

Program : D-Geo Stability
 Version : 18.1.1.3
 Company : Movares Nederland B.V.
 Date : 24-05-2018
 Time : 14:01:13

Output file : \\NL\Data\Shared\algemeen\GP-IF\Vg-Gm\GE0\EemT\N522 - Bruggen en wegen Ouderkerk
 Input file : \\NL\Data\Shared\algemeen\GP-IF\Vg-Gm\GE0\EemT\N522 - Bruggen en wegen Ouderkerk
 ===== BEGINNING OF DATA =====

ECHO OF THE INPUT
=====

Problem identification : N522
 : Sloopwerkzaamheden

Calculation model : Bishop
 Default shear strength : C phi

LAYER BOUNDARIES
=====

Boundary no.	Co-ordinates [m]					
8 - X -	0.00	9.70	10.23	11.75	13.99	19.20
8 - Y -	-3.40	-3.40	-2.94	-1.60	-1.60	-1.60
8 - X -	19.50	24.30	27.30	28.90	30.21	33.50
8 - Y -	-1.50	0.10	0.10	-0.70	-1.50	-3.50
8 - X -	36.00					
8 - Y -	-5.02					
7 - X -	0.00	9.70	10.23	11.75	13.99	19.20
7 - Y -	-3.40	-3.40	-2.94	-1.60	-1.60	-1.60
7 - X -	19.50	30.21	33.50	36.00		
7 - Y -	-1.50	-1.50	-3.50	-5.02		
6 - X -	0.00	9.70	10.23	14.00	33.50	36.00
6 - Y -	-3.40	-3.40	-2.94	-3.50	-3.50	-5.02
5 - X -	0.00	6.00	14.00	33.50	36.00	
5 - Y -	-6.00	-6.00	-3.50	-3.50	-5.02	
4 - X -	0.00	6.30	14.00	33.50	36.00	
4 - Y -	-9.50	-9.00	-3.50	-3.50	-5.02	
3 - X -	0.00	6.30	12.00	14.00	33.50	36.00
3 - Y -	-9.50	-9.00	-9.50	-3.50	-3.50	-5.02
2 - X -	0.00	6.30	12.00	14.00	35.00	36.00
2 - Y -	-9.50	-9.00	-9.50	-12.00	-12.50	-12.50
1 - X -	0.00	6.00	14.00	35.00	36.00	
1 - Y -	-10.50	-11.00	-12.00	-12.50	-12.50	
0 - X -	0.00	36.00				
0 - Y -	-17.37	-17.37				

PL-LINES
=====

Pl-line no.	Co-ordinates [m]					
1 - X -	0.00	9.70	19.20	24.30	27.30	28.30
1 - Y -	-3.70	-3.70	-2.35	-1.90	-1.40	-0.40
1 - X -	36.00					
1 - Y -	-0.40					

Unit weight of water used for calculation: 9.81 [kN/m3]
 The groundwater level is determined by Pl-line number 1

FORBIDDEN LINES

=====

No forbidden lines were input.

SOIL PROPERTIES

=====

Layer no. | Material name

Layer no.	Material name
8	Zand, matig
7	Klei, zandig
6	Veen
5	Klei, siltig
4	Klei, siltig
3	Klei, zandig
2	Basis veen
1	Zand, matig

Layer number	Gam usat [kN/m3]	Gam sat [kN/m3]	Pl-line top	Pl-line bottom
8	18.00	20.00	1	1
7	17.00	17.00	1	1
6	10.50	10.50	1	1
5	15.00	15.00	1	1
4	15.00	15.00	1	1
3	17.00	17.00	1	1
2	12.00	12.00	1	1
1	18.00	20.00	1	-

Layer number	Cohesion [kN/m2]	Phi [degrees]	Dilatancy [degrees]	S [-]	POP [kN/m2]	m [-]
8	0.00	27.00	27.00	-	-	-
7	1.72	20.88	20.88	-	-	-
6	3.45	12.10	12.10	-	-	-
5	3.45	22.61	22.61	-	-	-
4	3.45	22.61	22.61	-	-	-
3	1.72	20.88	20.88	-	-	-
2	3.45	14.16	14.16	-	-	-
1	0.00	27.00	27.00	-	-	-

Layer number	Su top [kN/m2]	Su bot. [kN/m2]	Su grad. [kN/m2/m]	POP top [kN/m2]	POP bot. [kN/m2]	Gamma LEM [-]
8	-	-	-	-	-	-
7	-	-	-	-	-	-
6	-	-	-	-	-	-
5	-	-	-	-	-	-
4	-	-	-	-	-	-
3	-	-	-	-	-	-
2	-	-	-	-	-	-
1	-	-	-	-	-	-

No degree of consolidation <> 100% input.

