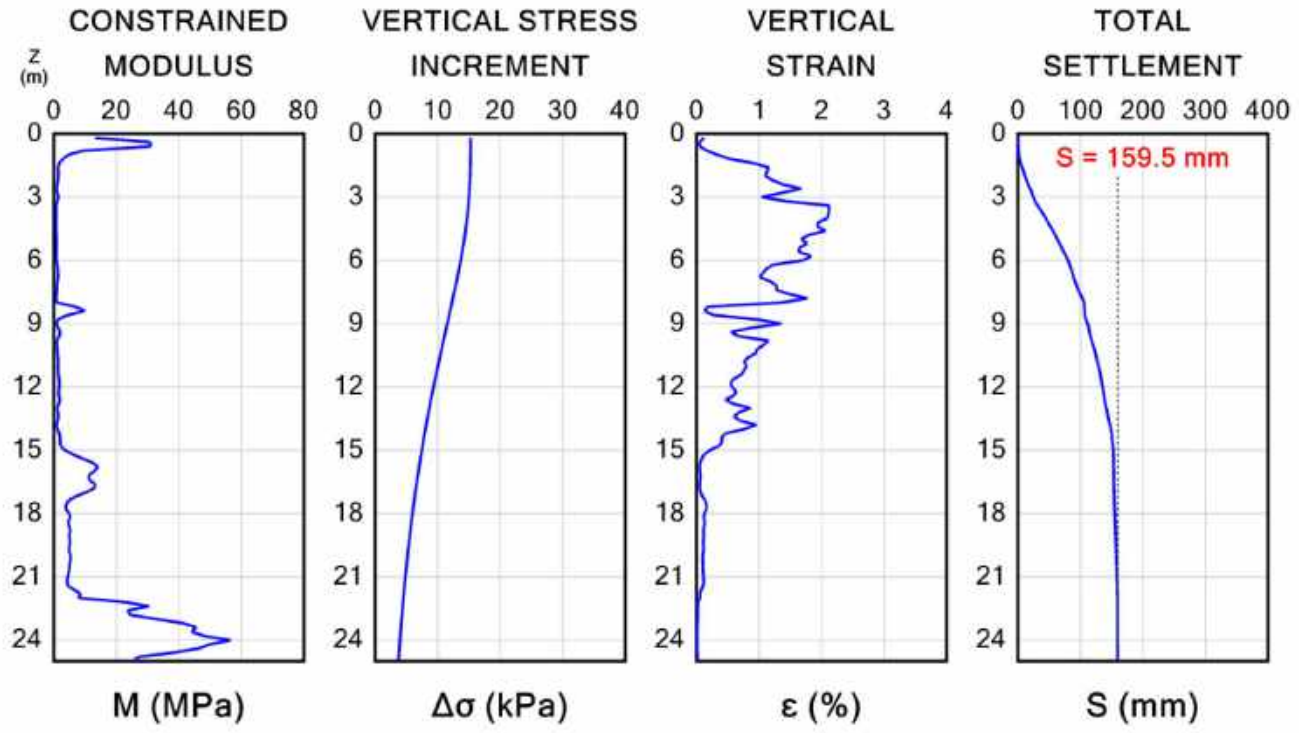
Lander Geotechnical | Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the median point of long side

Drill Force NZ | DF21GE034

Lander Geotechnical | Hamlin Rd, Ardmore



Settlements Calculation

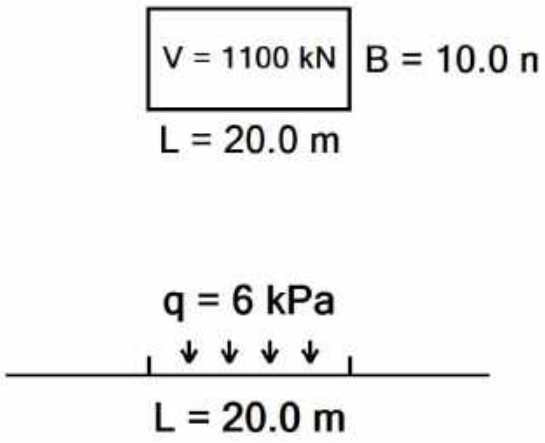
Drill Force NZ

Lander Geotechnical

DF21GE034 - DMT06: Case 2

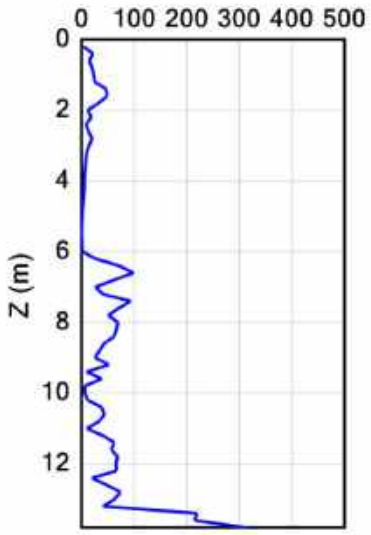
Hamlin Rd, Ardmore

LOAD DESCRIPTION



CONSTRAINED MODULUS M (MPa)

