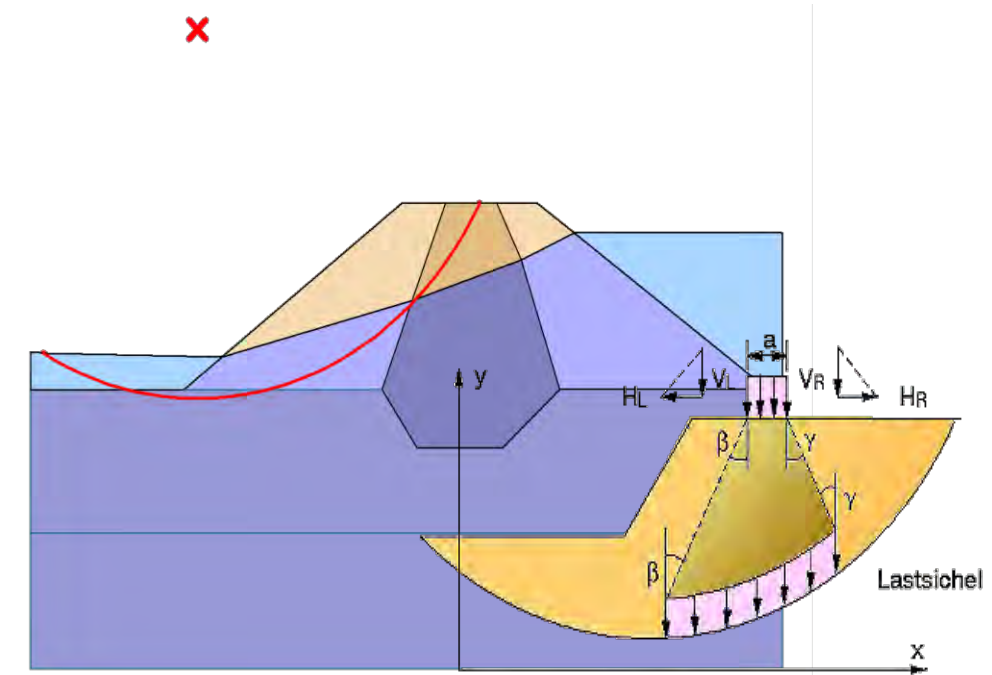
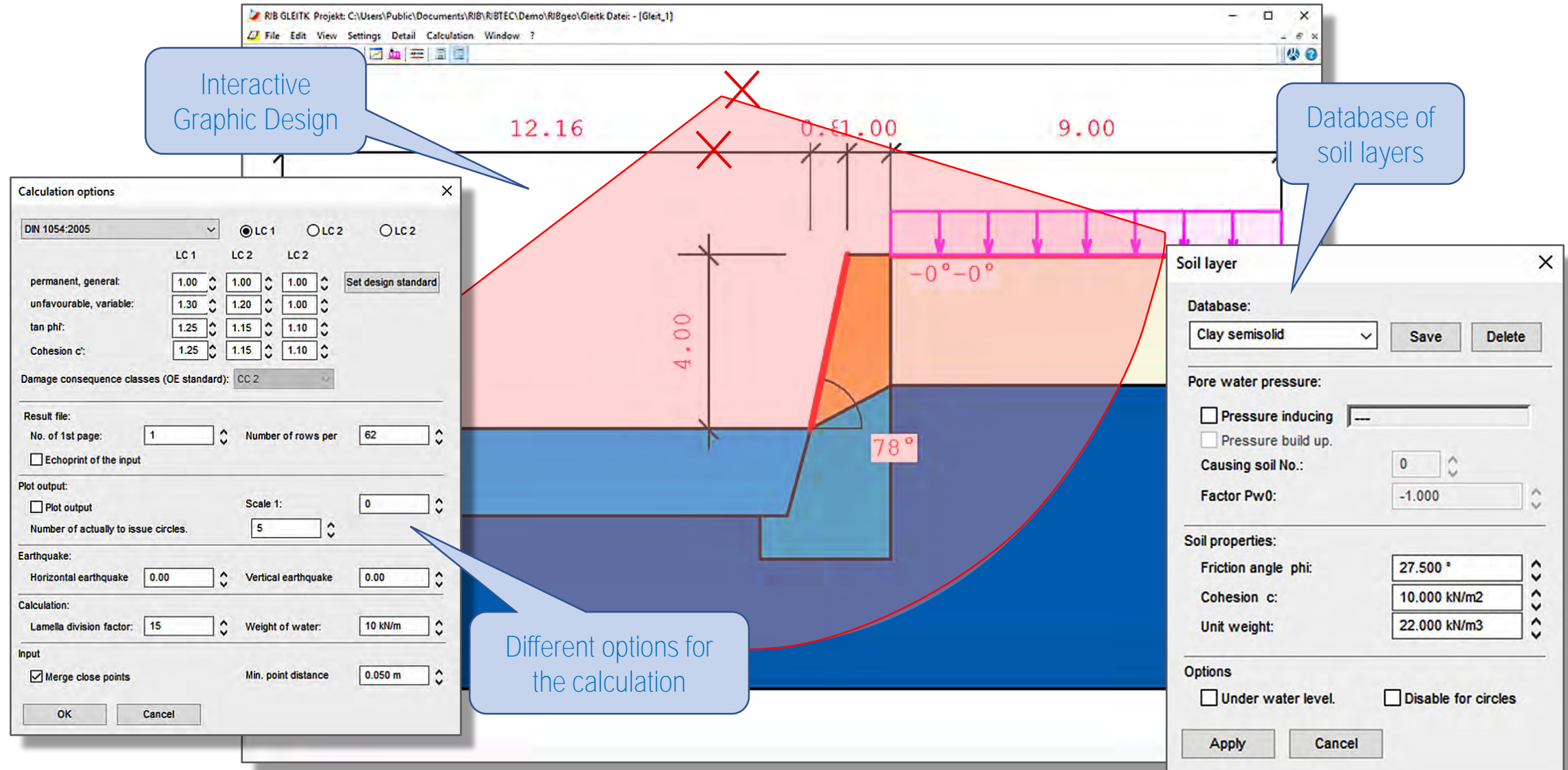


