

**HYDRAULIC & COASTAL ENGINEERING
GEOSYNTHETIC SYSTEMS**



ENGINEER THE EDGE



**WHERE LAND MEETS WATER
WE ENGINEER FOR A SAFER TOMORROW**

REVTMENT FILTERS

RIVER EROSION PROTECTION

COASTAL DEFENCE

RECLAMATION DYKES

CHANNEL PROTECTION

STORMWATER SYSTEMS

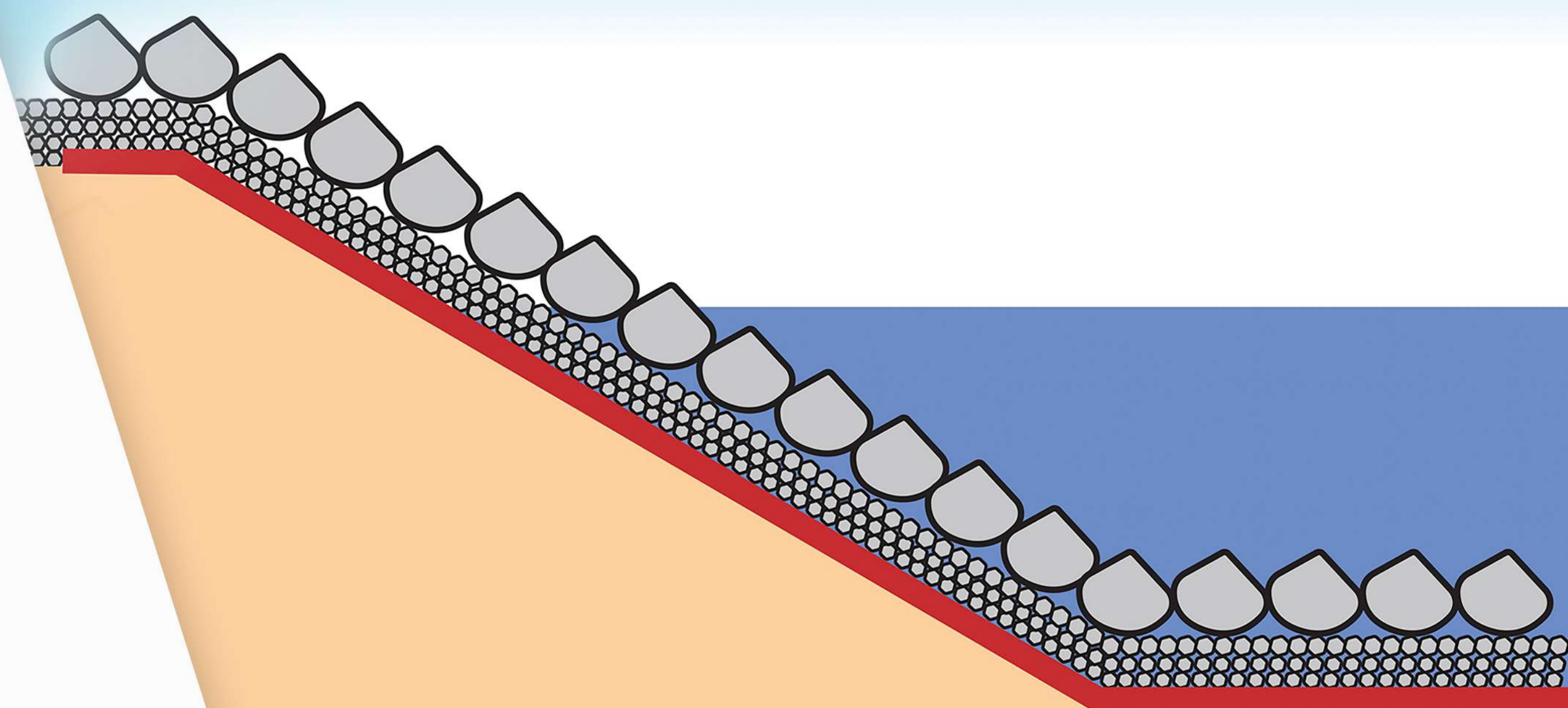
www.techfabindia.com

EROSION PROTECTION SYSTEMS RIVER AND COASTAL REVENTMENTS

SMART FILTRATION, LASTING STABILITY

ENGINEERED REVETMENT FILTER:

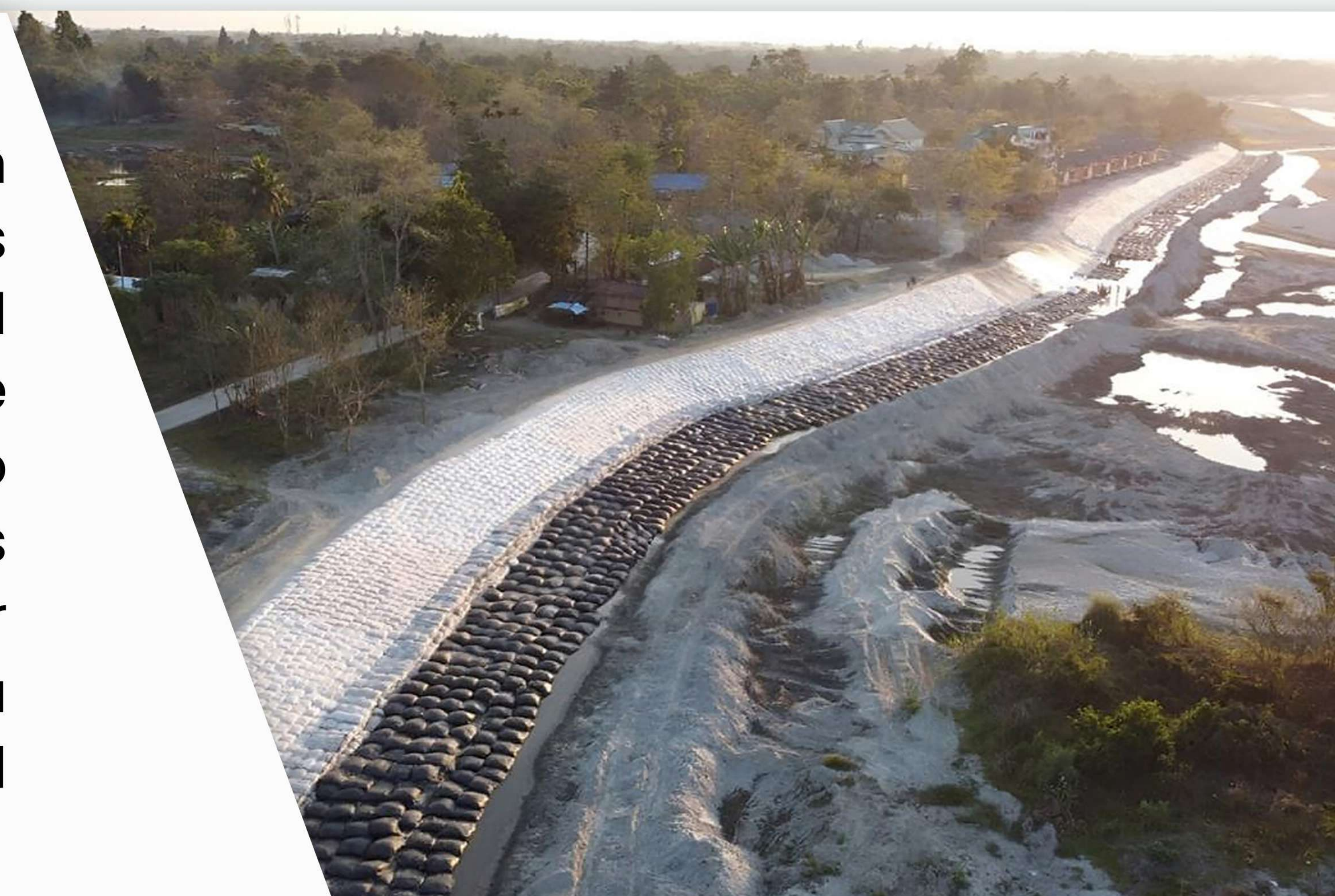
Engineered to resist subsoil migration under bidirectional wave-induced flow, dissipate excess pore pressure, and separate armour from subgrade without loss of hydraulic conductivity., TechFab Non-Woven Geotextiles form a critical component of river bank revetment filtration systems. Designed for long-term performance of revetments, they provide the foundation for stable, durable infrastructure across roads, embankments, retaining walls, and hydraulic structures.



ENGINEERED TO WITHSTAND, BUILT TO LAST

ENGINEERED GEOBAGS:

Provides robust, field driven erosion protection for river banks, coastal revetments and is engineered to resist wave action, tidal currents, and hydraulic scour. With their flexible yet resilient structure, Geobags conform to irregular surfaces, distribute hydraulic loads uniformly, and maintain slope integrity under demanding conditions, delivering a cost-effective, sustainable solution for critical hydraulic infrastructure.



TIME ADVANTAGE

No Quarrying. No Long-Haul Transport. Geobags Cut Lead Times and Accelerate Project Delivery.

