

**Project:** Grafton Green Roof

**Name:** Jess McAleer

**School:** Cummings School of Veterinary Medicine

**Role:** Student

**Description:** I would like to start a green roofing project. I think the McGrath anatomy lab building would be a good location. One interesting piece of the energy conservation puzzle, green roofing, simultaneously enhances public health and combats climate change.

Economically, while full green roofs carry higher upfront costs than conventional roofing and require extra maintenance, they also reduce energy consumption (heating and cooling) costs more significantly than even cool roofs. Socially, green roof aesthetics benefit mental health and can provide nutritious food. Environmentally, green roofs improve storm-water management and reduce heat island effect, air pollution, and greenhouse gas emissions. These numerous benefits may be enjoyed long-term, as a final advantage of green roof construction is it typically boasts twice a conventional roof's life expectancy.

**People Involved:** Grafton Green Team would work on the project. The Grafton facilities would have to approve the project.

**Budget:** The EPA estimates that the cost of installing a green roof starts at around \$10 per square foot for simpler extensive roofing. Annual maintenance costs may range from 75 cents to \$1.50 per square foot. However, seeing as our campus makes its own compost, the price of soil should be reduced.

**Timeline:** If chosen, the green roof could be started in the spring. After the initial planting, there would only need to be maintenance and replanting of specific plants that would die. However, this would not be a problem as Tufts has a community garden, but this roof would be extra beneficial as demand for garden space has been increasing.

**Benefit to Tufts Community:** It would reduce energy consumption (heating and cooling), benefit mental health, provide nutritious food and extra garden space, improve storm-water management and reduce heat island effect, air pollution, and greenhouse gas emissions, and an increase in the roof's life expectancy.