

hitting the benchmark

"Benches are not just for sitting... they can stop to think, meet, or simply observe their surrounding environment... these benches can help students reuse, reclaim, and reconnect with their surroundings."



HITTING THE BENCHMARK

The Final Report

Brought to you by the McGill Sustainability Projects Fund (SPF)

Written by Debbie So and Thomas Rowlinson





Thomas Rowlinson and Debbie So, 2011



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// PROJECT OVERVIEW

Hitting the Benchmark is a student driven project about sustainable urban design that was awarded a Sustainability Projects Fund (SPF) grant from McGill University in January 2011 and completed April 2011.

The project creates a pair of unique benches made of scavenged materials for McGill campus. By providing street furniture made of reclaimed waste, Hitting the Benchmark provides a platform for youth-driven design that engages the student body and community at large to interact with campus space and challenges the creative reusability of waste.

// PROJECT TEAM

Hitting the Benchmark was conceived by Debbie So and Thomas Rowlinson during a seminar on Sustainable Architecture at McGill University.

Debbie So and Thomas Rowlinson both graduated from McGill University in 2010. Debbie So graduated with a BCom and Minor in Urban Systems. Thomas Rowlinson graduated with a BA in Geography, Urban Systems and Minor in French Literature and Translation. The pair was responsible for the design, construction, implementation, and promotion of Hitting the Benchmark.

Radu Juster served as Project Leader for Hitting the Benchmark. As Architect at Campus and Space Planning for McGill University, Radu Juster was indispensable as a design consultant and in the installation of the benches on campus.

Professor Leila Farah, from the department of Architecture, also served a design consultant and met regularly with the team in a supporting role.

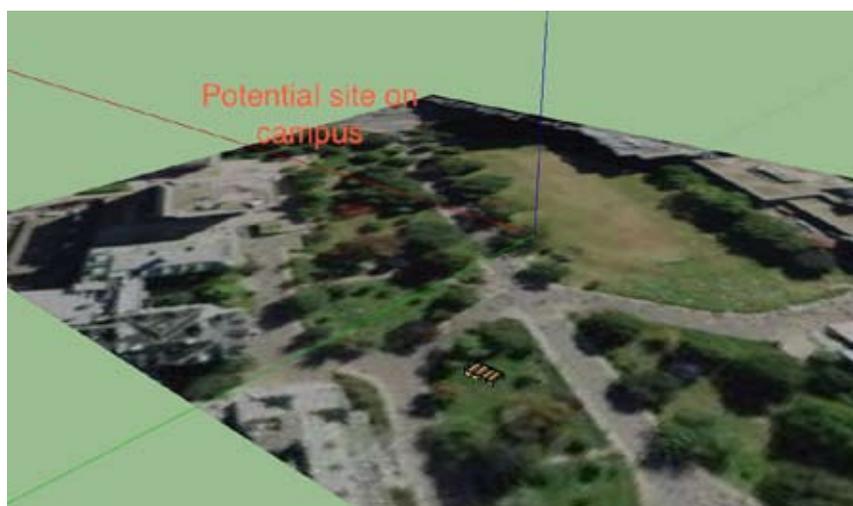
// PROJECT GOALS

Hitting the Benchmark intended to build a pair of benches made primarily of scavenged materials. The project team chose benches because of their simplicity of design and their functionality as points of interest where people can stop to think, meet, or simply observe their surrounding environment. The benches were envisioned with the following design, education, timeframe, and budget goals:

// DESIGN

Most important, the benches will feature locally scavenged materials. In turn, the scavenged materials are to dictate the design of the benches. There is the potential to repurpose McGill's own discarded furniture, but material sources will also include street waste and waste from local EcoCentres. Thus, not only will the benches recycle and divert materials from the local waste stream, but also its unique visual appeal will inspire people to reevaluate their consumption habits and reconsider the functionality of "waste".

The benches will be designed to be modular and movable. This encourages its cross-functionality of uses as an outdoor classroom, communal space, or social gathering spot.