QUALITY ADVANTAGE

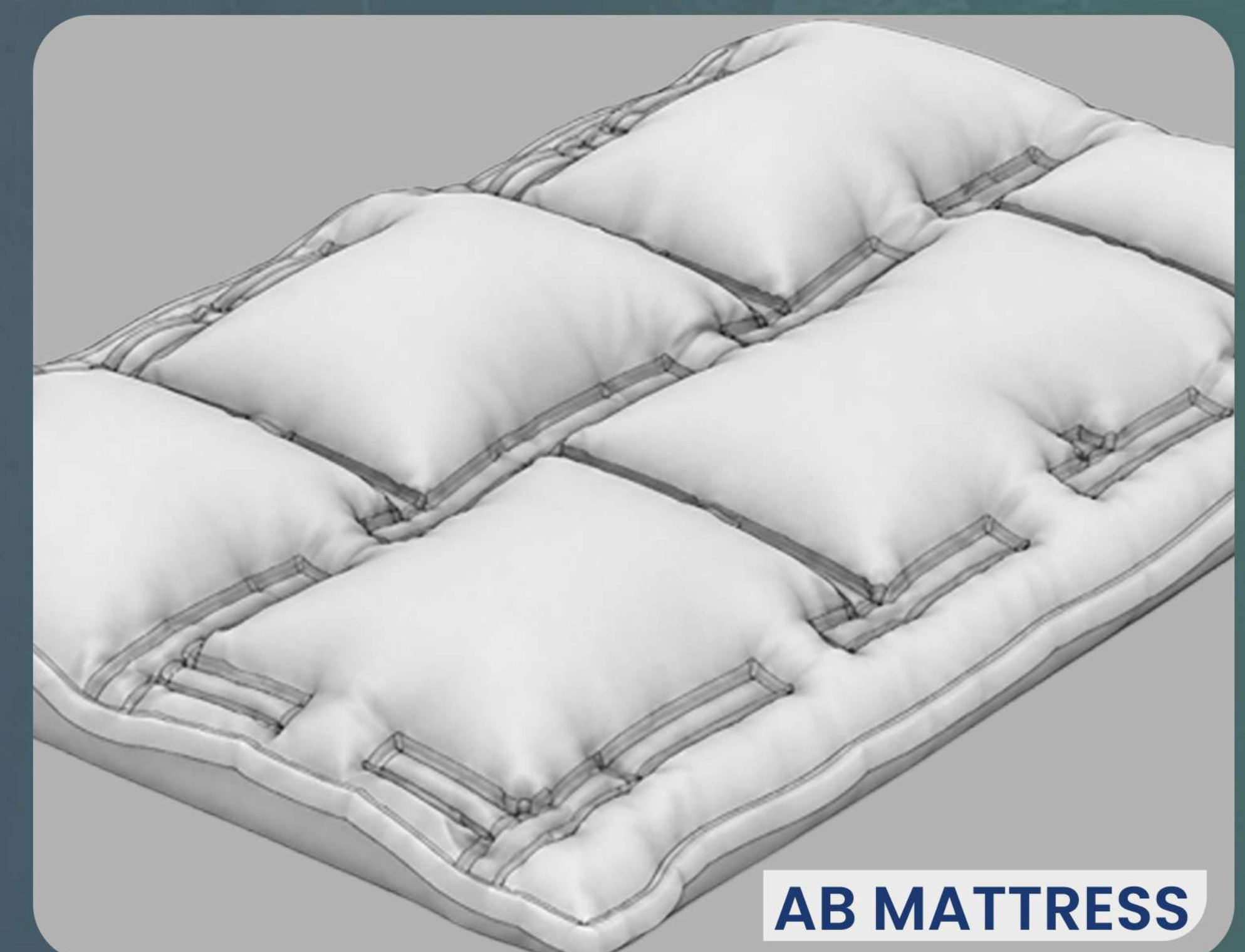
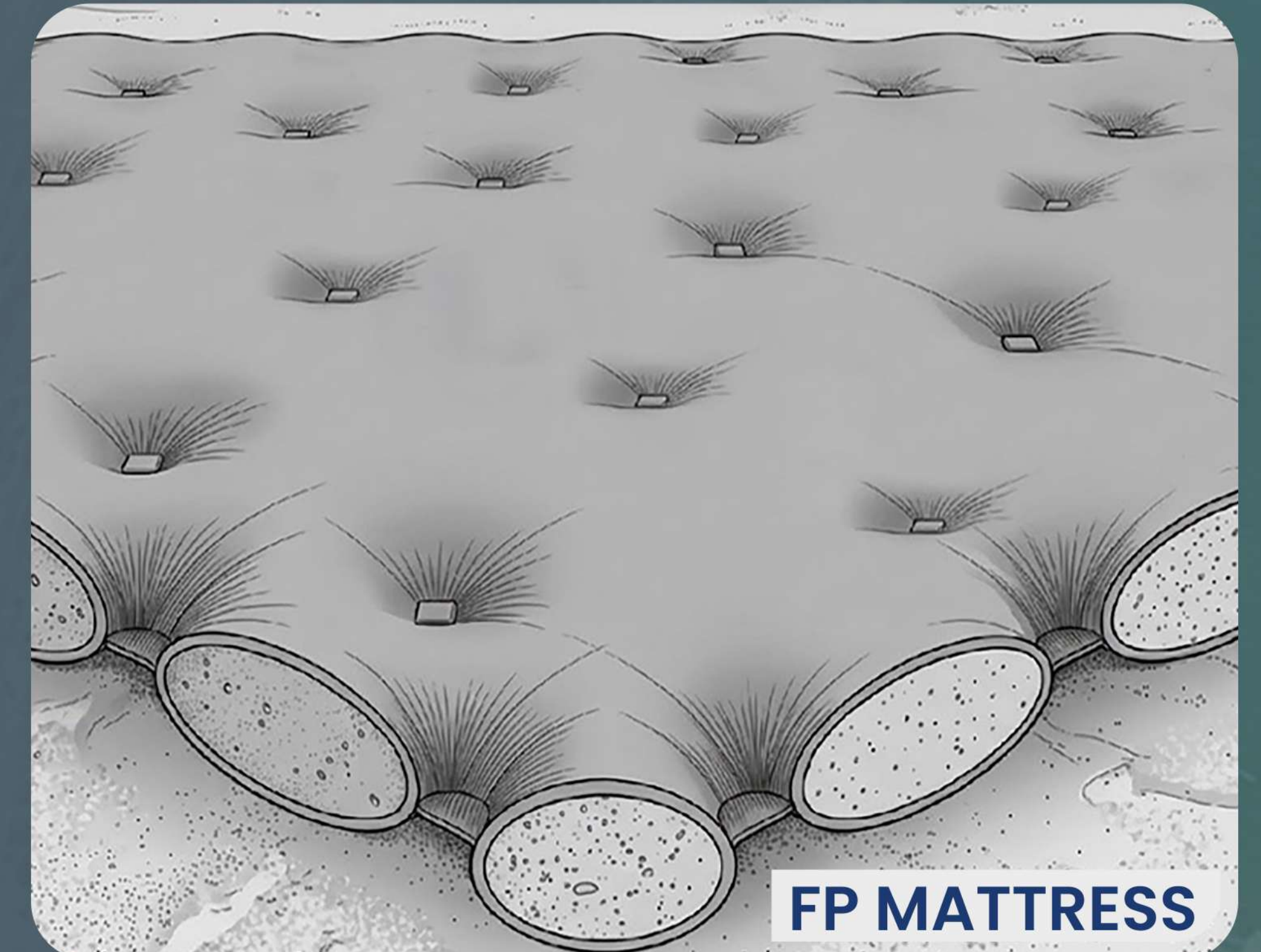
Quality by Design, Not by Chance — Geobags Deliver Consistent, Specification-Driven Performance Across Every Site.

