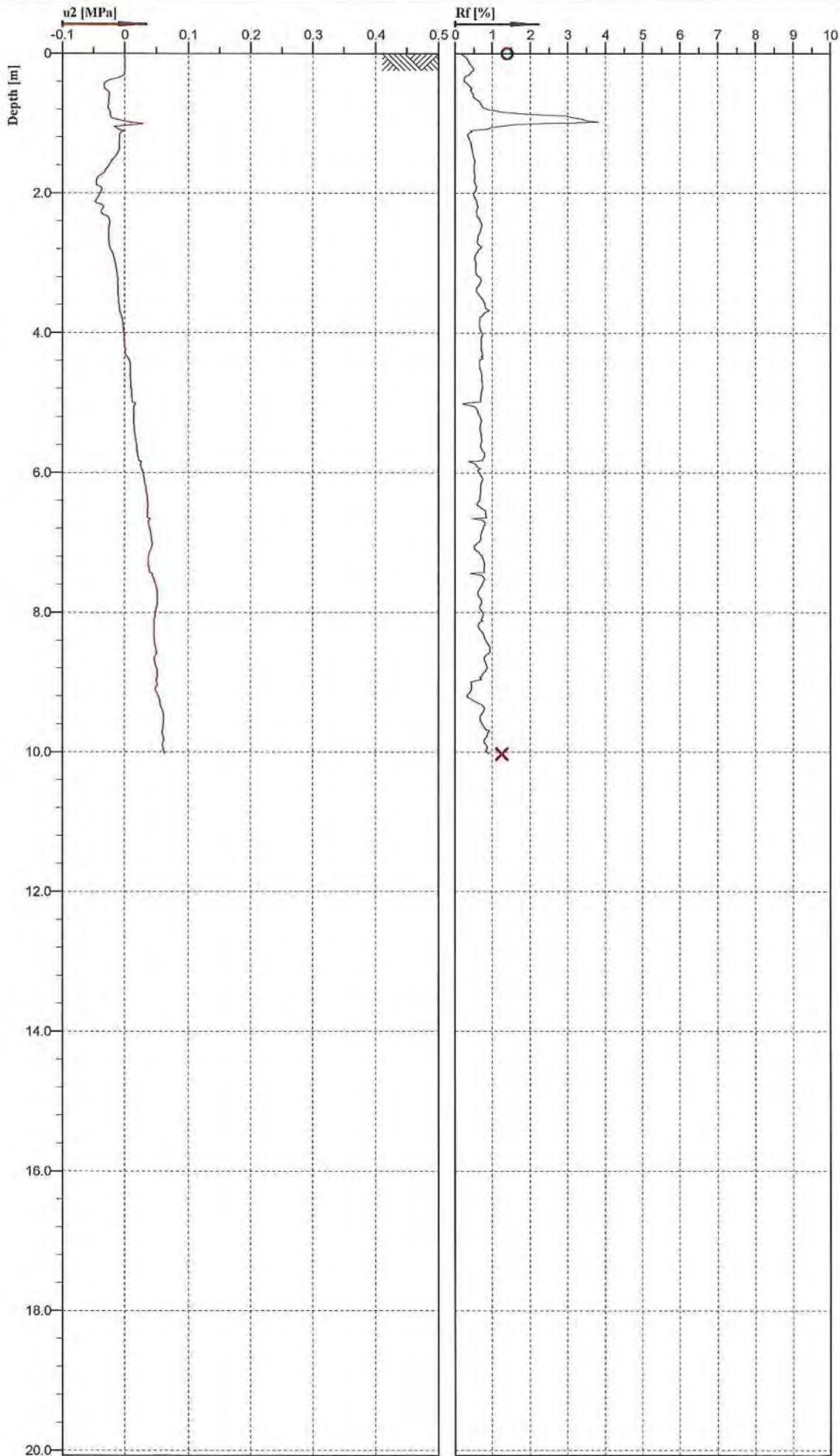


Classification by
Robertson 1986

Silty sand to sandy silt (7)



Sand (9)

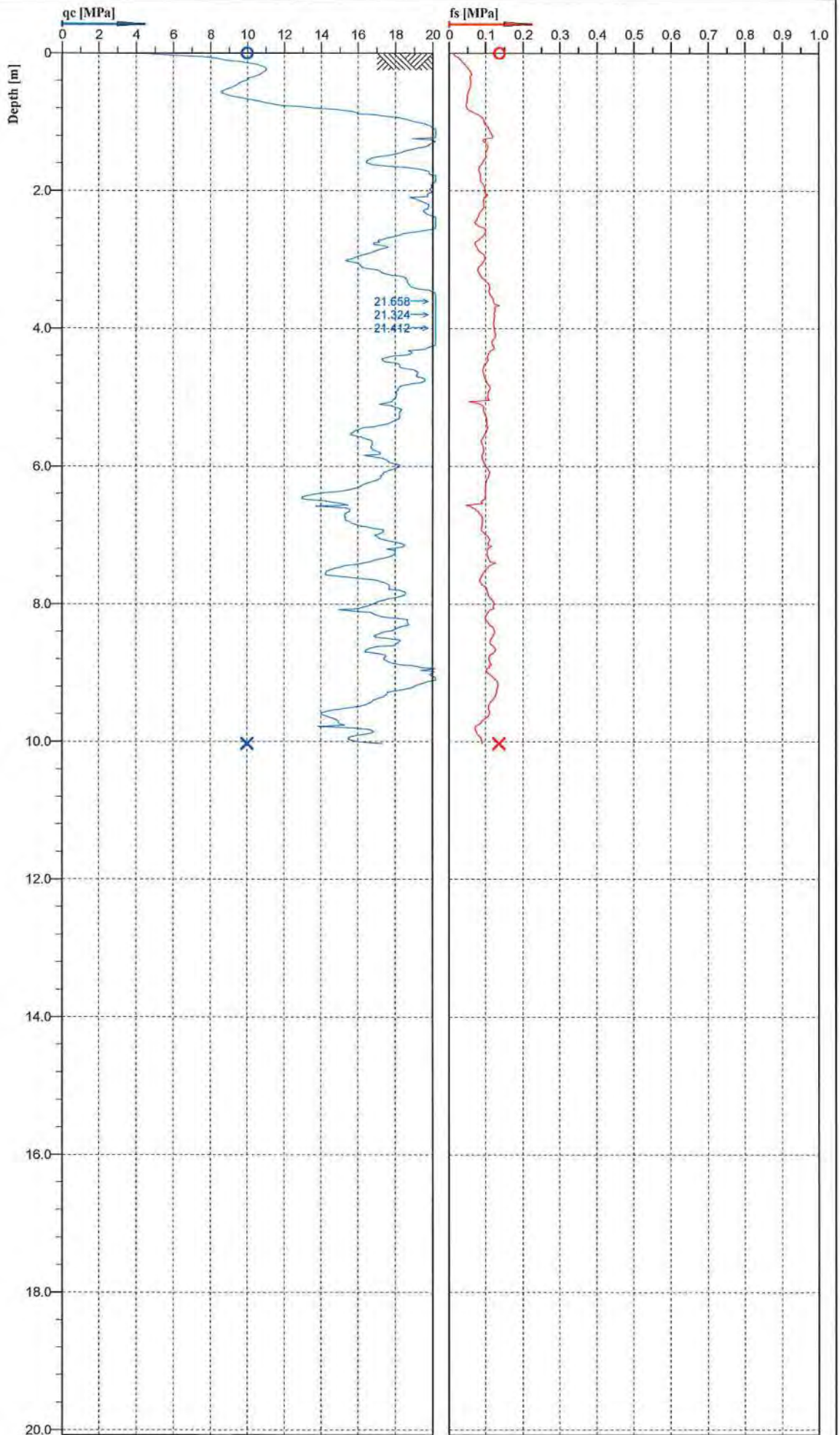


Location:	CHCH	Position:	X: 0.00 m, Y: 0.00 m	Ground level:	0.00	Test no:	630IC
Project ID:		Client:	Aurecon	Date:	04/02/2015	Scale:	1 : 80
Project:	PRESTONS SOUTH			Page:	1/1	Fig:	
				File:	PrestonsSouth630IC.cpt		

Classification by
Robertson 1986



Sand (9)



Cone No: 4439
Tip area [cm²]: 10
Sleeve area [cm²]: 150

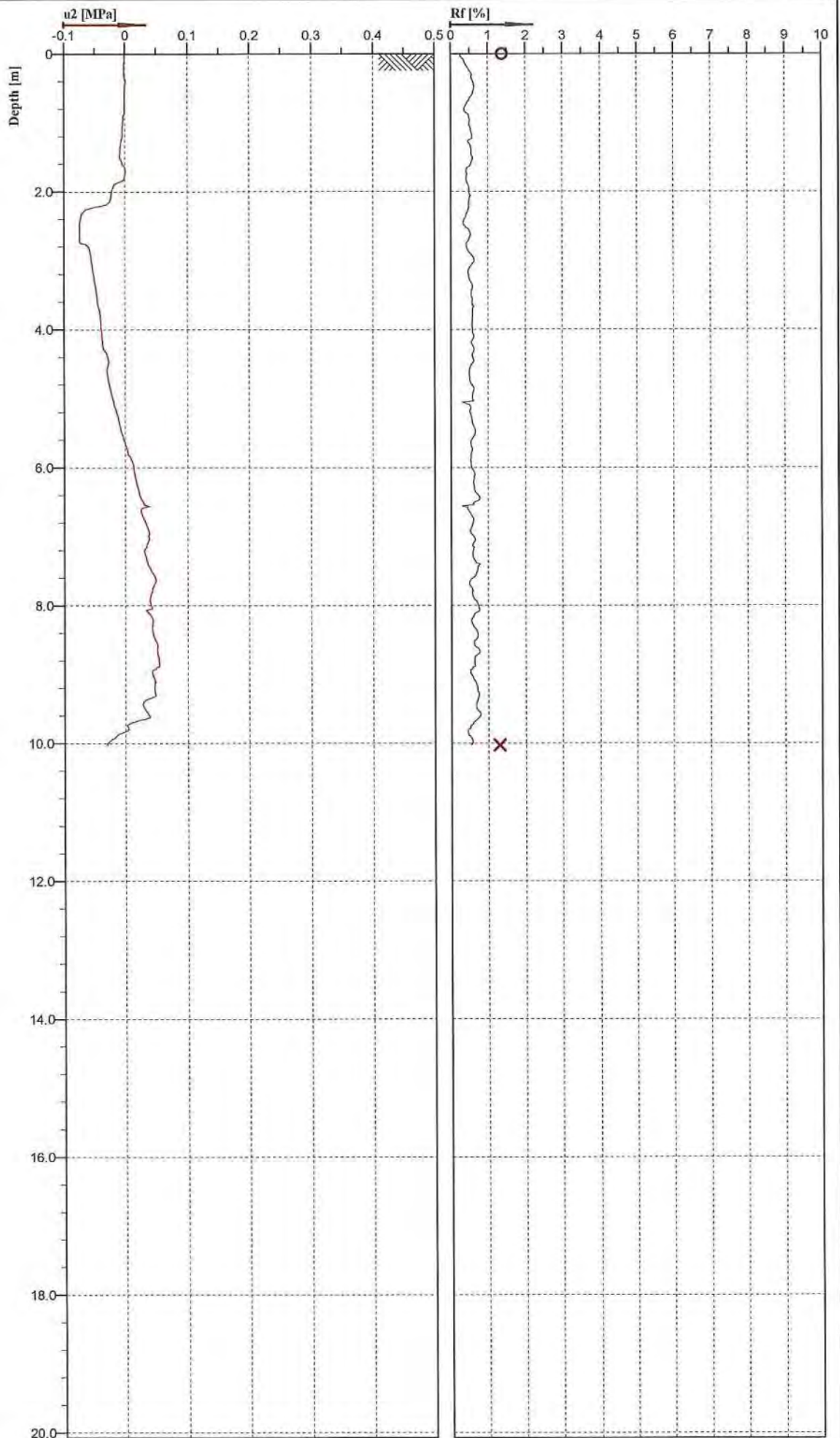
PRO-DRILL
SPECIALIST DRILLING ENGINEERS

Location: CHCH	Position: X: 0.00 m, Y: 0.00 m	Ground level: 0.00	Test no: 6311C
Project ID:	Client: Aurecon	Date: 04/02/2015	Scale: 1 : 80
Project: PRESTONS SOUTH		Page: 1/1	Fig:
		File: PrestonsSouth6311C.cpt	

Classification by
Robertson 1986



Sand (9)



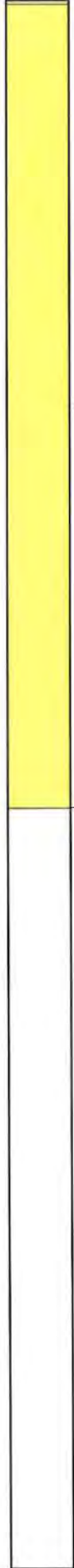
PRO-DRILL
SPECIALIST DRILLING ENGINEERS



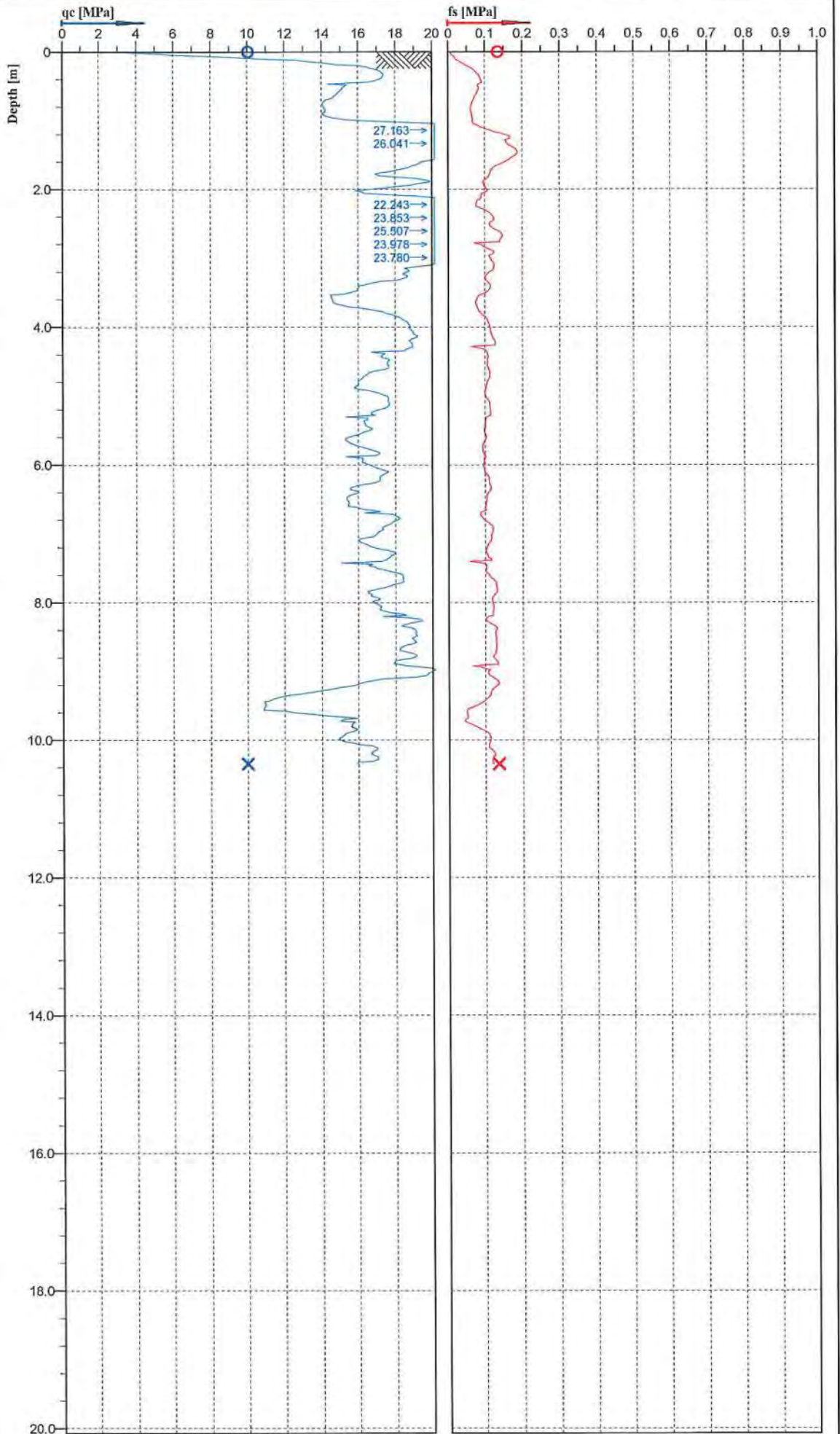
Cone No: 4439
Tip area [cm²]: 10
Sleeve area [cm²]: 150

Location:	CHCH	Position:	X: 0.00 m, Y: 0.00 m	Ground level:	0.00	Test no:	6311C
Project ID:		Client:	Aurecon	Date:	04/02/2015	Scale:	1 : 80
Project:	PRESTONS SOUTH			Page:	1/1	Fig:	
				File:	PrestonsSouth6311C.cpt		

Classification by
Robertson 1986



Sand (9)



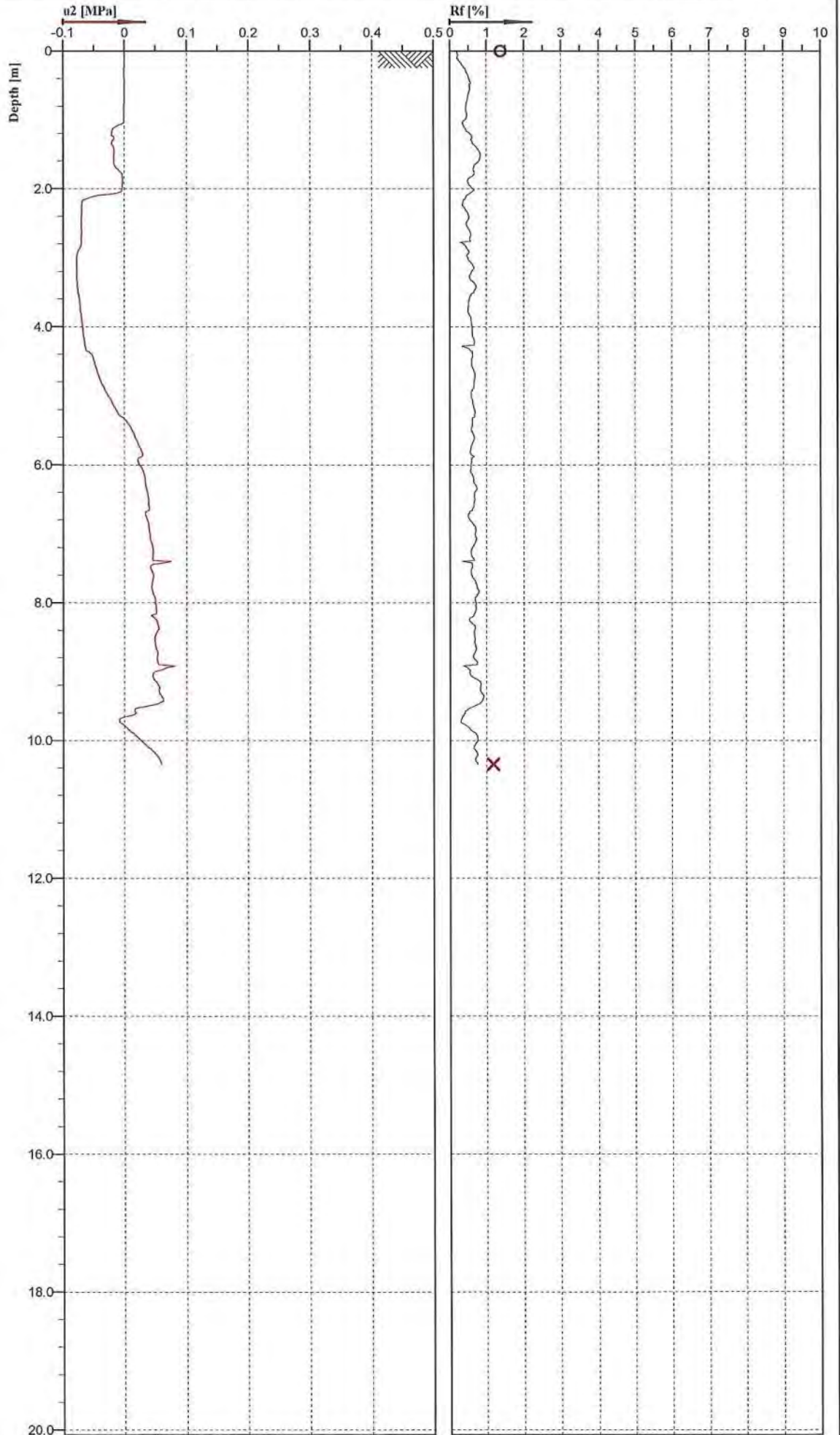
Cone No: 4439
Tip area [cm²]: 10
Sleeve area [cm²]: 150

Location:	CHCH	Position:	X: 0.00 m, Y: 0.00 m	Ground level:	0.00	Test no:	6321C
Project ID:		Client:	Aurecon	Date:	04/02/2015	Scale:	1 : 80
Project:	PRESTONS SOUTH			Page:	1/1	Fig:	
				File:	PrestonsSouth6321C.cpt		

Classification by
Robertson 1986



Sand (9)

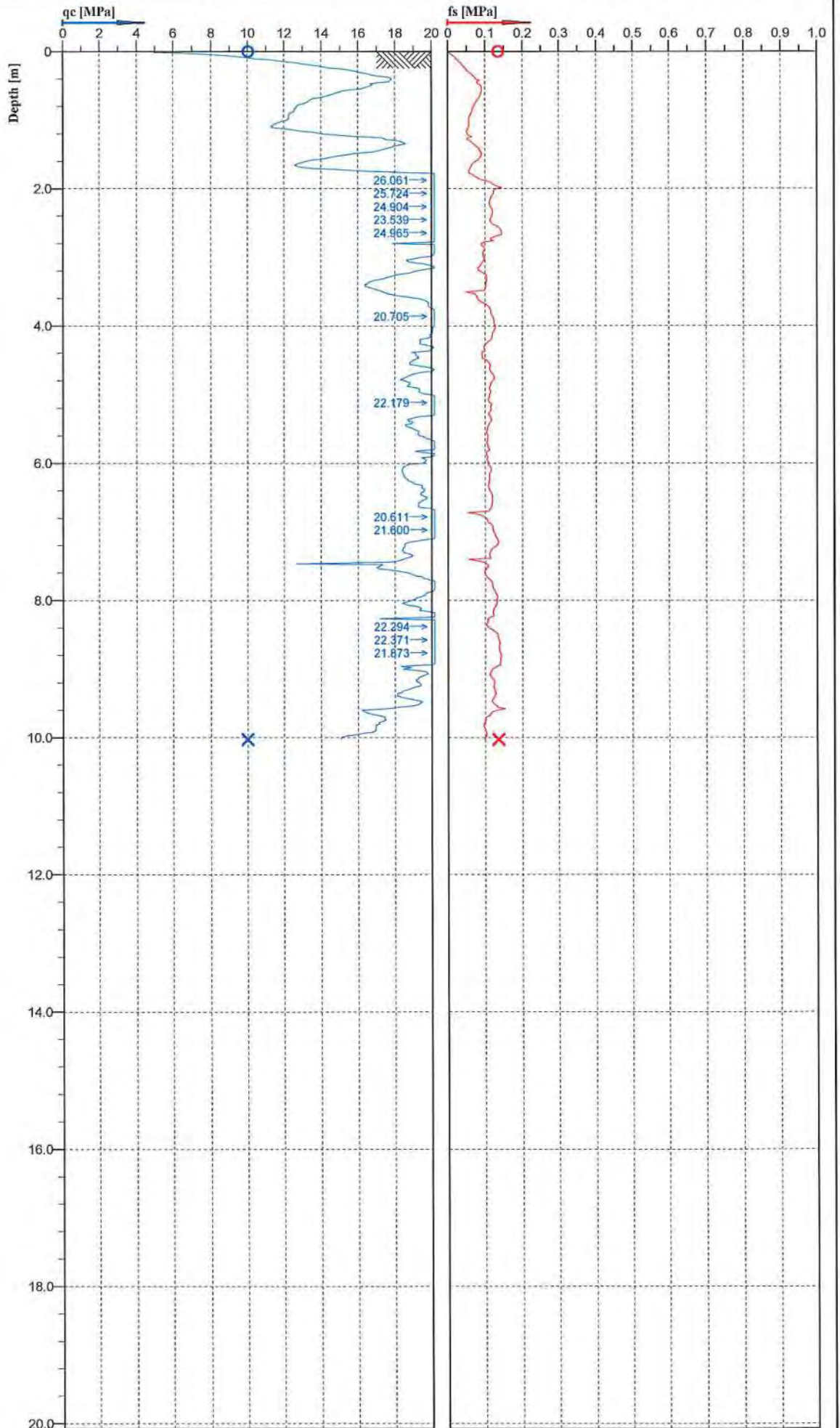
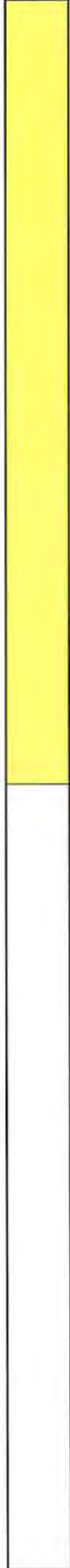


Cone No: 4439
Tip area [cm²]: 10
Sleeve area [cm²]: 150

PRO-DRILL
SPECIALIST DRILLING ENGINEERS

Location:	CHCH	Position:	X: 0.00 m, Y: 0.00 m	Ground level:	0.00	Test no:	6321C
Project ID:		Client:	Aurecon	Date:	04/02/2015	Scale:	1 : 80
Project:	PRESTONS SOUTH			Page:	1/1	Fig:	
				File:	PrestonsSouth6321C.cpt		

