Software interface
Talren v5
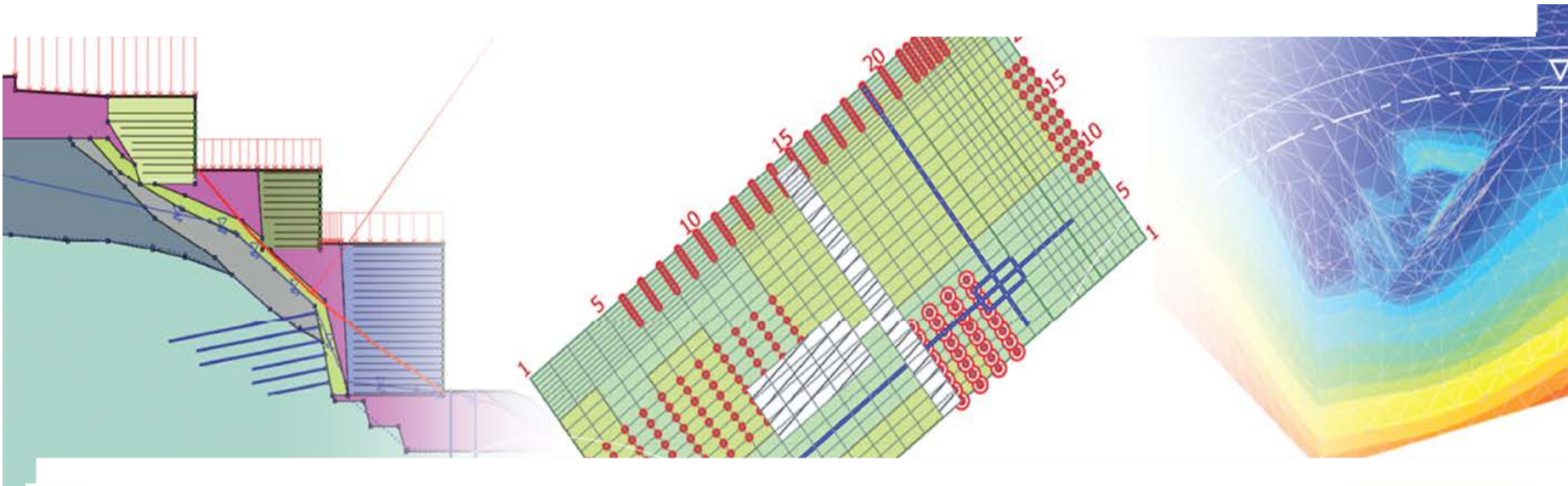
terrasol

setec

Talren v5 Foxta v3 K-Réa v3 Straticad **PLAXIS**
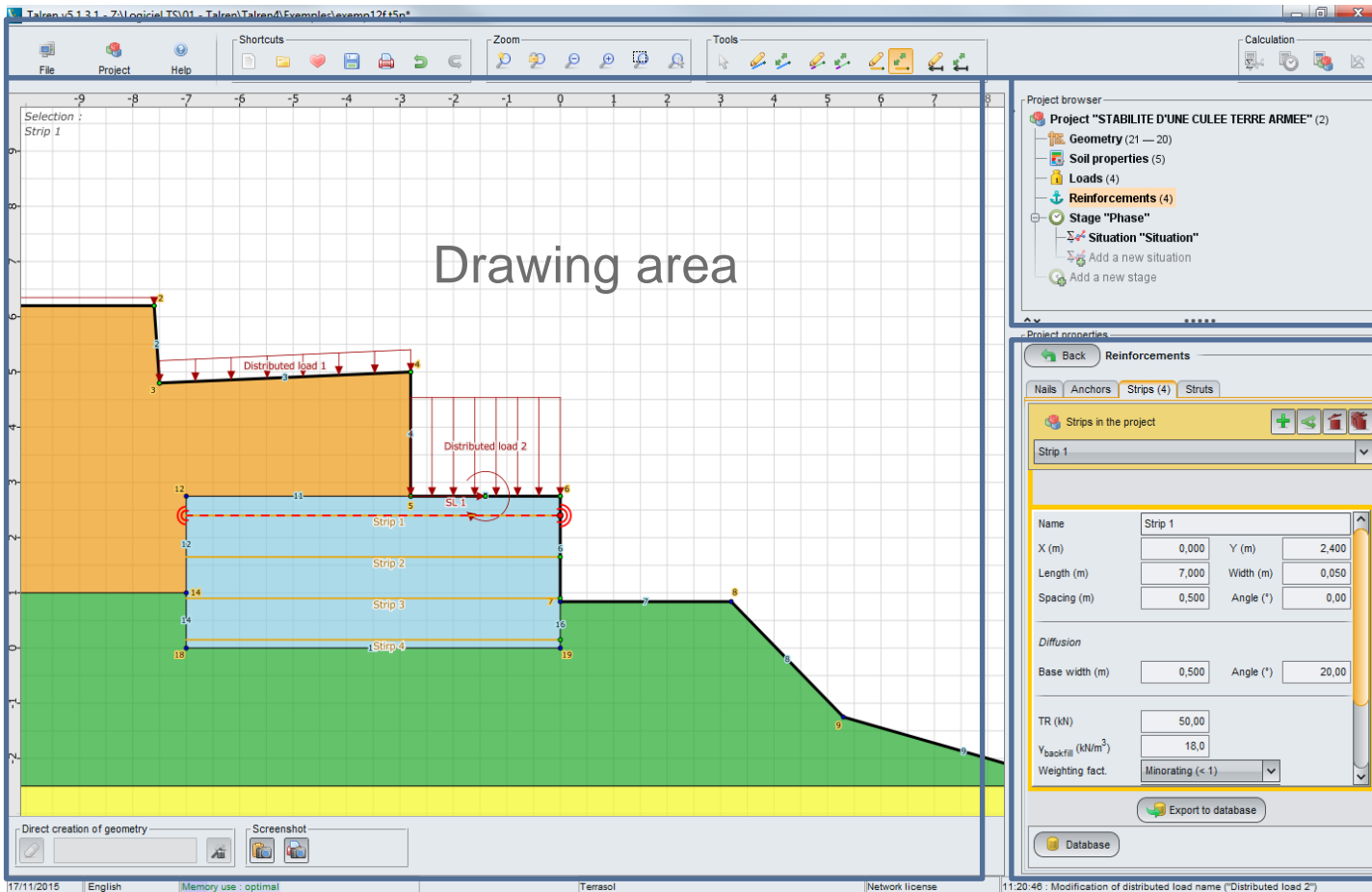
Summary

