REINFORCED EARTH

SUSTAINABLE TECHNOLOGY

Product Portfolio

Part of Soletanche Freyssinet. Worldwide leader in specialised civil engineering

A sustainable future.
For all your engineered soil solutions

Alternative Reinforced Earth® Solutions
Over 60million m² installed

Mixed Abutments
Spans over 40m

Pure Abutments
Spans over 40m

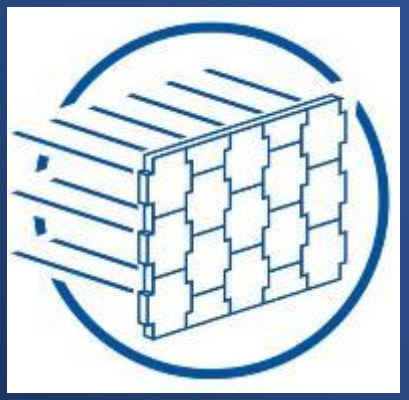
Shored Walls
Heights over 50m

Wire Faced | Mineral or Green
Heights over 50m

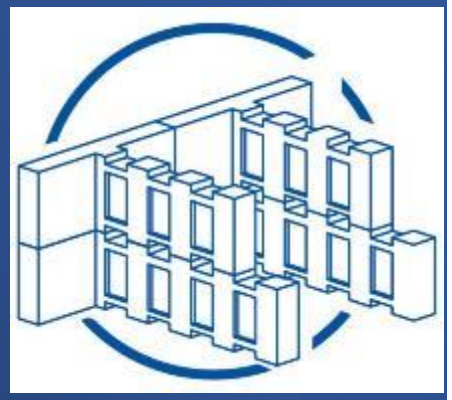