Classification by
Robertson 1986



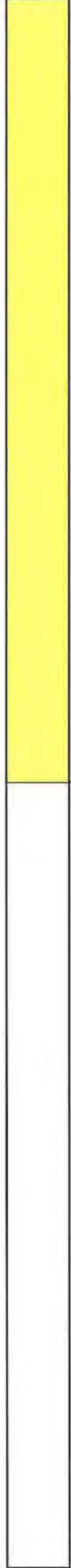
PRO-DRILL
SPECIALIST DRILLING ENGINEERS

Cone No: 4439
Tip area [cm²]: 10
Sleeve area [cm²]: 150

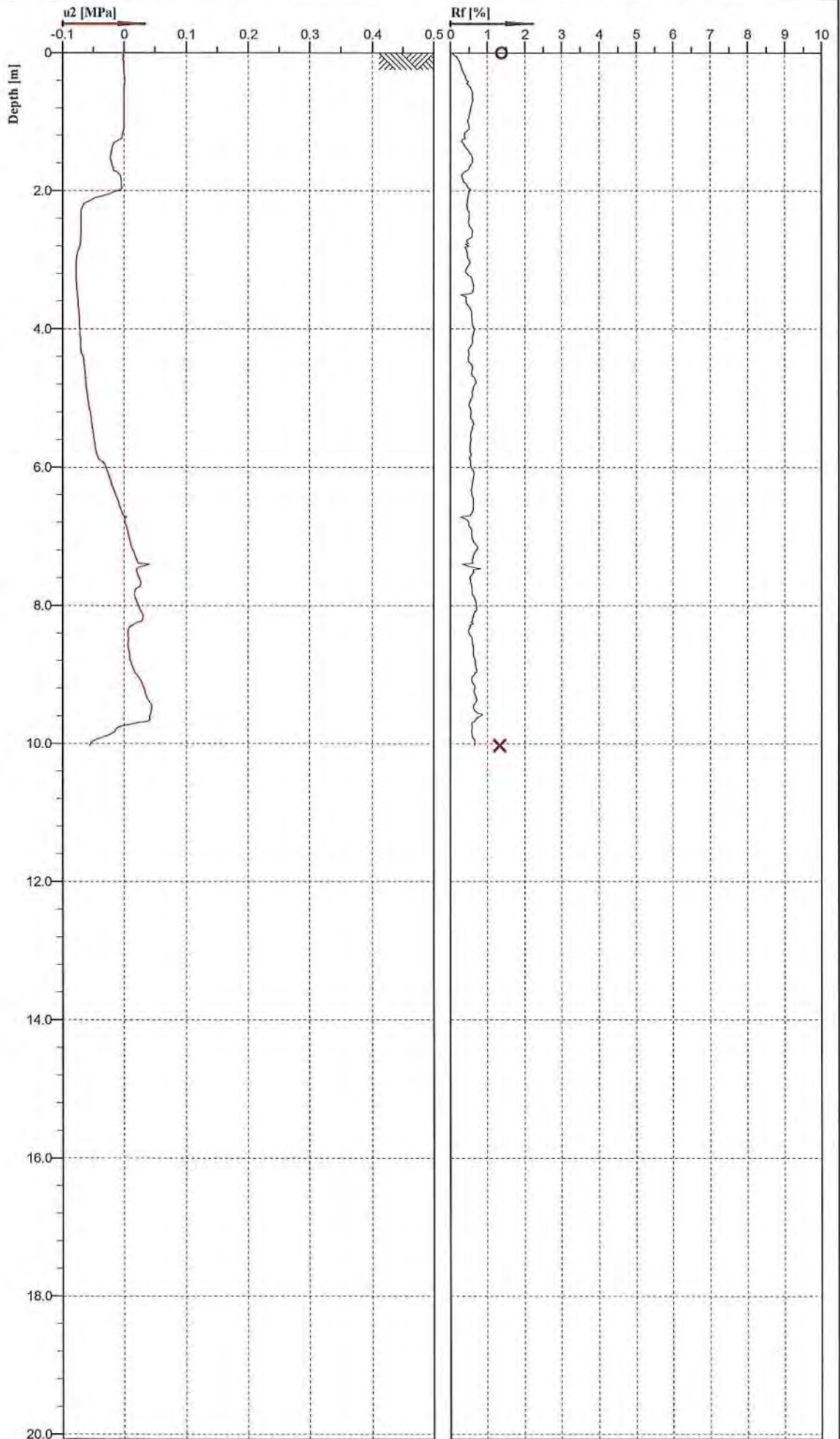


Location:	CHCH	Position:	X: 0.00 m, Y: 0.00 m	Ground level:	0.00	Test no:	633IC
Project ID:		Client:	Aurecon	Date:	04/02/2015	Scale:	1 : 80
Project:	PRESTONS SOUTH			Page:	1/1	Fig:	
				File:	PrestonsSouth633IC.cpt		

Classification by
Robertson 1986



Sand (9)



PRO-DRILL
SPECIALIST DRILLING ENGINEERS

Cone No: 4439
Tip area [cm²]: 10
Sleeve area [cm²]: 150



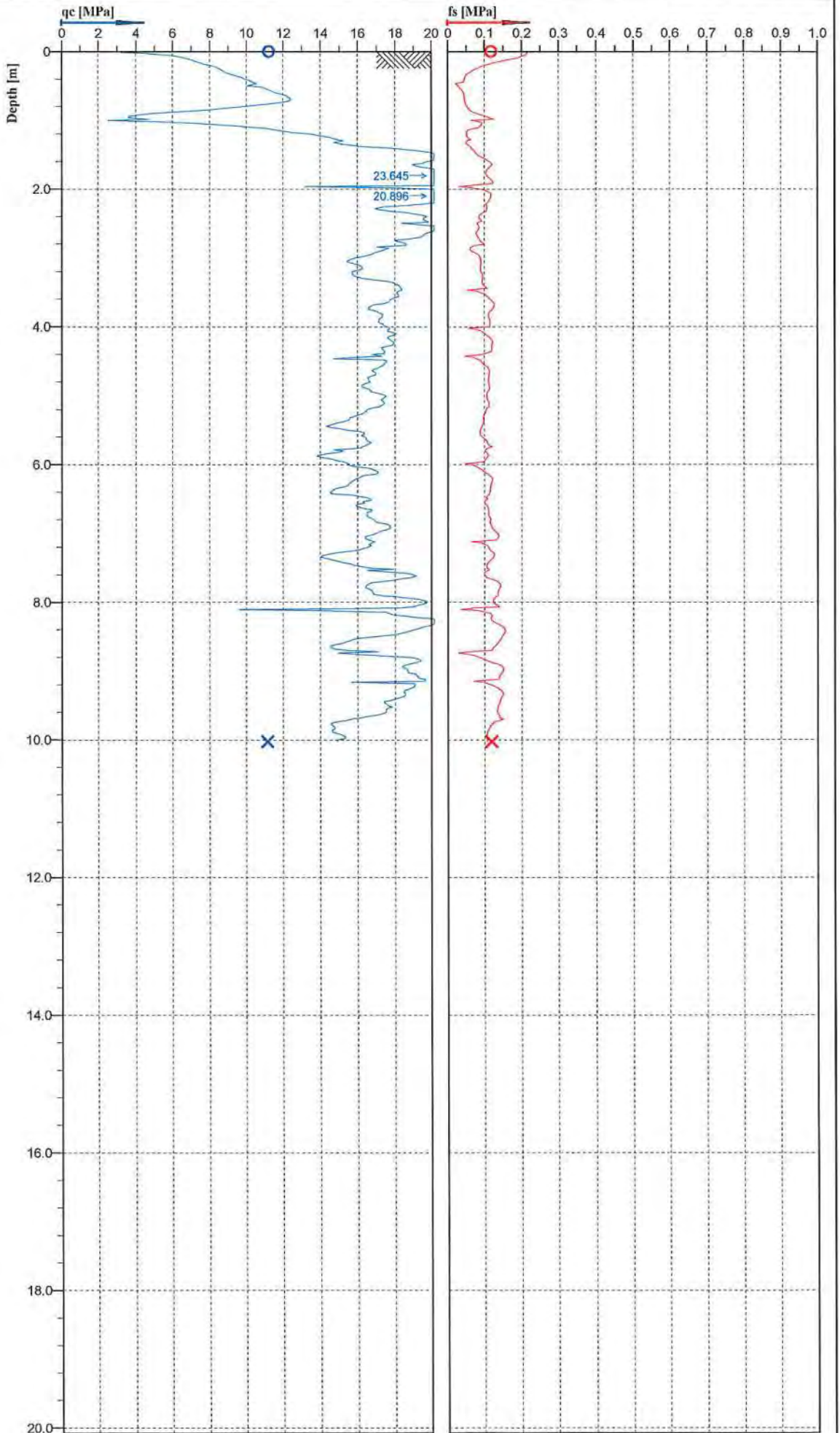
Location: CHCH	Position: X: 0.00 m, Y: 0.00 m	Ground level: 0.00	Test no: 6331C
Project ID:	Client: Aurecon	Date: 04/02/2015	Scale: 1 : 80
Project: PRESTONS SOUTH		Page: 1/1	Fig:
		File: PrestonsSouth6331C.cpt	

Classification by
Robertson 1986

Silty clay to clay (4)



Sand (9)



PRO-DRILL
SPECIALIST DRILLING ENGINEERS



Cone No: 4488
Tip area [cm²]: 10
Sleeve area [cm²]: 150

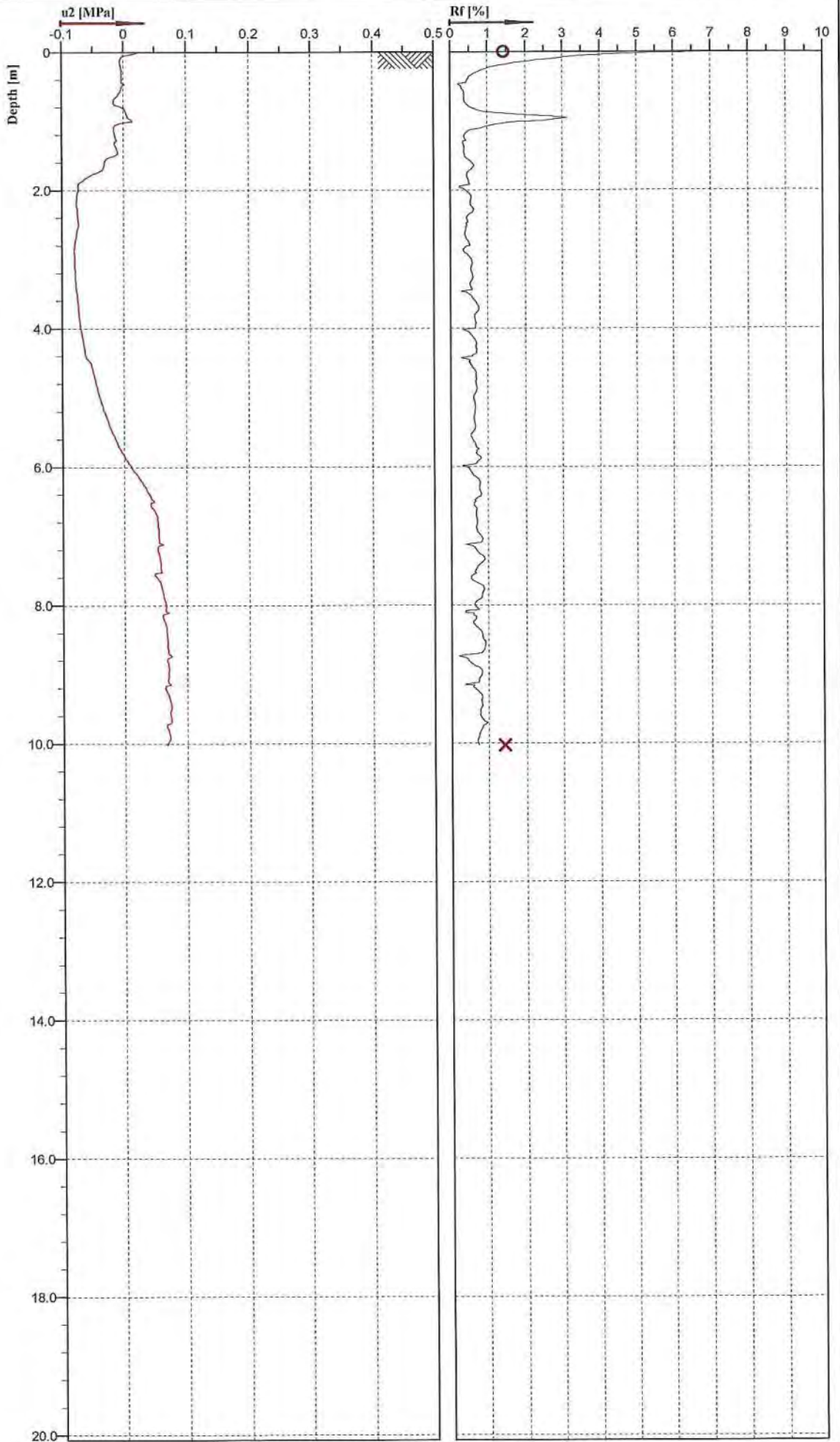
Location:	CHCH	Position:	X: 0.00 m, Y: 0.00 m	Ground level:	0.00	Test no:	6341C
Project ID:		Client:	Aurecon	Date:	16/10/2014	Scale:	1 : 80
Project:	PRESTONS SOUTH			Page:	1/1	Fig:	
				File:	PrestonsSouthCPT6341C.cpt		

Classification by
Robertson 1986

Silty clay to clay (4)



Sand (9)



PRO-DRILL
SPECIALIST DRILLING ENGINEERS

Cone No: 4486
Tip area [cm²]: 10
Sleeve area [cm²]: 150



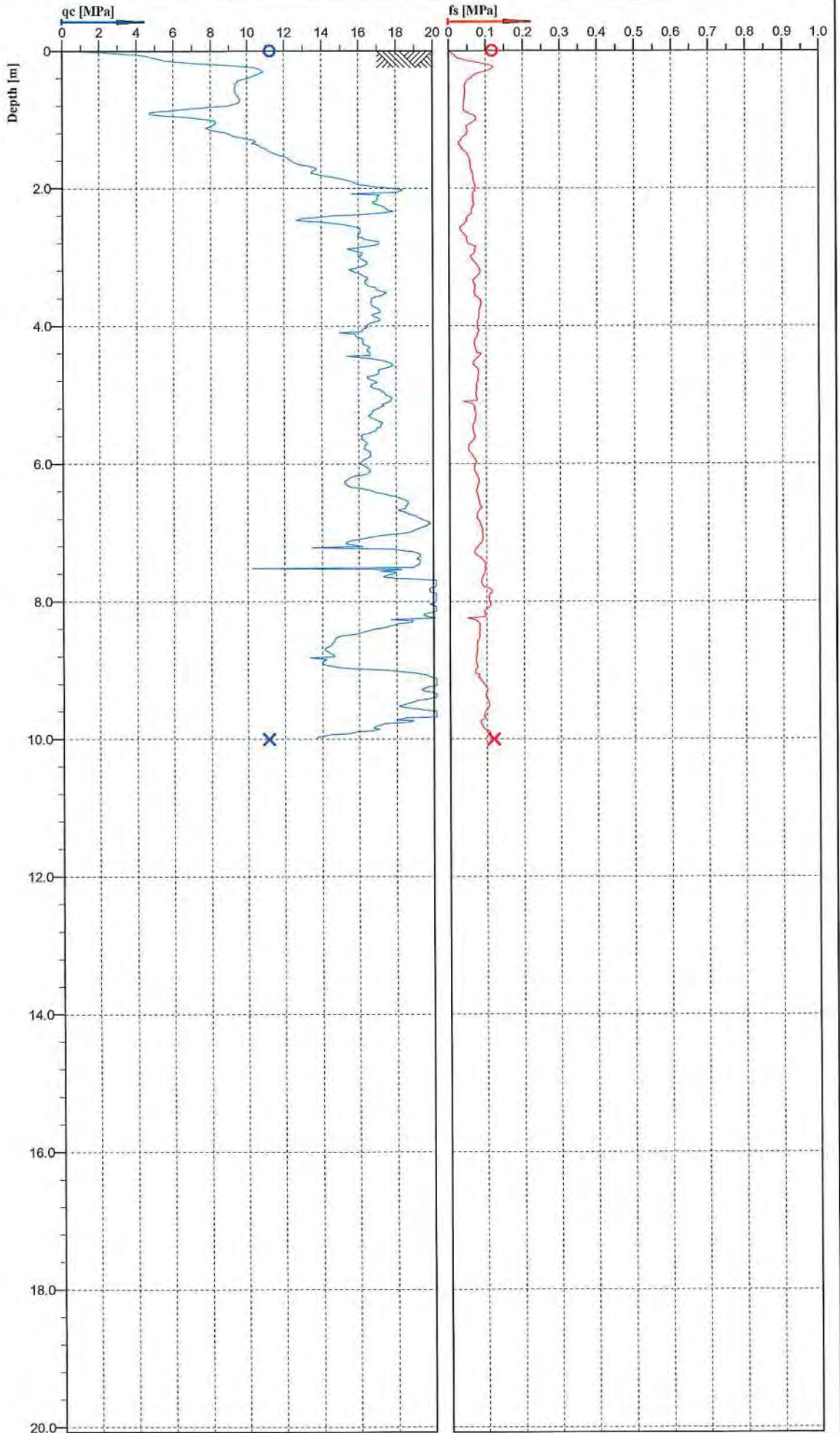
Location:	CHCH	Position:	X: 0.00 m, Y: 0.00 m	Ground level:	0.00	Test no:	6341C
Project ID:		Client:	Aurecon	Date:	16/10/2014	Scale:	1 : 80
Project:	PRESTONS SOUTH			Page:	1/1	Fig:	
				File:	PrestonsSouthCPT6341C.cpt		

Classification by
Robertson 1986

Silty sand to sandy silt (7)



Sand (9)



PRO-DRILL
SPECIALIST DRILLING ENGINEERS

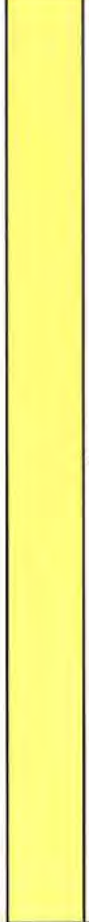


Cone No: 4486
Tip area [cm²]: 10
Sleeve area [cm²]: 150

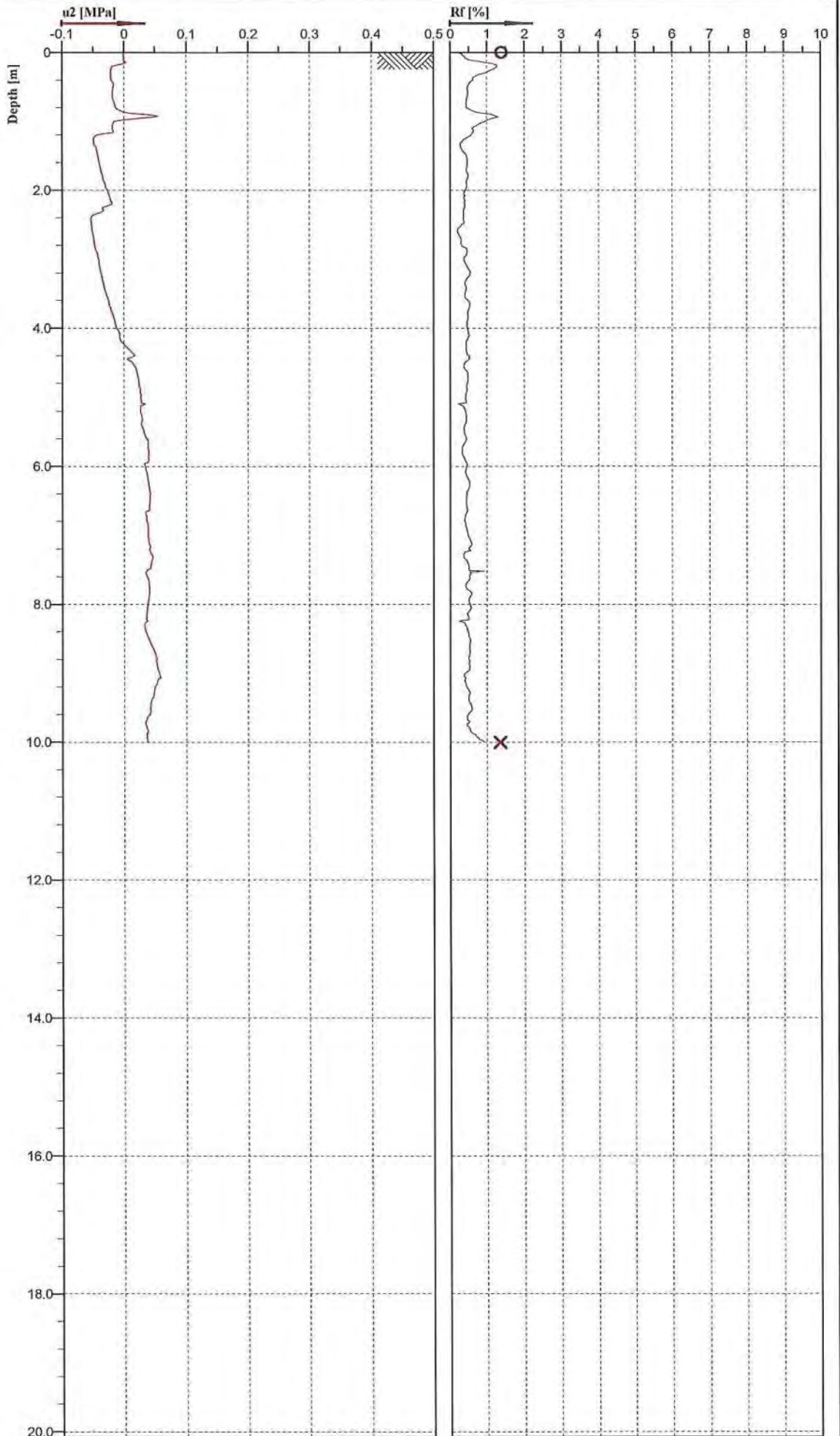
Location:	CHCH	Position:	X: 0.00 m, Y: 0.00 m	Ground level:	0.00	Test no:	6351C
Project ID:		Client:	Aurecon	Date:	16/10/2014	Scale:	1 : 80
Project:	PRESTONS SOUTH			Page:	1/1	Fig:	
				File:	PrestonsSouthCPT6351C.cpt		

Classification by
Robertson 1986

Silty sand to sandy silt (7)



Sand (9)



Cone No: 4486
Tip area [cm²]: 10
Sleeve area [cm²]: 150

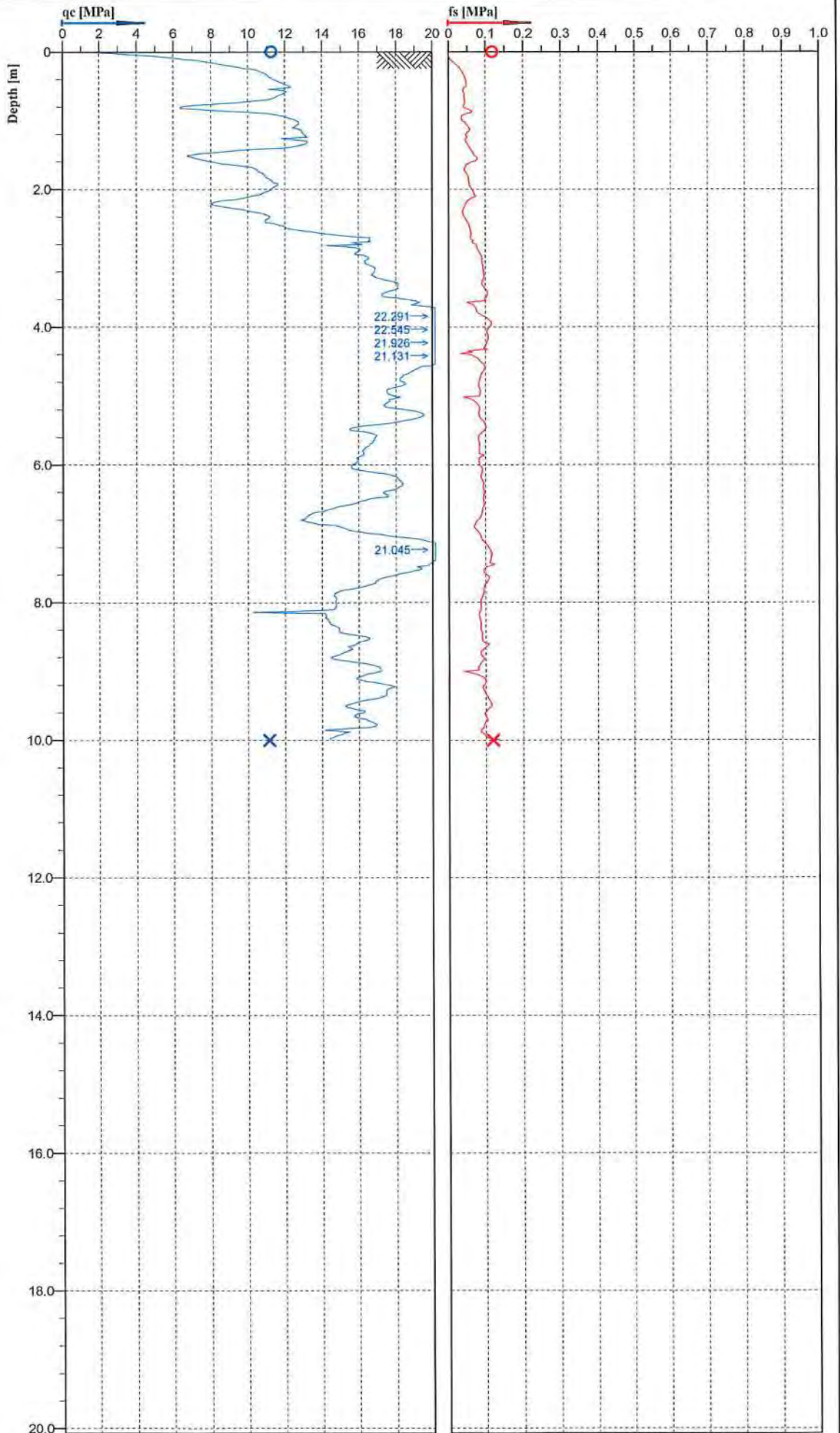
PRO-DRILL
SPECIALIST DRILLING ENGINEERS

Location: CHCH	Position: X: 0.00 m, Y: 0.00 m	Ground level: 0.00	Test no: 6351C
Project ID:	Client: Aurecon	Date: 16/10/2014	Scale: 1 : 80
Project: PRESTONS SOUTH		Page: 1/1	Fig:
		File: PrestonsSouthCPT6351C.cpt	

Classification by
Robertson 1986



Sand (9)



