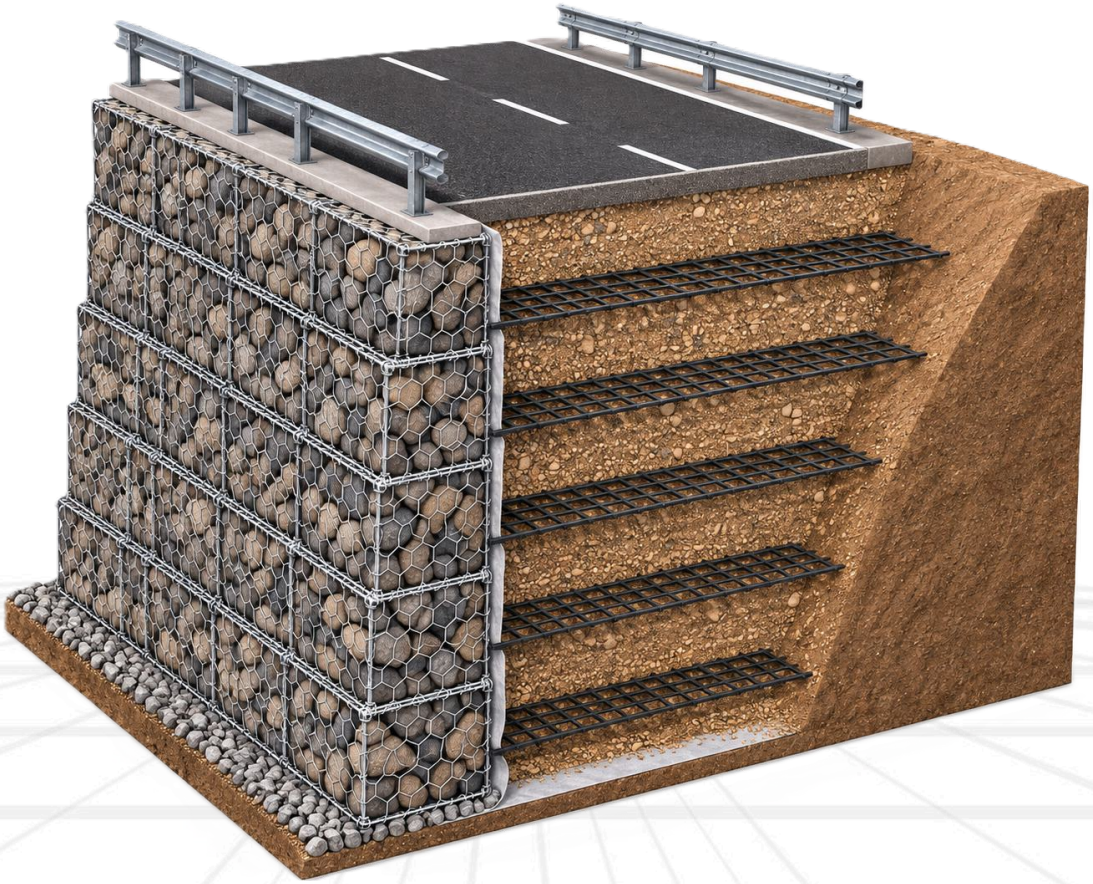
CONSTRUCK

SLOPE MESHWALL

Retain ground.
Create usable space.

Geogrid-reinforced fill. A modular mesh face.
Engineered together for earth retention.



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CONSTRUCK SYSTEMS & TECHNOLOGY

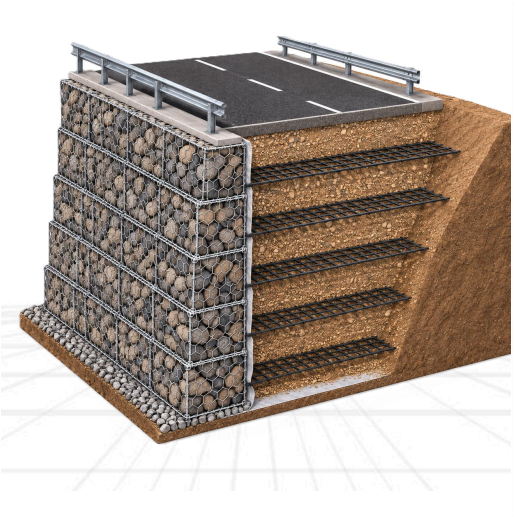
Research and Development | Design | Manufacturing | Geotechnics

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ConstruckSlope MeshWall — Engineered Earth Retention for Slope and Structure Stability

High-strength geosynthetics. Modular facing. Sustainable, cost-effective construction.

