CONSTRUCK
SLOPEROCKGABION

High-Energy Geohazard Protection Built Around Mass



CST-RGB-BRO-00019

CONSTRUCK SYSTEMS & TECHNOLOGY

Research and Development | Design | Manufacturing | Geotechnics

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Geohazard defense. Built around mass.

High-energy impact absorption. Rockfall, debris-flow and landslide protection.



ConstruckSlope RockGabion brings selected stone fill and corrosion-resistant mesh containment together in modular barrier units built to stop rockfall, debris flow and shallow landslides.

The stone fill provides mass that absorbs and dissipates impact energy. The containment holds it in a defined form. Arranged along the hazard path, the units create a permeable barrier that combines weight, energy absorption and drainage.

Between flexible steel barriers (up to 5,000 kJ) and FlexGabion (up to 30,000 kJ), RockGabion covers impact demands up to 10,000–12,000 kJ.

Mass That Absorbs Impact

Stone-filled units form a massive barrier, dimensioned for the design impact energy, block size and bounce height.

Drainage Built Into the Body

Voids between the stones let water pass through, so retained debris does not build up water pressure behind the barrier.

Modular by Design

Units can be arranged along slope toes, gullies and catch zones, giving engineers flexibility in the barrier layout.

SPaaP® — Slope Protection as a Product

Defined containment, fill requirements and assembly details give crews a clear basis for construction and quality control.

Where It Is Used

- Rockfall barriers below unstable cliffs and rock cuts.
- Debris-flow and mudflow retention in gullies and channels.
- Landslide-toe buttressing and impact walls.
- Highway, railway and mining corridor protection.
- Protection of settlements, portals and critical infrastructure.

What It Helps Your Project Achieve

- Stop high-energy rockfall impacts up to 10,000–12,000 kJ.
- Absorb repeated impacts through a deformable stone-filled body.
- Retain boulders and debris within a defined catch zone.
- Adapt the barrier line to irregular terrain and access limits.
- Drain water through the barrier to avoid pressure buildup.

System, Components & Benefits



Gabion Mesh Containment



Selected Angular Stone



Connection & Interface Details

Benefits at a Glance

High-Energy Impact Capacity

Stone-filled units absorb impact energy through mass, with width and height sized for the design rockfall event.

Permeable Protection

Water can move through the stone fill, helping reduce trapped-water pressure behind the barrier.

Flexible Response

The gabion body deforms locally under impact to dissipate energy, and damaged units can be repaired in place.

Adaptable Geometry

Modular units follow the hazard path along slope toes, gullies and catch zones around infrastructure.

Durability Through Material Selection

Durable rock and mesh protection suited to the exposure support long-term service and a practical inspection strategy.

Natural-Material Finish

Exposed stone gives the structure a textured finish that can integrate visually with the surrounding landscape.

How RockGabion® changes geohazard protection

Mass & Stone Interlock

Angular stone settles into a confined body. On impact, the mass and friction between stones absorb and dissipate the energy of the falling block.

Modular Geometry

Units are arranged along the rockfall or debris path to suit site constraints. Barrier height and width are sized from trajectory, bounce height and impact energy.

Permeability & Drainage

Water passes through the stone voids, so the barrier does not build up water pressure behind retained debris.

More than just Rockfall Protection— A SPaaP® Specialty Fully Loaded with Engineering Features