Introduction

General presentation

Input data

Wizards and et data basis

Calculation stages
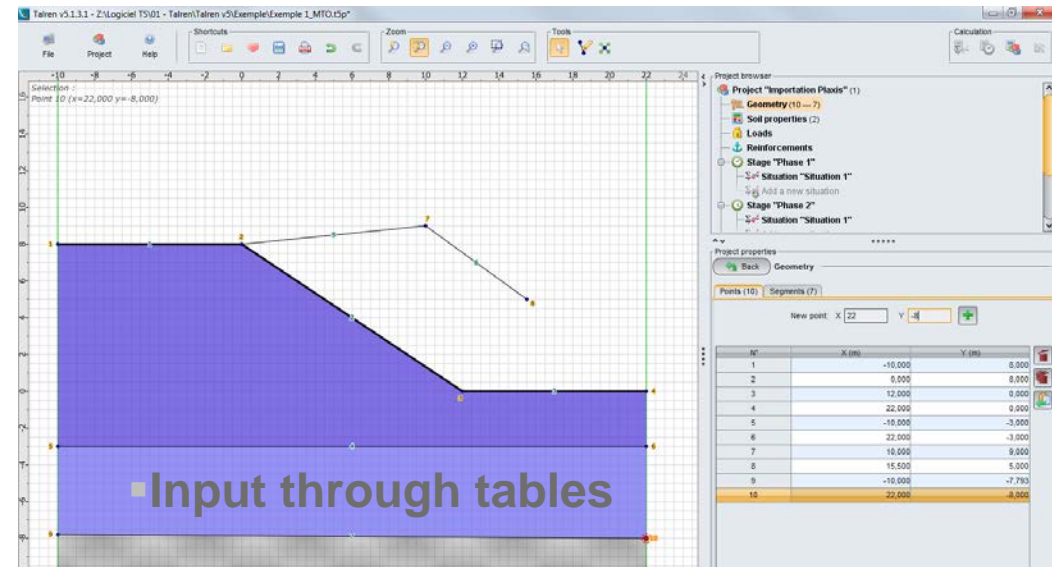
General presentation

Toolbar

Project browser

Drawing area

Properties input

General presentation

The geometry can be created in different ways

Manual definition with mouse

Input with the "drawing" tool

- **Import files: autoCad, Plaxis…**

All possible types	
Talren v5 projects (*.t5p)	
Talren 4 projects (*.prj)	
Talren 97 projects (*.tal)	
Plaxis AE projects (*.p2DX)	
Plaxis 2D projects (*.p2D)	
Plaxis v8 and v9 projects (.plx)	
AutoCAD projects (*.dxf)	
All possible types	

