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company, Unique Lighting, has introduced its new "HUB" system to Canada, which allows a main transformer to redistribute exactly 12 volts directly to each fixture providing both uniform illumination and huge savings in installed costs. The transformers are also available in underground and underwater models. Lighting fixtures can also accommodate MR 16 style lamps in LED that can be used in place of halogen style lamps. These LED lamps are rated to 100,000 hours and do not create the heat problems associated with halogen lamps, which are rated to 10,000 – 20,000 hours.

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EDITORIAL / ÉDITORIAL

Rehabilitating Urban Waterfronts
La remise en état de secteurs riverains
by/par Don Hester and David Leinster,
Guest Editors / Rédacteurs invités 6

PLANNING / PLANIFICATION

Investing in the Future: Creating urban waterfront districts requires time and public investment
Investir dans l'avenir: La création de secteurs riverains urbains nécessite du temps et des investissements publics
by/par Donna Hinde 7

Special Section: Winnipeg Waterfronts

Section spéciale: les secteurs riverains de Winnipeg

The Forks North Portage Development Corporation
A Model for Urban Waterfront Development
Un modèle d'aménagement riverain urbain
by/par Steve Cohlmeier 12

The Waterfront Comes Alive
La renaissance d'un secteur riverain à Winnipeg
by/par Mike Scatliff 16

The Seine River Greenway Concept
Le concept de couloir de verdure pour la rivière Seine
by/par Jim Paterson 18

DESIGN / CONCEPTION

Saskatoon's South Downtown Riverfront
Le secteur riverain du centre-ville sud de Saskatoon
by/par Rob Crosby 20

Saskatoon's Riverworks Weir Redevelopment
Le réaménagement du déversoir Riverworks à Saskatoon
by/par Rob Crosby 22

La promenade Samuel-de-Champlain, à Québec
Quebec City: Samuel de Champlain Promenade
par/by Vincent Asselin 23

The New Landscape of Toronto's Waterfront
Une nouvelle allure pour le secteur riverain de Toronto
by/par George Dark 26

Calgary's Rivers – Evolving Perceptions
Les rivières de Calgary – des perceptions en évolution
by/par Garry Carson 29

The Whitehorse Riverfront: Parks, Trails and Trolleys
Le secteur riverain de Whitehorse: des parcs, des sentiers et des tramways
by/par Damon Oriente 32

TECHNOLOGY/ECOLOGY / TECHNOLOGIE ET ÉCOLOGIE

Ecologically Based Waterfront Design
Vers aménagement riverain écologique
by/par Eha Naylor 34

Cliff Erosion Management at the University of British Columbia
La gestion du sapement à l'Université de la Colombie-Britannique
by/par Andrew Wilson 36

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Rehabilitating Urban Waterfronts

Many Canadian cities originally had very important connections to local waterways but left them behind in the industrial era. Railways and smokestacks occupied prime ocean, lakefront and riverbank properties. Lakes, rivers and streams became industrial sewers. In this issue, *LANDSCAPES/PAYSAGES* focuses on the renewal of these blighted urban waterfronts, and the landscape architects who are reshaping these forgotten places.

The task of revitalizing waterfronts often poses major technological and ecological difficulties, including such challenges as oceanfront cliff erosion control in Vancouver (page 36). More than ever before landscape architects are working with geotechnical engineers and other professionals in preserving and recreating the land/water edge. Just as consulting with technical experts is essential, so is public consultation, which helps shape most successful waterfront designs today. And critically important is a strong Waterfront Development Corporation to provide effective management. This is especially evident in Port

Hope, Orillia and Port Dover (page 7) and in Winnipeg (page 12), where The Forks North Portage Development Corporation leveraged public sector investment to redevelop a downtown rail yard at the historic centre of the city.

Many jurisdictions understand the need for projects that stimulate future urban waterfront rehabilitation. Winnipeg's rediscovery of the Red River began more than 20 years ago, and in it were the seeds of revitalization that now sees Winnipeggers enjoying the Red, the Assiniboine and the Seine Rivers in all seasons. In a similar fashion, Calgary's Eau Claire Promenade (page 29) has been a catalyst for local riverbank redevelopment, and in Toronto and Hamilton (page 26), waterfront planning has created new urban connections to Lake Ontario. Saskatoon's South Downtown Riverbank project (page 20) is intended to stimulate urban riverbank development: local groups are already working on creating a development corporation. And further north, a local First Nation group sees major opportunities in the Whitehorse Riverfront Project (page 32).

par rédacteurs invités Don Hester and David Leinster

Plusieurs villes canadiennes, qui entretenaient autrefois des liens très étroits avec les cours d'eau, se retrouvèrent avec des vestiges de l'ère industrielle. Des chemins de fer et des grandes cheminées meublaient çà et là des propriétés fort prisées le long des océans, lacs et rivières. Par conséquent, les lacs, rivières et ruisseaux devinrent les égouts industriels. Dans le présent numéro de *LANDSCAPES/PAYSAGES*, nous mettrons pleins feux sur la revitalisation de secteurs riverains urbains en décrépitude et sur les architectes paysagistes qui s'emploient à redonner vie à ces endroits qui ont sombré dans l'oubli.

Revitaliser des secteurs riverains pose souvent des problèmes de taille aux plans technologique et écologique. On n'a qu'à penser aux défis que posent le contrôle du sapement à Vancouver (page 36). Les architectes paysagistes plus que jamais en partenariat avec des ingénieurs géotechniciens et d'autres professionnels à la préservation et au réaménagement des rives. On note par ailleurs que prendre le pouls de la population est tout aussi important aujourd'hui que consulter des experts techniques pour réussir à remodeler avec brio des secteurs riverains. Se doter d'une société de développement de secteurs riverains dynamique s'avère tout à fait essentiel à une gestion efficace. Cela est notamment manifeste à

La remise en état de secteurs riverains

Port Hope, à Orillia et à Port Dover (page 7) et à Winnipeg (page 12), où la Forks North Portage Development Corporation a réussi à avoir une prise sur le secteur public pour qu'il investisse dans le réaménagement d'une cour de triage au centre historique de la ville.

Plusieurs administrations comprennent l'importance de lancer des projets qui stimulent la remise en état des rives en milieu urbain. Entamée il y a plus de vingt ans de cela, la redécouverte de la rivière Rouge à Winnipeg allait préparer le terrain à la revitalisation et permettre aux Winnipegois et Winnipegaises de profiter de tous les atouts que les rivières Rouge, Seine et Assiniboine ont à offrir durant les quatre saisons. Dans le même ordre d'idées, la promenade Eau Claire à Calgary (page 29) a aussi été catalyseur de réaménagement des rives locales, alors qu'à Toronto et à Hamilton (page 26), la planification des secteurs riverains a permis de rétablir des liens urbains avec le lac Ontario. Le projet des rives du centre-ville sud à Saskatoon (page 20) a pour sa part permis de stimuler l'aménagement des rives urbaines. À preuve, on compte déjà des groupes locaux qui travaillent à la création d'une société de développement. Un peu plus au nord, une bande de Première Nation a noté que ce projet de secteur riverain à Whitehorse pouvait offrir de grandes occasions (page 32).

by Guest Editors Don Hester and David Leinster

With this issue, *Landscapes/Paysages* marks the transition to a rotating guest editorship for our national publication. From its inception in 1999 to the fall of 2003, *L/P* has been largely the responsibility of Cecelia Paine, FCSLA. She has worked tirelessly to create the publication, find and coordinate publishers, push volunteer editors and writers, and write editorials and articles. We follow in her footsteps with some trepidation about measuring up to her high standards.

We now have an Editor-in-Chief, Judy Lord, who has guided this issue to publication and will similarly manage future issues of *Landscapes/Paysages*.

Guest Editors Don Hester, FCSLA, MCIP (dhester@UMAGroup.com) and David Leinster, CSLA (dleinster@envisionhough.com) both have a special interest in urban waterfront restoration and have been involved in some of the unique projects presented in this issue.

Ce numéro marque un point marquant dans l'histoire de *Landscapes/Paysages*, puisque les fonctions de rédacteur invité de votre publication nationale seront assumées par rotation. Depuis sa création en 1999 jusqu'à l'automne 2003, la parution de *L/P* relevait en grande partie de la membre agrée de l'AAPC, Cecelia Paine. Elle s'exerça sans relâche au fil de ces années à créer cette publication, à signer les éditoriaux et des articles, à trouver et à coordonner les maisons d'édition et à encourager les bénévoles à prêter leur collaboration à la rédaction de cette publication. Cela dit, nous comptons continuer sur sa lancée en vue d'atteindre des sommets encore plus hauts en matière de normes.

Le numéro que vous tenez entre vos mains a été réalisé par Judy Lord, notre nouvelle rédactrice en chef, qui continuera à gérer avec la même doigté la parution des prochains numéros de *Landscapes/Paysages*.

Les rédacteurs invités Don Hester, membre agrée de l'AAPC, MCIP, (dhester@UMAGroup.com) et David Leinster, AAPC, (dleinster@ENVisionhough.com) s'intéressent de près à la remise en état des secteurs riverains en milieu urbain. Ils se sont d'ailleurs impliqués dans certains des projets uniques dont il est question dans ce numéro.



Port Hope plan

Investing in the Future
Creating urban waterfront districts takes time and public investment – but the economic benefits are long-lasting.

par/by Donna Hinde

Many communities in Ontario have prepared comprehensive urban design plans that are intended to create new urban districts in waterfront areas. Most include innovative strategies to guide the implementation of new development. The plans both identify private sector opportunities and focus public sector initiatives.

Vibrant public places depend on many partners

In Port Hope, Orillia and Port Dover, The Planning Partnership recently prepared urban design plans and implementation strategies for new waterfront districts, with activities focussed on their unique and appealing waterside settings. The plans illustrate a new way of thinking about waterfronts. They call for healthy, vibrant, mixed-use waterfront districts that are logical extensions of existing urban areas.

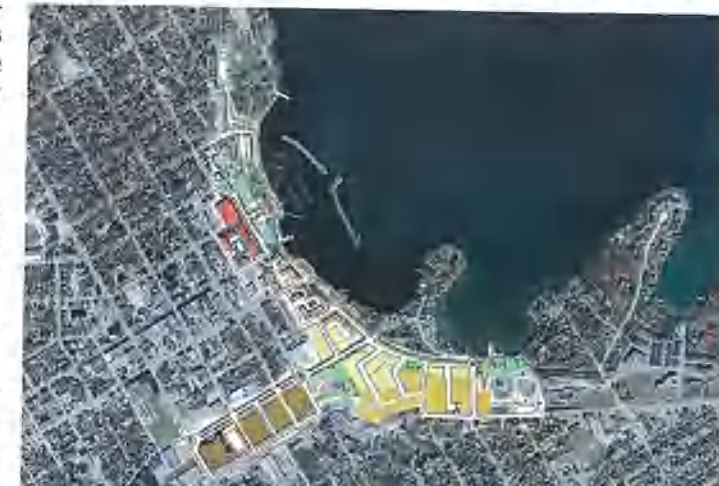
The waterfront districts are distinctly public places, not the private purview of industrial users. The plans do not focus on a single mega-project that typically requires only one developer and large government grants for implementation. Instead, they incorporate a variety of new private sector opportunities (residential, commercial and mixed-use development), and they outline investment priorities for the public sector. The public sector could invest, for example, in the creation of beautiful streets, parks, trails and community centres. In short, these waterfront districts will depend on many partners working together to bring the new vision to life.

The message is consistent. Establishing new urban districts on the waterfront will take time. This is not surprising: the industrial uses that dominated these waterfronts took decades to evolve. Now, it may well take decades for the desired change in use to occur.

Triggering change

Many communities become frustrated that redevelopment is not immediate in spite of their comprehensive plans. The community's urban structure is changing and that can take time. Research into case studies across North America of major redevelopment initiatives all point to three imperatives.

- The public sector must lead change.
- The costs of development must be reduced. This includes reduced development charges, reduced parking requirements, clear parkland and engineering standards and financial relief.
- The risks inherent in the planning approval process must be reduced, with clear expectations, flexible planning policy and as-of-right zoning permissions.



Orillia plan

EN BREF

Investir dans l'avenir :

La création de secteurs riverains urbains nécessite du temps et des investissements publics.

La planification des secteurs riverains à Port Hope, à Orillia et à Port Dover illustre bien la nouvelle pensée dans le domaine de l'aménagement de secteurs riverains. N'étant plus la classe gardée des utilisateurs industriels, ces secteurs sont maintenant vibrants grâce aux nombreux partenaires qui misent sur la concrétisation d'une nouvelle vision.

L'aménagement de secteurs riverains est aujourd'hui marqué tant par la présence du secteur privé, qui investit dans le développement résidentiel, commercial et polyvalent, que par la présence du secteur public qui investit massive-

ment dans des rues, parcs, sentiers et centres communautaires splendides. L'aménagement de nouveaux secteurs peut donc prendre énormément de temps, voire des décennies. Pour que les nouveaux secteurs soient une réussite, le secteur public doit, dans la plupart des cas, être l'instigateur de cette métamorphose. Il est ressorti des recherches réalisées en Amérique du Nord que les coûts d'aménagement et les risques que prennent les aménageurs doivent être amoindris.

