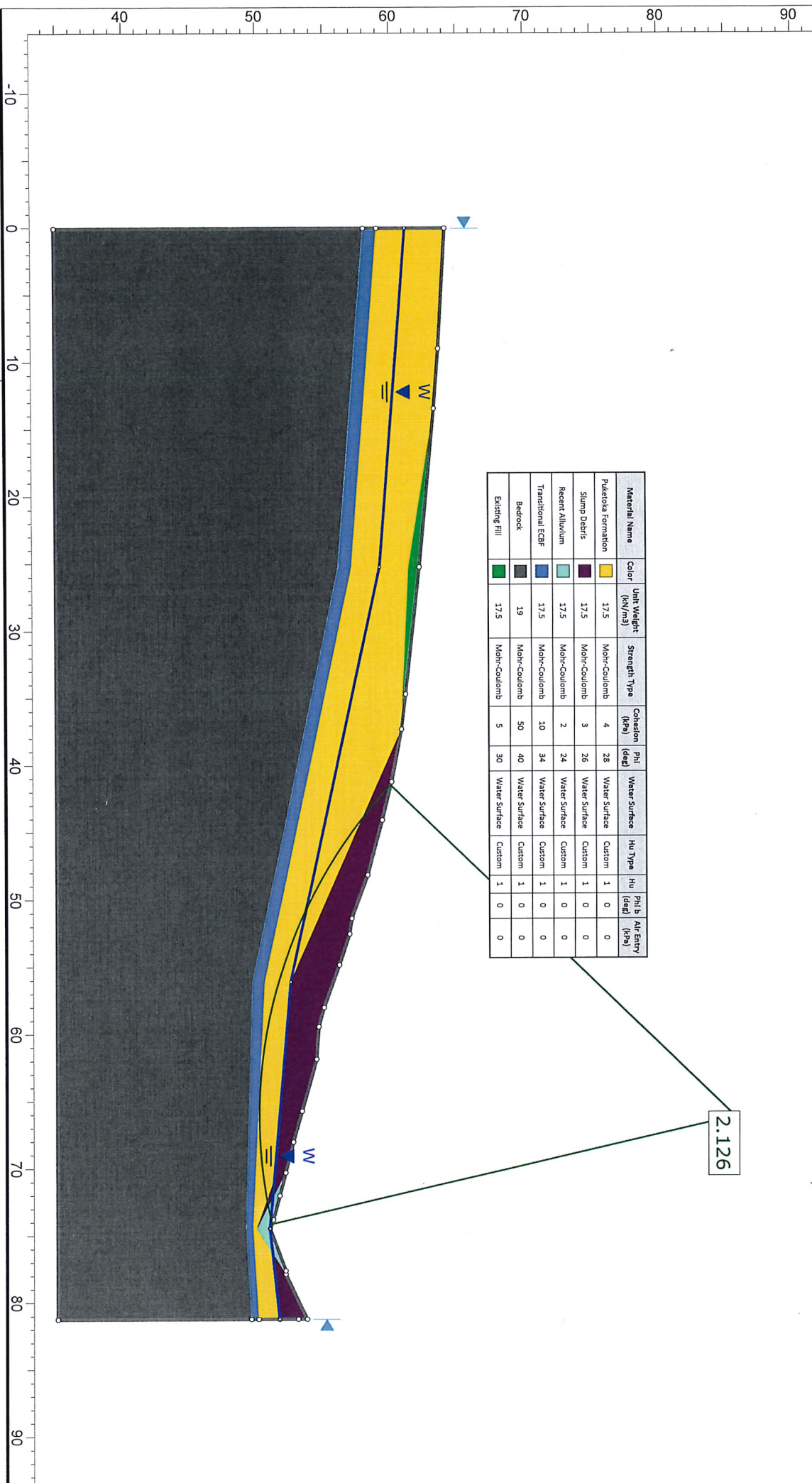


Appendix 5

Slope Stability Analysis Results

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu (deg)	Phi b (deg)	Air Entry (kPa)
Pakekōka Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Slump Debris	Dark Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0
Transitional ECAF	Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock	Dark Grey	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0
Existing Fill	Green	17.5	Mohr-Coulomb	5	30	Water Surface	Custom	1	0	0



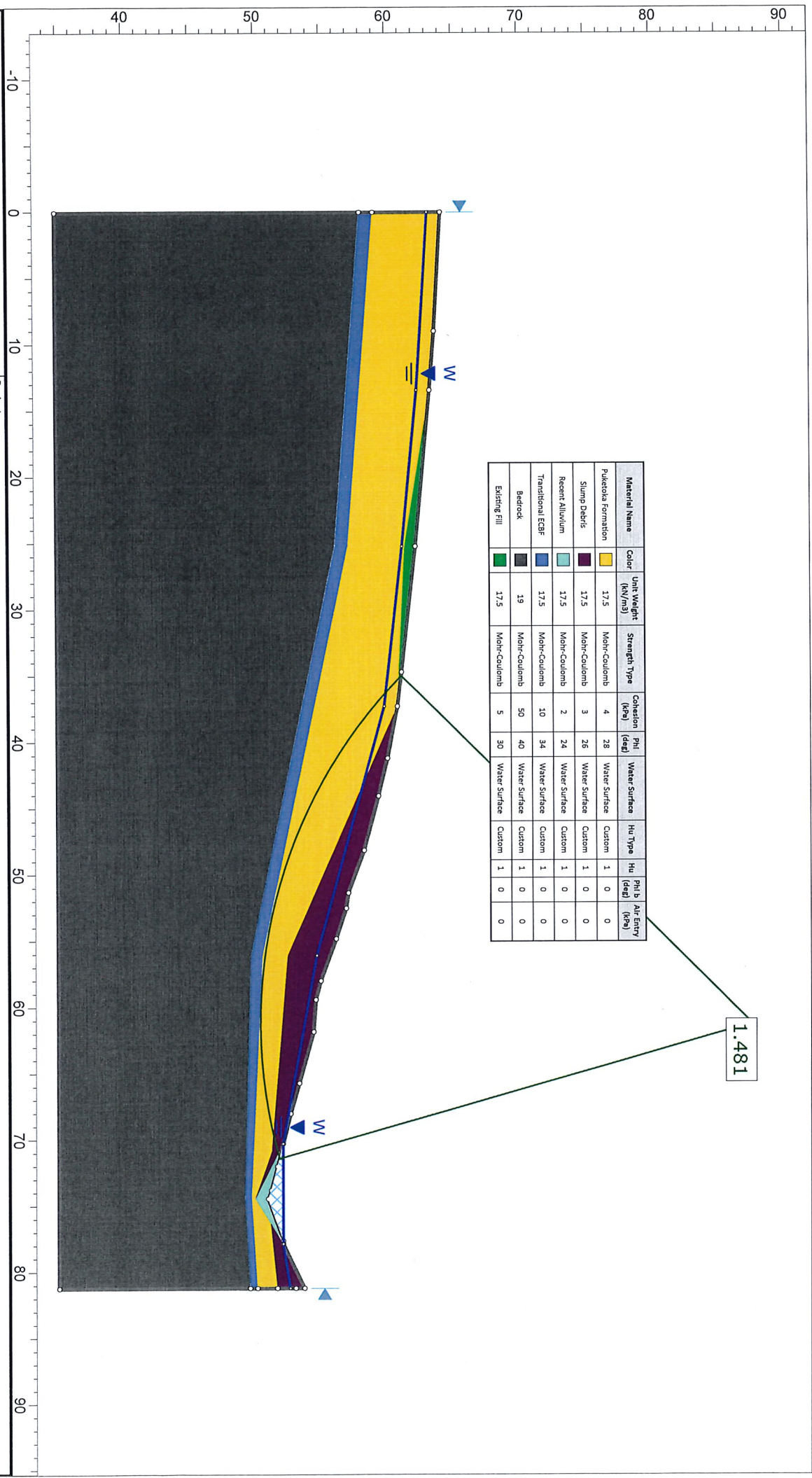
2.126

125 Murphys Road (Stage 2), Flat Bush

Project		Case No.		Analysis Description	
Cross Section 2-2'		P1		Prevailing - Long Term GWL	
Cross Section		F.O.S Filter		Company	
Drawn By		1.5		Lander Geotechnical Consultants Limited	
Date		1/03/2018, 12:03:31 p.m.		File Name	
		Scale		J00862_180228_Cross Section 2-2'.slmd	
		1:400			

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Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Phi b (deg)	Air Entry (kPa)
Puleokola Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Slump Debris	Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0
Transitional EGBF	Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock	Black	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0
Existing Fill	Green	17.5	Mohr-Coulomb	5	30	Water Surface	Custom	1	0	0

1.481

125 Murphys Road (Stage 2), Flat Bush

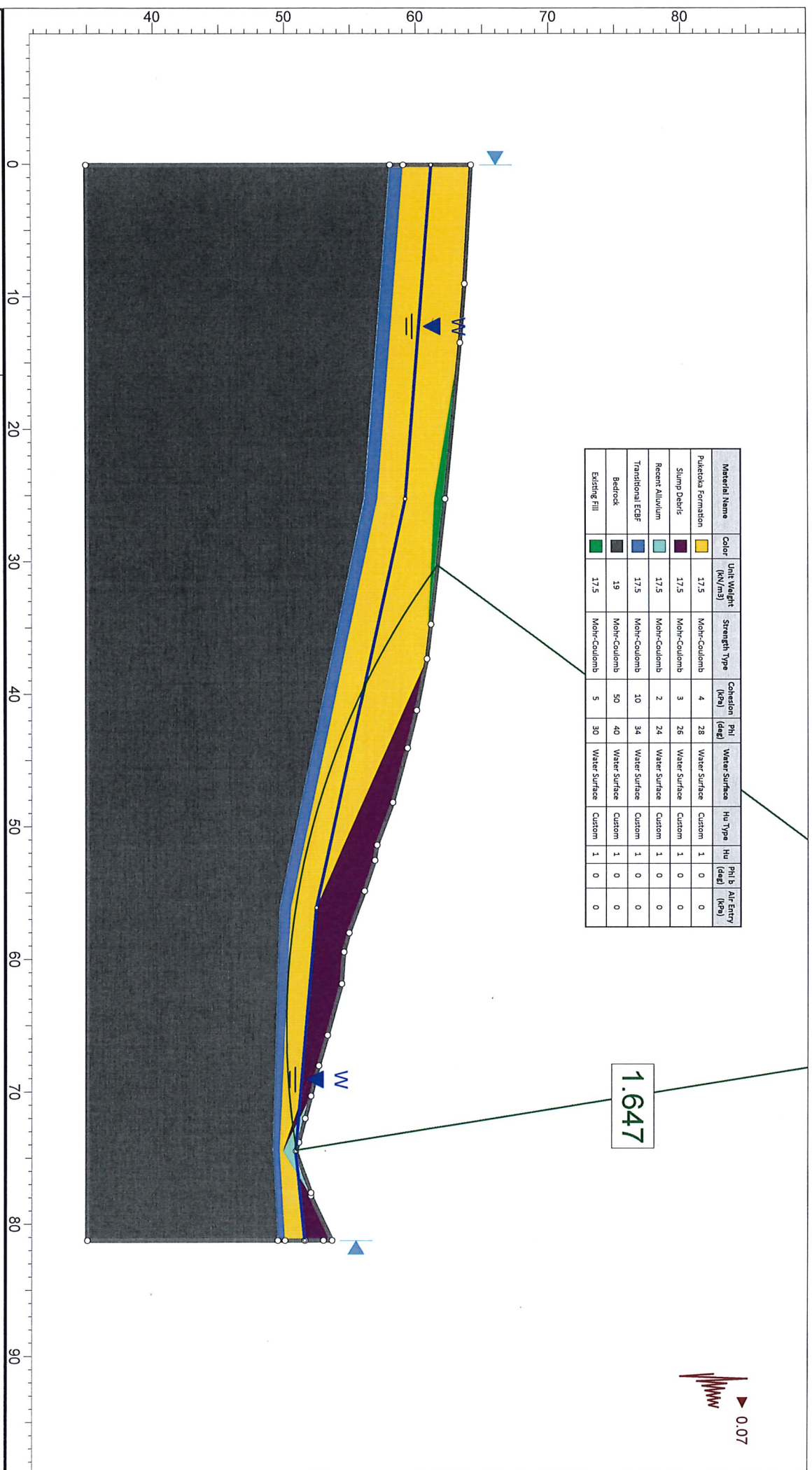
Prevailing - High GWL



Project		125 Murphys Road (Stage 2), Flat Bush	
Cross Section	Cross Section 2-2'	Case No.	P2
Drawn By	AB	F.O.S Filter	1.3
Date	1/03/2018, 12:03:31 p.m.	Scale	1:400
Analysis Description		Prevaling - High GWL	
Company		Lander Geotechnical Consultants Limited	
File Name		J00862_180228_Cross Section 2-2'.slmd	

SLIDEINTERPRET 7.031

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Phi b (deg)	Air Entry (kPa)
Palestina Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0
Slump Debris	Dark Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0
Transitional ECAF	Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0
Bedrock	Dark Grey	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0
Existing Fill	Green	17.5	Mohr-Coulomb	5	30	Water Surface	Custom	1	0



1.647

0.07

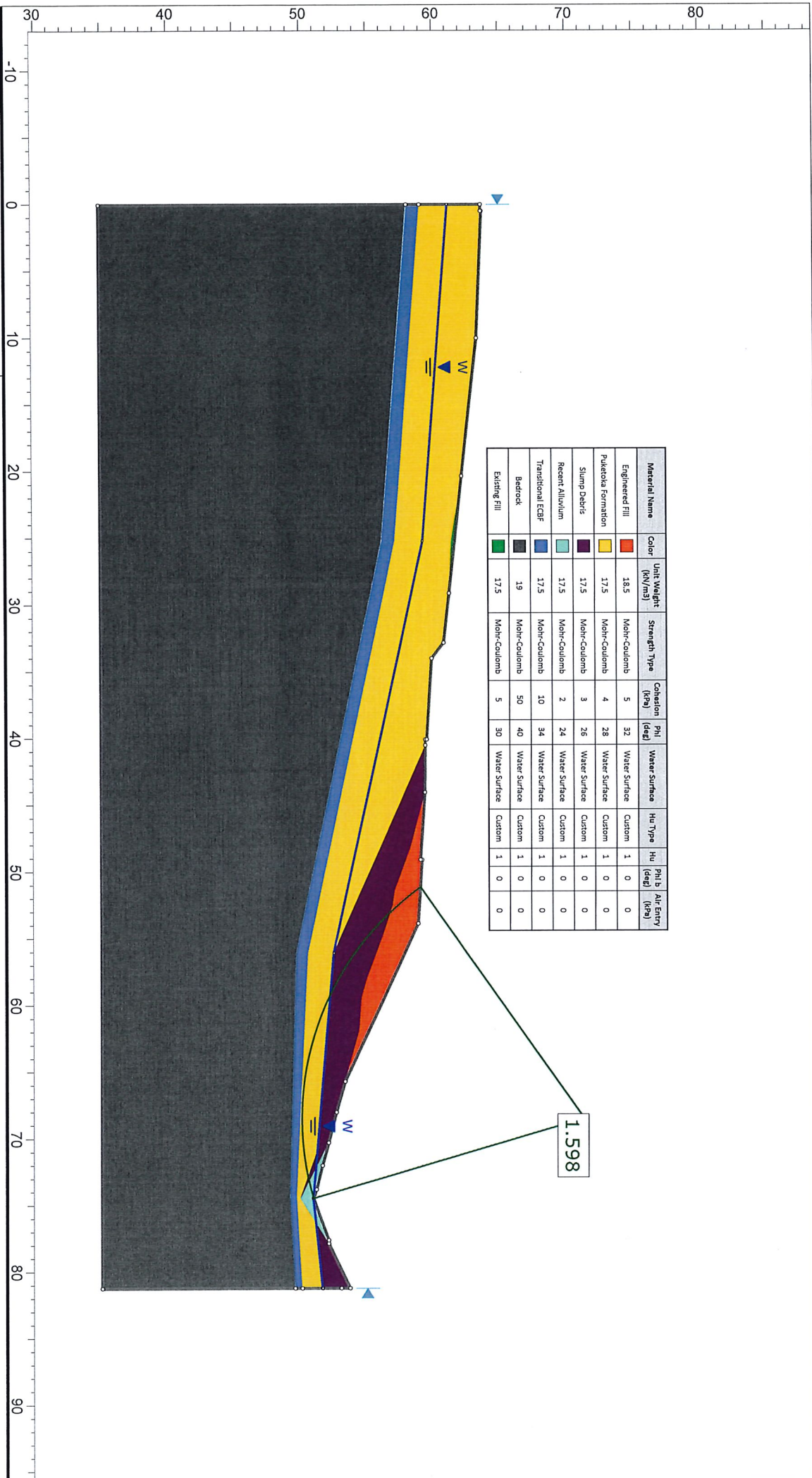
125 Murphys Road (Stage 2), Flat Bush


Project		125 Murphys Road (Stage 2), Flat Bush	
Cross Section	Cross Section 2-2'	Case No.	P3
Drawn By	AB	F.O.S Filter	1.2
Date	1/03/2018, 12:03:31 p.m.	Scale	1:400
Analysis Description		Prevailing - Seismic 1/150	
Company		Lander Geotechnical Consultants Limited	
File Name		J00862_180228_Cross Section 2-2'.slmd	



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Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Phi b (deg)	Air Entry (kPa)
Engineered Fill	Red	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1	0
Pukekaha Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0
Slump Debris	Dark Yellow	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0
Transitional ECAF	Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0
Bedrock	Dark Grey	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0
Existing Fill	Green	17.5	Mohr-Coulomb	5	30	Water Surface	Custom	1	0





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Project

125 Murphys Road (Stage 2), Flat Bush

Case No. PRO1

Analysis Description Proposed (updated March 2018) - Long Term GWL

Cross Section

Cross Section 2-2'

Company

Lander Geotechnical Consultants Limited

Drawn By AB

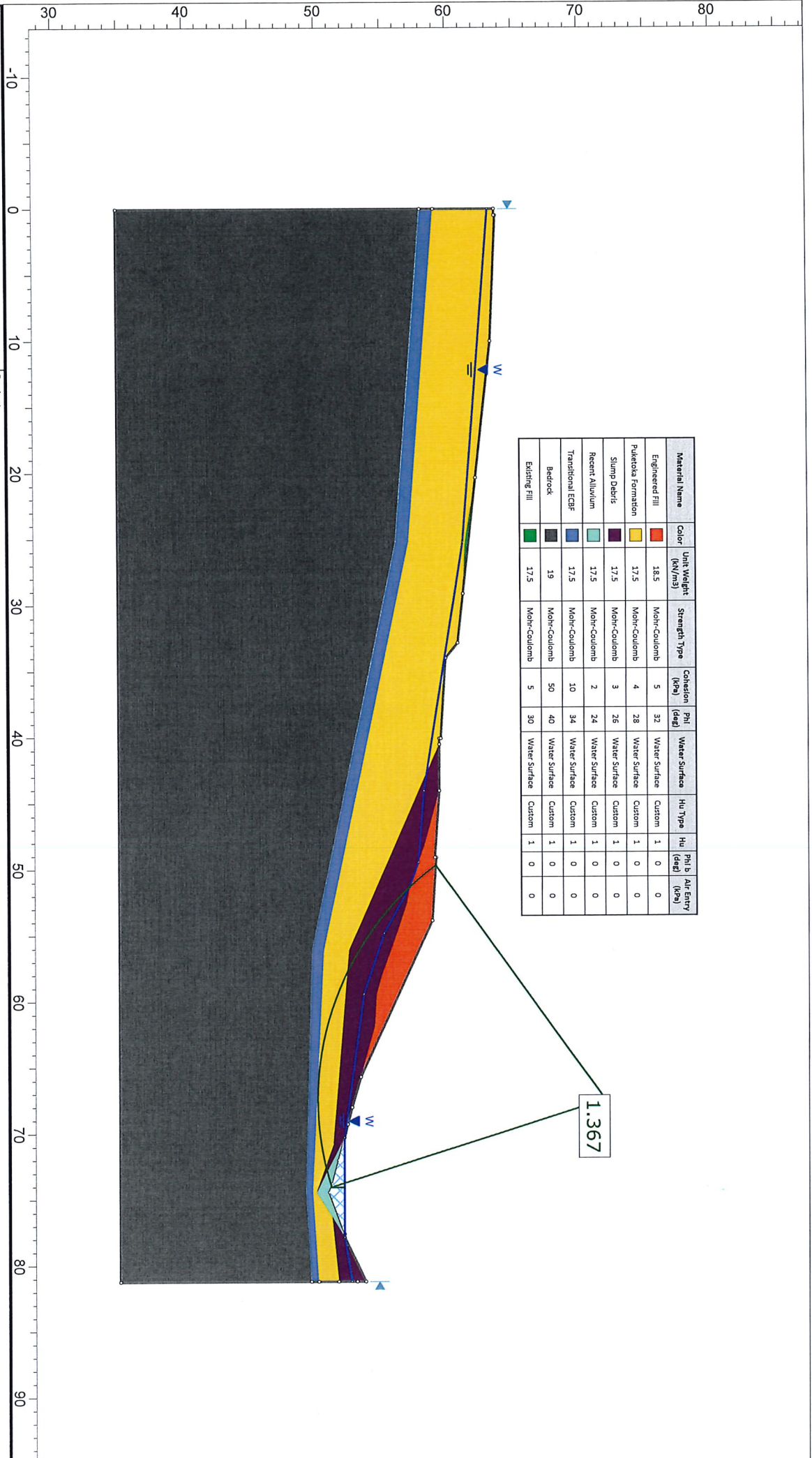
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Scale 1:400

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Date 1/03/2018, 12:03:31 p.m.

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Phi b (deg)	Air Entry (kPa)
Engineered Fill	Red	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1	0	0
Puketola Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Slump Debris	Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0
Transitional ECAF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock	Black	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0
Existing Fill	Green	17.5	Mohr-Coulomb	5	30	Water Surface	Custom	1	0	0



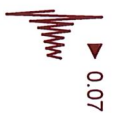
1.367

125 Murphys Road (Stage 2), Flat Bush

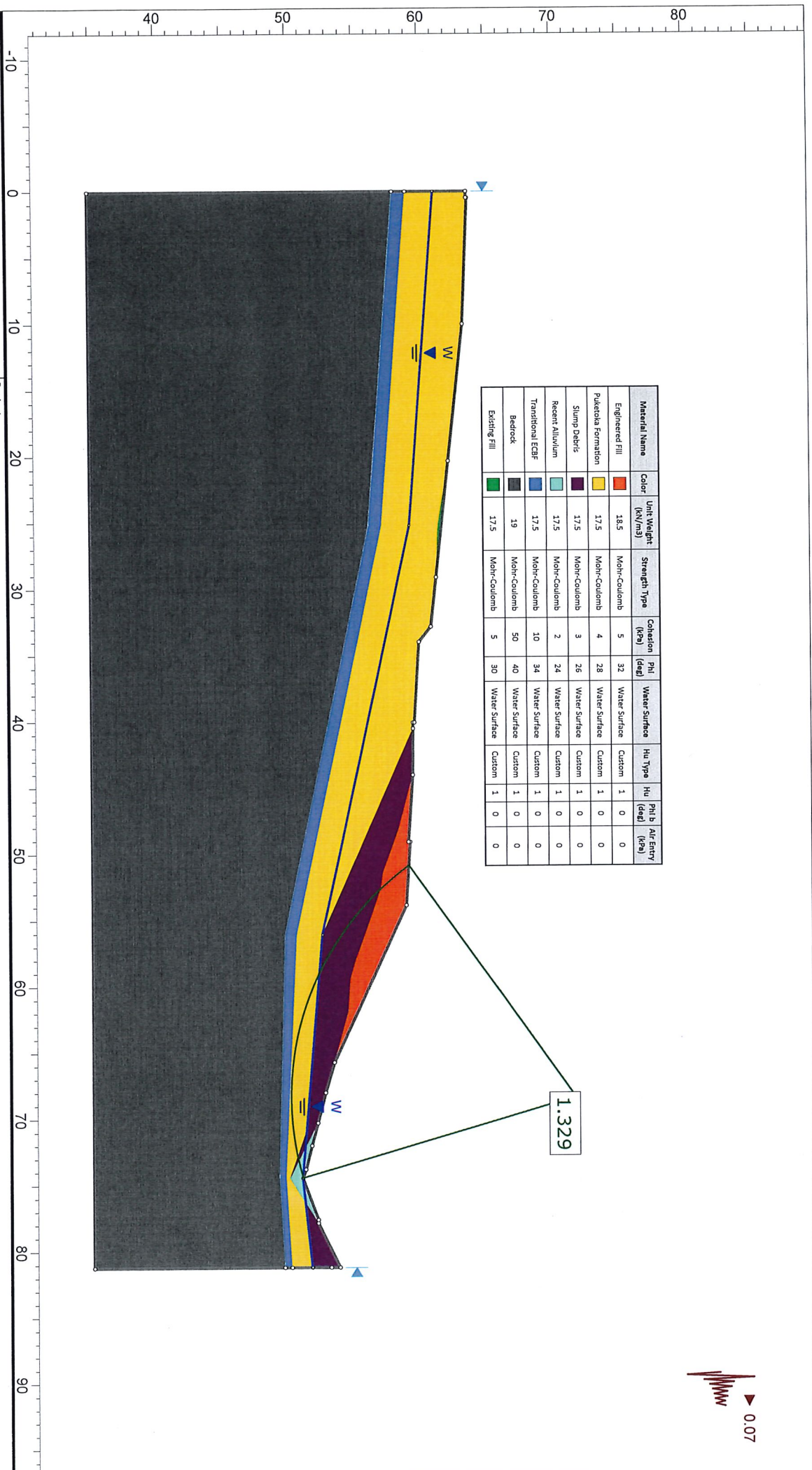
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Cross Section 2-2'		PRO2		Proposed (updated March 2018) - High GWL	
Cross Section		Scale		Company	
Drawn By AB		1:400		Lander Geotechnical Consultants Limited	
Date		File Name			
1/03/2018, 12:03:31 p.m.		J00862_180228_Cross Section 2-2'.slmd			



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Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hi Type	Hi (deg)	Phi b (deg)	Air Entry
Engineered Fill	Orange	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1	0	0
Pukekohe Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Slump Debris	Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0
Transitional ECGF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock	Black	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0
Existing Fill	Green	17.5	Mohr-Coulomb	5	30	Water Surface	Custom	1	0	0