- Automatic slope stability analysis
- Arbitrarily polygonal limited layers
- Polygonal water horizons for the simulation of flow and pore water overpressure
- Consideration of earthquake influence
- Verifications according to DIN 4084, DIN 1054 and DIN EN 1997 as well as EAU and EAB



RTslope – Versatile Friction Circle Analyses



Interactive Graphic Design

Database of soil layers

Different options for the calculation

Calculation options

DIN 1054:2005

LC 1 LC 2 LC 2

permanent, general: 1.00 1.00 1.00 Set design standard

unfavourable, variable: 1.30 1.20 1.00

tan phi: 1.25 1.15 1.10

Cohesion c: 1.25 1.15 1.10

Damage consequence classes (OE standard): CC 2

Result file:

No. of 1st page: 1 Number of rows per: 62

Echoprint of the input

Plot output:

Plot output Scale 1: 0

Number of actually to issue circles: 5

Earthquake:

Horizontal earthquake 0.00 Vertical earthquake 0.00

Calculation:

Lamella division factor: 15 Weight of water: 10 kN/m

Input

Merge close points Min. point distance: 0.050 m

Soil layer

Database:

Clay semisolid Save Delete

Pore water pressure:

Pressure inducing

Pressure build up.

Causing soil No.: 0

Factor Pw0: -1.000

Soil properties:

Friction angle phi: 27.500 °

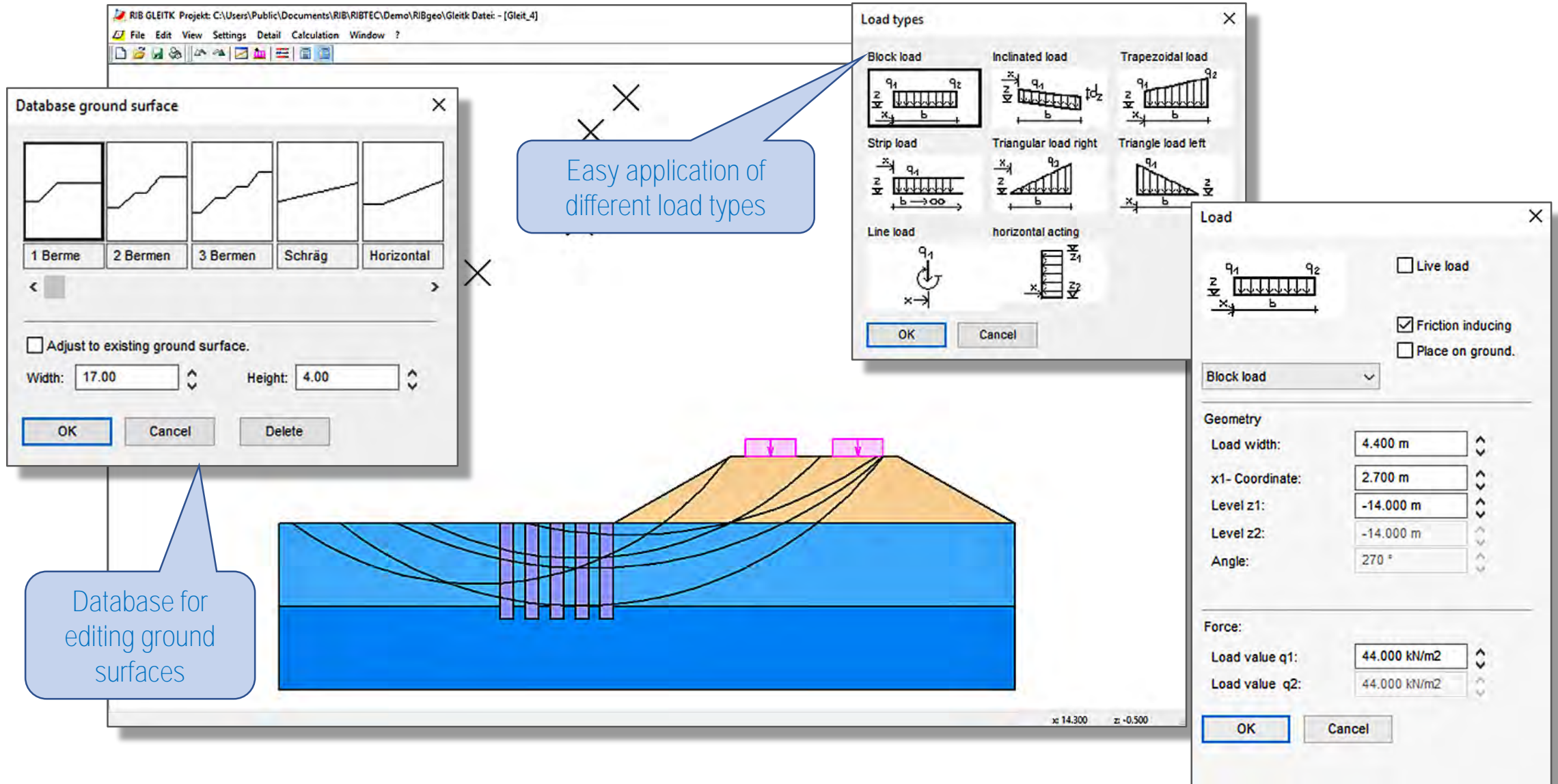
Cohesion c: 10.000 kN/m2

Unit weight: 22.000 kN/m3

Options

Under water level. Disable for circles