Input through tables

Terrasol - Talren v5 Interface

Input

Project properties
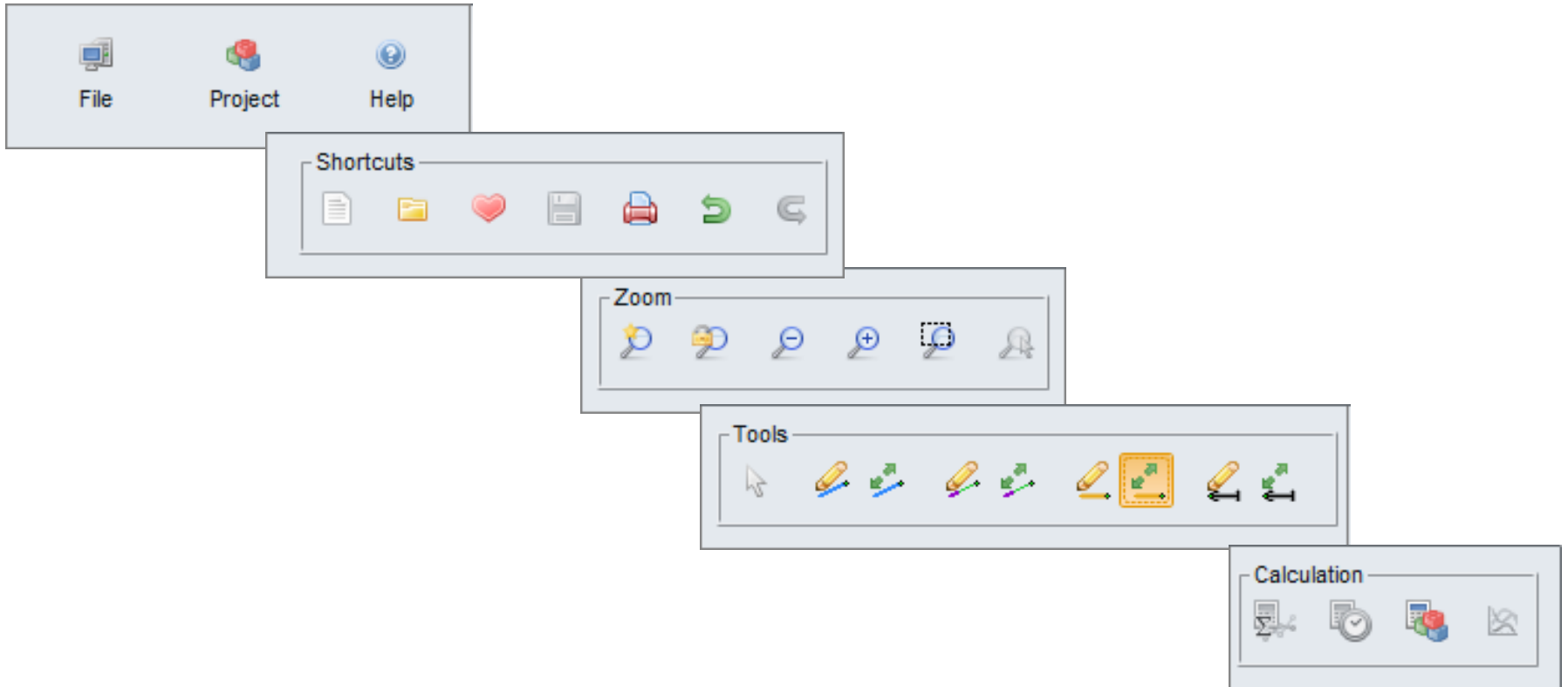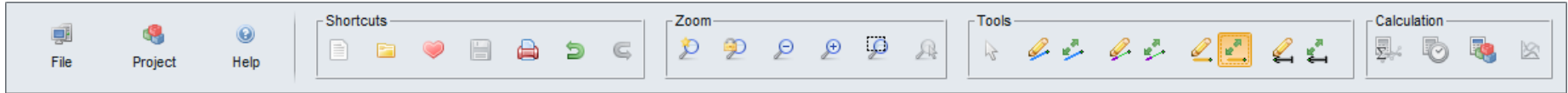
- Model borders