CENTER POINT GRID AND TANGENT LINES

=====

X co-ordinate grid left : 5.67 [m]
 X co-ordinate grid right : 10.67 [m]
 Number of grid points in X - direction : 10
 Y co-ordinate grid bottom : 2.42 [m]

Y co-ordinate grid top : 7.42 [m]
 Number of grid points in Y - direction : 10
 Y co-ordinate tangent smallest circle : -3.20 [m]
 Y co-ordinate tangent biggest circle : -8.00 [m]
 Number of circles per grid point : 25

No fixed points input.

Total number of center points in the grid: 100
 Total number of slip circles in the grid : 2500

MEASURED YIELD STRESS =====

No measured yield stress input.

LINE LOADS =====

No line loads were input.

UNIFORM LOAD =====

Uniform load number	Magnitude [kN/m]	X start [m]	X end [m]	Distrib. degrees	Load Type
1	13.33	24.30	27.30	26.00	Temporary

TREE ON SLOPE =====

No tree on slope was input.

DEGREE OF CONSOLIDATION : TEMPORARY LOADS =====

Layer number	Degree of consolidation
8	100
7	0
6	0
5	0
4	0
3	0
2	0
1	100

GEOTEXTILES =====

No geotextiles were input.

NAILS =====

No nails were input.

EARTHQUAKE =====

No earth quake factors were input.

***** The input has been tested, and is correct. *****

RESULTS OF THE SLOPE STABILITY ANALYSIS =====

The center point of the critical circle lies on the edge of the grid.

New grid with : X minimum = 5.67 [m]
 X maximum = 10.67 [m]
 Y minimum = 1.87 [m]
 Y maximum = 6.87 [m]

The center point of the critical circle lies on the edge of the grid.

New grid with : X minimum = 5.67 [m]
 X maximum = 10.67 [m]
 Y minimum = 1.31 [m]
 Y maximum = 6.31 [m]

The center point of the critical circle lies on the edge of the grid.

New grid with : X minimum = 5.67 [m]
 X maximum = 10.67 [m]
 Y minimum = 0.76 [m]
 Y maximum = 5.76 [m]

The center point of the critical circle lies on the edge of the grid.

New grid with : X minimum = 5.67 [m]
 X maximum = 10.67 [m]
 Y minimum = 0.20 [m]
 Y maximum = 5.20 [m]

The center point of the critical circle lies on the edge of the grid.

New grid with : X minimum = 5.67 [m]
 X maximum = 10.67 [m]
 Y minimum = -0.36 [m]
 Y maximum = 4.64 [m]

The center point of the critical circle lies on the edge of the grid.

New grid with : X minimum = 5.67 [m]
 X maximum = 10.67 [m]
 Y minimum = -0.91 [m]
 Y maximum = 4.09 [m]

The center point of the critical circle lies on the edge of the grid.

New grid with : X minimum = 5.67 [m]
 X maximum = 10.67 [m]
 Y minimum = -1.47 [m]
 Y maximum = 3.53 [m]

Information on the critical circle : Fmin = 1.130
 Calculation method used : Bishop - C phi

=====

X co-ordinate center point : 10.11 [m]
 Y co-ordinate center point : -0.91 [m]
 Radius of critical circle : 2.49 [m]

The center point of the critical circle is enclosed

Total driving moment	:	-39.92	[kNm/m]
Driving moment free water	:	0.00	[kNm/m]
Driving moment external loads	:	0.00	[kNm/m]
Iterated resisting moment	:	45.12	[kNm/m]
Non-iterated resisting moment	:	44.22	[kNm/m]

END OF D-Geo Stability OUTPUT

=====

Program : D-Geo Stability
 Version : 18.1.1.3
 Company : Movares Nederland B.V.
 Date : 24-05-2018
 Time : 14:12:38

Output file : \\NL\Data\Shared\algemeen\GP-IF\Vg-Gm\GE0\EemT\N522 - Bruggen en wegen Ouderkerk
 Input file : \\NL\Data\Shared\algemeen\GP-IF\Vg-Gm\GE0\EemT\N522 - Bruggen en wegen Ouderkerk
 ===== BEGINNING OF DATA =====

