

Sustainability Project Fund Application

Applicant/Project Leader: Professor Vikram Bhatt
McGill School of Architecture
Director, Minimum Cost Housing Group

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Project Title: Making the Edible Campus: A Model of Urban Agriculture for Montreal and Beyond

Total Project Budget: \$204,683

Budget Requested from the Sustainability Fund: \$152,359

Confirmed Outside Funds: \$52, 324

Project Group:

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Project summary: It is proposed to enhance and expand the Edible Campus Garden over next three years (2010-2012) and to use the project to reach out to a wider community with the help of educational initiatives: posters, publications and interactive panels and making the Edible Campus into a real “showcase,” a model of effective urban agriculture for the McGill community, the city and beyond. The estimated cost of this ambitious project is estimated to be \$204,683 of which we have already secured \$52,324 and are requesting the Sustainability Fund for \$152,359.

I. Project Overview and Project Implementation

Project Background: The Edible Campus Garden is a true partnership between the McGill School of Architecture's Minimum Cost Housing Group, and Montreal based NGOs Alternatives, and Santropol Roulant. This celebrated project seeks to involve citizens in the creation of green, edible community spaces by demonstrating how productive planting can be woven into urban spaces without diminishing their utility or functionality (see **Appendix 2** for coverage of the project). While exploring strategies for increasing food production in the city, we also seek to improve the spatial quality of underutilized and neglected spaces. The project forms a part of a sustainable urban food cycle that includes food production, preparation, food delivery, and composting. The garden started off campus but was moved to the Burnside Terrace in 2007, which was chosen after surveying a number of potential sites on the campus, to which McGill generously granted the full use of the space. Today, it comprises over 200 self-watering containers and a 100m² rock basin, recently converted into raised beds for productive planting. Remarkably, the garden, tended by volunteers during weekly volunteer shifts, provides a third of the vegetables used by Santropol Roulant's meals-on-wheels kitchen over the summer months. In addition, a portion of the harvest is distributed fresh to client-members and to residents of Little Burgundy, a low-income neighbourhood where sustainably grown fresh produce is hard to come by.

Proposal to the McGill Sustainability Project Fund: Thus far, "Making the Edible Campus" has been operating without any fiscal commitment from the University and is heavily dependent on the hard work of Santropol Roulant's and other committed volunteers. After 3 three years of "showing what we can do," we feel that it is time to take things to the next level. At this time, in charting our growth, we look to the McGill Sustainability Project Fund for support. Money from the fund would be used to 1) enhance, expand and consolidate our current work and the garden and 2) use the project to reach out to a wider community with the help of educational initiatives: posters, publications and interactive panels, workshops and public events throughout the growing season, making the Edible Campus into a real "showcase," a model of effective urban agriculture for McGill, city and beyond.

Strengthening of the model garden: In addition to continuing the current activities of the Edible Campus, it is proposed to add the following:

- a garden strip along the western wall of Burnside Hall, featuring the addition of semi-permanent custom made planter boxes, and other architectural features such as pergolas and trellis systems; see **Appendix 3** for the design of new planters.
- on-site composting of garden waste
- addition of 40+ new self-watering containers
- addition of an on-site community greenhouse, with potential to be shared with other community type garden projects on campus (i.e. student group Campus Crops)
- the hiring of a full-time garden coordinator

Increase involvement from the McGill community:

- for credit student research on urban agriculture, including a continued focus on coherent aesthetics and design
- improved informative and learning panels
- allocation of a small shared garden space for use by interested McGill community members
- 2 student internship positions

Expansion and consolidation initiatives:

- conversion of the rock basin at the southern entrance to Burnside Hall into raised beds for productive planting
- new fruit bearing bushes in the smaller rock basins on the western side of Burnside Hall
- a pilot beekeeping project on the roof of Burnside Hall or more appropriate site (inspired by a

collaborative project between Toronto's Food Share and the Fairmount Royal York Hotel. See http://springwise.com/food_beverage/royalyorkbees/)

