APPENDIX 3.5 FALLING HEAD PERCOLATION TEST RESULTS



| Client: | Ardmore Developm | ents Limited | | | Job No: | J01627 |
|-------------|------------------------|--------------|-------------|----------|-----------------------|---------|
| Location: | Sunfields | | | Date: | | 20.04.2 |
| | Ardmore | | | | Page | 1 of 2 |
| Hole No: | P01 | | | Diameter | 0.1 | (m) |
| Location: | Refer to site plan | | | Depth: | 2 | (m) |
| | onditions preceding to | est: | Wet | | | |
| | oresoaking: | 11-7-5 | 7 Days | | | |
| Time | Time | Depth | Water | | Cum | |
| of Test | Interval | Reading | Depth | | Time | |
| (hr.min) | | (m) | | | (min) | |
| (111.11111) | (min) | (111) | (m) | | (11111) | |
| 12:01 | - | 0.30 | 1.70 | | 0 | |
| 12:02 | 1 | 0.39 | 1.61 | | 1 | |
| 12:04 | 2 | 0.56 | 1.44 | | 3 | |
| 12:08 | 4 | 0.62 | 1.38 | | 7 | |
| 12:12 | 4 | 0.66 | 1.34 | | 11 | |
| 12:22 | 10 | 0.72 | 1.28 | | 21 | |
| 12:22 | 0 | 0.36 | 1.64 | | 21 | |
| 12:23 | 1 | 0.45 | 1.55 | | 22 | |
| 12:25 | 2 | 0.53 | 1.47 | | 24 | |
| 12:30 | 5 | 0.61 | 1.39 | | 29 | |
| 12:40 | 10 | 0.66 | 1.34 | | 39 | |
| 12:50 | 10 | 0.68 | 1.32 | | 49 | |
| 13:00 | 10 | 0.72 | 1.28 | | 59 | |
| 13:00 | 0 | 0.20 | 1.80 | | 59 | |
| 13:02 | 2 | 0.29 | 1.71 | | 61 | |
| 13:04 | 2 | 0.38 | 1.62 | | 63 | |
| 13:10 | 6 | 0.62 | 1.38 | | 69 | |
| 13:20 | 10 | 0.68 | 1.32 | | 79 | |
| 13:30 | 10 | 0.70 | 1.30 | | 89 | |
| 13:31 | 1 | 0.32 | 1.68 | | 90 | |
| 13:33 | 2 | 0.4 | 1.60 | | 92 | |
| 13:35 | 2 | 0.55 | 1.45 | | 94 | |
| 13:40 | 5 | 0.61 | 1.39 | | 99 | |
| 13:50 | 10 | 0.68 | 1.32 | | 109 | |
| 14:00 | 10 | 0.74 | 1.26 | | 119 | |
| 14:30 | 30 | 0.83 | 1.17 | | 149 | |
| 15:00 | 30 | 0.89 | 1.11 | | 179 | |
| 15:30 | 30 | 0.96 | 1.04 | | 209 | |
| 16:00 | 30 | 1.05 | 0.95 | | 239 | |
| 10.00 | .30 | 1.00 | 0.50 | | 200 | |
| | | | Test | P01 | | |
| | | | Gradient | 0.0030 | m/min | |
| | | | Percolation | 0.0754 | L/m ² /min | |



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P O Box 97 385, Manukau, Auckland 2241

Phone: 027 488 6882

Email: shane@landergeotechnical.co.nz

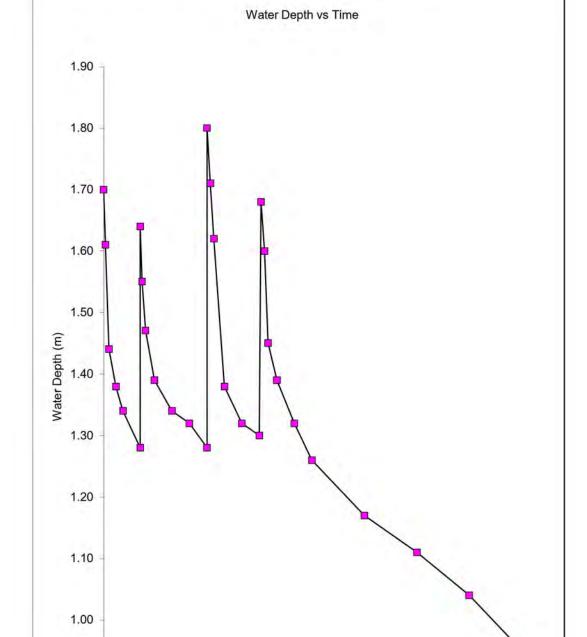
Operator:

Checked:

d: JM

RZ

| STORMWATER PERCOLATION TEST | | | | | | |
|--------------------------------------|--------------------|-----------|--------|----------|--|--|
| Client: Ardmore Developments Limited | | Job No: | J01627 | | | |
| Location: | Sunfields | | Date: | 20.04.21 | | |
| 200 | Ardmore | | Page | 2 of 2 | | |
| Hole No: | P01 | Diameter: | 0.1 | (m) | | |
| Location: | Refer to site plan | Depth: | 2.0 | (m) | | |





0.90

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Time (min)

150

P O Box 97 385, Manukau, Auckland 2241

100

Phone: 027 488 6882

50

Email: shane@landergeotechnical.co.nz Checked:

Operator: RZ

200

hecked: JM

| STORMWATER PERCOLATION TEST | | | | | | |
|------------------------------------|------------------------------|-----|---------|----------------|----------|--|
| Client: | Ardmore Developments Limited | | J | Job No: J01627 | | |
| Location: | Sunfields | | | ate: | 14.04.21 | |
| | Ardmore | | P | age | 1 of 2 | |
| Hole No: | P02 | | Diamete | 0.1 | (m) | |
| Location: | Refer to site plan | | Depth: | 2 | (m) | |
| Weather conditions preceding test: | | Wet | | | | |

48 Hours

| Time | Time | Depth | Water | Cum |
|----------|----------|---------|-------|-------|
| of Test | Interval | Reading | Depth | Time |
| (hr.min) | (min) | (m) | (m) | (min) |
| 11:21 | | 0.30 | 1.70 | 0 |
| 11:22 | 1 | 0.33 | 1.67 | 1 |
| 11:24 | 2 | 0.38 | 1.62 | 3 |
| 11:27 | 3 | 0.44 | 1.56 | 6 |
| 11:32 | 5 | 0.48 | 1.52 | 11 |
| 11:42 | 10 | 0.54 | 1.46 | 21 |
| 11:57 | 15 | 0.62 | 1.38 | 36 |
| 12:27 | 30 | 0.73 | 1.27 | 66 |
| 12:57 | 30 | 0.78 | 1.22 | 96 |
| 13:27 | 30 | 0.84 | 1.16 | 126 |
| 13:57 | 30 | 0.86 | 1.14 | 156 |
| 14:27 | 30 | 0.94 | 1.06 | 186 |
| 14:57 | 30 | 0.99 | 1.01 | 216 |

Test P02

 $\begin{array}{lll} \text{Gradient} & 0.0007 & \text{m/min} \\ \text{Percolation} & 0.01 & \text{L/m}^2/\text{min} \end{array}$



Details of presoaking:

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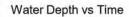
Phone: 027 488 6882

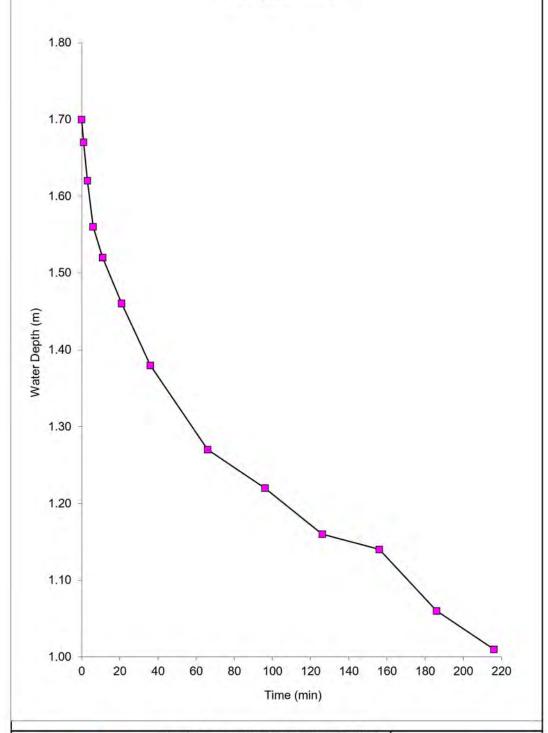
Email: shane@landergeotechnical.co.nz

Operator: JM

Checked: JM

| STORMWATER PERCOLATION TEST | | | | | | |
|-----------------------------|--------------------------------------|-----------|---------|----------|--|--|
| Client: | Client: Ardmore Developments Limited | | Job No: | J01627 | | |
| Location: | Sunfields | | Date: | 14.04.21 | | |
| | Ardmore | | Page | 2 of 2 | | |
| Hole No: | P02 | Diameter: | 0.1 | (m) | | |
| Location: | Refer to site plan | Depth: | 2.0 | (m) | | |







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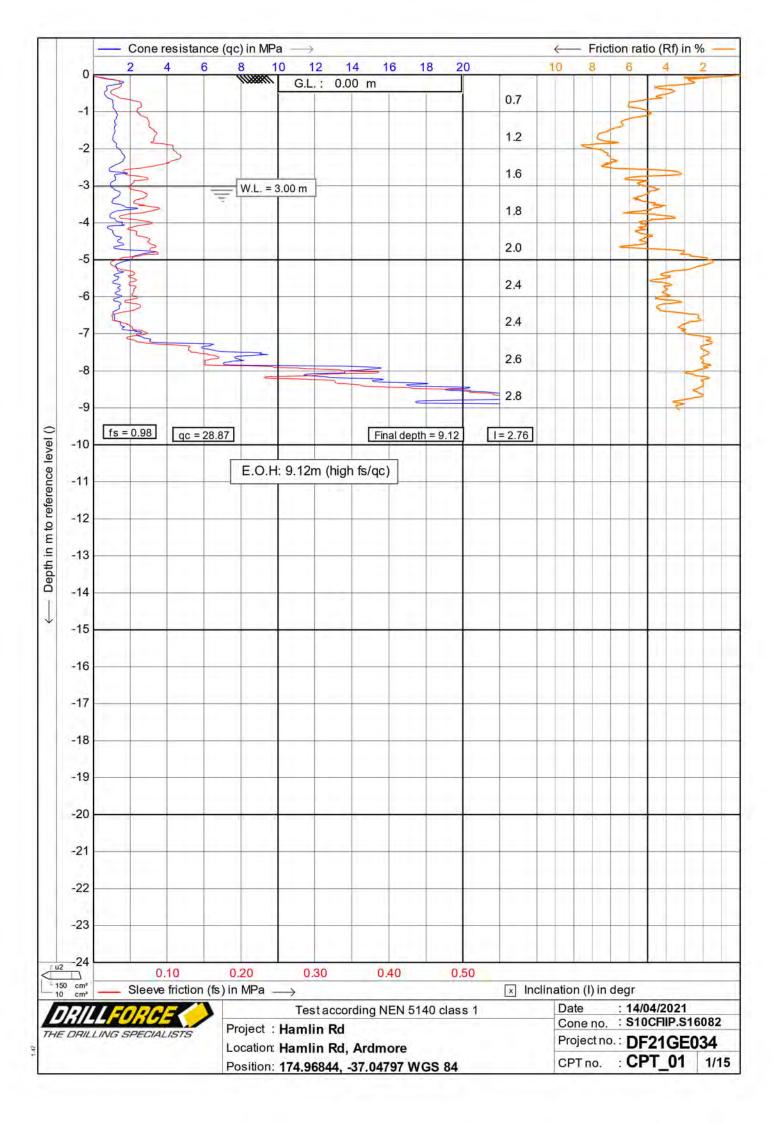
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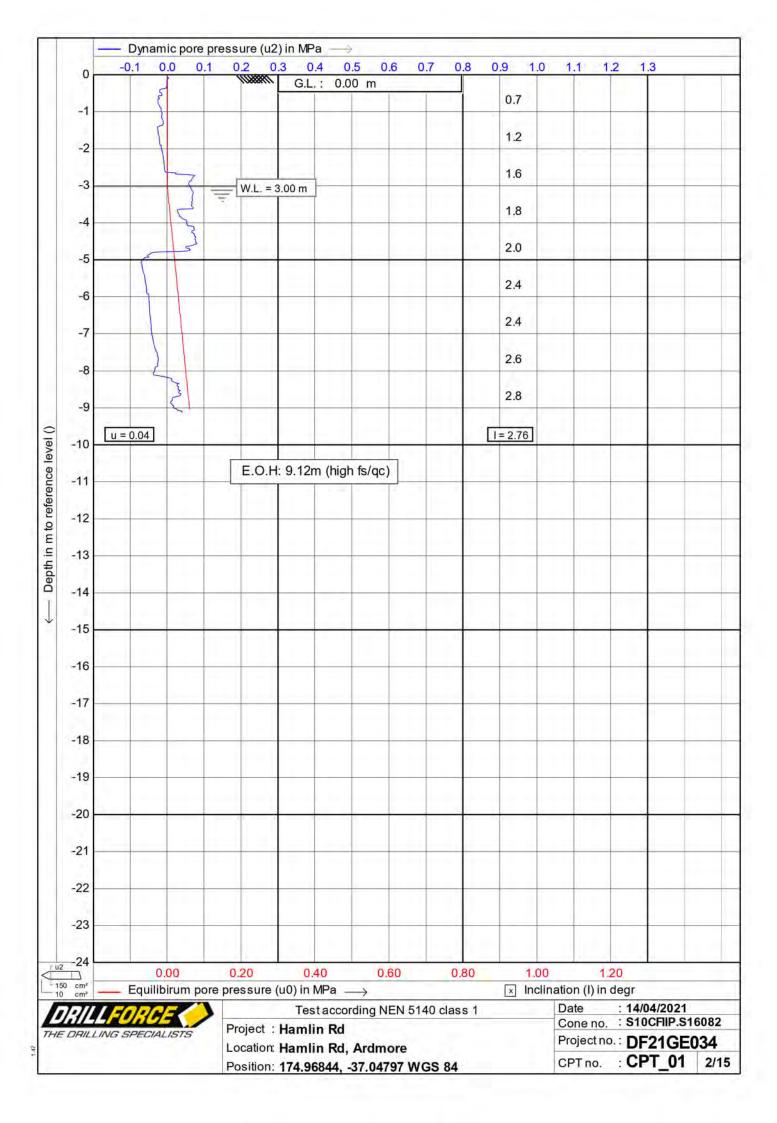
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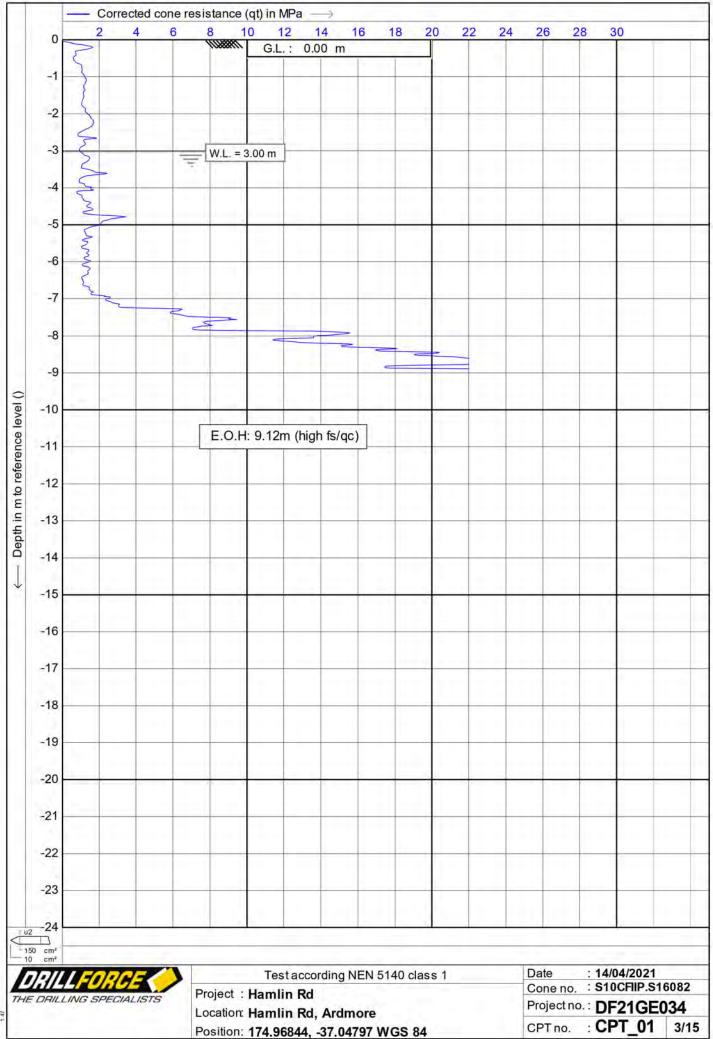
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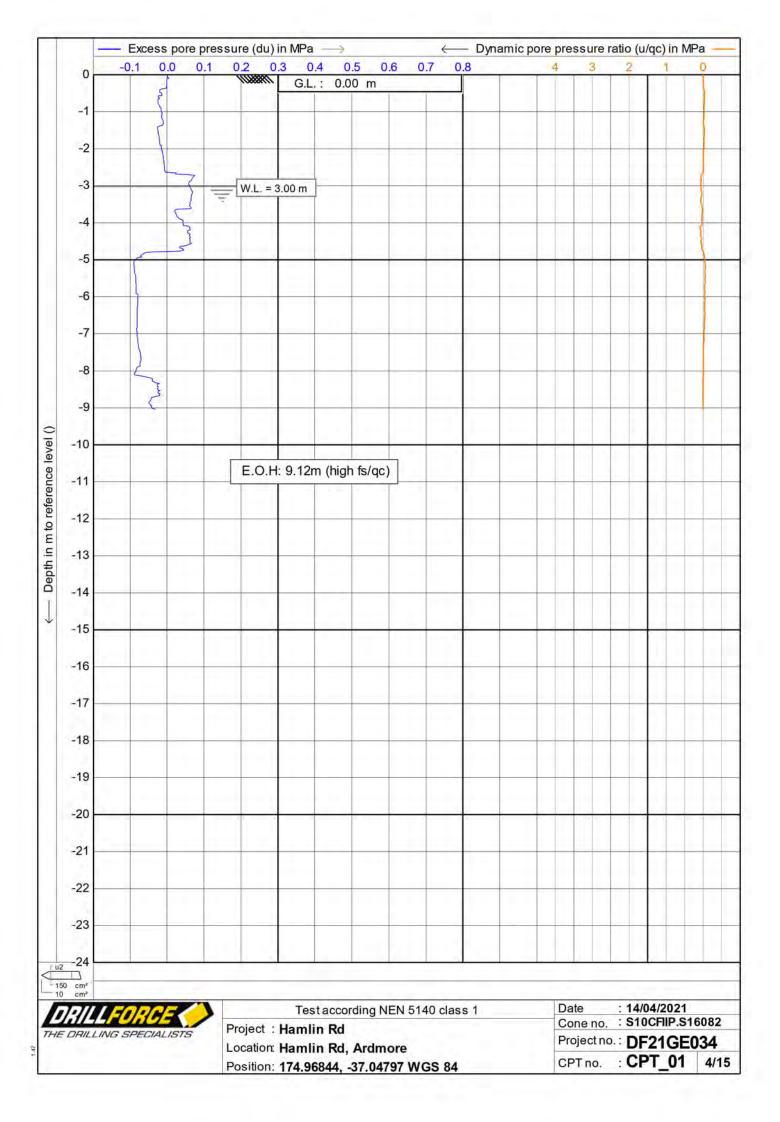
APPENDIX 3.6 CONE PENETRATION TEST RESULTS

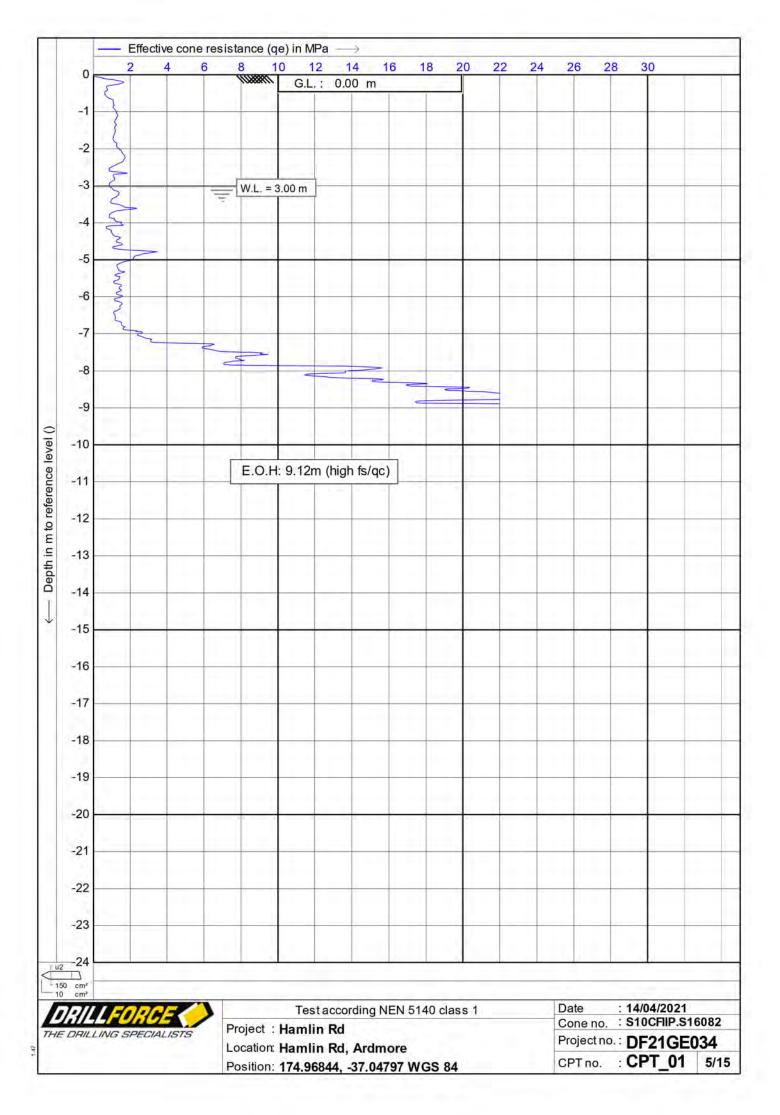


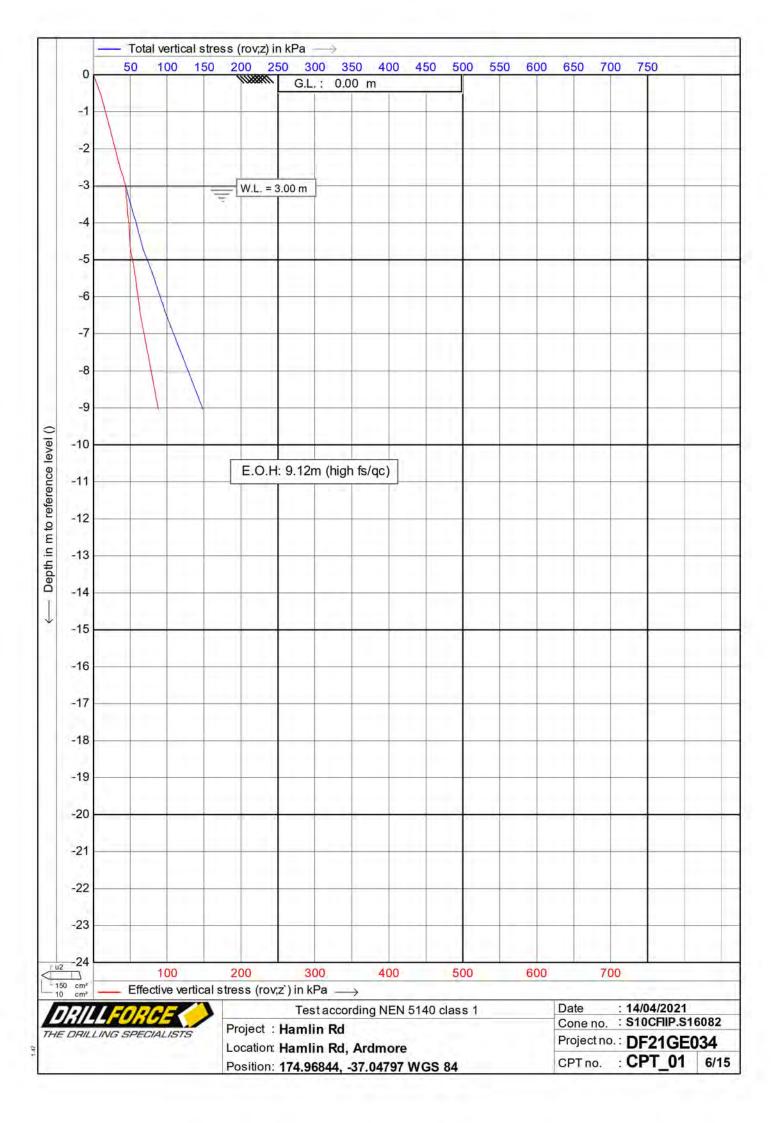


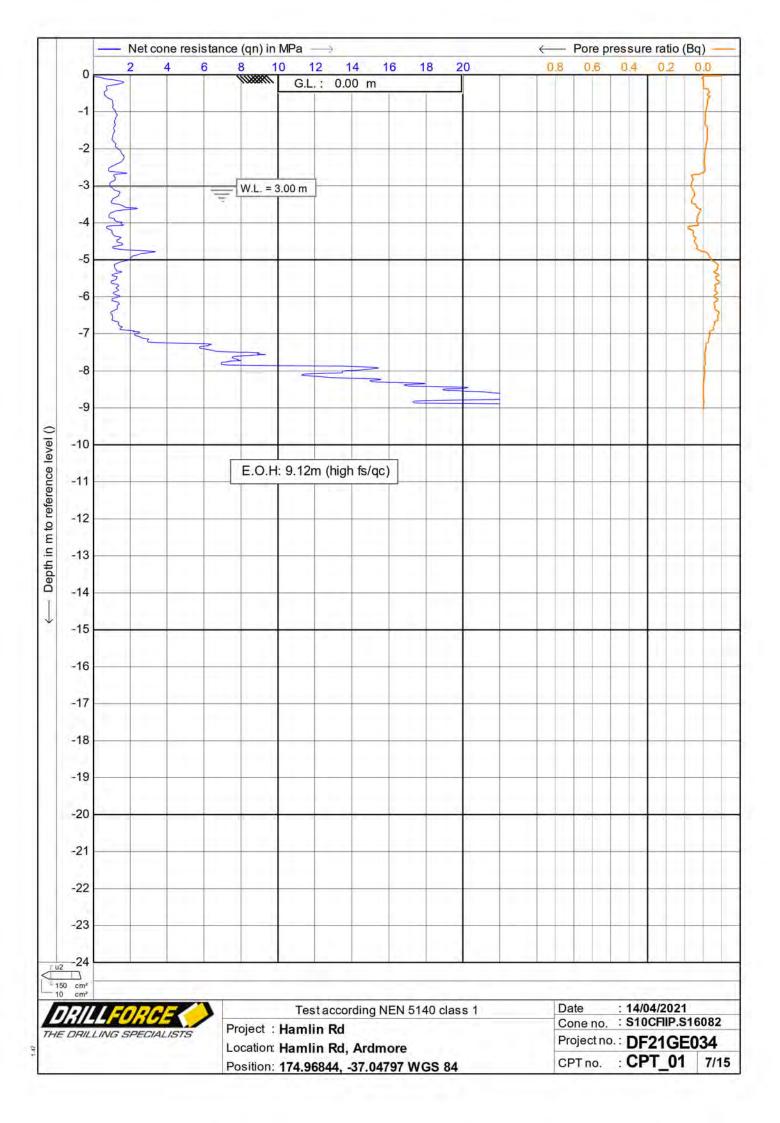


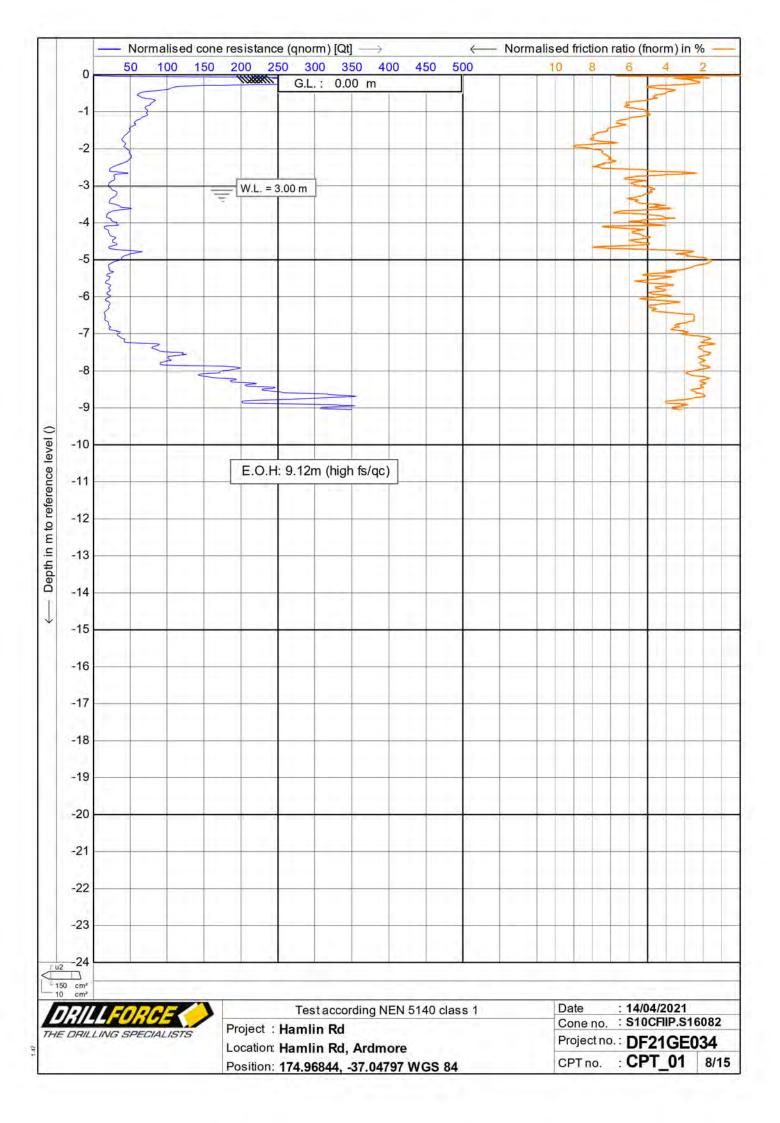


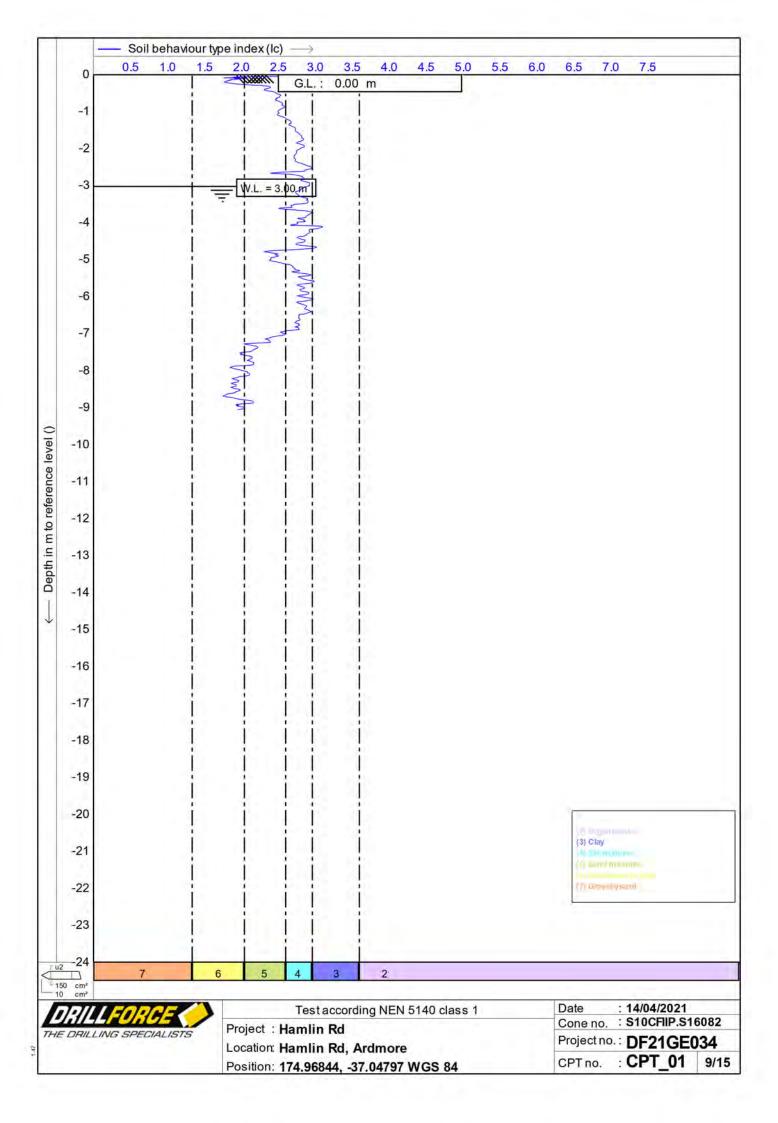


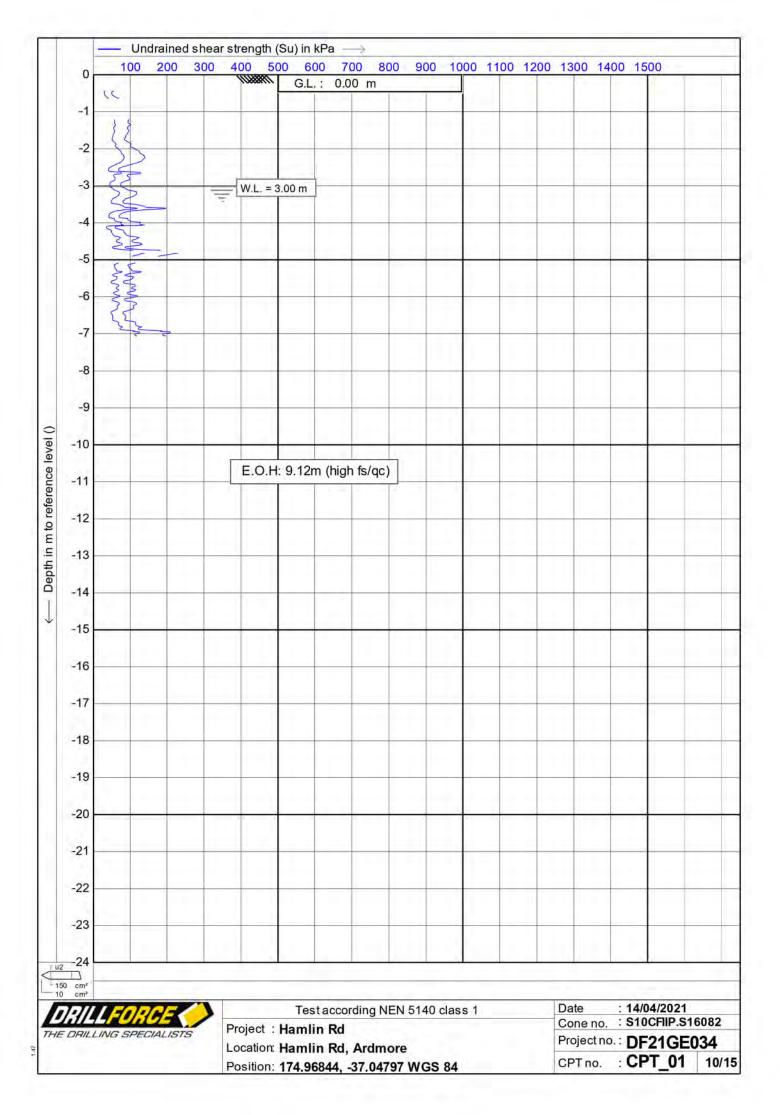


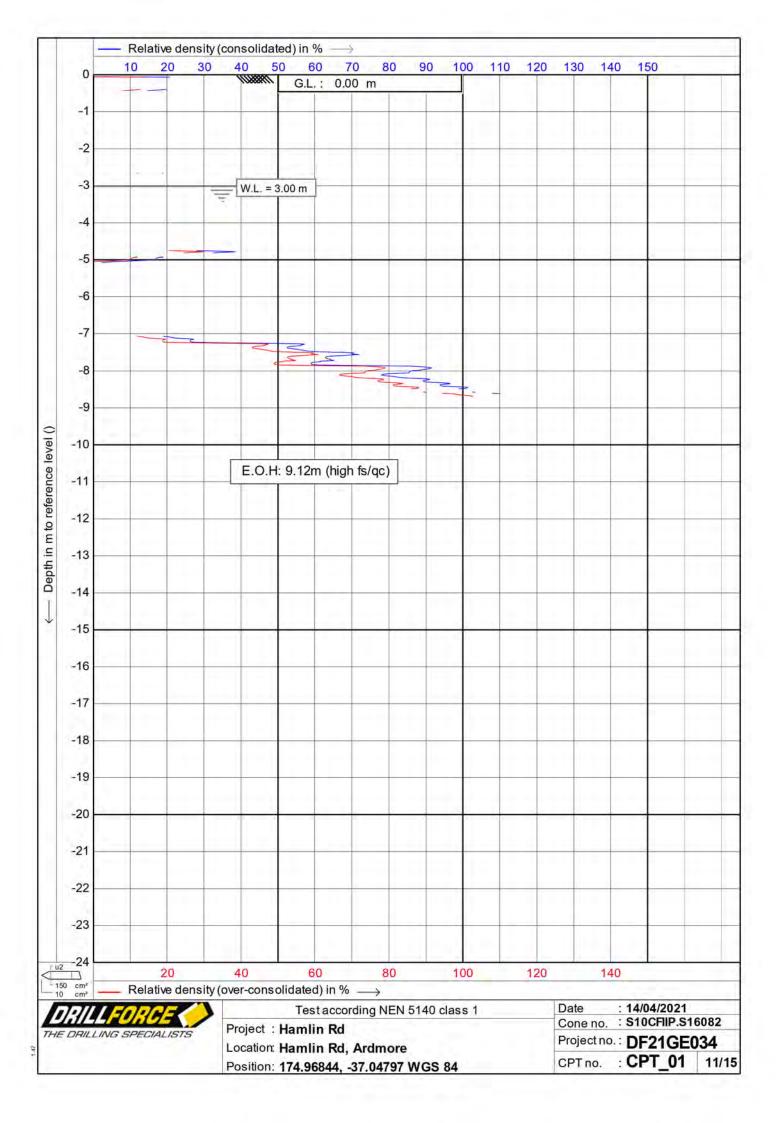


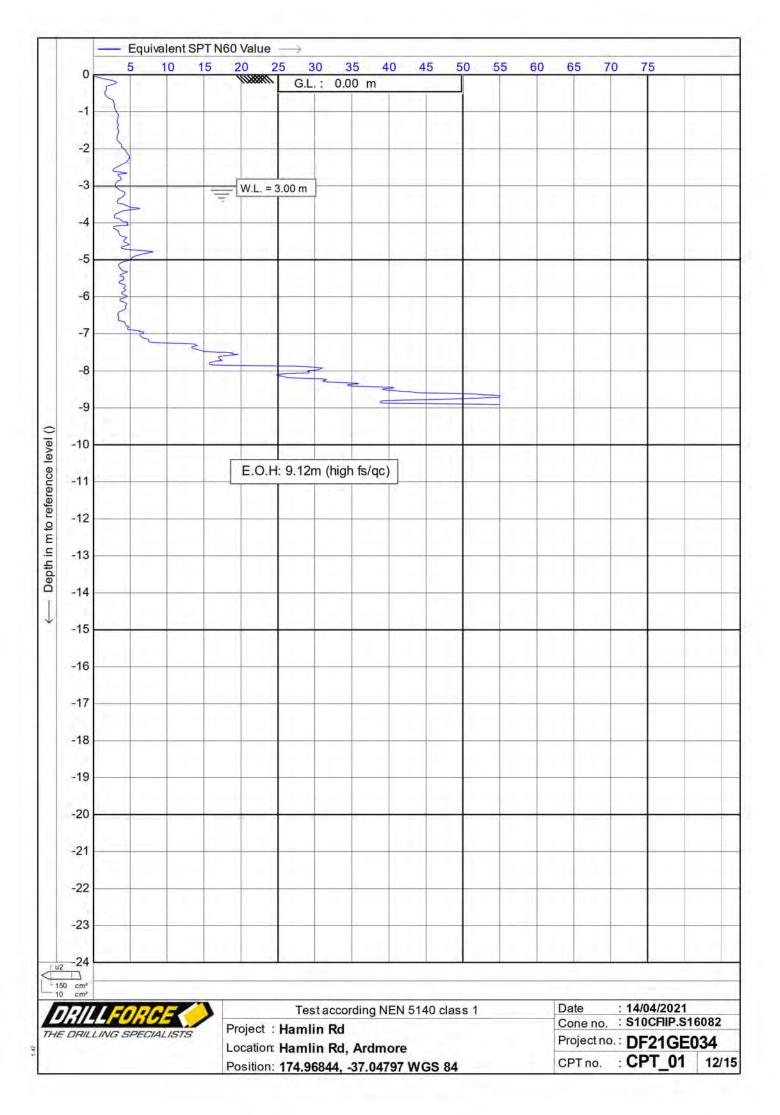


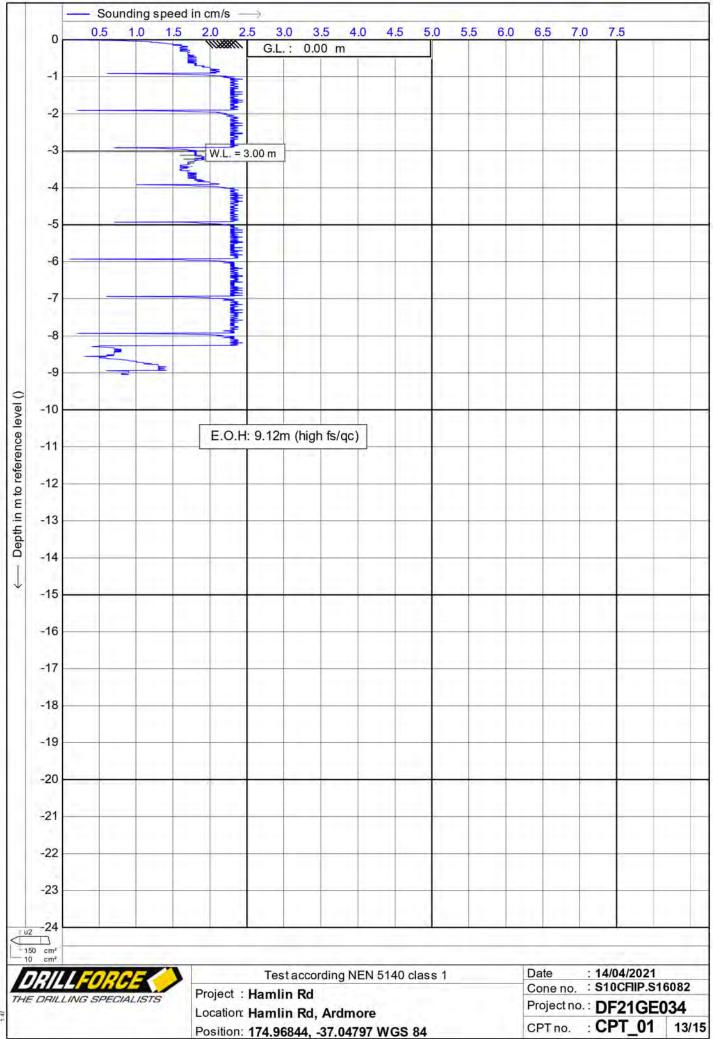


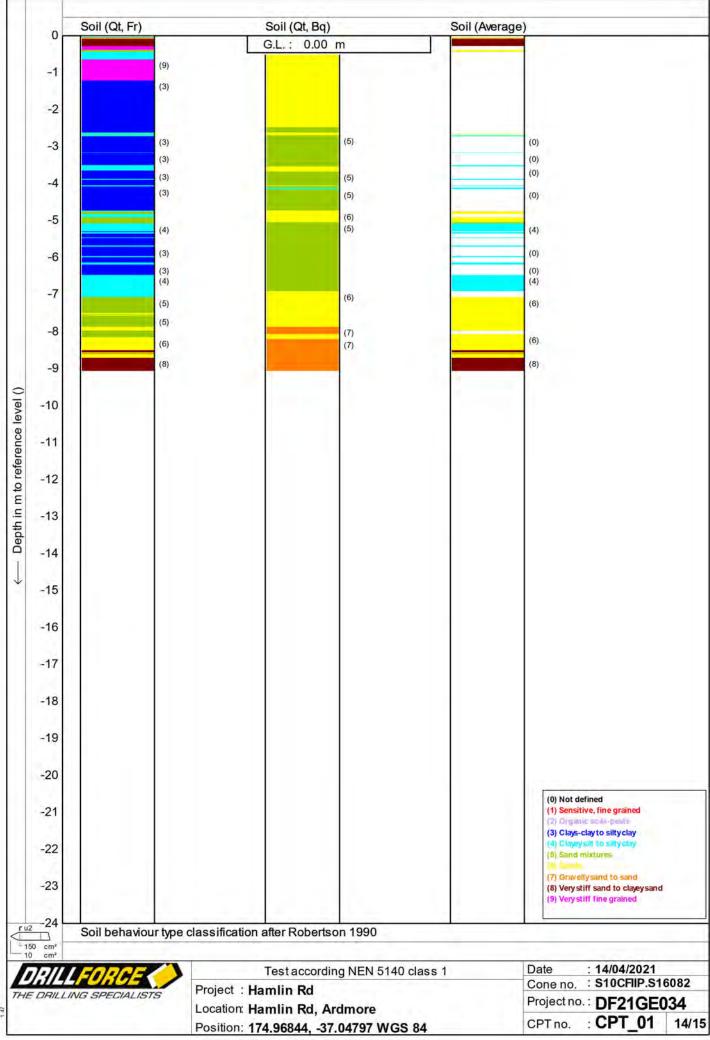




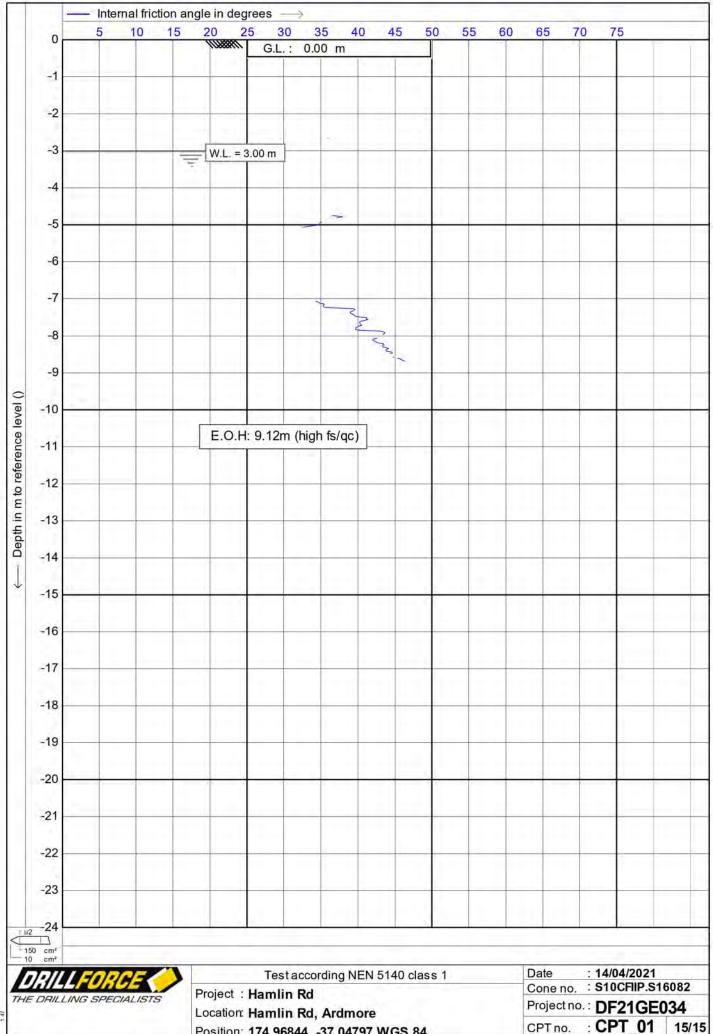




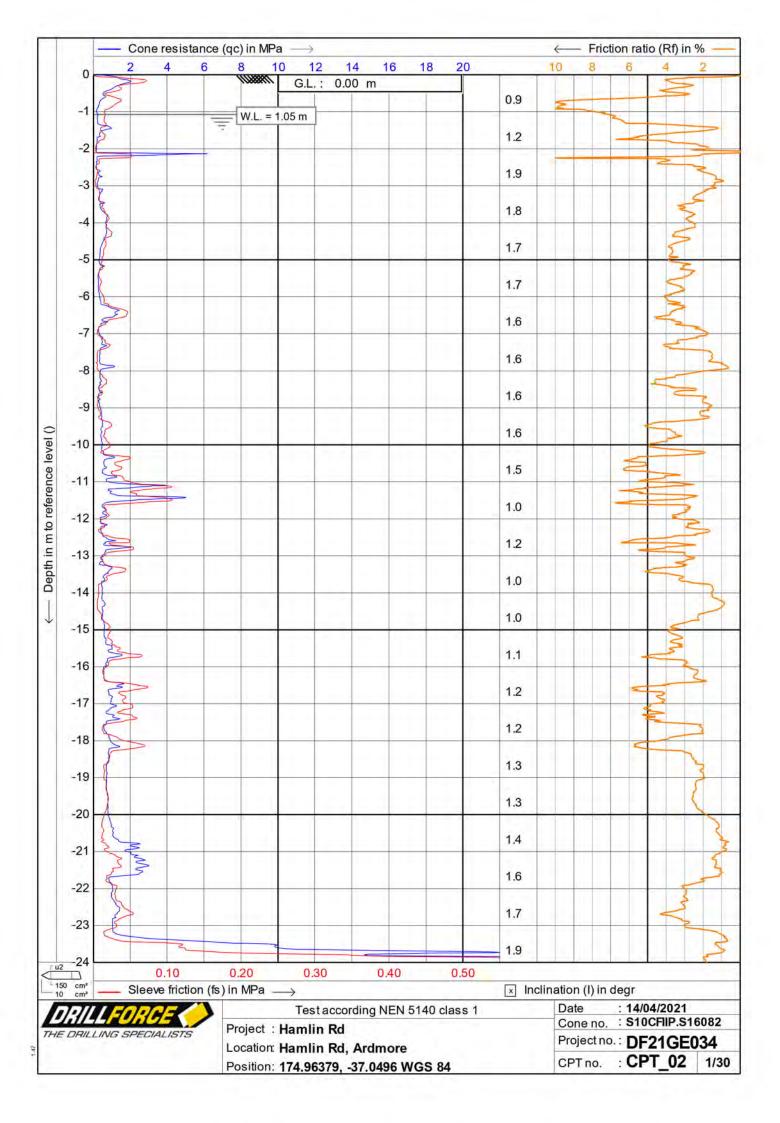


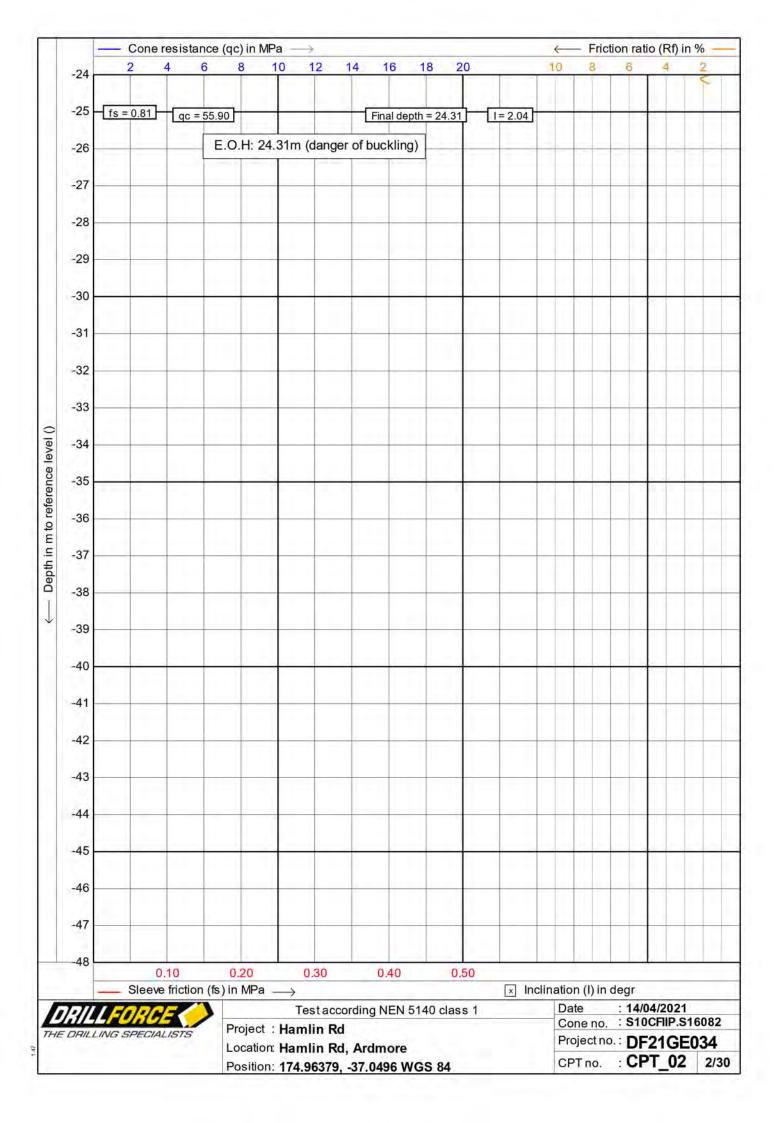


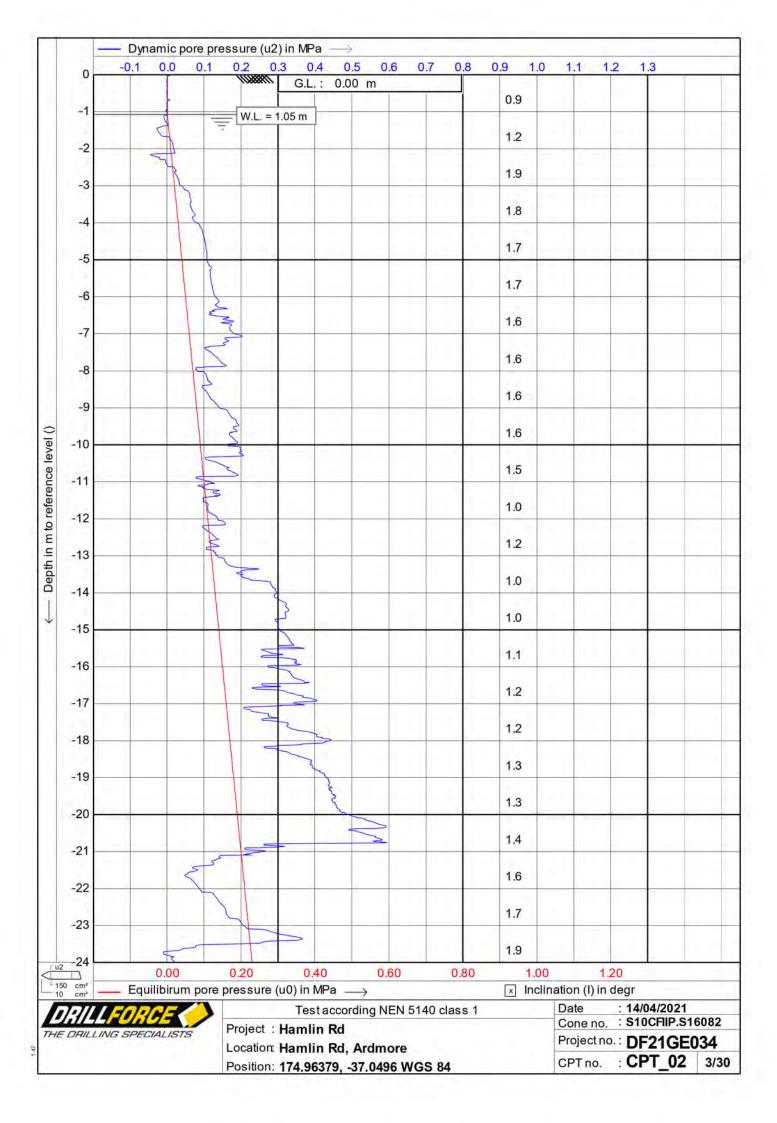
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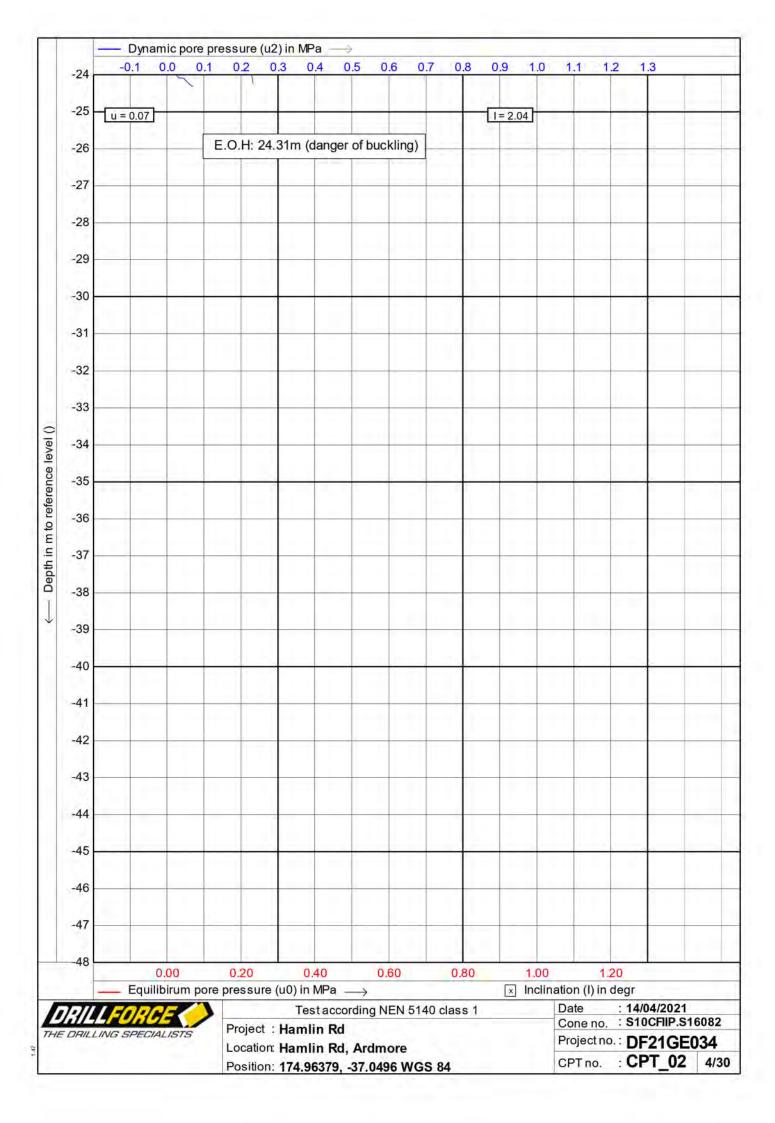


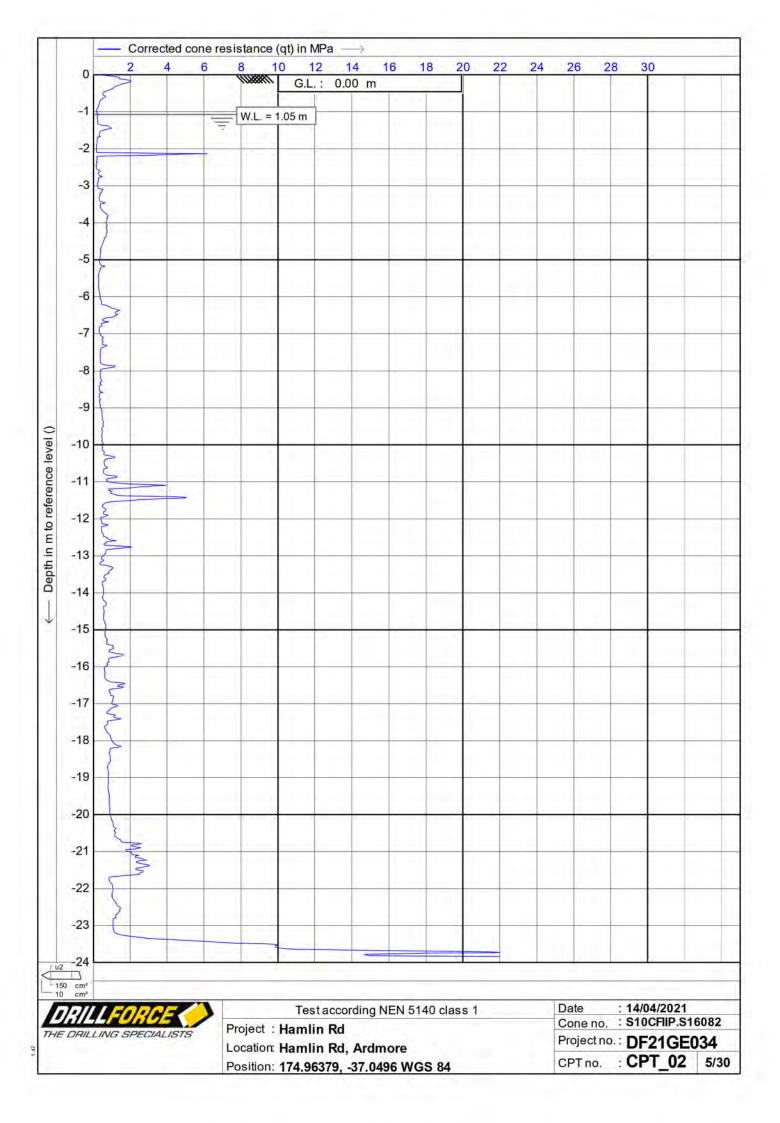
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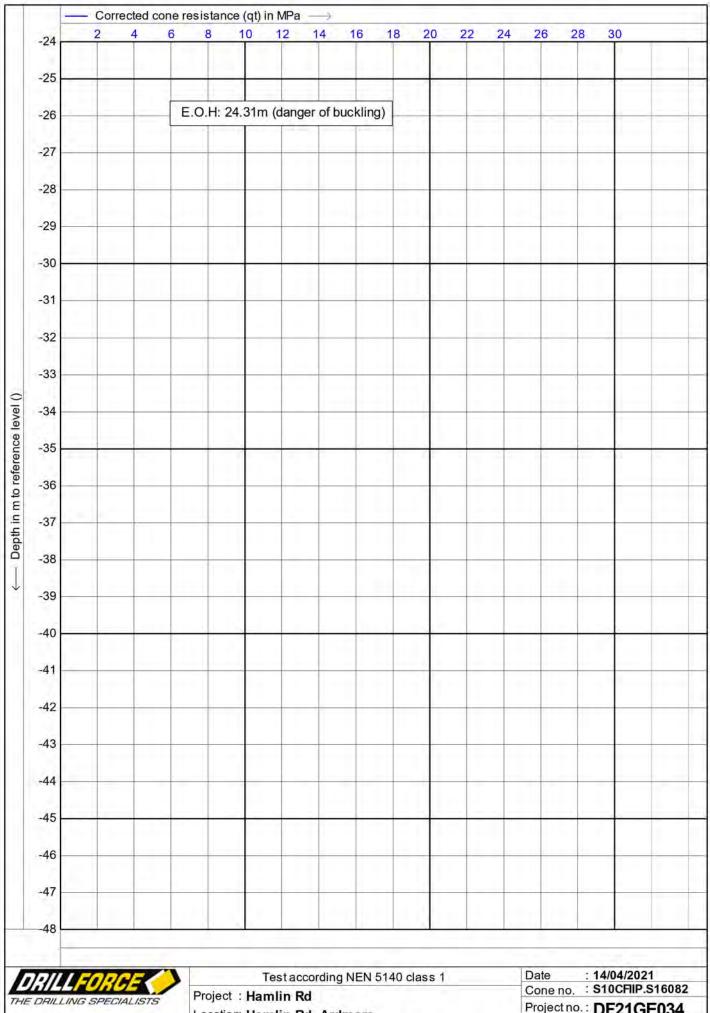










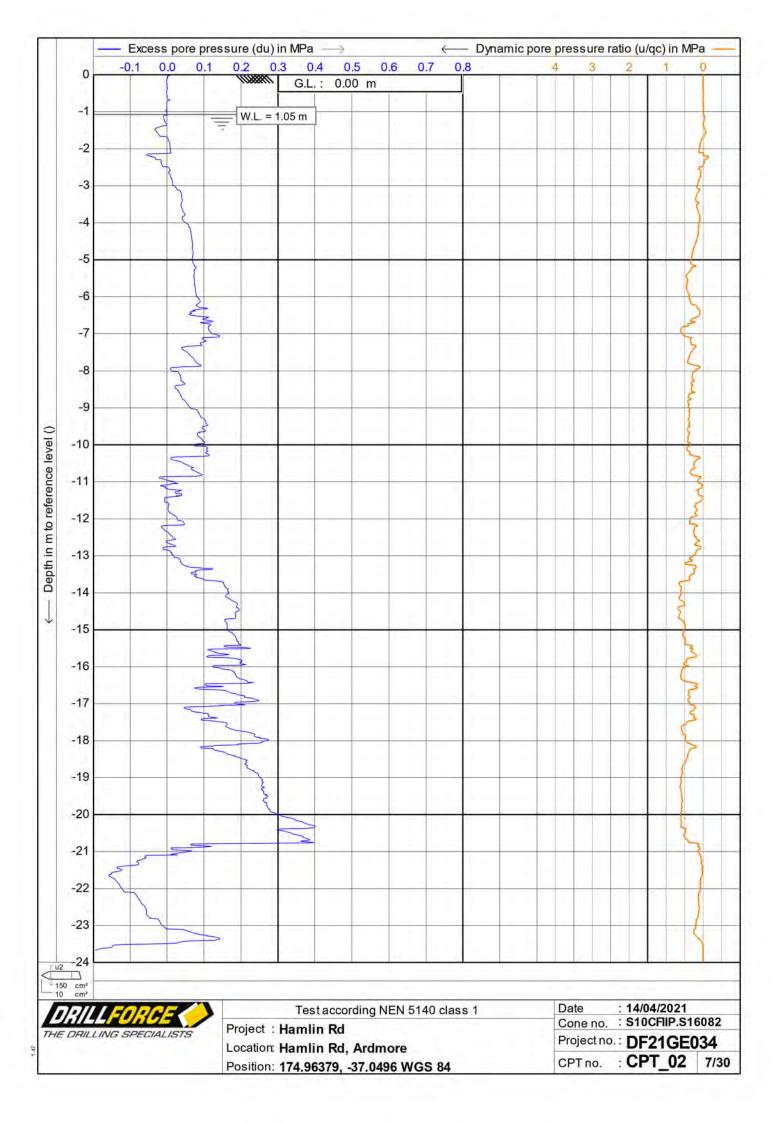


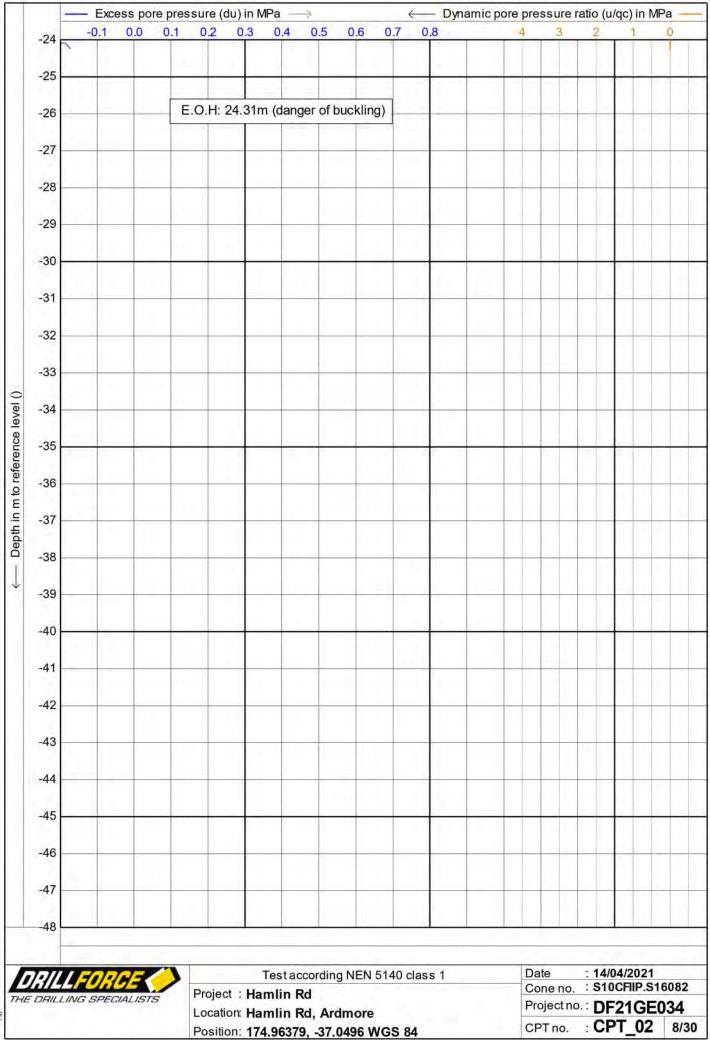
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Position: 174.96379, -37.0496 WGS 84

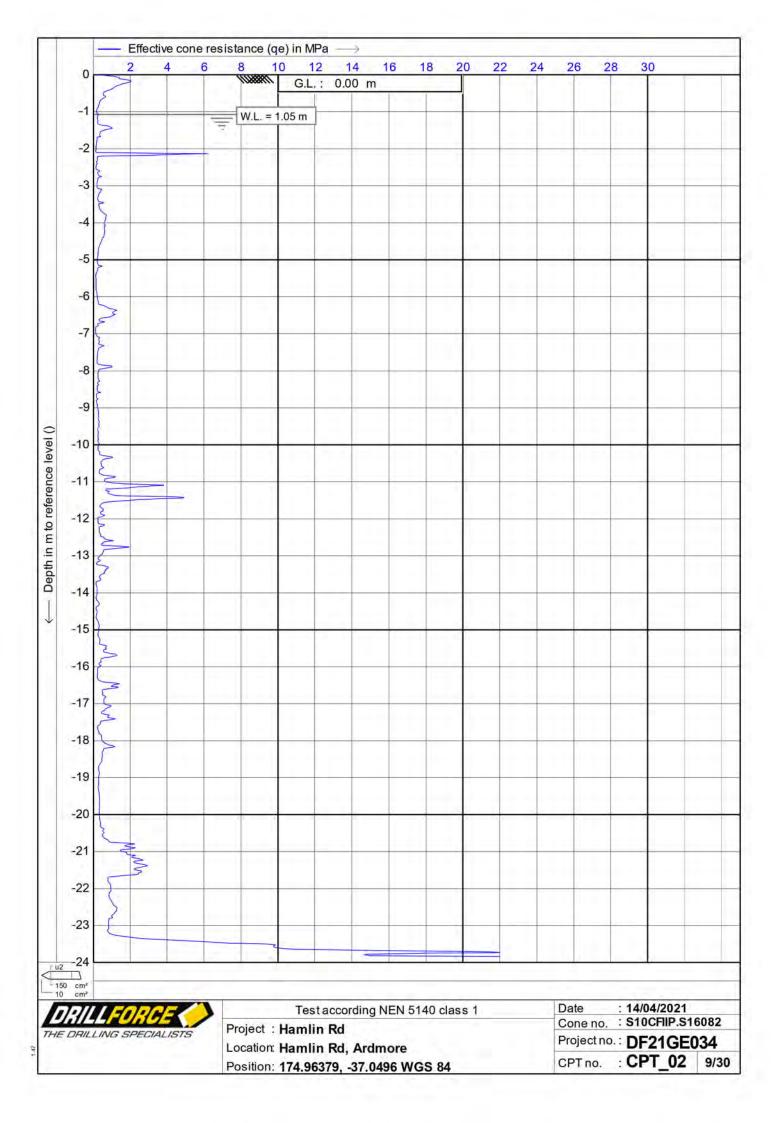
Project no.: DF21GE034

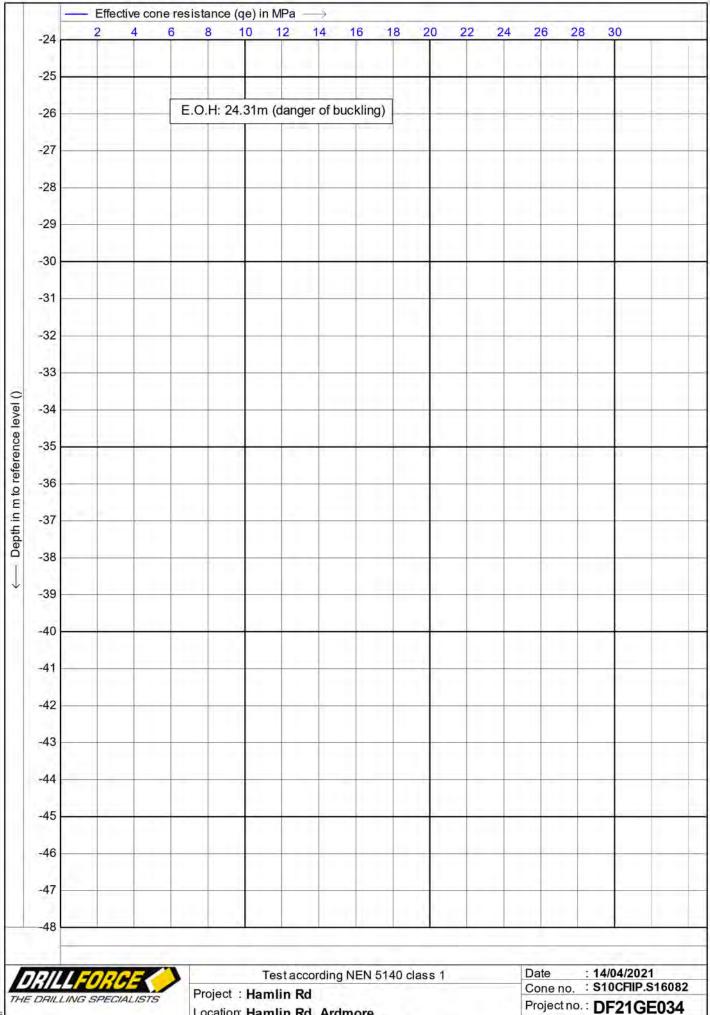
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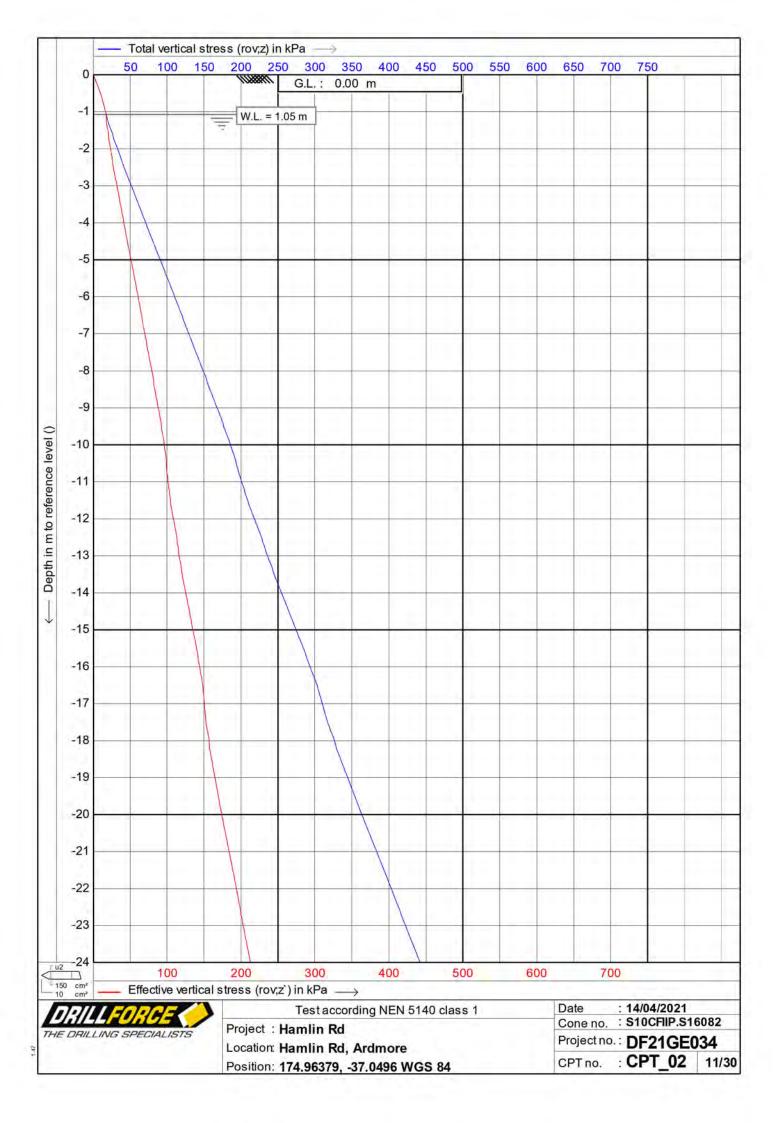


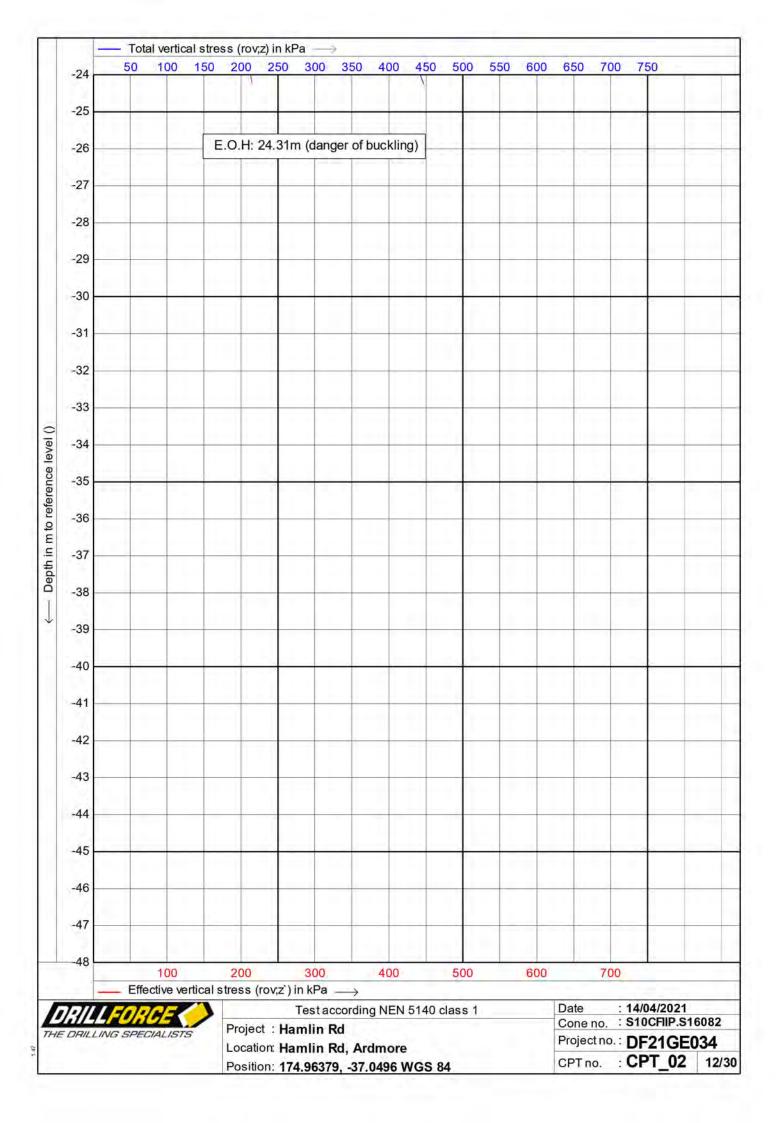


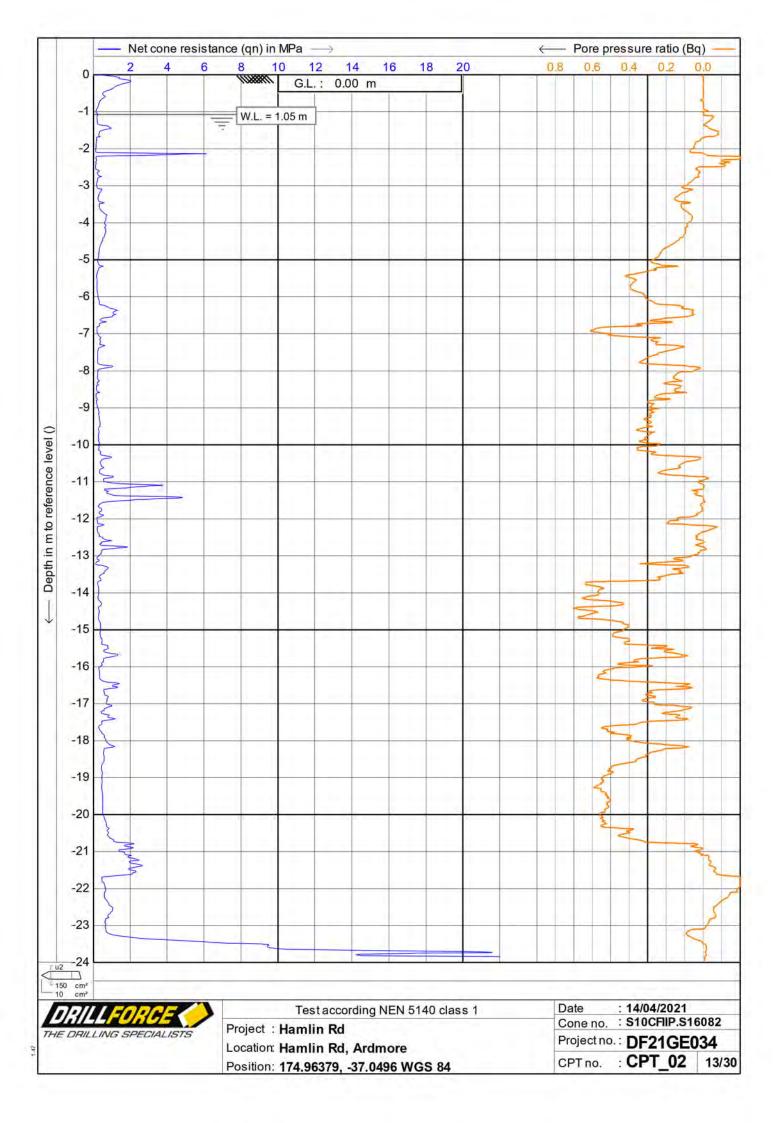
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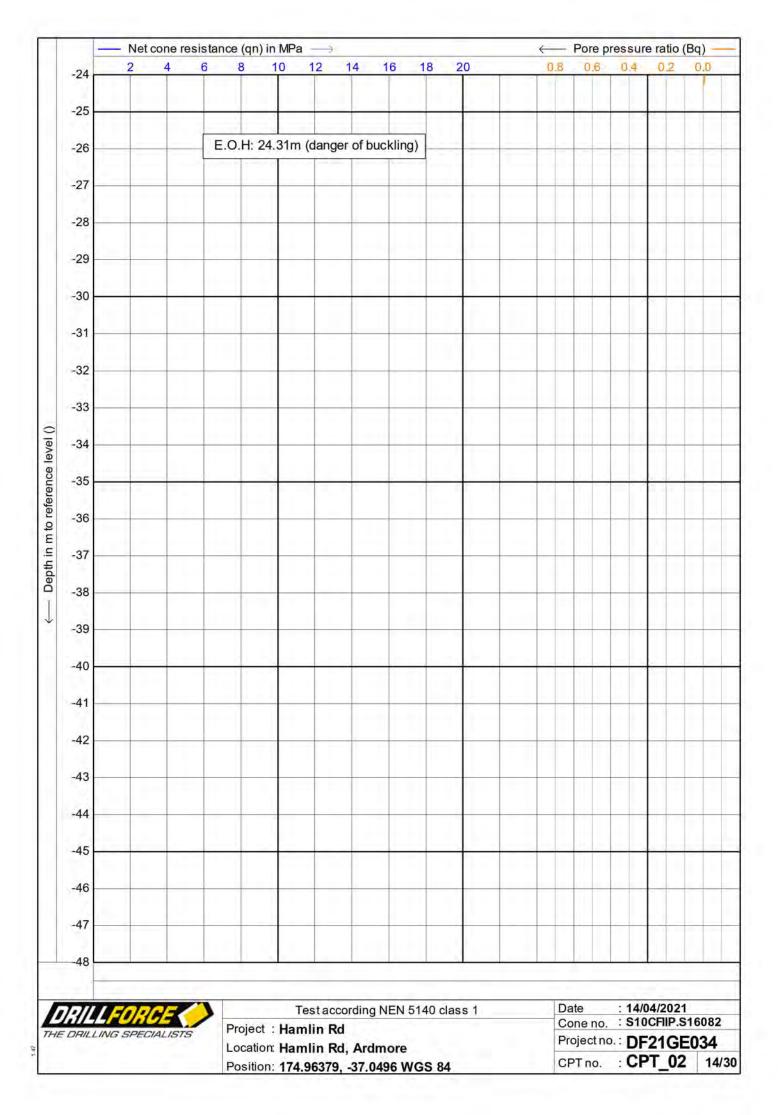
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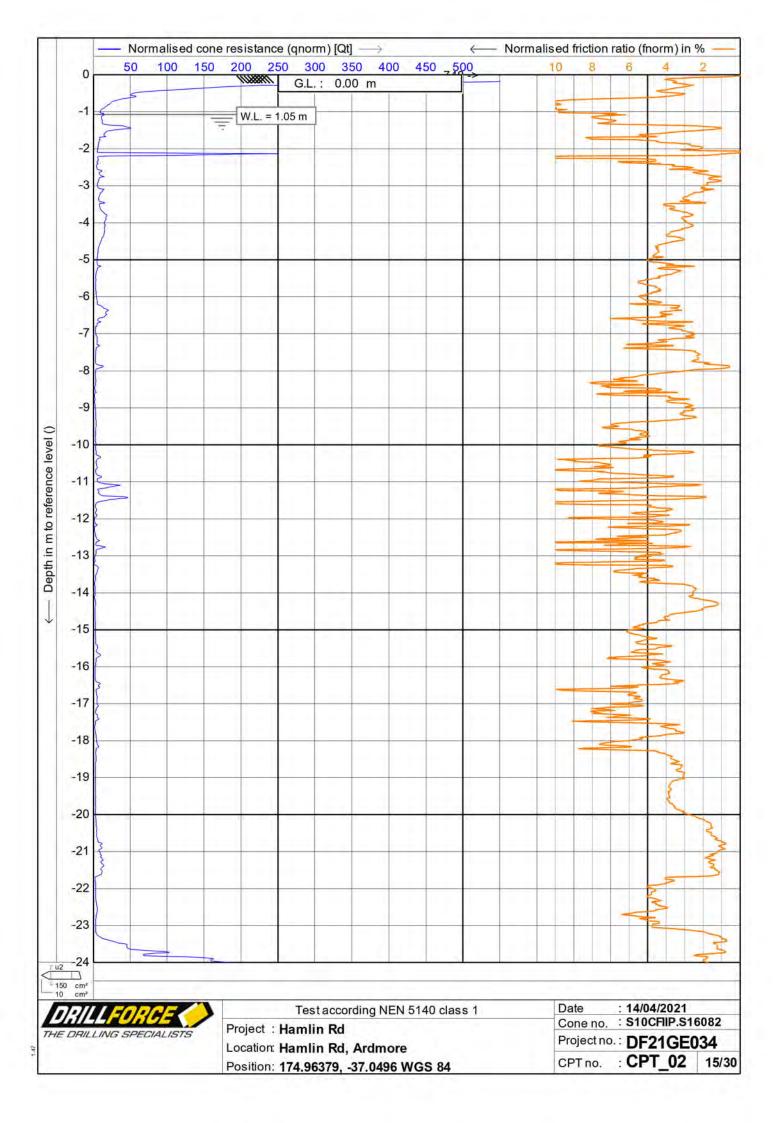
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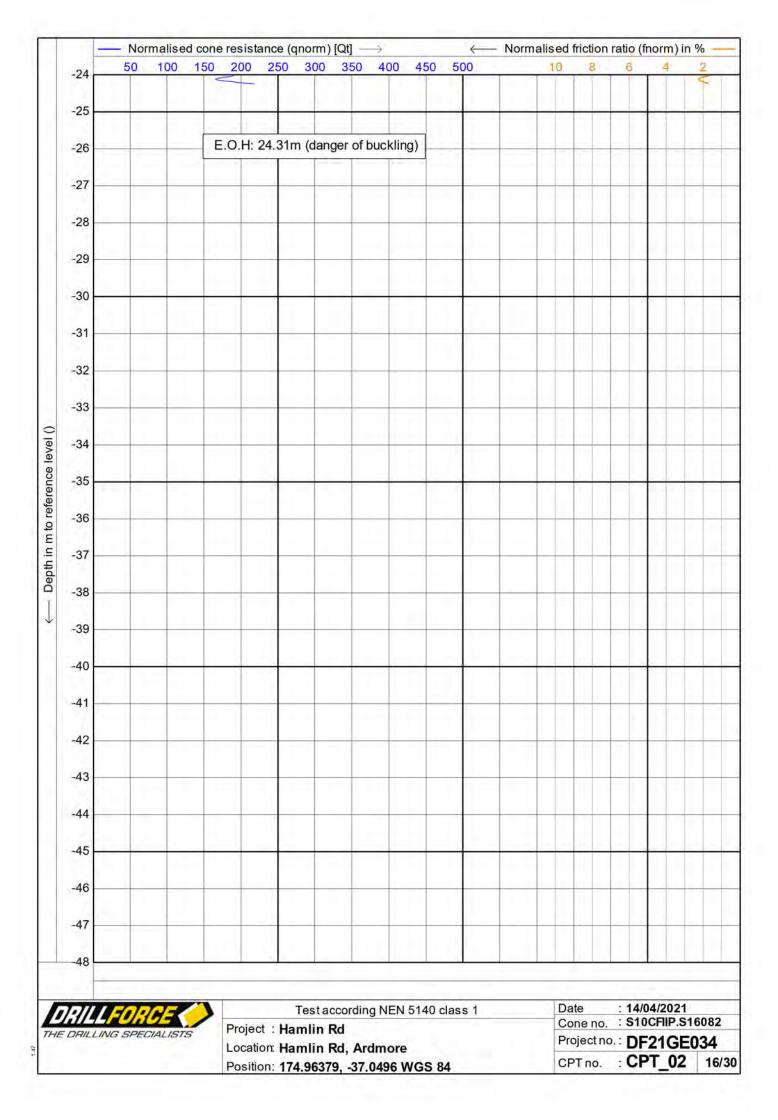