TECHMAT®

FABRIC FORM GROUT MATTRESS

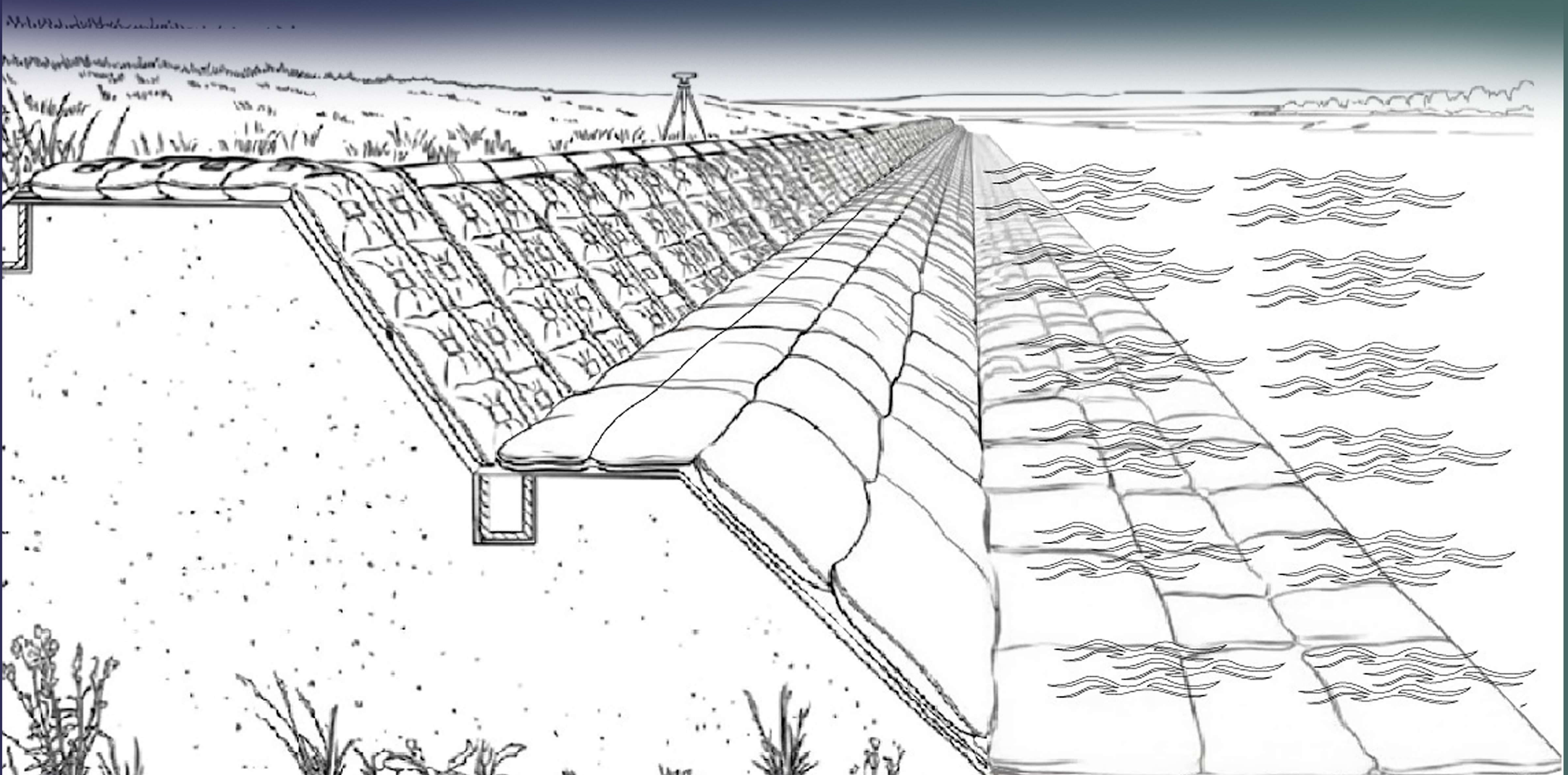
TechMat® is an advanced concrete grout mattress system engineered for hydraulic and erosion-protection applications. Fabric formwork is filled with concrete grout to form a stable, flexible protective layer that conforms to varying ground conditions, delivering long-term structural performance across channels, riverbanks, slopes, and hydraulic structures.

- **Three Variants Available** : Filter Point, Uniform Section, and Articulated Block — engineered for specific site requirements
- **Flexible & Ground-Conforming** : Adapts to irregular surfaces and poor subgrades without loss of structural integrity
- **Monolithic Concrete Matrix** : Uniform fill creates a continuous, durable protective concrete layer
- **High Resistance to Scour** : Engineered to withstand hydraulic forces, high flow velocities, and long-term erosion



From Slope to Apron — TechMat® Delivers a Complete, Engineered protection System.