L'investissement public initial dans une infrastructure s'avère essentiel parce qu'il permet d'accroître la demande en développement. Le secteur public, qui domine dans

nombre de ces secteurs riverains, occupe donc une place fort importante. Les gouvernements ne devraient toutefois jamais oublier que les investissements initiaux leur permettront d'engranger plus de revenus, notamment grâce à des recettes fiscales plus élevées, à la création d'emplois et à la promotion touristique. Cela ne date pas d'hier. À preuve, la valeur des propriétés ceinturant le Central Park à New York a permis à cette ville d'engranger 4,4 millions \$ U.S. de plus en impôts fonciers seulement (en dollars de 1873). L'aménagement d'un domaine public enchanteur est par ailleurs un investissement dans l'avenir.

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Landscape architects are concerned with serving the best interests of current and future generations through the design, planning and management of our landscapes. The Canadian Society of Landscape Architects is the national professional association that represents Canadian landscape architects and promotes their ideals. For more information on the CSLA, visit our Web site at www.csla.ca or contact CSLA via email at info@csla.ca.

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Port Dover plan

sector investment leverages private sector investment. By stimulating private sector redevelopment activity, property values are enhanced and property tax assessments will increase.

The bottom line: initial public dollars will secure existing tax revenues and generate additional financial returns to all levels of government. The decision to create a beautiful public realm is an investment in the future. The cycle of change is mutually supportive. By creating an environment for economic success, investment leads to increased lease rates and reduced vacancy rates. As well, attractive waterfront districts attract tourism, which builds the reputation of the community and creates jobs in the food and

beverage, accommodation and retail sectors. Hence, public sector investment is an important part of the transformation process. It is not only in the public interest but is also a good financial strategy.

These benefits are not new. For example, in 1873, the value of property in the wards surrounding Central Park had increased such that the City of New York was receiving \$4.4 million US in excess property taxes alone (in 1873 dollars). Similar calculations were used throughout the United States to convince municipal officials that spending money on parks and streetscapes would be fiscally advantageous.

A collection of new evidence indicates that the beauty and comfort of our waterfront districts, as expressed by the quality of our public spaces, should no longer be considered an expensive frill. Rather, these investments produce important and long-lasting economic benefits.

Donna Hinde, BES, MLA, OALA, FCSLA, is a partner and landscape architect at The Planning Partnership, a Toronto-based firm of planners, urban designers and landscape architects. Donna specializes in physical planning projects using an open collaborative design process. She has managed waterfront master plans for Brantford, Guelph, Fergus, Collingwood, Brockville, Belleville, Southampton, Huntsville, Marmora and Parry Sound, and won an Ontario Professional Planners Award in 1999 for her work in Thunder Bay. Email: dhinde@plupart.ca

The public leadership imperative

Case studies indicate that the public sector must be financially involved, and most often should lead the transformation process. Public sector investment in infrastructure can enhance the demand for development. By creating beautiful public spaces and public buildings, for example, public investment establishes the appropriate environment for revitalization.

Clearly, the success of new urban waterfront districts is strongly influenced by the political will to achieve the plan, which leads to investment in infrastructure and commitment to assist the private sector. Public investment should help remove the risks.

Hard economic benefits

In reality, the public environment dominates or will dominate many of the waterfronts. It has tremendous value - hard economic value. Government action has typically been followed closely by private sector activities. As the overall environment improves and the area becomes a great place to live, work, visit and invest, it will attract more residential development, which is necessary to support commercial and retail uses year round. As residential density increases, so will the residential property tax base.

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Winnipeg Waterfronts



Photo: Destination Winnipeg/Auricatta International

Twenty-five years ago, the idea was the stuff dreams are made of. Could Winnipeg's historic riverbanks become, once again, the heart of the city?

In the early 1980s, the Canada/Manitoba Agreement for Recreation and Conservation for the Red River Corridor (ARC) began to develop over a dozen sites along the Red River from Winnipeg to the Netley Creek near the south end of Lake Winnipeg. Three major projects were in downtown Winnipeg – The Forks, Stephen Juba Park and Promenade Tache.

Winnipeggers have learned that waterfront revitalization is not a quick process, nor is it easy, but throughout the last two decades Winnipeg riverbanks have come alive. Landscape architects have played a pivotal role in creating some of the city's best-loved urban spaces.

Steve Cohlmeier explains how The Forks North Portage Development Corporation leveraged public sector investment to redevelop the downtown rail yard that occupied the historic riverbanks where the Red and the Assiniboine rivers meet. Today, The Forks is a vibrant commercial, cultural and recreational hub. And as Mike Scatliff's story demonstrates, the growth continues. Waterfront Drive is building on the foundation of ARC, and realizes part of an urban trail conceived by the Manitoba Association of Landscape Architects in 1995, linking The Forks with Kildonan Park in the city's north end.

ARC became the catalyst for significant rediscovery of the city's urban riverbanks. Winnipeggers now enjoy the Red and Assiniboine rivers in all seasons.

Les secteur riverain de Winnipeg



Photo: Destination Winnipeg/Auricatta International

Il y a de cela vingt-cinq ans, une telle idée n'était qu'un rêve. Une question se posait alors : Est-ce que les rives historiques de Winnipeg pouvaient faire battre à nouveau le cœur de la ville ?

Au début des années 1980, on commença à élaborer, grâce à l'Accord Canada-Manitoba au sujet de la récréation et de la conservation du couloir de la rivière Rouge, plus d'une douzaine de sites le long de la rivière Rouge s'étendant de Winnipeg jusqu'au ruisseau Netley, près de l'extrémité sud du lac Winnipeg. Trois importants projets furent réalisés au centre-ville de Winnipeg, à savoir La Fourche, le parc Stephen Juba et la promenade Taché.

Les Winnipegois et les Winnipegaises se rendirent compte que la revitalisation d'un secteur riverain était une tâche ardue et de longue haleine. Au cours des deux dernières décennies, les rives de Winnipeg ont repris vie. Les architectes paysagistes jouèrent un rôle de premier plan dans la création des espaces urbains que la ville chérit le plus.

Steve Cohlmeier nous explique comment la Forks North Portage Development Corporation a réussi à convaincre le secteur public d'investir dans le réaménagement d'une voie ferrée au centre-ville qui occupait jadis les rives historiques au confluent des rivières Rouge et Assiniboine. Aujourd'hui, La Fourche est une plaque tournante commerciale, culturelle et récréative vibrante. Comme le démontre Mike Scatliff dans son article, la croissance se poursuit. On continue par ailleurs à aménager la promenade riveraine conformément à l'Accord et à réaliser une partie d'un sentier urbain conçu en 1995 par l'Association des architectes paysagistes du Manitoba, qui permet de raccorder La Fourche et le parc Kildonan à l'extrémité nord de la ville.

Cet Accord, qui devint le catalyseur de la redécouverte des rives urbaines de la ville, permet aujourd'hui aux Winnipegois et Winnipegaises de profiter de tout ce que les rivières Rouge et Assiniboine ont à offrir durant chaque saison de l'année.

Winnipeg: The Forks North Portage Development Corporation

A Model for Urban Waterfront Development

par/by Steve Cohlmeier

By the mid-1980s Winnipeg had two significant gaps in its downtown. One was the area immediately north of Portage Avenue. The other was the 34 hectares of land abandoned by CN Railway at the junction of Winnipeg's Red and Assiniboine Rivers - "The Forks." Governments took significant initiative in the rescue of these two areas of the city, and some of the mechanisms used and lessons learned have been very important at both the municipal and national level.

North Portage Development

The first of these projects was the north-of-Portage Avenue renewal. Government acquired lands through expropriation and created an arm's-length corporation, funding both the corporation's start-up and initial infrastructure expense. Federal, provincial and city governments were equal shareholders in the North Portage Development Corporation. Its mandate was to manage the property in perpetuity, and to do so as a self-sufficient organization.

The initial public capital investment was more than \$80 million. Since then, the North Portage Development has attracted more than \$200 million in private investment.

The initial infrastructure investment included a 1900-space below-grade parking structure. This parking structure is especially significant for two reasons. It facilitated the initial commercial development of Portage Place, a large shopping centre, and it now provides the annual source of operating income for The Forks North Portage Development Corporation.

The Forks: a Winnipeg icon

The Forks was developed as a separate corporation on essentially the same model as the North Portage Development Corporation. Later, the two separate corporations were married into a single management corporation for both sites.

The initial public infrastructure investment for The Forks, which was approximately \$30 million, has since attracted private and mixed development valued at approximately \$55 million. The initial infrastructure investment was concentrated in three areas: a large public market in an abandoned CN stable, site

Top Left: The Forks at sunset, showing the walk through time and the skate canopy. / **En haut à gauche :** Un coucher de soleil à La Fourche faisant revivre l'histoire et mettant en évidence l'avent du parc de planche à roulettes.

Left: Looking down on The Forks Market centre court. / **À gauche :** Vue en plan du marché La Fourche.

Below: The Fork's shiny tournament. / **Ci-dessous :** Tournoi de hockey rudimentaire à La Fourche.



Photo: Ken Miner

Photo: Thomas Young



Aerial view of The Forks. / Photo aérienne de La Fourche.

Winnipeg : La Forks North Portage Development Corporation

Un modèle d'aménagement riverain urbain

Winnipeg se retrouva au beau milieu des années 1980 avec deux plaies béantes au centre-ville. Pour les guérir, les gouvernements prirent d'importantes initiatives.

• Pour faire subir une cure de rajeunissement au secteur situé au nord de l'avenue du Portage, le gouvernement créa une société sans lien de dépendance pour gérer à perpétuité la propriété à titre d'organisme autonome et investit plus de 80 millions \$ en frais de lancement et infrastructures initiales, dont un stationnement souterrain de 1 900 places.

• Pour le terrain de 34 hectares au confluent des rivières Rouge et Assiniboine, plus communément appelé « La Fourche », Winnipeg eut recours au même modèle et investit 30 millions \$ en infrastructures, notamment dans un imposant marché public aménagé dans un hangar laissé à l'abandon par le CN, des services et des routes,

de l'éclairage, des allées piétonnières, des squares, un pavillon, une patinoire, ainsi qu'un amphithéâtre et un bassin d'amarrage sur la rivière Assiniboine.

Les deux sociétés devinrent plus tard la Forks North Portage Development Corporation. Les revenus que génère le parc de stationnement de North Portage servent maintenant à éteindre les déficits d'exploitation qu'essuient chaque année les deux sites qui ont quand même réussi à attirer des investissements en capital : 200 millions \$ pour la North Portage Development Corporation et quelque 55 millions \$ pour la Fourche.

Quoique les initiatives du gouvernement aient souvent tendance à exercer une force d'attraction sur les investisseurs, les promoteurs peuvent hésiter à lancer des projets parce que les politiques gouvernementales peuvent changer du jour au lendemain. La création d'une personne

morale à l'abri des changements apportés à court terme constitue un excellent outil pour stabiliser un cadre d'exploitation. La société de Winnipeg a été créée après que le plan global (y compris les énoncés d'objectifs généralement acceptés) avait été approuvé au moyen de consultations. Les plans physiques, dont l'approbation peut parfois être une tâche ardue, furent élaborés plus tard.

Lorsqu'une infrastructure change le visage d'un endroit, celui-ci devient un puissant moteur de croissance économique. Dans le cadre de projets ayant une véritable incidence à La Fourche, les dépenses publiques ont pu être remboursées en l'espace de cinq à sept ans. Les recettes générées par de nombreuses sources, notamment au niveau de l'emploi, permettent de mieux garnir les coffres publics.

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services, roads and public spaces. The intensive development of public spaces included lighting, public walkway systems, plazas, a pavilion, a large tensile structure/artificial skating rink (yes, even in Winnipeg!) and an amphitheatre/boat basin on the Assiniboine River.

When it opened in 1990, The Forks had (almost literally) no visitors. Now, it gets more than seven million visits a year. It is a prime location for larger-scale events; it has become a significant tourist destination and something of an icon for Winnipeg.

The income from the North Portage parking structure, which originally funded the operational expenses of the North Portage Development Corporation, now funds the annual operating deficits of The Forks as well. (The Forks also attracts income from the operation of The Forks Market and from land leases for projects built on the Corporation's lands.)

Arm's length governance

Government initiatives are often intended to attract private investment. If subsidies are generous enough, this can succeed. However, when there are no direct project-specific subsidies, governments often have difficulty interesting the private sector.

Private developers may be hesitant because government initiatives are usually run by public administrations with their added procedural burdens. As well, policies tend to change quickly. Private projects often take considerable time to move from idea to reality, and businesses are hesitant to enter into serious arrangements if they lack confidence that policies promised today will be in place when their projects are actually ready to proceed.

In response to this conundrum, the creation of a corporate entity, which is not affected by short-term change, is an important tool for stabilizing the real (and apparent) operating framework.

The Forks North Portage Development Corporation consists of a board of directors (three from each level of government) and a chairman nominated unanimously by all three levels. The board hires an operational team, which includes a president, various vice-presidents and operating officers and a range of management and operational staff. Consulting services are engaged on an as-required basis. The chairman officially reports to senior leaders of the three levels of government but the communication is for information only,

not for decision-making. Political control is, theoretically, limited to the right to replace board members at the end of their respective tenures. (In fact, there has been less separation, but the corporate structure has protected the organization against most political whims.)

The original global plan

At the outset, the global plan for both downtown Winnipeg projects was developed in consultation with citizens, shareholders and stakeholders. The objectives and long-term goals were defined and consensus was established at a working level before the conclusions were fine-tuned through public consultation. Only when the public approved the global plan was the corporation created.

