

Canadian Brownfield Case Study

Beare Hill Park



Source: Brownie Award Finalist, 2024.

Figure 1: An aerial image taken from the west-facing lookout area, showing the selectively designated granular trail system at Beare Hill Park.

QUICK FACTS

Location

Scarborough, Toronto ON

Project type

Ecological Revitalization

Site size

75 hectares

Land uses

Parks and Open Space, Recreation, and Natural Areas

Keywords/special features

Landfill remediation, methane conversion plant, adaptive management, revegetation, stormwater management, wetland protection

Website

toronto.ca/explore-enjoy/parks-recreation/places-spaces/parks-and-recreation-facilities/location/?id=3777

Project address

8145 Finch Avenue East
Toronto, Ontario

Project awards

2024 Brownie Award Finalist - Refocus

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Case studies were prepared as a course assignment by students enrolled in PL8312/ PLE865: Brownfields Redevelopment, School of Urban and Regional Planning, Toronto Metropolitan University (Winter 2025). Information for the case studies was obtained from online sources and available reports.

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The opinions expressed in this case study are those of the authors only and do not represent the opinions and views of either Toronto Metropolitan University, the School of Urban and Regional Planning, or the Canadian Brownfields Network.

PROJECT SUMMARY

Beare Hill Park is a 75-hectare public greenspace in Scarborough, Toronto, transformed from a former gravel pit and the Beare Road landfill into a revegetated natural area¹. Officially opened to the public after extensive environmental remediation, the park features over six kilometres of trails, diverse ecological habitats, and scenic lookout points². As part of the federal park management plan, Beare Hill Park enhances connectivity with the Rouge National Urban Park while providing recreational opportunities along repurposed landfill service roads. The park's redevelopment prioritizes sustainability, community engagement, and ecological restoration, making it a successful example of brownfield remediation and adaptive reuse.

Site Characteristics

Beare Hill Park is in Toronto and spans 75 hectares, featuring over six kilometres of singular and granular trails³ (see Figure 1). The park measures approximately 800 meters in width and 1,130 meters in length⁴. It is located at 8145 Finch Avenue East, near Little Rouge Creek in Scarborough, bounded by Finch Avenue East to the north, Pickering Townline to the east, a hydro corridor to

the south, and the Canadian National (CN) Rail and Beare Road to the west⁵. The site consists of a mix of meadows, forests, and wetlands, supporting various plant and animal species. Vegetation in the park has occurred naturally and through community planting efforts⁶. Additionally, the park features a parking lot, a lookout area, and wayfinding signage throughout the trail system⁷.

History

Beare Hill Park has undergone significant transformations over the years. The site began as a gravel pit in the 1960s, supplying materials for various construction projects in Toronto⁸. Once the gravel was depleted in 1966, it was repurposed into the Beare Road landfill⁹.

In 1967 additional land was acquired by the City of Toronto to expand the landfill¹⁰. Covering 80.5 hectares, the landfill had a capacity of approximately 3.3 million tons of waste, with an annual intake of around 7 million tons¹¹. The landfill remained in operation until around 1981 when it was discovered that the soil and gravel used to cover the waste had contaminated the land west of the CN rail tracks¹². As a result, it was officially shut down in 1982¹³.

In 1996 a landfill gas collection system was installed to convert methane waste into electricity, though power generation ceased in 2014 once it was no longer economically viable¹⁴. During this time, Johnson Sustromk Weinstein and Associates Limited prepared a master plan titled Beare Road Ski Facility, proposing a winter-use park which did not proceed further¹⁵. This resulted in additional studies being conducted to reassess the master plan and explore alternative uses for the site¹⁶. In 1994 a vegetation study was conducted at the site, marking the first steps toward ecological restoration. In October 2022 the park was officially opened to the public¹⁷.