River Bank Erosion Protection — Integrated System Application



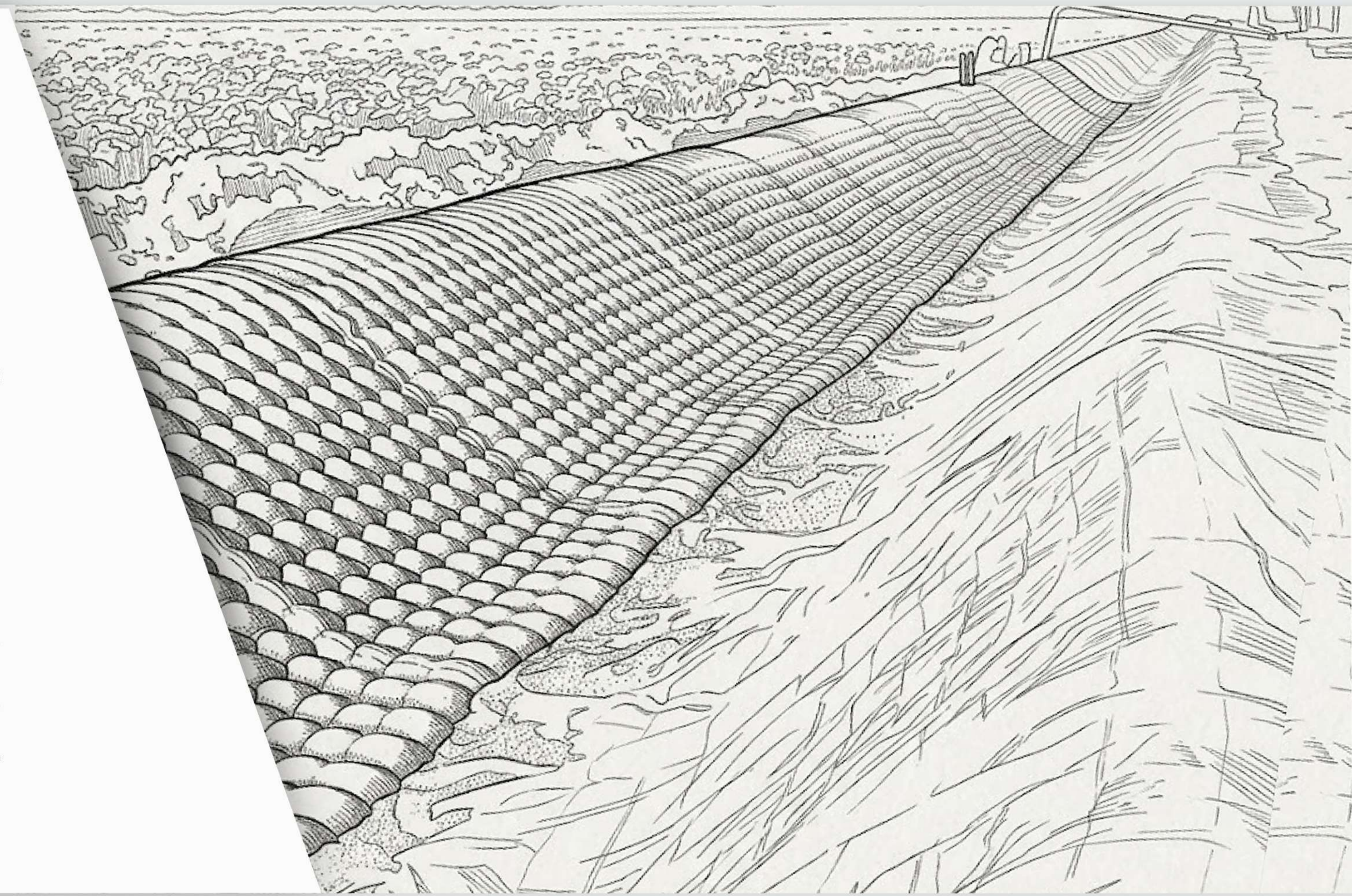
FP Mattress (slopes) + AB Mattress (apron) — Complete Engineered Riverbank Protection.

CHANNEL PROTECTION & STORMWATER DRAINAGE SYSTEMS

Built for Flow. Designed for Permanence. Proven Performance from Marginal Soils to High-Velocity Channels.

TechMat® — Uniform Section / Filter Point Mattress

- **Monolithic Concrete Matrix** : Continuous, uniform concrete layer for complete channel and slope protection
- **Rapid Installation** : Significantly faster than conventional rigid lining no on-site batching required
- **Marginal Soil Performance** : Ground conforming flexibility adapts to poor subgrades without loss of structural integrity
- **Reduced Water Losses** : Minimises seepage, improving hydraulic efficiency across the protected section
- **Lower Carbon Footprint** : Material efficient manufacture reduced embodied carbon vs. cast in place concrete
- **Minimal Maintenance** : Robust lining cuts long term repair frequency and operational costs



Where Ground Conditions Challenge — TechMat® Conforms, Protects and Performs.

Why TechMat® Outperforms Traditional Channel Protection



**No Formwork
or Batching**



**Marginal Soil
Ready**



**40–60% Faster
Installation**



**Lower Carbon
Footprint**

Concrete Canvas® — Effective liner system for Effluent/ Storm water drain management

- **Concrete on a Roll** : Flexible geosynthetic that hardens on hydration into a permanent, durable concrete surface
- **10× Faster Installation** : Dramatically cuts deployment time vs. conventional concrete channel lining methods
- **No Mixing or Batching Required** : Eliminates on-site concrete plants, reducing labour, logistics and construction waste
- **Lower Carbon Footprints** : Up to 95% less material than cast concrete significantly lower CO₂ per metre
- **Abrasion & Chemical Resistance** : Engineered for long-term durability in aggressive hydraulic environments
- **Reduced Maintenance** : Hard, impermeable surface minimises erosion and extends service life



