

Sustainability Project Fund Application

Project Title: Thomson House Pollinator Plantings

Budget Requested: 267.00

Applicant/Project Leader: Krista Reimer

Contact Information:

Last Name: Reimer

First Name: Krista

Email: reim.krista@gmail.com (krista.reimer@mail.mcgill.ca)

Daytime Phone: 514 - 431 - 2407

Affiliation: post-graduate student (MSc)

Faculty/Unit: Science, Department of Mathematics and Statistics

Relevant Links:

Project theme(s): Food, land, wellness and health

Project Group:

Renée Gélinau	reneegelineau@gmail.com	Thomson House beehive project member (THBP)
Dalal Hanna	dalal.e.hanna@gmail.com	THBP, McGill Alumni
Karine Houde	khoude88@gmail.com	THBP
Agathe Moreau	agathe.moro@gmail.com	THBP

Please carefully consider the [application criteria](#) before you begin. Consult the [FAQ](#) for further guidance. Application text may replace italicized instructions below. Length (before any appendices) cannot exceed 4 pages. Last revised: December 6, 2013

I. Project Overview

Project summary:

In the summer of 2014 both a beehive and a container vegetable gardening project were initiated on the Thomson House property. Following a workshop which brought the participants of these projects together to discuss their interdependence, the group members listed above (those involved with the beehive project) and project leader Krista Reimer (a participant in the container gardening project) decided to together increase the number of plants which support pollinators on the Thomson House grounds. At present, the limited number of flowering plants on the Thomson House grounds is a critical gap in the ecological processes of pollination and food production the aforementioned projects seek to attain. By planting more flowering plants, we wish to ensure the bees in the hive have adequate nectar and pollen sources nearby as well as to attract other pollinators to the site. In turn, this will benefit the container gardens. Moreover, as these plantings will additionally provide aesthetic and health benefits, they will enhance every use of the grounds by PGSS and Montreal community members. This project seeks to enrich the ecological systems already established on the Thomson House grounds by improving a presently unaddressed and weak component of them.

Objectives of the project:

- Increase the number of flowering plants desirable to pollinators on the Thomson House grounds
- Increase the visual interest of the Thomson House grounds

- Respect and enhance the various uses of the Thomson House grounds
- Increase the productivity of the container gardens and herb garden plots on the Thomson House grounds
- Initiate and set up a database documenting plantings on the Thomson House grounds
- Increase knowledge and understanding amongst PGSS and Montreal community members about the importance of supporting urban pollinator populations and how to do so
- Be designed to last beyond the 2015 season

Project components:

- I. **Planting** Mountain mint, yarrow, Virginia virgin's bower, and wild cucumber will be planted around the Thomson House grounds. White clover will be seeded into the lawn. These plantings have been chosen based on guidelines focused on ensuring that the above objectives will be met. In particular, plants and locations have been chosen so that maintenance of the plants will be kept to a minimum, no new infrastructure is needed to support the plantings, and presently untended areas of the grounds are addressed. Further information regarding the planting guidelines, plants, and planting locations can be found in the attached *Detailed Planting Proposal* document.
- II. **Documentation** Each of the planted plant species and their locations as well as the undertaken and necessary future maintenance will be electronically documented and left in the care of the Thomson House manager. A plants database created for this documentation project will extend to cover the plantings of an earlier permaculture project which took place on the grounds in 2011 (Please see first section below in *project eligibility*) as well as other long standing plants found on the grounds. This database may be used to inform future projects undertaken on the grounds as well as facilitate the grounds' ongoing maintenance.
- III. **Green Drinks and Montreal's Ecosystems at Your Service** In order that the project may serve to increase knowledge and understanding of the importance of supporting urban pollinator populations and how to do so, both a *Green Drinks* event will be organized on this topic in April, 2015 at Thomson House, and a post will be written about the project for the *Montreal's Ecosystems at Your Service* website midway through the summer.