Cleanup

In 1967 the City of Toronto acquired the Beare Hill Park site, licensing it as a waste disposal facility until its closure on September 1, 1982, accumulating over 9 million tonnes of municipal and industrial solid waste¹⁸ (see Figure 3). During its operation a 0.2 metre-thick daily cover of clay, silty sand till, and other local materials was applied for every 1.8 metres of waste¹⁹. Upon closure a final cover layer consisting of a low-permeability clay mixture was installed,



Figure 2: Aerial image of Beare Hill taken in 2002.

Source: Google Earth Pro, 2025

ranging between 1.2 and 1.8 metres in thickness to reduce any user interaction²⁰ (See Figure 3).

A leachate collection system was implemented to manage environmental impacts, pumping leachate to a sanitary sewer along Beare Road to prevent off-site migration²¹. Additionally, a stormwater management pond was constructed to control erosion and sediment runoff during landfill operations, but as the site has stabilized it is no longer required²². From 1996 until 2014 a methane processing system was in place. It consisted of vertical gas wells spread across the site and a power-generating

station that converted captured landfill gas into electricity²³ (See Figure 3). The methane power plant is planned to be demolished and landfill gas will be redirected through newly installed piping to the existing sanitary sewer system²⁴.

Efforts to restore the site included tree and wildflower plantings by Friends of the Rouge Watershed between 1997 and 2010²⁵. However, challenges such as wind, drought conditions, and low-permeability landfill capping materials made vegetation growth difficult, requiring the installation of water bars along slopes to retain moisture²⁶.

Figure 3: Beare Road Site Existing Conditions – Layer Diagram



Source: Beare Road Park Master Plan, 2013, p. 28.

Planning, Regulatory Issues, and Community Involvement

The remediation of Beare Hill Park required consultation among multiple government agencies and departments, including Toronto City Council, Parks Canada, the Toronto and Region Conservation Authority (TRCA), the Toronto Zoo, and other municipal, provincial, and federal public agencies²⁷. The Beare Road Park Master Plan considers statutory and non-statutory municipal policies and regulatory documents when planning the site's development²⁸.

Specific consideration was given under the Planning Act, particularly due to the site's location and its existing forest and wetland habitats²⁹. Section 2 of the Planning Act outlines matters of provincial interest, requiring municipalities, including Toronto, to consider environmental protection, agricultural resources, energy conservation, and public health and safety in their decision-making processes³⁰. Notably, the Townline Wetland Complex, a provincially significant wetland, lies along the east edge of the site³¹ (see Figure 4).

The proposed park aligns with the City of Toronto Official Plan (2013)

designation of 'Open Space Areas' and the Toronto Zoning By-law 569-2013 'Open Space' category³². It is also consistent with Site and Area Specific Policy 141 (SASP 141) for the 'Lands North of Twyn Rivers Drive, East of Staines Road,' which broadly applies policies to the Upper Rouge area³³. SASP 141 seeks to protect, restore, and enhance natural ecosystems and cultural heritage features while providing opportunities for appropriate recreational use³⁴. The Beare Road Park Master Plan identifies that a zoning by-law amendment or variance is unlikely to be required for any proposed buildings or structures³⁵.

Strategies in the Beare Road Park Master Plan ensure compliance and consistency with policies while balancing natural heritage protection and recreational opportunities³⁶. Any necessary fill or grading for trail construction has been evaluated for potential effects on adjacent natural heritage and hydrological features³⁷.

The Beare Road Park Master Plan was developed through three extensive public workshops held between October 2012 and January 2013³⁸. These workshops focused on three phases:

(i) establishing vision and principles, (ii) testing ideas, and (iii) refining the draft conceptual design³⁹. Participants included government agencies, biking and community associations, the Toronto Zoo, residents, students, hikers, cyclists, walkers, runners, and other park users⁴⁰. The six key priorities identified were:

- Enhancing connectivity between Beare Hill Park, the proposed Rouge National Urban Park, and the Toronto Zoo;
- Preserving natural space and protecting species;
- Providing recreational and educational opportunities;
- Maximizing the site's elevation for scenic views;
- Improving parking and access;
- Ensuring safety in relation to environmental conditions and access points⁴¹.

