



There's nothing greener than a  
**ROOF THAT LASTS.™**

**Functional Urban &  
Natural (F.U.N.) Roofs**

# A proven process for a beautiful, sustainable, and water-smart vegetative roof

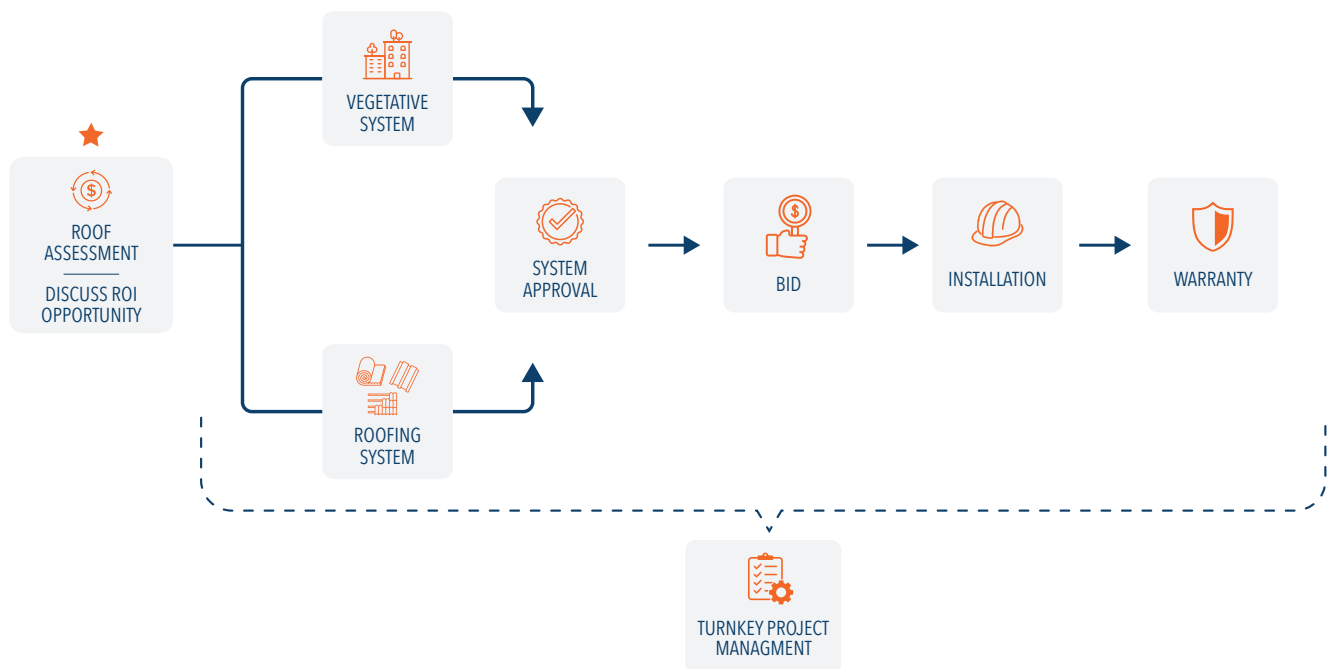


A growing number of building owners and design professionals are choosing vegetative roofs for their assets, especially in urban areas. The reasons why are numerous. Bringing natural greenery into a roofing assembly improves air quality and energy efficiency inside a building, and has significant positive impacts on stormwater runoff and nearby waterways. It's even proven to improve the mood of a building's inhabitants as well as those in surrounding buildings who gain even a fleeting view.

But vegetation brings a new set of challenges to a roofing assembly – additional weight, water, and foot traffic to name a few. Trust Garland to be your single source for the design of your vegetative roof. Our F.U.N. Roofs (Functional, Urban and Natural) are carefully designed with a process that leads to the best possible solution for your goals – and your building.

## FULL SERVICE Manufacturing

Garland's unique model gives building owners a single point of contact throughout a roofing project. One of our 200 highly-trained, locally-based Territory Managers partners with a building owner and architect to understand the building's needs. We engage our Engineering Services team to conduct a detailed structural analysis as needed. Then we engage on system design, both of the vegetative system, and the watertight roofing system beneath it, to ensure a high-performing green system and a leak-free environment inside.

