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RIVER+CITY+LIFE: A Guide to Renewing Toronto's Lower Don Lands

Stoss Landscape Urbanism



Cities have been rediscovering their waterfronts for several decades, using reinvestment to proclaim their heritage and to redefine their civic identity. These changes can be traced to changing urban geography, as new modes of transportation, deindustrialization, and new economies of scale have led formerly important industries to move away from the urban core.

At the same time, vacant inner-city sites and a shrinking tax base have challenged municipalities to develop new income-generating strategies. Their solution has frequently been to rebrand older urban districts as destinations for tourists, entrepreneurs, or affluent new residents. River walks, museum parks, and civic centers have been used as catalysts in the effort to bring new cultural and civic institutions to the urban core.

Above: The Stoss LU plan called for a renaturalization of the mouth of the Don River, creating a braided series of river channels that would allow changing patterns of flow and create a series of new residential areas.

Opposite: The plan called for creation of an island park between the dual spans of an emblematic new “spider” bridge, a signature piece of sculptural infrastructure at the river’s mouth.

Spearheading these changes have been attempts to clean up degraded urban environments and reframe them as urban amenities. Livable urban space is now conceived as attractive natural spaces and new public facilities to enjoy them. It is here that this Planning Award winner presents a subtle shift in the discipline of urban design. It marks the arrival of a new technique of place-making: natural ecologies of place.

RIVER+CITY+LIFE was one of four invited entries in the second phase of an urban design competition for Toronto’s Lower Don Lands. It was not the winning entry; that honor went to a team led by Michael Van Valkenburgh Associates, whose proposals were deemed more “cost effective and achievable.” Nevertheless, the EDRA/*Places* jury felt the work by this team, led by Boston’s Stoss Landscape Urbanism, presented a stunning vision of the integration of urban form and natural process.

This competition and several others like it in recent years have made it evident that Toronto is now second only to New York in North America in urban design initiatives. Current policies emphasize high environmental standards, strong design review, and a focus on the public realm. Toronto is fast becoming a laboratory for this new focus on urban ecologies.



A Revision of Priorities

Typically, the industrial waterfronts of North American cities occupy valuable land close to downtown areas. Natural and manmade pressures over the last fifty years have led to their decline. And today, flooding, pollution, sedimentation, and decaying infrastructure are associated with their current derelict condition.

Conscious of these circumstances, organizers of the Toronto competition sought a bold new approach to revitalization of the three hundred acres of largely vacated port lands southwest of downtown. The area, known as the Lower Don Lands, extends from the Parliament Street Slip east to the Don Roadway and from the rail corridor south to Commissioners Street. Its name comes from the Don River, whose distinctive ravine carves through many of the city's neighborhoods, and whose waters once entered Lake Erie, at a fertile estuarine marsh. However, as part of Toronto's industrialization, the mouth of the Don was channeled, and the marshlands were carved up and filled in to allow for warehousing and harbor facilities. The goal of the competition was to liberate the river mouth and use its renaturalization to reinvent this area of the city.

According to competition materials, public calls for

such renaturalization have grown steadily in Toronto. At the same time, redevelopment of other waterfront areas has created pressures to improve transportation infrastructures through the area. But such facilities overlapped with areas being studied for naturalization and the creation of a new flood-protection system. The competition thus called for an overall vision for integrating these various initiatives while addressing the complicated technical challenges of restoring and building in a former wetland.

Drawn up by the Toronto Waterfront Development Corporation (an agency established by federal, provincial, and city governments to oversee renewal of Toronto's central waterfront), the competition brief imagined a new urban district with the river as its central feature: "a sustainable green city, a new type of territory where city, lake and river interact in a dynamic and balanced relationship—an urban estuary." The competition brief further listed these specific objectives: to promote sustainable development, naturalize the mouth of the river, create a continuous riverfront park, enhance the Martin Goodman waterfront recreational trail, provide for harmonious new development, make transit a priority, and develop a gateway to the port lands.

The Stoss LU Approach

As Chris Reed, of Stoss Landscape Urbanism, explains, in responding to such a complex set of issues, his design team established two clear goals: an ecological interface between river and lake and an expanded cultural interface between Toronto and its lakefront. Framed by these objectives, RIVER+CITY+LIFE set out to accommodate the competition's main programmatic requirements: the design of a new urban district housing twenty thousand people and offering space for four thousand jobs; the investigation of alternatives to existing transportation infrastructure; and the preservation of existing railway connections and traffic corridors.