The global plan is essentially a written document. Although it is difficult for landscape architects, architects and some planners to work without plans and drawings, it became apparent that at this stage, consensus is more easily reached without physical plans. As the Winnipeg process unfolded, the widely accepted statement of objectives became a performance measure, to help assess

PLANIFICATION

Right: Crowds for a major event at The Forks. / **À droite :** Foule massée à La Fourche lors d'un événement majeur.

the physical and fiscal plans that were being developed. They provided a helpful authorization to proceed with physical plans when the plans themselves might have been difficult to sell. Throughout the years, the corporation has held annual open houses to review corporate status, and to present current development directions and planning strategies.

Infrastructure as economic generator
The word "infrastructure" normally evokes images of pipes, wires, excavation, fill and pavement. The public environment is, however, more than this. Infrastructure that changes the image of a place has a greater impact on potential investors than the mere provision of services we all need. When infrastructure includes the making of public places and facilities, it becomes a much more powerful economic generator.

Public expense as investment
Governments are perennially out of money. Infrastructure improvements that go beyond the bare necessities are usually seen (by politicians and administrators alike) as occasional and unavoidable "gifts" back to the citizenry.

Many Canadian municipalities have proven that every dollar spent on "culture" brings back \$7 to the local economy, easily repaying the initial government outlay. In the realm of public infrastructure as more broadly defined here, repayment is even more striking. With projects of real catalytic impact, public expense is repaid in five to seven years. After that, the increased revenues do not cease. The income continues to add to the public purse.

This remarkable investment performance comes from many sources. Government outlay generates taxes from direct hard costs. Development brings employment, material sales and profits, which can continue over the long-term. Increased tourism brings profit and foreign exchange.

All of these, taken together, bring added taxes and a better economic environment. The managing corporation itself benefits from land leases, land sales at growing values and even parking space rentals, which all bring their own revenues to the public purse.

Steve Cohlmeier, MAA, MRAIC, is president of Cohlmeier Architects Limited which, along with Cynthia Cohlmeier Landscape Architect, was the principal designer of the initial public environments at The Forks. The firm has been in charge of planning and project review for both corporations since 1995. Cohlmeier Architects is currently working to develop projects in Canada, Costa Rica and Chile, using the Winnipeg framework. Email steve@cohlarch.ca

Photo: Heather Cram



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Winnipeg: The Waterfront Comes Alive

A Model for Urban Waterfront Development

par/by Mike Scatliff



Plan for Waterfront Drive./Plan de la promenade Waterfront.

The vision begins as you pass through the gates of the scenic roadway into the Exchange District from Pioneer Avenue to Higgins Street. The drive meanders along the riverbank providing views toward the water and across the Red River to the French Quarter. Gateways at either end of the drive, and the narrow roadway with bays of parking along the route, portray a unique neighbourhood. Once you have entered the gates, motorists share the route with bicyclists, roller bladers, joggers and casual strollers.

Similar to the casual drive through Assiniboine Park or Kildonan Park, traffic moves slowly. Toward the water is Stephen Juba Park, redeveloped to accommodate the new needs of the neighbourhood. Benches, barbeque pits and picnic tables are all being used, and the open fields have attracted others for frisbee, sunning or simply watching the activity on the water. From time to time a shuttle goes by, carrying people from the Forks to Old Market Square, to Neeganin, and back to the Forks. At the water, locals fish from the dock while passengers wait for the boat taxi to take them across the river or to other destinations in Norwood Grove, The Forks or even further out to West Broadway, Osborne Village or Corydon Avenue.

On the downtown side of the drive, new infill buildings have replaced the gravel parking lots. With fountains and sculpture at the end of each street, the waterfront drive has taken on renewed prominence. Businesses have invested well, as offices, restaurants and bars, ice cream parlours and boutiques all share the prestigious waterfront addresses. Further north toward James Avenue and as far as Old Point Douglas, character condominium housing has sprung up, rejuvenating historic buildings and enticing new condominium construction.

... And so went the vision statement used to entice three levels of government to invest in a major downtown community revitalization project. In the spring of 1999, a volunteer waterfront committee was formed to investigate the potential for developing a scenic drive through Winnipeg's Exchange District. To chair the committee, the mayor approached a local landscape architect who had been trying to draw attention to this area for years. After five focussed meetings, a feasibility report was endorsed, and a \$10 million urban renewal project was born.

Capturing imagination

This scenario is becoming more commonplace. Politicians and landscape architects are teaming up to prepare visions and generate enthusiasm for community projects. In most cities, development is guided by zoning diagrams and "motherhood" policy statements. These are valuable documents and necessary administrative tools. However, by themselves they may not be providing sufficient detail to engage and inspire either developers or the general public.

Waterfront Drive was not initially in the City of Winnipeg's five-year capital budget or on any future radar screen. While it had been discussed for decades, it never found its way onto the priority list. The project did not come out of a planning framework. It needed a vision - a level of visual description - which could capture the imagination of civic leaders.

Why are these projects not "boiling up" out of the city planning processes? Visioning costs money, and money is rarely spent on speculative visioning, especially when funding is scarce. It seems that planning



Custom Bench./Banc sur mesure.

departments are chronically underfunded and in-house resources are often consumed by the necessary tasks of drafting by-laws, undertaking day-to-day design review and dealing with zoning issues. There are rarely funds available to engage consultants in detailed long-range planning and speculative design.

Life on the front lines

So this story is not about design. It is about the fundamental challenges facing the profession and life on the front lines, to advance landscape architecture.

For many years our cities have suffered from decreasing revenue, even where land development has been very active. If you follow the national headlines, you will see the mayor of Winnipeg, His Worship Glen Murray, leading the charge at the Mayors' Summit. The mayors across Canada are now speaking with a united voice to ask for fair treatment of cities as partners with the other levels of government. They are asking for the tools they need to meet the needs of their communities. In essence, they want to retain more locally generated wealth by sharing in tax revenues that grow with the economy, such as federal and provincial sales tax revenue. For details, see the New Deal website, www.winnipeg.ca/newdeal.

Underachieving communities

All of this affects landscape architecture. There is a serious lack of public investment into visioning and illustration, and into master planning, forward planning and research, all of which help to determine what a community aspires to be. Because of this, landscape architecture is suffering as a profession, and communities are underachieving.

If landscape architects waited for projects to rise out of "the system," the profession would wilt on the vine. Instead, many landscape architects are spending countless volunteer hours building up the profile of the profession in the political arena and in the boardrooms of development. With a new deal this could change. In the meantime landscape architects have to be political in staking out ground for landscape architecture.

Landscape architecture and politics

There has never been a better time to take stock of our profession. The Canadian Society of Landscape Architects (CSLA) and regional components must have a stronger voice in civic affairs. We need to be stronger politically, and to do this we need stronger membership. We need to determine whether CSLA membership is a requirement (as it is for architects, lawyers, doctors and engineers) or if CSLA is a club. With larger membership, we would both strengthen our financial resources and provide the necessary manpower to support the good work of our CSLA Governors.

We need support especially from the university and government work forces where the act of joining the profession is left largely to the discretion of the employee, even though it is the profession that has created the jobs. As well, if

our governments expect the private sector to employ "professional" landscape architects, then the citizens should expect the same from our universities and governments.

Winnipeg's waterfront design

In Winnipeg, the creation of the waterfront has been a battle between competing interests: Public Works, Operations and Maintenance, and those "fancy" landscape architects who are always trying to do something different. The intent was to create a waterfront park reminiscent of the city's founding era at the turn of the last century.

A grand promenade is the focus, with ornamental lighting and gardens planted in Victorian fashion. Neo-traditional design is employed to jog expectations. At the entrance to the park, an acoustic sculpture will bring back the sounds of the historic waterfront. The waterfront will also have a fog system and a mix of historic imagery - albeit formed out of contemporary materials and with modern fabrication techniques, including laser cut metals. Architectural guidelines will ensure that new buildings will appropriately address the historic context, yet encourage innovation.

It is now almost four years since the project began, and the waterfront is nearly finished. The roadway is operational, the park will be completed this summer and the development sites, previously gravel parking lots on surplus public lands, are being hotly pursued by developers. The waterfront is coming alive just as planned.

Mike Scatliff, MALA, CSLA, is a landscape architect and founding partner of Scatliff + Miller + Murray Inc, with offices in Winnipeg, Calgary and Beijing. He has been involved in the design of several miles of riverbank projects in Winnipeg including The Waterfront, Assiniboine Riverwalk, Bridge of the Old Forts and the Norwood Bridge. Mike is not an official member of any political party in Canada. E-mail him at michael1@scatliff.mb.ca



Custom Planter./Jardinière sur mesure.

Illustration: Mike Scatliff

EN BREF

La renaissance d'un secteur riverain à Winnipeg

Au printemps de 1999, la Ville de Winnipeg créa un comité de revitalisation du secteur riverain chargé d'étudier la possibilité d'aménager une promenade panoramique qui traverserait le quartier de la Bourse de Winnipeg. Ce projet, qui faisait l'objet de discussions depuis des décennies, n'avait jamais figuré en tête de liste des priorités de la ville. On se devait donc de se doter d'une vision qui saurait captiver l'imagination de la population et encourager les trois ordres de gouvernement à faire des investissements.

Rares sont les villes qui consacrent de l'argent à des visions spéculatives. Cette grave pénurie d'investissements a pour effet de rendre nos collectivités anémiques et de drôlement faire du tort à notre profession.

À Winnipeg, le comité de revitalisation du secteur riverain,

présidé par un architecte paysagiste du coin, élabore une vision claire et dramatique s'articulant autour d'un parc riverain évocateur de la fondation de la ville au tournant du siècle dernier. Un rapport de faisabilité fut ensuite entériné et un projet de réaménagement urbain se chiffrant à 10 millions de dollars élaboré.

Ce type de scénario est aujourd'hui de plus en plus monnaie courante. Des hommes et femmes politiques et des architectes paysagistes unissent leurs forces pour préparer des visions et susciter de l'enthousiasme à l'endroit de projets communautaires. Même les maires aux quatre coins du pays parlent d'une seule voix afin que les villes jouissent d'un traitement fiscal équitable. Les architectes paysagistes

se doivent de faire montre d'un bon niveau d'engagement. Il serait bon que l'Association des architectes paysagistes du Canada recrute plus de membres tant dans les universités que dans le secteur public.

Quoique la création du secteur riverain à Winnipeg soit marquée par une lutte entre des intérêts opposés, le parc riverain, qui se composera d'une grande promenade rehaussée d'un éclairage d'embellissement, de jardins de style victorien, d'une sculpture sonore et de bien plus encore, sera prêt à accueillir le public l'été prochain. Un secteur riverain vient de renaitre à Winnipeg!

Pour la version complète de cet article, rendez-vous au site Web de l'AAPC à www.aapc.ca.

Winnipeg: Seine River Greenway Concept

Below: Scenic views of Winnipeg's Seine River.
 Ci-dessous : Vue panoramique de la rivière Seine à Winnipeg.
 Bottom Right: What's New Annual SOS paddle./Pagayer pour sauver la Seine.



Photo: Don Hester

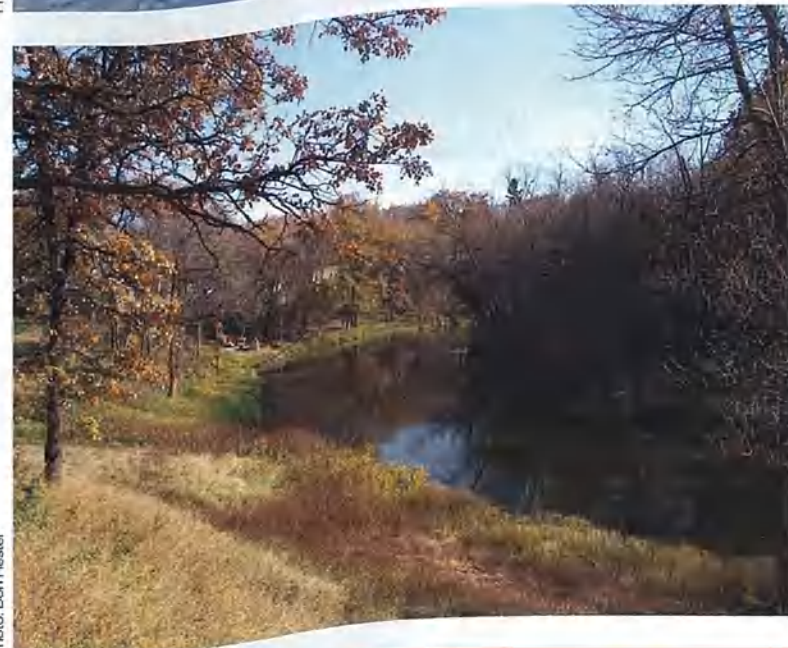


Photo: Don Hester

par/by Jim Paterson
 The Seine River Task Force conducted a comprehensive study of the Seine River watershed within the City of Winnipeg in order to better understand its current ecological condition and to guide appropriate development.

Led by a landscape architect, the multi-disciplinary task force included engineers (geotechnical, transportation and municipal), planners, naturalists and recreation professionals as well as maintenance superintendents. The team adopted a low-key approach, which would minimize the requirements for capital outlays and property acquisition. They opted primarily to protect what is good and restore what has been damaged. Specifically, goals include preserving high quality natural environments and conserving riparian and floodplain native vegetation communities. Another key objective is the promotion of improved pedestrian and wildlife linkages. This includes, for example, encouraging passive recreation by enhancing opportunities for canoeing and cross-country skiing.