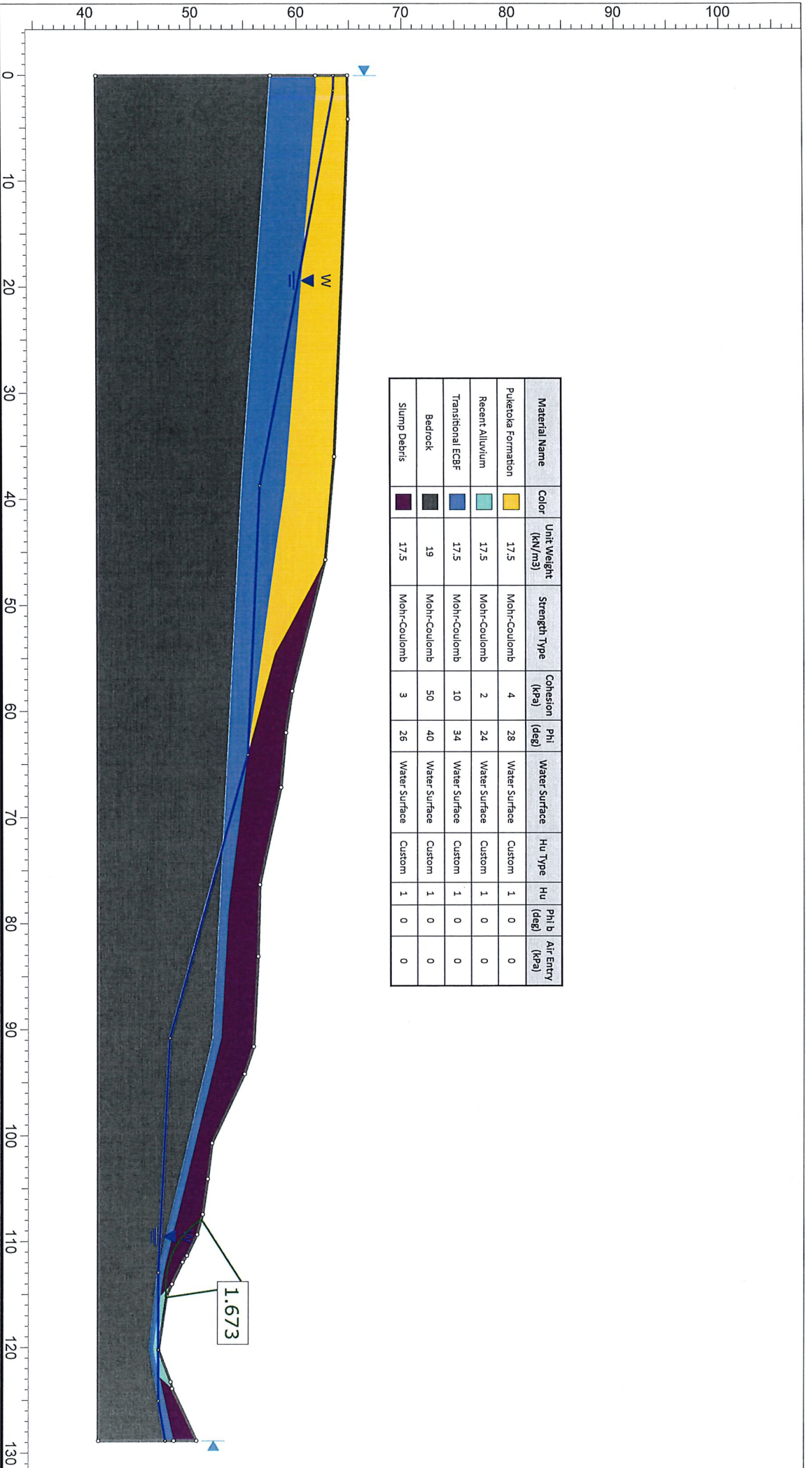
125 Murphys Road (Stage 2), Flat Bush

Project		125 Murphys Road (Stage 2), Flat Bush	
Cross Section	Cross Section 2-2'	Case No.	PRO3
Drawn By	AB	F.O.S Filter	1.2
Date	1/03/2018, 12:03:31 p.m.	Scale	1:400
Analysis Description		Company	Lander Geotechnical Consultants Limited
File Name		J00862_180228_Cross Section 2-2'.slmd	



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Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Phi b (deg)	Air Entry (kPa)
Pukekohe Formation		17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Recent Alluvium		17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0
Transitional ECBF		17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock		19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0
Slump Debris		17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0	0



125 Murphys Road (Stage 2), Flat Bush

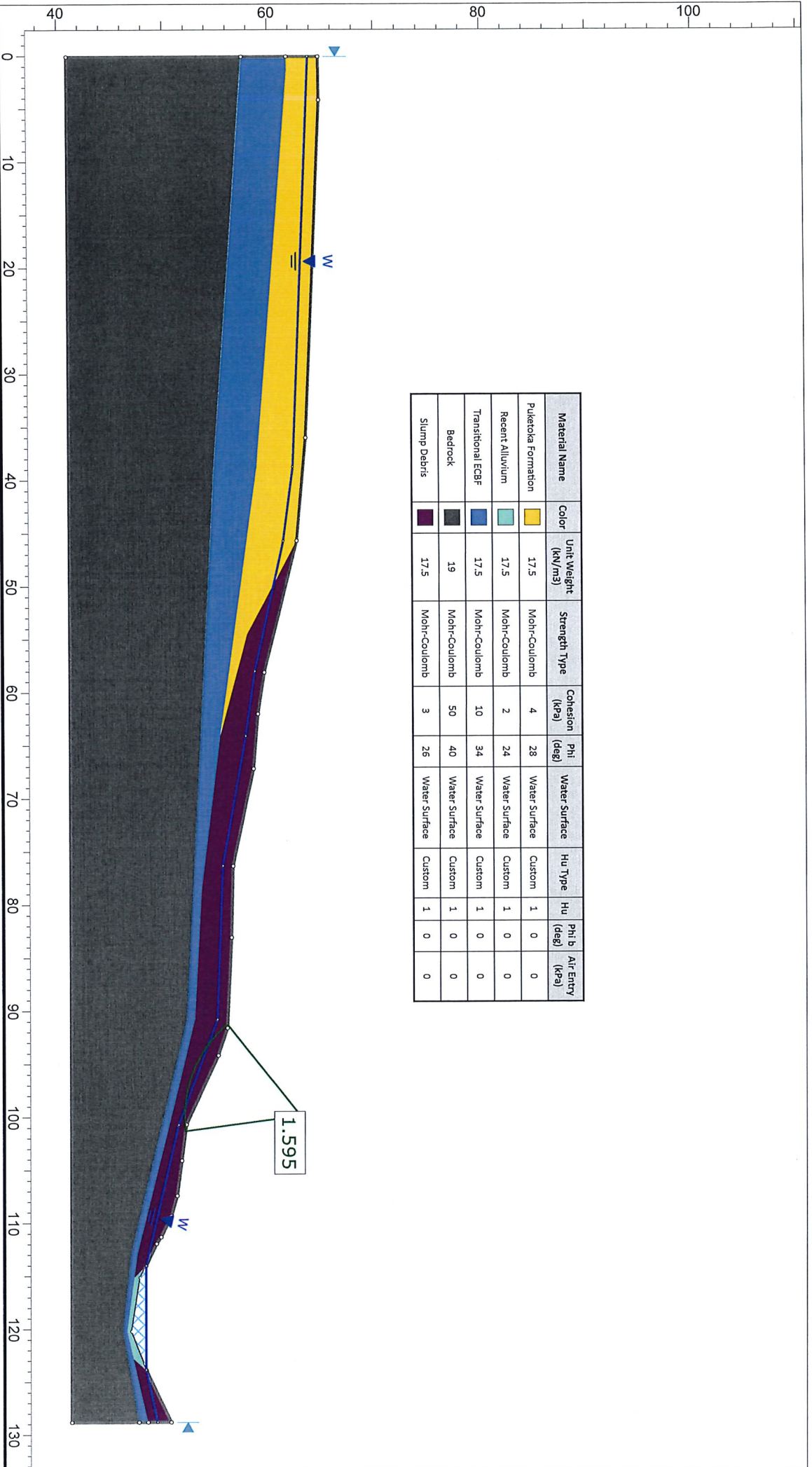
Project		125 Murphys Road (Stage 2), Flat Bush			
Cross Section	Cross Section 3 - 3'	Case No.	P1	Analysis Description	Prevailing - Long Term GWL condition
Drawn By	AB	F.O.S Filter	1.5	Company	Lander Geotechnical Consultants Limited
Date	28/02/2018, 2:19:25 p.m.	Scale	1:500	File Name	J00862_180228_Cross Section 3-3'.slmd



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Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Phi b (deg)	Air Entry (kPa)
Pleistocene Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0
Transitional EC&F	Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock	Dark Grey	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0
Slump Debris	Dark Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0	0



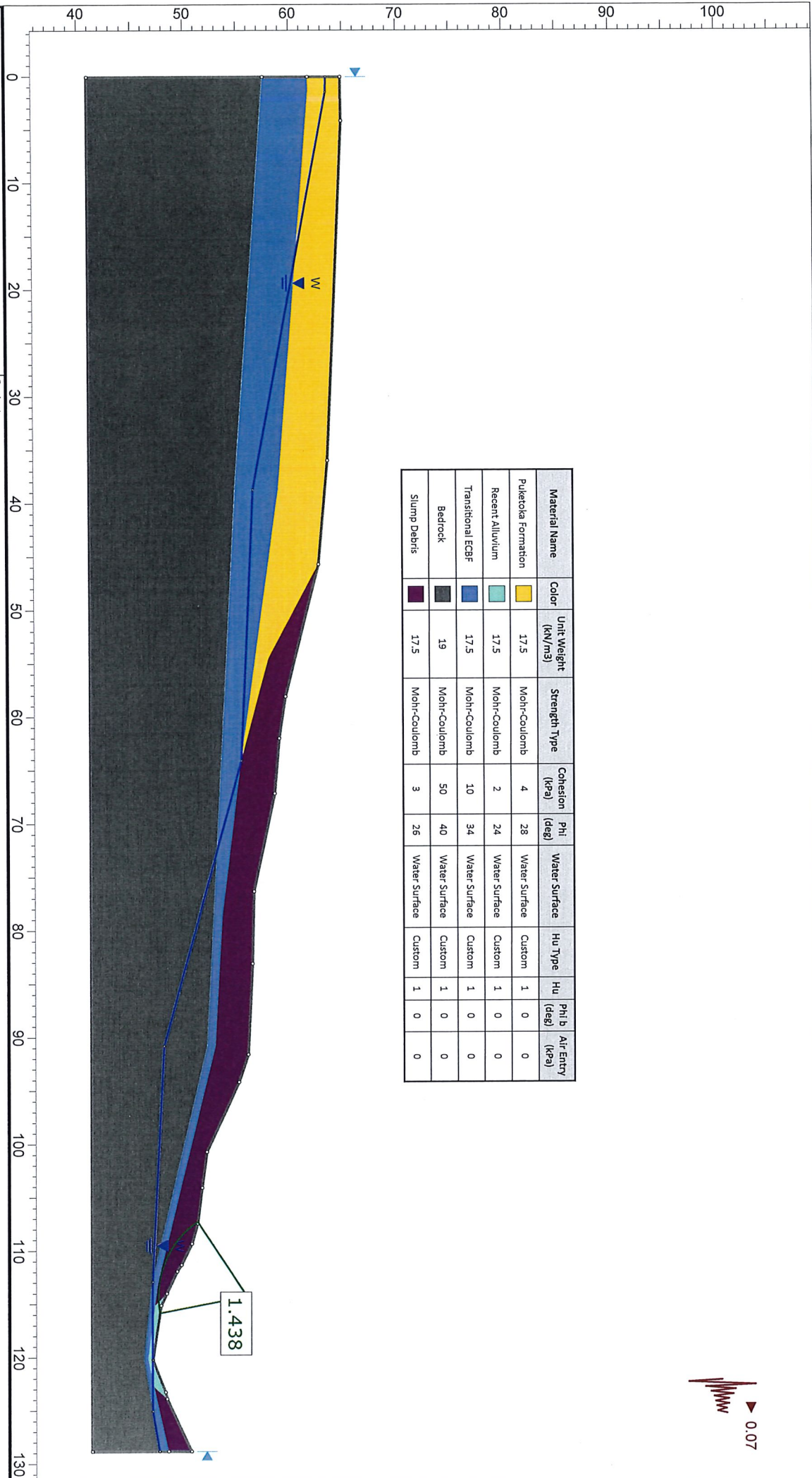
125 Murphys Road (Stage 2), Flat Bush

Project		Case No.		Analysis Description	
Cross Section 3 - 3'		P2		Prevailing - High GWL condition	
Drawn By		F.O.S Filter		Company	
AB		1.3		Lander Geotechnical Consultants Limited	
Date		Scale		File Name	
28/02/2018, 2:19:25 p.m.		1:500		J00862_180228_Cross Section 3-3'.slmd	





Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Phi b (deg)	Air Entry (kPa)
Pukekohe Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0
Transitional EGBF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock	Dark Grey	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0
Slump Debris	Dark Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0	0



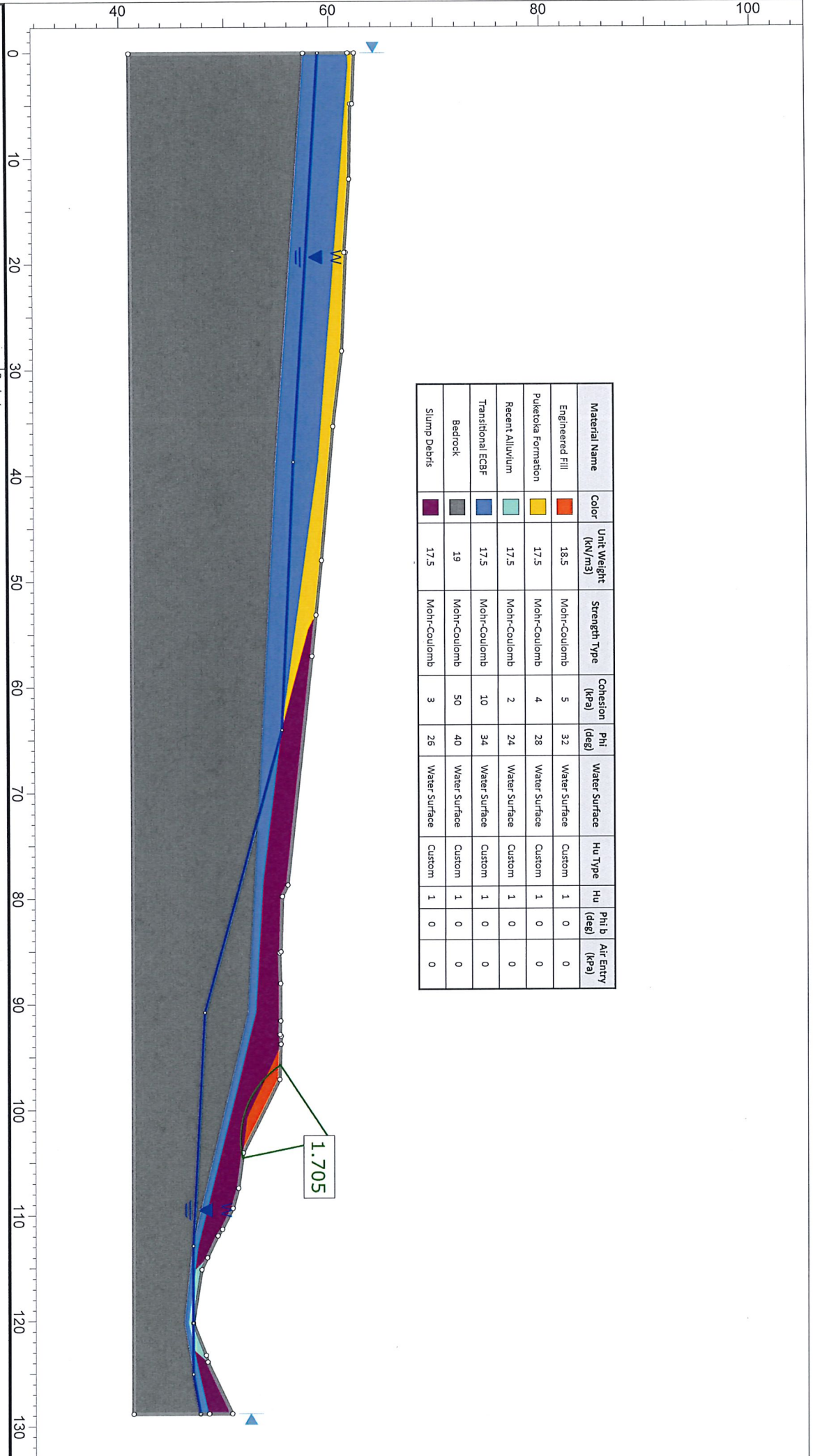
125 Murphys Road (Stage 2), Flat Bush

Project		125 Murphys Road (Stage 2), Flat Bush	
Cross Section		Case No.	P3
Drawn By		F.O.S Filter	1.2
Date		Scale	1:500
Project		Analysis Description	Prevailing - Seismic 1/150
Company		Company	Lander Geotechnical Consultants Limited
File Name		File Name	J00862_180228_Cross Section 3-3'.slmd



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Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Phi b (deg)	Air Entry (kPa)
Engineered Fill	Orange	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1	0	0
Puketoka Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0
Transitional ECRF	Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock	Grey	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0
Slump Debris	Dark Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0	0



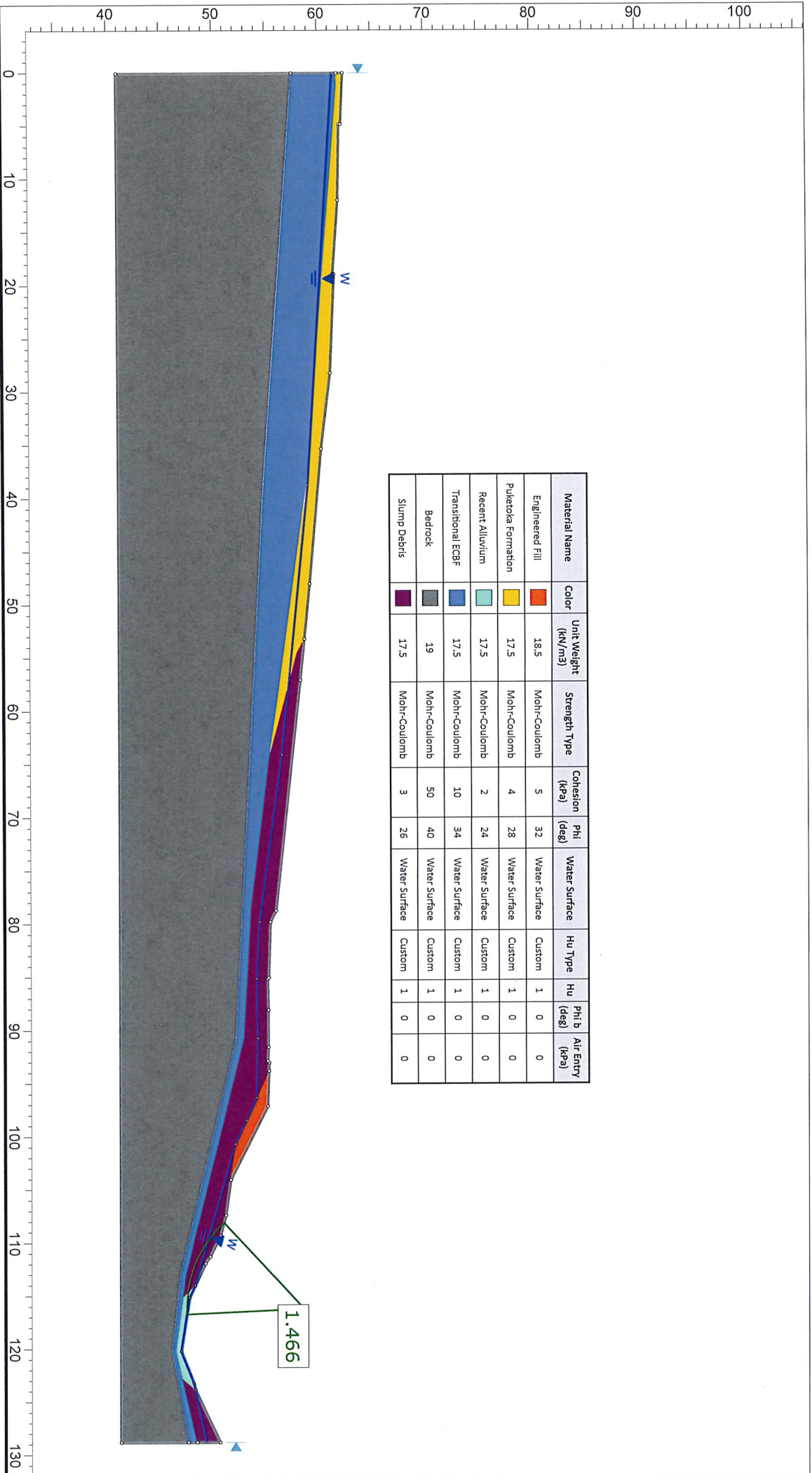
125 Murphys Road (Stage 2), Flat Bush

Project		Case No.		Analysis Description	
Cross Section 3 - 3'		PRO1		PROPOSED (updated March 2018) - Long Term GWL condition	
Drawn By AB		F.O.S Filter 1.5		Company Lander Geotechnical Consultants Limited	
Date 28/02/2018, 2:19:25 p.m.		Scale 1:500		File Name J00862_180228_Cross Section 3-3'.slmd	



SLIDEINTERPRET 7.031

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Phi b (deg)	Air Entry (kPa)
Engineered Fill	Orange	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1	0	0
Puketokia Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0
Transitional EGBF	Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock	Grey	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0
Slump Debris	Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0	0



125 Murphys Road (Stage 2), Flat Bush

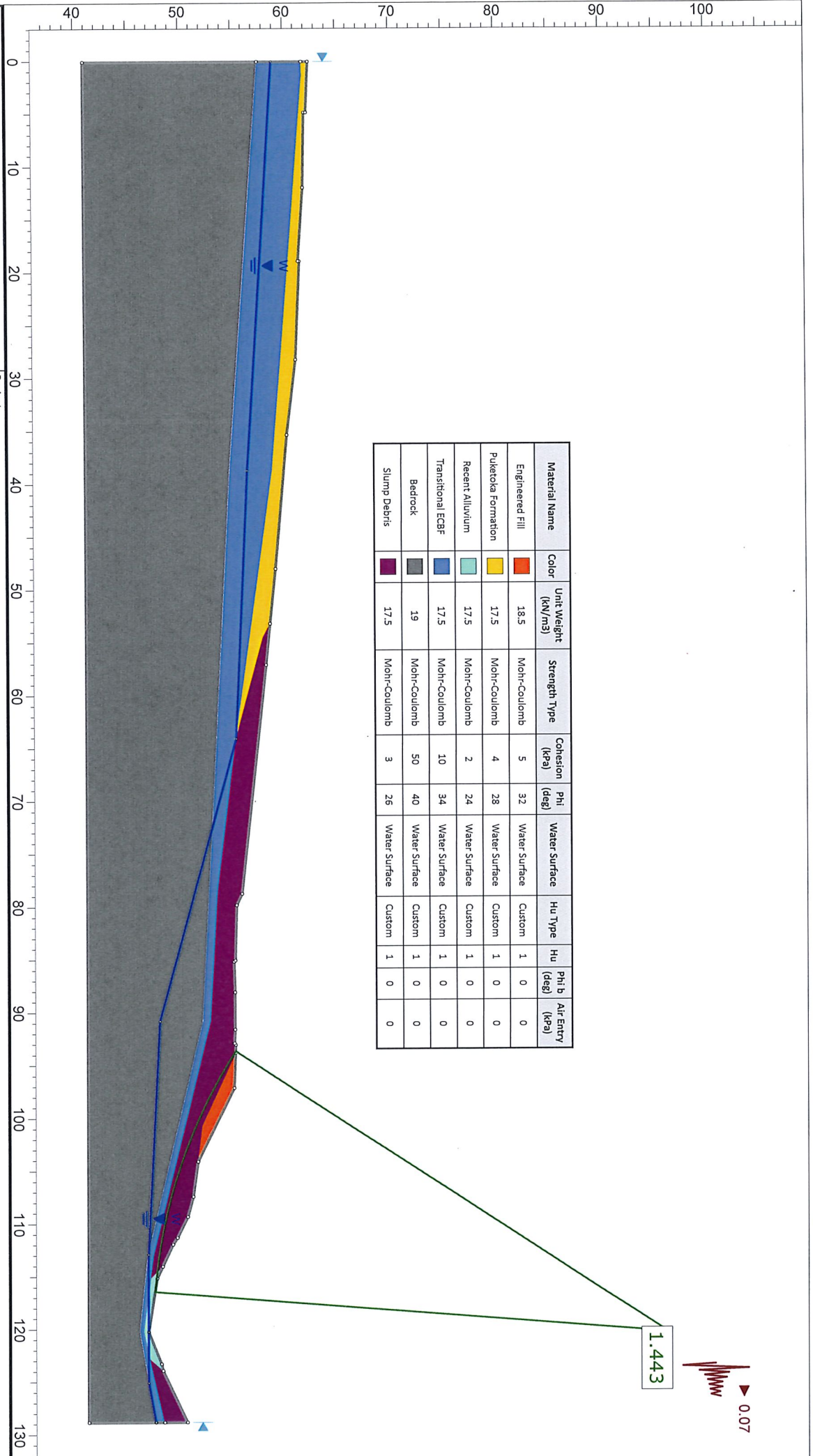
Project		125 Murphys Road (Stage 2), Flat Bush	
Cross Section	Cross Section 3 - 3'	Case No.	PRO2
Drawn By	AB	F.O.S Filter	1.3
Date	28/02/2018, 2:19:25 p.m.	Scale	1:500
Analysis Description		Proposed (updated March 2018) - High GWL condition	
Company		Lander Geotechnical Consultants Limited	
File Name		J00862_180228_Cross Section 3-3'.slmd	





1.443

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Phi b (deg)	Air Entry (kPa)
Engineered Fill	Orange	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1	0	0
Pukekohe Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0
Transitional ECBF	Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock	Grey	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0
Slump Debris	Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0	0








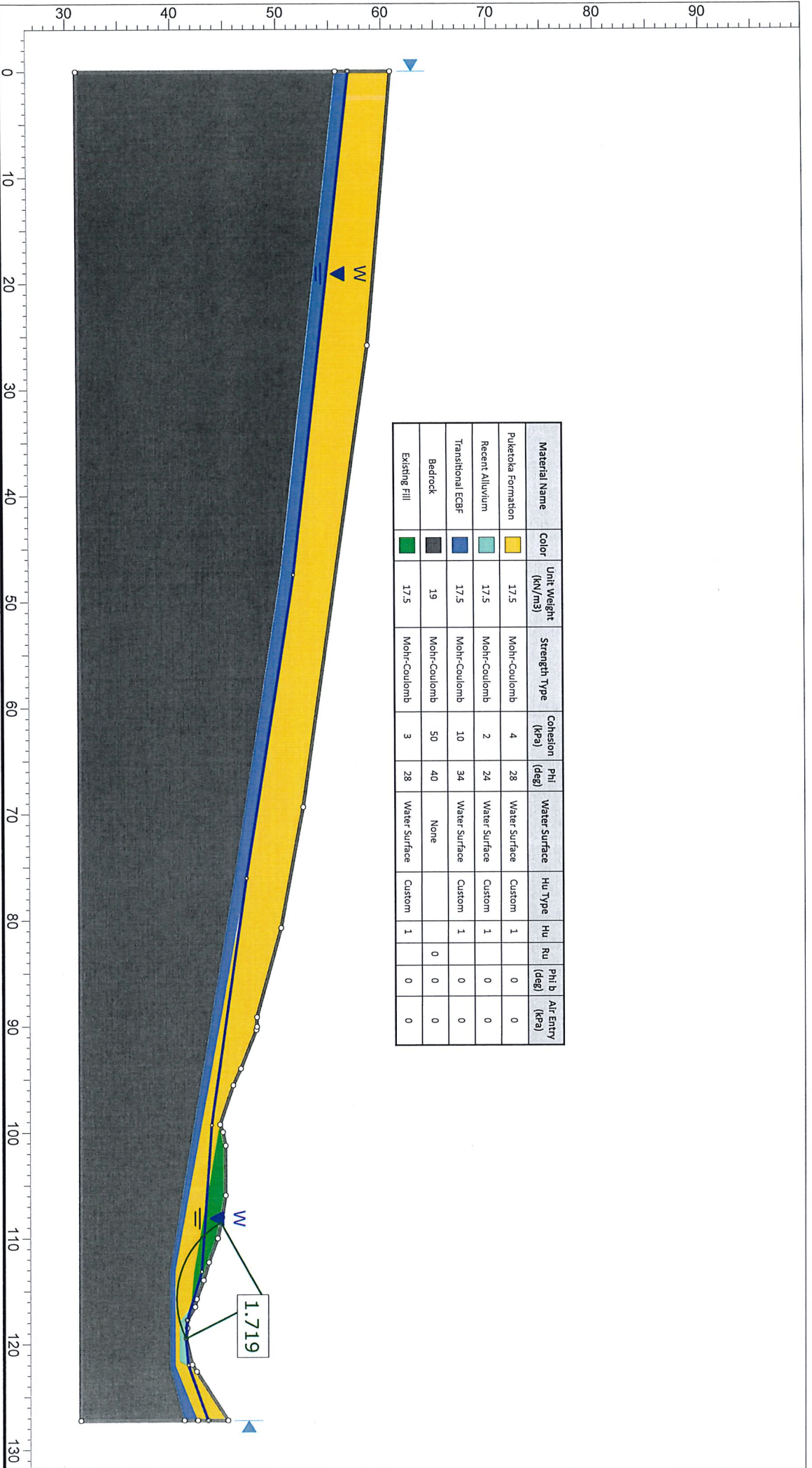
125 Murphys Road (Stage 2), Flat Bush

Project		Case No.		Analysis Description	
Cross Section 3 - 3'		PRO3		Proposed (updated March 2018) - Seismic 1/150	
Cross Section		F.O.S Filter		Company	
Drawn By AB		1.2		Lander Geotechnical Consultants Limited	
Date		Scale		File Name	
28/02/2018, 2:19:25 p.m.		1:500		J00862_180228_Cross Section 3-3'.slmd	