ConstruckSlope MeshWall combines geogrid-reinforced fill with a modular, stone-filled mesh face. The reinforcement and compacted soil work together as a retaining mass, while the facing contains the exposed front. Each wall is designed for its geometry, ground conditions and loading, including seismic actions and groundwater where relevant. Build usable space for roads, embankments and infrastructure with a system assembled in controlled lifts.



High-Strength Geosynthetics

The geogrid reinforcement interlocks with compacted soil to create a composite mass that evenly distributes lateral earth pressures, enhancing load-bearing capacity and stability against heavy structures, seismic forces, and dynamic loads.

Sustainable & Cost-Effective Design

Selected fill and a modular mesh face can reduce reliance on cast-in-place concrete, formwork and curing. Material quantities and site preparation follow the project design.

Seamless Integration & Durability

Mesh facing, geogrid and compacted fill form one coordinated wall. Designed connections, foundation support and drainage address the demands of the site.

SPaaP® — Slope Protection as a Product

SPaaP brings the specified components, engineering and installation requirements together, giving teams a clear path from design to controlled site delivery.

Places of Use

- Road embankments and highway support
- Bridge abutments
- Retaining walls in residential or commercial developments
- Hillside developments and access roads
- Slope foot stabilisation in landslide-prone areas

What MeshWall Delivers

- Reinforced fill creates a structural retaining mass.
- Design checks address sliding, bearing and overall stability.
- Modular facing avoids cast-in-place face curing.
- Groundwater and seismic conditions inform the design.
- Wall geometry adapts to the available site footprint.

System, Components & Key Benefits



ConstruckGrid HS — Geogrid Reinforcement



ConstruckGabion — Mesh Facing System



Compacted Granular Fill

Benefits at a Glance

Engineered Strength

High-tensile geogrid interlocks with soil to form a composite mass, dramatically improving shear strength and distributing lateral earth pressures under extreme loading.

Designed footprint

Reinforcement length and excavation follow the wall height, loads and ground conditions. The reinforced zone is planned to fit the site.

Faster Construction

No formwork, finishes, or curing time — reducing downtime and accelerating project delivery, ideal for confined areas or active job sites.

Adaptable to Challenging Conditions

Modular units suit varied wall alignments. Reinforcement length, access and foundation requirements remain part of the site layout.

Sustainable & Low Maintenance

Suitable local fill can reduce imported materials. Fill quality, filtration and drainage are specified to support the wall and manage groundwater.

Long-Term Performance

Performance depends on the selected components, foundation, connections, drainage and controlled construction. Inspection supports long-term service.

How the MeshWall structure works

Geosynthetic Reinforcement

Geogrid develops tensile resistance through interaction with compacted fill. Its strength, spacing and length are selected for the wall geometry and loading.

Water management

The mesh face permits drainage, but does not replace a designed drainage system. Fill permeability, filters and outlets must suit the ground and water conditions.

Seismic design

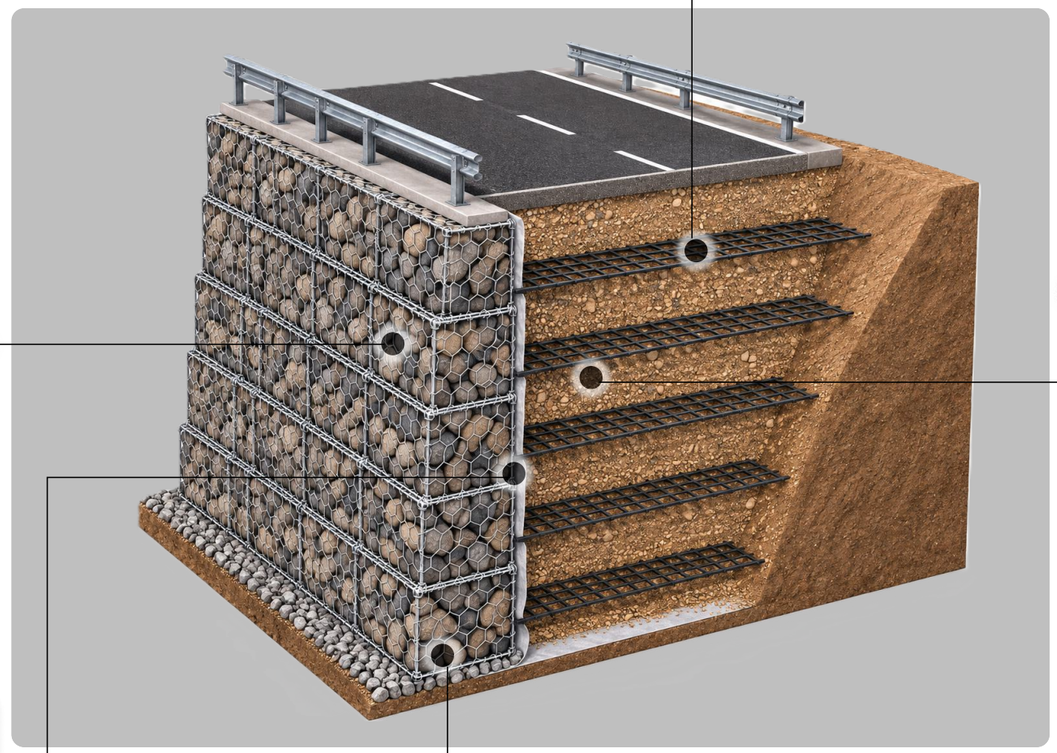
Seismic actions are assessed for the site. Reinforcement, connections and the foundation are designed together to address strength, stability and movement requirements.