The task force consulted extensively with the seven-member Seine River Advisory Group appointed by the Riel Community Committee. The advisory group represents a cross-section of local community stakeholders.

Supporting documents to the Seine River Greenway Concept include the *Riverbank Stability Characterization Study*, *An Assessment of Wildlife Habitat Quality for the Seine River Parkway*, *The Seine River: Its History and Suggestions for its Interpretation and Hydrologic and Hydraulic Modeling of Flows and Levels on the Seine River*.

Jim Paterson, MALA, CSLA, is the manager of downtown improvement and departmental projects with the City of Winnipeg's Planning, Property and Development Department. He is currently serving as the president-elect of the Canadian Society of Landscape Architects. Email jpaterson@winnipeg.ca



EN BREF

Le concept de couloir de verdure pour la rivière Seine

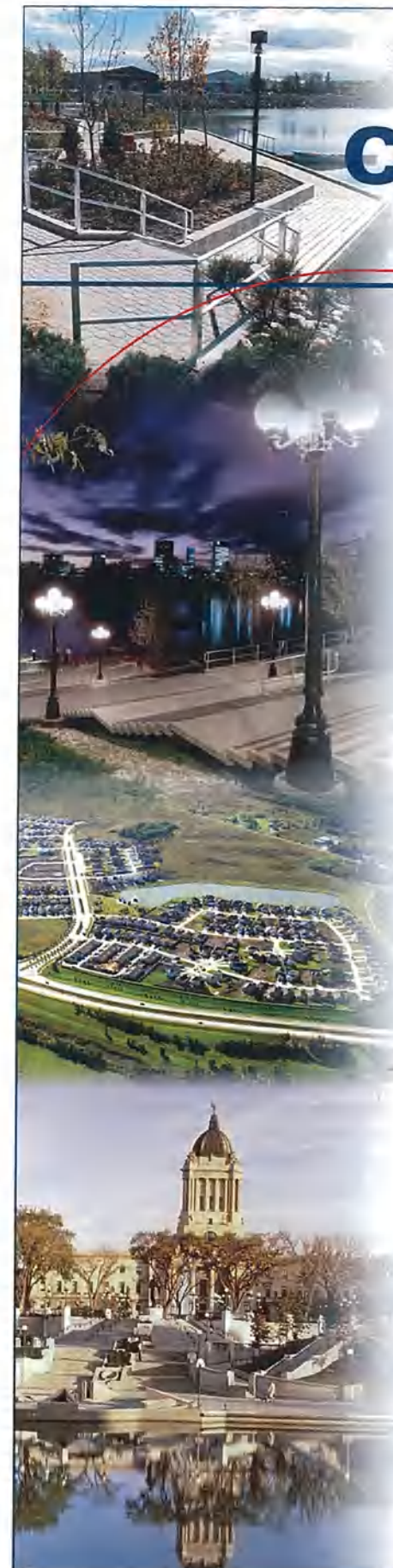
Le Groupe de travail sur la rivière Seine mena une étude exhaustive sur le bassin de la rivière Seine à Winnipeg. Dirigé par un architecte paysagiste, ce groupe de travail multidisciplinaire adopta une approche discrète qui per-

mit de réduire au minimum les investissements nécessaires et l'acquisition de propriétés. Le groupe de travail se fixa entre autres pour buts de préserver les milieux naturels de haute qualité, de conserver la végétation riveraine

et dans la plaine d'inondation, ainsi que d'améliorer les liaisons piétonnières et fauniques. Ce concept comporte quatre documents pertinents.

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Saskatoon: South Downtown Riverfront

A Model for Urban Waterfront Development

par/by Rob Crosby



The South Downtown Riverfront site fronts a significant urban redevelopment area. / Les rives du centre-ville Sud, un réaménagement urbain d'envergure.

Twenty-five years ago (1979), the potential of Saskatoon's South Downtown riverfront was identified in *The Meewasin Valley Project, 100 Year Conceptual Plan*, prepared by Raymond Moriyama Architects and Planners. Subsequent planning studies reinforced the broad notion of a major riverfront project in the area. However, the South Downtown riverfront remained undeveloped, primarily due to land ownership issues.

In 2003, thanks to recent riverbank lands consolidation and new political will, the City of Saskatoon started the riverbank development process. In April, a multi-disciplinary team, led by a collaboration of Crosby Hanna & Associates and Gordon Forsyth & Associates, began to develop a master plan. The aggressive schedule, which aimed for a completed plan before the end of June, included comprehensive consultation with stakeholder groups and the public, a visioning workshop and formation of steering and technical committees.

Looking at the potential at Saskatoon's heart

The 1.82 ha (4.5 acre) South Downtown Riverfront site is premier river-edge property. Currently undeveloped, the site has little aesthetic value and weak linkages. It is uncomfortable and lacks a sense of place. On the other hand, the site has some strong assets: a full southern exposure, the river-edge itself, mature elms on the riverbank slope and broad river valley views, with Saskatoon's first traffic bridge at one edge.

Located along a high-velocity section of the South Saskatchewan River, the site incorporates a river-fill terrace constructed as a snow dump in the late 1960s. Today, it is used as a trail linkage and powerboat launch with associated parking. Much of the remaining area consists of constructed slopes and surfaces, regraded in 1929, typically barren and subject to river erosion.

The broader South Downtown area, comprising the Broadway, Downtown and Riversdale communities, has the potential to be the heart of Saskatoon's social and cultural life. The river-edge is critically important. The Riverfront project will create a unique identity, firmly establishing a sense of place.

An urban riverfront identity

The community clearly demonstrated its desire for a pleasant South Downtown urban riverfront, which is vital, animated, safe and comfortable. During the planning process, sweeping goals were set. Overall, the project intends to promote Saskatoon's South Downtown as a distinctive and viable area in which to live and do business. The Riverfront will become a community focal point, with public amenities in a well-landscaped setting and opportunities for casual leisure and festivals. The new setting will provide a context for interpretation, and it will support local tourism initiatives.

The water play area will add a whimsical and refreshing play opportunity. / Une aire de jeux aquatiques avec une touche fantaisiste lorsque vient le temps de se rafraîchir.



20 Landscapes/Paysages

The feature building will provide major site identity and serve a commercial function. / L'édifice phare procurera une identité et une vocation commerciale au site avec des heures d'ouverture prolongées.

Designers will establish an appropriate landscape character that strengthens site characteristics, with open space at river-edge. Planners will establish a framework, which will specify how to integrate the site with adjacent areas (physically, socially and economically). And throughout the development process, capital resources will be managed effectively, in a manner beneficial to the community.

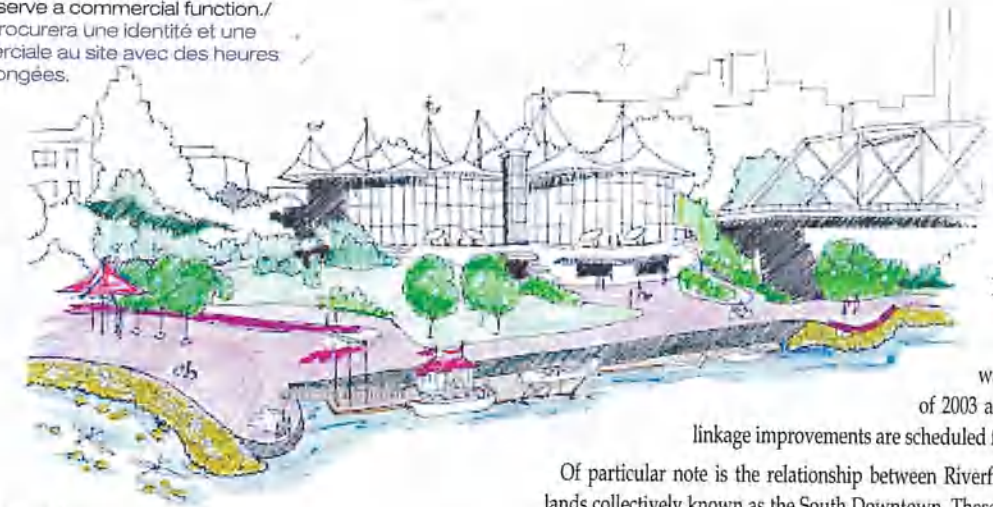
A celebration of the river

The South Downtown Riverfront Master Plan is a compilation of ideas explored early in the design process. The design includes a feature building which will establish site identity, act as a focus for riverfront activities and provide income for riverfront development and management. The building will be commercial: a restaurant with extended hours of operation is proposed. Plans also include:

- a riverwalk for close-to-the-water strolling;
- a promenade development on the adjacent Gathercole site, where there is a major building slated for adaptive reuse;
- river-viewing opportunities to strengthen the concept of the "river as a stage";
- display opportunities for public art, interpretation and river celebration;
- accessible linkages north, east, west and throughout the site;
- seasonal docking to enhance river activities;
- program spaces for events and performances (more than double the existing area);
- a new pavilion for day-to-day activities and special events; and
- other features, such as a suspension bridge, river garden and tributary stream.

The riverfront as catalyst

The South Downtown Riverfront Master Plan received strong community support, and was approved by the City of Saskatoon and endorsed by the Meewasin



Valley Authority. Implementation will take place in phases. Partial site preparation was completed in the fall of 2003 and major shoreline and linkage improvements are scheduled for 2004.

Of particular note is the relationship between Riverfront and the backshore lands collectively known as the South Downtown. These properties are the subject of considerable community interest and debate. One possibility currently being explored is the establishment of a Community Development Corporation (CDC) with tri-level government participation, which would provide a development framework broadly modelled after The Forks in Winnipeg. (See Steve Cohlmeier's story in this issue, page 12.) The South Downtown Riverfront project is viewed as the primary catalyst to expedite this long-awaited, now timely, urban revitalization initiative.

Rob Crosby, SALA, FCSLA, is a prairie boy with degrees in Environmental Studies and Landscape Architecture from the University of Manitoba. He is a principal of the Saskatoon-based firm, Crosby Hanna & Associates, which specializes in landscape architecture and planning. E-mail rcrosby@crosbyhanna.ca



The backshore linkage will integrate the river with downtown. / Le lien arrière-plage permettra d'intégrer la rivière au centre-ville.

EN BREF

Le secteur riverain du centre-ville sud de Saskatoon

Si on a relevé il y a 25 ans de cela le potentiel que recèle le secteur riverain du centre-ville sud de Saskatoon, ce n'est qu'à partir de 2003 qu'on est allé de l'avant avec le processus d'aménagement. L'aménagement le long de la rivière occupe une place primordiale dans le plus vaste secteur du centre-ville sud, qui a le potentiel d'être au cœur de la vie culturelle et sociale de Saskatoon.

Ce projet vise dans l'ensemble à promouvoir la partie sud

du centre-ville de Saskatoon à titre d'aire distinct et viable où on peut vivre et faire des affaires. L'étendue riveraine deviendra pour sa part un centre d'intérêt pour la collectivité. Les plans prévoient un édifice vedette (utilisé à des fins commerciales), un pavillon, une promenade riveraine, des espaces pour des programmes, des quais saisonniers, des endroits pour admirer et exposer des œuvres d'art, de même que d'autres ouvrages tels qu'un pont suspendu et

un jardin riverain. Des parcours accessibles s'étendront au nord, à l'est et à l'ouest, alors que l'aménagement d'une promenade est prévu à un site contigu.

Il importe ici de noter le lien entre le projet du secteur riverain et les terres riveraines connues sous le nom de centre-ville sud. Le projet du secteur riverain est considéré comme le principal catalyseur du développement de la revitalisation urbaine tant attendue.

Various lookouts and interpretation.
Des vues différentes et un panneau d'interprétation.



One component of Riverworks, the light tower, was recently parodied by a local newspaper columnist. See *Our Giant Banana*, by Les McPherson of the Saskatoon Star Phoenix at the Web site: www.sala.sk.ca/articles/giantbanana.htm. / Éléments phare du déversoir, la tour illuminée fut récemment parodiée par le chroniqueur du quotidien The Saskatoon Star Phoenix, Les McPherson, qui l'avait surnommée Notre banane géante. Pour plus de détails, rendez-vous au site Web du journal à www.sala.sk.ca/articles/giantbanana.htm

Saskatoon: Riverworks Weir Redevelopment

by Rob Crosby

In 1999, the Meewasin Valley Authority initiated a redevelopment project adjacent to a 60-year-old weir on the South Saskatchewan River in Saskatoon. The site was a long, narrow ribbon of underdeveloped open space, characterized by steep denuded slopes, prohibitive access and crowded paths and viewpoints. Nonetheless, it attracted more than 350,000 visitors annually. People were drawn by the aesthetic water feature and the wildlife. A sandbar upstream is waterfowl habitat and weir back eddies attract fishing pelicans.

Between 2000 and 2003, the community raised more than \$6 million for improvements and Riverworks began to reclaim the site to accommodate large numbers of pedestrians. Trail linkages were expanded and architects created an accessible route to a riverside fishing platform. Site structures were designed to reflect the architectural character of the weir and a nearby high-level railway bridge; comprehensive site lighting and signage were installed, and extensive planting and site restoration were completed.