ECHO OF THE INPUT =====

Problem identification : N522
 : Sloopwerkzaamheden

Calculation model : Bishop
 Default shear strength : C phi

LAYER BOUNDARIES =====

Boundary no.	Co-ordinates [m]					
8 - X -	-10.00	9.70	10.23	11.75	13.99	19.20
8 - Y -	-3.40	-3.40	-2.94	-1.60	-1.60	-1.60
8 - X -	19.50	24.30	27.30	28.90	30.21	33.50
8 - Y -	-1.50	0.10	0.10	-0.70	-1.50	-3.50
8 - X -	36.00					
8 - Y -	-5.02					
7 - X -	-10.00	9.70	10.23	11.75	13.99	19.20
7 - Y -	-3.40	-3.40	-2.94	-1.60	-1.60	-1.60
7 - X -	19.50	30.21	33.50	36.00		
7 - Y -	-1.50	-1.50	-3.50	-5.02		
6 - X -	-10.00	9.70	10.23	14.00	33.50	36.00
6 - Y -	-3.40	-3.40	-2.94	-3.50	-3.50	-5.02
5 - X -	-10.00	6.00	14.00	33.50	36.00	
5 - Y -	-6.00	-6.00	-3.50	-3.50	-5.02	
4 - X -	-10.00	6.30	14.00	33.50	36.00	
4 - Y -	-9.50	-9.00	-3.50	-3.50	-5.02	
3 - X -	-10.00	6.30	12.00	14.00	33.50	36.00
3 - Y -	-9.50	-9.00	-9.50	-3.50	-3.50	-5.02
2 - X -	-10.00	6.30	12.00	14.00	35.00	36.00
2 - Y -	-9.50	-9.00	-9.50	-12.00	-12.50	-12.50
1 - X -	-10.00	6.00	14.00	35.00	36.00	
1 - Y -	-10.50	-11.00	-12.00	-12.50	-12.50	
0 - X -	-10.00	36.00				
0 - Y -	-17.37	-17.37				

PL-LINES =====

Pl-line no.	Co-ordinates [m]					
1 - X -	-10.00	9.70	19.20	24.30	27.30	28.30
1 - Y -	-3.70	-3.70	-2.35	-1.90	-1.40	-0.40
1 - X -	36.00					
1 - Y -	-0.40					

Unit weight of water used for calculation: 9.81 [kN/m3]
 The groundwater level is determined by Pl-line number 1

FORBIDDEN LINES

=====

No forbidden lines were input.

SOIL PROPERTIES

=====

Layer no. | Material name

Layer no.	Material name
8	Zand, matig
7	Klei, zandig
6	Veen
5	Klei, siltig
4	Klei, siltig
3	Klei, zandig
2	Basis veen
1	Zand, matig

Layer number	Gam usat [kN/m3]	Gam sat [kN/m3]	Pl-line top	Pl-line bottom
8	18.00	20.00	1	1
7	17.00	17.00	1	1
6	10.50	10.50	1	1
5	15.00	15.00	1	1
4	15.00	15.00	1	1
3	17.00	17.00	1	1
2	12.00	12.00	1	1
1	18.00	20.00	1	-

Layer number	Cohesion [kN/m2]	Phi [degrees]	Dilatancy [degrees]	S [-]	POP [kN/m2]	m [-]
8	0.00	27.00	27.00	-	-	-
7	1.72	20.88	20.88	-	-	-
6	3.45	12.10	12.10	-	-	-
5	3.45	22.61	22.61	-	-	-
4	3.45	22.61	22.61	-	-	-
3	1.72	20.88	20.88	-	-	-
2	3.45	14.16	14.16	-	-	-
1	0.00	27.00	27.00	-	-	-

Layer number	Su top [kN/m2]	Su bot. [kN/m2]	Su grad. [kN/m2/m]	POP top [kN/m2]	POP bot. [kN/m2]	Gamma LEM [-]
8	-	-	-	-	-	-
7	-	-	-	-	-	-
6	-	-	-	-	-	-
5	-	-	-	-	-	-
4	-	-	-	-	-	-
3	-	-	-	-	-	-
2	-	-	-	-	-	-
1	-	-	-	-	-	-

No degree of consolidation <> 100% input.