SLIDENTERPRET 7.031

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (Kpa)	Phi (deg)	Water Surface	Hu Type	Hu	Ru	Phi b (deg)	Air Entry (kpa)
Pukekohe Formation		17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0	0
Recent Alluvium		17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0	0
Transitional EGBF		17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0	0
Bedrock		19	Mohr-Coulomb	50	40	None			0	0	0
Existing Fill		17.5	Mohr-Coulomb	3	28	Water Surface	Custom	1	0	0	0








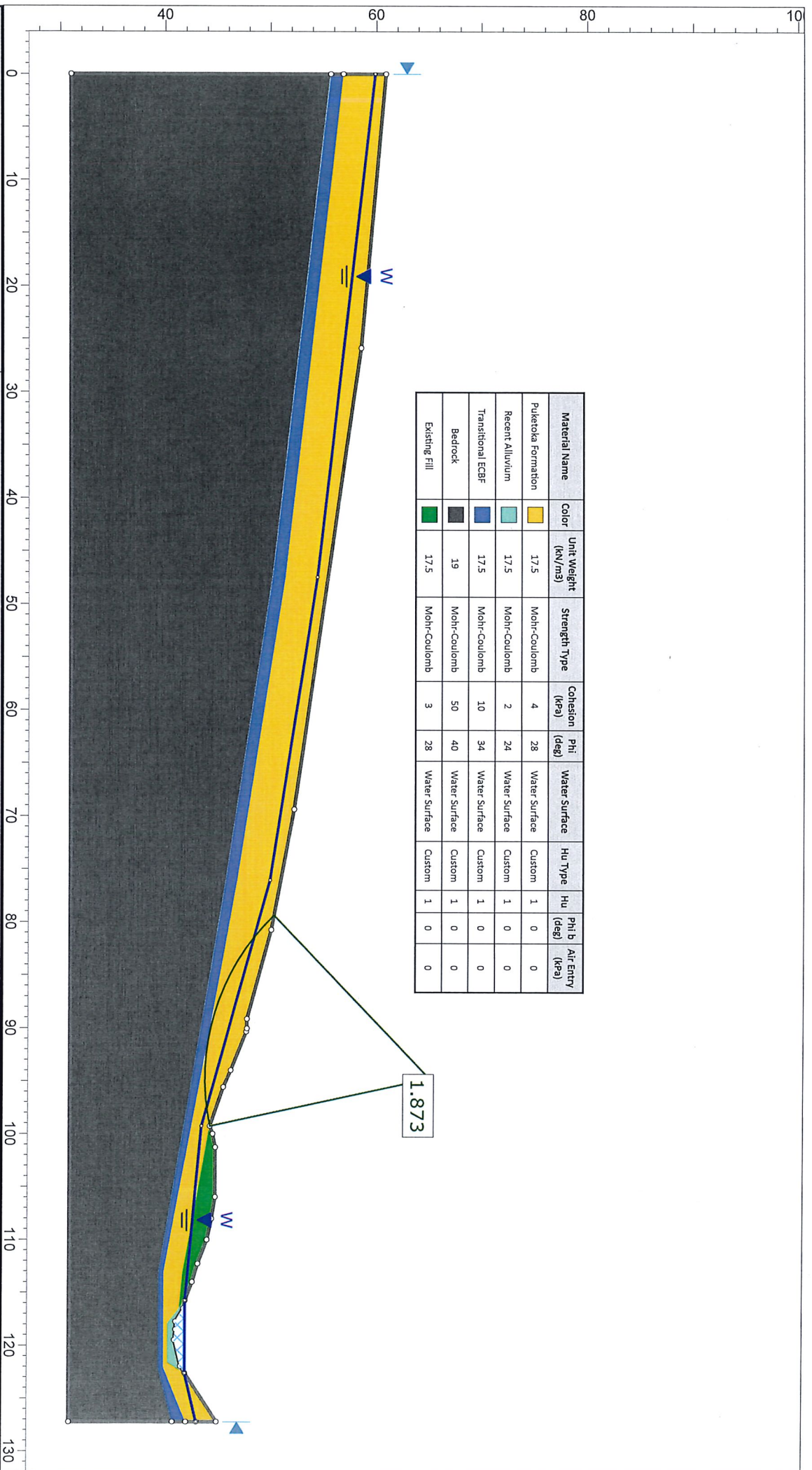
125 Murphys Road (Stage 2), Flat Bush

Project		Case No.		Analysis Description	
Cross Section 4-4'		P1		Prevailing - Long Term GWL	
Drawn By AB		F.O.S Filler 1.5		Company Lander Geotechnical Consultants Limited	
Date 28/02/2018, 3:53:10 p.m.		Scale 1:500		File Name J00862_180228_Cross Section 4-4'.slmd	



SLIDEINTERPRET 7.031

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Phi b (deg)	Air Entry (kPa)
Pukekohe Formation		17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Recent Alluvium		17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0
Transitional ECBF		17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock		19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0
Existing Fill		17.5	Mohr-Coulomb	3	28	Water Surface	Custom	1	0	0

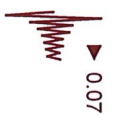


125 Murphys Road (Stage 2), Flat Bush

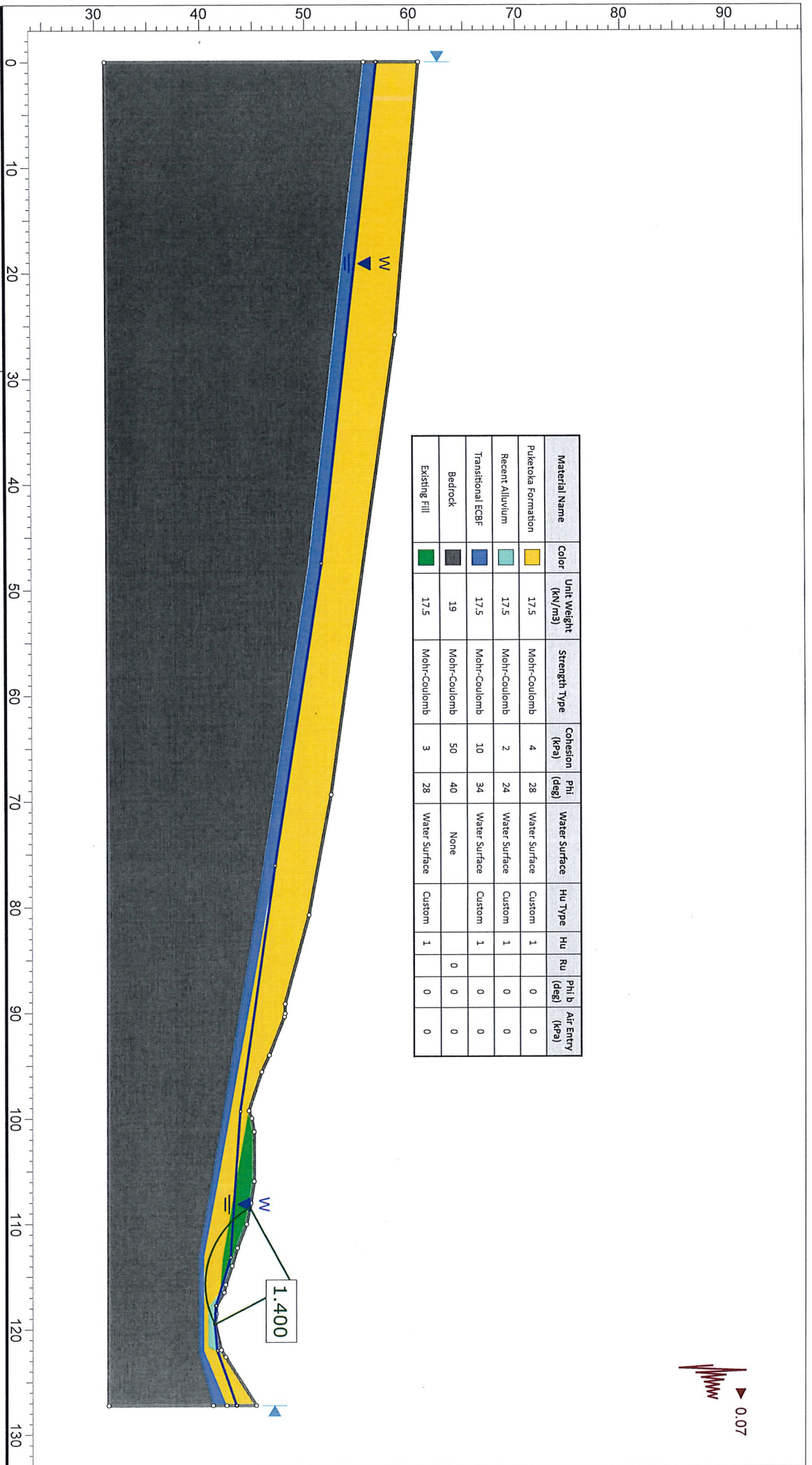
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Cross Section	Cross Section 4-4'	Case No.	P2
Drawn By	AB	F.O.S Filter	1.3
Date	28/02/2018, 3:53:10 p.m.	Scale	1:500
Analysis Description		Prevailing - High GWL	
Company		Lander Geotechnical Consultants Limited	
File Name		J00862_180228_Cross Section 4-4'.slmd	



SLIDENTERPRET 7.031



Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Ru	Phi b (deg)	Air Entry (kPa)
Pukekohe Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0	0
Transitional EGBF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0	0
Bedrock	Dark Grey	19	Mohr-Coulomb	50	40	None		0	0	0	0
Existing Fill	Green	17.5	Mohr-Coulomb	3	28	Water Surface	Custom	1	0	0	0



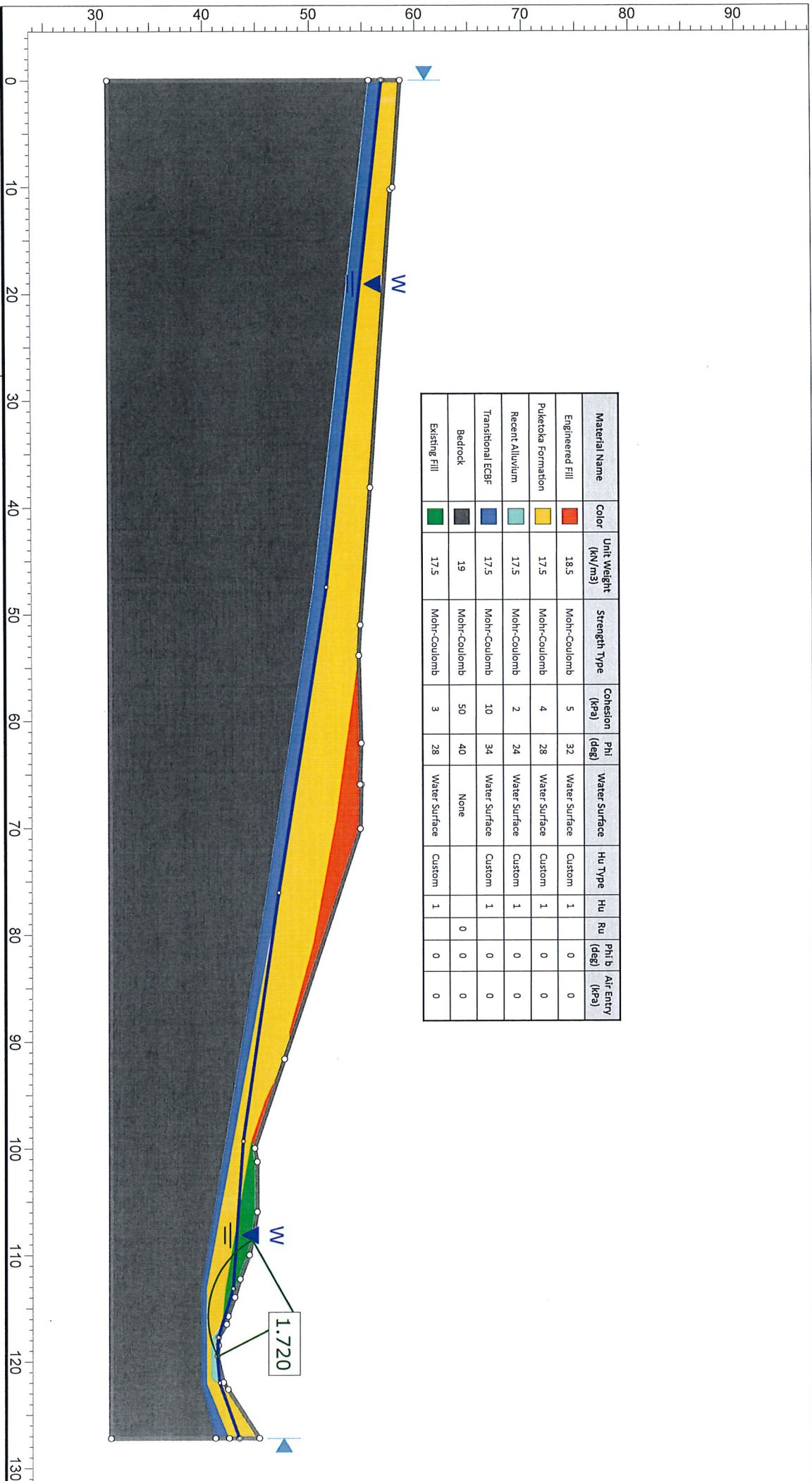
125 Murphys Road (Stage 2), Flat Bush

Project		Case No.		Analysis Description	
Cross Section 4-4'		P3		Prevailing - Seismic 1/150	
Drawn By		F.O.S filler		Company	
AB		1.2		Lander Geotechnical Consultants Limited	
Date		Scale		File Name	
28/02/2018, 3:53:10 p.m.		1:500		J00862_180228_Cross Section 4-4'.slmd	



SLIDINTERPRET 7.031

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kpa)	Phi (deg)	Water Surface	Hu Type	Hu	Ru	Phi b (deg)	Air Entry (kpa)
Engineered Fill	Red	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1	0	0	0
Pukekōia Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0	0
Transitional EGBF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0	0
Bedrock	Dark Grey	19	Mohr-Coulomb	50	40	None			0	0	0
Existing Fill	Green	17.5	Mohr-Coulomb	3	28	Water Surface	Custom	1	0	0	0



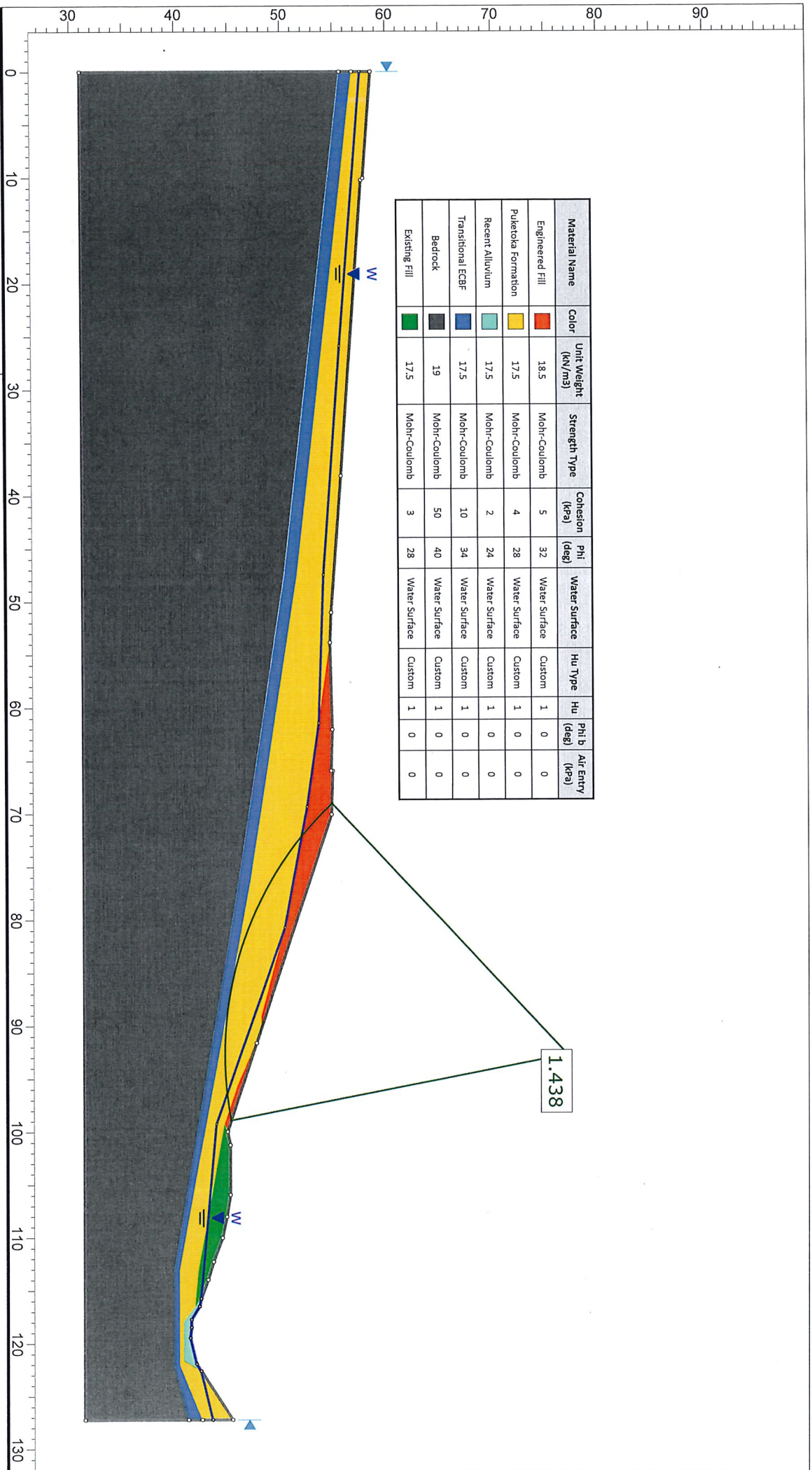
125 Murphys Road (Stage 2), Flat Bush


Project		125 Murphys Road (Stage 2), Flat Bush			
Cross Section	Cross Section 4-4'	Case No.	Pro1	Analysis Description	Proposed (updated March 2018) - Long Term GWL
Drawn By	AB	F.O.S Filter	1.5	Company	Lander Geotechnical Consultants Limited
Date	28/02/2018, 3:53:10 p.m.	Scale	1:500	File Name	J00862_180228_Cross Section 4-4'.slnd



SLIDINTERPRET 7.031

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kpa)	Phi (deg)	Water Surface	Hu Type	Hu	Phi b (deg)	Air Entry (kpa)
Engineered Fill	Red	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1	0	0
Pukekoia Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0
Transitional EGBF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock	Dark Grey	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0
Existing Fill	Green	17.5	Mohr-Coulomb	3	28	Water Surface	Custom	1	0	0

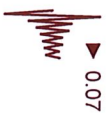




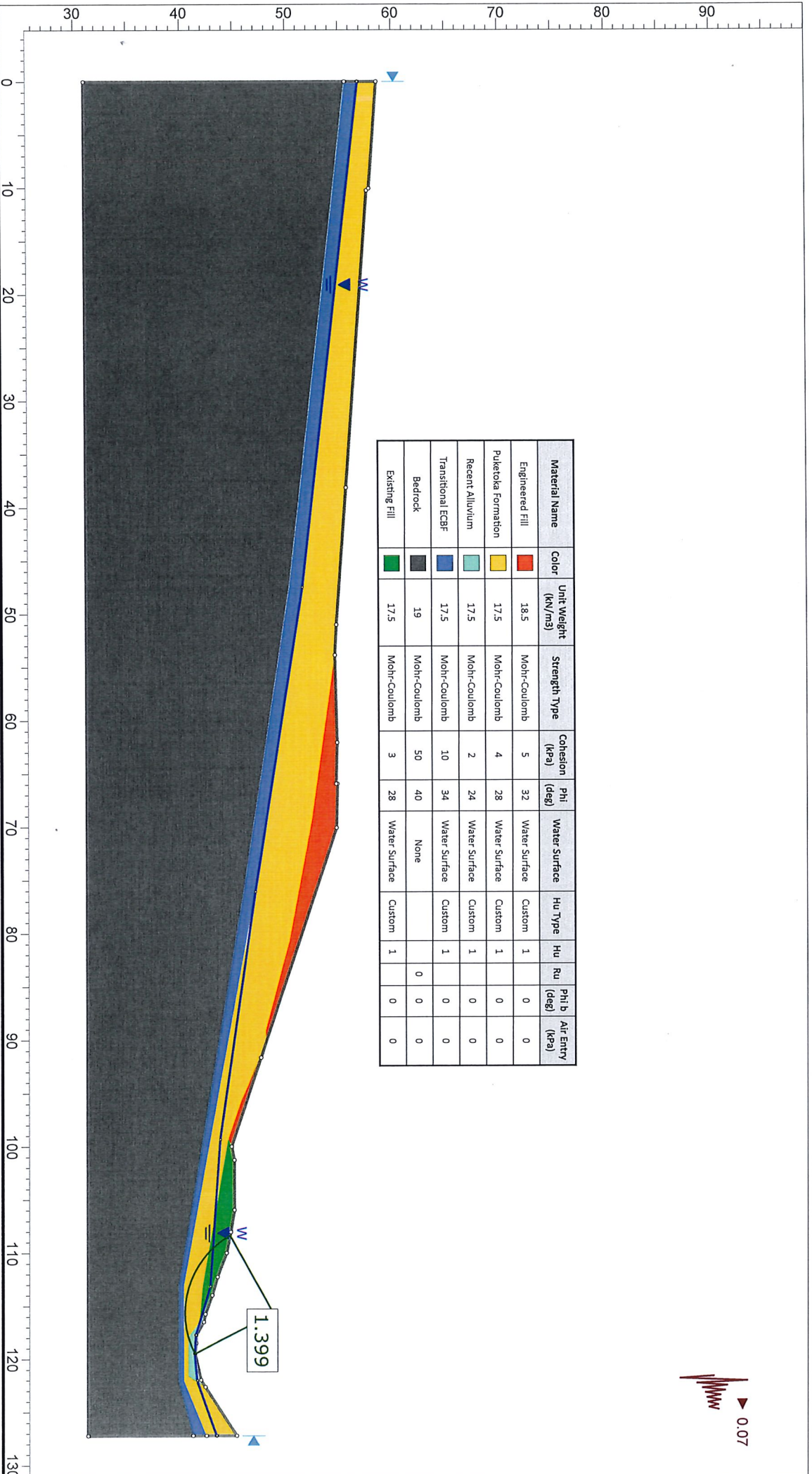
SIDENTERPRET 7.031

Project 125 Murphys Road (Stage 2), Flat Bush

Cross Section	Case No.	Analysis Description
Cross Section 4-4'	PRO2	Proposed (updated March 2018) - High GWL
Drawn By	F.O.S Filter	Company
	AB	Lander Geotechnical Consultants Limited
Date	28/02/2018, 3:53:10 p.m.	File Name
	Scale 1:500	J00862_180228_Cross Section 4-4'.slmd



Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Ru	Phi b (deg)	Air Entry (kPa)
Engineered Fill	Red	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1	0	0	0
Pukekohe Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0	0
Transitional ECBF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0	0
Bedrock	Grey	19	Mohr-Coulomb	50	40	None			0	0	0
Existing Fill	Green	17.5	Mohr-Coulomb	3	28	Water Surface	Custom	1	0	0	0



125 Murphys Road (Stage 2), Flat Bush

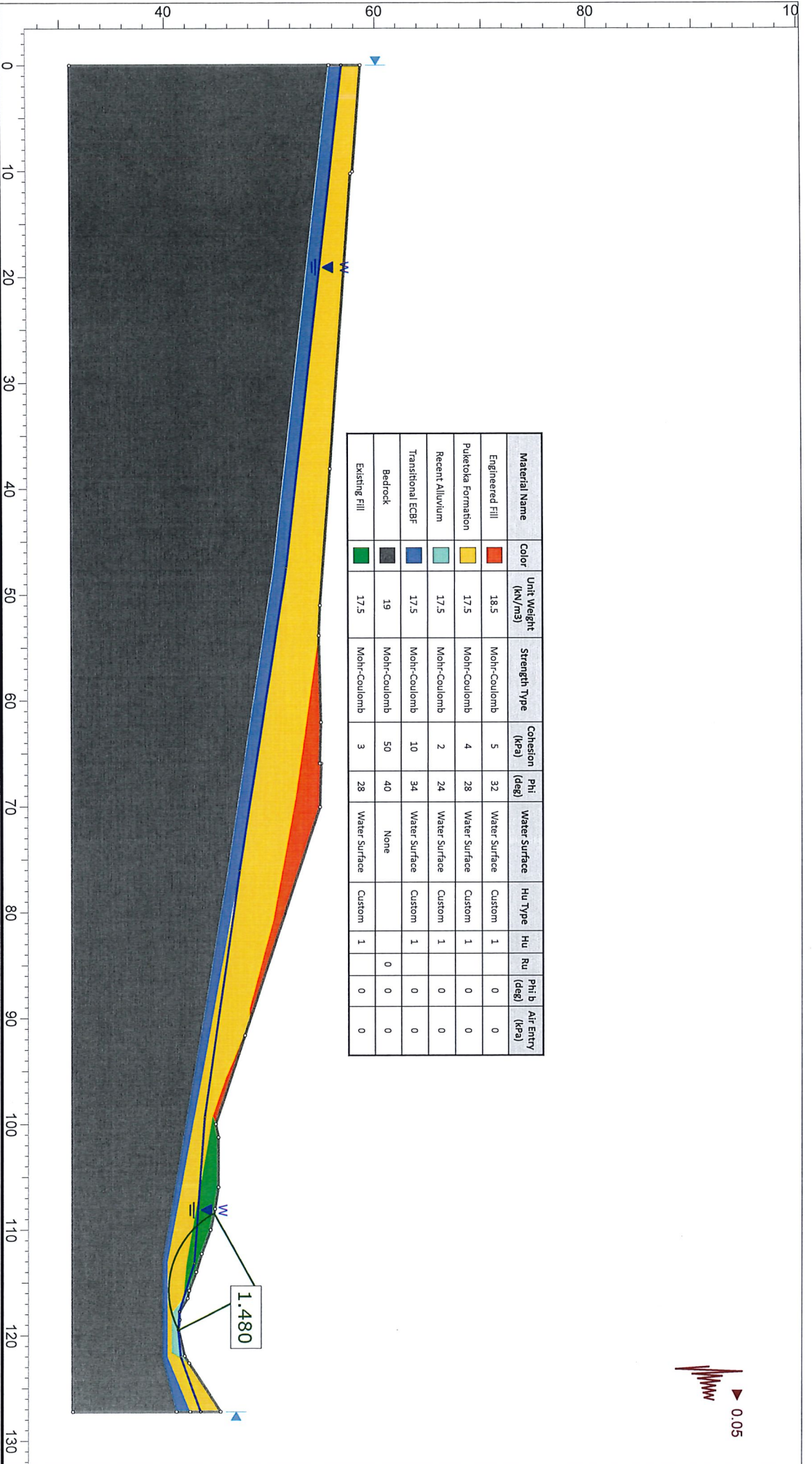
<i>Project</i>		125 Murphys Road (Stage 2), Flat Bush	
<i>Cross Section</i>	Cross Section 4-4'	<i>Case No.</i>	PRO3
<i>Drawn By</i>	AB	<i>F.O.S Filter</i>	1.2
<i>Date</i>	28/02/2018, 3:53:10 p.m.	<i>Scale</i>	1:500
		<i>Analysis Description</i>	Proposed (updated March 2018) - Seismic 1/150
		<i>Company</i>	Lander Geotechnical Consultants Limited
		<i>File Name</i>	J00862_180228_Cross Section 4-4'.slmd



