## Appendix. A

129 Slope stability data

No.	$\gamma$ (KN/m3)	c (Kpa)	<b>φ</b> (°)	<b>β</b> (°)	H (m)	$r_u$	Stability
Training	set and Validation s	set					
1	18.8	14.4	25.02	19.98	30.6	0	1
2	18.77	30.01	9.99	25.02	50	0.1	1
3	19.97	19.96	36	45.5	50	0.5	0
4	22.38	10.05	35.01	45	10	0.4	0
5	18.77	30.01	19.98	30	50	0.1	1
6	28.4	39.16	37.98	34.98	100	0	1
7	19.97	10.05	28.98	34.03	6	0.3	1
8	13.97	12	26.01	30	88	0	0
9	18.77	25.06	19.98	30	50	0.2	0
10	18.83	10.35	21.29	34.03	37	0.3	0
11	28.4	29.41	35.01	34.98	100	0	1
12	18.77	25.06	9.99	25.02	50	0.2	0
13	16.47	11.55	0	30	3.6	0	0
14	20.56	16.21	26.51	30	40	0	0
15	18.66	26.41	14.99	34.98	8.2	0	0
16	13.97	12	26.01	30	88	0.5	0
17	25.96	150.1	45	49.98	200	0	0
18	18.46	25.06	0	30	6	0	0
19	19.97	40.06	30.02	30	15	0.3	1
20	20.39	24.91	13.01	22	10.6	0.4	1
21	19.6	12	19.98	22	12.2	0.4	1
22	20.96	19.96	40.01	40.02	12	0	1
23	17.98	24.01	30.15	45	20	0.1	0
24	20.96	45.02	25.02	49.03	12	0.3	1

25	22.38	99.93	45	45	15	0.3	1
26	18.77	19.96	19.98	30	50	0.3	0
27	21.78	8.55	32	27.98	12.8	0.5	0
28	21.47	6.9	30.02	31.01	76.8	0.4	0
29	21.98	19.96	22.01	19.98	180	0.1	0
30	18.8	57.47	19.98	19.98	30.6	0	1
31	21.36	10.05	30.33	30	20	0	1
32	18.8	14.4	25.02	19.98	30.6	0.5	0
33	15.99	70.07	19.98	40.02	115	0	0
34	21.98	19.96	36	45	50	0	0
35	19.08	10.05	9.99	25.02	50	0.4	0
36	19.08	10.05	19.98	30	50	0.4	0
37	17.98	45.02	25.02	25.02	14	0.3	1
38	24.96	120	45	53	120	0	1
39	20.39	33.46	10.98	16.01	45.8	0.2	0
40	17.98	4.95	30.02	19.98	8	0.3	1
41	18.97	30.01	35.01	34.98	11	0.2	1
42	21.98	19.96	22.01	19.98	180	0	0
43	20.96	30.01	35.01	40.02	12	0.4	1
44	20.96	34.96	27.99	40.02	12	0.5	1
45	18.46	12	0	30	6	0	0
46	19.97	40.06	40.01	40.02	10	0.2	1
47	19.97	19.96	36	45	50	0.3	0
48	18.77	19.96	9.99	25.02	50	0.3	0
49	18.83	24.76	21.29	29.2	37	0.5	0
50	19.03	11.7	27.99	34.98	21	0.1	0
51	22.38	10.05	35.01	30	10	0	1
52	18.8	15.31	30.02	25.02	10.6	0.4	1
53	18.68	26.34	15	35	8.23	0	0

54   16.5   11.49   0   30   3.66   0   0     55   18.84   14.36   25   20   30.5   0   1     56   18.84   57.46   20   20   30.5   0   1     57   28.44   29.42   35   35   100   0   1     58   28.44   39.23   38   35   100   0   1     59   20.6   16.28   26.5   30   40   0   0     60   14.8   0   17   20   50   0   0     61   14   11.97   26   30   88   0   0	
56   18.84   57.46   20   20   30.5   0   1     57   28.44   29.42   35   35   100   0   1     58   28.44   39.23   38   35   100   0   1     59   20.6   16.28   26.5   30   40   0   0     60   14.8   0   17   20   50   0   0	
57 28.44 29.42 35 35 100 0 1   58 28.44 39.23 38 35 100 0 1   59 20.6 16.28 26.5 30 40 0 0   60 14.8 0 17 20 50 0 0	
58   28.44   39.23   38   35   100   0   1     59   20.6   16.28   26.5   30   40   0   0     60   14.8   0   17   20   50   0   0	
59 20.6 16.28 26.5 30 40 0 0   60 14.8 0 17 20 50 0 0	
60 14.8 0 17 20 50 0	
61 14 11.97 26 30 88 0 0	
62 25 120 45 53 120 0 1	
63 26 150.05 45 50 200 0 0	
64 18.5 25 0 30 6 0 0	
65 18.5 12 0 30 6 0 0	
66 22.4 10 35 30 10 0 1	
67 21.1 10 30.34 30 20 0 1	
68 22 20 36 45 50 0	
69 22 0 36 45 50 0	
70 12 0 30 35 4 0 1	
71 12 0 30 45 8 0 0	
72 12 0 30 35 4 0 1	
73 12 0 30 45 8 0 0	
74 23.47 0 32 37 214 0 0	
75 16 70 20 40 115 0 0	
76 20.41 24.9 13 22 10.67 0.35 1	
77 19.63 11.97 20 22 12.19 0.405 1	
78 21.82 8.62 32 28 12.8 0.49 0	
79 20.41 33.52 11 16 45.72 0.2 0	
80 18.84 15.32 30 25 10.67 0.38 1	