Apply Cancel

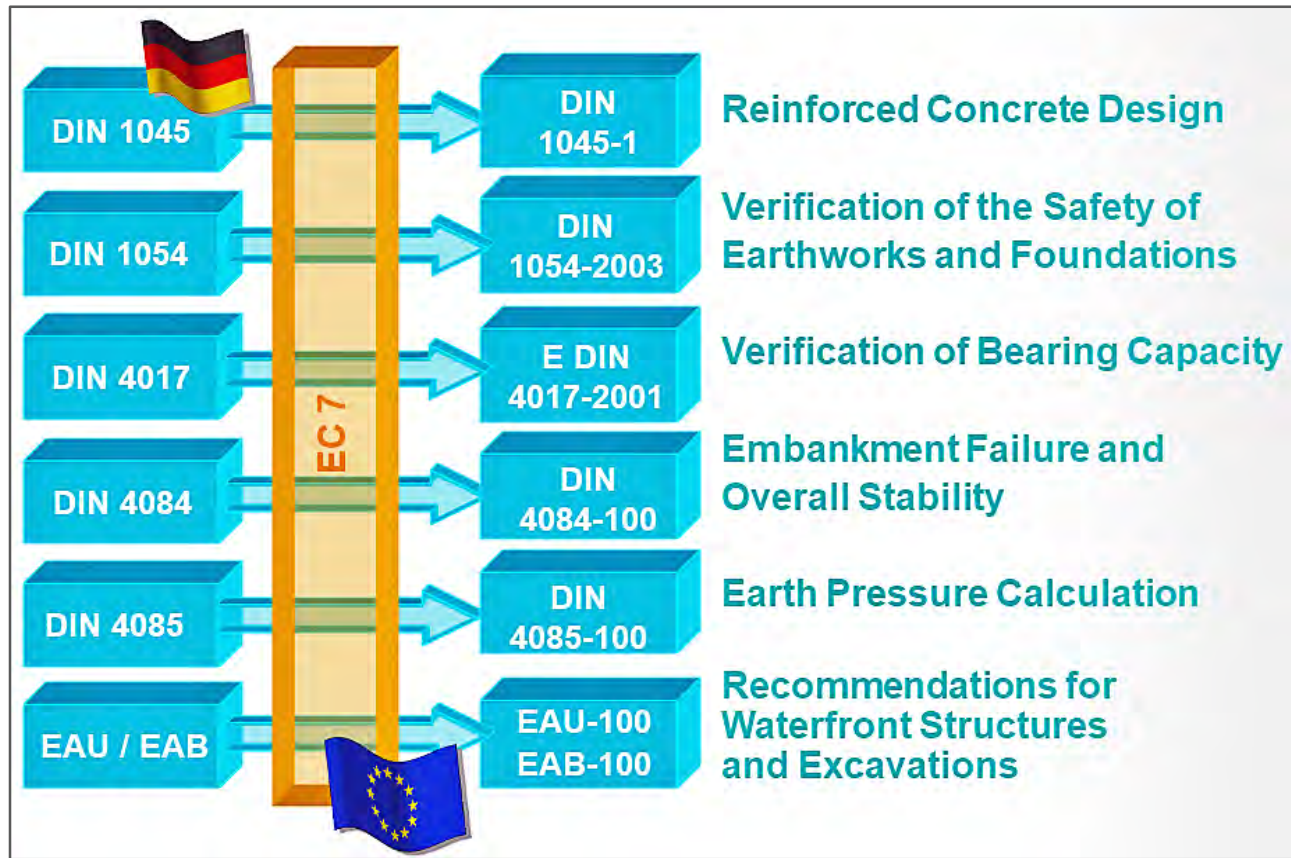


The screenshot displays the RTslope software interface with several key components:

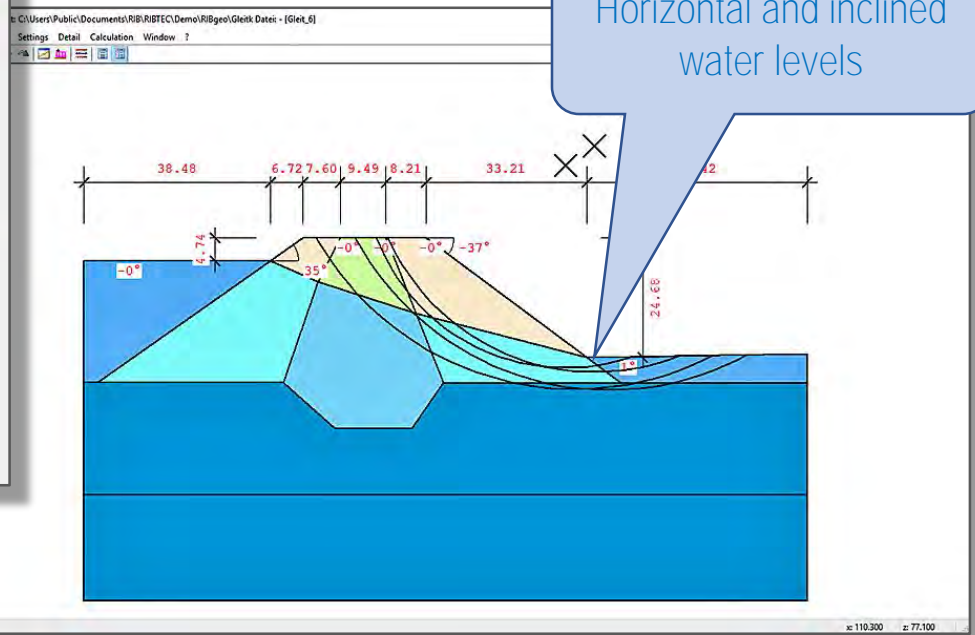
- Database ground surface:** A dialog box on the left showing a grid of ground surface profiles. The profiles are labeled: 1 Berme, 2 Bermen, 3 Bermen, Schräg, and Horizontal. Below the grid, there is a checkbox for "Adjust to existing ground surface" and input fields for "Width: 17.00" and "Height: 4.00".
- Load types:** A central dialog box showing various load types with diagrams: Block load, Inclined load, Trapezoidal load, Strip load, Triangular load right, Triangle load left, Line load, and horizontal acting.
- Load:** A detailed configuration dialog box on the right for a "Block load". It includes checkboxes for "Live load", "Friction inducing" (checked), and "Place on ground". The "Geometry" section contains: Load width: 4.400 m, x1- Coordinate: 2.700 m, Level z1: -14.000 m, Level z2: -14.000 m, and Angle: 270°. The "Force" section contains: Load value q1: 44.000 kN/m2 and Load value q2: 44.000 kN/m2.

Annotations and callouts:

- A blue callout bubble points to the "Load types" dialog with the text: "Easy application of different load types".
- A blue callout bubble points to the "Database ground surface" dialog with the text: "Database for editing ground surfaces".



The latest standards available



Horizontal and inclined water levels

RtConfig

File Export View ?

- RIB RTslope Slope Failure analysis
 - Beispiel fuer Porenwasserdruck
 - View
 - Result list file:
 - Datei
 - Teilsicherheitsbeiwerte
 - Schicht
 - Knotenkoordinaten
 - Wasser
 - Gleitkreise
 - Lamellenleistungsfaktor
 - Neues Koordinatensystem
 - Schicht
 - Knotenkoordinaten
 - Wasser
 - Gleitkreise
 - Lamellenleistungsfaktor

RIB RTslope Slope Failure analysis
Beispiel fuer Porenwasserdruck

Result list file:

Programm GLEITK 18.0 Gleitkreis-Berechnung Seite 1
Beispiel fuer Porenwasserdruck
EingabeDatei: GLEIT_7.GLK
Datum/Date: 22.10.2018
Berechnung nach DIN EN 1997-1:2009

als ständige Bemessungssituation entsprechend BS-P
Teilsicherheitsbeiwerte :

gamma_G	gamma_Q	gamma_phi	gamma_c
1.00	1.30	1.25	1.25

Schicht eingeschlossen von den Knoten

Schicht	eingeschlossen von den Knoten
1	1 2 3 4
2	1 5 6 7 8
3	1 9 10 6 5
4	11 12 10 9
5	2 1 13 12 11