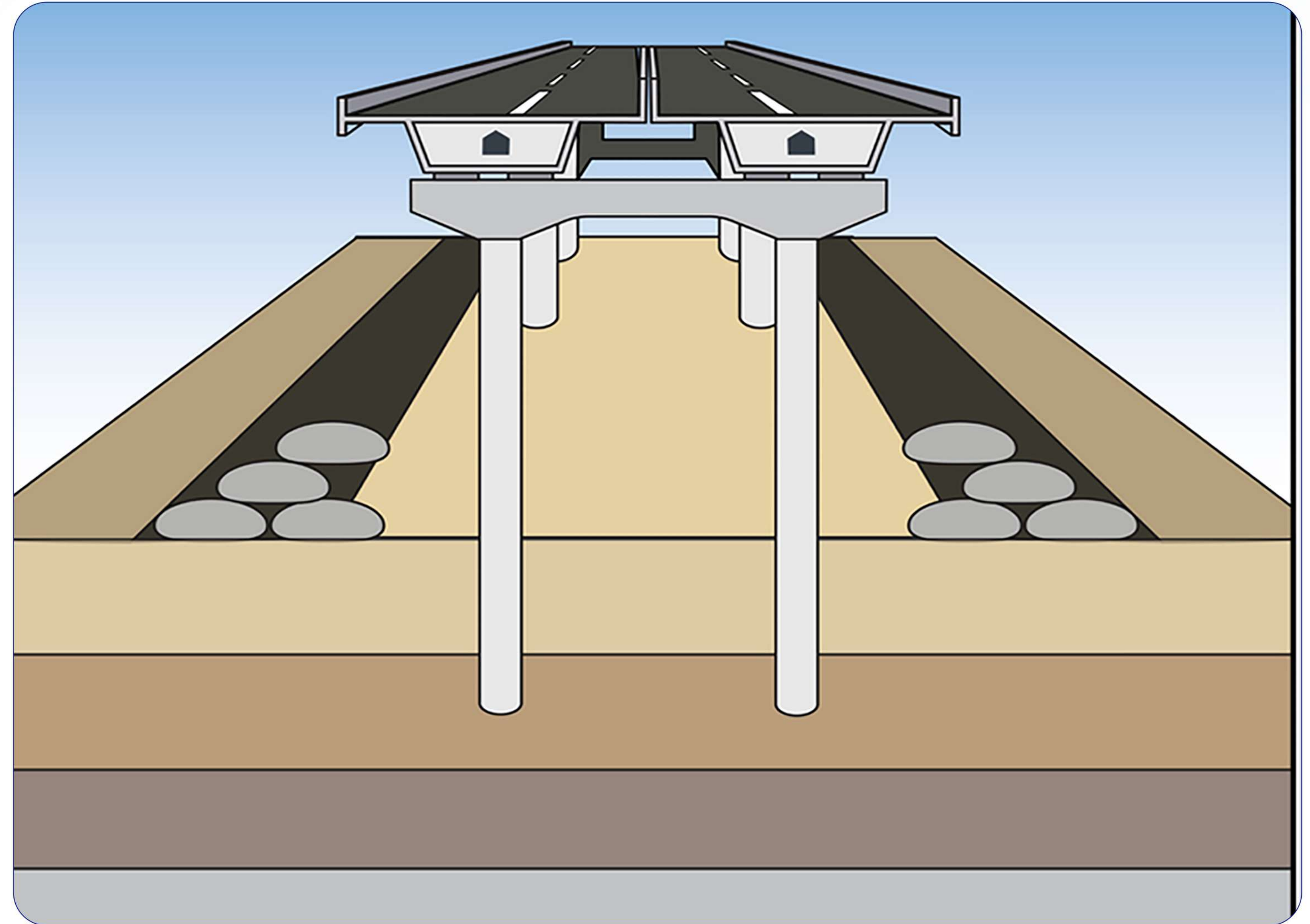
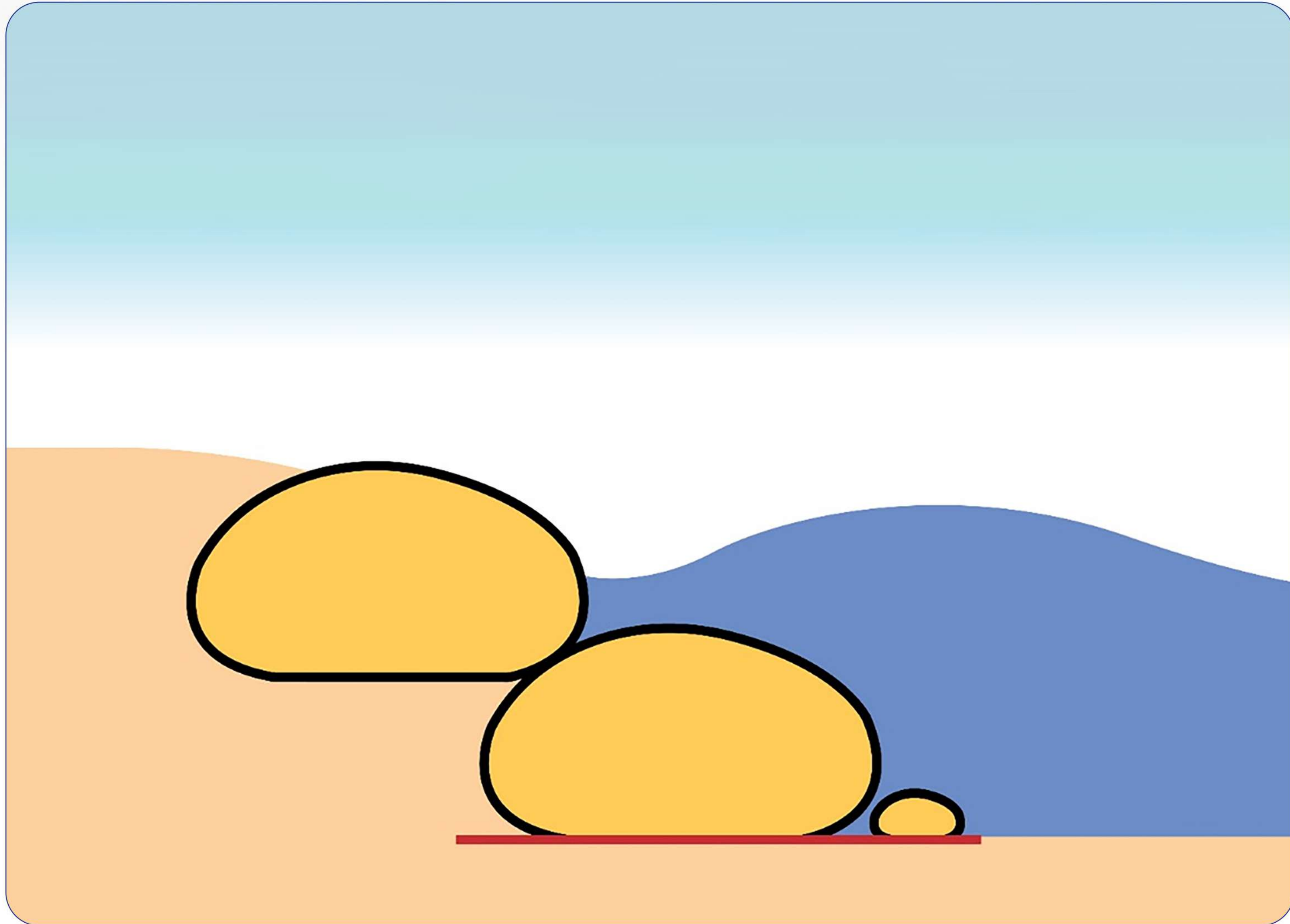
Concrete in a Roll. Installed in Hours. Built to Last Decades.

