





# urban oasis

Toronto's Raw Design reimagines Hamilton's downtown as a network of green **PLUS:** Meet three bold locals taking steps toward making our cities more sustainable

BY **DAVID YOUNG** ILLUSTRATIONS BY **RAW DESIGN** PHOTOGRAPHY BY **DARREN WHEAR**




gone are the days when cities could find greatness in generic urban formulas. Nearly a quarter of the continent lives in mid-size cities, places with populations ranging from 50,000 to 500,000 inhabitants. Until recently, however, planners and other design professionals have tended to obsess on the strategies, design and dynamics of much larger cities, places with populations of a million or more. The upshot is that mid-size cities were on the receiving end of urban revitalization drives that simply offered scale versions of strategies that worked elsewhere. Almost universally, these initiatives involved the zealous razing of downtown neighbourhoods and the installation of monolithic mega-developments that proved aesthetically disconnected from city life and economically challenged. From a distance, an albatross can be mistaken for a silver bullet.

Downtowns are not just the geographic heart of cities but also their symbolic heart, and as such they are barometers for urban health. When economic collapse is severe, when things go cataclysmically wrong, as in some ruinous American cities, the psychic damage to the community can be profound. But decades of stagnation and apathy can be just as corrosive to civic identity. Despite recent and encouraging signs of life, Hamilton's core is a place that has gone gen-

erations without the kind of political leadership and private investment that would see it reclaim some of the vitality and promise that was once its birthright. What is needed is not just loving attention, but bold intervention.

Toronto's Raw Design first appeared in these pages a year or so ago as the architectural firm behind Burlington's \$25 million Ironstone Condominiums. The firm had at that point just been given 2009's Ontario Architecture Association Best Emerging Practice Award. Co-founded in the fall of 2007 by award-winning architects Roland Rom Colthoff and Richard Witt, Raw Design was fashioned as a collaborative workshop, in which hierarchical job descriptions don't exist and staff share in all profits. Raw's projects have demonstrated that the firm values courageous thinking as much as sustainable development.

Ironstone, for example, was a project that encapsulated the firm's interest in sustainable building; it was one of the first residential buildings in the Greater Toronto Area to be equipped with geothermal heating/cooling technology. Raw Design was also instrumental in the rebirth of Kitchener's former Lang Tannery complex. A mixed-use office and commercial complex spanning a city block, the \$30 million project transformed a former industrial site into a hub for the area's growing technology sector, with marquee office tenants (including Communitex and Google), public courtyards and event space, and workspace for local artisans.

A man, Barry Imber, stands in a modern architectural hallway. He is wearing a dark t-shirt, blue jeans, and tan shoes. He has his arms crossed and is leaning against a white wall. The hallway features a mix of materials, including wood paneling on the ceiling and walls, and stone tiles on the floor. The lighting is warm and natural, highlighting the textures of the materials.

Barry Imber and partner Leslie Akse are owners of Burlington's Insite Design. For more details on their home, visit [imberaksehouse.ca](http://imberaksehouse.ca)

## **BARRY IMBER**

*Inspiring change through holistic design and conscientious living*

"Our goal was to reduce materials and to use real materials that were themselves what we were looking for. We wanted to use materials that were practical and accessible. Walnut has been coming to a certain age, and a lot of 100-year-old trees are starting to come down. So our kitchen cabinetry is made largely of walnut from a fallen tree in Dundas, collected by a local firm and milled down. It's hard-wearing and tight-grained, and it has an intrinsic beauty.... We tried to design a home we would enjoy living in, something that really suited us. We knew we needed a lot of flexible space for family, but it had to scale to that use, so that when those people weren't around, it wouldn't feel empty. We were able to realize that. From an energy standpoint, our main space is kind of a lung for the house. There's a lot of thermal mass in here – a central wall made with 40 tons of Northern Ontario stone. On summer nights, we vent off passively, let the space cool down; the wall extracts heat from the interior air, passively cooling the space. The opposite happens during winter, when the wall stores heat during the day; as the outside temperature drops at night and starts to pull heat from the building, the wall mitigates heat loss by releasing warmth to the room air. Another aspect to the design is that the windows' natural light means that we don't require much artificial light.... But it's not just in the build. It's in the way we live. My family lives very conscientiously.... People around us see these practices in action and sometimes find a fit within their lifestyles as well."