According to Reed, most important in his team's response was that "the Don would come first." This was an inversion of the norm; typically, the emphasis in urban design projects is on built fabric. However, in this case, Reed argued that the fundamental question needed to be: "What kind of territory enables the necessary conditions for the river to flourish and function?" The template of action would be to understand the ecology of the river's mouth and to introduce land forms that might restore and protect it.

Because the amount of space originally occupied by the historic marsh was no longer available, Reed said in an interview, the scheme needed to unfold in ways that extended beyond a conventional restoration project. But other implementation issues soon emerged. For example, how could flexibility be built into the design so the foundational eco-

Opposite: In CITY+RIVER+LIFE none of the architectural drawings were prescriptive; instead, they functioned as massing studies, allowing for flexibility, choice, and alteration. The Head and Tail building was one of a dozen housing types that could be combined to create a rich mix of densities and intervening open spaces.

system might change over time? And, once established, how could natural systems continue to flourish in concert with sequenced development of the new neighborhood?

Stoss LU's proposal envisioned integrated infrastructures that would reestablish the river marsh and control flooding. These would comprise armored and porous surfaces, which could capture water flow, encourage plant growth, and create a system that would accommodate changing water levels, at low tide and high tide, during spring runoff and summer drought.

The success of these hybrid infrastructural tactics would depend on the right combination of natural and engineered systems. For example, new berms, correctly located, could prevent flooding while functioning as repositories for contaminated soil and platforms for new development.

Additional design tactics were proposed to create social as well as ecological diversity. In this regard, flexibility was an important principle driving development of the new neighborhood envisioned by the scheme. The proposal offered eleven housing typologies, which could be combined in different ways to create various densities.

Furthermore, as the building types settled around the new landscape forms, their varying densities would define distinct neighborhoods. Thus, relationships between built form and open space at different scales would give each new district its own character, which would blend with the needs of the river to produce a memorable and distinctive new environment.

The Challenge of Holistic Thinking

In the RIVER+CITY+LIFE scheme, the public realm becomes a terrain where novel urban design techniques are tested. But beyond the aesthetic signature or master plan vision, this challenge is fundamentally about performance. The scheme imagines how green technologies and urban

Sample Juror Comments—RIVER+CITY+LIFE

Fritz Steiner: I am still where I was yesterday on these. I think the Arc and the Don are the best. The Toronto one, in particular, is beautifully produced and thorough.

Dennis Frenchman: The more I look at it the more extraordinary this project is. Because what they are trying to do is to reestablish the real life of this river, which normally has changed the way the land... the way the property is dealt with, so that if it floods the

