

Green Roof Gardening

Course: Econ 2505

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What is Green Roof ?

- ▶ A **green roof** is a roof of a building that is partially or completely covered with vegetation and a growing medium, planted over a waterproofing membrane.



Types of Green Roof

▶ Extensive →



▶ Semi-Intensive

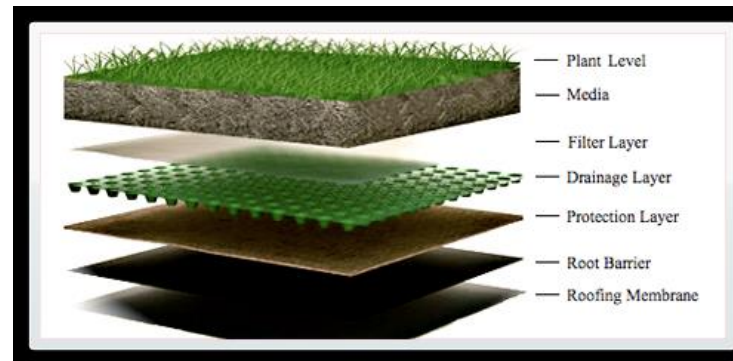
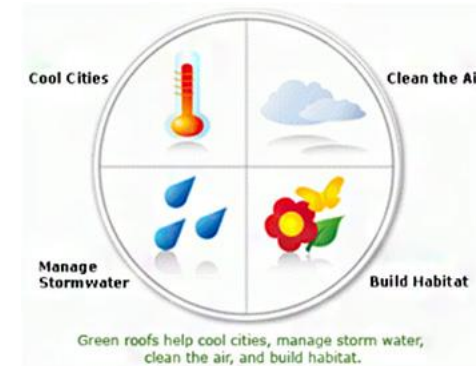
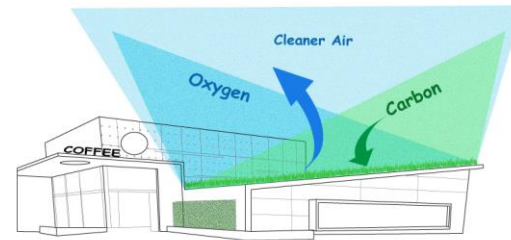
▶ Intensive



Benefits of Green Roof Garden



- ▶ Fresh Food
- ▶ Fresh Clean air
- ▶ Less fossil fuel involvement
- ▶ Reduce Heat (Reducing air condition costs)
- ▶ https://www.trentu.ca/eab/documents/Rooftop_Gardens-Zipple.pdf



Economic and Social Benefits

- ▶ New jobs
- ▶ Save cost of energy
- ▶ Education opportunities
- ▶ Storm water management-
quality and quantity



OPPORTUNITY

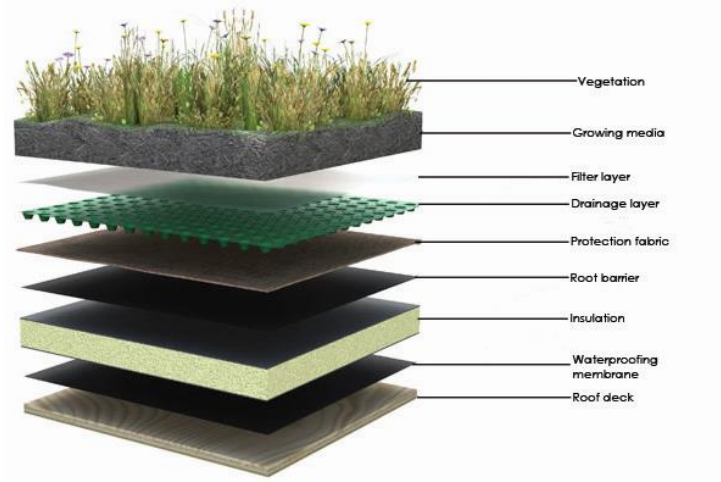
Disadvantages of Green Roof Garden

- ▶ Expenses
- ▶ Maintenance
- ▶ Damage Membrane
- ▶ Companies



Safeties Requirements

- ▶ Flat Roof
- ▶ Design
- ▶ Roof Condition
- ▶ Water Proof Layer
- ▶ Drainage Layer
- ▶ High Quality Membrane
- ▶ Safety Railings



Certification

▶ LEED



LEED

Leadership in Energy and Environmental Design

GREEN BUILDING

Overall Review

- ▶ Fresh Food
- ▶ Environmental Benefits
- ▶ Social Benefits
- ▶ Economic Benefits
- ▶ Expensive
- ▶ Safties

Conclusion

- ▶ In all my research, I learned that the green roof garden have many benefits and less disadvantages. In benefits, Green roof uses plants to cool a building in summer by absorbing CO₂ from the air, it reduce storm water runoff which contributes to urban flooding, and gives fresh food and so on. The disadvantage is just the cost of installation and maintenance but it pays you back.