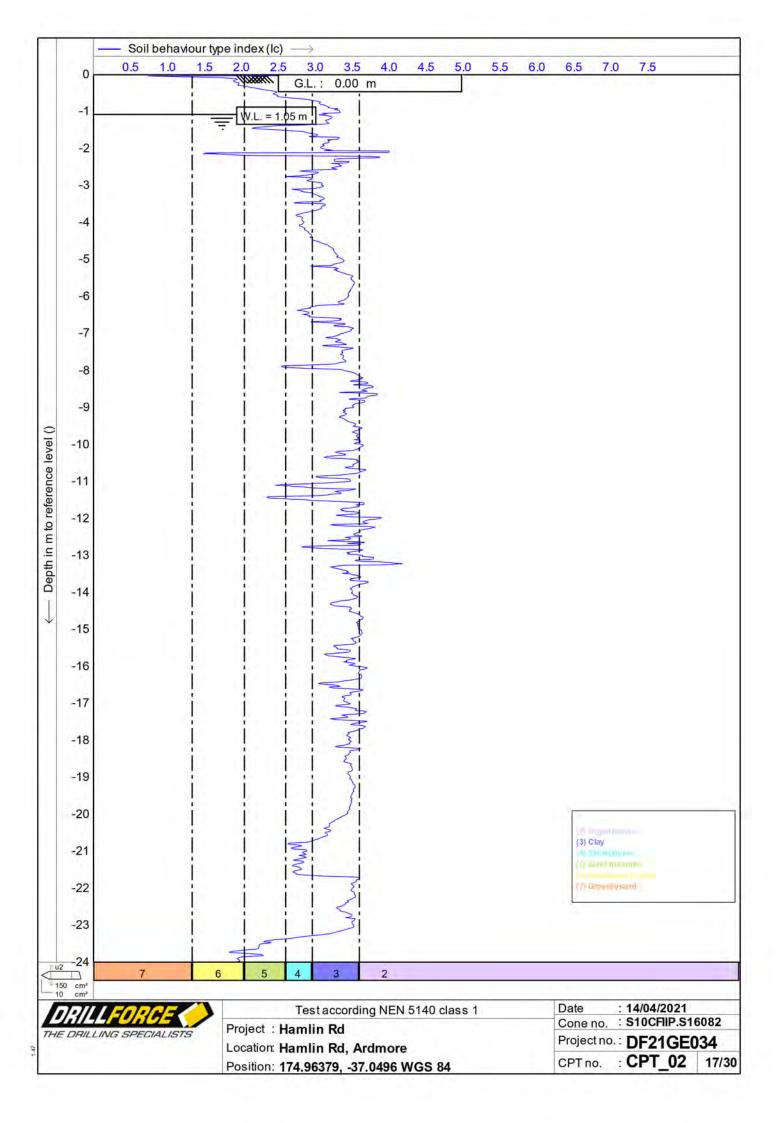


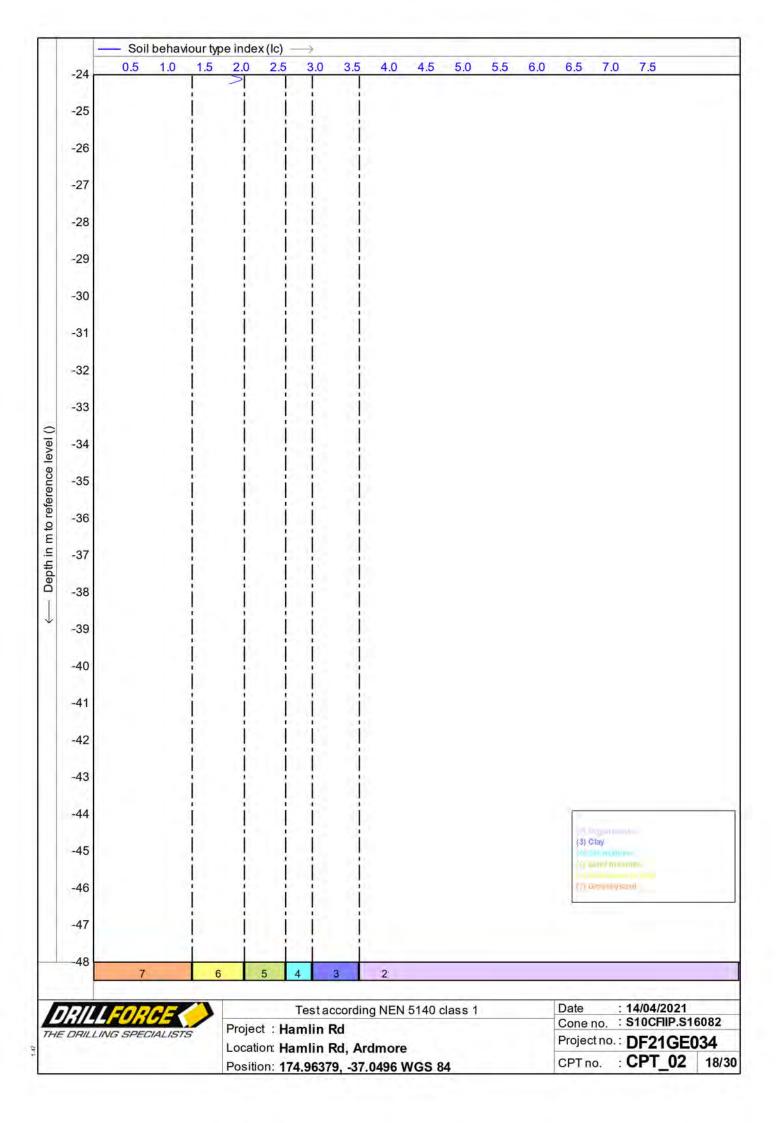


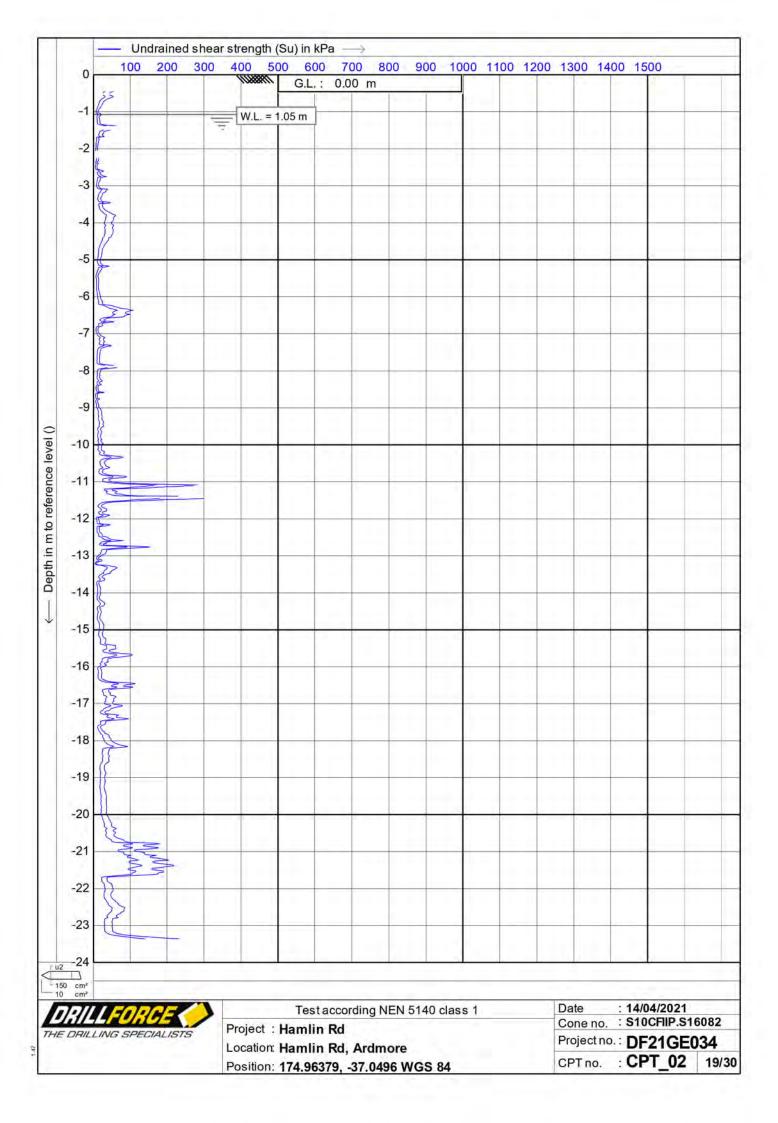


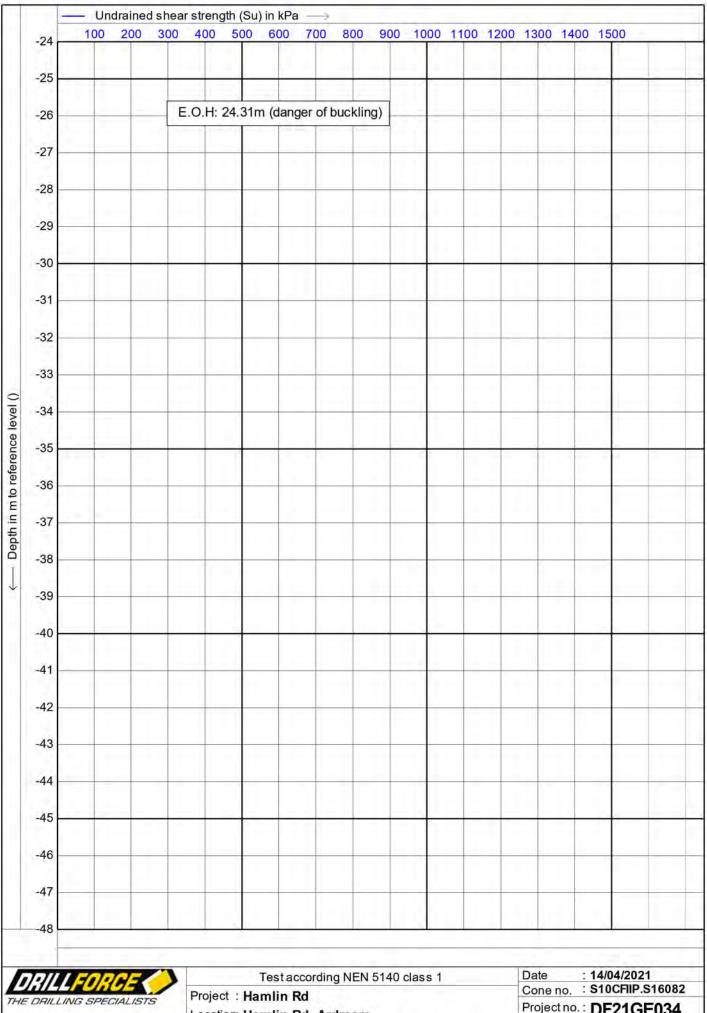










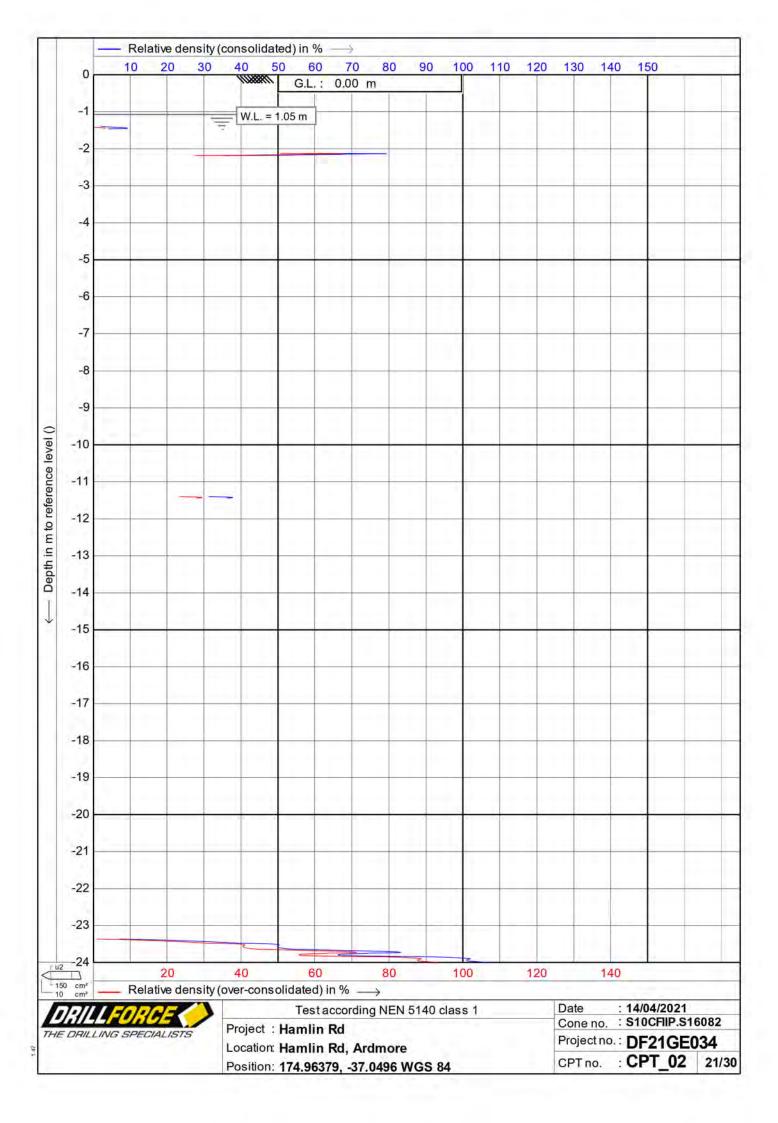


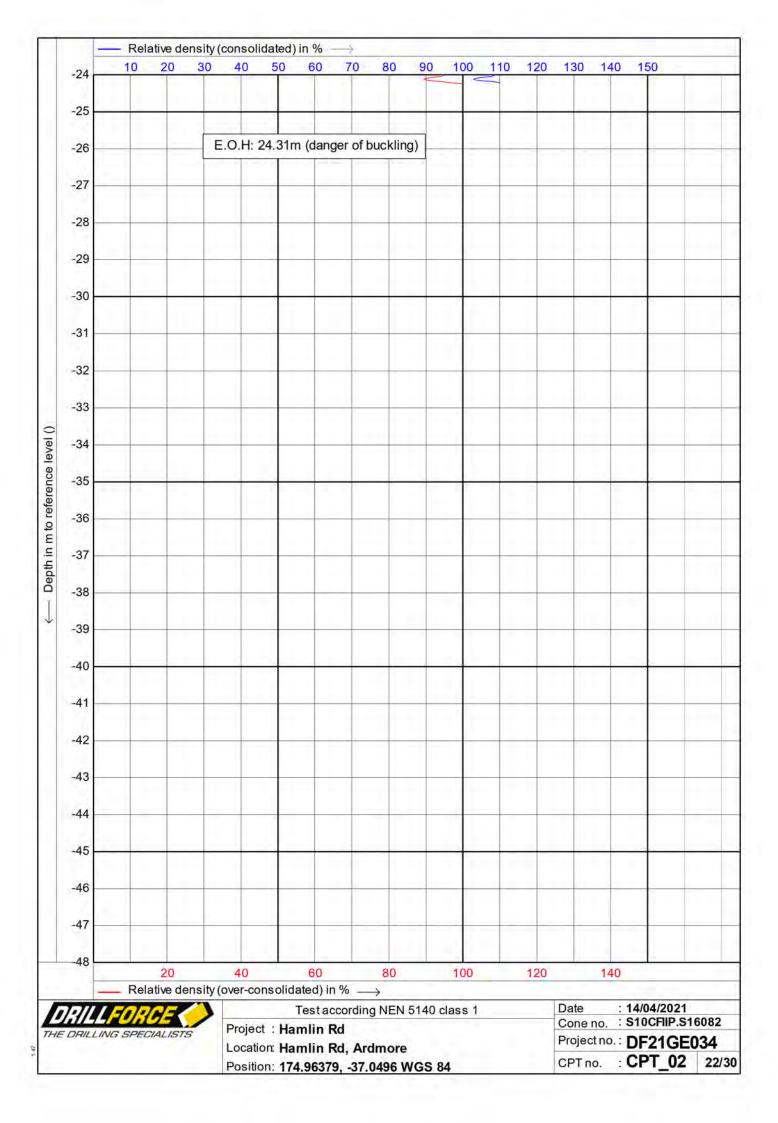
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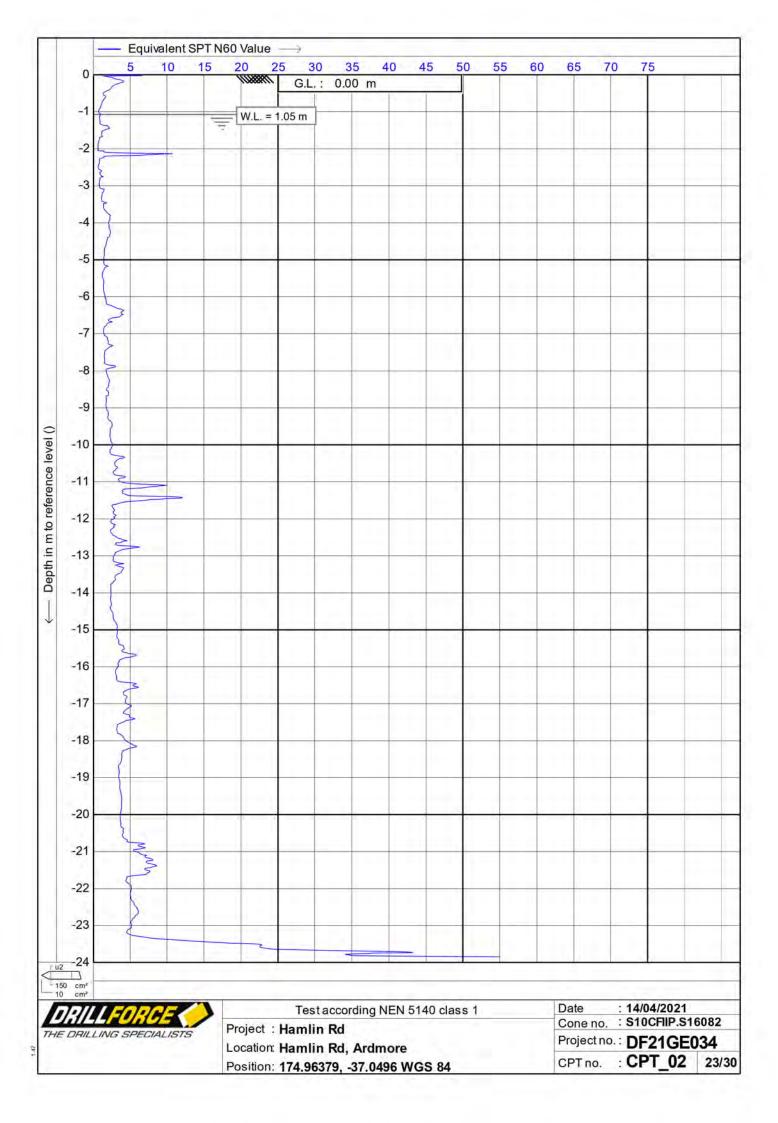
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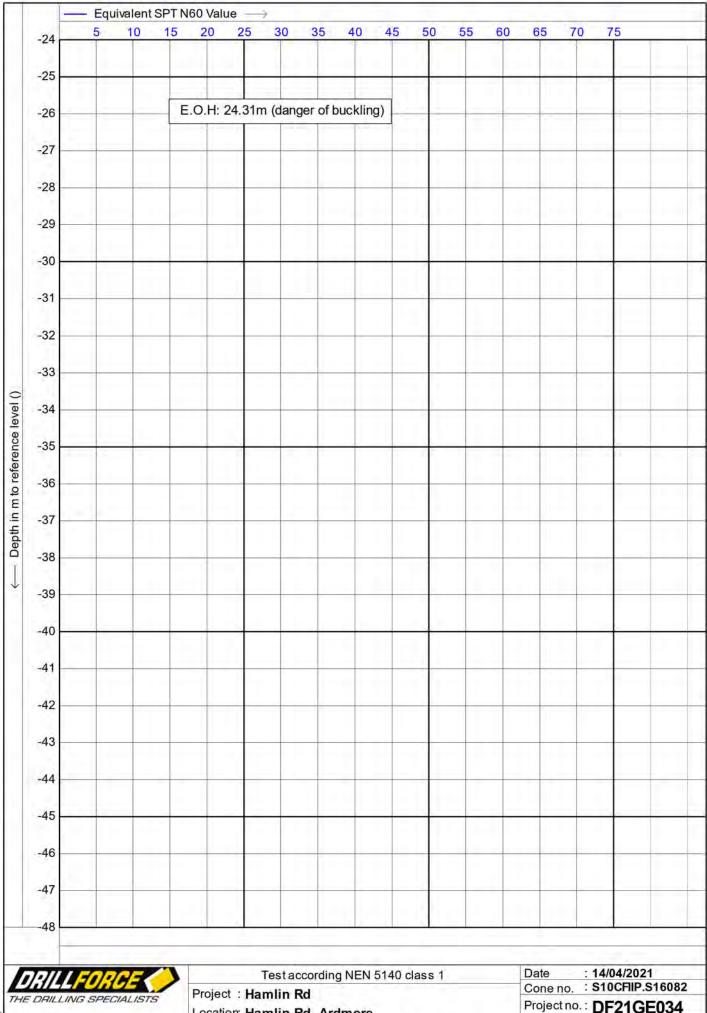
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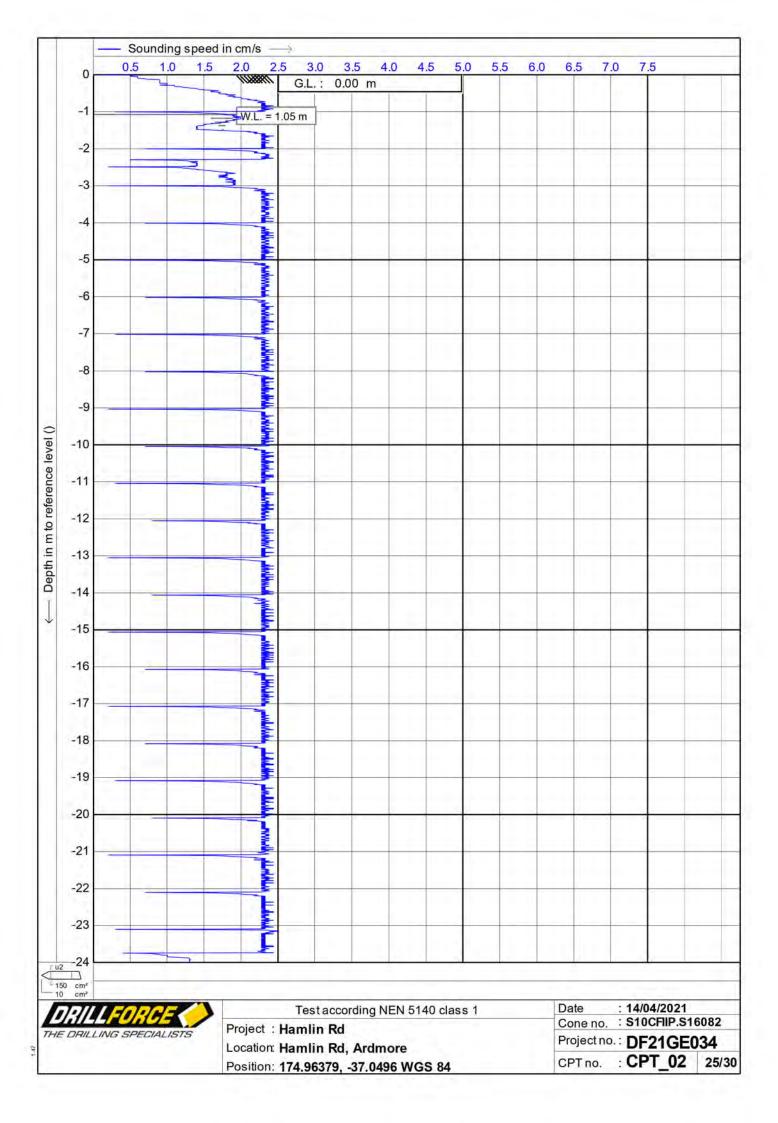


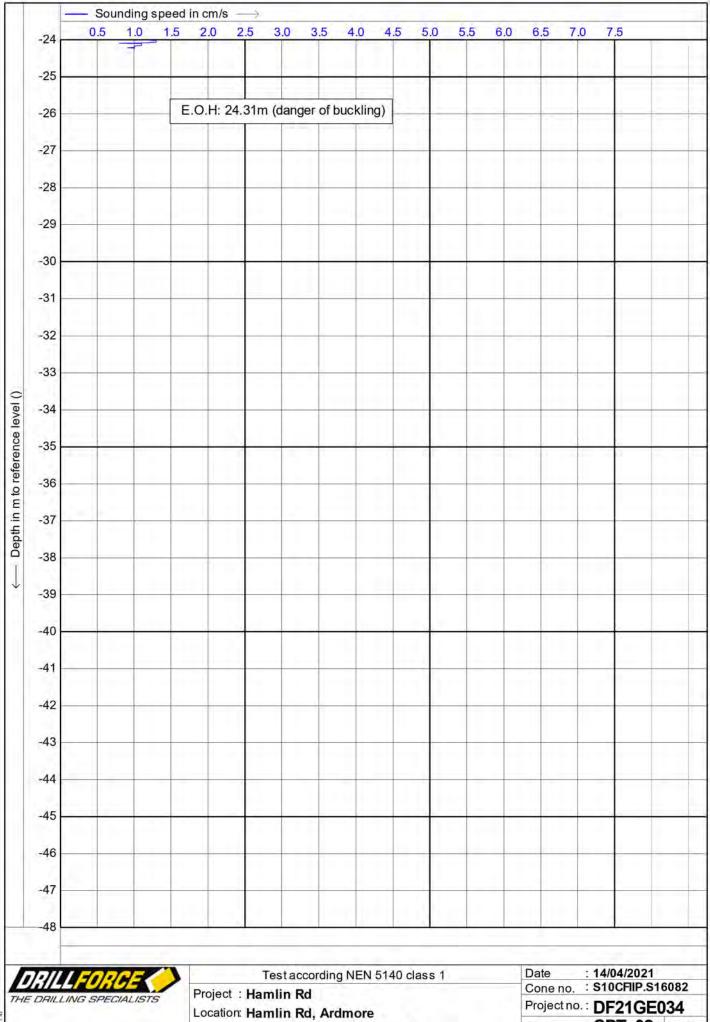
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Position: 174.96379, -37.0496 WGS 84

Project no.: DF21GE034

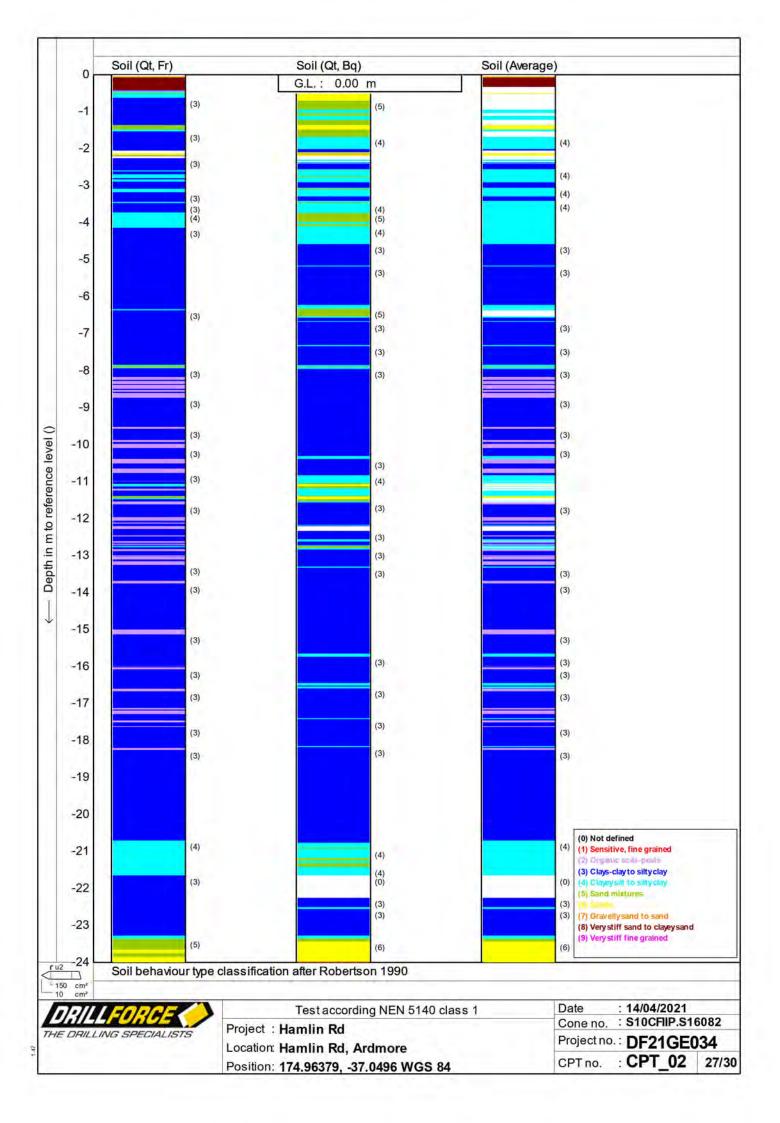
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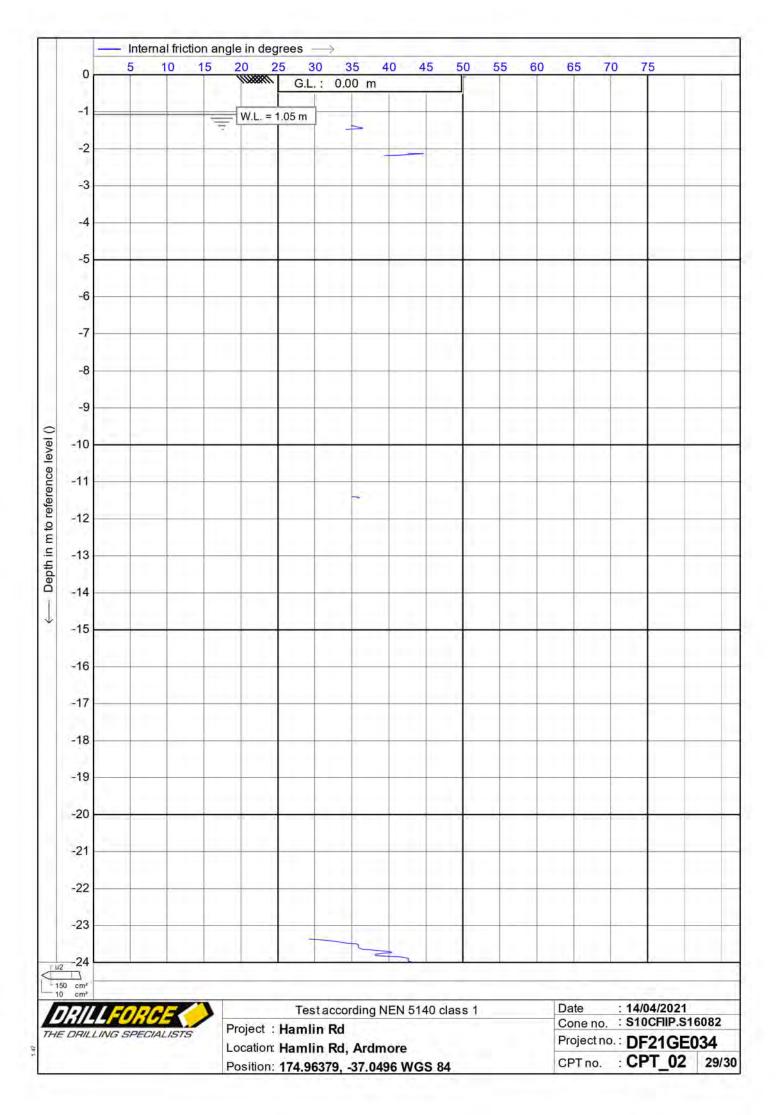


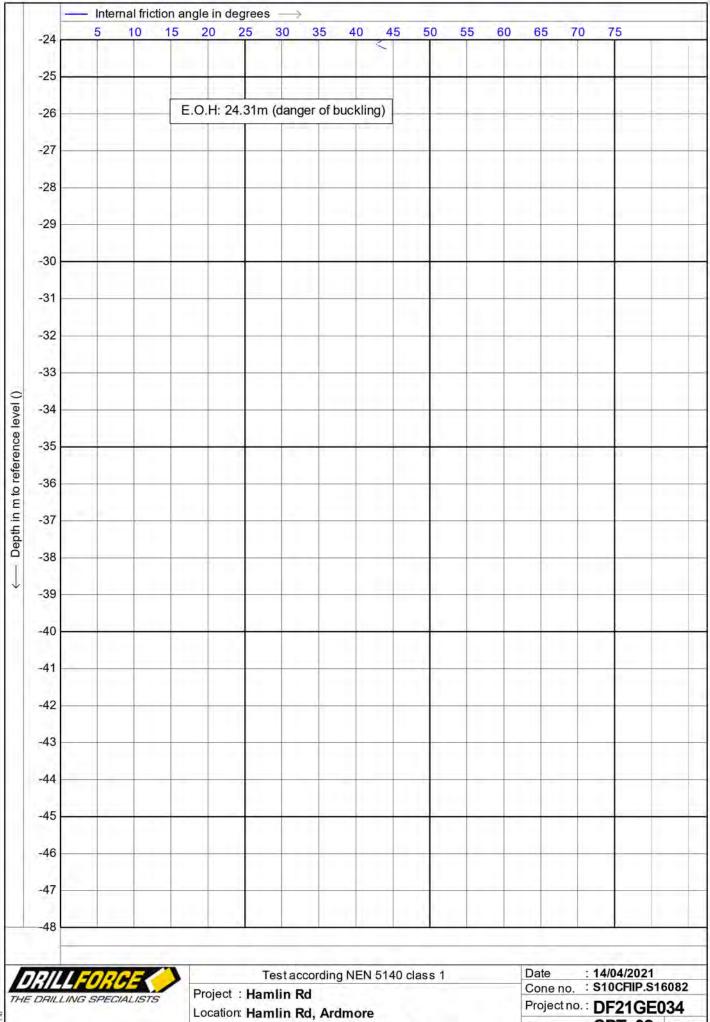
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: CPT 02 26/30 CPT no.



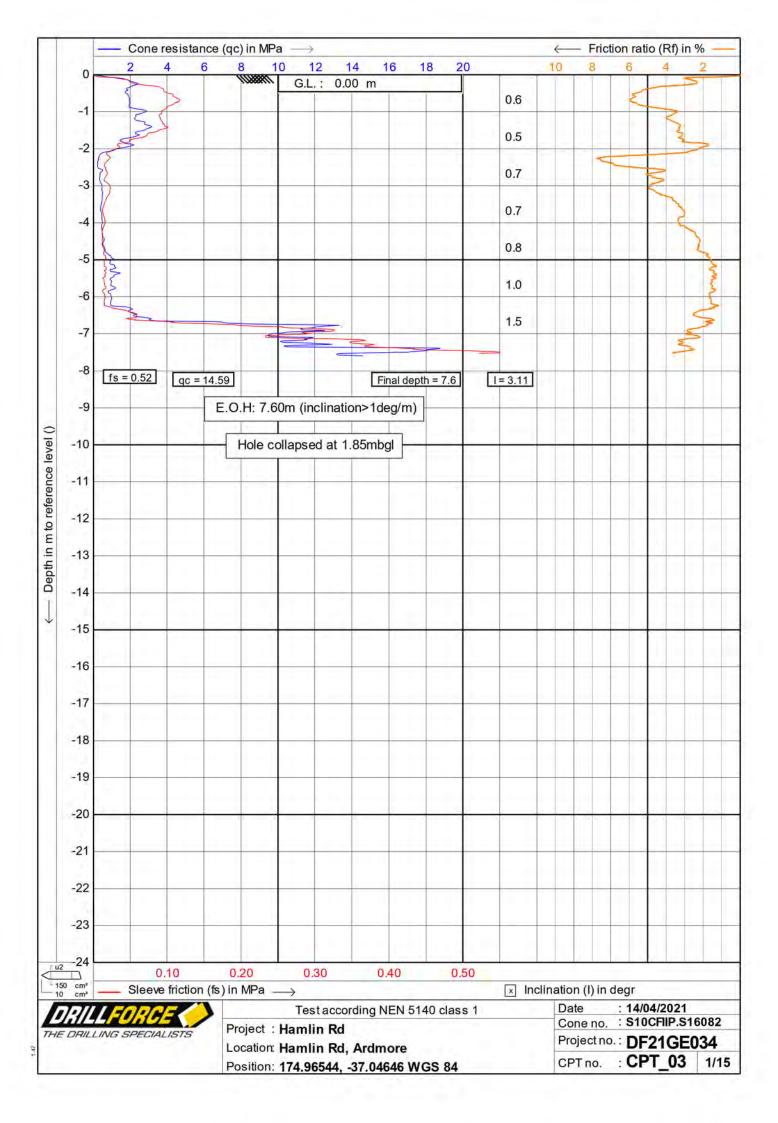
| | -24 | Soil (Qt, Fr) | Soil (Qt, Bq) | Soil (Average |) |
|----|-------|---------------------|-------------------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | -25 | | | | |
| | | | | | |
| | -26 | | | | |
| | -27 | | | | |
| | -28 | | | | |
| | -29 | | | | |
| | -30 | | | | |
| | -31 | | | | |
| | -32 | | | | |
| | -33 | | | | |
| | -34 | | | | |
| | -35 | | | | |
| | -36 | | | | |
| | -37 | | | | |
| | -38 | | | | |
| | -39 | | | | |
| | -40 | | | | |
| | -41 | | | | |
| | -42 | | | | |
| | | | | | |
| | -43 | | | | |
| | -44 | | | | (0) Not defined |
| | -45 | | | | (1) Sensitive, fine grained (2) Organic scale-peaks (3) Clays-clay to silty clay |
| | -46 | | | | (4) Clayeysilt to siltyclay (5) Sand mixtures (6) Sands |
| | -47 | | | | (7) Gravellysand to sand (8) Verystiff sand to clayeysand (9) Verystiff fine grained |
| | -48 | Soil behaviour type | classification after Robertson 1990 | | |
| | | | | | The state of the s |
| 1 | 3//4 | LFORCE 🥏 | Test according NEN 5140 class 1 | | Date : 14/04/2021 Cone no. : S10CFIIP.S16082 |
| IE | DRILL | ING SPECIALISTS | Project : Hamlin Rd | | Project no.: DF21GE034 |
| | | | Location: Hamlin Rd, Ardmore | | CPT no. : CPT_02 28/ |

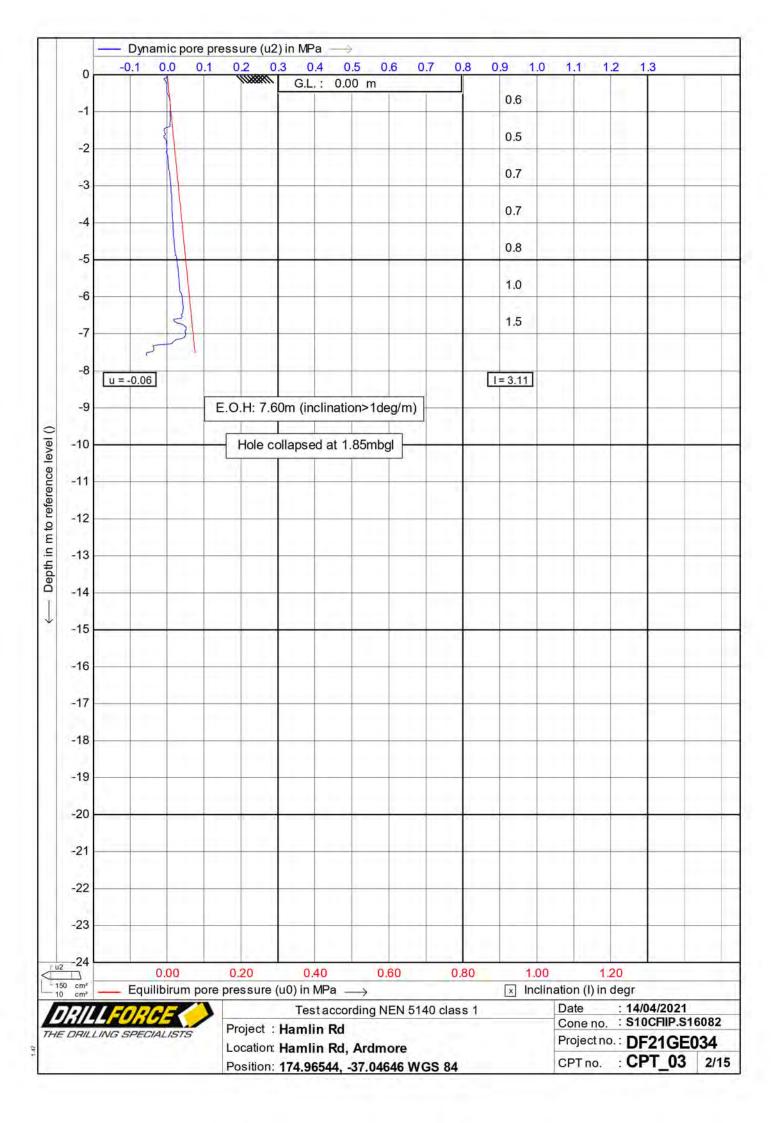


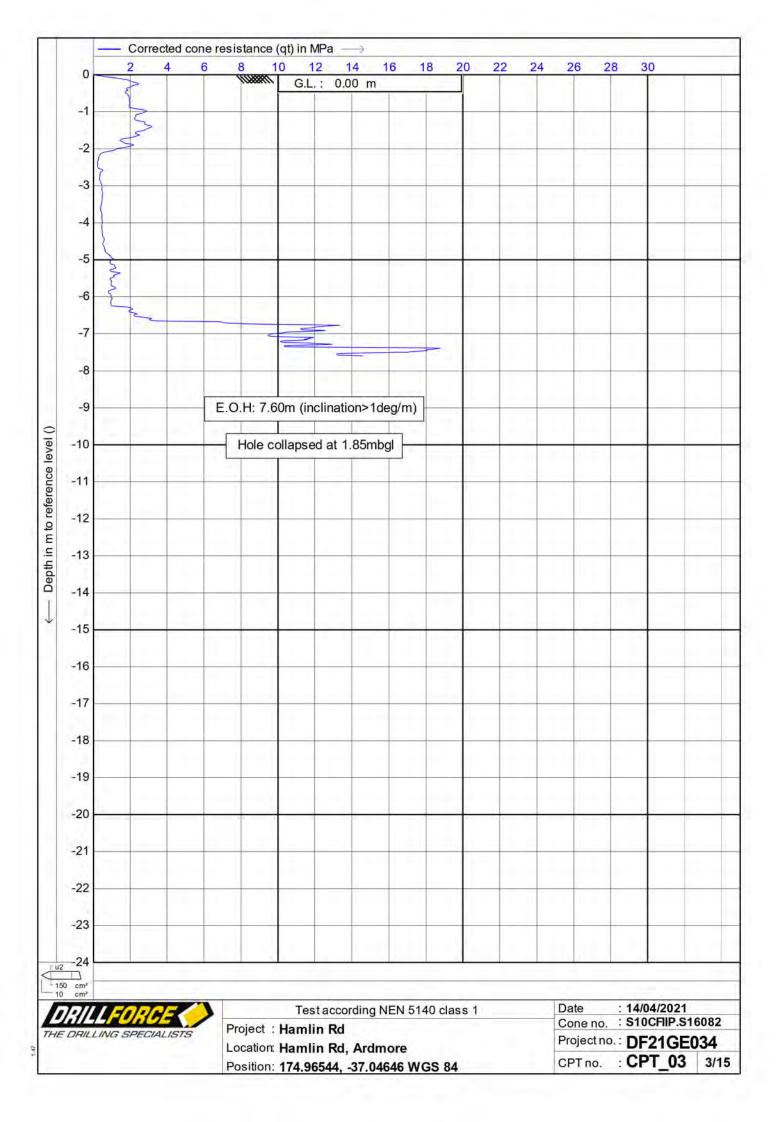


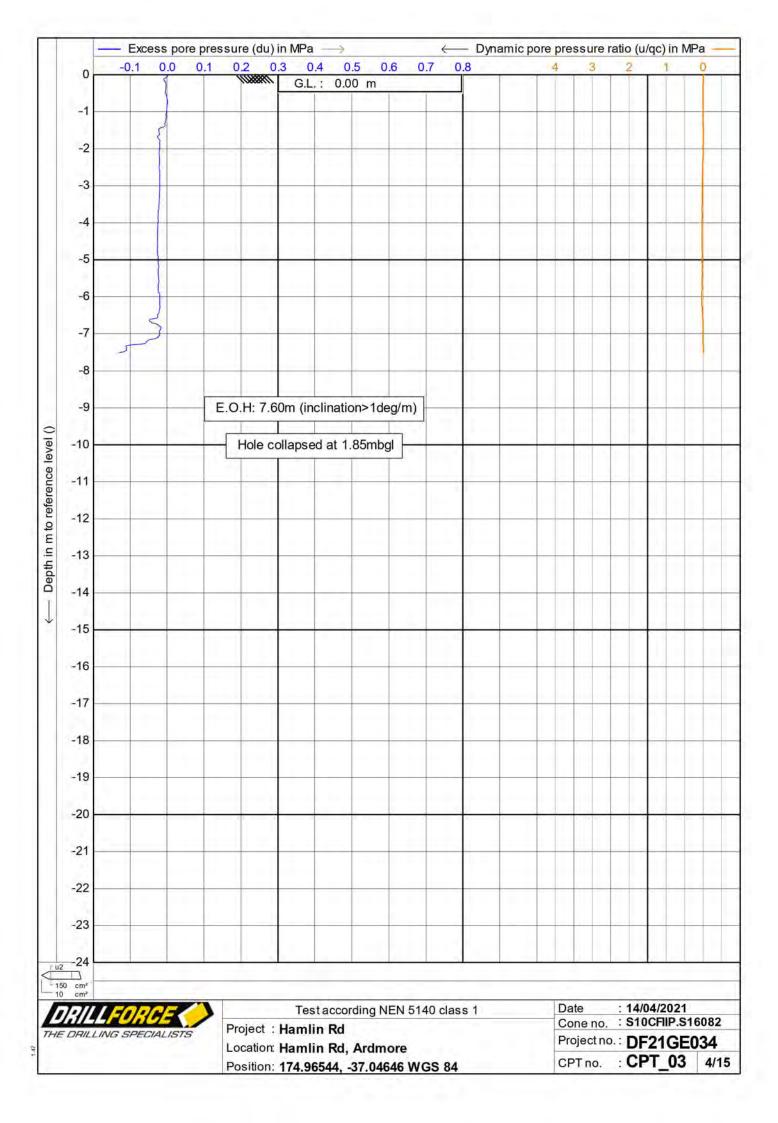
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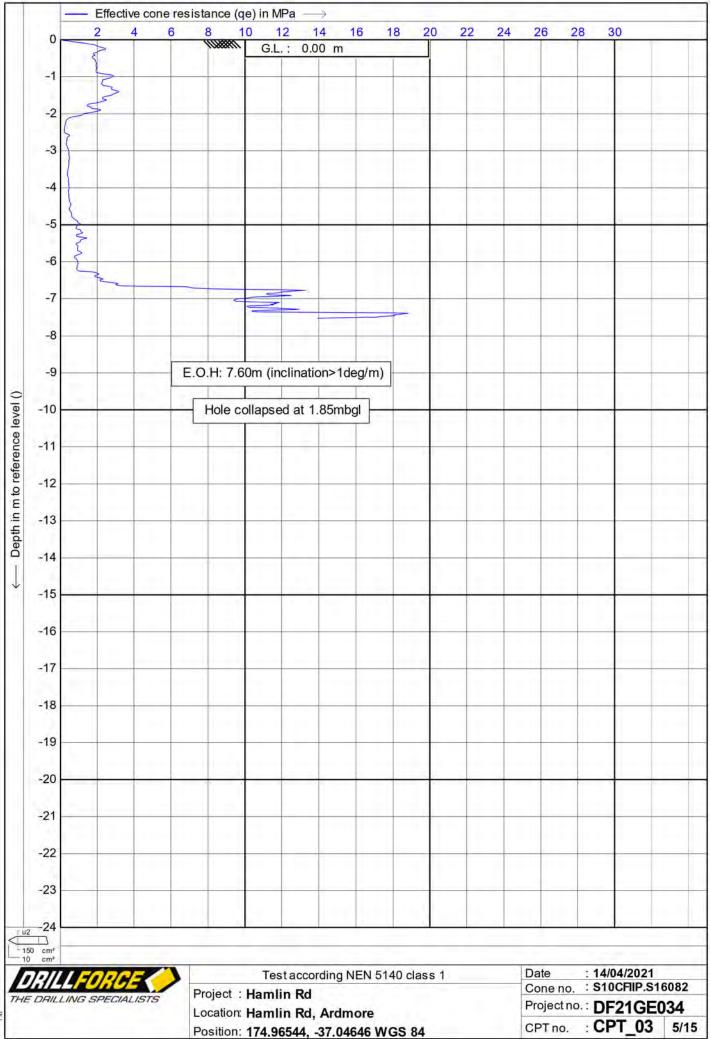
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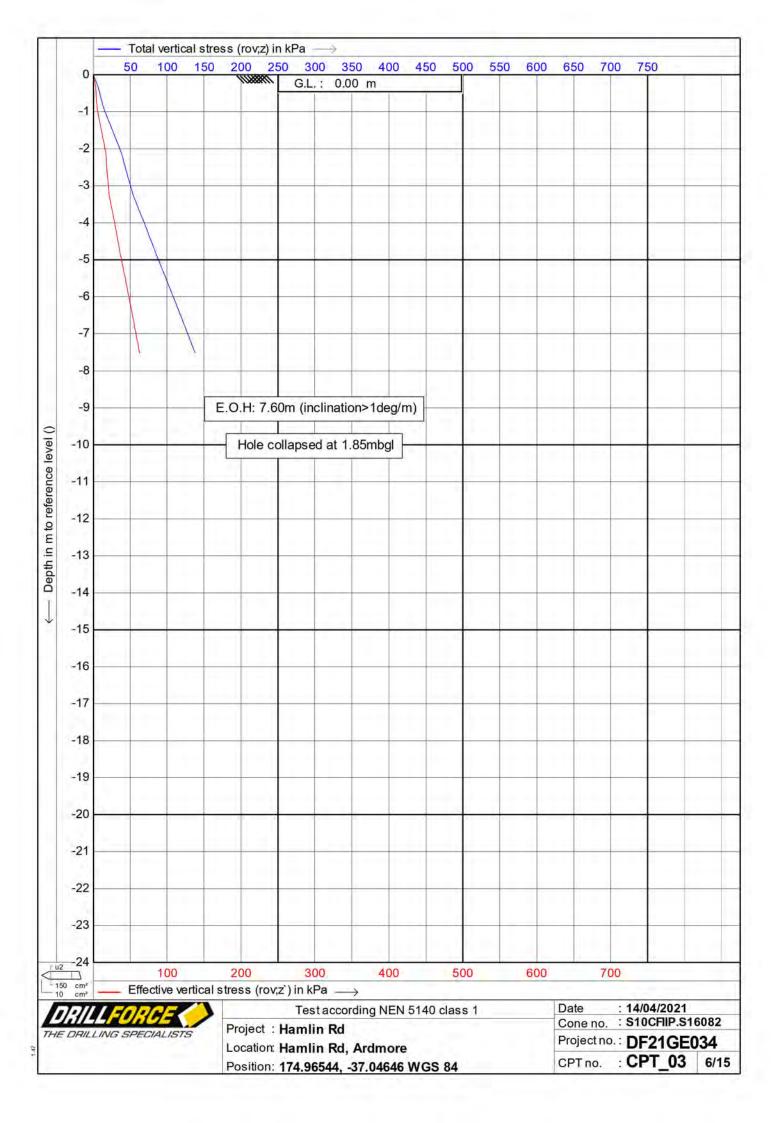


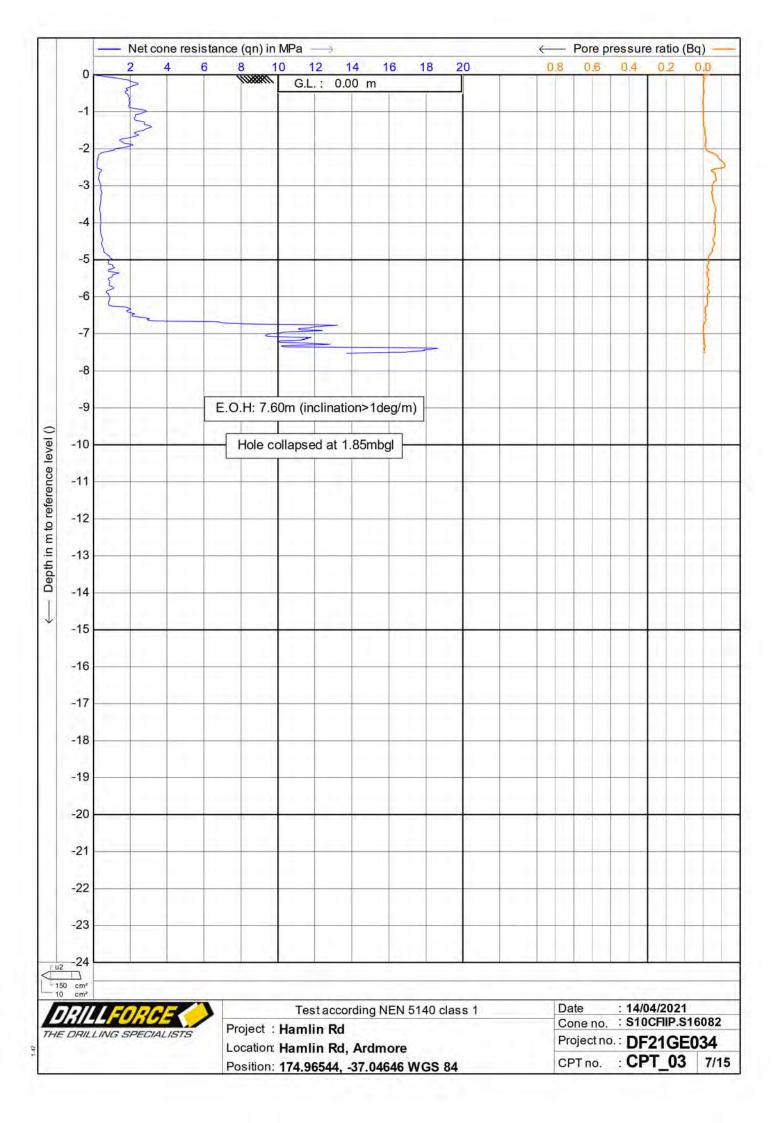


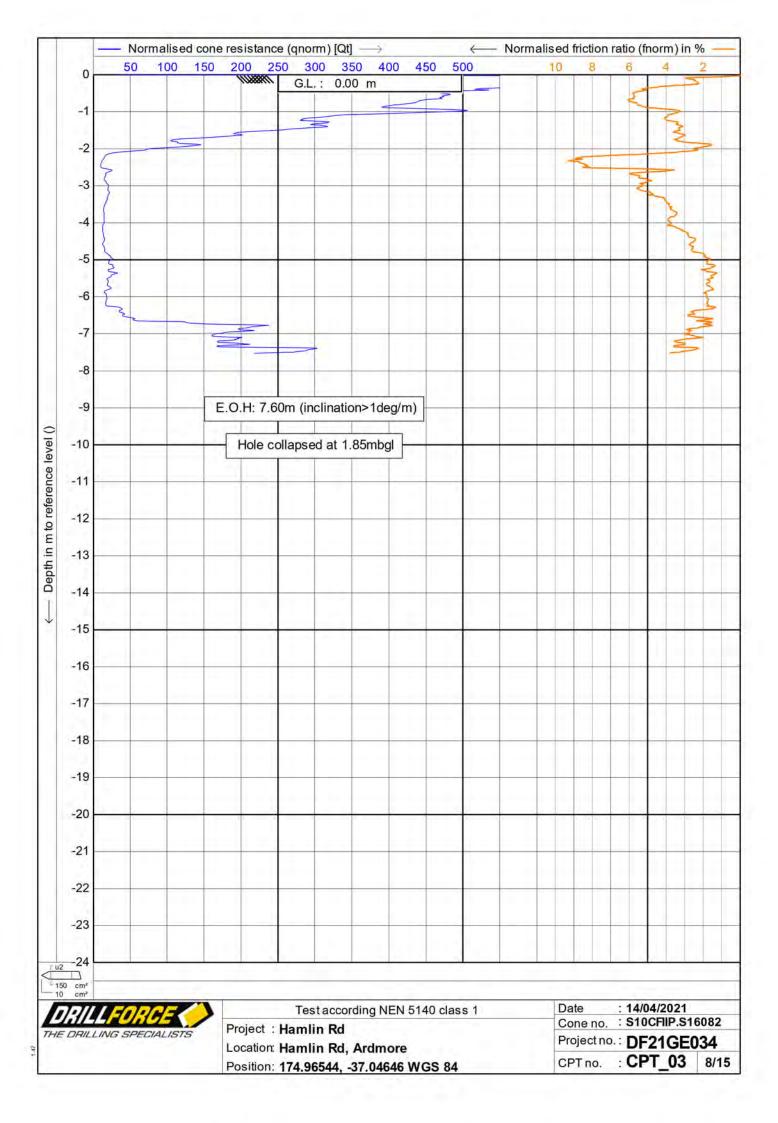


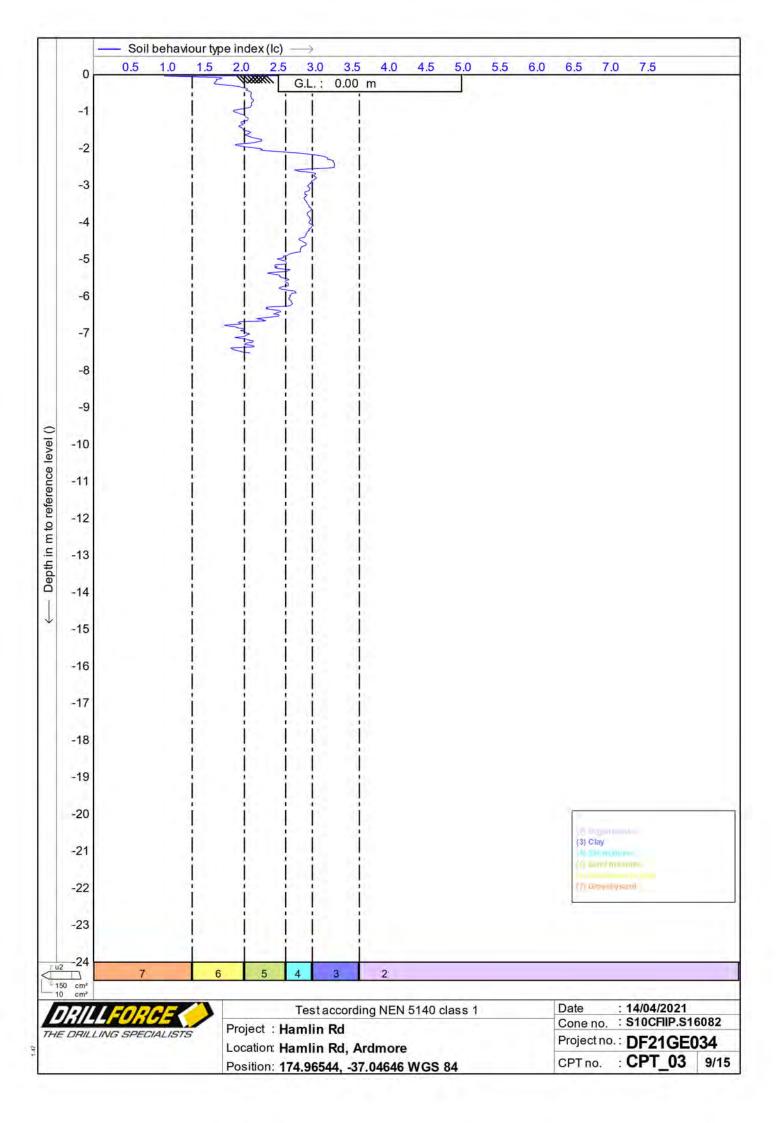


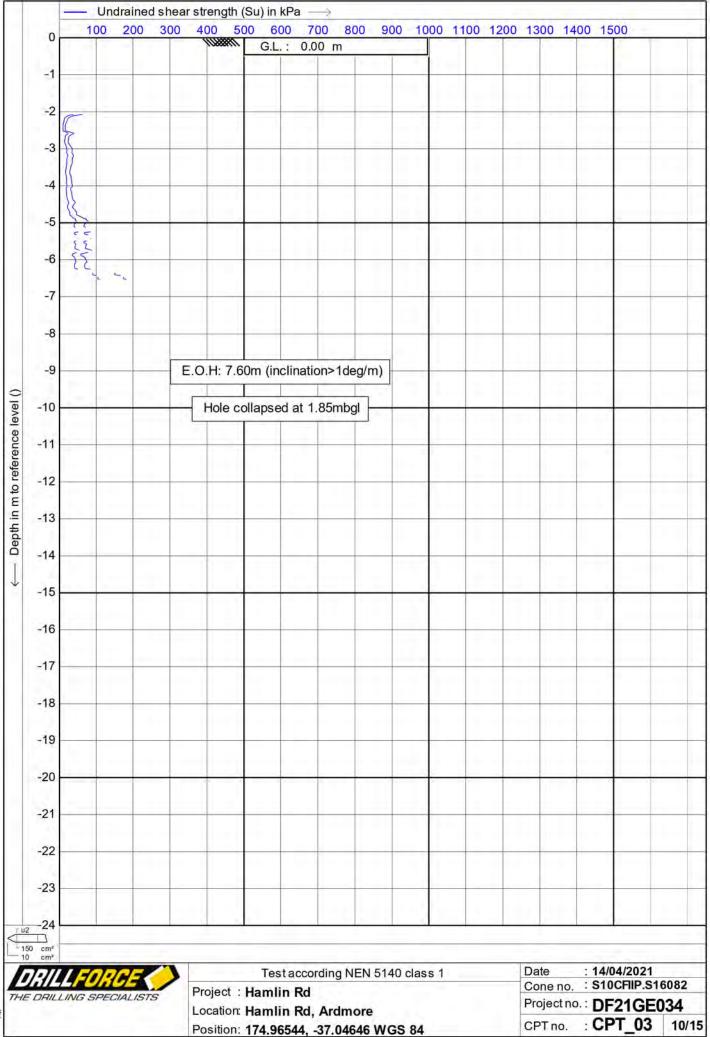
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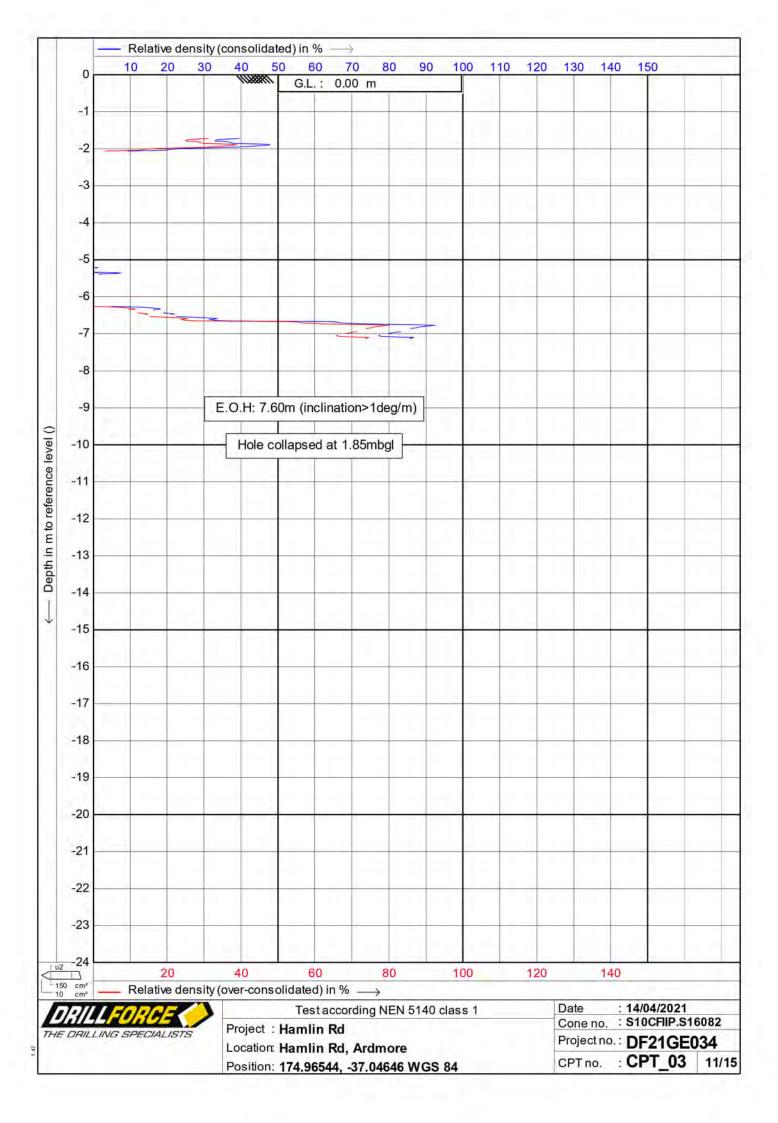


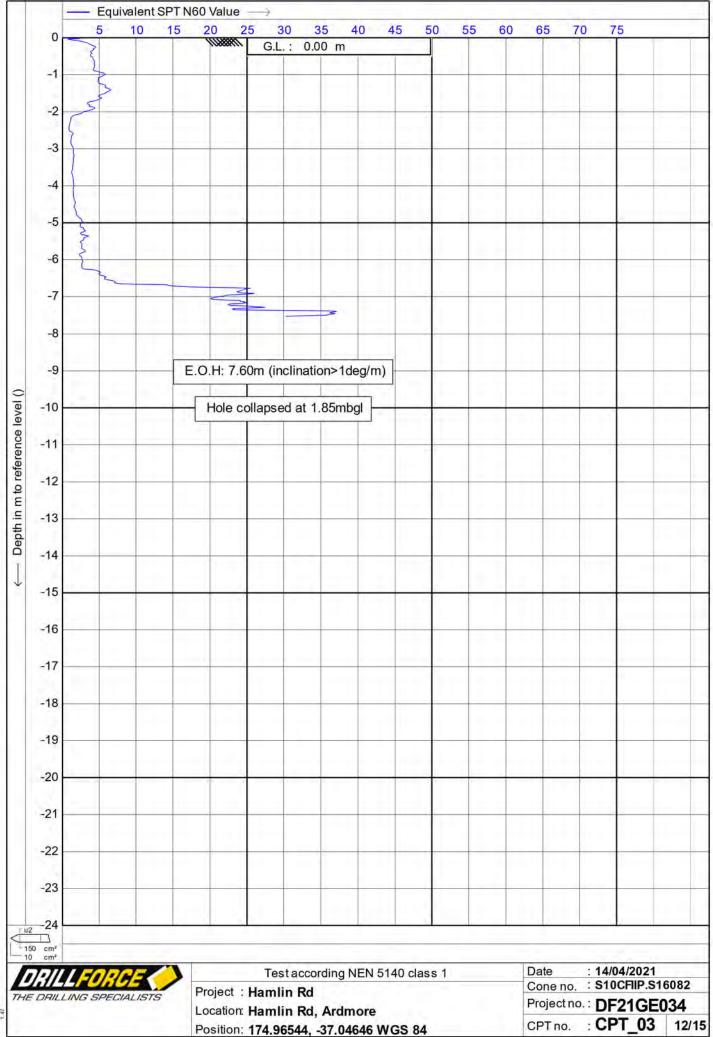


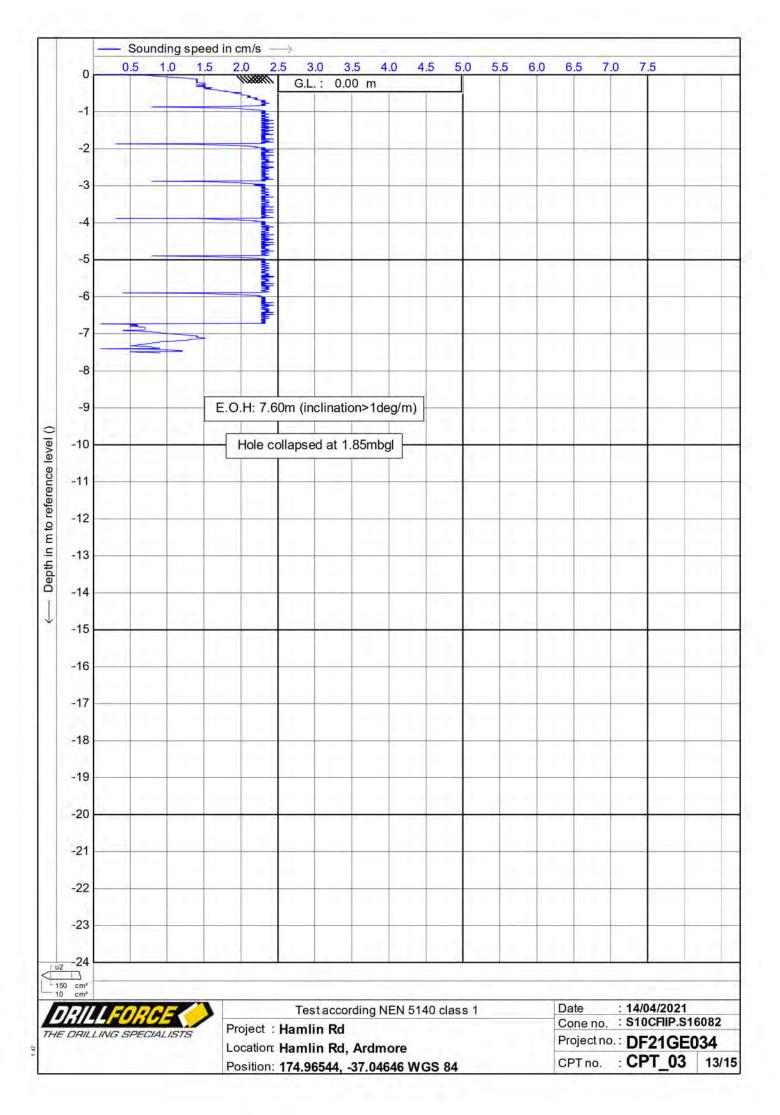


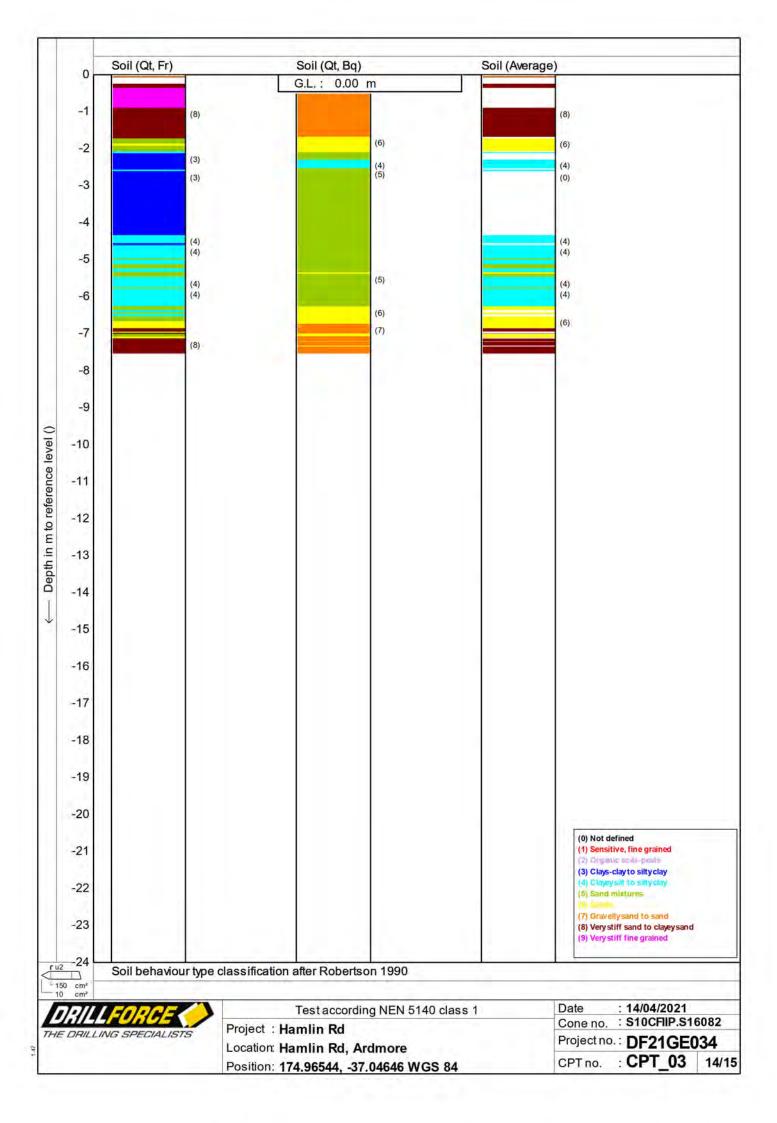


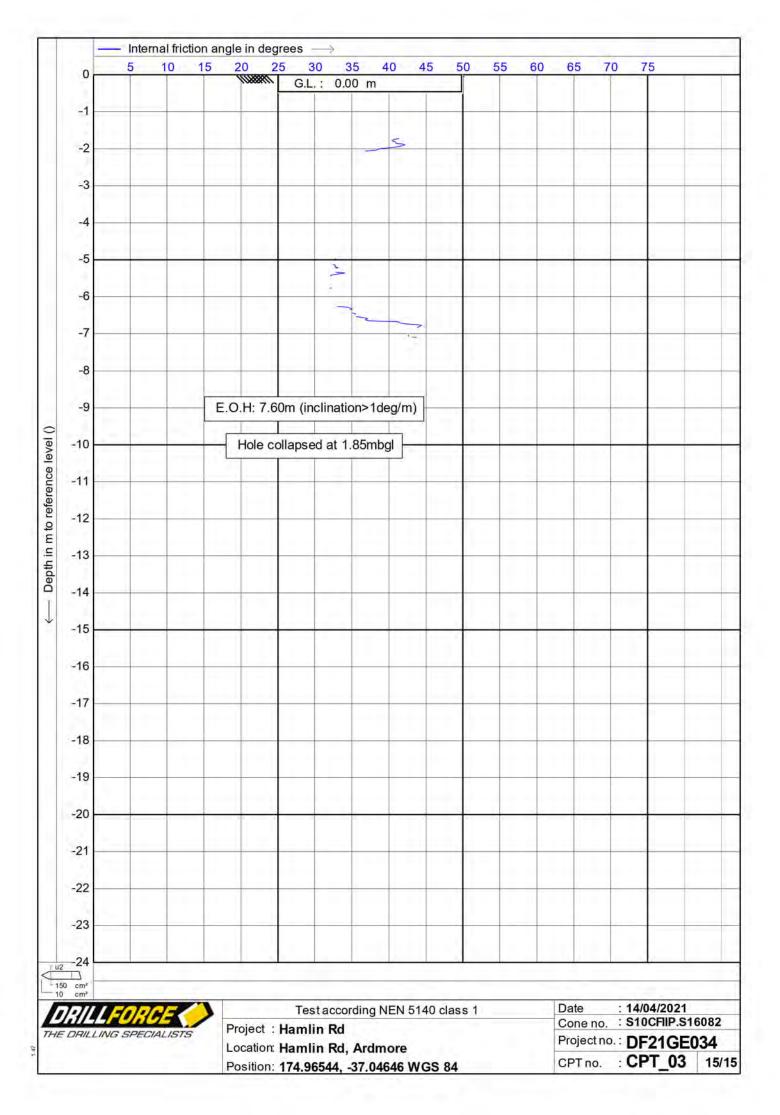
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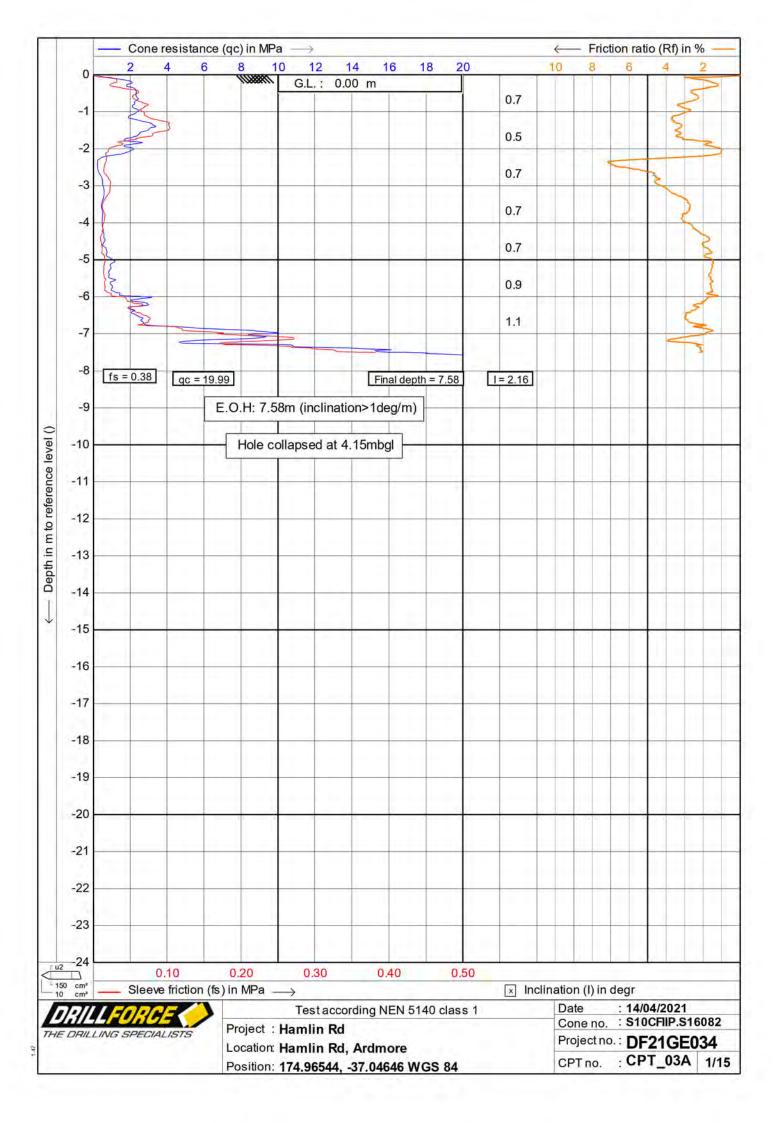