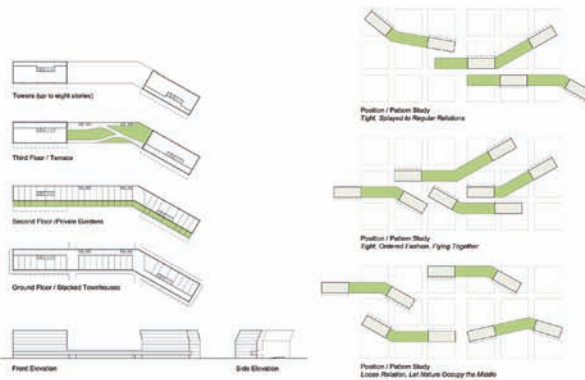
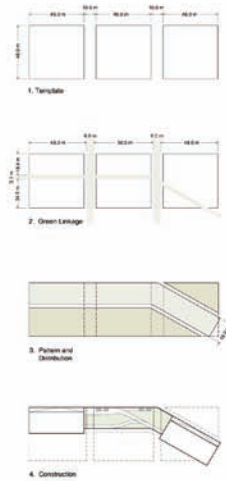
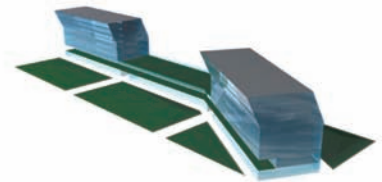
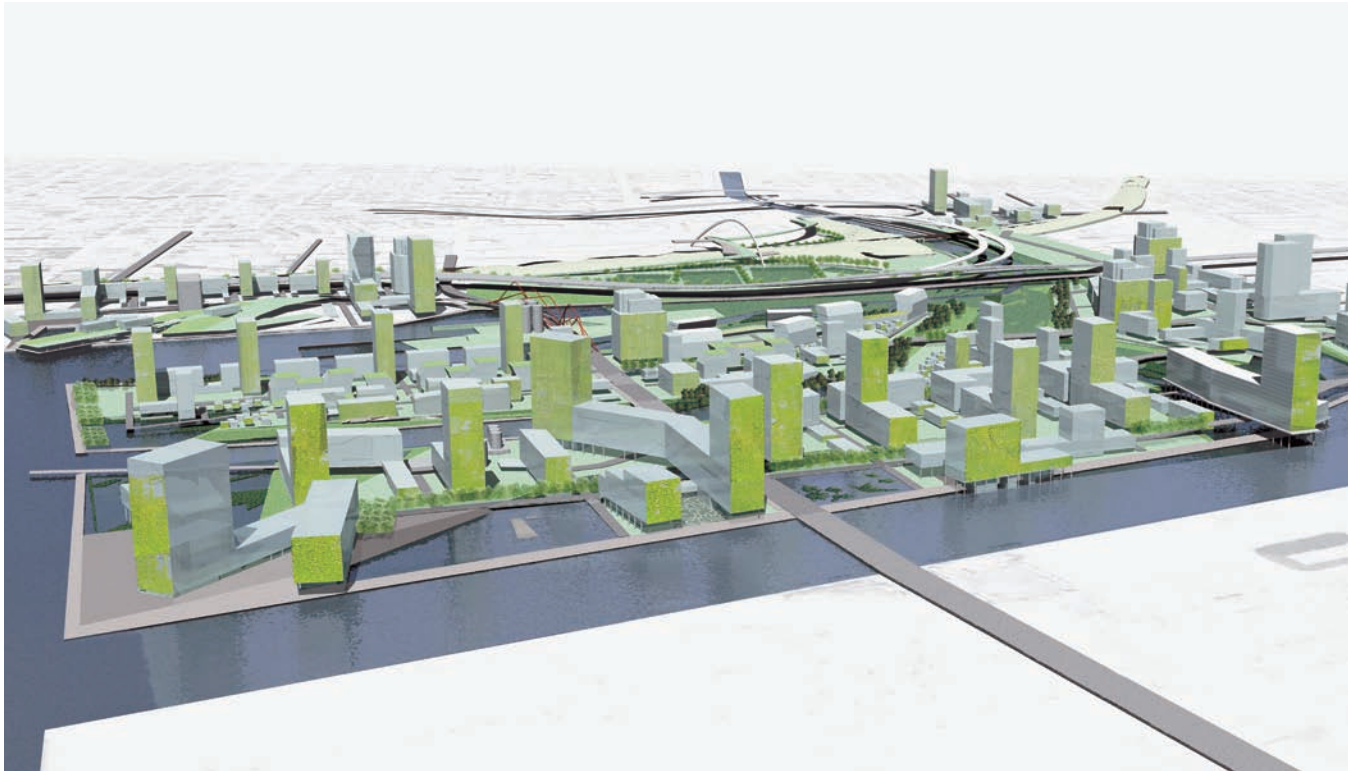
river actually takes a different course. And that's built into the landscape. It is extremely sophisticated, and it would create a really dynamic place.

Fritz Steiner: In a way it is similar to the Seattle waterfront in the sense that it creates a model. This is the kind of plan you could show others, and say this is how you go about revitalizing rivers in an urban sense. There are rivers around the world that need this kind of attention.

Dennis Frenchman: It is interesting to me that it has, on a planning scale, some of the qualities of the Sculpture Park on a project scale. I like that reinforcing of an approach, which is the direction I think it should be going—to weave the city back together in one of these dimensions.

Susan Szenasy: And I love the way it uses the old fabric....

Dennis Frenchman: It doesn't get rid of that either.



Head and Tail

Running in clusters of compact densities, the Head and Tail types consist of a hooked bar of stacked townhouses, with higher towers on either end of a roof terrace. Private access to all units is made through an adjacent walkway that is punctuated at low points between the founding 46 meter x 46 meter templates. The towers rise eight storeys in the optimum scenario, but tilt out slightly at the fifty storey to organize a series of non-overlapping views.