81 18.84 0 20 20 7.62 0.45 0	
82 21.43 0 20 20 61 0.5 0	

83   1906   1.71   28   35   21   0.11   0     84   18.84   14.36   25   20   30.5   0.45   0     85   21.51   6.94   30   31   76.81   0.38   0     87   18   24   30.15   45   20   0.12   0     88   23   0   20   10   0.3   0     89   22.4   10   45   45   15   0.25   1     90   22.4   10   36   45   10   0.4   0     91   20   20   36   45   50   0.25   0     92   20   3   6   45   50   0.25   0     93   20   0   36   45   50   0.25   0     94   20   0   40   33   8   0.35   1     95   2   0   40   33   8   0.35   1     97   2   6   <								
85   21.51   6.94   30   31   76.81   0.38   0     86   14   11.97   26   30   88   0.45   0     87   18   24   30.15   45   20   0.12   0     88   23   0   20   100   0.3   0     89   22.4   100   45   45   15   0.25   1     90   22.4   10   35   45   10   0.4   0     91   20   20   36   45   50   0.5   0     92   20   0   36   45   50   0.5   0     93   20   0   36   45   50   0.5   0     94   20   0   40   33   8   0.3   1     95   22   0   40   33   8   0.3   1     97   20   0   24.5   20   8   0.3   1     98   18   5   30	83	19.06	11.71	28	35	21	0.11	0
86   14   11.97   26   30   88   0.45   0     87   18   24   30.15   45   20   0.12   0     88   23   0   20   20   100   0.3   0     89   22.4   100   45   45   15   0.25   1     90   22.4   10   36   45   50   0.25   0     91   20   20   36   45   50   0.25   0     92   20   36   45   50   0.25   0     93   20   0   36   45   50   0.25   0     94   20   0   36   45   50   0.5   0     95   22   0   40   33   8   0.35   1     96   24   0   40   33   8   0.3   1     98   18   5   30   20   8   0.3   1     100   26.49   150   33	84	18.84	14.36	25	20	30.5	0.45	0
87   18   24   30.15   45   20   0.12   0     88   23   0   20   20   100   0.3   0     89   22.4   100   45   45   15   0.25   1     90   22.4   10   35   45   10   0.4   0     91   20   20   36   45   50   0.25   0     92   20   36   45   50   0.5   0     93   20   0   36   45   50   0.5   0     94   20   0   36   45   50   0.5   0     94   20   0   36   45   50   0.5   0     95   22   0   40   33   8   0.35   1     96   24   0   40   33   8   0.3   1     97   20   0   24.5   20   8   0.3   1     98   18   150   33 <td< td=""><td>85</td><td>21.51</td><td>6.94</td><td>30</td><td>31</td><td>76.81</td><td>0.38</td><td>0</td></td<>	85	21.51	6.94	30	31	76.81	0.38	0
88   23   0   20   20   100   0.3   0     89   22.4   100   45   45   15   0.25   1     90   22.4   10   35   45   10   0.4   0     91   20   20   36   45   50   0.25   0     92   20   36   45   50   0.5   0     93   20   0   36   45   50   0.25   0     94   20   0   36   45   50   0.5   0     95   22   0   40   33   8   0.35   1     96   24   0   40   33   8   0.3   1     97   20   0   24.5   20   8   0.3   1     98   18   5   30   20   8   0.3   1     100   26.7   150   33   52   120   0.25   1     101   26.89   150   38.7	86	14	11.97	26	30	88	0.45	0
89   22.4   100   45   45   15   0.25   1     90   22.4   10   35   45   10   0.4   0     91   20   20   36   45   50   0.25   0     92   20   20   36   45   50   0.5   0     93   20   0   36   45   50   0.25   0     94   20   0   36   45   50   0.25   0     95   22   0   40   33   8   0.35   1     96   24   0   40   33   8   0.35   1     97   20   0   24.5   20   8   0.35   1     98   18   5   30   20   8   0.35   1     100   26.7   150   33   50   130   0.25   1     101   26.89   150   38.7   45.3   80   0.15   0     102   26.77 <t< td=""><td>87</td><td>18</td><td>24</td><td>30.15</td><td>45</td><td>20</td><td>0.12</td><td>0</td></t<>	87	18	24	30.15	45	20	0.12	0
