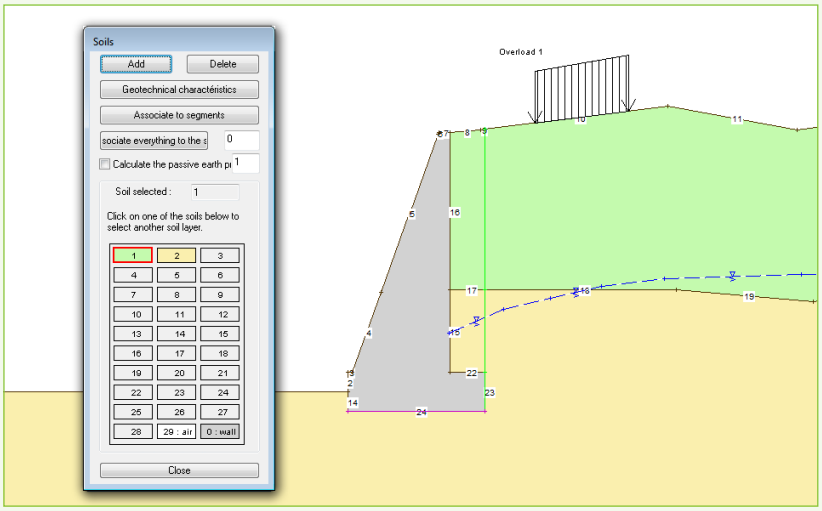
A fast, powerful tool, according to Eurocodes

GEOMUR

Retaining wall design

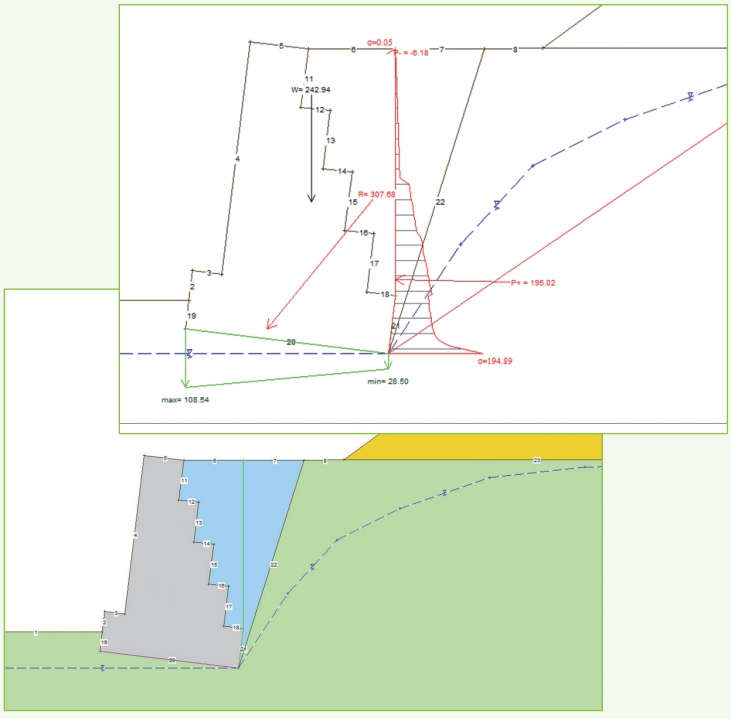
Gravity and cantilevered walls design

- **Efforts:** pressures, weight, hydraulic pressure
- **External stability:** sliding, overturning and punching
- **Internal stability:** masonry or reinforced concrete walls
- **Steel sections**



Result extraction functions

- Systematic recall of **all data input**
- Clair display of **security factors**
- **Pressure and stress diagrams**
- **Steel sections Design** according to BAEL and NF EN 1992-1-1

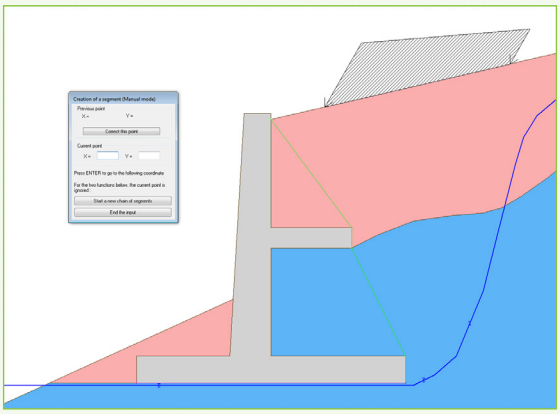


Fast and interactive model creation

- Predefined or free wall geometries
- **Any slopes shape** in the back and in front of the wall
- **Water levels** including those with partial drawdowns
- **Forces and overloads,** even inclined
- **Seismic calculations and solicitations** by rotation, and modification of gravity
- **Partial coefficients** from various French standards (Mur 73, Fascicule 62, NF EN 1997-1, NF P 94-281 et NF EN 1998-5)

