**Description**

**GGU-GABION** – Analysis and design of retaining structures manufactured using concrete elements, stacked blocks and gabions or noise abatement walls.

**Capabilities:**

- Choice of analysis using either partial safety factors to DIN 1054:2010, EC 7, Austrian Standard ÖNORM EN 1997-1 or global safety factors (DIN 1054 old)
- Automatic noise abatement wall generation
- Geogrids definition via company products
- Verification of sliding safety, overturning safety and maximum geogrid forces
- Determination of external and internal element stability (inner stability to DIN 4093:2012-08)
- Bearing capacity safety and settlement analysis to DIN 4017 and DIN 4019
- Analysis of static equilibrium compliant with DIN 1055 or EQU compliant with EC 7
- Wind load consideration to DIN EN 1991-1-4
- Analysis of pull-out resistance of geogrids via gamma(B)
- System input using absolute heights
- Soil properties can be selected from an expandable database of common soils
- Consideration of active and passive berms
- Analysis using active earth pressure, at-rest earth pressure and increased active earth pressure
- Active earth press. coefficients to DIN 4085
- Passive earth pressure coefficients to DIN 4085:2011, Streck, Caquot/Kerisel
- Consideration of active and passive bounded and double-bounded surcharges
- Consideration of horizontal area loads
- Triangular load from stepped loads
- Automatic design of any geogrids present using two-part wedge failure mechanisms
- Limiting depth analysis using x % of overburden stress, a multiple of the foundation width or as a fixed value
- “5° condition” test to DIN 4017
- Seismic effects via additional horizontal loads and/or altered earth pressure coefficients to EC 8 or EAU 1990
- Interface to the GGU-STABILITY (slope stability analysis)
- Choice of result presentation for earth pressure, moments, horizontal force and vertical force

- Adopted standard, program name and version can be included in the General legend
- Freely definable positioning and sizing of graphical elements and legends
- Print or copy screen sections, e.g. for transfer to a word processor
- Integrated Mini-CAD system for additional annotation of graphics