Knotenkoordinaten

Nr.	x	y	Nr.	x	y	Nr.	x	y
1	-32.80	-1.50	2	28.80	-1.50	3	28.80	-10.00
4	-32.80	-10.00	5	28.80	4.00	6	6.66	4.00
7	10.00	6.00	8	28.80	6.00	9	28.80	2.00
10	3.33	2.00	11	28.80	0.00	12	0.00	0.00
13	-32.80	0.00						

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RIB RTslope Slope Failure analysis
Pore Water Pressure

Result list file:

Programm GLEITK 18.0 Gleitkreis-Berechnung Page 1
Beispiel fuer Porenwasserdruck
EingabeDatei: GLEIT_7.GLK
Datum/Date: 22.10.2018
Berechnung nach DIN EN 1997-1:2009

als ständige Bemessungssituation entsprechend BS-P
Teilsicherheitsbeiwerte :

gamma_G	gamma_Q	gamma_phi	gamma_c
1.00	1.30	1.25	1.25

Schicht eingeschlossen von den Knoten

Schicht	eingeschlossen von den Knoten
1	1 2 3 4
2	1 5 6 7 8
3	1 9 10 6 5
4	11 12 10 9
5	2 1 13 12 11

Knotenkoordinaten

Nr.	x	y	Nr.	x	y	Nr.	x	y
1	-32.80	-1.50	2	28.80	-1.50	3	28.80	-10.00
4	-32.80	-10.00	5	28.80	4.00	6	6.66	4.00
7	10.00	6.00	8	28.80	6.00	9	28.80	2.00
10	3.33	2.00	11	28.80	0.00	12	0.00	0.00
13	-32.80	0.00						

Porenwasserdruckverhältnisse

IF	Sch.	gamma	phi	c	1	2	3	4	5	6	7	8	9	10	RIP
1	1	21.3A	17.0	0.0	.40	.30	.18	.00	.00	.00	.00	.00	.00	.00	0
2	2	17.0	15.0	0.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1
3	3	17.5	18.0	0.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2
4	4	19.5A	20.0	0.0	.90	.20	.10	.00	.00	.00	.00	.00	.00	.00	3
5	5	21.0A	23.0	5.0	.90	.60	.30	.00	.00	.00	.00	.00	.00	.00	0

Wasser 10.0

Gleitkreise

Nr.	Radius	x-Ord.	y-Ord.	Nr.	Radius	x-Ord.	y-Ord.
1	18.05	2.56	15.44	2	20.32	-0.10	17.90
3	16.55	0.10	15.20	4	20.29	2.30	16.50

Company-specific results

New individual output report

RTslope – Verifiable result list with graphics

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RIB RTSlope Slope Failure analysis
 Projekt Gleitk

Result list file:

Programm GLEITK 18.0 Gleichkreis-Berechnung Seite 1
 Projekt Gleitk
 EingabeDatei: GLEIT_6.GLK
 Datum/Date: 22.10.2018
 Berechnung nach DIN EN 1997-1:2009
 als ständige Bemessungssituation entsprechend BS-P

Teilsicherheitsbeiwerte:

gamma_G	gamma_Q	gamma_phi	gamma_c
1.00	1.30	1.25	1.25

Schicht | eingeschlossen von den

Schicht	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4						
2	2	3	4	5						
3	3	4	5	6						
4	4	5	6	7						
5	5	6	7	8						
6	6	7	8	9						
7	7	8	9	10						
8	8	9	10	11						
9	9	10	11	12						
10	10	11	12	13						

Knotenkoordinaten

Nr.	x	y	Nr.	x	y	Nr.	x	y
1	79.17	-16.63	2	114.28	-25.68	3	121.54	-30.59
4	84.77	-30.90	5	159.80	-30.59	6	159.80	-54.00
7	10.67	-54.00	8	10.67	-30.80	9	10.40	-30.80
10	51.86	-30.90	11	62.81	-40.39	12	78.19	-40.39
13	49.15	-5.74	14	10.67	-5.74	15	55.87	-0.59
16	63.48	-0.59	17	88.94	-10.03	18	72.94	-0.59
19	74.82	-5.55	20	81.17	-0.59	21	159.80	-24.51
22	159.80	-75.87	23	10.67	-75.87			