Geos

Various design options
An intuitive and friendly interface



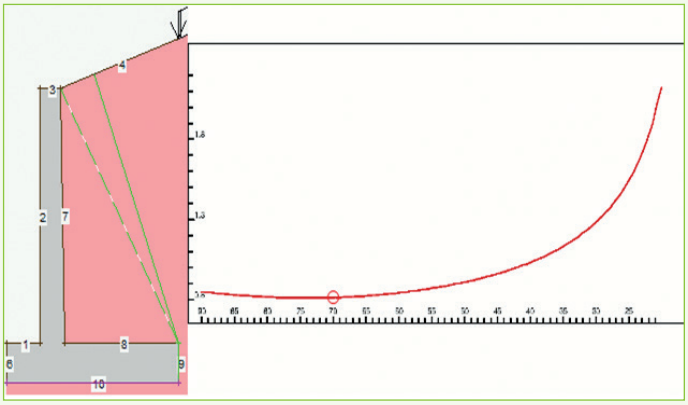
Key or heel at the base of the wall

GEOMUR allows free definition of the base of the wall and reconsiders automatically:

- **Punching efforts**
- **Sliding surfaces**
- **Application points of overturning moments**

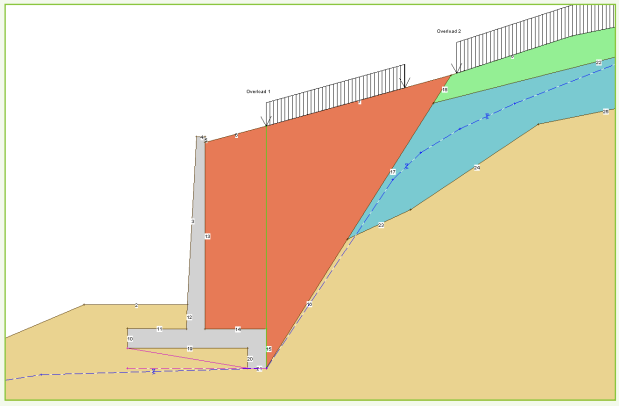
Variation of the fictive wall

GEOMUR automatically identifies the fictive wall's worst scenario



Design of walls in slope crests

GEOMUR calculates the reduction coefficient $i_{\delta\beta}$ on soils bearing capacity



Design according to Eurocodes

- French application standards NF P 94-281 **(Eurocode 7)**
- **Fascicule 62 Chapter V** methods
- Methods recommended by **Mur 73**
- Seismic calculations according to NF EN 1998-5 **(Eurocode 8)**

Partial safety factor	Criteria Eurocodes 7	Static factor Oversizing
Actions - ULS Unfavourable permanent γg = 1.35 Unfavourable variables γq = 1.5 Favourable permanent γg = 1 Favourable variables γq = 0 **Resistance** Bearing (ULS) γR;v = 1.4 shift γR;h = 1.1 butting γR;e = 1.4 **Water** State limit considered : SLS frequent Unfavourable water Actions γR;rst = 1	Approach - Case 1: unfavourable pressure Shift () Reversal () Punching () Approach - Cas 2 : favourable pressure Shift () Reversal () Punching ()	Rh = 605.290 kN Eh = 454.932 kN Rh/(Eh * gR;h) = 1.331 Mr,o = 4411.764 kN.m Mm,o = 1518.074 kN.m Mm,o/Mr,o = 2.906 q'ref = 255.047 kPa q'lim= 424.899 kPa q'lim/(q'ref * gr,e) = 1.190 Excen. = 0.333 m < 1.111 m Rh = 605.287 kN Eh = 336.987 kN Rh/(Eh * gR;h) = 1.796 Mr,o = 4411.721 kN.m Mm,o = 1124.499 kN.m Mm,o/Mr,o = 3.923 q'ref= 228.492 kPa q'lim= 485.091 kPa q'lim/(q'ref * gr,e) = 1.516 Excen. = 0.067 m < 1.111 m

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