Today Riverworks celebrates the weir and bridge, and has integrated these features with the ecological fabric of the river. Since its completion, Riverworks has become one of the most used urban trails in Canada.

Rob Crosby is the recipient of a 2004 CSLA Award of Excellence, Regional Honour, for Riverworks.



The boardwalk meanders along the riverbank.
Promenade méandrique longeant les berges.

EN BREF

Le réaménagement du déversoir Riverworks à Saskatoon

En 1999, la Meewasin Valley Authority commença à remettre en état un site fort visité mais sous-développé contigu à un déversoir vieux de soixante ans sur la rivière Saskatchewan Sud à Saskatoon. La communauté amassa plus de 6 millions \$ pour réaménager ce site tant chéri.

Dans le but de pouvoir accueillir un nombre important de piétons, les aménageurs du Riverworks augmentèrent les liaisons entre les sentiers, ajoutèrent un parcours accessible à une plate-forme de pêche, créèrent des structures qui

reprennent les lignes architecturales d'un pont avoisinant et ajoutèrent de l'éclairage, des panneaux et des plantes. Riverworks est maintenant l'un des sentiers urbains les plus fréquentés au Canada.

La promenade Samuel-de-Champlain, Québec

par/by Vincent Asselin



Illustration: B. Gauthier



The Urban Environment./Le milieu urbain.

Le littoral du fleuve Saint-Laurent est au cœur de l'histoire du Québec depuis la nuit des temps. Au début, voie de communication centrale aux Premières nations, les berges du fleuve furent investies des diverses fonctions économiques et sociales faisant de ce majestueux fleuve un paysage culturel de classe internationale.

C'est dans la foulée des consultations publiques, tenues l'automne 2000 par la Commission de la capitale nationale du Québec, que s'est élaborée une vision nouvelle du boulevard Champlain. En effet, les consultations ont permis d'établir une vision partagée de la requalification du secteur couvrant les onze kilomètres séparant le Vieux-Québec et les ponts de Québec. Les intervenants furent unanimes. Redonner le fleuve aux Québécois est une priorité dans ce début de millénaire.

Mandatés par la Commission de la capitale nationale du Québec, les consultants ont élaboré une vision holistique du littoral alliant les nécessités de trans-

IN BRIEF

Samuel de Champlain Promenade, Quebec City

A project to redevelop Champlain Boulevard and create the Samuel de Champlain Promenade calls for greater accessibility to the shores of the St. Lawrence River, which have been at the heart of Quebec's history. The 11-km-long promenade will include a parkway (Champlain Boulevard), pedestrian and bike paths, natural areas and five activity poles (ecological, cultural, services, beach, civic).

Users will see the area's magnificent landscape unfold as

they travel along the new promenade that will follow the historic shoreline more closely. The promenade's new geometry will open up two areas along the St. Lawrence: the Anse-au-Foulon beach and a highly significant marsh. In addition, the project calls for the conservation and enhancement of the Sainte-Foy forest, a relic forest containing unique plant species and a wealth of archaeological traces left by First Nations peoples.

The Samuel de Champlain Promenade is a well-thought-out project based on sustainable development principles. It was developed and designed by a consortium of firms: Gauthier Daoust Lestage, WAA-Williams, Asselin, Ackaoui and Associates, Inc. and Option Aménagement, supported by numerous consultants including Genivar Group for the engineering aspects.



port et les fonctions économiques à une vision favorisant nettement les usages récréatifs et environnementaux. Le plan d'aménagement de la « promenade Samuel-de-Champlain » s'appuie sur les orientations issues des consultations, et fut élaboré en partenariat avec les représentants de la Commission et ses partenaires dans le projet, soit la Ville de Québec et le ministère des Transports du Québec.

Le concept d'aménagement

L'objectif central du projet vise à redonner la plus grande accessibilité possible au littoral. Sa requalification et son réaménagement se feront en respectant les conditions économiques actuelles afin de dédier les nouvelles zones libérées à des fonctions récréatives et environnementales.

Le projet se présente sous la forme d'une promenade véhiculaire, le boulevard Champlain, suivi d'un réseau de pistes multifonctionnelles (piétonne, cyclable) et de pôles d'activités qui répondent aux potentiels du site et aux attentes des citoyens. Les espaces naturels (boisé de Sainte-Foy, berge du littoral...) et culturels (quais et autres infrastructures récupérées) sont récupérés, afin de les protéger et de les rendre accessibles à la population.

Le boulevard Champlain, une promenade servant à la découverte du paysage

Afin de permettre une découverte progressive et variée du littoral, la géométrie du boulevard est modifiée en ajoutant de grandes courbes concaves vers l'intérieur du littoral. Cette nouvelle géométrie s'apparente davantage au tracé historique du littoral et permet, en plus, de libérer en deux endroits des espaces riverains stratégiques à l'accessibilité en rive. Ces anses ainsi récupérées génèrent des aires en bordure du fleuve favorisant un accès accru au littoral. Ce nouveau tracé soigneusement développé crée un parcours plus vivifiant et offre des vues renouvelées sur la falaise, le fleuve et le paysage en général.

Une piste multifonctionnelle

Les espaces récupérés permettront de développer une piste multifonctionnelle en continu le long du boulevard. En effet, du quai Irving dans la partie ouest jusqu'au Vieux-Québec dans la partie est, une piste multifonctionnelle d'environ 4 mètres de large se déploiera tout le long du littoral. Ces axes de circulation sont



les composantes structurantes du projet au long duquel s'articulent les divers pôles d'activités. Le concept d'aménagement s'articule autour de 5 pôles principaux qui sont, de l'ouest vers l'est : le pôle écologique, le pôle culturel, le pôle de services, le pôle balnéaire, le pôle civique.

Les pôles

Les pôles sont les centres névralgiques du concept, c'est là où seront offerts les services et activités les plus intensives. Les pôles sont reliés par des « secteurs de liaison », servant à rattacher les pôles d'activités et définissant l'image globale de la promenade.

Un projet de l'envergure de celui de la « promenade Samuel-de-Champlain » doit vivre au rythme d'un centre névralgique lequel insuffle la vie et définit l'ensemble de la vision du projet. Ce centre névralgique est le pôle de la plage située à l'Anse-au-Foulon. Plus que symbolique, l'aménagement de cette zone centrale au projet sera l'un des secteurs les plus actifs et par lequel les Québécois pourront, sous plusieurs formes diverses, se réapproprier le fleuve et ses berges.

Le pôle écologique : Le boisé de Sainte-Foy et le quai Irving

La limite ouest de la promenade se démarque par la concentration d'activités éducatives et écologiques à l'endroit de l'anse Victoria. En effet, le pôle s'articule autour de la conservation et la mise en valeur de la forêt de Sainte-Foy. Cette forêt relique est un legs remarquable comprenant les espèces

végétales originales du cap. Lieu fréquenté depuis l'orée des temps, le site est un des plus riches en traces archéologiques reliées aux activités des Premières nations. Des travaux de reboisement permettront de poursuivre le couvert arborescent existant jusqu'à envelopper le boulevard Champlain. Cette action aura pour effet de marquer le paysage et de dramatiser l'expérience de l'utilisateur autant à partir du boulevard Champlain qu'à partir du littoral. Dans l'anse créée par la relocalisation du boulevard, une zone écologique de haute valeur sera reconstituée. En effet, l'espace ainsi dégagé sera réhabilité en un marais supérieur,



The Beach/La plage.

niche écologique largement disparue dans la proximité de la ville. Ce pôle offrira, en plus du contact avec le fleuve, des activités éducatives et culturelles basées sur la richesse écologique du biotope reconstitué. Cette nouvelle aire est un ajout considérable à l'écologie du littoral et confirme le volet éducatif et environnemental de la proposition globale.

La promenade Samuel-de-

Champlain est un projet finement réfléchi et mettant de l'avant les principes du développement durable. En tant que tel, il sera un legs inestimable pour Québec qui fêtera son 400^{ème} anniversaire en 2008.

Vincent Asselin, FCSLA, est associé chez WAA. Le projet est élaboré et conçu par le consortium formé des firmes Gauthier Daoust Lestage, WAA-Williams Asselin Ackaoui et associés et Option aménagement supporté par de nombreux consultants, dont Le Groupe conseil Genivar pour les aspects d'ingénierie.

CANADA EXAMPLE -

Vancouver, contractor losing all 100% of trees in June, big down-town tree planting, revived 100%, won national award, September .

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The New Landscape of Toronto's Waterfront

par/by George Dark



Left: Digital rendering of the planned improvements to the water's edge at York Quay./**À gauche :** Rendu numérique des améliorations prévues le long des berges du Quai York.

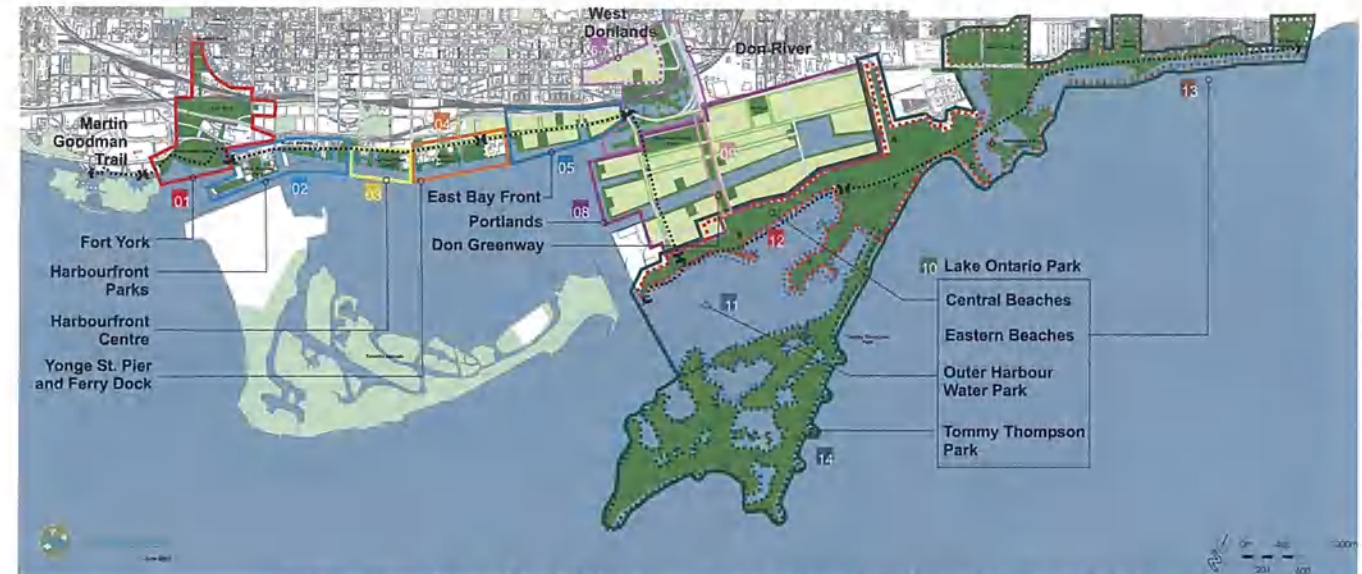
Top Right: Enhancing public access to the water's edge is a key goal./**En haut à droite :** L'amélioration de l'accès aux berges est le principal objectif.

Bottom Right: Waterfront design requires a variety of design elements and high environmental standards./**En bas à droite :** L'aménagement d'un secteur riverain nécessite divers éléments de conception et des normes en matière d'environnement rigoureuses.

The concept plan developed by the Toronto Waterfront Revitalization Taskforce in 2000 demonstrated, for the first time, that Torontonians would rally behind waterfront revitalization. People from many disciplines and communities throughout the city came together to endorse the concept. A strong and compelling vision for a renewed central waterfront emerged: a generous sequence of public spaces, parks and promenades along the water's edge.

Over the past few years, the initial vision has been modified through a more detailed technical review. Today, several key documents articulate the broad principles and provide the policy framework and strategic direction. These include the *Toronto Waterfront Revitalization Corporation's Development Plan* and its *Business Strategy*, the City of Toronto's *Central Waterfront Secondary Plan* and the *Central Waterfront Public Space Framework*. The framework creates a roadmap for development, defining the character, scale and use of the parks, squares, trails and open spaces.

The central waterfront is best viewed in a wider context. The new public spaces will be part of a network that reaches across the city, the region and the watershed. The central waterfront will link existing public spaces that stretch from beyond the Humber River in the west to Balmy Beach in the east, and will also connect the extensive ravine systems. Critical links will be created by transforming underutilized land into a series of magnificent and engaging public places that will act as the front door to emerging waterfront communities.



The Central Waterfront Public Space Framework defines a series of key public space districts to guide and organize landscape planning and design work./Le cadre des places publiques du secteur riverain central prévoit des places publiques permettant d'orienter et d'organiser la planification des paysages et les travaux de conception.

Ten founding principles

The central waterfront public space framework is founded on 10 principles:

1. Introduce a continuous, publicly accessible and magnificent water's edge.
2. Require design excellence for all waterfront public spaces.
3. Provide a diversity of public spaces that will foster culture and creativity in Toronto. Public art should be integrated into all infrastructure and public space design to strengthen the sense of place and exploit heritage and archaeological features.
4. Design all public spaces to a high environmental standard.
5. Strengthen east/west connections along the waterfront.
6. Link existing communities to emerging waterfront communities and spaces.
7. Improve the aquatic habitat and water quality along the waterfront, and integrate this with river and stream improvements.
8. Introduce a palette of waterfront design elements, to build continuity across all public spaces.