90     22.4     10     35     45     10     0.4     0       91     20     20     36     45     50     0.25     0       92     20     20     36     45     50     0.5     0       93     20     0     36     45     50     0.25     0       94     20     0     36     45     50     0.5     0       95     22     0     40     33     8     0.35     1       96     24     0     40     33     8     0.35     1       97     20     0     24.5     20     8     0.35     1       98     18     5     30     20     8     0.35     1       99     26.49     150     33     45     73     0.15     1       100     26.7     150     33     52     120     0.25     1       102     26.57 <td< td=""><td>88</td><td>23</td><td>0</td><td>20</td><td>20</td><td>100</td><td>0.3</td><td>0</td></td<>	88	23	0	20	20	100	0.3	0
91   20   20   36   45   50   0.25   0     92   20   20   36   45   50   0.5   0     93   20   0   36   45   50   0.25   0     94   20   0   36   45   50   0.25   0     95   22   0   40   33   8   0.35   1     96   24   0   40   33   8   0.3   1     97   20   0   24.5   20   8   0.3   1     98   18   5   30   20   8   0.3   1     99   26.49   150   33   45   73   0.15   1     100   26.7   150   33   52   120   0.25   1     102   26.89   150   38.7   45.3   80   0.15   0     103   26.78   300   38.7   45.3   80   0.15   0     104   26.81	89	22.4	100	45	45	15	0.25	1
92   20   20   36   45   50   0.5   0     93   20   0   36   45   50   0.25   0     94   20   0   36   45   50   0.5   0     95   22   0   40   33   8   0.35   1     96   24   0   40   33   8   0.3   1     97   20   0   24.5   20   8   0.35   1     98   18   5   30   20   8   0.3   1     99   26.49   150   33   45   73   0.15   1     100   26.7   150   33   52   120   0.25   1     101   26.89   150   33   52   120   0.25   1     102   26.57   300   38.7   54   155   0.25   0     103   26.7   30   35   58   138   0.25   1     104   26.43	90	22.4	10	35	45	10	0.4	0
93   20   0   36   45   50   0.25   0     94   20   0   36   45   50   0.5   0     95   22   0   40   33   8   0.35   1     96   24   0   40   33   8   0.3   1     97   20   0   24.5   20   8   0.35   1     98   18   5   30   20   8   0.3   1     99   26.49   150   33   45   73   0.15   1     100   26.77   150   33   50   130   0.25   1     101   26.89   150   33   52   120   0.25   1     102   26.57   300   38.7   54   155   0.25   0     104   26.81   20   35   58   138   0.25   1     105   26.43   50   26.6   40   92.2   0.15   1     107   26	91	20	20	36	45	50	0.25	0
94   20   0   36   45   50   0.5   0     95   22   0   40   33   8   0.35   1     96   24   0   40   33   8   0.3   1     97   20   0   24.5   20   8   0.3   1     98   18   5   30   20   8   0.3   1     99   26.49   150   33   45   73   0.15   1     100   26.7   150   33   50   130   0.25   1     101   26.89   150   33   52   120   0.25   1     102   26.57   300   38.7   45.3   80   0.15   0     103   26.78   300   38.7   54   155   0.25   1     104   26.81   200   35   58   138   0.25   1     105   26.43   50   26.6   50   170   0.25   1     107	92	20	20	36	45	50	0.5	0