Financing and Funding

The total cost for the Beare Hill Park Trail Enhancements project is \$1,775,646, including HST and all applicable charges⁴². After HST recoveries, the net cost to the City is \$1,531,252⁴³. This cost breakdown specifically covers the park enhancements' descriptions, with funding allocated across four areas within the 2019 Interim Capital Budget for Parks, Forestry, and Recreation: \$1,066,294 for Rouge Park – Beare Road Construction, \$123,820 for Rouge Park – Beare Road Design, \$170,569 for CAMP Trails, Pathways & Bridges, and \$170,569 for Citywide Environmental Initiatives⁴⁴. The City of Toronto's Chief Purchasing Officer recommended awarding the contract to Dynex Construction Inc., with their bid of \$1,700,387 being the lowest proposed and below the City's initial engineering estimate⁴⁵.

Building Development

Following the closure of the Beare Road Landfill in 1983, the City of Toronto implemented a methane collection and processing system using landfill gas to generate electricity through a cogeneration plant⁴⁶. Electricity was produced on-site from 1996 until 2014 when operations ceased⁴⁷.

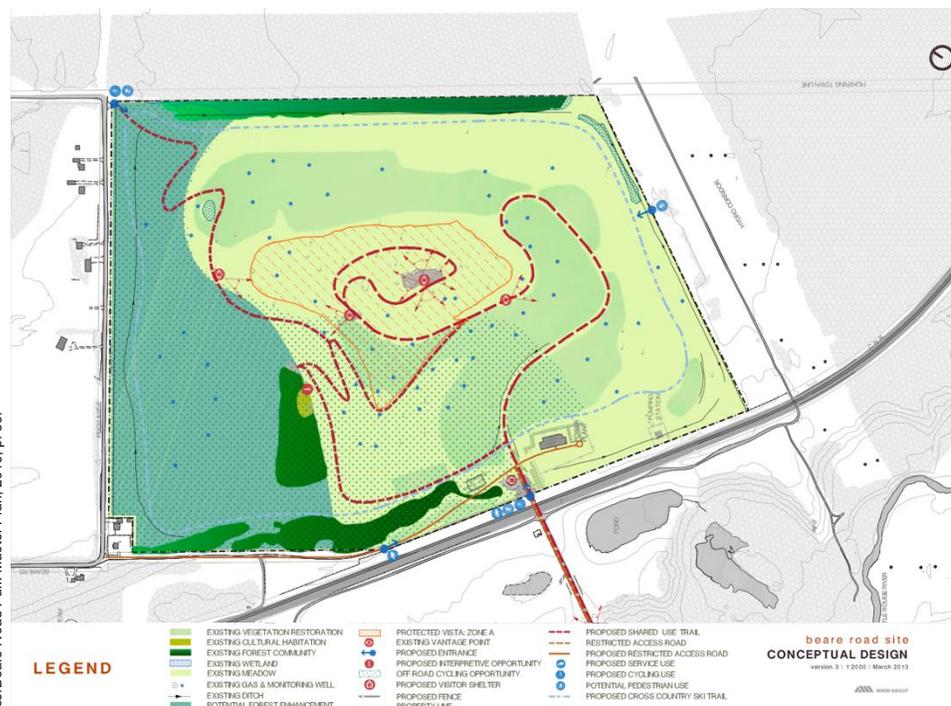


Figure 4: Conceptual design of Beare Hill Park including the location of existing and proposed features.

While adaptive reuse of the power plant building for educational purposes was considered, its current age and condition have resulted in a public construction notice for demolition⁴⁸. The project, scheduled for completion by Winter 2026, includes backfilling and restoring the site to its original grading⁴⁹.

