



Anything Groes

Professional Plantscaping



What is a Green Roof? *also called an “eco-roof” or “living roof”; it is an extension of an existing roof that is covered with vegetation and soil or a growing medium. Plants are not planted directly in the ground but rather on top of the roof.*

Why install a Green Roof? Green Roofs provide direct and indirect benefits to both the building owner and to the public at large. They are becoming increasingly important in the urban core for a variety of reasons. Essentially, there are 6 advantages for adopting a Green Roof system, as opposed to using the traditional black or white reflective membrane roofs. These advantages are

1. **stormwater management;**
2. **reduced energy costs;**
3. **reduction of the “urban heat island” effect;**
4. **extension of the life of the roof;**
5. **sound insulation; and**
6. **aesthetics.**

Stormwater Reduction

Especially in urban areas, over 75% of a rain event can become surface runoff depositing pollutants into waterways. Many older cities have combined stormwater and sanitary sewers where, in the event of a significant rainfall, the sewage treatment plant becomes unable to treat all of the excess stormwater flowing into it. Green Roofs help alleviate this problem through retention of rainfall and detention of roof water runoff. Green Roofs can greatly reduce the risk of flooding, sewer overflows, and subsequent discharges. Once the Green Roof is saturated, the water slowly percolates through the

Green Roof growth media, becoming roof runoff. This occurs several hours after peak flows from impervious surfaces have subsided and provides additional time for municipal sewer systems to handle other uncontrolled runoff. For the building owner, a Green Roof can often mean that costly stormwater detention and retention systems can be substantially reduced in size or even rendered unnecessary.

Reduced Energy Costs

Because of their insulating properties, Green Roofs have consistently and significantly reduced rooftop heat loads in warm seasons, even more so than reflective white roof membranes. Additionally, Green Roofs have greatly affected interior building temperatures, reducing the amount of energy needed to heat and cool buildings effectively. Green Roofs have been shown to reduce heating and cooling costs from 25% to 50% for the floor directly below the roof. They can also significantly slow a building's heat gain and loss. Roof temperatures with a Green Roof are significantly cooler than their counterpart blacktop and reflective white membrane roofs. As a result, the HVAC systems of buildings with a Green Roof operate more efficiently, translating in lower energy costs for the building owner.

Urban Heat Island Effect

Green Roofs also reduce the urban heat island effect common to most large cities. Roads and building rooftops absorb a significant amount of heat during daylight hours. This heat, in turn, is radiated back into the atmosphere, causing an increase in the temperature of the air. To compound the problem, additional heat is emitted by vehicles and HVAC systems. These factors can result in a 6- to 10-degree temperature increase in large cities. Due to the ability of plants to transpire and also shade, significant use of green roofs throughout large cities can cause a cooling effect, lowering the temperature in city environments. In addition, since green roof buildings are cooler and require less air conditioning, the subsequent ventilation of hot air from an air conditioner to the atmosphere is reduced. In addition, heat is not retained in Green Roofs the way it is in black roofs, thus the city can cool faster.

Protection of Roof Membrane

Green Roofs protect exterior roof membranes from ultraviolet radiation, extreme temperature fluctuations, punctures and other physical damage. They can significantly increase life expectancies of roof membranes, thereby diminishing the need for costly roof replacements and maintenance, and resulting in tangible savings for building owners.

Sound Insulation

The growth media, plants, and layers of trapped air in a Green Roof system serve as excellent sound insulators. Tests have shown that Green Roofs can reduce the indoor noise pollution from outdoor contributors by as much as 10 decibels. Noise-level reductions can provide significant benefits to buildings in noise-impacted areas, such as sites close to airports, highways, or heavy industry.

Aesthetic Appeal

Green Roofs provide both visually pleasing vistas and functional space through serene rooftop gardens and gathering areas. In addition, Green Roofs often help increase the values of condominiums, apartment complexes, and office buildings. They also help industrial and commercial properties blend into suburban and rural areas.

How Can Anything Groes Help You? We can assist with the design, build and maintenance of your Green Roof. First we must decide what kind of Green Roof is appropriate for your structure.

Extensive Green Roof – typically 6” or less of soil, usually planted with sedum or other succulents that are extremely drought resistant. This system weighs the least and is the easiest to maintain after being installed.

Intensive Green Roof - typically 12” or more of soil, suitable for much larger plant material, more akin to traditional landscaping done on the ground, irrigation usually required. This system weighs the most and much more maintenance is required after installation than the extensive Green Roof.

Semi Intensive/Hybrid – typically 6” -12” of soil, many times is planted with a mixture of sedums, other succulents, native grasses, perennials, and smaller shrubs. Weight of the system is more than the extensive and less than the intensive. Irrigation may be necessary and maintenance requirement is more than extensive but less than intensive.