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EN BREF

Une nouvelle allure pour le secteur riverain de Toronto

Elaboré en 2002 par le Groupe d'étude sur la revitalisation du secteur riverain de Toronto, le plan conceptuel d'aménagement prouva pour la première fois que les Torontois et les Torontoises apporteraient leur soutien à la revitalisation du secteur riverain. Aujourd'hui, au terme d'un examen technique détaillé de la vision initiale, les documents clés font état des principes et donnent une orientation.

Ce plan propose d'aménager de nouveaux espaces pu-

blics qui feront partie d'un réseau qui traversera la ville, la région et le bassin. Les terres sous-utilisées seront transformées dans le cadre de ce plan en une suite d'espaces publics des plus splendides, en raccordant l'aire riveraine publique actuelle à un vaste réseau de ravin.

Ce cadre s'articulera autour de dix principes qui comprennent un rivage continu, accessible au public et hors du commun. Il s'agit de principes qui misent sur l'excellence en aménagement, sur des espaces hétérogènes

(qui prévoient des oeuvres d'art dans les lieux publics), sur des normes environnementales rigoureuses, sur un raffermissement des liens le long de l'aire riveraine et avec les collectivités existantes et sur une coordination qui livrera le maximum des atouts du lac Ontario. La société de revitalisation du secteur urbain se fixe pour but de remettre en état le secteur riverain de Toronto pour en faire un modèle de référence.

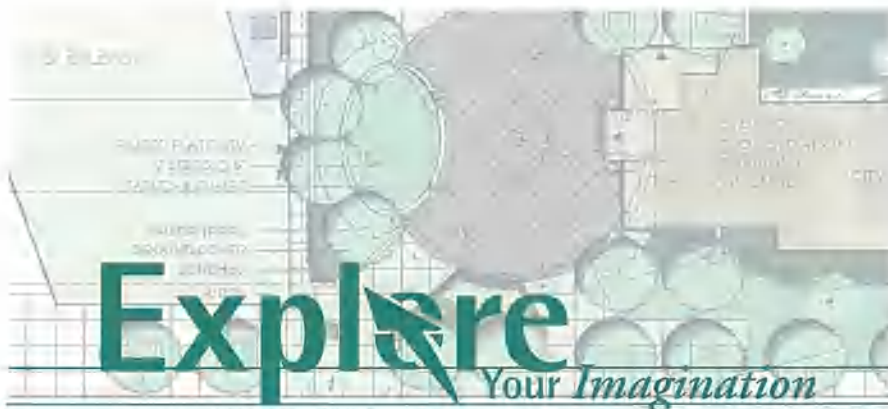
- Co-ordinate the use of the water and supporting land base to maximize the economic, recreational and environmental assets of Lake Ontario.
- Create a network of public spaces that attract and invite both Torontonians and the world to our waterfront.

The framework plan created by Urban Strategies Inc., is well in motion and involves many of the best landscape architects in Canada. The revitalization of Cherry Beach by Schollen and Company begins the process of restoring this important public shoreline park. Claude Cormier and Janet Rosenberg have teamed up on HTO, bringing

an urban beach and quay park to the centre of the downtown waterfront. Envison, The Hough Group, are tackling the water's edge improvements of Harbourfront Centre and, with Claude Cormier, have been selected to produce a concept for the 12 hectare (30 acre) Commissioners Park. Phillips Farvag and Smallemberg are developing a more detailed open space concept for the East Bayfront Precinct Plan. Du Toit Allsopp Hillier are doing the same for the West Donlands Precinct Plan.

Coming up shortly will be the master plan for Lake Ontario Park from the eastern gap to the eastern beaches along the shore of the lake. The goal of the Toronto Waterfront Revitalization Corporation is to re-establish Toronto's waterfront as a showpiece of the city. It should be a place that can inspire economic development ... a place that can create vibrant inner-city neighbourhoods ... a place with great public spaces. Canada's landscape architects are making a major contribution to the effort.

George Dark, OALA, CSLA, is an urban designer, landscape architect and partner in the firm, Urban Strategies Inc., who focuses on the quality of urban environments. In 2001, George was added to the Toronto Region Conservation Authority's Honor Roll for his work in establishing the Oak Ridges Moraine Coalition. He is chair of the Toronto Parks Foundation and sits on the board of directors of the Evergreen Foundation, a national organization dedicated to bringing nature back to cities. E-mail gfdark@urbanstrategies.com



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Calgary Rivers – Evolving Perceptions

Changing public perceptions have made Calgary a more beautiful and liveable city.

par/by Garry Carson

"I would beg to remind you that one of the stipulations made by Mr. White, Controller of the N.W.M. Police at the time the town was asking permission to conduct the main sewer through the Barrack Property was that the outlet should extend a distance of 20 feet into the river, in order that the sewage should then catch the full current of the river and be carried clear away."

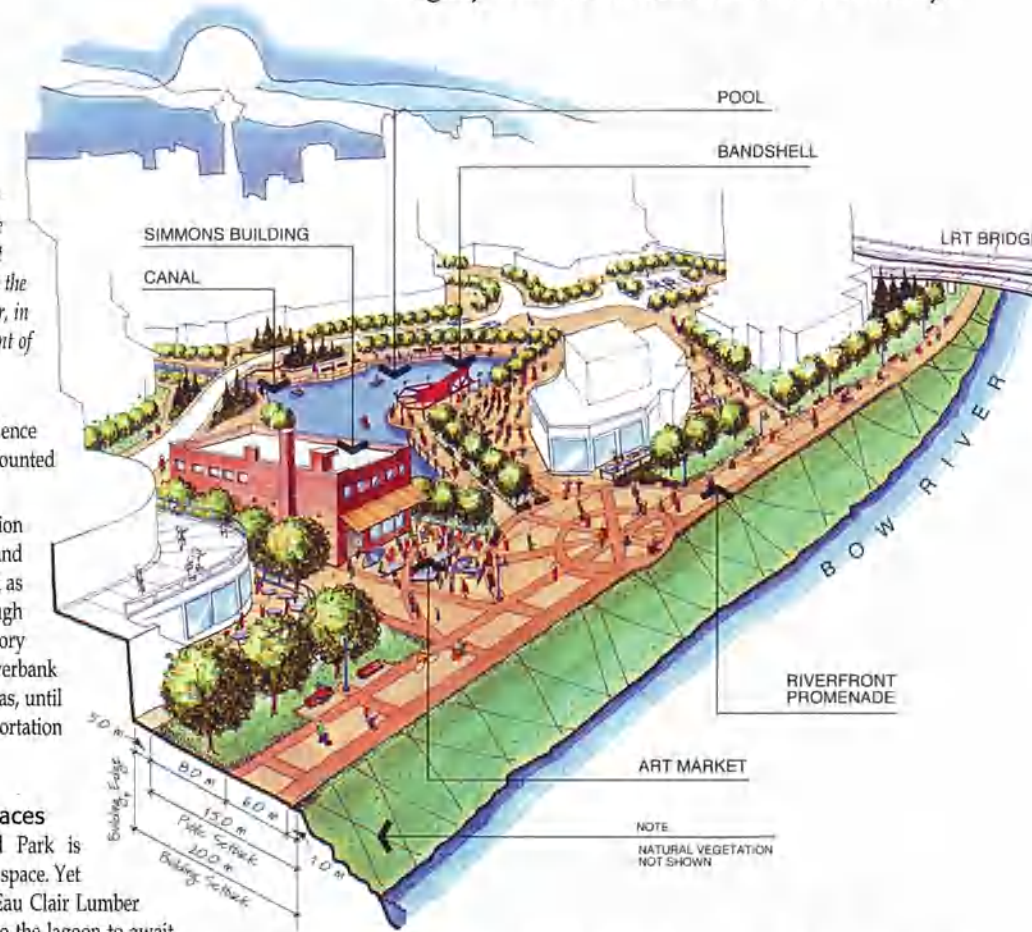
...excerpt from May 19th, 1898 correspondence between the commissioner of the Northwest Mounted Police and the Mayor of the Town of Calgary

Over the past 100 years, the public perception of Calgary's rivers has changed. It is startling (and humorous) to read that Spring Creek once served as the "town" of Calgary's main sewer, flowing through Fort Calgary and into the Bow River. Yet history confirms that today's extravagantly priced riverbank land, where Calgarians yearn to live and play, was, until recently, considered suitable for industry, transportation and even open sewers.

The history of Calgary's best loved spaces

Upstream from Fort Calgary, Prince's Island Park is Calgary's best-loved and most heavily used open space. Yet for more than fifty years, it was the site of the Eau Claire Lumber Company. Timber from the west was floated into the lagoon to await milling operations on the island. It wasn't until 1947 that the island was purchased for \$11,250 from the Calgary Water and Power Company and developed into sports fields and playgrounds.

Downstream from Fort Calgary, the Western Irrigation District has, for more than a century, drawn water from the Bow River to irrigate thousands of acres of dry farmland in southeastern Alberta. The present weir and the 26-km main canal have been rebuilt several times, and Chestermere Lake, which acts as the main reservoir in this



EN BREF

Les rivières de Calgary – des perceptions en évolution

Grâce aux nouvelles perceptions qu'entretient la population, Calgary est devenue une ville plus coquette où il fait bon vivre.

Les terres à prix exorbitant le long des rives où les Calgariens brûlent d'envie de s'établir, furent jusqu'à tout récemment considérées comme des terres pouvant être utilisées à des fins industrielles, pour le transport, voire comme égouts à ciel ouvert.

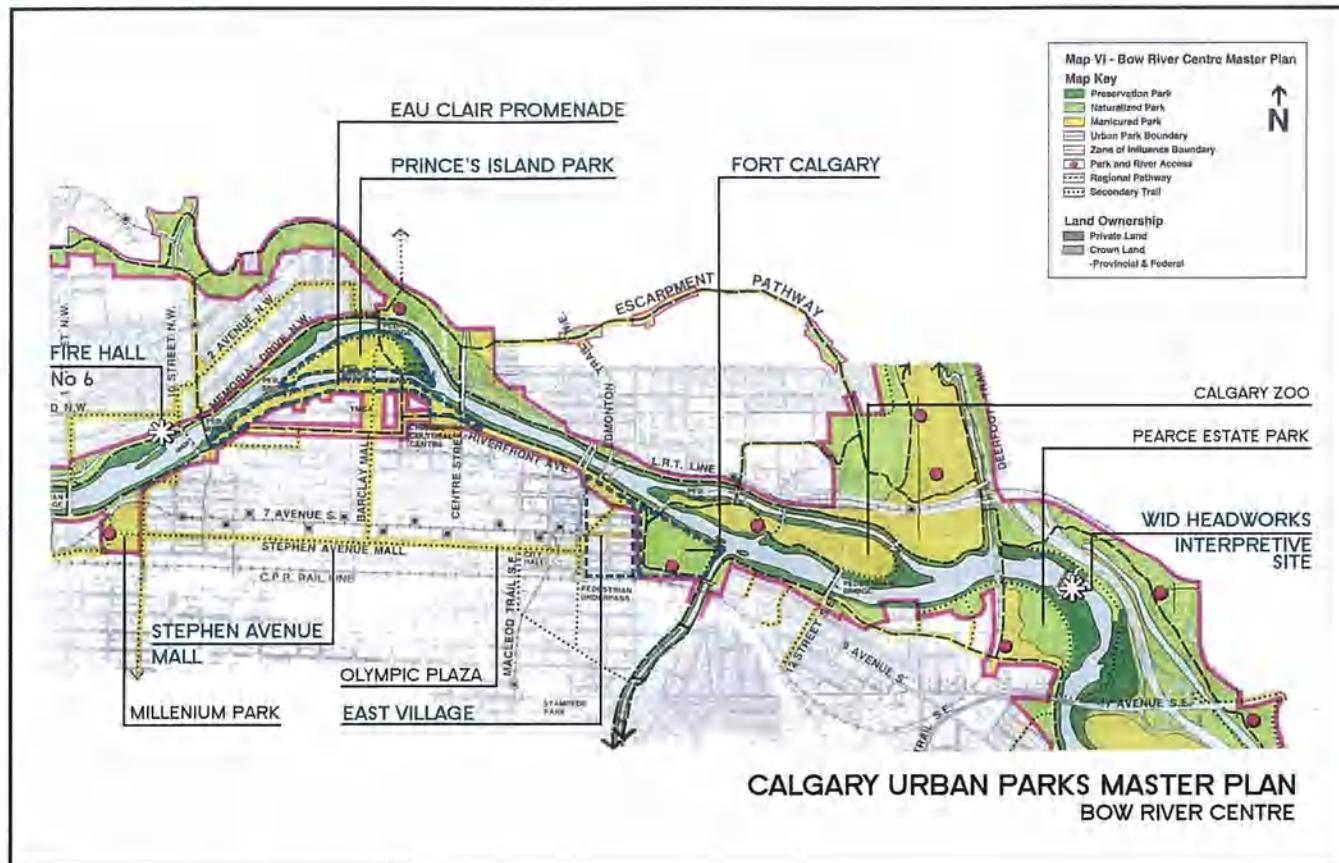
Situé en amont de Fort Calgary, le parc Prince's Island est le poumon vert le plus fréquenté et le plus adulé des Calgariens. Ce site fut pendant plus de 50 ans la propriété de la Eau Claire Lumber Company. Le territoire d'irrigation occidental, situé en aval de Fort Calgary, puise son eau dans la rivière Bow depuis plus d'un siècle déjà, alors que la quasi-totalité du lac Chestermere, qui fait fonction de réservoir principal dans cet énorme système, est presque entièrement bordée de maisons de luxe.