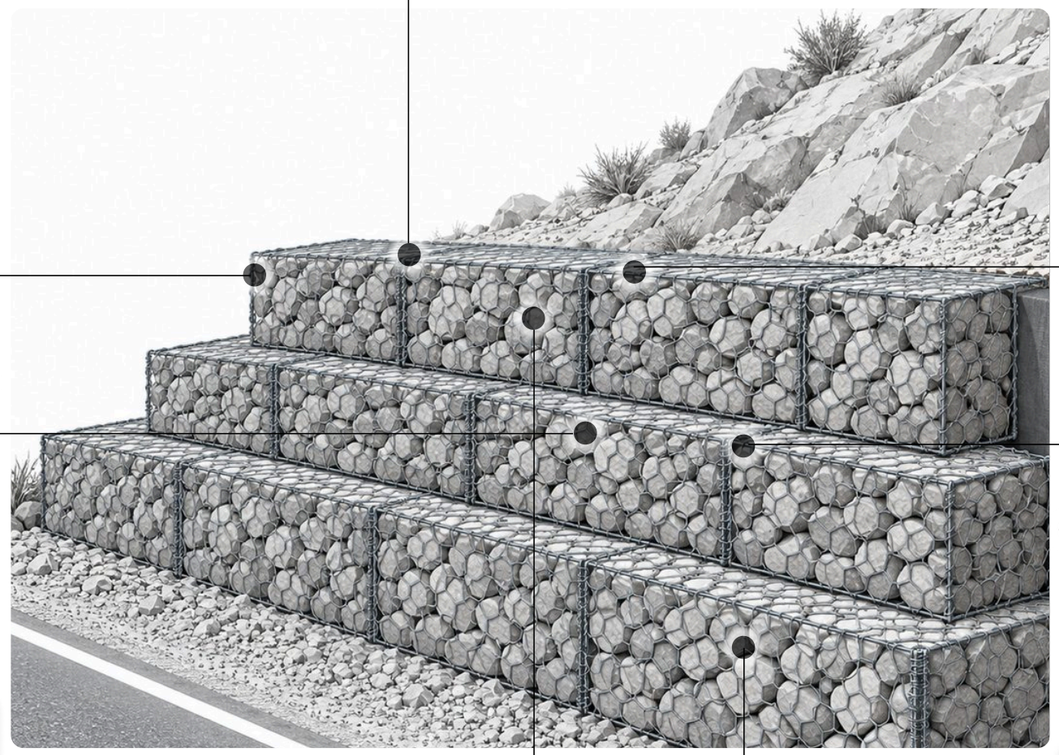
Corrosion-resistant mesh containment

Exposure-appropriate mesh protection keeps the stone fill confined through repeated impacts and long-term exposure, so the barrier holds its form where it matters.



Connected units. One structure.

Secure closures and connections tie adjoining units together, so impact loads are shared along the barrier line instead of hitting a single unit.





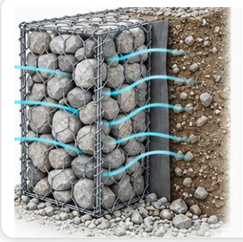
Mass-based resistance

The RockGabion® body confines selected rock fill to form a massive barrier. On impact, stone mass and interlock absorb and dissipate energy, covering demands up to 10,000–12,000 kJ.



Modular, adaptable geometry

Defined units form stepped and stacked barrier lines that follow slope toes, gullies and catch zones, sized to the rockfall path and bounce height.



Permeability that supports stability

Stone voids let water drain through the barrier, so retained debris and saturated material do not build up pressure behind it after storms.



Flexible structural response

The stone-filled body deforms locally under impact instead of undergoing brittle failure, dissipating energy. Damaged units can be inspected and repaired in place.



Selected angular stone fill

Durable angular stone provides the mass and interlocking contact that absorb impact energy, while appropriate sizing keeps the fill securely contained within the mesh.





Performance, SPaaP & Spec Snapshot

How RockGabion changes geohazard protection

Energy Absorption & Stone Interlock

Stone-filled units form a massive barrier. Angular stone interlocks within the mesh, and the mass absorbs rockfall and debris impact energy.

Designed for Site Conditions

Barrier dimensions, alignment and foundation are developed from rockfall trajectory, impact energy, bounce height and access constraints.

Consistent Factory-Made Components

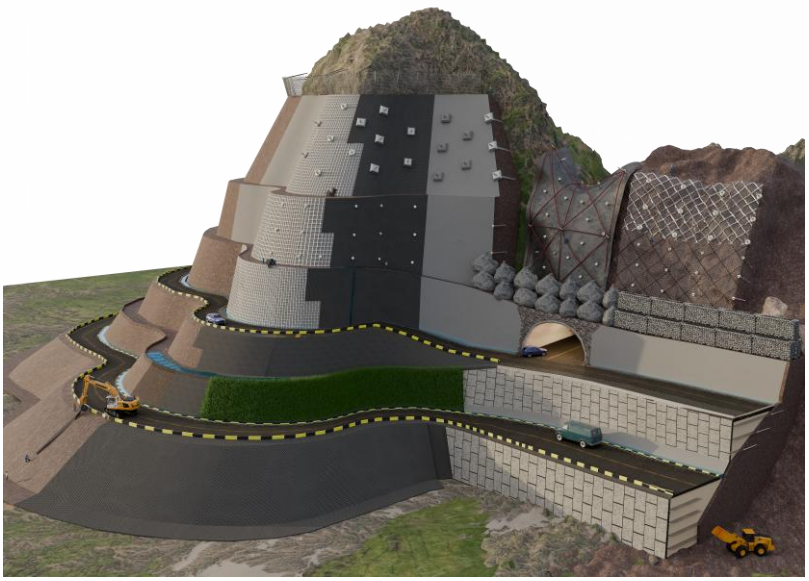
Mesh, fasteners, stone grading and assembly details are specified so that installation can be inspected, approved and maintained with confidence.