Green precast
Noise and GHG Absorber

Steep Slopes
>60° to 40m heights

Low Carbon Solutions

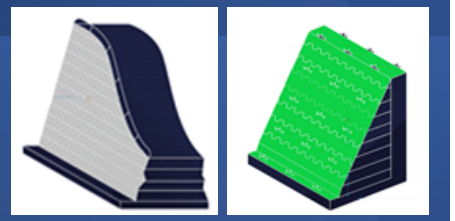


Reinforced Earth®



T-Wall®

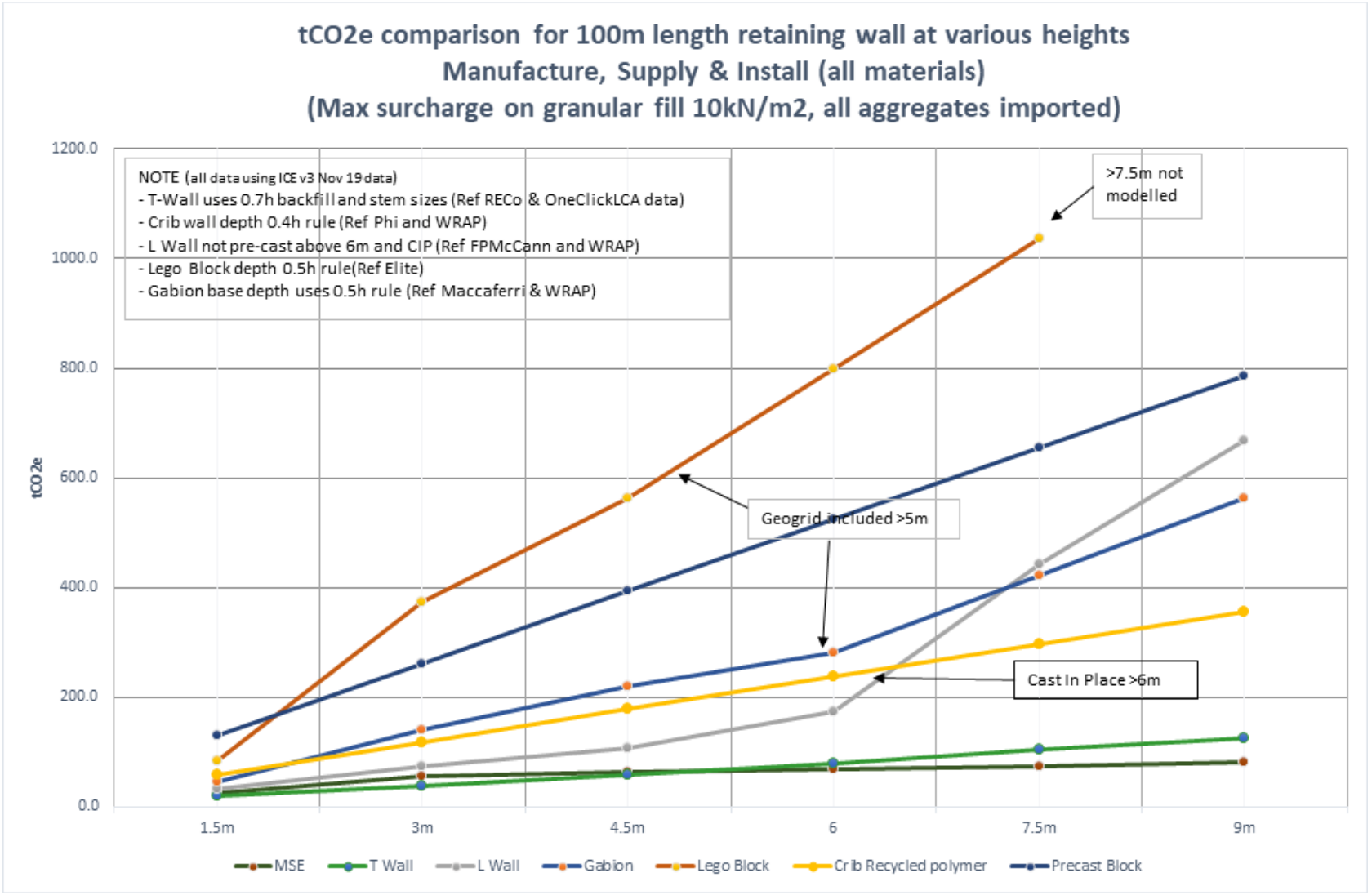
TerraLink™



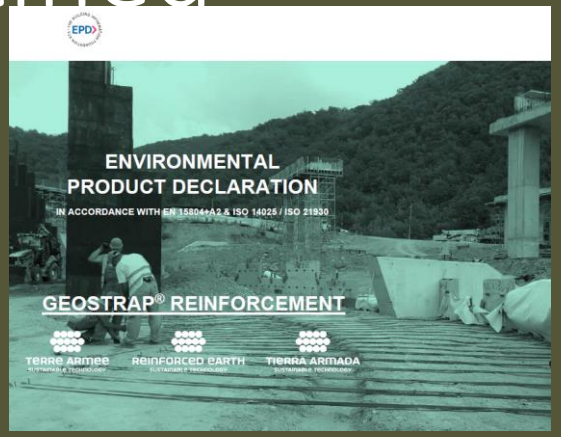
ArmaStone or ArmaGreen Wire mesh faced

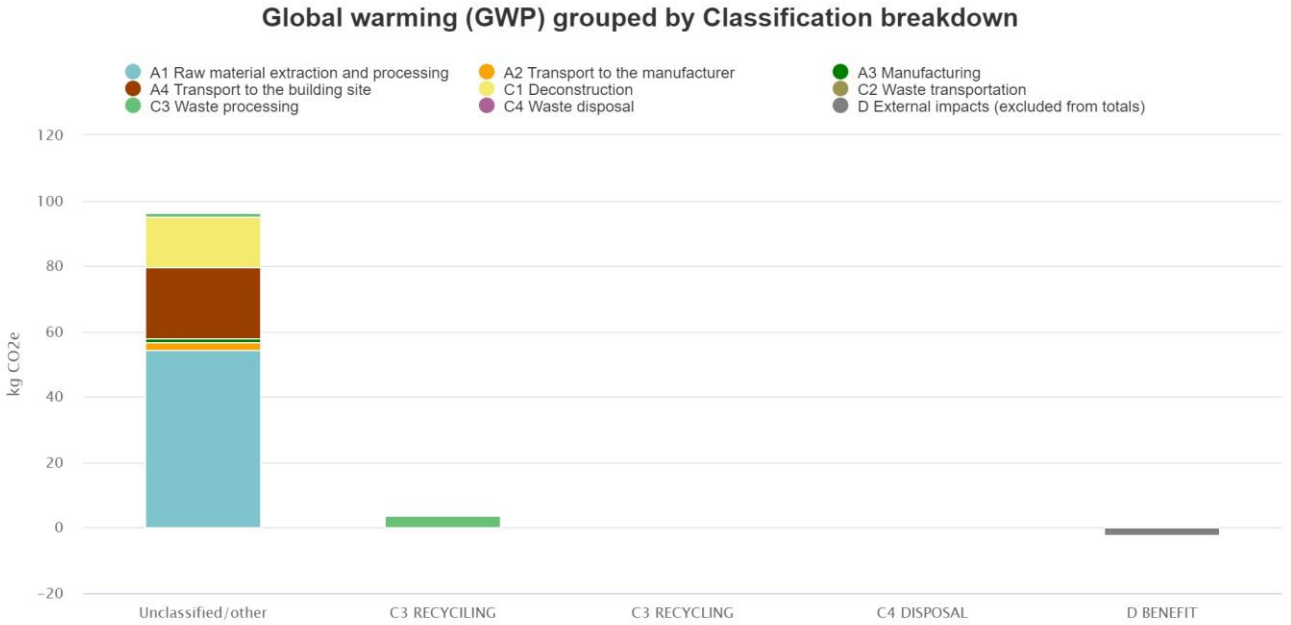
TechWall®

EcoDuct®



Reinforced Earth® 140mm precast panels + geosynthetics. Any surface aesthetic. BBA/HAPAS Certified