Project eligibility:

In addition to the previously mentioned beehive and container gardening projects, this pollinator planting project emerges with close ties to another recently completed project on the Thomson House grounds and current plantings by the McGill Grounds department. In 2011 a permaculture planting project was undertaken by students in a McGill urban horticulture class. The current project incorporates lessons learnt from this project and seeks to further the ecological efforts initiated by it, thereby playing a critical role in a collective advance in more sustainable landscape design on the Thomson House grounds. It has been communicated by André Pierzchala, the Thomson House business manager, that the 2011 permaculture project highlighted the need for plant documentation to be left with Thomson House following any future projects. The plant database initiative of this project addresses this need. Some of the plantings included in the 2011 proposal did not survive because of their unsuitability to difficult growing locations. Knowing this, particular care has been taken in choosing plants for these same locations in the current proposal. New locations for plantings have also been proposed. The seeding of clover into the Thomson House lawn joins current efforts by McGill's Grounds department in replacing conventional lawns with more resilient and biologically diverse groundcovers.

This project aligns with McGill's Vision 2020 in a multitude of ways; the primary links are with the goals outlined within the *Operations* category. The plantings proposed work towards the goal of having "*natural ... environments [which support] resilient ecosystems, strong communities and individual wellbeing.*" The project, as it seeks through experimentation to provide knowledge about planting to benefit pollinators, contributes to the Vision's aim to have "*McGill operations serve as a 'living lab'*".

It has been intentionally planned that all physical materials acquired for this project are either biotic or soil components. Locations for vining plants have been chosen close to structures which can serve as supports, tools for

planting and maintenance will be borrowed from other McGill parties, and documentation will be compiled and stored electronically. This responds to the Vision’s call to consider all activities in terms of their life cycle.

If received, SPF funding will be used to purchase plant materials. Labour will be either provided voluntarily or taken care of by standard grounds operations. The necessary tools for seeding, planting, and maintenance have all been arranged to be provided either by the McGill Grounds department (seeder for clover seeding) or the PGSS environment commissioner (trowel, hand hoes, watering cans, etc.).

Timeframe/Milestones:

This project will begin in March 2015 with preparation for an April Green Drinks event and will continue through September 2015. Project activities of seeding, planting, maintenance, and pollen analysis will be done at the seasonally appropriate times. The *Montreal’s Ecosystems at Your Service* post will be written once the plants have had time to establish themselves. The electronic documentation to be left with Thomson House will be completed by September 31, 2015.

The success of the plantings will be measured by a pollen analysis of a honey sample from the beehive. Such an analysis provides information on the contributing pollen sources. This analysis will be conducted at the urban agriculture AULab at UQAM. The information provided by the analysis will provide feedback on which plantings were most utilised by the honey bees. This knowledge can inform the design of future plantings on the Thomson House grounds as well as in other projects carried out by the team members. A report of this analysis will be incorporated into the documentation component of this project.

All visitors to and users of the Thomson House grounds will benefit from the project as it enhances the visual, tactile, and aromatic interest of the grounds, in particular as it addresses portions of the grounds which are presently untended. Increasing the number of plantings on the grounds will increase the well-being of visitors to them as natural views have been shown to influence psychological states more beneficially than urban views¹. It is our hope that participants of the container garden project will notice an increase in food production.

Stakeholders:

The following McGill community members will be either affiliated or affected by the project. Each of these people/groups has been contacted and is/are supportive of the project. Please find letters of endorsement attached from all listed parties. Note any active contributions which will be undertaken by each party are listed in parenthesis:

- André Pierzchala *for Thomson House* - Thomson House business manager
- Amanda Winegardner - PGSS environment commissioner, co-organizer of downtown PGSS Green Drinks events (lending of PGSS garden tools)
- Brighita Lungu - PGSS member services officer
- Hugo Laperle *for the McGill Grounds Department* - Horticultural supervisor (horticultural expertise, lending of seeder, compostable material collection)
- Martine Larouche *for Montreal’s Ecosystems at Your Service* (MEAYS) - MEAYS project coordinator (correspond regarding post submission)

II. Project Implementation

Tasks and Responsibilities:

Type of Activity – Task	Est.Time Required	Group Member in Charge
Design preparation and plant choice	completed	All project members (incl. proj. leader)

¹ Ulrich, Roger. "Natural Versus Urban Scenes: Some Psychophysiological Effects." *Environment and Behavior* 13, no. 5 (1981): 523-56. Accessed March 8, 2015. SAGE Journals.

