

Minutes

February Meeting
3 February, 2009 – 6:30pm to 8:30 pm
Arts and Letters Club, 14 Elm Street

Present:

Andrew Azzopardi
Antoine Belaieff
Arlene Gould
Bindya Lad
Bruce Semple
Carina Cojeen
Carlo Milessa
Carolyn Moss
Cathy Tafler
Colin Viebrock

Dennis Rijkhoff
Heather Dubbeldam
Heidi Keyes
Joe Lobko
Johanna Bollozos
Klaus Dunker
Linda Kafta
Margo Welch
Matthew Searle
Medhat Soliman Rofael

Meg Graham
Owen Peat
Peter Saarty
Rafid Kustou
Real Eguchi
Rob Mark
Susan Lewin
Tushar Gayen
Vered Klein

1. Introduction

- Meg welcomed everyone to the meeting and introduced herself as the 2009 TSA Chair.
- 'Around the room' introductions followed.

2. TSA Initiatives

- Meg noted that there were several upcoming TSA initiatives that may be of interest to those in attendance. She encouraged others to share events that may also be of interest. The following initiatives were discussed:
 - Meetings:
 - Meg noted that the next meeting TSA meeting would discuss Design Review Panels (DRP) and guests were being invited from the various DRPs including: Gordon Stratford from the City of Toronto Design Review Panel, and Sharon Mittman from the City of Mississauga Design Review Panel.
 - Meg shared that members of the firm COHOS EVAMY would be joining the discussion for May's meeting, which would focus on the topic of sustainable resilience.
 - fAd:
 - Meg noted that the City would be scaling back the Festival of Architecture and Design (fAd) activities this year. She noted that fAd would be held in May and encouraged anyone organizing design-related events to schedule them in May during the Festival.

- Membership:
 - Meg advised that 2009 membership renewal was currently underway. She reminded those that were members of the Ontario Association of Architects (OAA) to renew their membership with the TSA by checking the box to support their local society on their OAA membership form.
- Executive Director:
 - Meg advised that the TSA Executive was in the process of confirming the appointment of an Executive Director (ED). She expressed that it was an exciting opportunity, and would allow the organization to take on more initiatives.
- Poster Competition:
 - Susan indicated that the theme for the 2009 Poster Competition was green design. She advised that green design could range from the design of a tea cup to the design of the planet. Susan noted the Poster Competition would promote awareness around issues of the environmental sustainability.
 - Susan advised that the competition was launched earlier this year to allow for greater participation from students. She also noted that the competition was open to anyone, and would attract submissions from a variety of disciplines.
 - Susan noted that the Competition was being launched at the meeting and competition briefs were available for anyone who was interested in participating.
 - Bindya advised that the Competition Brief would also be available on the TSA website in the next few days.
- IIDEX:
 - Matthew indicated that a 'call for presentations' was launched for IIDEX. He noted that it was the 25th anniversary of the show, and the theme would be 'the next 25 - looking back but also looking forward'. Matthew shared that further information was available on the IIDEX website.
 - Matthew noted that individuals could submit more than one idea, and there was no associated costs with submitting ideas. He indicated that IIDEX offered a generous revenue sharing agreement.
 - Matthew advised that the deadline to submit presentations was April 1st, with individuals with selected presentation ideas being notified by May 1st.
 - Matthew noted that the TSA held several past events in conjunction with IIDEX including: exhibits of the Poster Competition finalists; and, the Unbuilt Toronto seminar and exhibit.
- Livable Cities:
 - Carina shared that David Suzuki's documentary *Livable Cities* would be premiering on CBC at 8:00 pm on Thursday February 5th.