PRO-DRILL
SPECIALIST DRILLING ENGINEERS



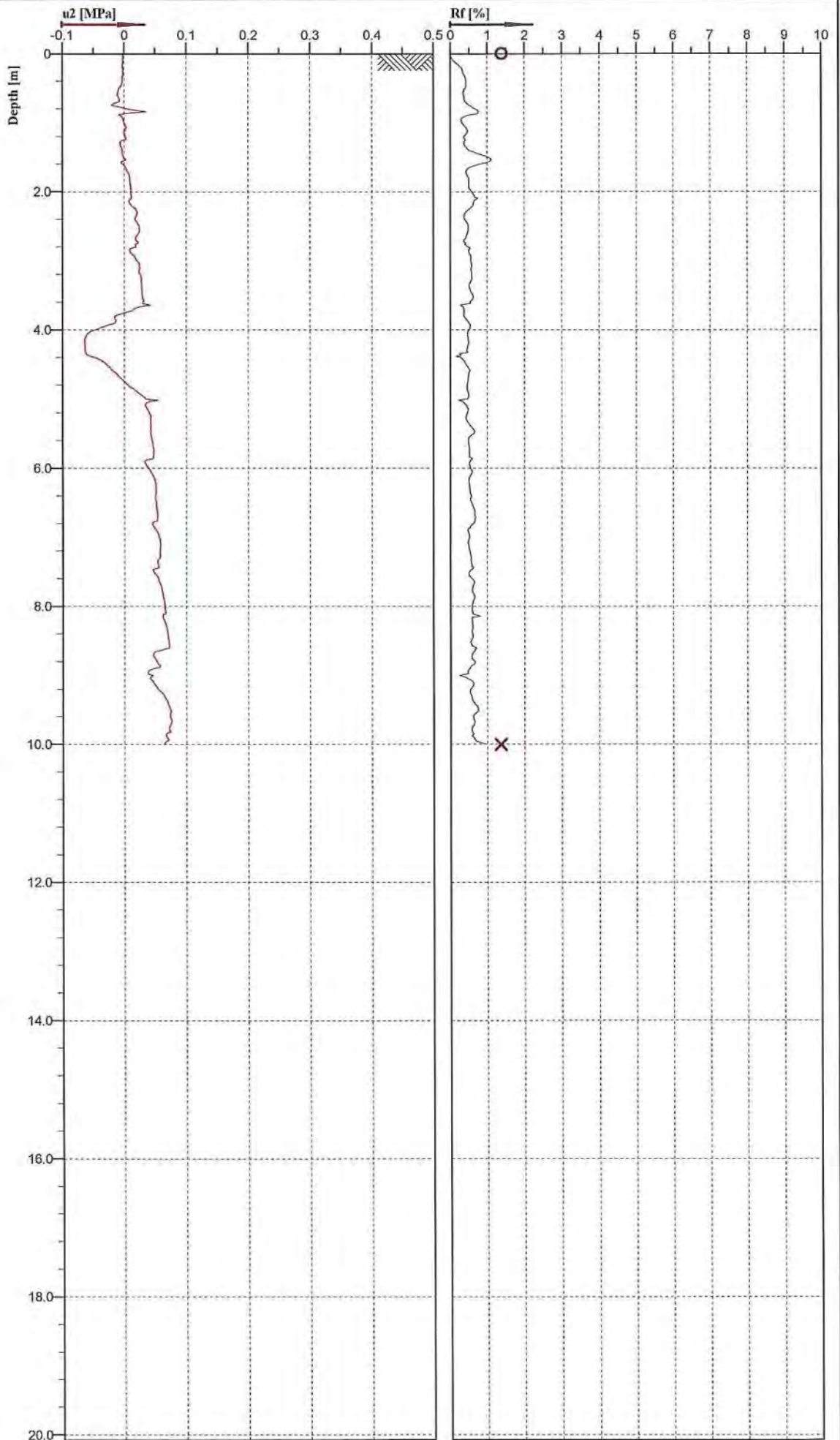
Cone No: 4486
Tip area [cm²]: 10
Sleeve area [cm²]: 150

Location:	CHCH	Position:	X: 0.00 m, Y: 0.00 m	Ground level:	0.00	Test no:	6361C
Project ID:		Client:	Aurecon	Date:	16/10/2014	Scale:	1 : 80
Project:	PRESTONS SOUTH			Page:	1/1	Fig:	
				File:	PrestonsSouthCPT6361C.cpt		

Classification by
Robertson 1986



Sand (9)



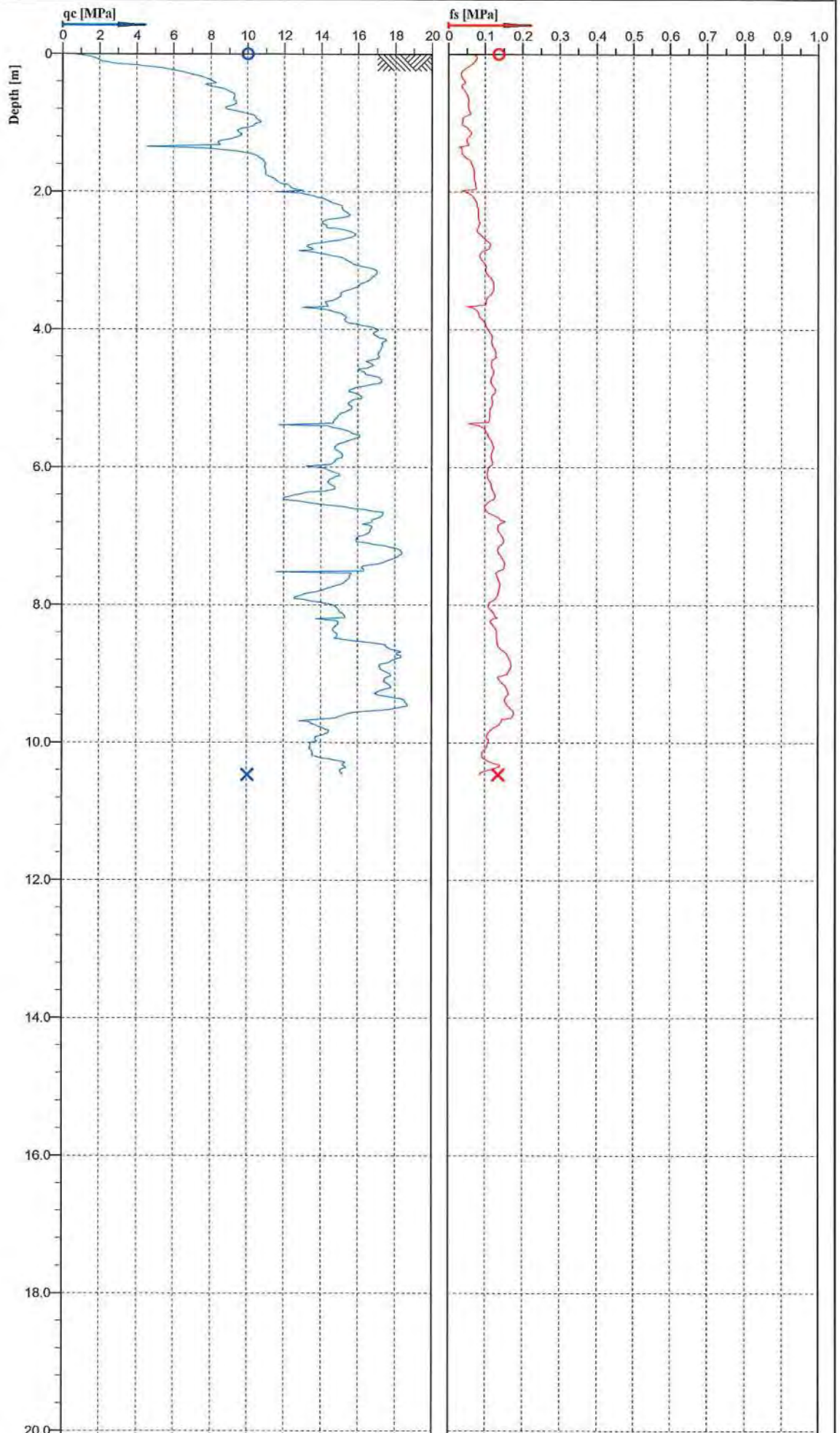
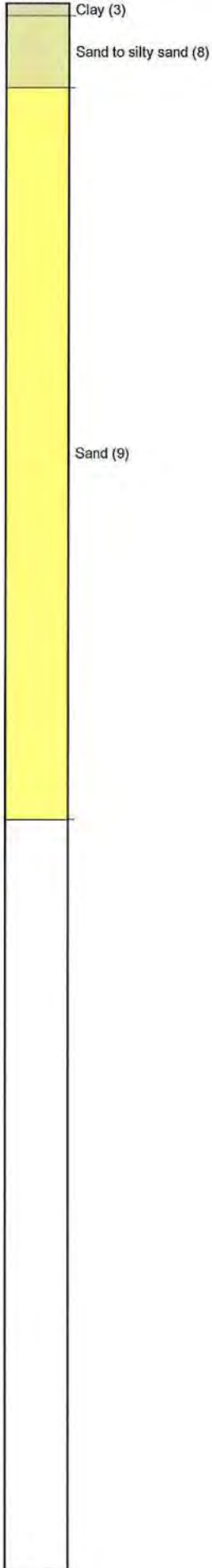
PRO-DRILL
SPECIALIST DRILLING ENGINEERS

Cone No: 4486
Tip area [cm²]: 10
Sleeve area [cm²]: 150



Location:	CHCH	Position:	X: 0.00 m, Y: 0.00 m	Ground level:	0.00	Test no:	6361C
Project ID:		Client:	Aurecon	Date:	16/10/2014	Scale:	1 : 80
Project:	PRESTONS SOUTH			Page:	1/1	Fig:	
				File:	PrestonsSouthCPT6361C.cpt		

Classification by
Robertson 1986



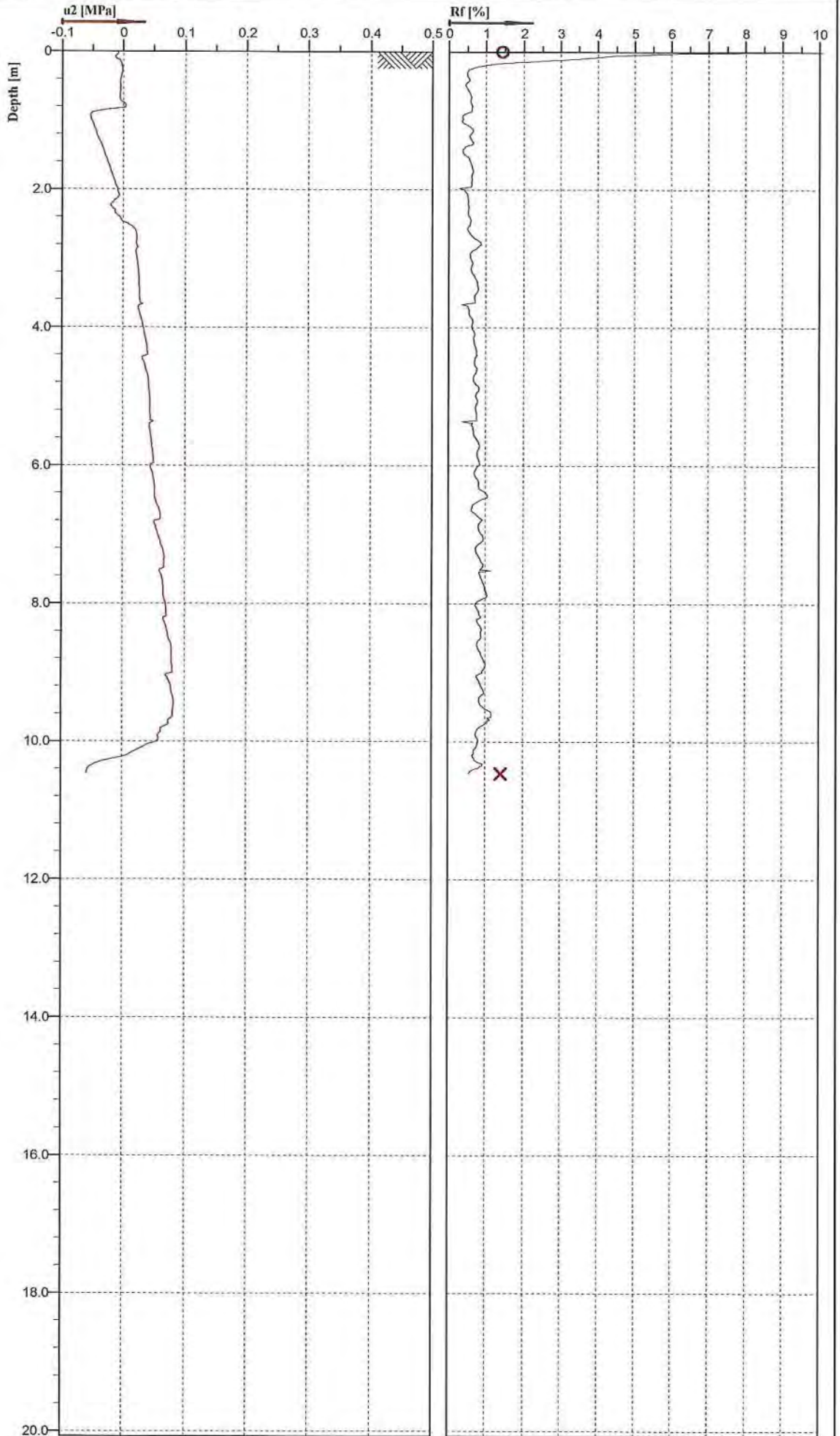
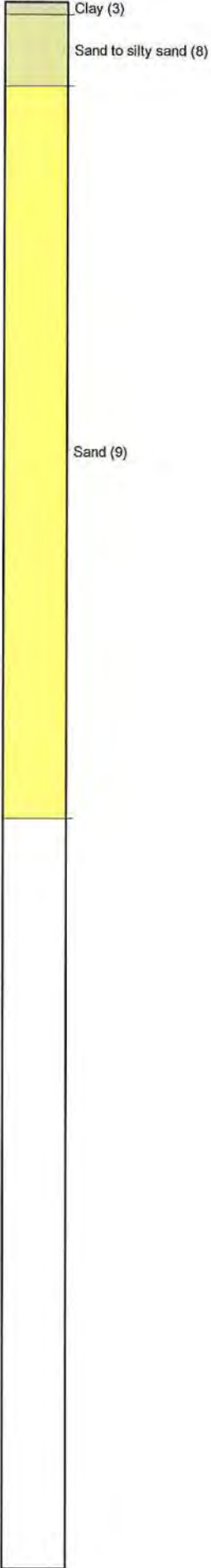
PRO-DRILL
SPECIALIST DRILLING ENGINEERS

Cone No: 4439
Tip area [cm²]: 10
Sleeve area [cm²]: 150



Location:	CHCH	Position:	X: 0.00 m, Y: 0.00 m	Ground level:	0.00	Test no:	637
Project ID:		Client:	AURECON	Date:	7/11/2014	Scale:	1 : 80
Project:	PRESTONS SOUTH			Page:	1/1	Fig:	
				File:	PrestonsSouthCPT637-.cpt		

Classification by
Robertson 1986



PRO-DRILL
SPECIALIST DRILLING ENGINEERS

Cone No: 4439
Tip area [cm²]: 10
Sleeve area [cm²]: 150



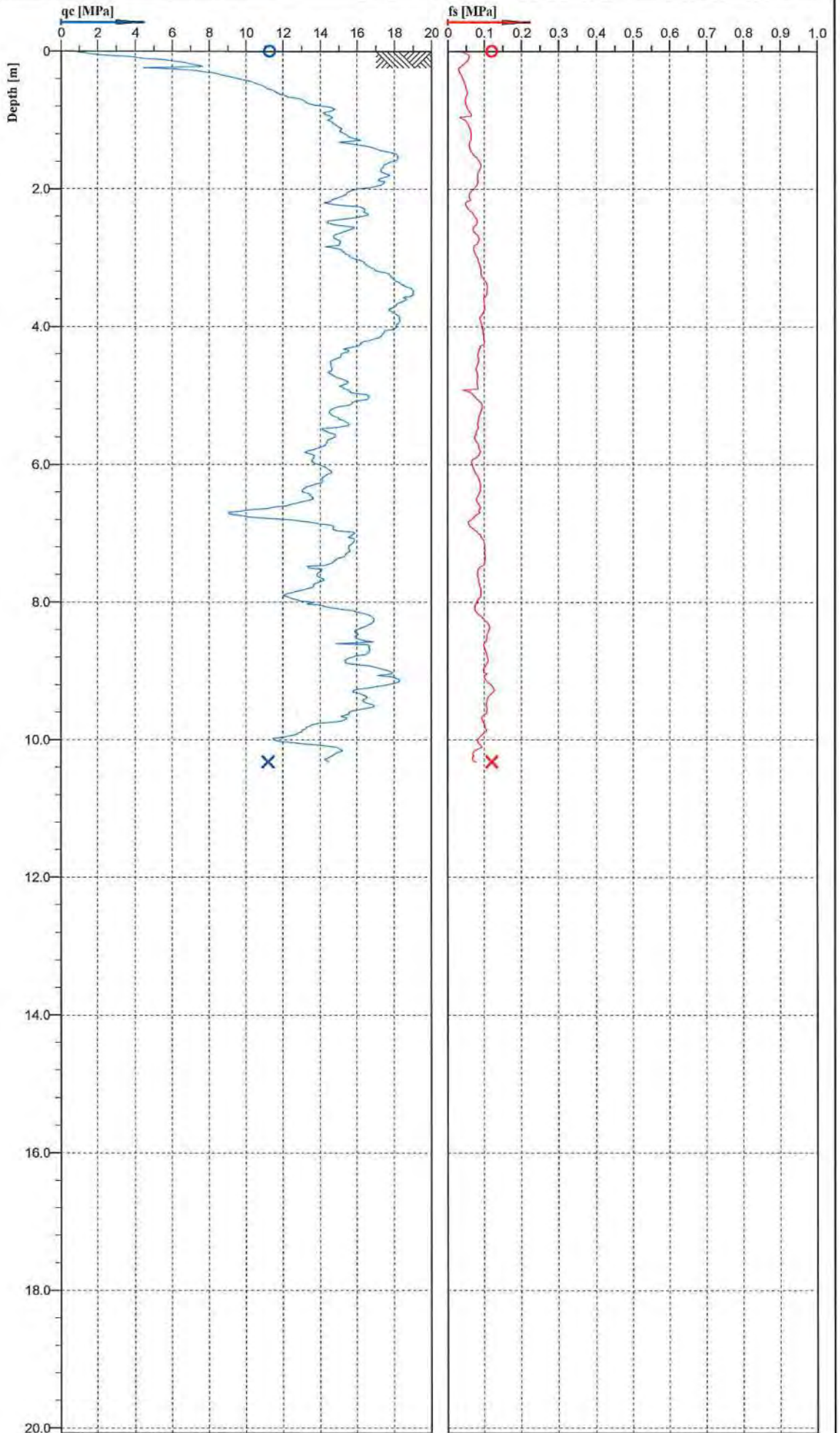
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Project ID:		Client:	AURECON	Date:	7/11/2014	Scale:	1 : 80
Project:	PRESTONS SOUTH			Page:	1/1	Fig:	
				File:	PrestonsSouthCPT637-.cpt		

Classification by
Robertson 1986

Clayey silt to silty clay (5)



Sand (9)



PRO-DRILL
SPECIALIST DRILLING ENGINEERS



Cone No: 4486
Tip area [cm²]: 10
Sleeve area [cm²]: 150

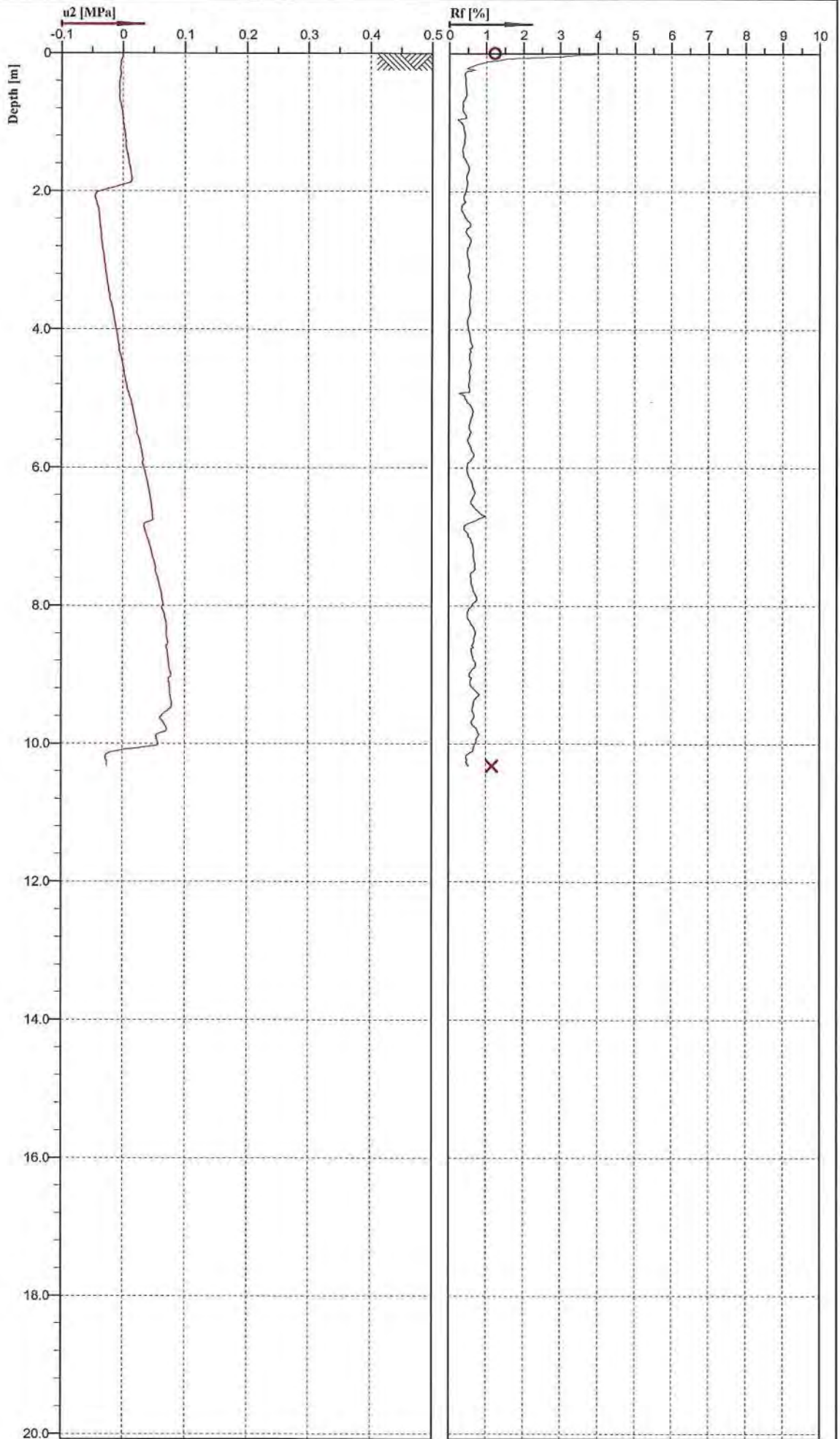
Location:	CHCH	Position:	X: 0.00 m, Y: 0.00 m	Ground level:	0.00	Test no:	6381C
Project ID:		Client:	Aurecon	Date:	2/10/2014	Scale:	1 : 80
Project:	PRESTONS SOUTH			Page:	1/1	Fig:	
				File:	PrestonsSouthCPT6381C.cpt		

Classification by
Robertson 1986

Clayey silt to silty clay (5)



Sand (9)



Cone No: 4486
Tip area [cm²]: 10
Sleeve area [cm²]: 150

PRO-DRILL
SPECIALIST DRILLING ENGINEERS

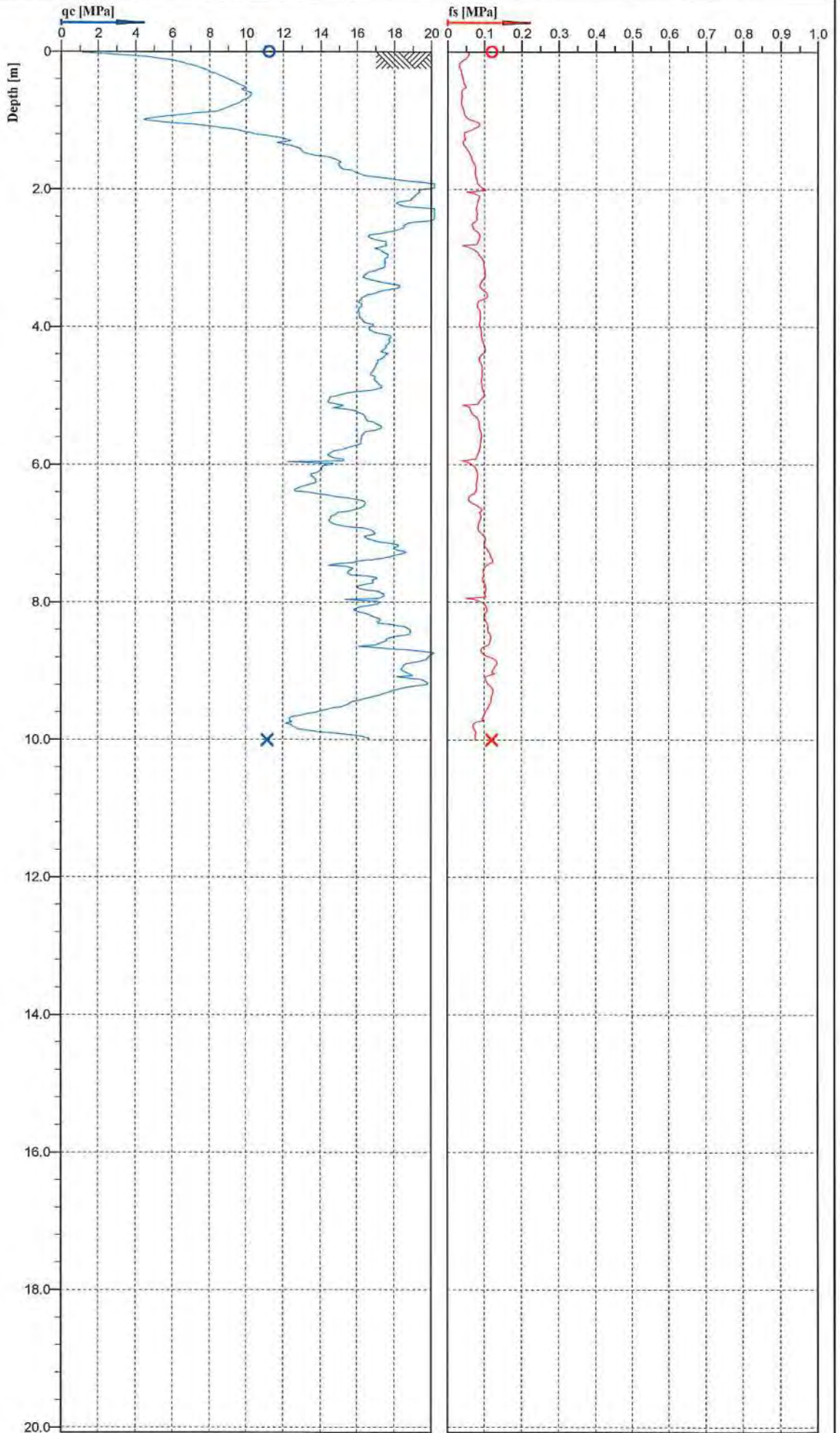
Location: CHCH	Position: X: 0.00 m, Y: 0.00 m	Ground level: 0.00	Test no: 6381C
Project ID:	Client: Aurecon	Date: 2/10/2014	Scale: 1 : 80
Project: PRESTONS SOUTH		Page: 1/1	Fig:
		File: PrestonsSouthCPT6381C.cpt	