(Vertical name: DMT_06)



CALCULATION OPTIONS

Lower limit of Constrained Modulus assigned in the calculation	0.70 MPa
Thickness of calculation layer	0.20 m
End of Calculation	at end of assigned profile

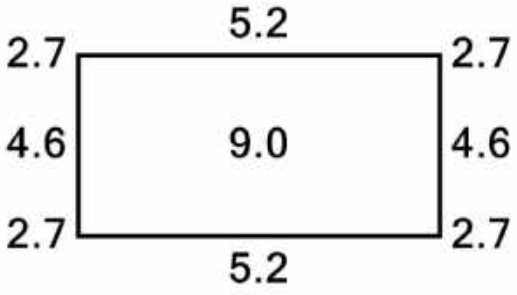
SETTLEMENTS CALCULATION

(one-dimensional conventional method)

$$S = \sum \frac{\Delta\sigma_v}{M} \Delta z$$

Calculation Point	Settlements [mm]	Z Stop [m]
below the center	9.0	13.80
below the corner	2.7	13.80
below the median point of short side	4.6	13.80
below the median point of long side	5.2	13.80

Settlements [mm]

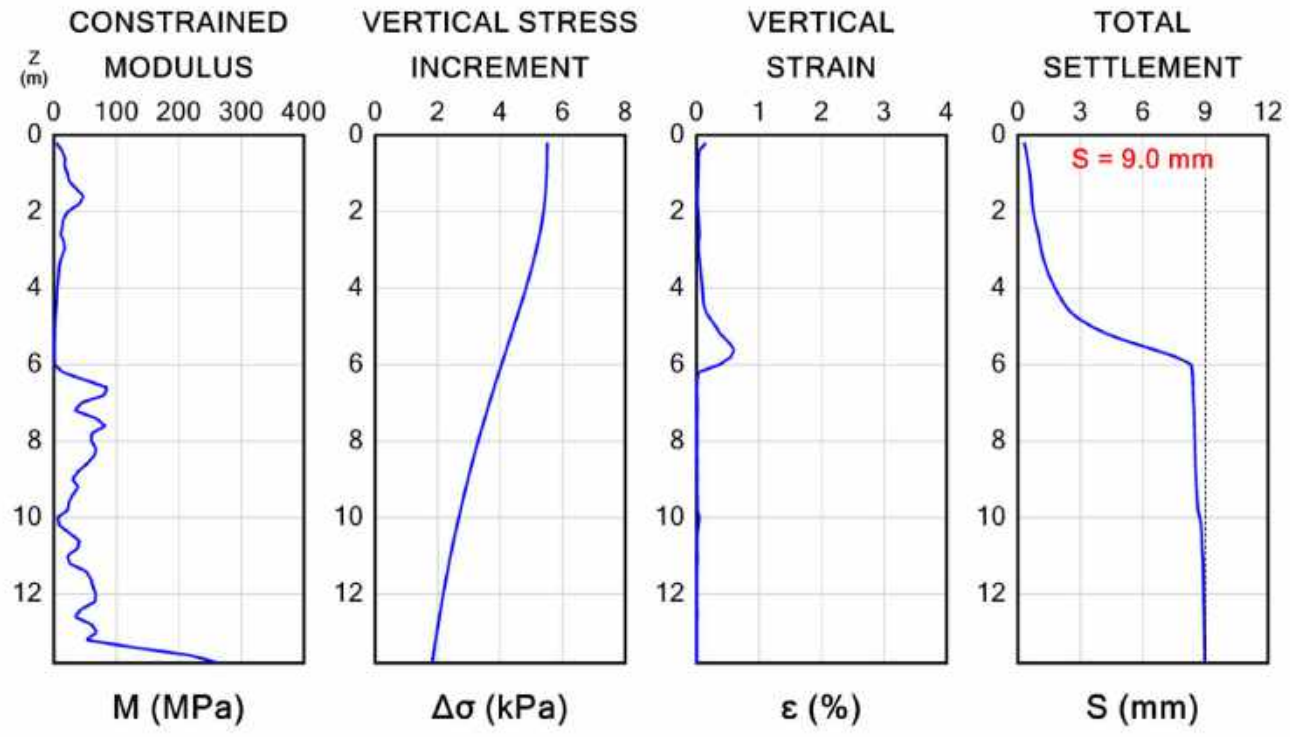


The calculated settlements are obtained using the interpretation formulae and the calculation method recommended in the TC16 DMT Report(2001). It is the designer's responsability to use alternative procedures if considered preferable.

SETTLEMENTS CALCULATION - below the center

Drill Force NZ — DF21GE034

Lander Geotechnical — Hamlin Rd, Ardmore



SETTLEMENTS CALCULATION - below the corner

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