3. Urban Affairs – Green By Design

- Meg shared that TSA Vice Chair, Heather Dubbeldam, would moderate the discussion organized for the remainder of the evening.
- Heather noted that the theme for the discussion was 'green by design', indicating that the discussion was part of a two-part series that would be continued in May with a larger discussion on a similar topic.
- Heather advised that there was an increasing global awareness on the need to reduce greenhouse gas emissions and environmental degradation, which was driving the need for rapid change. She noted that

consensus was growing, indicating the need for a far reaching transformation of the built environment. Heather advised that the forum would discuss the coming green shift from the various perspectives of the invited guests, including: Susan Lewin; Arlene Gould; Colin Viebrock; and, Carolyn Moss.

- Heather shared that Susan Lewin was a principal at CS&P Architects and had over twenty years experience as a professional architect. Her design background was extensive in the design of educational and institutional buildings, with a focus on universal and sustainable design. She advised that Susan was a LEED (Leadership in Energy and Environmental Design) Accredited Professional, who brought leadership to her firm's sustainable design strategies. Heather noted that Susan was also active with the Canada Green Building Council, Greater Toronto Chapter (CaGBC-GTC), and had lectured and presented LEED educational seminars and case studies.
 - Green Design:
 - Heather asked Susan to discuss the topic of green design and organizations which encouraged its implementation.
 - Susan commented that participating in the discussion was a great opportunity especially since there were many individuals present who were not architects.
 - Susan explained that what green design was, noting that buildings contributed 50 per cent of greenhouse emissions and were therefore hugely responsible for climate change. She advised that people in Ontario alone consumed 30 per cent more power than they did 30 years ago. She noted that while we use a lot of energy, we also waste a lot of energy. She questioned how buildings could be designed to consume energy more efficiently.
 - Susan advised that there were various groups providing leadership on green design. She noted that Architecture 2030, an advocacy group based in California, had challenged designers to generate only carbon neutral buildings by the year 2030. Susan advised that the target set out by Architecture 2030 could be realized in small steps. She noted that the goal had been successfully adopted by many organizations including: the American Institute of Architects (AIA); US Green Building Council; and the Royal Architectural Institute of Canada (RAIC). Susan shared that the 2030 challenge had been woven into legislature in order to make it more effective.
 - Susan explained that new buildings were only a small part of the problem, and that it was more important to focus on existing buildings. She advised that Architecture 2030 also spoke about existing buildings.
 - Susan indicated that there was a slew of rating systems including: the Green Globe; Energy Star; and, LEED. She noted that the systems were similar and shared parameters such as measuring indoor air quality, environmental degradation, etc.
 - Susan advised that the rating systems did not measure the quality of design. She suggested that rating systems should look at social, economic, and environmental aspects as a three part goal. She also advised that designers should aim at achieving a symbiotic relationship between the various systems when designing buildings, so that they can contribute to a more far reaching transformation of the built environment.
 - Susan noted that a key part of the process is education, as many people were not aware of the impact buildings have on the environment.
 - Susan advised that the notion of green design should be applied to the context of cities seeing that by the end of the decade over half of the world's population would live in cities. She suggested that a sustainable urban lifestyle be created that is able to regenerate a city's various systems.
 - Susan indicated that using resources more efficiently can result in financial savings; consequently, green systems harvest an economic advantage by offering 'payback'.