Classification by
Robertson 1986

Clayey silt to silty clay (5)



Sand (9)



PRO-DRILL
SPECIALIST DRILLING ENGINEERS

Cone No: 4486
Tip area [cm²]: 10
Sleeve area [cm²]: 150



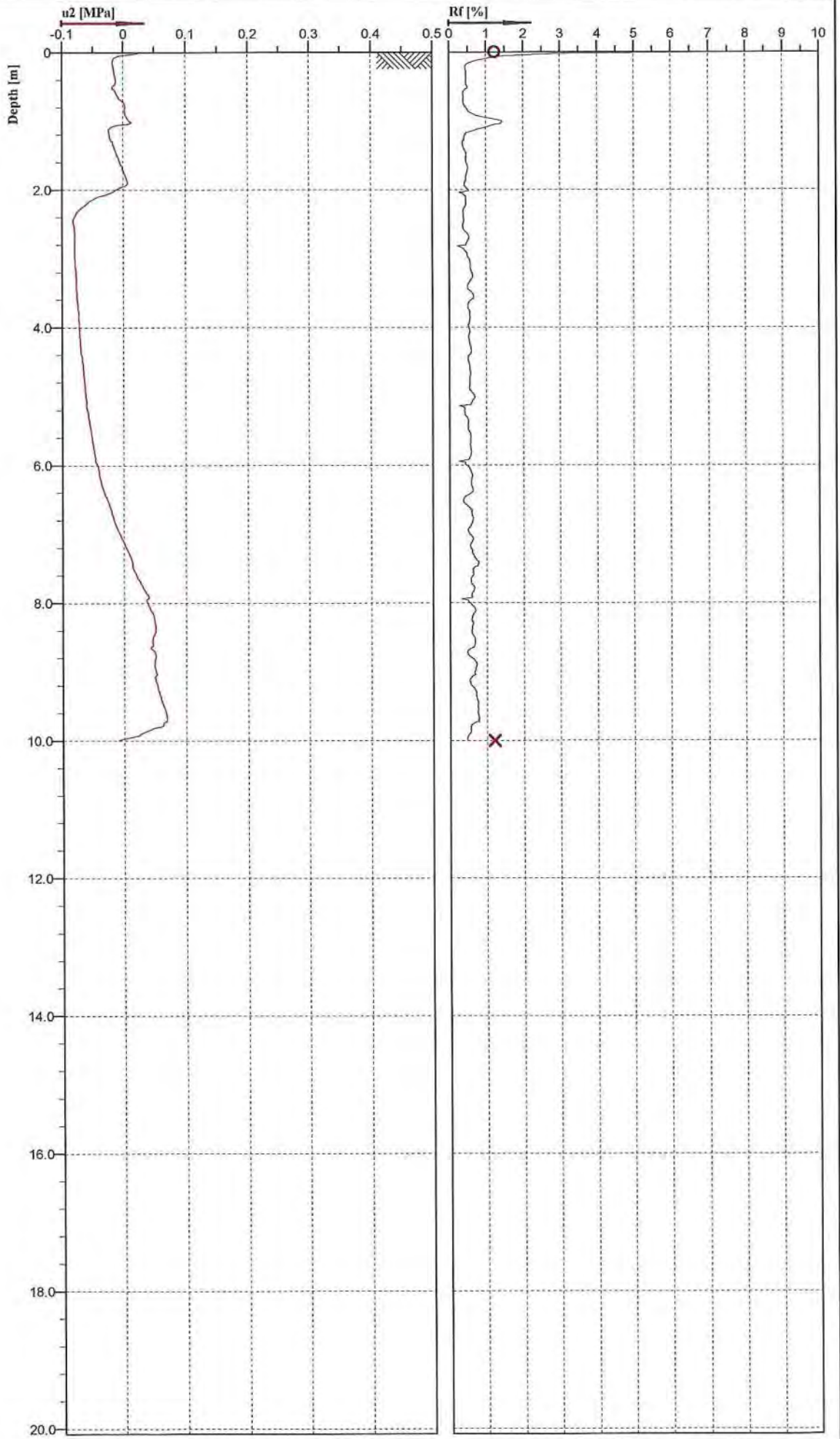
Location:	CHCH	Position:	X: 0.00 m, Y: 0.00 m	Ground level:	0.00	Test no:	6391C
Project ID:		Client:	Aurecon	Date:	2/10/2014	Scale:	1 : 80
Project:	PRESTONS SOUTH			Page:	1/1	Fig:	
				File:	PrestonsSouthCPT6391C.cpt		

Classification by
Robertson 1986

Clayey silt to silty clay (5)



Sand (9)



PRO-DRILL
SPECIALIST DRILLING ENGINEERS

Cone No: 4486
Tip area [cm²]: 10
Sleeve area [cm²]: 150

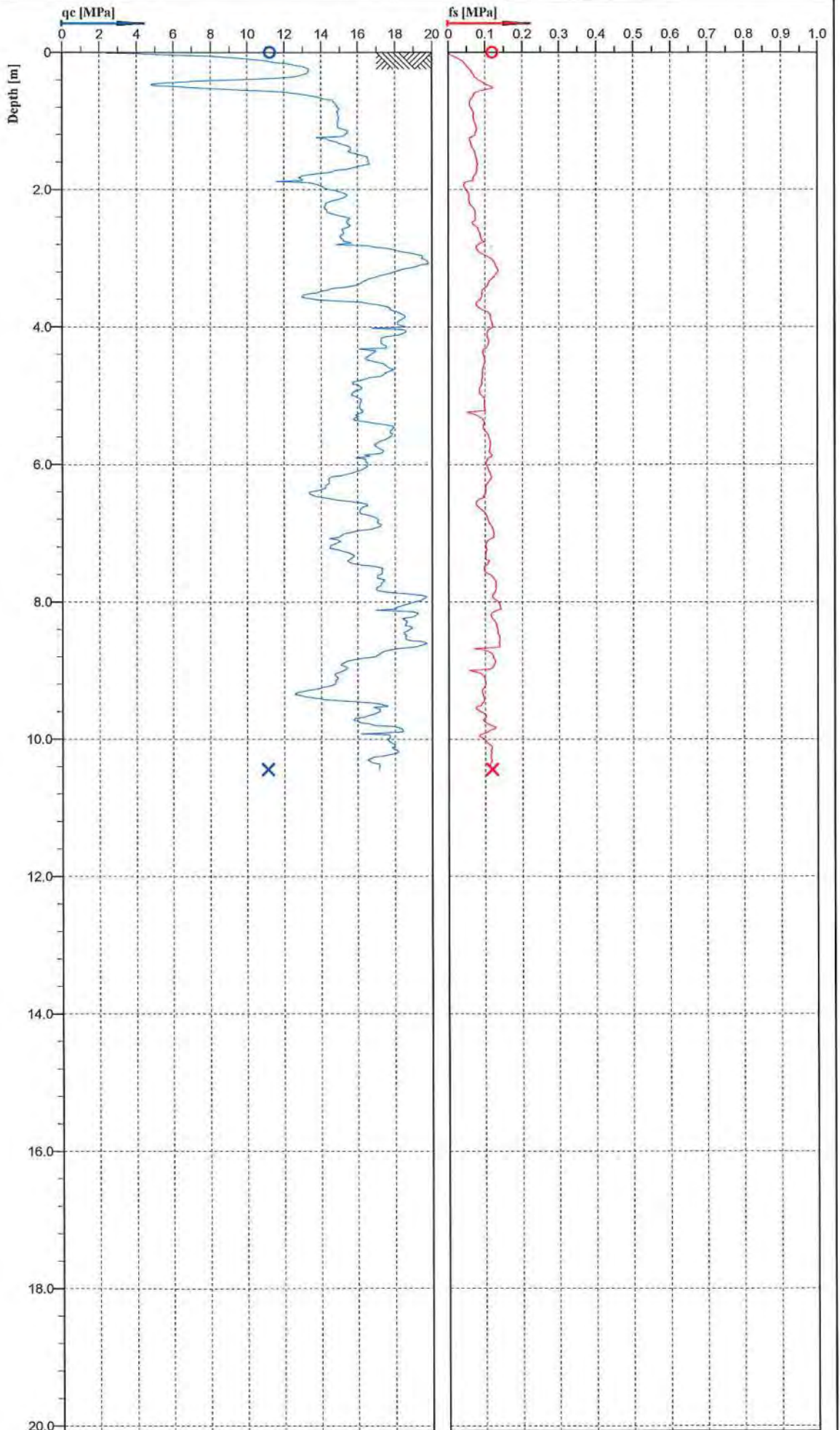


Location: CHCH	Position: X: 0.00 m, Y: 0.00 m	Ground level: 0.00	Test no: 639IC
Project ID:	Client: Aurecon	Date: 2/10/2014	Scale: 1 : 80
Project: PRESTONS SOUTH		Page: 1/1	Fig:
		File: PrestonsSouthCPT639IC.cpt	

Classification by
Robertson 1986



Sand (9)



PRO-DRILL
SPECIALIST DRILLING ENGINEERS



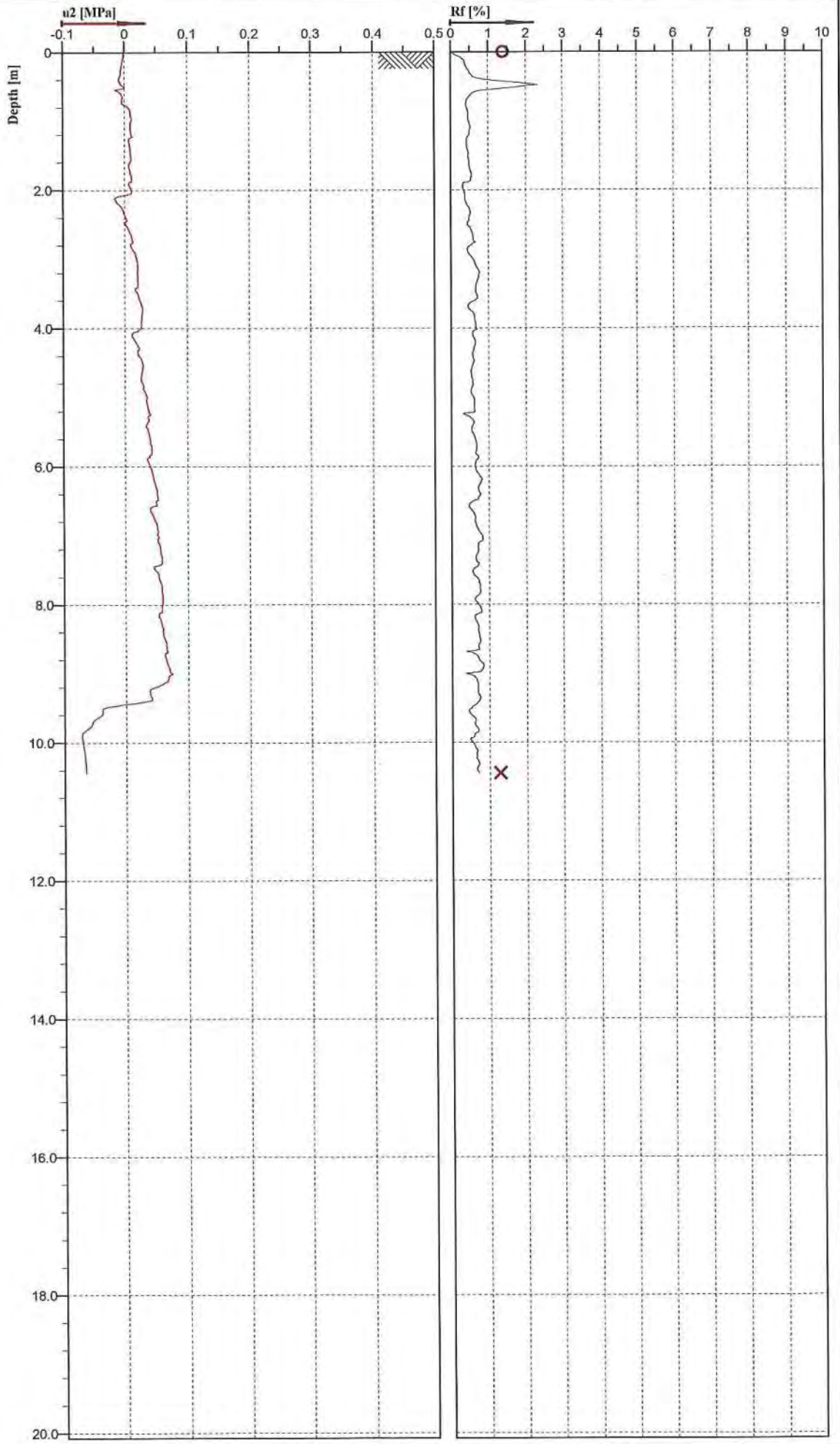
Cone No: 4486
Tip area [cm²]: 10
Sleeve area [cm²]: 150

Location:	CHCH	Position:	X: 0.00 m, Y: 0.00 m	Ground level:	0.00	Test no:	640IC
Project ID:		Client:	Aurecon	Date:	16/10/2014	Scale:	1 : 80
Project:	PRESTONS SOUTH			Page:	1/1	Fig:	
				File:	PrestonsSouthCPT640IC.cpt		

Classification by
Robertson 1986



Sand (9)



PRO-DRILL
SPECIALIST DRILLING ENGINEERS

Cone No: 4486
Tip area [cm²]: 10
Sleeve area [cm²]: 150

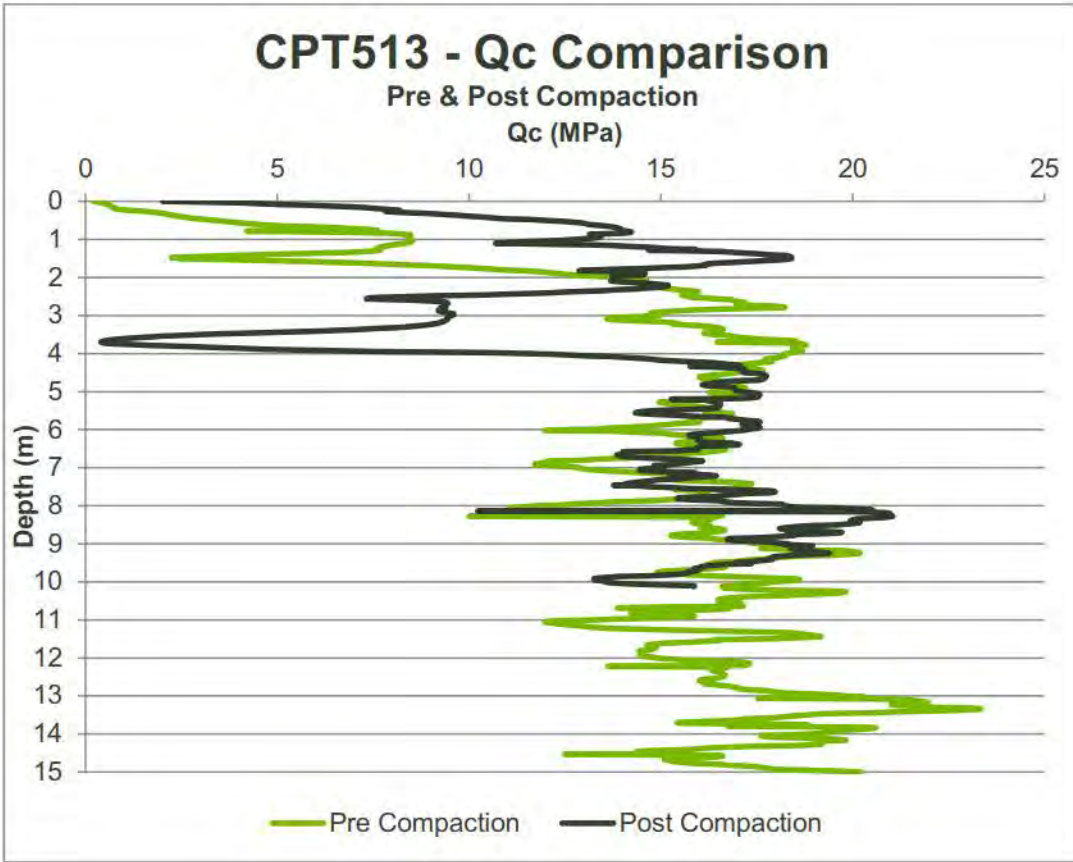
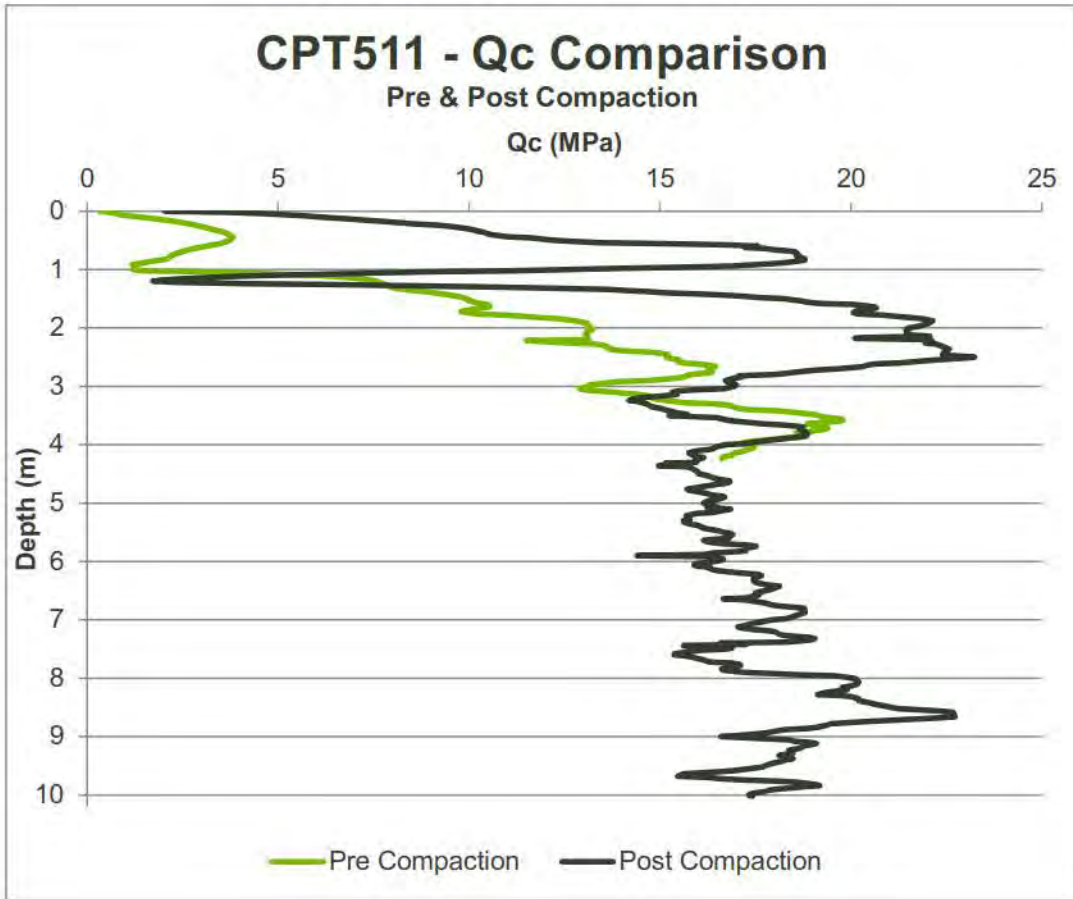


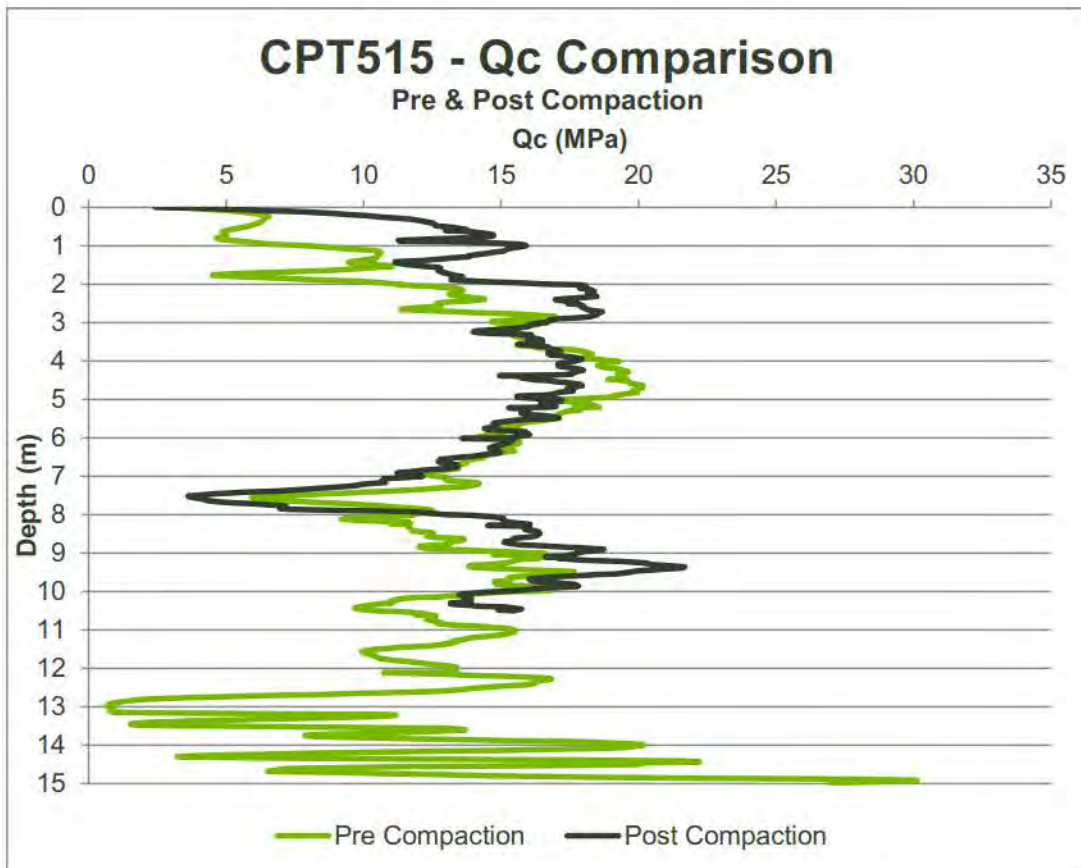
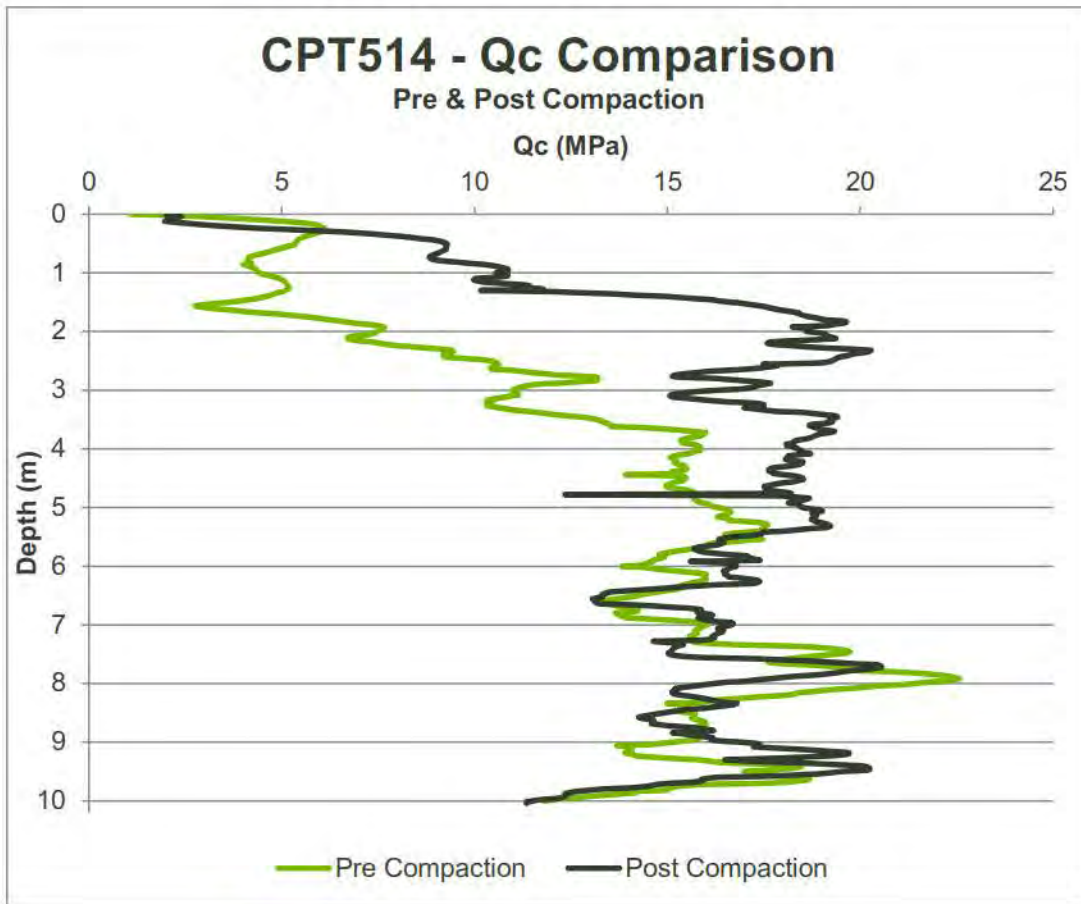
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Project ID:		Client:	Aurecon	Date:	16/10/2014	Scale:	1 : 80
Project:	PRESTONS SOUTH			Page:	1/1	Fig:	
				File:	PrestonsSouthCPT640IC.cpt		