Purchase plants and sand	4 hrs	Krista Reimer
Seeding the clover	5 hrs	Krista Reimer
Planting (other than clover)	4 hrs	Krista Reimer
Ongoing monitoring/maintenance of plants	indeterminable	Krista Reimer with help from proj. grp
Conduct pollen analysis at AULab	4 hrs	Agathe Moreau
Green Drinks: preparation and event	5 hrs	Krista Reimer, Dalal Hanna, Agathe Moreau
Montreal's Ecosystems at Your Service post: writing and correspondence	8 hrs	Krista Reimer
Creation of documentation/plant database	30 hrs	Krista Reimer
Complete project reports for TH and SPF	10 hrs	All project members (incl. proj. leader)

III. Financials

If possible, funding is required by May 1, 2015

Detailed expenses:

Expense Description	Estimated Cost
Wild cucumber plants	40.00
Mountain mint plants	29.00
Yarrow plants	17.00
Virginia virgin's bower seeds	6.00
White clover seeds	20.00
Sand	5.00
Transportation to and from nursery by taxi	80.00
Pollen Analysis at AULab	70.00
TOTAL	267.00

Detailed revenues: This project will produce no revenue

IV. Additional information:

Please see qualifications/related experience of the project leader and other project members listed on the final page of the attached *Detailed Planting Proposal* document.

Thomson House Pollinator Plantings

Summer 2015

Detailed planting proposal

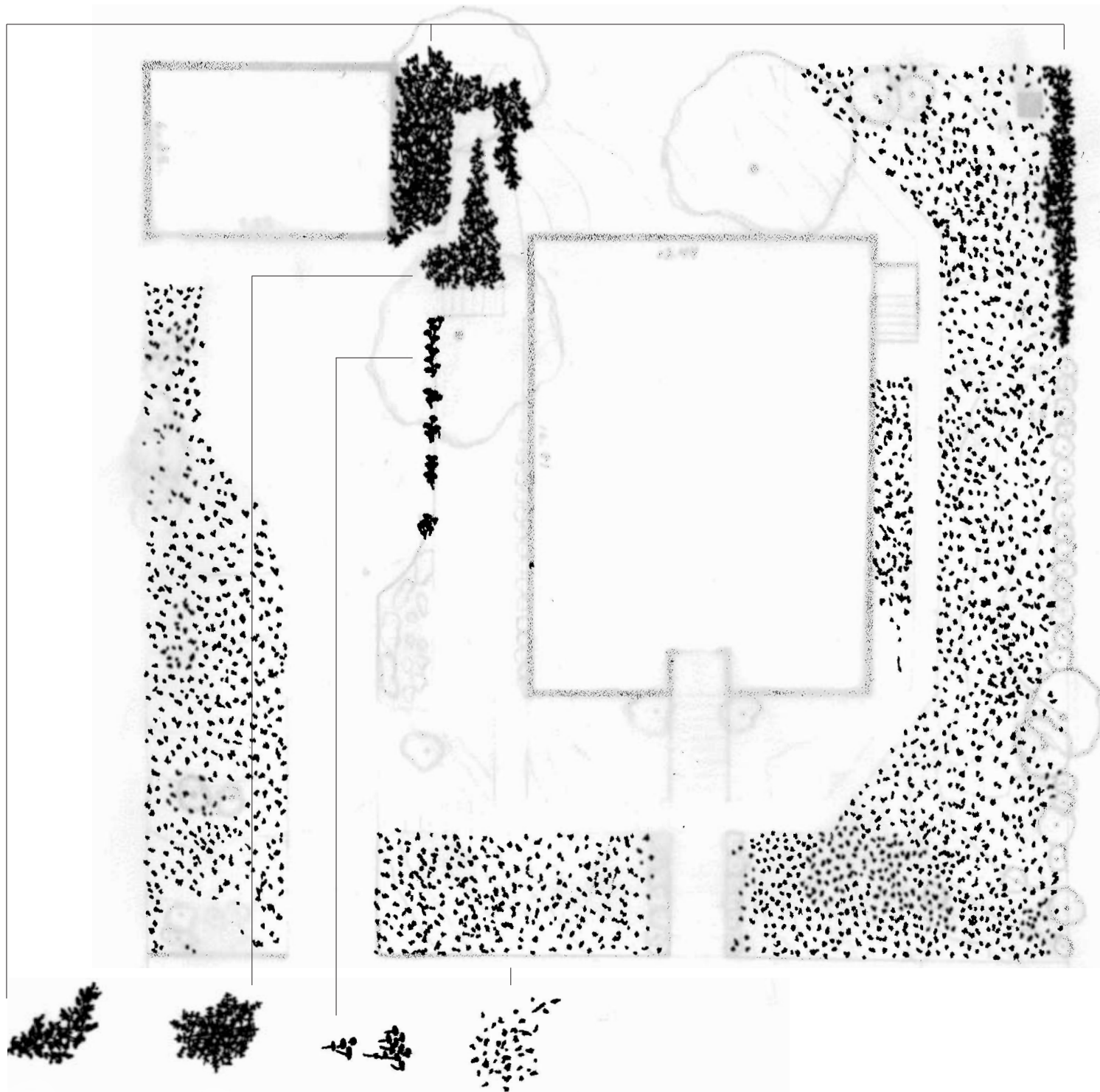
Guidelines for choosing plants and locations

