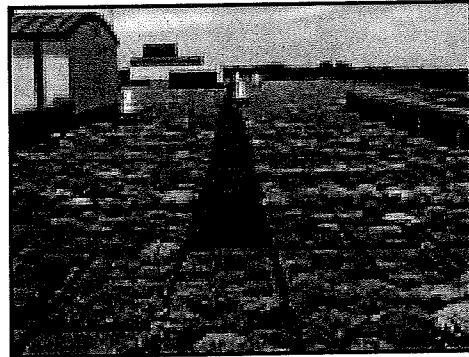


Introducing Green Roofs

What is a Green Roof?

A green roof is a roof of a building that is partially or completely covered with vegetation and soil, or a growing medium, planted over a waterproofing membrane. This term does not refer to roofs which are merely colored green, as with green shingles. A green roof may also include additional layers such as a root barrier and drainage and irrigation systems. The term "green roof" may also be used to indicate roofs that utilize some form of "green" technology, such as solar panels or a photovoltaic module. Green roofs are also referred to as eco-roofs, vegetated roofs, and living roofs.



What Are the Benefits of Green Roofs?

Green roofs are used to:

- Reduce storm water run off.
- Filter pollutants and carbon dioxide (CO₂) out of the air
- Filter heavy metals and other pollutants out of rainwater
- Reduce heating and cooling loads on a building
- Reduce the urban heat island effect
- Provide amenity space for building users — in effect replacing a yard or patio
- Grow fruits, vegetables, and flowers
- Increase roof life span
- Increase wildlife habitat in built-up areas

"In North America, the benefits of green roof technologies are poorly understood and the market remains immature, despite the efforts of several industry leaders. In Europe, however, these technologies have become very well established."

- Steven W. Peck, Green Roofs for Healthy Cities, Toronto

Are There Any Disadvantages of Green Roofs?

Green roofs can have more demanding structural standards. Some existing buildings cannot be retrofitted with a green roof because of the weight load of the soil and vegetation.

Are There Different Types of Green Roofs?

Green roofs can be categorized depending on the depth of planting medium and the amount of maintenance they need.

Intensive - Traditional roof gardens, which require a reasonable depth of soil to grow large plants or conventional lawns; labor-intensive, requiring irrigation, feeding and other maintenance.

Extensive - Designed to be virtually self-sustaining and require only a minimum of maintenance, perhaps a once-yearly weeding or an application of slow-release fertilizer to boost plant growth; can be established on a very thin layer of "soil" (most use specially formulated composts).

Another important distinction is between pitched roofs and flat roofs. Pitched green roofs tend to be of a simpler design than flat green roofs because the pitch of the roof reduces the risk of water penetrating through the roof structure, allowing the use of fewer waterproofing and drainage layers.