Google Sketchup of Potential Bench Site, Rowlinson (2010)



The benches will be designed to be accessible. Given that so much of existing public furniture is consciously designed to obstruct loitering and by extension “unwanted” social groups, our bench will favour accessibility to provide rest and comfort for all. The benches will be designed as a temporary installation. Although consideration will be made to the durability of the final product, the benches are not expected to be permanent installations on campus. The project team will work with Campus and Space Planning to decide an appropriate timeframe for installation – most likely until the end of 2011. However, as outdoor furniture the final products are expected to withstand ranges of weather.

For safety and liability reasons, the benches will follow the design guidelines for outdoor furniture set out by McGill University. As Project Leader and Architect at Campus and Space Planning, Radu Juster has agreed to oversee the design requirements and installation of the benches. Ideally, the final product will be featured on lower campus, where it will be visible, interactive, and accessible.

// EDUCATION

Hitting the Benchmark is meant to be an educational experience for the project team as much as it is for the general public.

For the project team, Hitting the Benchmark will provide a platform for youth-driven design. Given that team members Debbie So and Thomas Rowlinson come from non-design, non-engineering, non-architecture backgrounds, Hitting the Benchmark will provide an opportunity for them to tangibly express their education and passion for sustainable design. Both hope to gain hands on experience with project management responsibilities, especially in the construction process.

For the general public, Hitting the Benchmark will provide a visual, interactive and functional piece that invites people to reconsider the creativity reusability of waste. Both benches will feature an accompanying educational placard. Ideally the placard will be installed on or beside the bench. They will describe the project mission, where the materials were sourced, and other interesting details of its construction. Results of Hitting the Benchmark will be shared with local academic and public journals such as, McGill Daily, Spacing Montreal, The Link (Concordia), and the CBC. As well, TV McGill is expected to produce a video segment on Hitting the Benchmark.

In the long term, the hope is that Hitting the Benchmark will be a positive example to inspire future urban interventions. By providing a comprehensive final report and a functional product, Hitting the Benchmark will show that students from non-design, non-engineering, non-architecture backgrounds can impact the built environment on a tangible scale. We hope that our project will inspire others to work in interdisciplinary teams to change the landscape of campus.

// TIMEFRAME

Type of Activity – Task	Estimated Time Required	Group Member in Charge
Sourcing Materials	2 weeks	Thomas and Debbie
Construction	3 weeks	Thomas and Debbie
Consultation with Campus Space Planning	2 weeks	Debbie
Implementation	2 weeks	Thomas and Debbie

The project is targeted to take place January 2011 to April 2011. This assumes design and organizational partnerships completed by late January (2 weeks) and material sourcing and construction completed by late February, early March (3 – 4 weeks). Installation on campus is targeted for end of March to early April 2011.

It is estimated that team members will each spend on average 10 hours/week dedicated to the project.

// BUDGET

Expense Description	Estimated Cost
Materials	\$ 75 + found material (free)
Tools	\$ 50
Gas	\$ 30
UHaul	\$ 75
Labour	\$12.00/hour x 80 h = \$960
Promotion	\$150
TOTAL	\$1,340

Hitting the Benchmark was awarded a \$1,340 grant from McGill's Sustainability Projects Fund (SPF). The project will be funded entirely by said grant.

// RESULTS

// THE BENCHES



From left to right: The Chess Set, The Beehive, So & Rowlinson (2011)

The first bench, “The Beehive”, was inspired by an empty yellow six-pack cylinder rack found in the condemned Linguistics building on McGill campus. A bench was constructed on one side of the cylinder rack using a dismantled bookcase and broken table legs. On the other side, planters were fashioned using cardboard tubes and plant pots.

The second bench, “The Chess Set”, features two dismantled chairs found in the Ferrier building, a milk crate, and a chess set mounted on a small ladder and the bottom of a papasan couch. Apart from the chairs the rest of the materials were scavenged from the street. The structure is held together entirely by zip ties and plumber rings. In particular, this bench is extremely light and easy to move. The feature of a chessboard between the two seats adds a functionality of leisure and play.