Project Eligibility: Highly visible and fully accessible, the Edible Campus Garden seeks to inspire. It is the perfect combination of both form and function. Our garden programming will connect urbanites to the source of their food. We hope that the project will inspire McGill community members to rethink their daily food choices, perhaps attempting to grow their own food at home. The Edible Campus garden is an example of urban agriculture, a recognized strategy for sustainable development. Namely, urban gardens such as ours help mitigate the heat island effect and minimize rainwater runoff. Locally grown food means lesser food miles and associated greenhouse gas emissions. Employing only natural gardening methods, our vegetables are free from harmful petro-chemical fertilizers and pesticides. Our garden is non-mechanized and relies on manual labor, whereas conventional agriculture is heavily reliant on fossil fuels to run its tractors and other large machinery. Our garden is exceptional in its ability to engage volunteers, be they from McGill or from the community at large. It is an outdoor classroom, with potential interest to students and professors from a broad range of faculties. Situated in the heart of Montreal's downtown core, it acts as a public showcase for urban agriculture and city greening. We believe it has already helped shape a culture of sustainability on campus, and that through continued innovation and a welcoming attitude, it will continue to do so over the years to come. Photos from our 2009 season can be found at: <http://www.flickr.com/photos/srgarden/>

Timeframe/Milestones/Tasks and Responsibilities: Improvements to the Edible Campus Garden are planned over 3 growing seasons. All aspects of the project, including the initial design phase, are to be led by Prof. Bhatt with the participation of students from the School of Architecture and other academic units. Student involvement is to be assured and strengthened via research assistantships and fellowships. Santropol Roulant will assume the horticultural aspects of the project, as well as volunteer coordination and community events. An evaluation will be conducted near the end of the third year and a decision made on continued funding for the project. Please consult **Appendix 1** for the project timeframe, with milestones for key actions and deliverables, as well as key performance indicators, communication strategies, and group member in charge.

Stakeholders: Following are the key stakeholders of this project and their respective roles:

McGill School of Architecture's Minimum Cost Housing Group: Prof. Vikram Bhatt, Director of the Group will lead the project, provide general direction and oversight, act as a liaison with the university's administration, and will steer research efforts and student involvement. Leila Farah, Research Associate who has coordinated a number of such projects for the group will help oversee designs of this project.

Santropol Roulant : Santropol Roulant will be responsible for the technical aspects of the project, including the set-up, planting, cultivation, harvest, volunteer recruitment, public engagement. We will work in close consultation with the McGill Facilities Office and the Horticultural Supervisor. Santropol Roulant's contributions to the project include technical expertise, but also funding (materials, equipment and salaries), and in-kind donations, principally in the form of volunteer labour. Santropol Roulant is an equal partner in this project and will manage it jointly with the Minimum Cost Housing Group. The Edible Campus Garden is part of Santropol Roulant's modeling of a sustainable urban food cycle, including food preparation (hot meal service), waste management (worm composting), food delivery (by foot or bike), and food production (the garden). See **Appendix 4** for letter of support.

McGill Facilities Office (aVP Jim Nicell, Chuck Adler, Radu Jaster): This Office will advise our

team in the continued development of the Burnside Terrace and other open spaces on soon to be Car-free lower Campus of McGill. Mr. Juster met with the Edible Campus team early in February to discuss the ideas included in this proposal and has given it his approval and support. Assistant Vice-Principal Jim Nicell and Chuck Adler have also been kept informed and are fully supportive of the project. See **Appendix 4** for letter of support.

Horticultural Supervisor McGill (Eric Champagne): He will assist our team in acquiring necessary materials: soil, compost, storage bins, etc and with the removal of organic waste and eventual onsite composting. We have worked closely in the past and he and his team fully support the project.

Campus Crops: It is a student-run urban gardening initiative at McGill's downtown campus. In 2008 and 2009, they tended a small plot behind the School of Environment and intend to develop other campus locations in 2010. Their garden harvest is given to the Midnight Kitchen. Over the past two seasons, Campus Crops and the Edible Campus Garden teams have collaborated on numerous projects including horticultural workshops and a Fall Harvest Party. This Spring, Santropol Roulant is providing Campus Crops with space in its off-campus seedling room. This proposal calls for continued collaboration between the two groups, with specific regards to the proposed on-site greenhouse. See **Appendix 4** for letter of support.

II. Financials: Expenses and their respective sources are outlined in the table below. Please note that the financial details are over a 3-year period.

