## Leafed Out: West 8 Brings Canada Out to a Stretch of Prime Toronto Waterfront

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Summers in Toronto can get hot: high 80s, up into the 90s; and, as the city's unofficial refrain goes, it's not the heat—it's the humidity. So the logical thing is to head for the lake.

Downtown Toronto's southern edge fronts onto Lake Ontario, offering lots of ways to enjoy life by the water: cultural and festival venues, shopping and restaurants, sail- and paddleboat rentals by the hour, and a series of stellar parks, including Sugar Beach by Claude Cormier, ASLA, and HtO by Cormier and Janet Rosenberg, FASLA, with their festive umbrellas; PFS Studio's Sherbourne Common with its play of water; the enduringly popular Toronto Music Garden, designed by Julie Moir Messervy in collaboration with the cellist Yo Yo Ma; and a fragrant little wilderness, the Spadina Quay Wetland, by PMA Landscape Architects, where monarch butterflies breed on milkweed and pike lurk among the reeds. Even an anonymous, shrubbery-enclosed square of grass makes it possible to find yourself, just meters from crowds strolling by, alone at the center of a swooping choreography of purple martins: something to make a person forget whatever business they thought they had, and feel just fine.

Until this summer, however, Toronto's main waterfront street, Queens Quay Boulevard, ran grimly past without caring. Double lanes of traffic in both directions, and a streetcar corridor down the middle, left only narrow sidewalks, where weeds sprang from cracks, rust bled from crumbling concrete, and the dangling end of a design-free steel-pipe guardrail along the water's edge defied anyone to use the word "promenade."

"The waterfront had no identity. It looked as though the city had written it off," says Jelle Therry, a design manager at West 8, the landscape architect of the revitalization of Queens Quay in collaboration with DTAH.

The completion in June last year of a central, one-mile stretch of Queens Quay, from the foot of Bay Street to Yo Yo Ma Lane, just past Spadina, is a small but critical phase in one of the largest urban redevelopment projects in history. The project's client, Waterfront Toronto, which was established by federal, provincial, and municipal governments in concert in 2001, is overseeing the 25-year redevelopment of 1,977 acres of waterfront lands: an area more than seven times the size of London's Canary Wharf, and more than 20 times the size of New York's Battery Park City.

"What holds it all together is this one piece of public realm that is Queens Quay," says Christopher Glaisek, the vice president of planning and design for Waterfront Toronto. "It touches every other piece that we've built, so that the whole is greater than the sum of the parts."

To allow the diverse parts to add up, the design objective for the Queens Quay revitalization was to create for the public realm a consistent and legible identity. The design team's quest for that identity began with a visit to Algonquin Park, the oldest provincial park in Ontario, and a landscape which the paintings of artists Tom Thomson and the Group of Seven have made iconic. There, the designers found Ontario's archetypal lakefront experience: standing on the porch of a cabin, gazing out at the water, with a wooden dock saying come farther, a canoe tied up, Muskoka chairs in the foreground, and, where a smooth outcropping of rock reaches out to the lake, always a tree.

"The Jack Pine, by Tom Thomson, that's the identity of the Ontario lake," says Therry, referring to one of Canada's most widely recognized landscape paintings. "We strongly believed we could translate this image to Toronto."

West 8 and DTAH's concept for that translation comprises three layers. First is what Therry calls "the green vein," a tree-lined streetscape that serves pedestrians, cyclists, and streetcars, as well as vehicles, and energizes the waterfront. Second is a granite-paved promenade along the south side of Queens Quay, between the street and the lake, that creates a wide and welcoming public realm.

Third are three wooden wave decks that cantilever out over the lake, relieving pinch points where boat slips would otherwise constrict the sidewalk, and inviting freestyle use.

Along the green vein, traffic has been completely recongured. What used to be four lanes for cars has been reduced to two, which run along the north side of the right-of-way, farthest from the water. Intermittent turning lanes allow the street to move traffic as efficiently as before. Streetcars run along a raised concrete corridor to the south of the cars, and the section of street width used for cars' turning lanes also accommodates extra-wide transit platforms where passengers can wait for their ride in comfort.

On the lake side of the streetcar lines, cyclists enjoy a much improved connection through the central waterfront. An off-street bike path fills a missing link in the Martin Goodman Trail, a 35-mile path running along the lakeshore from one end of the city to the other. Edging the new stretch of the path, granite-sett gutters collect rainwater to irrigate a double row of London plane trees.

The landscape architects selected London plane trees not only for their beauty—their distinctive, mottled bark and seasonally expressive character—but also for their ability to grow big in urban conditions, which in Toronto include the salt strewn on winter streets. The plane trees will develop huge canopies that allow light to penetrate, provide shade, catch wind, and give the streetscape volume.

To ensure the trees, more than 240 of them, will have the volume of soil they need for full growth and long life, the design team specified a modular soil containment system, silva cell, beneath the pavement. Crate-like plastic frames transfer aboveground loads to a compacted substrate, creating a zone in between for tree roots to extend through lightly compacted soil. The system also helps with rainwater management, having the capacity to handle up to two inches of rainfall per storm. For the first two years, the trees will wear slow-release irrigation bags to help them get established. In time, they'll reach 70 to 100 feet in height, and their huge branches will reduce the heat, if not the humidity, on the promenade below.