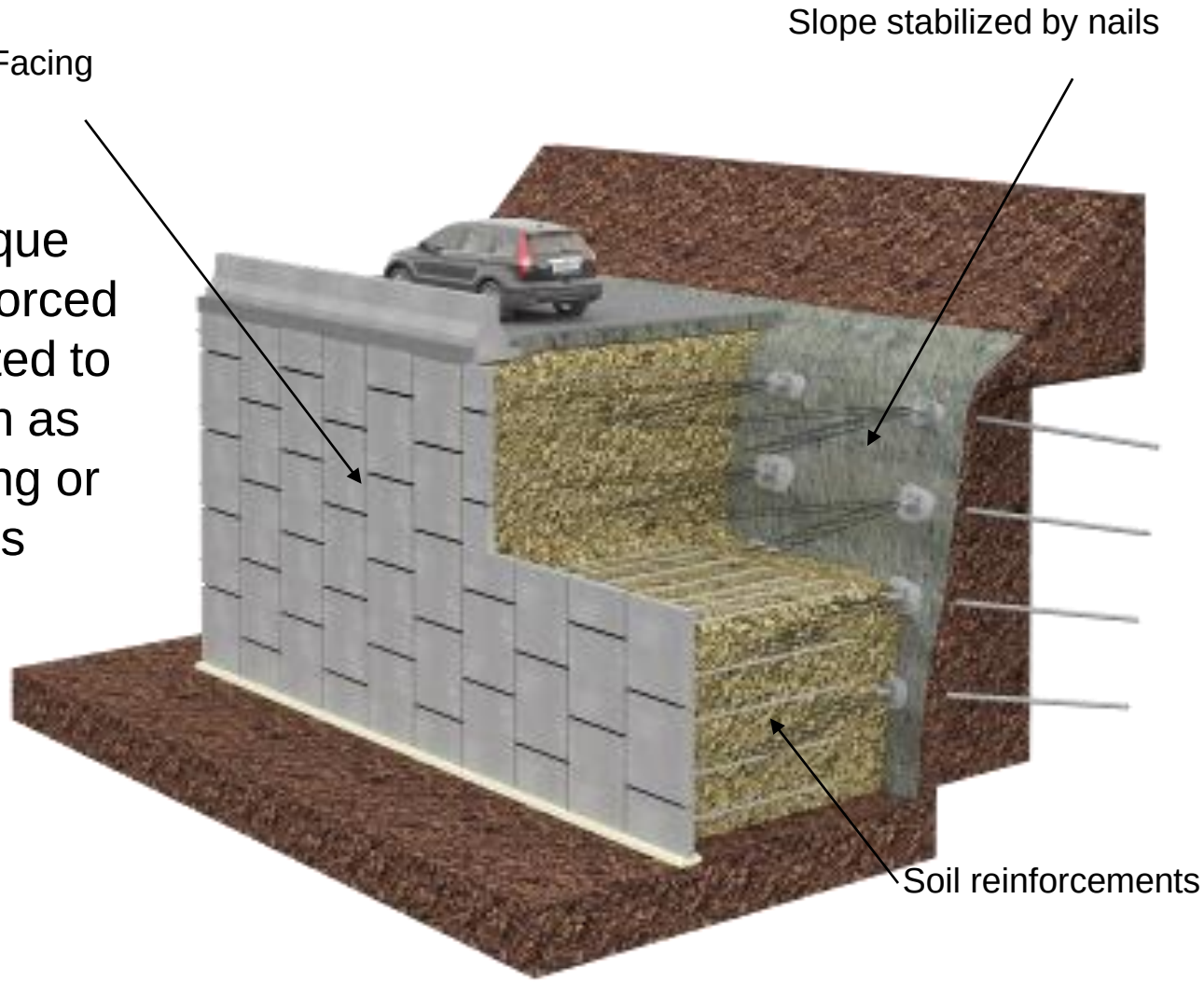
Reinforced Earth®

(Shored Reinforced Earth®), principle – Complementary Reinforced Application

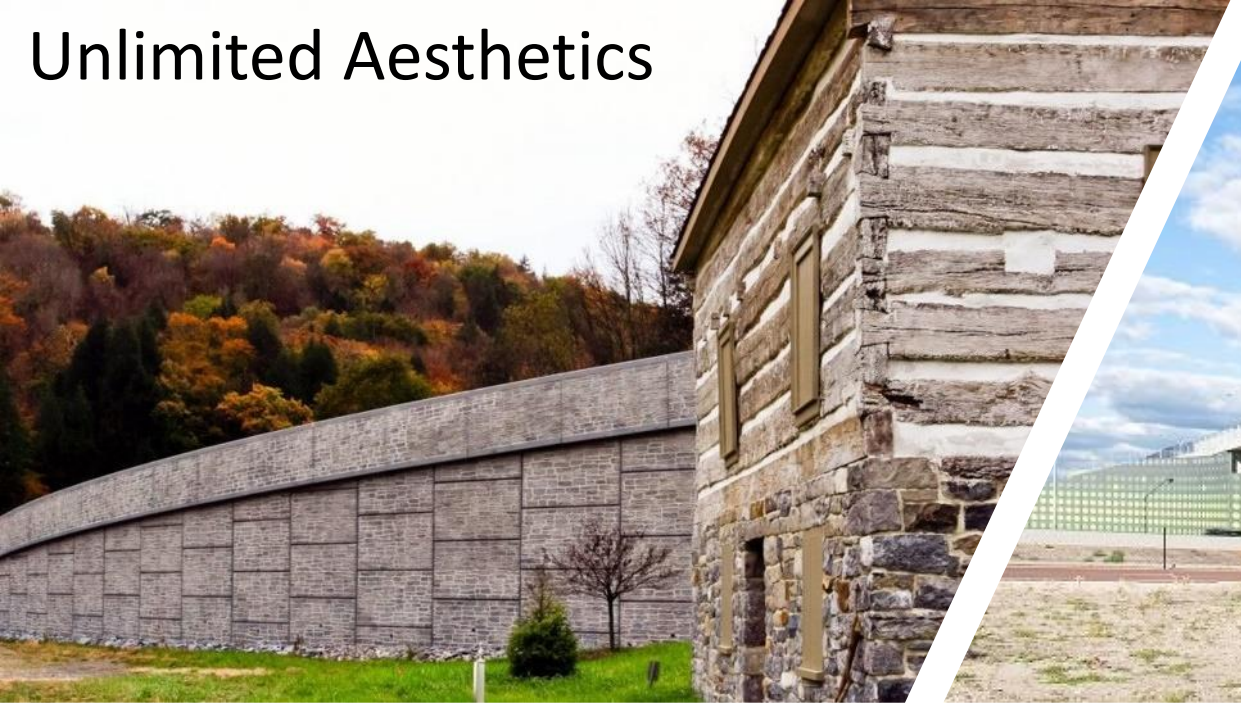
TerraLink™

A logical complementary development

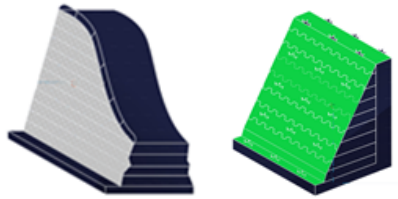
The **TerraLink™** technique allows building new Reinforced Earth® type walls connected to retaining structures such as slopes stabilized by nailing or existing retaining walls



