

# Canadian Brownfields Case Study

## Inspiration Lakeview



Source: Lakeview Community Partners

Lakeview Village Master Plan<sup>5</sup>

### PROJECT SUMMARY

Lakeview Village's full 177-acre property is located along Lakeshore Rd East, East of Cawthra Road along the shores of Lake Ontario in Ward 1 of Mississauga. The lands were transferred from Ontario Power Generation to Lakeview Community Partners Limited for \$275 million, with 65 acres of the property being transferred to the City of Mississauga. The net funds are to be placed into the Ontario Trillium Trust, with the funds to be spent on transit projects throughout the province, including on the Lakeview Site<sup>1,2</sup>. The underlying vision for the future of the site is to demonstrate what capabilities the public sector and government have in providing a high standard of life that will be adequate for future generations<sup>1</sup>.

Currently, the land is mostly vacant as it undergoes a cleanup process. A 600m pier into Lake Ontario remains on the property and is intended to still be used by the community in the master plan<sup>3</sup>. 20,000 new residents and 9,000 new employment opportunities are expected to be added within the new development site<sup>4</sup>. The majority of the surrounding Lakeview lands along the waterfront are currently being used for heavy industrial purposes. Warehouses and treatment plants exist nearby, with an established

community to the north and west of the site<sup>5</sup>.

The site was first used for militaristic purposes beginning in 1891 when Fort York commissioned the lands for artillery ranges. Later in 1915, it became Canada's first airport as the Long Branch Aerodrome. During World War II, the site transitioned into an industrial use, first supplying weapons. Starting in the 1940's, the site began to focus on industrial uses including: warehousing for the war, sewage plant, water treatment plant

### QUICK FACTS

**Location**

Mississauga, Ontario

**Project type**

Master Plan Redevelopment

**Site size**

177 Acres

**Land uses**

Coal power plant, sewage and water treatment plant, warehousing, aerodrome

**Keywords/special features**

Innovation, Sustainability, Community

**Website**

<http://www.mississauga.ca/portal/residents/inspirationlakeview>

**Project address**

1300 Lakeshore Road East  
Mississauga, Ontario

**Brownfield Awards**

2016 Brownie Award Finalist, RENEW – Redevelopment at the Community Scale

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Case studies were prepared as a course assignment by students enrolled in PLG845: Brownfield Reuse & Development, Cleaning up the Past and Building the Future, School of Urban and Regional Planning, Ryerson University (Winter 2019). Information for the case studies was obtained from online sources, available reports, and, in some cases, site visits and direct communication with stakeholders.

If you are aware of any errors or updates to the case studies, please contact [chris.desousa@ryerson.ca](mailto:chris.desousa@ryerson.ca).

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and the Lakeview Generating Station a coal fired power plant. It was home to the iconic four sisters smoke stacks each being 146 meters tall, opening in 1962 and closing in 2005<sup>1,4,5</sup>. The property has served to be an important part of the economy in the 20th century<sup>4</sup>.

As it was unsustainable, a provincial plan to reduce provincial emissions was made by transferring the energy grid reliance on coal towards other sources such as nuclear energy established in 2003. This required all five coal-powered power plants, including the light sulfur coal fire plant in Port Credit, to be closed before 2007<sup>4</sup>. The coal plant was a large contributor to smog days in the Greater Toronto Area and would create a layer of white coal ash in the surrounding area<sup>4</sup>.

The future of the Lakeview lands must consider the existing context as the site interacts with five watercourses and is located along the northern shore of Lake Ontario. The watercourses are: Etobicoke Creek, Applewood Creek, Serson Creek, Cawthra Creek and Cooksville Creek, which have been artificially modified to better suit the urban context that has evolved over the course of the 20th and 21st century. In addition, the site contains wetlands, and a flood plain<sup>6</sup>.