Bill Curran is principal of Hamilton's TCA / Thier + Curran Architects and past president of the Hamilton and Burlington Society of Architects

The intersection of those two key elements – sustainable development and creative, adaptive reuse – inspired a tantalizing proposal from the Raw Design camp. They would embark on a blue-sky visioning exercise set around Hamilton's core. Given the city's famously great bones, fluctuating urban demographics and evolving post-industrial economy, it seemed interesting to embark on a visual exploration of the possible urban regeneration in the area. It also presented us with an opportunity to salute some of the local exemplars of new urban thinking, individuals whose contributions to area sustainability could add valuable dimension to the exercise. Their thoughts are intermingled with this feature.

Raw Design began the exercise with a satellite view of Hamilton's downtown, a perspective that revealed numerous empty lots and vast paved areas dedicated to vehicle parking and

traffic. A lengthy walking tour of the core by the firm's principals Roland Rom Colthoff and Richard Witt underscored the obvious, namely that these underused paved areas currently eclipse the existing downtown green spaces. Under the firm's conceptual vision, the empty spaces would be transformed into new parks and engineered wetlands providing ecologically robust connections to peripheral green spaces. They proposed a multi-layered transformation, a revitalization of Hamilton based on a strategy of threading green space from periphery to core. These connections would operate at the regional, downtown district and city block scales – using James Street North as a focal point of the modelling.

The process began by identifying and mapping green spaces, agricultural land and waterfalls, then forging new connections between existing green spaces, in the process forming "green

**BILL CURRAN**

*TCA principal on his firm's stand on adaptive reuse at James and Vine*

"Part of the reason we're doing this is because we were frustrated with all the talk. The answer lies in taking action. With a thousand of us all taking action in our incremental ways, like a cog on a gear, eventually the gear rotates and things change. There's no white knight coming to save downtown Hamilton. It really has to be people that are here taking the initiative and putting their own contribution in place. Hopefully the cumulative effect will be substantial. It's already happening – James North coming to life is one of the most inspiring steps we've seen, and we're happy to be a part of that. The missing link is more housing downtown. We need more young people, recent graduates, early 30s families working, living and patronizing downtown so that the place goes to the next level. And that's the next challenge for downtown. I think downtown is a bit oversubscribed with green space. The city has a plan to turn the parking lot at John and Rebecca into an urban park. I totally disagree with that. What we really need is more energy and vitality. What we need is a way to use that parcel as a catalyst for development by putting a McMaster building there or putting a 250-300 unit condo there. The Bell Lofts on Bay Street were a shot in the arm for the southwest edge of downtown; we need a comparable building with that kind of critical mass down in the north end."

fingers" of parks and engineered wetlands that would draw peripheral green space into city centre. A new local light rail transit network – inspired by Metrolinx initiatives but not beholden to their hypothetical routing – would build upon the existing heavier rail network. Transit hubs would connect the regional rail network with the light rail system, which weaves above these green corridors on an elevated track. This new elevated light rail transit system, along with a network of pedestrian and cycling routes, would replace car-dominated streets; the light rail is coupled with energy harvesting from solar-heated salt ponds and rivers coursing below. Constructed wetlands, marshes providing a natural filtration process to help to clean the groundwater, would line the waterways.

"The idea is that, on these 'green fingers,' that we institute a waterway underneath the rail sys-

tem, which is what we're calling a 'solar river,'" Witt explains. "It's a kind of technology you can use by creating striations of density of saltwater – the top is just normal water, the middle layer is a bit more salty and then the lower one is very salty. That layer traps the solar heat gain and would reach a fairly high temperature in summer months." A similar prototype constructed a half-century ago on the shores of the Dead Sea proved capable of producing temperatures of 90°C. It's this thermal energy that's tapped, via heat exchangers, to run turbines.

"It sounds a bit fantastic," Witt allows. "But there are examples of the technology that have been constructed. And you could use those turbines to augment the energy needs of something like the light rapid transit system."