COASTAL PROTECTION SYSTEMS

Challenging the limits of landline.. Techtube dykes are engineered to support additional reclaimed land and enhance the coastal economy.

Techtube® — Geotextile Tube Systems

Techtube® Geotextile Tube Systems deliver a sustainable, cost-effective solution for shoreline protection and land reclamation — uniquely designed to be filled with locally available sand, blending seamlessly with the natural coastalecosystem. Engineered with high-performance fibres to endure severe coastal storms and extreme hydrodynamic stresses,Techtube® is ideal for locations with limited rock access, enabling rapid deployment and lasting structural performance.



Techtube® Mega Bags

Techtube® Megabags are engineered units which can be customized to site requirements (up to 3.5MT per each unit) which can deliver exceptional ballast and resistance against wave action and tidal forces in high-energy coastal environments. Their substantial weight advantage ensures long-term positional stability - the definitive choice for critical coastal protection requiring permanent, reliable performance.



TechTube® Megabags units - Designed to replace heavy armor/rock units

TECHROCK™

BIO-ENGINEERED COMPOSITE GEOSYSTEM

Protecting Shorelines. Restoring Ecosystems.

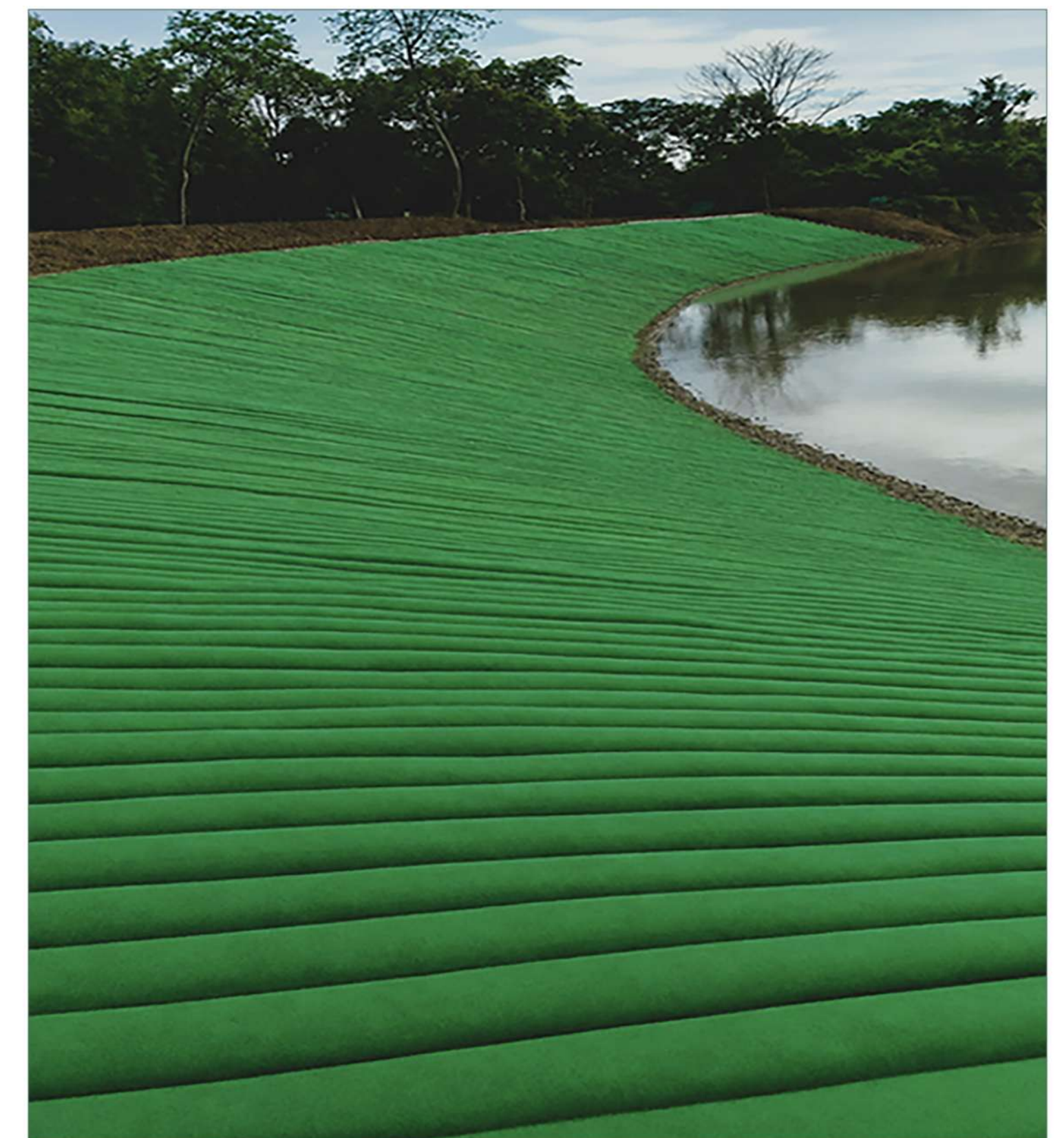
TechRock™ — Engineered Composite Geotextile Shoreline Protection

TechRock™ is a bio-engineered geosynthetic system that protects shorelines without conventional rock armour. High strength, UV and abrasion resistant composite fibres withstand wave action and environmental stress, while the exposed surface naturally entraps sediments triggering progressive cover buildup that transforms the structure into a living, self-reinforcing coastal ecosystem.