Beginning in 1998, part of the site underwent a cleaning process through soil excavation. The Coal Power Plant occupied 4.5km of shoreline and 63 hectares in its operations. Ground water cleanup to remove Petroleum Hydrocarbons was undertaken during 2010. The statistics alone for the remediation of the plant's coal yard included the removal of 27 thousand metric tons of soil, disposal of 130 thousand litres of groundwater, and recycling three thousand cubic metres of concrete. Thirteen thousand cubic metres of clean infill was also required<sup>6</sup>.

There are 7 brownfield properties within the site, including the Arsenal Lands (WWII Arms Production Site). The brownfield property activities range from manufacturing, a power plant, and automobile services and maintenance. The most abundant contaminant found in the site is petroleum hydrocarbons. Other common chemicals on the site include assorted metals, organic compounds, aromatic hydrocarbons, benzene and toluene, which affects the soil and groundwater. A record of site condition was



Source: Lakeview Community Partners

Lakeview Generating System<sup>6</sup>

submitted for the previous Coal Power plant (800 Hydro Road) in 2007. To address the site hydrocarbon contaminants, a groundwater system that pumps and treats the site on a constant basis was installed<sup>6</sup>.

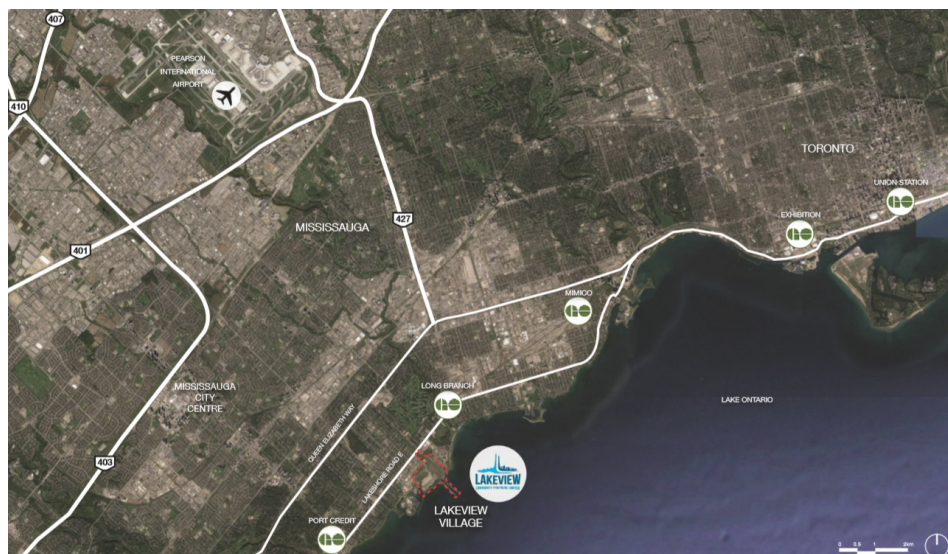
### Redevelopment Project Description

The timeline of the Master Plan has evolved since it began in 2006 after the Ontario Generation Plant ceased operations. Citizens called for the Lakeview Legacy Project to begin an innovative vision for the future of the lands. In 2010, the city began the visioning process as Inspiration Lakeview; in 2011 the Province

joined as a partner in a shared vision; in 2013 the master plan process began; and in 2018 Lakeview Community Partners Limited brought a master plan as the Lakeview Village Development Master Plan. The master plan aims to bring a diverse amount of uses and densities into the site's seven districts. The main update to the newest master plan is that there is a commitment to be sustainable and to give full access to the waterfront, in addition to more public space throughout key corridors of the site. This is also outlined as the first of six key moves<sup>5</sup>.

With assistance from public consultations, six

Site Context Map<sup>6</sup>



Source: Lakeview Community Partners

priorities have been identified for the master plan: have a continuous waterfront, blue and green network, a fine grain street pattern, bring transit to the site, a cultural hub at the top of the pier, and creating an employment/innovation corridor. Two key districts of the master plan include the innovation corridor and the Cultural Waterfront. The innovation corridor will encompass primarily employment and institutional uses including research and will act as a buffer from the adjacent brownfield property to the east that encompasses a waste treatment plant<sup>5</sup>.