95   22   0   40   33   8   0.35   1     96   24   0   40   33   8   0.3   1     97   20   0   24.5   20   8   0.35   1     98   18   5   30   20   8   0.3   1     99   26.49   150   33   45   73   0.15   1     100   26.7   150   33   50   130   0.25   1     101   26.89   150   33   52   120   0.25   1     102   26.57   300   38.7   45.3   80   0.15   0     103   26.78   300   38.7   54   155   0.25   1     104   26.81   200   35   58   138   0.25   1     105   26.43   50   26.6   40   92.2   0.15   1     107   26.8   60   28.8   59   108   0.25   1     108	93	20	0	36	45	50	0.25	0
96   24   0   40   33   8   0.3   1     97   20   0   24.5   20   8   0.35   1     98   18   5   30   20   8   0.3   1     99   26.49   150   33   45   73   0.15   1     100   26.7   150   33   50   130   0.25   1     101   26.89   150   33   52   120   0.25   1     102   26.57   300   38.7   54   155   0.25   0     103   26.78   300   38.7   54   155   0.25   0     104   26.81   200   35   58   138   0.25   1     105   26.43   50   26.6   40   92.2   0.15   1     107   26.8   60   28.8   59   108   0.25   1     107   26.8   60   28.8   59   108   0.25   1	94	20	0	36	45	50	0.5	0
97   20   0   24.5   20   8   0.35   1     98   18   5   30   20   8   0.3   1     99   26.49   150   33   45   73   0.15   1     100   26.7   150   33   50   130   0.25   1     101   26.89   150   33   52   120   0.25   1     102   26.57   300   38.7   45.3   80   0.15   0     103   26.78   300   38.7   54   155   0.25   0     104   26.81   200   35   58   138   0.25   1     105   26.43   50   26.6   40   92.2   0.15   1     106   26.7   50   26.6   50   170   0.25   1     107   26.8   60   28.8   59   108   0.25   1     Test set     108   22.4   10   35   45   10	95	22	0	40	33	8	0.35	1
98   18   5   30   20   8   0.3   1     99   26.49   150   33   45   73   0.15   1     100   26.7   150   33   50   130   0.25   1     101   26.89   150   33   52   120   0.25   1     102   26.57   300   38.7   45.3   80   0.15   0     103   26.78   300   38.7   54   155   0.25   0     104   26.81   200   35   58   138   0.25   1     105   26.43   50   26.6   40   92.2   0.15   1     106   26.7   50   26.6   50   170   0.25   1     107   26.8   60   28.8   59   108   0.25   1     Test set     108   22.4   10   35   45   10   0.4   0     109   20   20   36   45   50	96	24	0	40	33	8	0.3	1
99   26.49   150   33   45   73   0.15   1     100   26.7   150   33   50   130   0.25   1     101   26.89   150   33   52   120   0.25   1     102   26.57   300   38.7   45.3   80   0.15   0     103   26.78   300   38.7   54   155   0.25   0     104   26.81   200   35   58   138   0.25   1     105   26.43   50   26.6   40   92.2   0.15   1     106   26.7   50   26.6   50   170   0.25   1     107   26.8   60   28.8   59   108   0.25   1     Test set     108   22.4   10   35   45   10   0.4   0     109   20   20   36   45   50   0.5   0	97	20	0	24.5	20	8	0.35	1
100   26.7   150   33   50   130   0.25   1     101   26.89   150   33   52   120   0.25   1     102   26.57   300   38.7   45.3   80   0.15   0     103   26.78   300   38.7   54   155   0.25   0     104   26.81   200   35   58   138   0.25   1     105   26.43   50   26.6   40   92.2   0.15   1     106   26.7   50   26.6   50   170   0.25   1     107   26.8   60   28.8   59   108   0.25   1     Test set     108   22.4   10   35   45   10   0.4   0     109   20   20   36   45   50   0.5   0	98	18	5	30	20	8	0.3	1