- Susan advised that building small equated to building smart, and indicated that proponents should refrain from building more than what is needed, as the 'extra space' contributed to greater use of the various building systems, and would cost the owners more over time.
- Susan expressed that designers were myopic, and encouraged them to design more flexible space that could be changed or adapted when needed. She suggested that existing buildings should be adaptively reused and provided the example of Artscape's Wychwood Barns project. Designed through a collaborative effort, the project demonstrated sophisticated green design, as the development was able to do more for less. Susan noted that the project was LEED certified.
- Canada Green Building Council (CaGBC):
 - Heather asked Susan to elaborate on the role of the CaGBC.
 - Susan advised that the CaGBC was Canada's response in advocating for green buildings. She noted that the United States founded the Green Building Council and created LEED. Canada became a member of the Council in 2000 and introduced the durable credit.
 - Susan noted that the goal of the CaGBC was to transform the built environment to lead to a sustainable future. She shared that the Council worked to raise consumer awareness and prevent green washing. The CaGBC also worked to define what green was, making the market for 'green products' more mainstream. She advised that the Council was making a big difference, and she was respectful of the role of LEED in raising the bar of design.
 - Susan advised that the Council engaged a coalition of industry leaders, and was able to bring different people together and seminate information.
 - Susan shared that its role included: providing education on LEED building systems; certifying buildings using the LEED standard; providing seminars; and, providing testing to become a LEED accredited professional. Susan noted that LEED was becoming very popular in Ontario, and becoming a building standard.
 - Susan advised that the CaGBC was looking at creating LEED standards for the design of entire communities, and for specialized systems.
- Green School Design:
 - Heather questioned how green design was being encouraged in schools.
 - Susan advised that her firm, was currently working on the design of a school. She noted that they were incorporating integrated design in the design process, by bringing a diverse series of professionals together including energy modelers.
 - Susan indicated that the LEED rating system for schools should focus on creating healthy spaces by monitoring such as air quality, daylighting, and other effects of good design as they related to student performance. She advised that school environments should be thermally, acoustically, and visually comfortable. She added that school buildings should be easy to operate and maintain, and could be safe and secure community resources.
 - Susan shared that the school project, her firm has been commissioned for, involved tearing down an old school and building a new school, which included two (2) residential towers of 24 and 26 storeys. She advised that the school board formed a public-private partnership with developers allowing the new school to become a multi-use environment. As a result the school became an example of how green design could be successfully integrated.
 - Susan advised that a competition was held to allow the students to illustrate the various green features that had been included in the design such as radiant heating and cooling.
 - Heather questioned whether there was interest in green design among the younger generation.

- Susan noted that there was interest from all generations, but that the younger generation would put a greater emphasis on green design as they would have to think more efficiently about how they use their environmental resources.
- Heather thanked Susan for sharing her experiences and introduced Arlene Gould. Heather shared that Arlene Gould was a design educator, researcher and consultant who has been championing the value of design to the academic, business and social community for over twenty years. She was an Adjunct Professor in the Faculty of Graduate Studies at York University where she conducts cross-disciplinary research and teaches courses in Design for Sustainability and Design Management. Heather noted Arlene was also the Strategic Director for Ontario's Design Industry Advisory Committee (DIAC), a member of the Executive Board for Sustainable Buildings Canada (SBC), and an Executive Board Member at the Institute for Research and Innovation in Sustainability at York University.
 - Sustainable Buildings Canada (SBC):
 - Heather asked Arlene to speak about the work of SBC and the advocacy role that they play.
 - Arlene advised that SBC seeks to educate, support and empower energy efficient professionals, architects, designers, etc., in Canada. It showcases design and operational principles through its acclaimed design charrettes, which include topics such as determining Canada's role in post-disaster reconstruction. In September, the SBC hosts the Green Building Festival, which was a precursor to IIDEX, where the organization typically organizes a number of keynote speakers and break-out sessions.
 - York University:
 - Arlene advised that she taught design theory at York University, in the Faculty of Environmental Studies, which is the largest faculty of environmental studies in North America.
 - Arlene shared that a group of Masters students were unhappy with their learning environment at York University. They organized a charrette which led to various pilot projects at the University, including the creation of a 'model' learning space in conjunction with Herman Miller. Arlene noted that the classroom would provide an example of developing learning environments using green design.
 - Arlene noted that the students were studying the aging campus environment, and developing how it could be sustainably managed. This led to the development of a new course, *Design For Sustainability on Campus - A Workshop Course on Environmental Planning in Higher Education Institutions*. She advised that the University was trying to apply LEED to the development of the campus.
 - Arlene advised that York University in collaboration with the World Green Building Council (WGBC) was launching two new initiatives: an international school for sustainable design and development; and, an international internship program.
 - The international school would be launched this year with the aim of educating students in Ontario and around the world in principles and best practices in sustainable building design. Arlene noted that the program would bring 15 international students to Canada to work with York students. She noted that the international internship program would be implemented in 2010, and would offer students an opportunity to apply their acquired knowledge and skills at different companies around the world, allowing York students to work with Green Building Council's across the world.
 - Design Industry Advisory Committee (DIAC):
 - Heather noted that Arlene was also the Strategic director of the DIAC, which was a non-profit organization formed in 2001 and was comprised of stakeholders of the design industry, including most of the design schools, City of Toronto economic development, manufacturing and