Unlimited Aesthetics



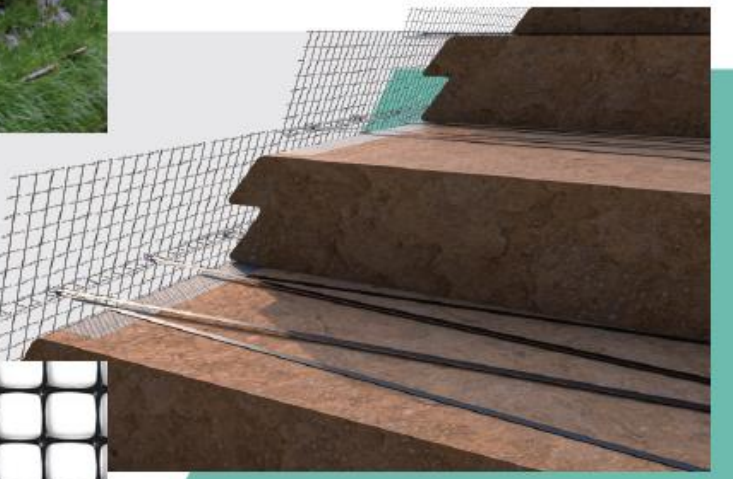
ArmaGreen or ArmaStone



Steel mesh facing

ArmaStone
mineral facing

ArmaGreen
vegetated facing



Steel mesh facing with geostrip

Reinforcements

Steel
reinforcement

Geostrip
reinforcement

Geogrid
reinforcement

Mont Blanc Tunnel, Italy

Saint Véran, France