// TIMEFRAME

Type of Activity – Task	Actual Time Required	Date
Grant writing and organizational partnerships with McGill University	2 months	November 2010 – January 2011
Proposal approved by SPF	-	January 19, 2011
Consultation with Campus & Space Planning	2 weeks	Late January, 2011
Material sourcing	2 weeks	Early February, 2011
Design consultation	2 weeks	Late February, 2011
Construction	3 weeks	Late February – Mid March, 2011
Poster session	1 day	March 3, 2011
Promotion and launch event organization	3 weeks	Late March – Early April, 2011
Installation and launch event	1 day	April 8, 2011
Assessment and monitoring	3 weeks	April – Early May, 2011

The benches were completed and installed in the expected three-month timeframe between January 19th, 2011 and April 8th, 2011. However, this figure does not include the lead up work (ex. grant writing, organizational partnerships) before January 2011. In total, the proposal for Hitting the Benchmark went through three rounds of review with the Sustainability Projects Fund (SPF) Committee and was approved January 19th, 2011.

Organizational partnerships with Campus Planning McGill and Greening McGill were finalized by end of January 2011. The majority of material sourcing was completed in the first two weeks of February 2011. Design drafts and consultation with Radu Juster and Leila Farah were completed by end of February 2011. Construction of the benches took place between late February and mid-March 2011.

In addition, Hitting the Benchmark participated in the Poster Session for McGill's first Sustainability Symposium on March 3rd, 2011. Promotion and planning for the launch event were completed by late March 2011. The benches were installed and unveiled on campus on April 8th, 2011.

The project team projected they would each spend approximately 10 hours a week on the project, which was correct, but unfortunately this figure was not appropriately reflected in the budgeted 40 hours of paid work per person. It is estimated that Debbie So and Thomas Rowlinson each volunteered over 100 hours to the project. The wrap up period (ex. final report, clean up of studio space, collecting expenses, assessment and monitoring) is expected to be finished by early May, 2011.

// BUDGET

The final expenses of the project came out to \$1,458.58, which was \$118.58 or 8.8% over budget.

Materials and Tools were both 50-80% over budget. This can be attributed to a conservative estimate for the cost of basic materials and tools. For example, purchasing safety gear (ex. protective eyewear, masks) was not initially considered, screws and brackets were bought individually which was costlier than bulk, and the cost of painting materials exceeded expectations. However, overall costs were kept low because the main components of the benches were free (scavenged materials) and friends donated power tools.

Transportation was 14% over budget. Borrowing a car was no longer available, but the project functioned fine with the use of rental vans. The major implication of not having a car was that street scavenging had to be done on foot or bike.

Promotion was only 5% under budget, the only estimation to be under budget. The major reason for this was that the cost of printing the educational placards was exceedingly lower than expected. The initial plan was to mount the placards, which would have cost \$50 per 8x11 poster (a total of \$100). Instead, the team opted to print out sticker sheets that they later mounted on scraps of plywood sealed with black exterior paint. This option cost a total of \$6 and reduced the use of virgin materials. Rubiks insisted that sticker sheets would not bleed in the rain and they were seen to last through the winter.

There were unexpected costs for the rental of a studio space. Initially the studio space was a basement donated by a friend, but afterwards the project team was asked to contribute \$30 in overhead fees (ex. heating, water). This amount was more than reasonable for the use of a space that was spacious, heated and accessible 24/7 for three months. The alternative of officially renting a space would have been additional hundreds of dollars.

Labour was grossly undervalued. As mentioned before in B. Timeline (pg. 10), it is estimated that Debbie So and Thomas Rowlinson each volunteered over 100 hours to the project, in addition to the budgeted paid 40 hours. Compensation for their time would have valued at an additional \$1,200.