The next phases of the detailed design process will introduce a weather shelter and explore additional amenities in collaboration with local partners⁵⁰ (See Figure 4). Proposed public facilities include a low-impact washroom at Beare Hill Park's main entrance, with opportunities for shared use between park visitors and the adjacent Rouge National Urban Park⁵¹ (See Figure 4).

Key Challenges, Benefits, and Lessons Learned

The site's history as a former landfill presents challenges, particularly regarding potential contamination of nearby areas. During public meetings and consultations, residents expressed concerns about the environmental impact of parking lots and access points on local wildlife⁵². Some viewed the development negatively, fearing it could disrupt the surrounding natural ecosystem⁵³. In response, efforts to minimize hazard exposure for park users and the ecosystem included installing a fence around the CN railway and the methane conversion plant, along with a thick clay cap over the waste disposal lands⁵⁴.

Repurposing the landfill has provided several benefits. Many residents welcomed the transformation of a brownfield into a recreational space, appreciating the increased accessibility to nature⁵⁵. There was also strong support for incorporating educational opportunities to highlight the site's history⁵⁶.

The Beare Park Master Plan indicates that the site's ecological restoration has positively impacted local species and vegetation⁵⁷. Restoration efforts have promoted plant growth, with conservation groups actively planting trees and shrubs⁵⁸.

The wetland area now supports a diverse range of frogs, turtles, birds, and other wildlife, further demonstrating the success of the park's redevelopment and adaptive remediation⁵⁸.

Notes

- ¹ Beare Road Park Master Plan. (2013). City of Toronto. 30. https://www.toronto.ca/data/parks/pdf/projects/Beare_Road_Park_Master_Plan_2013_Final.pdf
- ² Mehrabi, K. A. (September). One of Toronto's newest parks is built on a former giant mound of trash. *blogTO*. <https://www.blogto.com/city/2024/09/beare-hill-park-toronto/>
- ³ Beare Hill Park Aerial View: Trail Construction. (2019). City of Toronto. <https://www.toronto.ca/wp-content/uploads/2019/03/8d43-beare-hill-park-aerial-view-trail-construction.pdf>
- ⁴ Beare Road Park Master Plan. (2013). City of Toronto. 3-5. https://www.toronto.ca/data/parks/pdf/projects/Beare_Road_Park_Master_Plan_2013_Final.pdf
- ⁵ *Ibid.*, 13-15.
- ⁶ *Ibid.*
- ⁷ *Ibid.*, 17-18.
- ⁸ *Ibid.*, 16.
- ⁹ Stories from Rouge Park: The Beare Road Landfill Started as a Sand and Gravel Pit. (2023). *Toronto.com*. https://www.toronto.com/news/stories-from-rouge-park-the-beare-road-landfill-started-as-a-sand-and-gravel-pit/article_aba81db6-6ecf-56b9-a920-42826c1468ad.html
- ¹⁰ *Ibid.*
- ¹¹ Beare Hill Park Aerial View: Trail Construction. (2019). City of Toronto.
- ¹² *Ibid.*
- ¹³ *Ibid.*
- ¹⁴ Construction Notice: Beare Hill Park. (2024). City of Toronto. <https://www.toronto.ca/wp-content/uploads/2024/05/9705-2024-05-03Construction-Notice-Beare-Hill-Park.pdf>
- ¹⁵ Beare Road Park Master Plan. (2013). City of Toronto. 13. https://www.toronto.ca/data/parks/pdf/projects/Beare_Road_Park_Master_Plan_2013_Final.pdf
- ¹⁶ *Ibid.*
- ¹⁷ *Ibid.*
- ¹⁸ *Ibid.*, 29.
- ¹⁹ *Ibid.*
- ²⁰ *Ibid.*
- ²¹ *Ibid.*, 31.
- ²² *Ibid.*, 33.
- ²³ City of Toronto. (2024). *Construction notice: Beare Hill Park*. <https://www.toronto.ca/wp-content/uploads/2024/05/9705-2024-05-03Construction-Notice-Beare-Hill-Park.pdf>
- ²⁴ Beare Hill Park Power Plant Demolition Construction Update. (November 2024). City of Toronto. 1-2. <https://www.toronto.ca/wp-content/uploads/2025/02/8c3b-22ECS-MI-03SWConstruction-UpdateBeare-Hill-Park.pdf>
- ²⁵ Beare Road Park Master Plan. (2013). City of Toronto. 37. https://www.toronto.ca/data/parks/pdf/projects/Beare_Road_Park_Master_Plan_2013_Final.pdf