EXPENSES

Item	Estimated Cost	Source
Garden Coordinator Salary	\$78 750 (\$26 250/9months x 3 yrs) \$26 250 (\$8 750/3months x 3 yrs)	MSPF Santropol Roulant
Graduate Student Assistantships	\$15 000 (\$5 000/year x 3 yrs)	MSPF
Summer Student Internships	\$15 000 (\$5 000/year x 3 yrs)	MSPF
Materials: soil, compost, perlite, fertilizer, seeds, etc	\$7 000	MSPF
Equipment: garden tools, hives for beekeeping project, etc	\$7 000	MSPF
Planting: perennials, fruit bushes	\$5 000	MSPF
Greenhouse (8x14')	\$5 275 (http://cedarbuilt.homestead.com/)	MSPF
Structural Evaluation of rock basins proposed for conversion (engineer consultant fees)	\$750	MSPF
“Showcase Garden Strip” (planters, pergolas, etc)	\$15 584	MSPF
Signage and panels	\$2 500	MSPF
Transportation	\$500	MSPF
15% administrative	\$26 074	Santropol Roulant

FUNDING SOURCES

Revenue Source	Amount Requested	Confirmed
McGill Sustainability Program	\$152,359	Requested from MSPF
Santropol Roulant (EJLB Foundation)	\$40 000	confirmed
Santropol Roulant (Evergreen Foundation)	\$12 324	confirmed

Qualifications of key group members:

Vikram Bhatt, is a Professor of Architecture and he also directs activities of the Minimum Cost Housing Group, a research unit with an international orientation that focuses attention on the human settlement problems of the poor. Since 2000, his team has done pioneering work in the field of urban agriculture, including Making the Edible Landscape project that integrated productive growing in three cities on three continents. In addition, he has lead several other urban agriculture projects in Montreal: A Study of Montreal's Community Gardens, Nutri Centre a collective garden in Ville La Salle, Paysage Solidaire 2008-13 program to advance community based growing ops in Mercier-Hochelaga-Maisonneuve district and last but not the least, the Edible Campus project of McGill University.

Tim Murphy, a graduate of the McGill School of Environment, is the Director of Sustainability at Santropol Roulant. He has worked as part of the Edible Campus Garden for the past four growing seasons, coordinating volunteers, tending to the plants, and organizing workshops and events. While at McGill, he was a coordinator of Greening McGill, a QPIRG board member, and an active leader in the student-led campaign for an environmental policy. Tim has over 10 years of experience working in the not-for-profit community sector, having previously worked as a National Coordinator for the Sierra Youth Coalition. He is the Coordinating Editor of *To The Tar Sands*, Lorimer Press.

Leila Marie Farah, is a lecturer in sustainable design at McGill University. She holds a professional degree in Architecture from l'Ecole Nationale Supérieure d'Architecture Paris-Malaquais, M.Arch from McGill University and is currently a PhD candidate at McGill's School of Architecture. Her work seeks ways to increase the sustainability of cities through design. Her current research focuses on urban metabolism, and more specifically on the correlation between food paths and cities. Between 2005-2009, she was affiliated as a RA with the Minimum Cost Housing Group and has coordinated action-research projects triangulating community participation, urban horticulture and urban design.

Rayna Goldman, has been an active in the non-profit sector in Canada and the United States since 2001, having focused much of her career on education reform in the inner-city communities of New York and San Francisco. After pursuing a Master's degree in Non-Profit Management at New School University, she took on project-based work with Tibetan refugee communities. Such initiatives included program development for the Tibetan Health Initiative at the Gere Foundation, consulting for The Missing Peace and event coordination for Healing the Divide. She moved back to her hometown Montreal in 2007, worked at Concordia University, and founded Bicycles for Humanity Montreal, a grassroots initiative dedicated to collecting and shipping used bicycles to Africa. As the new Executive Director of Santropol Roulant, she is excited to help support the organization's award-winning community-building practices while advancing its steadfast commitment to food security and sustainability.