HITTING THE BENCHMARK (FINAL EXPENSES)

Type	Item	Date	Actual Cost	Budgeted Cost	% of Actual	
Materials	Bolts (8)	26-Feb	\$2.46			
	Corner Brackets (2 packs)	26-Feb	\$3.56			
	Plastic Bag	26-Feb	\$0.05			
	GeR Color A10	26-Feb	\$12.52			
	Exterior Paint (Black)	16-Mar	\$14.79			
	Screws for wood	16-Mar	\$3.18			
	Flat Brackets (4)	16-Mar	\$2.69			
	Cardboard Tubes	24-Mar				
	Corner Brackets	24-Mar	\$16.43			
	Exterior Paint (Black)	31-Mar				
	Flower Pots (3)	31-Mar				
	Plumber Rings	31-Mar	\$48.37			
	Dirt	7-Apr				
	Plants	7-Apr	\$10.22			
				\$114.27	\$75.00	
					-\$39.27	-52%
	Tools	Carpet	17-Feb			
Lamp		17-Feb	\$11.98			
Power Bar		18-Feb				
Extension Cords (2)		18-Feb				
Notepad		18-Feb	\$9.79			
Disposable Masks		26-Feb	\$3.75			
Chaffeur		26-Feb	\$6.83			
Long Ruler		15-Mar	\$5.69			
Saw Teeth (6D/P)		16-Mar	\$6.25			
Drill Bit (1/4")		16-Mar	\$4.32			
Safety Goggles		16-Mar	\$11.33			
Paint Roller		16-Mar	\$6.83			
Paint Roller Brush		16-Mar	\$6.82			
Paint Brushes (2)		16-Mar	\$6.79			
Sander Paper (MED)		18-Mar	\$5.91			
Pens		8-Apr	\$5.78			
				\$92.07	\$50.00	
				-\$42.07	-84%	
Transportation	Van (for materials)	7-Feb	\$60.00			
	Van (for Delivery)	8-Apr	\$60.00			
			\$120.00	\$105.00		
				-\$15.00	-14%	
Promotion	Poster (Sustainability Symposium)	3-Mar	\$34.18			
	Photo Developing	22-Mar	\$17.76			
	Signage	5-Apr	\$6.34			
	Groceries for Event	6-Apr	\$25.49			
	Lunch for Event	8-Apr	\$32.35			
	Kombucha for Event	8-Apr	\$10.00			
	Photo Developing	27-Apr	\$16.12			
			\$142.24	\$150.00		
				\$7.76	5%	
Studio Space	Overhead costs	22-Mar	\$30.00			
			\$30.00	\$0.00		
				-\$30.00	-100%	
Labour	Labour (80 hrs x \$12/h)	8-Apr	\$960.00			
			\$960.00	\$960.00		
				\$0.00		
	FINAL		\$1,458.58	\$1,340.00		
	Overbudget			(\$118.58)	-8.8%	

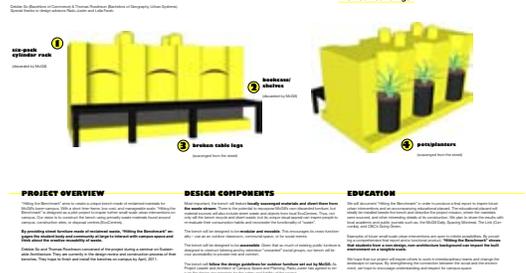
// PRESS

Promotion for the unveiling was covered by local print, blog, listserves, and radio in the two weeks leading up the event. As well, Hitting the Benchmark previously participated in the Sustainability Symposium in March, 2011.

A summary of the press, press release, and press poster follow:

Articles: The Link, Midnight Poutine, McGill Daily, Spacing Montreal, Maisonneuve
 Listserves: S.T.O.P, Geography, Business, Quoi de Neuf
 Radio: CBC News, CKUT - What's Happening McGill

hitting the benchmark



Top row, from left to right: Sustainability Symposium Poster, So & Rowlinson (2011), Spacing Montreal article (2011)



Bottom row, from left to right: Maisonneuve article (2011), Midnight Poutine article (2011), Concordia Link article (2011)



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Fonds des projets du développement durable
Bureau du développement durable
1010, rue Sherbrooke Ouest, Suite 1200
Montréal (Québec) H3A 2R7

Press Release – LONG (288 words)

FOR IMMEDIATE RELEASE:

Hitting the Benchmark

Montreal, Quebec – March 23, 2011 – *Hitting the Benchmark* is a student driven project about sustainable urban design that was awarded a Sustainability Projects Fund (SPF) grant from McGill University in February 2011.