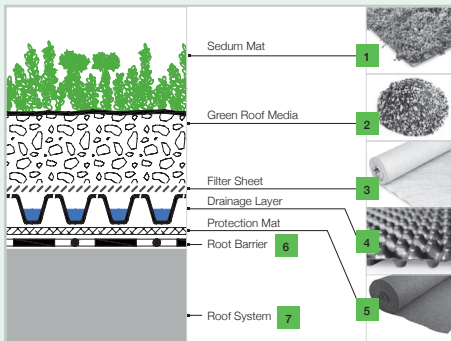


# F.U.N. Roof Vegetative System Options



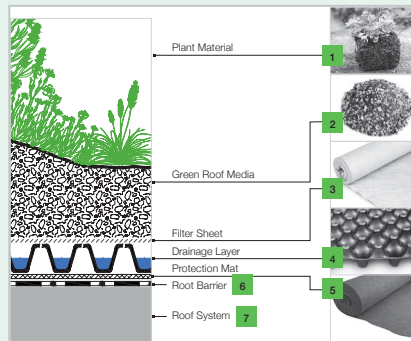
## Sedum

- › Extensive System
- › Lightweight
- › Ecological protection layer instead of gravel covering
- › Minimum maintenance
- › Suitable for low slope applications



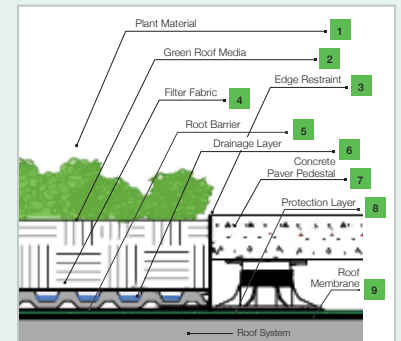
## Wildflower

- › Semi-Intensive System
- › High drainage capacity
- › Choice and flexibility of flowering
- › Suitable for low slope applications



## Paver/Hardscape

- › Hybrid benefits of green roof pavers and stormwater management in one system
- › Stormwater builds up to a predetermined depth and drains at a desired maximum rate
- › Sedum carpet, rockery type plants or heather with lavender can be applied

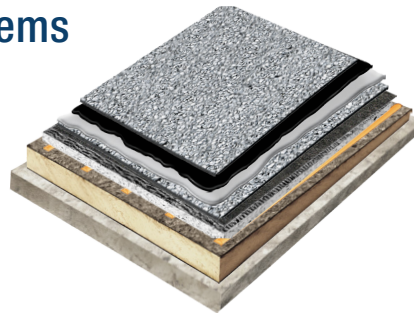


**Blue Roof design characteristics can be incorporated to provide required stormwater management.**

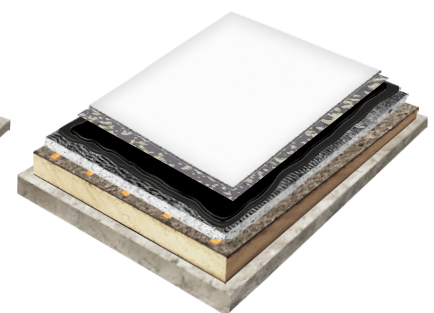


## F.U.N. Roof Waterproofing Systems

- › High performance membranes utilizing proven technology
- › Multiply protection
- › Proper slope and stormwater drainage
- › Engineered edge protection and roof perimeters
- › Inverted Roof Membrane Assemblies (IRMA) or Conventional Insulated Roof Assemblies
- › Combine vegetative roofing with adjacent reflective roof sections to maximize sustainability and program compliance



2-Ply Torch-Applied System



2-Ply KEE System

## Project Highlight



### Garland Vegetative Roof System Improves Aesthetics & Waterproof Protection

Garland has been supporting the New York University hospital system for over a decade with a variety of roofing applications. One of the buildings where we hadn't yet re-roofed was aging and beginning to experience leaks. At the same time, the roof provided an opportunity for a vegetative system, as patients from surrounding hospital buildings would have a much-enhanced view looking down on a lush green roof versus the previous traditional system.

Garland rep Keith DeVito worked on developing a system that would deliver a watertight environment - and the sustainable and aesthetic benefits of a green roof.



See the full project video.

# F.U.N. Roof Benefits



## Temperature Regulation

Green roof systems help to keep buildings cool in the summer and warm in the winter, reducing energy costs.



## Improved Air Quality

Vegetation absorbs pollutants and releases oxygen, improving the quality of the air.