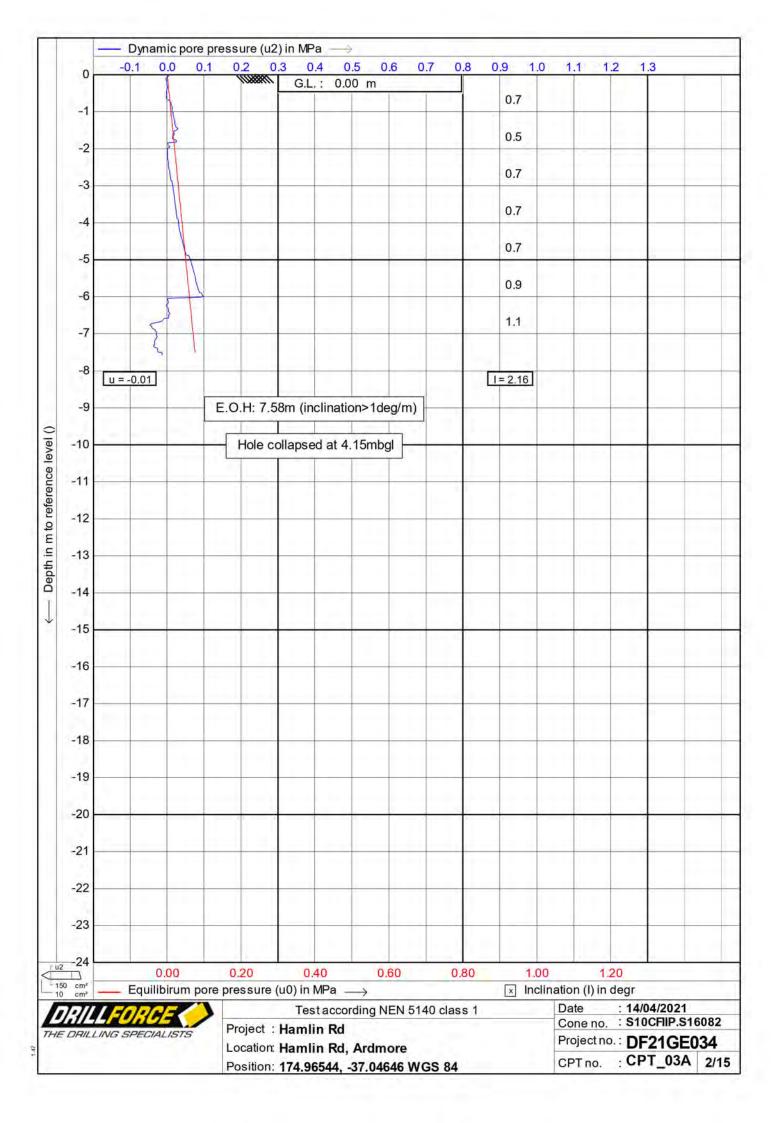


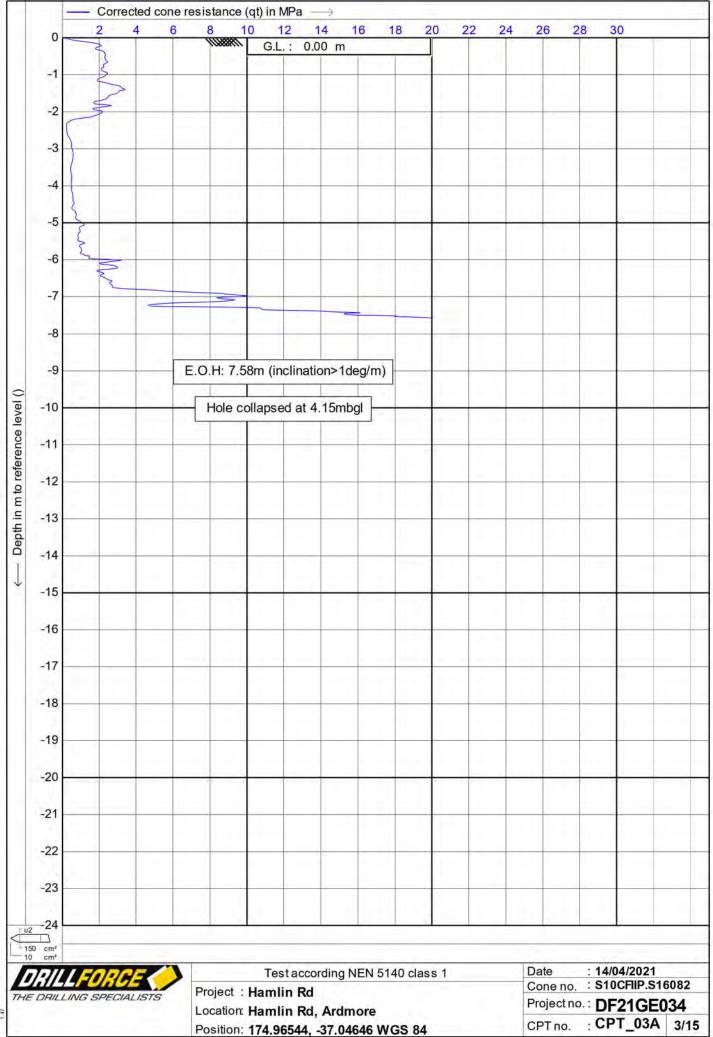


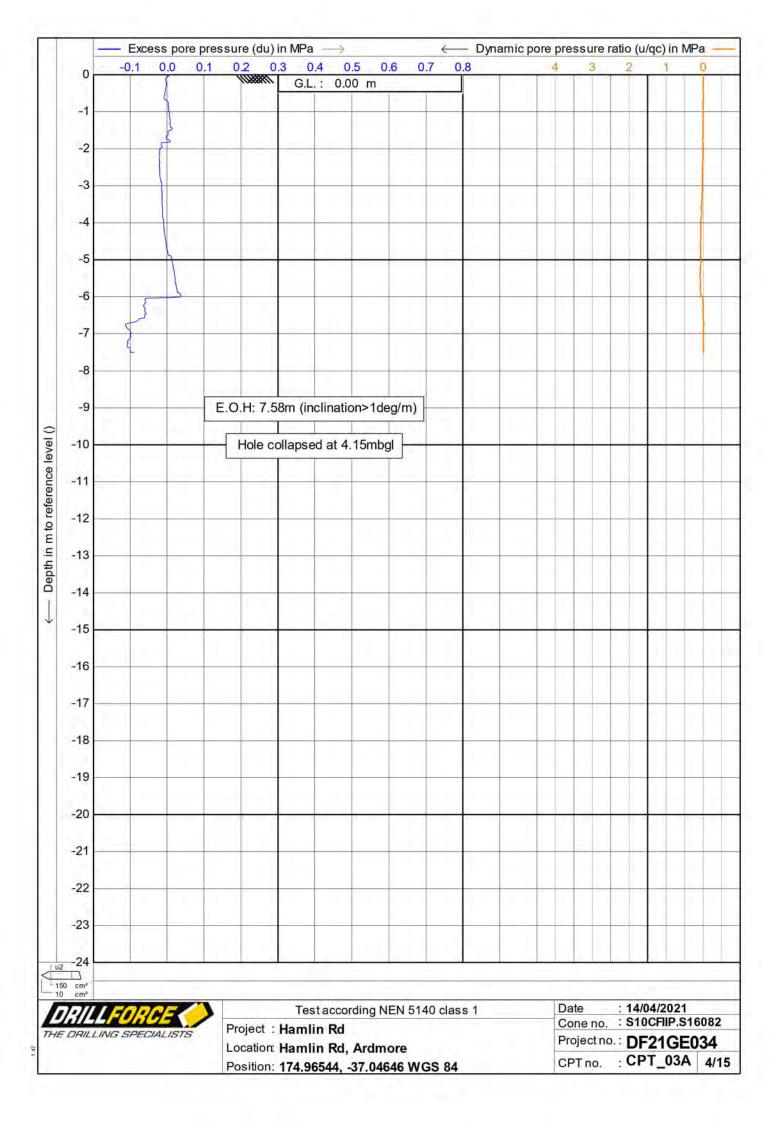


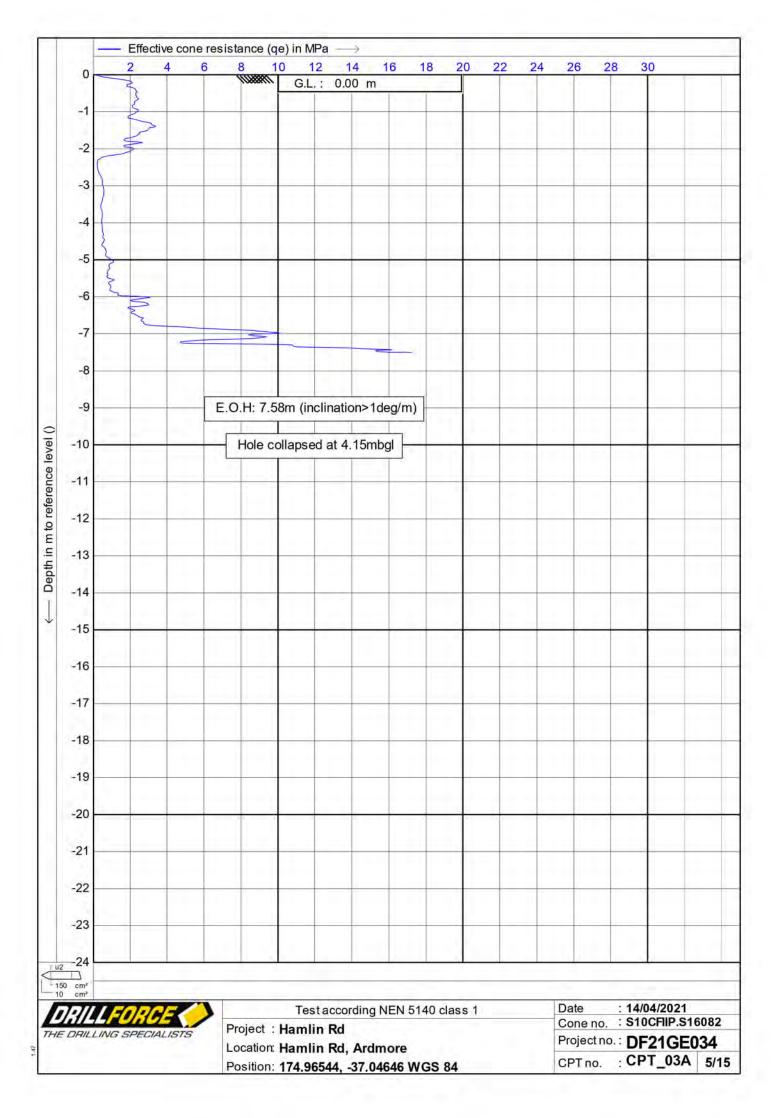


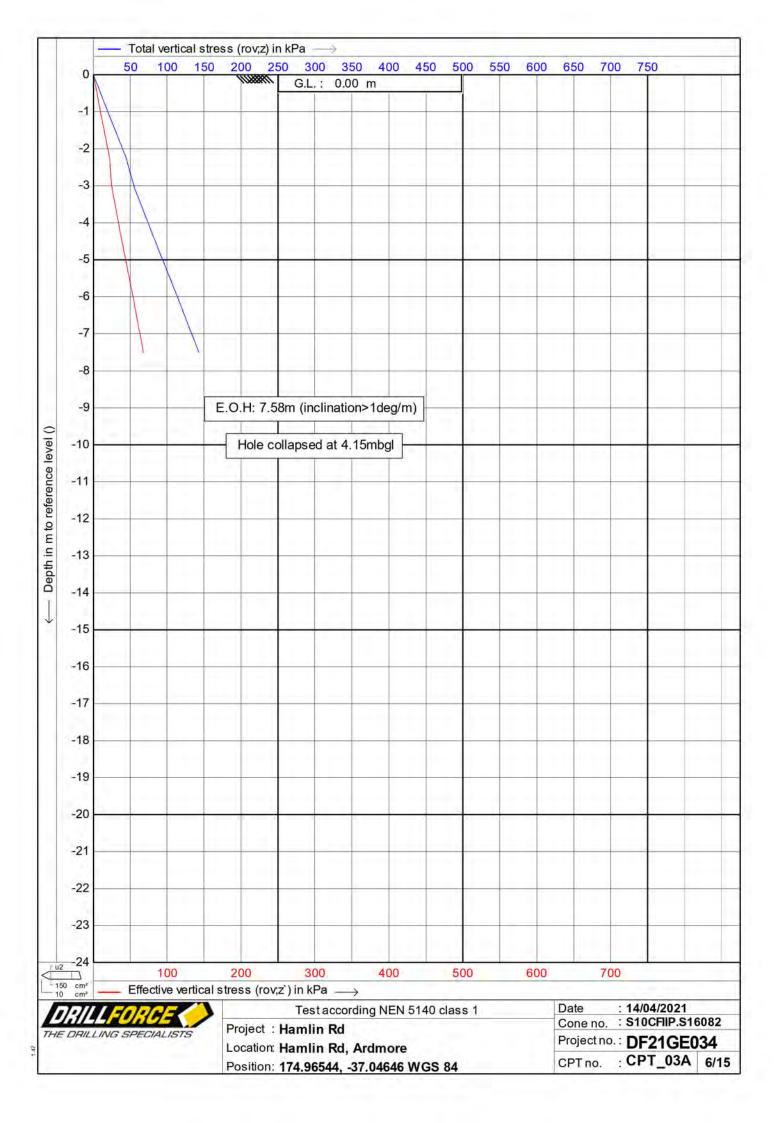


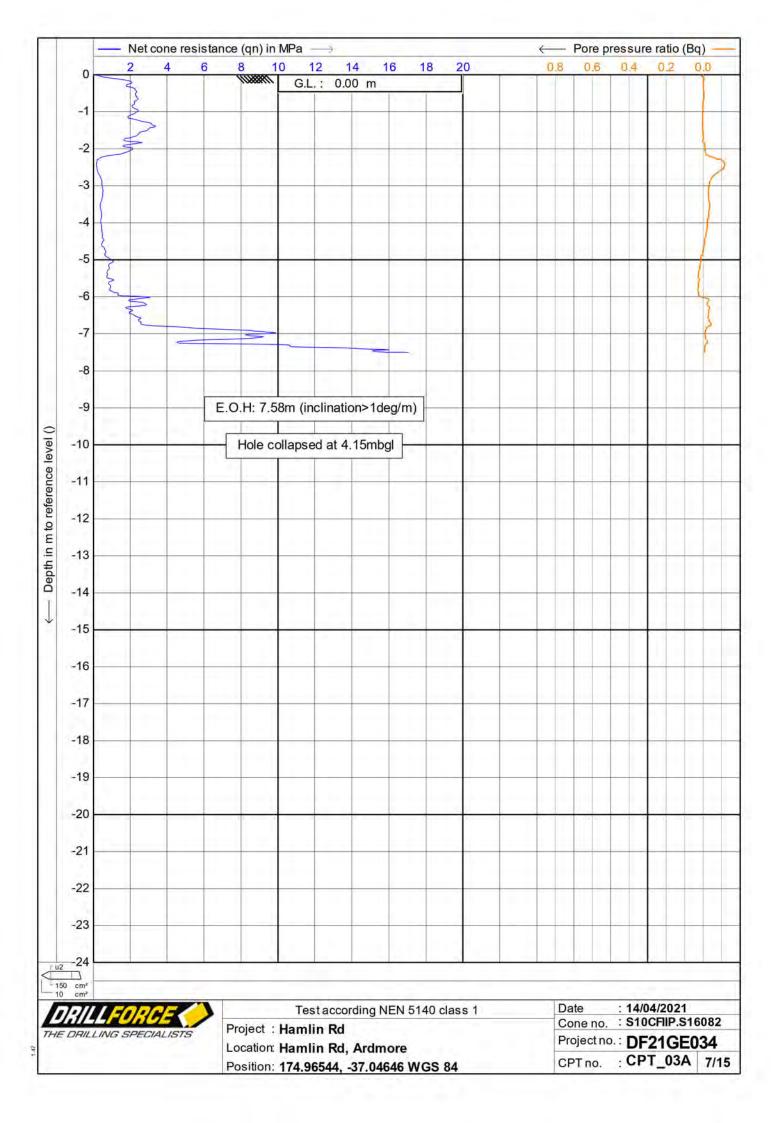


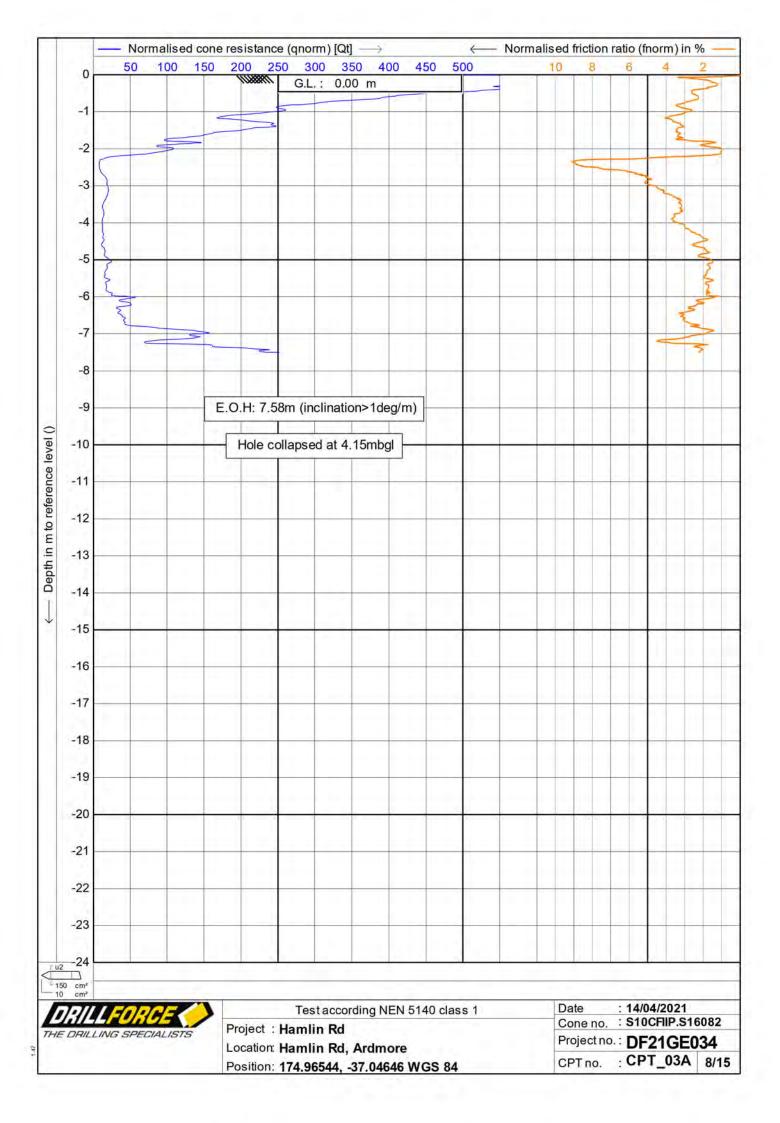


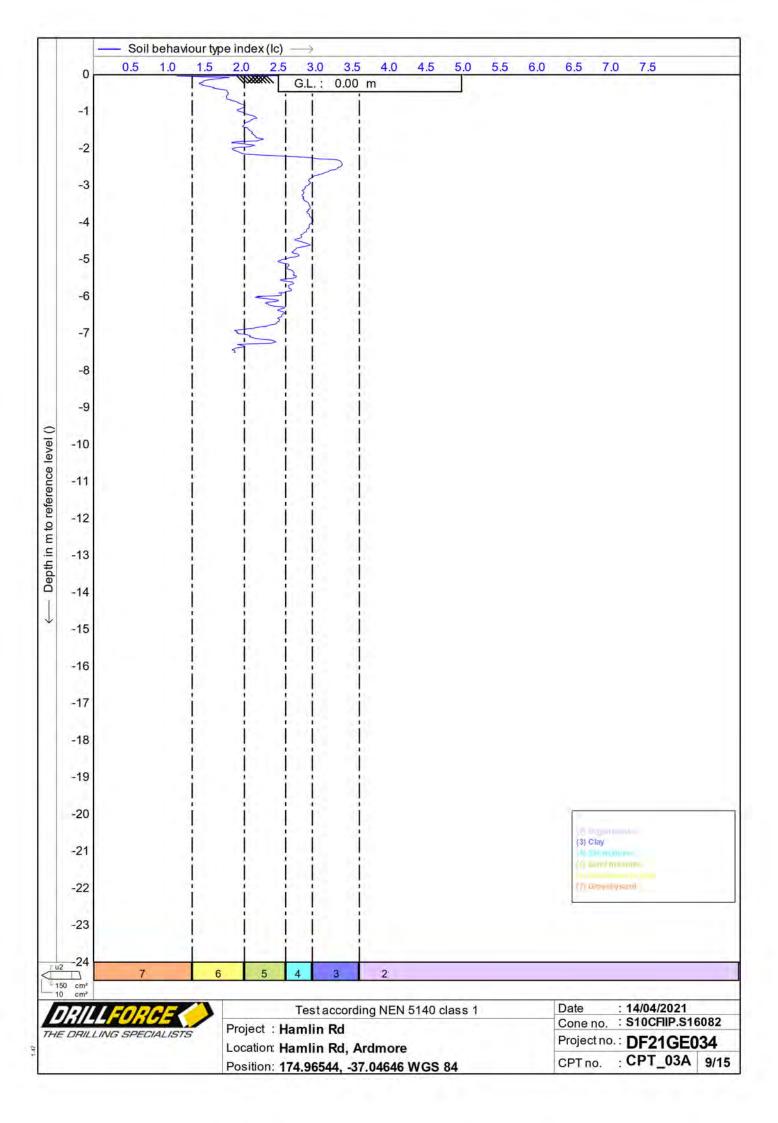


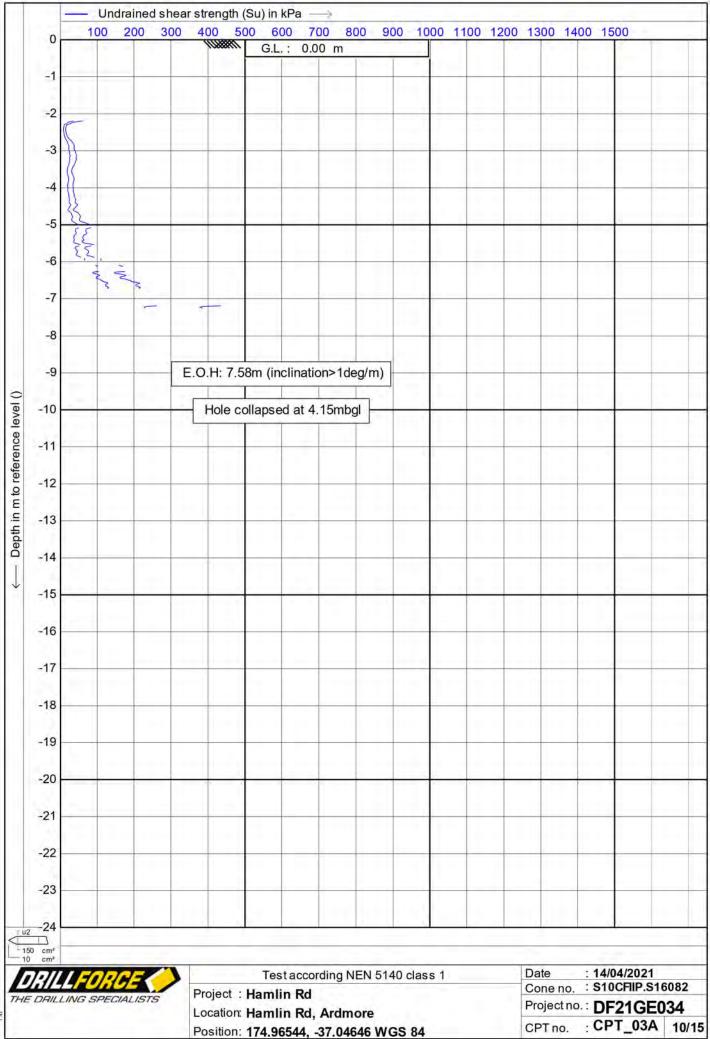


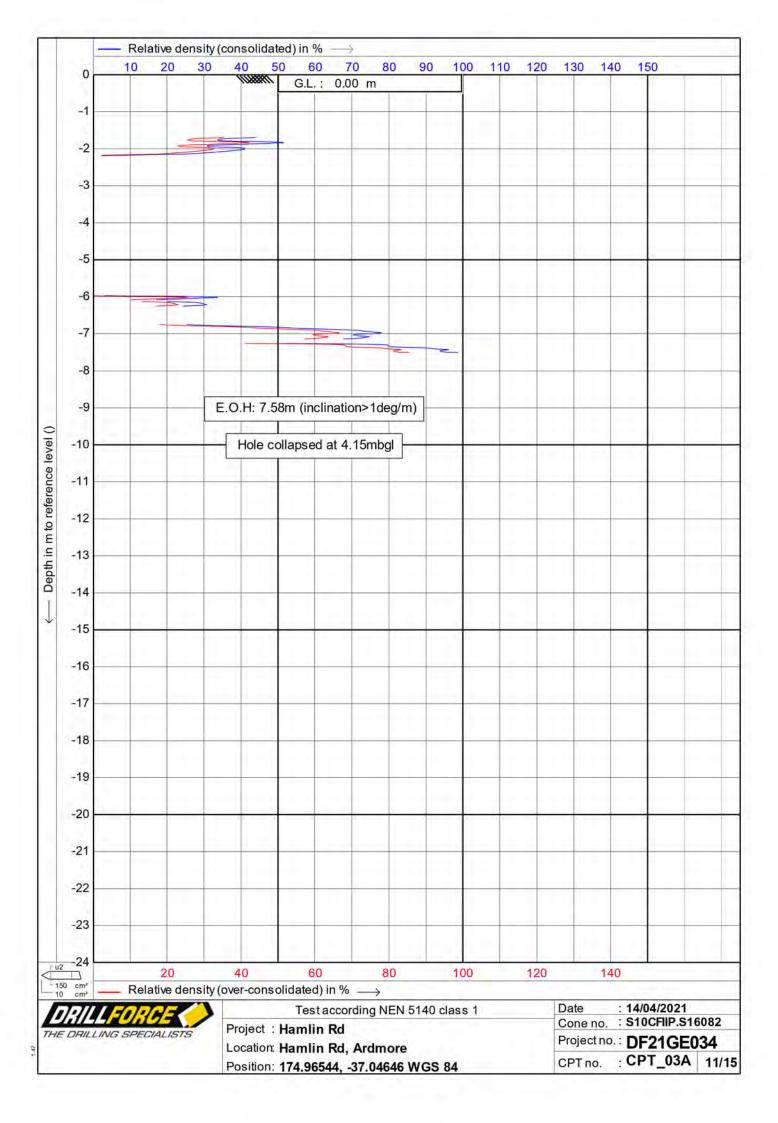


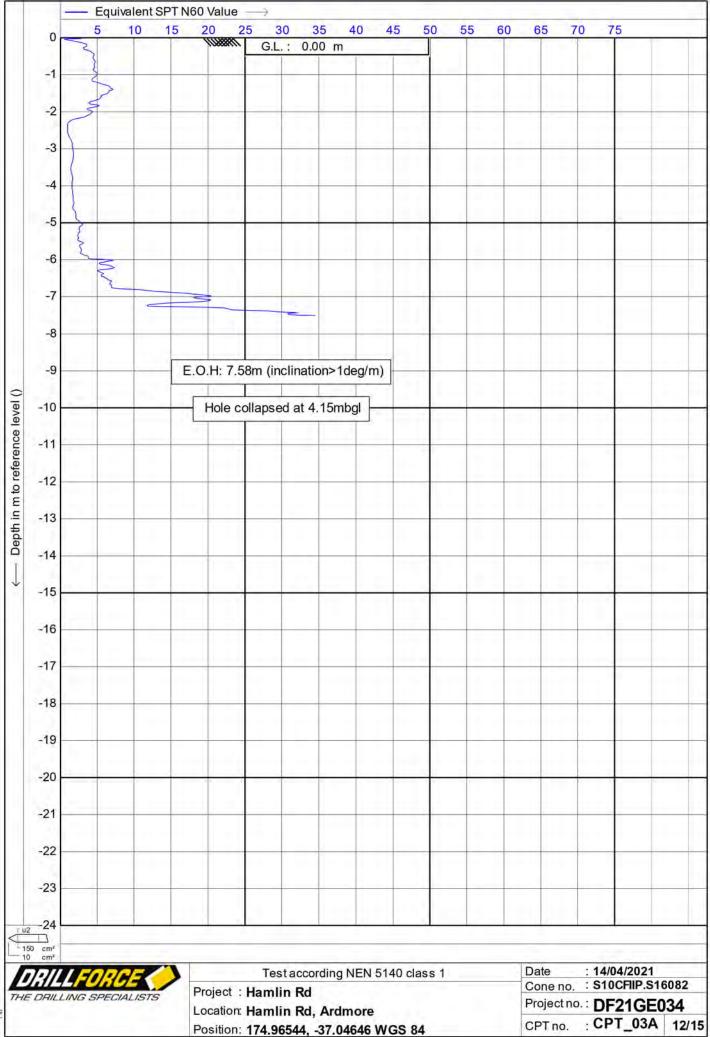


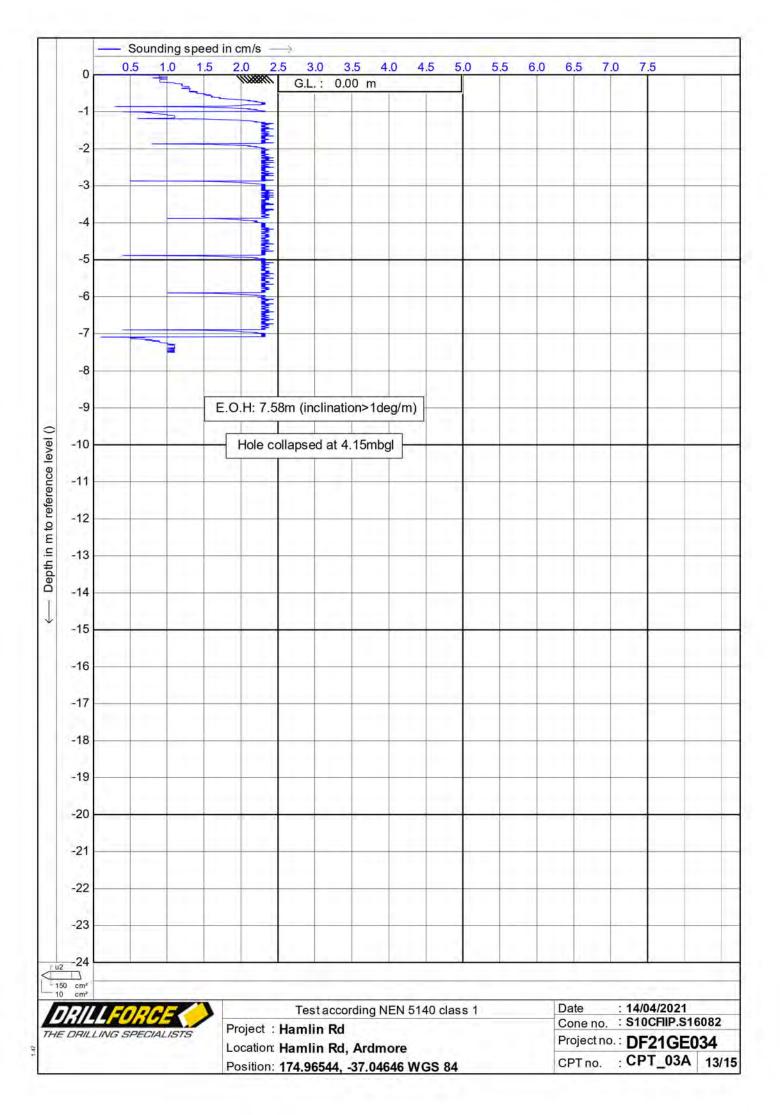


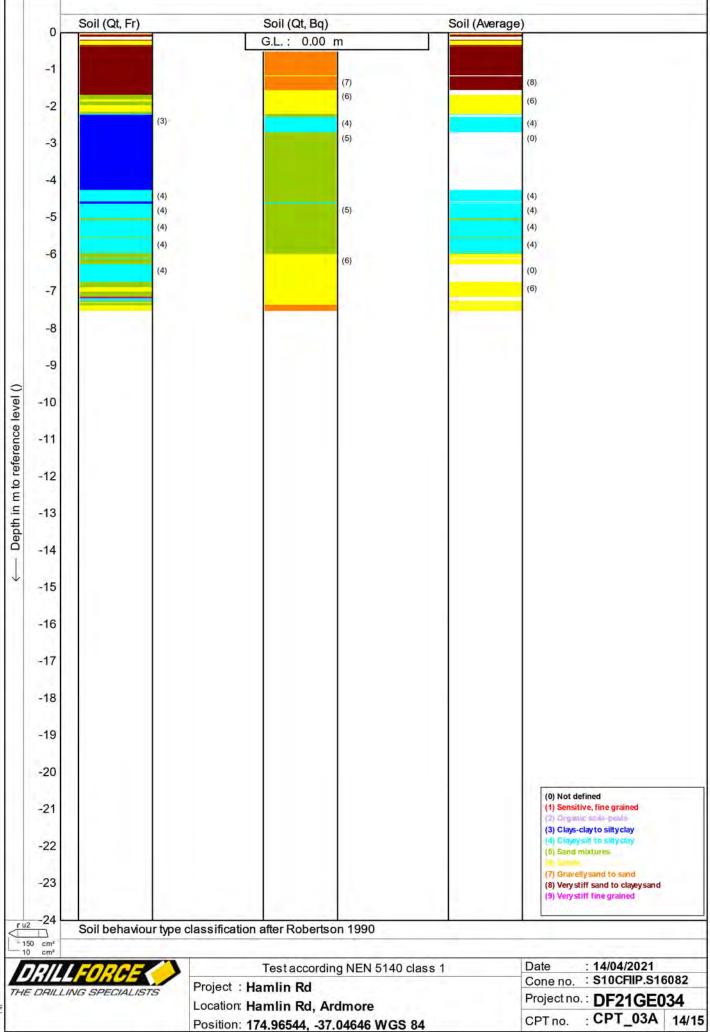


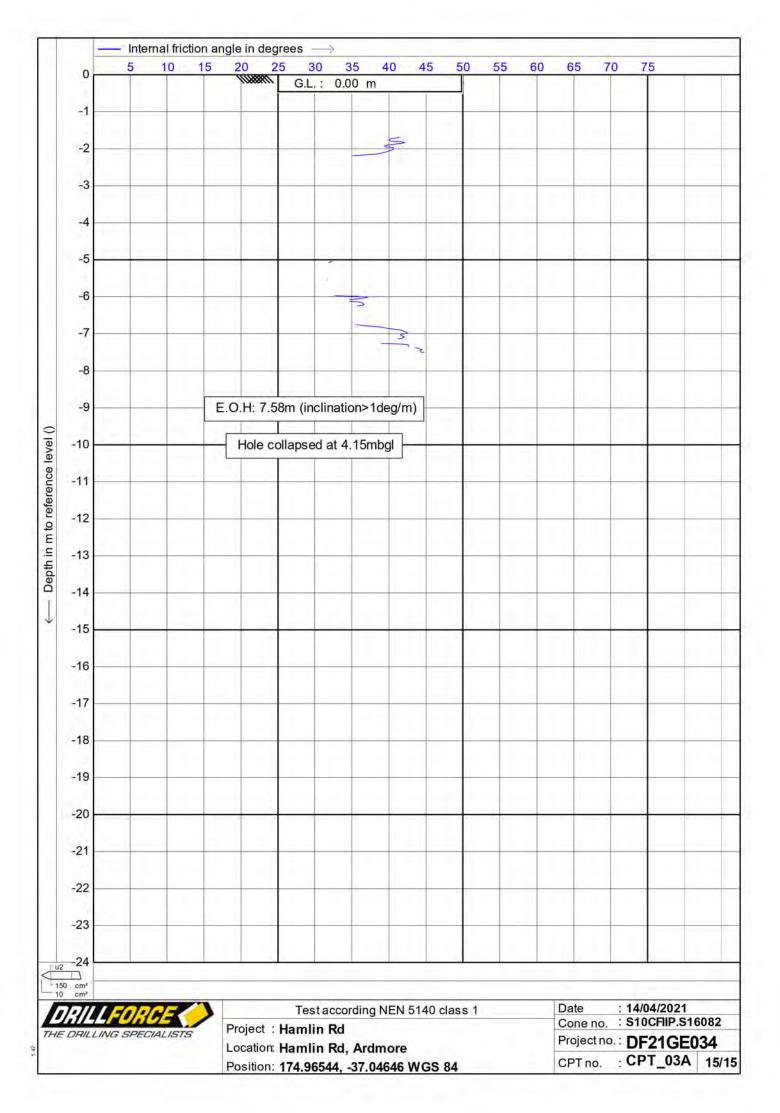


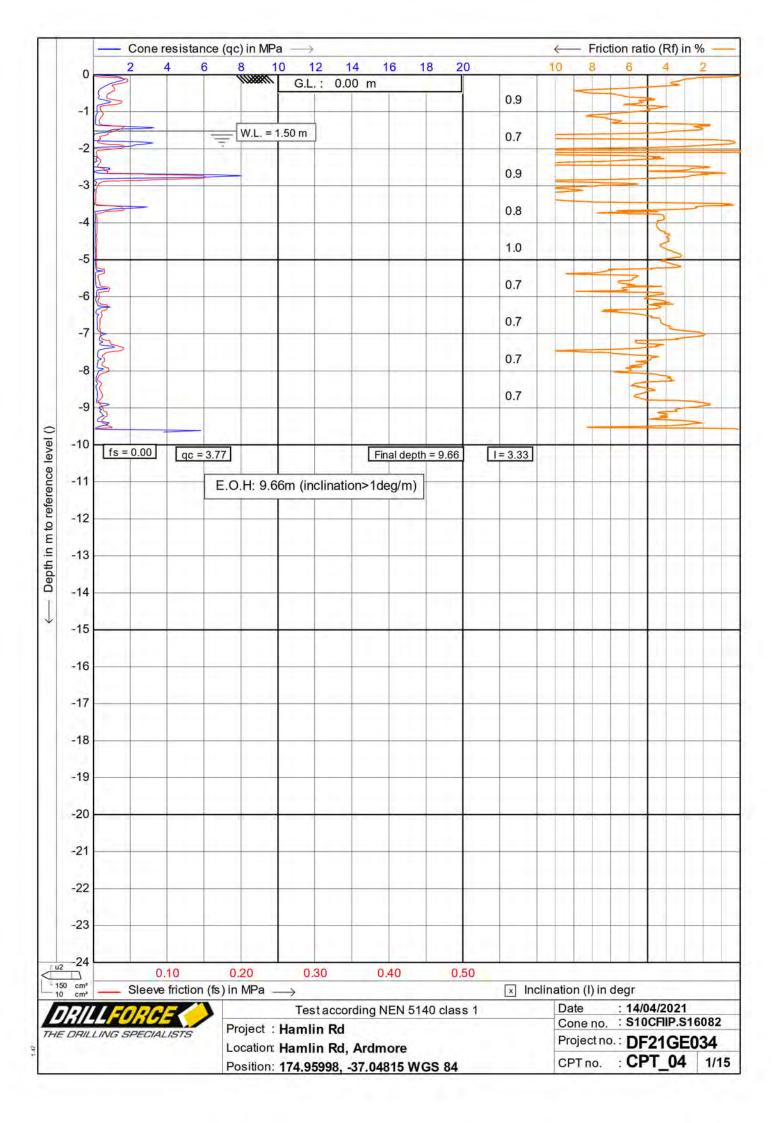


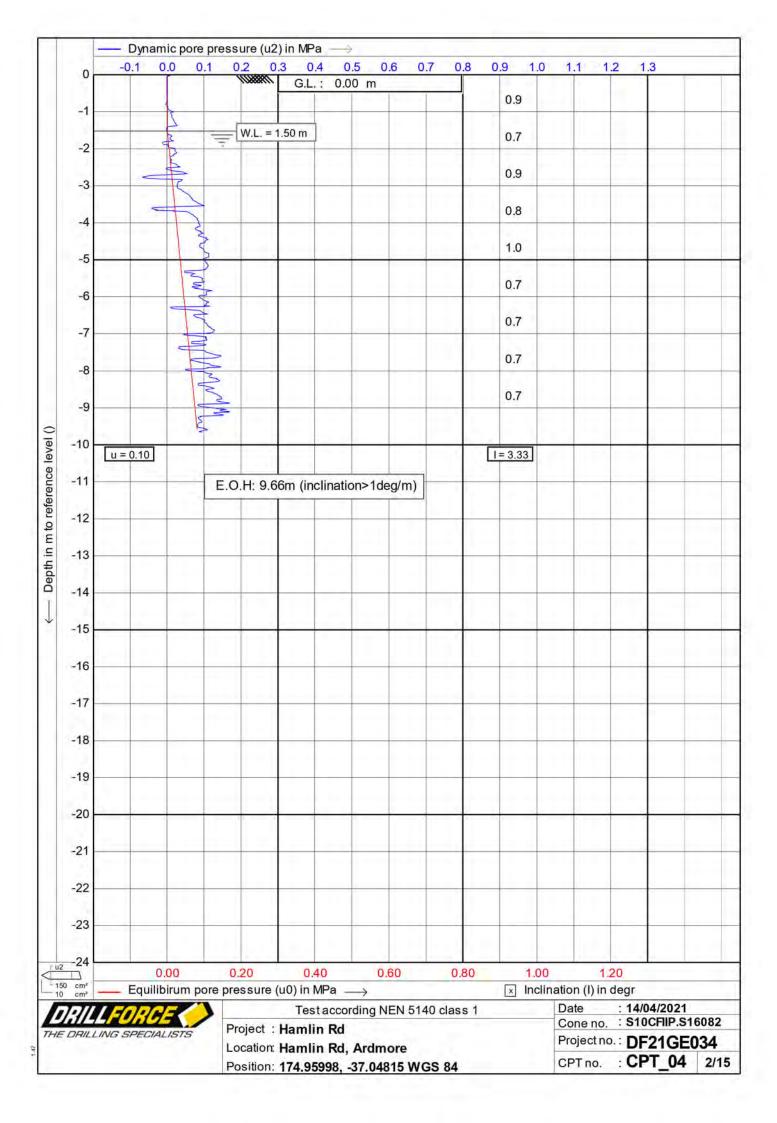


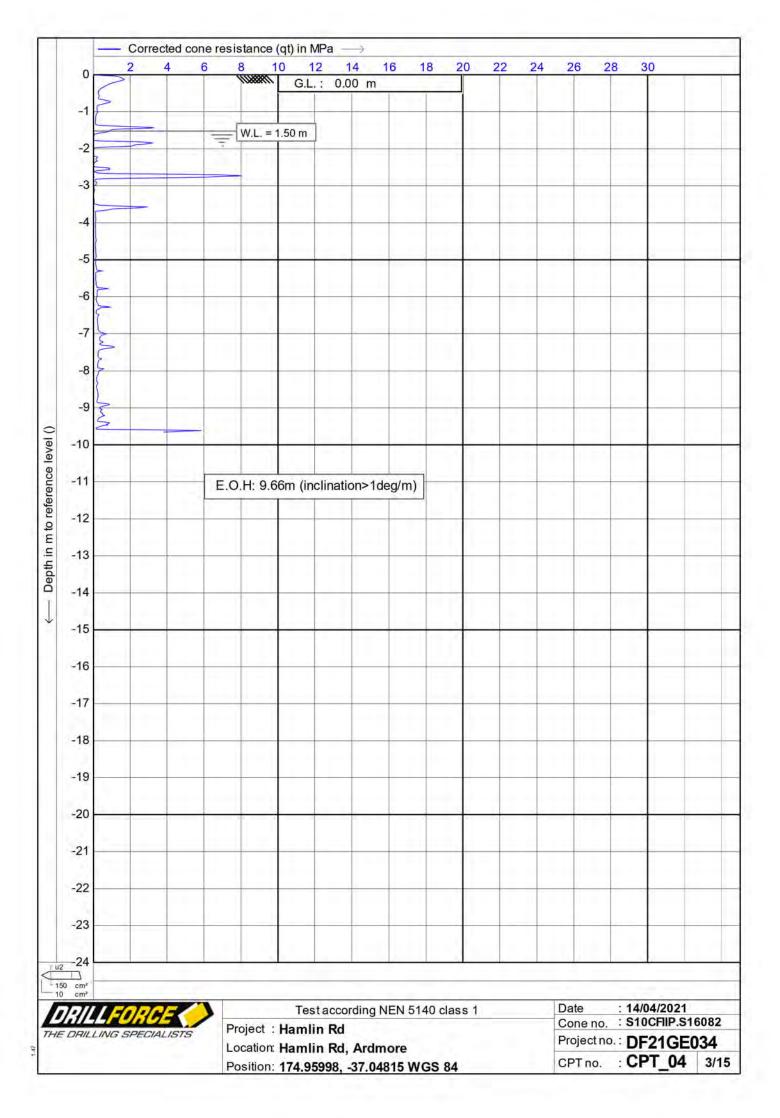


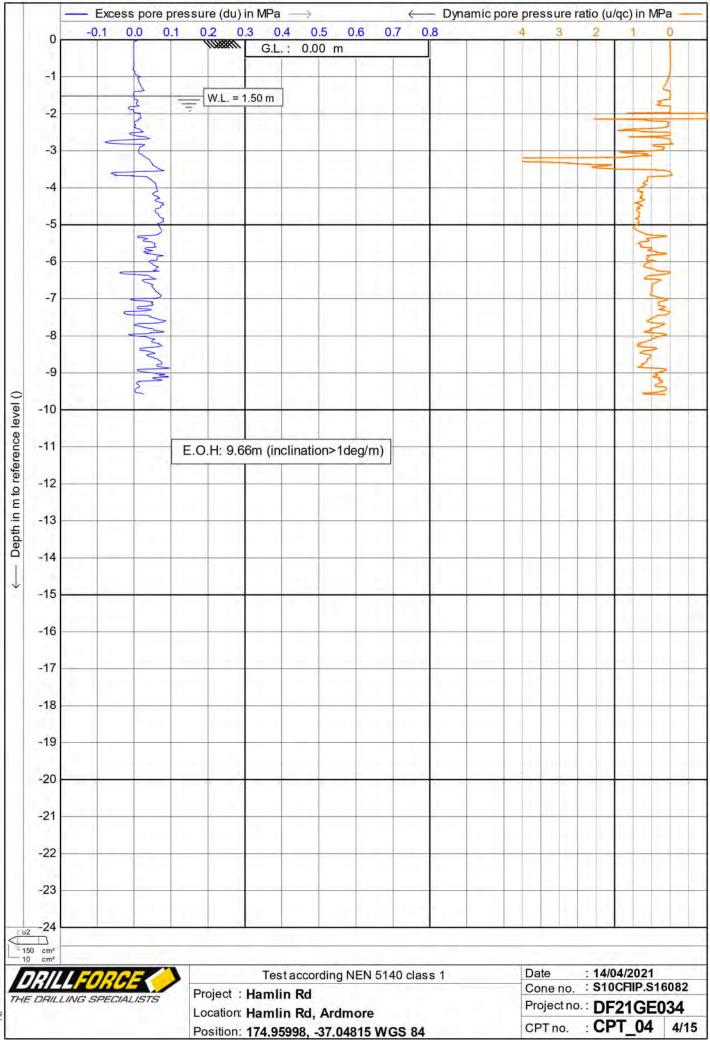


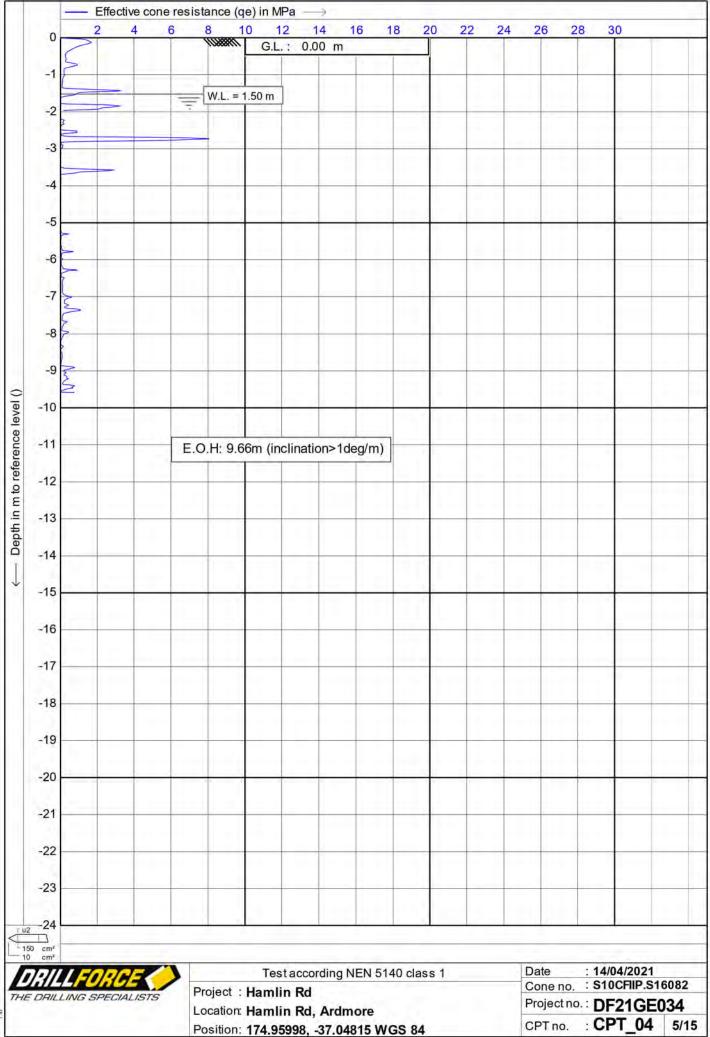


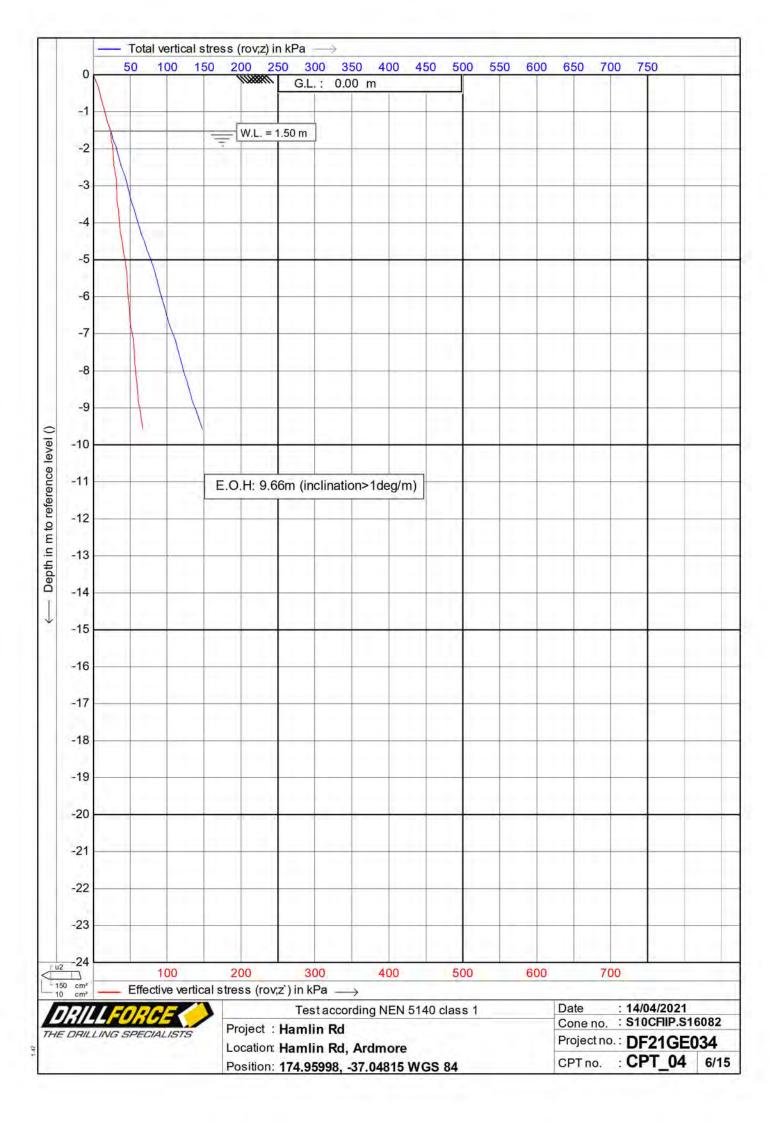


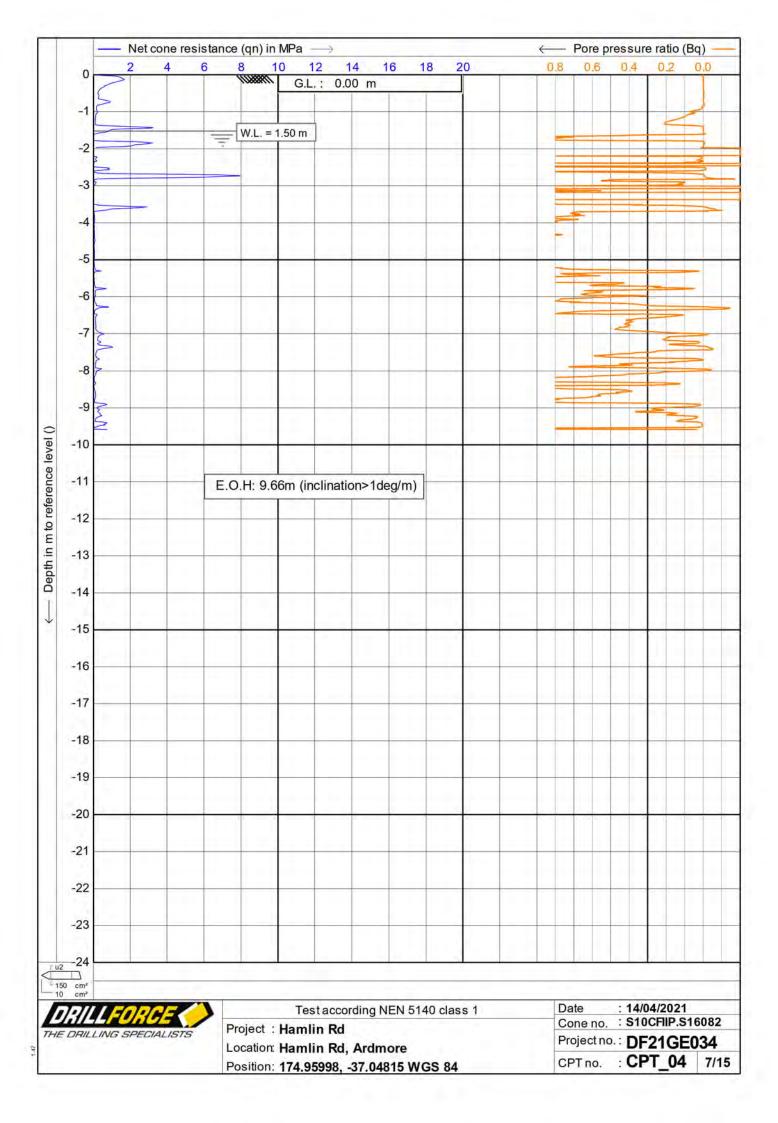


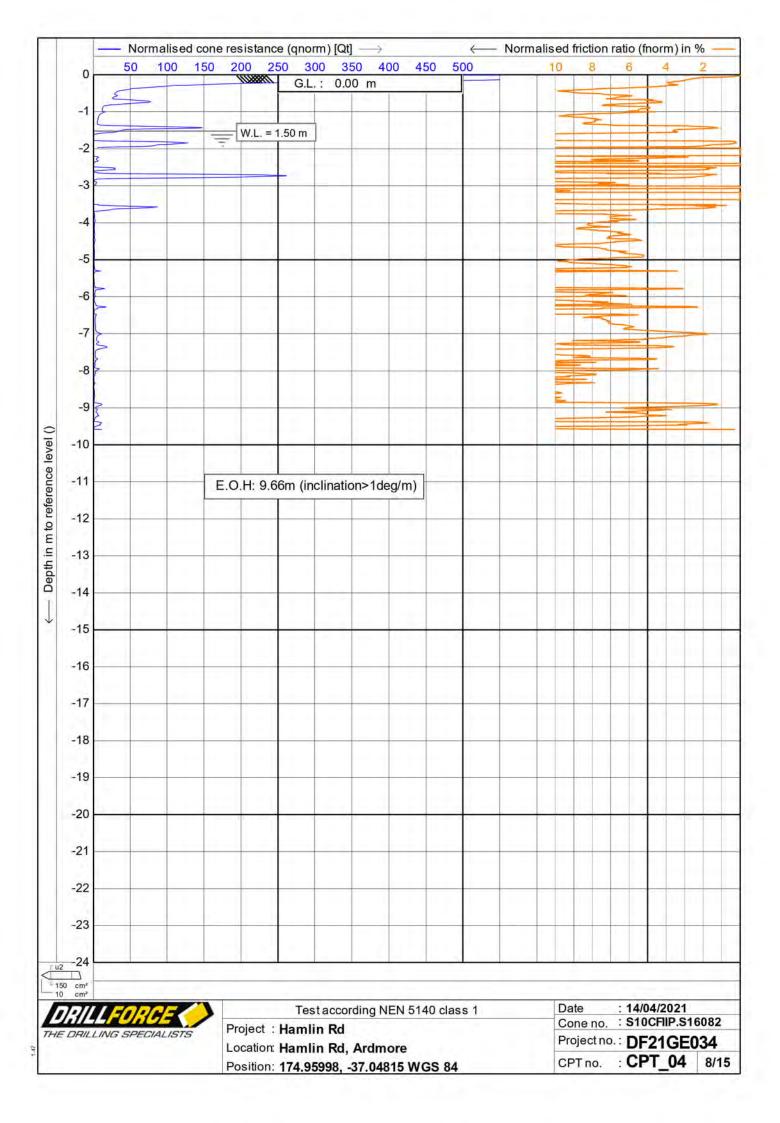


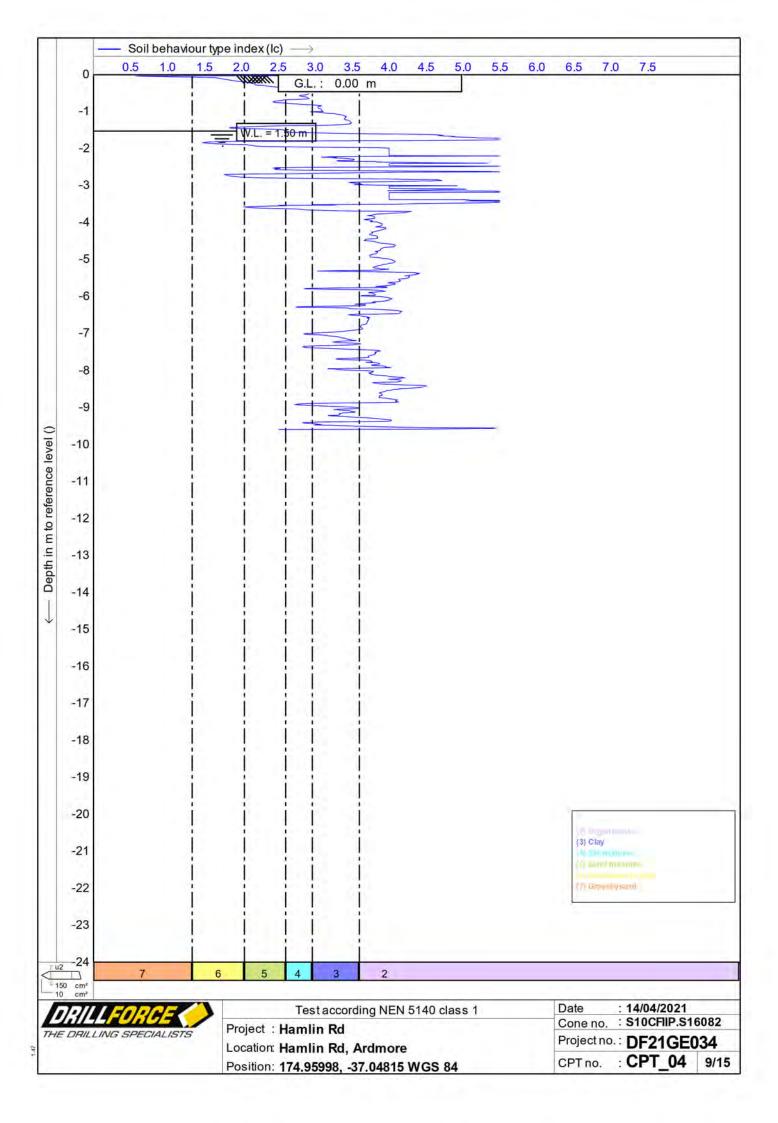


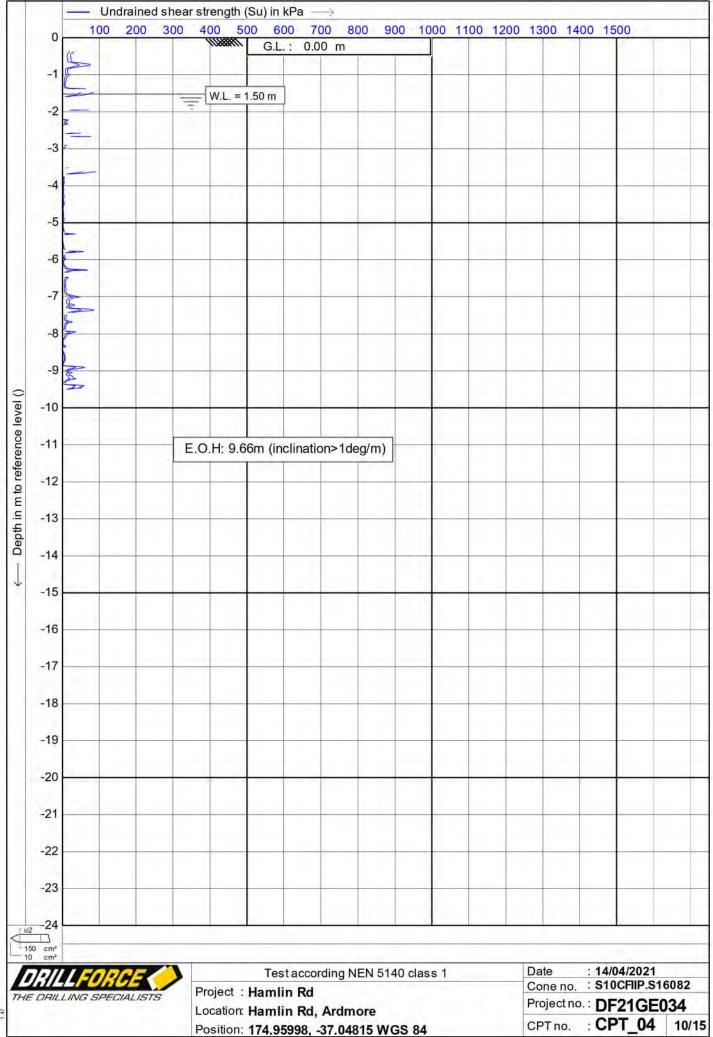


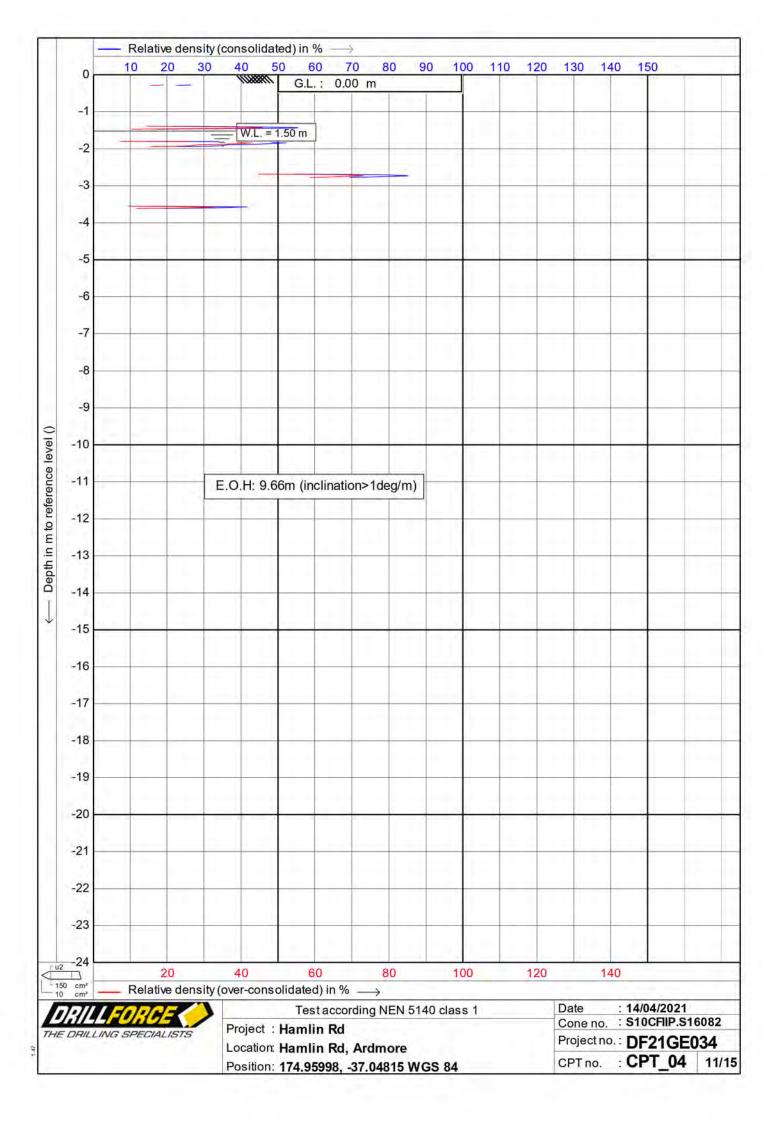


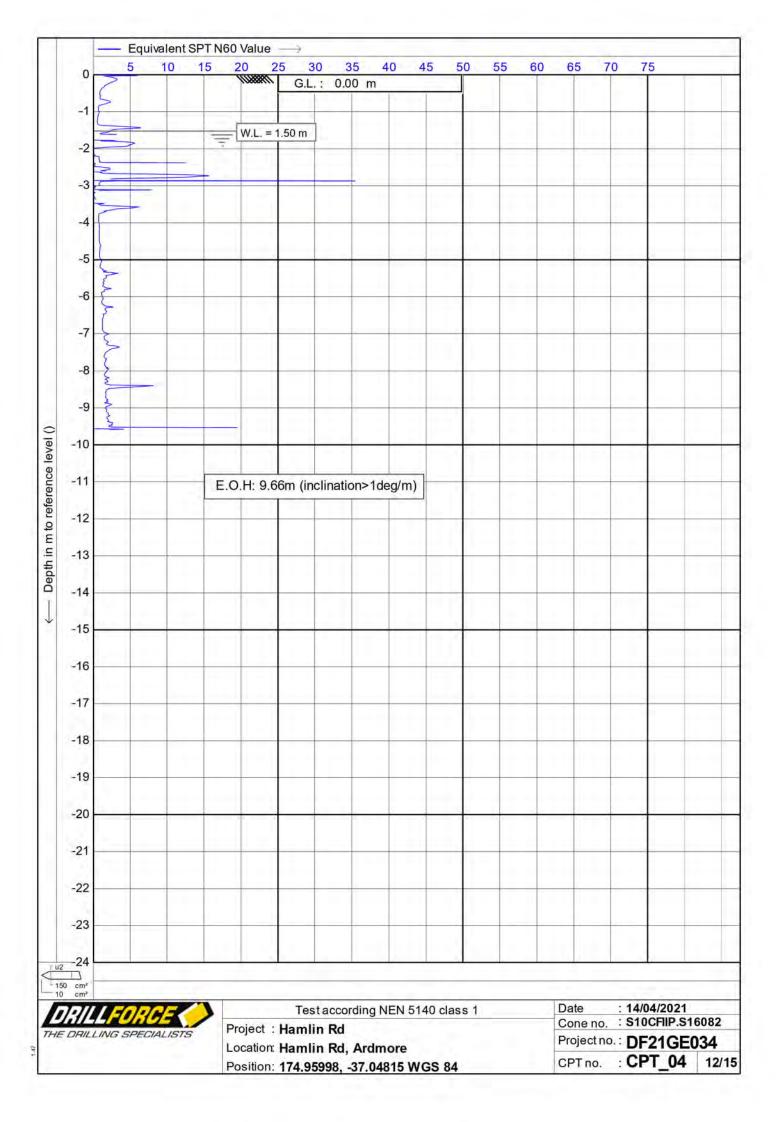


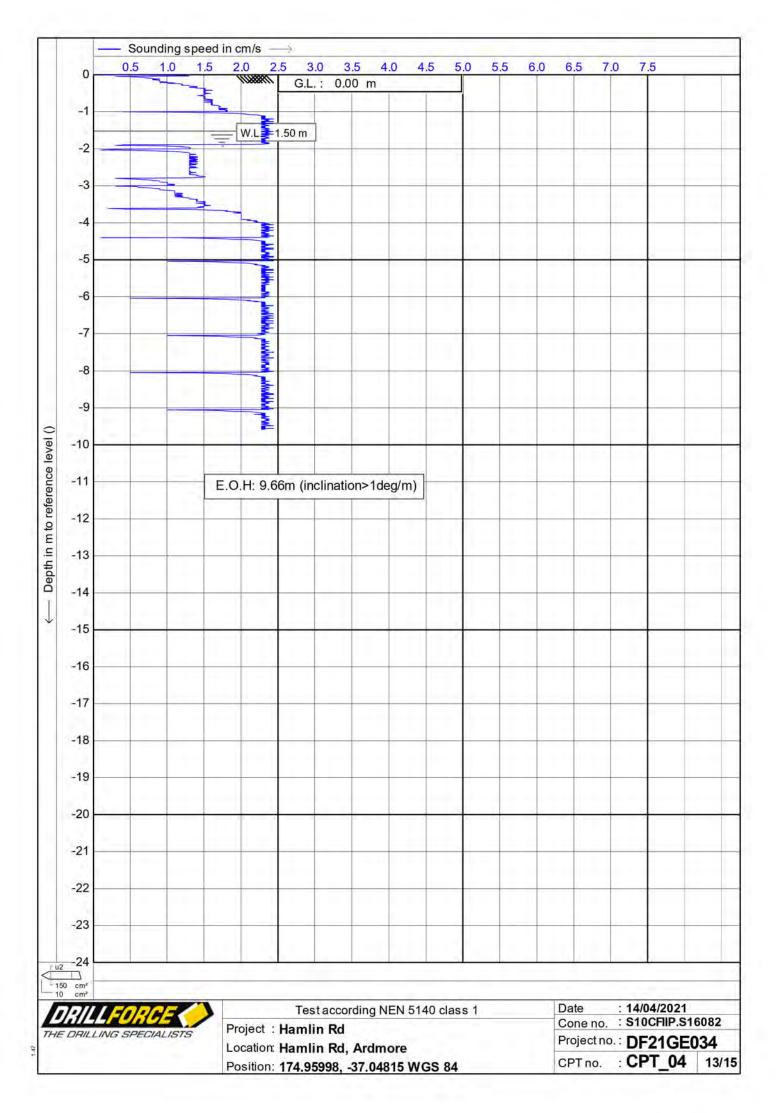


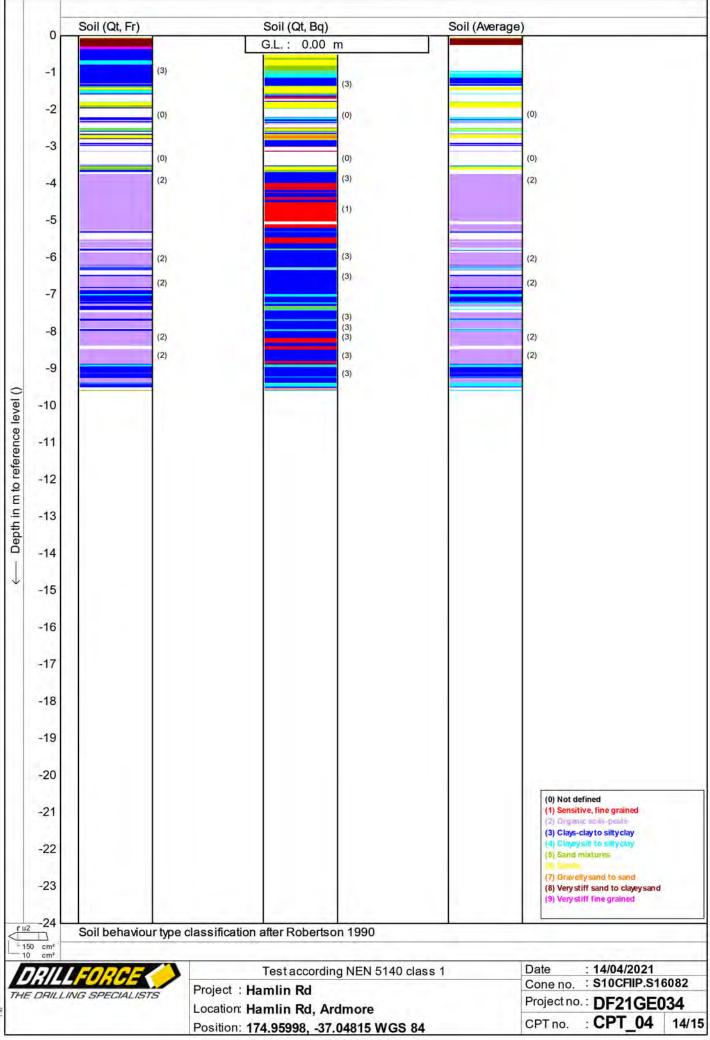


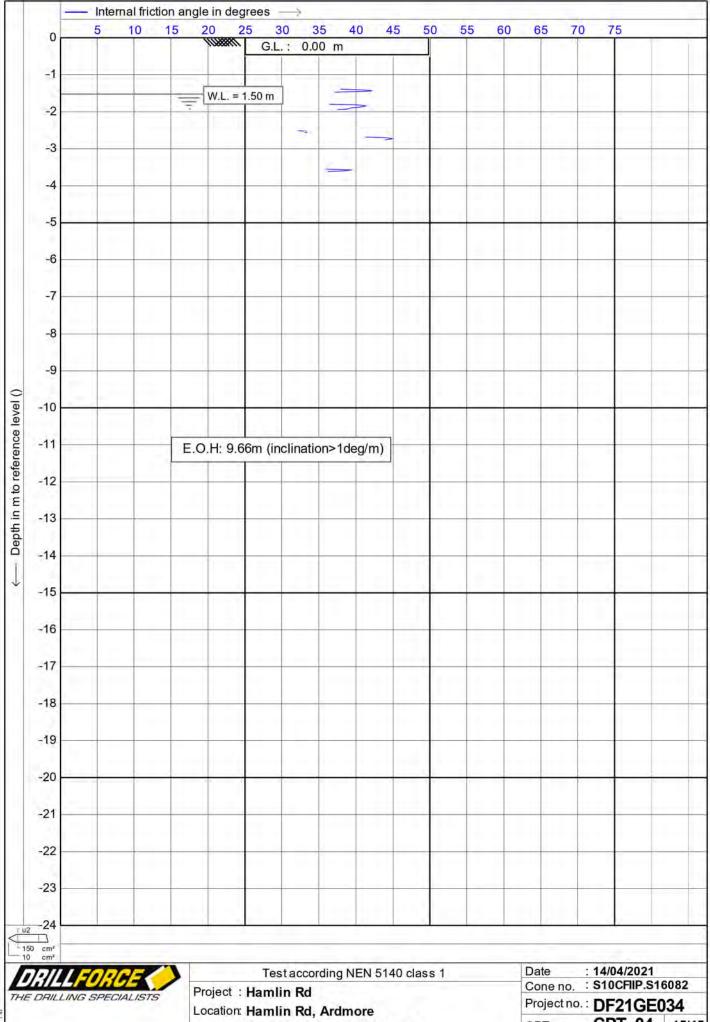






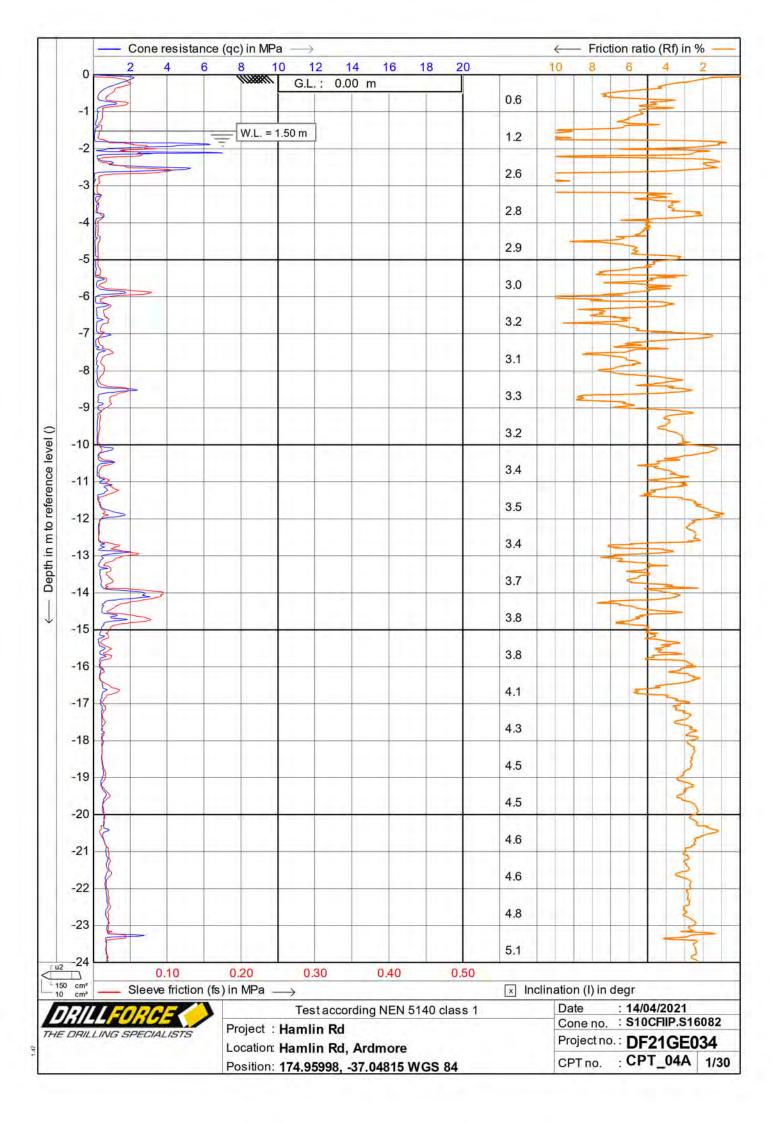


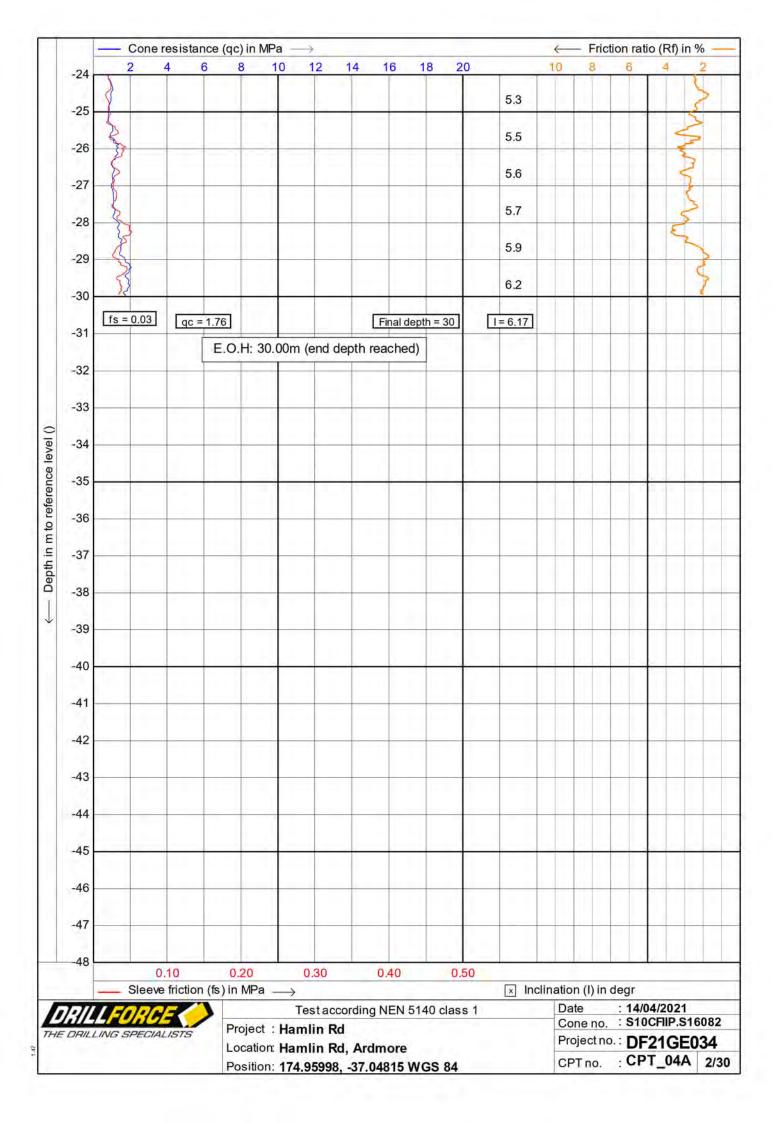


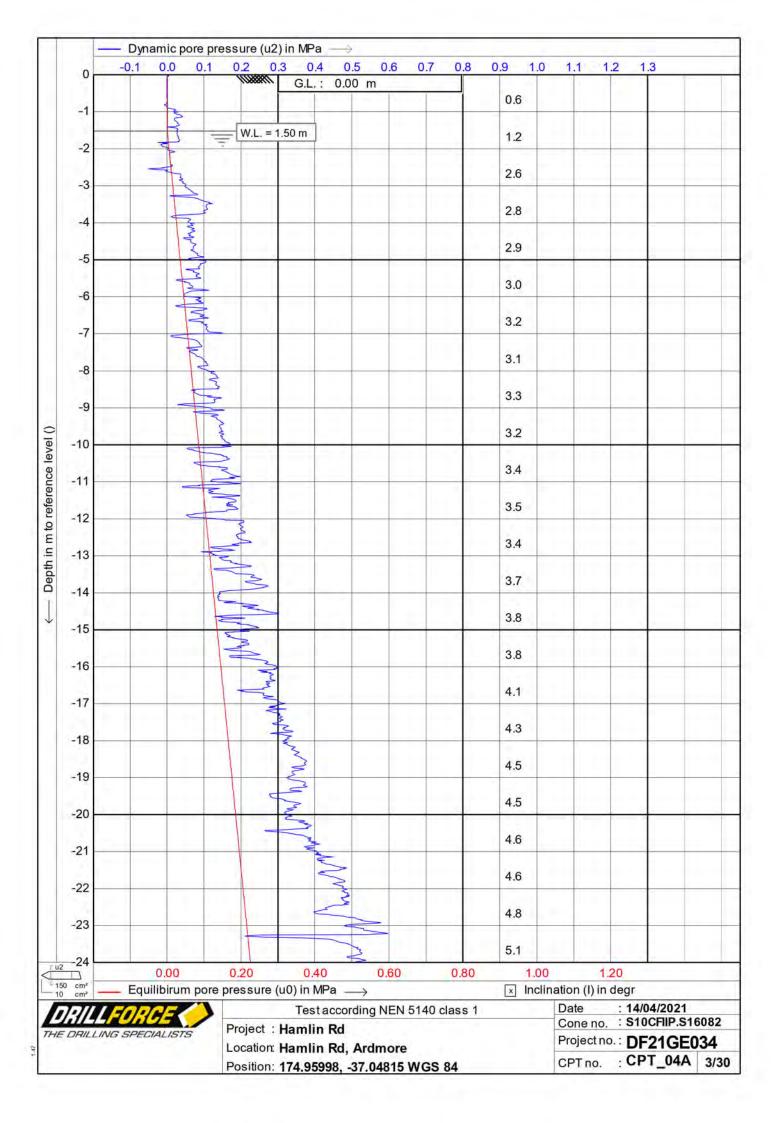


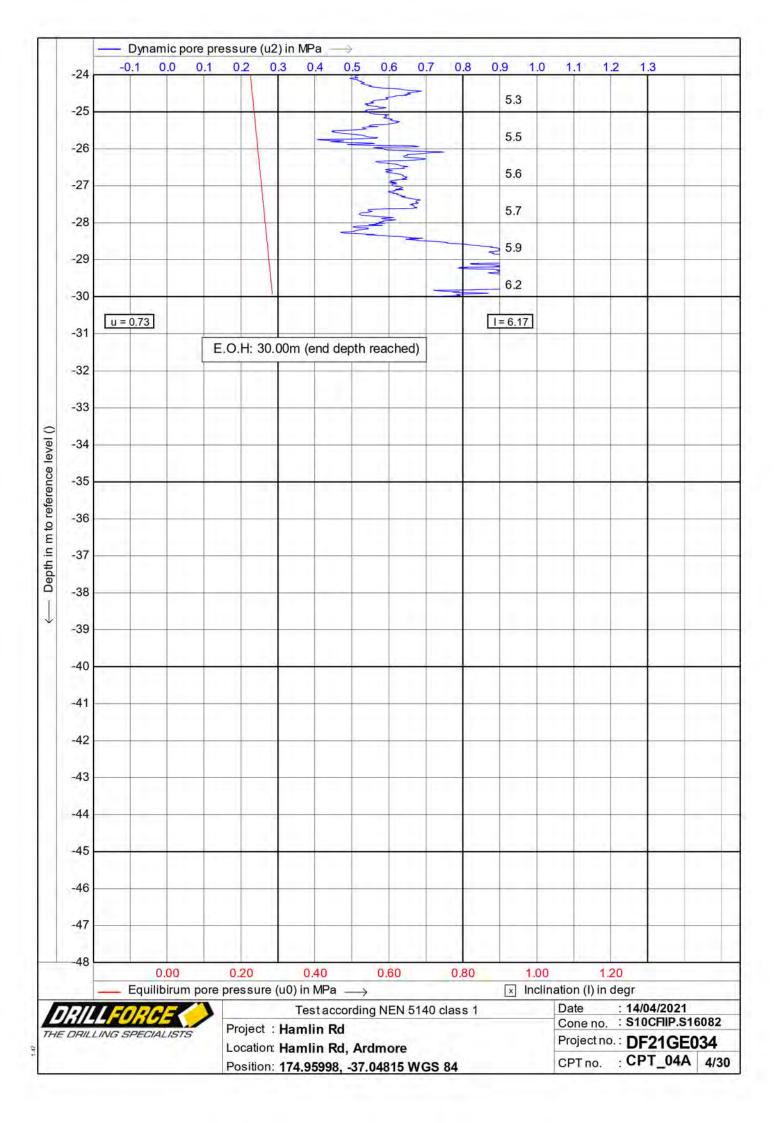
Position: 174.95998, -37.04815 WGS 84

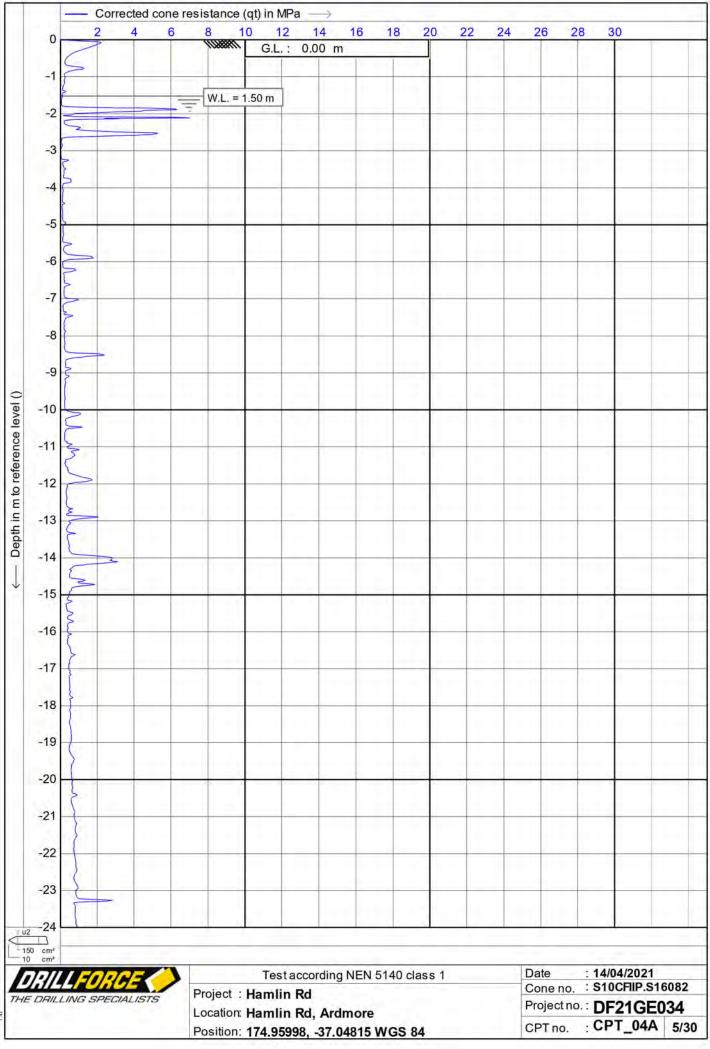
: CPT 04 CPT no.