industry organizations, all the provincial design organizations in interior design, graphic design, architecture, landscape architecture, industrial design, fashion design and the Design Exchange. She advised that the DIAC recently developed a Sustainable Design Charter which was supported by the Ontario design associations, which presents an opportunity for members of the Ontario design sector to speak with one voice about the critical role of designers from all disciplines in sustainability planning and action plans. She asked Arlene to elaborate on the role of the DIAC, and the development of the Sustainable Design Charter.

- Arlene noted that in 2004, DIAC conducted a study on design capability in Ontario to demonstrate the economic value of design in Canada. The study concluded that there are 40,000 designers in Ontario, with a particular concentration in Toronto, which has the third largest design workforce in North America.
 - Arlene advised that the study led to a four step action plan, which was yet to be implemented. The plan included a commercialization program, building a unified brand for design, forming a design educators network, and establishing a model design policy for implementation by various government agencies.
 - Arlene advised that the DIAC had organized a series of design green seminars, a panel discussion during the Festival of Architecture and Design (fAd), case studies and best practices. She noted that they were encouraging smaller companies to take on simple things that can be done to get started.
 - Arlene noted that she had been assembling a series of case studies on design for tough times, which highlight initiatives that demonstrate why design budgets should not be cut in times of economy uncertainty. She noted that the case studies would be published.
 - Arlene advised that the DIAC was also working with Industry Canada to evaluate the product design and development (PDD) process. She noted that they had a design change model where different activities were involved; however, the DIAC was not happy with design as change. Rather, they believe that design should have life cycle involvement. As a result, the DIAC created the integrated design process, which was presented to Industry Canada, and is going to be endorsed.
 - Arlene noted that the DIAC is comprised of Executive from all the design professions. She advised that they were looking at the design sector to take leadership role in the community by increasing stakeholders, and increasing the impact of case studies.
- DIAC – Sustainable Charter
- Arlene shared that the DIAC was also trying to promote green design, and had developed a sustainable charter which includes the following points:
 1. To raise awareness of the critical role of design and designers from all disciplines in helping Ontario to achieve its sustainability goals.
 2. To encourage the members of all professional design associations to educate and to enable their clients in the private and public sectors to take significant steps towards reducing environmental impacts in all their activities.
 3. To substantiate the business case for sustainable design (reducing environmental impacts in design/ business projects can help clients to be the early adapters and to put themselves on the competitive edge).
 4. To help to educate and to encourage professional designers to develop and implement sustainable design practices in their own firms and to model these practices for other employees.