Au milieu des années 1960, les Calgariens critiquèrent vivement l'industrialisation des rives en s'opposant aux cours de triage à Fort Calgary. L'humeur de la population continua à changer, au point où quelque trente années plus tard, des citoyens consacèrent des milliers d'heures à la réalisation d'un plan directeur pour les parcs en milieu urbain, plan qui remporta un prix d'honneur de l'AAPC en 1994. Ce Plan directeur entraîna, en 1996, la construction de la promenade Eau Claire qui s'étend sur une distance de deux kilomètres, puis le réaménagement en 2002 de la caserne des pompiers n° 6. Durant cette même année, au terme d'interminables audiences publiques, le conseil de ville rejeta un ambitieux plan de réaménagement pour le quartier East Village en exigeant des marges de reculem-

plus larges et des aménagements plus « doux » des abords de la rivière.

À Fort Calgary, endroit où un égout se déversait dans la rivière en 1889, des bénévoles ont reconstruit des répliques des anciens bâtiments en bois rond et de la palissade. Les nouvelles perceptions qu'entretient la population à l'endroit des terres longeant les rives ont sans contredit fait de Calgary une ville plus coquette où il fait bon vivre. On continue toutefois d'utiliser l'eau douce à des fins douteuses. Forts d'un siècle d'histoire et d'éducation, nous devrions peut-être mieux prévoir les besoins de demain.

Pour la version complète de cet article, rendez-vous au site Web de l'AAPC à www.aapc.ca.



Left: River pathway adjacent to #6 Fire Hall./À gauche : Le sentier de la rivière contigu à la caserne des pompiers n° 6.
 Right Middle: Eau Claire from Centre St. Bridge./Au centre à droite : Vue d'Eau Claire depuis le pont de la rue Centre.
 Bottom Left: Viewing area at Headworks Interpretive Site./En bas à gauche : Aire d'observation au site d'interprétation Headworks.



and the riverbank would be crossing a four-lane expressway and two railroad lines.

A more positive demonstration of changing public perceptions about Calgary's rivers occurred in 1992 with publication of an Urban Parks Master Plan. Hundreds of citizens volunteered thousands of hours to address issues of public access, continuity, safety and preservation of the natural character of the city's entire river parkway. In 1994, this document won a CSLA Honour Award.

**Eau Clair Promenade:
An urban flavour**

The master plan identified the most dramatic problems in the downtown core. Planners predicted increasing volumes of pedestrians, conflicts between different types of users and aesthetic issues along the south bank of the Bow River. The design and management recommendations that followed were equally dramatic, and resulted in the construction of the Eau Claire Promenade in 1996. The Promenade

stretches two kilometres between the Louise and the Centre Street bridges. The width of typical regional pathways was doubled to six metres and sight lines were lengthened. Also, better quality lighting, furnishings, paving materials and landscaping gave the corridor a more "urban" flavour.

On a more modest scale, the No. 6 Fire Hall north of the Louise Bridge was redeveloped in 2002. The restored 1906 building now accommodates parks information and a food concession on the lower level with offices above. The surrounding site provides a relaxed park space and outdoor patio. Faster moving pathway users are rerouted to the river's edge below. The entire site overlooks the Bow River, the Louise Bridge and Calgary's downtown skyline.

**East Village:
Back to the drawing boards**

The most recent example of public efforts to protect the riverbank occurred in East Village, only a few metres upstream from Fort Calgary. In 2002, after lengthy public hearings, City Council rejected an ambitious redevelopment plan for this 16-hectare (40-acre) riverside site. The rejection was due, at least in part, to proposed development to within 20 metres of the riverbank. East Village is currently back on the drawing boards, this time incorporating wider setbacks and "softer" river edge treatments.

Volunteers recreate Fort Calgary history
 Back at Fort Calgary, the original location of Calgary's 1889 sewer, plans for interpretive development are

underway. Throughout the past 10 years, volunteers have reconstructed a replica of the original log buildings and stockade. A recreation of the original barracks building was completed in 2001, and re-establishment of Spring Creek, this time as a storm water channel and wetland, is currently being considered.

There's no doubt that changing public perceptions of riverbank lands have made Calgary a more beautiful and liveable city. They have also provided stimulating work for many local landscape architects. Yet it would be dangerous to become smug about our new found spirit of river stewardship. A hundred years from now, Calgarians might be confronted with an ultimate irony. Predictions of global warming are being confirmed with disturbing regularity, and recent estimates suggest that the Bow Glacier, the primary water source for the Bow River, will have receded into non-existence within the century.

In spite of these ominous predictions, millions of gallons of fresh water continue to be siphoned off for dubious agriculture. New developments continue to drain storm water into pipes before it can recharge ground water. And throughout the city, manicured landscapes (that were once dry grasslands) are being maintained with intensive irrigation systems.

We should acknowledge that riverbank treatments of the past, which now appear damaging and wasteful, were simply opportunistic responses to the needs of the time. With a century of history and education to inform us, perhaps we should be doing more to anticipate and respond to future needs.

Garry Carson, AALA, FCSLA is a Fellow of the Canadian Society of Landscape Architects. He has long been a partner of Carson McCulloch Associates Ltd., a firm that has been involved in many of the projects described in his article. Email cmal-garry@nucleus.com



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Whitehorse Riverfront: Parks, Trails and Trolleys

par/by Damon Oriente

Photos courtesy of the McBride Museum: Percy Pezalla Collection



The largest city in the Yukon, Whitehorse (population about 20,000) is surprising in many ways. Whitehorse residents today are an interesting mix of native Yukoners and converts to the north, many of whom have moved from cities such as Victoria or Toronto. The city has a diversified service and retail component which caters to many international tourists, and yet it feels connected to the wilderness around it and the Yukon River which runs through it.

The Yukon River has always been an important link with Dawson City, seven hours drive to the north. In the late 1890s, Whitehorse was the destination for thousands of gold-seekers bound for Dawson City. A half century later in the 1940s, the United States Army moved men and machinery to Whitehorse on barges, riverboats, trains and trucks to build the Alaska Highway. A two-km stretch of Yukon River riverfront was the focus of all this activity. Whitehorse expanded rapidly from a pre-war population of about 500, to accommodate a new cosmopolitan population.

In 1942 the army finished work on the Alaska Highway, and with the change in transportation and industry, the city's riverfront changed. SS Klondike, the



last of the famous, flat-bottomed riverboats, ended its commercial life in 1955. And sadly, the last narrow-gauge diesel freight train of the White Pass & Yukon Railway rolled into Whitehorse in 1982, ending more than 80 years of rail traffic. The railway, which had begun during the Klondike gold rush, ironically saw some of its most reliable business during the Alaska Highway's construction.

Reconnecting to the riverfront

In 1998, the City of Whitehorse began to energetically plan to recapture the riverfront and reconnect it to the community. A consultant team led by UMA Engineering Ltd. was contracted to update the land-use plan for the downtown riverfront, and has since continued with design and construction-related work for the riverfront lands.

The Whitehorse Riverfront comprises a two-km stretch of land bounded by two parks, Rotary Park to the south and Shipyards Park to the north. Where Main Street meets the Yukon River, several historic buildings anchor the downtown shopping district. The former White Pass & Yukon Railway depot and an old fire hall share the river's edge with old railway workers' quarters and Second World War-era army huts. UMA proposed that these buildings, together with the log-built, grass-roofed McBride Museum, become the core of a new cultural-historical district - ideally, in the form of a riverside plaza.

The overall riverfront design plan, completed in 2000, included a continuous riverfront trail, small plazas and nodes along the river, a waterfront trolley using some of the original White Pass & Yukon rail line, and natural areas with native vegetation. The territorial government recently added to the area's character by relocating the last remaining industrial building, a roundhouse, to this "cultural-historic" district. The building will house and service the waterfront trolley, and include an interpretative centre and display space.

Though the city is relatively small, the Riverfront stakeholder group was large and diverse. The Whitehorse City Planning Department has been the driving force, but the Yukon Territorial Government has also been an active and supportive

Left: Interpretive and wayfinding signage at the Yukon Territorial Government Plaza Trolley Stop. / **A gauche :** Panneaux d'interprétation et d'orientation à un arrêt de tramway à la place du gouvernement du territoire du Yukon.



Photo: Don Heister



Roundhouse Relocation view east down Wood Street. / Vue sur l'est de la remise à machines qui donne maintenant sur la rue Wood.

Illustration: Damon Oriente

participant. In addition, the Kwanlin Dun First Nation is considering riverfront opportunities that include a new cultural centre and tourist accommodation.

Taking nature seriously

Yukoners are a seriously nature-oriented group with a strong commitment to their city. The public was very vocal about its desires and visions for the riverfront, and consultation paralleled the planning and design work. More than one tent housing the riverfront design panels was blown down by the southerly winds!

As a result of the community's strong sense that nature is part of the daily environment, designers focussed on preserving the natural character of the landscape. The recently completed plaza outside the Yukon Territorial Government's Visitor Reception Centre reflects this sensitivity. By closing a portion of First Avenue, UMA created a public plaza that connects the Visitor Centre to the river. A grid pattern of trees begins in the paved plaza and then steps out into the landscape. Close to the river, the paved area gives way to a diagonal wood deck, which extends out over the banks of the Yukon River. It is a combination of ordered urban design and natural landscaping.

Historic elements that remain are preserved. Way-finding and interpretative signs have been combined with the riverfront trolley stop, and historic buildings and public art are blended into the edges of this small urban park.

At the north end of the city, construction has just been completed on Phase One of Shipyards Park. Planned by UMA and the city to encourage year-round riverfront activity, Shipyards Park has a new toboggan hill, which also provides amphitheatre seating for an outdoor stage area; a winter skating loop with a warming hut and a central bonfire area. The park will be a key festival space, and may play an important ceremonial role when the city hosts the 2007 Canada Winter Games. It is expected that international events such as the winter Yukon Quest dogsled race and the summer story-telling festival will find comfortable homes here.

Now that some projects have been completed and others are under construction, the link between planning, design and realization of the Whitehorse riverfront is apparent. Once again the city's downtown riverfront will become a busy, people-oriented part of the community, echoing the important role the river has played through history.

Damon Oriente, CSLA is a landscape architect with UMA in Burnaby, B.C. He has worked with UMA on planning and design projects in British Columbia, Yukon, Alberta and Russia. Damon's work includes signage, historical interpretation and aerial photo interpretation. Work in Whitehorse continues, with several park and urban design projects scheduled for construction this year. E-mail doriente@umagroup.com

EN BREF

Le secteur riverain de Whitehorse : des parcs, des sentiers et des tramways

Si la rivière Yukon occupe une place fort importante dans l'histoire de Whitehorse, une bonne partie de l'infrastructure industrielle d'autrefois de cette ville avait disparu au début des années 1990. Le secteur riverain était donc devenu une bande de terre sans vocation en grande partie laissée pour compte.

En 2000, une équipe de conseillers dirigée par UMA Engineering Ltd. coucha des plans sur papier afin de faire subir une cure de revitalisation au secteur riverain. Comme les bâtiments historiques constituent le point d'ancrage du district commercial du centre-ville, UMA proposa qu'ils deviennent le cœur d'un nouvel arrondis-

sement historique culturel. Ce plan prévoyait entre autres l'aménagement d'un sentier riverain continu, de petites places publiques bordant la rivière, un tramway riverain empruntant l'ancien tracé de la voie ferrée, de même que des aires naturelles.

Il y avait également un grand groupe d'intervenants pour le secteur riverain qui se composaient de représentants de la ville, du gouvernement territorial, de la Première nation de Kwanlin Dun et de simples citoyens. Étant donné que la communauté attache une grande importance à la nature dans leur quotidien, les concepteurs s'employèrent à conserver le cachet naturel du paysage. À

preuve, la place publique qu'on vient tout juste de réaliser à l'extérieur du centre d'accueil du gouvernement allie une esthétique urbaine ordonnée et des paysages naturels, agrémentés d'éléments historiques et d'œuvres d'art dans les lieux publics.

Le Shipyards Park dans la section nord de la ville invite également les gens à s'adonner à des activités le long de la rive grâce à une nouvelle pente de toboggan (qui comprend également des sièges d'amphithéâtre pour une scène en plein air), une patinoire en forme de boucle, un abri et un endroit pour faire des feux de camp.

Ecologically Based Waterfront Design

par/by Eha Naylor

During the past three or four decades, landscape architects with allied design professionals have created waterfront environments that manipulated shorelines and near-shore environments to best serve the needs of the proposed development. Landscape architects designed recreational harbours, waterfront parks and residential communities that relied on extensive lake filling, protective coastal structures and significant alteration of the natural dynamic process within the littoral zone.

Many of these projects, such as Ontario Place, have become landmarks and set the standard for design excellence in waterfront planning. However, the ecological impact of altering the shoreline has not been a key issue in the conceptualization or implementation of the project.

Humber Bay shoreline./Rive de la baie Humber.



