

VersiDrain[®] BG

BlueGreen[™] Roof Tray System



We make the difference.
The Elmich Difference.



VersiDrain® BG

What is a bluegreen roof?

Blue roofs are roofing systems that collect stormwater during rain events, temporarily store it, and then release it slowly over a predetermined period of time, typically not more than 24 hours.

Bluegreen roofs are blue roof systems that have supplementary greenery installed in tandem, to capture more stormwater runoff on-site. Stormwater would be captured and attenuated, through the saturation of the planting media and storage in the detention tank layers. This system, like a pseudo sponge, imitates the hydrology of the natural landscape prior to the construction of developments.

Detained stormwater not only reduces peak runoff flow rates, but may be repurposed within developments, lowering the water demands of buildings.

The design dilemma

The challenge Architects and Engineers face stems from the contradicting design requirements between a conventional flat roof and a bluegreen roof. The former is designed to drain stormwater expeditiously during extreme rain events, while the latter is designed to detain stormwater for up to 24 hours.

Flat roofs are typically constructed with a single waterproofing layer, and to incorporate the bluegreen roof system by installing a storage layer using the flat roof's waterproofing membrane means that designers accept a compromise: an increased risk that should the blue roof fail, it would not just leak, but result in a flooded building.

The solution

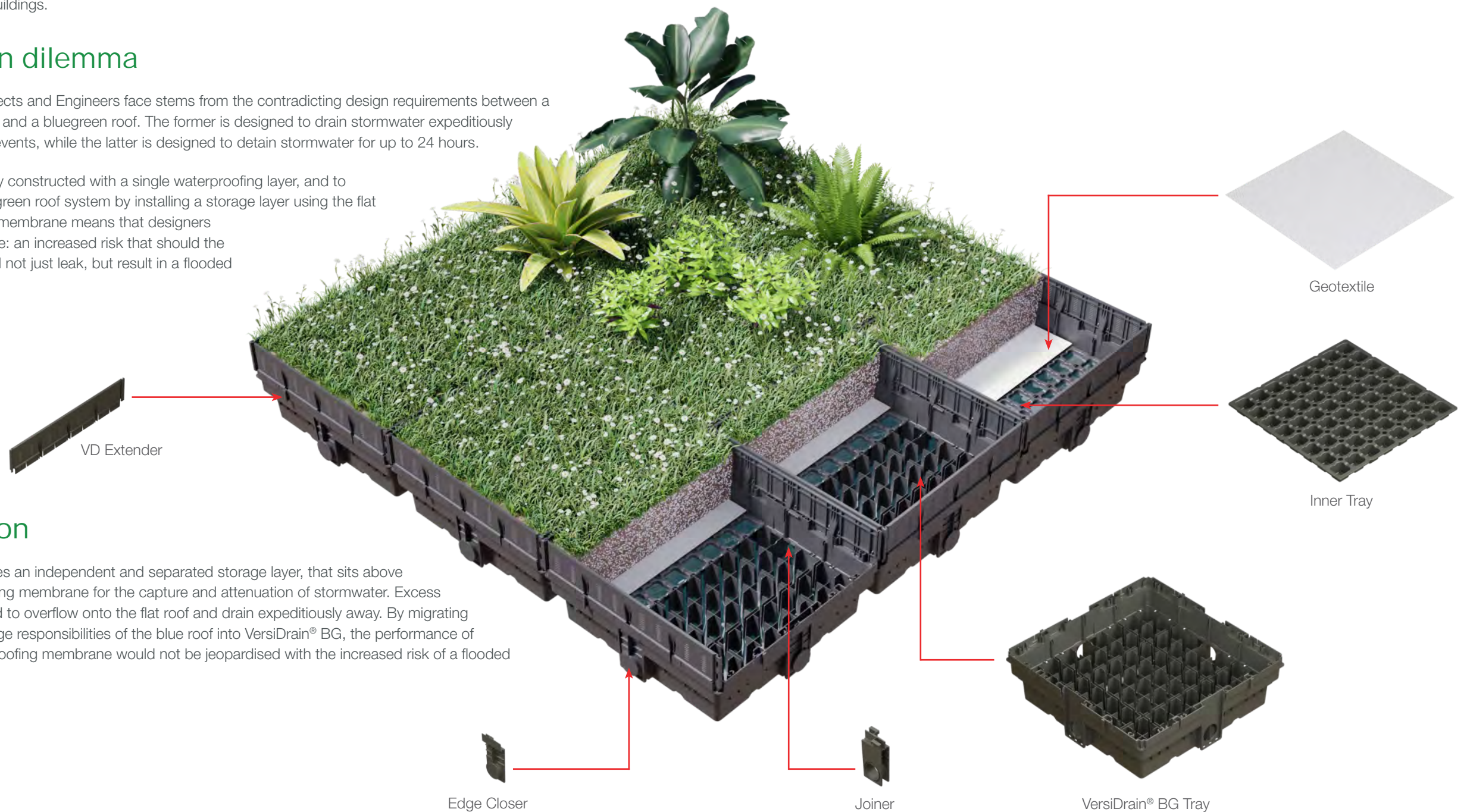
VersiDrain® BG creates an independent and separated storage layer, that sits above the roof's waterproofing membrane for the capture and attenuation of stormwater. Excess stormwater is allowed to overflow onto the flat roof and drain expeditiously away. By migrating the stormwater storage responsibilities of the blue roof into VersiDrain® BG, the performance of the flat roof's waterproofing membrane would not be jeopardised with the increased risk of a flooded building.

About VersiDrain® BG

VersiDrain® BG is an extensive green roof planting tray with the added functionality of creating a bluegreen roof. It is a lightweight and robust planting tray made from high-strength UV-stabilised recyclable plastics. The tray comprises of three layers: a planting layer, an irrigation reservoir layer, and a stormwater attenuation layer.

VersiDrain® BG's modular design allows pre-planting to achieve instant greening of rooftops, and its internal irrigation reservoir promotes plant sustainability with minimised maintenance.

The stormwater attenuation layer collects stormwater at-source and releases it slowly after the rain event to prevent the overburdening of drainage infrastructures. Adjacent trays interconnect with each other at this layer allowing the collected stormwater to have unrestricted flow between trays. This ensures that the stormwater in each tray is attenuated at the same rate.



Key Benefits

- Integral component to at-source stormwater management
- Reduce peak runoff flow rates
- Collected stormwater can be repurposed for use within the development
- Does not compromise the roof's waterproofing warranty
- Adaptability to various storm events

Technical Specifications

Material	PP
Dimensions	500 x 500 x 150 mm
Planting media height	75 mm
Wall Extender	75 mm
Weight	
- Empty	12 kg/m ²
- Planted (design load)	150 kg/m ²
Irrigation reservoir capacity	~10 L/m ²
Stormwater attenuation capacity (includes irrigation reservoir capacity)	~40 L/m ²

**All specifications are calculated without additional height extenders*



The Elmich security hologram ensures authenticity of the products.



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