5. To move to the next level on sustainable design in each of the specific design disciplines.
- Heather thought that this would be a good opportunity to introduce Colin Viebrock. She noted that Colin was the owner and founder of Green Garage, a green roof company specializing in small residential green roof applications. Green Garage started as a project to improve the urban environment by rebuilding one garage, Colin's own garage, built as a prototype. That project generated a lot of interest and has led to the formation of a green roof design and installation company. Heather advised that Colin also played an advocacy and consulting role, spreading the word about green roofs and their many benefits. He was a member of Green Roofs for Healthy Cities (an international industry and advocacy group), Green Enterprise Toronto and the Greater Toronto Chapter of the Canadian Green Building Council. She noted that Colin was transforming Toronto's regular roofs into green roofs, one building at a time.
 - Implementing Green Roofs on Existing Residential Structures in Toronto
 - Heather asked Colin to comment on the opportunities that exist in Toronto and challenges that he faced when trying to incorporate green roofs on existing structures, whether it is garages, sheds or houses.
 - Colin noted that a green roof is essentially a roof where vegetation grows, but it is commonly confused with a roof garden. Colin advised that there are two types of green roofs: *extensive*, which have a growing depth of six (6) inches or less; and, *intensive*, which have a growing depth of six (6) inches to two (2) feet.
 - Colin shared that there were many benefits to green roofs including: the introduction of active transpiration; the provision of additional insulation which reduced energy costs; and, the extension of the roof life as asphalt roofs tended to deteriorate faster from ultra radiation. Colin noted in Toronto, green roofs are particularly beneficial in reducing stormwater runoff, as they allowed water to percolate slower. He also commented that roofs add aesthetic appeal to the built environment.
 - Colin advised that he started his business with his 50 year old garage that was about to fall over. He knew nothing about green roofs, so he called several companies and they laughed at the 400 ft² size of his garage's roof and provided quotations that were priced high. So, he decided to install the roof himself.
 - Colin noted that the costs associated with green roofs can be prohibitive. He shared that there was a huge range in the prices; with extensive systems costing \$10-\$20 ft², which is costly when compared to asphalt systems costing \$2/ft².
 - Colin advised that there were also structural issues associated with green roofs as they tended to weigh more than traditional roofs. A lot of the buildings he was called to look at are not designed to take these additional loads, which further alleviates the costs as a new structure has to be added in order to implement the green roof. Colin noted that green roofs were most successful in new construction. He advised that even if a green roof was not built immediately, it could be planned for by beefing up the structural elements (i.e., using 2x10's rather than 2x6's) during the design process.
 - City of Toronto Green Roof By-law
 - Heather noted that Colin had been involved in the public consultation process for the new Green roof by-law that was being introduced by the City of Toronto. She advised that a part of the By-law was passed as of January 1st, and the other part was currently being reviewed and would

be passed later this year. She asked Colin to describe the nature of the by-laws and comment on the pros and cons of the new and upcoming By-laws.

- Colin advised that the City of Toronto had been interested in green roofs for a number of years. The initiative started with concerns about runoff and impact on the combined water/sewage systems, as the City was looking at ways to reduce the amount of water entering the systems.
- Colin noted that the City implemented a pilot green roof incentive program in 2006 by providing a \$10/m² subsidy for green roofs based on a series of requirements. The program was successful, and in 2007, the subsidy requirements were increased to \$50/m² with the same requirements, which prohibited smaller projects from getting funding.
- Colin commented that the Toronto green roof market was immature, when compared to Europe, noting that we were 30 years behind. Colin noted that in Europe, you could walk into a Norwegian version of Home Depot and purchase materials to construct a green roof.
- Colin advised that the City was proposing to mandate green roofs through a new By-law that required green roofs on certain types of building. The proposed By-law also stated that green roofs were required to cover at 50 per cent of the roof.
- Colin noted that the proposed policies have a loophole as they gave the option of requiring a green roof or a 'cool roof', which is a roof that mitigates heat offset of a traditional roof, which was less costlier. Colin advised that the construction costs associated with a green roof was equal to 50 per cent of the construction costs associated with big box type development.
- Colin noted that there are no construction standards for green roofs mentioned in the Ontario Building Code (OBC). However, the City of Toronto Act included a standard to apply to all green roofs.
- Colin advised that the problem with the proposed green roof policies was that they are geared toward large scale developments, and made small scale green roof projects prohibitive as they required a two (2) metre perimeter, and a six (6) inch depth.
- Colin expressed that there was growth potential for implementing green roofs on homes. He noted that the garage typically takes up 50 per cent of the property in Toronto and if a green roof was installed on the garage, the green space would be doubled. He advised that there were a lot of laneway garages in Toronto; noting that the total ft² was comparable to the big box stores that were being built.
- Heather noted that 50 per cent of the roofs of Toronto homes were flat, and this presented a huge opportunity for retrofitting the city with green roofs; however, with the new By-law this opportunity would be missed.
- Heather added that many of the green roof examples that were included on the City's website would likely not be able to be constructed under the new policies.
- Heather advised that the City had just undergone a public consultation for the proposed By-law, noting that a meeting was held two weeks prior to the By-law being implemented. She advised that she attended the meeting, and a wide range of people were present.
- Colin shared that the City had decided to hold another round of consultations with meetings on February 16th and 27th on the Green Construction Standard, and February 18th for revised proposals for industrial buildings.
- Susan commented that it was very difficult to get people to implement green roofs. She noted that the roof required constant maintenance, which would be difficult to mandate. She noted

