

Green Fund Project Final Report

Project Title: New Permeable paving tiles for SIUC Green Roof.

Project ID #: 15SP102

Award Date: 4/22/15

Completion Award: April 16, 2016

Total Funds Used: \$ 4,140.00

1. Please provide a write up of your project/project experience. (This may be used on the SIUC sustainability website.)

The Green Roof located at the College of Agriculture was installed in 2010 and partially funded by the Green Fund. Industry Professionals volunteered their time and over 120 students helped to install the green roof. We are very fortunate to have a green roof at SIUC. It is the only Green Roof on campus and we use it for meaningful research, out door classes, public education, and tours with over 100 people visiting yearly. There are multiple environmental, social, and economic benefits to be realized from having a green roof on our campus. The green roof helps to filter and absorb excess rain fall which reduces water run-off into the drainage system which in turn prevents flooding around the building. The roof also has an insulation effect in which the building stays warmer in the summer and cooler in the winter. In addition to providing green space to our campus, the roof is also a habitat for bees, spiders, and sometimes ducks which are essential to our ecosystem. Along with the environmental benefits, the green roof provides a place for research and educational opportunities for the campus as well as the greater community. With that in mind it is important that the Green Roof remain safe, accessible, and presentable to receive its benefits which is why we proposed the installation of permeable paver tiles. The previous pathway tiles were not adequate for the needs of the roof and we only had a few, providing a very narrow path. The original installation of the roof did not include a path. Later tiles were donated but were not suitable. They were not porous; water pooled on them causing mold, thus becoming slippery and dangerous to walk on. The new permeable pavers allow water to flow completely through them and are very durable and light weight. With the installation of the permeable paver tiles the usability of the green roof is vastly improved in water movement, safety and aesthetics. Additionally, these pavers protect the roof from foot traffic, UV rays and debris, increasing the longevity of the roof membrane.

The new permeable pavers were installed with the help from a team of about 40 student volunteers from Karen Midden's design classes and Dr. Alan Walters' home gardening class. The installation process took place on 4/1/16. First, the old pavers were removed and the impermeable membrane of the roof was thoroughly cleaned. On 4/6/16, the new tiles were installed on the green roof by the students, with Karen and my supervision. The new tiles not only look great but cover more area which makes the roof saver and protects the waterproof surface from wear and tear. An additional note. We had problems getting the permeable pavers that we originally wrote

into our proposal so we could not meet our one year deadline. The company we originally planned to purchase them from stopped making the pavers. Once we found a new company, we had to wait for delivery, which occurred over Christmas break. We then waited for suitable weather to work on the green work for the installation.

2. Please provide a summary of your results (environmental, social, and/or economic) including quantifiable data as appropriate (ex. # of individuals reached, lbs. diverted from landfill, energy saved, etc.).

There are many systems and entities that the green roof affects within the built environment. The most observable result that could be seen from the completion of this project may be improved accessibility to the 100's of students and visitors on the green roof each year. The permeable pavers not only provide a safer surface to walk on but may also increase the life span of the green roof by improving water drainage capacity. While aesthetic value is subjective, the new pavers have also improved the look but most importantly the overall functionality of the green roof as an ongoing research facility in green infrastructure. The permeable pavers also serve as a great demonstration to students and visitors illustration how rain water moves through an permeable material versus an impermeable. This is a critical discussion on storm water management and water conservation and usage.

3. Summarize how your project promoted the Green Fee/Sustainability on campus including, but not limited to, flyers created, screenshots of website, signage, etc. Please include website links, if applicable.

The green roof itself at SIU was funded in part by the Green Fee and materials were donated by outside companies. The installation was a joint event by faculty and students predominately in the College of Agricultural Sciences but included many other disciplines, professionals who volunteered their expertise, SIU Physical Plant Services and some other industry persons. That phase of the excitement of planning and installing generated an amazing campus and community excitement over sustainable practices. Especially given that green roofs are typically found in urban areas, we now had one in Southern Illinois. Although the green roof is located on the agriculture building, it is considered a community space and has served and will continue to serve hundreds of students, visitors and others. It is truly an educational 'tool' as well as serving a sustainable function for the agriculture building. Students can learn hands on and take the lessons with them as they go into their professions. The green roof would not be possible without the support of the green fee. Now, with the additional of the permeable pavers, supported by the green fee, the safety, aesthetics and sustainable benefits increase on those visits that anyone makes to the green roof. We encourage community involvement and always share that our green roof and permeable pavers were made possible by the green fee. That is why we always welcome visitors from garden clubs to grade school classes to tour our green infrastructure projects to not only promote sustainable practices but explain how they work and inspire new ideas in green infrastructure. The most visibility will be from the tours and students who work on the green roof. The college includes all of our sustainable projects in our recruitment efforts, leadership board meetings and more. We are also working to include it on our website.

4. Is there anything you would do differently if you were to do a similar project in the future? If so, please describe.
No, we are very pleased with the outcome.
5. Please attach a minimum of 5 digital images –these will be images used to promote interest in sustainability projects on campus. These can be photos of the progress of the project or the completed project.
6. Optional: Do you have any suggestions for the SIU Sustainability Council to improve the Green Fund Award Process?

Possibly more work with alternative energy sources and grey water recycling. Otherwise, it is an easy to follow process (and very much appreciated).









