



## Elevated Lab Living Wall Installation | March 2014

Project Management: Centre for Architectural Ecology

Consultants: RJC Engineering

Contractor: Architek

Supplier: Modulogreen

Funding: School of Construction and the Environment, Centre for Architectural Ecology and Factor-Four













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The Centre for Architectural Ecology is building a Burnaby campus research base, the Elevated Lab, which will be used to educate and train the next generation of students and local professionals in leading-edge green roof, living wall, and green façade technologies. These different systems have many direct impacts on the environment and community, such as limiting stormwater runoff, insulating and protecting buildings, reducing noise pollution, limiting energy consumption, cleaning the air and introducing greater biodiversity into the urban cores.

The lab will strengthen student knowledge regarding sustainable construction technologies; provide them with a new field to envision, build, and complete new projects; and will engage students to think, apply, research and innovate in a growing sector. More tours, courses, and activities will be developed and organized to provide our industries and schools with key knowledge to better save energy, protect the environment, and grow our communities. The Elevated Lab will have a major impact on the BCIT landscape, contributing to the Eco Street network and the Factor IV initiative.

BCIT, with the support of Campus Planning and Facilities Management, improved access to the rooftop in 2013. A rooftop classroom deck, interactive living walls, green façades and green roof learning plots, real-time display monitor of storm water and thermal performance of green roofs, and a rainwater harvesting system to support the living architecture are planned and going through the approval process. The current project under construction includes:

- A 25 square metre living wall installation on the lower north wall of the stairwell. The living wall will be used to translate knowledge to students and others about this innovative and leading edge technology, and will inform designers on plant maintenance and water balance requirements to sustain these systems. The walls will require irrigation and is currently using potable water; however, a rainwater harvesting system has been purchased and it will be installed pending the approval process. The plants selected (some shown here on right) are shade-tolerant and befitting to our rain forest ecology.
- The fence beside the living wall will be vegetated with a prototype planter/climber system. Water runoff from the living wall will be held in a reservoir at the bottom of the planter to support the plant growth. The green fence will showcase how quickly and easily green streets can be attained. This prototype will be assessed for replication throughout the BCIT Burnaby campus.
- A display monitor will be installed in the middle of the living wall. The display monitor will be connected to a video camera placed on the green roof and to a series of thermal sensors and meters. The monitor will display real-time performance data of living building systems and information on current rooftop activities.

	
Luzula Sylvatica	Heuchera Palace Purple
	
Phlox Douglasii	Gaultheria Procumbens
	
Dianthus Deltoides Pink	Lonicera Pileata
	
Liriope Muscari	Polystichum Neolobatum
	
Vaccinium Ovatum	Pachysandra Terminalis
	
Phyllitis Scolopendrium	Acorus Gramineus