These linear building create a striated landscape of both low and high buildings that are open to both their sites and neighbouring buildings. Their orientation creates large, open in-between spaces that could accept a wilder natural landscape, or a finer grain of detached housing.

	Res. Areas / Units	Retail/Inst.	Total
Optimum	16 500 m ² / 150	0	16 500 m ²
Minimum	13 400 m ² / 110	0	13 400 m ²
Maximum	20 000 m ² / 185	0	20 000 m ²

Susan Szenasy: One of the other things is that none of the architectural drawings seem prescriptive; they are like massing studies. The others give this impression that it should look that way, and it's really annoying.

Dennis Frenchman: It will actually allow for the future. Maybe there is a different way that this river is going to go, so it is looking in time at how this thing is going to change.

Susan Szenasy: It's beautiful. This is definitely a winner....

Leanne Rivlin: I am very much in support of making

use of available waterfronts. The only good thing I can say about the Battery Park City design is that... it made people think about using the Hudson River as a destination....

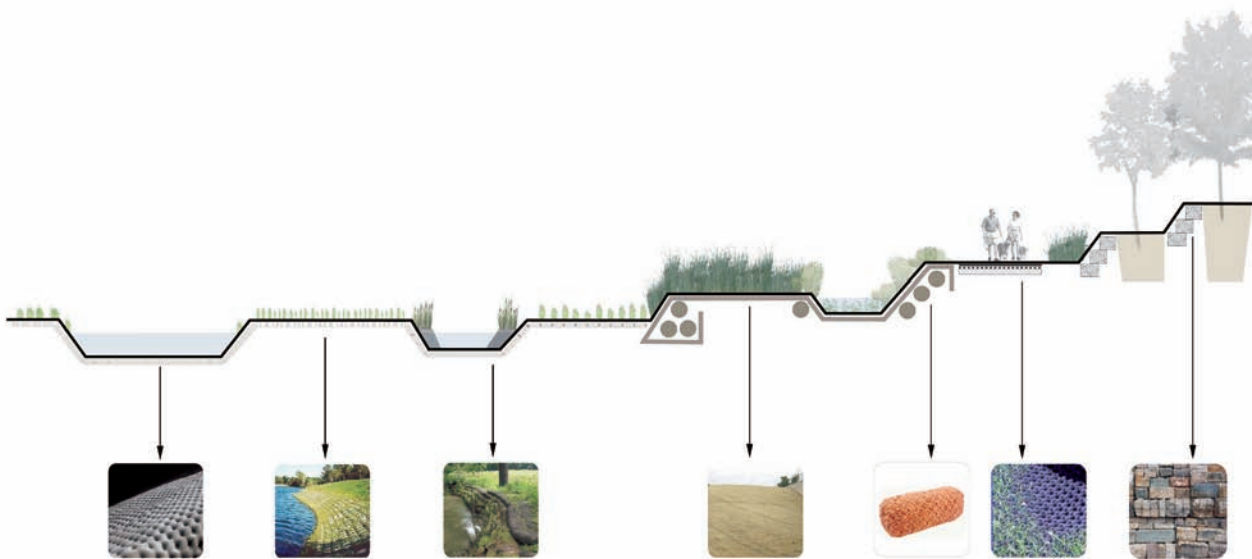
Susan Szenasy: This one is really beautifully done, very clean, very clear.

Dennis Frenchman: The research is really well presented.

Jane Weinzapfel: One last bit. When you think of the relentlessness of so much of Toronto, the fabric. This is such a mind-blowing opportunity.

Dennis Frenchman: And I just love the fact that the basic idea about this river is creating a moving and constantly changing thing. To try to recapture that in the design....Here is a place where we have tried to contain it, but you can't contain it.