Following the introduction of this high-speed light rail transit system and new low-rise build-



## **DAVID PREMI**

*Accentuating context of buildings,  
green spaces, human connections*

"With the old library, it was pretty much impossible to understand what was going on inside the building from the street – to the extent that they had to hang a giant sign over York Boulevard. Now it's easy to find because you can see exactly what's going on inside. Conversely, the people inside feel a connection to the fabric of the city, because when you sit in the library, you look right out and can see street life, so you maintain that connection to the city, even inside. In terms of sustainability, that's an important aspect – the contextual nature of a building, how it becomes part of a city, how it connects the city together. When things are looked at in isolation, they tend to disconnect from other pieces of the city. Jackson Square disconnects all of the adjacent blocks from each other because it's a massive thing, and its whole function is to siphon people off of the street, so it's a double whammy. It's completely antithetical to healthy urban development. I believe that architecture – and any kind of design that's public – has a responsibility to understand and discuss these kinds of things. Because everything we build is a huge commitment. It's not something that's easy to reverse. Success relies on connections, and I think parks and green spaces are an integral part of that. In a dense urban environment, it's the negative space between buildings that become public spaces, whether they're green or not. It's absolutely something that should be thought about as architects design buildings, as urban planners develop plans – everybody has to collaborate."

David Premi is principal of Hamilton's David Premi Architects Inc. (dp.Ai), whose design for the Hamilton Public Library and Farmers' Market received a 2011 Award of Excellence from the Ontario Association of Architects



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For more on Raw Design, visit [rawdsgn.ca](http://rawdsgn.ca)

ings (as well as the densification of existing buildings), the concept would introduce a mixed-use form of modular high-rise. These new towers would offer incrementally greater density as they combined various elements: retail and/or community use at street level, perhaps light manufacturing based on green technologies above that, residential or commercial uses above that and urban agriculture mixed to varying extents throughout. Sited along “green fingers” and light rapid transit corridors, these mixed-use towers and rooftop greenhouses might provide extensive urban agriculture to support the densified downtown while also intensifying with residential, commercial, retail and manufacturing uses.

“These are an evolution of a building type that would line these ‘green fingers,’” says Witt. “They start off with a certain component and then evolve as the density need increases. You might start off with a retail or a residential component, then you add elements to it, so that it becomes an organic model of mixed-use building that eventually disperses across the entire city. Developments don’t grow in select zones, but grow organically in every zone.”

Green walls and roofs would also be featured, serving to unify and soften neighbourhoods without compromising desirable density, while simultaneously connecting fragmented ground-level habitats. Hamilton, which has been reconnecting with its position within an incredibly diverse and vibrant ecosystem – will similarly benefit from this enriched urban environment, as green roofscapes and the like encourage biodiversity. Seen

from area high-rises, these living installations would appear as green islands, just as they would to butterflies or birds. Diversity in green roof applications could thus support urban biodiversity with microclimates and unique ecosystems. More than that, the concept responds to the city’s human inhabitants, addressing quality of life in a novel, sustainable, human-scaled manner.

The cynic will balk at all of this, pointing out that such an undertaking would require an unprecedented level of cooperation amongst a staggering number of stakeholders. And the complexity of this plan could be challenging. Metrolinx has proven to be more politically sensitive than it initially appeared, for example, and our timid city politicians have a long history of sticker shock when it comes to socially progressive initiatives. The design parallels are certainly sobering. Manhattan’s fêted High Line urban park project, for example, reclaimed a mile and a half of elevated freight rail at a cost of over \$150 million; Friends of the High Line, the group that spurred the development, has estimated that maintenance could cost the city around \$4 million a year.

Beyond such considerations, however, the Raw Design concept offers a philosophical connection with history’s Ambitious City, in an innovative and sustainable urban blueprint that promotes healthy, vibrant city neighbourhoods for generations to come.

“It is a bit fantastic, but that’s what you want,” Witt insists. “You don’t want the realistic option. You want people to open their minds and think, ‘Wow, this could be something amazing.’” **HM**