SLIDENTERPRET 7.031



Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Ru	Phi b (deg)	Air Entry (kPa)
Engineered Fill	Red	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1	0	0	0
Puketoka Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0	0
Transitional ECBF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0	0
Bedrock	Black	19	Mohr-Coulomb	50	40	None			0	0	0
Existing Fill	Green	17.5	Mohr-Coulomb	3	28	Water Surface	Custom	1	0	0	0



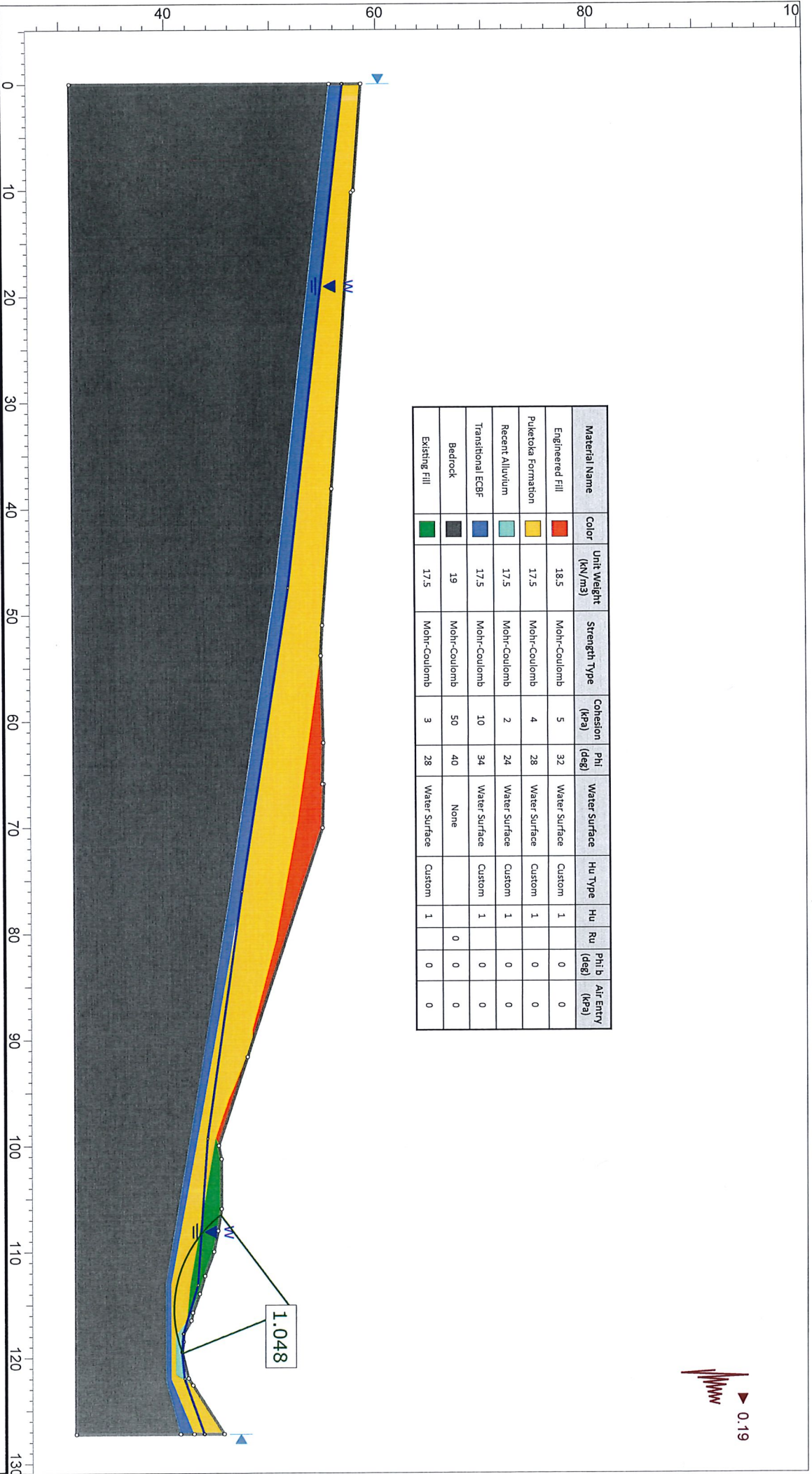
125 Murphys Road (Stage 2), Flat Bush

		Project 125 Murphys Road (Stage 2), Flat Bush	
Cross Section Cross Section 4-4'		Case No. PR04	
Drawn By AB		F.O.S Filter 1.1	
Date 28/02/2018, 3:53:10 p.m.		Scale 1:500	
Analysis Description Proposed (updated March 2018) - Seismic 1/500		Company Lander Geotechnical Consultants Limited	
File Name J00862_180228_Cross Section 4-4'.slmd			

SLIDENTERPRET 7.031



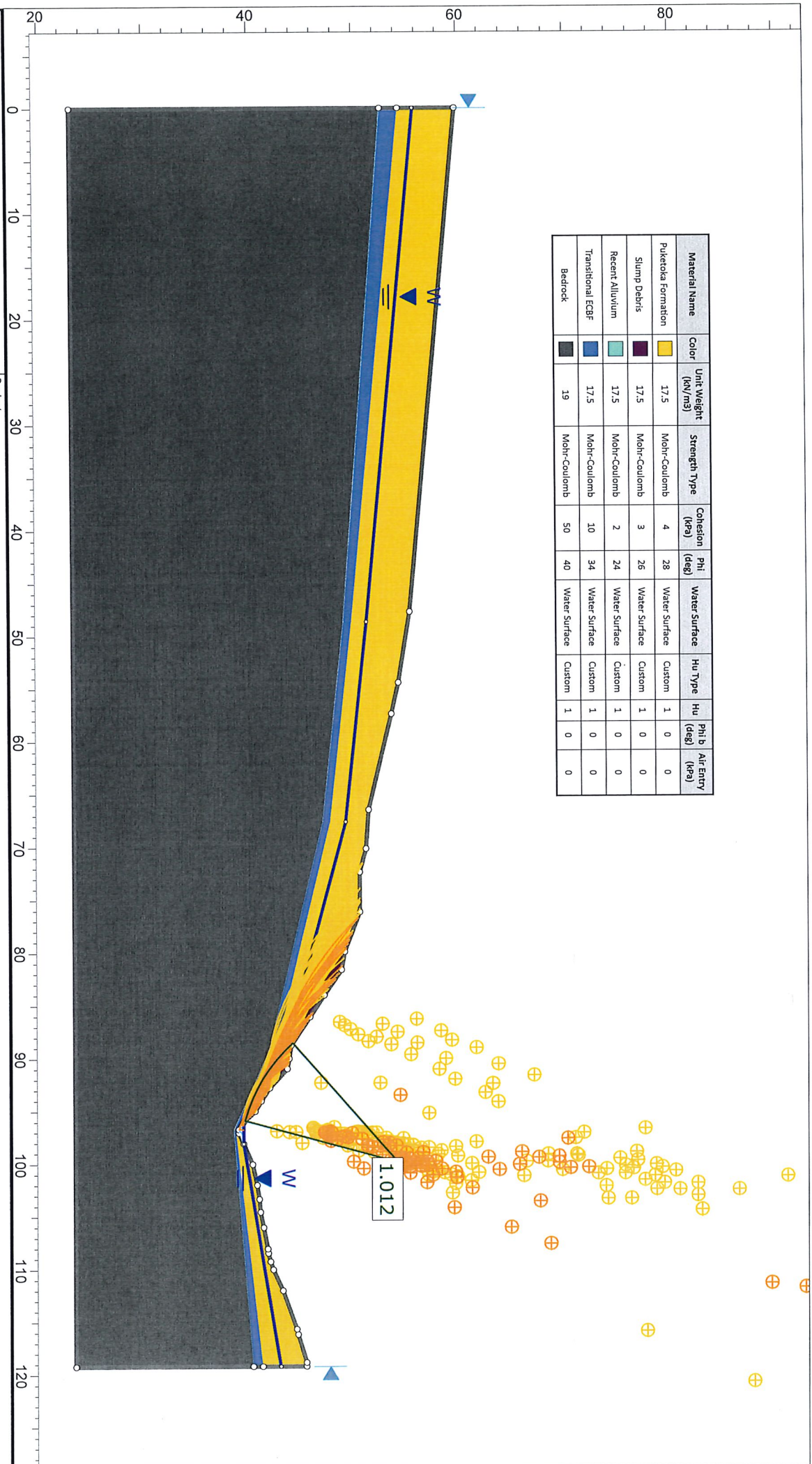
Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Ru	Phi b (deg)	Air Entry (kPa)
Engineered Fill	Red	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1	0	0	0
Puketotia Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0	0
Transitional ECBF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0	0
Bedrock	Grey	19	Mohr-Coulomb	50	40	None			0	0	0
Existing Fill	Green	17.5	Mohr-Coulomb	3	28	Water Surface	Custom	1	0	0	0



125 Murphys Road (Stage 2), Flat Bush

		Project 125 Murphys Road (Stage 2), Flat Bush	
Cross Section Cross Section 4-4' Drawn By AB Date 28/02/2018, 3:53:10 p.m.	Case No. PRO5 F.O.S Filter 1.0 Scale 1:500	Analysis Description Proposed (updated March 2018) - Seismic 1/2500 Company Lander Geotechnical Consultants Limited File Name J00862_180228_Cross Section 4-4'.slmld	

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Phi b (deg)	Air Entry (kPa)
Pulestoka Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Slump Debris	Dark Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0
Transitional EGBF	Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock	Dark Grey	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0

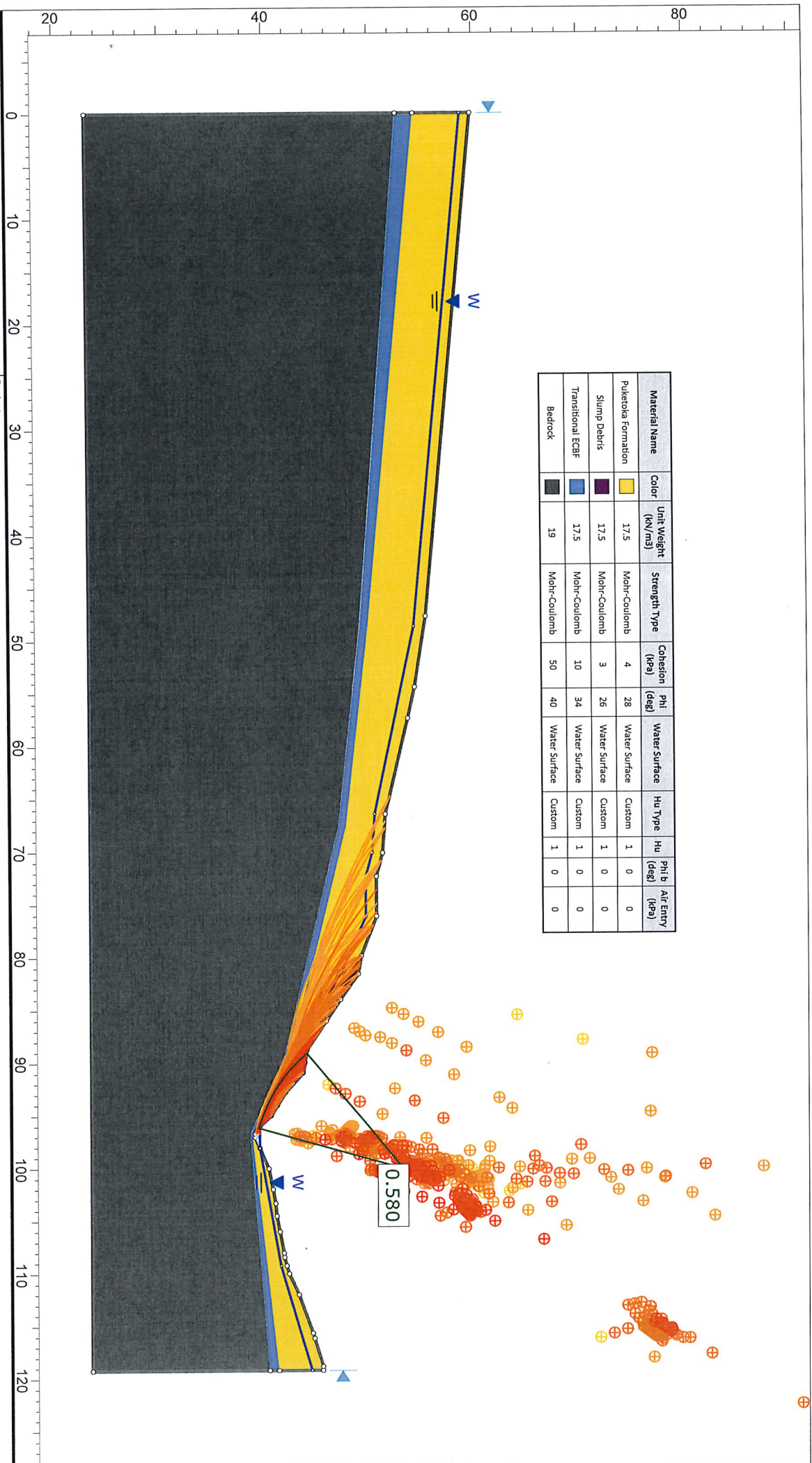


125 Murphys Road (Stage 2), Flat Bush



Project		Case No.		Analysis Description	
Cross Section 5-5'		P1		Prevailing - Long Term GWL	
Drawn By AB		F.O.S Filter 1.5		Company Lander Geotechnical Consultants Limited	
Date 1/03/2018, 4:12:49 p.m.		Scale 1:500		File Name J00862_180228_Cross Section 5-5'.sltm.slmnd	

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Phi _b (deg)	Air Entry (kPa)
Pukerika Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Slump Debris	Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0	0
Transitional EGBF	Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock	Black	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0



125 Murphys Road (Stage 2), Flat Bush

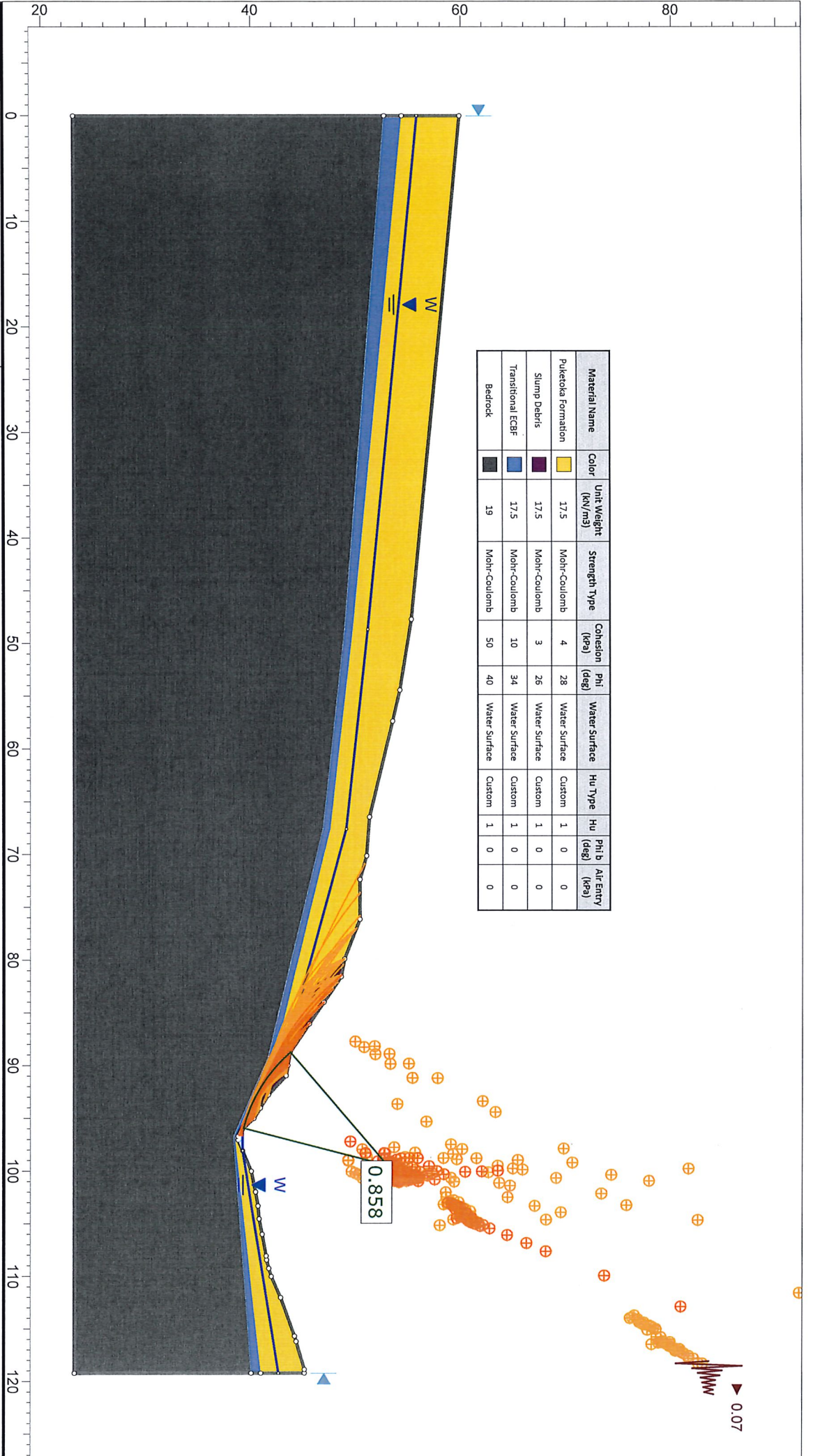
Project	125 Murphys Road (Stage 2), Flat Bush	
Cross Section	Cross Section 5-5'	Case No. P2
Drawn By	AB	F.O.S Filter 1.3
Date	1/03/2018, 4:12:50 p.m.	Scale 1:500
Analysis Description	Prevailing - High GWL	



SLIDENTERPRET 7.031

Company	Lander Geotechnical Consultants Limited	
File Name	J00862_180228_Cross Section 5-5'.sltm.slmnd	

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Phi b (deg)	Air Entry (kPa)
Pulvetoka Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Slump Debris	Dark Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0	0
Transitional EGBF	Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock	Dark Grey	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0



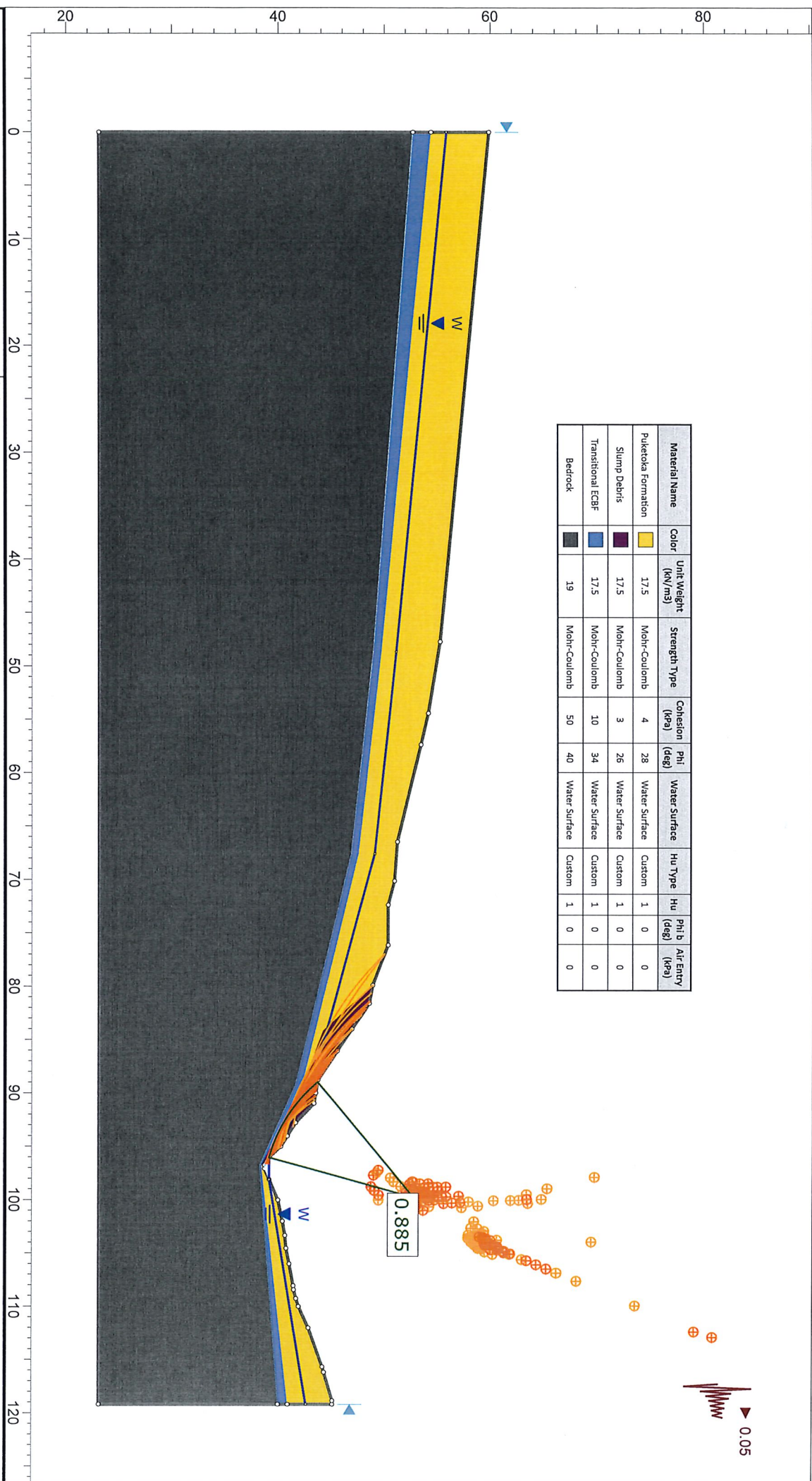
125 Murphys Road (Stage 2), Flat Bush

Project		Case No.		Analysis Description	
Cross Section		P3		Prevailing - Seismic 1/150	
Drawn By		AB		Company	
Date		1/03/2018, 4:12:50 p.m.		Lander Geotechnical Consultants Limited	
Scale		1:500		File Name	
				J00862_180228_Cross Section 5-5'.sltn.slmnd	



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Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Phi b (deg)	Alt Entry (kPa)
Puketoka Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Slump Debris	Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0	0
Transitional ECRF	Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock	Black	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0



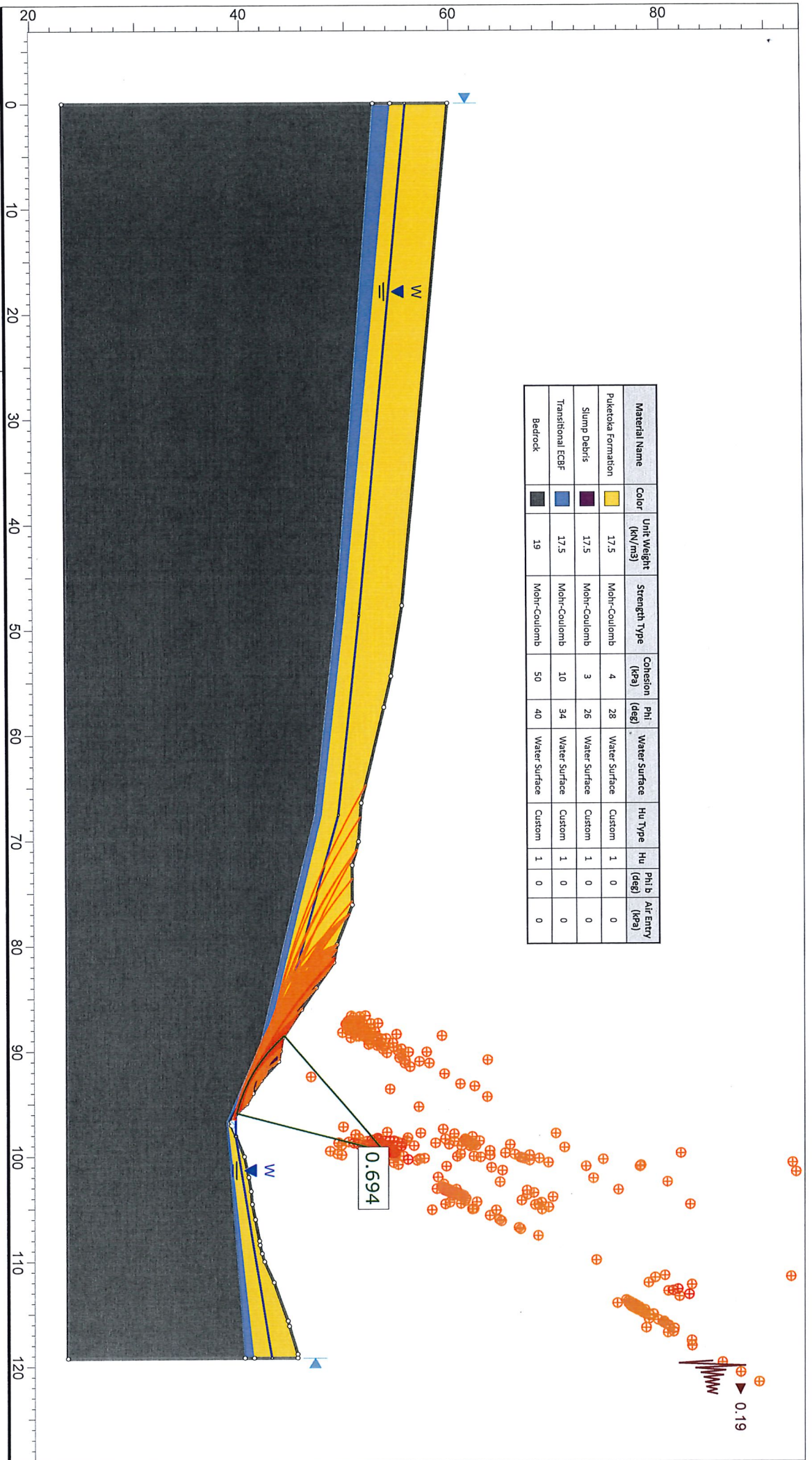
125 Murphys Road (Stage 2), Flat Bush

Project		125 Murphys Road (Stage 2), Flat Bush	
Cross Section	Cross Section 5-5'	Case No.	P4
Drawn By	AB	F.O.S Filter	1.1
Date	1/03/2018, 4:12:50 p.m.	Scale	1:500
Analysis Description		Prevailing - Seismic 1/500	
Company		Lander Geotechnical Consultants Limited	
File Name		J00862_180228_Cross Section 5-5'.sltm.sltm.d	