101   26.89   150   33   52   120   0.25   1     102   26.57   300   38.7   45.3   80   0.15   0     103   26.78   300   38.7   54   155   0.25   0     104   26.81   200   35   58   138   0.25   1     105   26.43   50   26.6   40   92.2   0.15   1     106   26.7   50   26.6   50   170   0.25   1     107   26.8   60   28.8   59   108   0.25   1     Test set     108   22.4   10   35   45   10   0.4   0     109   20   20   36   45   50   0.5   0	99	26.49	150	33	45	73	0.15	1
102   26.57   300   38.7   45.3   80   0.15   0     103   26.78   300   38.7   54   155   0.25   0     104   26.81   200   35   58   138   0.25   1     105   26.43   50   26.6   40   92.2   0.15   1     106   26.7   50   26.6   50   170   0.25   1     107   26.8   60   28.8   59   108   0.25   1     Test set     108   22.4   10   35   45   10   0.4   0     109   20   20   36   45   50   0.5   0	100	26.7	150	33	50	130	0.25	1
103   26.78   300   38.7   54   155   0.25   0     104   26.81   200   35   58   138   0.25   1     105   26.43   50   26.6   40   92.2   0.15   1     106   26.7   50   26.6   50   170   0.25   1     107   26.8   60   28.8   59   108   0.25   1     Test set     108   22.4   10   35   45   10   0.4   0     109   20   20   36   45   50   0.5   0	101	26.89	150	33	52	120	0.25	1
104   26.81   200   35   58   138   0.25   1     105   26.43   50   26.6   40   92.2   0.15   1     106   26.7   50   26.6   50   170   0.25   1     107   26.8   60   28.8   59   108   0.25   1     Test set     108   22.4   10   35   45   10   0.4   0     109   20   20   36   45   50   0.5   0	102	26.57	300	38.7	45.3	80	0.15	0
105   26.43   50   26.6   40   92.2   0.15   1     106   26.7   50   26.6   50   170   0.25   1     107   26.8   60   28.8   59   108   0.25   1     Test set     108   22.4   10   35   45   10   0.4   0     109   20   20   36   45   50   0.5   0	103	26.78	300	38.7	54	155	0.25	0
106   26.7   50   26.6   50   170   0.25   1     107   26.8   60   28.8   59   108   0.25   1     Test set     108   22.4   10   35   45   10   0.4   0     109   20   20   36   45   50   0.5   0	104	26.81	200	35	58	138	0.25	1
107   26.8   60   28.8   59   108   0.25   1     Test set     108   22.4   10   35   45   10   0.4   0     109   20   20   36   45   50   0.5   0	105	26.43	50	26.6	40	92.2	0.15	1
Test set     108   22.4   10   35   45   10   0.4   0     109   20   20   36   45   50   0.5   0	106	26.7	50	26.6	50	170	0.25	1
108 22.4 10 35 45 10 0.4 0   109 20 20 36 45 50 0.5 0	107	26.8	60	28.8	59	108	0.25	1
109 20 20 36 45 50 0.5 0	Test set							
	108	22.4	10	35	45	10	0.4	0
110 20 0.1 36 45 50 0.25 0	109	20	20	36	45	50	0.5	0
	110	20	0.1	36	45	50	0.25	0

111	20	0.1	36	45	50	0.5	0
112	22	0	40	33	8	0.35	1
113	24	0	40	33	8	0.3	1
114	20	0	24.5	20	8	0.35	1
115	18	0	30	20	8	0.3	1
116	27	40	35	43	420	0.25	1
117	31.3	68	37	49	200.5	0.29	0
118	26.18	44.93	59	31.5	172.98	0.1	0
119	26.62	31.78	0	42.72	51.48	0.4	0
120	27.3	26	31	50	92	0.25	0
121	27	32	33	42.2	289	0.25	1
122	27.3	31.5	29.7	41	135	0.25	1
123	25	46	35	47	443	0.25	1
124	25	46	35	44	435	0.25	1
125	25	46	35	46	432	0.25	1
126	26	150	45	30	200	0.25	1
127	18.5	12	0	30	6	0.25	0
128	22.4	10	35	30	10	0.25	1
129	22	20	36	45	50	0.25	0