Photo by Kelly Learned

Healing at the hospital, both inside and out

PROJECT:	**Ted & Lois Hole Healing Garden, Robbins Pavilion, Royal Alexandra Hospital**
LOCATION:	**10245 - 111 Avenue NW**
BUILDING TYPE:	**Institutional/Hospital**
TOTAL ROOF AREA:	**2,090 m²**

Ecoroof details

ECOROOF AREA: 2,090 m²

DIRECTION: Limited exposure, centrally located between taller buildings

STOREY: Third floor

YEAR INSTALLED: 2011-2012

NEW BUILD OR RETROFIT: Retrofit

TYPE OF ECOROOF: Combination of extensive, semi-intensive, and intensive sections

ECOROOF SYSTEM: A single proprietary system manufactured by Soprema Canada was used, a laid-in-place system which includes individual layers of drainage mat with filter fabric incorporated, root barrier, and growing medium.

SUBSTRATE DEPTH: The depths of the growing medium ranged from 150 mm and 300 mm for annuals and perennials; 600 mm to 900 mm for shrubs and trees.

PLANTS: Deciduous trees – ex. trembling aspen, snowbird hawthorn; coniferous shrubs – ex. common juniper, hops dwarf mugo pine; deciduous shrubs – ex. cotoneaster, blue fox willow; Climbers – ex. Virginia creeper, William Baffin rose; Perennials – ex. daylily, stonecrop

INTERESTING FEATURES: Among numerous features some highlights include water features, trellises, commemorative art installations and various sized seating areas.

Description

The Ted & Lois Holes Healing Garden/roof top garden was designed to be a public place of healing and refuge for hospital patients, staff, and the general public. The installation was intended to commemorate the lives of a special Alberta couple, Ted and Lois Hole, founders of Hole's Nursery in St. Albert, Alberta.

First conceived during the planning of the new Lois Hole Hospital for Women, a LEED compliant/LEED shadow addition to the Royal Alexandra Hospital, the ecoroof scope of work was deferred and redesigned. The roof was then later retrofitted with the ecoroof, with some structural modifications to the roof required.

The roof is accessible by hospital patients, staff and the general public during daylight hours in the summer and shoulder seasons. It is closed during the winter months. On occasion, the roof has been lit up with Christmas lights for the holiday season. The roof is also visible from the building interiors and the patient rooms above that overlook it.

The completed project earned a regional citation by the Canadian Society of Landscape Architects (CSLA) in 2012 as well as an honourable mention by the National Design Exchange in 2011.

Photo by Royal Alexandra Hospital Foundation

Challenges

One challenge of this ecoroof was ensuring the intended design matched the available budget.

The budget for the healing garden was provided by a generous donation to the Royal Alexandra Hospital Foundation by the Hole Family Foundation. Numerous efforts were made to ensure that the construction costs not exceed the value of the donation such as in-house cost evaluations, trade quotes during the design phase and the hiring of an independent cost consultant to provide a detailed cost report prior to tendering the project.

Retrofitting a leak detection system after the ecoroof was installed was another challenge for this project. A flood test was initially performed at the completion of the base building in 2008. A thermal scan was also performed in 2010 with the start of the construction program of the ecoroof healing garden, to ensure the integrity of the waterproofing. Prior to the start of construction, an independent roofing consultant was hired to review the condition of the existing membrane and the construction documents.

A recommendation was made to include a leak detection system. A leak detection system is often used particularly on larger, more complex roof garden installations where tolerance for leaks is low and to pinpoint the location of a leak should one occur. However, leak detection is normally incorporated during the installation of the waterproof membrane whereas the waterproofing was already installed. A system called ProtectSys WM leak detection made by International Leak Detection (ILD) was retroactively installed which consisted of nine remote sensors inserted into the roofing system on a grid spacing of nine meters. The remote sensors are wireless and communicate to a transmitter unit located in the maintenance shed on the roof. This installation added to the overall cost of the project and delayed the project by one month.

The ecoroof healing garden is designed as a formal manicured garden; it therefore requires frequent regular maintenance in addition to seasonal activities. At first, the demands of this garden were overwhelming for the maintenance crew but with a team led by the Women's Auxiliary group, a new approach was agreed upon and set to focus maintenance on the public areas of the garden and perform minimal maintenance tasks in the areas not accessible by the public.

Benefits

The primary benefit of this ecoroof is exemplified by its name, Ted & Lois Hole Healing Garden. This ecoroof provides a place for healing and reconnection with nature within what would normally be an institutional setting typically void of plant life and greenery. This ecoroof has created a wonderful, peaceful space for patient and staff use for celebrations, including Indigenous ceremonies. The photos provided were taken during the annual Garden Party hosted yearly by the Royal Alexandra Hospital Foundation.

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Lessons Learned

Proper design of an ecoroof is essential. For this ecoroof, some challenges could have been avoided by designing the ecoroof at the same time as building design, to avoid having to modify the existing building to support an ecoroof. Additionally, considering and planning for a leak detection system in the design phase is beneficial as retrofitting that system costs time and budget.

As with many ecoroofs in Edmonton, the Ted & Lois Hole Healing Garden became the home and nest site of a pair of Canada Geese in April 2019. At the recommendation of Wildlife Services, the Garden was temporarily closed to the public so the geese could lay their eggs in peace.

Thanks to our project funder

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