SLIDENTERRET 7.031

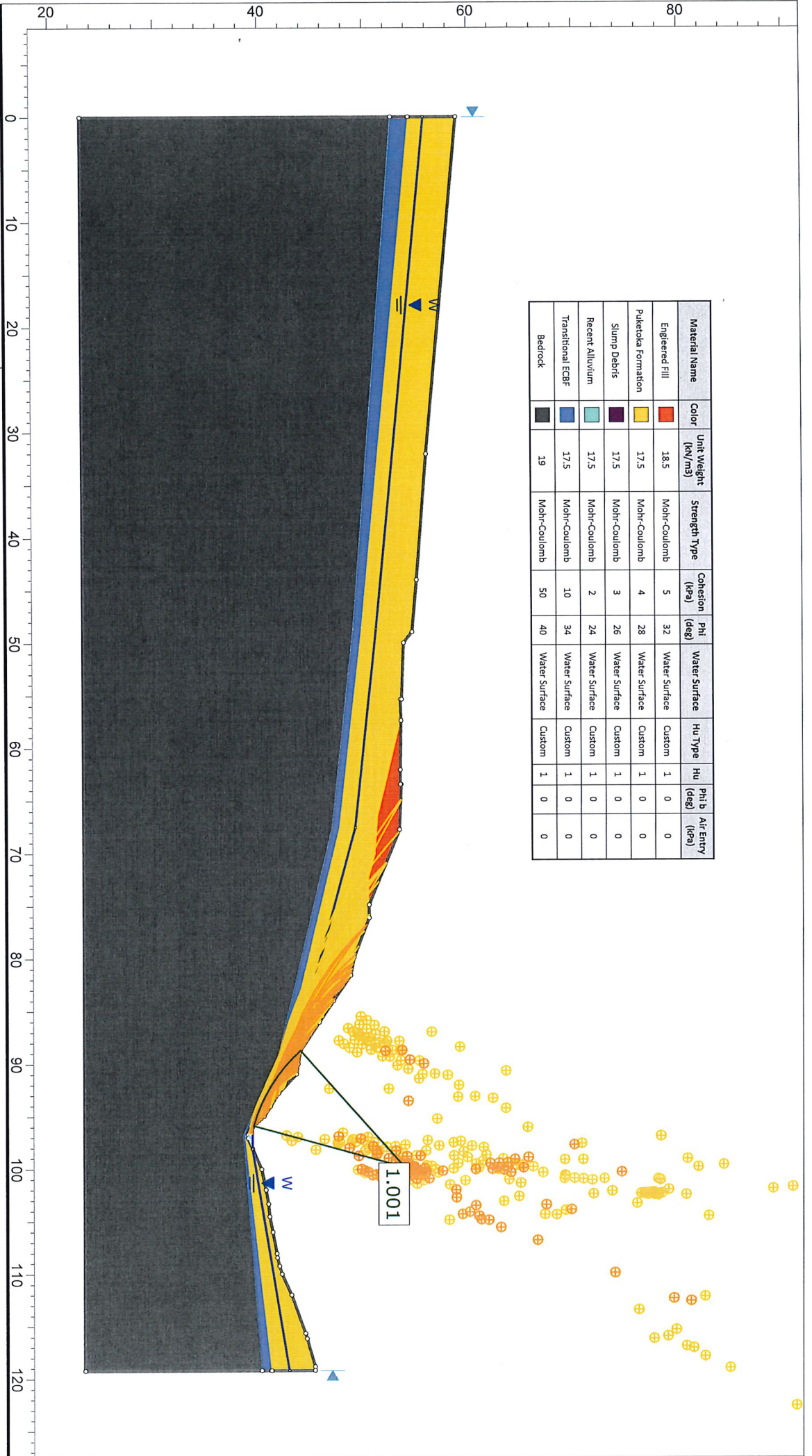
Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Phi b (deg)	Art Entry (kPa)
Puketaka Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Slump Debris	Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0	0
Transitional ECBF	Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock	Dark Grey	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0



Project		125 Murphys Road (Stage 2), Flat Bush	
Cross Section	Cross Section 5-5'	Case No.	P5
Drawn By	AB	F.O.S Filter	1.0
Date	1/03/2018, 4:12:50 p.m.	Scale	1:500
Analysis Description		Prevailing - Seismic 1/2500	
Company		Lander Geotechnical Consultants Limited	
File Name		J00862_180228_Cross Section 5-5'.sltm.sltm	

SLIDENTERPRET 7.031

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Phi _b (deg)	Air Entry (kPa)
Engineered Fill	Red	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1	0	0
Puketaka Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Slump Debris	Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0
Transitional ECGF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock	Black	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0



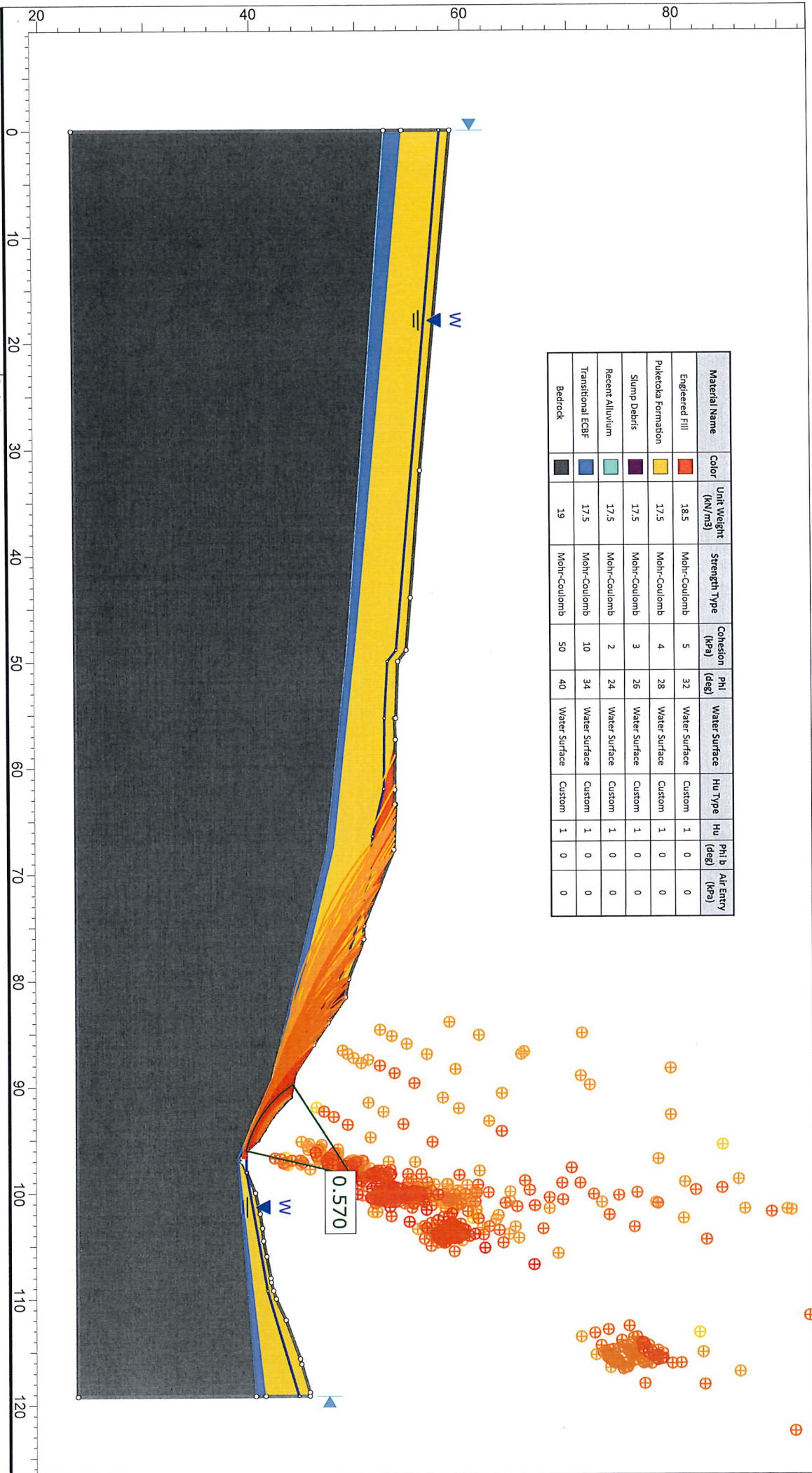
125 Murphys Road (Stage 2), Flat Bush


Project		Case No.		Analysis Description	
Cross Section 5-5'		Pro1		Proposed - Long Term GWL	
Drawn By		F.O.S filler		Company	
AB		1.5		Lander Geotechnical Consultants Limited	
Date		Scale		File Name	
1/03/2018, 4:12:50 p.m.		1:500		J00862_180228_Cross Section 5-5'.sltm.slmtd	

SLIDENTERPRET 7.031



Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Phi _b (deg)	Air Entry (kPa)
Engineered Fill	Red	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1	0	0
Puketoka Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Slump Debris	Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0
Transitional ECBF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock	Black	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0





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Project 125 Murphys Road (Stage 2), Flat Bush

Cross Section Cross Section 5-5'

Drawn By AB

Date 1/03/2018, 4:12:50 p.m.

Case No. PRO2

F.O.S Filter 1.3

Scale 1:500

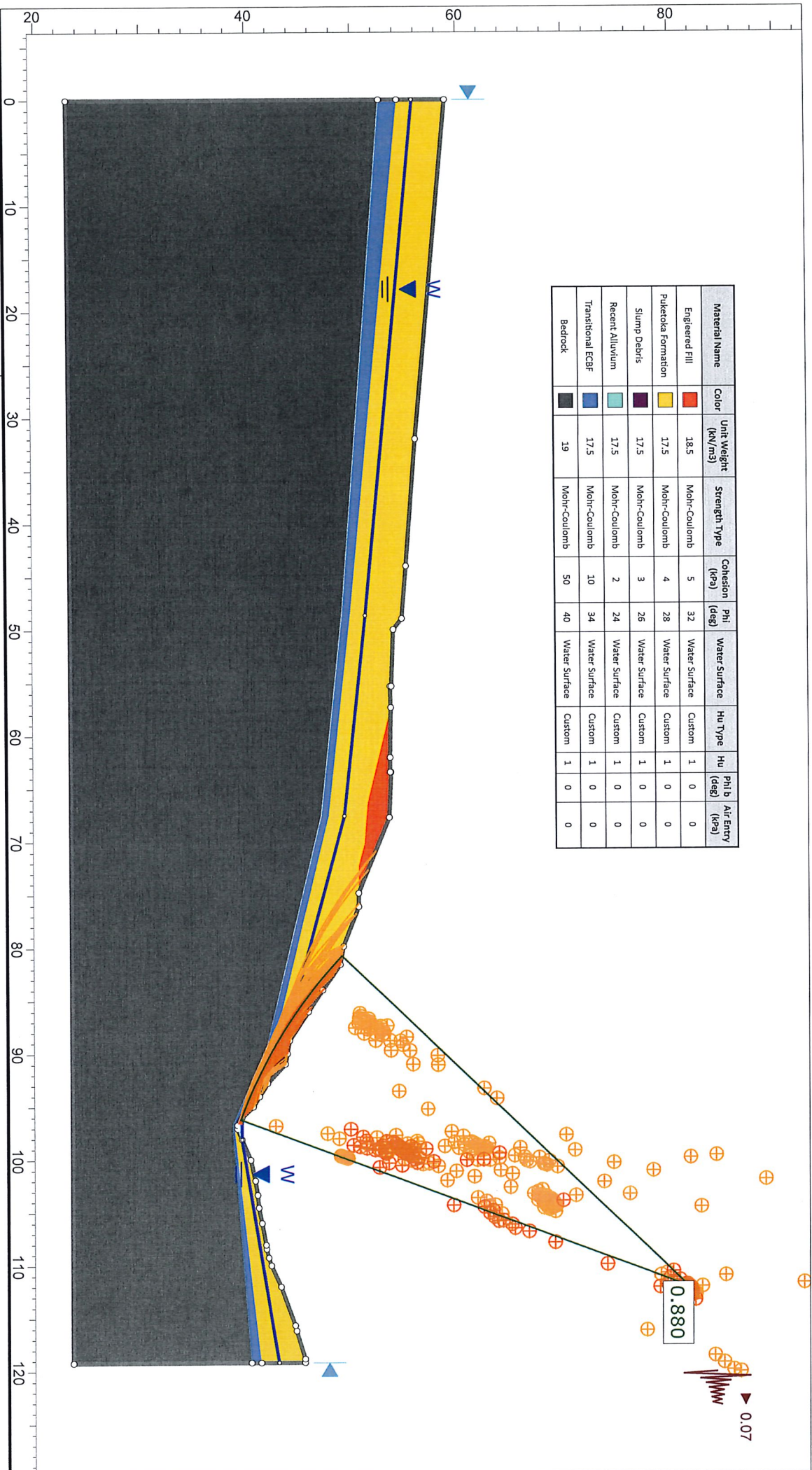
Analysis Description Proposed - High GWL

Company Lander Geotechnical Consultants Limited

File Name J00862_180228_Cross Section 5-5'.sltm.slmnd

SLIDENTERPRET 7.031

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Phi b (deg)	Air Entry (kPa)
Engineered Fill	Red	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1	0	0
Puketaka Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Slump Debris	Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0	0
Recent Alluvium	Teal	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0
Transitional ECAF	Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock	Black	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0



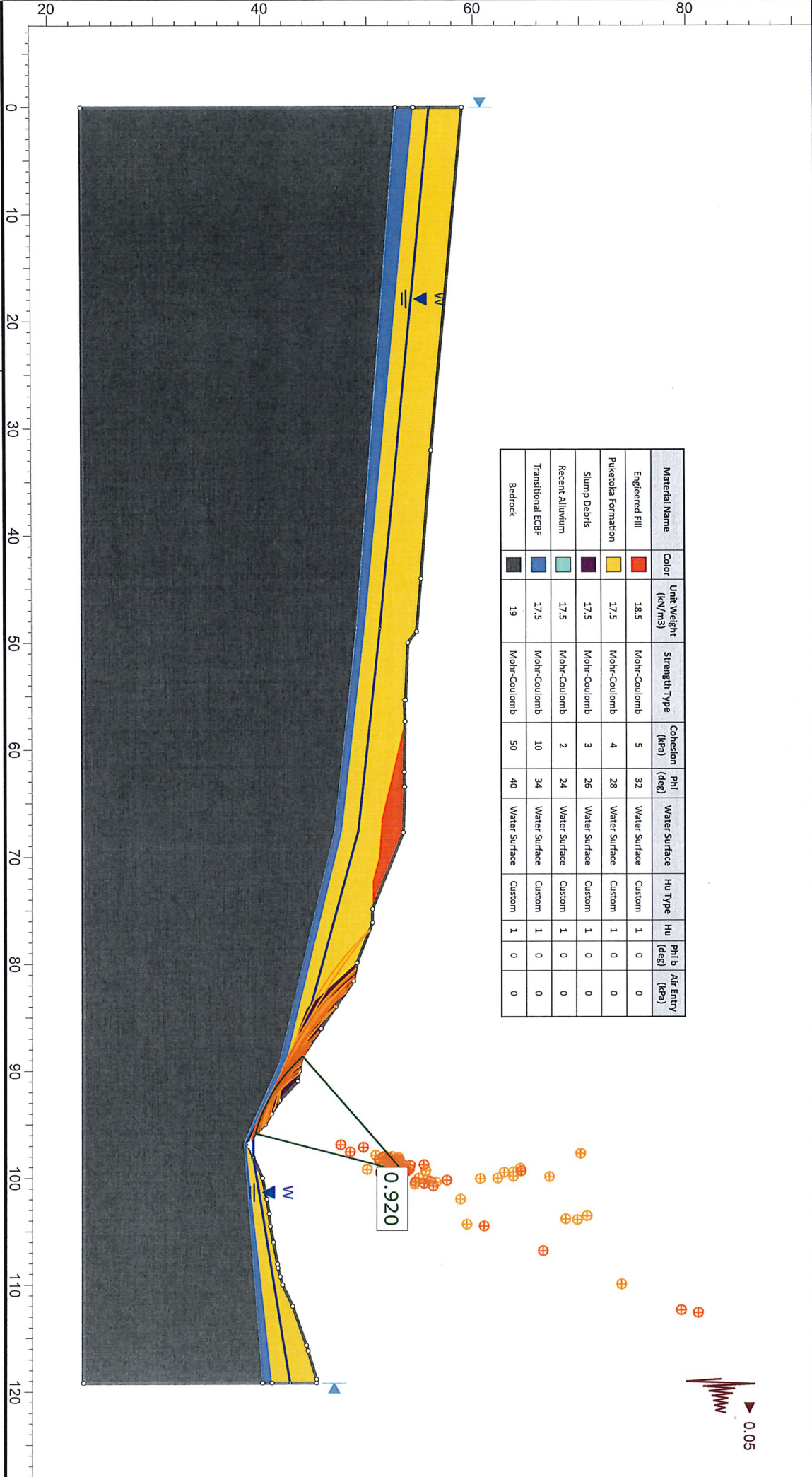
125 Murphys Road (Stage 2), Flat Bush

Project		Case No.		Analysis Description	
Cross Section		PRO3		Proposed - Seismic 1/150	
Drawn By		F.O.S Filter		Company	
AB		1.2		Lander Geotechnical Consultants Limited	
Date		Scale		File Name	
1/03/2018, 4:12:50 p.m.		1:500		J00862_180228_Cross Section 5-5'.sltm.slmnd	



SLIDENTERPRET 7.031

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Phi b (deg)	Air Entry (kPa)
Engineered Fill	Red	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1	0	0
Puketaka Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Slump Debris	Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0
Transitional EGBF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock	Black	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0



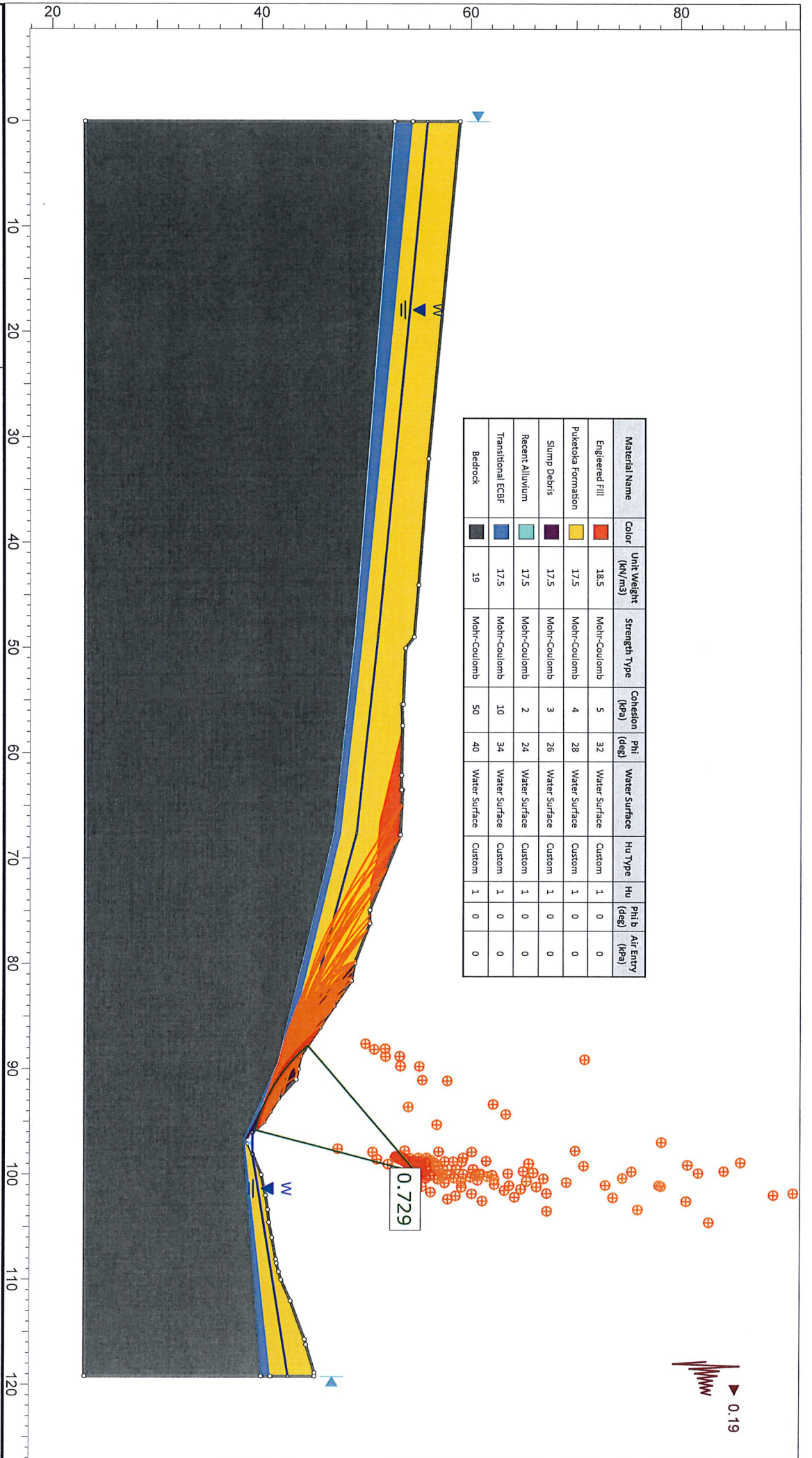
125 Murphys Road (Stage 2), Flat Bush

Project		125 Murphys Road (Stage 2), Flat Bush	
Cross Section	Cross Section 5-5'	Case No.	PRO4
Drawn By	AB	F:O.5 Filter	1.1
Date	1/03/2018, 4:12:50 p.m.	Scale	1:500
Analysis Description		Proposed - Seismic 1/500	
Company		Lander Geotechnical Consultants Limited	
File Name		J00862_180228_Cross Section 5-5'.sltm.slmnd	



SLIDENTERPRET 7.031

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Phi b (deg)	Att Entry (kPa)
Engineered Fill	Red	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1	0	0
Puketokela Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Slump Debris	Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0	0
Recent Alluvium	Teal	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0
Transitional ECBF	Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock	Black	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0



125 Murphys Road (Stage 2), Flat Bush

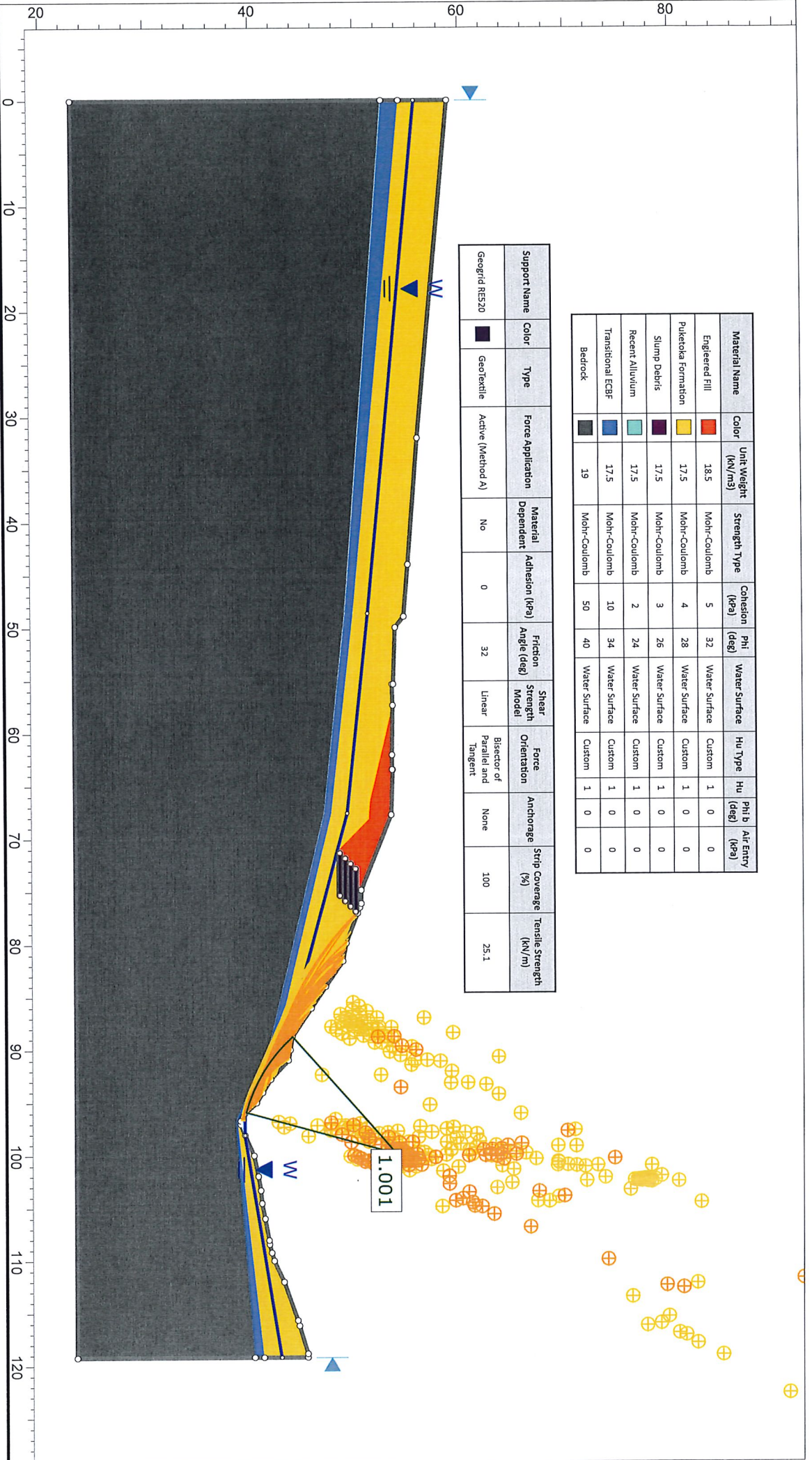
Project		Case No.		Analysis Description	
Cross Section 5-5'		PRO5		Proposed - Seismic 1/2500	
Drawn By AB		F.O.S Filter 1.0		Company Lander Geotechnical Consultants Limited	
Date 1/03/2018, 4:12:50 p.m.		Scale 1:500		File Name J00862_180228_Cross Section 5-5'.sltm.slmtd	

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Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu (deg)	Air Entry (kPa)
Engineered Fill	Red	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1	0
Pukekohe Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0
Slump Debris	Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0
Transitional ECBF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0
Bedrock	Black	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0

Support Name	Color	Type	Force Application	Material Dependent	Adhesion (kPa)	Friction Angle (deg)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Tensile Strength (kN/m)
Geogrid R520	Black	Geotextile	Active (Method A)	No	0	32	Linear	Bisector of Parallel and Tangent	None	100	25.1



125 Murphys Road (Stage 2), Flat Bush

Project		125 Murphys Road (Stage 2), Flat Bush	
Cross Section	Cross Section 5-5'	Case No.	R1
Drawn By	AB	F.O.S Filter	1.5
Date	1/03/2018, 4:12:55 p.m.	Scale	1:500
Analysis Description		shear key - Long Term GWL	