  The geometry should absolutely start from Xmin and end at Xmax

- Calculations default options

Input

Toolbar

Terrasol - Talren v5 Interface

Input

Soil layers

- **Definition by selection in the drawing area**

- **Drag & Drop**

Soil layers
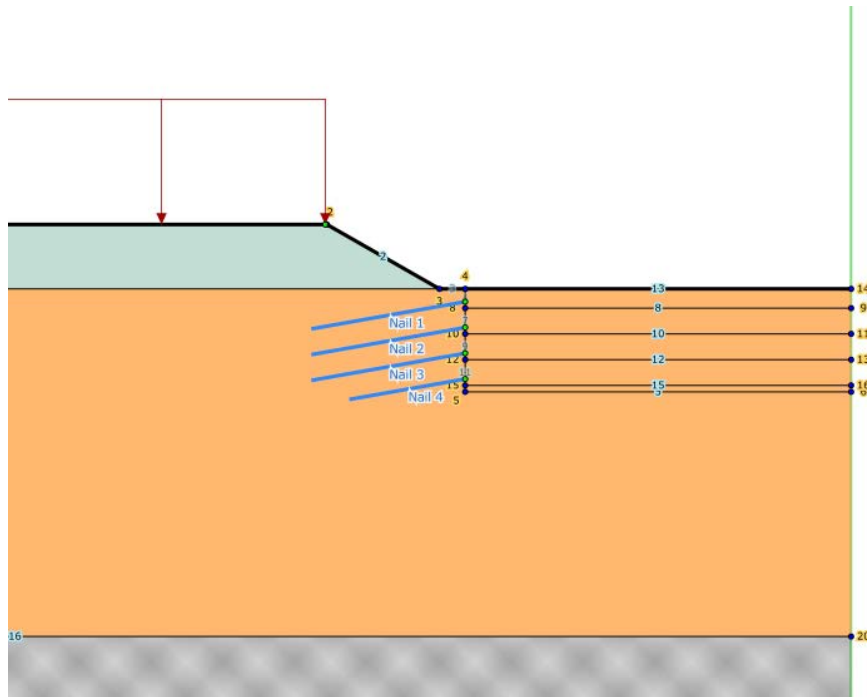
- Define all the lines which will be used for the staged construction (excavation levels or fill geometry included for example)

- Bedrock: soil layer without parameters, available in all projects

This layer is assigned by default to all clusters (grey colour);

In the calculations, the passage of the failure surfaces within this layer is not allowed

Wizards and databases

Options

- The data input is controlled in real time.
There are 3 levels of control:

Errors: One or several input data are not corrects and the calculation is not possible.

Warnings: One or several input data are not consistent.

Information : The choice of the user should be made by taking it into account

- Tables, zoom tools and edit tools are available at all stages of your calculations

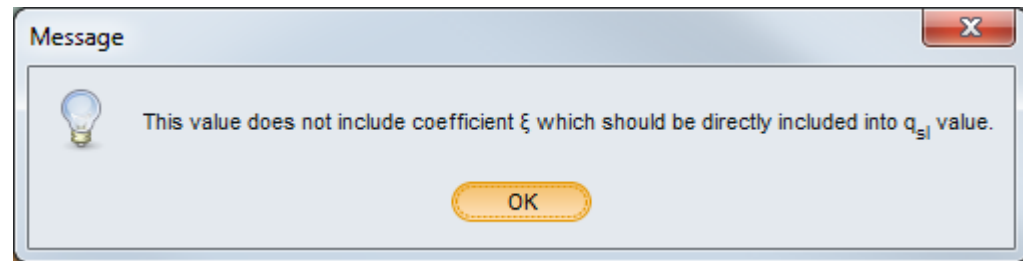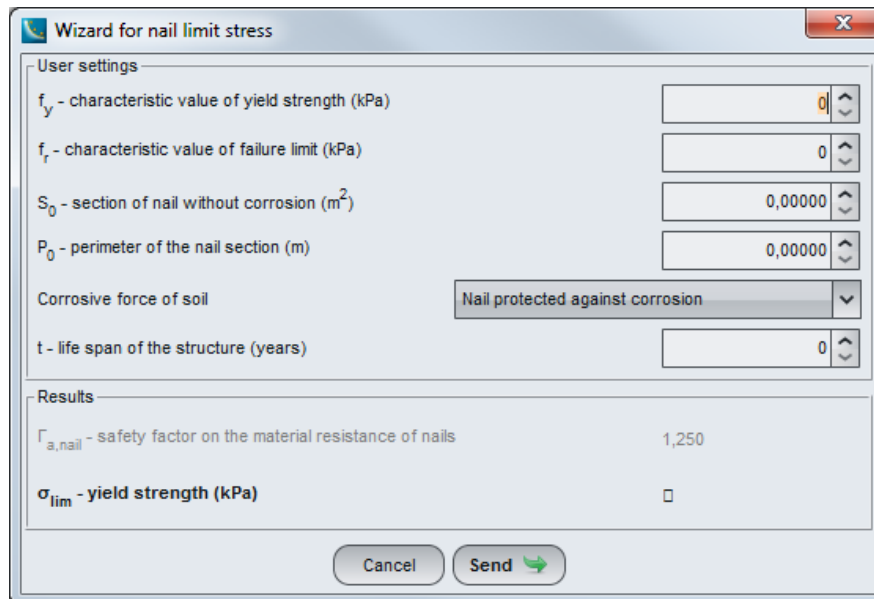**Summary table of reinforcements**