that there were other ways of developing sustainable buildings that would not require as intense maintenance.

- Colin noted that Chicago was the North American green roof capital, and though they have had green roof policies in place for a number of years, they did not mandate green roofs.
 - Heather noted that five to six requirements needed to be met in order for the green roof to be implemented, making the incorporation of green roofs costly. She noted that the proposed By-law would capture the larger buildings and asked Colin to elaborate on the building types that the By-law focused on.
 - Colin noted that the By-law was geared toward residential buildings of a minimum of 20,000 gross floor area (gfa), and industrial/commercial/institutional buildings of a minimum of 10,000 gfa.
 - Heather commented that the jurisdiction of the By-law would only apply to the City of Toronto and not the Greater Toronto Area, and questioned how many of these large buildings would be built when much of the City's fabric was already built out. She noted that the City was targeting a small section of new development and should try and capture more buildings by loosening the standards. Heather encouraged those interested in green roofs to attend the public consultations.
 - Joe suggested that the TSA should review the proposed policy and put forward suggestions to the City. He noted that a lot of people could offer valuable comments that would make the policy more effective. Joe advised that the City should be more open regarding such policies. He noted that many green roofs are failing as they required irrigation systems, and suggested that there could be alternatives for harvesting water from the roof.
 - Colin advised that his green roof has lasted through three winters, and it currently had two (2) inches of growing material. He noted that the roof used an irrigation system that was made by Lee Valley. He advised that there is no such thing as no maintenance when it comes to green roofs, although you can have low maintenance green roofs. He noted that the small scale roofs, required a couple of visits per year, with ongoing watering, and fertilizer being added every second year. In fall, another inch of soil was required, and at times a greater variety of plant material was introduced. Colin shared that his green roof was planted with sedum low growing, succulent ground cover, and that he anticipated experimenting with hives and prickly cactus experiments this year.
- Heather suggested as the discussion had touched upon the topic of harvesting water it was a great point to introduce Carolyn Moss. She shared that Carolyn was a principal at MOSS SUND Architects, an emerging architectural firm based in Toronto specializing in residential, healthcare and commercial/retail design with a strong focus on sustainability.
 - CISTA
 - Heather noted that Moss Sund in collaboration with figlfourty had developed a prototypical rain water harvesting system called CISTA, designed for urban environments. The system provided storage for rain water within a vertical planted frame, allowing the conservation of water and increasing green space. Heather advised that CISTA would make its debut at the 2009 Interior Design Show (IDS) as part of the *Prototype: Ideas for the Home* exhibition, and that Carolyn would also be speaking at IDS about Passive Solar Design. Heather asked Carolyn to describe the CISTA system providing details about how it worked, its benefits, etc.