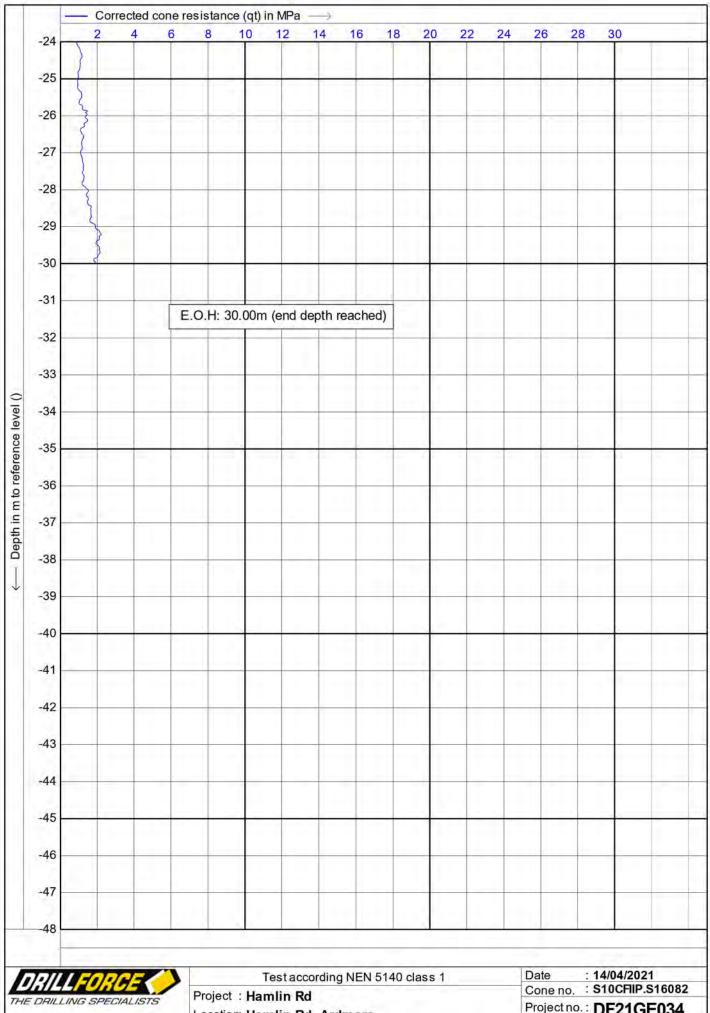










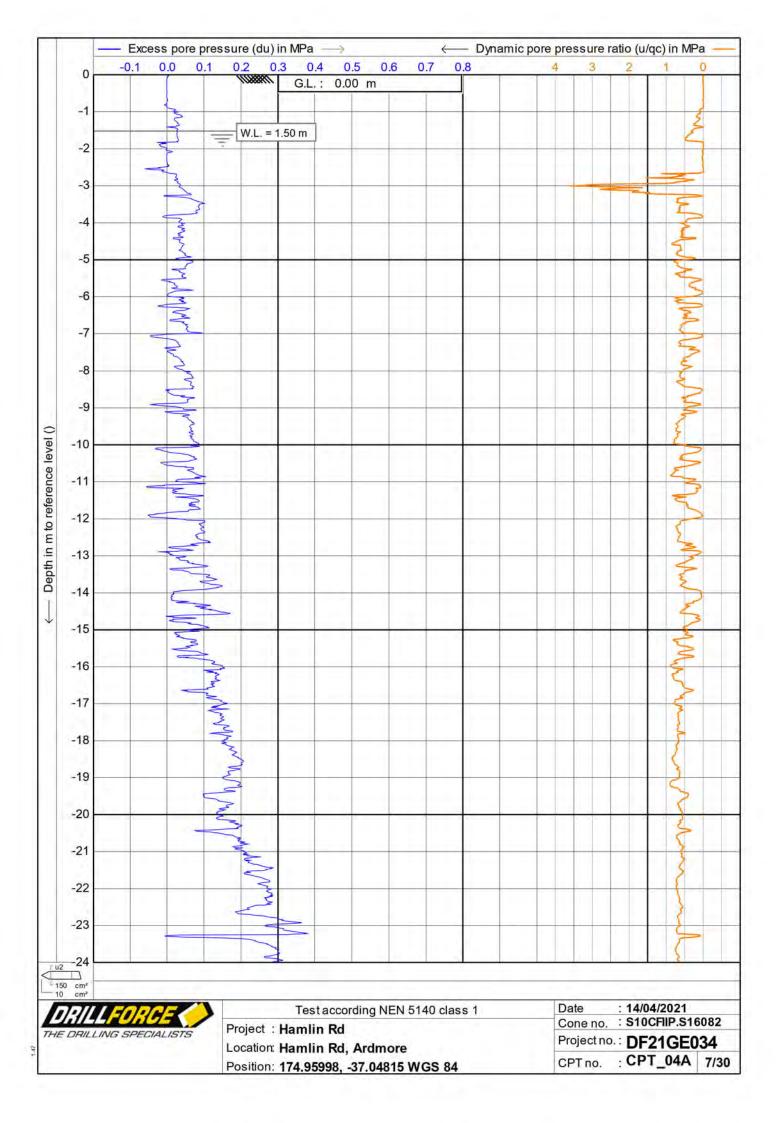


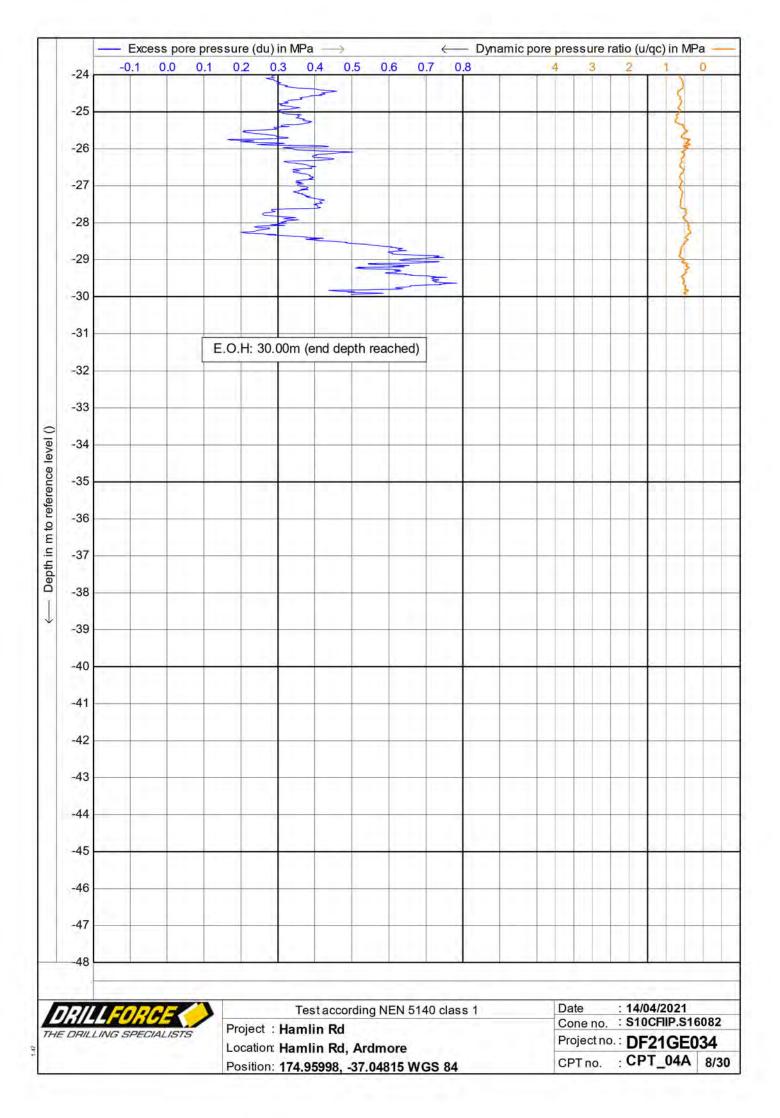
Location: Hamlin Rd, Ardmore

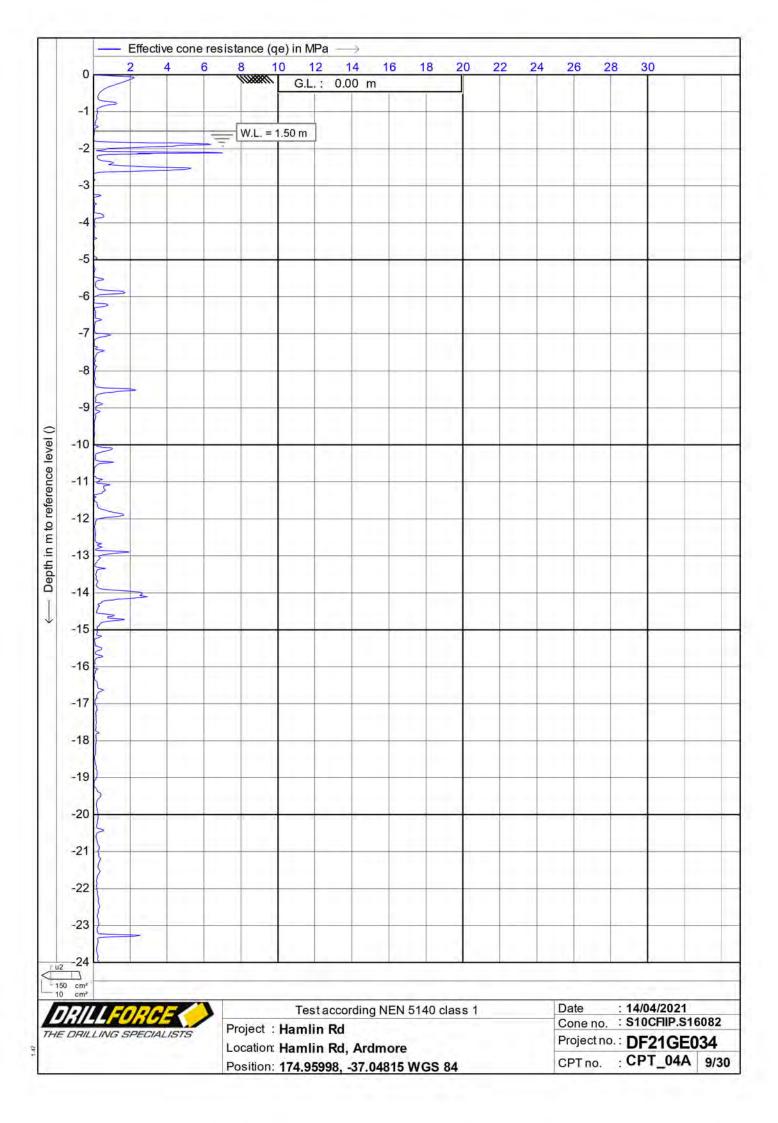
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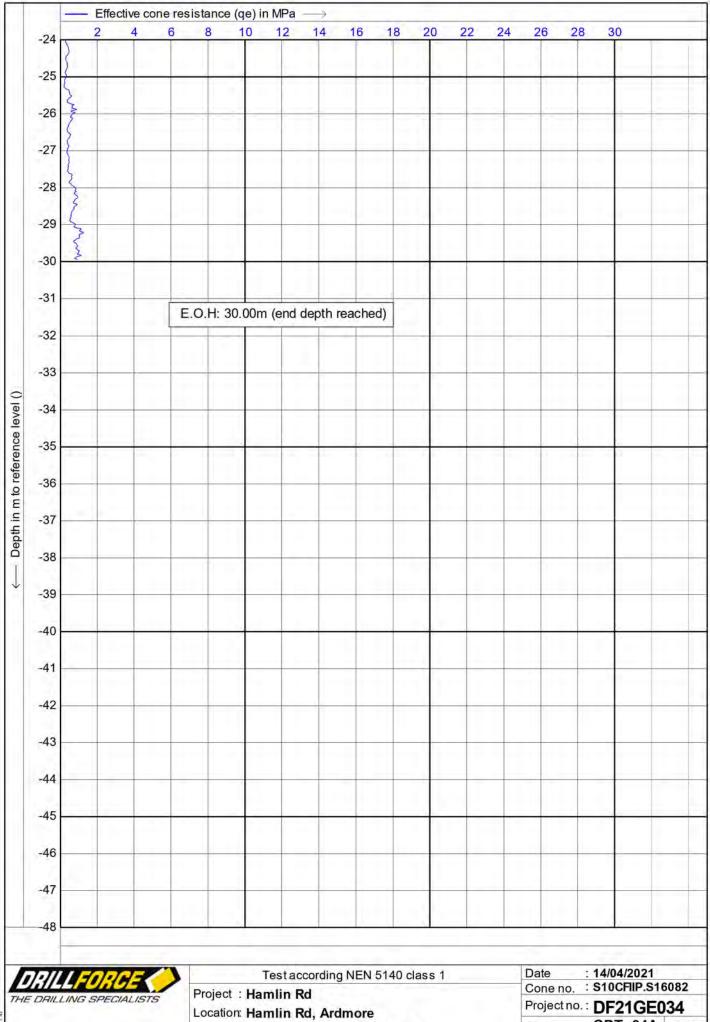
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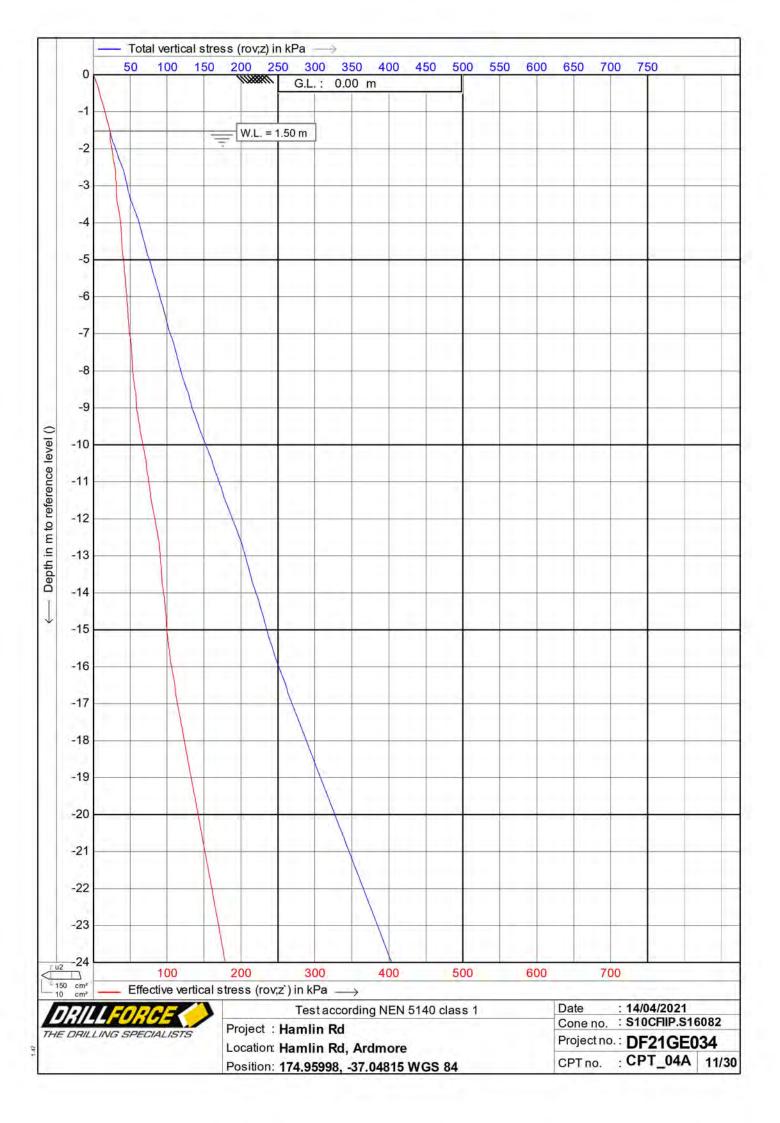


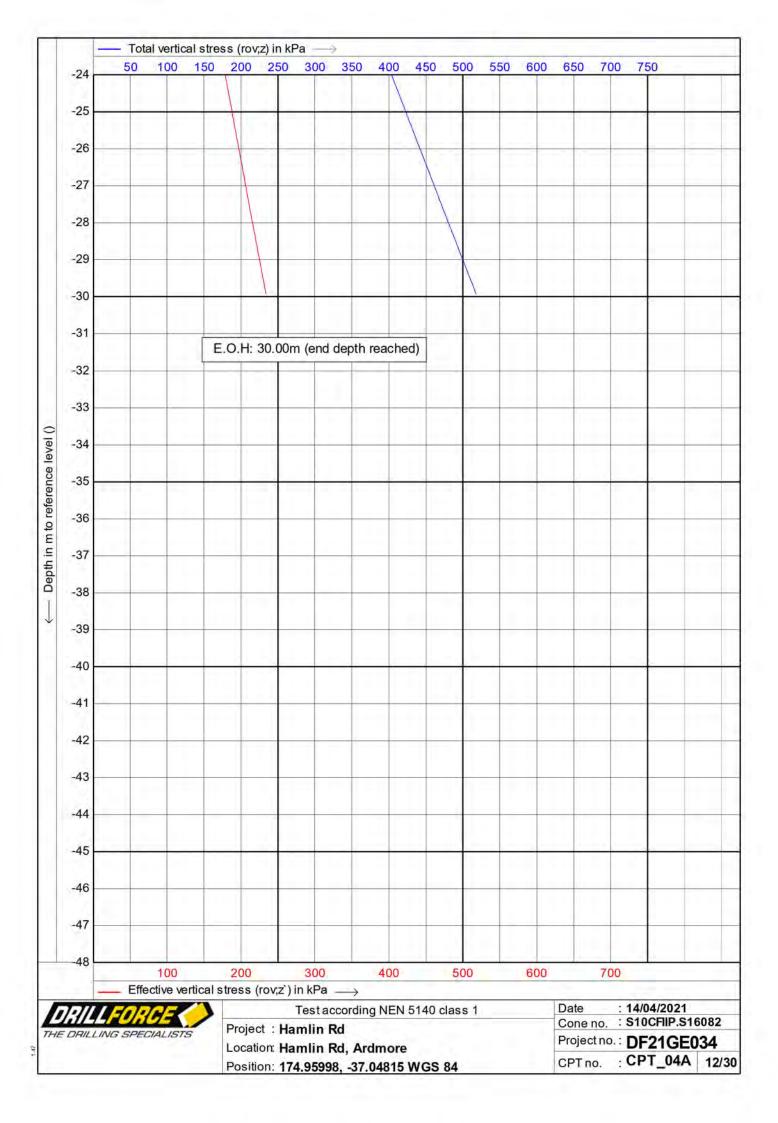


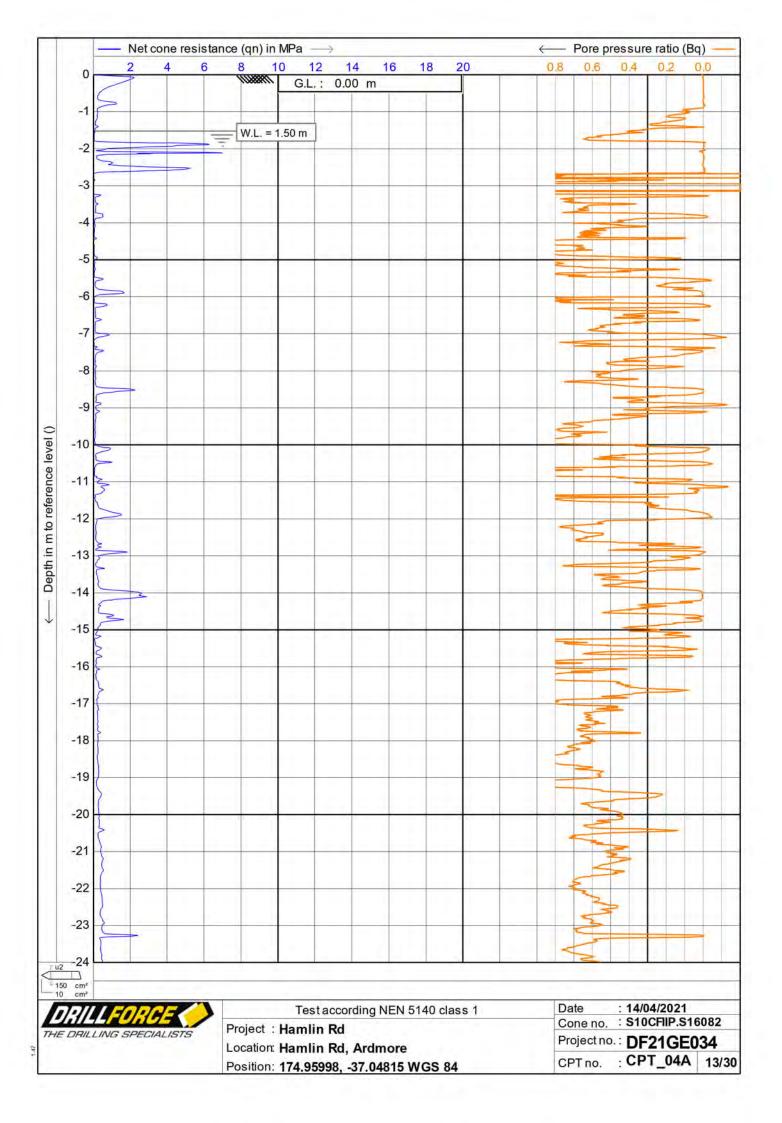


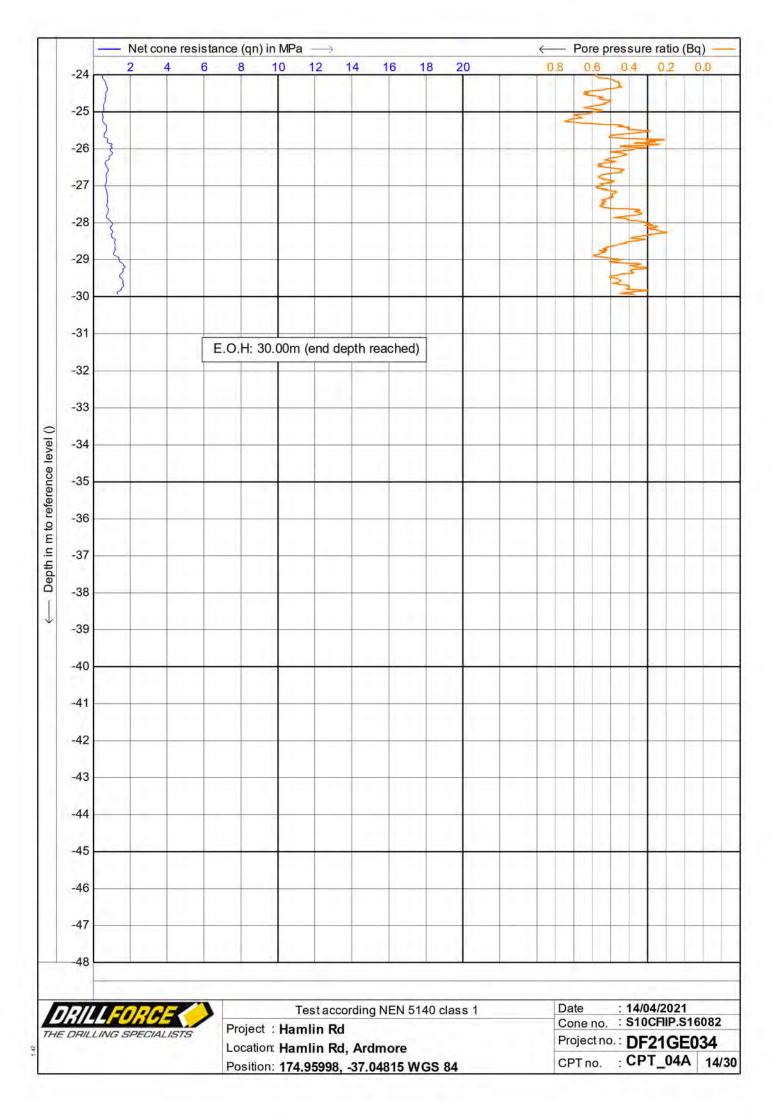
Position: 174.95998, -37.04815 WGS 84

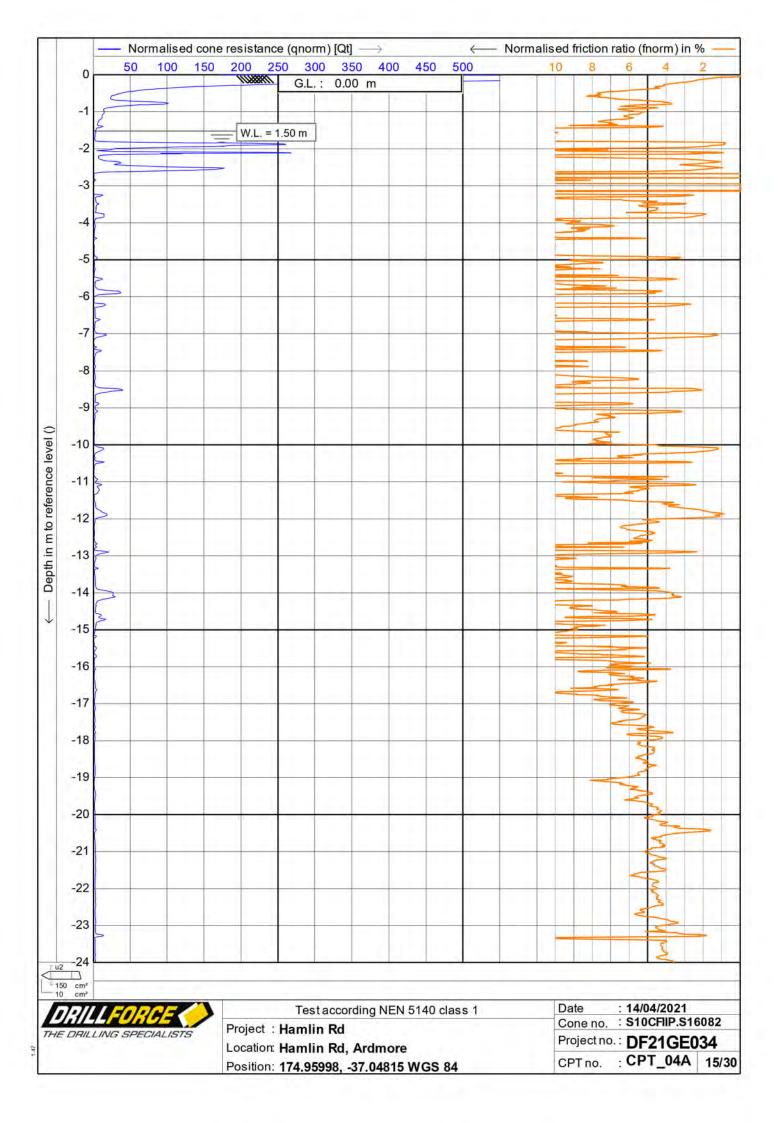
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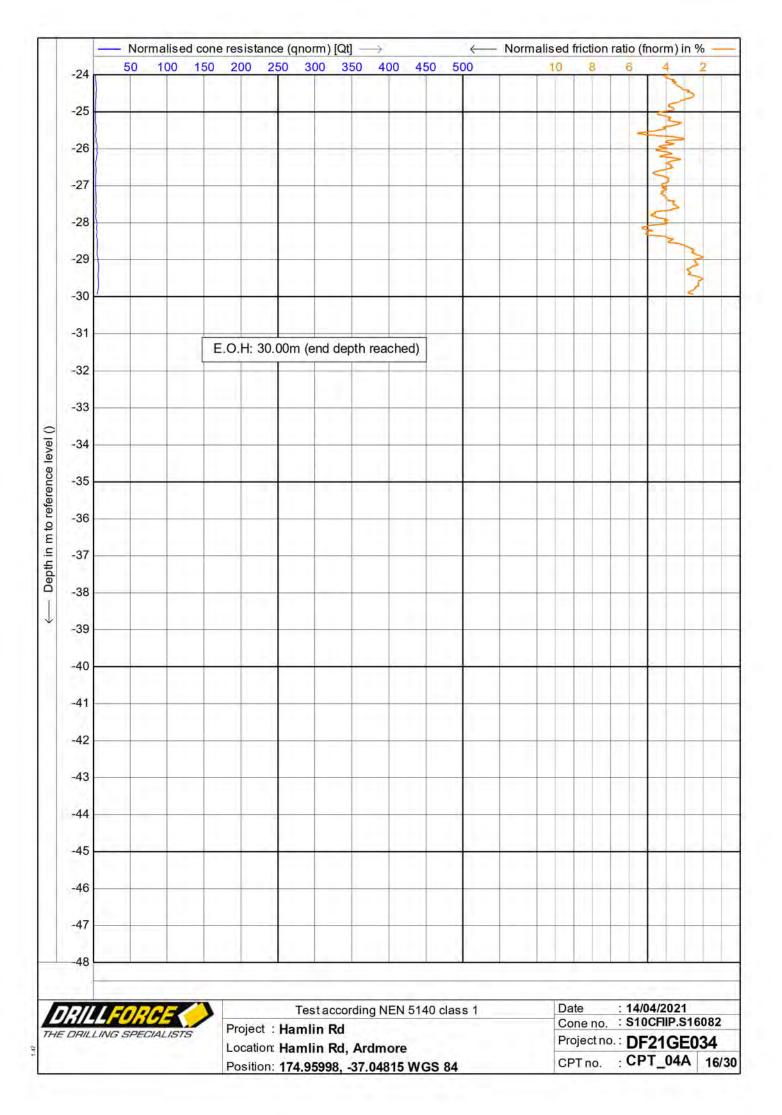


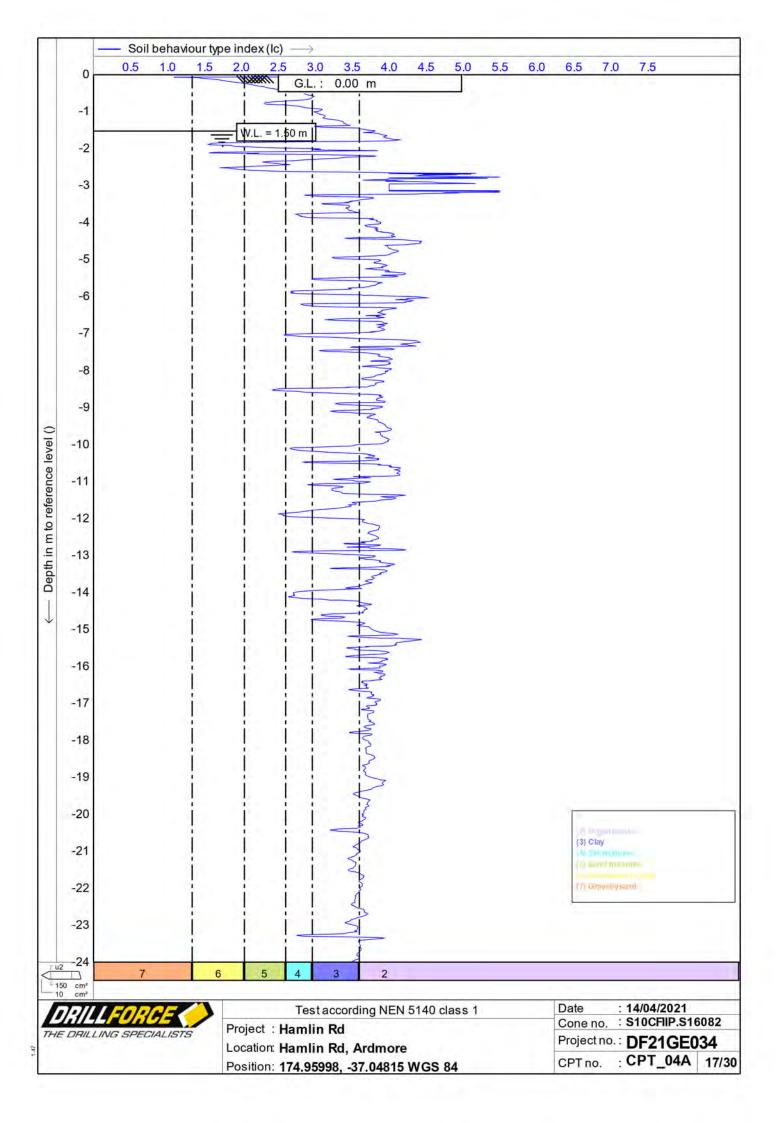


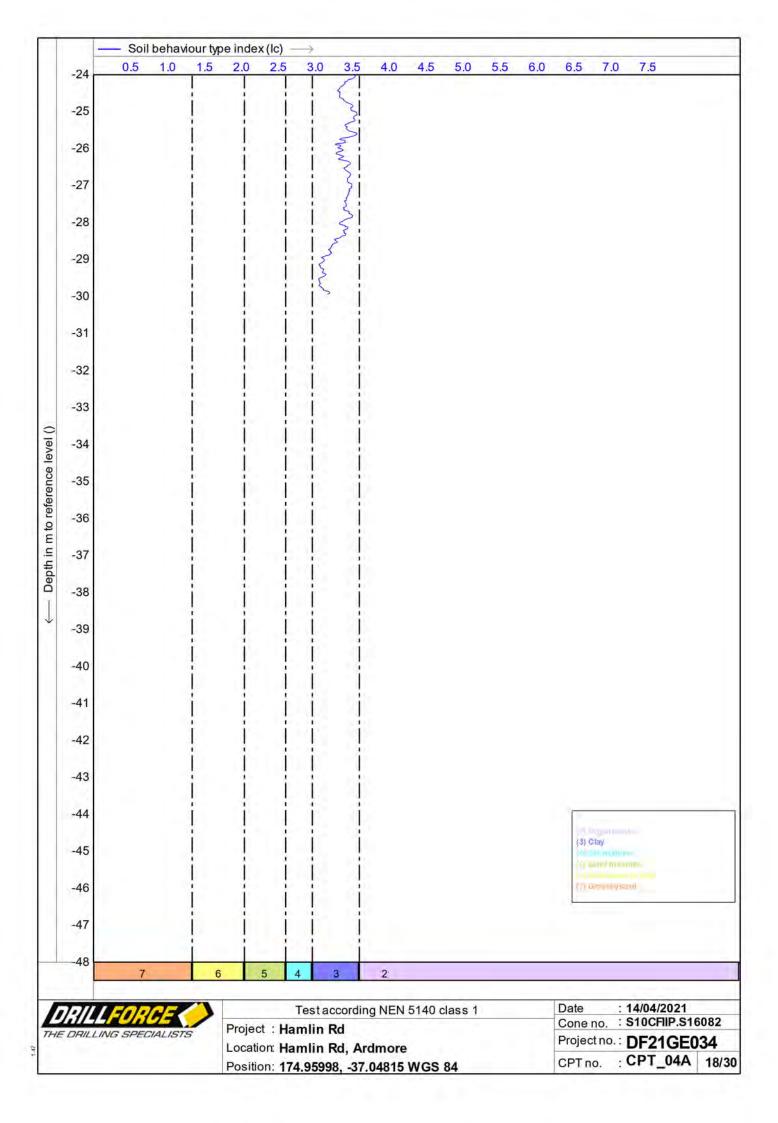


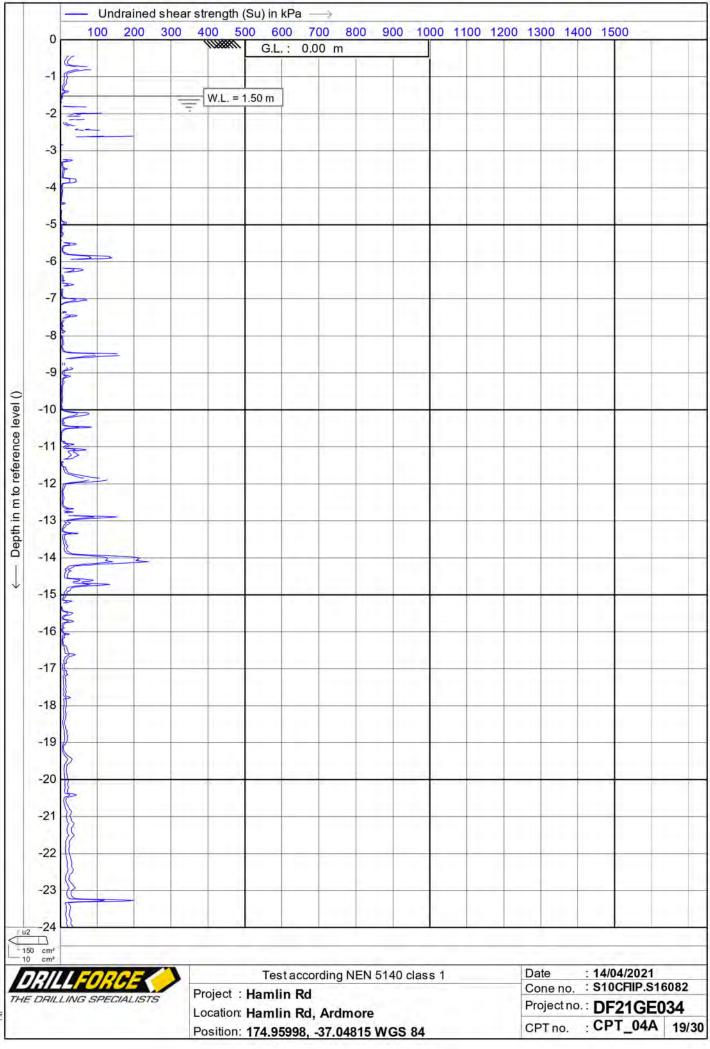


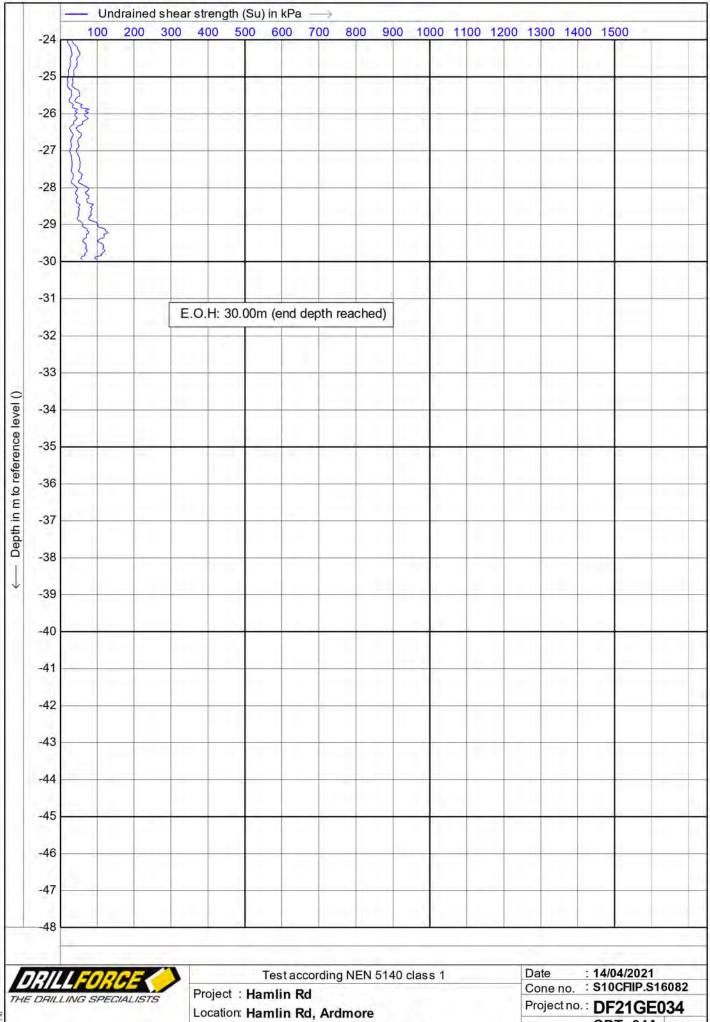






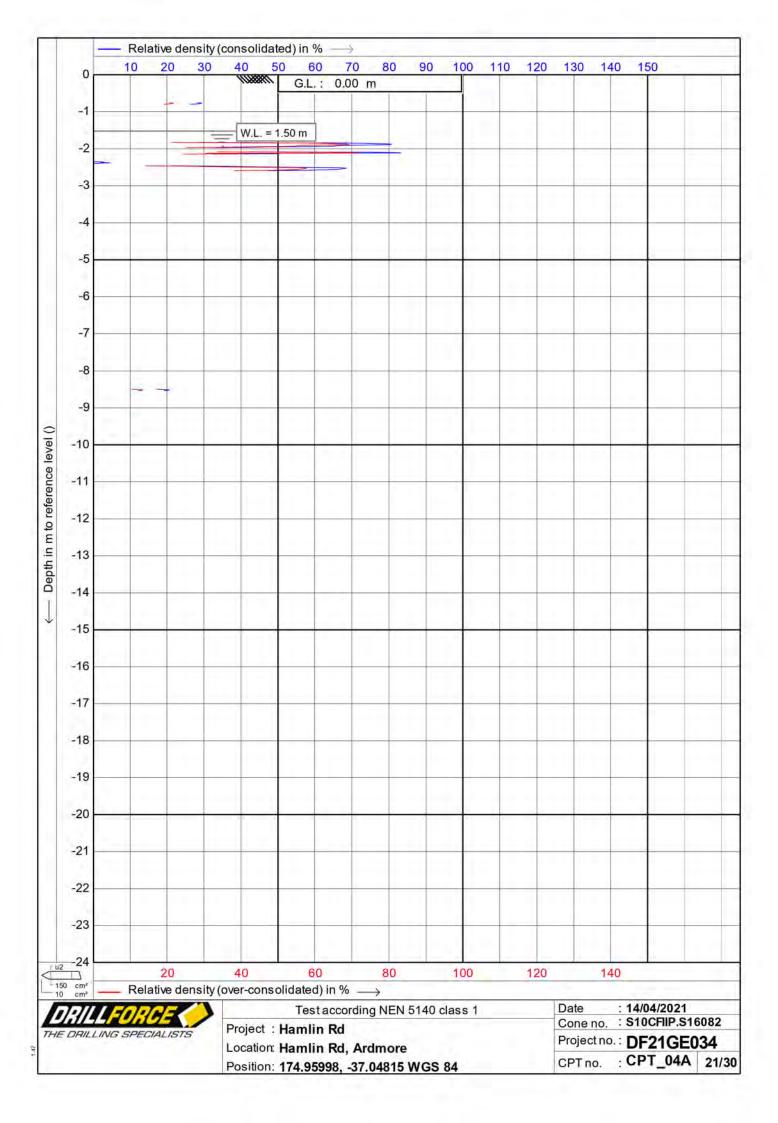


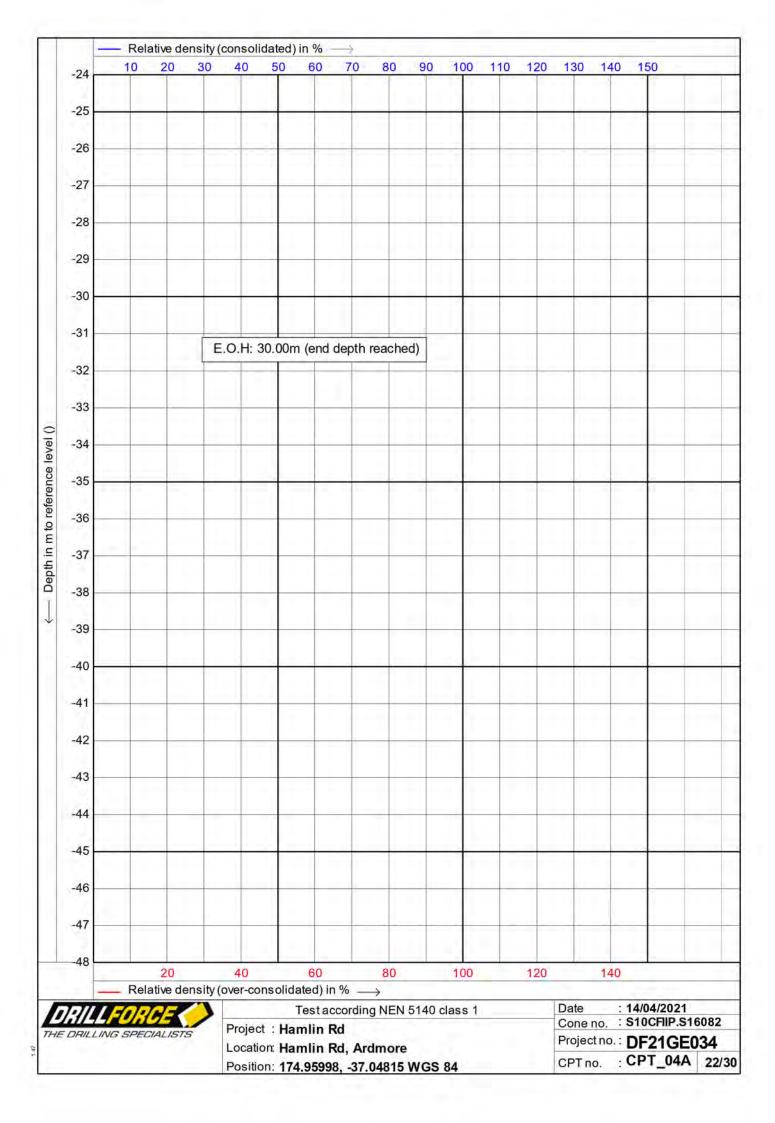


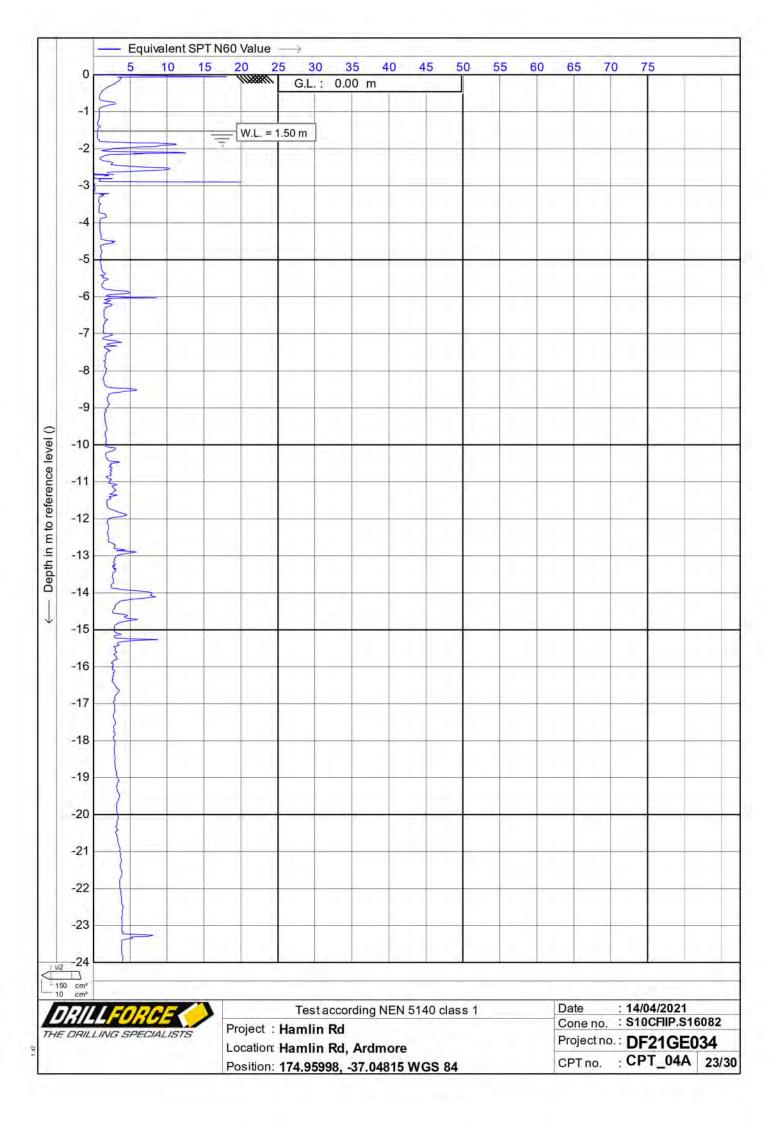


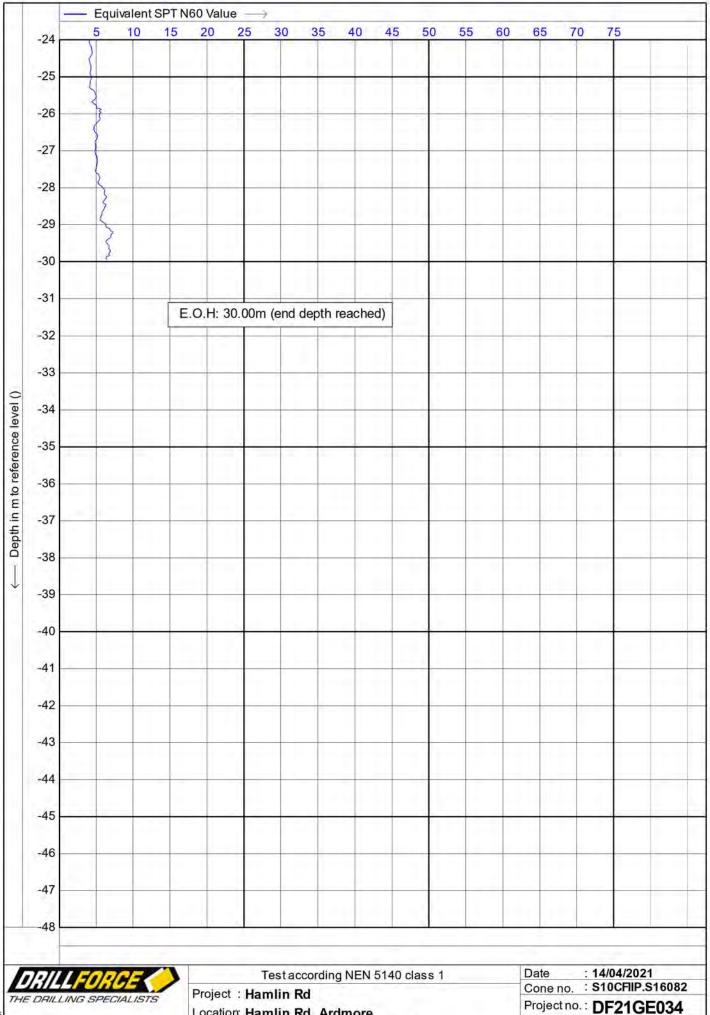
Position: 174.95998, -37.04815 WGS 84

: CPT_04A 20/30 CPT no.





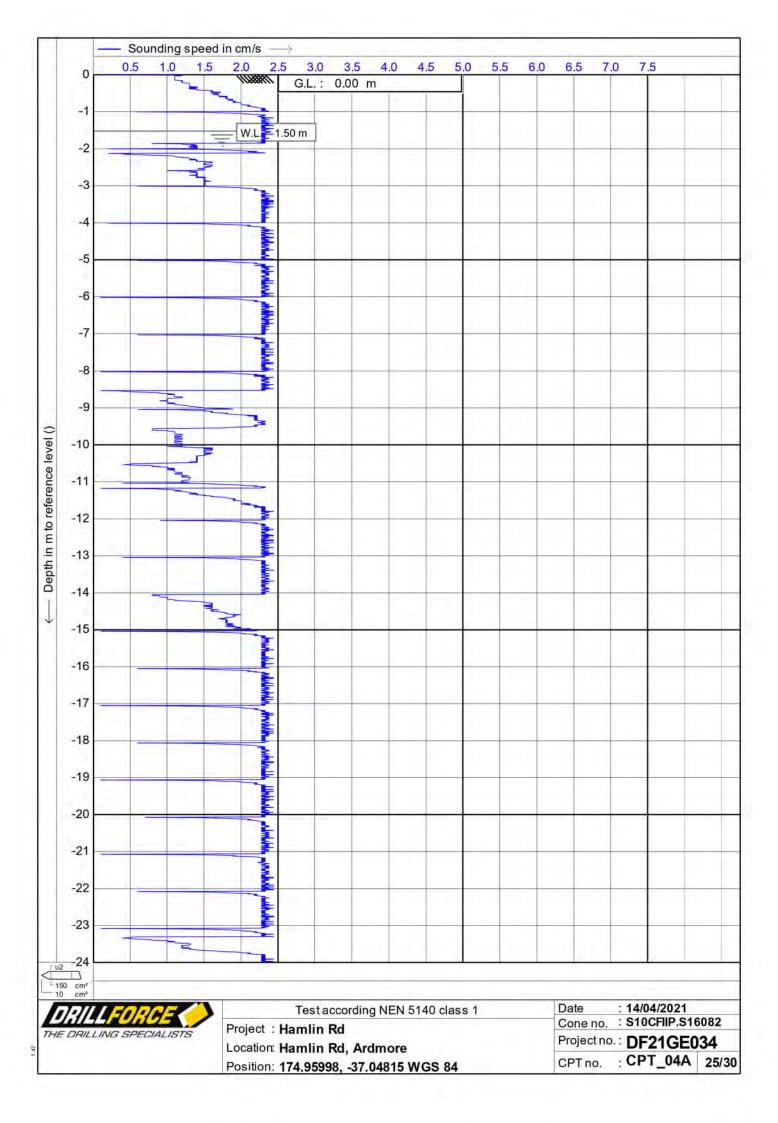


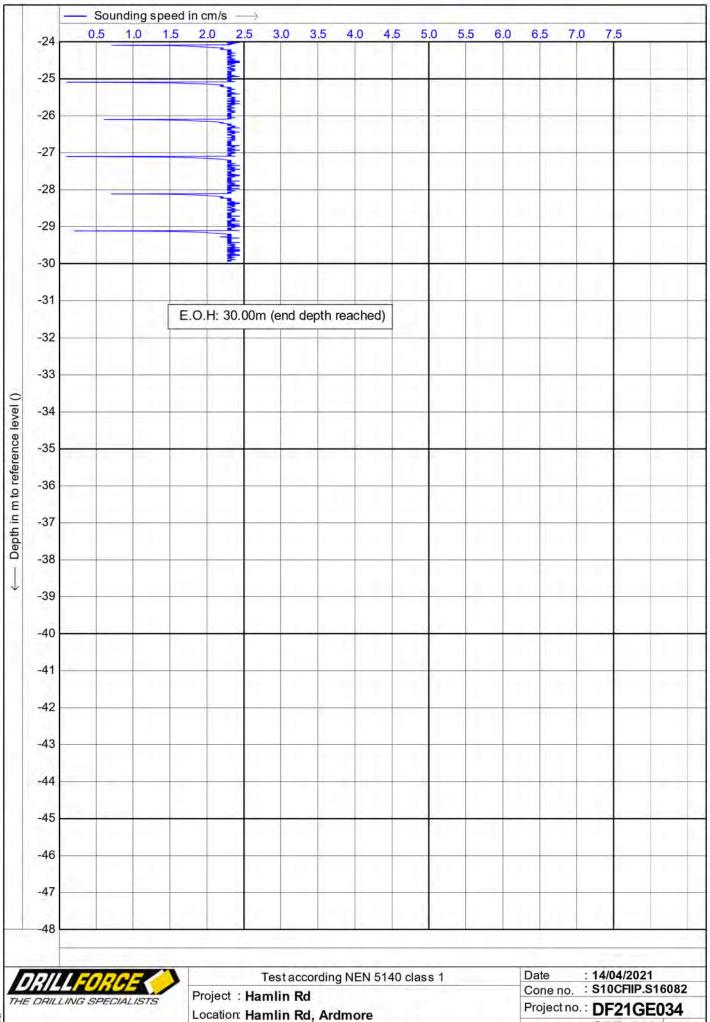


Location: Hamlin Rd, Ardmore

Position: 174.95998, -37.04815 WGS 84

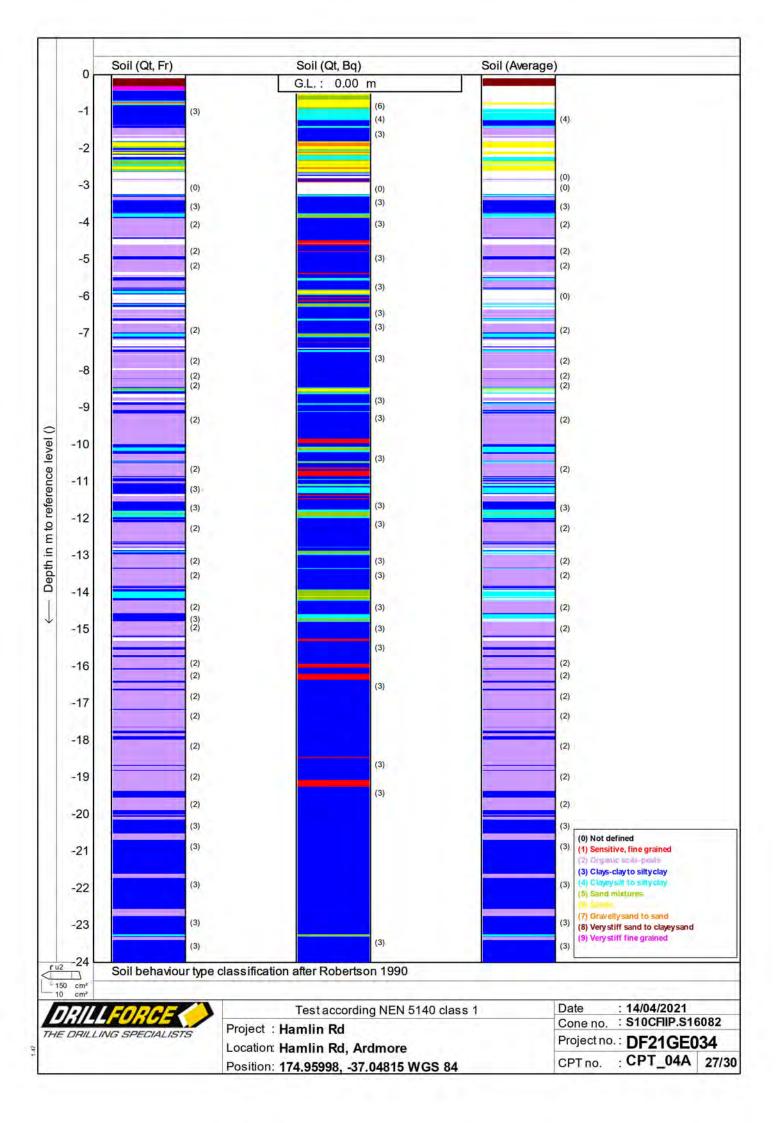
: CPT_04A 24/30 CPT no.

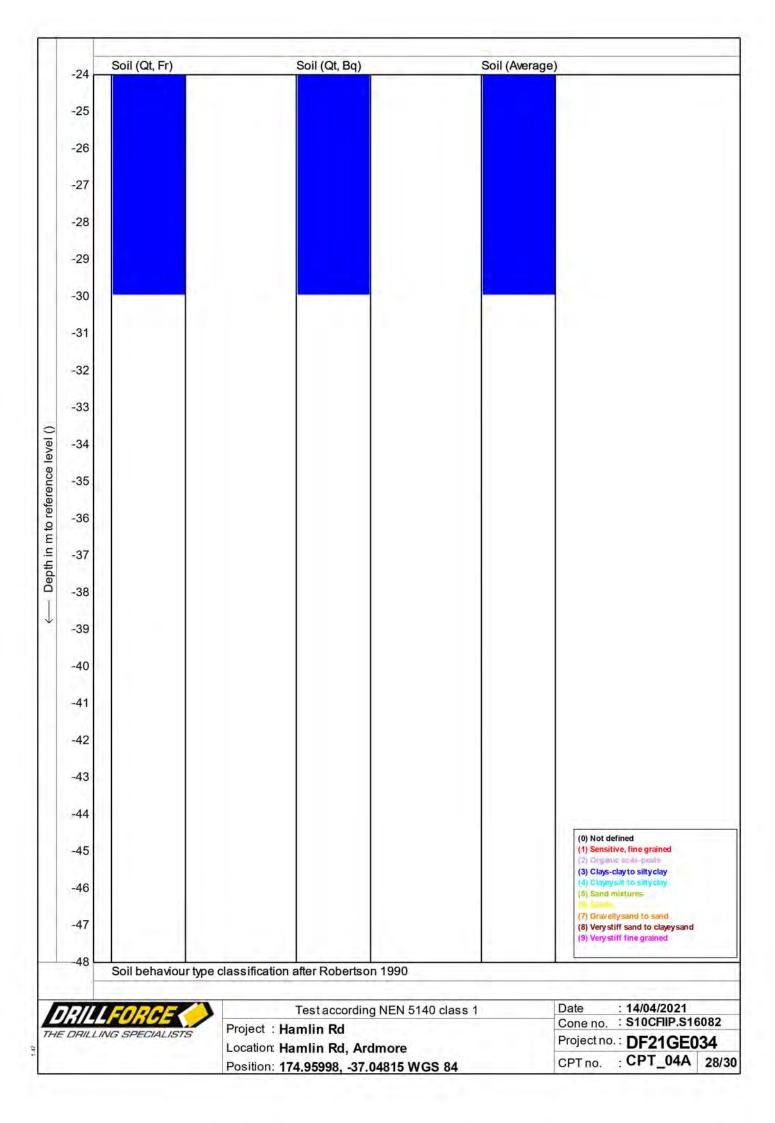


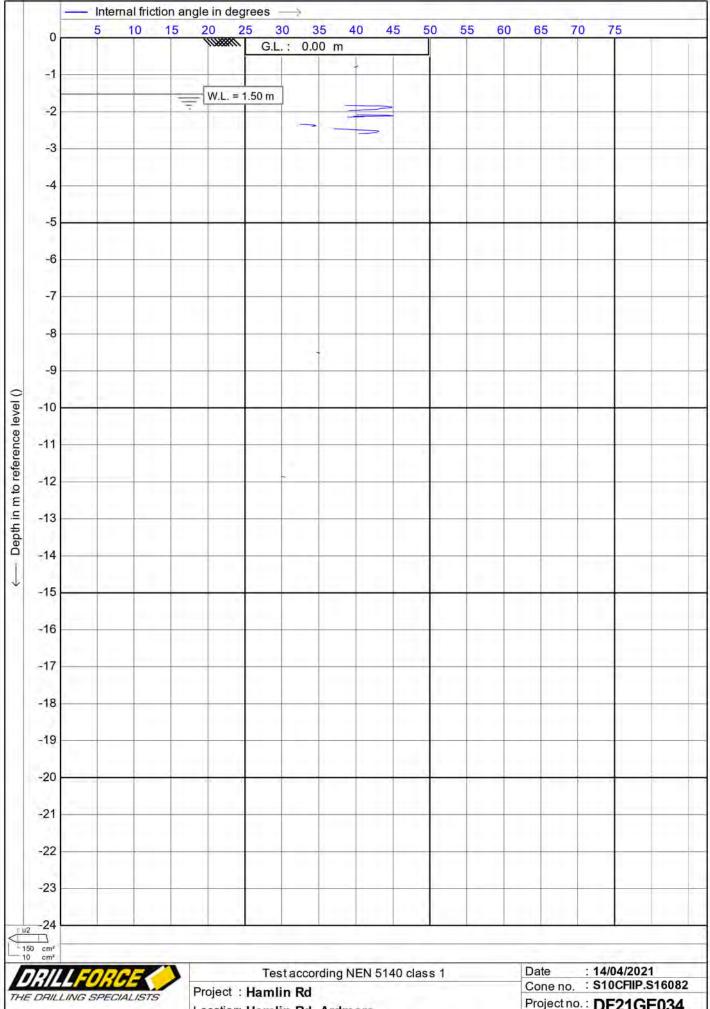


Position: 174.95998, -37.04815 WGS 84

CPT no. : CPT_04A 26/30





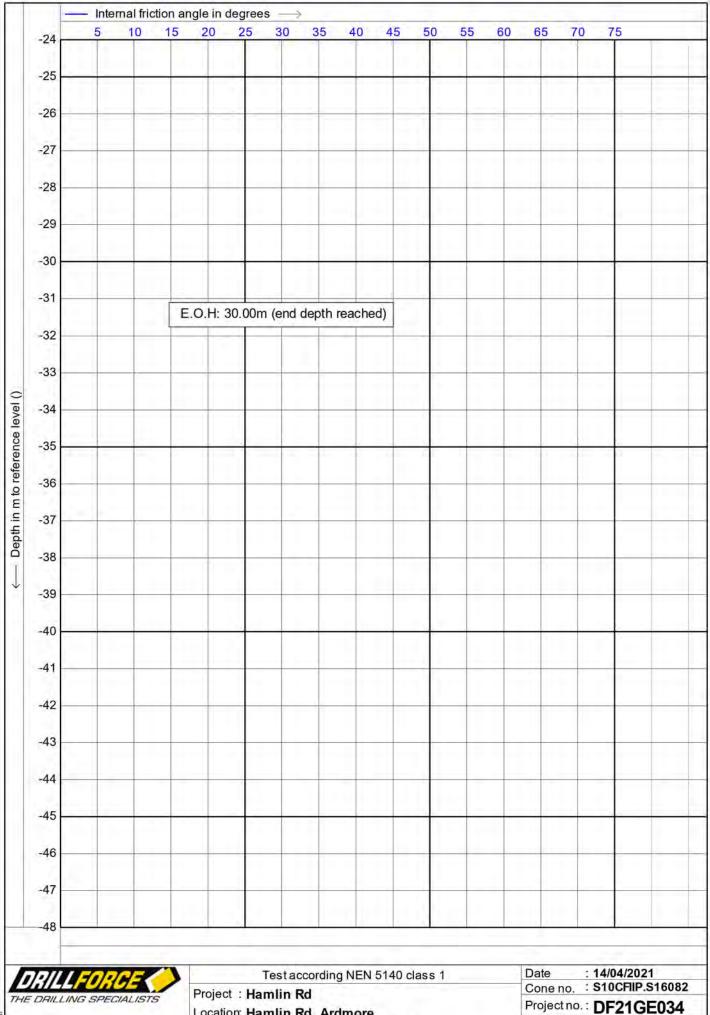


Location: Hamlin Rd, Ardmore

Position: 174.95998, -37.04815 WGS 84

Project no.: DF21GE034

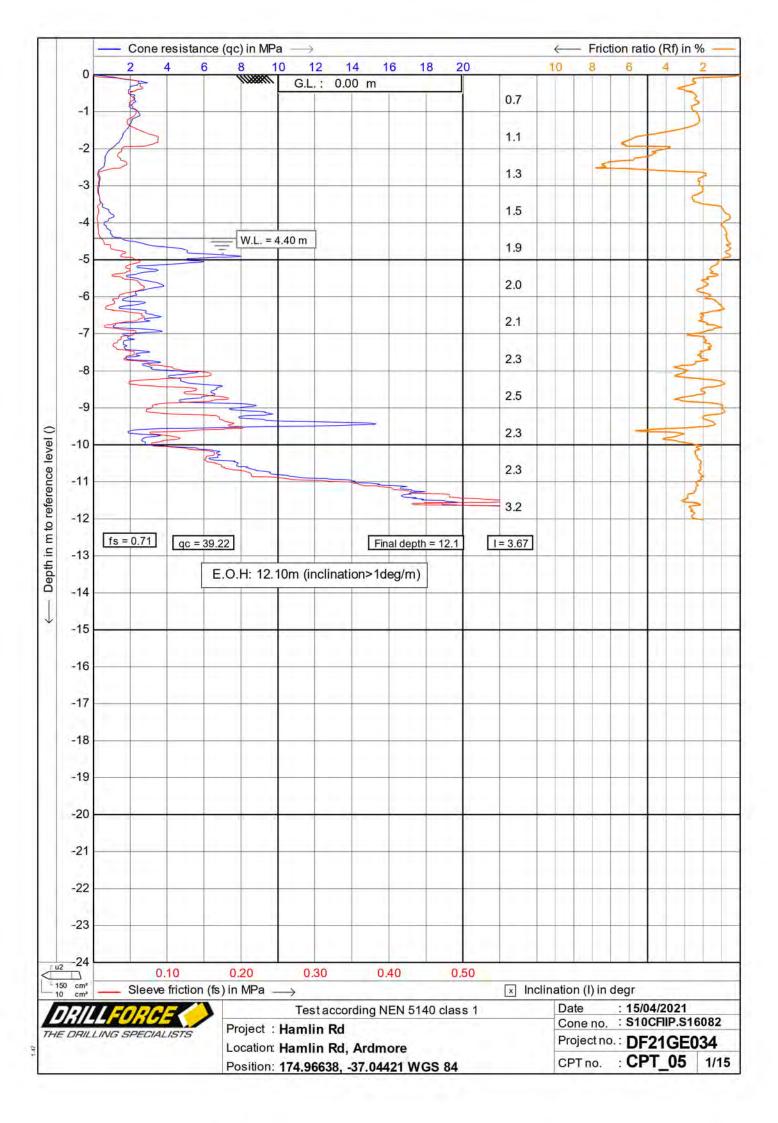
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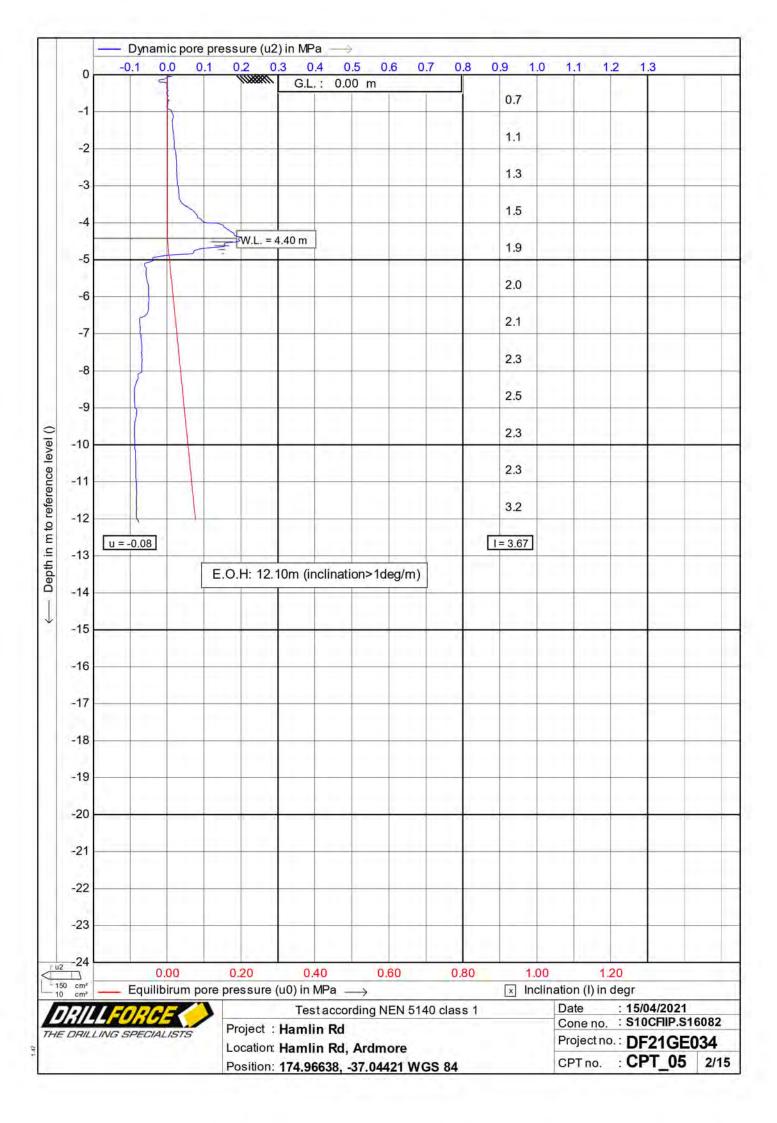


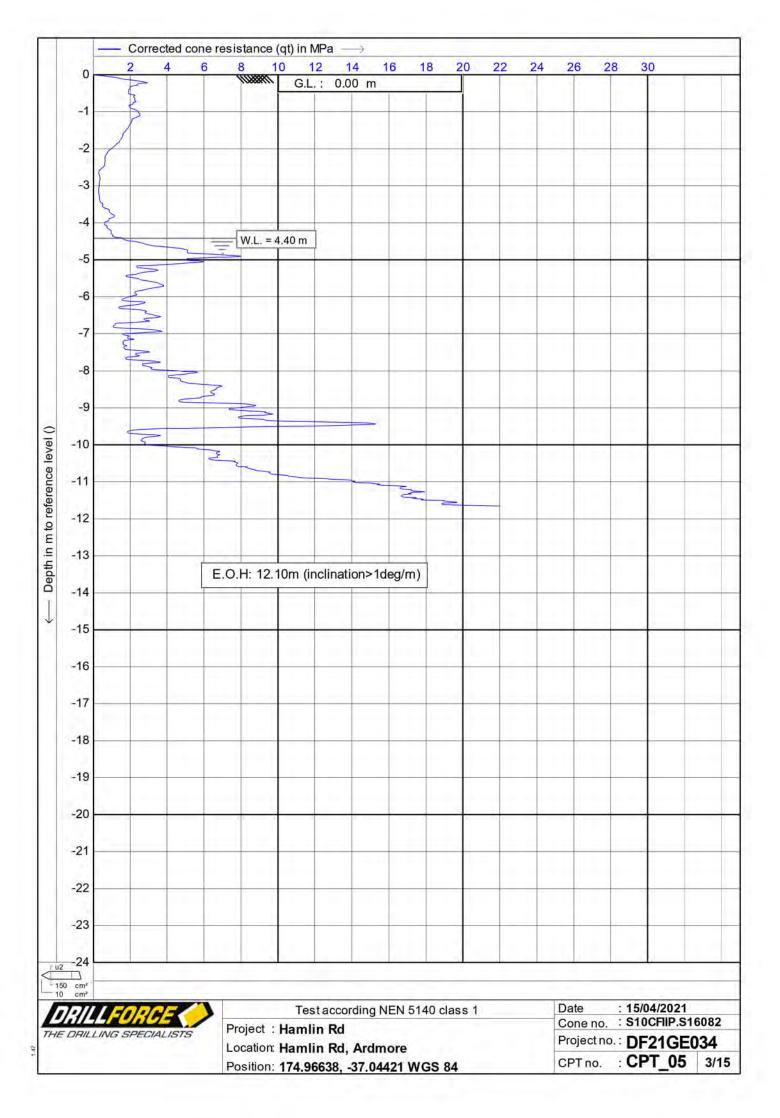
Location: Hamlin Rd, Ardmore

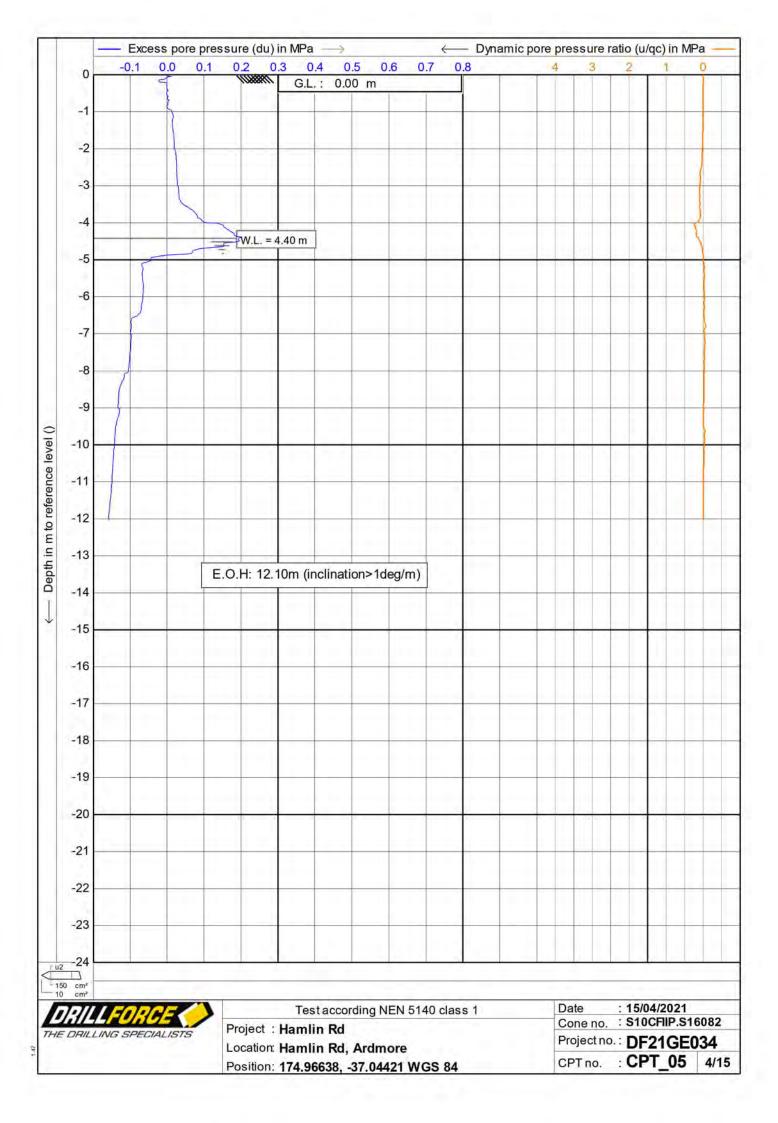
Position: 174.95998, -37.04815 WGS 84

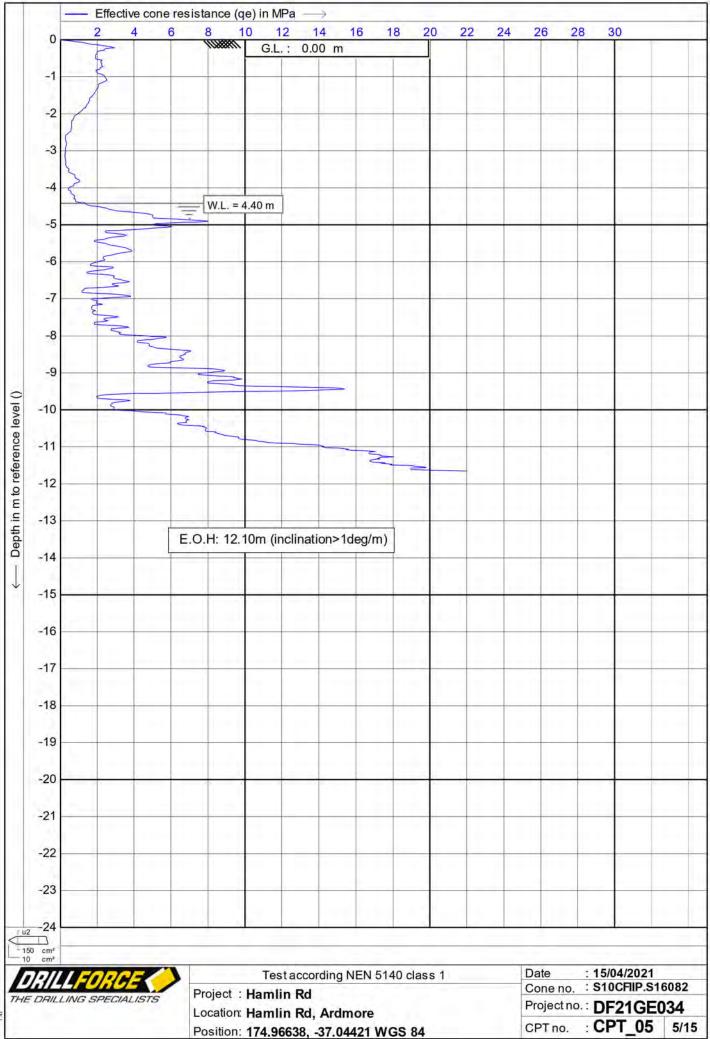
: CPT_04A 30/30 CPT no.