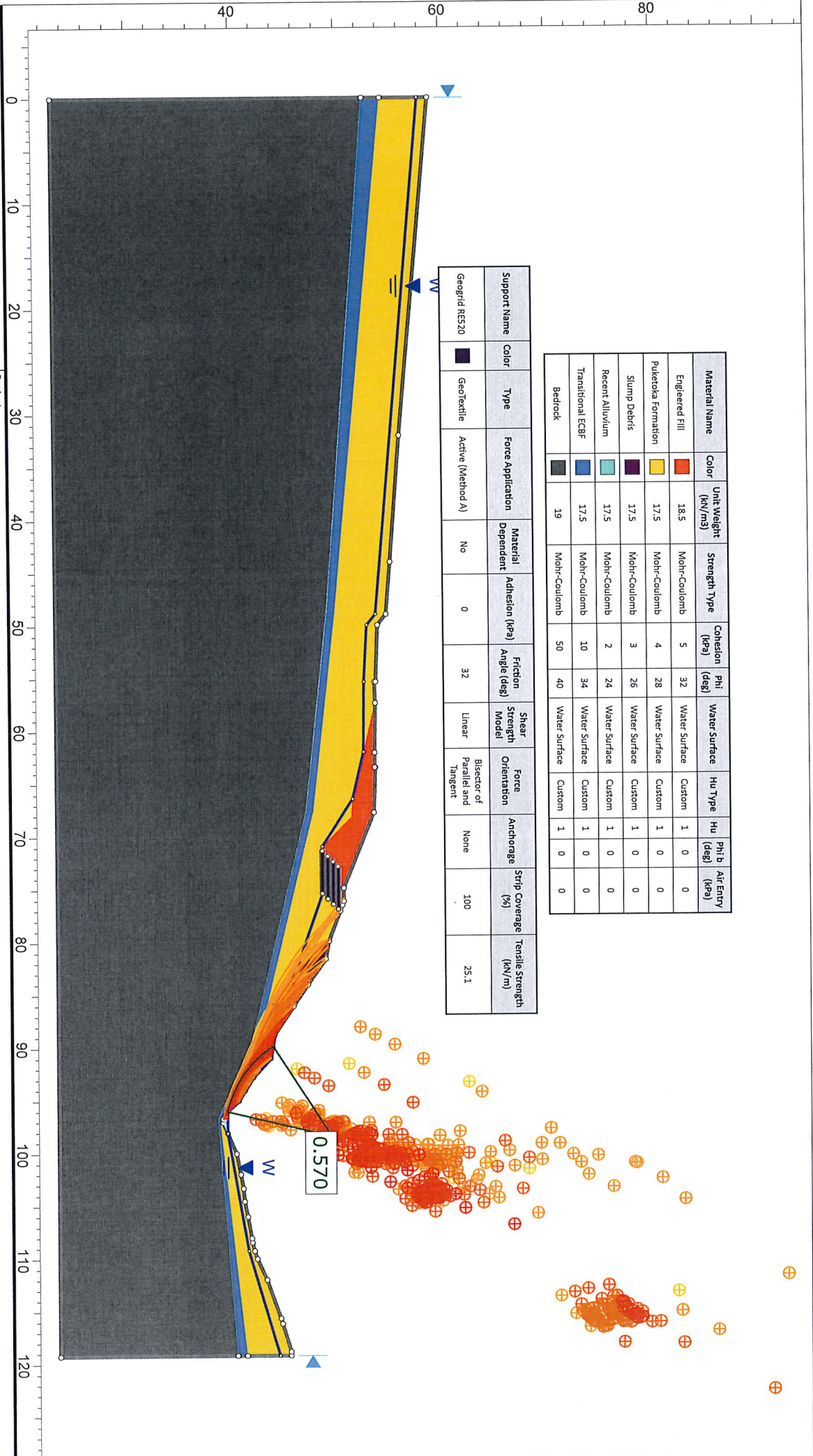


SLIDEINTERPRET 7.031

Company		Lander Geotechnical Consultants Limited	
File Name	J00862_180228_Cross Section 5-5'.sltm.slmd		

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu (deg)	Air Entry (kPa)
Engineered Fill	Red	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1	0
Pukerua Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0
Slump Debris	Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0
Transitional ECBF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0
Bedrock	Grey	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0

Support Name	Color	Type	Force Application	Material Dependent	Adhesion (kPa)	Friction Angle (deg)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Tensile Strength (kN/m)
Geogrid RES20	Black	GeoTextile	Active (Method A)	No	0	32	Linear	Bisector of Parallel and Tangent	None	100	25.1



125 Murphys Road (Stage 2), Flat Bush

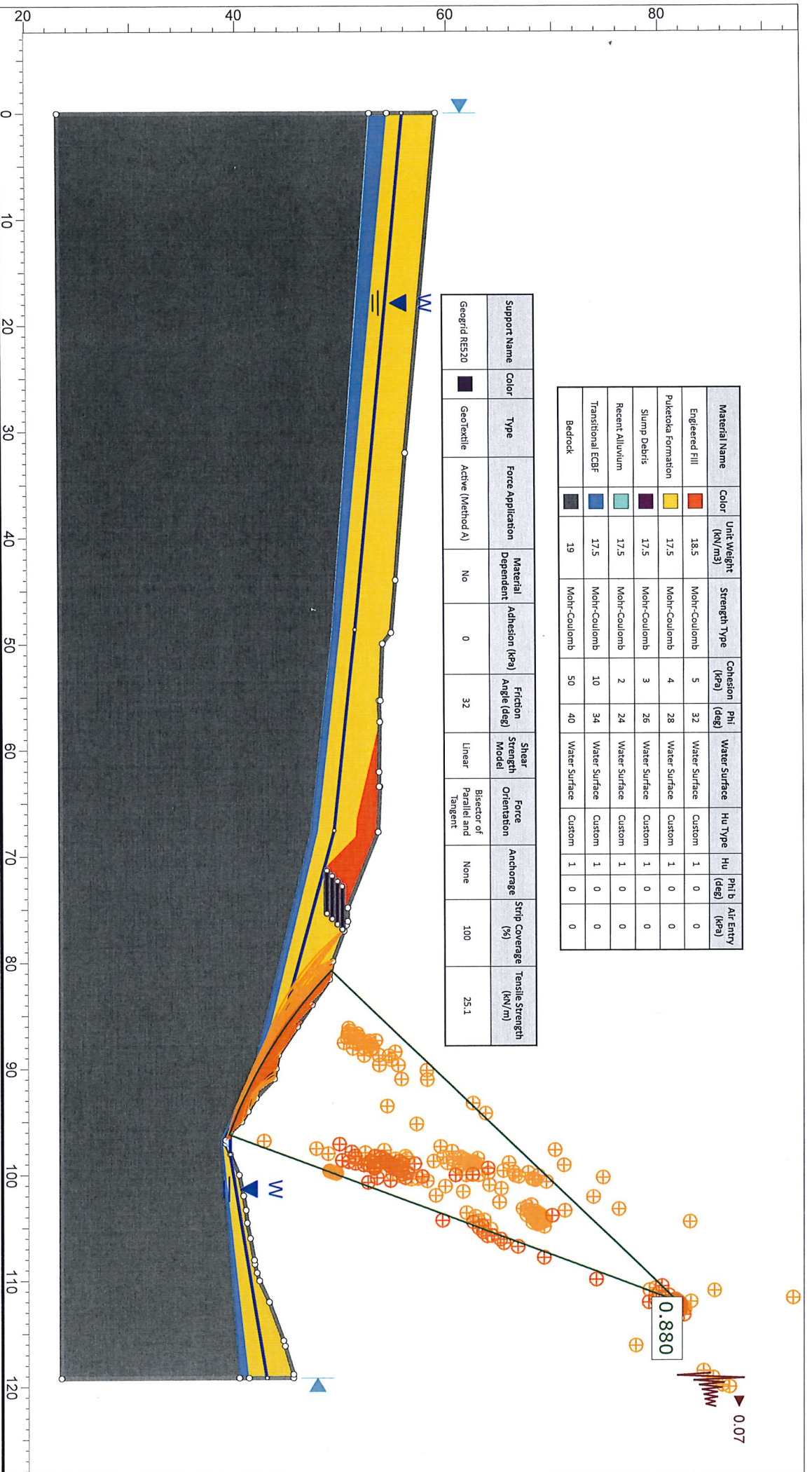
Project		Case No.		Analysis Description	
Cross Section		R2		shear key - High GWL	
Drawn By		F.O.S Filter		Company	
AB		1.3		Lander Geotechnical Consultants Limited	
Date		Scale		File Name	
1/03/2018, 4:12:55 p.m.		1:500		J00862_180228_Cross Section 5-5'.sltm.slmtd	




SLIDENTERPRET 7.031

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu (deg)	Air Entry (kPa)
Engineered Fill	Red	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1	0
Puketoka Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0
Slump Debris	Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0
Transitional ECGF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0
Bedrock	Black	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0

Support Name	Color	Type	Force Application	Material Dependent	Adhesion (kPa)	Friction Angle (deg)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Tensile Strength (kN/m)
Geogrid RE520	Black	Geotextile	Active (Method A)	No	0	32	Linear	Bisector of Parallel and Tangent	None	100	25.1





SIDENTERPRET 7.031

Project
125 Murphys Road (Stage 2), Flat Bush

Cross Section
Cross Section 5-5'

Drawn By
AB

Date
1/03/2018, 4:12:55 p.m.

Case No.
R3

Analysis Description
shear key - Seismic 1/150

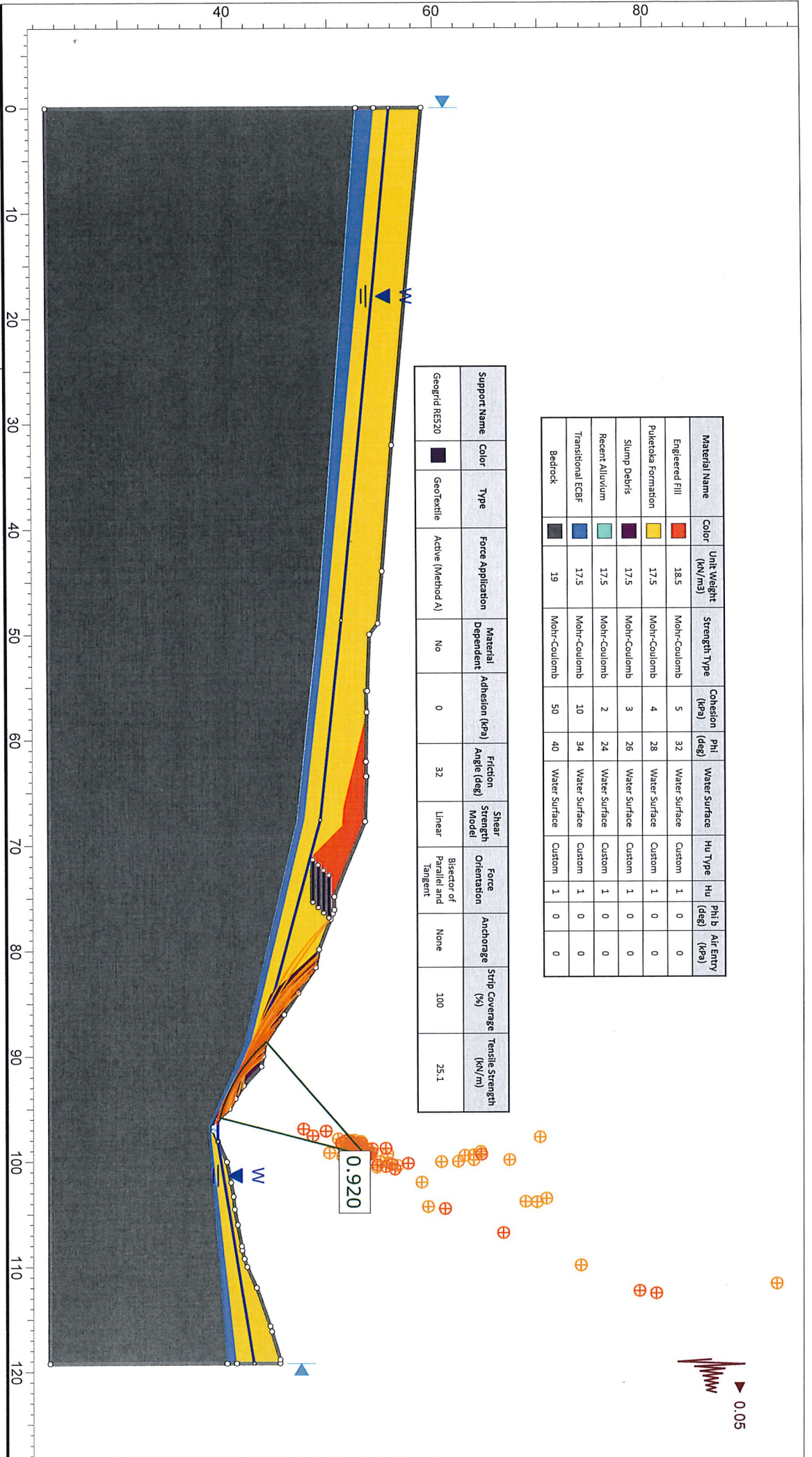
Company
Lander Geotechnical Consultants Limited

Scale
1:500

File Name
J00862_180228_Cross Section 5-5'.sltm.slmd

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu (deg)	Air Entry (kPa)
Engineered Fill	Red	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1	0
Puketotia Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0
Slump Debris	Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0
Recent Alluvium	Teal	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0
Transitional ECBF	Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0
Bedrock	Black	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0

Support Name	Color	Type	Force Application	Material Dependent	Adhesion (kPa)	Friction Angle (deg)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Tensile Strength (kN/m)
Geogrid RE520	Black	GeoTextile	Active (Method A)	No	0	32	Linear	Bisector of Parallel and Tangent	None	100	25.1



125 Murphys Road (Stage 2), Flat Bush

Project		Case No.		Analysis Description	
Cross Section 5-5'		R4		shear key - Seismic 1/500	

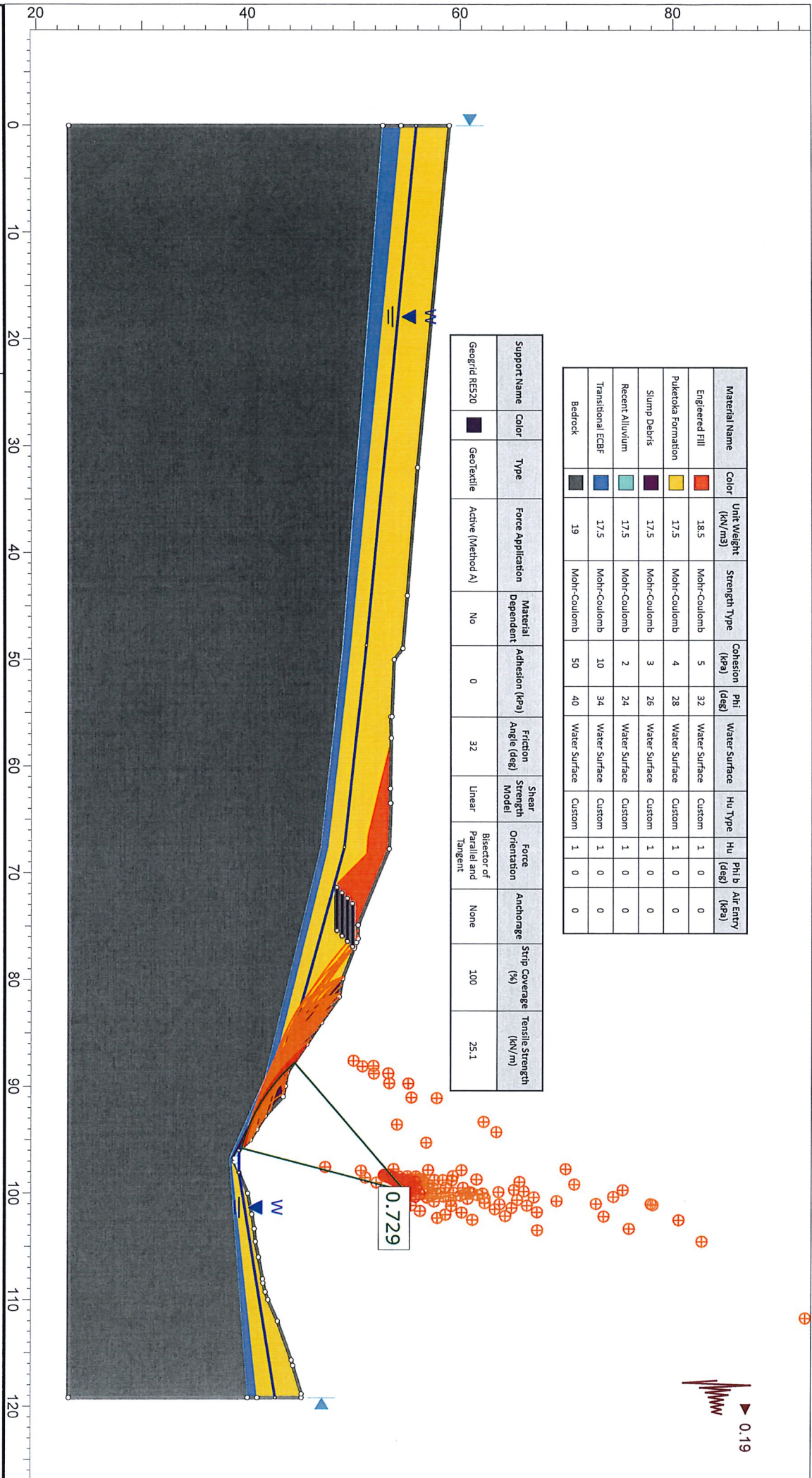
Cross Section		F.O.S Filter		Company	
Cross Section 5-5'		1.1		Lander Geotechnical Consultants Limited	
Drawn By	AB	Scale	1:500	File Name	J00862_180228_Cross Section 5-5'.sltm.slmnd
Date	1/03/2018, 4:12:55 p.m.				



SLIDENTERPRET 7.031

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu	Phi b (deg)	Air Entry (kPa)
Engineered Fill	Red	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1	0	0
Puketoka Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1	0	0
Slump Debris	Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1	0	0
Recent Alluvium	Teal	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1	0	0
Transitional ECBF	Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1	0	0
Bedrock	Dark Grey	19	Mohr-Coulomb	50	40	Water Surface	Custom	1	0	0

Support Name	Color	Type	Force Application	Material Dependent	Adhesion (kPa)	Friction Angle (deg)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Tensile Strength (kN/m)
Geogrid R520	Black	Geotextile	Active (Method A)	No	0	32	Linear	Bisector of Parallel and Tangent	None	100	25.1



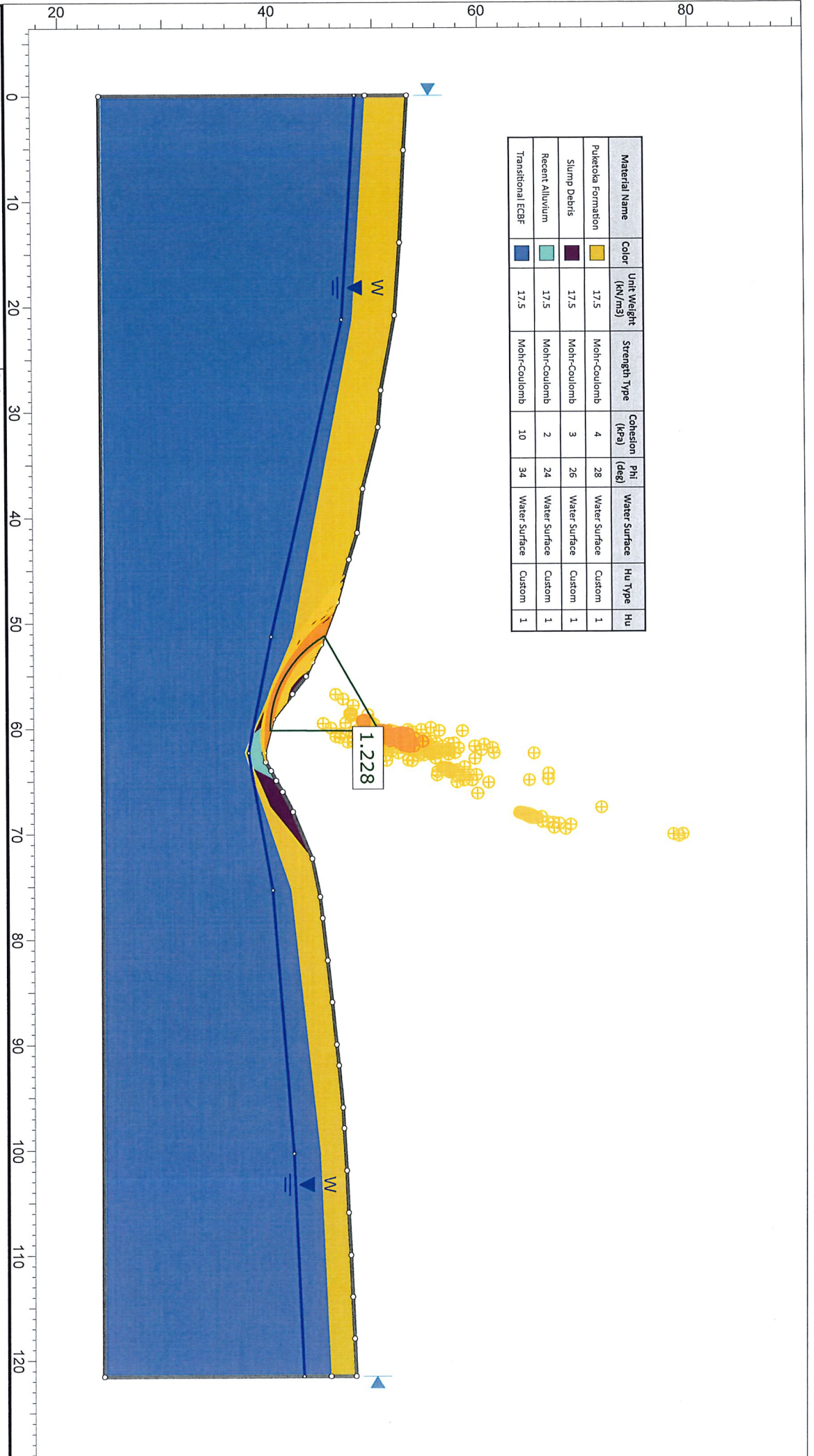
Project: 125 Murphys Road (Stage 2), Flat Bush

Cross Section	Case No.	Analysis Description
Cross Section 5-5'	R5	shear key - Seismic 1/2500
Drawn By	F:O.5 Filter	Company
AB	1.0	Lander Geotechnical Consultants Limited
Date	Scale	File Name
1/03/2018, 4:12:55 p.m.	1:500	J00862_180228_Cross Section 5-5'.sltn.slmd



SLIDENTERPRET 7.031

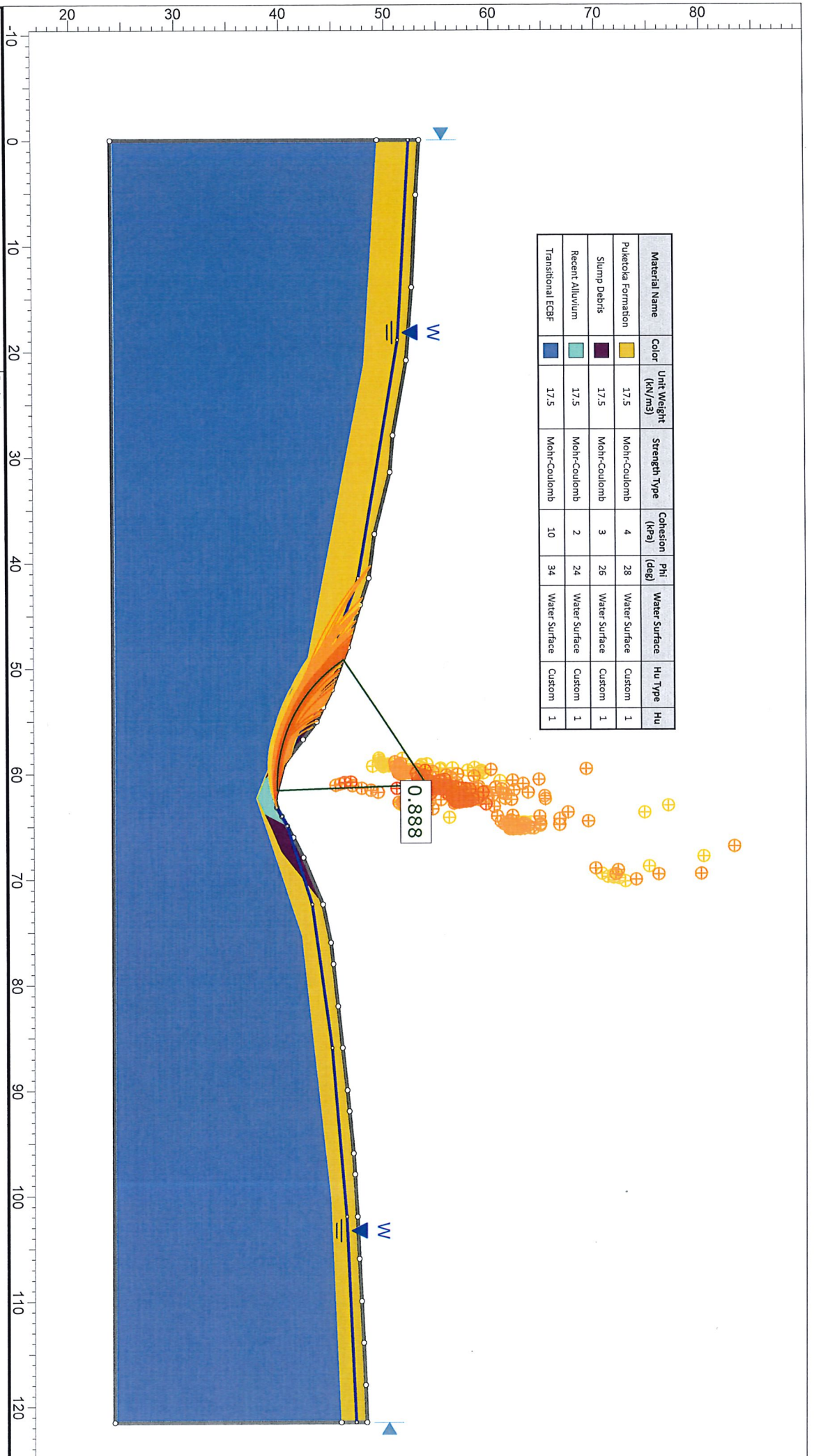
Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu
Puketoka Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1
Slump Debris	Dark Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1
Transitional EGBF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1



125 Murphys Road (Stage 2), Flat Bush

Project		Case No.		Analysis Description	
Cross Section 6-6'		P1		Prevailing - Long Term GWL condition	
Drawn By AB		F.O.S Filter 1.5		Company Lander Geotechnical Consultants Limited	
Date 9/03/2018, 12:01:46 p.m.		Scale 1:500		File Name J00862_180228_Cross Section 6-6'.slmd	

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Psi (deg)	Water Surface	Hu Type	Hu
Pleistocene Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1
Slump Debris	Dark Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1
Transitional ECBF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1