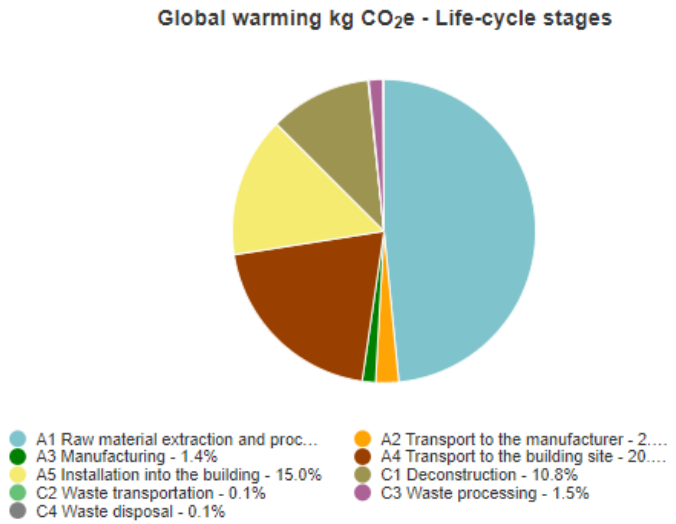
Vegetated steep slope, Japan

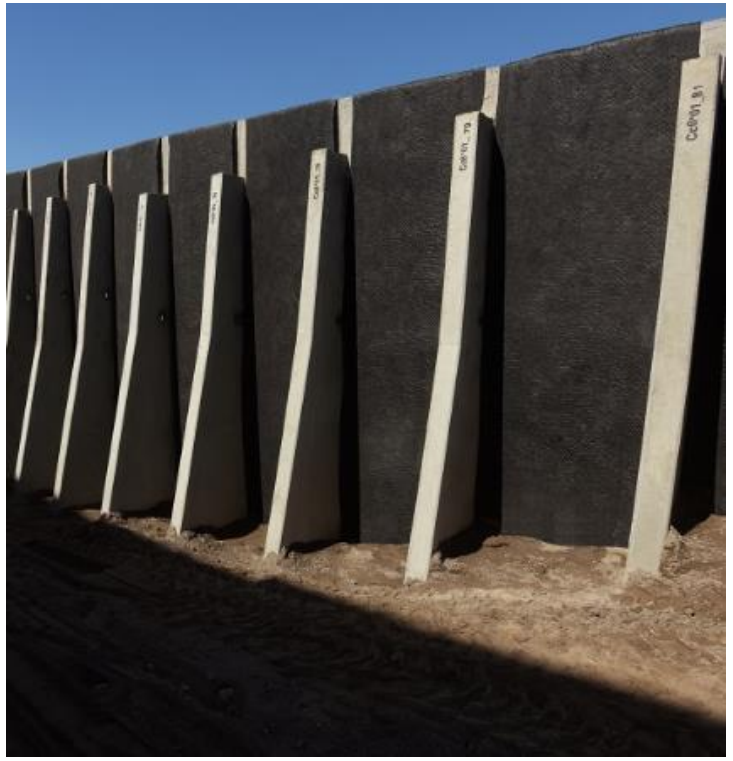
Z-Morh tunnel, India

Parc de la Courneuve, France

Roma G.R.A. Quad.
North-Ouest, Italy

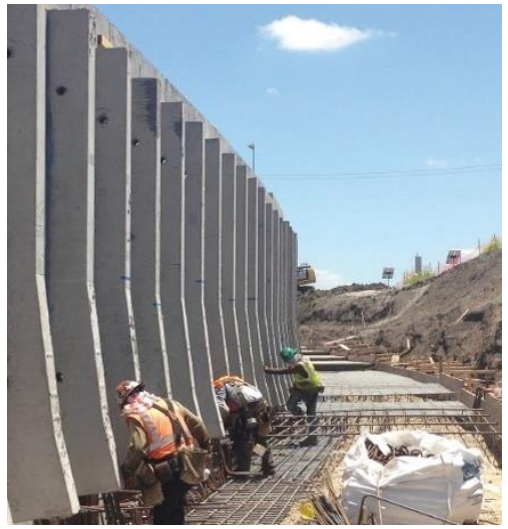
A4 Hörselgau, Germany

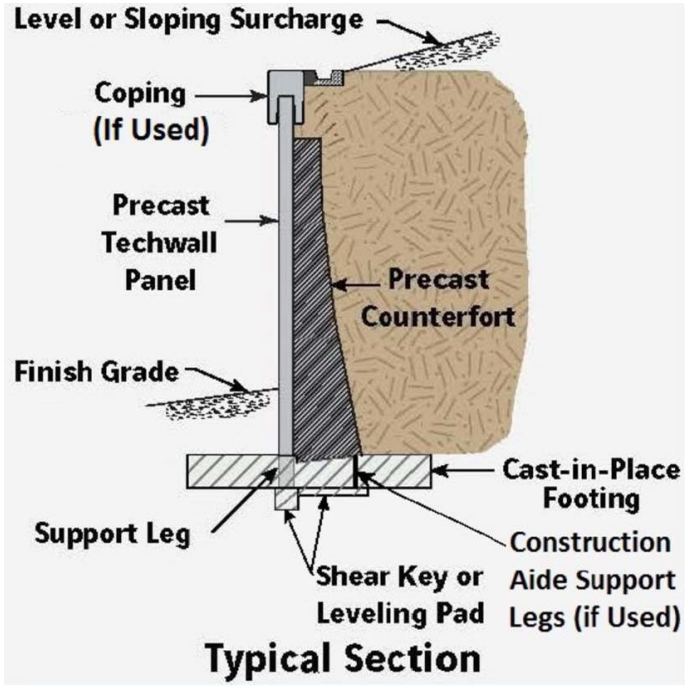