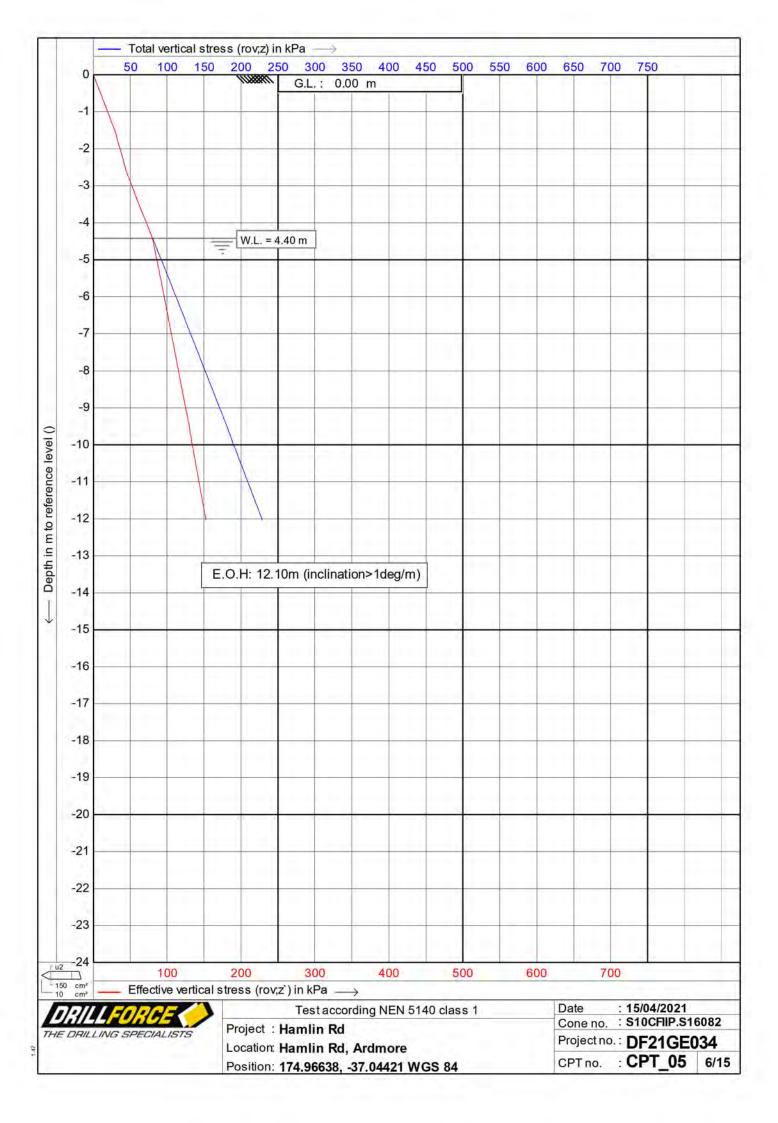


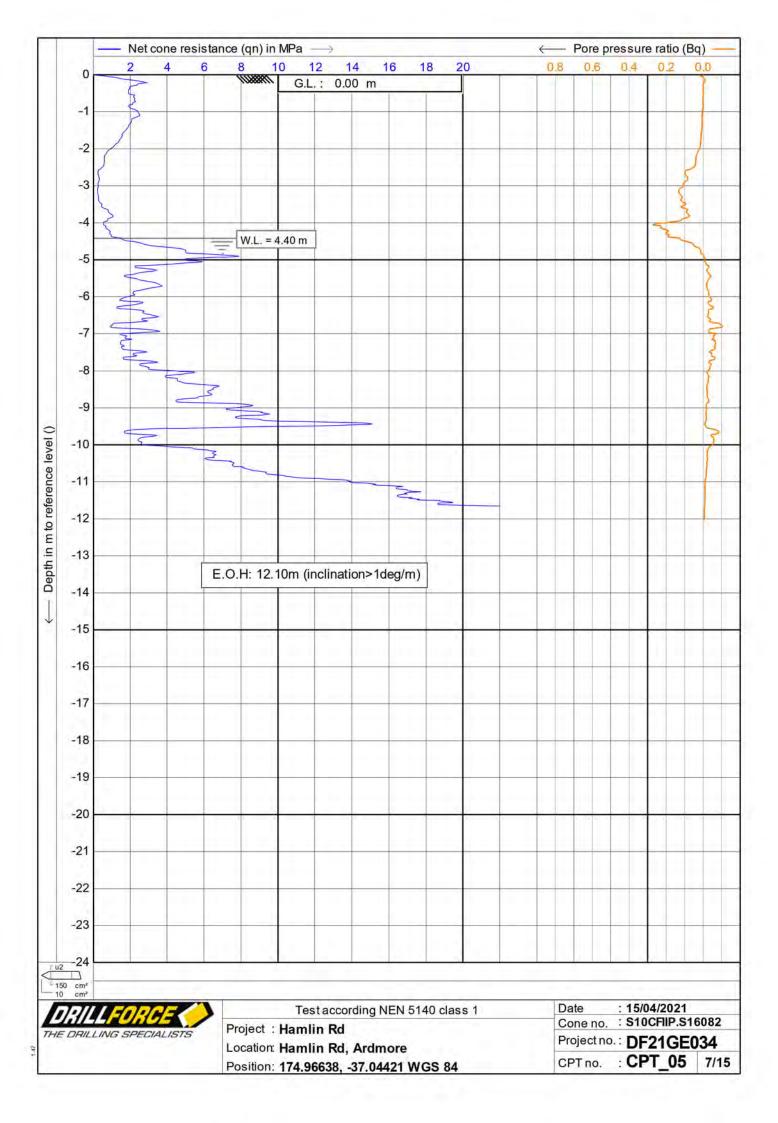


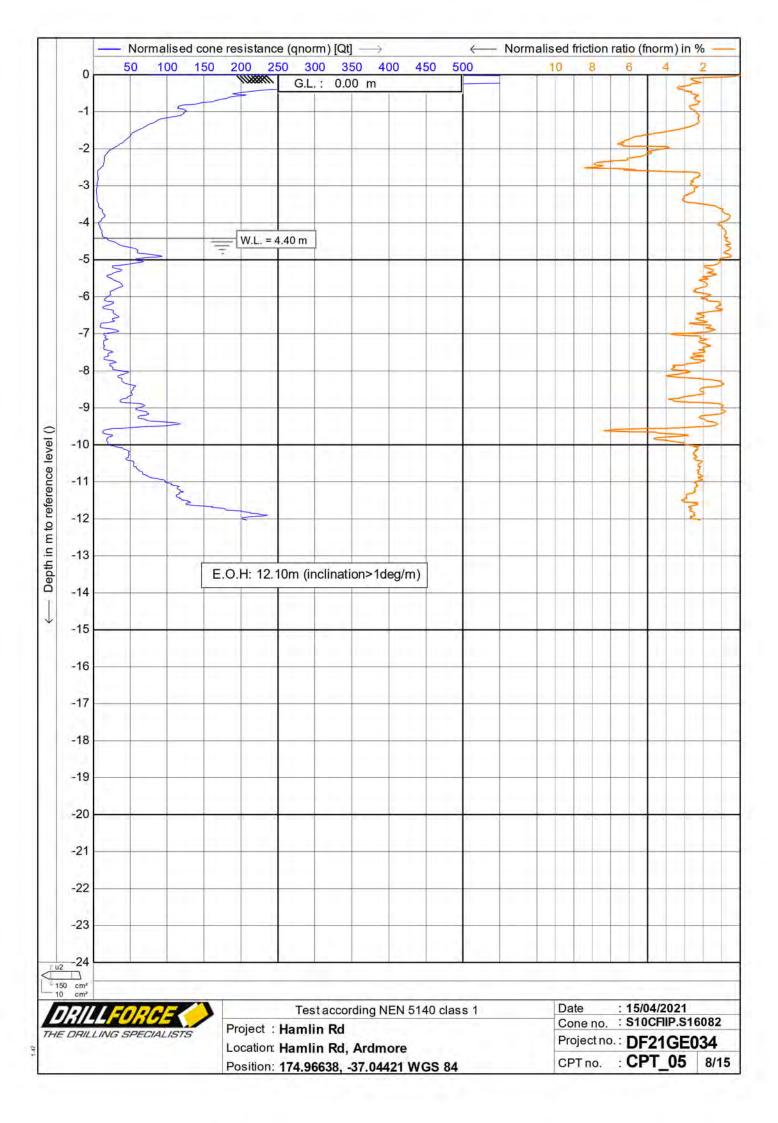


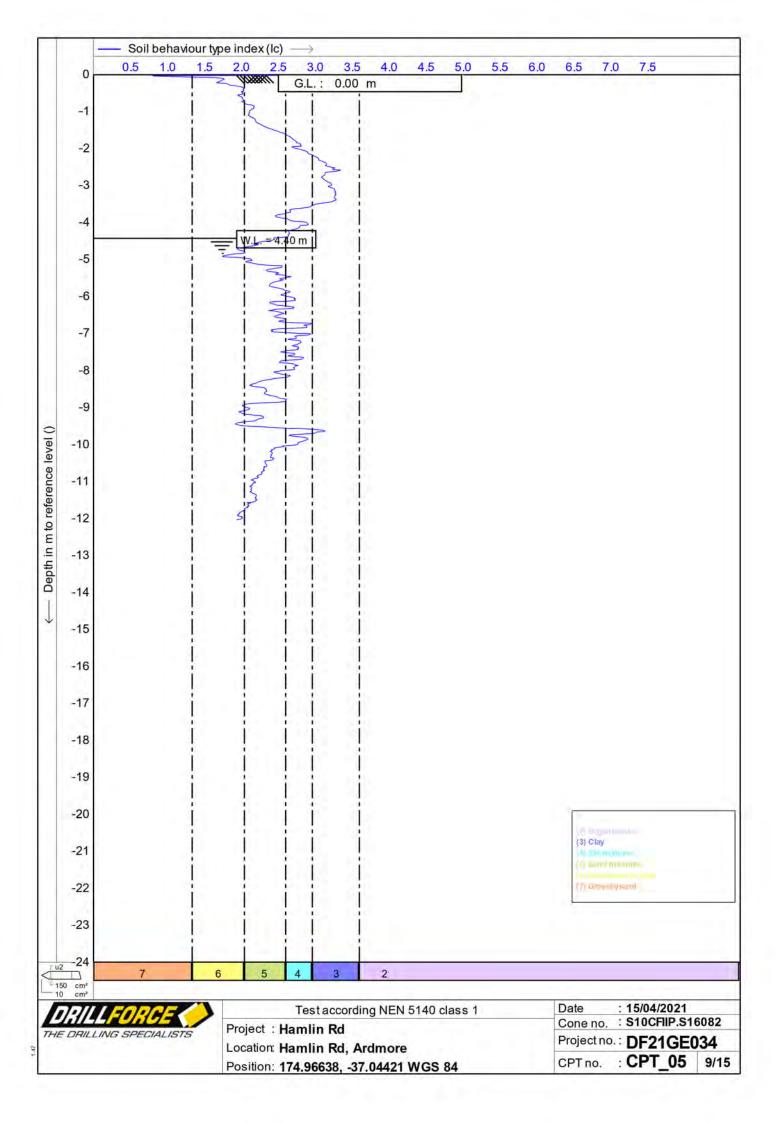


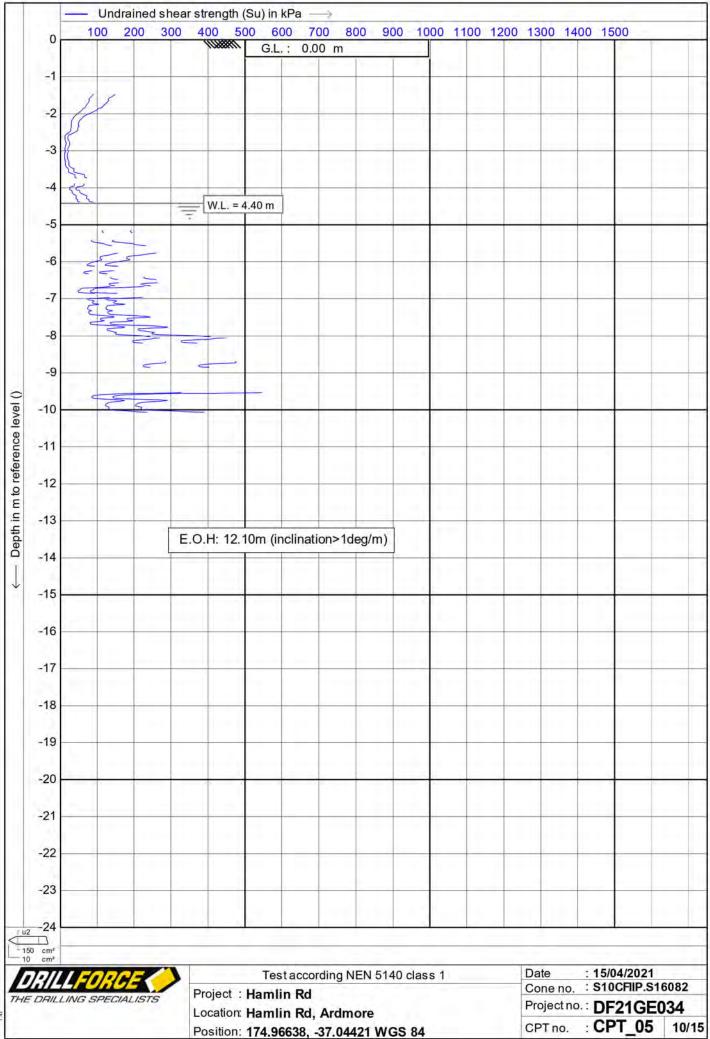


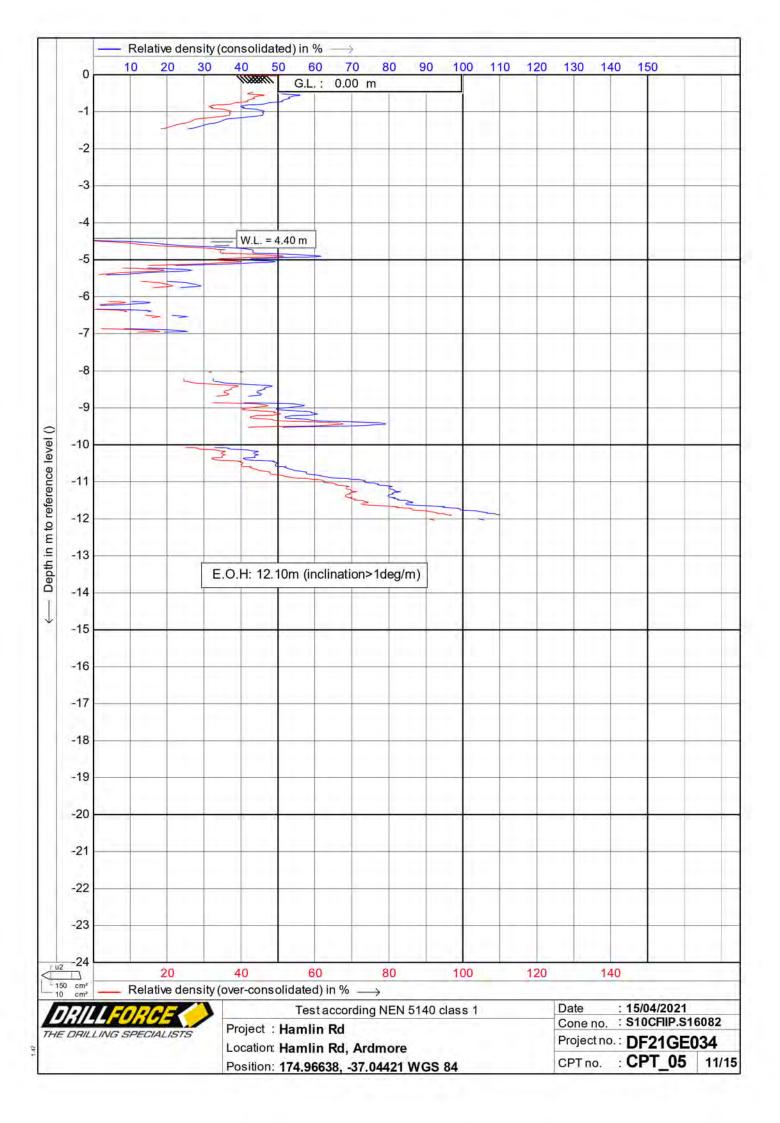


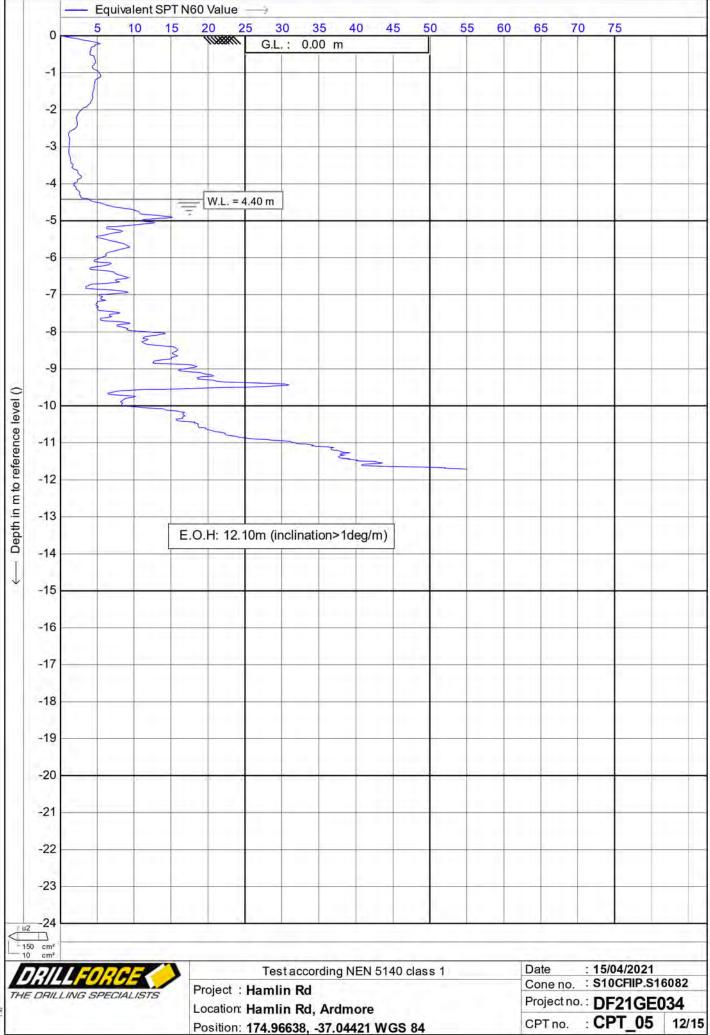


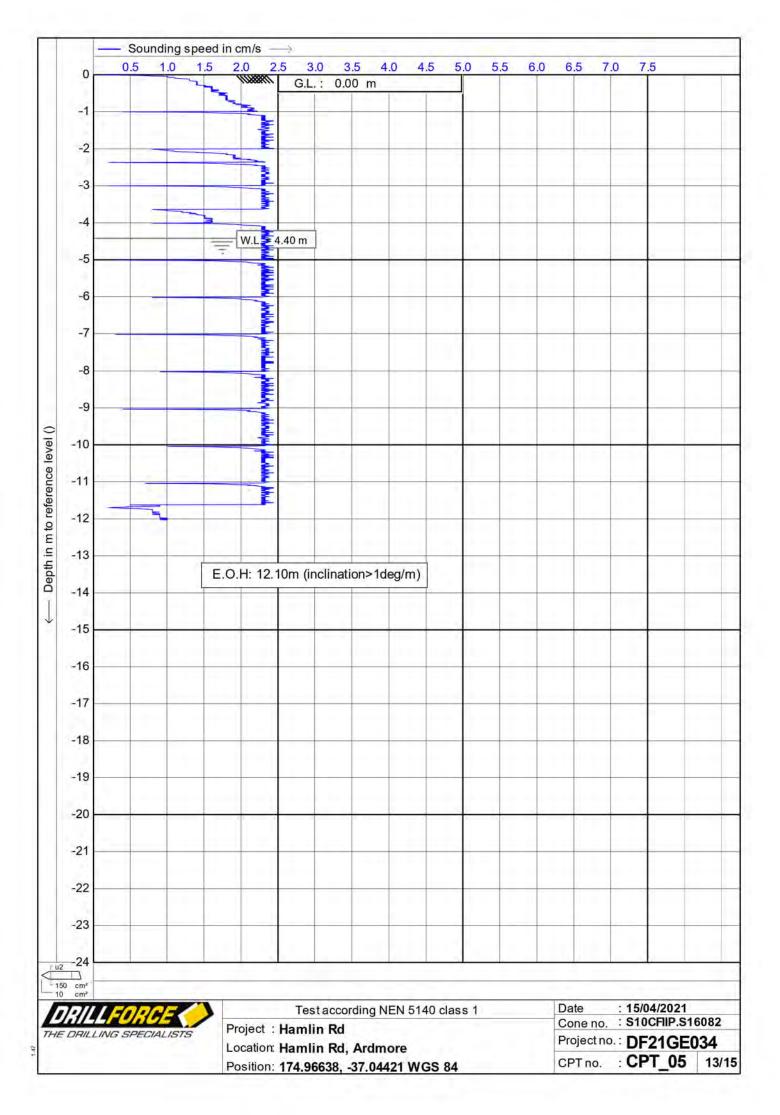


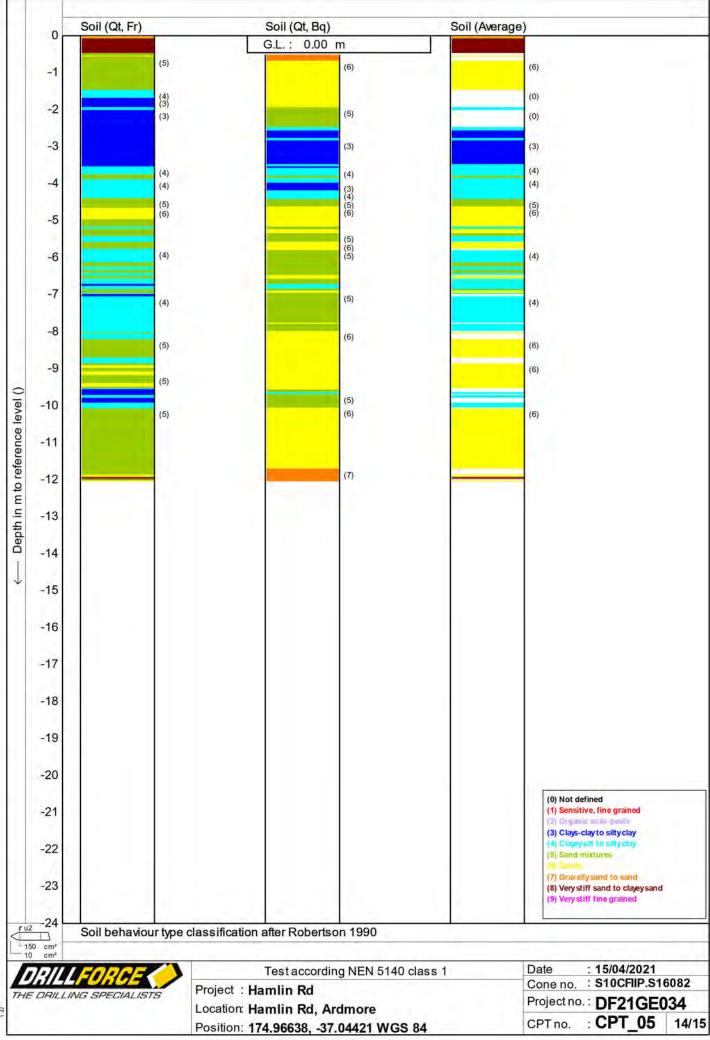


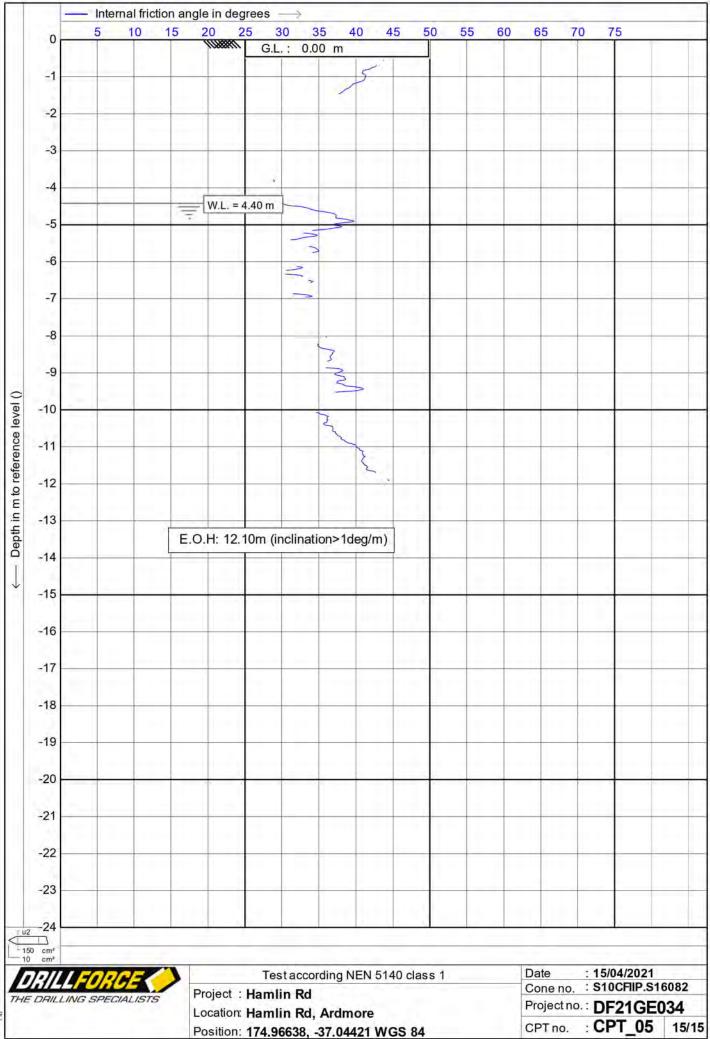


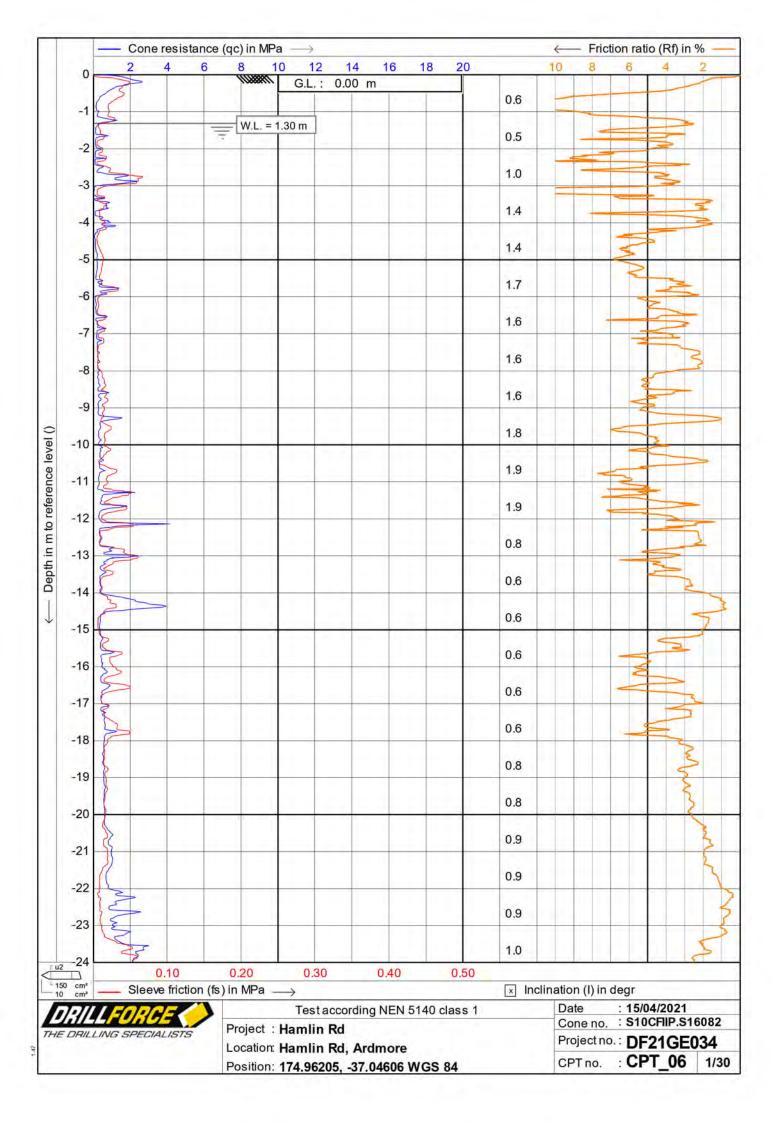


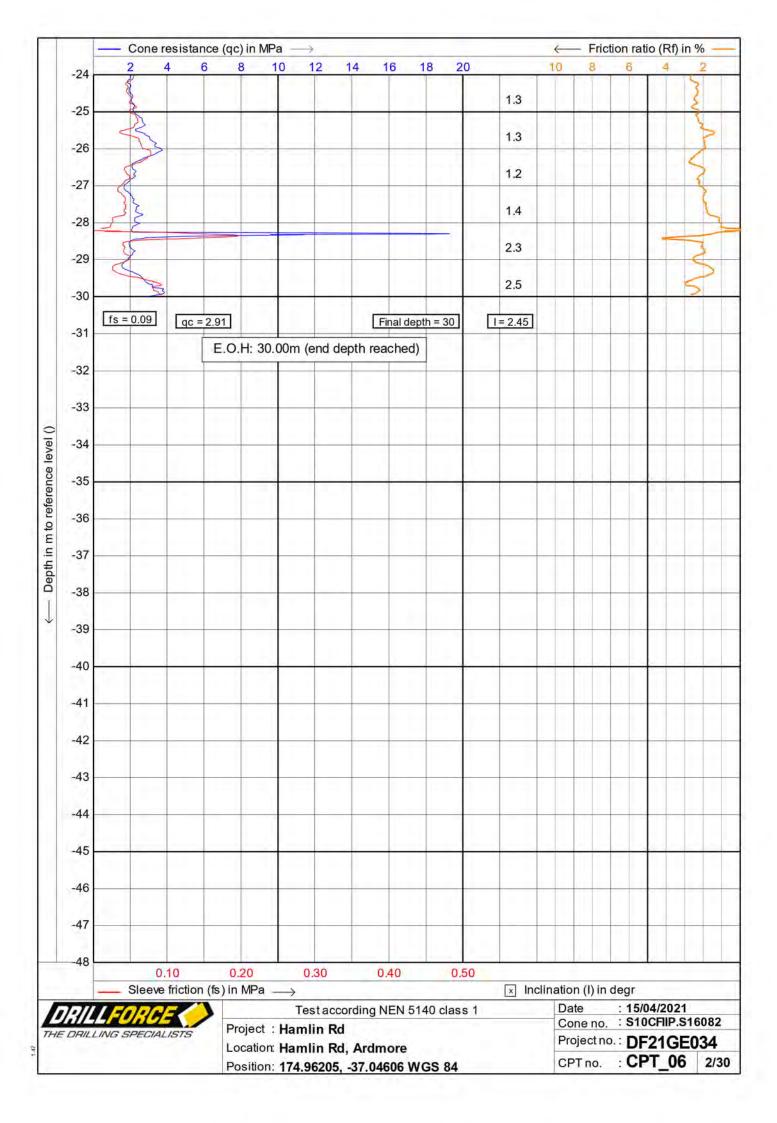


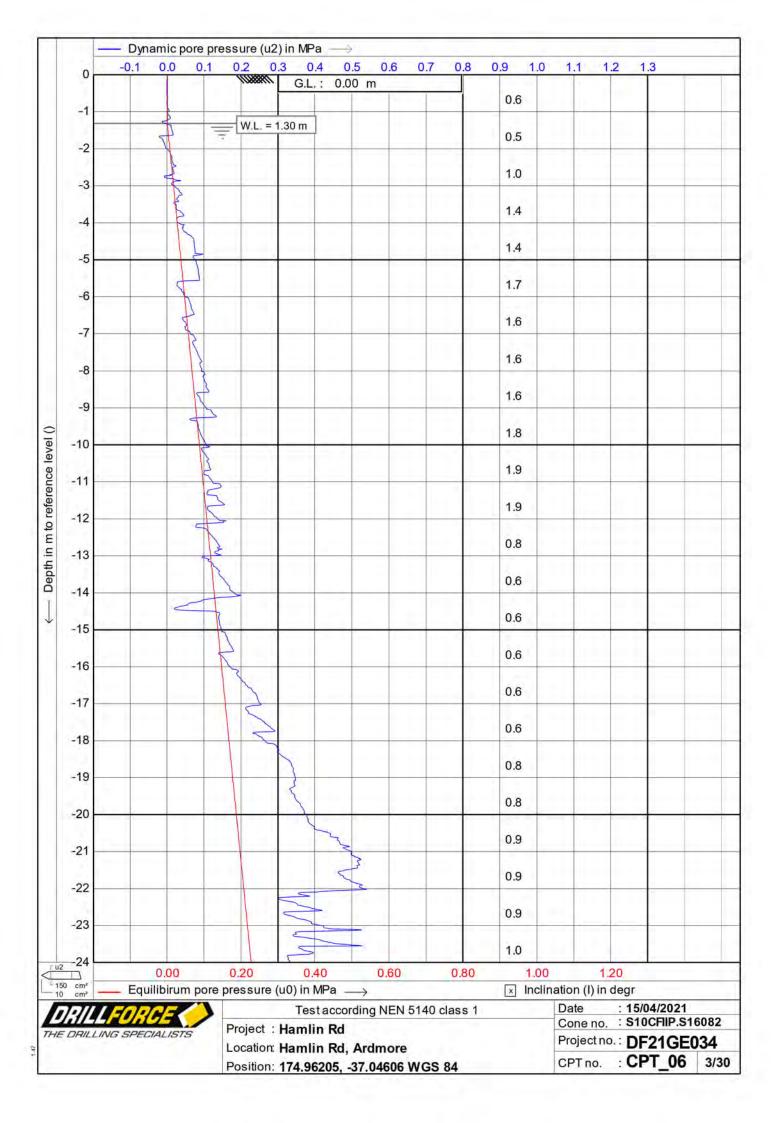


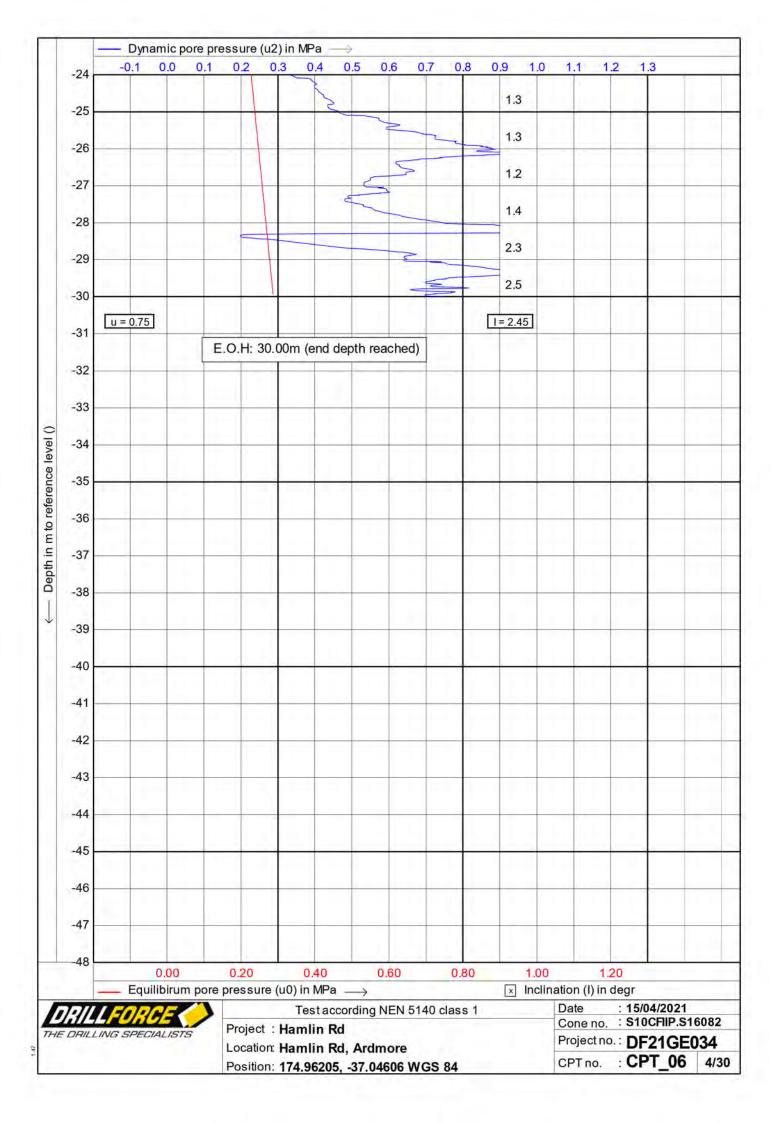


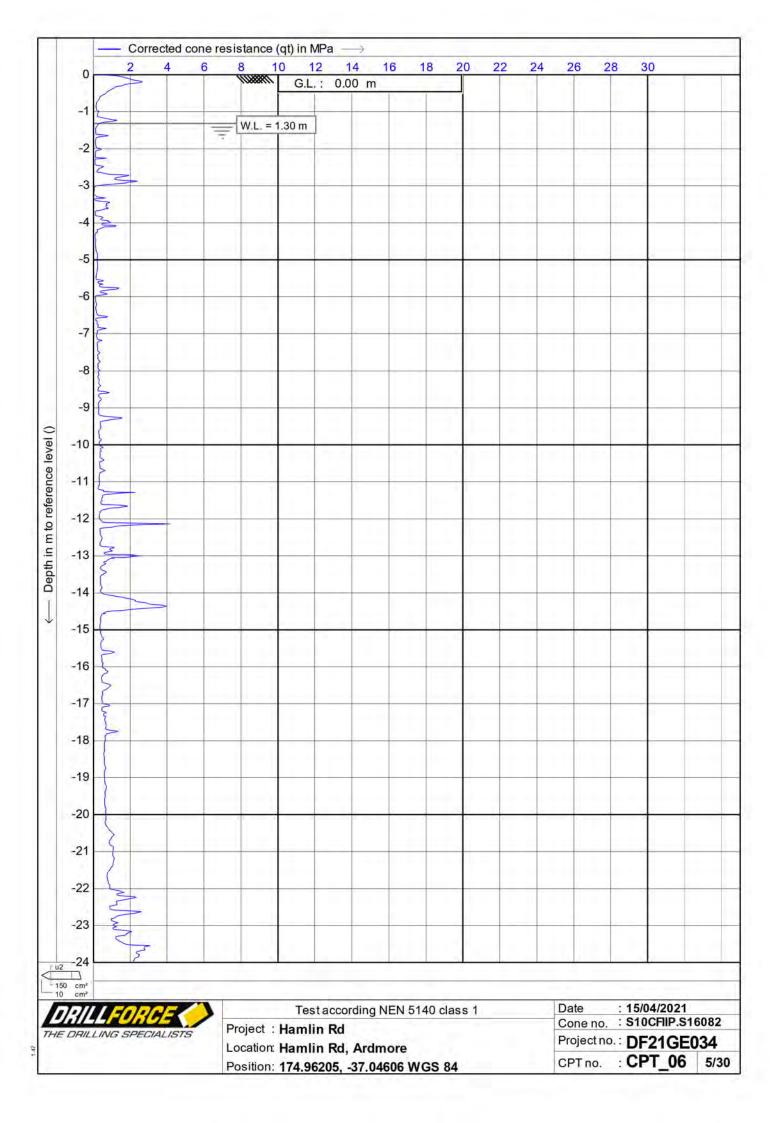


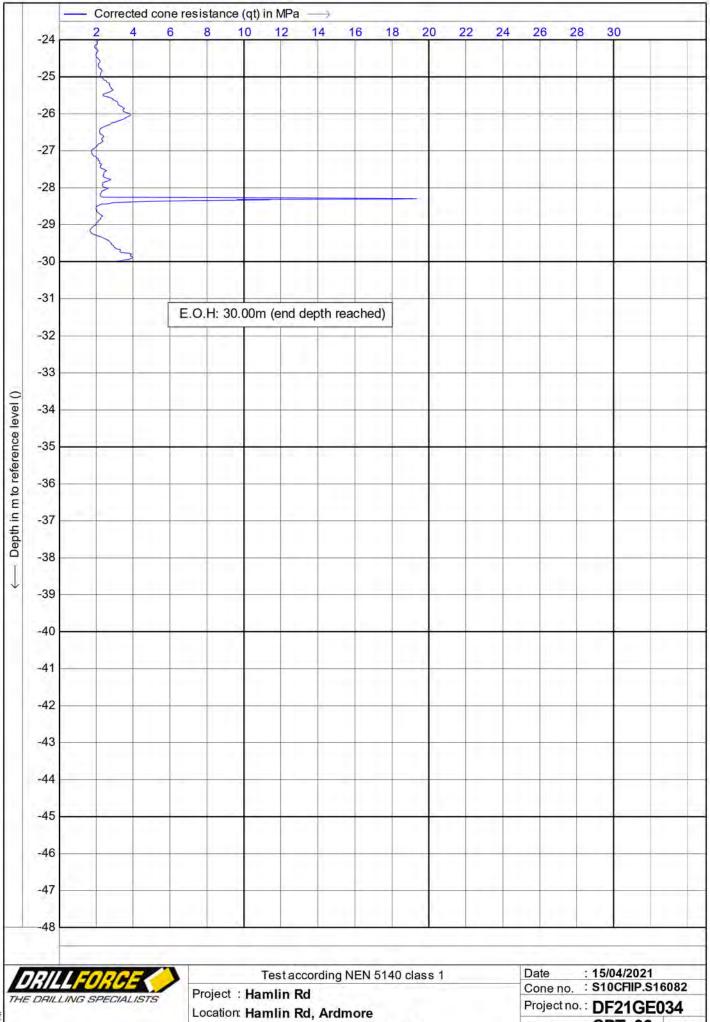






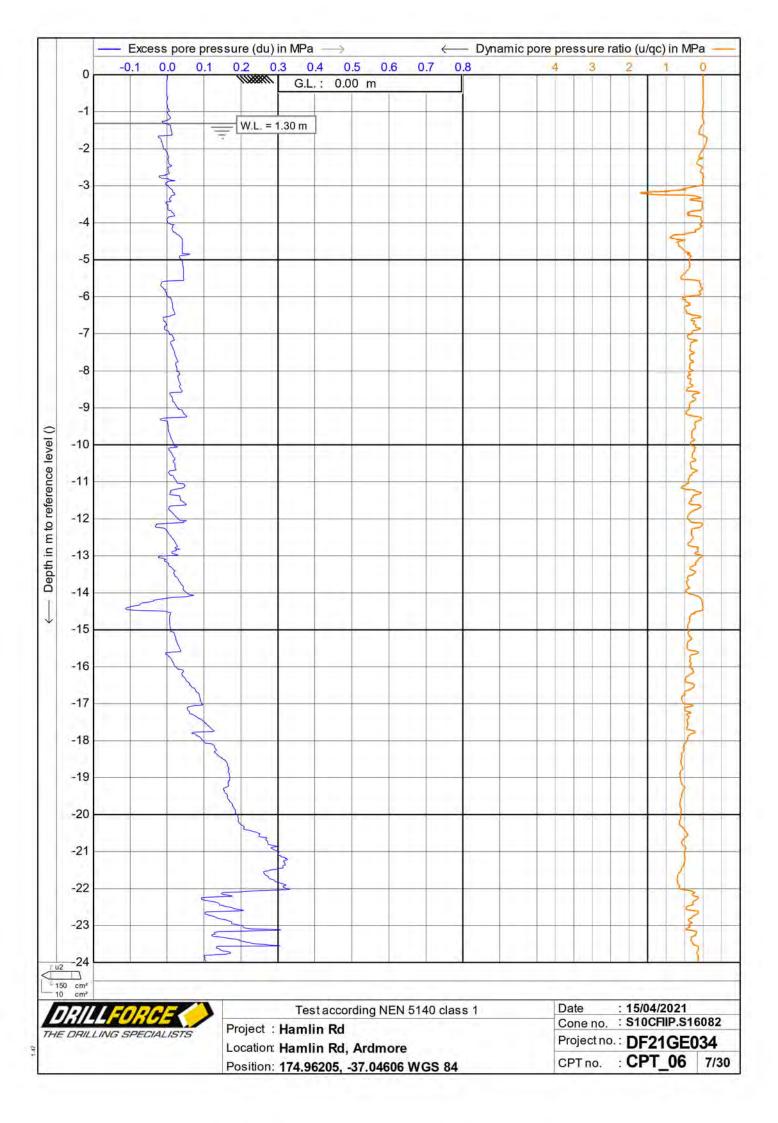


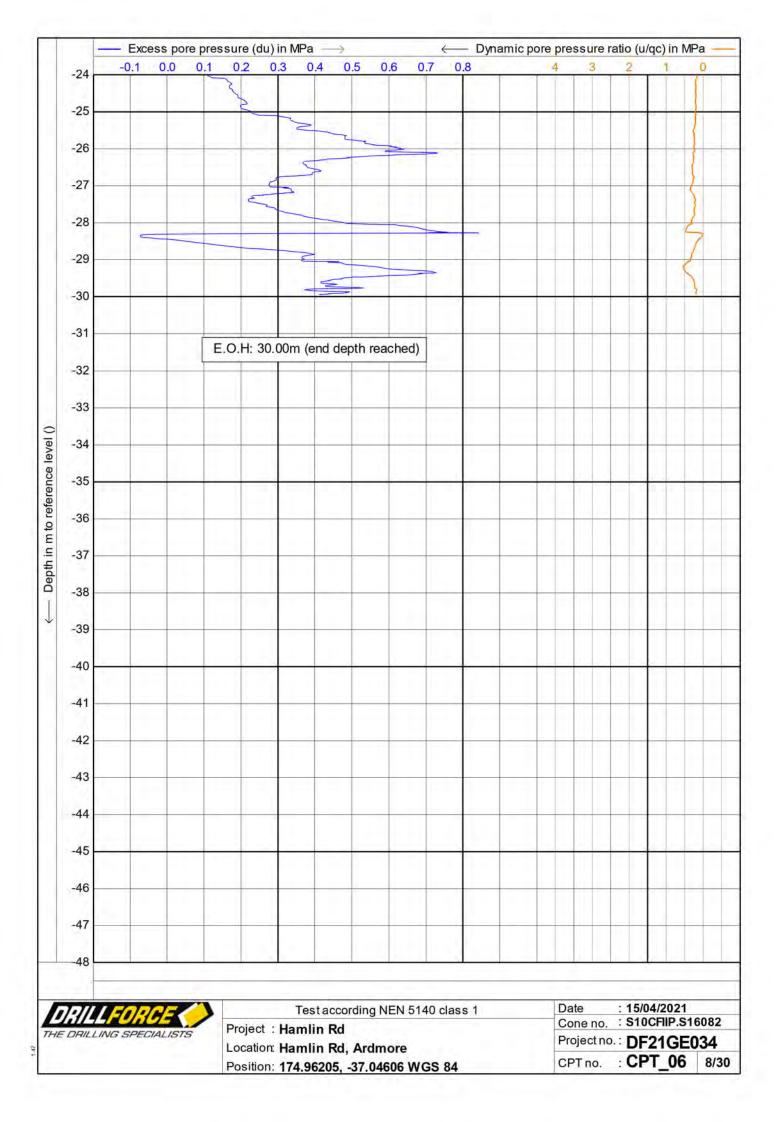


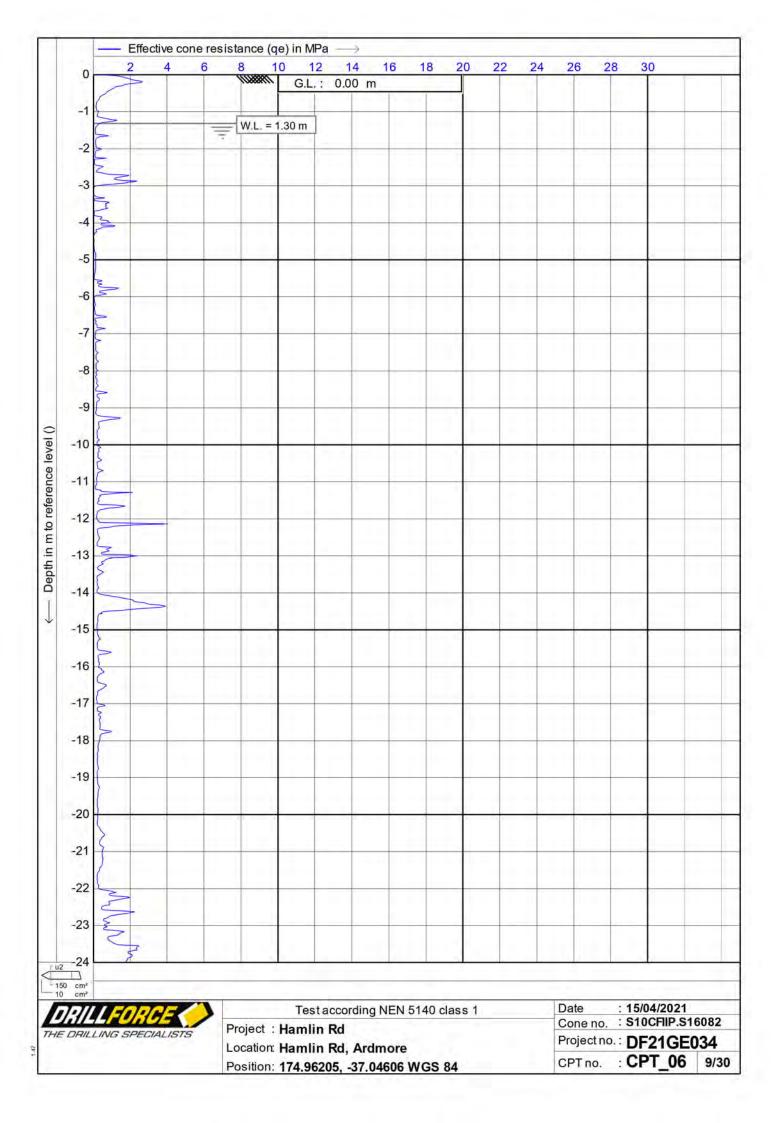


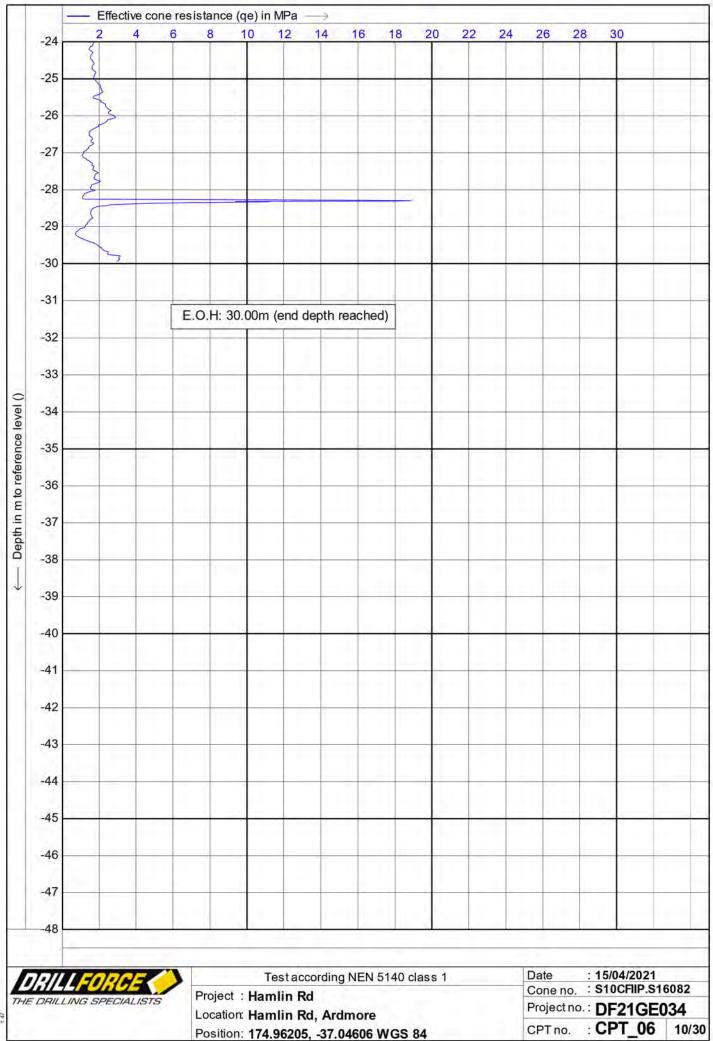
Position: 174.96205, -37.04606 WGS 84

: CPT 06 CPT no.

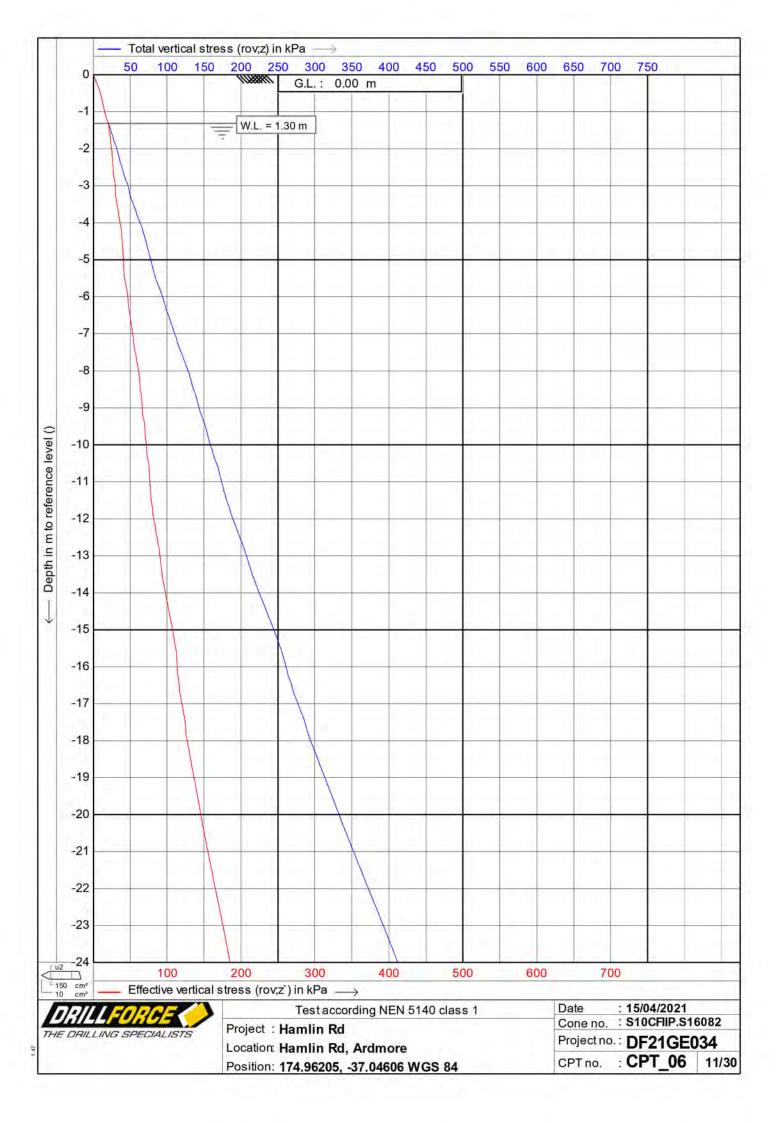


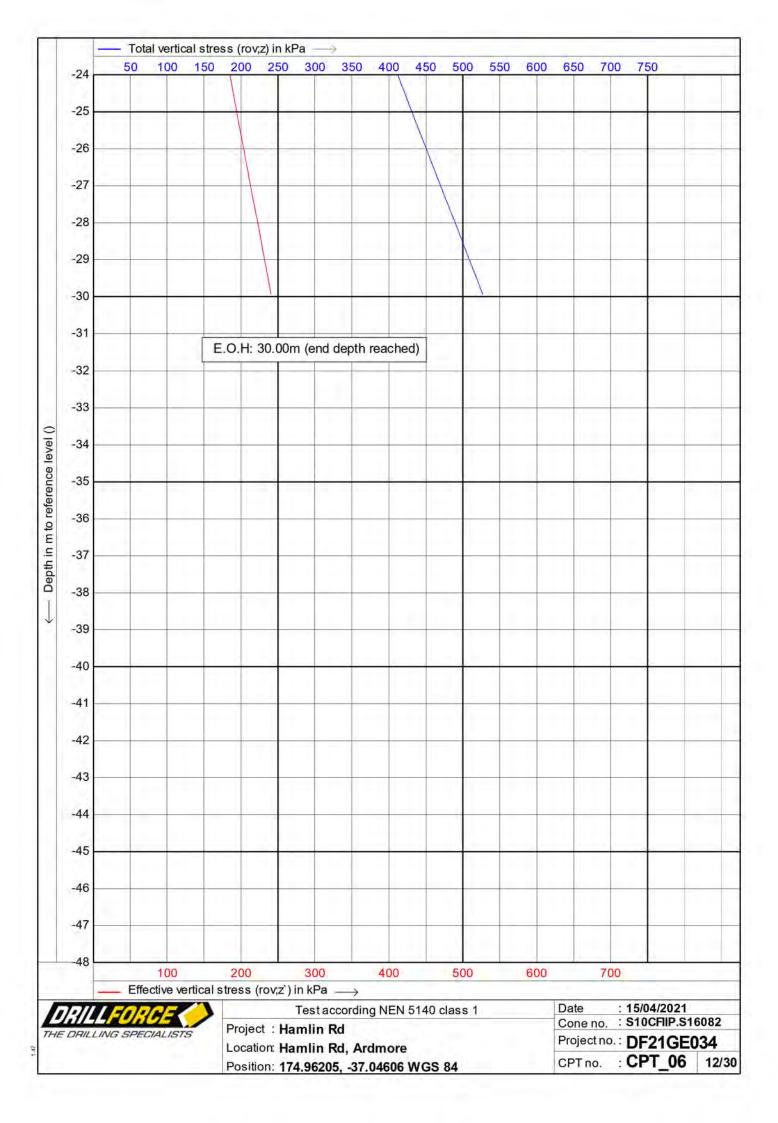


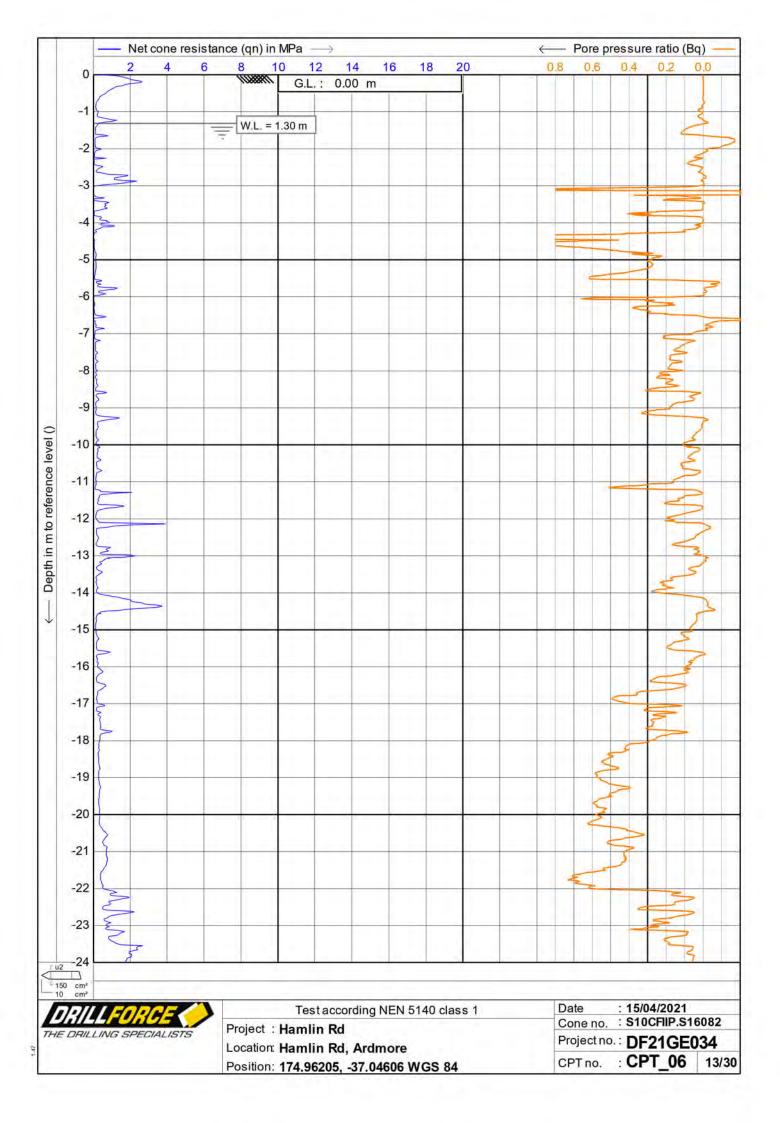


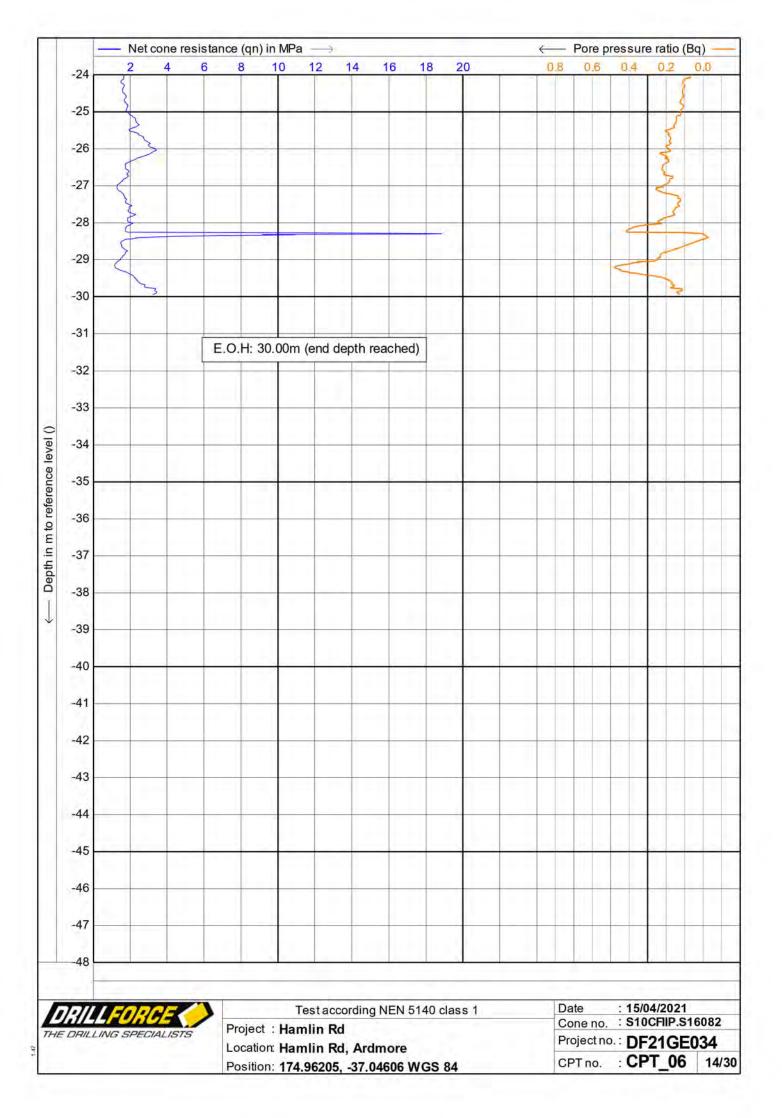


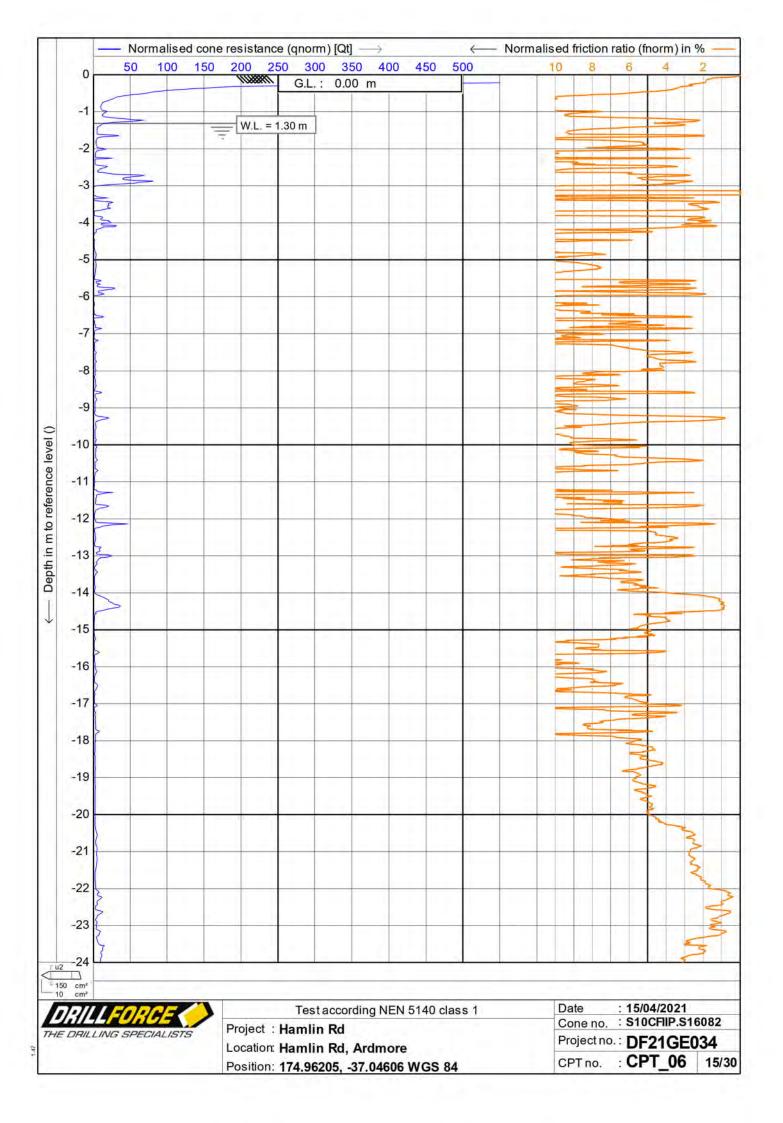
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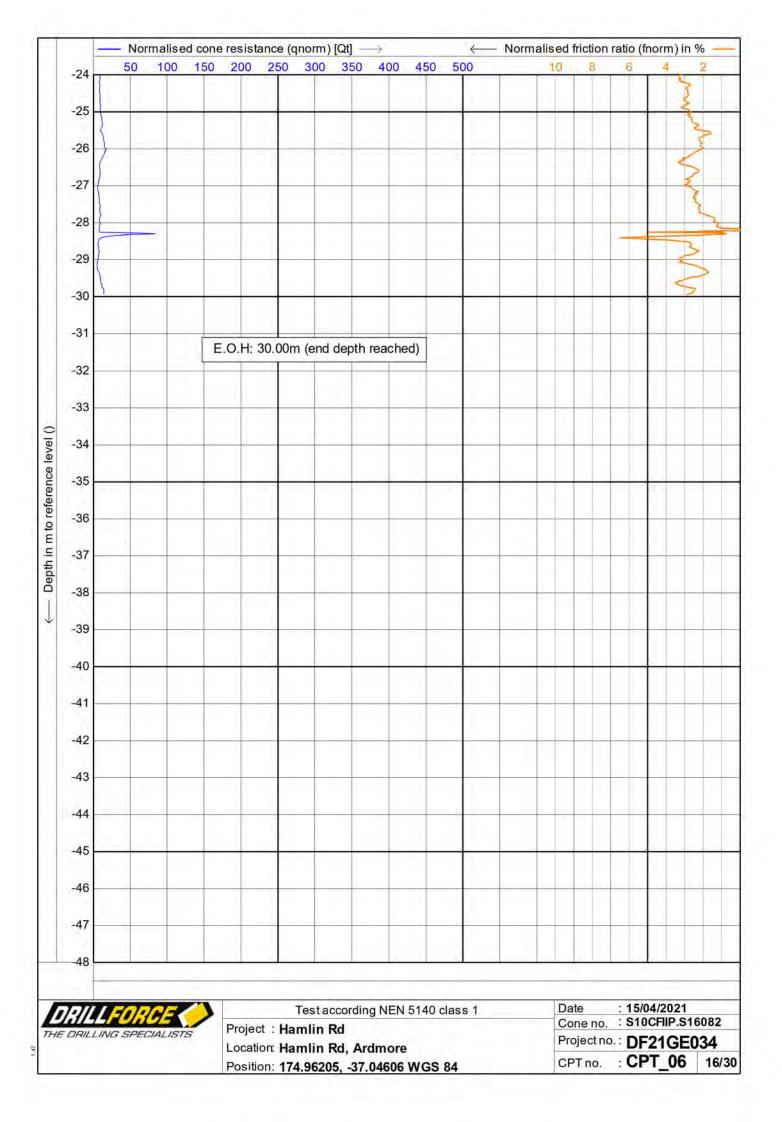


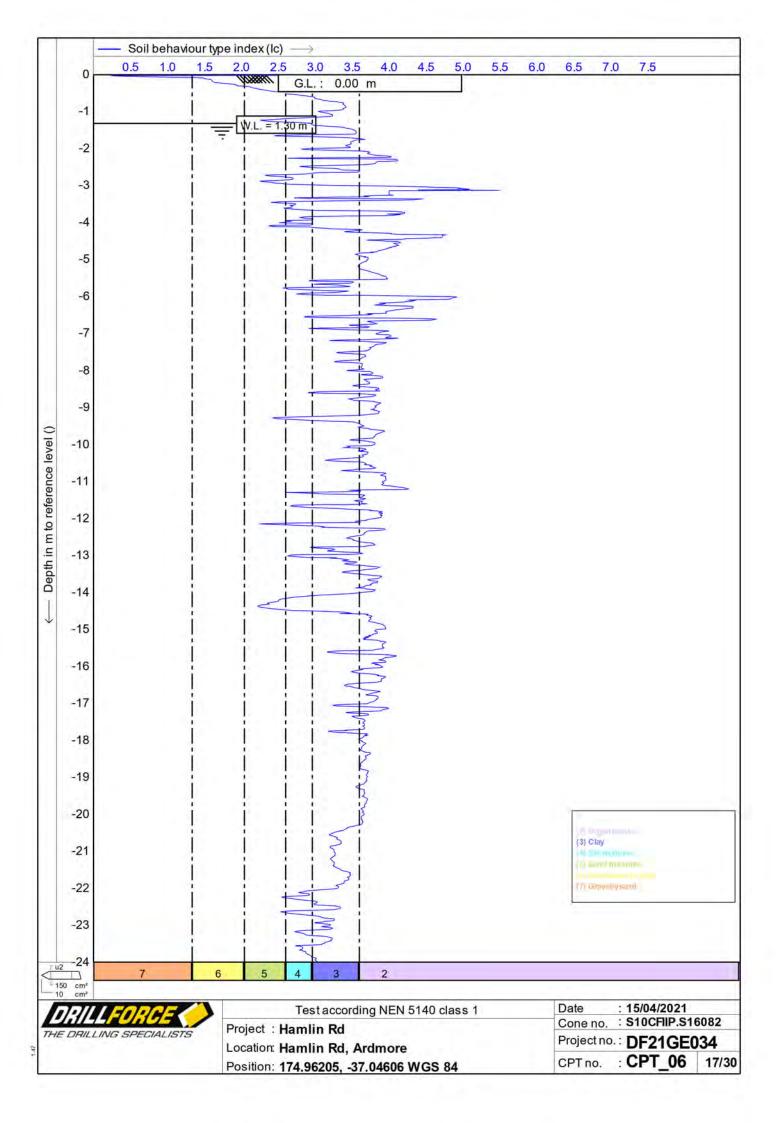


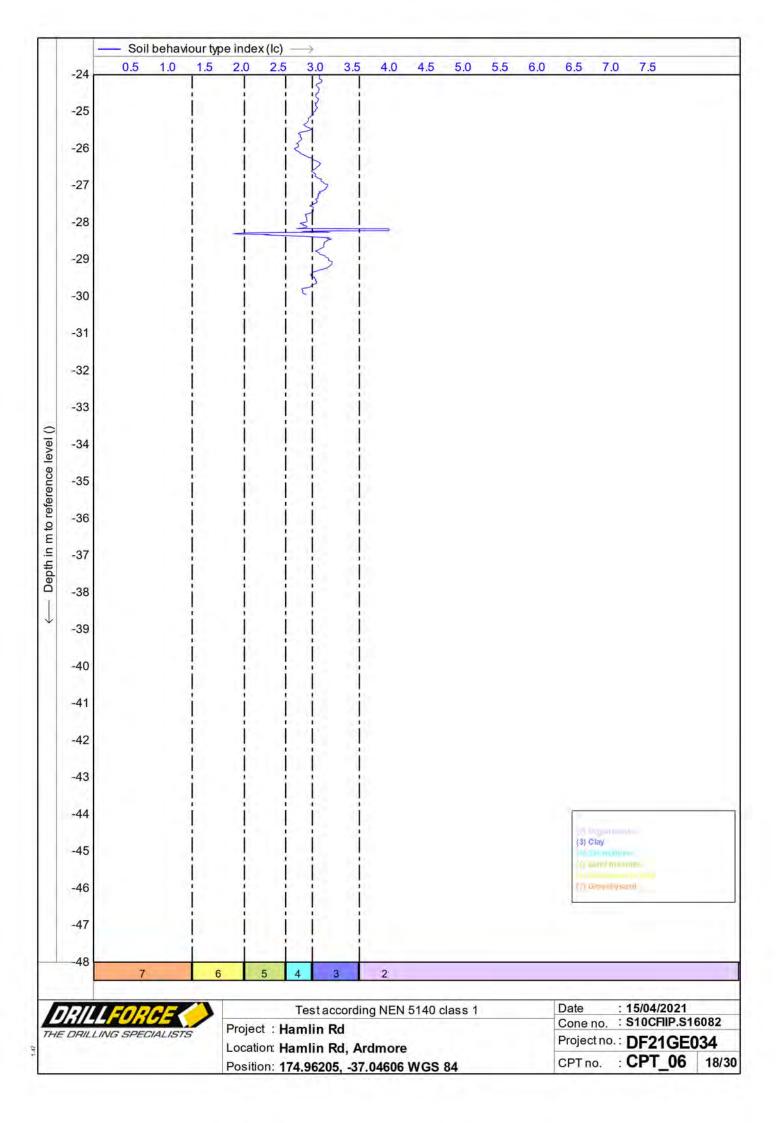


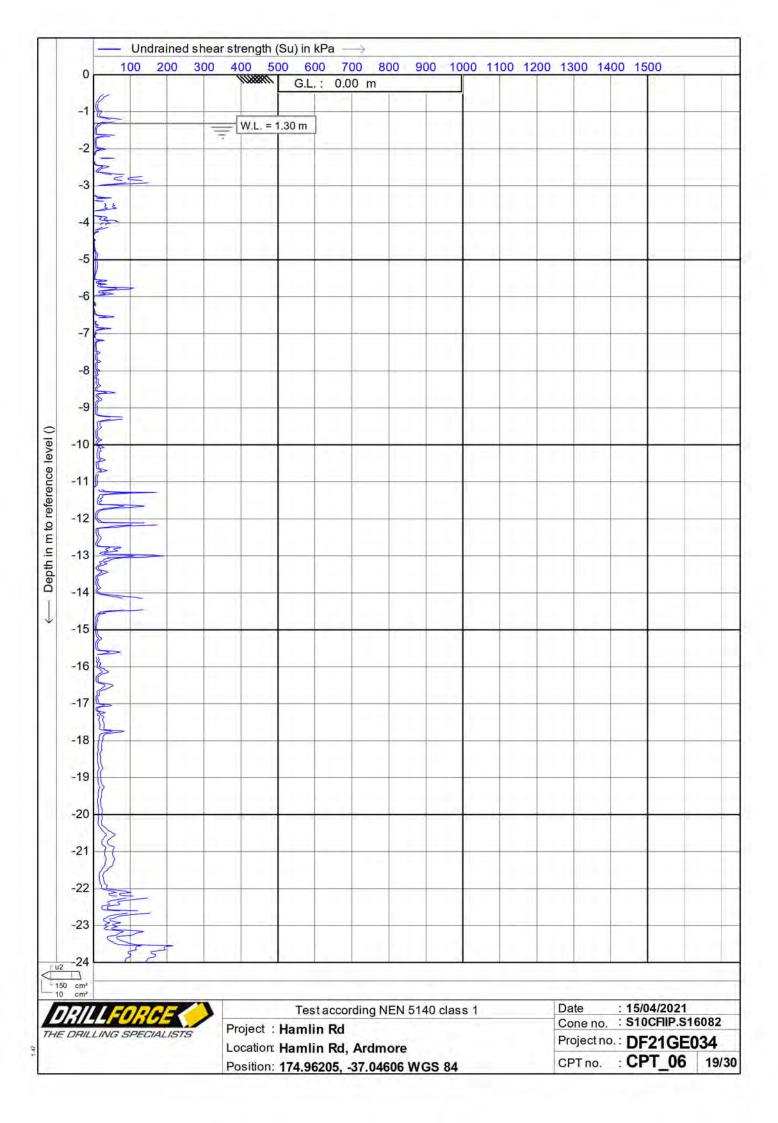


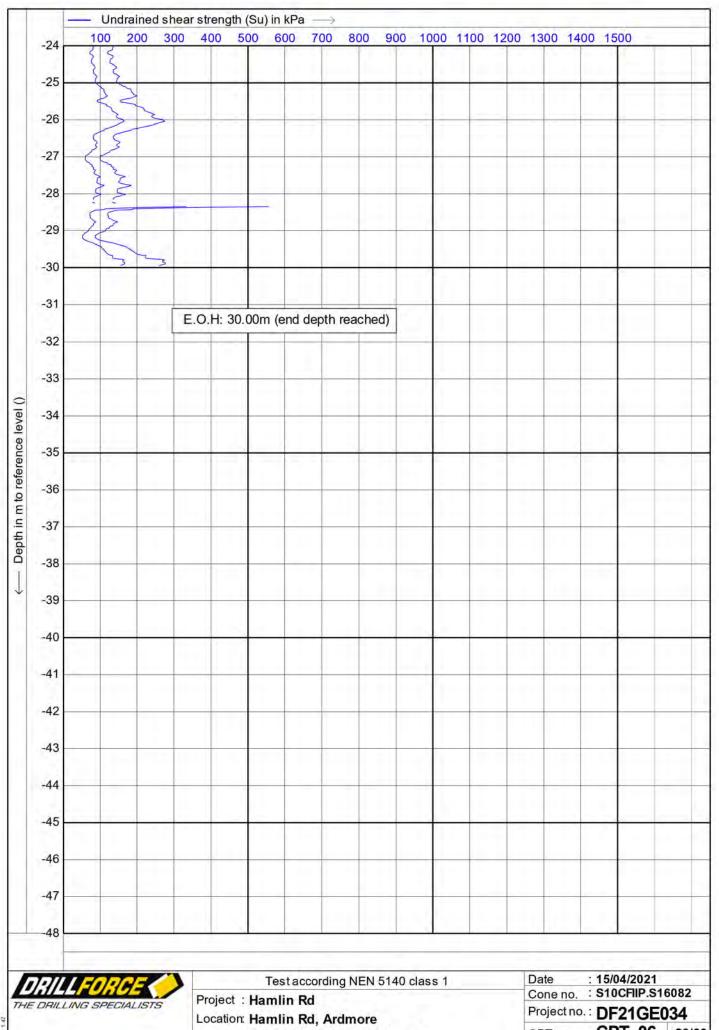






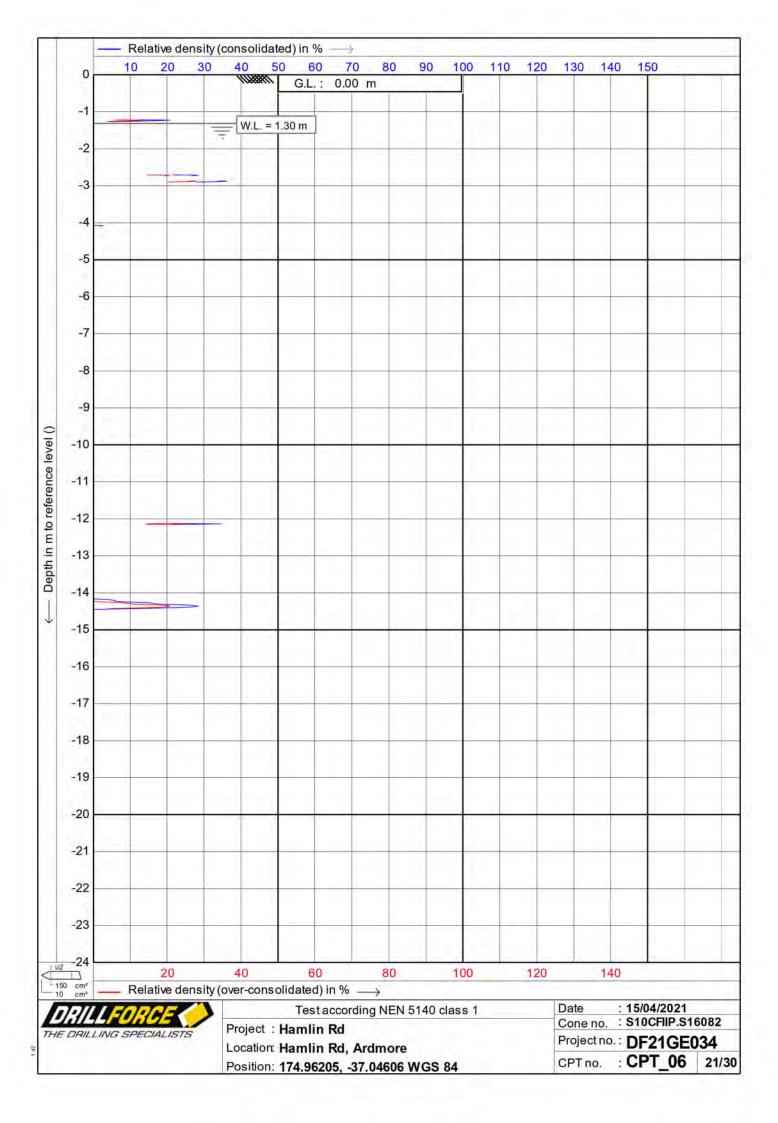


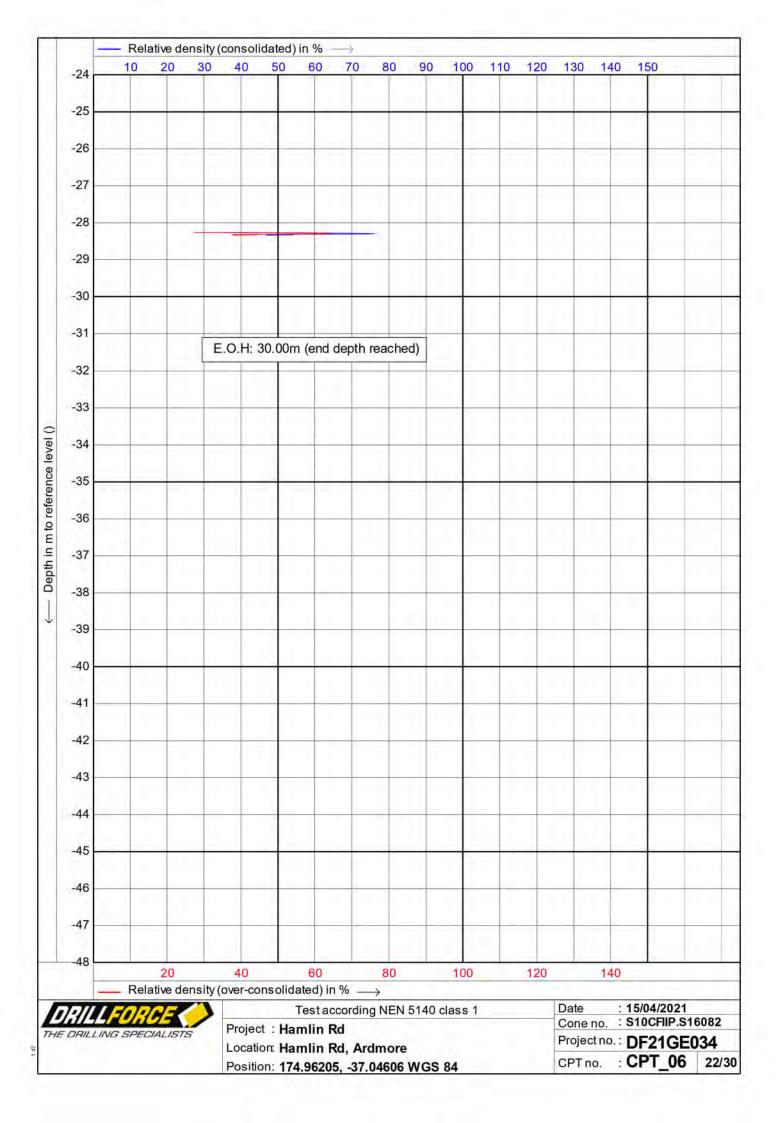


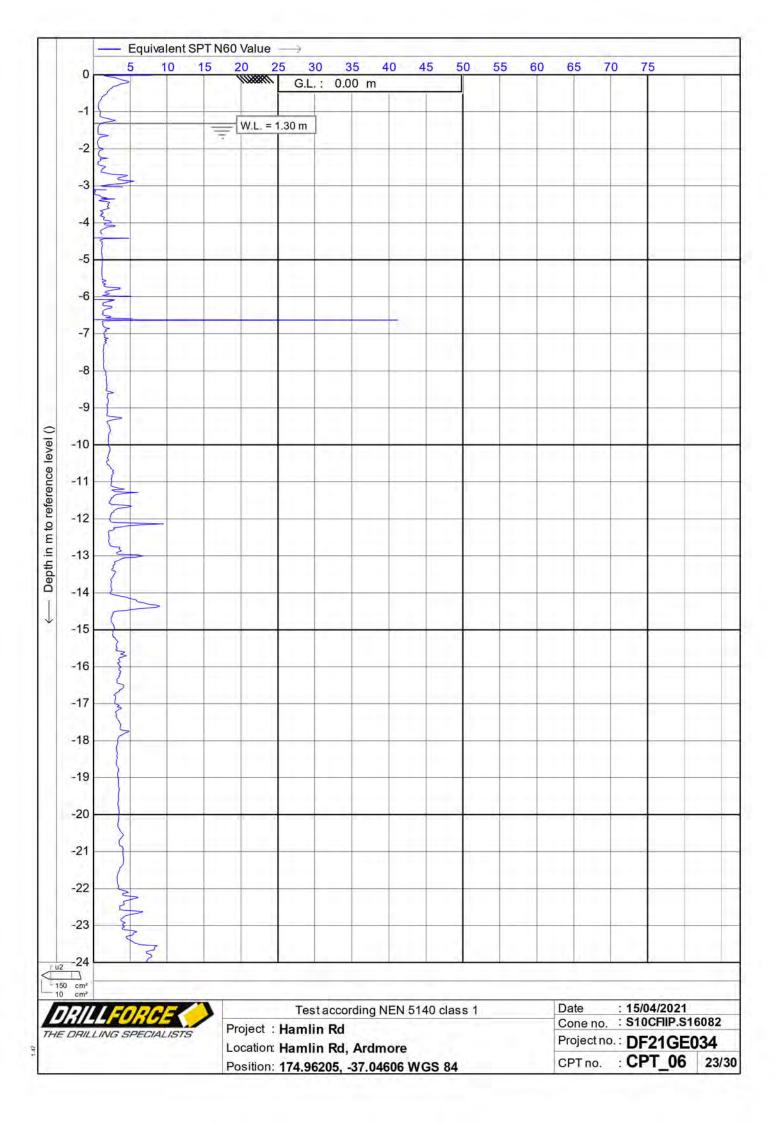


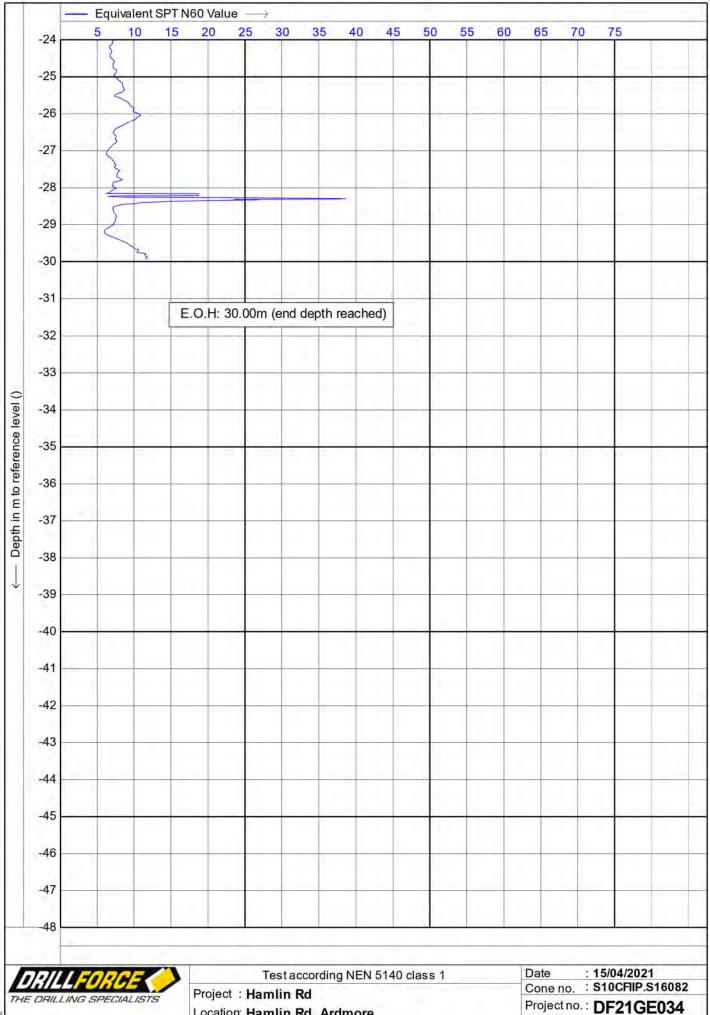
Position: 174.96205, -37.04606 WGS 84

CPT no. : CPT_06 20/30





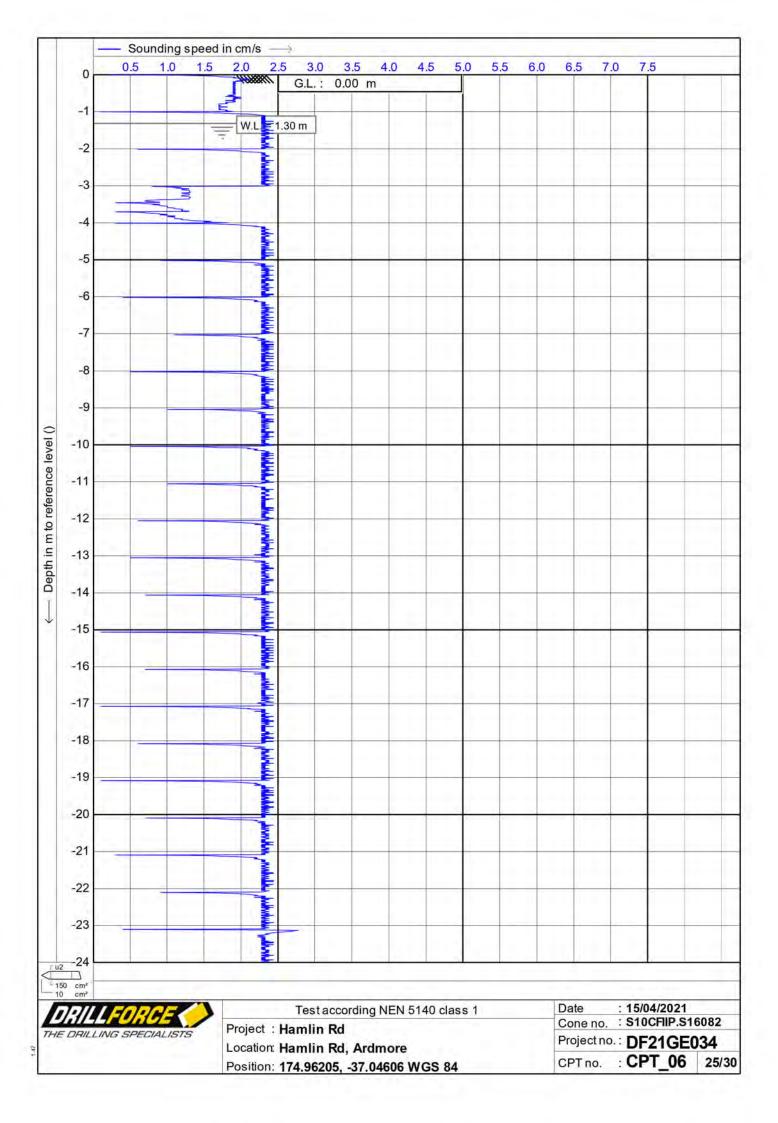


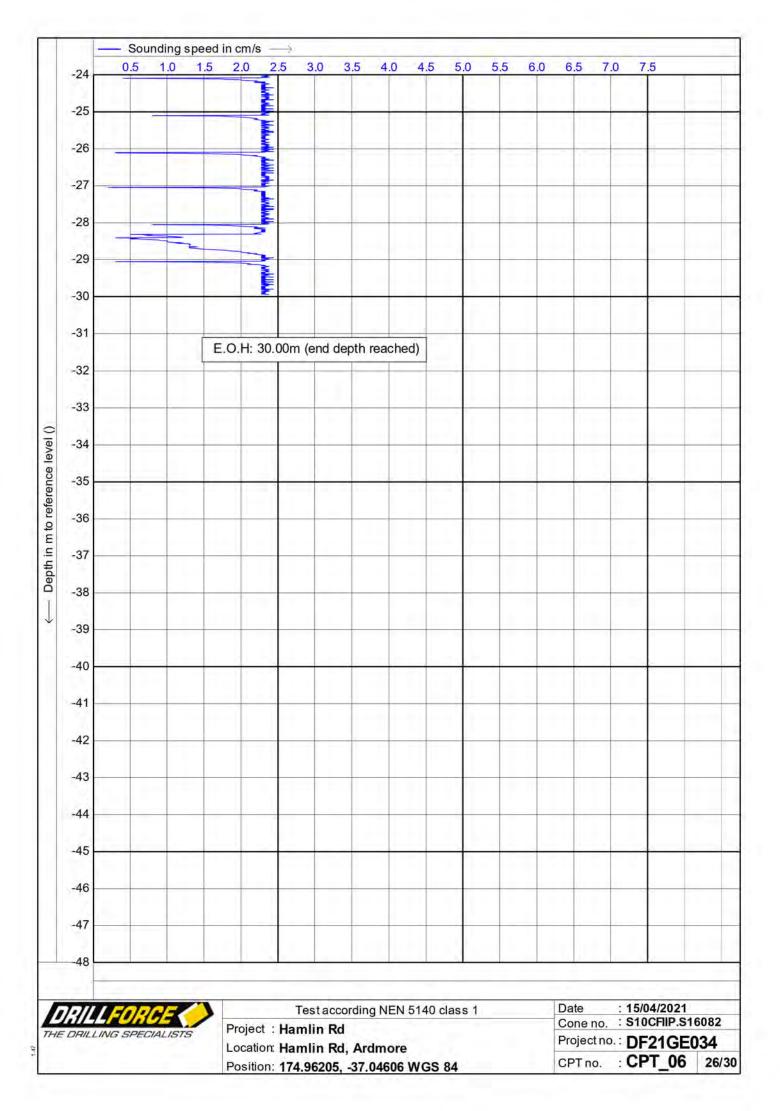


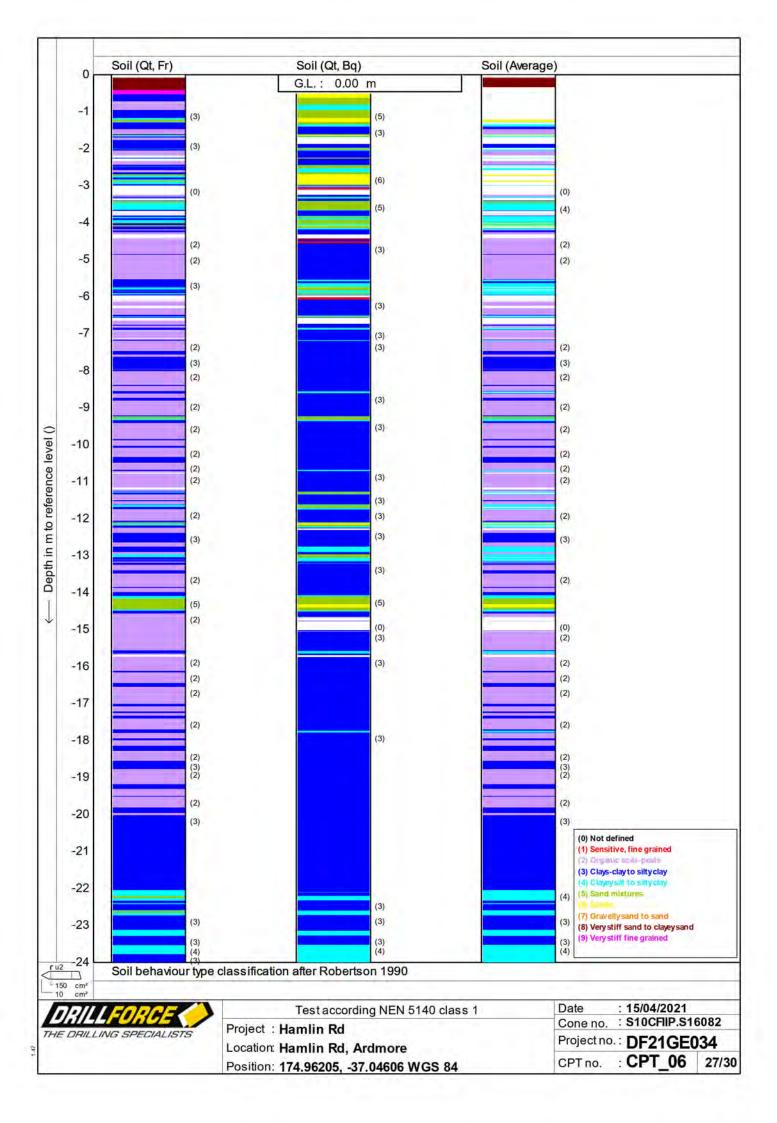
Location: Hamlin Rd, Ardmore

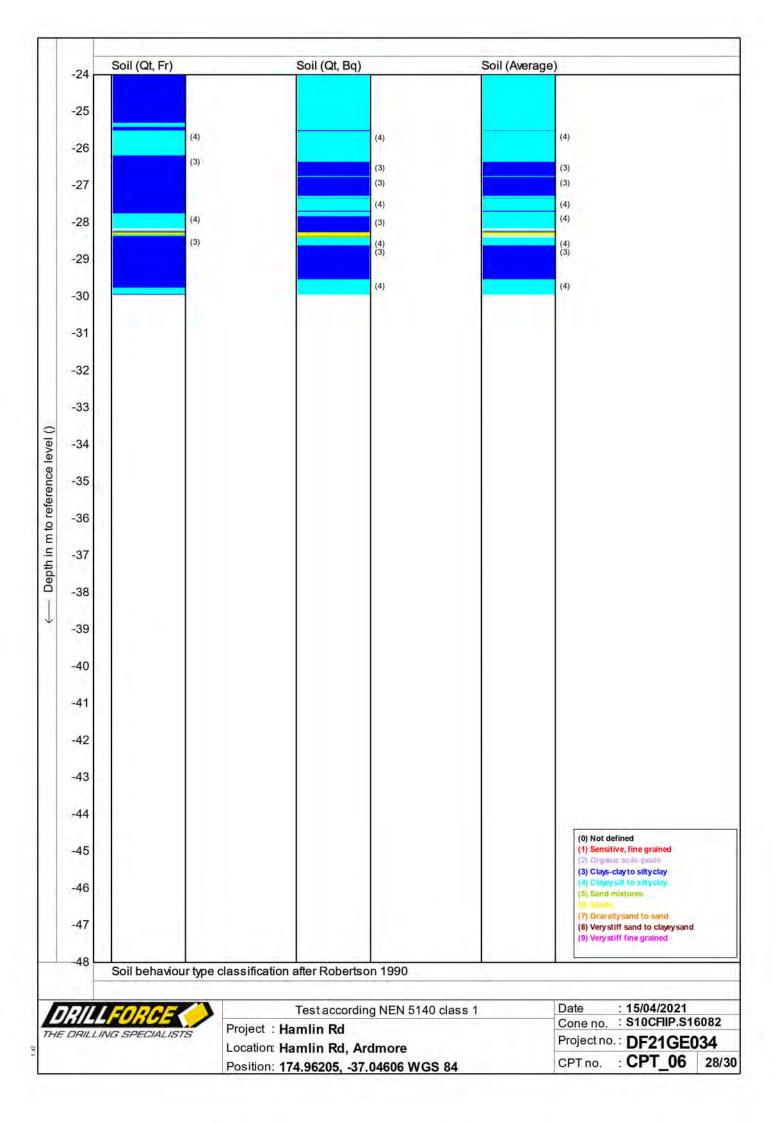
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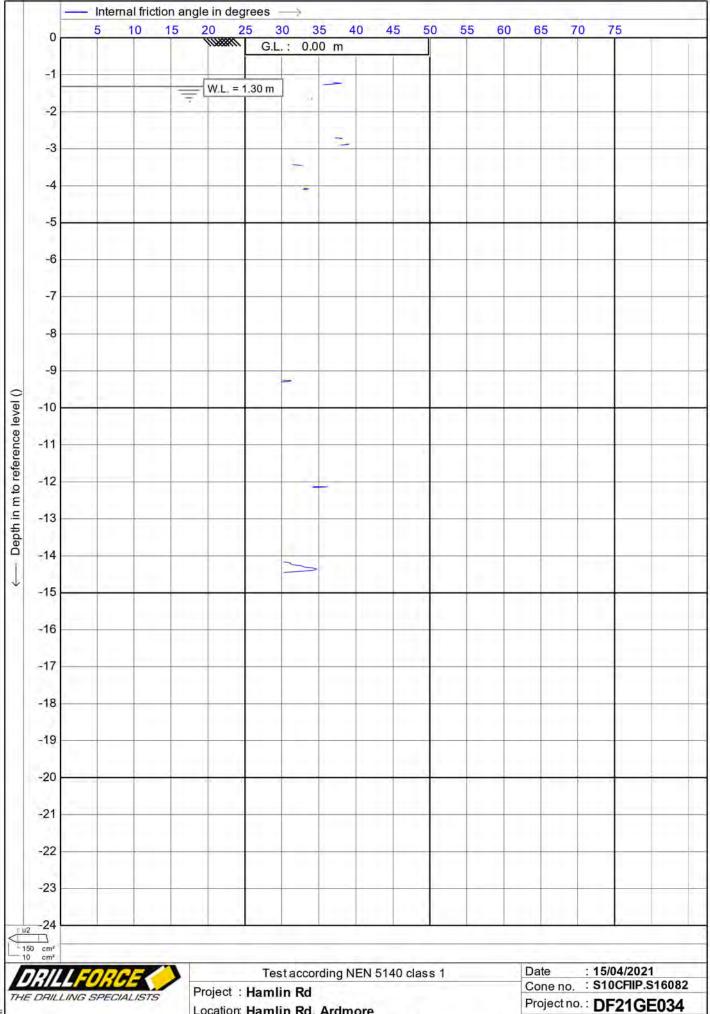
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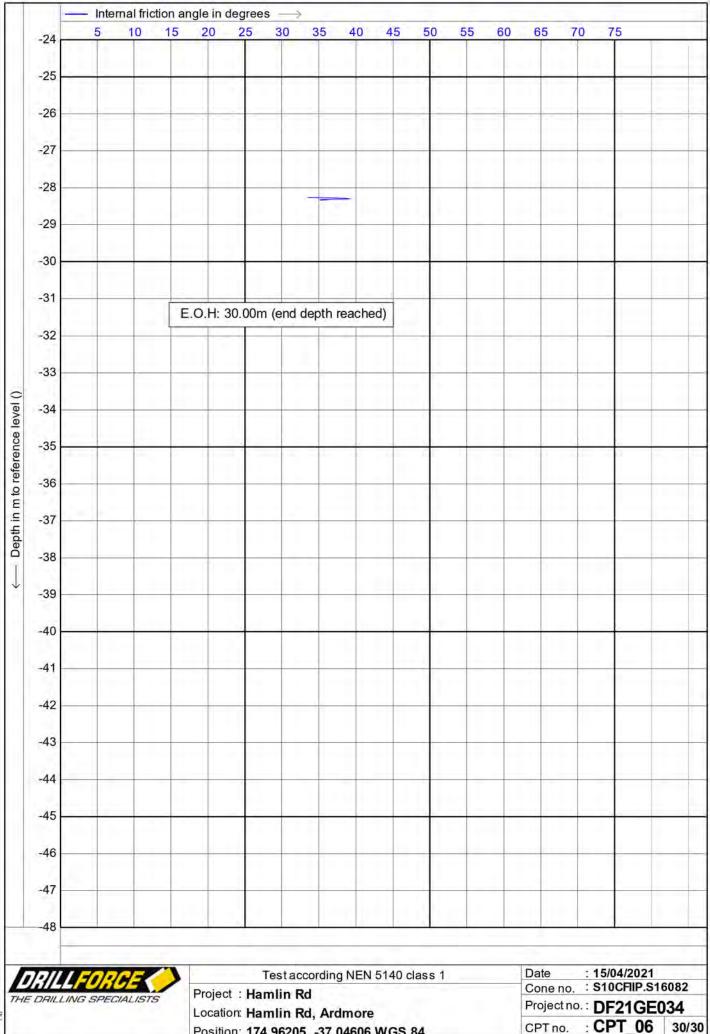




Location: Hamlin Rd, Ardmore

Position: 174.96205, -37.04606 WGS 84

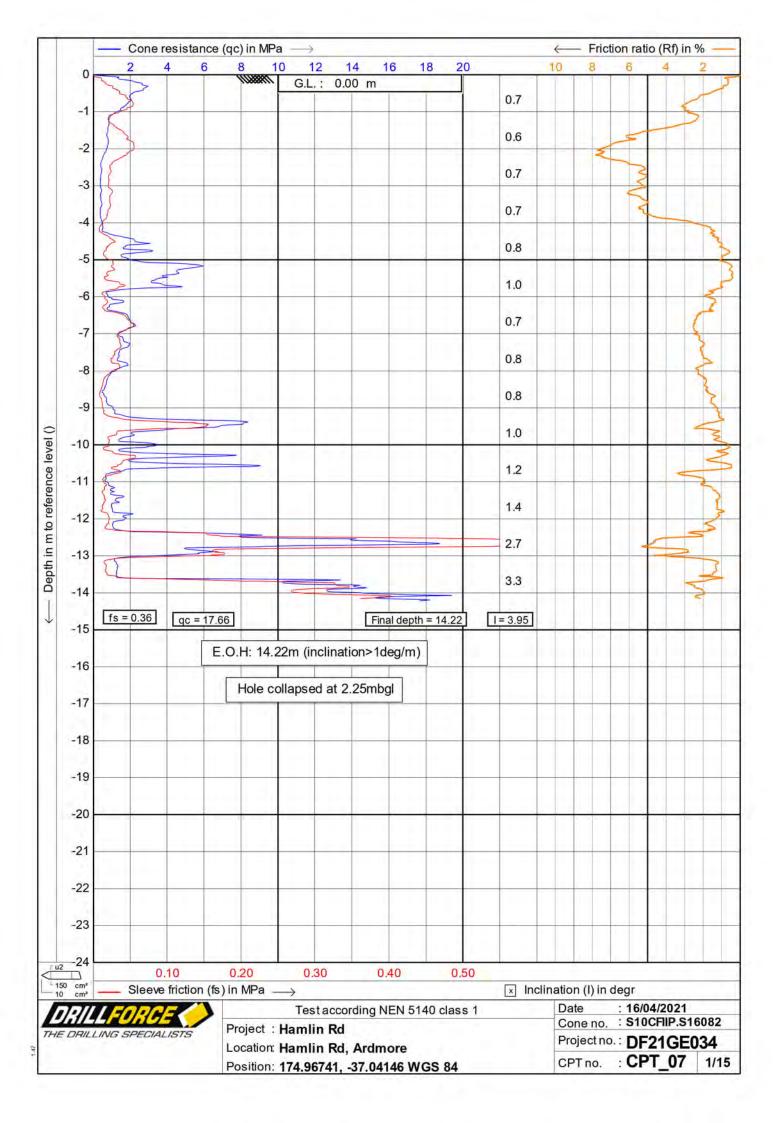
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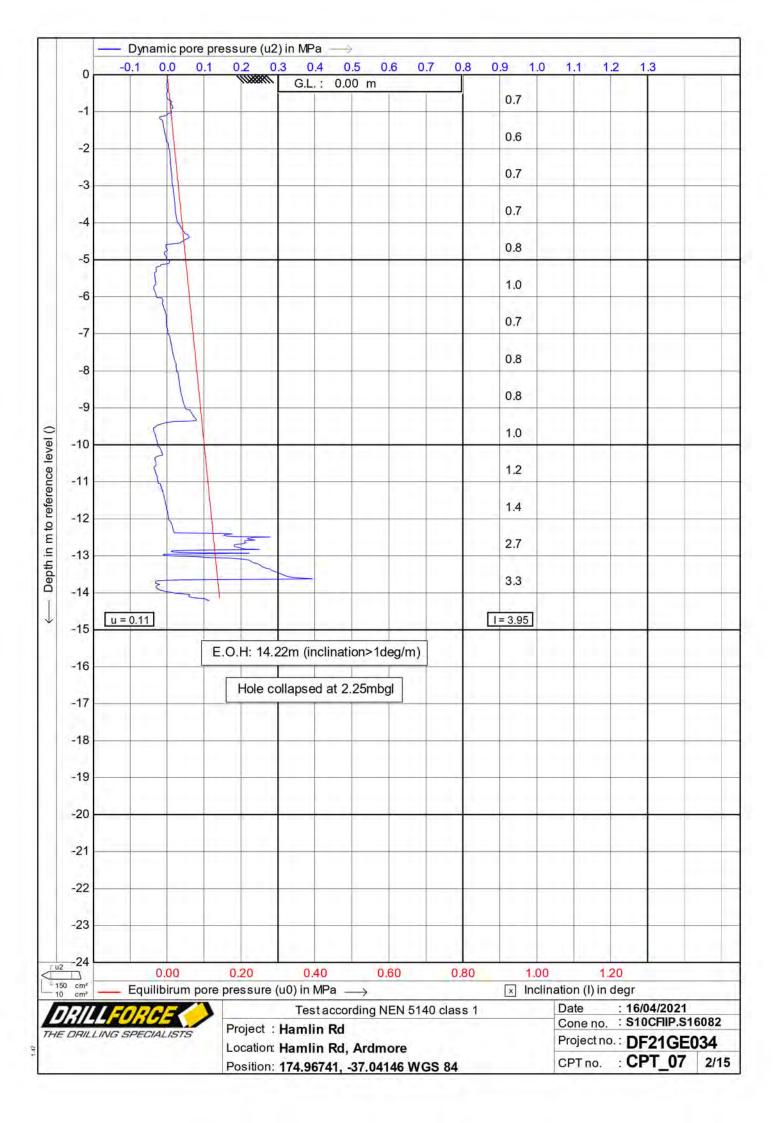