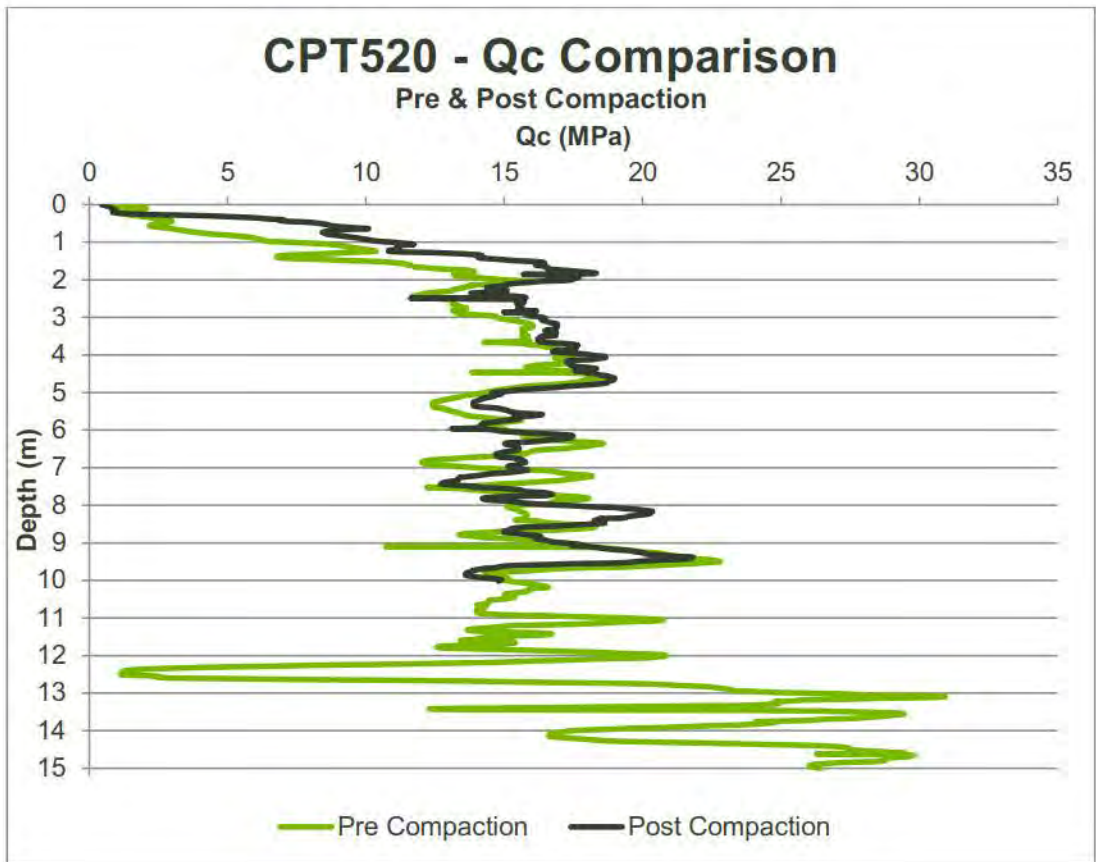
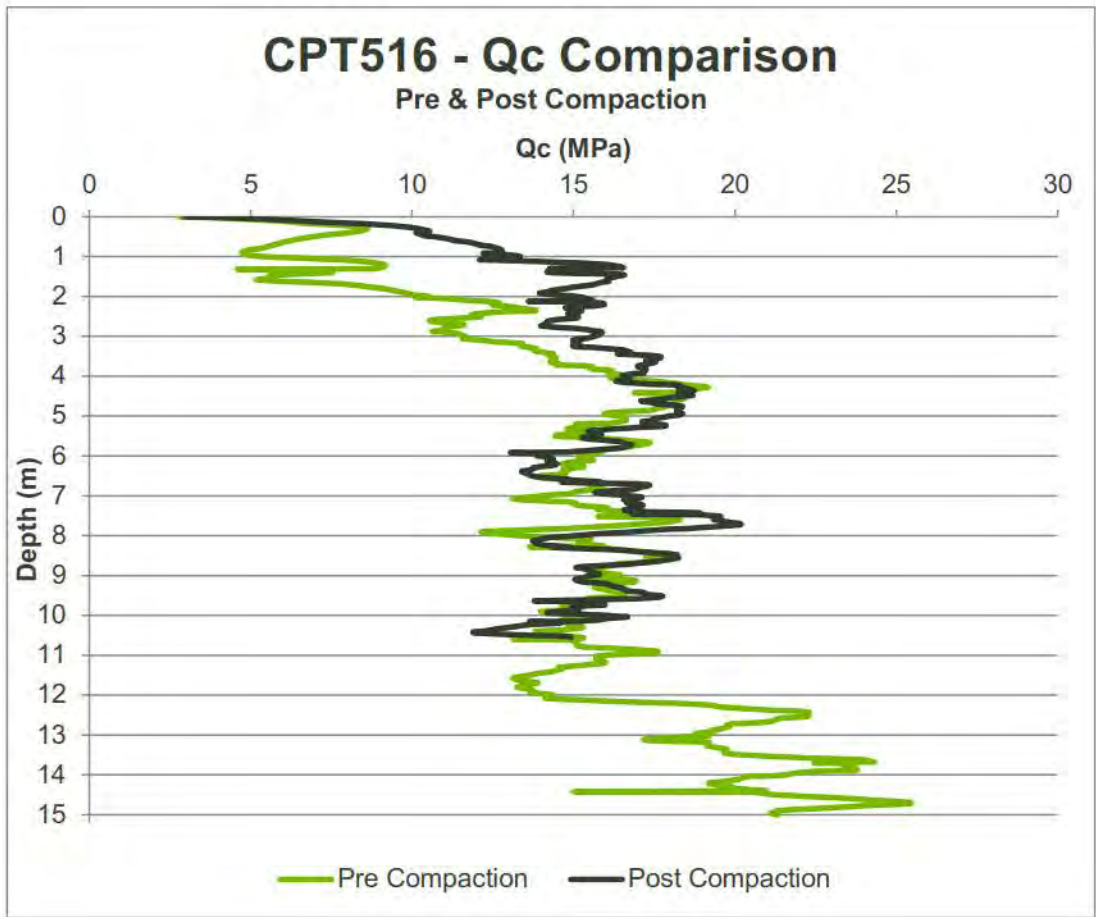


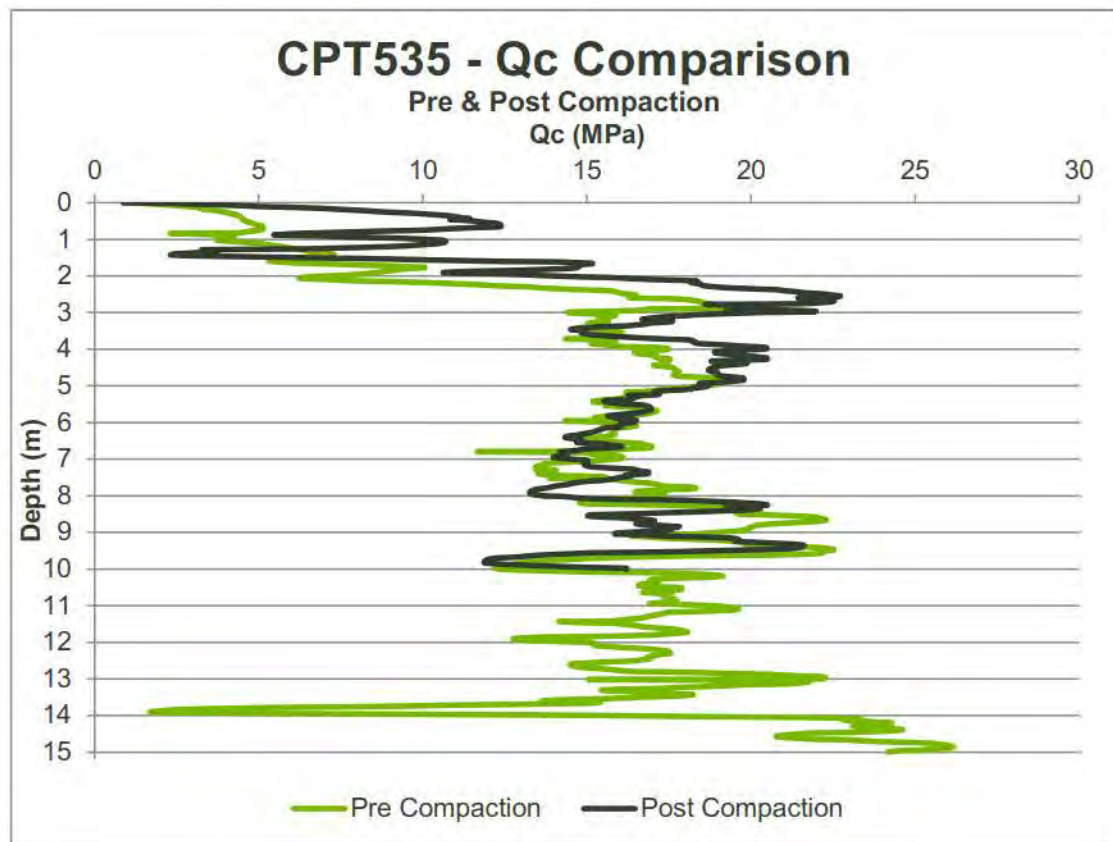
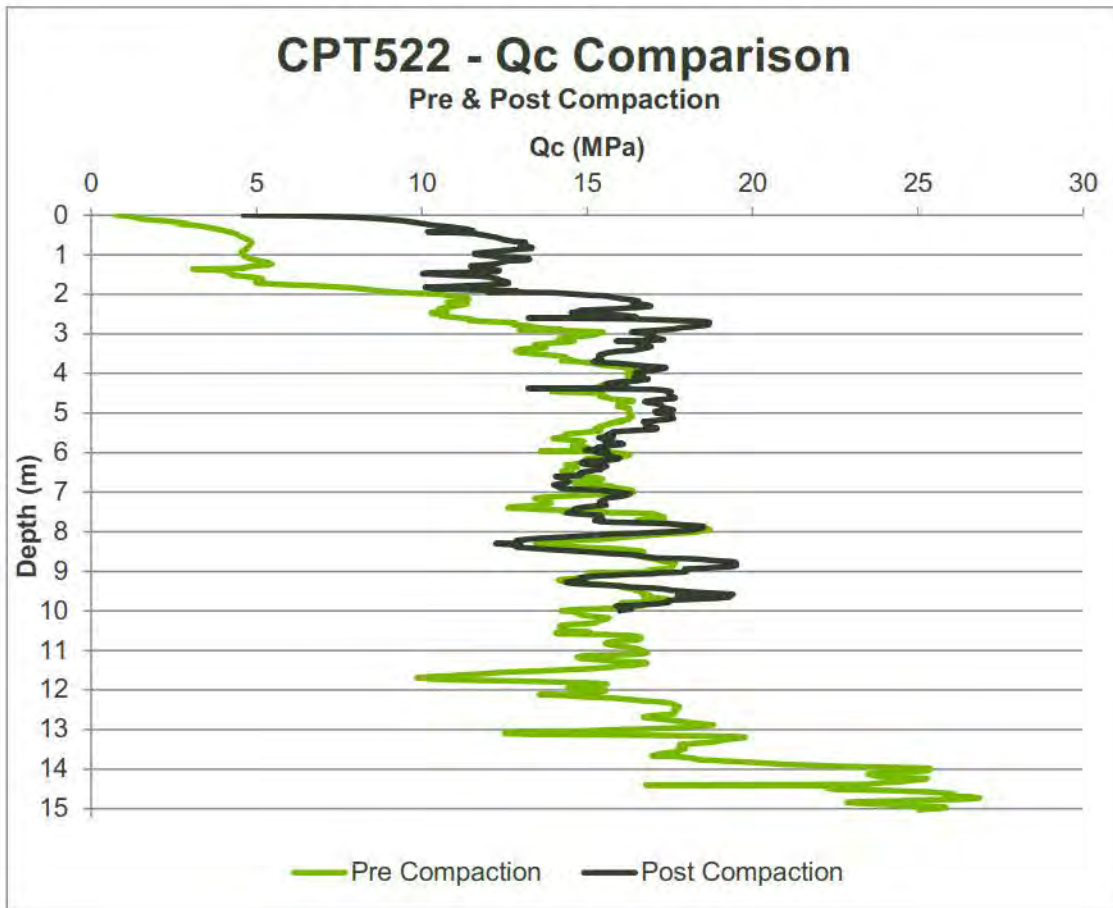
Appendix E

Qc Comparisons



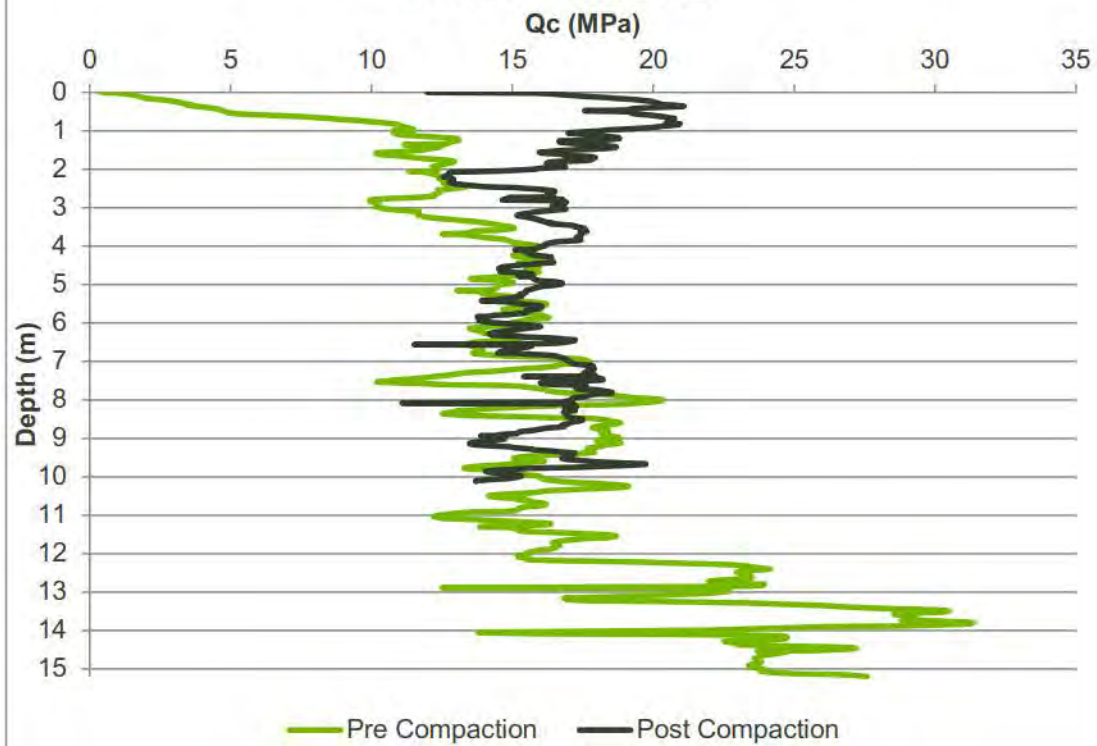






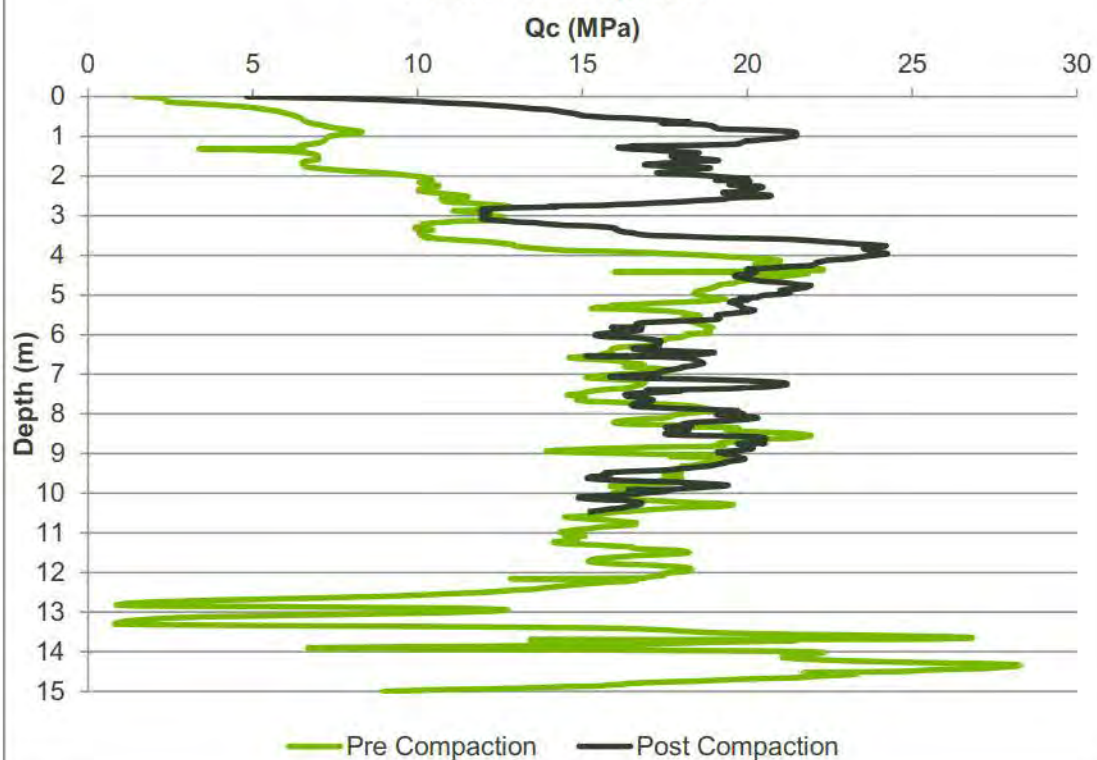
CPT537 - Qc Comparison

Pre & Post Compaction



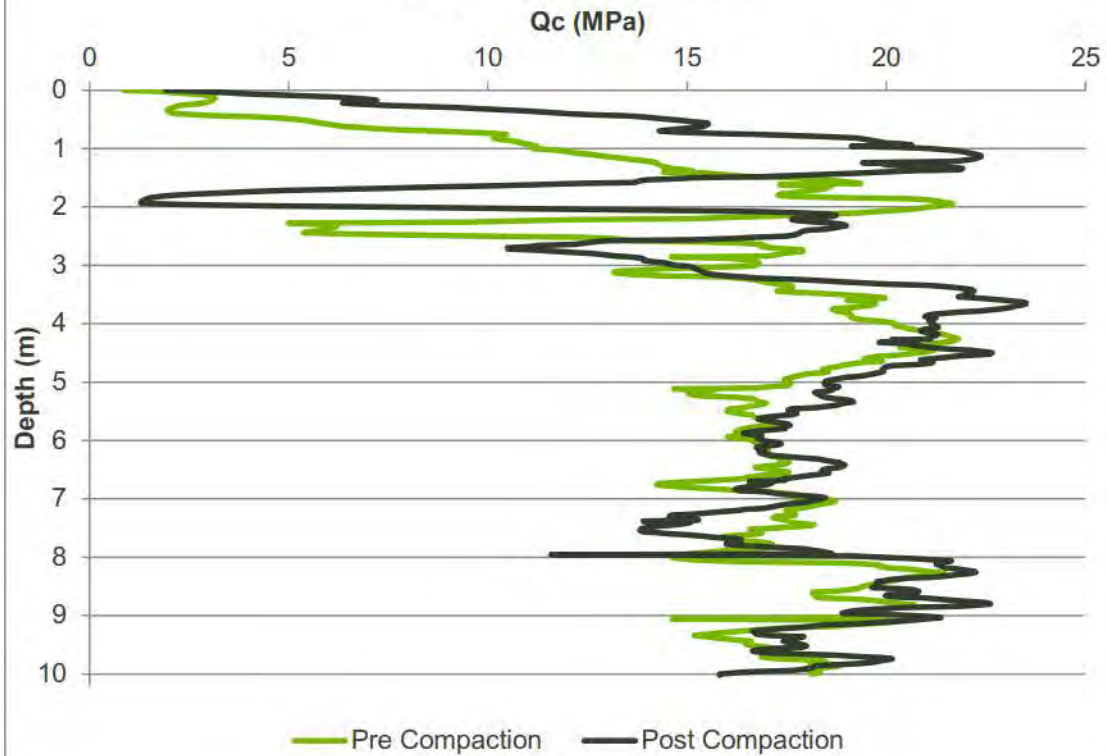
CPT538 - Qc Comparison

Pre & Post Compaction



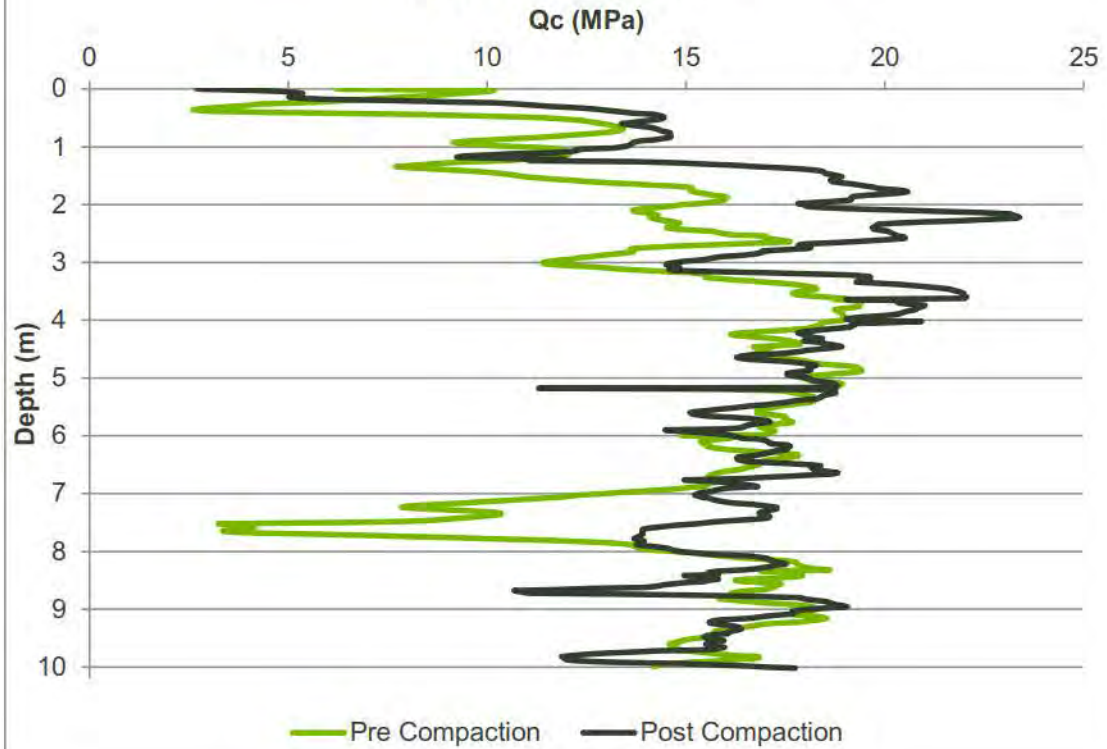
CPT539 - Qc Comparison

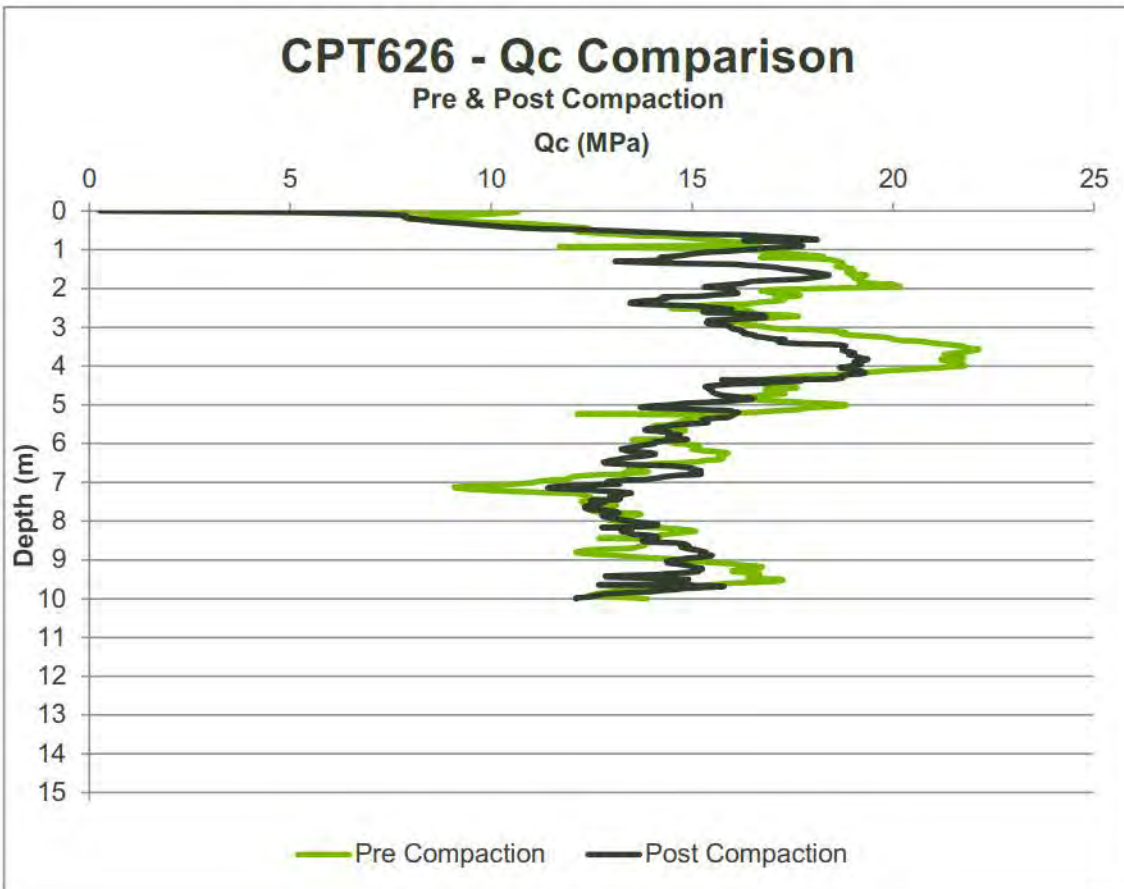
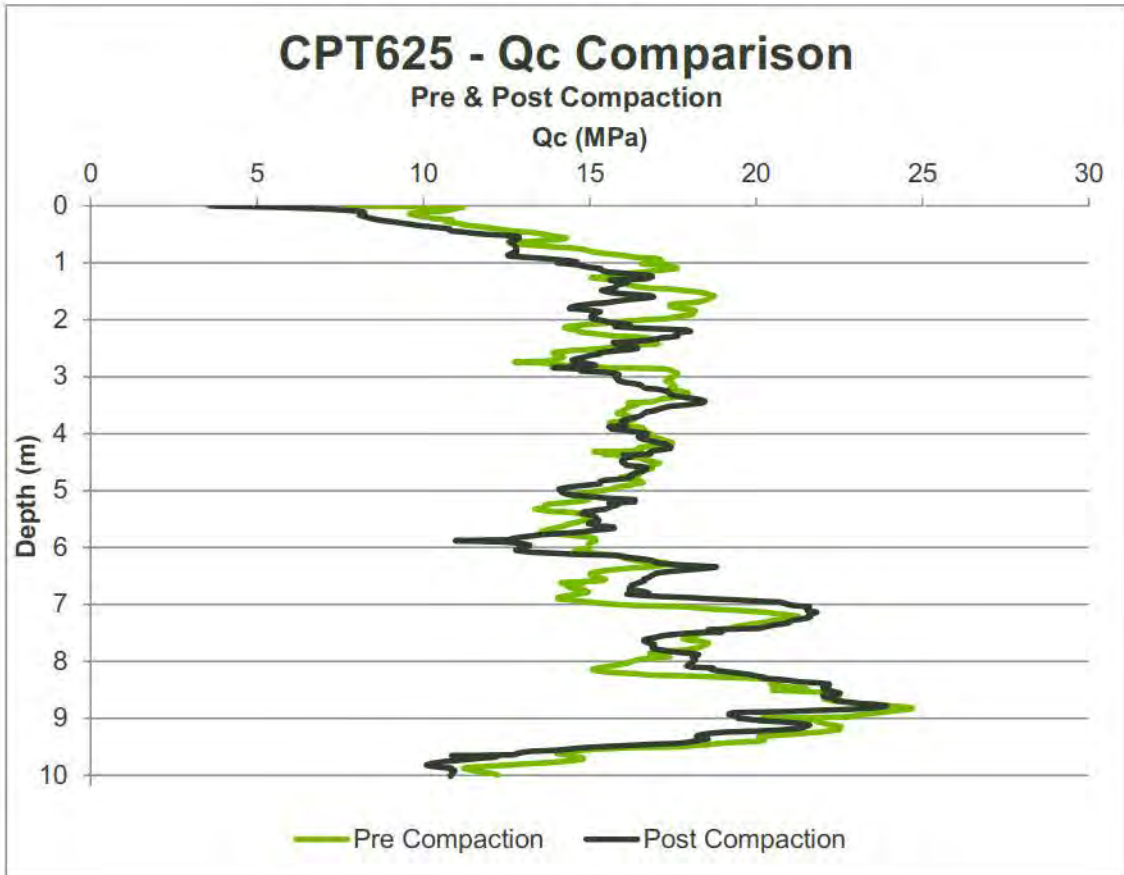
Pre & Post Compaction