125 Murphys Road (Stage 2), Flat Bush

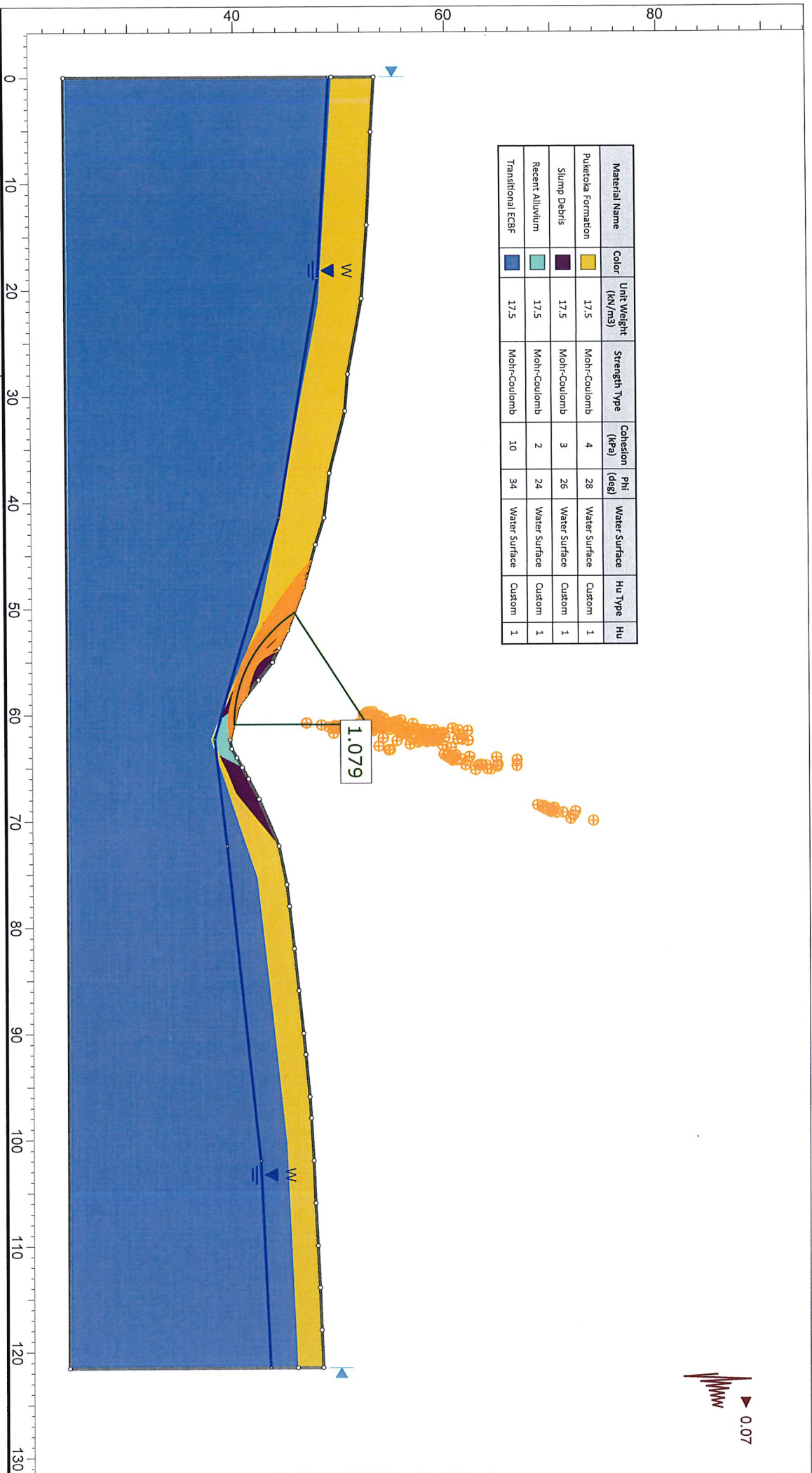
Project		125 Murphys Road (Stage 2), Flat Bush	
Cross Section	Cross Section 6-6'	Case No.	P2
Drawn By	AB	F.O.S Filter	1.3
Date	9/03/2018, 12:01:46 p.m.	Scale	1:500
Analysis Description		Prevailing - High GWL	
Company		Lander Geotechnical Consultants Limited	
File Name		J00862_180228_Cross Section 6-6'.slmd	



SLIDENTERPRET 7.031



Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu
Puketokā Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1
Slump Debris	Dark Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1
Transitional ECBF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1



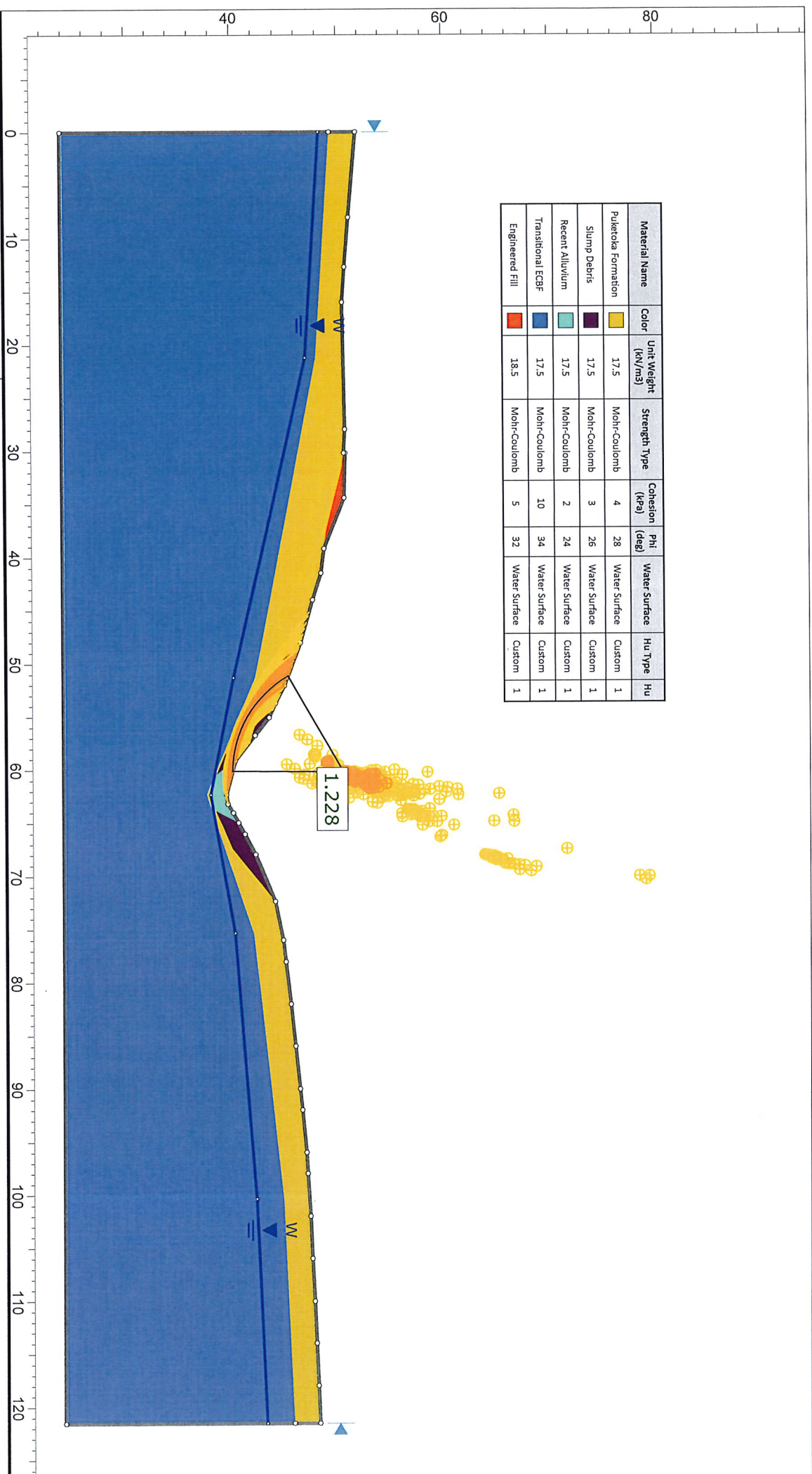
125 Murphys Road (Stage 2), Flat Bush

Project		Case No.		Analysis Description	
Cross Section		P3		Prevailing - Seismic 1/150	
Drawn By		F.O.S Filler 1.2		Company	
Date		9/03/2018, 12:01:46 p.m.		Scale	
		1:500		File Name	
				J00862_180228_Cross Section 6-6'.slmd	




SLIDENTERRET 7.031

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu
Puketotia Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1
Slump Debris	Dark Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1
Transitional EC3F	Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1
Engineered Fill	Red	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1

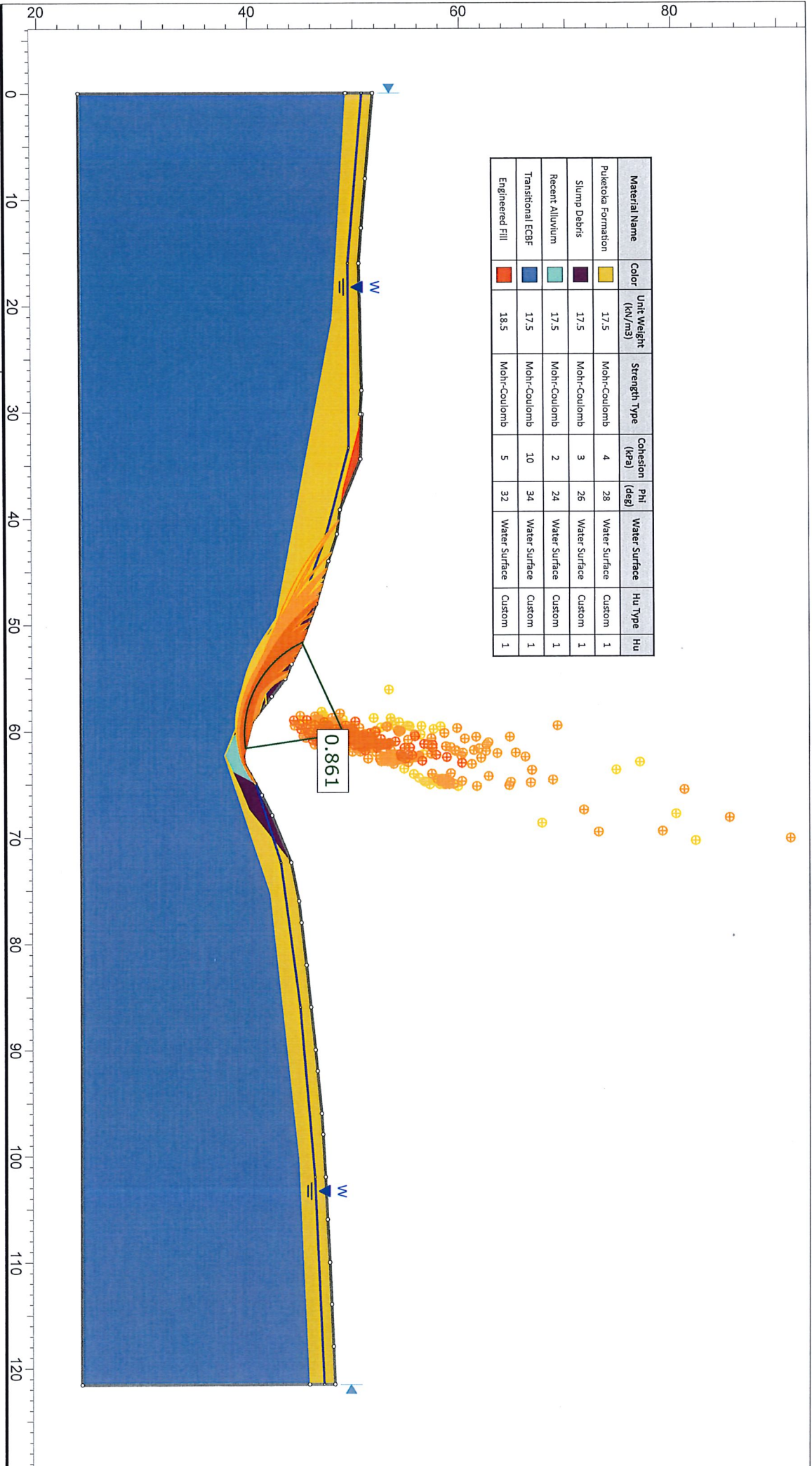


125 Murphys Road (Stage 2), Flat Bush

		Project: 125 Murphys Road (Stage 2), Flat Bush	
Cross Section	Cross Section 6-6'	Case No.	Pro1
Drawn By	AB	F.O.S Filter	1.5
Date	9/03/2018, 12:01:46 p.m.	Scale	1:500
Analysis Description: Proposed (updated March 2018) - Long Term GWL condition		Company	Lander Geotechnical Consultants Limited
File Name: J00862_180228_Cross Section 6-6'.slmd			

SLIDENTERPRET 7.031

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu
Puketokā Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1
Slump Debris	Dark Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1
Transitional ECBF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1
Engineered Fill	Red	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1



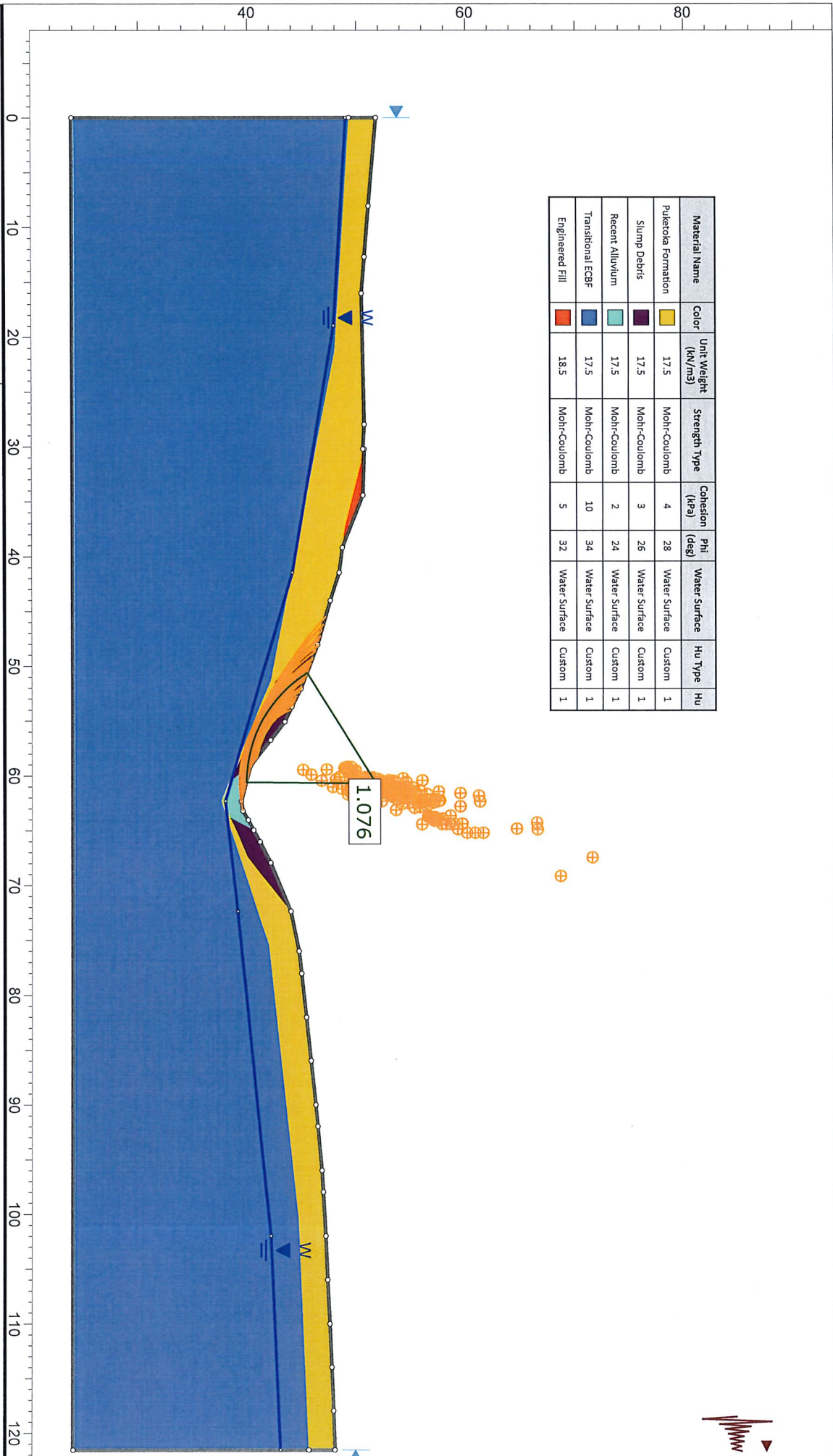
125 Murphys Road (Stage 2), Flat Bush

Project		125 Murphys Road (Stage 2), Flat Bush	
Cross Section		Cross Section 6-6'	
Drawn By	AB	Case No.	PRO2
Date	9/03/2018, 12:01:46 p.m.	F:O.S Filter	1.3
		Scale	1:500
Analysis Description		Proposed (updated March 2018) - High GWL	
Company		Lander Geotechnical Consultants Limited	
File Name		J00862_180228_Cross Section 6-6'.slmd	



SLDENTERPRET 7.031

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu
Pukekohe Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1
Slump Debris	Dark Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1
Transitional EGBF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1
Engineered Fill	Red	18.5	Mohr-Coulomb	5	32	Water Surface	Custom	1



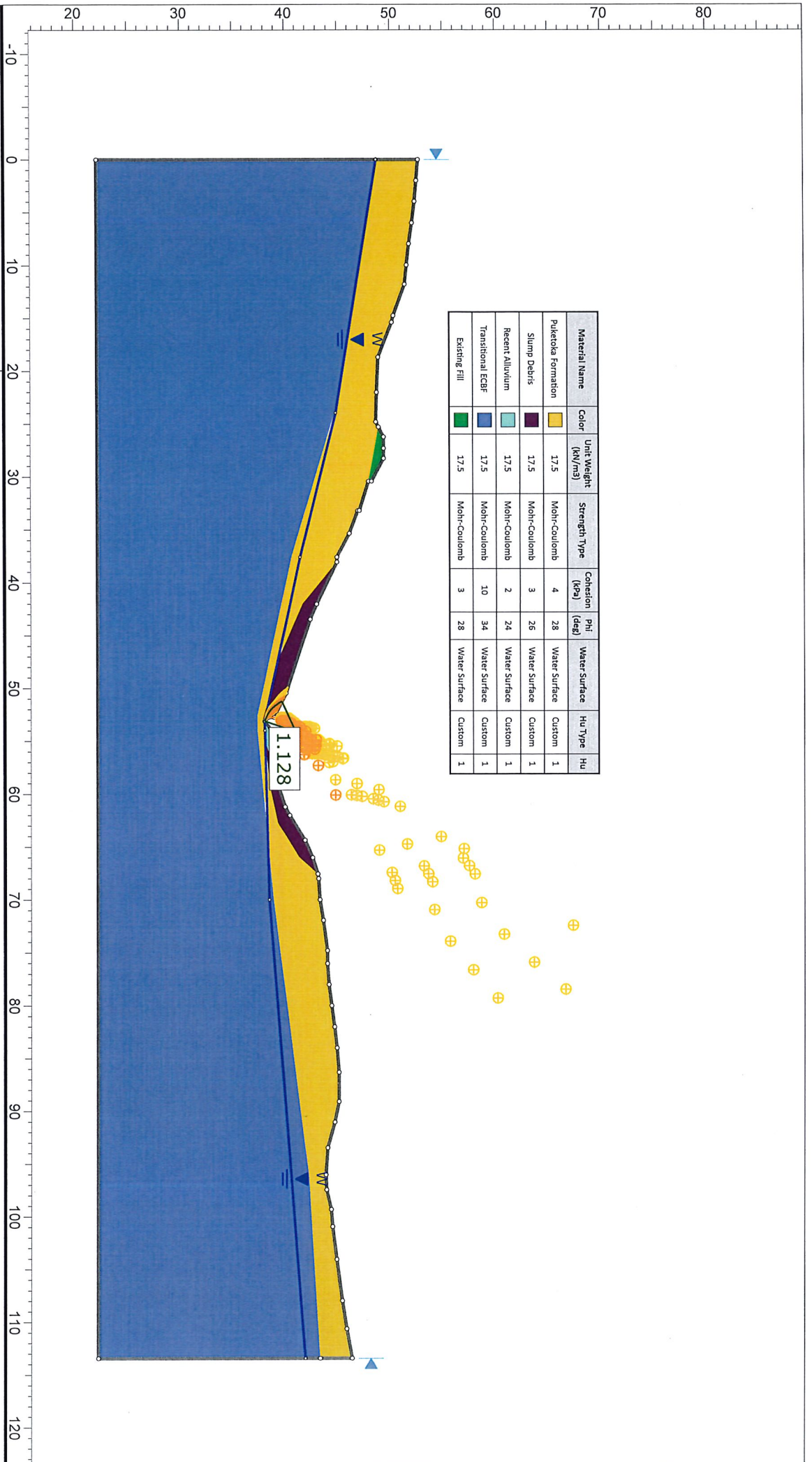
125 Murphys Road (Stage 2), Flat Bush

Project		125 Murphys Road (Stage 2), Flat Bush	
Cross Section	Cross Section 6-6'	Case No.	PRO3
Drawn By	AB	F.O.S Filter	1.2
Date	9/03/2018, 12:01:46 p.m.	Scale	1:500
Analysis Description		Proposed (updated March 2018) - Seismic 1/150	
Company		Lander Geotechnical Consultants Limited	
File Name		J00862_180228_Cross Section 6-6'.slmd	



SLIDENTERPRET 7.031

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu
Pukekohe Formation		17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1
Slump Debris		17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1
Recent Alluvium		17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1
Transitional ECBF		17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1
Existing Fill		17.5	Mohr-Coulomb	3	28	Water Surface	Custom	1



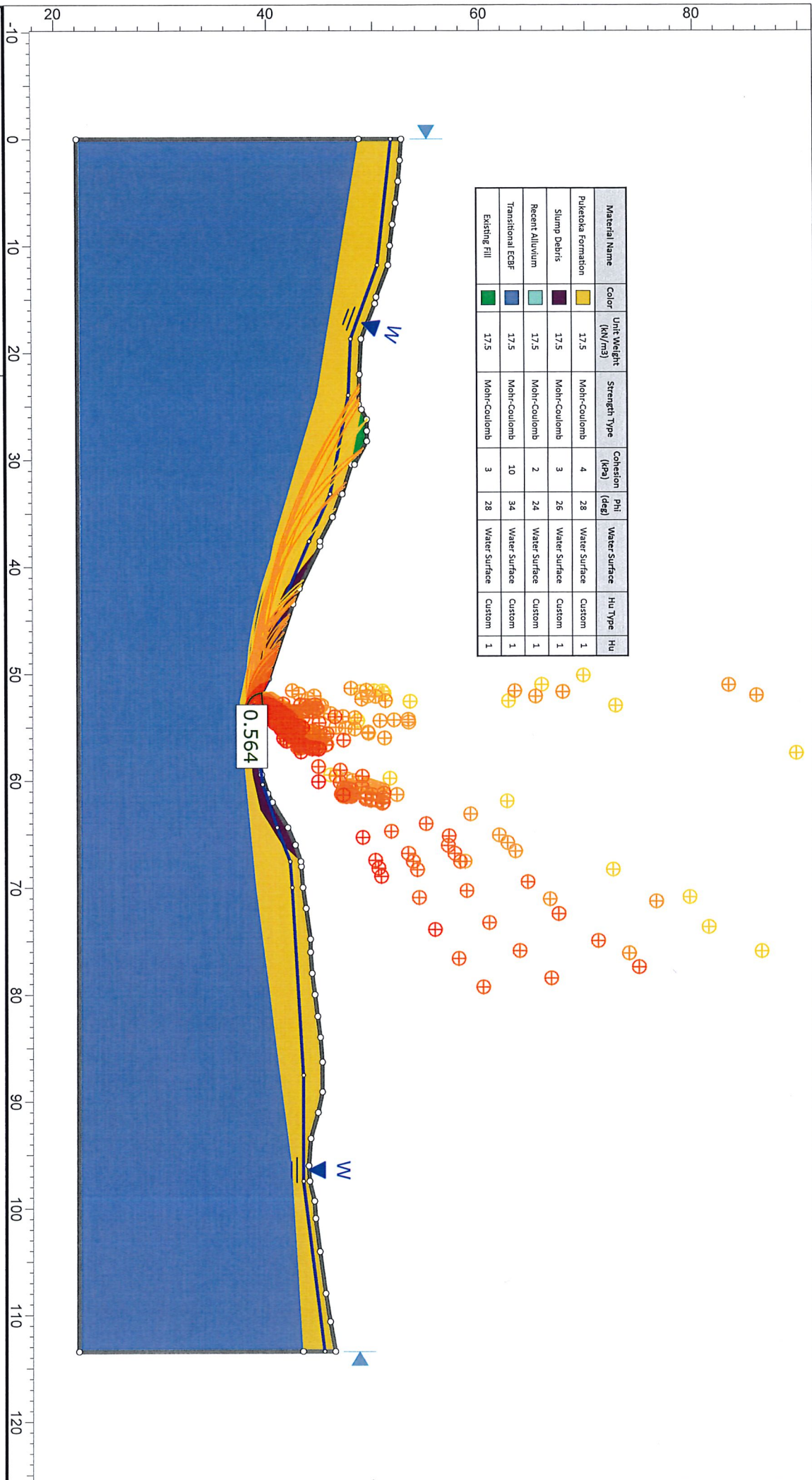
125 Murphys Road (Stage 2), Flat Bush

Project		Case No.		Analysis Description	
Cross Section		P1		Prevailing - Long Term GWL condition	
Drawn By		F.O.S Filter		Company	
AB		1.5		Lander Geotechnical Consultants Limited	
Date		Scale		File Name	
9/03/2018, 3:11:53 p.m.		1:500		J00862_180309_Cross Section 7-7'.slmd	

SLIDENTERPRET 7.031



Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu
Pileotoka Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1
Slump Debris	Dark Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1
Transitional ECBF	Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1
Existing Fill	Green	17.5	Mohr-Coulomb	3	28	Water Surface	Custom	1



125 Murphys Road (Stage 2), Flat Bush

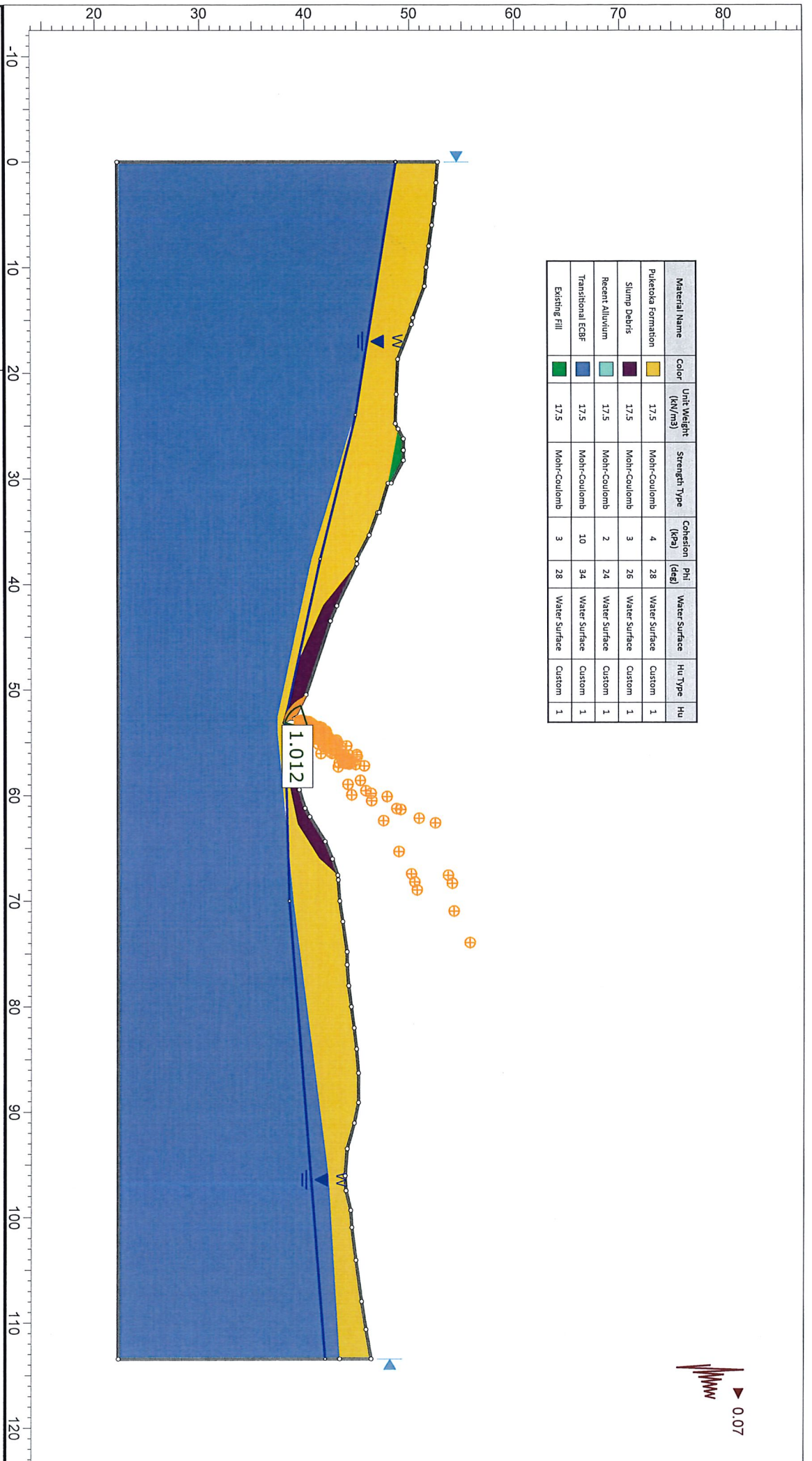
Prevailing - High GWL

Project		Case No.		Analysis Description	
Cross Section 7-7'		P2		Prevaling - High GWL	
Drawn By AB		F.O.S Filter 1.3		Company Lander Geotechnical Consultants Limited	
Date 9/03/2018, 3:11:53 p.m.		Scale 1:500		File Name J00862_180309_Cross Section 7-7'.slmd	