This district will also have the highest concentration of employment. The cultural waterfront encompasses a vital connection to the waterfront. It will also hold a central square providing an opportunity for cultural activation and will act as a community node. The direction and future of Lakeview contrasts its industrial history with emphasis on sustainability, innovation and community<sup>5</sup>.

Adjacent lands to Lakeview Village and the South Eastern most lands on the site will be remediated. Credit Valley Conservation and the Region of Peel are collaborating to return parts of the waterfront to residents in Port Credit including the lands that are operating a waste treatment plant. The new waterfront connection will encompass a new natural waterfront park which will occupy 33 hectares of land. A fraction of that land is part of the Lakeview lands. A few

of the key features of the park include a cobble beach, river levee systems, and will be re-routing Applewood and Serson Creek, and extending Serson Creek. There will also be the creation of a new wetland and residents will benefit from a new recreation centre<sup>7</sup>.

### Key Challenges

Soil washing and dig and dump are options for soil clean up in the site, which may have toxins that are 3 feet deep. Dig and dump can be costly and will fill up landfills. The costs to conduct this process per metric ton of soil removed varies from \$42-\$240 per metric ton with the price increasing due to level of toxicity. Soil washing is an option in trying to clean land that is high in metal pollution; its a process where bulk soil and fine soil particles are separated in an aqueous process. In 2010, it was speculated that there are more hazardous metals on the site than is currently known, although further analysis is required. The costs vary for the site cleanup. In a better case scenario, where contaminants have been contained in a small site over the course of the site history, the cost would be \$1.4 million, and it could reach \$10.5 million for a large case scenario. Close to 90% of the costs in both scenarios are on account to soil washing<sup>6</sup>.

In addition to soil remediation costs, ground water costs may vary. The method used for ground water remediation is pump and treat,

which uses air stripping technology. Timing for remediation depends on the extent of harmful chemicals on site, polluted water body size, and site soil type. Assuming 40 monitor wells will be installed on the site, a phase two site assessment would cost \$250,000. The initial implementation of this infrastructure would cost \$1-\$3 million and would require up to \$500,000 a year in operational costs. The costs for both water and soil remediation are higher as they will be cleaned to residential standards<sup>6</sup>.

Regarding market demands and projecting property values by land use, the site investment could pay off. The amount for residential spans from \$900,000 per acre currently to a potential of \$1.5 million per acre. With commercial office, it spans to a current value as low as \$600,000 per acre up to a potential of \$1.5 million in the future. This considers having a mix of uses, installing the required infrastructure such as parks and sidewalks, and having medium to high density development. Note that financial figures are in accordance to 2010 values. The remediation costs are an investment on the property which forecasts a large return. The large project must be able to efficiently navigate between many parties and stakeholders. Six companies make up part of the development team including TACC Construction and Greenpark Group. Four companies form the design team including Urban Strategies<sup>8</sup>.

### Benefits and Lessons Learned

The largest insight from the Lakeview Village Master Plan and the process it has taken thus far is that large scaled projects with drawbacks such as a brownfield property can also be an opportunity. To successfully plan and implement, it requires the collaboration of the public sector including the municipality and province, and many private partners in order to maximize skill sets, capabilities and resources. With the size of a 177 acre site, the project takes advantage of creating a master plan, which ensures a large district of the city can grow cohesively. It is also important to highlight that this project was initiated by citizen action during the Lakeview Legacy period. It is an example that passionate communities make a difference and can also be a critical part of the success of any project caliber. Ultimately, this project will be conducted throughout the course of many years and its success will be influenced by the strong foundation and vision that has been created.



Source: Lakeview Community Partners

Lakeview Village Render<sup>6</sup>

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## Endnotes

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