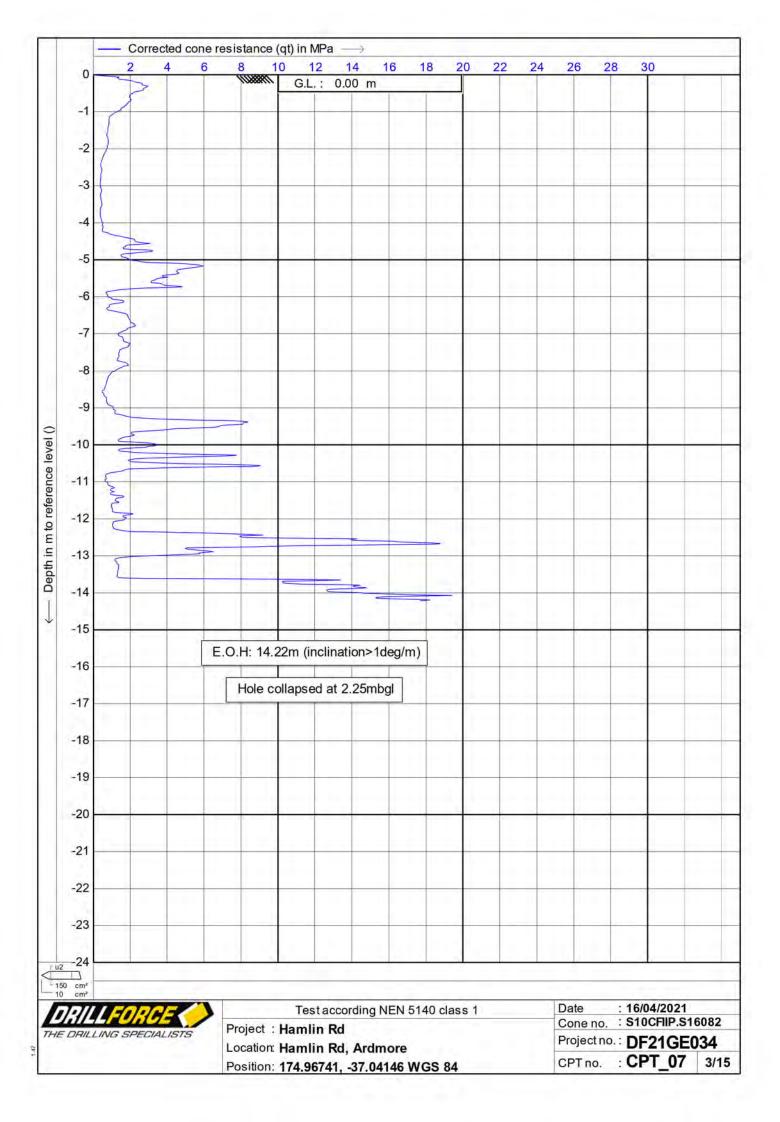
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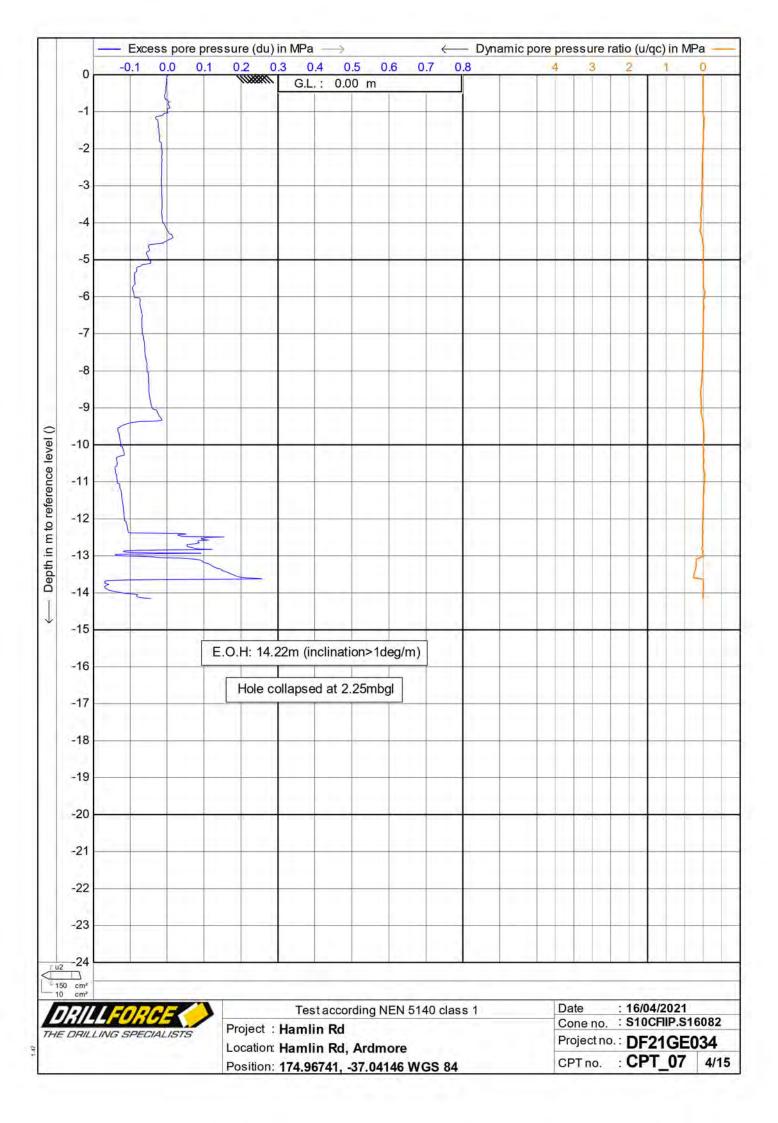
30/30

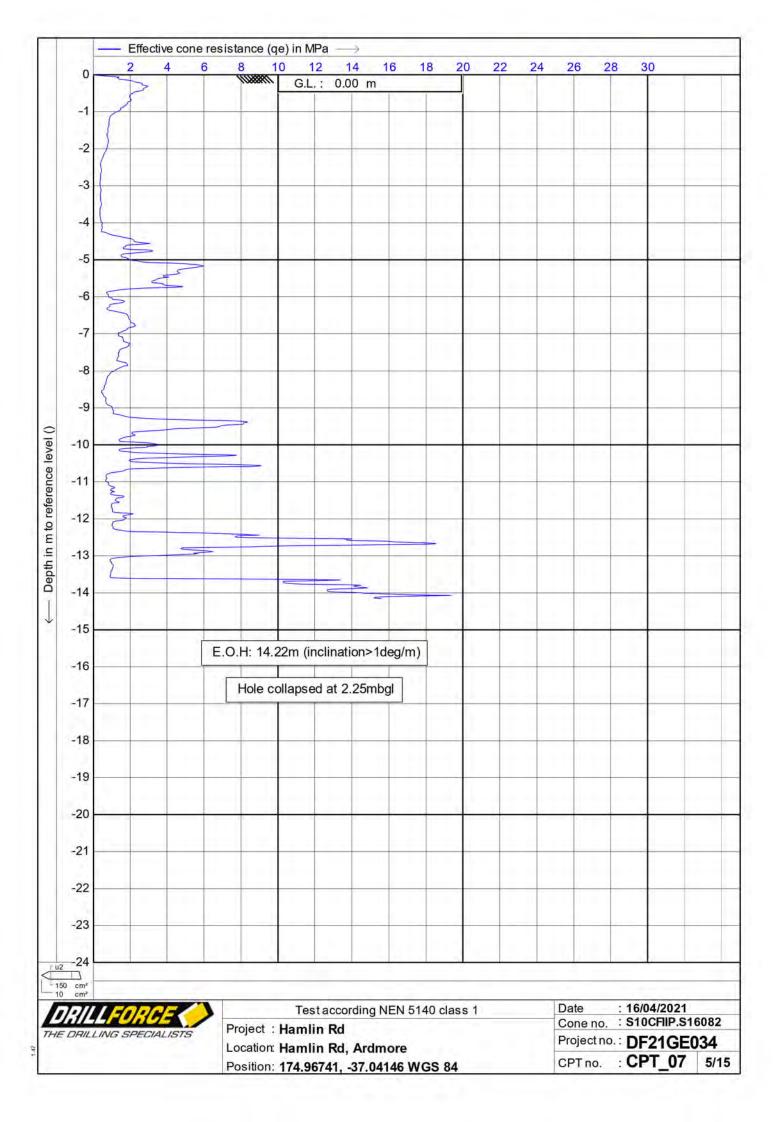
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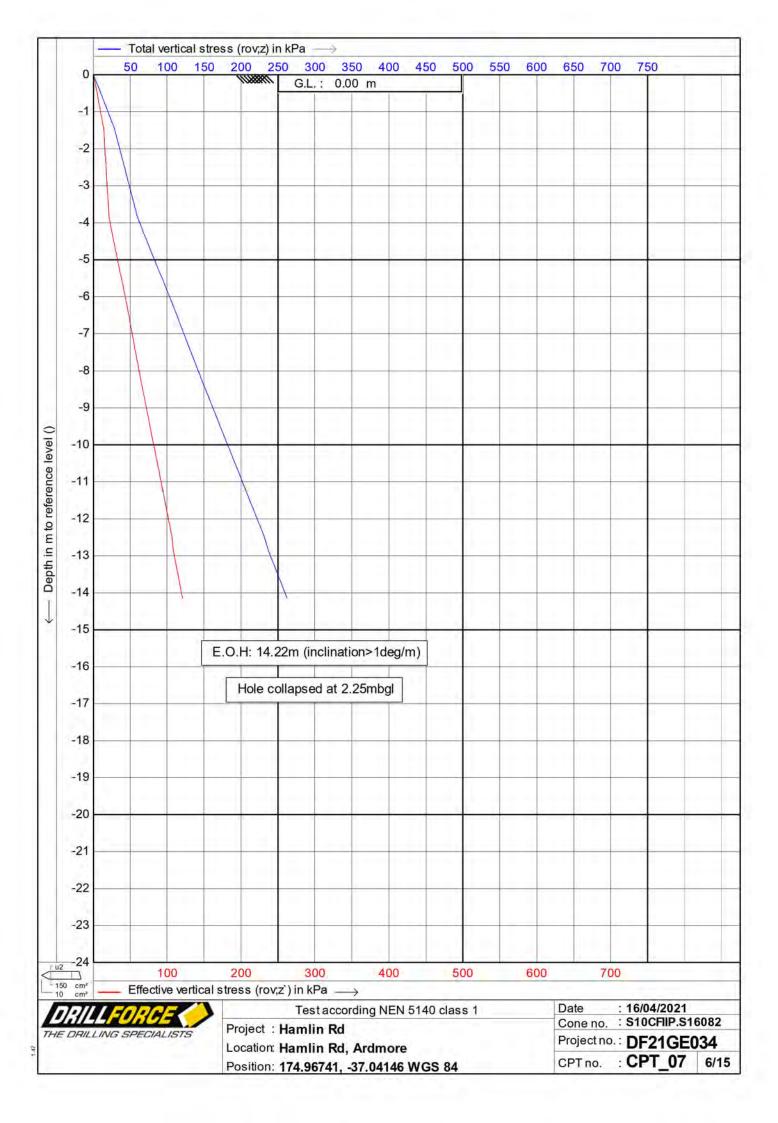


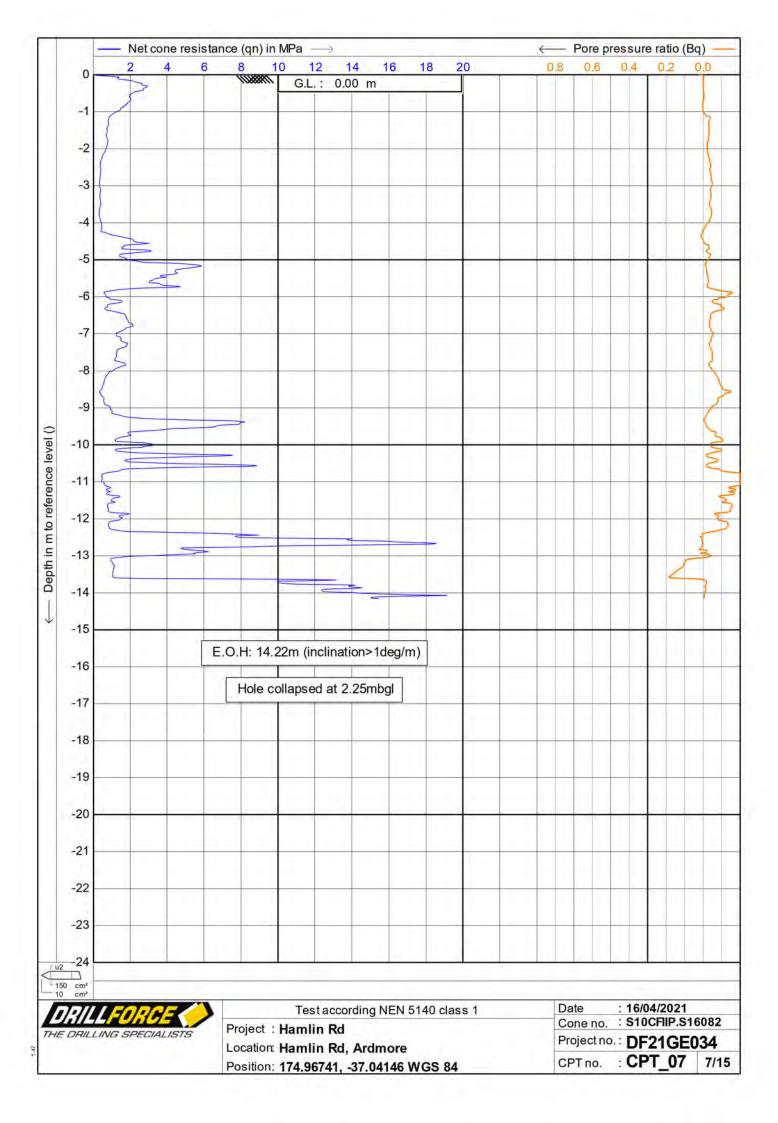


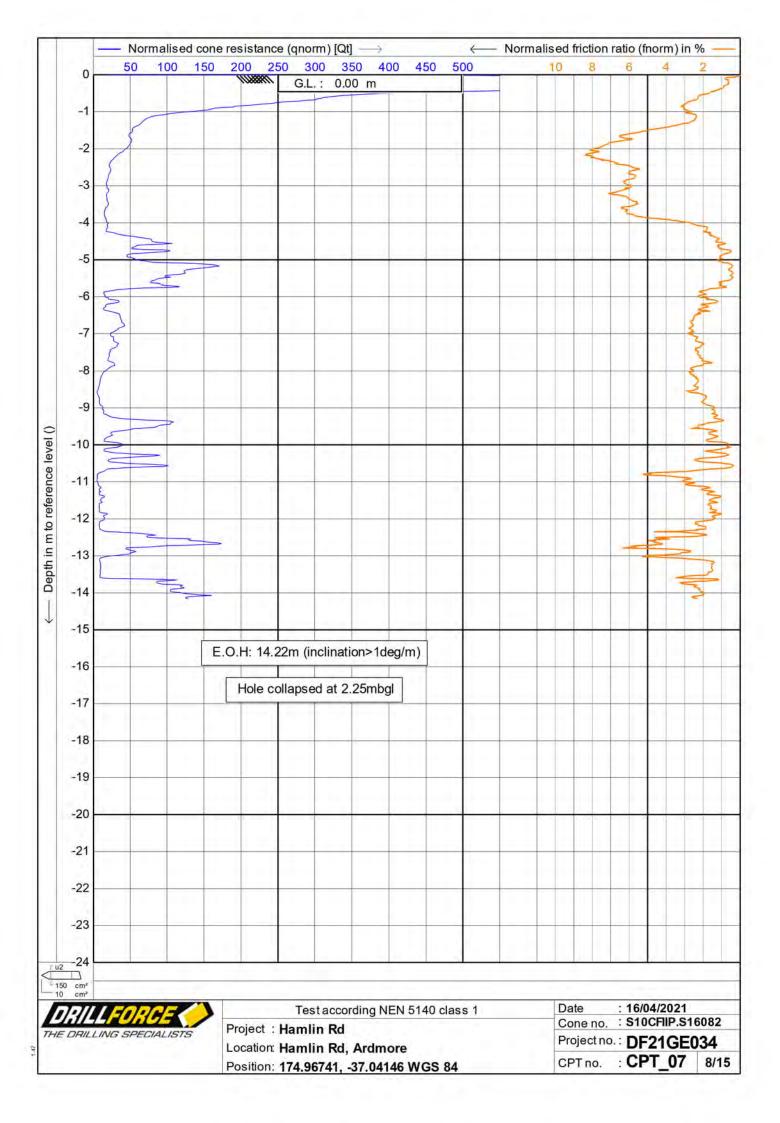


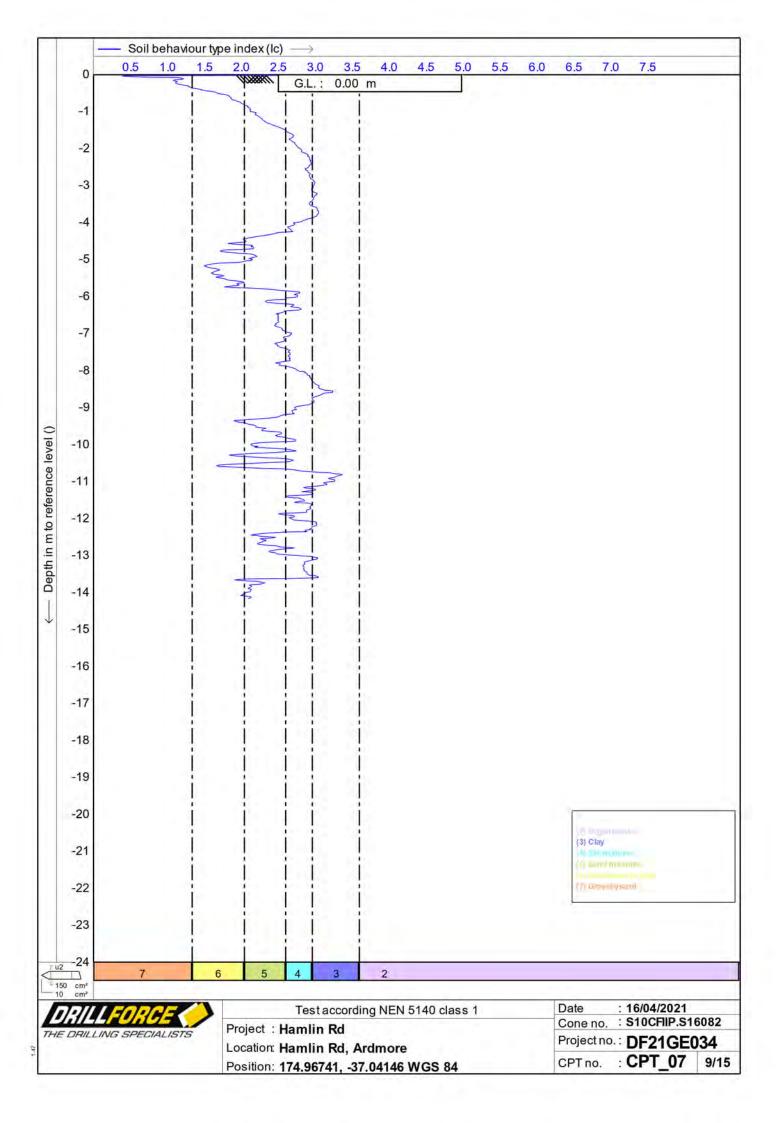


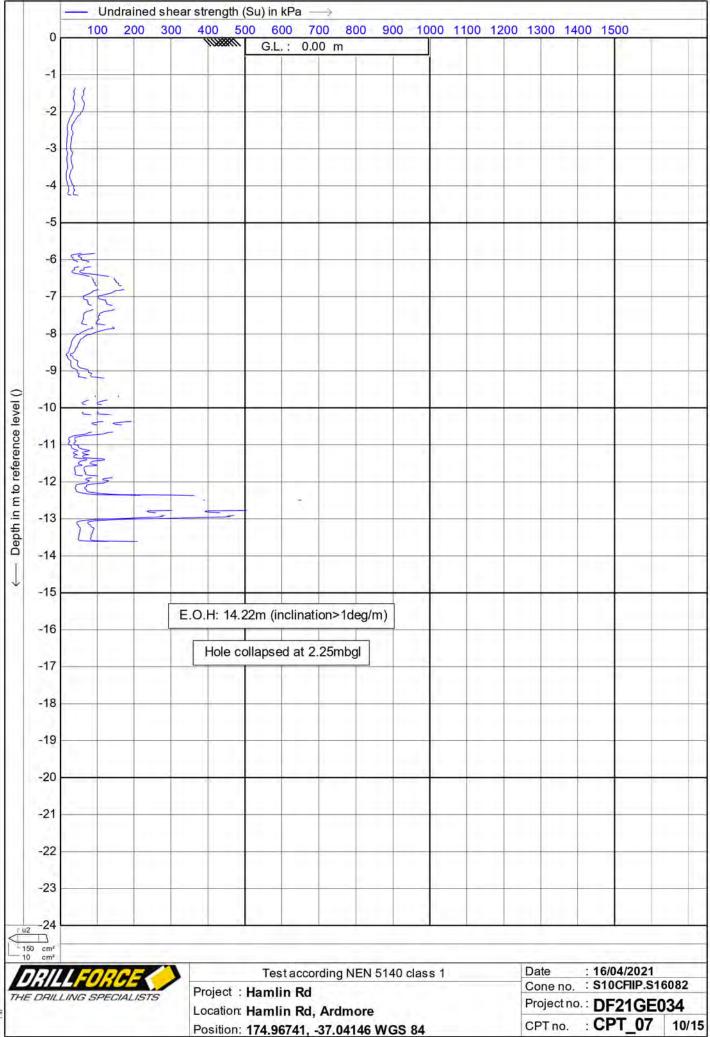


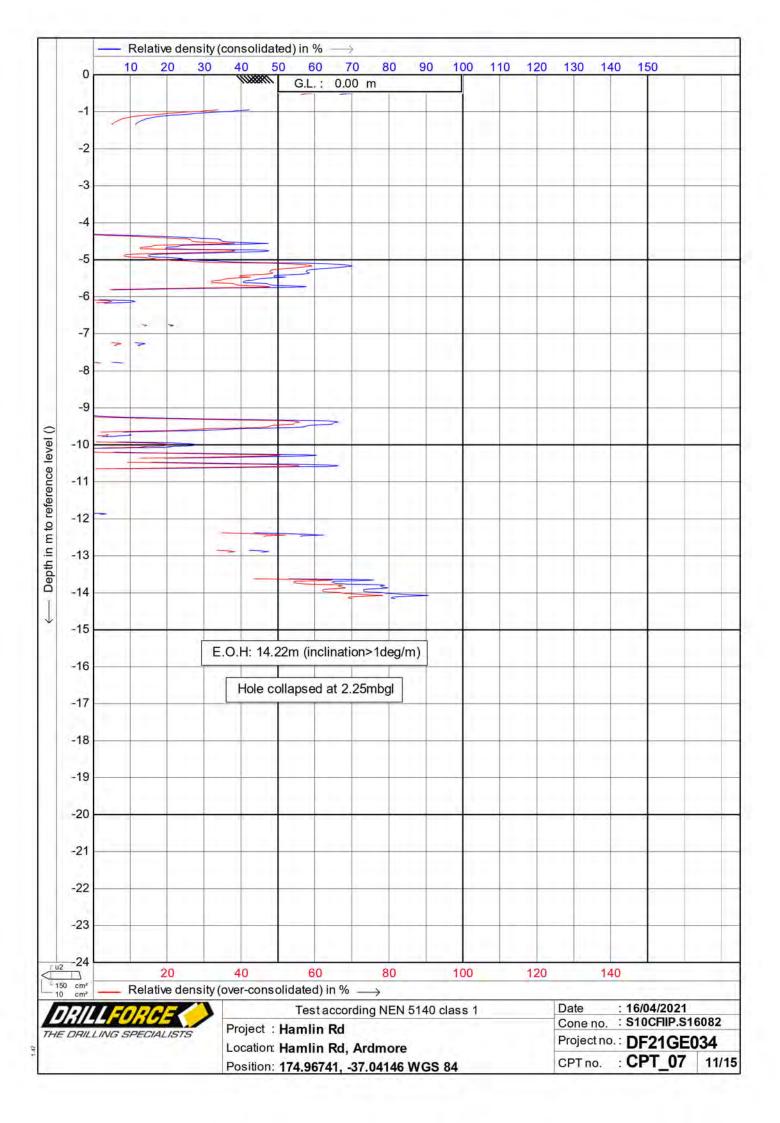


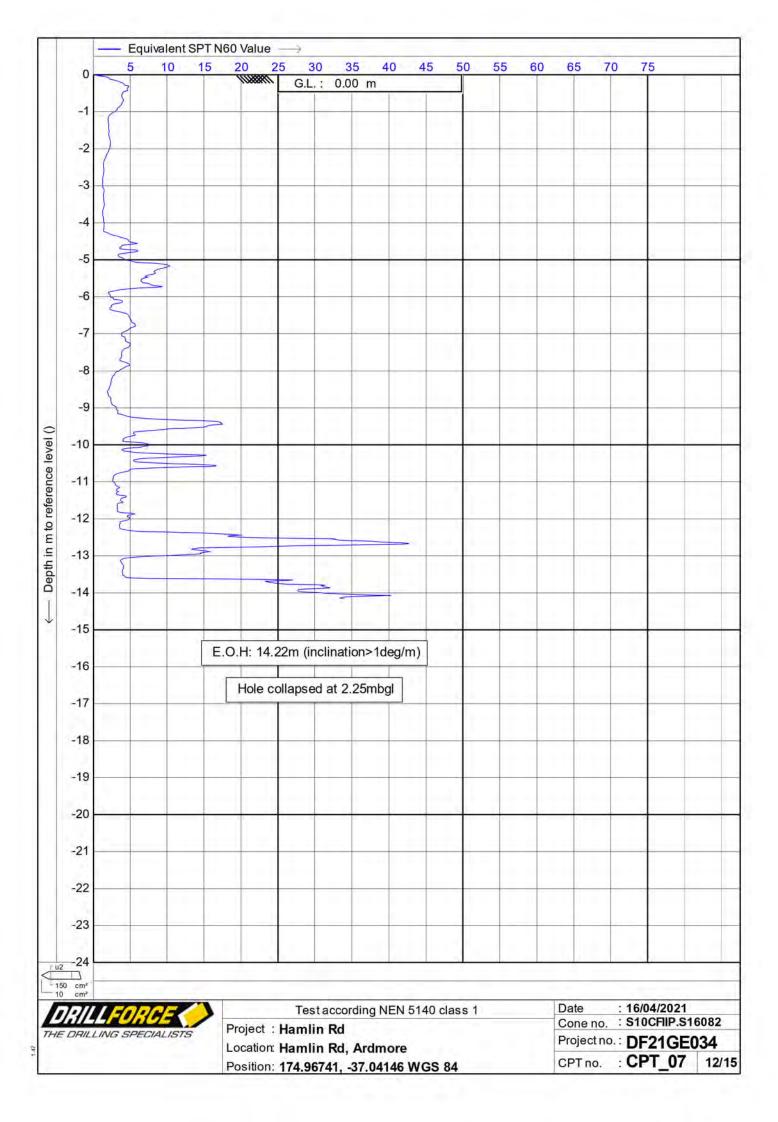


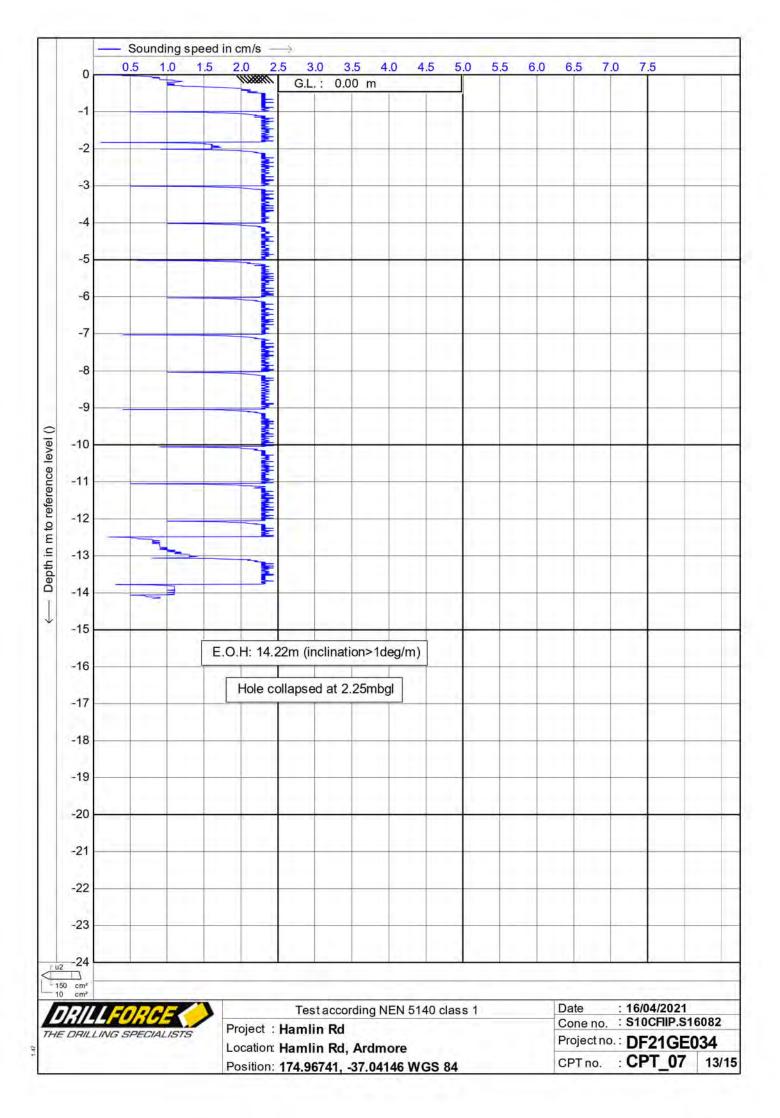


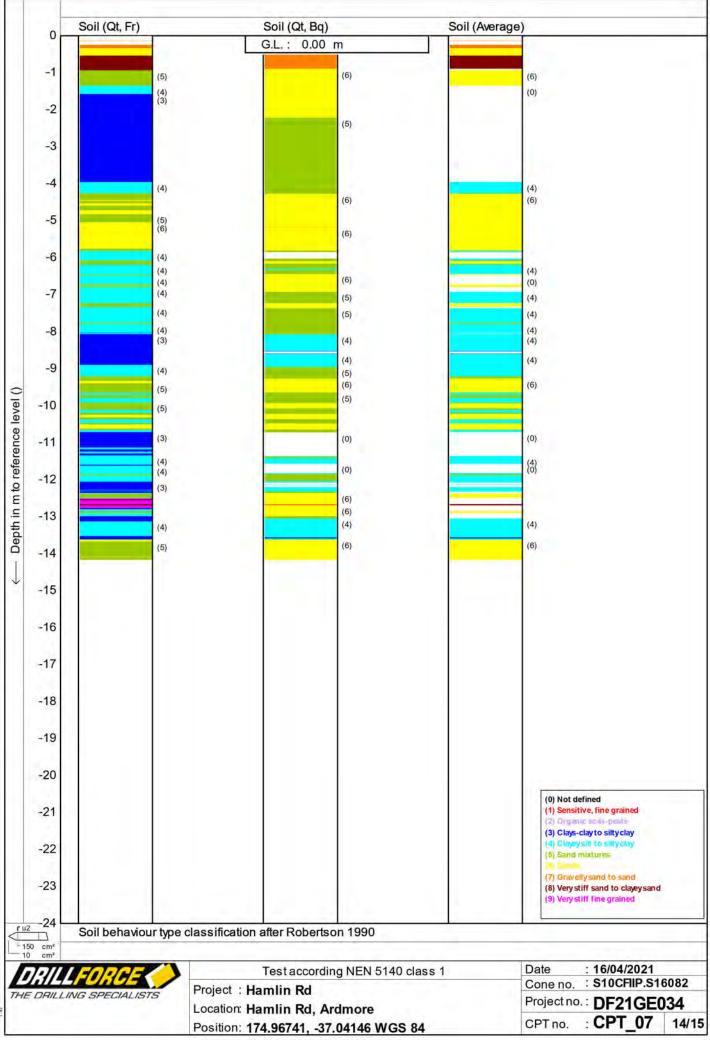


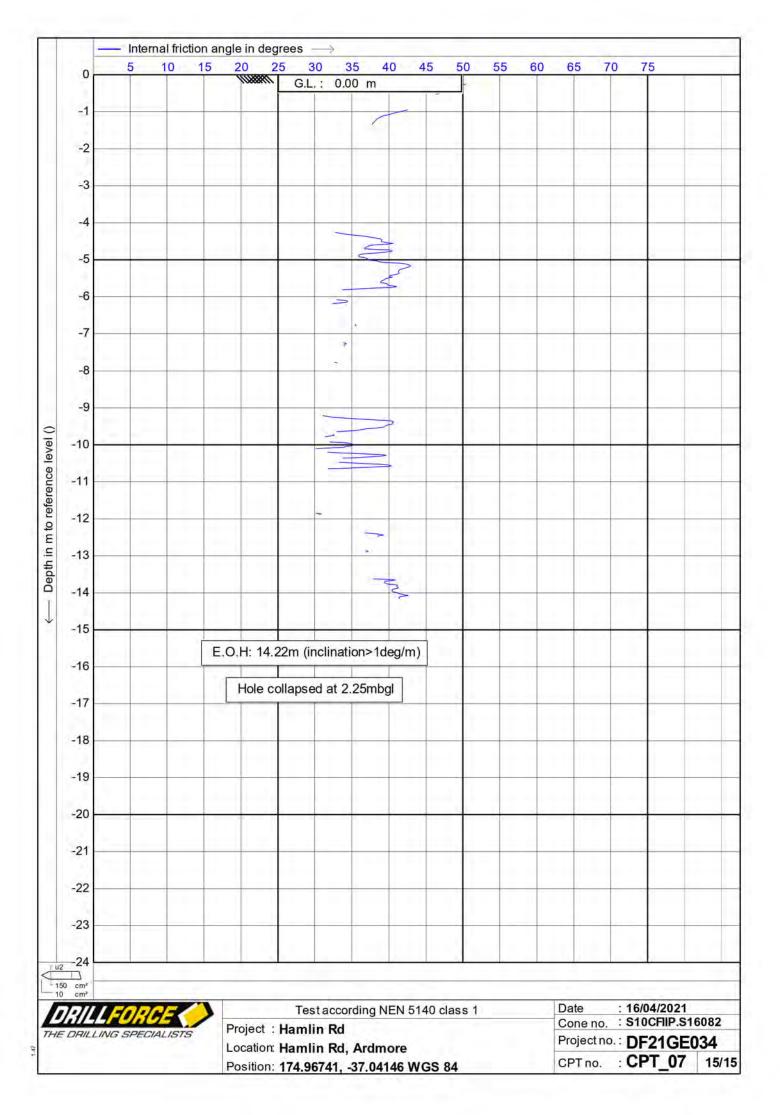


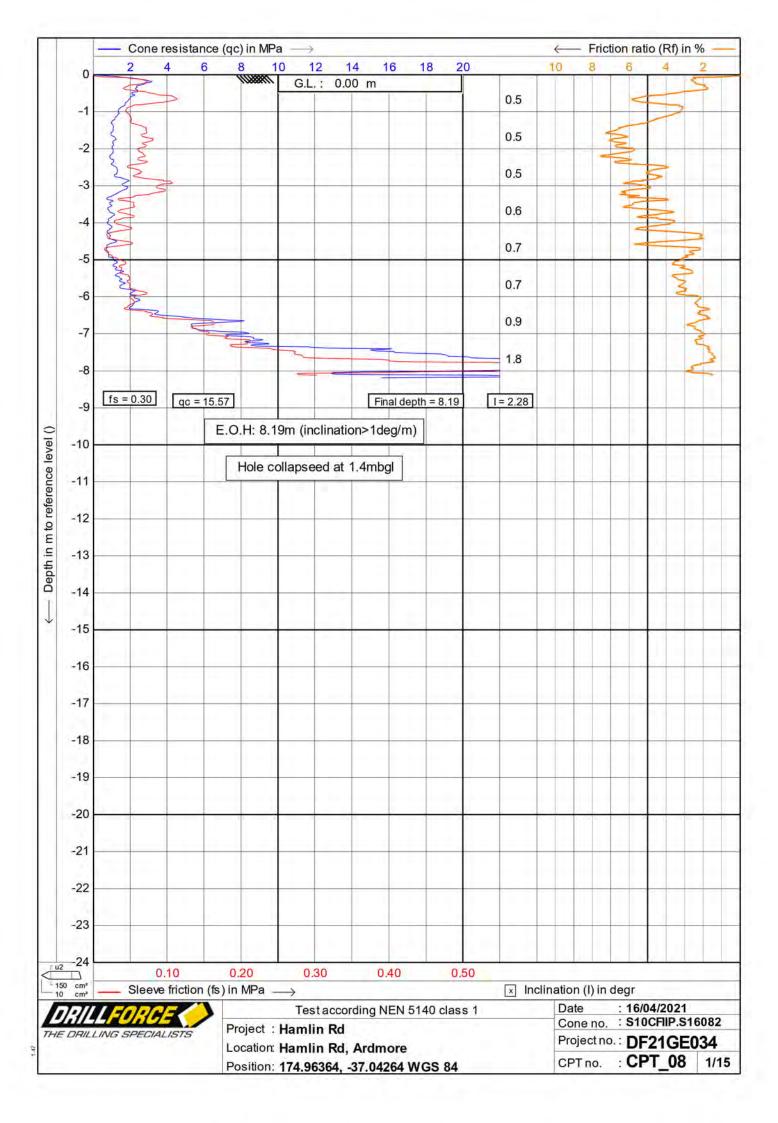


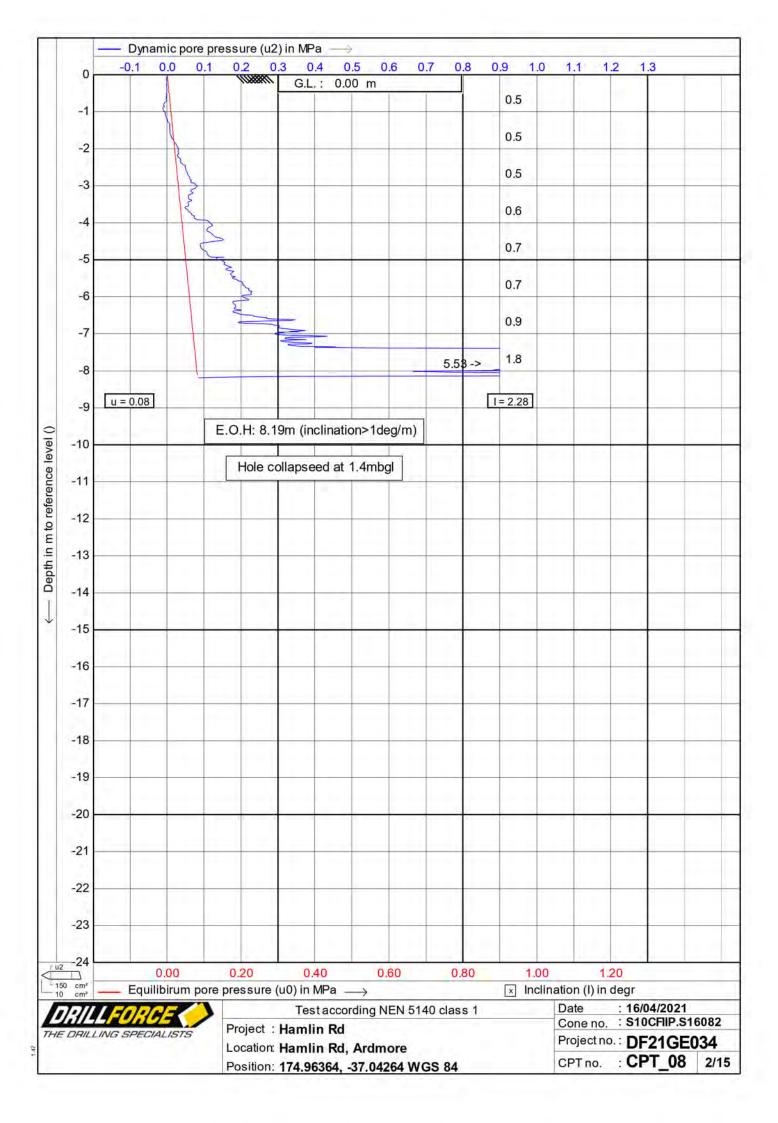


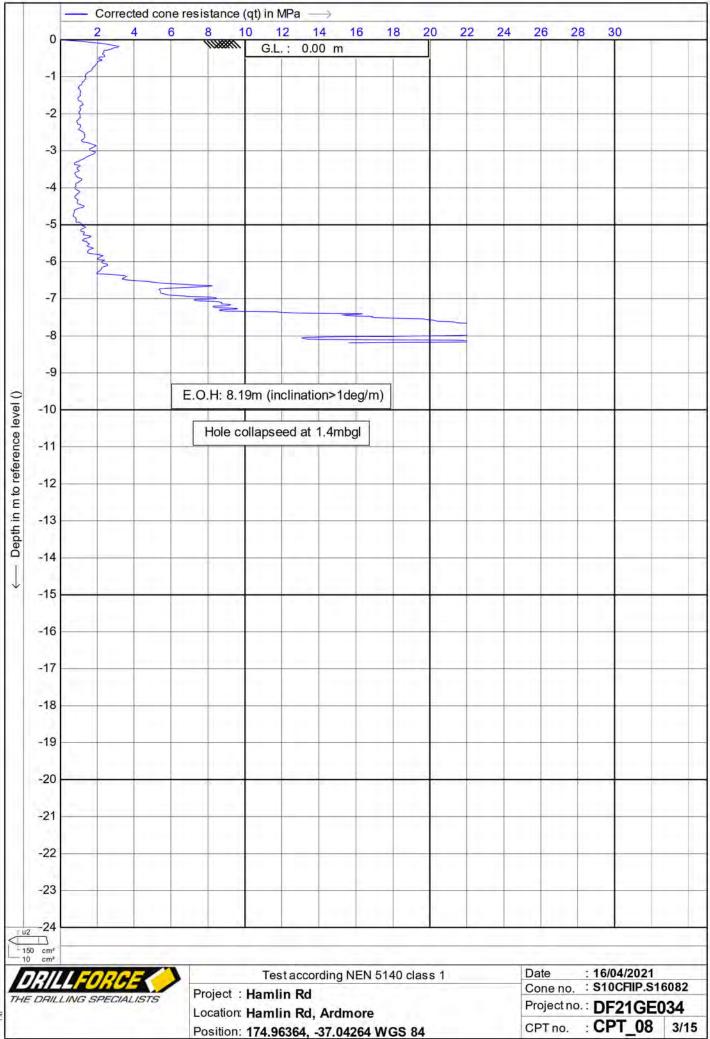


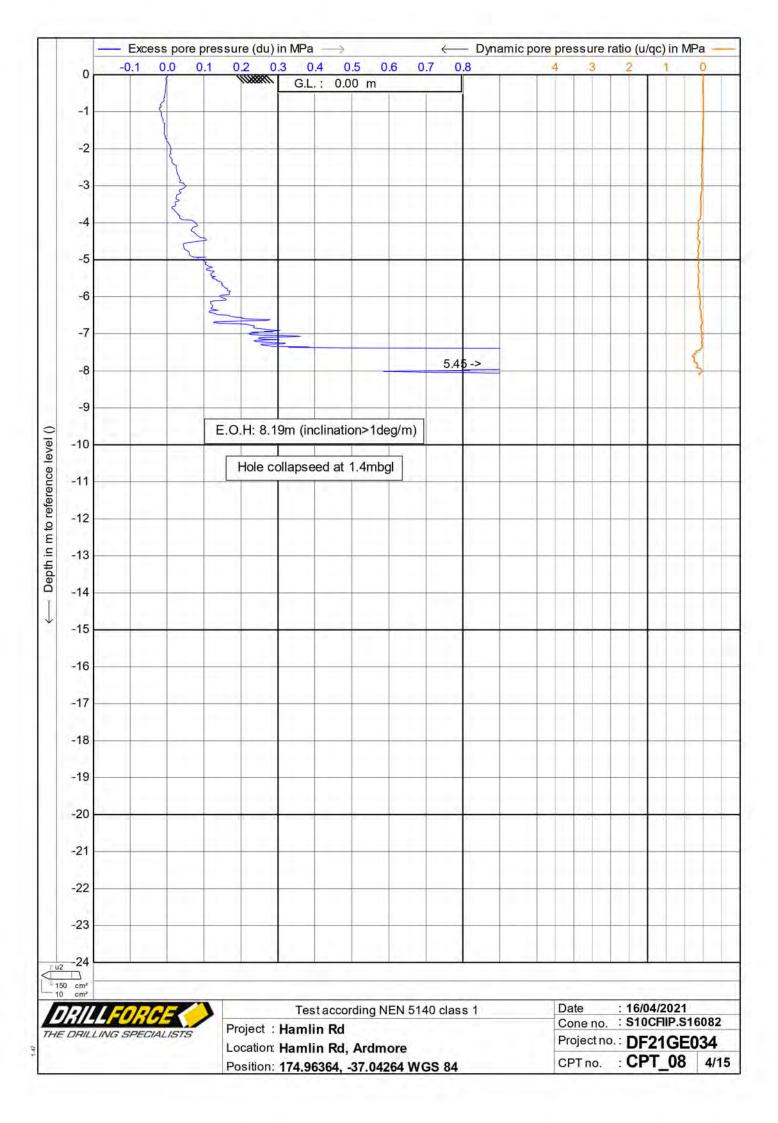


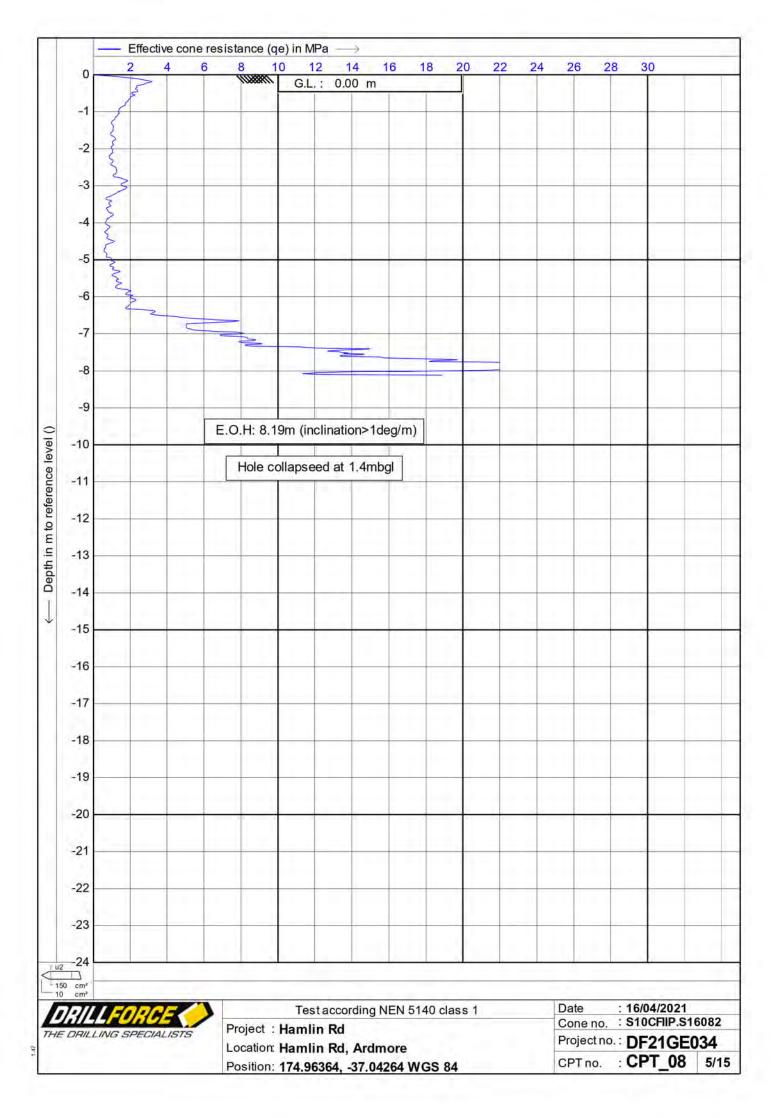


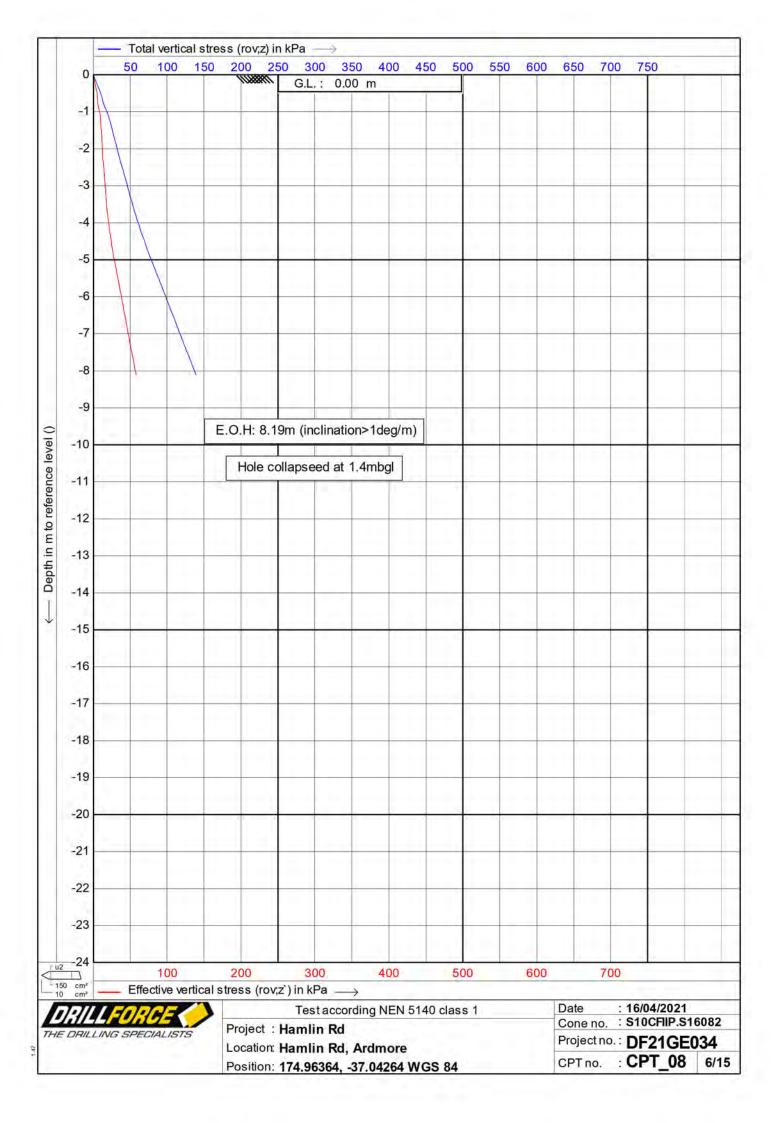


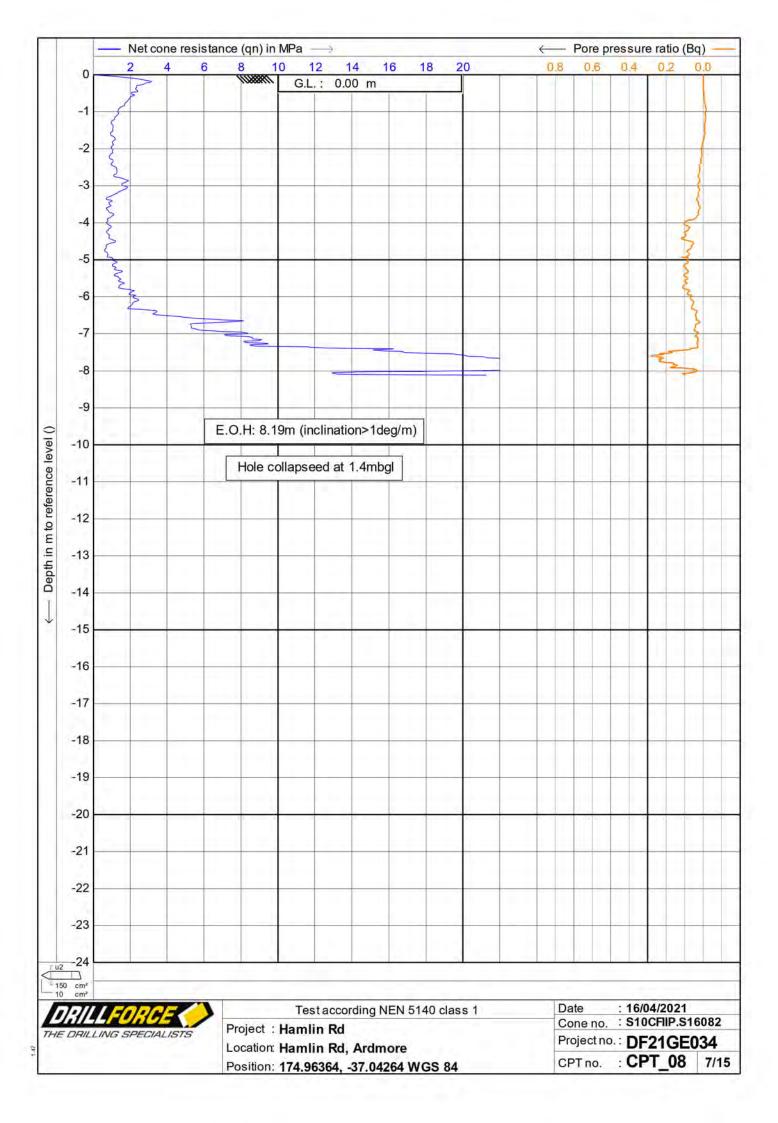


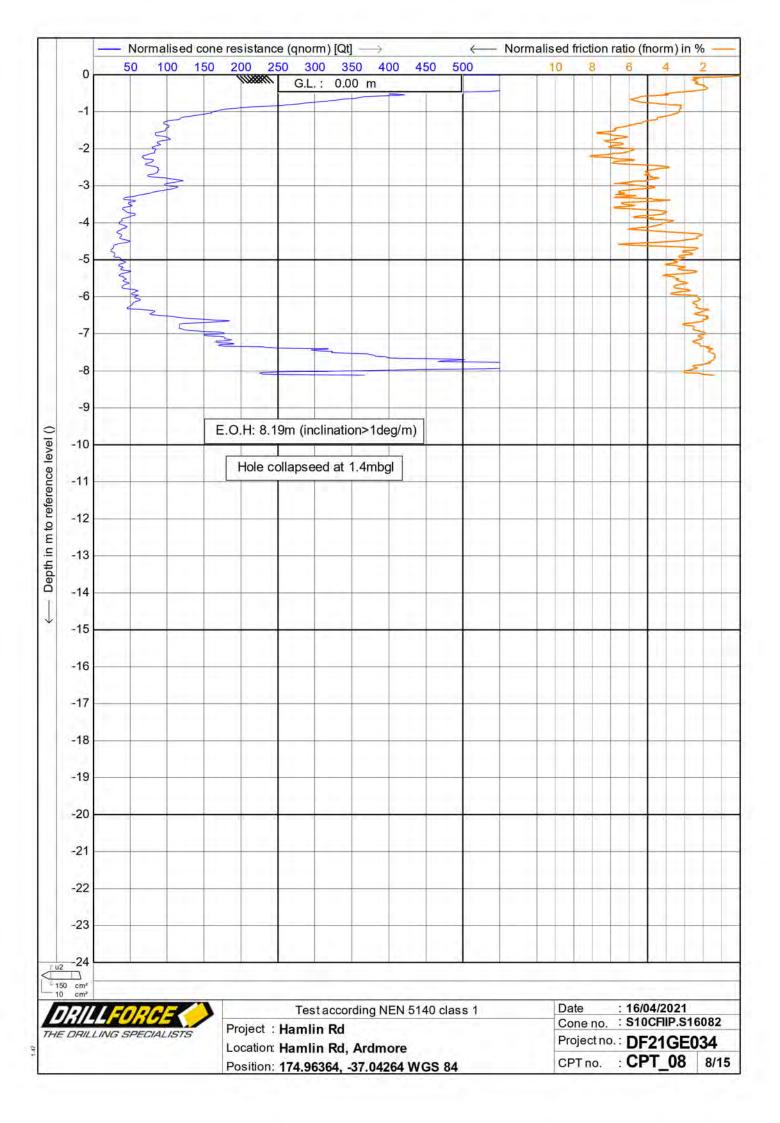


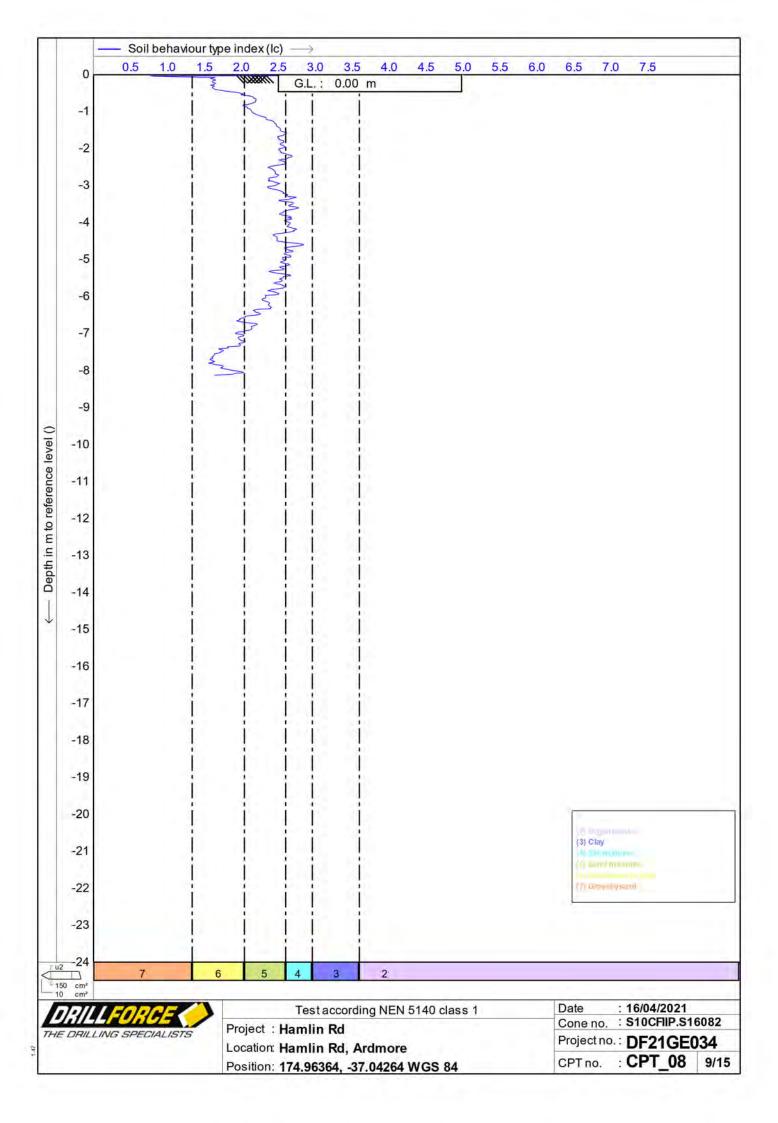


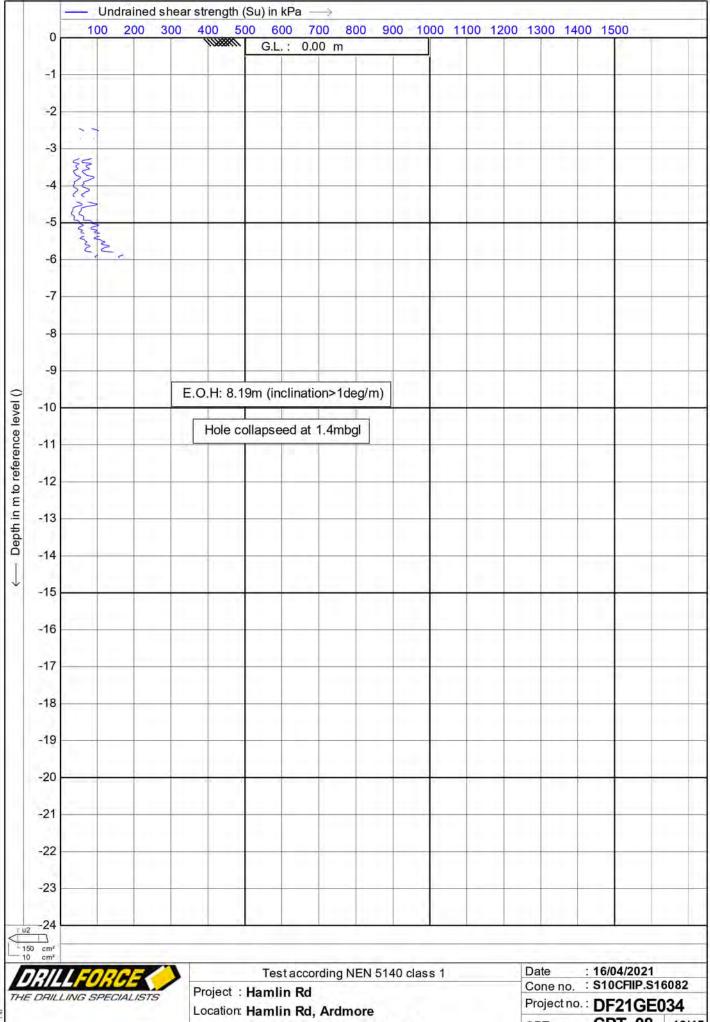






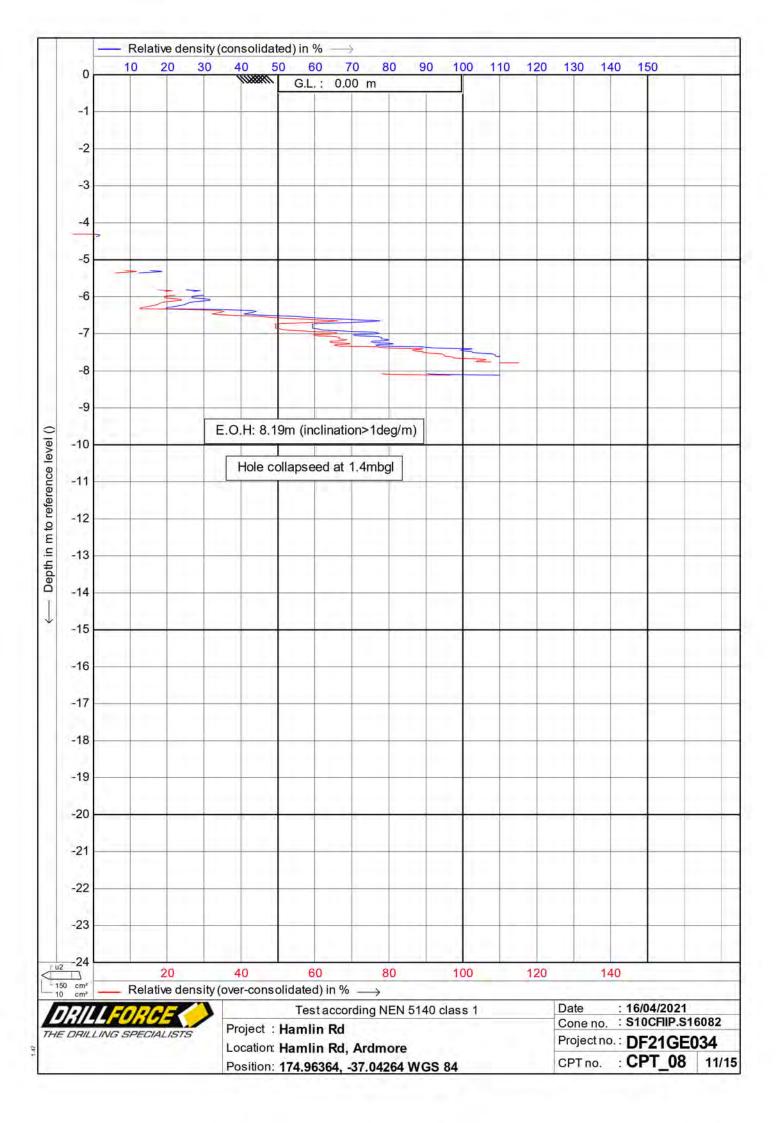


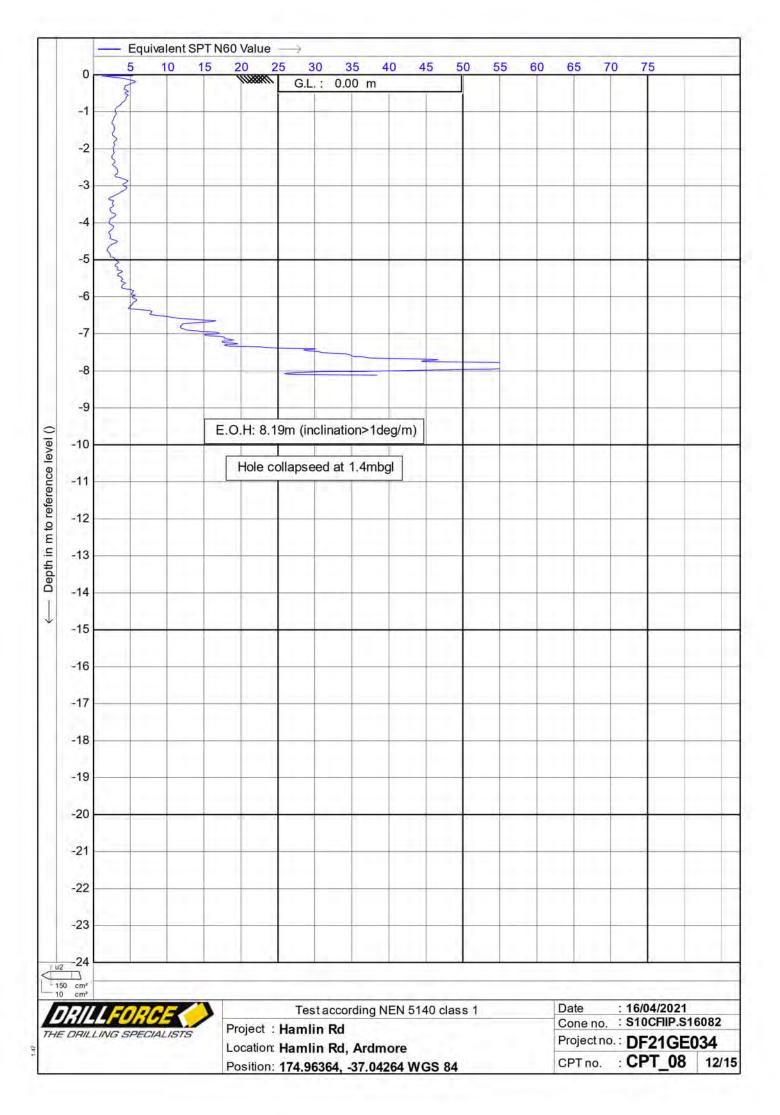


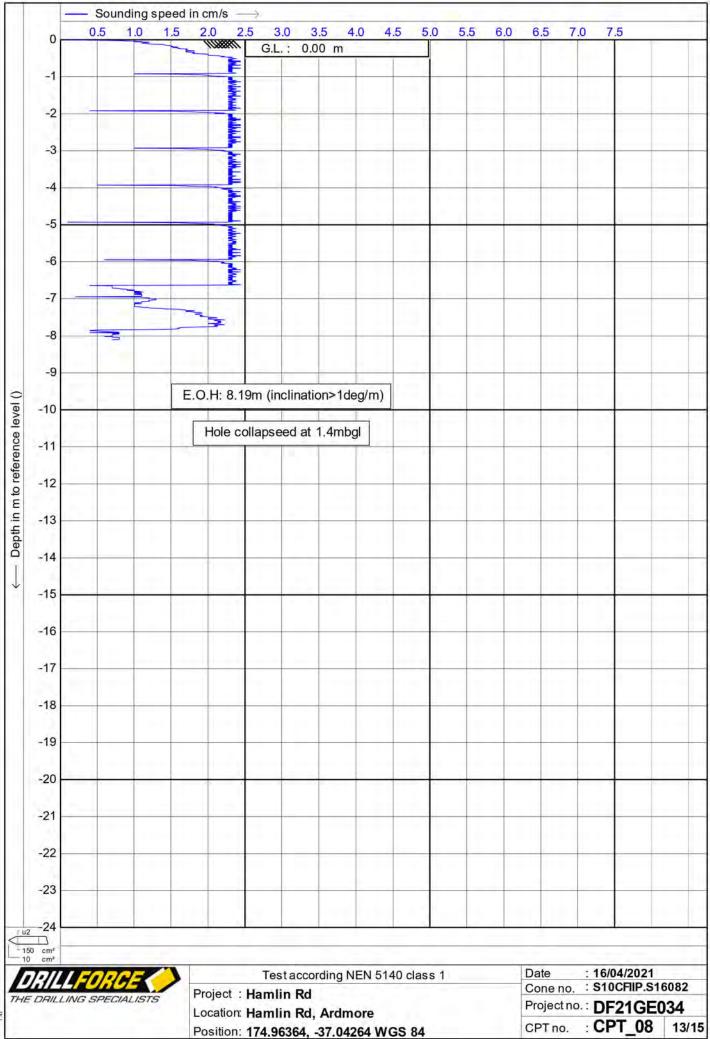


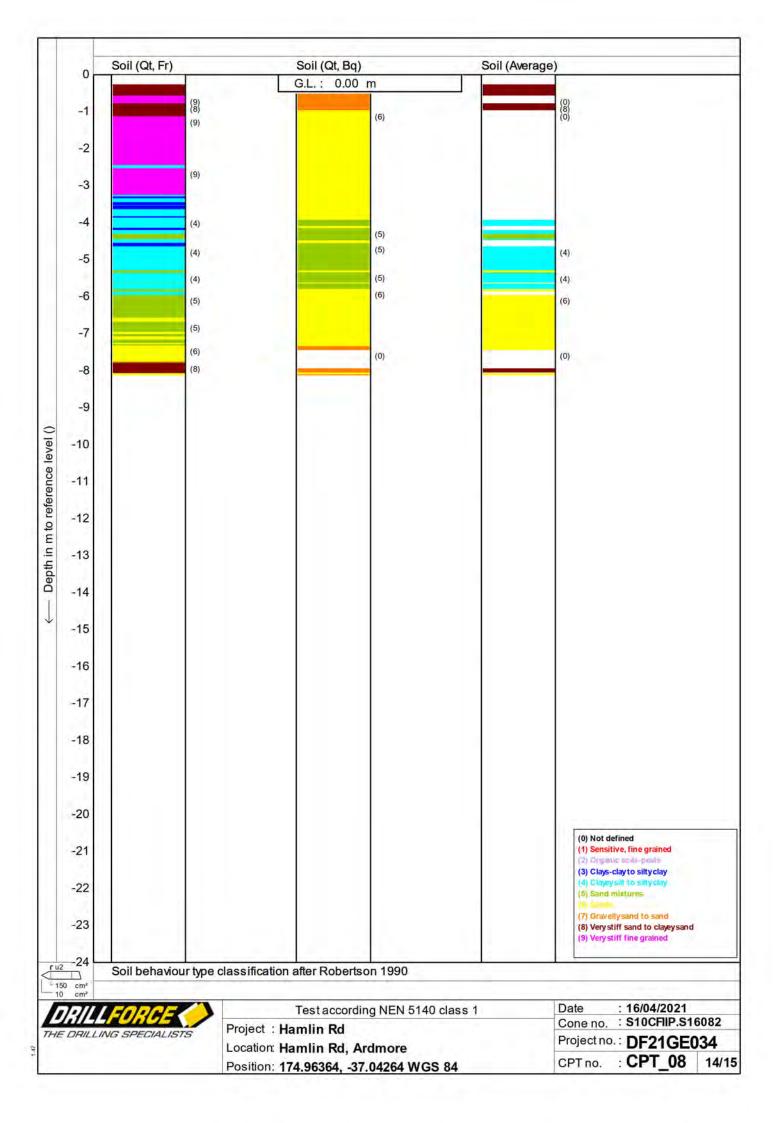
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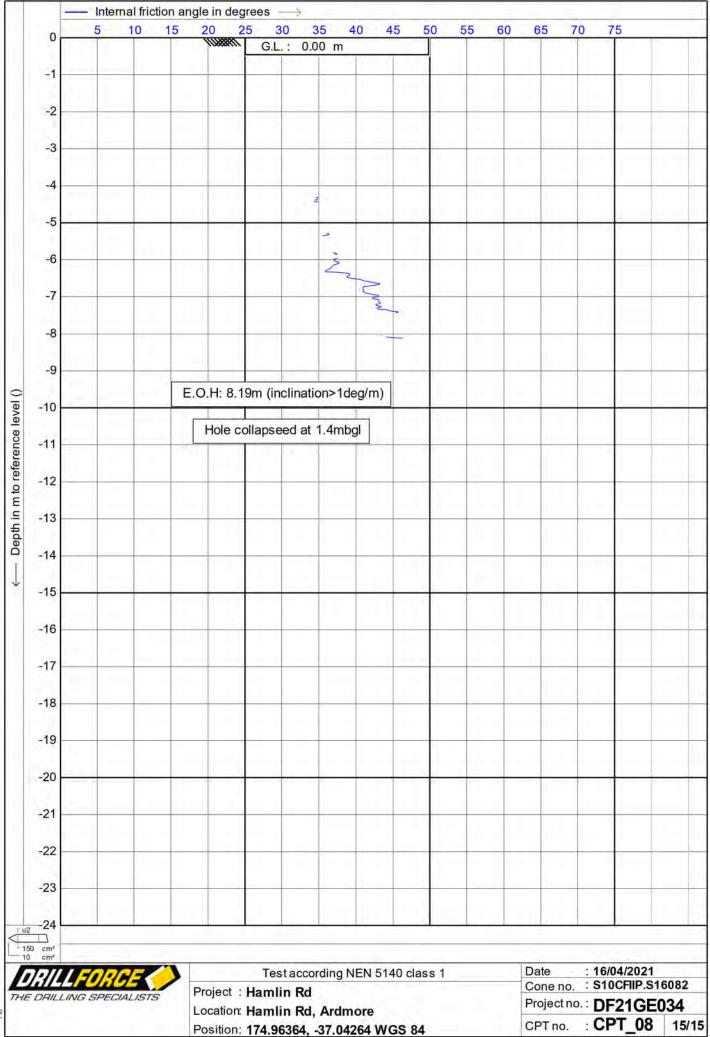
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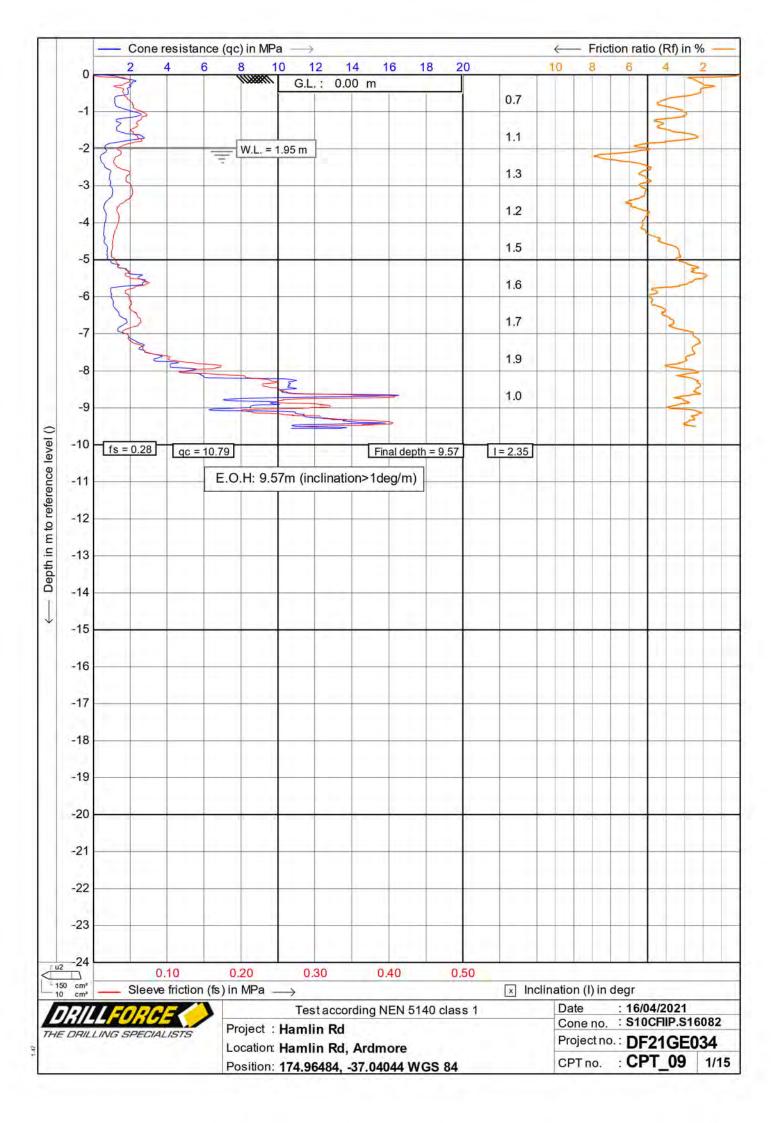