Nails (4)

	Name	X	Y	Horizon...	Angle/...	Width of ...	Diffus...	TR	Length	Rsc	Equival...	Tractio...	Prescribed ...	Plastific...	EI	Critic...	Tracti...	Shear	qs_{nails}	θ_{bar}	σ_e	Direct input ...	Rsc calc...	Shear force ...
1	Nail 1	0,000	9,000	2,000	10,00	2,000	10,00	-	12,000	-	0,065	T_{cal}, C_{imp}	0,000	-	-	5,000	external	-	Charts	0,040	50000...	No	Yes	No
2	Nail 2	0,000	7,000	2,000	10,00	2,000	10,00	-	12,000	-	0,065	T_{cal}, C_{imp}	0,000	-	-	5,000	external	-	Charts	0,040	50000...	No	Yes	No
3	Nail 3	0,000	5,000	2,000	10,00	2,000	10,00	-	12,000	-	0,065	T_{cal}, C_{imp}	0,000	-	-	5,000	external	-	Charts	0,040	50000...	No	Yes	No
4	Nail 4	0,000	3,000	2,000	10,00	2,000	10,00	-	9,000	-	0,065	T_{cal}, C_{imp}	0,000	-	-	5,000	external	-	Charts	0,040	50000...	No	Yes	No

Copy   Export   Close

Wizards and databases

Help and wizards

- Several help tools are available for the creation of your model

Message

This value does not include coefficient ξ which should be directly included into q_{sl} value.

OK

- Wizards help you to determine some of the parameters

Wizard for nail limit stress

User settings

f_y - characteristic value of yield strength (kPa)	0
f_r - characteristic value of failure limit (kPa)	0
S_0 - section of nail without corrosion (m^2)	0,00000
P_0 - perimeter of the nail section (m)	0,00000
Corrosive force of soil	Nail protected against corrosion
t - life span of the structure (years)	0

Results

$\Gamma_{a,nail}$ - safety factor on the material resistance of nails   1,250

σ_{lim} - yield strength (kPa)   ☐

Cancel   Send

Wizards and databases

Databases

- **For the partial safety factors, soil layers and the reinforcements**

Wizards and databases

Partial safety factors

- Several sets of predefined partial safety factors are available

- However these sets of partial safety factors are incomplete because for example Clouterre don't provide coefficients related to strips or struts.

- Before using them, it is necessary to import them in your project and complete the missing coefficients

EC7 Design Approach 1/1
EC7 Design Approach 1/2
Unit
Clouterre fundamental/standard
Clouterre fundamental/sensitive
Clouterre accidental/standard
Clouterre accidental/sensitive
XP P 94-240 accidental 1-2a
XP P 94-240 accidental 2b
XP P 94-220 fundamental/standard
XP P 94-220 fundamental/sensitive
XP P 94-220 accidental/standard
XP P 94-220 accidental/sensitive
Traditional/Provisional
Traditional/Permanent
Eurocode (French standard) - Fundamental - Standard
Eurocode (French standard) - Fundamental - Sensitive
Eurocode (French standard) - Seismic

Stages and calculations

Stages: principle

- A stage corresponds to a construction phase

- A situation defines for a stage the calculation method
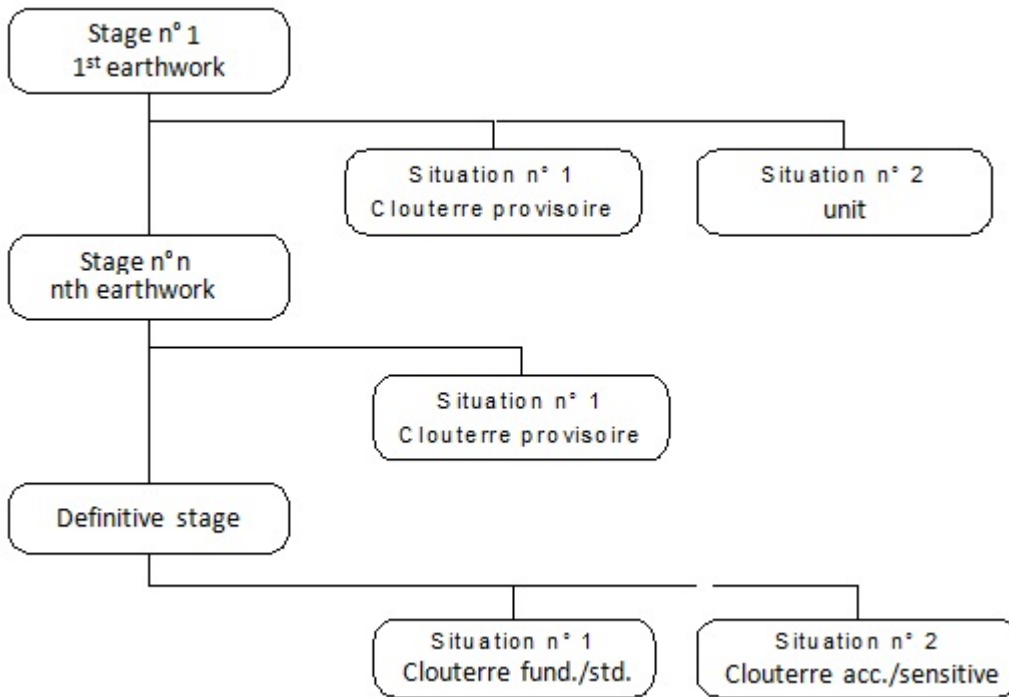
It is possible to add, insert and delete stages