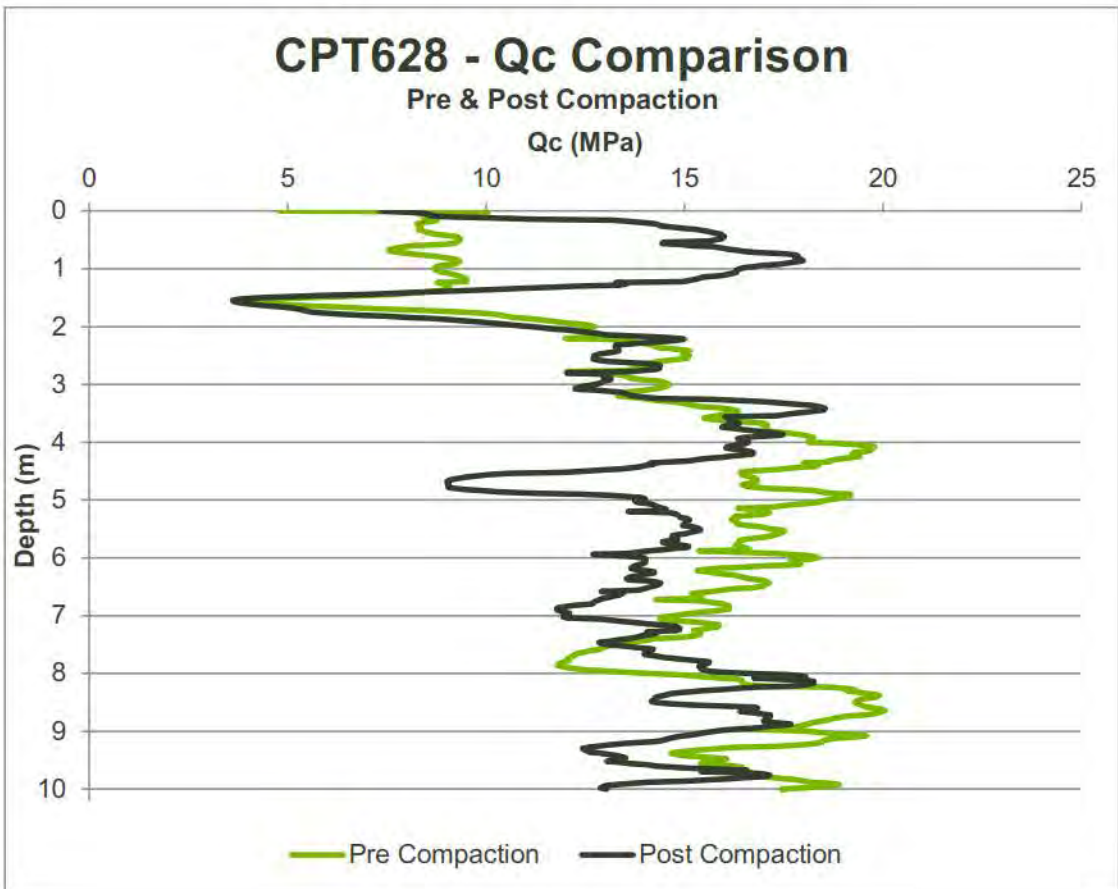
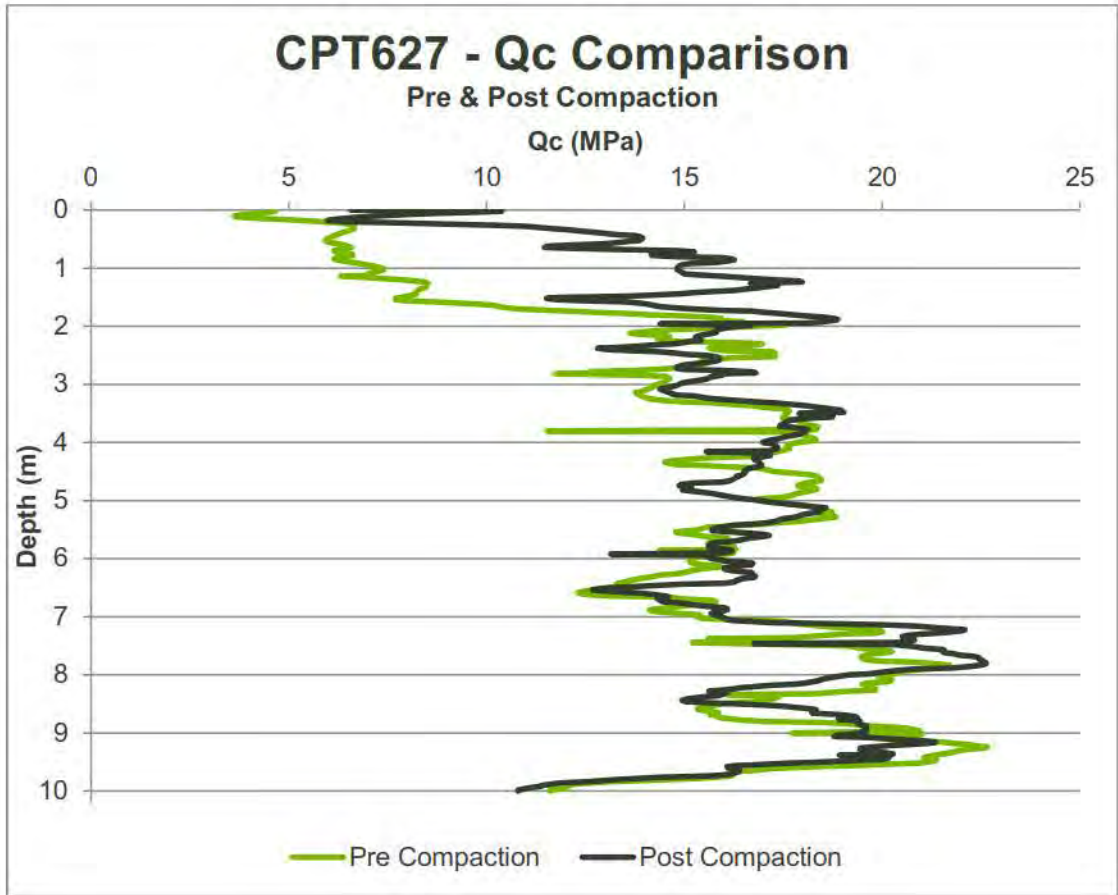


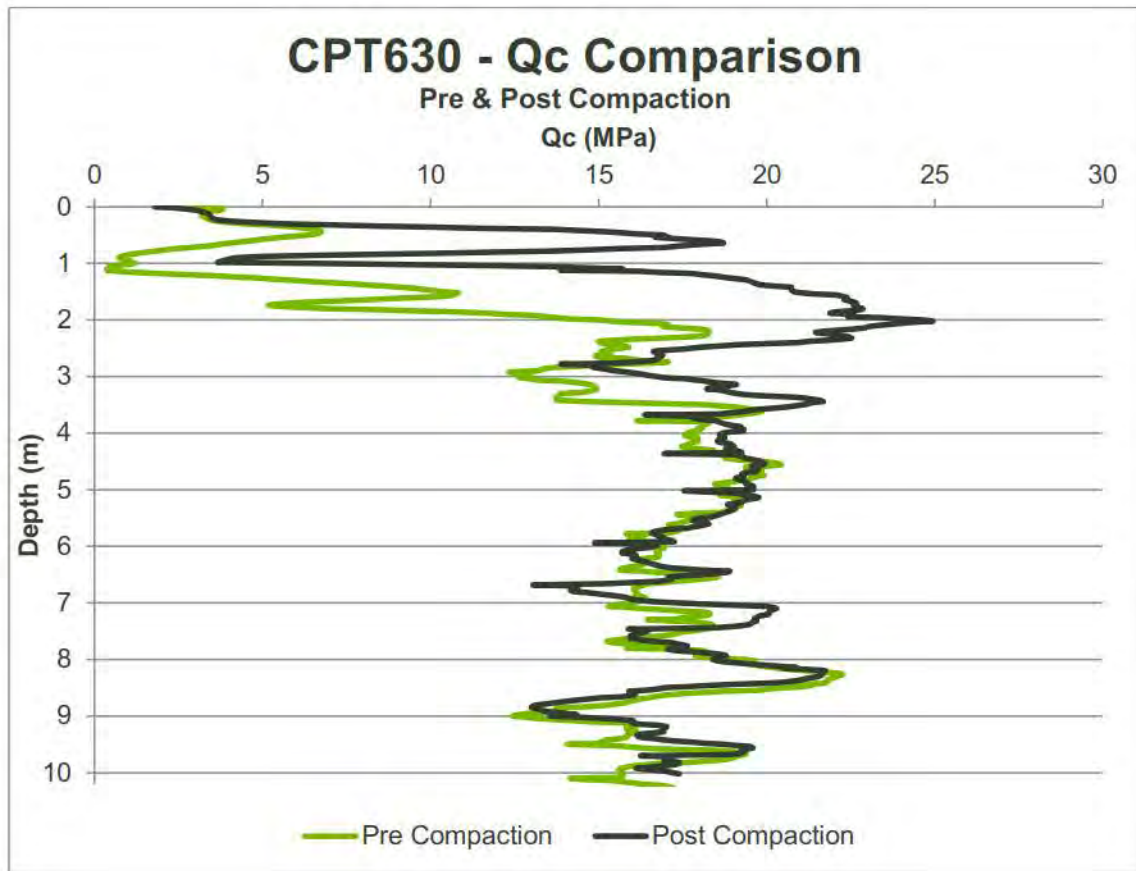
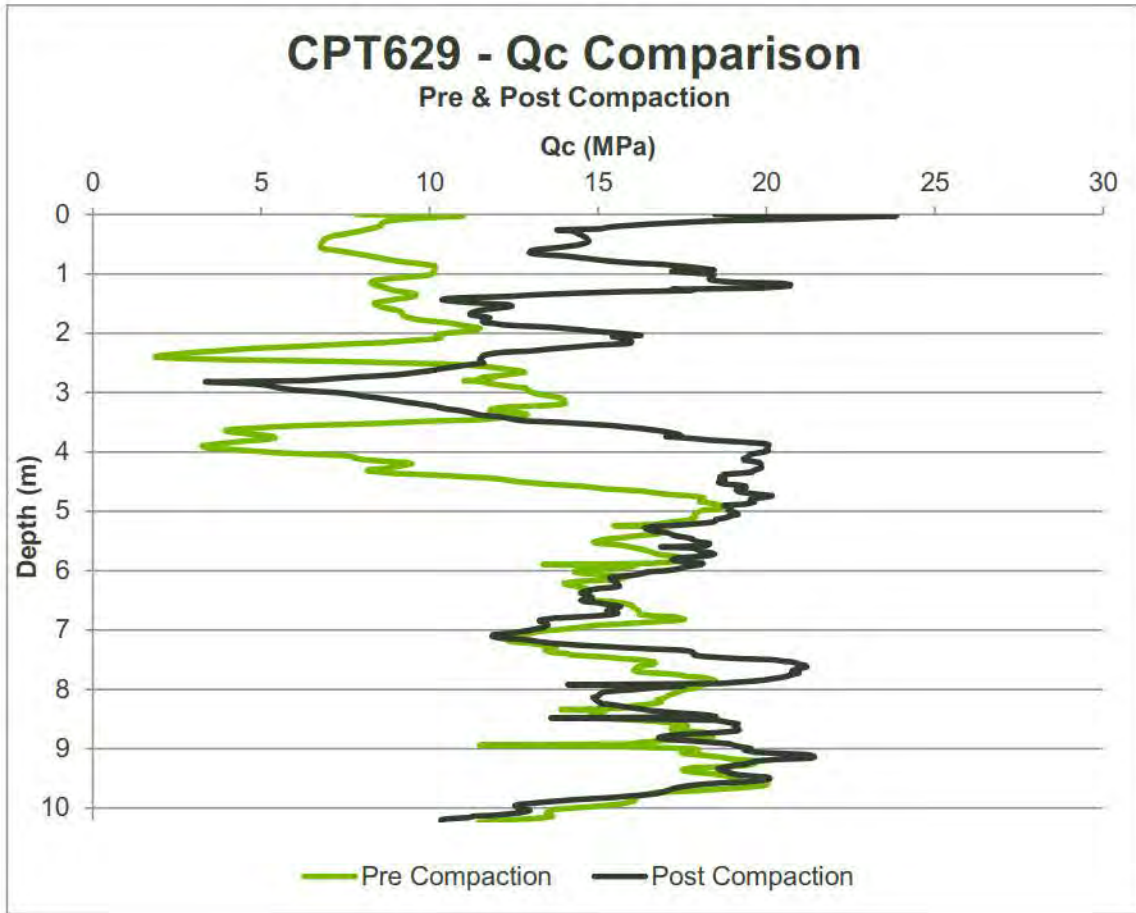
CPT614 - Qc Comparison