CENTER POINT GRID AND TANGENT LINES

=====

X co-ordinate grid left : 6.30 [m]
 X co-ordinate grid right : 11.30 [m]
 Number of grid points in X - direction : 10
 Y co-ordinate grid bottom : 4.69 [m]

Y co-ordinate grid top : 9.69 [m]
 Number of grid points in Y - direction : 10
 Y co-ordinate tangent smallest circle : -3.20 [m]
 Y co-ordinate tangent biggest circle : -12.00 [m]
 Number of circles per grid point : 25

No fixed points input.

Total number of center points in the grid: 100
 Total number of slip circles in the grid : 2500

MEASURED YIELD STRESS =====

No measured yield stress input.

LINE LOADS =====

No line loads were input.

UNIFORM LOAD =====

Uniform load number	Magnitude [kN/m]	X start [m]	X end [m]	Distrib. degrees	Load Type
1	13.33	24.30	27.30	26.00	Temporary

TREE ON SLOPE =====

No tree on slope was input.

DEGREE OF CONSOLIDATION : TEMPORARY LOADS =====

Layer number	Degree of consolidation
8	100
7	0
6	0
5	0
4	0
3	0
2	0
1	100

GEOTEXTILES =====

No geotextiles were input.

NAILS =====

No nails were input.

EARTHQUAKE =====

No earth quake factors were input.

***** The input has been tested, and is correct. *****

RESULTS OF THE SLOPE STABILITY ANALYSIS
=====

Information on the critical circle : Fmin = 1.245
Calculation method used : Bishop - C phi
=====

X co-ordinate center point : 10.74 [m]
Y co-ordinate center point : 6.91 [m]
Radius of critical circle : 18.18 [m]

The center point of the critical circle is enclosed

Total driving moment : -8671.65 [kNm/m]
Driving moment free water : 0.00 [kNm/m]
Driving moment external loads : -602.23 [kNm/m]
Iterated resisting moment : 10795.77 [kNm/m]
Non-iterated resisting moment : 10623.00 [kNm/m]

END OF D-Geo Stability OUTPUT
=====

Program : D-Geo Stability
 Version : 18.1.1.3
 Company : Movares Nederland B.V.
 Date : 24-05-2018
 Time : 14:01:57

Output file : \\NL\Data\Shared\algemeen\GP-IF\Vg-Gm\GEO\EemT\N522 - Bruggen en wegen Ouderkerk
 Input file : \\NL\Data\Shared\algemeen\GP-IF\Vg-Gm\GEO\EemT\N522 - Bruggen en wegen Ouderkerk
 ===== BEGINNING OF DATA =====

ECHO OF THE INPUT
=====

Problem identification : N522
 : Sloopwerkzaamheden

Calculation model : Bishop
 Default shear strength : C phi

LAYER BOUNDARIES
=====

Boundary no.	Co-ordinates [m]					
8 - X -	-10.00	9.70	13.33	16.50	18.20	19.20
8 - Y -	-3.40	-3.40	-3.40	-3.40	-1.60	-1.60
8 - X -	19.50	24.30	27.30	28.90	30.21	33.50
8 - Y -	-1.50	0.10	0.10	-0.70	-1.50	-3.50
8 - X -	36.00					
8 - Y -	-5.02					
7 - X -	-10.00	9.70	13.33	16.50	18.20	19.20
7 - Y -	-3.40	-3.40	-3.40	-3.40	-1.60	-1.60
7 - X -	19.50	30.21	33.50	36.00		
7 - Y -	-1.50	-1.50	-3.50	-5.02		
6 - X -	-10.00	9.70	13.33	14.00	33.50	36.00
6 - Y -	-3.40	-3.40	-3.40	-3.50	-3.50	-5.02
5 - X -	-10.00	6.00	14.00	33.50	36.00	
5 - Y -	-6.00	-6.00	-3.50	-3.50	-5.02	
4 - X -	-10.00	6.30	14.00	33.50	36.00	
4 - Y -	-9.50	-9.00	-3.50	-3.50	-5.02	
3 - X -	-10.00	6.30	12.00	14.00	33.50	36.00
3 - Y -	-9.50	-9.00	-9.50	-3.50	-3.50	-5.02
2 - X -	-10.00	6.30	12.00	14.00	35.00	36.00
2 - Y -	-9.50	-9.00	-9.50	-12.00	-12.50	-12.50
1 - X -	-10.00	6.00	14.00	35.00	36.00	
1 - Y -	-10.50	-11.00	-12.00	-12.50	-12.50	
0 - X -	-10.00	36.00				
0 - Y -	-17.37	-17.37				

PL-LINES
=====

Pl-line no.	Co-ordinates [m]					
1 - X -	-10.00	9.70	16.50	19.20	24.30	27.30
1 - Y -	-3.70	-3.70	-3.70	-2.35	-1.90	-1.40
1 - X -	28.30	36.00				
1 - Y -	-0.40	-0.40				

Unit weight of water used for calculation: 9.81 [kN/m3]
 The groundwater level is determined by Pl-line number 1

FORBIDDEN LINES

=====

No forbidden lines were input.