Plants

- easy to maintain
- interest for pollinators
- variation in species, with attention to successive blooming periods
- subtle colour scheme/variations of white (white is one of the colours preferred by bees; such a colour scheme is sensitive to the use of the yard for weddings; maintains the strong visual effect of the fuchsia rose bushes flanking the main staircase)
- currently available for purchase from local nurseries

Locations

- match light and soil requirements
- minimize the need for new infrastructure (ex. trellises)
- currently contain few or no plantings
- dispersed throughout the grounds



Wild cucumber/
Virginia virgin's
bower

Mountain mint

Yarrow

White clover

June



White clover - trèfle blanc

Location Incorporated into the lawn
Growing conditions light - sun
Interest for pollinators blooms June - July, nectar and pollen source, sugar percentage: 40.1
Notes perennial, increases lawns resistance to drought

July



Wild cucumber - concombre grim pant

Locations Chain link fence along the NW; SW corner by ramp
Growing conditions light - sun or part shade; soil - humid but drier ok
Size 500 - 800 cm high (long); 50 cm wide
Interest for pollinators blooms July - August, nectar and pollen source
Notes annual, Indegineous to Quebec, grows quickly and easily

August



Yarrow - herb-a-dinde

Location In the planters bordering the patio
Growing conditions light - sun, part shade, or shade ; soil - well drained
Size 30 - 60 cm high
Interest for pollinators blooms June - September, nectar and pollen source
Notes perennial, indigineous to Quebec, drought resistant

September



Virginia virgin's bower (clematis virginiana) - herbe aux gueux

Locations Chain link fence along the NW; SW corner by ramp
Growing conditions light - sun or part shade; soil - humid
Size 100 - 400 cm high (long); 60 cm wide
Interest for pollinators blooms July - September, nectar and pollen source
Notes perennial, indigineous to Quebec, grows easily

October



Mountain mint - pycnanthème de virginie

Location ramp 'planter' in the SW corner of the property
Growing conditions light - shade or part shade; soil - not fussy
Size 30 - 90 cm high; 60 cm wide
Interest for pollinators blooms August-October, nectar source
Notes perennial, indigineous to Quebec, easy to grow

Successive vine planting

Due to the fact that Virginia virgin's bower plants are expensive and wild cucumbers are annuals, a successive growing scheme is the most suitable solution in those locations where vining plants are desired.