## Stormwater Retention

Green and Blue systems absorb water, alleviating the pressure on local rainwater drainage systems.



## Waterproofing Protection

Green roofs protect the waterproofing system from harmful UV rays and temperature fluctuations which can reduce the lifespan of the roof.



## Provide Natural Habitats

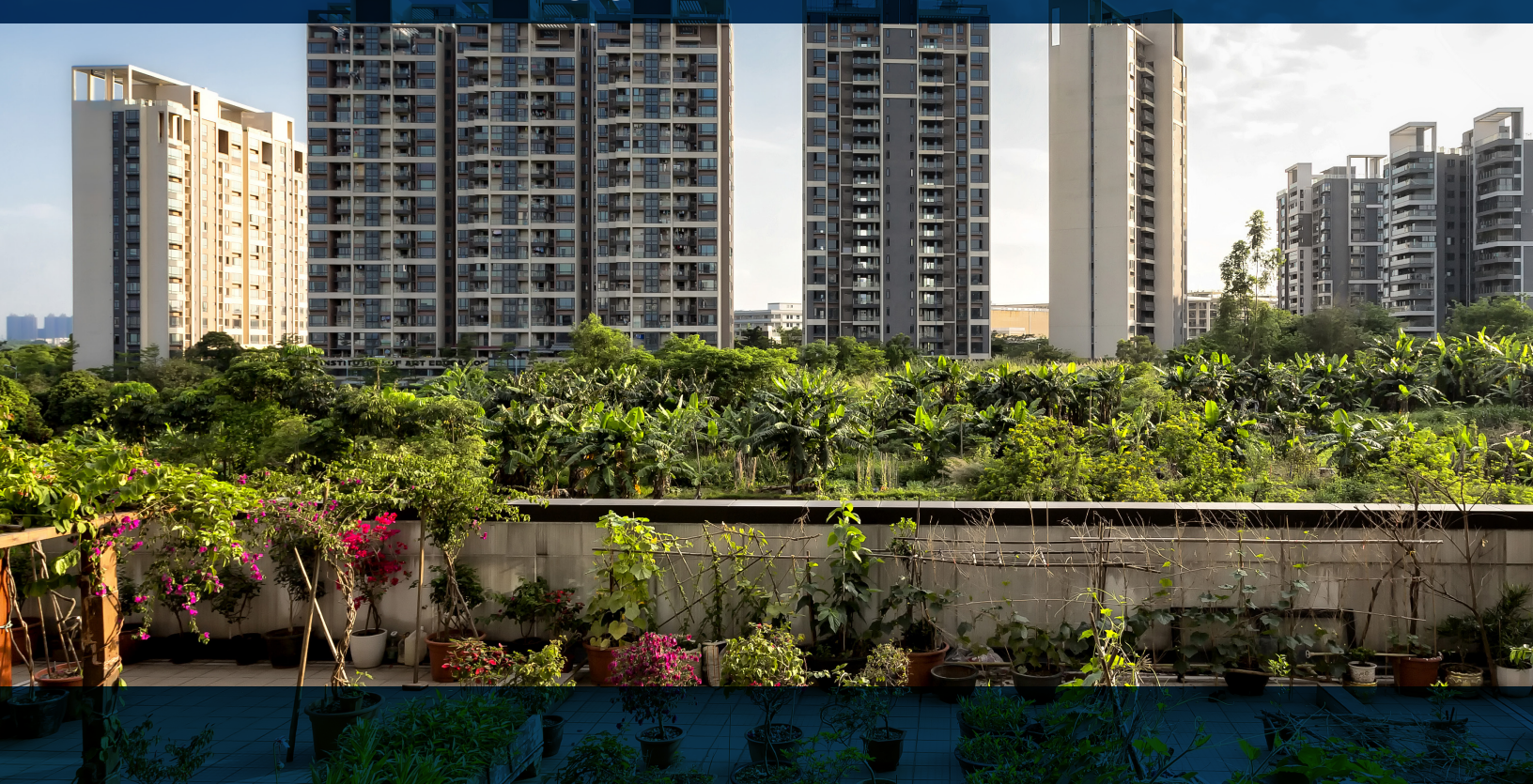
Reduce the impact of development by encouraging wildlife and nature to thrive in urban environments.



## Stimulating Aesthetics

Green roofs create a visually appealing environment for building occupants and the neighbouring buildings.

There's nothing greener than a roof that lasts.™



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