TechWall Counterfort precast panels
Up to 18m tall x 2.5m wide, 140mm thick

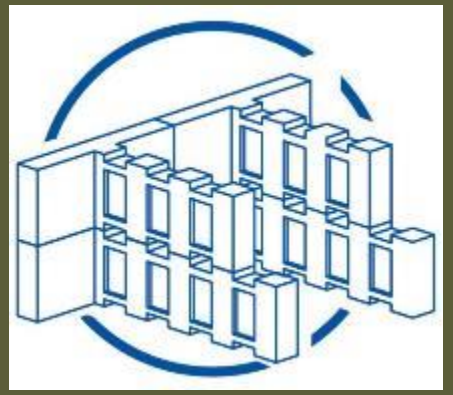
TechWall®





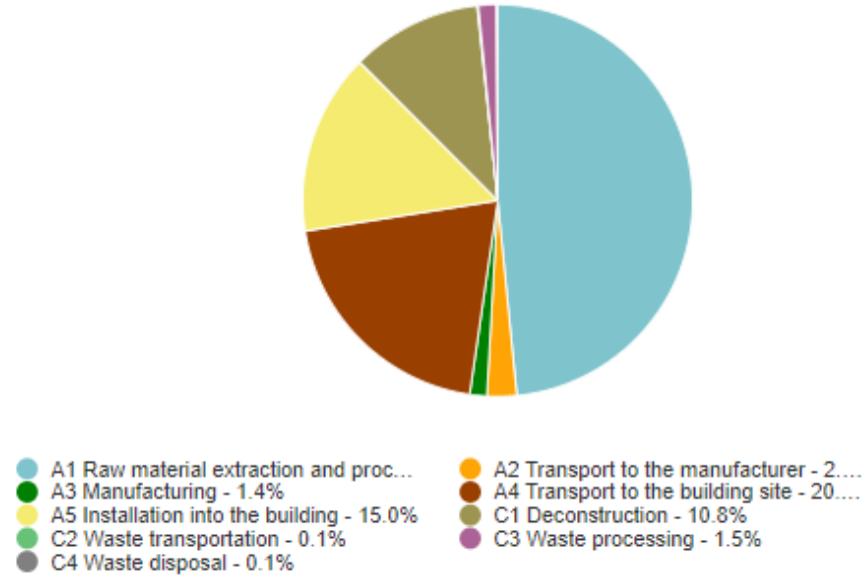
Typical Section

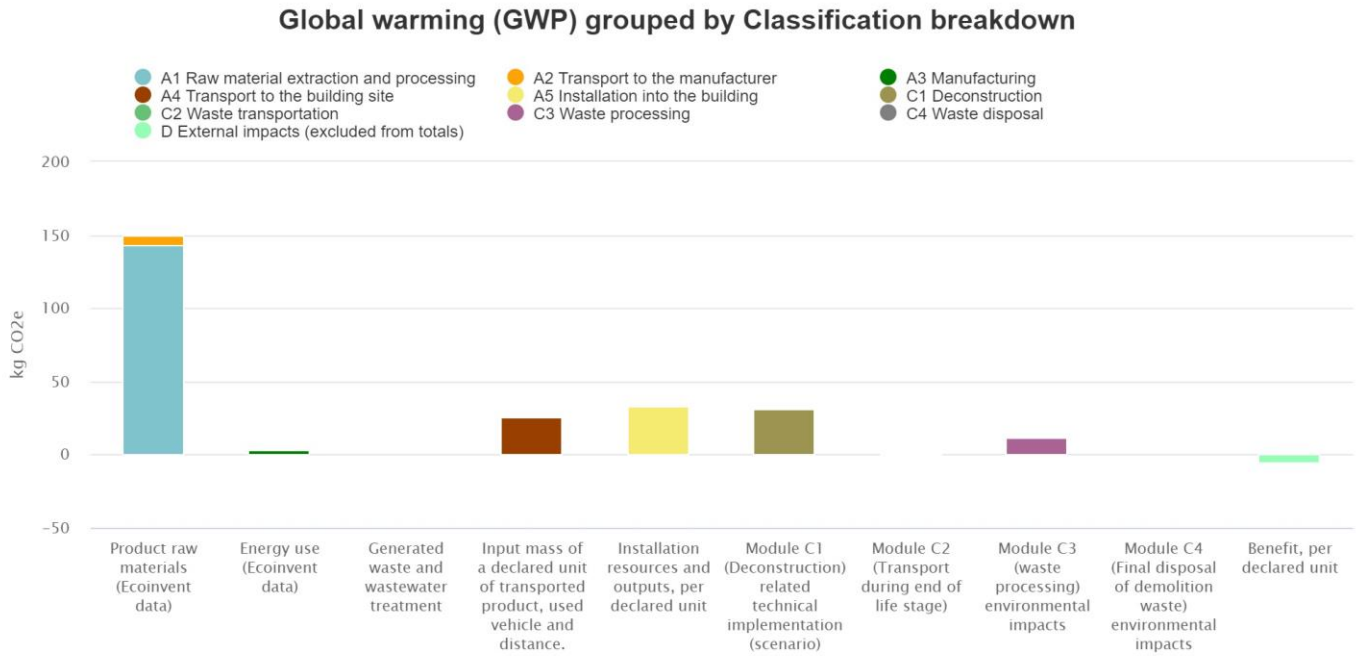
T-Wall Modular Stackable Panels for retaining walls, abutments. 140mm thick Any surface aesthetic