This year, both wild cucumber plants will be planted and Virginia virgin's bower seeds will be sown. The rapidly growing wild cucumber will fill the majority of the space in which vining plants are desired, while the Virginia virgin's bower plants become established. The annual wild cucumber plants will be removed at the end of the 2015 season. In future seasons the Virginia virgin's bower plants will grow to fill the space for vining plants.



Wild cucumber - concombres grimpant

Locations

Chain link fence along the NW; SW corner by ramp

Growing conditions

light - sun or part shade

soil - humid but drier ok

Size

500 - 800 cm high (long)

50 cm wide

Interest for pollinators

blooms July - August, nectar and pollen source

Notes

annual, indigeneous to Quebec, grows quickly/easily



Virginia virgin's bower - herbe aux gueux

Locations

Chain link fence along the NW; SW corner by ramp

Growing conditions

light - sun or part shade

soil - humid

Size

100 - 400 cm high (long)

60 cm wide

Interest for pollinators

blooms July - September, nectar and pollen source

Notes

perennial, indigeneous to Quebec, grows easily

Qualifications and related experience of project members

Krista Reimer ***Introductory landscape architecture course***
Harvard's Graduate School of Design, Summer 2014

Renée Gélinau ***Horticulturalist***

Introduction to urban beekeeping course
Miel Montréal, Winter 2014

Dalal Hanna ***MSc Biology***
McGill University

Introduction to urban beekeeping course
Miel Montréal, Winter 2014

Karine Houde ***Introduction to urban beekeeping course***
Miel Montréal, Winter 2014

Agathe Moreau ***Introduction to urban beekeeping course***
Miel Montréal, Winter 2014



The Post-Graduate Students' Society of McGill University Inc.
Association étudiante des cycles supérieurs de l'Université McGill inc.
Maison David Thomson House, 3650 rue McTavish, Montréal (Québec) H3A 1Y2
Tél.: (514) 398-3756
Fax: (514) 398-1862
www.pgss.mcgill.ca

March 9, 2015

Dear: Sustainability Projects Fund Working Group,

This letter is in support of Krista Reimer et al.'s application to the SPF proposing a pollinator-friendly addition to the current Thomson House garden (PGSS). Krista and her co-applicants have worked hard and in consultation with the PGSS Operations Manager as well as the PGSS environment and sustainability committees to develop an excellent plan for the garden that builds on existing projects and we are pleased to support their efforts.

The Thomson House garden was first conceptualized in 2010 as a permaculture garden and SPF funding was secured to design and plant such a garden. In 2012, the (then) Sustainability Coordinator began using some of the raised beds around Thomson House as well as temporary containers to grow vegetables and herbs for the Thomson House kitchen. This activity has continued since then, and we have tried to improve the operation of this garden each year since then, overcoming issues of mismatch between garden production and kitchen needs and people-power for maintenance and harvesting. Last year, a member of the PGSS environment committee submitted a (successful) SPF application for the first year of a PGSS community garden. The purpose of this project was to improve the interaction between PGSS members and the physical garden space around Thomson House. Our learnings from this project included improving workshops, and collaborating with other groups like Campus Crops. Last year was also our first year hosting a bee colony, managed by interested PGSS members and embraced by staff at Thomson House.

The proposal that Krista has put together would further expand the Thomson House garden as an ecosystem service for McGill and Montréal and is probably the most sustainable initiative for the garden planned as of yet. This is not another reinvention of the garden but a proposal in line with what we have learned with past initiatives and one that will help our other initiatives (growing food for the Thomson House kitchen, the community garden and bee colony) to continue to grow and flourish.

Sincerely,

Brighita Lungu

Amanda Winegardner

PGSS Member Services Officer
(membership.pgss@mail.mcgill.ca)

PGSS Environment Commissioner
(environment.pgss@mail.mcgill.ca)



March 2, 2015

Ms. Krista Reimer
Thomson House
Post Graduate Student Society (PGSS)
3650, McTavish Street
Montreal, Quebec
H3A 1Y2

Ms. Reimer,

Re: Thompson House Pollinator Plantings

The purpose of this letter is to endorse Krista Reimer's pollinator plantings project at Thomson House. On February 24, 2015, a meeting was held between Krista Reimer, the project organizer, and Hugo Laperle, a supervisor from the Grounds Department, to discuss the implication and potential impacts of the project on the Grounds Department.