- **Sediment Entrapment & Cover Build-Up** : Exposed surface captures sediment progressively, forming a natural protective layer that strengthens over time
- **No Rock Armour Required** : Eliminates quarried stone entirely structurally sound without heavy, high-carbon materials
- **3× Service Life** : Sand-entrapped surface shields from UV and abrasion, tripling longevity over standard uncovered geosynthetics
- **Local Fill Materials** : Uses on-site or dredged fill no imported aggregates, cutting logistics and cost significantly
- **Rapid Deployment** : Rolls out direct to site no batching, no heavy plant, drastically shorter programme duration

TechRock™ Products :

- Geotextile Bag
- Geotextile Tube
- GeoMattress



Conventional Armour Ends, TechRock™ Begins



~50% Lower Carbon
vs Rock Armour



Bio-Engineered
— Structure Becomes
Nature

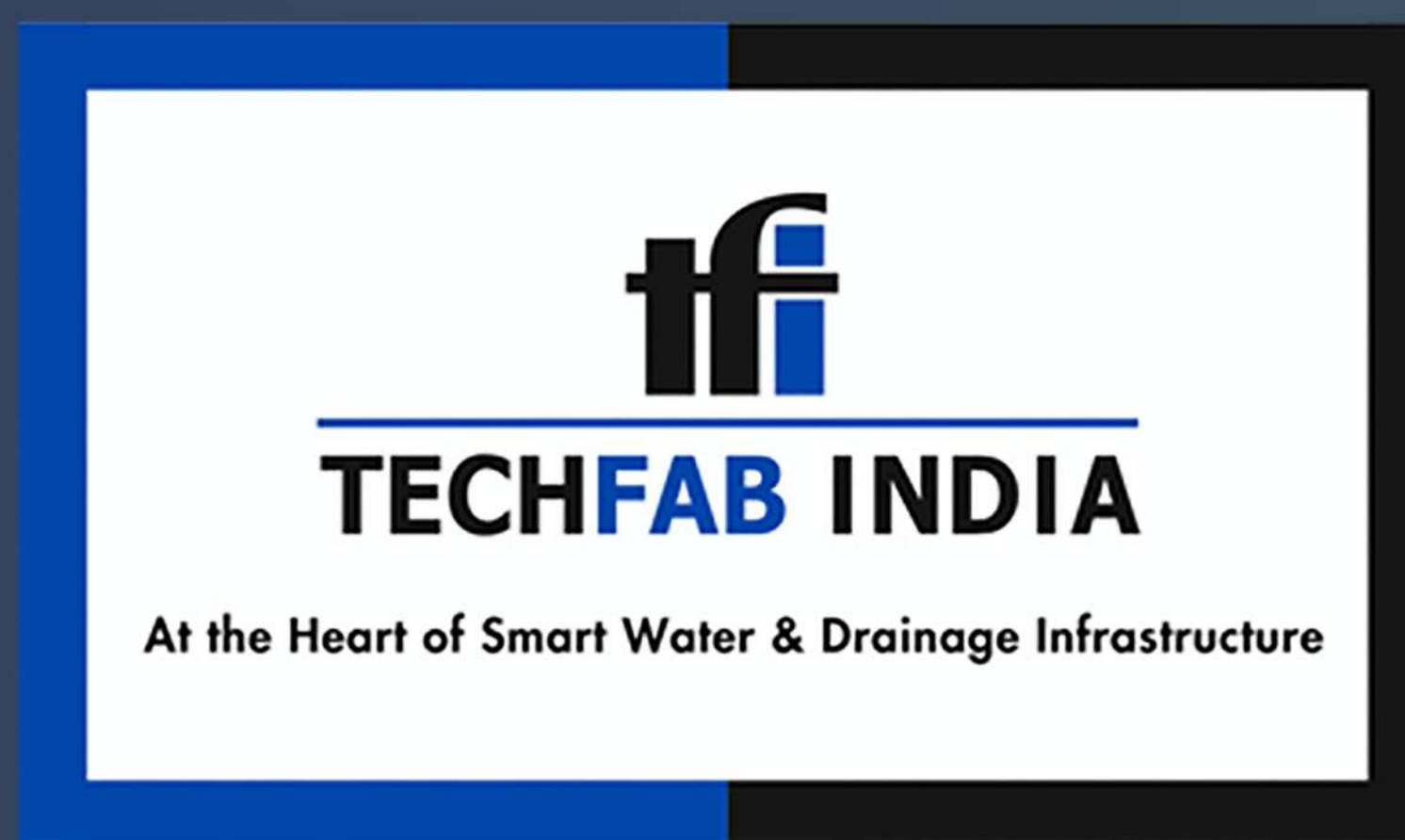


Eco-Friendly
— Zero Rock Armour

TechRock™ — System Deployed



Transforming Vulnerable Shorelines Into Resilient Ecosystems



*Delivering Performance Through Advanced
Hydraulic Engineering Solutions*

BRANDS

TechTube®



TechRock™

CERTIFICATIONS



GAI-LAP



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