²⁶ *Ibid.*

²⁷ Beare Hill Park Public Information Meeting. (June 2017). City of Toronto. 5. https://www.toronto.ca/wp-content/uploads/2017/11/9762-2017-06-27_BeareHillPark-DetailedDesignProject-details.pdf

²⁸ Beare Road Park Master Plan. (2013). City of Toronto. 19.

https://www.toronto.ca/data/parks/pdf/projects/Beare_Road_Park_Master_Plan_2013_Final.pdf

²⁹ *Ibid.*

³⁰ *Ibid.*

³¹ *Ibid.*, 20.

³² *Ibid.*, 138.

³³ *Ibid.*, 19.

³⁴ Official plan: Chapter 7 – Site and area specific policies. (2013). City of Toronto. 94-97. <https://www.toronto.ca/wp-content/uploads/2017/11/9832-city-planning-official-plan-chapter-7-saps.pdf>

³⁵ Beare Road Park Master Plan. (2013). City of Toronto. 19.

https://www.toronto.ca/data/parks/pdf/projects/Beare_Road_Park_Master_Plan_2013_Final.pdf

³⁶ *Ibid.*, 20.

³⁷ *Ibid.*

³⁸ *Ibid.*, 7.

³⁹ *Ibid.*

⁴⁰ *Ibid.*, 9.

⁴¹ *Ibid.*, 10.

⁴² Award of Tender Call No. 272-2018 to Dynex Construction Inc. for Beare Hill Park Trail Enhancements. (January 2019). City of Toronto. <https://www.toronto.ca/legdocs/mmis/2019/ba/bg rd/backgroundfile-124734.pdf>

⁴³ *Ibid.*, 1.

⁴⁴ *Ibid.*, 2.

⁴⁵ *Ibid.*

⁴⁶ Beare Road Park Master Plan. (2013). City of Toronto. 9.

https://www.toronto.ca/data/parks/pdf/projects/Beare_Road_Park_Master_Plan_2013_Final.pdf

⁴⁷ Beare Hill Park Power Plant Demolition Construction Update. (November 2024). City of Toronto. 1-2. <https://www.toronto.ca/wp-content/uploads/2025/02/8c3b-22ECS-MI-03SWConstruction-UpdateBeare-Hill-Park.pdf>

⁴⁸ *Ibid.*

⁴⁹ *Ibid.*

⁵⁰ Beare Hill Park Public Information Meeting. (June 2017). City of Toronto. 24.

https://www.toronto.ca/wp-content/uploads/2017/11/9762-2017-06-27_BeareHillPark-DetailedDesignProject-details.pdf

⁵¹ Beare Road Park Master Plan. (2013). City of Toronto. 59.

https://www.toronto.ca/data/parks/pdf/projects/Beare_Road_Park_Master_Plan_2013_Final.pdf

⁵² *Ibid.*, 10.

⁵³ *Ibid.*

⁵⁴ *Ibid.*, 15.

⁵⁵ *Ibid.*, 10.

⁵⁶ *Ibid.*

⁵⁷ *Ibid.*

⁵⁸ Parks Canada. (n.d.). *Toronto Zoo lands history*. Government of Canada. <https://parks.canada.ca/pn- np/on/rouge/culture/histoire-history/zoo>