On a Saturday afternoon in August, the promenade between the trees and the water throngs with people, and it has done since it opened. Everyone is here: families strolling, friends standing and talking, couples getting into a water taxi, and tourists on a bench taking selfies. A man in a white kaftan and red sneakers follows a timber seam along a wave deck, talking to his friends while watching his feet. Now and then a pedestrian wanders onto the bike path, until a roar from that plane of righteousness only cyclists

inhabit sets them straight. Maybe these pedestrians are so used to curbs, they're slow to register subtler paving cues. Or maybe the new pedestrian realm is so wide, it seems limitless.

Three or four times the width of a normal sidewalk, the promenade is paved with four-inch-square pink and gray setts of Canadian granite in a maple leaf mosaic. The mosaic might sound tacky, and it required a leap of faith on the part of the client, says Pina Mallozzi, Waterfront Toronto's design director and also a landscape architect, but the scale of the leaf pattern makes it work. Each leaf is a half dozen or more paces across, so the tracery of gray leaves outlined on pink ground becomes almost abstract. In fact, you feel a bit clever when you figure it out.

"They're not right in your face," says Therry, "but they add a certain playfulness to the landscape."

To increase the apparent width of the public domain, the granite not only covers the strip of sidewalk that's actually in the right-of-way, but it extends across the setbacks of adjacent properties as well, on both sides of the street. In a testament to the degree of public support the design vision was able to muster, 15 out of 16 property owners pitched in half the cost of bringing the granite up to the face of their buildings.

At some points, instead of a property line, a boat slip edges the public domain, where the designers borrowed space with a different strategy. Three timber wave decks hang out over the water, widening the pedestrian throughway and translating the wooden dock from the cabin to the urban waterfront. These tremendously popular structures are highly functional works of art. Their sinuous curves, which recall the smooth stone outcrops of the northern lake country, invite use as alternative pathways to meander, as seating edges, and, yes, as a dock from which to board a small boat.

Completing the scene is the street furniture: beautiful wooden benches, yellow cedar lampposts— both designed by West 8—and 40 bright red Muskoka chairs sprinkled throughout.

Like the granite that property owners chose to extend across property lines, the chairs, provided by the neighborhood's business improvement association, are another visible

example of Waterfront Toronto's success in building a constituency for the design. Waterfront Toronto has held more than 100 community consultation meetings over the course of design and construction. An innovative competition, through which West 8 and DTAH won the design commission in 2006, began with community engagement in drafting the competition brief. Competition entrants were given a walking tour with community representatives and a critique with community groups and the city's technical staff at the halfway point. Some 500 people turned out to see the final proposals.

"This particular design resonated with people the most," Glaisek says, "infusing the street with some real Canadian feeling in both culture and materiality, as well as a simple elegance people liked. It was the most coherent vision, and it has come through remarkably intact."

The revitalization of Queens Quay included not only the streetscape, but all the below-grade infrastructure as well: electricity chambers and cable, natural gas lines, sanitary sewers, storm sewers, telecommunications lines, and wiring and caissons for streetlights, transit poles, and traffic lights. Drawings of existing infrastructure were old and wildly inaccurate, necessitating redesign on the fly as soon as excavation began. Preserving the design's coherent sense of place and high level of functionality took perseverance.

"There's an unwritten rule that utilities do not give way to trees," Mallozzi says, "but we stuck to our guns. Landscape is a utility, not an add-on after the fact."

That point of view might surprise landscape architects used to being brought in to "put in a beautiful carpet," as Therry puts it, after the engineers have done their work—an approach Glaisek compares to bringing in an architect after the structural engineer has finished: "You simply can't build a great project that way." Unless the civil engineers are accountable to the landscape design when laying out their infrastructure, something as simple as a straight row of trees becomes difficult to achieve.

Appointing landscape architects as prime consultants is a revolutionary aspect of Waterfront Toronto's modus operandi. All of the work of the other consultants is coordinated through the landscape architects and is accountable to their design. When something in the field goes awry, the landscape architects are the first to be informed, and

they coordinate the solution. For many landscape architects, that role would entail a steep learning curve.

"Those macromanagement skills may be something landscape architecture needs to focus more on in education and internship," Glaisek says. "It's the natural place for that leadership role to reside."

The priority of design throughout Waterfront Toronto's purview reflects the corporation's commitment to design as a problem-solving tool. The multimodal solution for Queens Quay, for example, could never have been achieved by listing all the problems and totting up the widths needed to solve them one at a time. Even without trees, standard solutions would have totaled more than the right-of-way. But design is both analytic and synthetic, and Queens Quay illustrates an approach that asks not only how much space does all this need, but what has to be done to make all this fit? It's this vision-led perspective that layered and dovetailed the project's disparate components into a coherent whole, and generated the support needed to see it through.

"If it weren't for designers, we wouldn't have had this solution," Glaisek says. "It's been eye-opening for everyone."

Best of all, it's now possible on a hot summer day in Toronto to head down to the central waterfront with no particular aim in mind, and just see what the day brings, knowing it will be something good.