- Carolyn advised that the system was developed with figlforty who were also clients. She had just installed the system at their home. The project was initiated when she purchased her home and wanted to install a rainwater harvesting system, but could not find one that was suitable or attractive. She decided to design the prototype in conjunction with the IDS exhibition call, with the intentions that the system would be easy to use and aesthetically pleasing.
 - Carolyn noted that the frame attaches to the side of a building, and provided the armature for a 70-inches high flexible bladder tank having the capacity of holding 100 gallons of water. The frame was covered by vertical planting and supported by a base that was 30-inches high and included a plant pot for an annual plant such as ivy and a plumbing hose bib. The system also included a level, which indicated the amount of water in the tank. Carolyn noted that the water collected in the bladder could be used for irrigation purposes.
 - Susan suggested that the system could be connected to external irrigation systems.
 - Carolyn added that the height of the system allowed water to flow out of the drip system.
 - Susan questioned why a flexible bladder was used. Carolyn advised that the flexible bladder allowed the system to be shipped and transported easily, and allowed the system to have a shallower section.
 - Owen questioned how the system would perform in winter, and whether the capacity was appropriate for a two-storey home. Carolyn advised that the diverter would have to be switched off in winter, and that at the present time the prototype was adaptable to one storey bungalows. She advised that the system could be expanded to higher heights, but this needed to be tested before it was implemented.
 - Joe questioned how the capacity related to the typical Toronto rainfall. Carolyn advised that she has a 50-gallon tank installed on her house and it had only filled up a quarter of the capacity the past year.
 - It was questioned, whether the system needed to be lag bolted to the exterior wall. Carolyn advised that the pressure was not taken on by the wall, rather the purpose of the wall fastenings was to keep the system straight.
- Incorporating Sustainable Design in Architectural Practice:
- Heather asked Carolyn to comment on the challenges that she faced in her practice in trying to incorporate sustainable design.
 - Carolyn noted that she ran a small practice which initially concentrated on a single project, but built from its work. She advised that not every project incorporated sustainable design; however, for every project the practice completed a green report to advise the client of potential sustainable strategies that could be implemented. She advised that they did not apply LEED to their residential projects as it was too onerous. Carolyn advised that the practice also only used local recycled materials in their designs and discouraged the use of asphalt and vinyl. Carolyn advised that the main challenge was educating the contractors on green technologies.
 - Carolyn added that there are various fees associated with putting together a great building, and in the end the client made the choices, which could sometimes come down to choosing between solar panels or marble in the bathroom.

- General Discussion:
 - Heather advised that there are new government loans that offer incentives for systems such as photovoltaic panels and installing geothermal systems. She noted that the loans helped with initial costs, and allowed homeowners to borrow money without paying interest. She opened up the floor to questions and comments.
 - Colin advised that if anyone was interested in installing solar panels, they would get a better price if they approached a manufacturer in a group.
 - It was questioned whether the green roof on Colin's garage was accessible. Colin advised that it was not, and this would require additional railings, stairs and a permit approval in order to be. Colin noted that adding accessibility to green roofs would also add to the structural issues of the design.
 - Carolyn commented that her practice was currently working on a 22,000 ft² outdoor playground which was a green roof as it was cheaper to add the green roof than purchase the required space.
 - Klaus shared that he designed a series of residential buildings in 1964 in Germany which incorporated green roofs and are still being maintained.
 - Meg questioned whether LEED was available for small residential projects. Susan advised that it was a pilot project in Canada, although LEED for homes was implemented in the USA. In Canada, Energuide provides more reasonable standards for homes. She noted that LEED for homes was highly onerous. She advised that institutions used LEED as it aided them in securing financing and marketing; however, LEED did not work as well for homes due to the difference in the economies of scales.
 - Colin advised that if the City adopted LEED as a standard, the process would be simplified and incentives could be offered; making the process more successful.
 - It was suggested that a green roof should count toward the open space requirement. Heather advised that this came up in the public consultation that she attended, and the City is considering it for the future.
 - Carolyn noted that her practice was working on a project in King Township, where the Toronto and Region Conservation Authority had jurisdiction, and they were required to submit additional drawings because the project had a green roof. She suggested that government policies should support the use of sustainable initiatives in buildings and not penalize them through the approvals processes.
- Heather thanked Susan, Arlene, Colin and Carolyn for contributing to the discussion.
- Meg also thanked the guests and Heather for organizing the evening's discussion and invited everyone to attend March's Design Review Panel forum.

The meeting was adjourned at 8:45 pm.

The next TSA General Meeting will take place on Tuesday March 10th, 2009, at 6:30 pm, at the Arts and Letters Club.