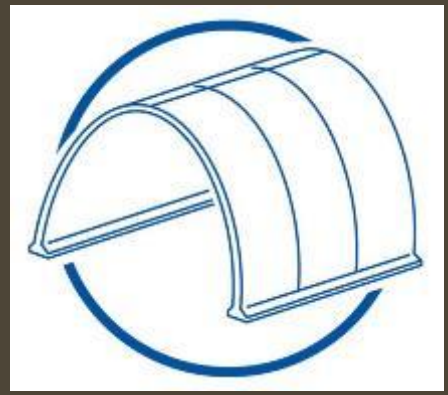
T-Wall®

Global warming kg CO_2e - Life-cycle stages

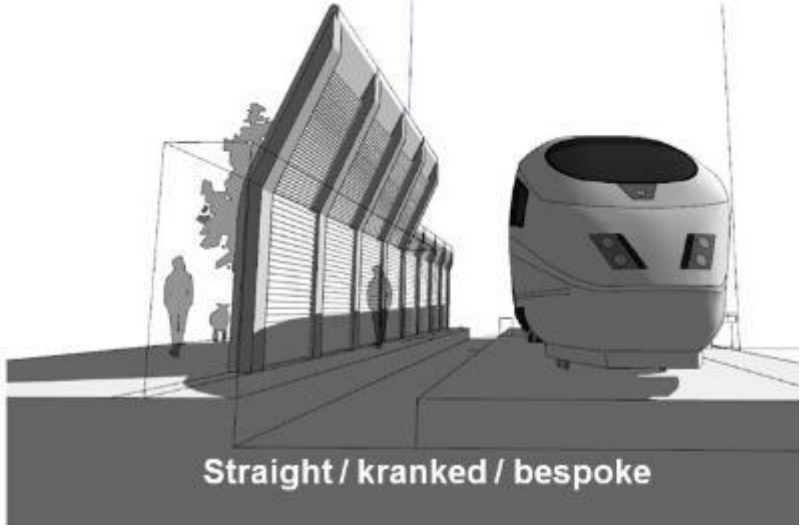




EcoDucts Arch Thickness 200-450mm. Spans to 30m



EcoDuct®



Noise Barriers Structural and noise absorbing

Hybrid Mineral green faced

ReGrid – UX_{PET}

ReGrid – UX_{PET} is a knitted polyester Geogrid manufactured into a dimensionally stable network of apertures providing tensile reinforcement capacity in one direction. ReGrid – UX_{PET} is best suited for demanding soil reinforcement applications.

Applications

- **Steep Slopes**: Used as soil reinforcement for reinforced soil steep slopes and embankments.
- **Basal Reinforcement**: ReGrid – UX_{PET} improves the stability of soft sub-soils by interacting with engineered fill and providing a strong mattress foundation for embankments and platforms.
- **Foundation Improvement**: ReGrid – UX_{PET} is used to support shallow structural foundations, by improving stability, enhancing load distribution and reducing differential settlement.