APPENDIX 1

DETAILED TIMETABLE OUTLINING: ACTIONS, OUTCOMES AND RESPONSIBILITIES

Start Date	End Date	Key Action or Deliverable	Performance Indicator	Communication Strategy	Group Member in Charge
May 2010	October 2012	Garden Coordinator assumes duties	-periodic evaluations and reporting	-articles in campus publications -public events -speaking engagements	Tim Murphy
May 2010	October 2012	Continuation of existing activities	-200+ volunteers in garden -1000+ of visitors to garden	-volunteer opportunities -garden tours and visits -public events	Tim Murphy + Rayna Goldman
April 2010	June 2010	Conversion proposal for rock basin near Burnside Hall's Southern Entrance	-new growing space -increased harvest - Diversity of harvest (30+ species planted) -comparative estimation of food miles -calculation of reduction in rainwater runoff (in volume)	-design proposal -website and other publicity -garden installed	Prof. Vikram Bhatt + Leila Farah
April 2010	June 2010	Addition of 40+ new self watering containers	-increased harvest -diversity of harvest (30+ species planted)	-volunteer opportunities -garden tours and visits -public events	Tim Murphy
Spring 2010	Fall 2012	On-site composting of garden waste	-organic matter composted (in weight) -home made compost used as fertilizer in garden (in volume)	-volunteer opportunities -garden tours and visits -public events -poster	Tim Murphy
April 2010	October 2012	Installation of a greenhouse	-seedlings	-volunteer	Tim

			started over course of growing season	opportunities -garden tours and visits -public events -website and other publicity	Murphy
June 2010	October 2010	Design phase of “Showcase Garden Strip” along Western wall of Burnside Hall	Peer review process, comment period	Exhibition of plans in school of architecture	Prof. Vikram Bhatt
April 2010	October 2012	Furthered student research on urban agriculture	-2 projects/studies conducted per season -student interns working on garden design and in garden itself	-research reports	Prof. Vikram Bhatt
June 2010	October 2012	Improved signage and informative panels			
May 2011	Fall 2012	Planting of small fruit bearing bushes in the smaller rock basins near the western wall of Burnside Hall			Prof. Vikram Bhatt + Prof. Vikram Bhatt
May 2011	October 2012	Pilot beekeeping project on roof of Burnside Hall	-forging of partnership with local beekeeper -honey harvested	Establishment of a beekeeping collective to assure proper care of hives (modeled after similar program at Toronto's Food Share)	Tim Murphy
April 2011	October 2012	Allocation of a small shared garden space for McGill community members	-# of gardeners -qualitative feedback from gardeners	-articles in campus publications -public events -speaking engagements	Tim Murphy
April 2011	Fall 2012	Completion of showcase garden strip along the	-survey of McGill		Prof. Vikram

	western wall of Burnside Hall, featuring the addition of semi-permanent, custom made planter boxes and other architectural features such as pergolas and trellis systems, based on designs completed in year one	community members		Bhatt
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APPENDIX 2

Recognitions of the Edible Campus Project

Awards :

2010 “Le Jardin du Roulant,” Gala de reconnaissance en environnement et en développement durable de Montréal.

2008 “Making the Edible Campus,” National Urban Design Award 2008 in the category: Urban Fragments, by the Royal Architectural Institute of Canada, the Canadian Institute of Planners, and the Canadian Society of Landscape Architects.

2008 “Des jardins sur les toits,” Prix Phénix de l'environnement dans la catégorie Développement Durable.

Exhibitions:

2009 - 2010 Actions: What You Can Do with the City. Graham Foundation for Advanced Studies in the Fine Arts, Chicago, 16 October 2009 – 13 March 2010.

2009 Design Montreal. Montreal, May 2nd 2009.

2009 Carrot City. Design Exchange, Toronto, February 25 – April 30, 2009.

2008 - 2009 Actions: What You Can Do with the City. Canadian Centre for Architecture, Montreal, 26 November 2008 - 19 April 2009.

2008-9 “Making the Edible Campus.” Travelling exhibition across Canada, Royal Architectural Institute of Canada, the Canadian Institute of Planners, and the Canadian Society of Landscape Architects.

Publications:

Bhatt, Vikram, Leila M. Farah, Nik Luka and Jeanne M. Wolfe. “Making the Edible Campus: A model for food-secure urban revitalization.” *Designing Edible Landscapes*. Open House International. 34.2. London, 2009: 81-90.

Bhatt, Vikram, Leila M. Farah, Nik Luka, Jeanne. M. Wolfe, Rotem Ayalon, Ismael Hauteceur and Jane Rabinowicz & Julia Lebedeva. "Reinstating the Roles and Places for Productive Growing in Cities." *The Sustainable City V. Urban Regeneration and Sustainability*. Eds. A. Gospodini, C.A. Brebbia and E. Tiezzi. Skiathos, Greece: WIT Press, 2008: 75-84.

APPENDIX 3
DESIGNS

APPENDIX 4
LETTERS OF SUPPORT