SOIL PROPERTIES

=====

Layer no. | Material name

Layer no.	Material name
8	Zand, matig
7	Klei, zandig
6	Veen
5	Klei, siltig
4	Klei, siltig
3	Klei, zandig
2	Basis veen
1	Zand, matig

Layer number	Gam usat [kN/m3]	Gam sat [kN/m3]	Pl-line top	Pl-line bottom
8	18.00	20.00	1	1
7	17.00	17.00	1	1
6	10.50	10.50	1	1
5	15.00	15.00	1	1
4	15.00	15.00	1	1
3	17.00	17.00	1	1
2	12.00	12.00	1	1
1	18.00	20.00	1	-

Layer number	Cohesion [kN/m2]	Phi [degrees]	Dilatancy [degrees]	S [-]	POP [kN/m2]	m [-]
8	0.00	27.00	27.00	-	-	-
7	1.72	20.88	20.88	-	-	-
6	3.45	12.10	12.10	-	-	-
5	3.45	22.61	22.61	-	-	-
4	3.45	22.61	22.61	-	-	-
3	1.72	20.88	20.88	-	-	-
2	3.45	14.16	14.16	-	-	-
1	0.00	27.00	27.00	-	-	-

Layer number	Su top [kN/m2]	Su bot. [kN/m2]	Su grad. [kN/m2/m]	POP top [kN/m2]	POP bot. [kN/m2]	Gamma LEM [-]
8	-	-	-	-	-	-
7	-	-	-	-	-	-
6	-	-	-	-	-	-
5	-	-	-	-	-	-
4	-	-	-	-	-	-
3	-	-	-	-	-	-
2	-	-	-	-	-	-
1	-	-	-	-	-	-

No degree of consolidation <> 100% input.

CENTER POINT GRID AND TANGENT LINES

=====

X co-ordinate grid left : 14.49 [m]
 X co-ordinate grid right : 19.49 [m]
 Number of grid points in X - direction : 10
 Y co-ordinate grid bottom : 2.11 [m]

Y co-ordinate grid top : 7.11 [m]
 Number of grid points in Y - direction : 10
 Y co-ordinate tangent smallest circle : -3.20 [m]
 Y co-ordinate tangent biggest circle : -8.00 [m]
 Number of circles per grid point : 25

No fixed points input.

Total number of center points in the grid: 100
 Total number of slip circles in the grid : 2500

MEASURED YIELD STRESS =====

No measured yield stress input.

LINE LOADS =====

No line loads were input.

UNIFORM LOAD =====

Uniform load number	Magnitude [kN/m]	X start [m]	X end [m]	Distrib. degrees	Load Type
1	13.33	24.30	27.30	26.00	Temporary

TREE ON SLOPE =====

No tree on slope was input.

DEGREE OF CONSOLIDATION : TEMPORARY LOADS =====

Layer number	Degree of consolidation
8	100
7	0
6	0
5	0
4	0
3	0
2	0
1	100

GEOTEXTILES =====

No geotextiles were input.

NAILS =====

No nails were input.

EARTHQUAKE =====

No earth quake factors were input.

***** The input has been tested, and is correct. *****

RESULTS OF THE SLOPE STABILITY ANALYSIS

=====

Information on the critical circle : Fmin = 1.049
Calculation method used : Bishop - C phi

=====

X co-ordinate center point : 18.38 [m]
Y co-ordinate center point : 4.88 [m]
Radius of critical circle : 9.48 [m]

The center point of the critical circle is enclosed

Total driving moment : -1407.18 [kNm/m]
Driving moment free water : 0.00 [kNm/m]
Driving moment external loads : -213.33 [kNm/m]
Iterated resisting moment : 1475.88 [kNm/m]
Non-iterated resisting moment : 1467.89 [kNm/m]

END OF D-Geo Stability OUTPUT

=====