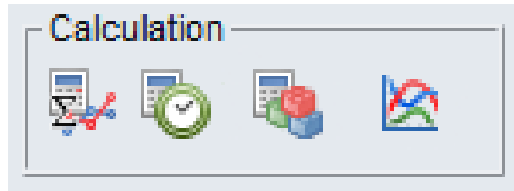Definition of situations: It is possible to add, copy/past and delete situations.

The calculation of a situation is independent of all other calculations carried on for other situations of the same project.

Stages and calculations

Run of calculations

Calculate all the situations of the current stage

Display of results

Calculation achievement follow up

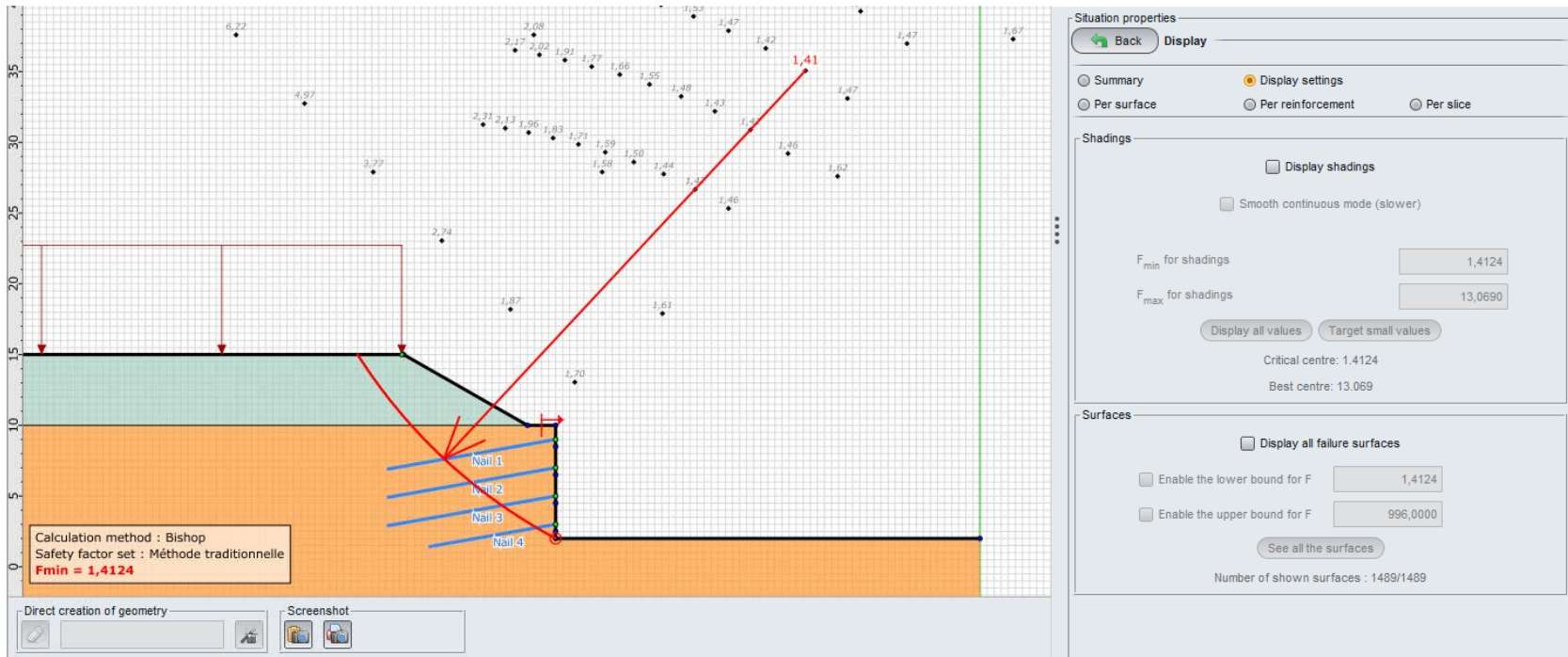Calculate the current situation

Calculate all the situations of all stages

Stages and calculations

Default output

- Most critical failure surface and corresponding FoS in red
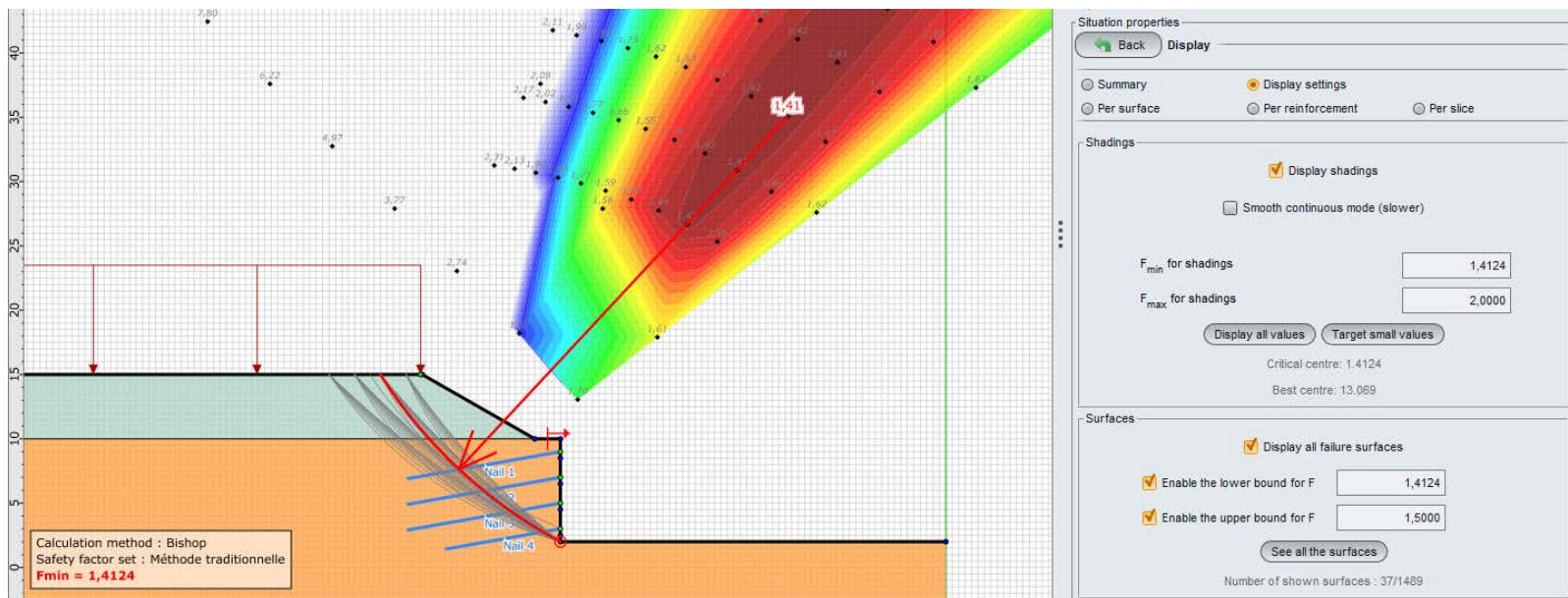- Summary table of the most critical surface