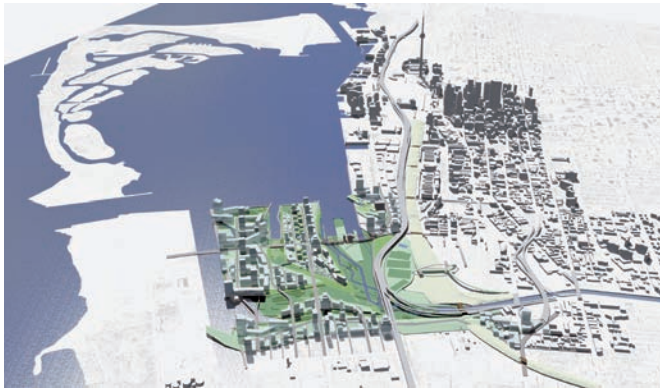
Jane Weinzapfel: It makes a layered thing between the highway, the city, and the river. So then the river becomes what inspires, and it becomes accessible as an idea—as opposed to my memory of [Toronto] which is this linear, endless....Terrific. Good for them.



design concepts might be brought together in a multilayered system. But the healthy functioning of this system would need to be continuously evaluated against performance standards.

In order to manage such a multilayered effort, a multidisciplinary team knowledgeable about infrastructure as well

as design would be crucial. Any the team would also need a high degree of technical expertise in nontraditional areas. In such circumstances, the lead planner and designer would need to manage data from allied consultants in such areas as flood control, soil evaluation, plant and animal biology, traffic engineering, building design, public process, graphic



identity, and information management. Toward that end, Stoss LU was joined in their proposal by Brown + Storey Architects, ZAS Architects, and additional environmental and engineering consultants, foremost among them the ecologist and planner Nina-Marie Lister.

The aim of the team process would be to create a new urban infrastructure that would perform ecologically but neither mimic nor aestheticize the relationship between nature and city.

This important principle is central to the nascent urban design practice of landscape urbanism.

The Dawn of Landscape Urbanism?

In the words of Charles Waldheim, associate dean and director of the landscape architecture program at the University of Toronto, landscape urbanism manifests “the failure of urban design to make proposals that are environmentally stable and ideologically progressive.” Waldheim noticed landscape urbanism as an emerging paradigm in the mid-1990s. At the time, European design critics were starting to write about the incursion of landscape architects into the field of urban design.

Waldheim was a member of the Lower Don Lands competition jury. He explained that landscape urbanism proposes a relationship between nature and the city that is fundamentally different from conventional horticultural or art-historic frames of analysis. It emphasizes an appreciation of native ecologies as adaptive systems.

As RIVER+CITY+LIFE demonstrates, the tenets of landscape urbanism require from its practitioners an understanding of environmental issues and an aggressive incorporation of ecological function with progressive design culture. In practice, this approach creates a powerful tool for the design of urban territories, in which synthetic solutions create large-scale systems, and where engineered

infrastructures complement natural systems.

Projects like the Fresh Kills Landfill and the soon-to-open High Line, both in New York City, are advancing public awareness of ecology in the design of urban spaces. Given the current energy crisis and the new prominence of environmental discourse in the public sphere, higher densities of urban settlement are also coming to be seen more positively.

Nevertheless, it remains unclear, Waldheim said, whether people are willing to live close to or in wetland environments, as proposed in the Stoss LU proposal for the Lower Don Lands. As a result, “What is not yet entirely clear is the rate by which popular opinion and the development community are willing to introduce that level of ecological function in the city,” he concluded.

Considering the ambitious approach of the Stoss LU proposals, therefore, one is not surprised that the scheme submitted by the team of Michael Van Valkenburgh Associates (MVVA) and Ken Greenberg won the competition. The two teams shared many ecological goals, Waldheim pointed out, but the MVVA scheme was easier to imagine as built work. By contrast, Waldheim believes the Stoss scheme may be more significant in the long run for its attempt to push landscape urbanism forward.

Nevertheless, the relative ranking of the two schemes may be a footnote to the development of a larger movement. The Stoss proposal’s avant-garde ideas—foliage screens providing shading and planting surfaces on buildings, a new neighborhood of two- to forty-story buildings executed within green building parameters, and the sheer scale of applied landscape urbanism principles—make it an important contribution to current urban design practice.

At stake is not only recognition of a sophisticated, well-conceived design proposal, but the glimpse of a model that questions current values and that points to a recalibration of urban design: a vision marking time, making place.

— *Hector Fernando Burga*

All drawings and images courtesy of Stoss LU.

Opposite: The Don mouth would remain a highly engineered estuary, set free within retaining structures. A variety of engineering strategies, from mesh matting to coconut logs to gabion blocks, would be deployed to produce a framework of primary channel, broad marshes, floodway, and armored uplands.

Above: Overview of downtown Toronto, showing the project site. The river enters the lake from the lower right.