SLIDENTERPRET 7.031



Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu
Puketokai Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1
Slump Debris	Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1
Transitional ECGF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1
Existing Fill	Green	17.5	Mohr-Coulomb	3	28	Water Surface	Custom	1



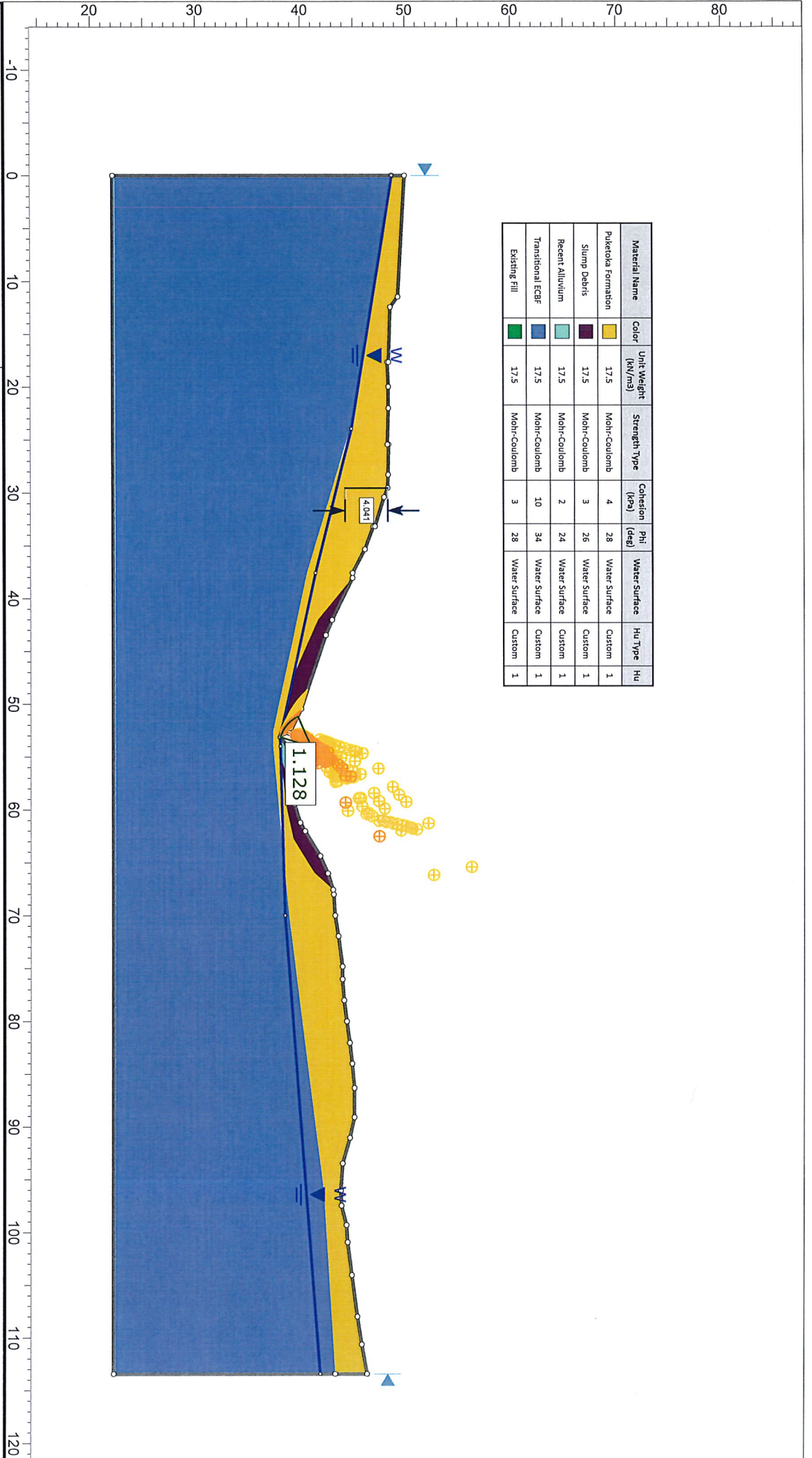
125 Murphys Road (Stage 2), Flat Bush

Project		Case No.		Analysis Description	
Cross Section		P3		Prevailing - Seismic 1/150	
Drawn By		F.O.S Filter		Company	
AB		1.2		Lander Geotechnical Consultants Limited	
Date		Scale		File Name	
9/03/2018, 3:11:53 p.m.		1:500		J00862_180309_Cross Section 7-7'.slmd	



SLIDEINTERPRET 7.031

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu
Pukekohe Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1
Slump Debris	Dark Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1
Transitional ECBF	Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1
Existing Fill	Green	17.5	Mohr-Coulomb	3	28	Water Surface	Custom	1



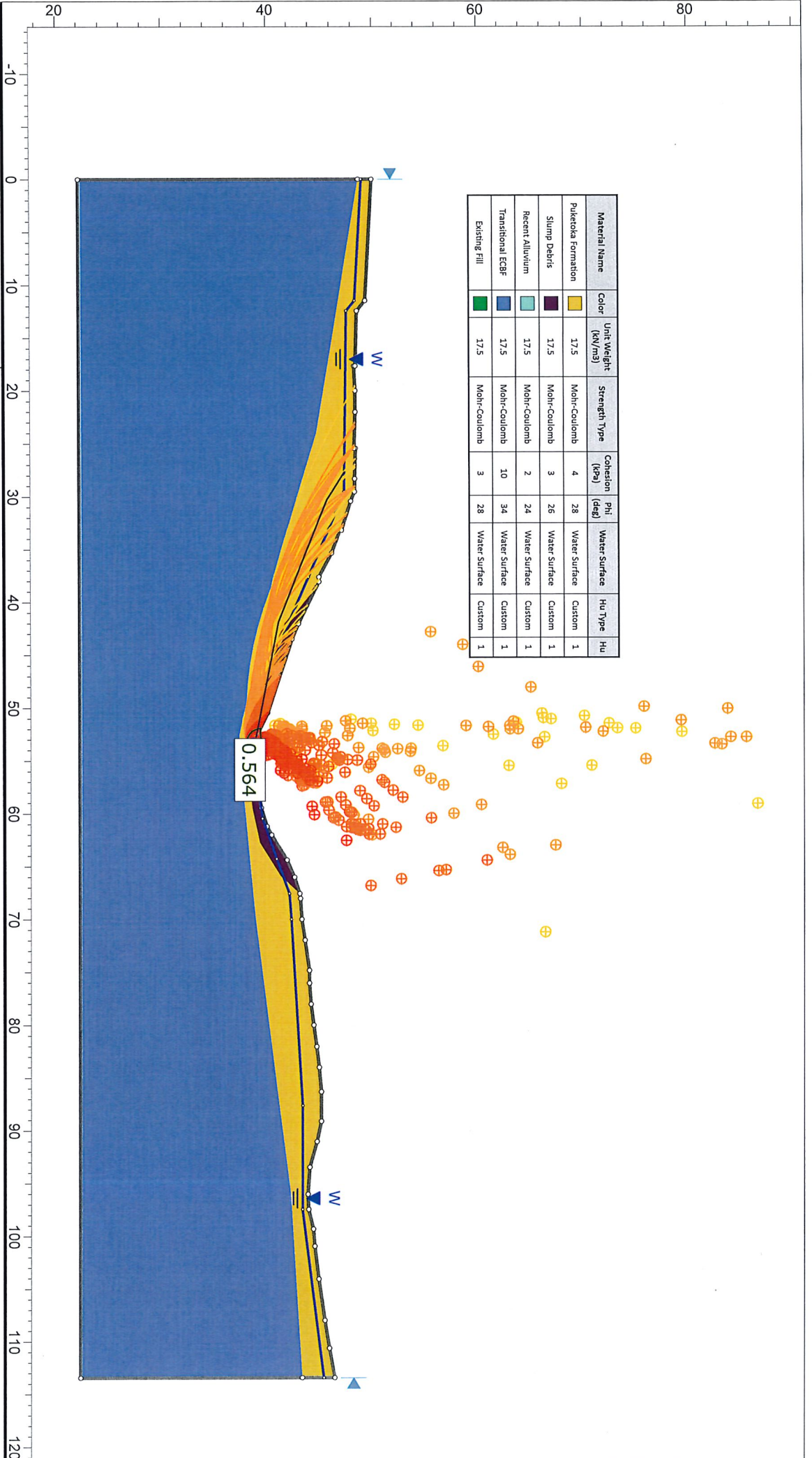
125 Murphys Road (Stage 2), Flat Bush

Project		125 Murphys Road (Stage 2), Flat Bush	
Cross Section		Cross Section 7-7'	
Drawn By	AB	Case No.	PRO1
Date	9/03/2018, 3:11:53 p.m.	F.O.S Filter	1.5
		Scale	1:500
		Analysis Description	Proposed Earthworks - Long Term GWL condition
		Company	Lander Geotechnical Consultants Limited
		File Name	J00862_180309_Cross Section 7-7'.slmd



SLIDENTERPRET 7.031

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu
Pulevoka Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1
Slump Debris	Dark Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1
Transitional ECBF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1
Existing Fill	Green	17.5	Mohr-Coulomb	3	28	Water Surface	Custom	1



125 Murphys Road (Stage 2), Flat Bush

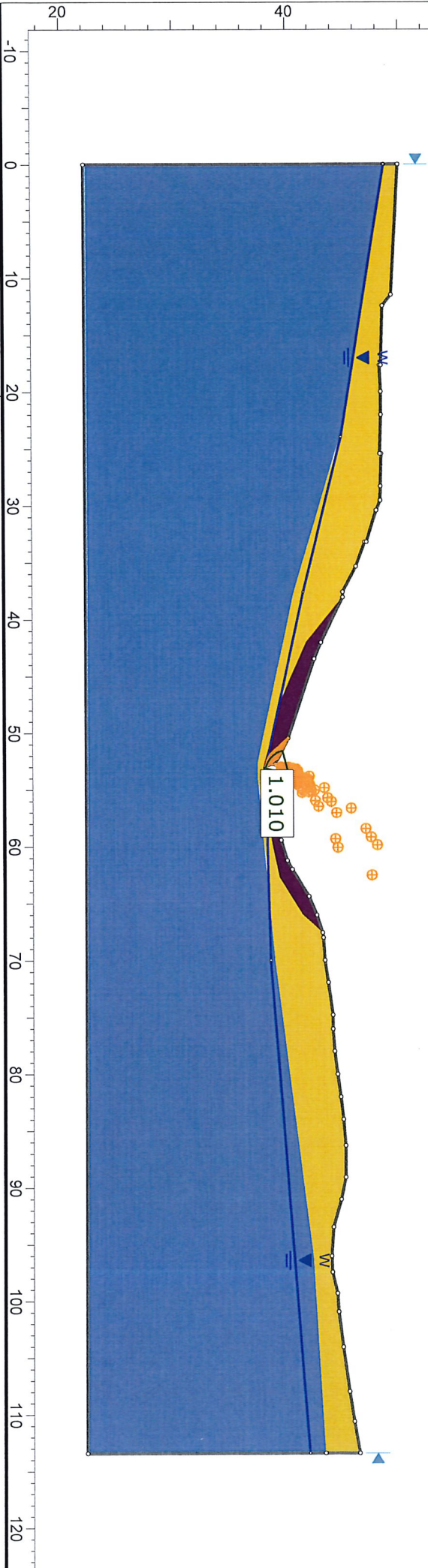
<i>Project</i>		125 Murphys Road (Stage 2), Flat Bush	
<i>Cross Section</i>		Cross Section 7-7'	
<i>Drawn By</i>	AB	<i>Case No.</i>	PRO2
<i>Date</i>	9/03/2018, 3:11:53 p.m.	<i>F.O.S Filter</i>	1.3
		<i>Scale</i>	1:500
		<i>Analysis Description</i>	Proposed Earthworks - High GWL
		<i>Company</i>	Lander Geotechnical Consultants Limited
		<i>File Name</i>	J00862_180309_Cross Section 7-7'.slmd



SLIDENTERPRET 7.031



Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu
Puketokā Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1
Slump Debris	Dark Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1
Transitional ECBF	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1
Existing Fill	Green	17.5	Mohr-Coulomb	3	28	Water Surface	Custom	1



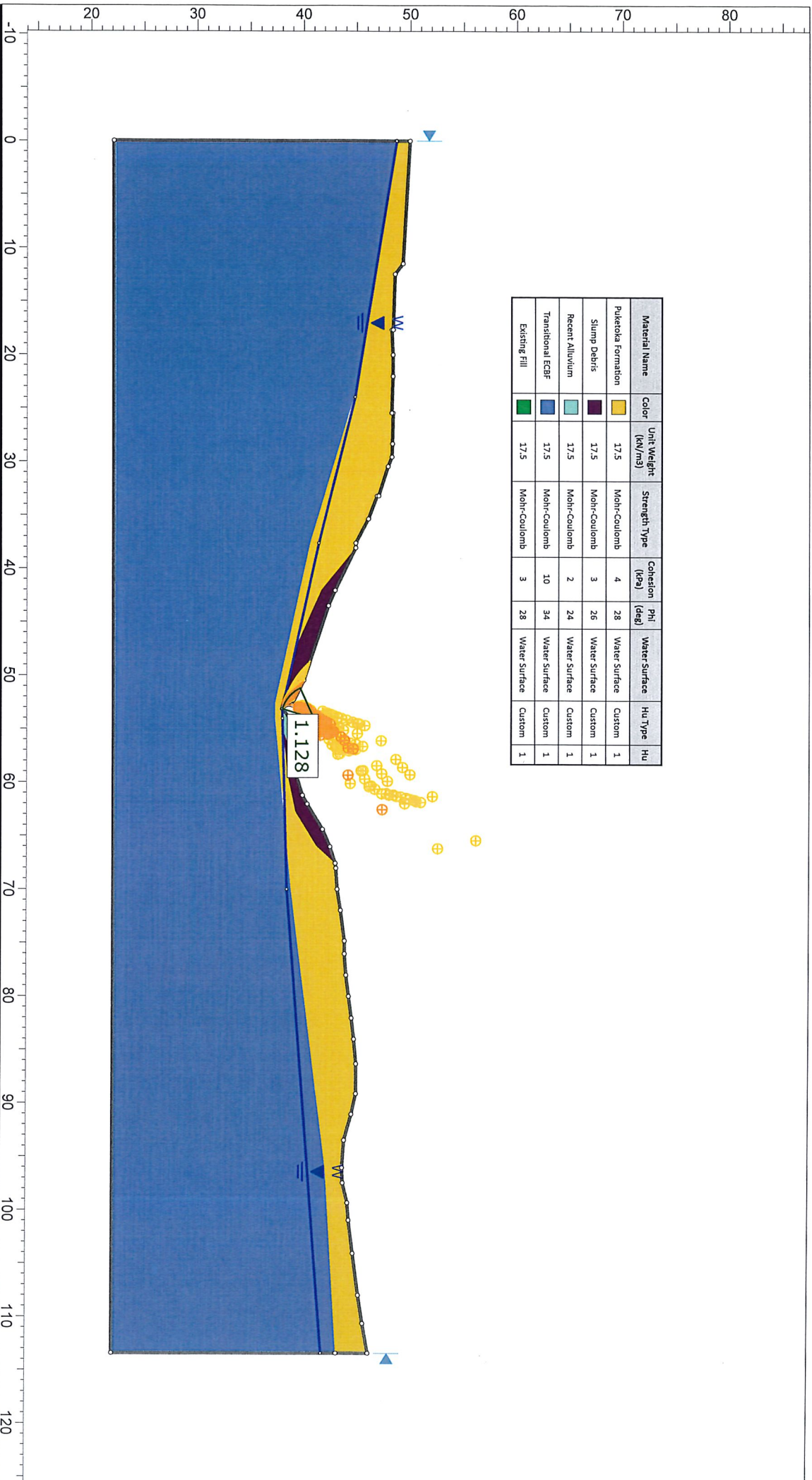
125 Murphys Road (Stage 2), Flat Bush

Project		Case No.		Analysis Description	
Cross Section		PRO3		Proposed Earthworks - Seismic 1/150	
Drawn By		F.O.S Filter		Company	
AB		1.2		Lander Geotechnical Consultants Limited	
Date		Scale		File Name	
9/03/2018, 3:11:53 p.m.		1:500		J00862_180309_Cross Section 7-7'.slmd	

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SLIDENTERPRET 7.031

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu
Pukekohe Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1
Slump Debris	Dark Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1
Transitional ECGF	Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1
Existing Fill	Green	17.5	Mohr-Coulomb	3	28	Water Surface	Custom	1



125 Murphys Road (Stage 2), Flat Bush

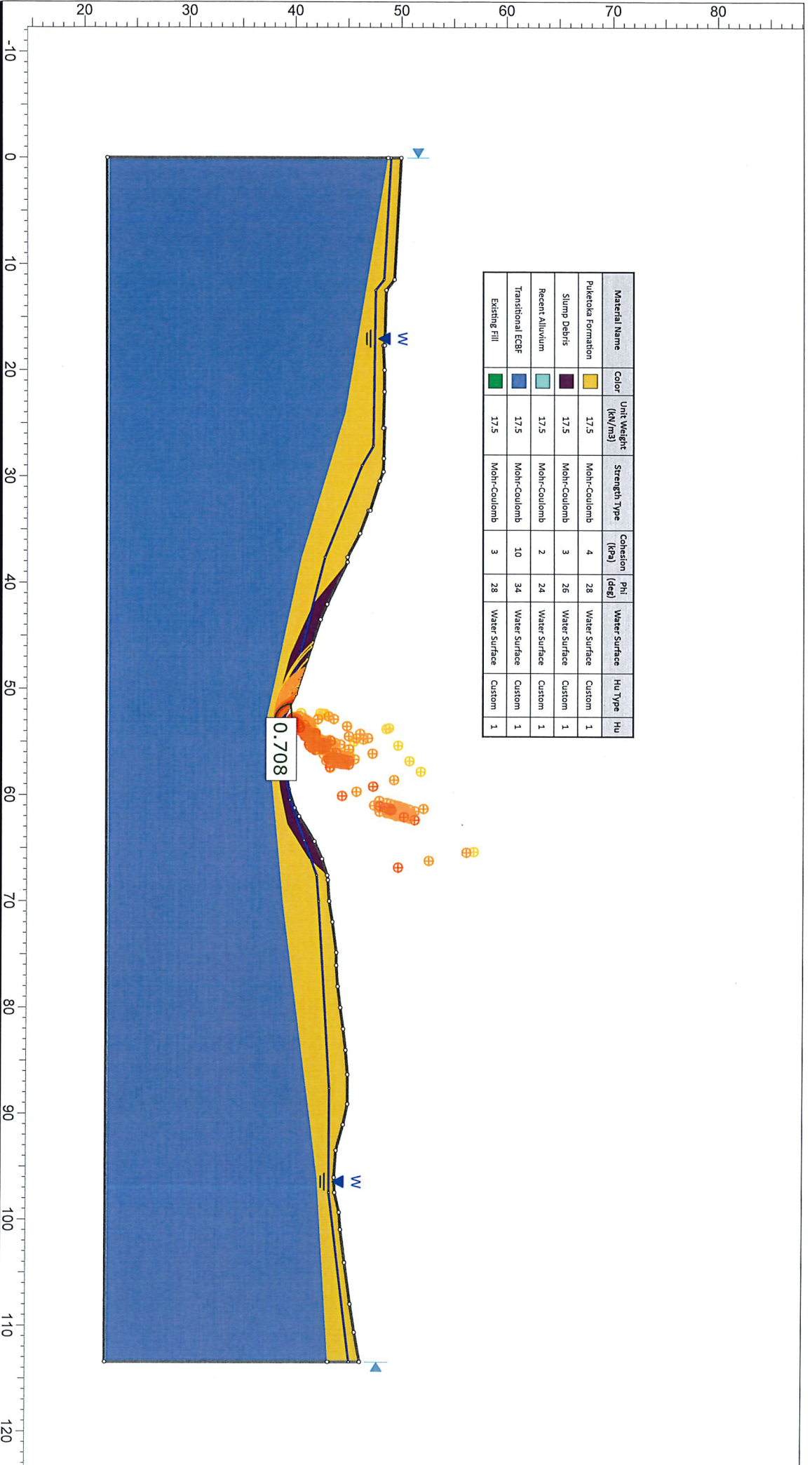


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geotechnical

PROJECT REF: 7.031

<i>Project</i>		125 Murphys Road (Stage 2), Flat Bush	
<i>Cross Section</i>	Cross Section 7-7'	<i>Case No.</i>	R1
<i>Drawn By</i>	AB	<i>F.O.S Filter</i>	1.5
<i>Date</i>	9/03/2018, 3:11:53 p.m.	<i>Scale</i>	1:500
		<i>Analysis Description</i>	Counterfort Drain - Long Term GWL condition
		<i>Company</i>	Lander Geotechnical Consultants Limited
		<i>File Name</i>	J00862_180309_Cross Section 7-7'.slmd

Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu
Pulekoka Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1
Slump Debris	Dark Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1
Transitional ECRF	Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1
Existing Fill	Green	17.5	Mohr-Coulomb	3	28	Water Surface	Custom	1



125 Murphys Road (Stage 2), Flat Bush

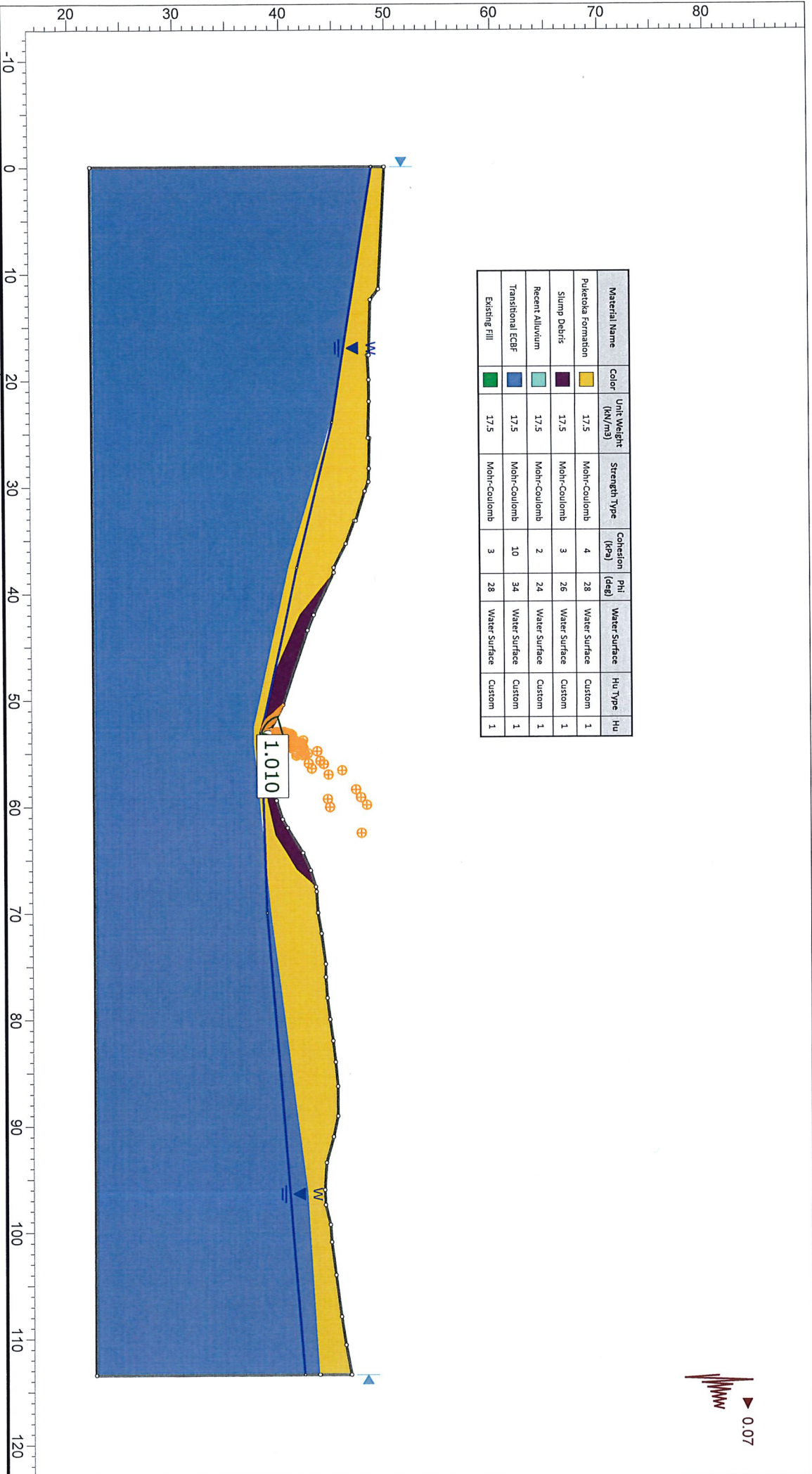
Project		Case No.		Analysis Description	
Cross Section		R2	Counterfort Drain - High GWL		
Drawn By		AB	Company		Lander Geotechnical Consultants Limited
Date		9/03/2018, 3:11:53 p.m.	File Name		J00862_180309_Cross Section 7-7'.slmd
		Scale	1:500		



SLIDENTERPRET 7.031



Material Name	Color	Unit Weight (kN/m ³)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Hu Type	Hu
Pukekohe Formation	Yellow	17.5	Mohr-Coulomb	4	28	Water Surface	Custom	1
Slump Debris	Dark Purple	17.5	Mohr-Coulomb	3	26	Water Surface	Custom	1
Recent Alluvium	Light Blue	17.5	Mohr-Coulomb	2	24	Water Surface	Custom	1
Transitional EC9F	Dark Blue	17.5	Mohr-Coulomb	10	34	Water Surface	Custom	1
Existing Fill	Green	17.5	Mohr-Coulomb	3	28	Water Surface	Custom	1



125 Murphys Road (Stage 2), Flat Bush

Project		125 Murphys Road (Stage 2), Flat Bush	
<i>Cross Section</i>	Cross Section 7-7'	<i>Case No.</i>	R3
<i>Drawn By</i>	AB	<i>F.O.S Filter</i>	1.2
<i>Date</i>	9/03/2018, 3:11:53 p.m.	<i>Scale</i>	1:500
Analysis Description		<i>Company</i>	Lander Geotechnical Consultants Limited
		<i>File Name</i>	J00862_180309_Cross Section 7-7'.slmld



SLIDENTERPRET 7.031

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