SPaaP — Slope Protection as a Product

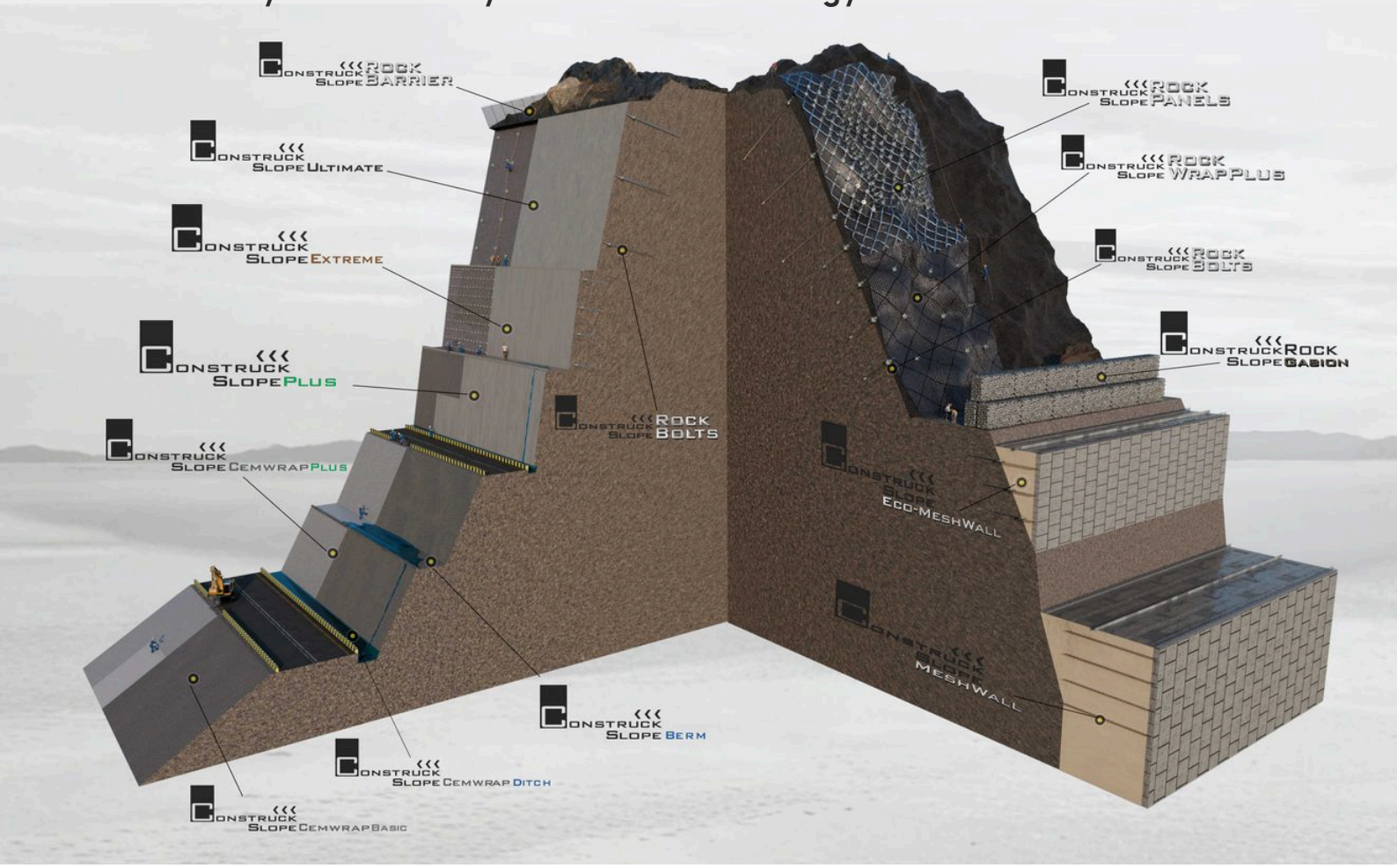
- One matched kit, one trained crew, one clear construction path.
- Project-specific engineering based on hazard assessment, block size, trajectory and impact energy.
- Fewer trades and lighter logistics than concrete impact walls on many sites.
- Clear inspection and repair approach after impact events and over the service life.

Advantages

- **High-energy capacity:** absorbs impacts up to 10,000–12,000 kJ.
- **Permeable body:** stone voids allow drainage and help limit water pressure buildup.
- **Flexible response:** the body deforms under impact without brittle failure.
- **Adaptable layout:** barrier lines follow slope toes, gullies and catch zones.
- **Durable materials:** corrosion-resistant mesh and selected stone suited to the exposure.
- **Natural finish:** exposed stone integrates with the surrounding landscape.



The Widest Range of SPaaP® in the World, Powered by Construck Systems and Technology.



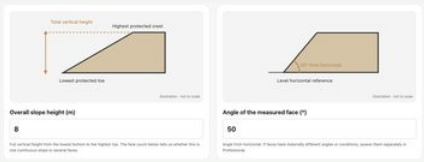
Digital support

Better decisions. A stronger project.

Explore the options, strengthen the technical basis and connect the people, information and delivery behind your Construck system.

Construck Calc

Understand the ground.
Build the technical case.



Actual Quick Check interface / sample geometry.

Quick Check
A free first step into relevant systems, preliminary quantities and indicative cost.

Professional
Bring surveys, ground conditions and existing studies into a project-specific assessment.

A further stability study
A project-specific stability study is included for each slope we take forward for protection.

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ProjectSuite

One connected platform.
Support from start to finish.



Actual development workspace / sample records.

Manufacturer expertise, local support
Connect technical teams and authorised local partners around the selected Construck system.

Supply and construction, coordinated
Keep technical preparation, material supply and installation quality in the same workflow.

Sustainability and handover
Relate environmental estimates to project quantities and retain useful information for the asset.

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Quick Check is preliminary guidance. Professional assessment and support follow the agreed scope and required approvals.













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