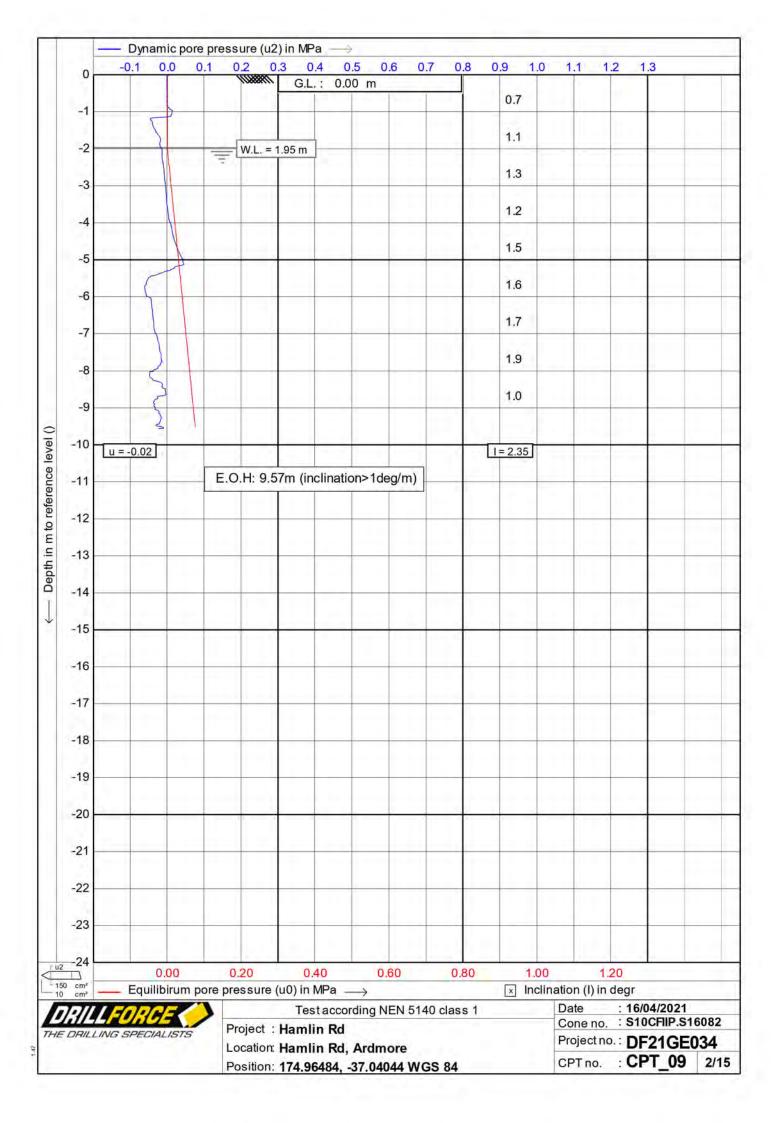


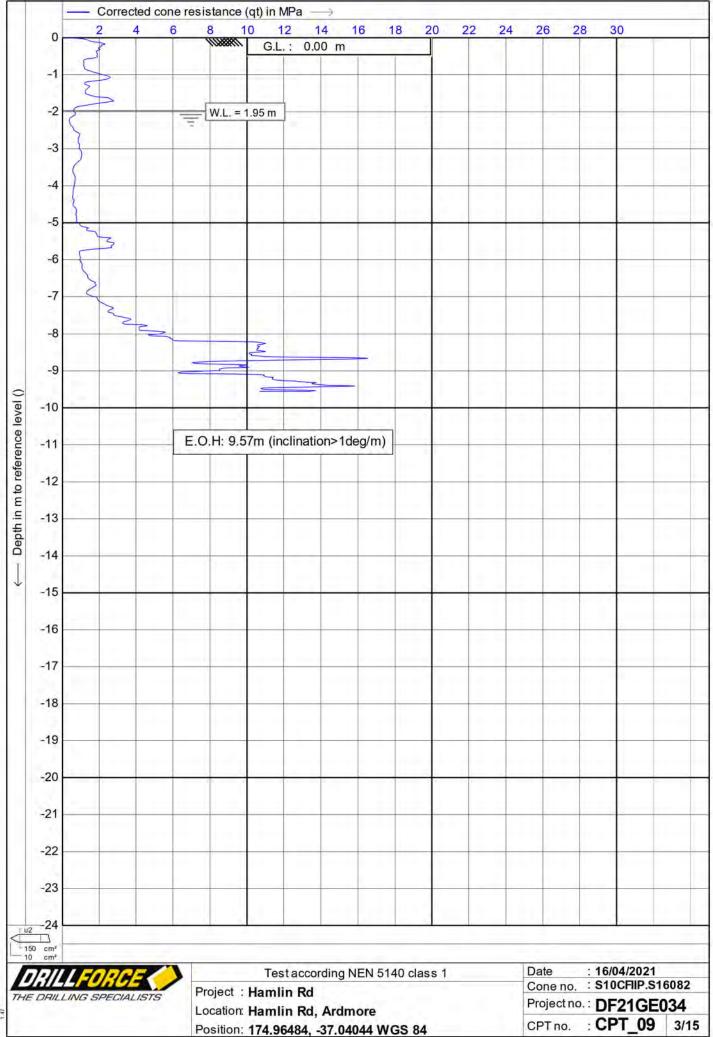


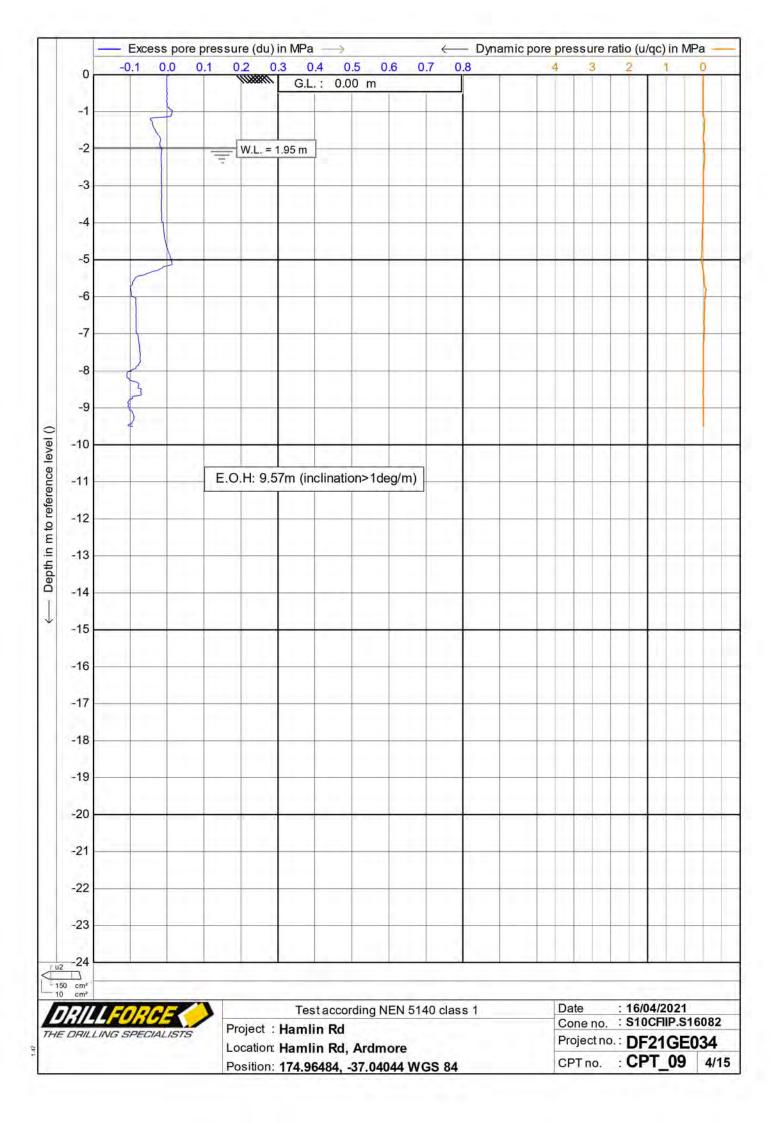


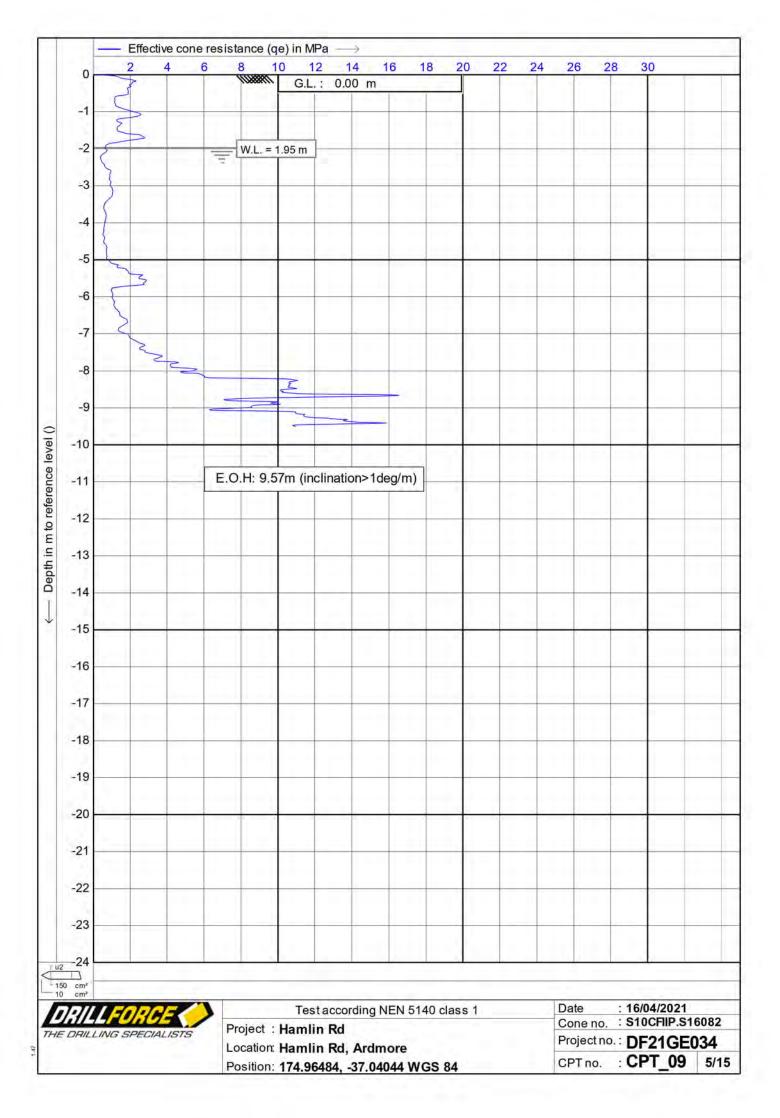


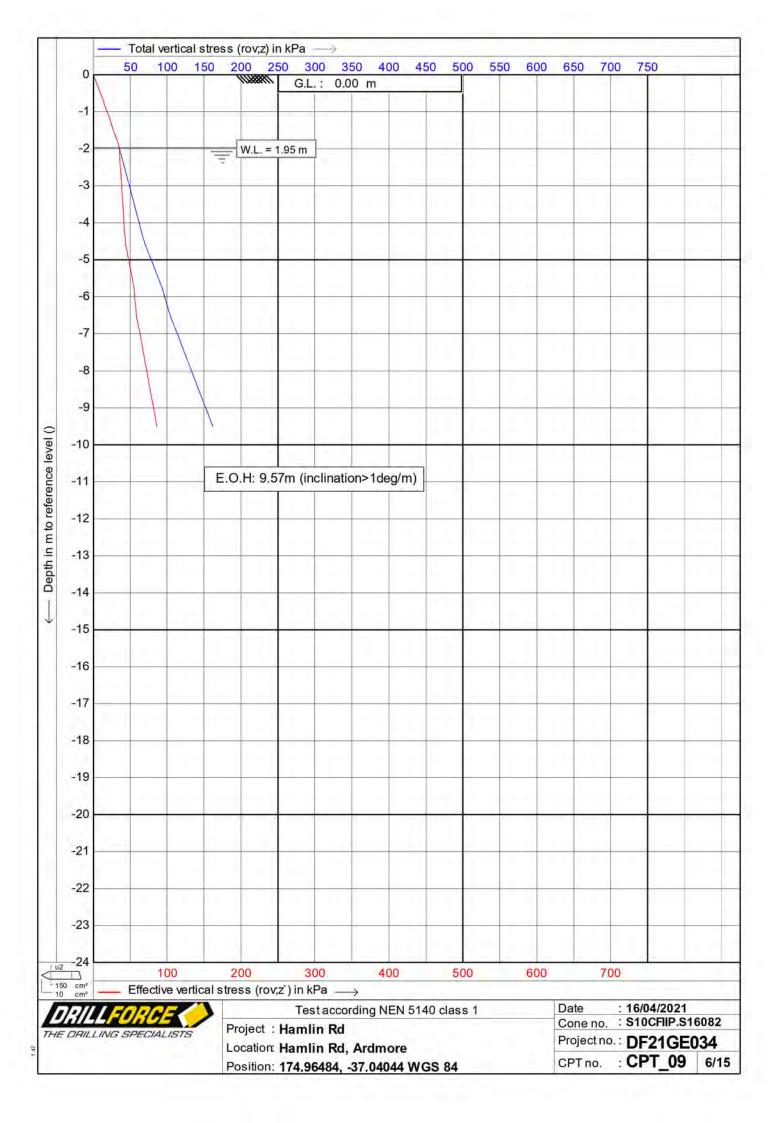


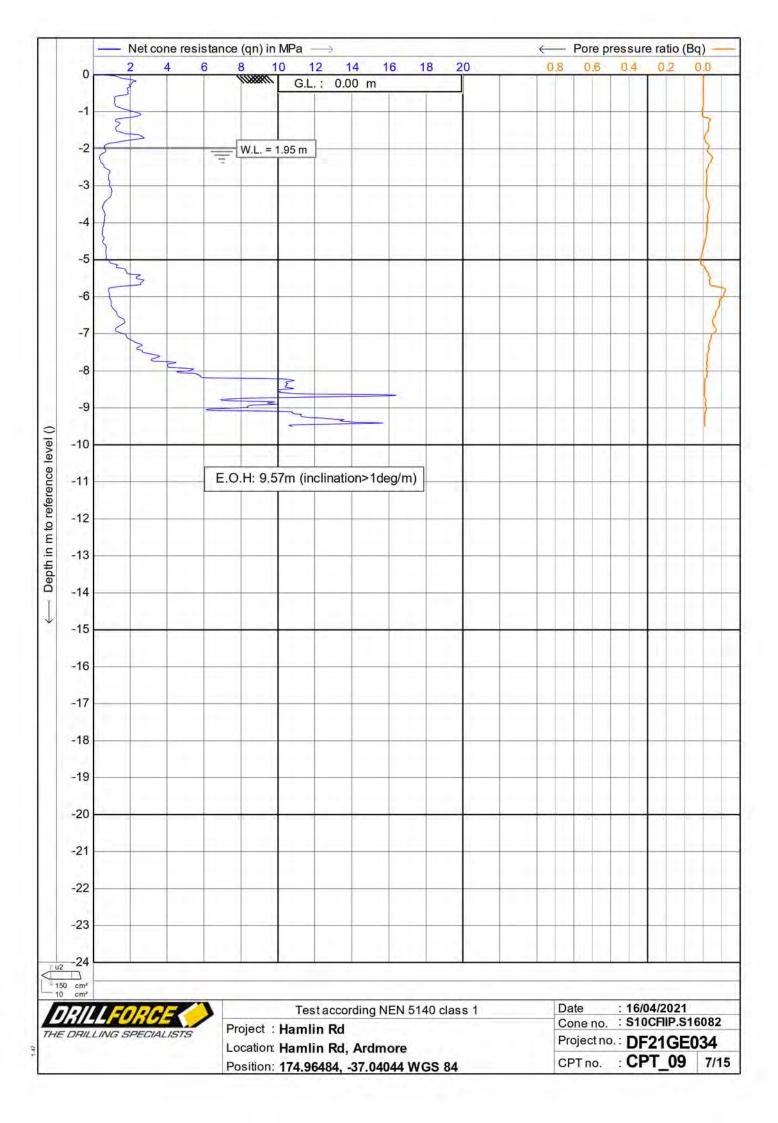


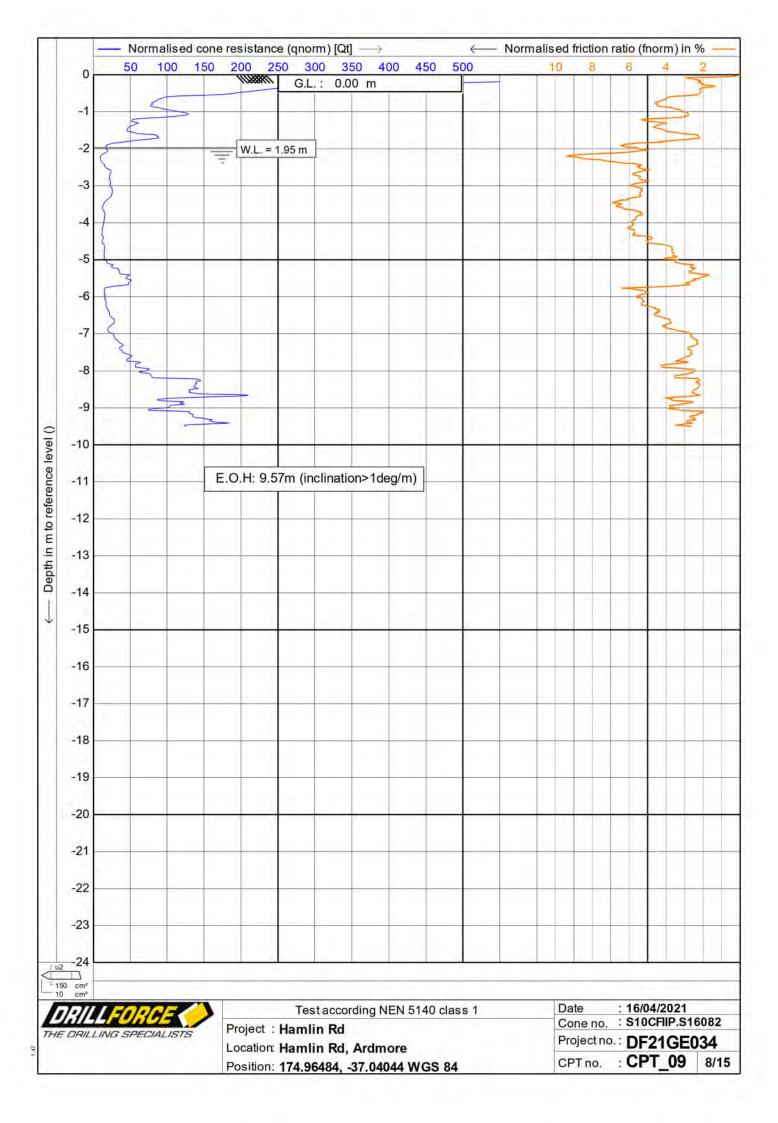


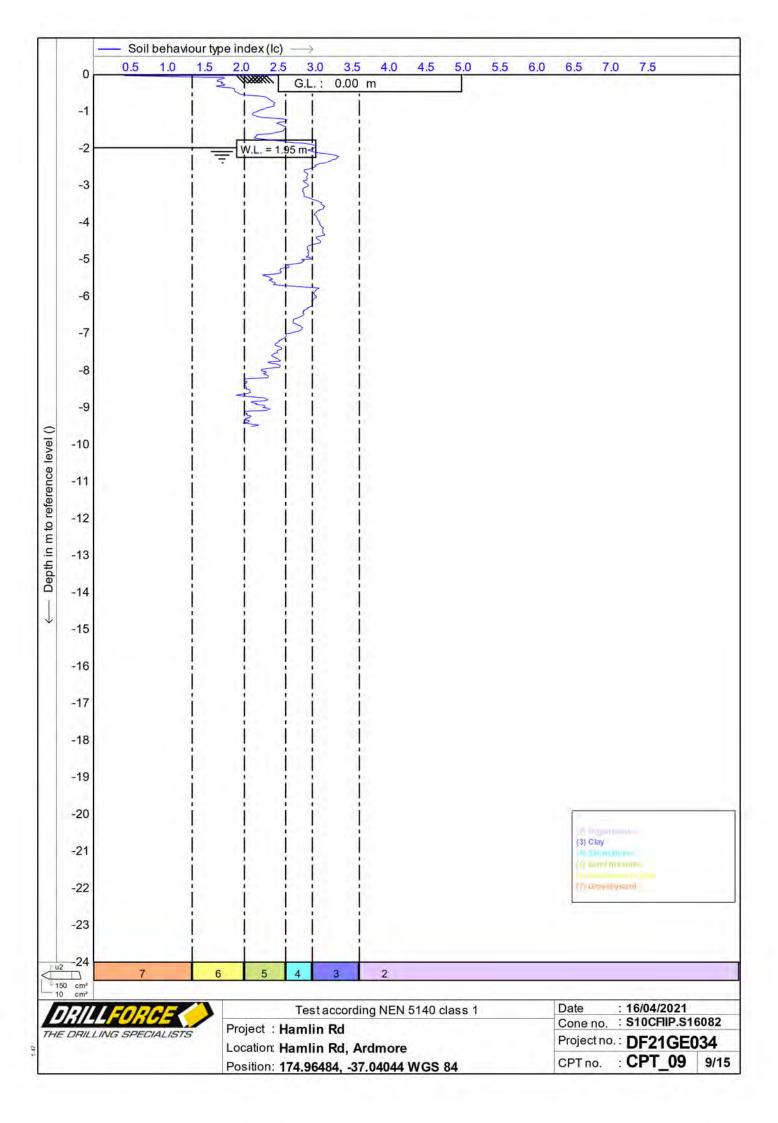


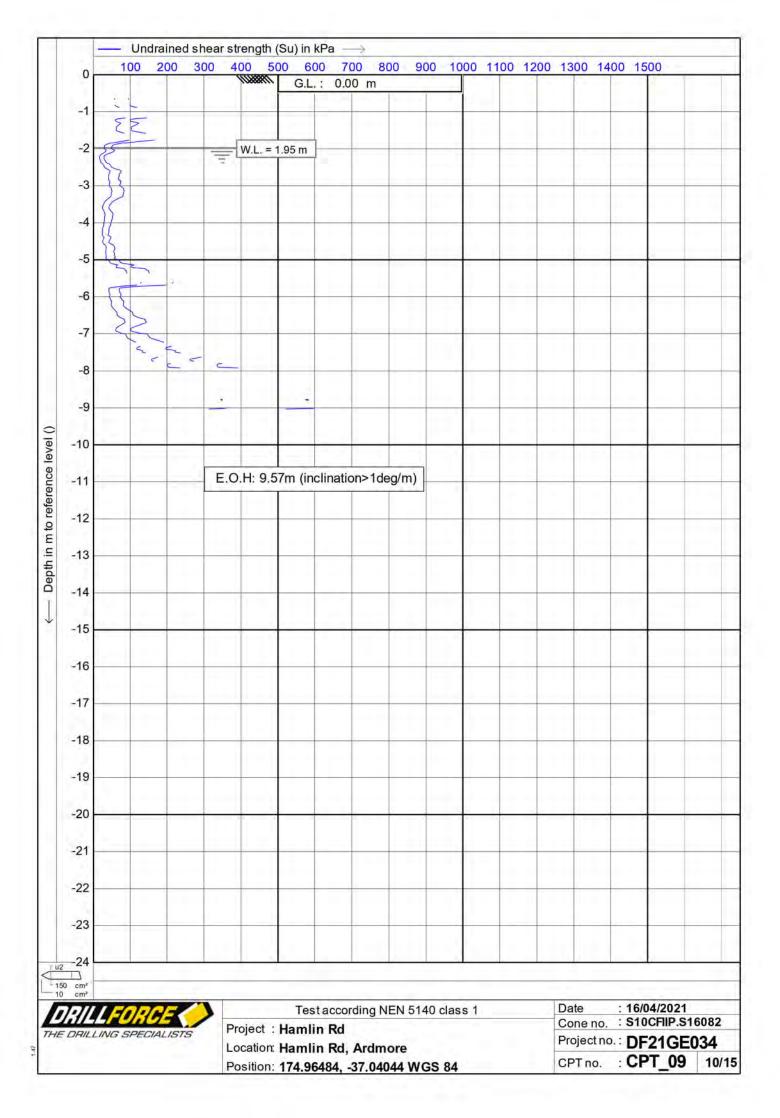


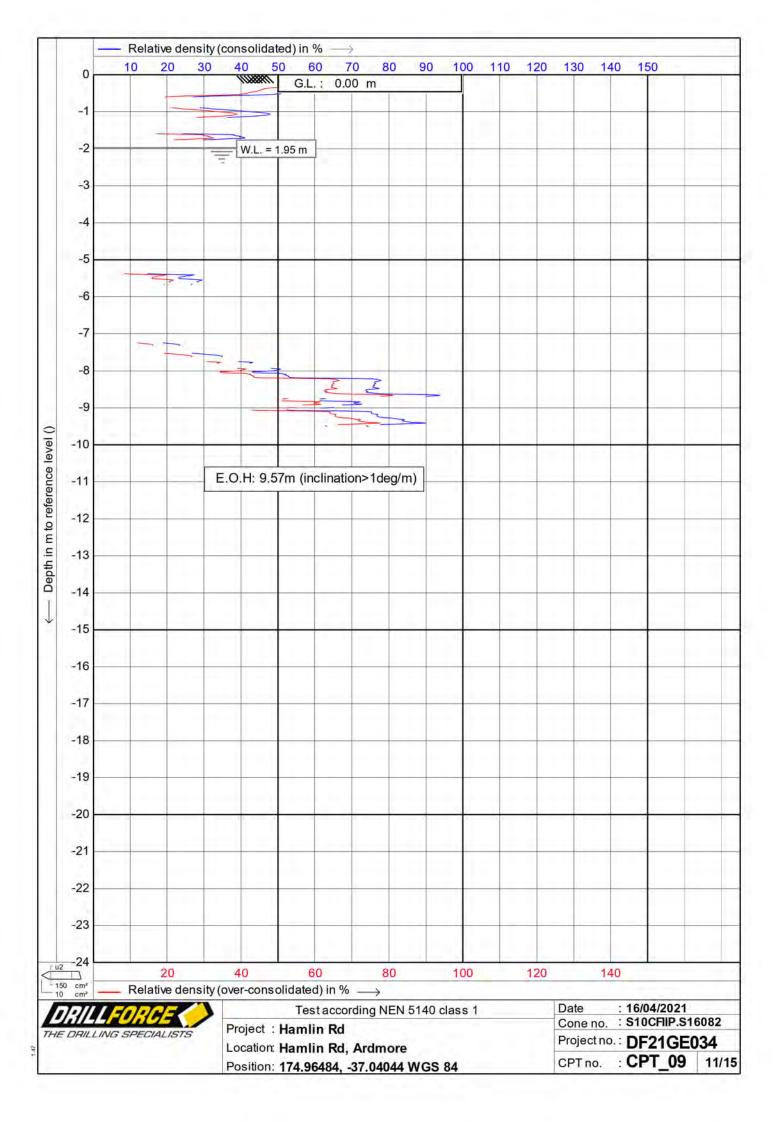


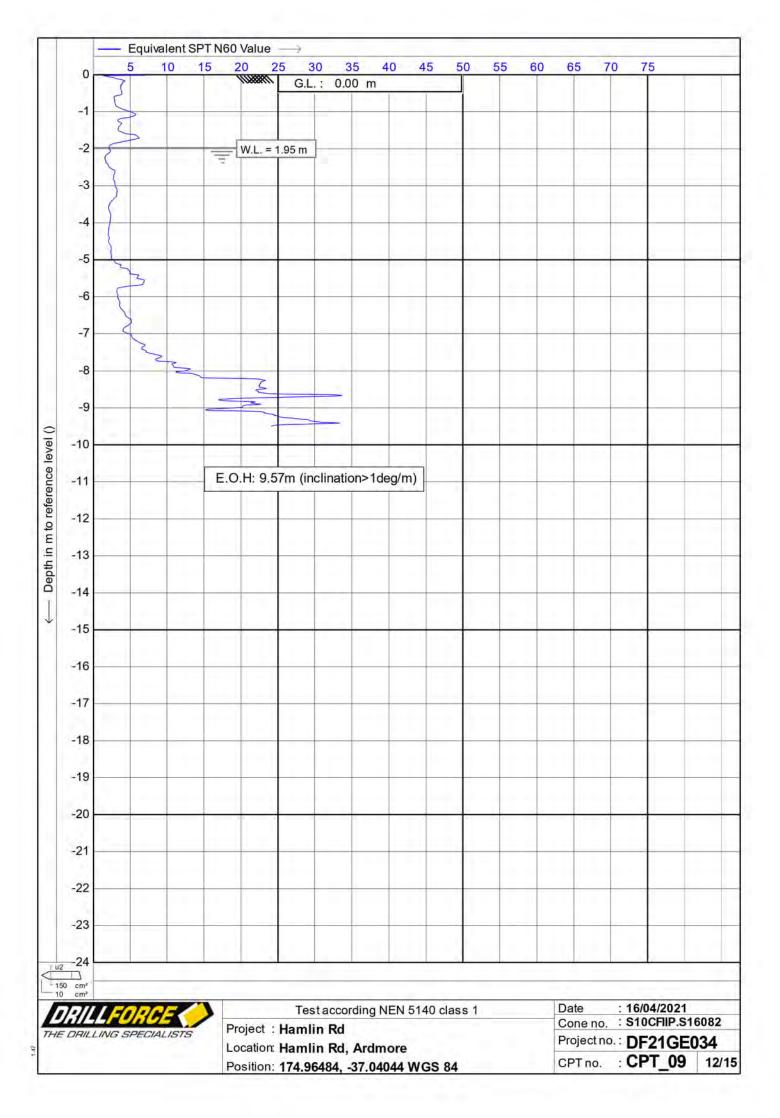


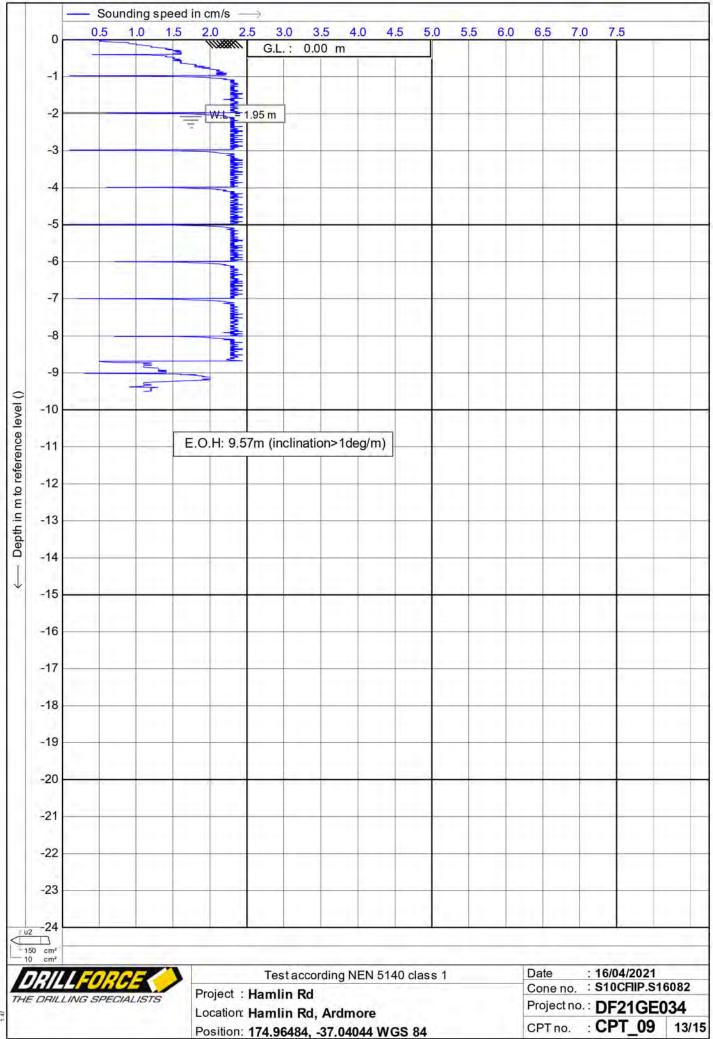


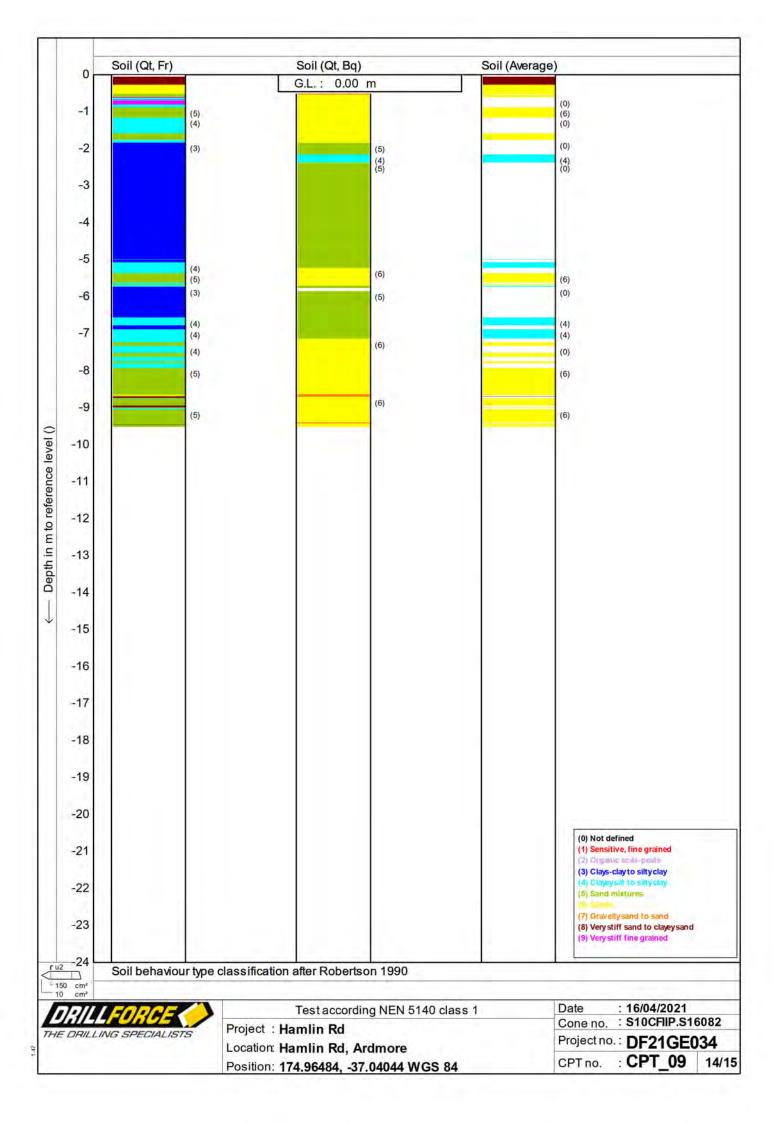


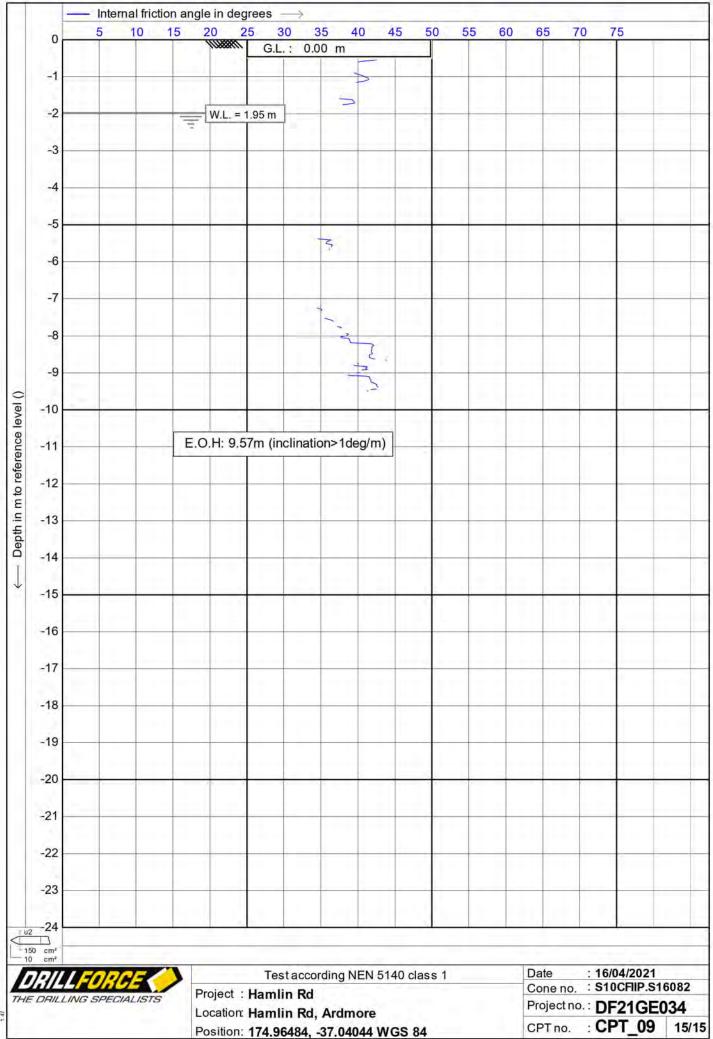


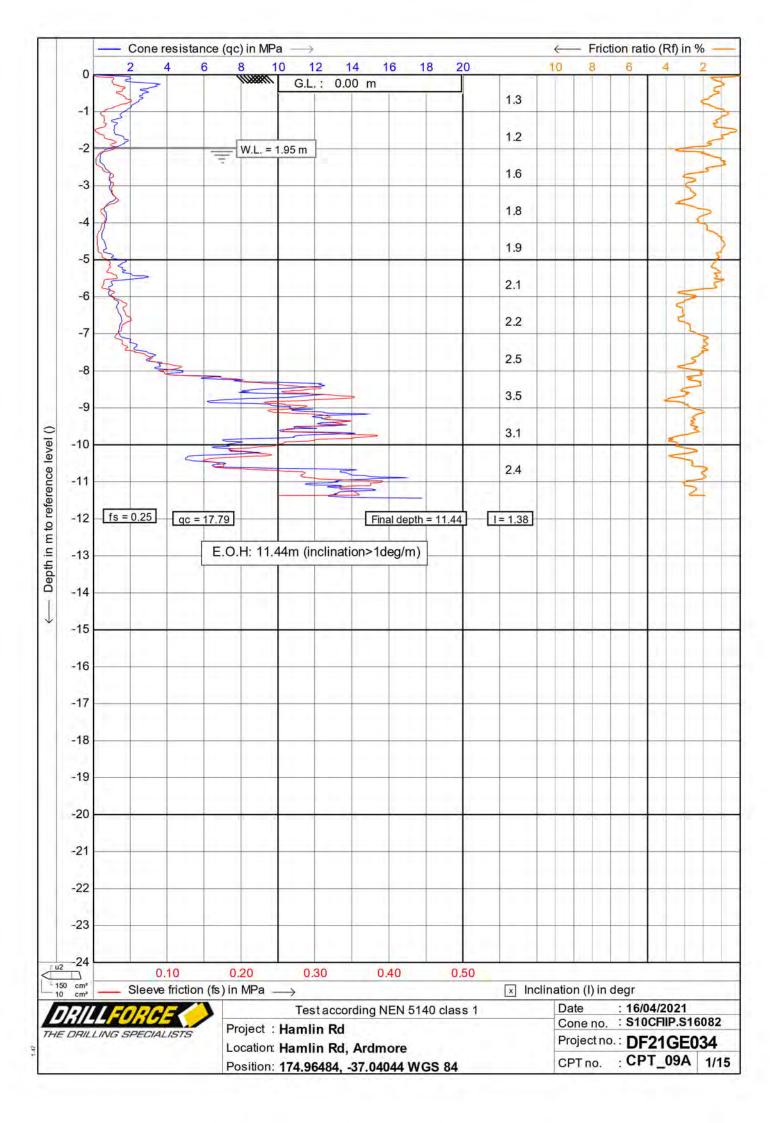


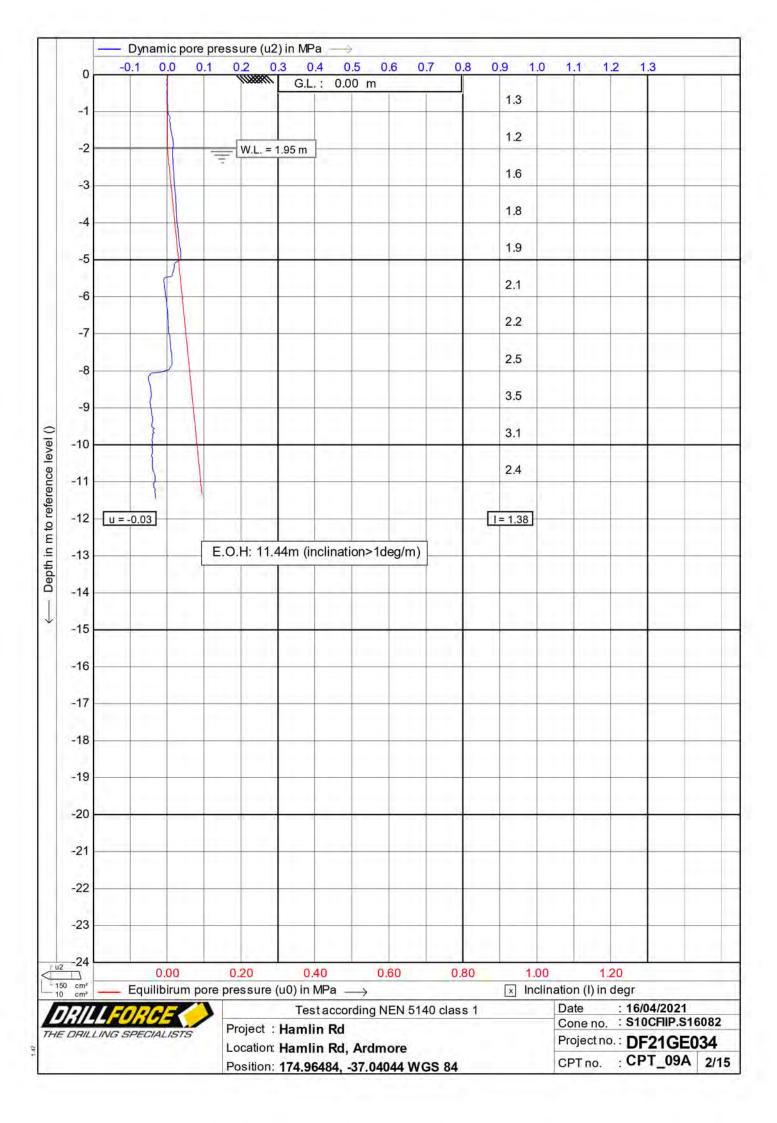


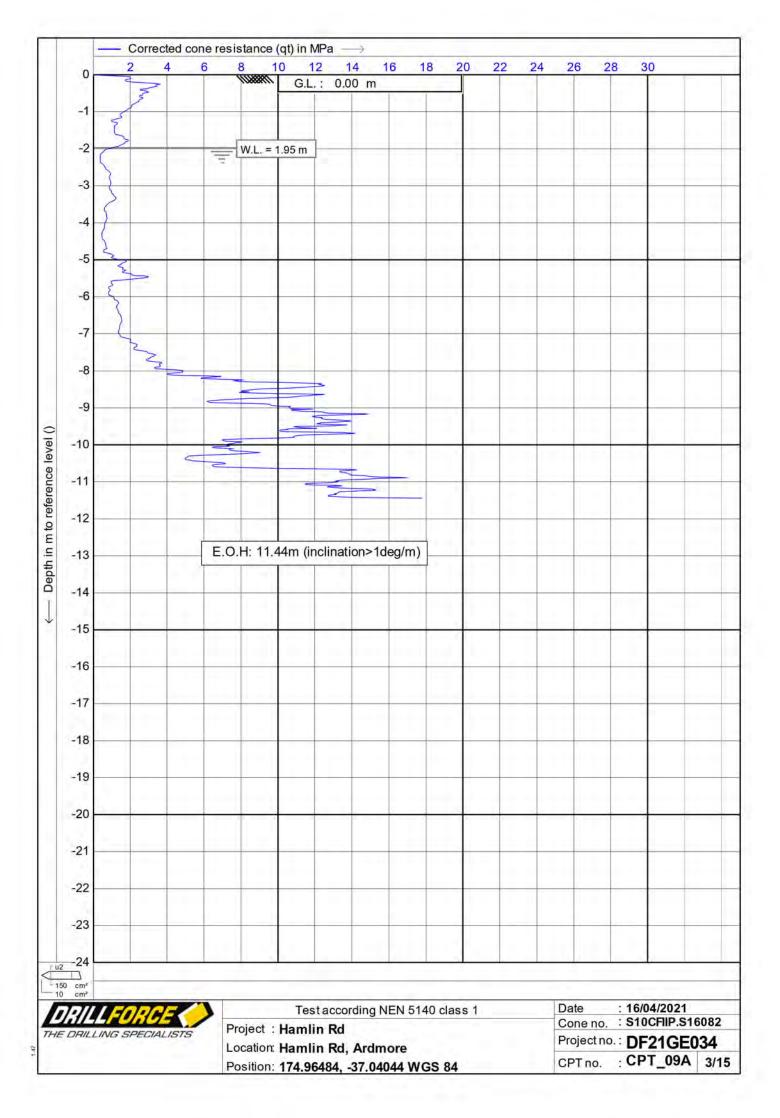


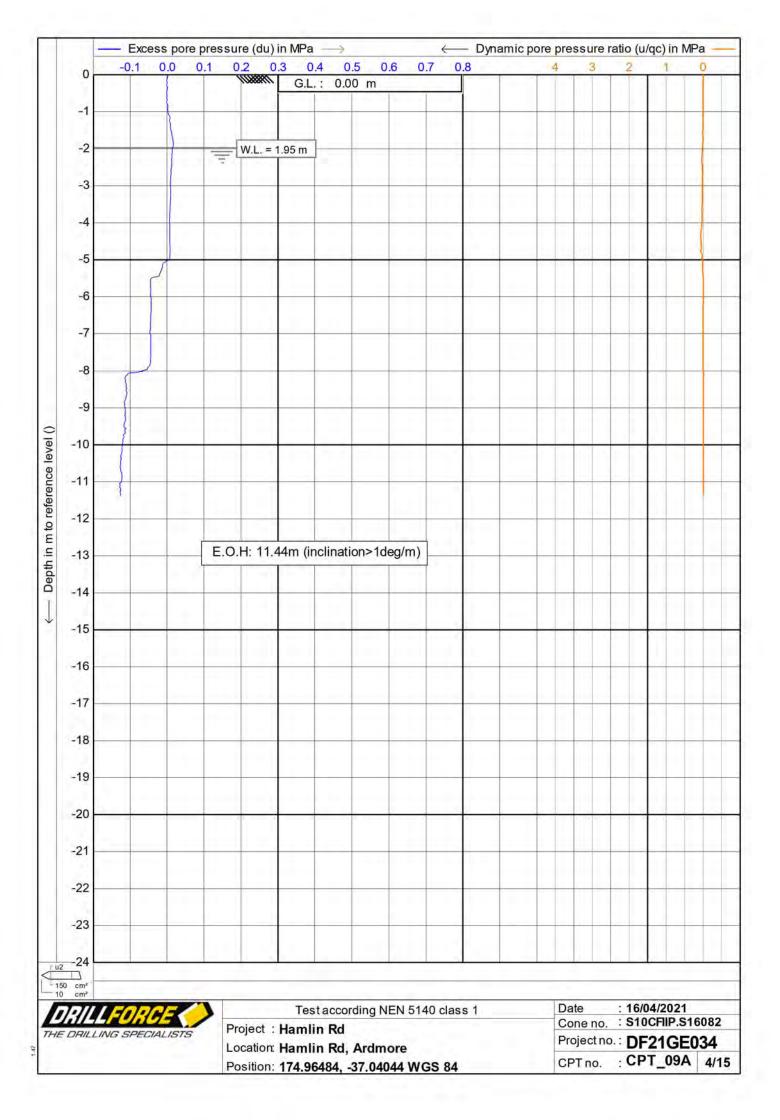


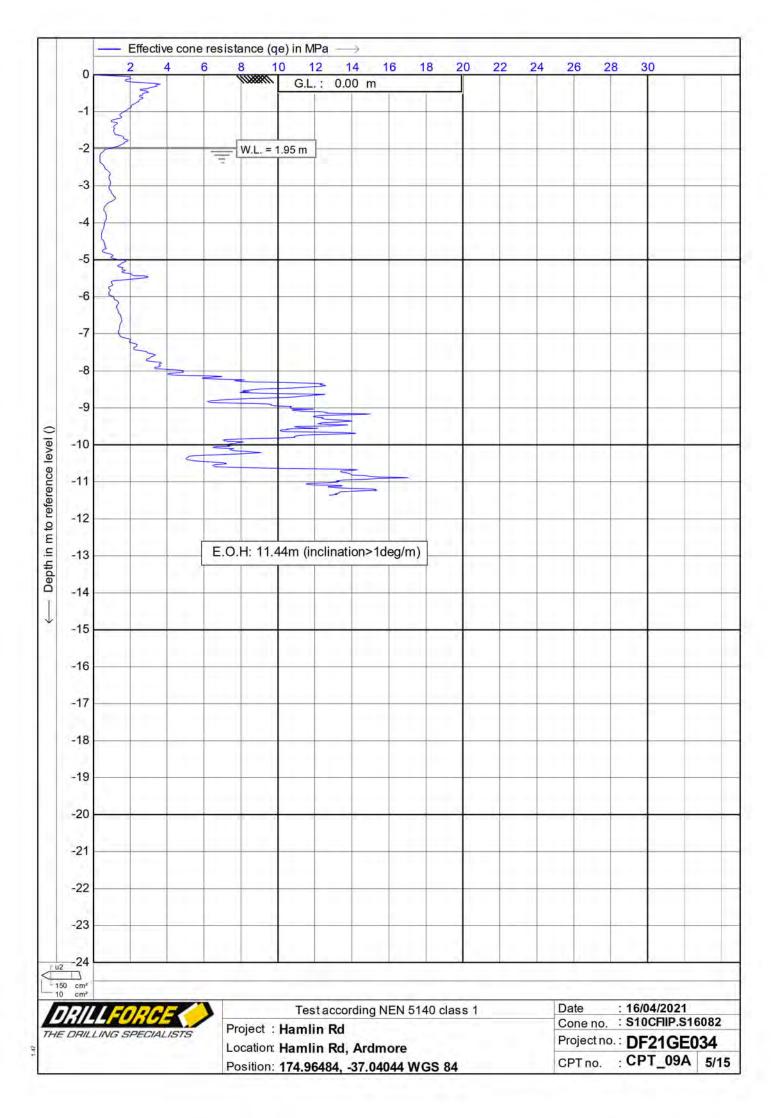


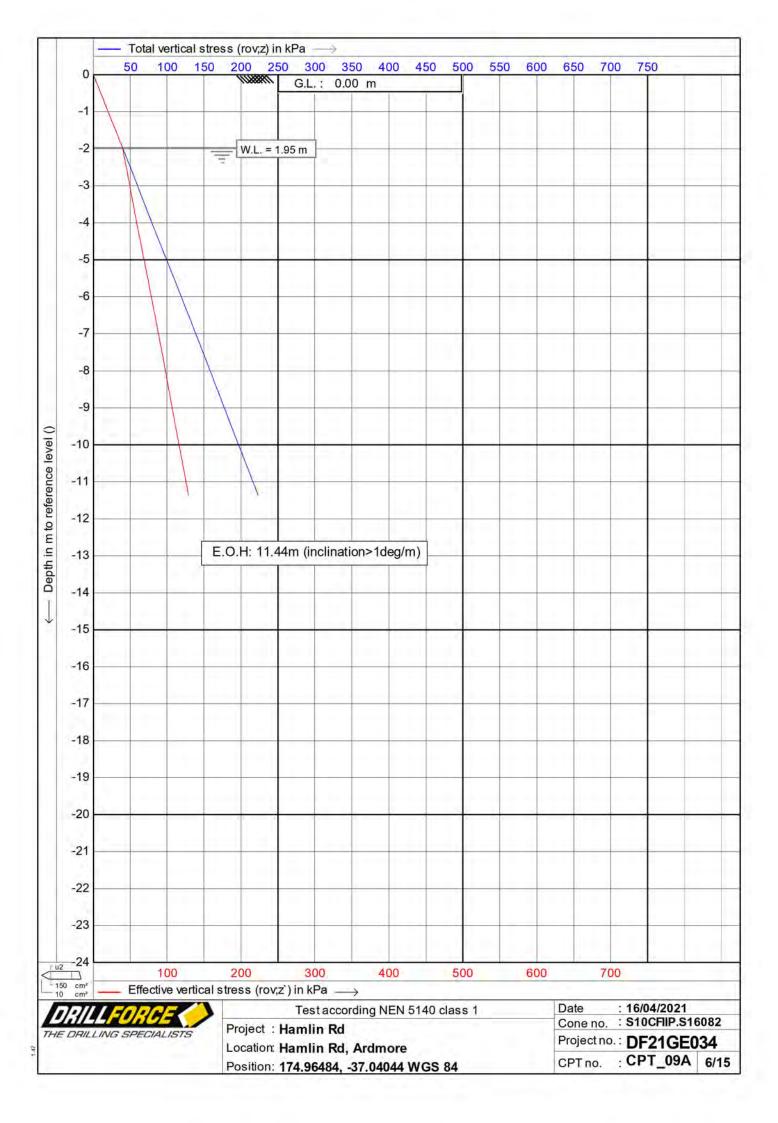


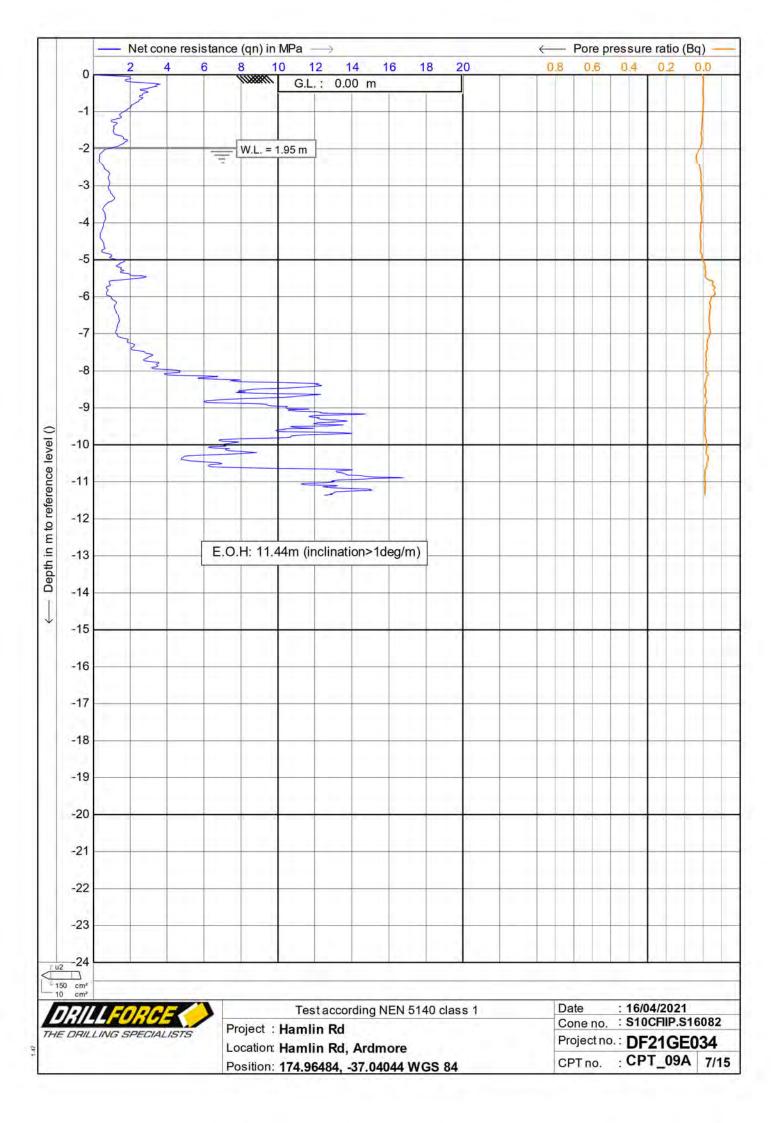


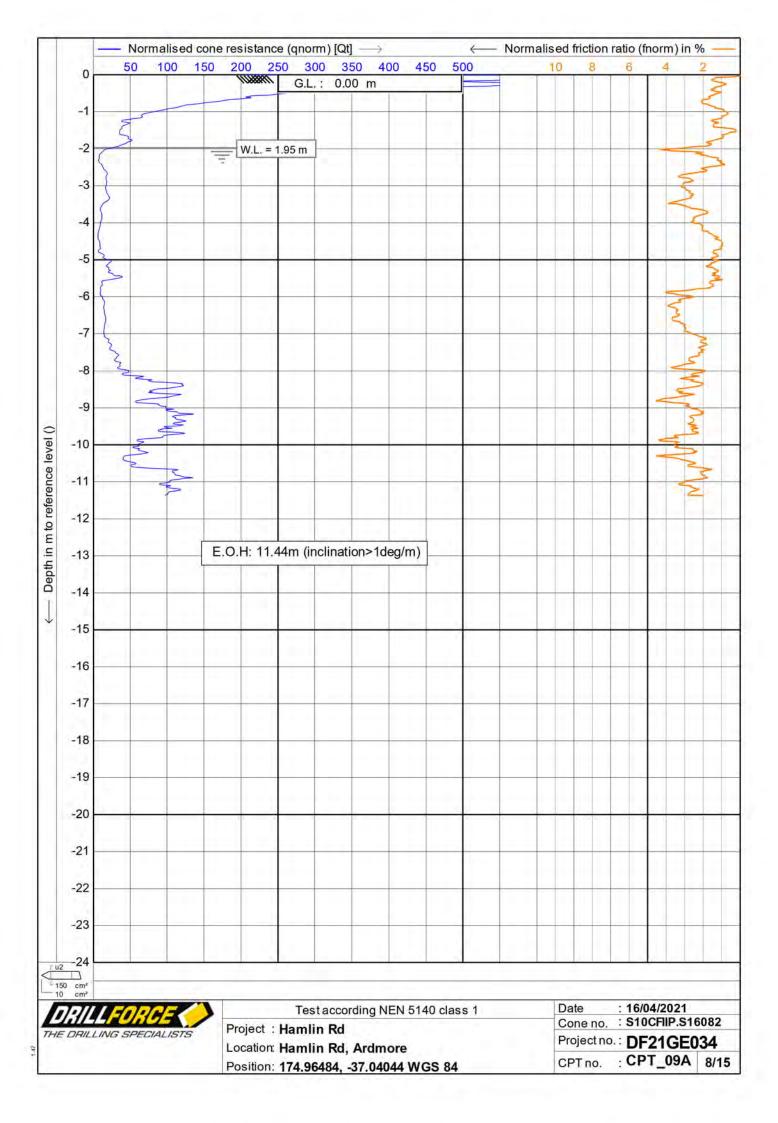


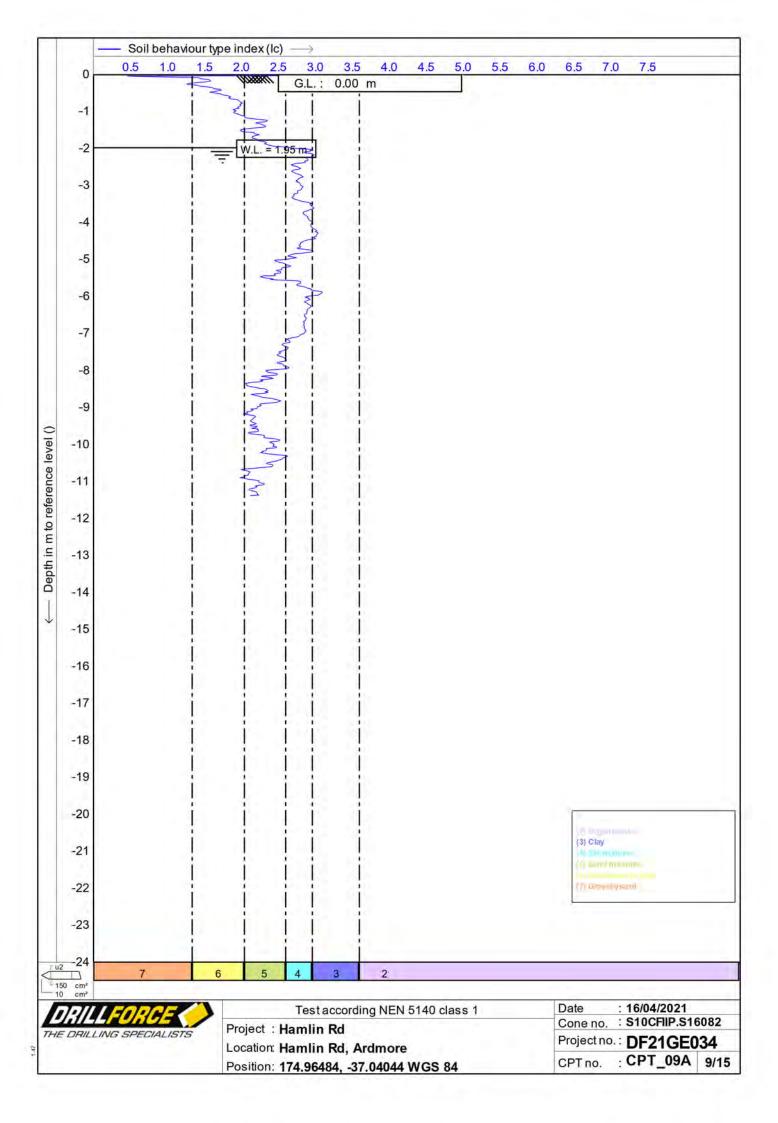


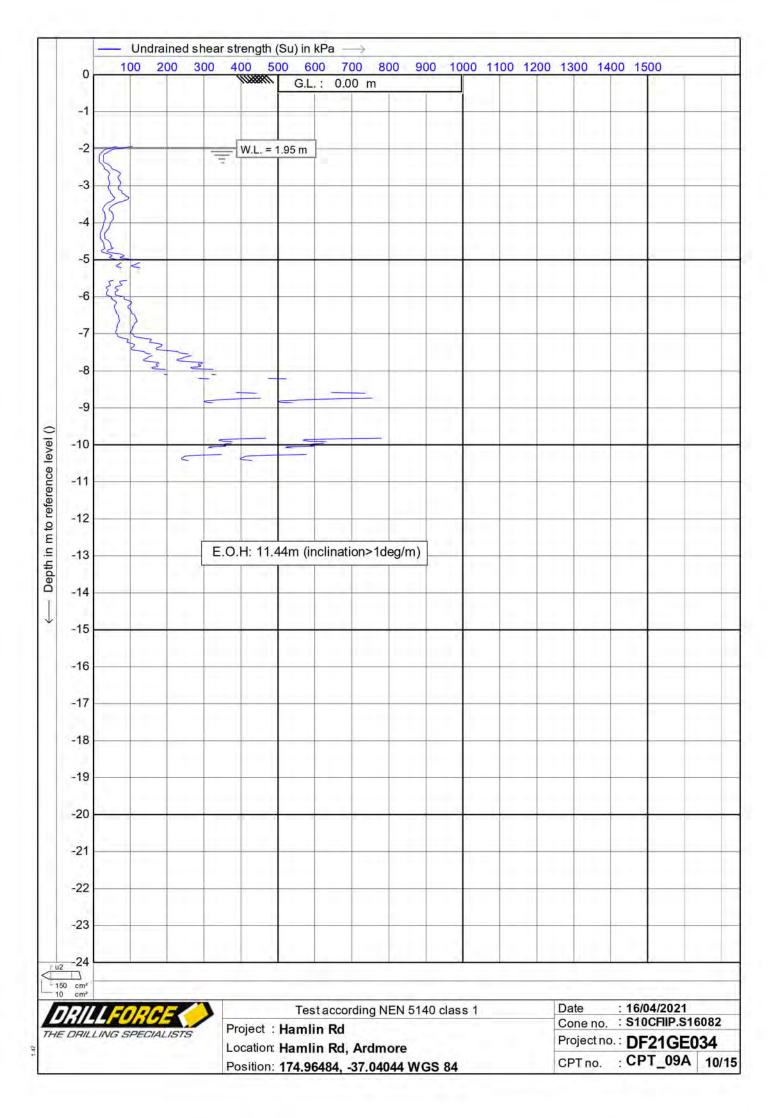


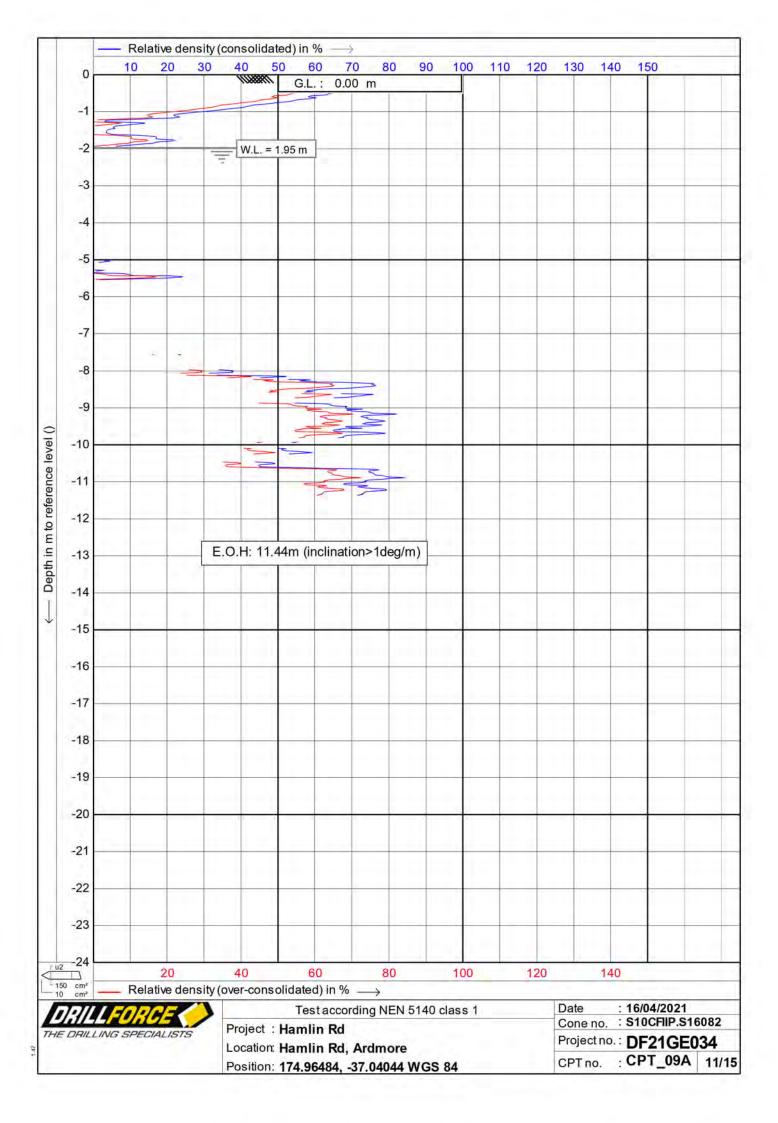


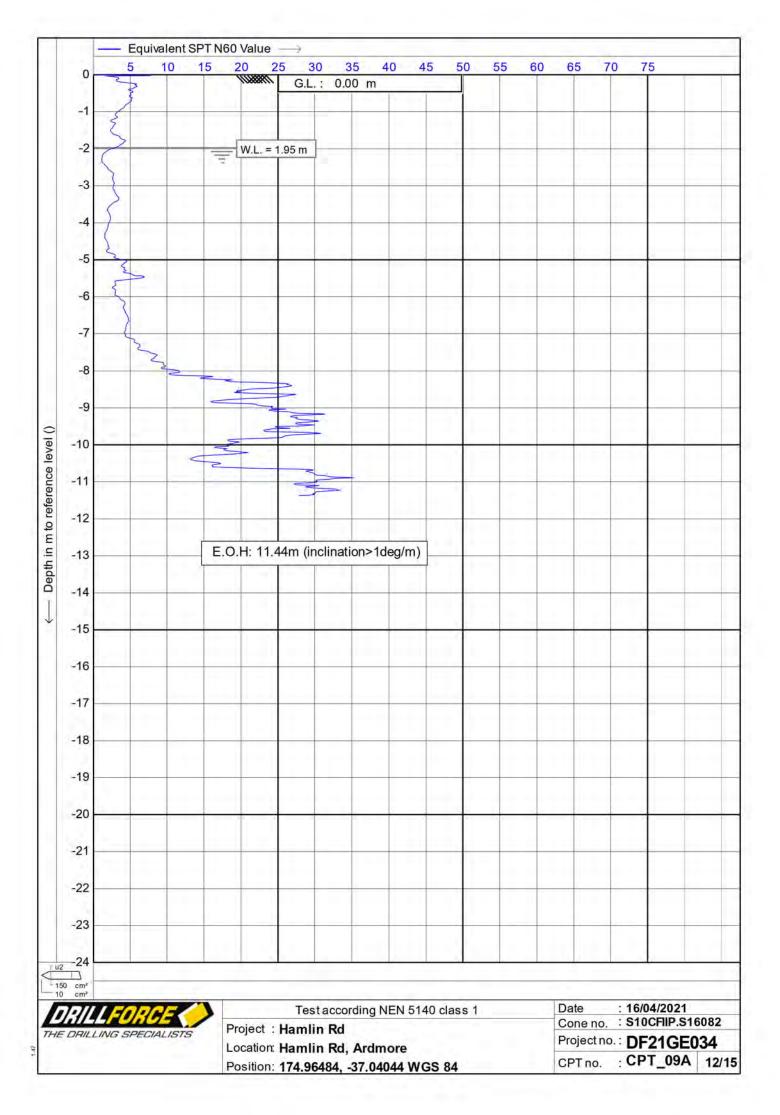


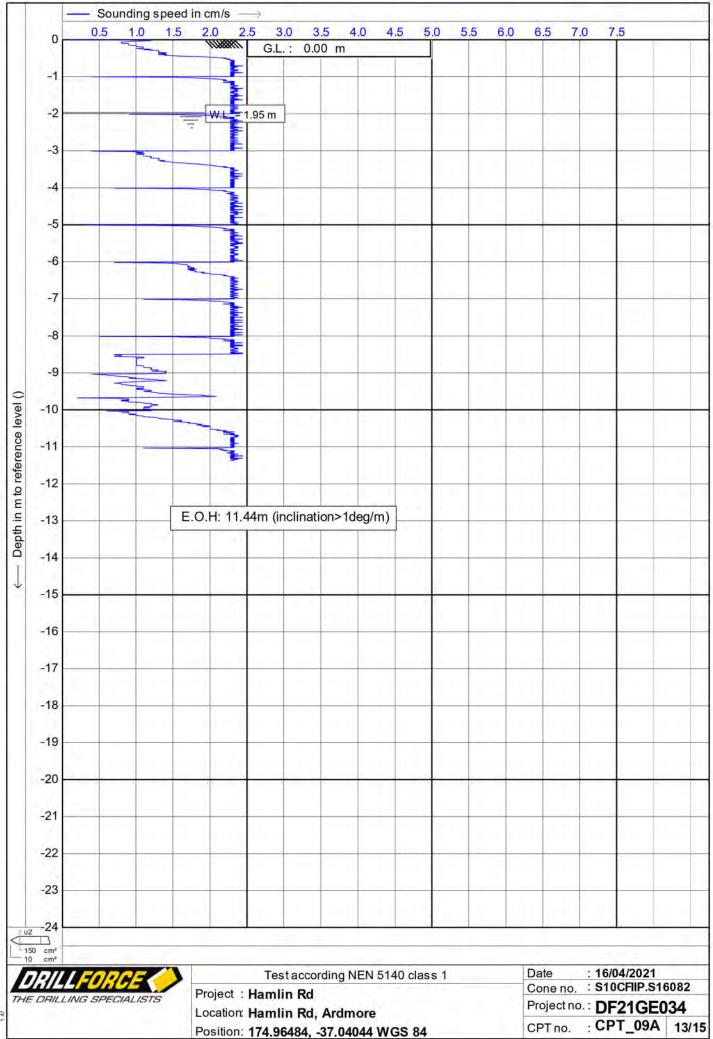


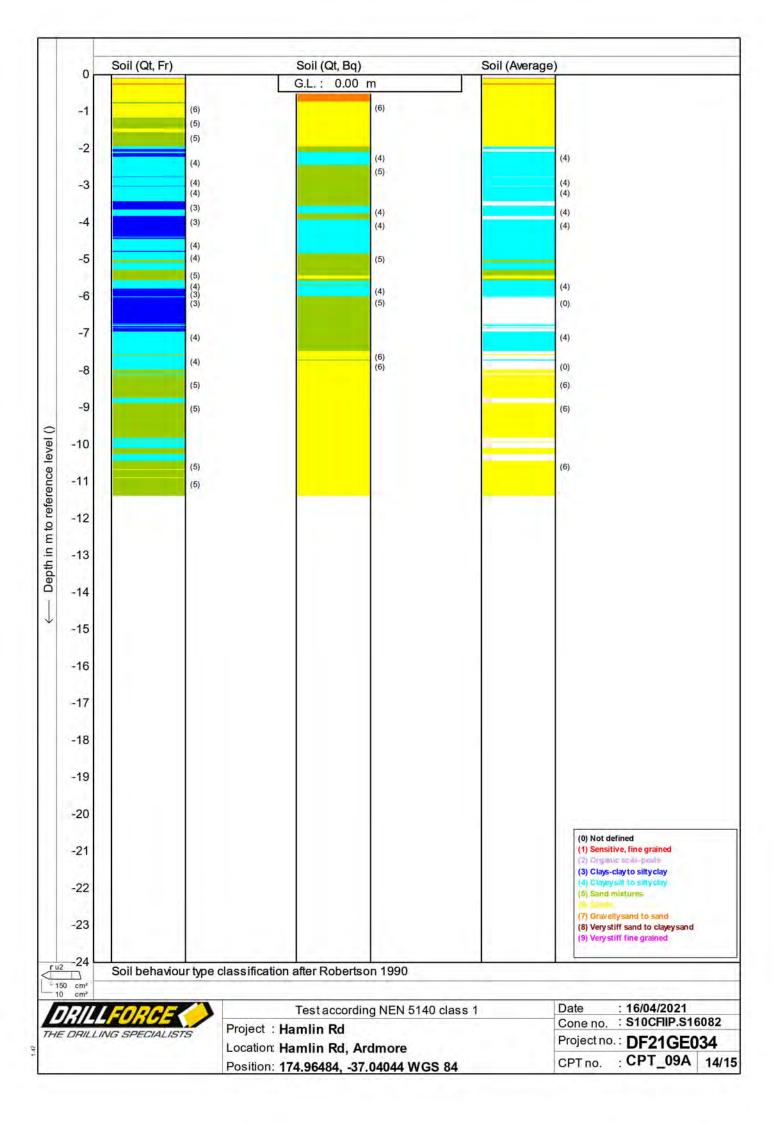


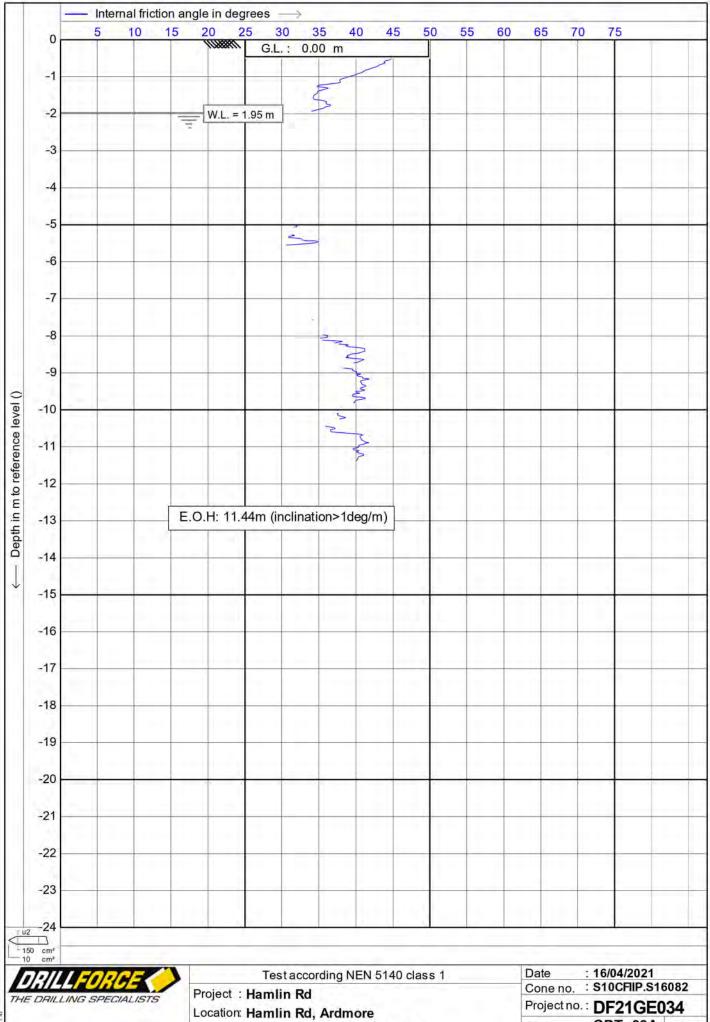






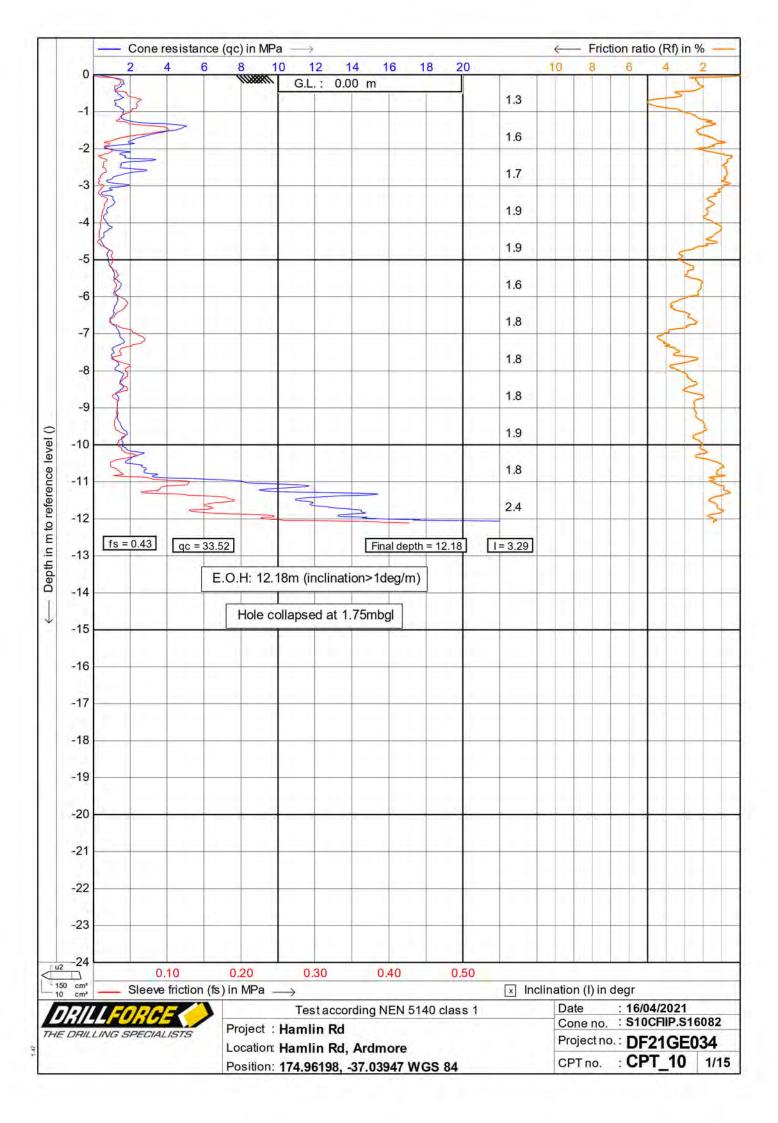


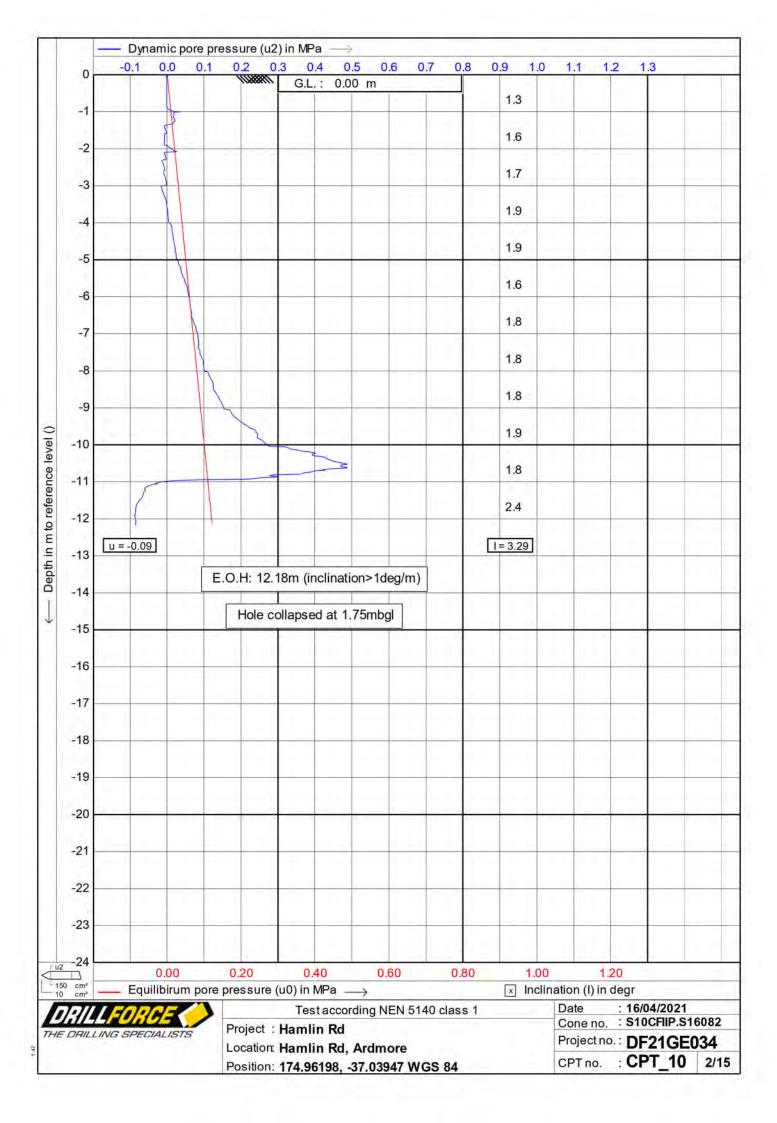


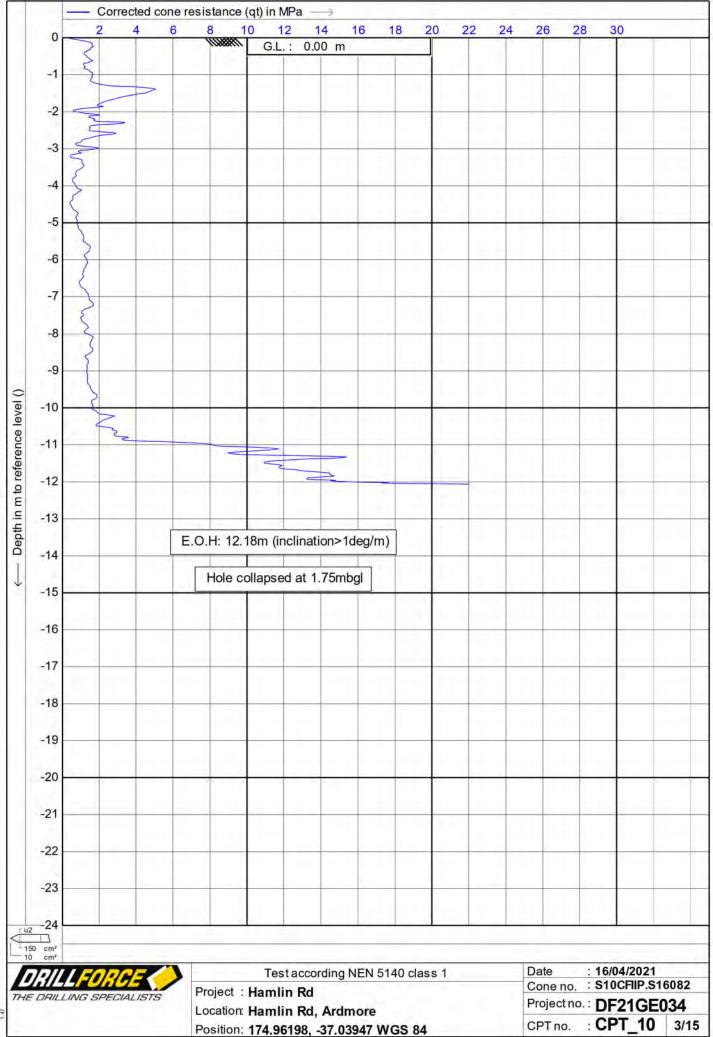


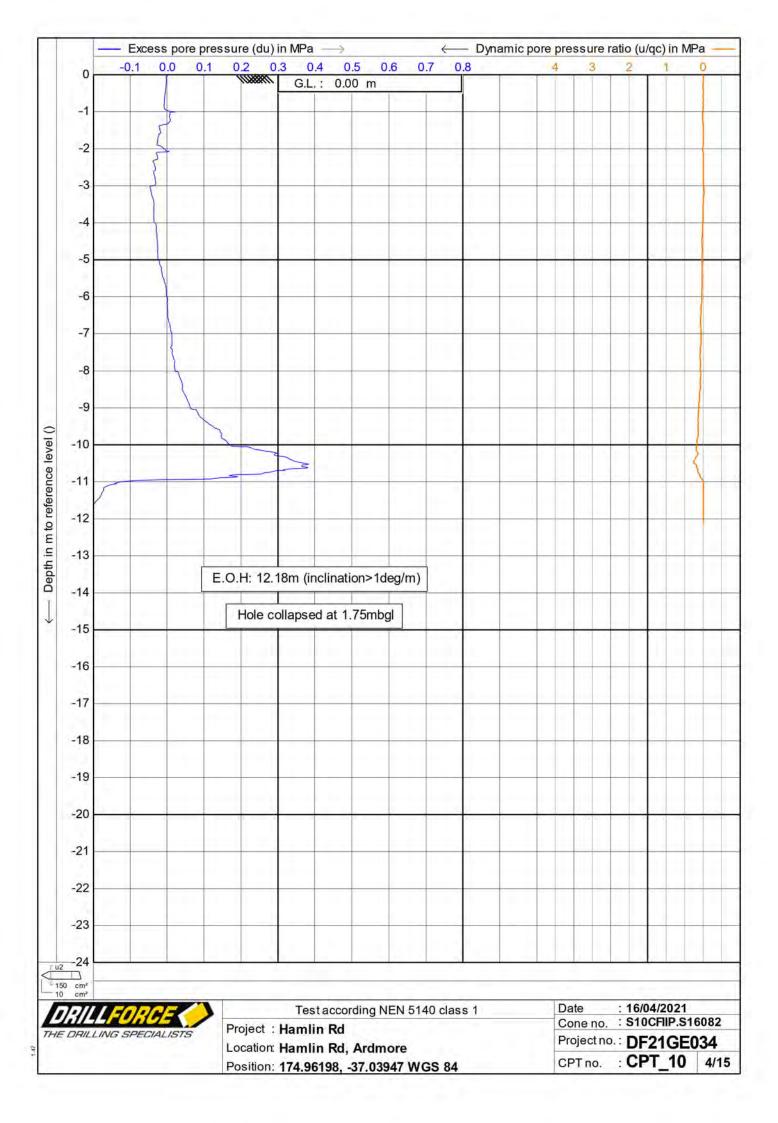
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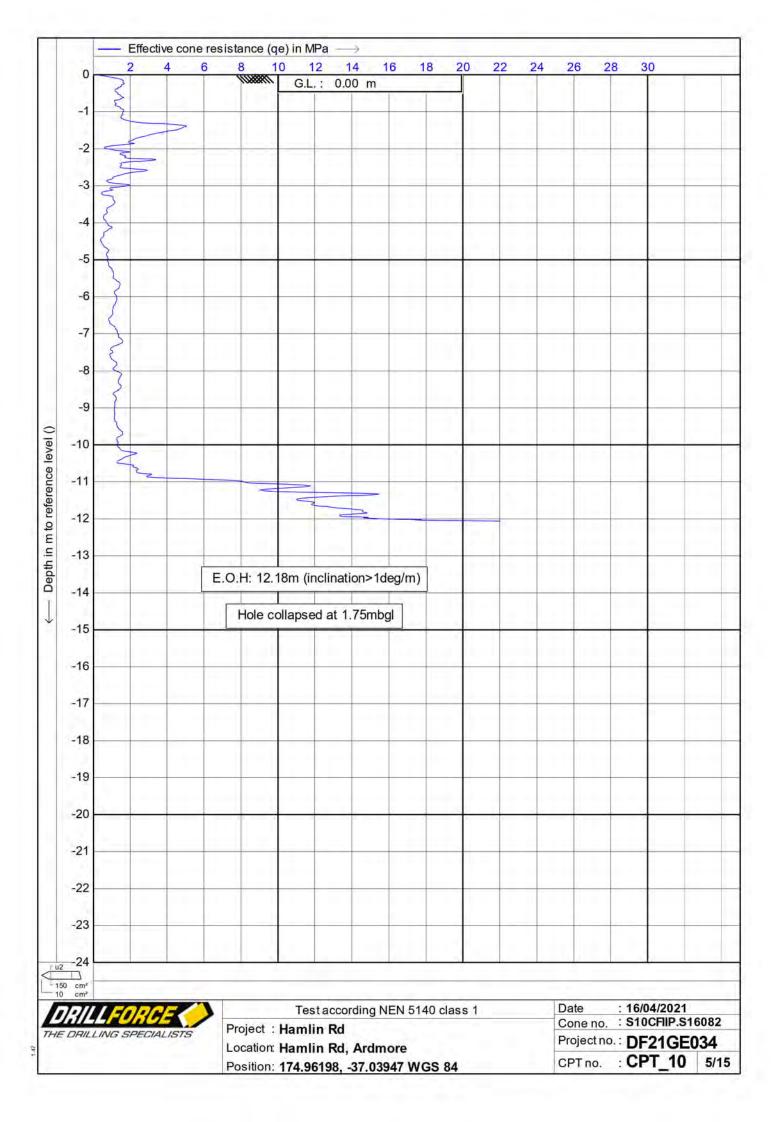
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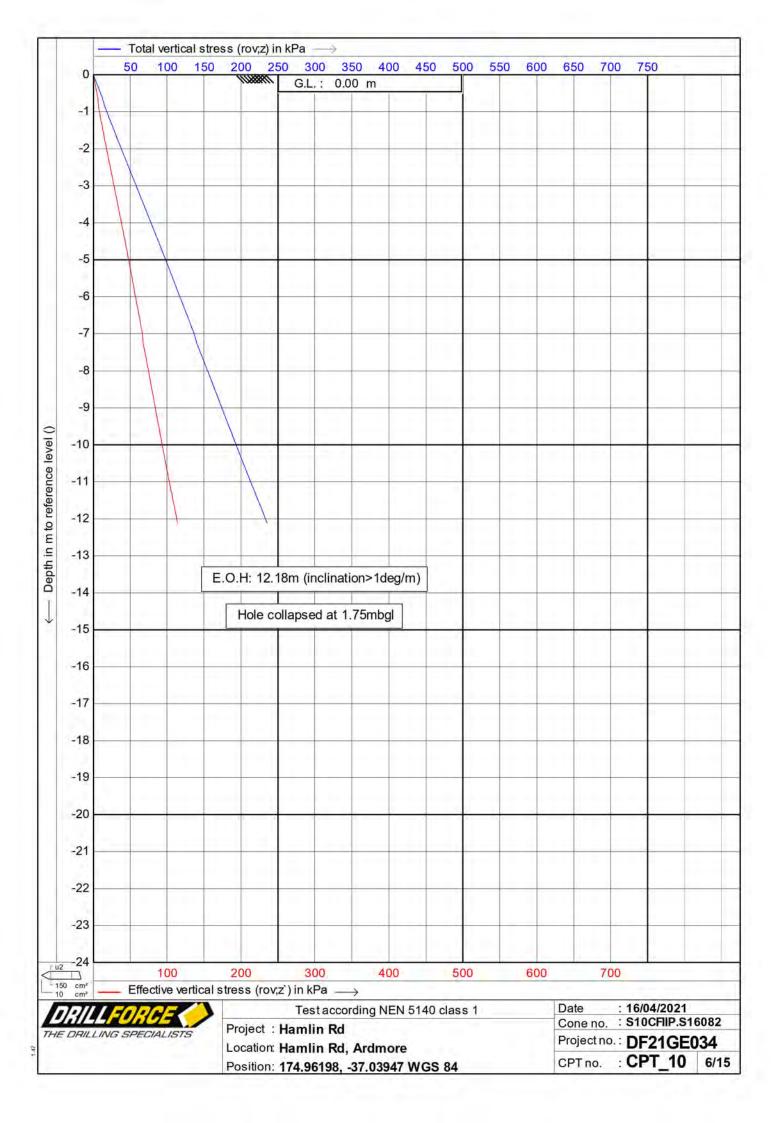