Stages and calculations

Graphical options

- Shadings to display the FoS values

- Display of all calculated failure surfaces

Stages and calculations

Output tables

- Detailed output

  - Per failure surface

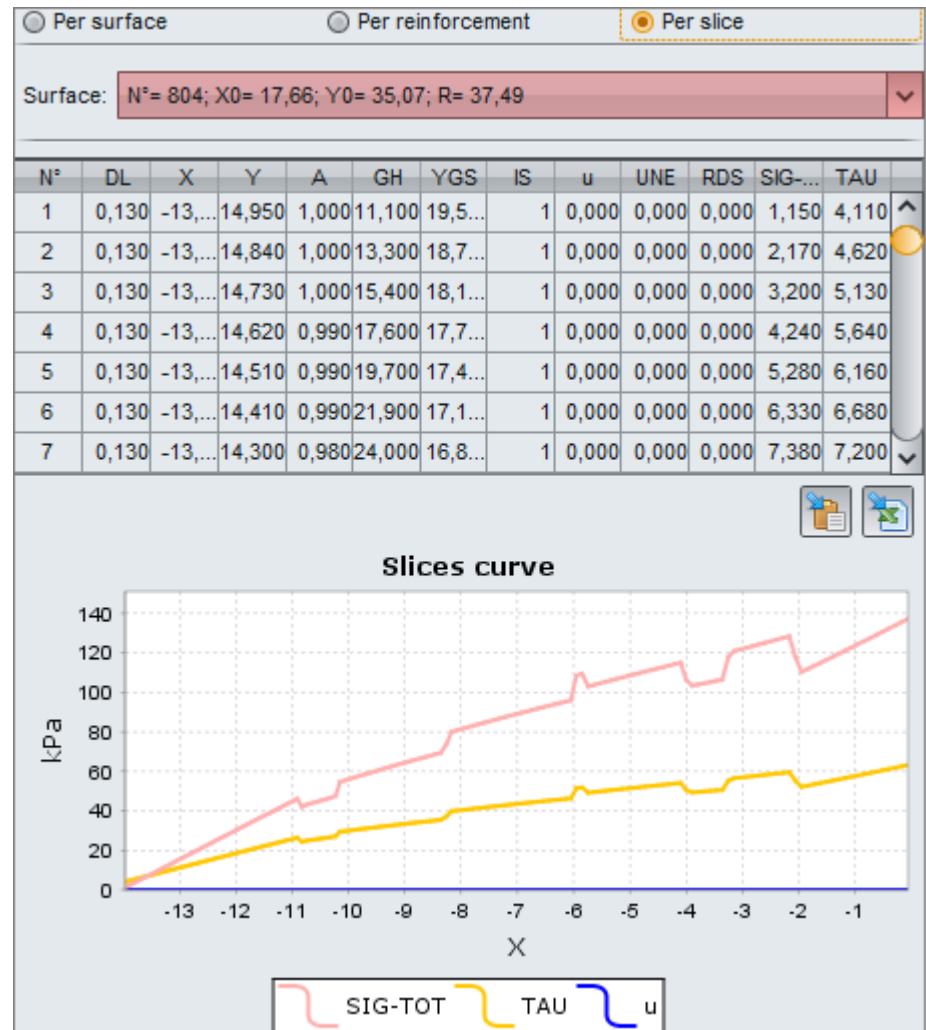| Per surface	Per reinforcement	Per slice				
N°	X_0	Y_0	R	M_{MOT}	F-SOL	F-SURCH	F-TOTAL
800	13,770	30,880	30,990	22476,86...	0,9728	0,9652	1,5295
801	13,770	30,880	30,490	18909,98...	0,9924	0,9863	1,8189
802	13,770	30,880	29,990	15570,74...	1,0166	1,0122	2,3614
803	13,770	30,880	29,490	12454,09...	1,0552	1,0533	3,7813
804	17,660	35,070	37,490	34914,29...	0,9228	0,9150	1,4124
805	17,660	35,070	36,990	30180,63...	0,9353	0,9277	1,6307
806	17,660	35,070	36,490	25719,52...	0,9529	0,9460	1,5488
807	17,660	35,070	35,990	21526,34...	0,9740	0,9681	1,8692
808	17,660	35,070	35,490	17596,02...	1,0028	0,9988	2,5006
809	17,660	35,070	34,990	13923,75...	1,0447	1,0438	4,3359
810	21,560	39,270	43,050	39515,98...	0,9071	0,8999	1,4149
811	21,560	39,270	42,550	34078,01...	0,9209	0,9138	1,6443
812	21,560	39,270	42,050	28948,98...	0,9402	0,9319	1,5655
813	21,560	39,270	41,550	24123,51...	0,9631	0,9576	1,9171
814	21,560	39,270	41,050	19597,90...	0,9948	0,9911	2,6318
815	21,560	39,270	40,550	15366,44...	1,0396	1,0391	4,9209
816	25,450	43,460	48,650	44117,92...	0,8961	0,8894	1,4189
817	25,450	43,460	48,150	37970,75...	0,9108	0,9042	1,6577
818	25,450	43,460	47,650	32169,42...	0,9297	0,9235	1,5836
819	25,450	43,460	47,150	26708,87...	0,9558	0,9507	1,9611
820	25,450	43,460	46,650	21584,62...	0,9899	0,9866	2,7541

Stages and calculations

Output tables

- Detailed output
  - Per slices

Stages and calculations

Output tables

- Detailed output
  - Per reinforcements

○ Per surface		● Per reinforcement		○ Per slice			

Surface: N°= 804; X0= 17,66; Y0= 35,07; R= 37,49

Nail

Name	LU	TR	ITR	IPTR	Tc	ICIS	IPCI
Nail 1	4,020	106,660	2	1	0,000	0	0
Nail 2	5,960	158,260	2	1	0,000	0	0
Nail 3	8,150	216,280	2	1	0,000	0	0
Nail 4	7,630	202,540	2	1	0,000	0	0