Pre & Post Compaction

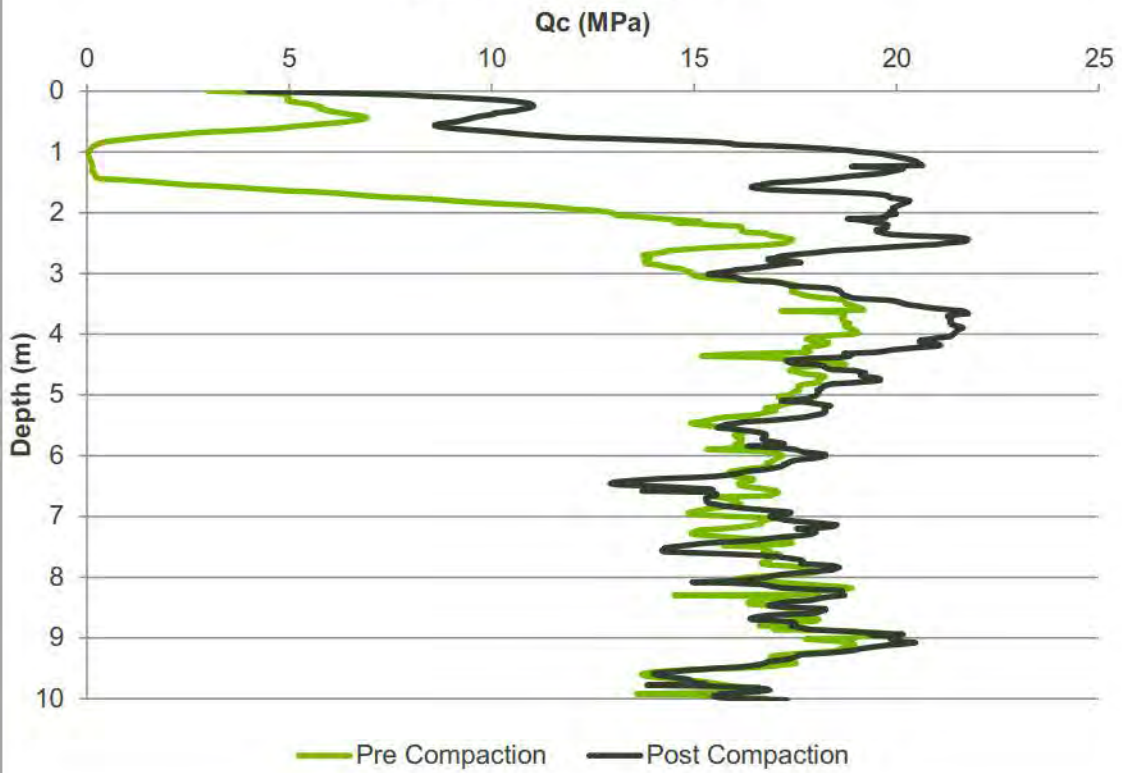




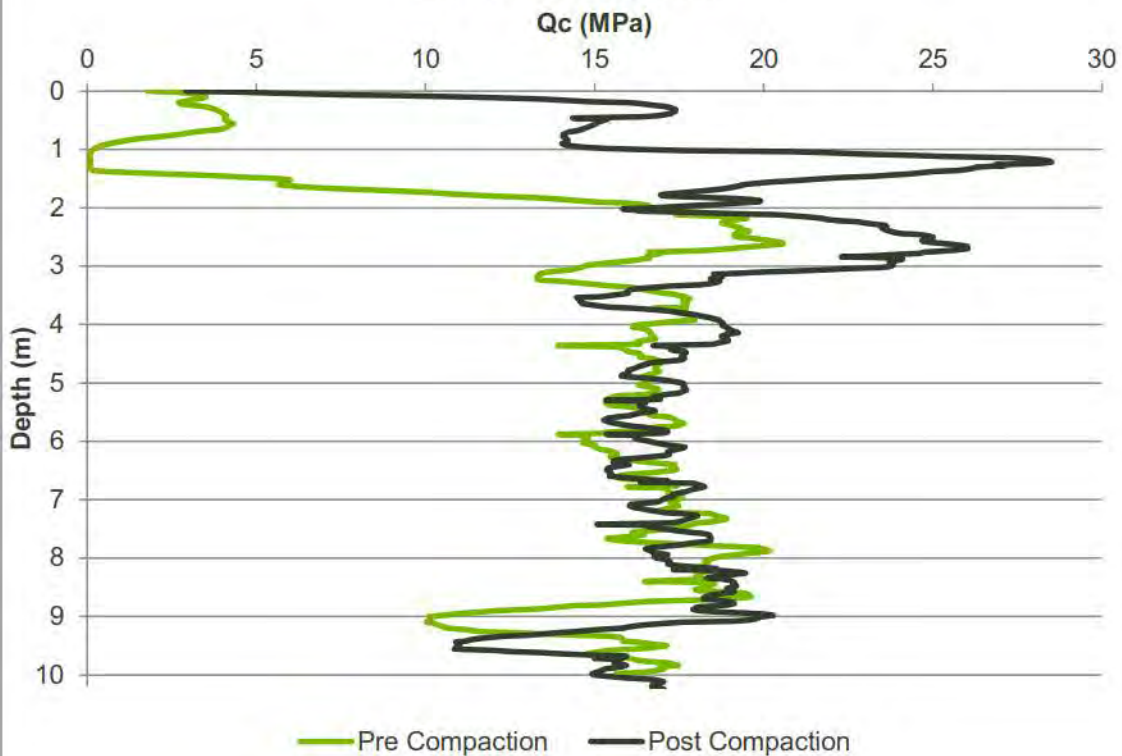




CPT631 - Qc Comparison Pre & Post Compaction

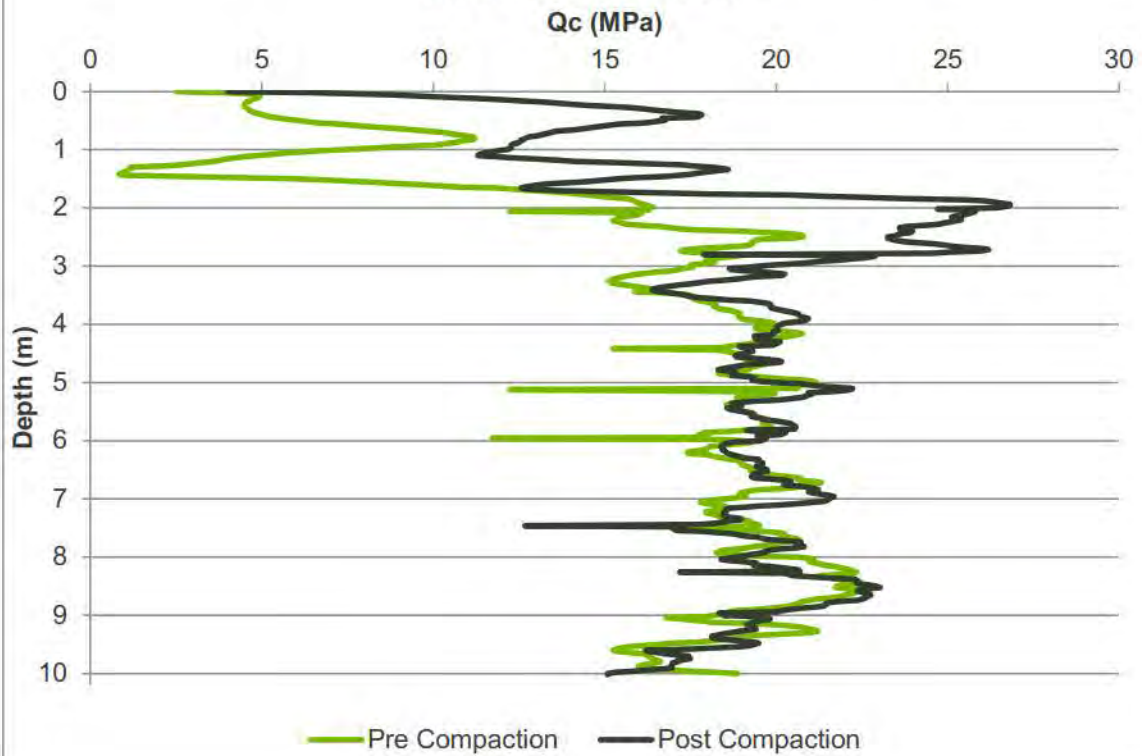


CPT632 - Qc Comparison Pre & Post Compaction



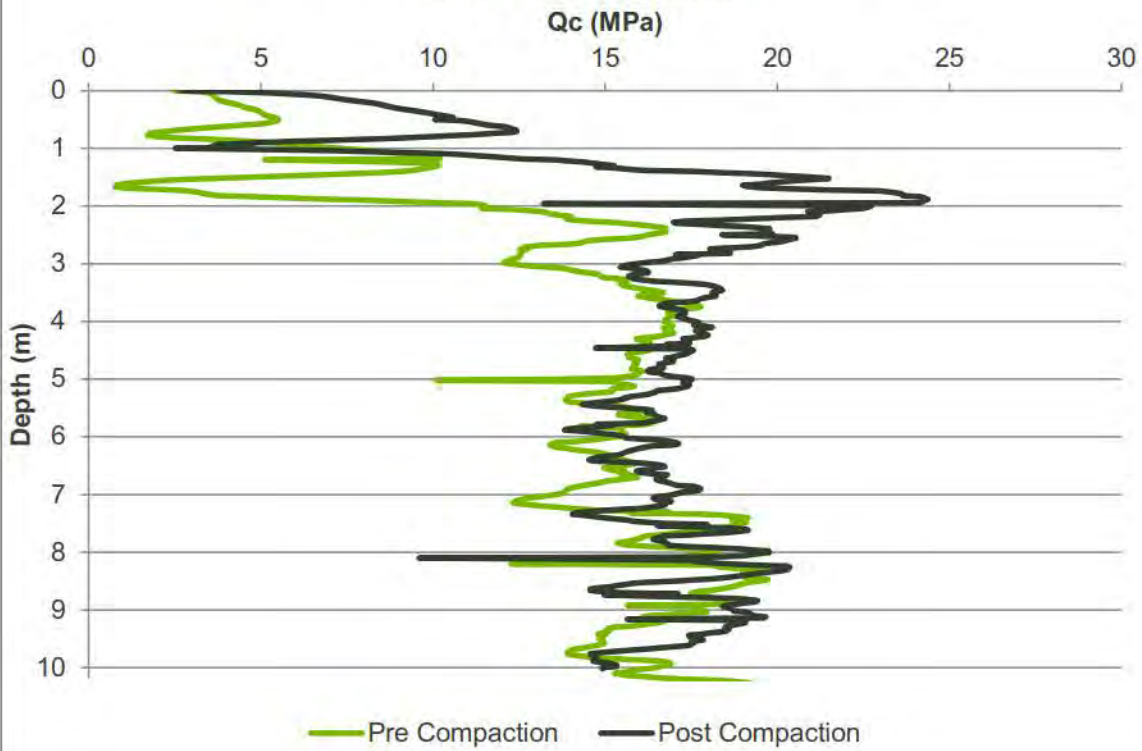
CPT633 - Qc Comparison

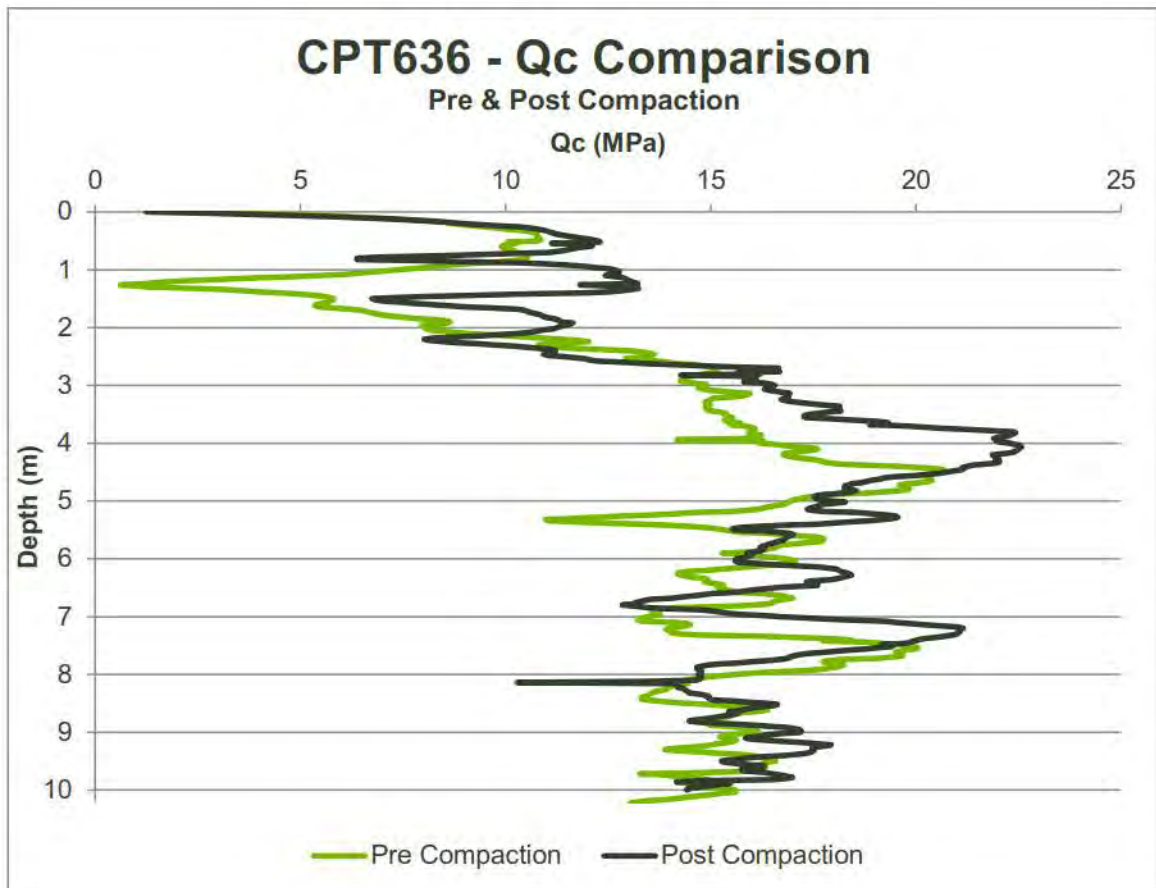
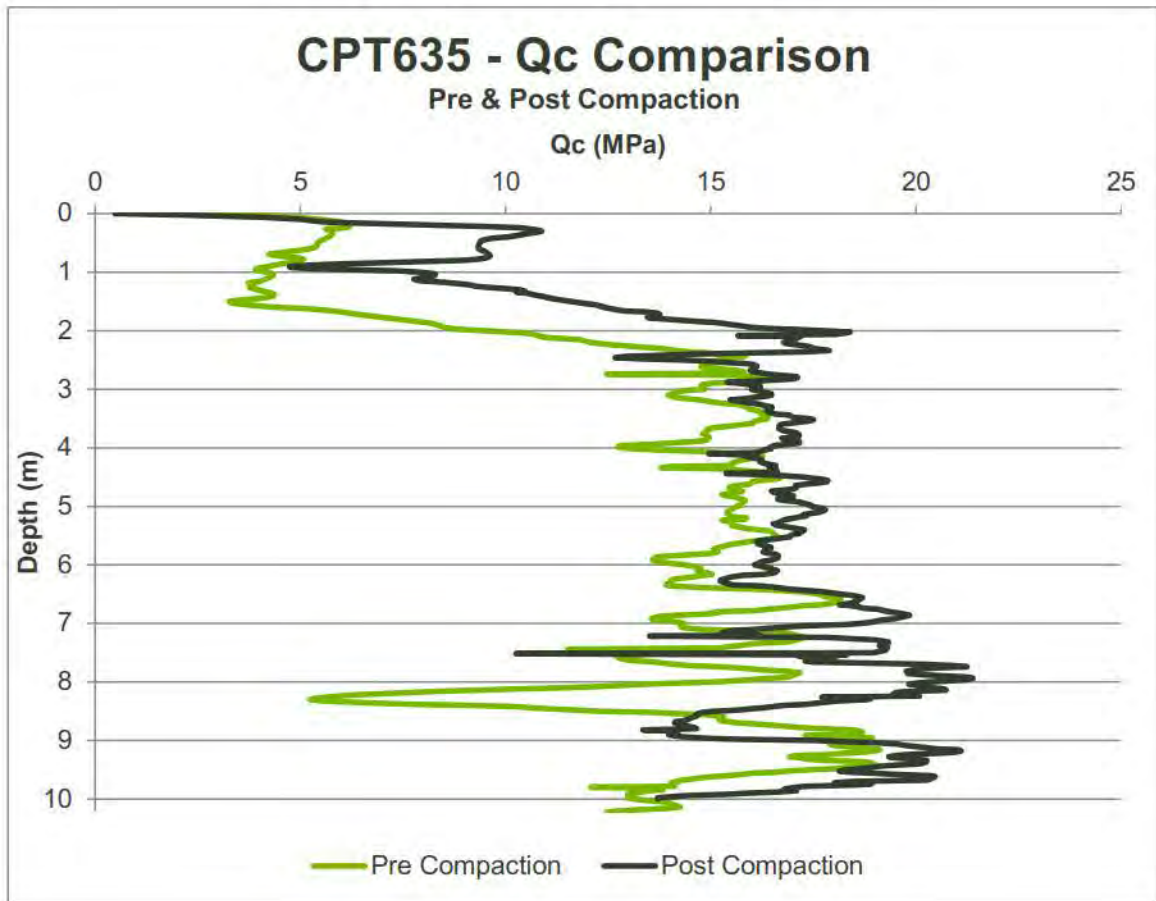
Pre & Post Compaction