The purpose of the project is to increase the number of flowering plants in the Thomson House yard to ensure that the bees from the Thomson House bee-hive have an adequate nectar and pollen source. In turn, these added plantings will attract other pollinators which will be beneficial for the container gardens located on the site.

Plant selection:

The selection of plants for the project was based on two main criteria's: low maintenance and flowering colors that are attractive to bees. The selection includes wild cucumber (*Echinocystis lobate*), mountain mint (*Pycnanthemum virginianum*), white clover (*Trifolium repens*) and yarrow (*Achilla millefolium*). The targeted locations are areas where there are no plantings, such as near the access ramp and near the Thomson House annexe. Plants such as white clover will be dispersed in the grass.

Maintenance:

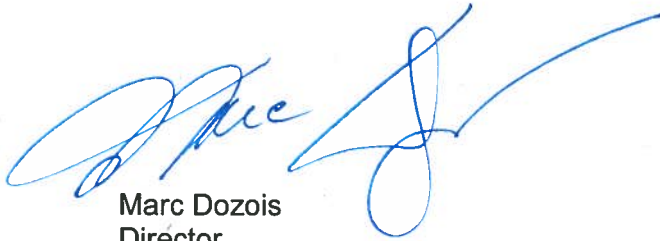
The second point covered in the meeting was the long-term maintenance of the garden and the involvement of the Grounds department. It was determined in the meeting that the project would be self-sufficient and sustainable. The project is based on the participation of volunteers. They will be responsible for the maintenance and the cleanliness of the site. All of the green waste (weeds, plant residue) will be composted and reused to enrich the soil for future plantings. Any non-organic waste can be brought to the nearest garbage or recycling bins surrounding the site. They will be collected by the Groundsmen during their daily tasks.



The Grounds Department was asked if it could provide some equipment to lower some of the cost associated with the project. It was agreed that a grass seeder would be available to the project volunteers to help disperse the white clover seeds. As far as long-term maintenance, the Grounds Department will continue the regular upkeep of the Thomson House yard as per usual.

The contact person for this project is the organizer Krista Reimer. She will be responsible for organizing the volunteers in charge of working on and maintaining the garden.

Sincerely,



Marc Dozois
Director
Buildings, Grounds, Events Support,
Printing and Mail Services



Hugo Laperle
Horticulture Supervisor



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L'association des étudiantes et étudiants des 2e et 3e cycles de l'Université McGill inc.

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<http://pgss.mcgill.ca>

To whom it may concern,

I wish to express enthusiastic support for the Thomson House Pollinator Plantings project proposal put for by Krista Reimer. It ties in and compliments very well what is already being done. The scope is realistic and manageable, the budget is very reasonable, more importantly the possible resulting effect is very positive. A simple plan that may make a very real impact.

Andre Pierzchala

Business Manager

PGSS McGill

Operations.pgss@mail.mcgill.ca

Dear members of the Sustainability Funds Project Working Group,

Krista Reimer contacted Montreal's Ecosystems at your Service three weeks ago asking to collaborate with us by writing a blog post about her project of planting more pollinator supporting plants on the Thomson House grounds. I was really excited to hear about her project and invited her to our Brainstorming session on March 23rd (one of the LARS brown bag lunches). She brought a lot of good ideas in the discussion and we had the time to chat a bit after. She seemed very determined to start her project in Thomson House and to collaborate with Montreal's Ecosystems at your Service for its outreach part. I think that her idea of planting flowering plants is intrinsically linked to sustainability and that it will be very successful. I look forward to her contribution to Montreal's Ecosystems at your Service.

Best regards,



Martine Larouche, M.Sc.

Project coordinator – Linking Action and Research in Sustainability and Montreal's
Ecosystems at your Service