Porenwasserdruckverhältnis

LF	Sch.	gamma	phi	c	1	2	3	4	5	6	7	8	9	10	KSP
1	1	10.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
2	2	25.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
3	3	25.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
4	4	19.0%	30.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
5	5	19.0%	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0

Wasser 10.0
 Lasten die wie Lamellen wirken

LF	x1	y1	x2	y2	px1	py1	px2	py2	Var
6	14.00	10.00	29.00	10.00	0.00	-50.00	0.00	-50.00	0

Lasten die nicht wie Lamellen wirken

Page: 1

Slope failure analysis including graphics

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mit 1 Anker, DIN-neu mit Reibung Last
 Kombi= 1 Kreis= 1 Radius= 10.42 x= 11.87 y= 11.06 Eh= 0.0 Ev= 0.0
 Mass-Stab= 1: 150
 Rd/Ed= 1.93 + Bishop
 Program GLEITK.0 R

LF Sch. gamma phi c
 1 1 10.0 0.0 0.0
 3 3 20.0 30.0 0.0
 LAST 5 LU RU
 5 139.999 139.999

mit 1 Anker, DIN-neu mit Reibung Last
 Kombi= 1 Kreis= 2 Radius= 10.89 x= 10.89 y= 11.06 Eh= 0.0 Ev= 0.0
 Mass-Stab= 1: 150
 Rd/Ed= 2.04 + Bishop
 Program GLEITK.0 R

LF Sch. gamma phi c
 1 1 10.0 0.0 0.0
 3 3 20.0 30.0 0.0
 LAST 5 LU RU
 5 139.999 139.999

mit 1 Anker, DIN-neu mit Reibung Last
 Kombi= 1 Kreis= 3 Radius= 9.10 x= 10.89 y= 9.93 Eh= 0.0 Ev= 0.0
 Mass-Stab= 1: 150
 Rd/Ed= 1.90 + Bishop
 Program GLEITK.0 R

Page: 6

Different graphics of the friction circle analysis

Simple and understandable diagrams

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RIB RTSlope Slope Failure analysis

Result list file:

Programm GLEITK 18.0 Gleichkreis-Berechnung Seite 1
 WINKELSTUEZMANN: LFK OHNE WASSER, LFK MIT WASSER - Bsp.1
 EingabeDatei: GLEIT_1.GLK
 Datum/Date: 19.10.2018
 Berechnung nach DIN EN 1997-1:2009
 als ständige Bemessungssituation entsprechend BS-P

Teilsicherheitsbeiwerte:

gamma_G	gamma_Q	gamma_phi	gamma_c
1.00	1.30	1.25	1.25

Schicht | eingeschlossen von den Knoten

Schicht	1	2	3	4	5	6	7	8
1	1	2	3	4	5			
2	2	3	4	5	6			
3	3	4	5	6	7			
4	4	5	6	7	8			
5	5	6	7	8	9			

Knotenkoordinaten

Nr.	x	y	Nr.	x	y	Nr.	x	y
1	0.00	6.00	2	12.16	6.00	3	11.60	4.00
4	11.00	4.00	5	0.00	4.00	6	14.00	7.00
7	14.00	2.00	8	11.00	2.00	9	14.00	10.00
10	12.00	10.00	11	23.00	10.00	12	23.00	7.00
13	23.00	0.00	14	0.00	0.00			

Porenwasserdruckverhältnis

LF	Sch.	gamma	phi	c	1	2	3	4	5	6	7	8	9	10	KSP
1	1	10.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	
2	2	25.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	
3	3	25.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	
4	4	19.0%	30.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	
5	5	19.0%	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	

Wasser 10.0
 Lasten die wie Lamellen wirken

LF	x1	y1	x2	y2	px1	py1	px2	py2	Var
6	14.00	10.00	29.00	10.00	0.00	-50.00	0.00	-50.00	0

Lasten die nicht wie Lamellen wirken

Page: 1