CPT634 - Qc Comparison

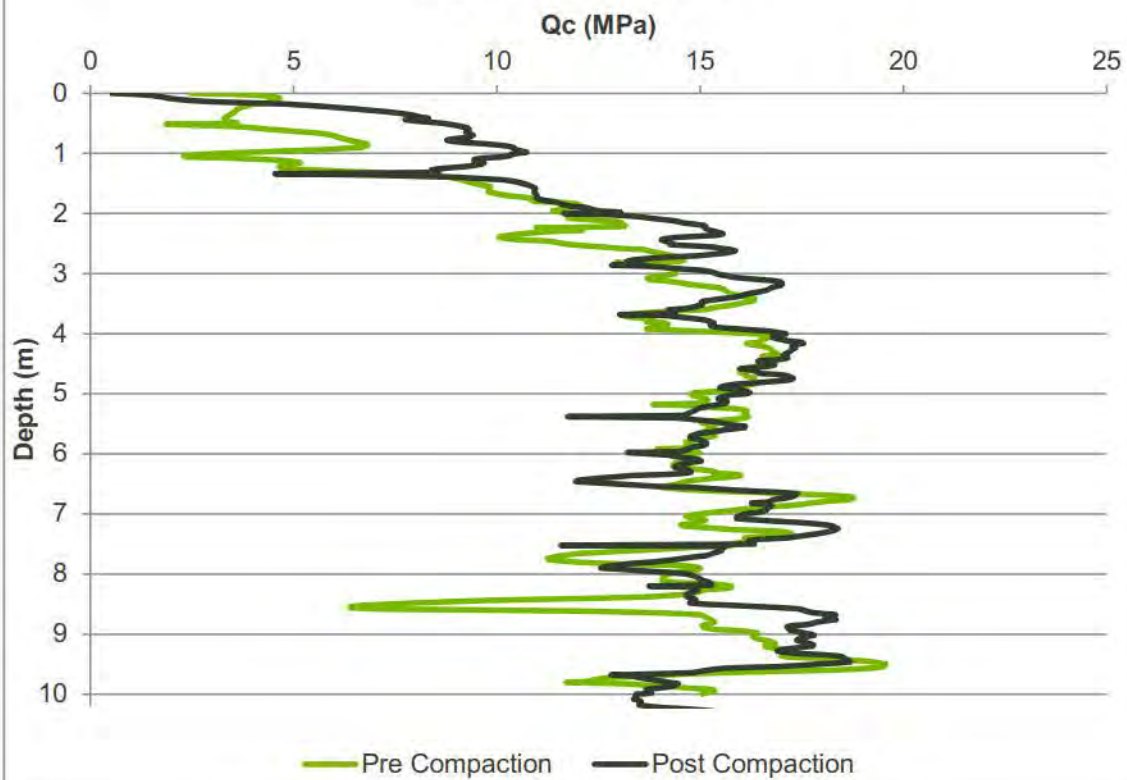
Pre & Post Compaction





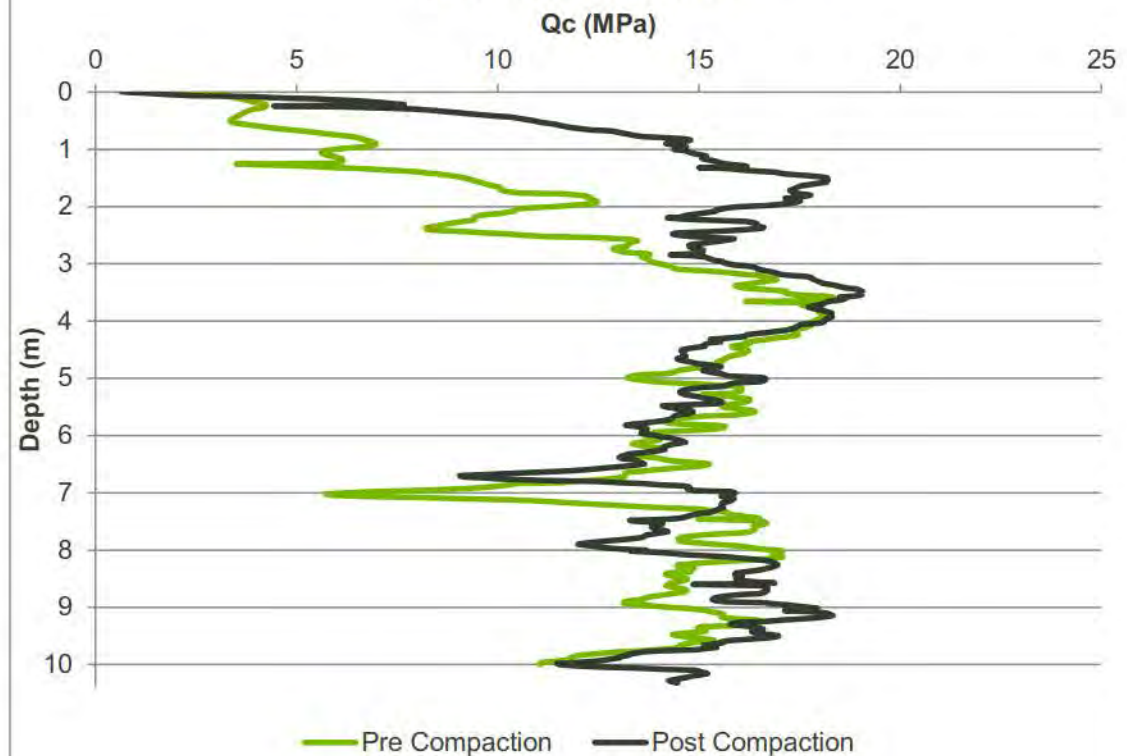
CPT637 - Qc Comparison

Pre & Post Compaction

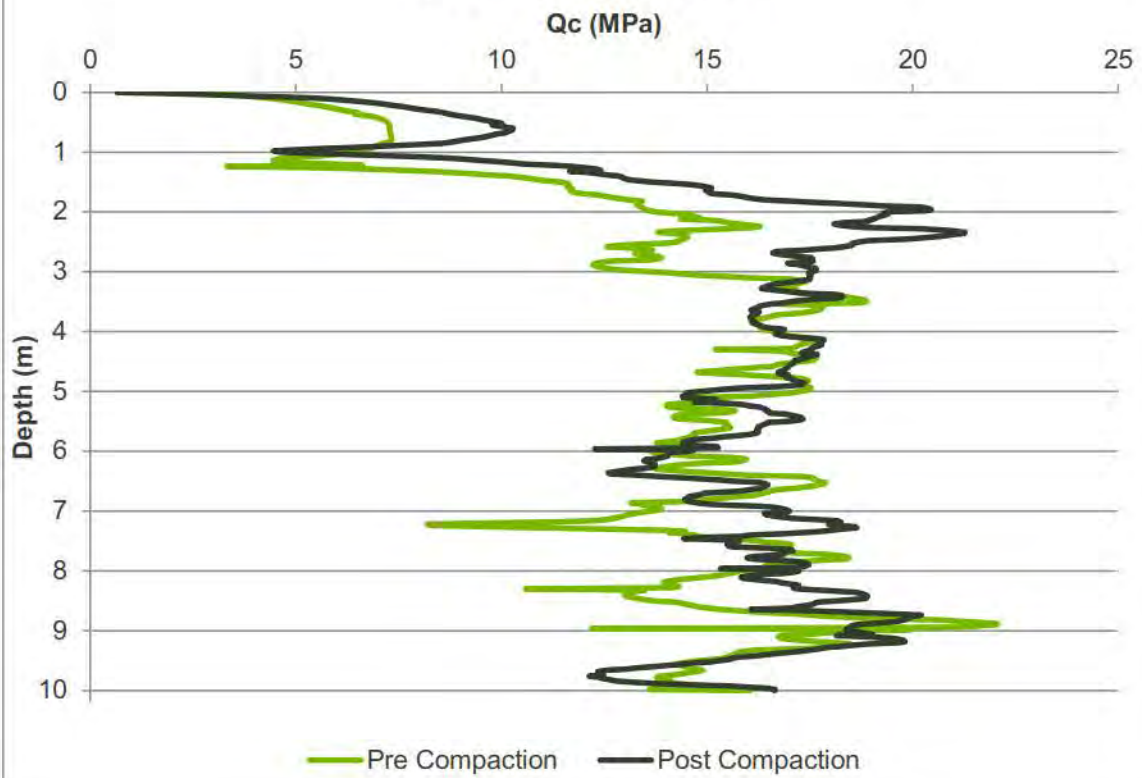


CPT638 - Qc Comparison

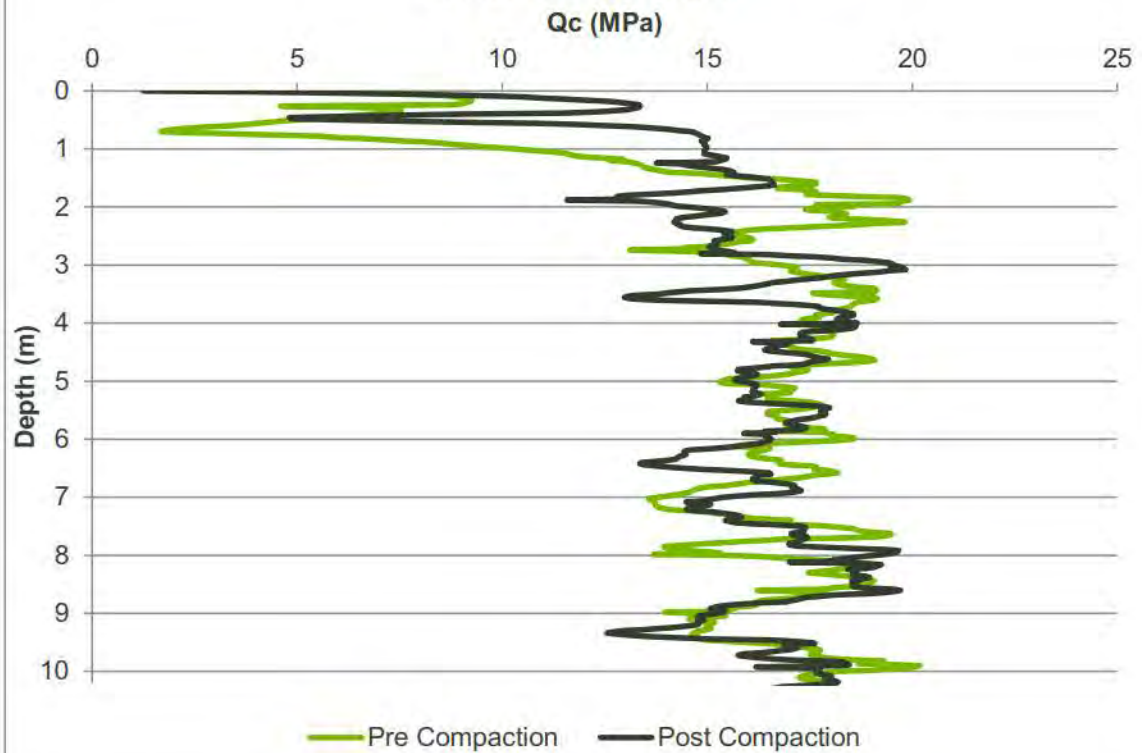
Pre & Post Compaction



CPT639 - Qc Comparison Pre & Post Compaction



CPT640 - Qc Comparison Pre & Post Compaction

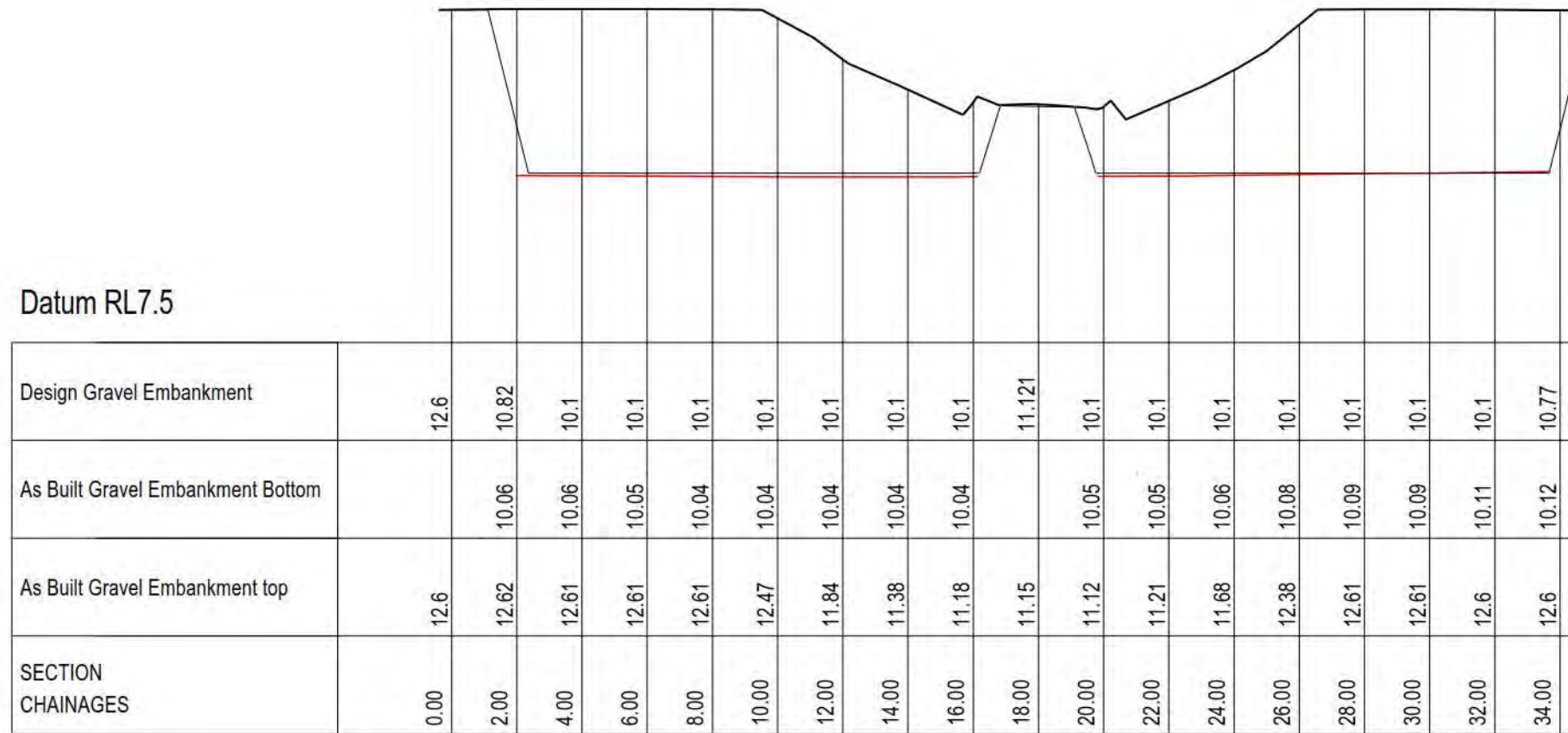




Appendix F

Gravel Embankment

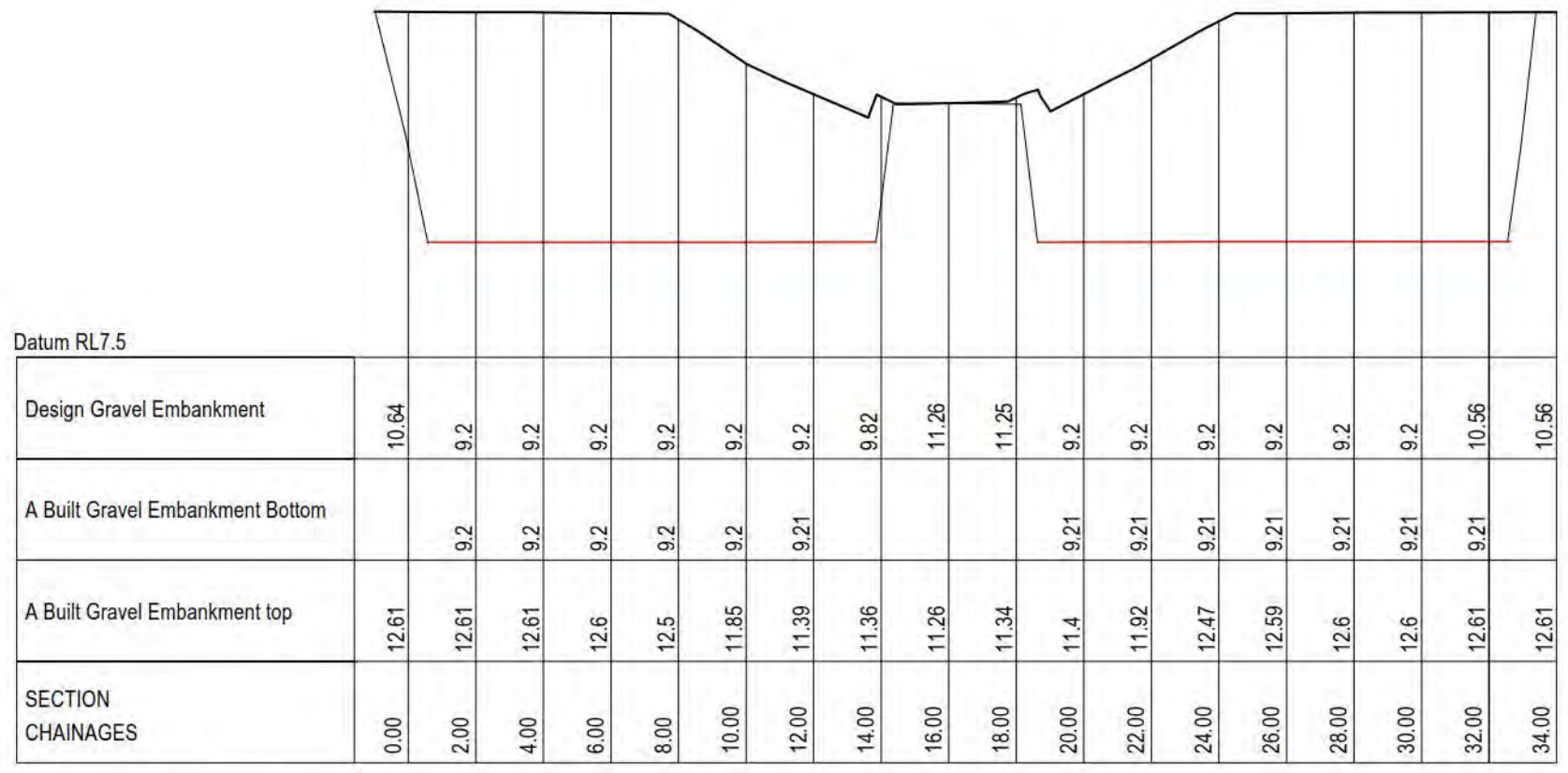
Asbuilts



As Built Gravel Embankment Section X7

HORIZONTAL 1:200

VERTICAL 1:100



Datum RL7.5

Datum RL7.5

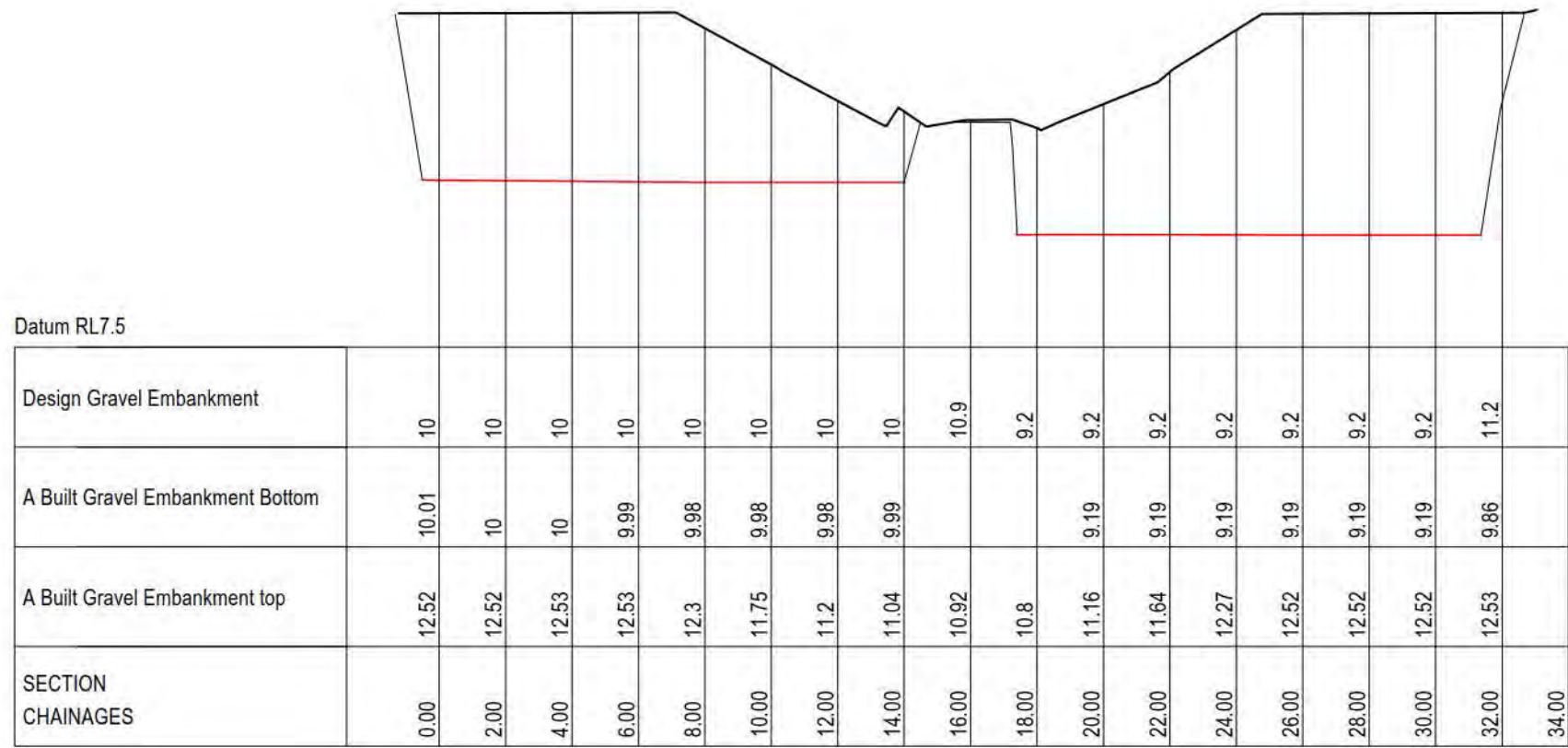
Design Gra

A Built Gra

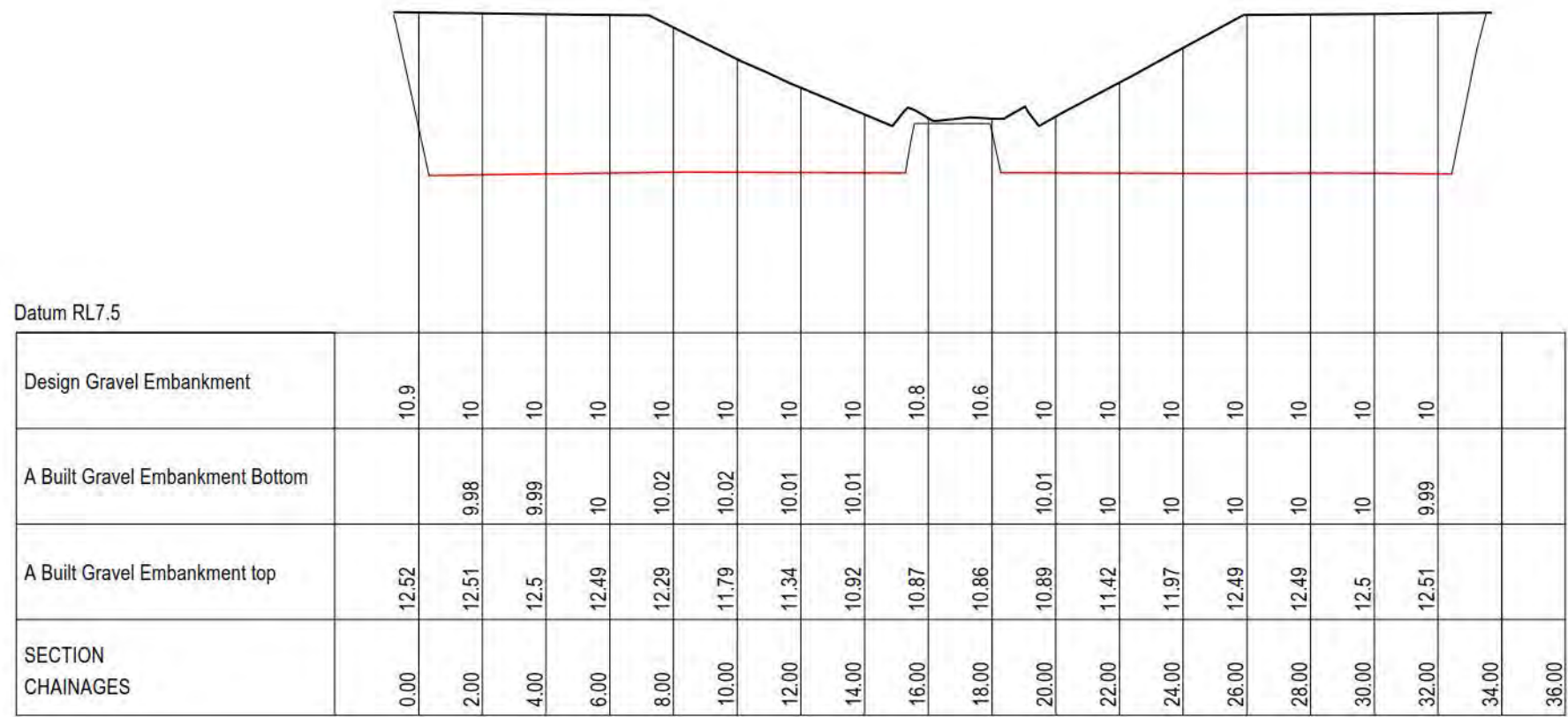
A Built Gra

SECTION CHAINAGE

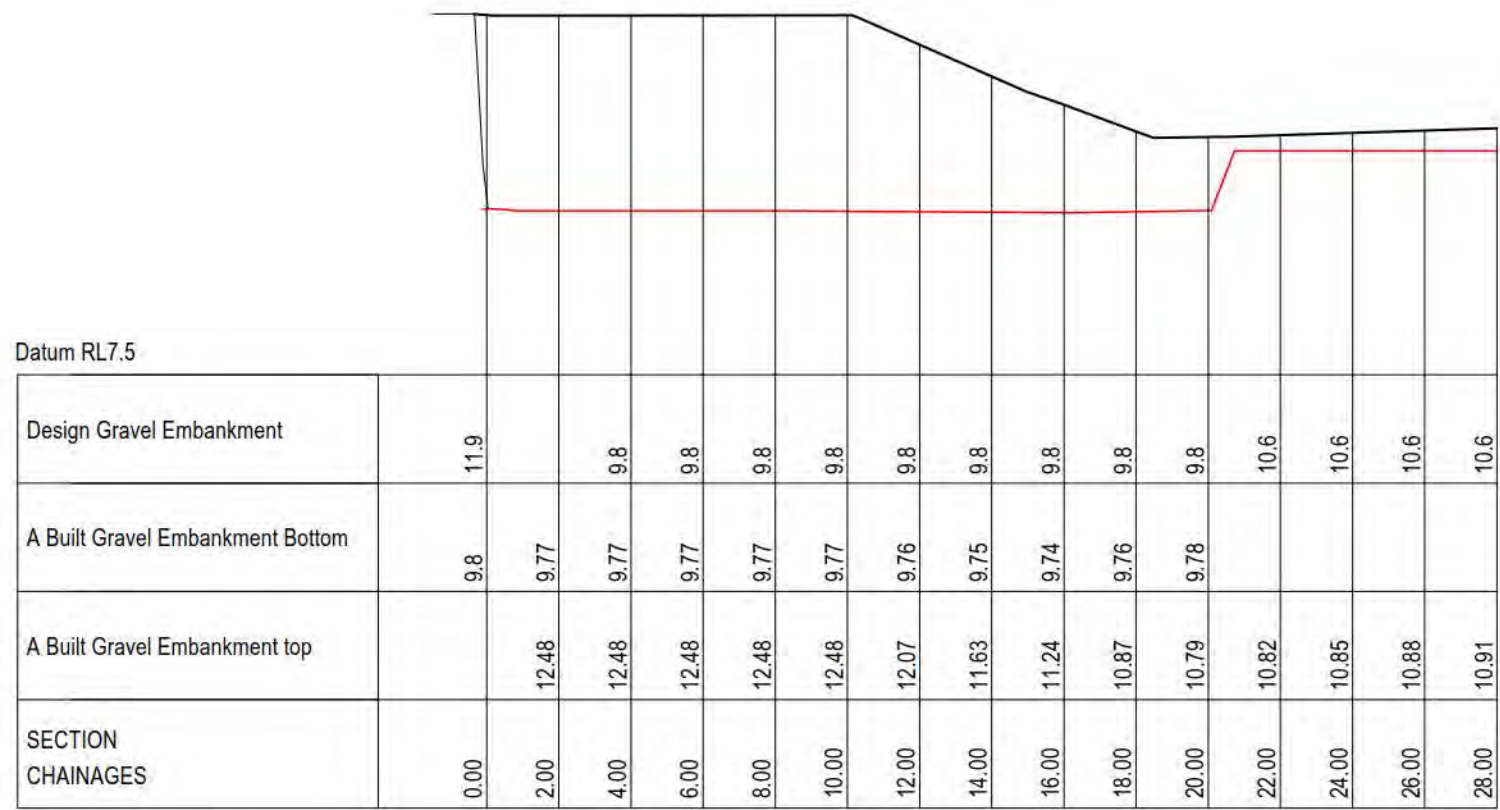
XS12
HORIZONTAL 1:200
VERTICAL 1:100



XS13->XS13
HORIZONTAL 1:200
VERTICAL 1:100

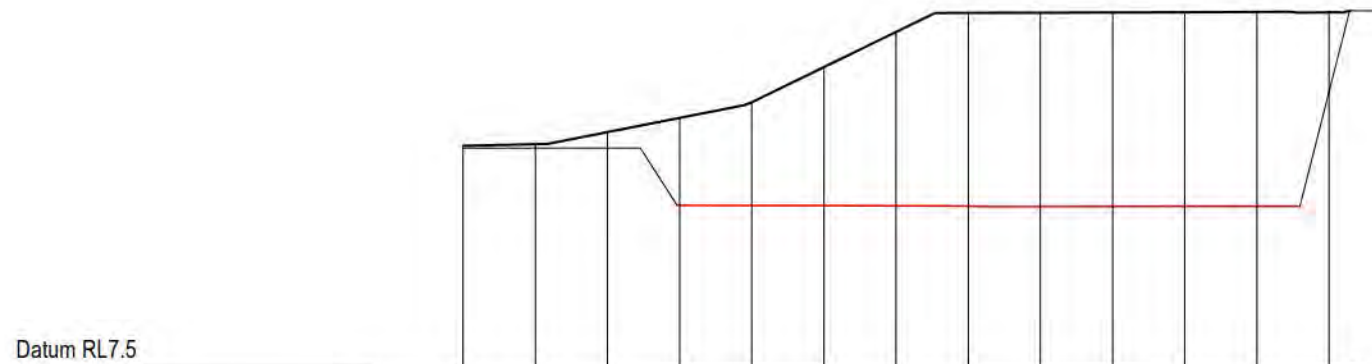


XS14->XS14
HORIZONTAL 1:200
VERTICAL 1:100



Datum RL7.5

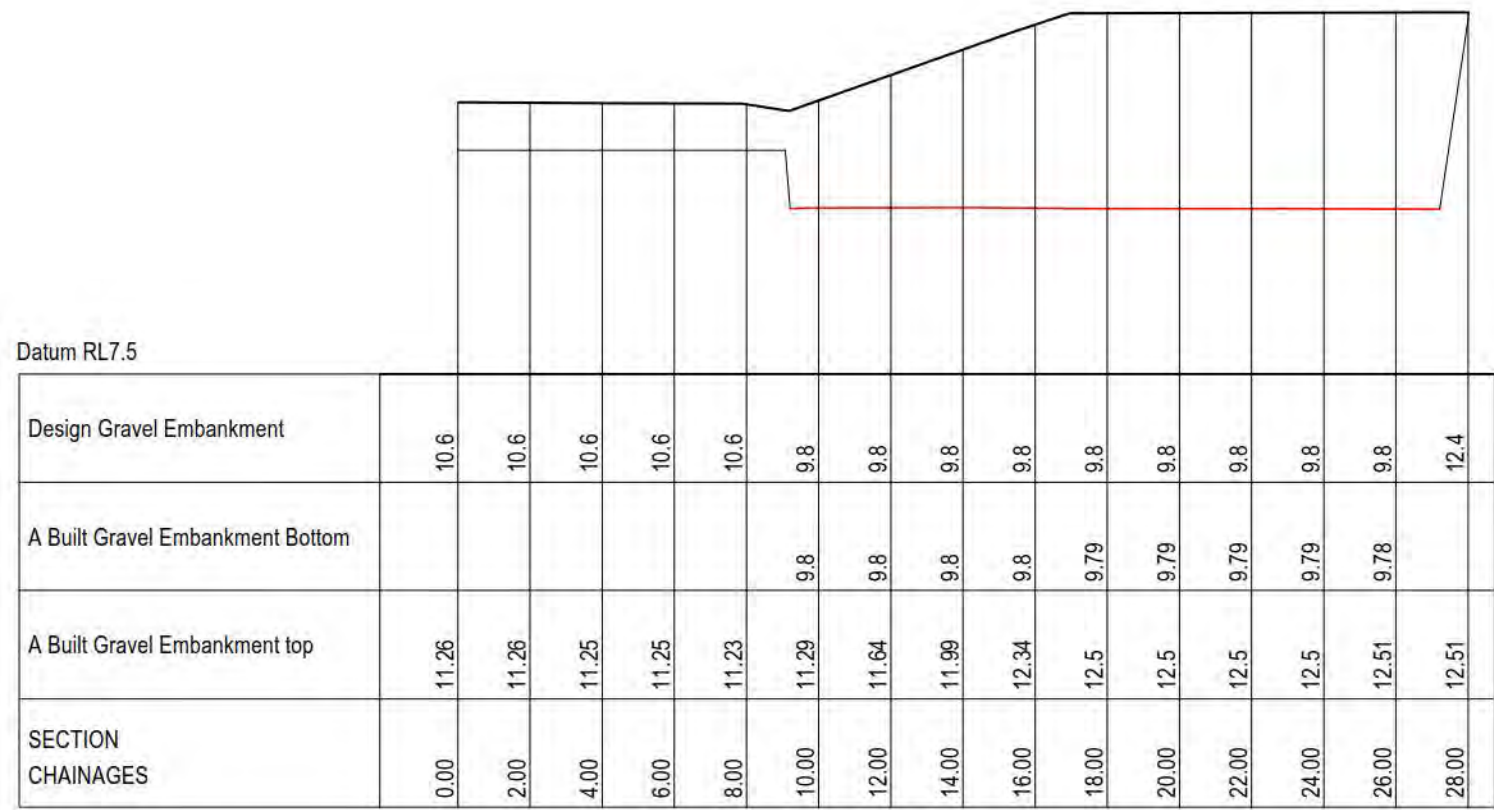
XS15->XS15
 HORIZONTAL 1:200
 VERTICAL 1:100



Datum RL7.5

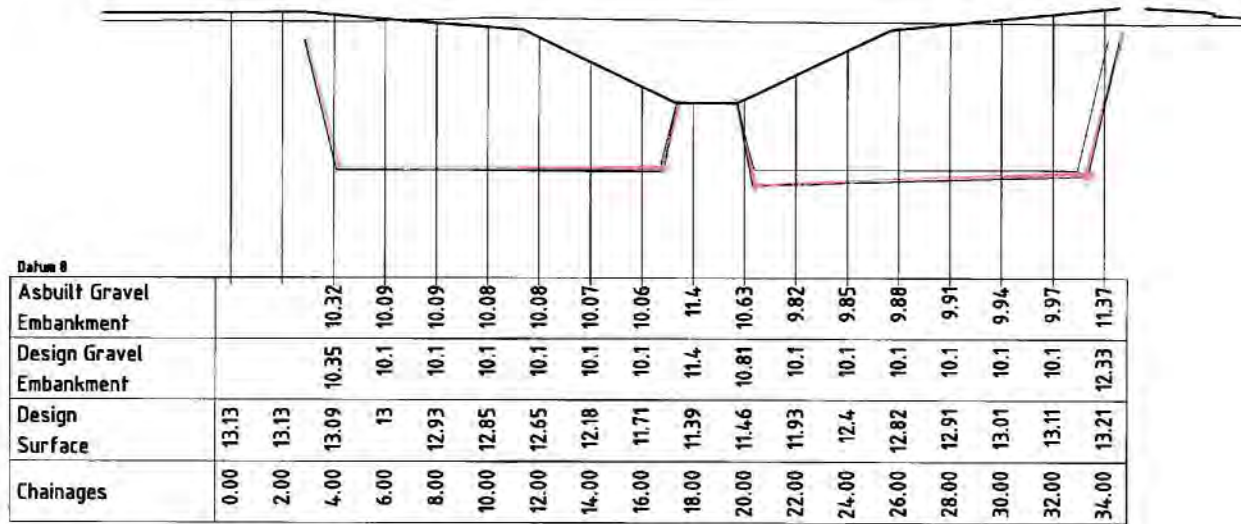
Design Gravel Embankment		10.6	10.6	10.6	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	11.4
A Built Gravel Embankment Bottom					9.81	9.8	9.8	9.8	9.8	9.79	9.79	9.79	9.79	9.79	9.79	9.79	9.79	9.79	9.79
A Built Gravel Embankment top		10.63	10.65	10.82	11.02	11.23	11.72	12.21	12.47	12.48	12.48	12.48	12.48	12.49	12.48	12.48	12.48	12.48	12.48
SECTION CHAINAGES		0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00					

XS16->XS16
 HORIZONTAL 1:200
 VERTICAL 1:100



Datum RL7.5

XS17->XS17
HORIZONTAL 1:200
VERTICAL 1:100



AB EW 150330 EMBANKMENT SUBGRADE SECTIONS->Section 4

HORIZONTAL 1:200

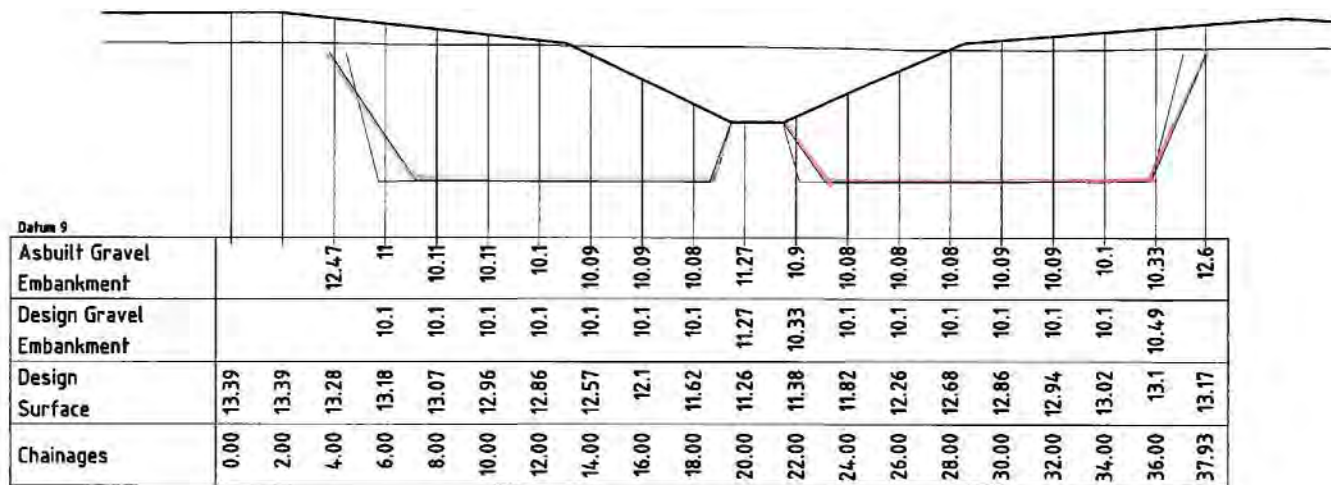
VERTICAL 1:100



AB EW 150330 EMBANKMENT SUBGRADE SECTIONS->Section 5

HORIZONTAL 1:200

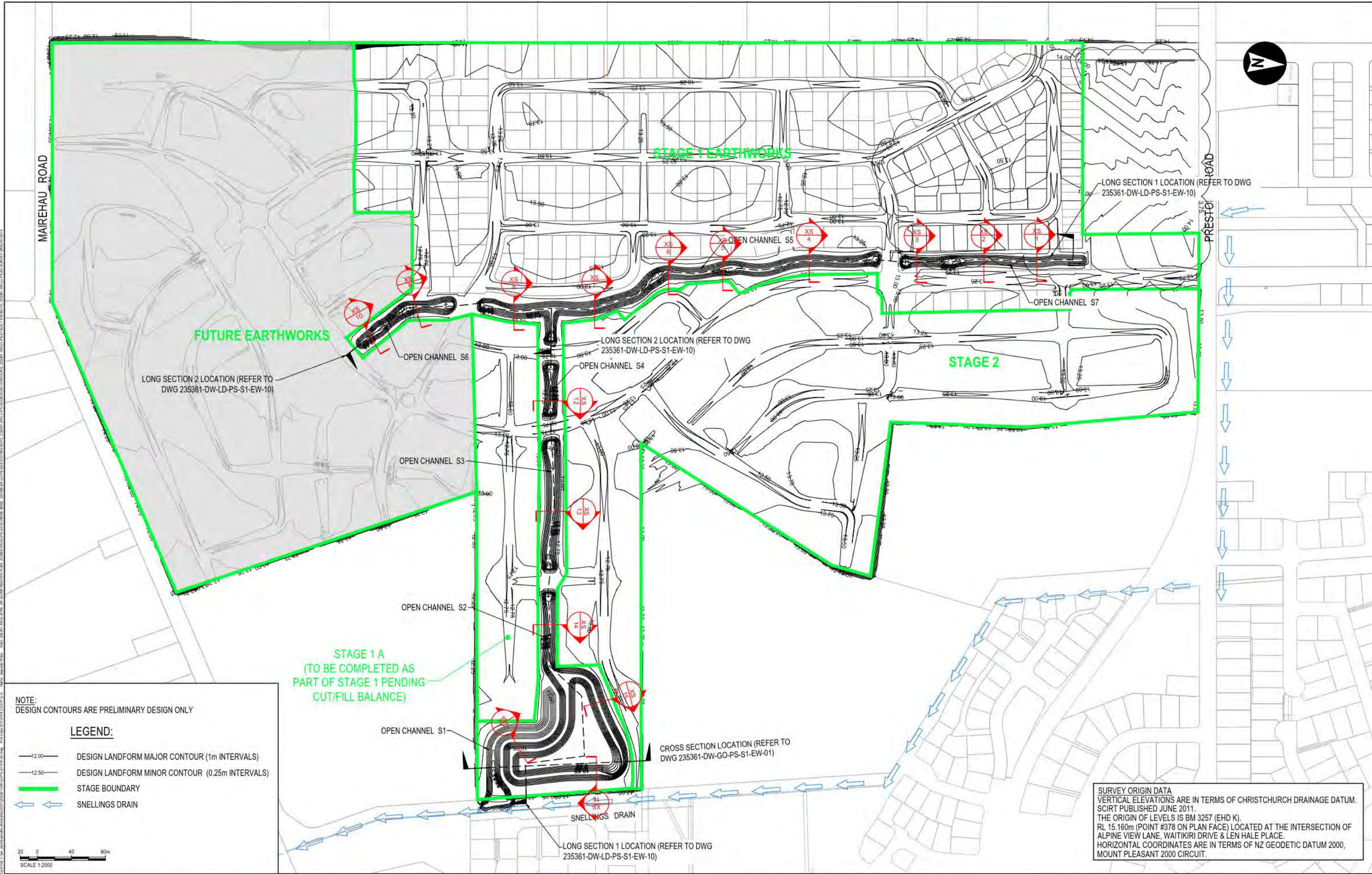
VERTICAL 1:100



AB EW 150330 EMBANKMENT SUBGRADE SECTIONS->Section 6

HORIZONTAL 1:200

VERTICAL 1:100



REV	DATE	REVISION DETAILS	APPROVED	DRAWN	DESIGNED	PROJECT	CONSTRUCTION
2	05/12/14	ISSUE FOR INFORMATION	K.ASHBY	L.O'SULLIVAN	S.HUSBAND	PRESTONS SOUTH	PROJECT No. 235361
1	09/10/13	FOR CONSTRUCTION	K.ASHBY	W.NEL			SCALE 1:2000 @ A1
				K.ASHBY			DRAWING No. LD-PS-S1-EW-02
						TITLE	SIZE
						EARTHWORKS STAGE 1 DESIGN LANDFORM	A1
							REV
							2