The Sustainability Projects Fund (SPF) was created to promote and build a culture of sustainability at McGill, with the primary purpose to create opportunities for the McGill community to actively engage in sustainability initiatives on campus. The fund proposal was passed by student referendum in November 2009, with 79 per cent of voters on the downtown campus voting to adopt the fund. Some 5,300 students voted, the second-highest total in SSMU history. The estimated yearly total of the SPF fund is \$800,000.

Hitting the Benchmark creates a pair of unique benches made of scavenged materials for McGill campus. The materials were scavenged from construction sites and condemned buildings around McGill campus, disposal centres (EcoCentres), and the street. By providing street furniture made of reclaimed waste, *Hitting the Benchmark* provides a platform for youth-driven design that engages the student body and community at large to interact with campus space and challenges the creative reusability of waste.

Debbie So and Thomas Rowlinson conceived of the project during a seminar on Sustainable Architecture.

“This has been a great opportunity to express academic ideas about sustainability in a very tangible way,” says Tom.

“We want people to see that small-scale urban interventions are possible. We’re passionate about sustainability and our urban environment so we chose to do something about it,” says Debbie.

Come celebrate the unveiling of the benches Friday, April 8th / 2 pm / on the terrace between Morrice Hall and Leacock (below McTavish and Dr. Penfield) on McGill Campus. There will be free kombucha and nachos.

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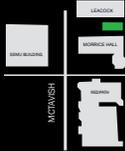



HITTING THE BENCHMARK

2PM + FRIDAY APRIL 8TH
 THE TERRACE BETWEEN MORRICE HALL AND LEACOCK
 FREE KOMBUCHA AND NACHOS

COME SEE THE GRAND UNVEILING OF SCAVENGED MATERIALS
 RE-DESIGNED AS SUSTAINABLE OUTDOOR FURNITURE. BROUGHT
 TO YOU BY THE **MCGILL SUSTAINABILITY PROJECTS FUND.**





Promotional Poster for Hitting the Benchmark: The Unveiling, So & Rowlinson (2011)

// THE EVENT

Hitting the Benchmark was installed and unveiled on April 8th, 2011. The event took place between 2-4 PM on the Leacock Terrace on McGill campus. Approximately 50-75 students and members from the Montreal community attended the event.

The event coincided with the last day of classes for McGill University and the weather was a sunny 10C for early April. Attendees were inquisitive, enjoyed the snacks, and interacted playfully with the benches. Overall, the event was a success.



Photos from Hitting the Benchmark: The Unveiling, Rowlinson (2011)

// THE “OOPS” REPORT

On behalf of the project team, Debbie So and Thomas Rowlinson offer the following takeaways regarding their experience with Hitting the Benchmark.

First off, Hitting the Benchmark would not have been possible without the donation of a studio space. Hitting the Benchmark was initially proposed in 2010 and it was tabled for almost a year because Campus and Space Planning was not able to suggest a suitable workspace for the project on campus. Understandably, space on McGill campus is at a premium and the prospect of finding an accessible space for two graduates to work on an independent project with power tools was low to null. The other option was to rent a space, which would have doubled the cost of the project. Having friends offer their basement was luck of the draw and not easily replicated in the future. Our suggestion is that future design projects be integrated with coursework in order to access campus space.



Basement Workspace, Rowlinson (2011)

After Hitting the Benchmark was approved, the process of implementing the project was met with very little red tape. Campus and Space Planning, Greening McGill, and the Sustainability Projects Fund (SPF) were all extremely supportive.