Minimizing ecological impacts

In Ontario, the Environmental Assessment Act requires that a project be evaluated for impact, and mitigation measures be developed. The Federal Department of Fisheries and Oceans mandates that there be "no net loss of fish habitat." The task of designing mitigating measures to compensate for any environmental impacts is considerably different than establishing design parameters at the outset of a project. Mitigation measures may include the restoration of degraded habitats or the recreation of natural features that were present but lost during the industrialization of urban waterfronts.

The movement towards ecologically focused waterfront design is a response to a grassroots demand for natural places that contribute functionally to the health of the eco-system. There is a growing awareness that watersheds are complex environmental systems; they influence the health of the ecosystem and are determinants of air and water quality. Shorelines are particularly important, both as regional migratory corridors for birds and as very productive fish habitats.

Humber Bay Shores: An ecologically rich urban setting

Recent waterfront projects are demonstrating that development and sustainable ecological design are not mutually exclusive. For example, the Humber Bay Shores project (formerly the Etobicoke Motel Strip Public Amenity Area) focuses on integrating natural features within a dense, high-quality urban setting. A viable and exciting residential community can co-exist with an ecologically rich, sustainable shoreline.

The open space framework at Humber Bay Shores establishes a publicly accessible waterfront green space anchored by a near-shore wetland for storm water management. The design includes a variety of natural environments and public amenity areas: a trail system with boardwalks, urban tree-lined promenades, a central multi-purpose terrace, reconstructed cobble beaches and

fish habitat islands. The project also has a number of special landscapes, including the award-winning Butterfly Garden.

Waterfront redevelopment with a focus on habitat

Today, more waterfront redevelopment projects are undertaken primarily for habitat restoration purposes. In Burlington, the LaSalle Park Fish and Wildlife Restoration Project focused, first, on rehabilitating the shoreline for aquatic and terrestrial habitats. Its secondary objective was public access via a carefully designed boardwalk that controlled the location and extent of pedestrian access.

The Toronto Region Conservation Authority is embarking on the restoration of the mouth of the Don River with two equally important objectives. The restoration will control the extent of flooding in the Port Lands and also restore the ecological health of the Lower Don River with a series of near shore marshes, wetlands and terrestrial habitats along a relocated channel. Active recreation will not be part of the program. Instead, recreational uses will be designed into the adjacent Commissioners Park.

Designing sustainable waterfront spaces has become much more complex during the last decade. In urban settings, it is now common to evaluate the ecological attributes (historic and existing) of shoreline sites, and to identify soil and other degraded conditions that require remediation. The degradation is a consequence of historic uses. Many urban waterfronts with a legacy of industrial uses are brownfield sites, which require both decontamination of impacted soils and ecological restoration of degraded natural features.

The design challenge is to find creative, elegant solutions that respect ecological systems. Not only must on-site contamination problems be resolved, but landscape architects must also deliver usable, exciting places that contribute financially and environmentally to the community. Ecologically based waterfront designs can inspire an appreciation for the remarkable landscape that exists where the land meets the water.

Eha Naylor, OALA, CSLA, ASLA, is a principal of ENVision - the Hough Group, with 23 years of consulting experience in both environmental planning and site design. Eha's practice includes public facilitation and projects that bridge planning and ecological design fields. E-mail enaylor@envisionhough.com



EN BREF

Vers un aménagement riverain écologique

Au cours des dernières décennies, l'incidence écologique des changements apportés aux rives n'a pas vraiment été un problème clé pour les architectes paysagistes. Les choses ont toutefois bien changé. Les lois fédérales exigent maintenant qu'on effectue des études d'impact et qu'on élabore des mesures de mitigation avant d'entreprendre tout projet. La population demande pour sa part qu'on aménage des rives écologiques favorisant des écosystèmes sains.

De récents projets riverains ont démontré qu'il pouvait y avoir une osmose entre le développement et des aménage-

ments écologiques durables. Dans le cas du projet des rives de la baie Humber, on a intégré des atouts naturels dans un milieu urbain dense et remarquable. Parmi les autres projets entrepris principalement pour restaurer l'habitat, on compte le projet de restauration de l'habitat des poissons et de la faune du parc LaSalle à Burlington, de même que le projet de restauration de l'embouchure de la rivière Don River préparé par l'Office de protection de la nature de la région de Toronto.

L'aménagement d'espaces riverains durables est toute-

fois devenu une tâche beaucoup plus complexe. Dans plusieurs secteurs riverains, il faut procéder à la décontamination des sites perturbés et à la restauration écologique des atouts naturels dégradés. Les architectes paysagistes doivent également être en mesure de proposer des places pratiques et passionnantes qui sont bénéfiques tant aux niveaux financier qu'environnemental pour la collectivité. Le défi au plan de l'aménagement consiste donc à trouver des solutions empreintes de créativité et de charme qui tiennent compte des écosystèmes.

Bottom Left: Toronto's Ontario Place shoreline./
En bas à gauche : Rive de la Place Ontario à Toronto.
Top Right: LaSalle shoreline./En haut à droite :
Rive de la baie Burlington au parc LaSalle.



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Cliff Erosion Management at the University of British Columbia

par/by Andrew Wilson

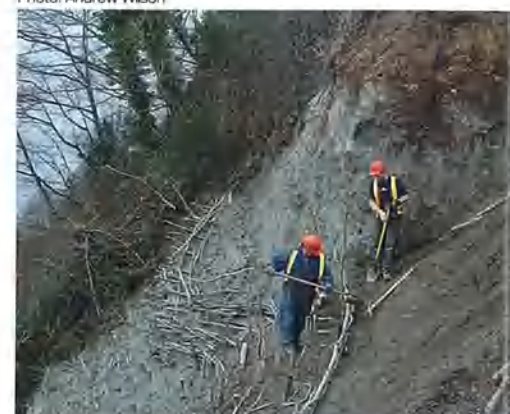
Photo: Andrew Wilson



Photo: Andrew Wilson



Photo: Andrew Wilson



Left: Finish grading around mature Quercus./À gauche : Nivellement de finissage autour d'un chêne à maturité.
Middle: Blending of berm with established Cecil House garden./Au centre : La berme se fond au jardin de la Cecil House.
Right: Terraced installation of live Salix Wattle fencing./À droite : Clayonnages de Salix en terrasses.

The University of British Columbia (UBC) is located on a promontory of land called Point Grey. The Fraser River's north arm, the Strait of Georgia and Burrard Inlet define Point Grey's shoreline at the base of steep cliffs. The cliffs are subject to erosion caused primarily by wave action, tides and storms. Other forces contributing to erosion are gravity, uprooting of vegetation, hydrological forces, storm-water runoff and human activity.

UBC occupies uplands 65 to 95 metres above sea level. The cliffs themselves are under the jurisdiction of the Greater Vancouver Regional District (GVRD) Parks and are part of Pacific Spirit Regional Park.

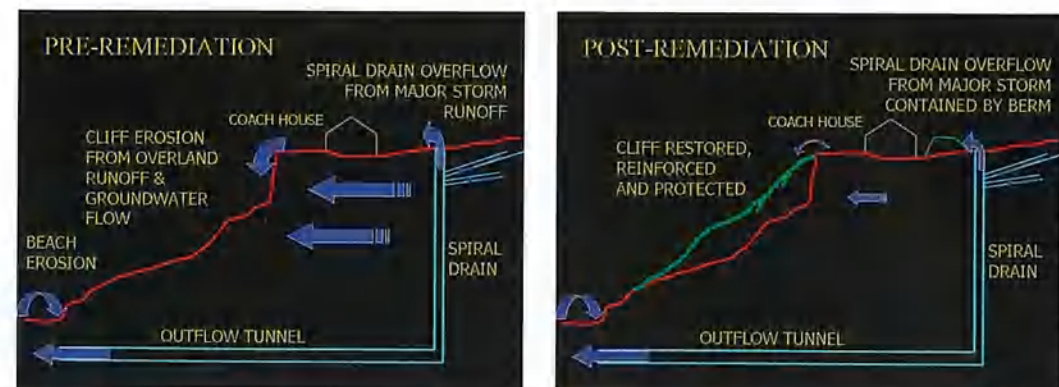
Examining options for control

UBC and GVRD Parks decided to examine options for controlling cliff erosion because of its impact on the parkland, some UBC facilities and Wreck Beach at the base of the cliffs. The project planning committee included representatives from the Musqueam First Nation, since Point Grey is part of their traditional territory. Community representatives also helped develop the erosion management plan. One of the first projects was the stabilization of the cliff face at the Cecil Green Coach House.

Stabilizing Coach House

Coach House is one of UBC's heritage buildings. Storm waters overflowing the cliff top created a gully behind the house. The facility is at one of the low points for drainage on the north campus. A spiral drain carries water from the campus storm system down to beach level and out into the water. Severe storms, however, can cause the spiral drain to back up, which, combined with additional surface drainage, threatens the cliffs and thus the Coach House.

Designers opted for a two-fold course of action: reinforce the cliff face and build a storm-water retention berm. While simply diminishing surface runoff would have helped to alleviate erosion, it would not have fully addressed the problem, considering that damage had already occurred and the university was continuing to develop its lands, increasing runoff.



Illustrations: Andrew Wilson

Reinforcing the cliff face required the following:

- removing about 1,400 cubic metres of loose sands;
- layering about 5,500 cubic metres of crushed gravel, protected by a layer of graded, crushed rock, in 400 mm lifts tied into the slope with 9,000 square metres of geo-grid;
- reusing native sand where possible with a filter layer of birdseye gravel;
- reinforcing the upper 7 metres of cliff face with soil anchors and shotcrete before placing a stabilized soil and rock face;
- installing about 2,000 linear metres of live wattle (Salix) fencing in terraces up the finished face; and
- planting 300 fir seedlings and blackberry bushes to vegetate and protect the slope from erosion.

To protect the cliff, the storm-water retention berm was designed to contain large amounts of overflow – volumes that might be expected in severe, one-in-70 years storm floods. The designers also incorporated a spillway in the berm at the newly reinforced section of cliff face. Given the existing contours, a road, and the volume of storm water that had to be retained, there was no choice but to locate the berm in the garden of Cecil Green House and adjacent to the Coach House.

Berm aesthetics

Designers located the berm in a manner that saved as many existing plants as possible. Though the engineered structure of the berm and its height could not be compromised, the slopes and the top surface were graded to create a feature that

worked with the garden. As well, due to the constant elevation of the berm and its construction, the designers were able to create a universally accessible path in a part of the campus that had been wheelchair inaccessible. The additional height of the berm near Cecil Green House created another opportunity: designers added seating areas to take advantage of new views of the Strait of Georgia.

Staff and students worked collectively to plant the berm and the land disturbed during construction. Students in the UBC Landscape Architecture Program prepared planting plans in their planting design class. Three were chosen, combined into a master plan, and then modified in consultation with the UBC Head Gardener and his staff. (Modifications were based on plant material availability and the area's maintenance levels.)

The Coach House work, budgeted at \$1.6 million, was just one priority in the UBC Cliff Erosion Management Plan. Seven other priority sites have been identified as well as more general work, such as campus drainage and ground water movement, cliff vegetation and the maintenance of beach berms and drift sills to protect the base of the cliffs. More information is available on the UBC Web site under Campus Planning.

Andrew Wilson was the landscape architect/urban designer in the Office of the University Architect, Land & Building Services, at the University of British Columbia in 2001-2002 when the highlighted work was undertaken. He was responsible for the finished design of the berm and its integration with the existing landscape. Andrew is now an urban designer with the City of Vaughan, Ont. E-mail Andrew.Wilson@city.vaughan.on.ca



Photo: Andrew Wilson

Left: The newly stabilized slope./
 À gauche : Talus nouvellement stabilisé.



Right: Bioengineering./
 À droite : Un ouvrage de bio-ingénierie de taille.

EN BREF

La gestion du sapement à l'Université de la Colombie-Britannique

L'Université de la Colombie-Britannique se dresse sur un promontoire qu'on a baptisé la pointe Grey, dont le sapement a une incidence majeure sur certaines installations de l'Université de la Colombie-Britannique, sur certains parcs de Vancouver et sur la falaise en arrière-plan de la plage Wreck.

Pour pallier ce problème, l'Université de la Colombie-Britannique, les responsables des parcs du district régional du Grand Vancouver, ainsi que les représentants de la Première nation de Musqueam (la pointe Grey fait partie de leur territoire traditionnel) ont élaboré un plan de gestion de sapement.

On se fixa comme priorité numéro un de consacrer la somme de 1,6 million \$ à la stabilisation de l'escarpement dominant sur la Cecil Green Coach House. Les concepteurs décidèrent de renforcer l'escarpement et de construire une berme pour retenir les eaux pluviales. Renforcer l'escarpement ne fut toutefois pas une mince tâche. On dut, par exemple, procéder à l'enlèvement du sable lâche et construire un escarpement fait de terre stabilisée et de pierre et installer des clayonnages et planter des éléments végétaux.

Pour protéger la falaise, la berme pour retenir les eaux pluviales fut aménagée de manière à pouvoir contenir une

grande quantité des débordements. Quoique la berme doit être érigée dans le jardin de la Cecil Green Coach House et que la structure et la hauteur de cet ouvrage de génie civil ne pouvaient être compromises, les maîtres d'œuvre réussirent à donner un cachet qui se mariait avec le jardin, dont un sentier accessible à tous et des aires de repos donnant des vues le détroit de Georgia. Le personnel et les étudiants misèrent ici sur la synergie pour ériger la berme.

Pour de plus amples informations, visitez la section « Campus Planning » du site Web de l'Université de la C.-B.

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