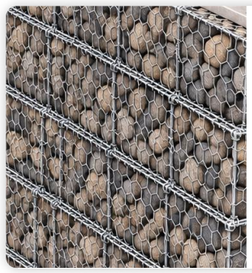
Compacted Fill as Structure

Unlike concrete gravity walls, MeshWall's reinforced compacted fill IS the structure. Each compacted lift, locked in by geogrid layers, contributes directly to wall strength — reducing concrete, formwork, and curing entirely.

The strength is in the reinforced soil mass.

See how the grid, compacted fill, facing and connections work together.





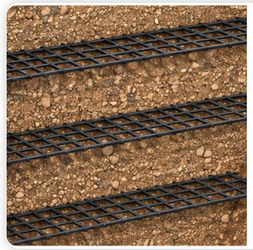
A modular face that retains the front

Stone-filled mesh units contain the exposed face and form the wall's external profile. Their connections to the reinforcement complete the specified facing arrangement.



Strength within the fill

Geogrid layers develop tensile resistance through interaction with compacted fill, creating the reinforced soil mass behind the facing. Strength, length and spacing follow the wall geometry and loading.



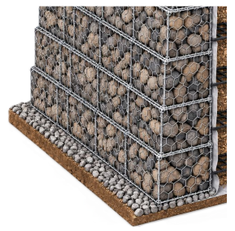
Compaction that builds the structure

Fill selection and controlled compaction are fundamental to performance. Each lift forms part of the reinforced mass; placement quality matters throughout the wall.



Connections that carry the design through

The facing and reinforcement must work together. Designed connections transfer the required forces and control relative movement as construction progresses.



Reliable support starts at the base

A prepared foundation provides the bearing support and alignment needed for staged construction. Ground conditions, settlement and overall stability remain part of the project design.





Performance, SPaaP & Spec Snapshot

How geogrid-reinforced MeshWall delivers stable, cost-effective earth retention

Reinforce + Interlock + Hold

High-strength geogrid interlocks with compacted granular fill to form a composite mass that holds back lateral earth pressure from slopes, embankments and structures.

Engineered for Real Site Conditions

Designed around wall height, slope geometry, soil strength, surcharge and seismic loads, hydrostatic conditions, and available footprint.

Factory-Consistent Quality

Matched geosynthetic and facing components, controlled accessories, defined installation procedures, and traceable QA make the system easier to approve, inspect, and maintain.

SPaaP — Slope Protection as a Product

- One matched kit, one trained crew, one performance path.
- Project-specific engineering based on wall height, site geometry, soil parameters, and loading conditions.
- Faster programs with fewer trades and lighter logistics than concrete gravity or rigid wall options.
- Clear maintenance approach over the structure's service life.

Advantages

- **Engineered strength:** Geogrid layers lock compacted fill into a composite structure with high tensile resistance.
- **Complete load path:** Forces transfer through geogrid layers, the modular facing, and the reinforced soil mass.

• Material efficiency: Selected fill forms the structural mass; concrete use depends on the design.

• Water management: Specify fill, filtration and drainage to manage groundwater and runoff.