Regarding the process of sourcing materials, we were delighted with the support we received from McGill University. Ethan Landry, from Campus and Space Planning, was able to bring us to renovation sites and abandoned buildings filled with

discarded materials on McGill campus. Dennis Fortune, from Greening McGill and the SPF, introduced us to the discarded furniture room in Ferrier where we picked up materials. Future projects should note that because of car free rules on campus, special vehicles are only allowed on campus before 11 AM. This is useful in regards to bringing materials to and from campus.

Street waste was best when the weather was nice and people were comfortable dragging larger materials to the curb (ex. tables, ladders). Unfortunately, we were unable to access materials from EcoCentres because they were closed in the winter 2011 season.

For the purposes of building outdoor furniture, material selection was limited to solid wood, plastic, and metal. Indoor furniture that is composed of particleboard or fabric should be avoided because of its poor durability in wet and cold outdoor climates. Furthermore, wood should be coated with exterior paint for best results.

Designing the benches was empowering and fulfilling. Design consultants Radu Juster and Leila Farah provided invaluable insight on the pragmatism of certain materials and designs. Future projects would benefit from having project leaders that are versed in design or engineering.



Pile of Materials, Rowlinson (2011)

The construction process was a steep learning curve. Constructing the benches, typically a simple structure, took much more time and effort than projected. For example, simple tasks such as bolting or sawing required more thought and measurement than predicted. In addition, the basement studio was on a steep slant and it made accurate measurements even harder. However, both Debbie So and Thomas Rowlinson feel they have benefitted exponentially from this hands-on experience.



At Work in the Studio 1 &2, Rowlinson (2011)

Regarding the budget, the project team acknowledges they were too conservative in their initial estimations. As discussed previously in C. Budget (pg. 10, more buffers should have been included for materials and tools and labour time was grossly undervalued. However, Hitting the Benchmark had a relatively small budget of \$1,340 to begin with and a \$120 oversight is not grievous.

Finally, in regards to the final event and promotion process, a large portion of the success can be attributed to personal connections. Debbie So and Thomas Rowlinson were fortunate enough to know several members of the press and have a wide community of friends and colleagues support them. For future projects, participants should note that online media (ex. blogs, listserves, facebook, twitter) is much easier to access than print media or radio. That said, student papers and and CBC's Homerun are most likely to run with local stories.



// ASSESSMENT & MONITORING

The project team intends to revisit the benches approximately a month after installation to see if any vandalism or damage has been inflicted upon the structures. Our hope is that the community enjoys and respects the benches, and that the benches themselves successfully withstand the elements. If any repairs need to be made Thomas Rowlinson and Debbie So are both in Montreal and can provide them as needed.

The project team will be in touch with Radu Juster and Campus and Space Planning in regards to the longevity of the benches and deciding when will be an appropriate time to remove them from campus

// CONCLUSION

Overall Debbie So and Thomas Rowlinson agree the project has been a success. Both benches are visually stimulating and provide colour to the campus palette.

Public response has been very positive from both students and administrators alike. Both Thomas Rowlinson and Debbie So have received compliments on the comfort and the uniqueness of the pieces. Furthermore, the team hopes the project will be integrated into course work and that the initiative will be taken up by future groups of students. Rowlinson and So ultimately wish that this project becomes a greater student effort to craft campus space as they imagine it.

On a personal note Hitting the Benchmark has inspired So and Rowlinson to pursue their own dreams of sustainable design. A deeply empowering experience.

// THANKS

Hitting the Benchmark owes many thanks to the McGill and Montreal community. The project team would like to extend special regards to Lilith Wyatt, Dennis Fortune, and Ethan Landry for sourcing materials on McGill; Ming Lin, Aditi Ohri, Hilary Ison, and Malcolm Sacks for use of their basement; Shawn Scott and Ted Ledford for donating tools and materials; and Graham Van Pelt and Emma Quail for their unwavering support.



Studio View, Rowlinson (2011)