Technical Parameters

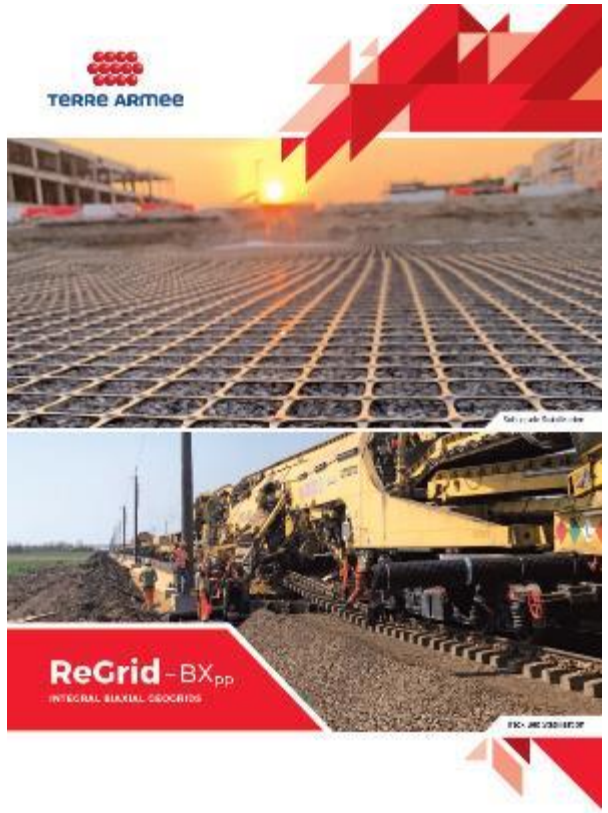
Properties	Test Method	Units	RG-UX_{PET} 40	RG-UX_{PET} 60	RG-UX_{PET} 80	RG-UX_{PET} 100	RG-UX_{PET} 120	RG-UX_{PET} 150	RG-UX_{PET} 180	RG-UX_{PET} 200	RG-UX_{PET} 250	RG-UX_{PET} 300
			Minimum Average Roll Value (MARV)[1]									
Physical Properties												
Material			Polyester									
Mass Per Unit Area	ASTM D 5261	g/m²	209	244	306	356	427	463	526	555	648	751
Mechanical Properties												
Ultimate Tensile Strength in Machine Direction	ASTM D 6637 B	kN/m	40	60	80	100	120	150	180	200	250	300
UltimateTensile Strength in Cross Machine Direction		kN/m	20	20	30	30	30	30	30	30	30	30
Elongation at Designated Strength (≤2%)		%	10	10	10	10	10	10	10	11	11	11
Tensile Strength at 5% Strain (≥5%)			20	30	40	50	60	75	81	90	100	120
Creep Reduction Factor (114 Years Design Life)	ASTM D 6637A	at 20°C	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39
		at 30°C	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44
Partial Factor - Installation Damage	ASTM D 5818	Particle size < 5mm (Silty Sand)	1.10	1.10	1.02	1.02	1.02	1.02	1.02	1.06	1.06	1.06
		Particle size < 35mm (Gravely Sand)	1.12	1.12	1.06	1.06	1.04	1.04	1.04	1.04	1.04	1.04
		Particle size < 125mm (Sandy Gravel)	1.19	1.19	1.16	1.16	1.11	1.11	1.11	1.11	1.11	1.11
Partial Factor - Environmental Effects	GRI-GG7, GRI-GG8 Environment	4 < pH < 8	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Molecular Properties												
Molecular Weight (GRI GG6)		g/mol	minimim 25,000									
Carboxyl End Group (CEG) (GRI GG7)		mmol/kg	maximun 30									
Standard Packaging												
Roll Dimensions (Width x Length)[2]		m	3.8 x100	3.8 x100	3.8 x100	3.8 x100	3.8 x100	3.8 x100	3.8 x100	3.8 x100	3.8 x100	3.8 x100
Roll Area[3]		m²	380	380	380	380	380	380	380	380	380	380
Weight Per Roll[4]		kg	90.5	112.9	138.4	157.8	182.1	199.2	232.6	246.7	287	315

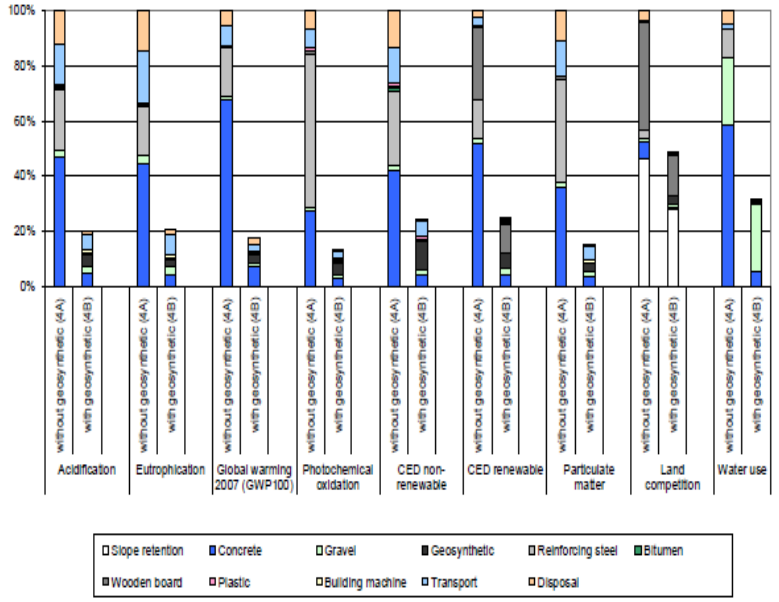
[1] All the values mensioned are of minimum average roll values (MARV).
[2] ±1 % variation possible
[3] Other roll sizes available

NOTES
A. All prescribed values are minimum unless otherwise mentioned and tested in GAI-LAP accredited laboratories.
B. These properties may change at the time of manufacturing, handling, storage and shipping.
C. Roll weights are average values including shipping cores. Actual roll weight may vary.
D. Customized rolls with varying lengths or master rolls can be manufactured.
E. The above values are subject to change as per discretion of the company.

www.terre-armee.com

August, 2020





Geosynthetics

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