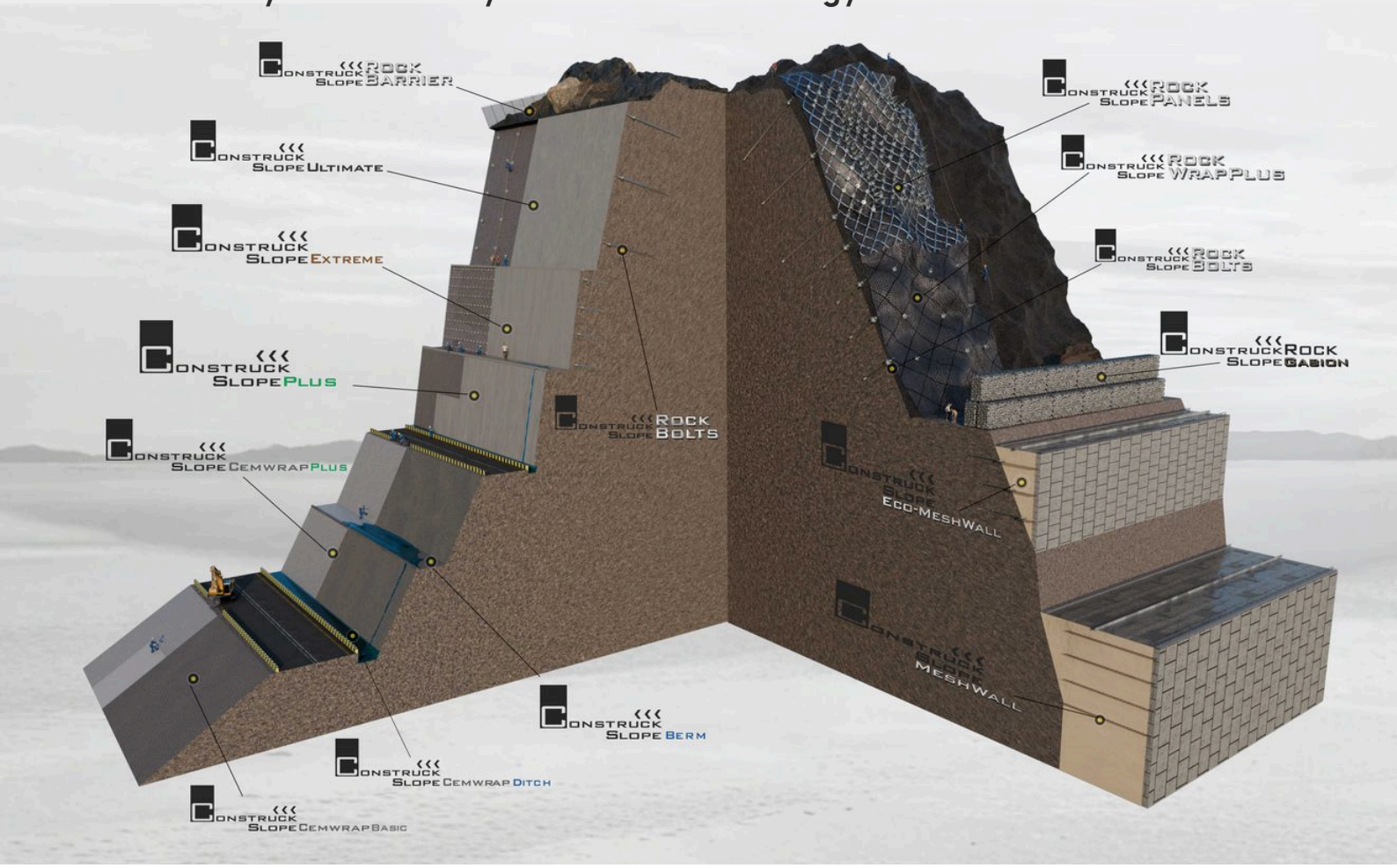
- **Compact footprint:** Suitable for roads, bridge abutments, and constrained hillside sites.

• Site-specific performance: Loading, groundwater and exposure inform component selection.

- **Corrosion-smart durability:** Galvanized and coated steel options for hot, coastal, and arid environments.



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



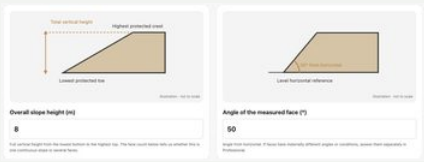
Digital support

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.

construck.me/project-suite

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













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