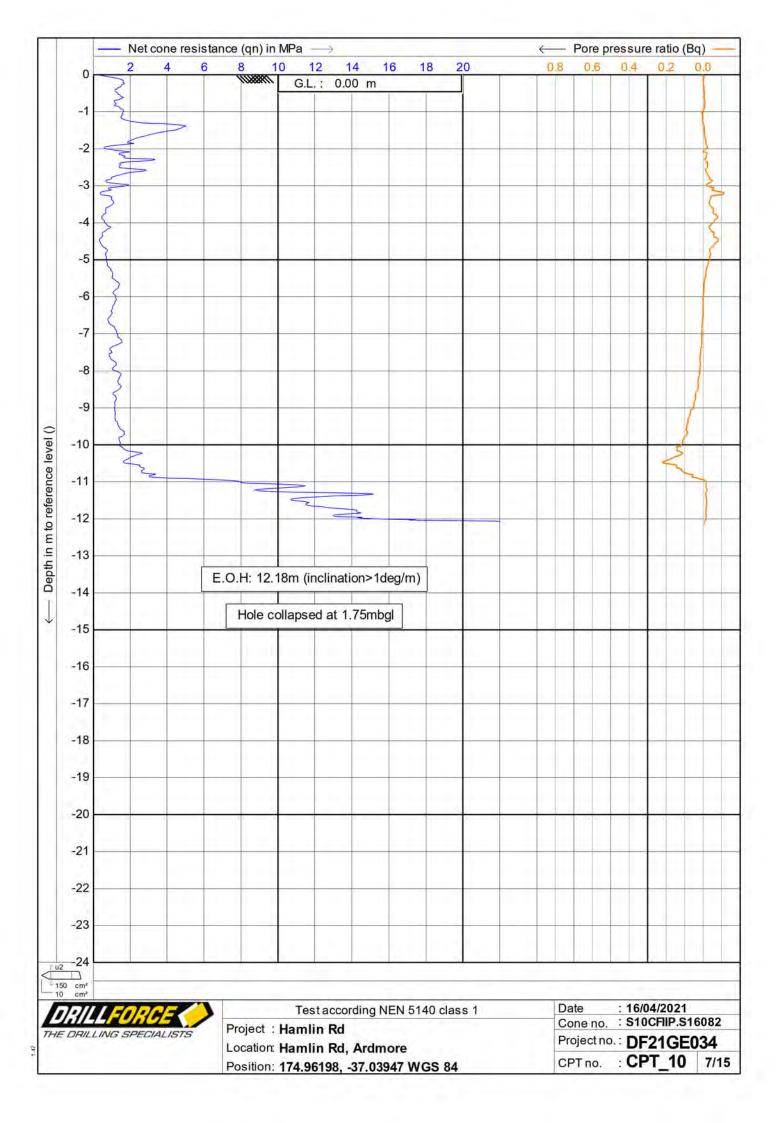


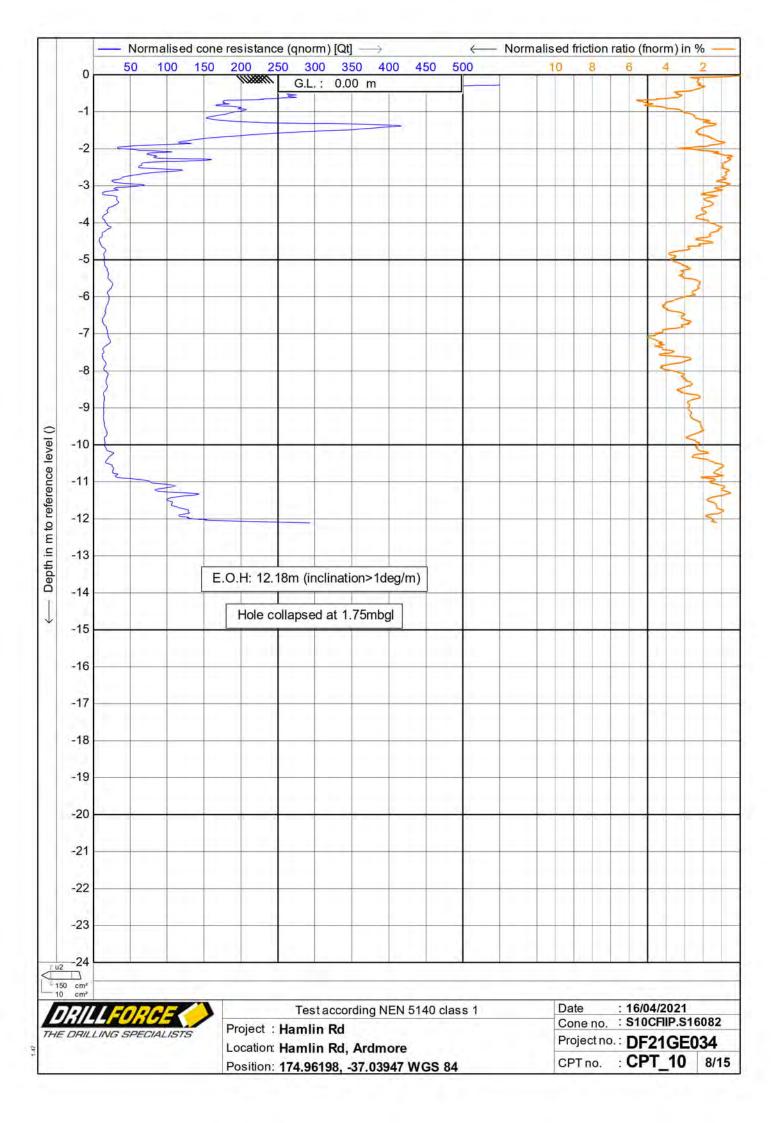


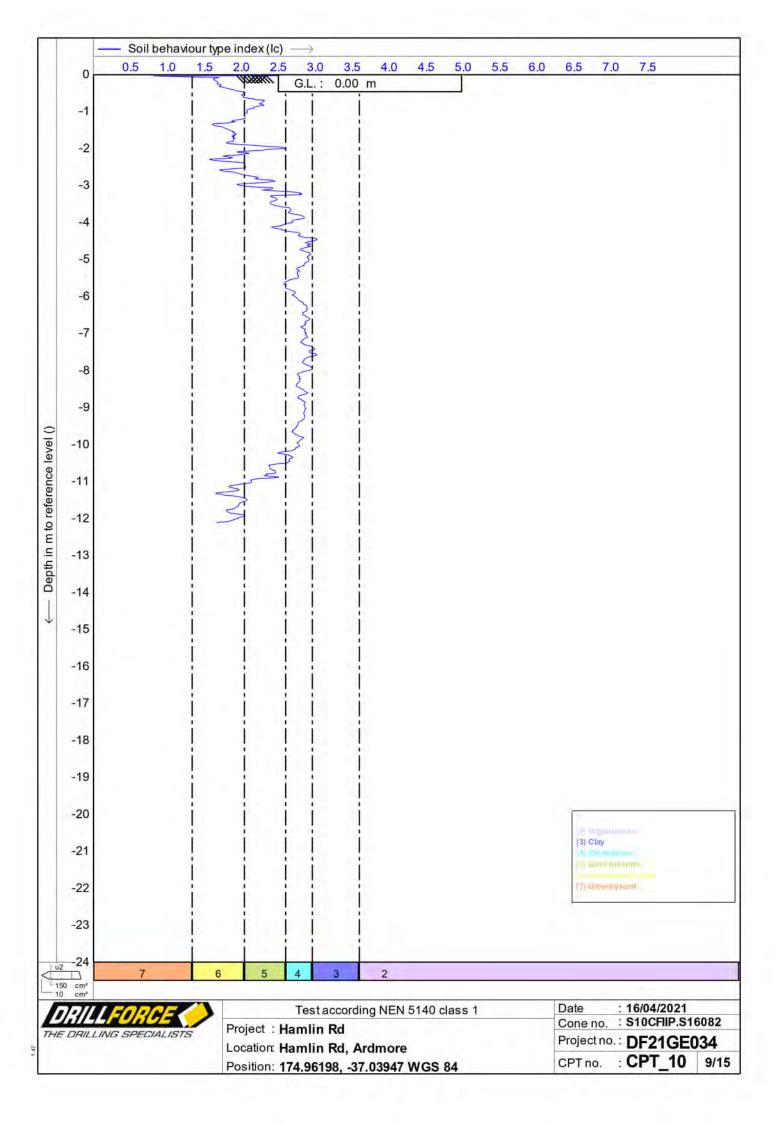


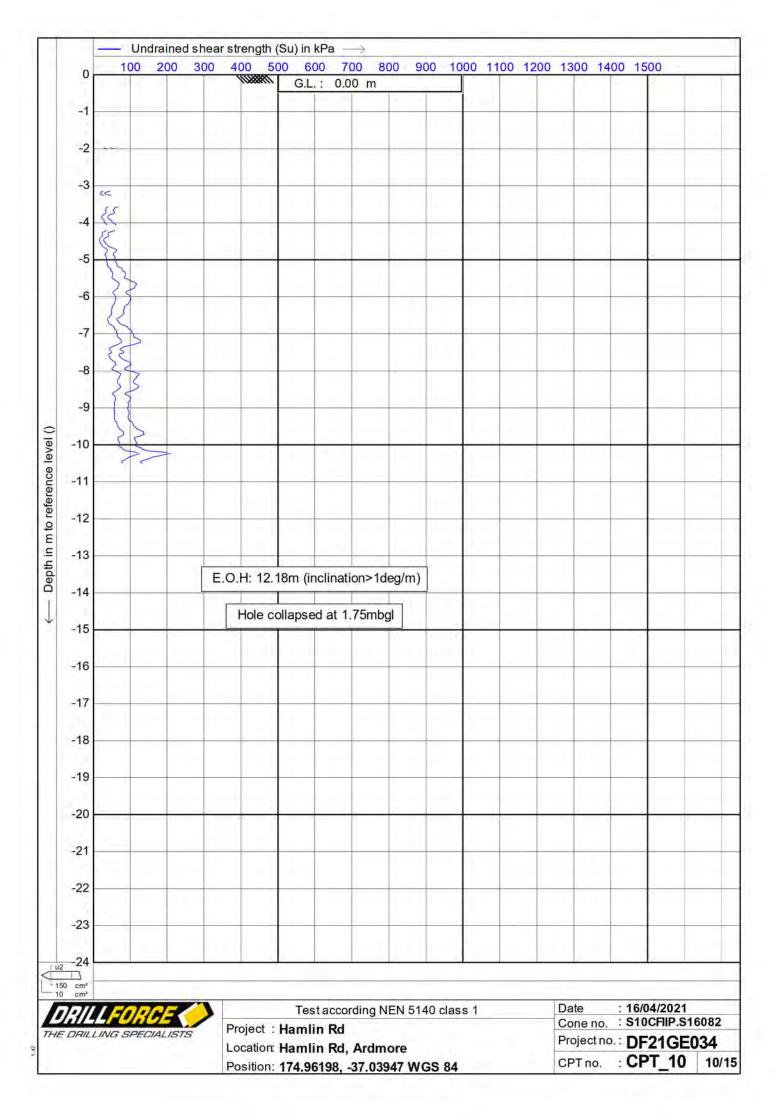


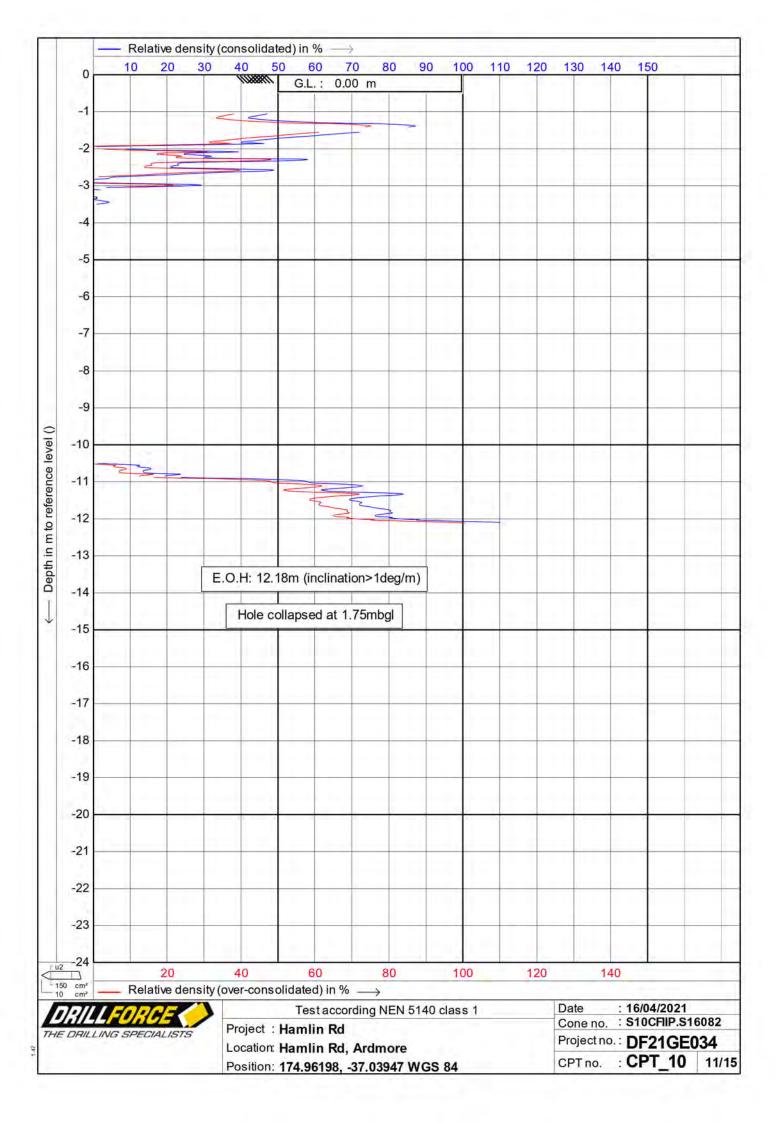


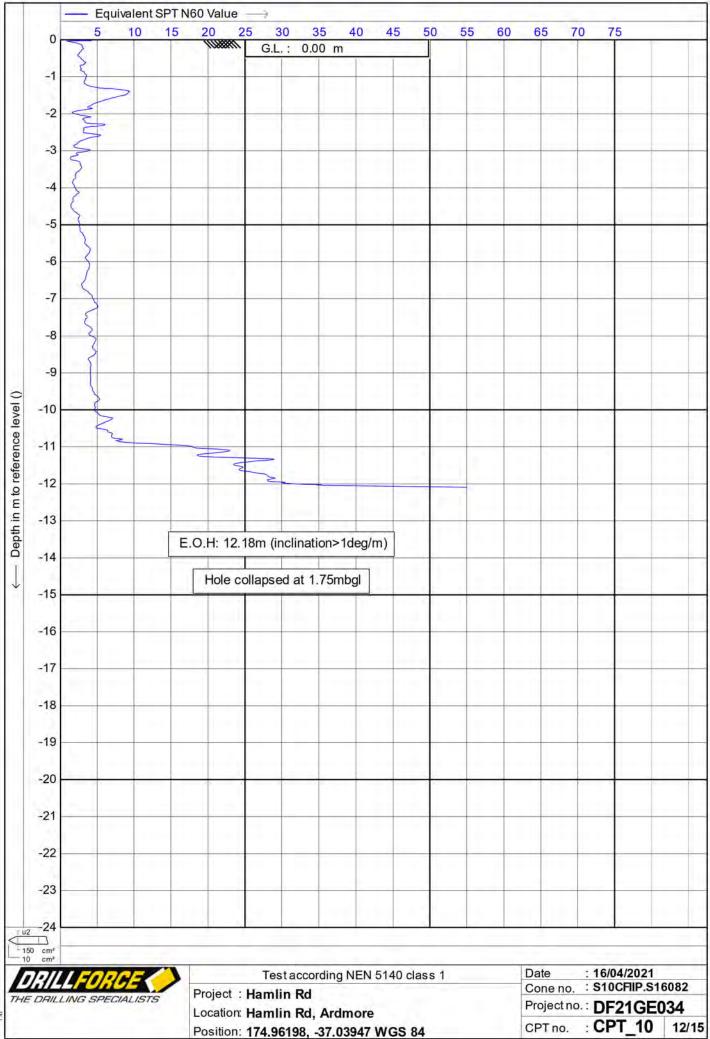




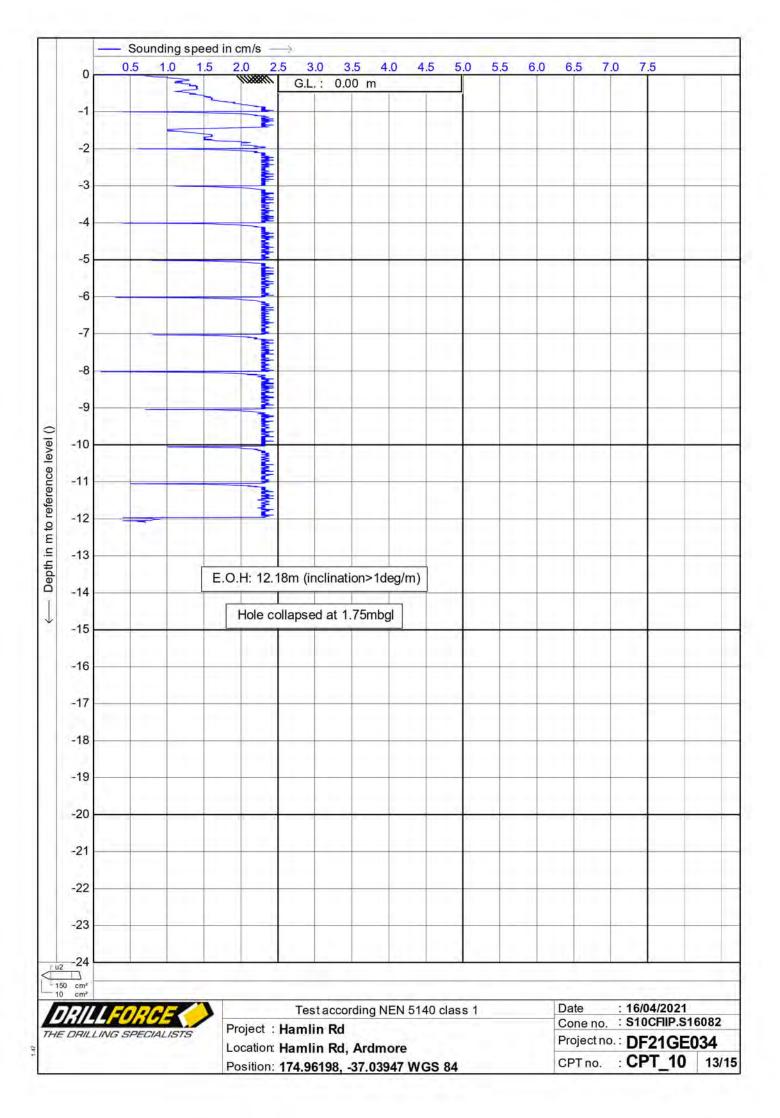


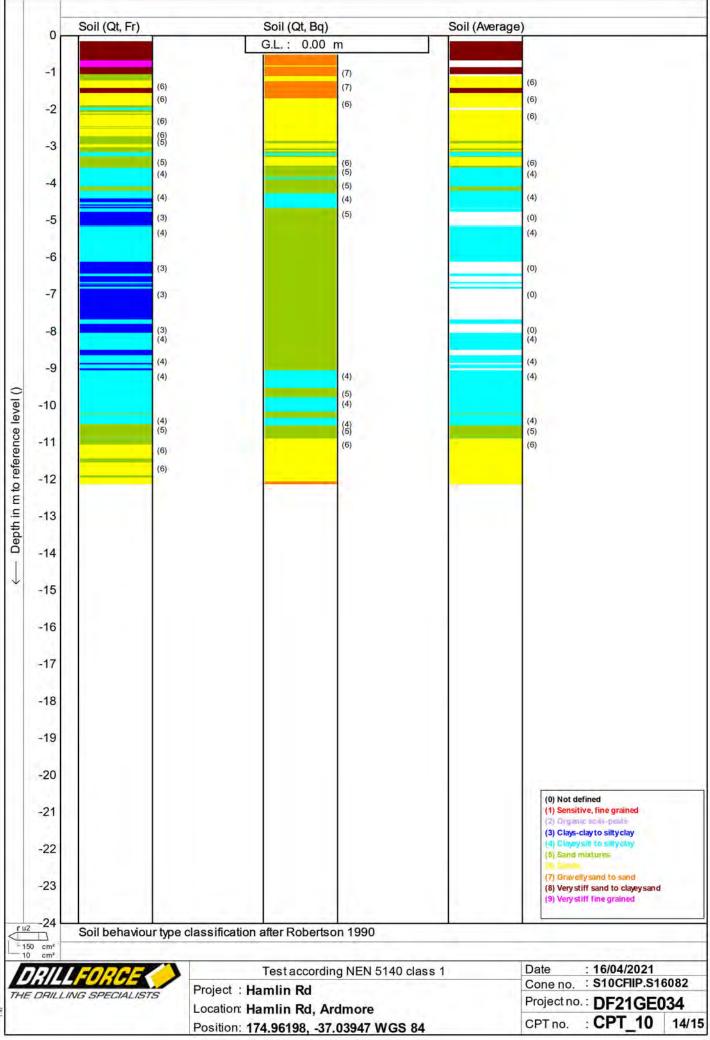




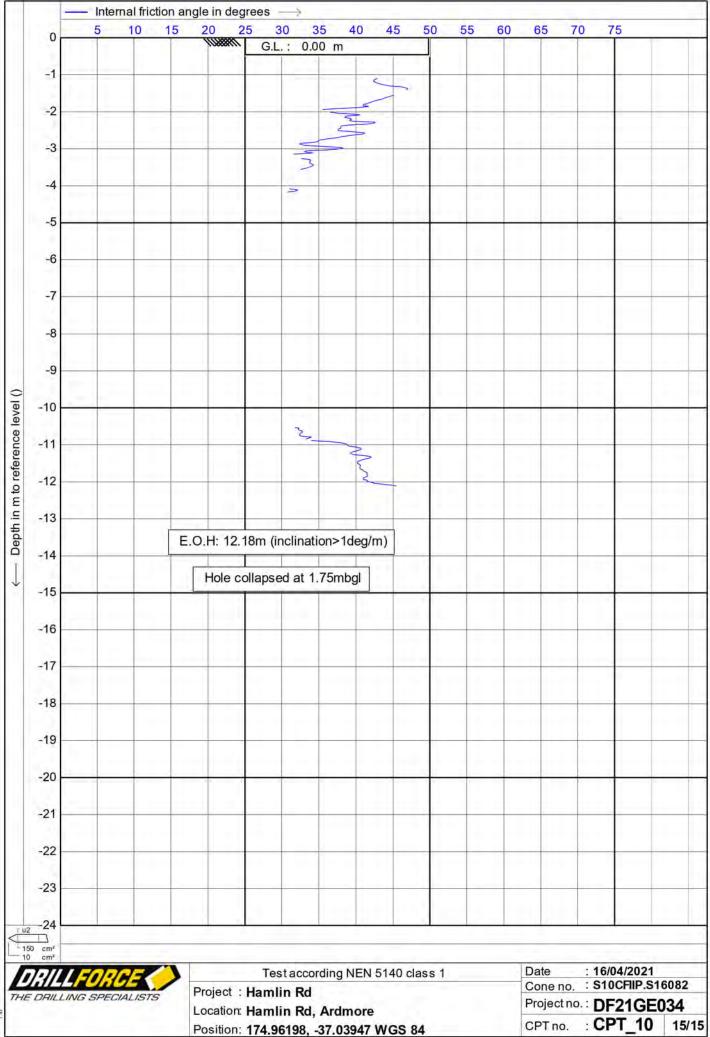


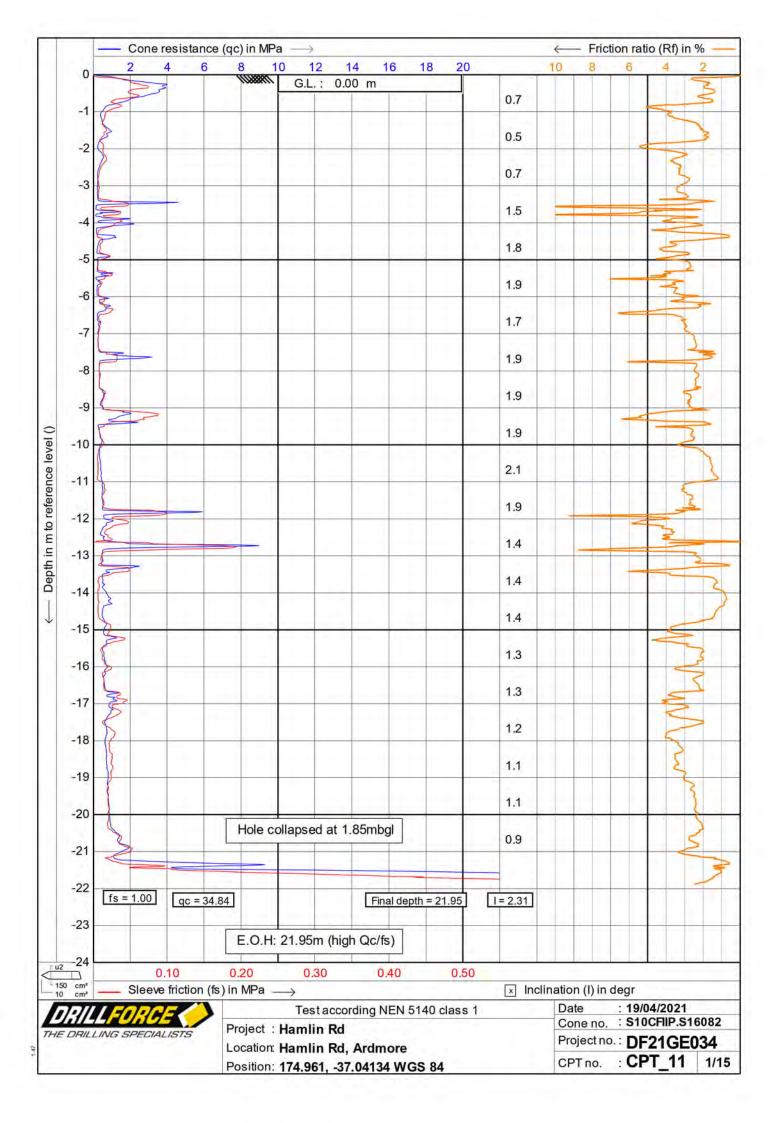
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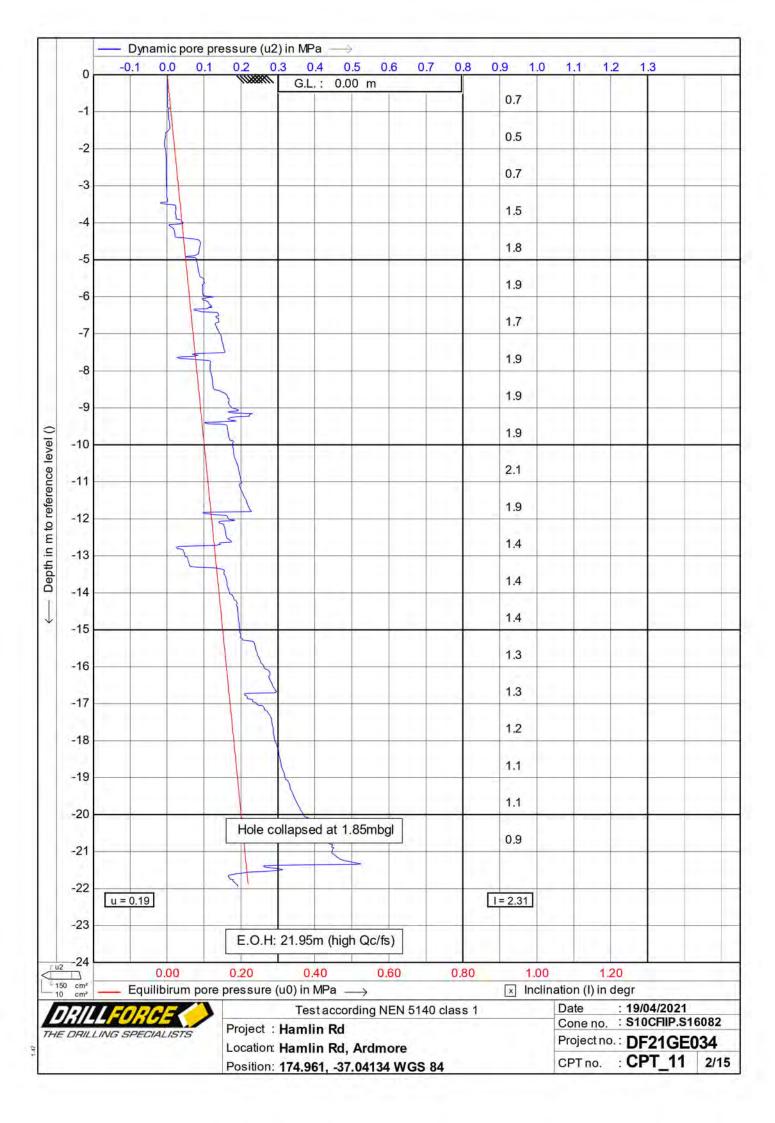


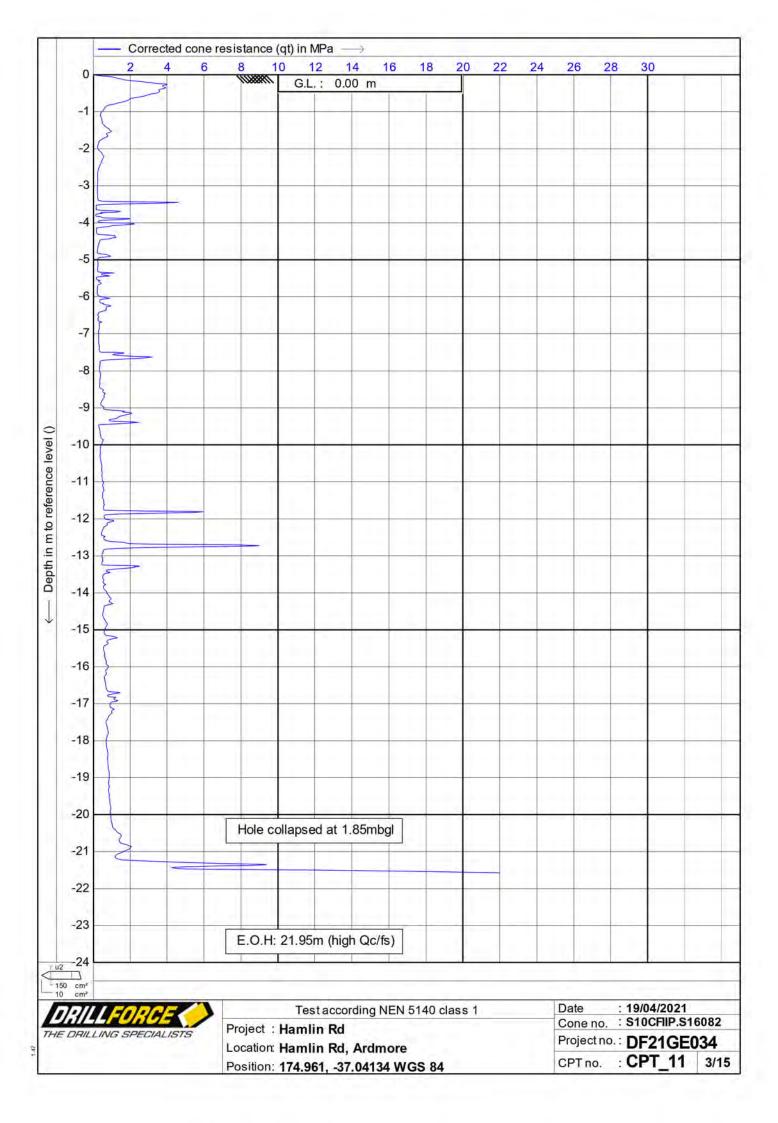


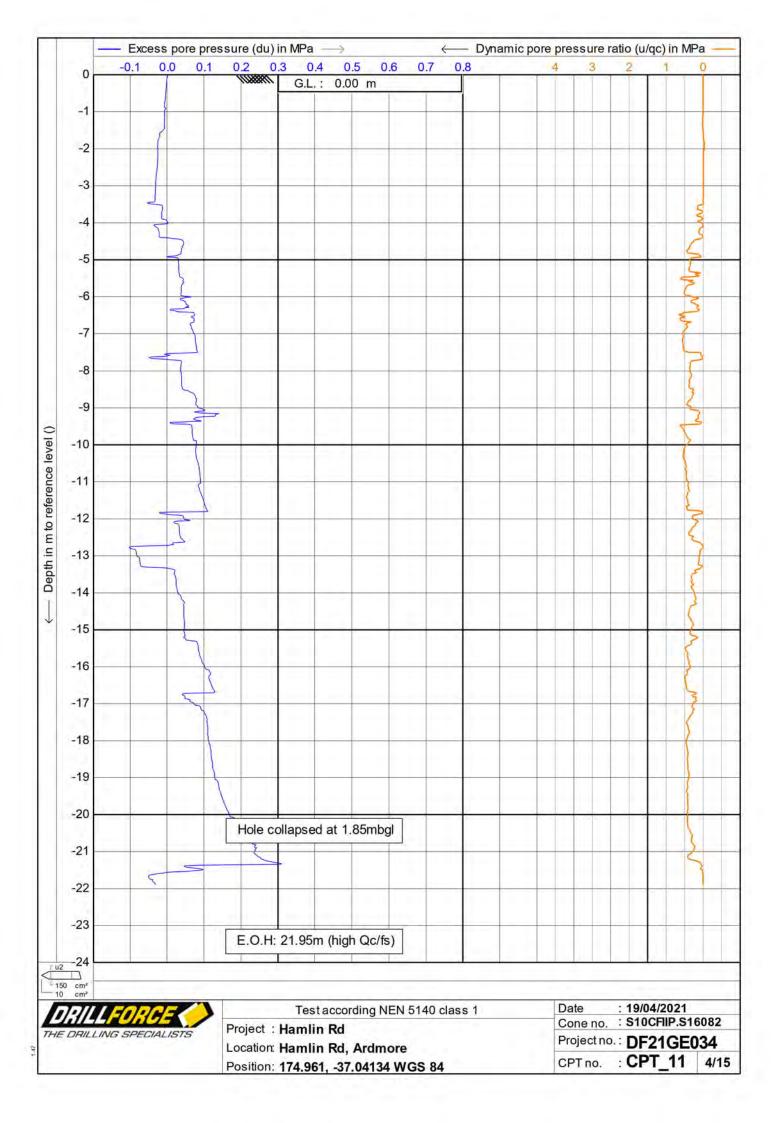
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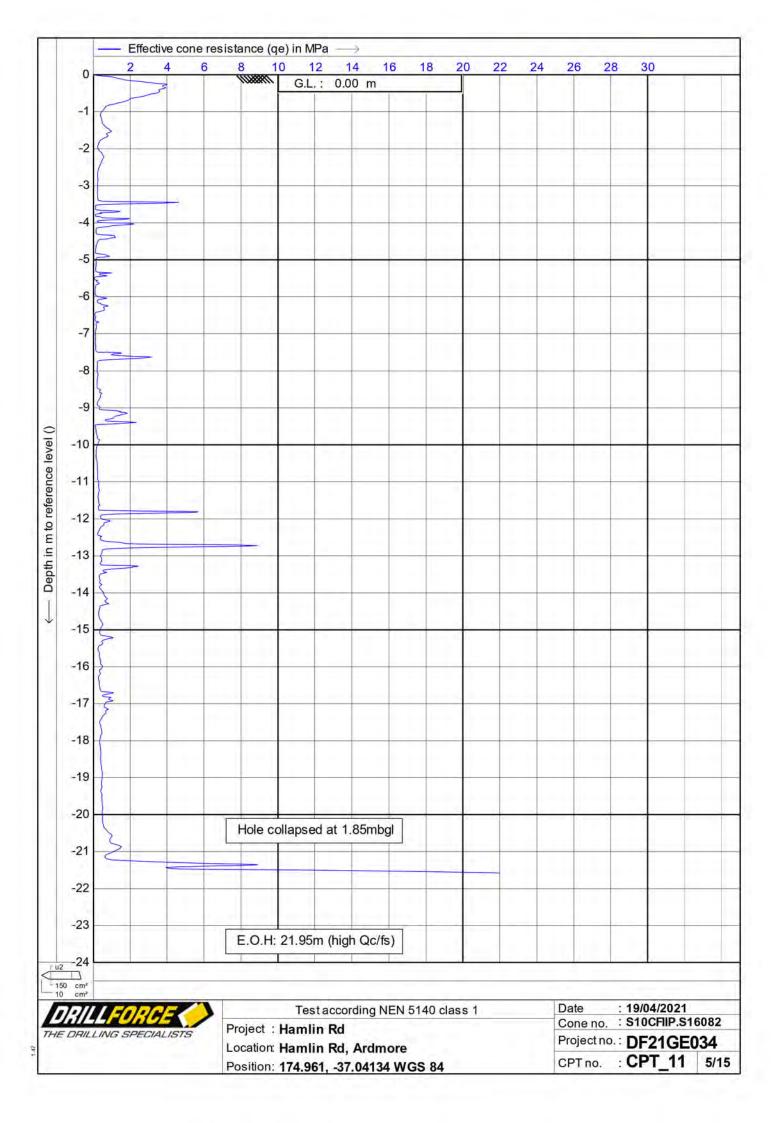


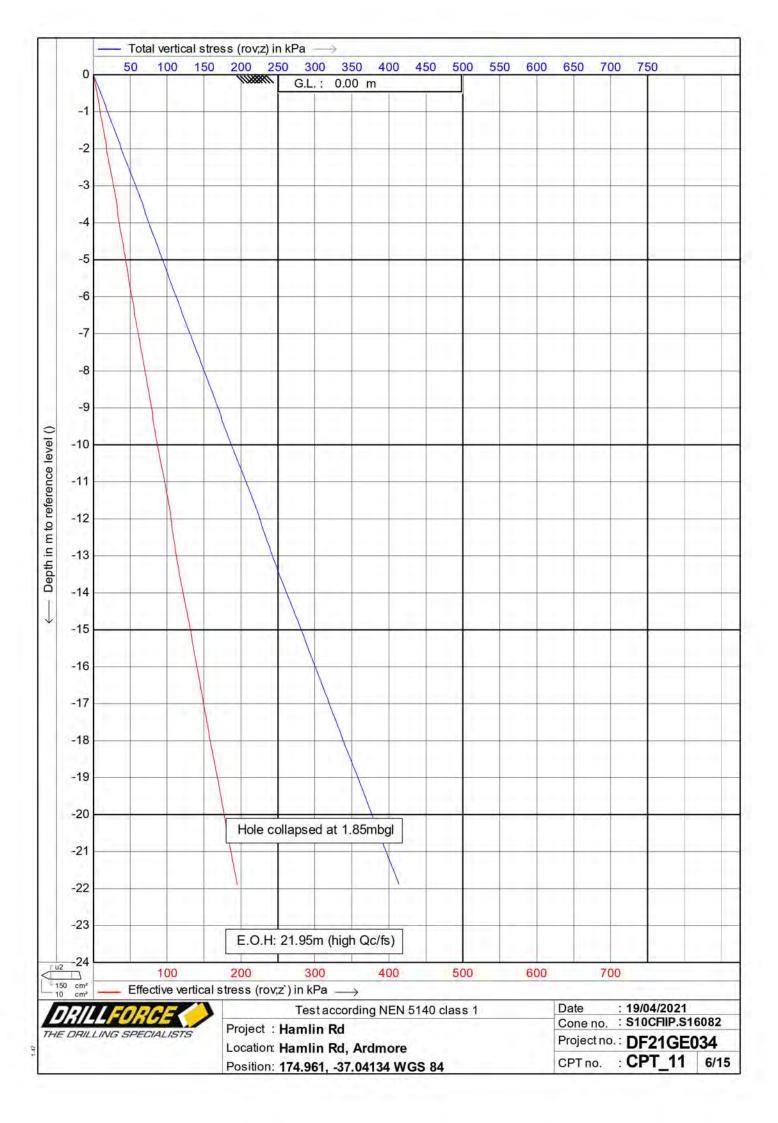


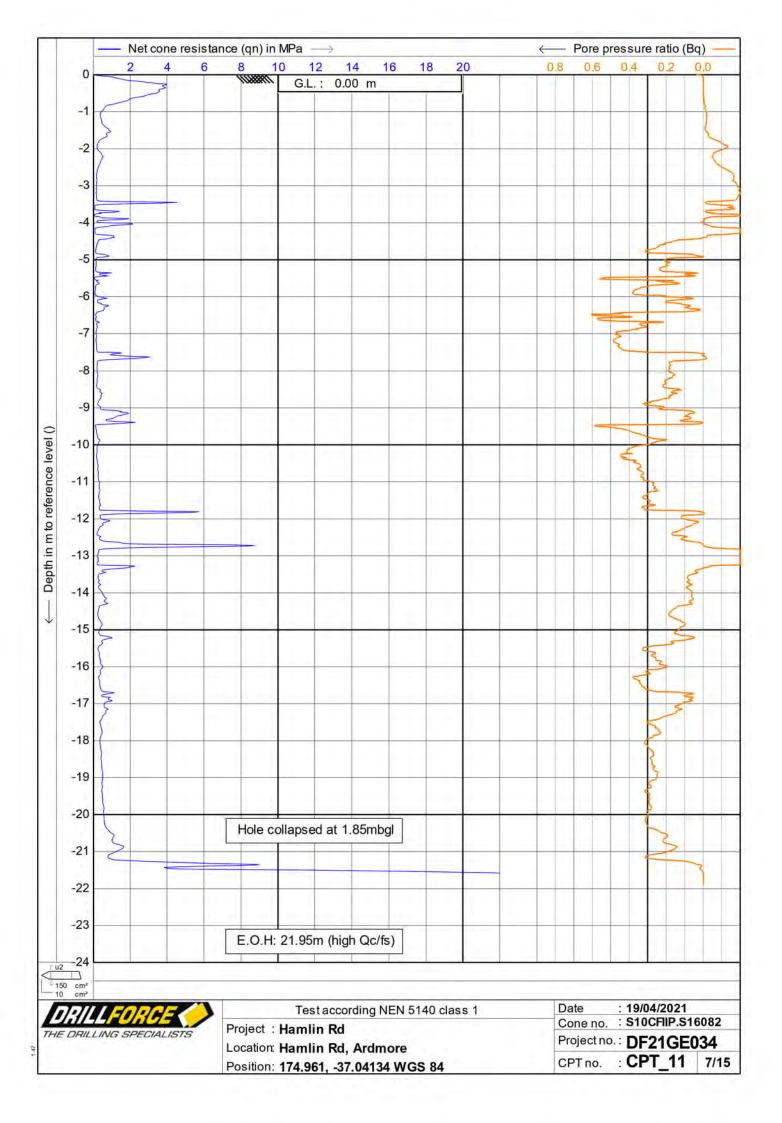


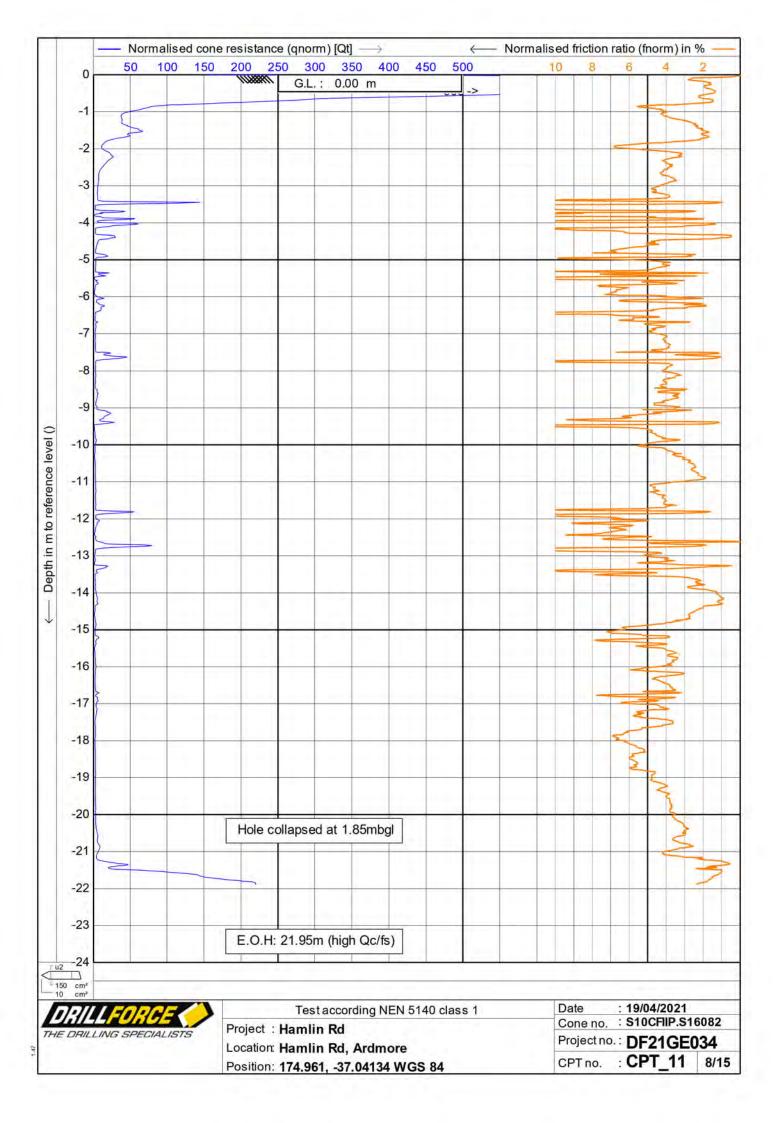


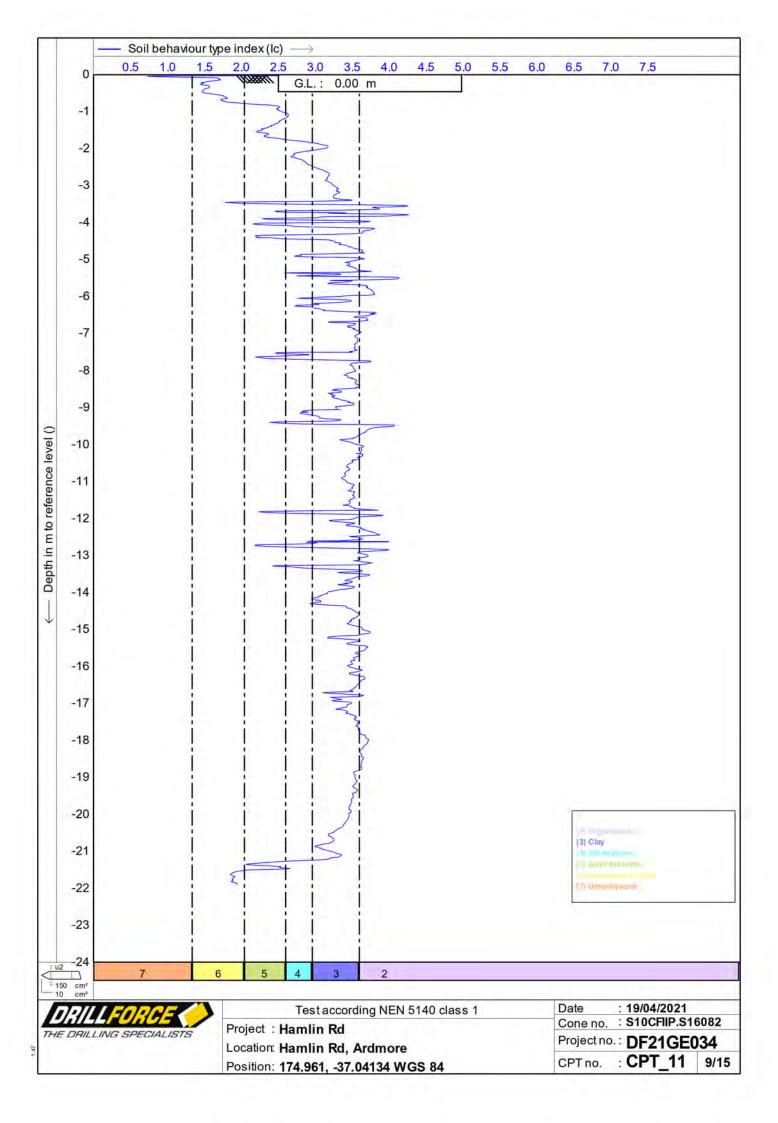


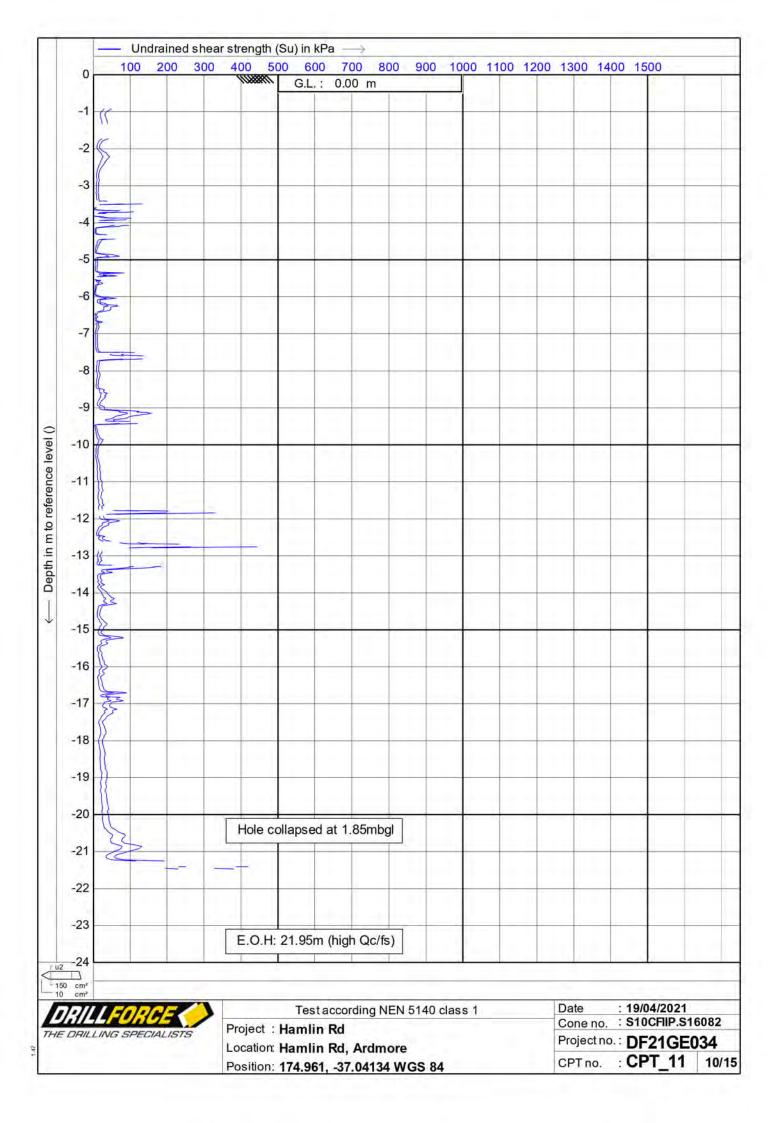


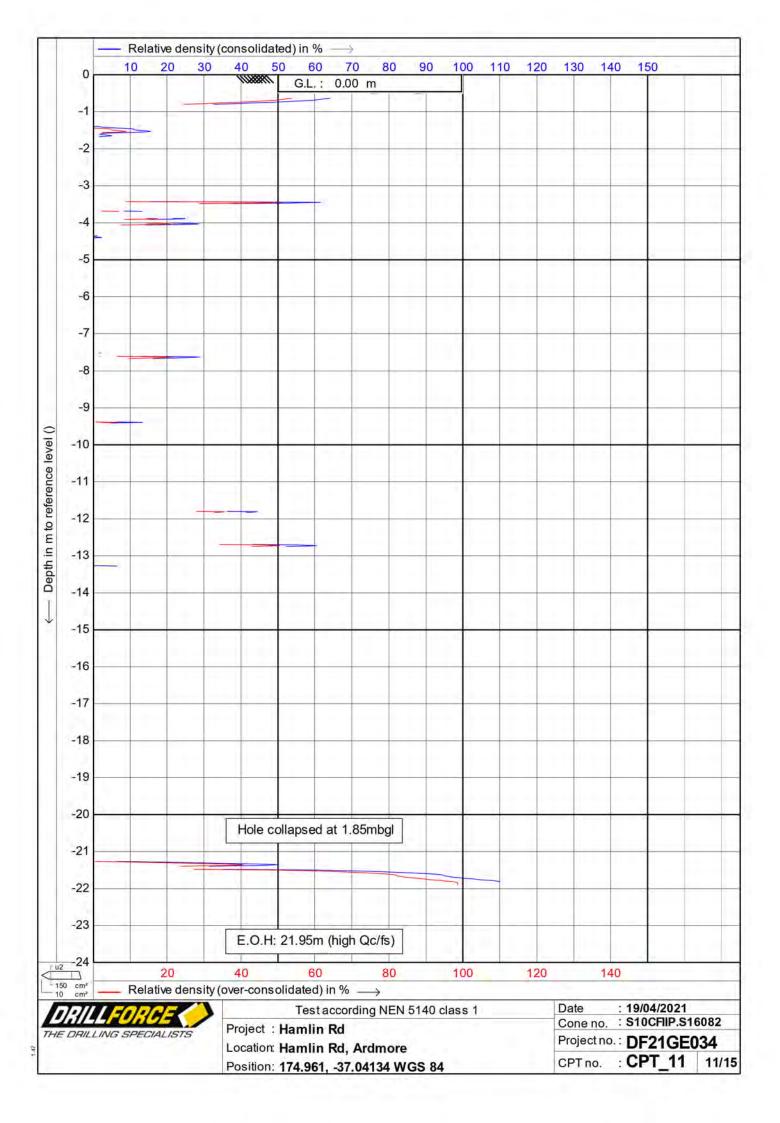


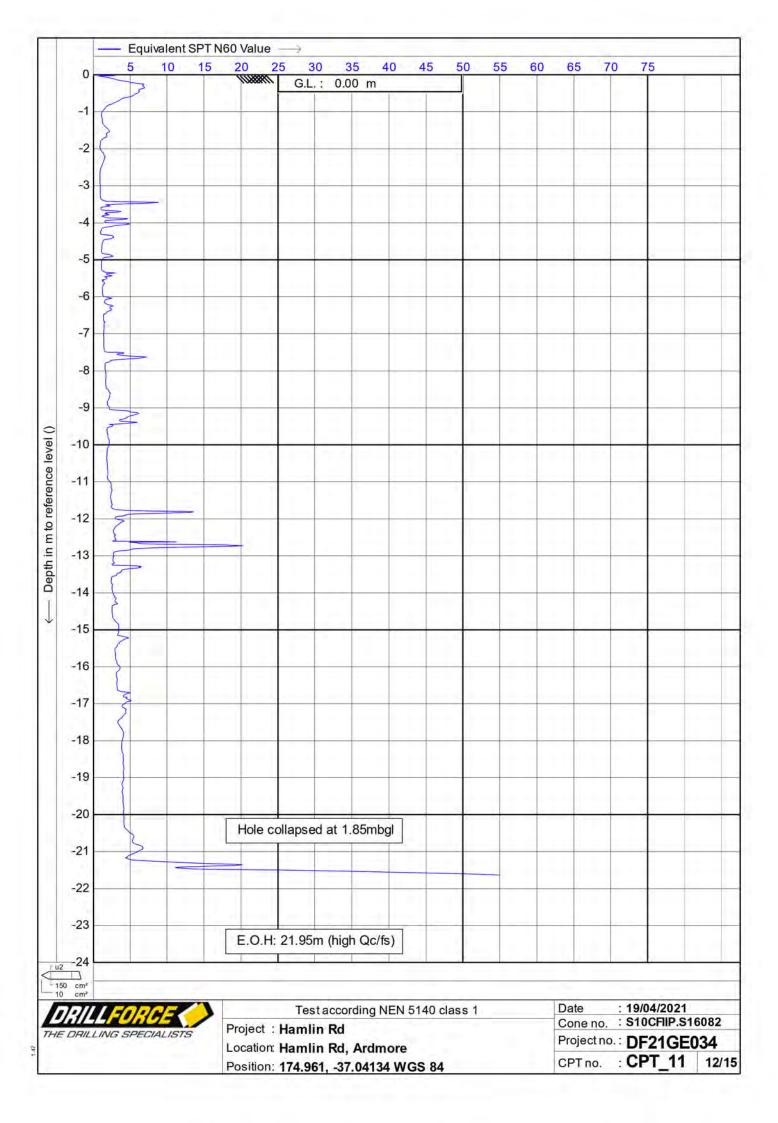


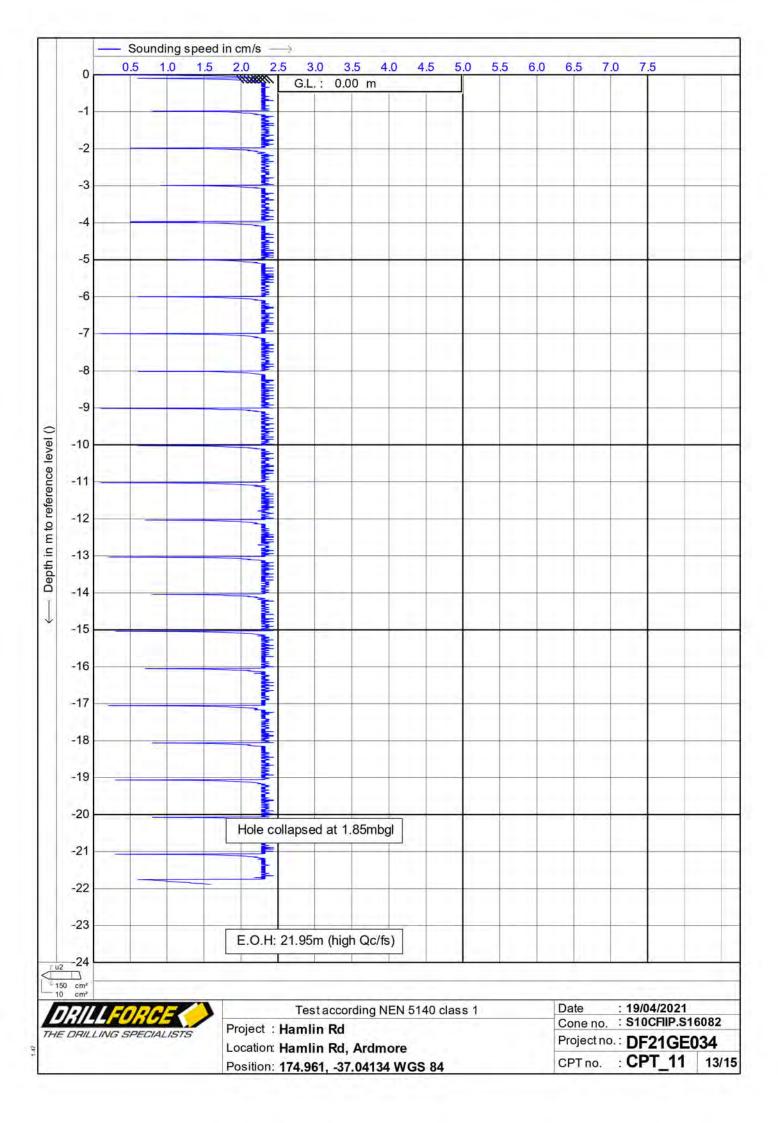


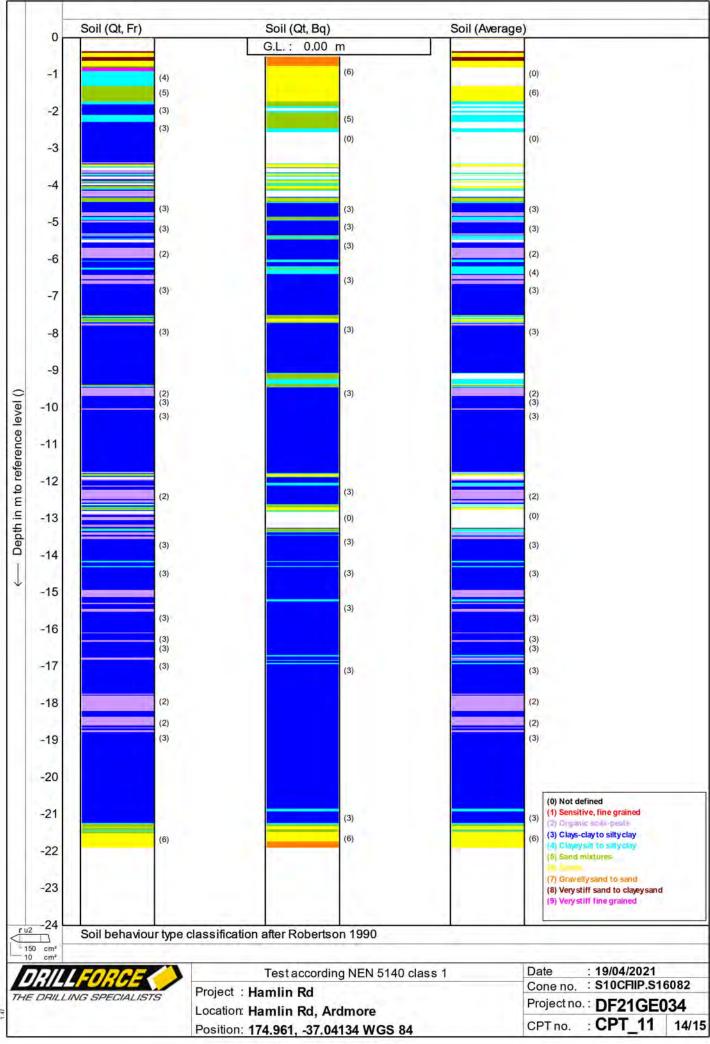


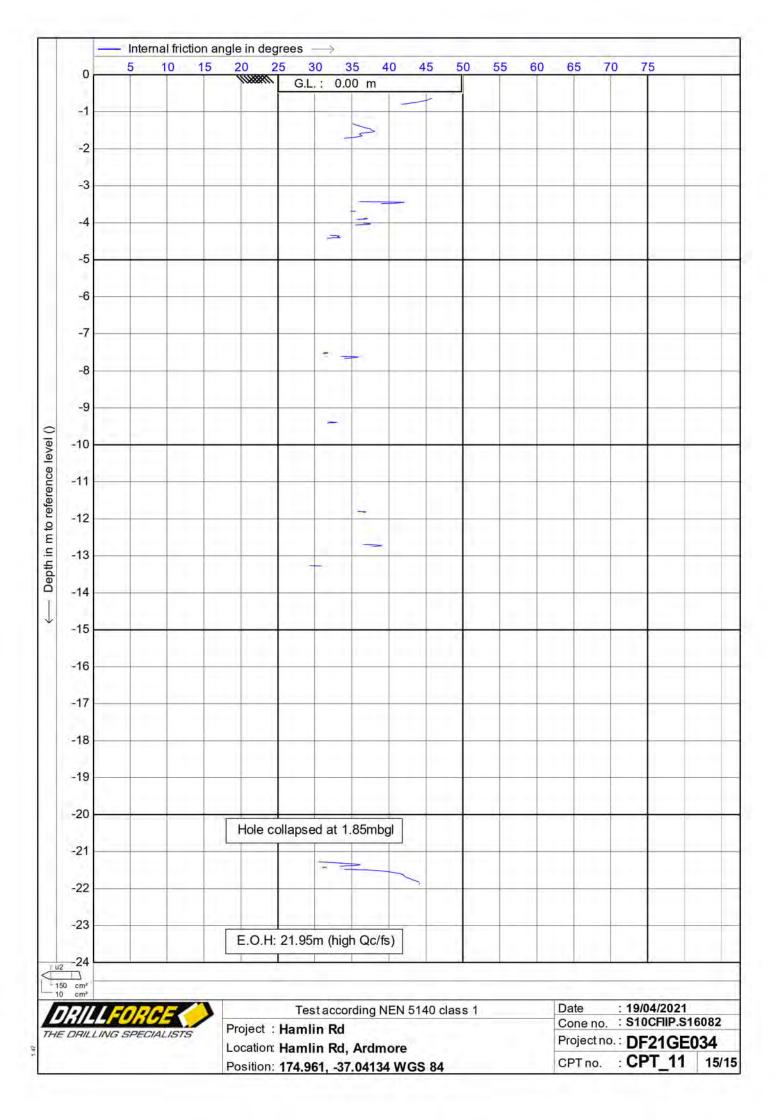


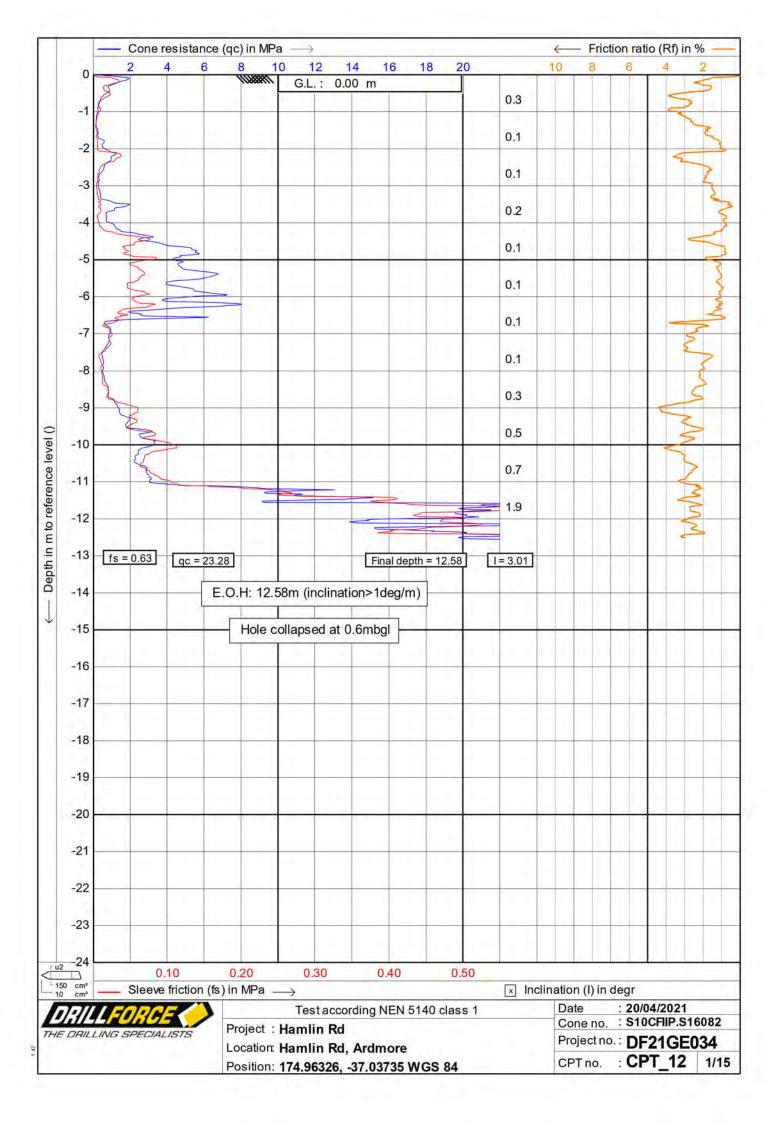


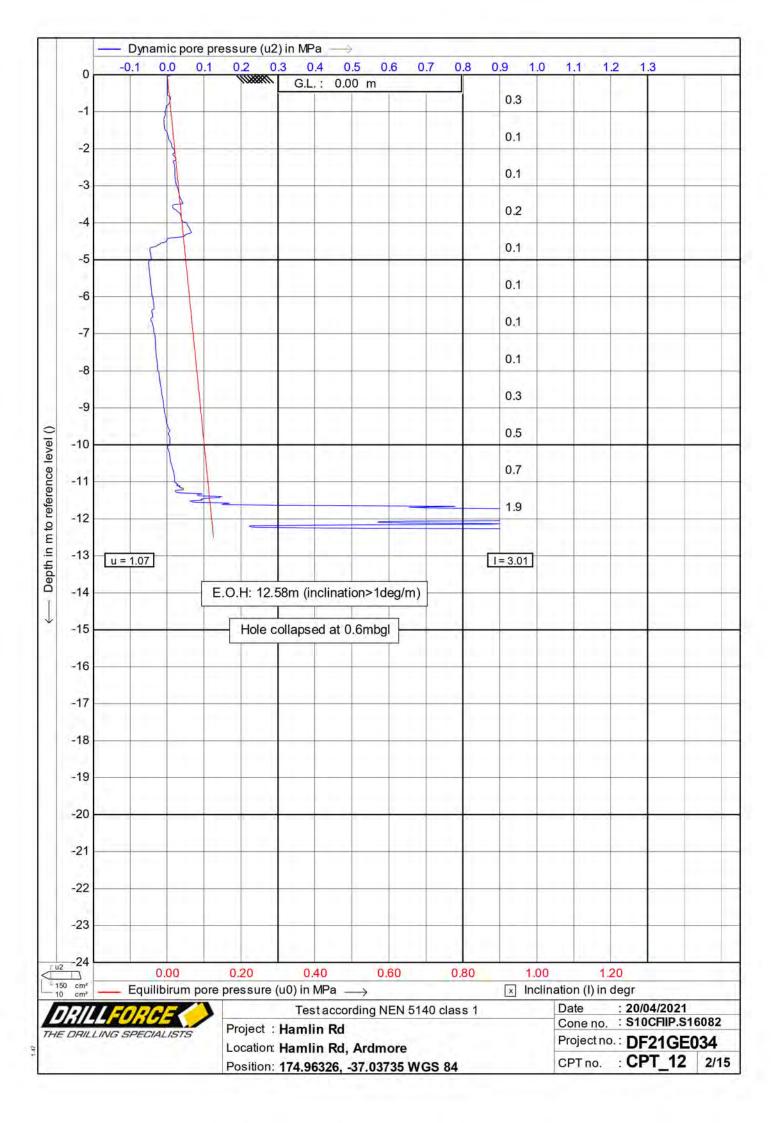


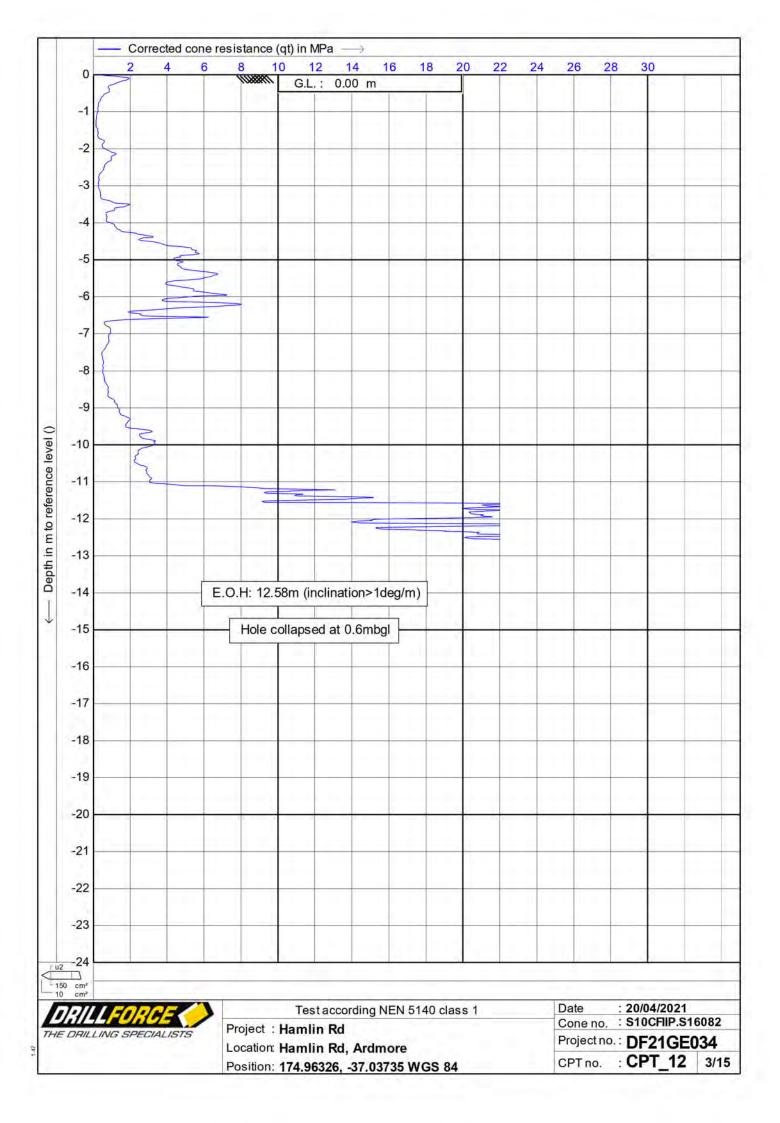


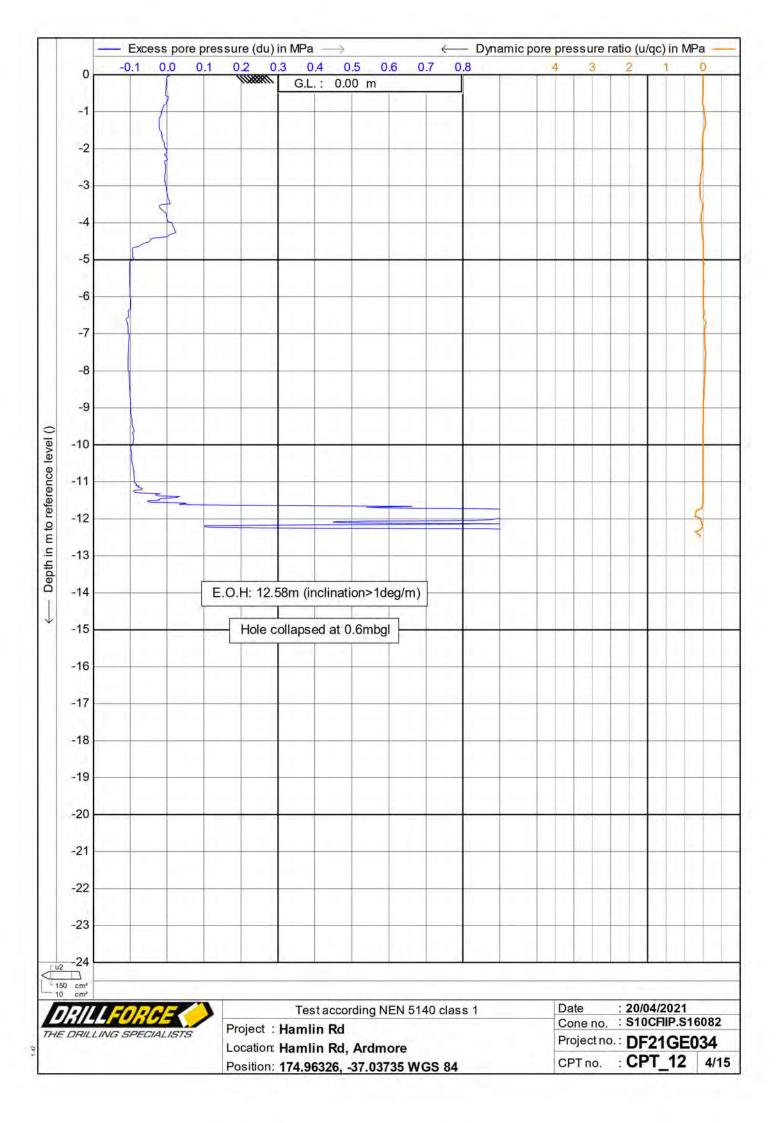


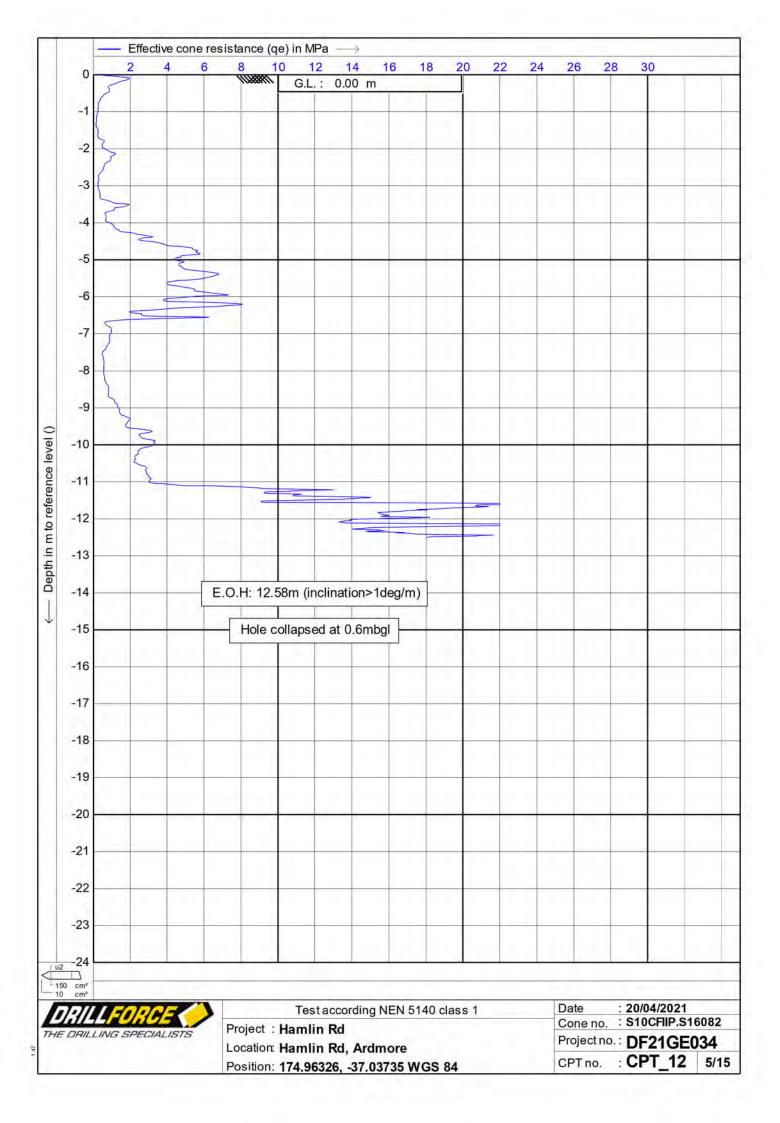


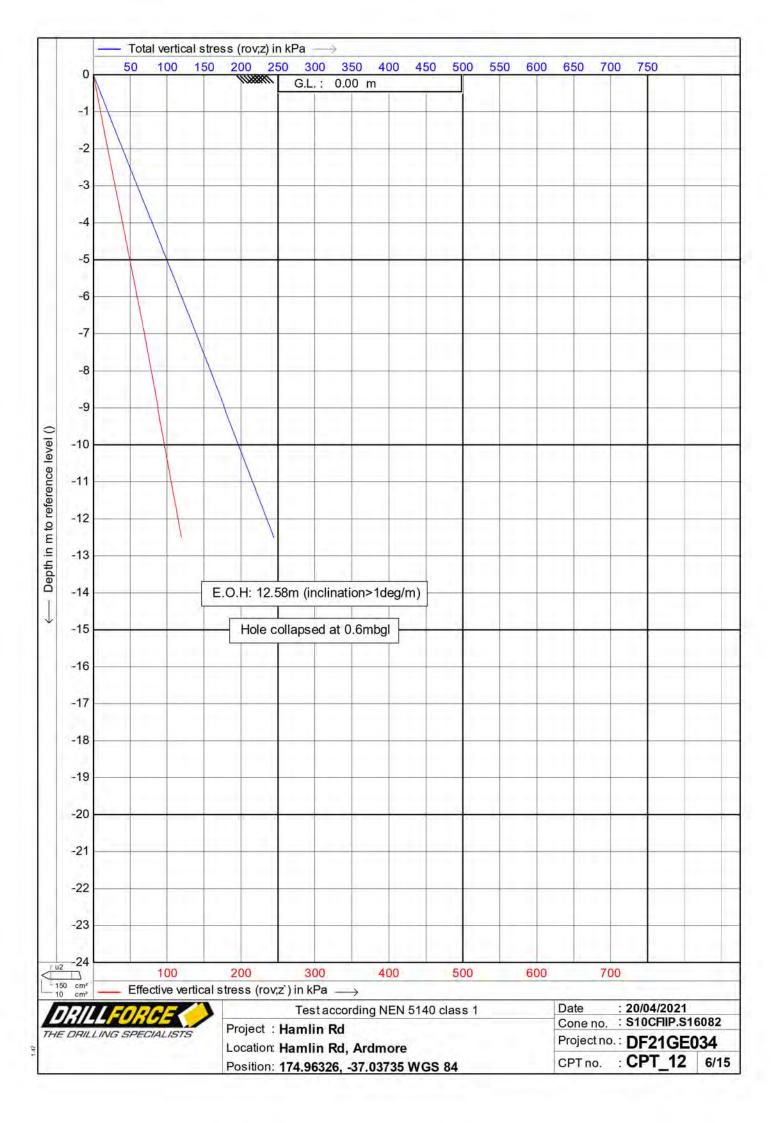


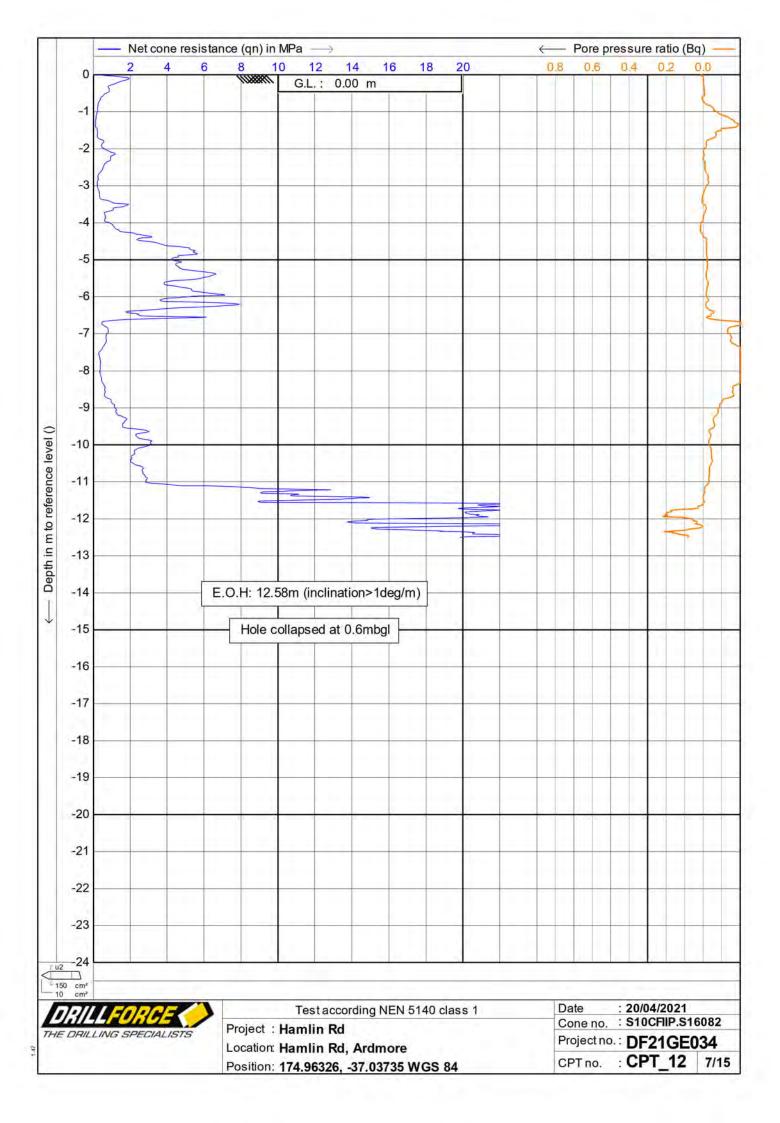


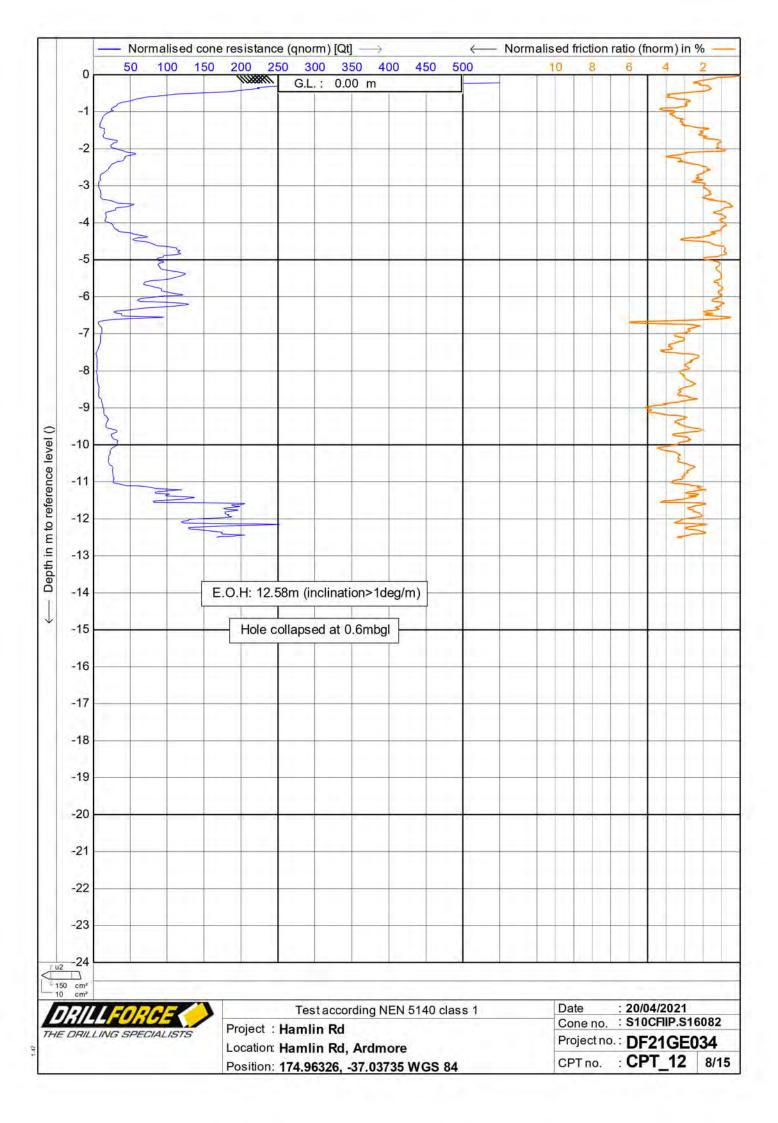


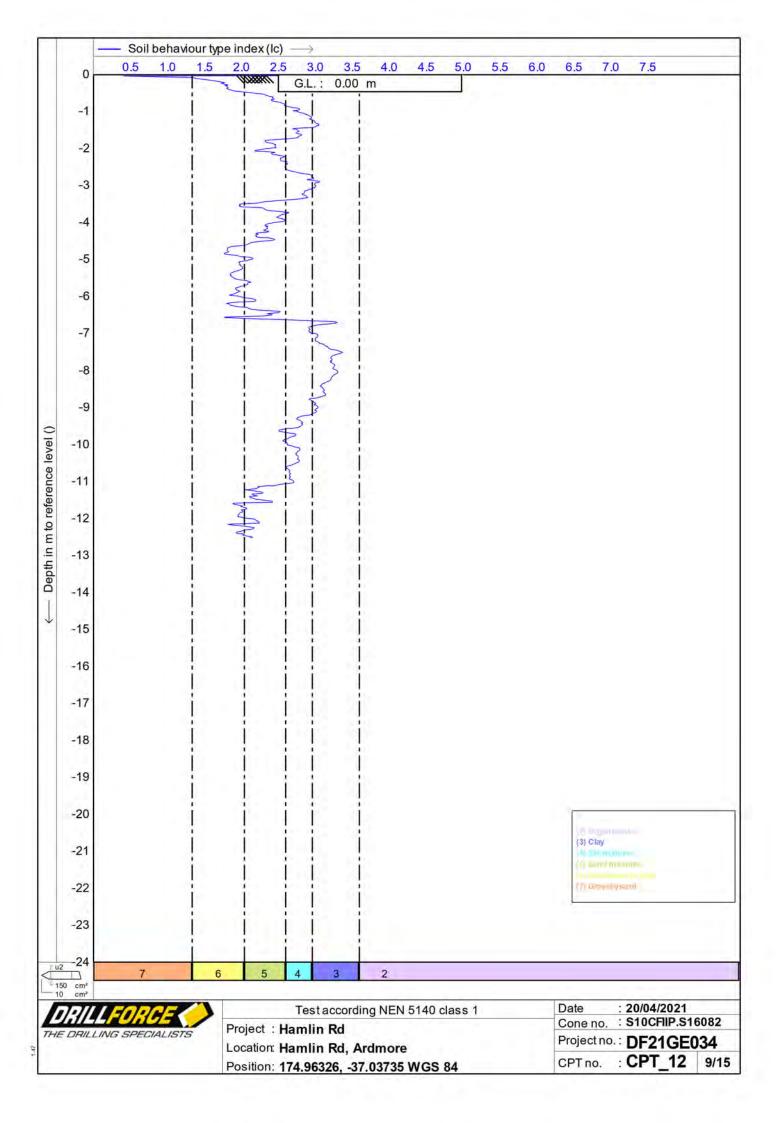


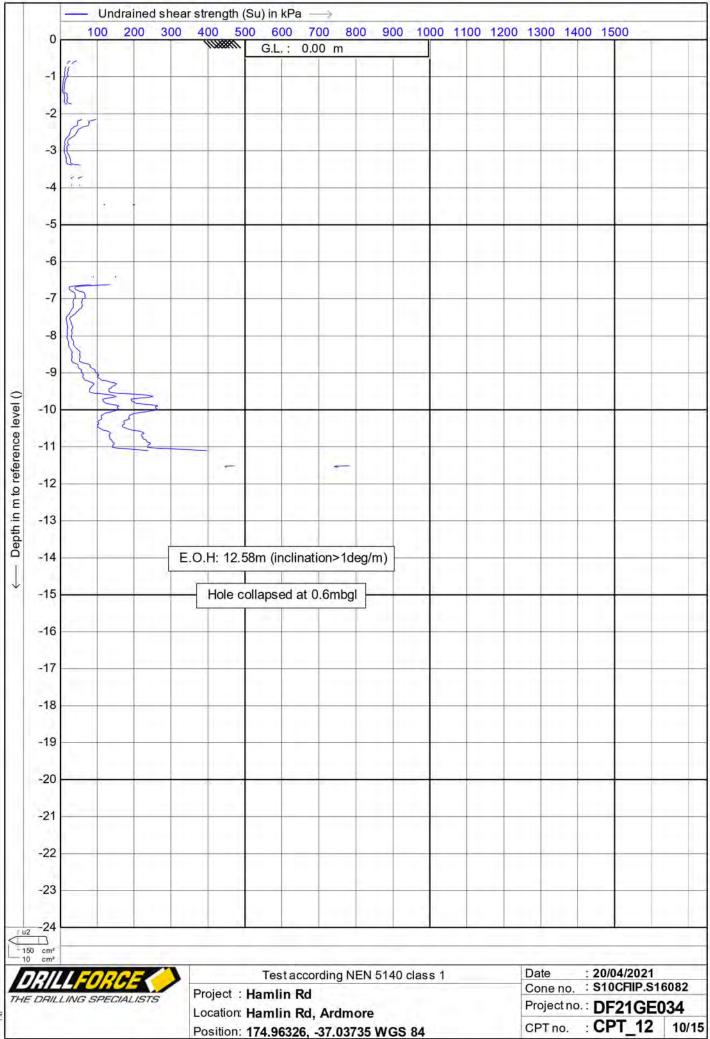




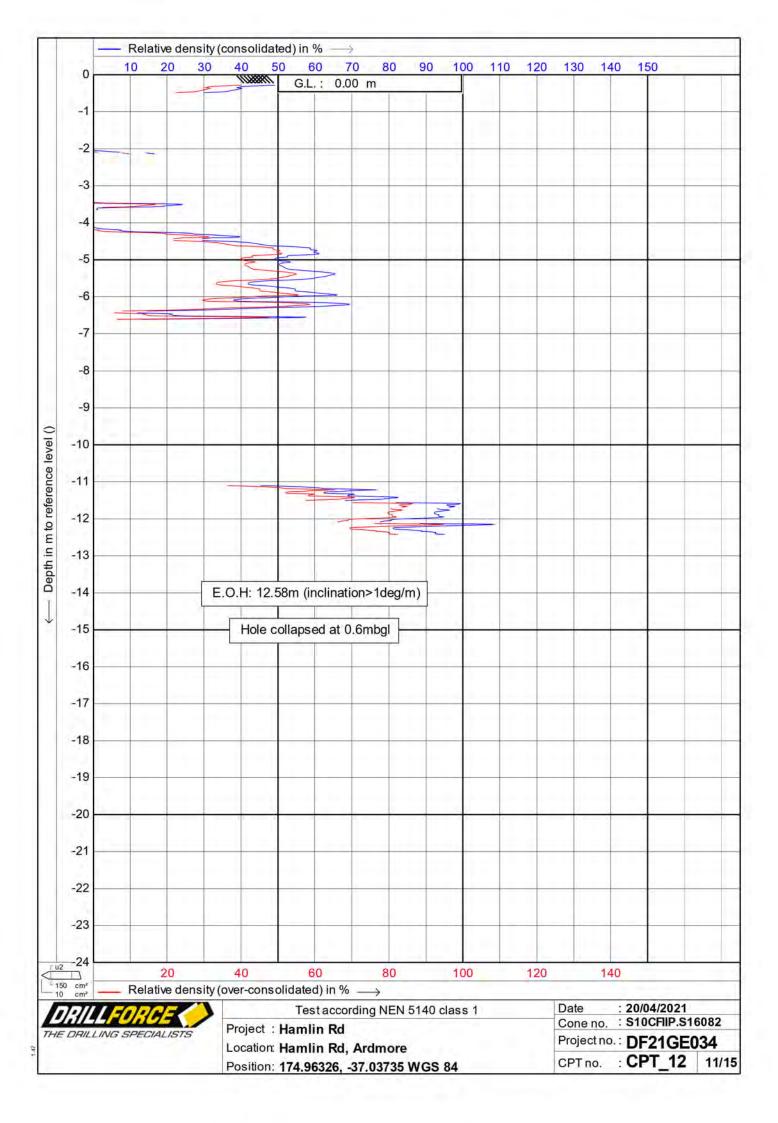


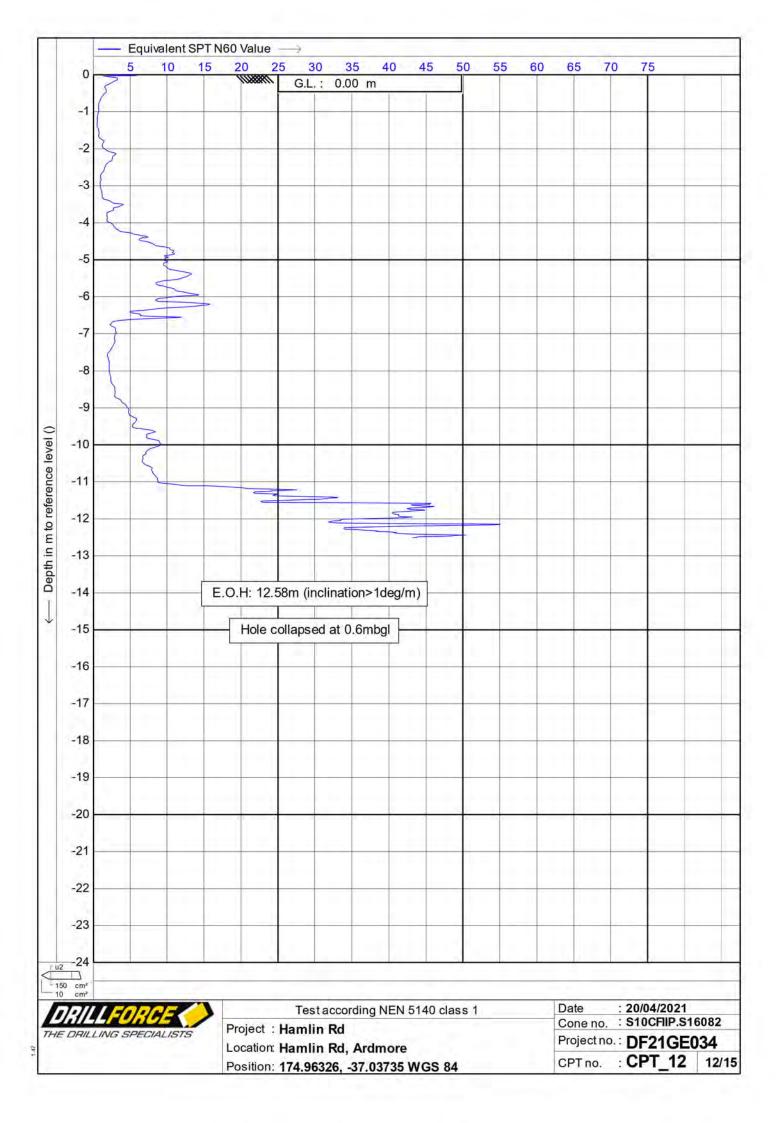


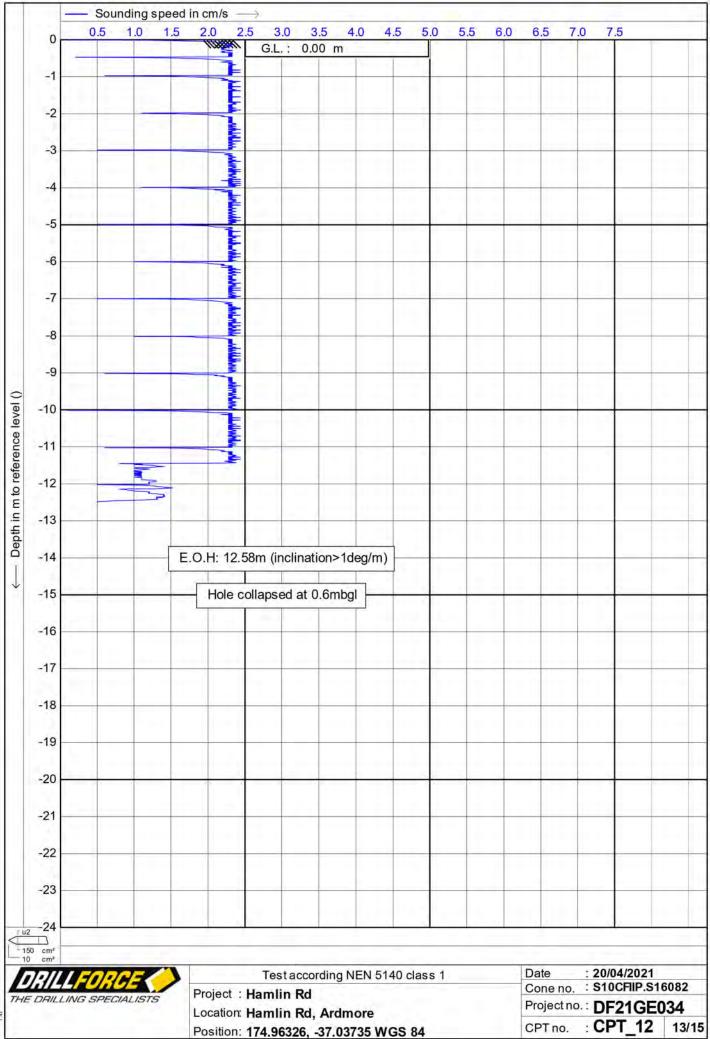




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