

# Canadian Brownfields Case Study

## The City of Toronto's Pan Am Sports Centre



Source: Urban Toronto

*Concept site plan for the Pan Am Sports Centre - The centre has been an intellectual and cultural hub during and after the 2015 Pan American and Parapan American games.*

### PROJECT SUMMARY

The Toronto Pan Am Sport Centre (TPASC) was built in conjunction by the City of Toronto and University of Toronto Scarborough to house swimming and fencing events at the 2015 Pan Am and Parapan Am Games; as well as use for the University of Toronto Scarborough Campus. The facility consists of two Olympic-sized swimming pools, training facilities, a gym space, a track area and a field house (for fencing and modern pentathlon). Due to the TPASC being built on a brownfield, the site required extensive work in remediation efforts before development could commence. Contaminated soil on the site was evident, as a proper environmental remediation was required to develop the space into a sports complex.

During consultation for the TPASC site, the City of Toronto identified four current objectives to facilitate proper planning. They are:

1. Exploring the requirements that would lead to public and private sector partnerships, including the University of Toronto, Pan Am Toronto 2015 and the Canadian Sports Institute Ontario.
2. Identify sustainable design principals that lead to overall reduction in operational costs.
3. Describe the creation of a unique, accessible,

legacy facility for the University and the Community.

4. Recognize the delivery of a legacy project through an alternative finance or procurement model.

### Site Characteristics

This case study will focus on the 5.41 hectares of land located at the intersection of Morningside avenue and Military Trail, and how remediation efforts were achieved to develop the TPASC. Due

### QUICK FACTS

#### Location

Scarborough, Ontario

#### Project type

Remediation for Recreational Facility: Sports Complex

#### Site size

5.41 hectares

#### Land uses

Community Land

#### Keywords/special features

Disaster, oil spill, biopile, soil washing, water decontamination, ex-situ remediation

#### Website

<https://www.tpasc.ca/>

#### Project address

875 Morningside Avenue  
Toronto, Ontario

#### Brownfield Project Award(s)

2014 Brownie Awards REBUILD - Excellence in Project Development: Building 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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to the former uses of the site, a proper site assessment was key in determining what approaches had to be made to assess the current brownfield. Pressures revolving around the 2015 Parapan and Pan Am games placed a huge burden on the City of Toronto to develop this centre in a short period of time. With the need for this sports centre, the University of Toronto worked hand in hand with the City, as investment was leveraged to create a facility that would meet the needs of student sports and recreational requirements for the long term. Internal challenges were present, as the City decided whether it was a good idea to facilitate private-public partnerships. External challenges were present, as there was a variability of stakeholder interests.

### Detail of Former Uses

**Presence and Operation of Morningside Landfill (APEC #1):** Leachate from the refuse deposit may have impacted groundwater underlying the RSCA Phase One Property. In addition, refuse may have impacted the underlying soil. Potential contaminants of concern (COCs) included metals and inorganics; benzene, toluene, ethylbenzene, and xylenes (BTEX); petroleum hydrocarbons (PHCs); volatile organic compounds (VOCs); polycyclic aromatic hydrocarbons (PAHs); polychlorinated biphenyls (PCBs); and pesticides. CRA conducted a RA in support of a RSC to PSSs. The MOE approved the RA.

**Operation of the Works Yard (APEC #2):** A gasoline underground storage tank (UST) leak in 1990 resulted in soil and groundwater contamination and free 072139 (15) 4 CONESTOGA-ROVERS & ASSOCIATES product release beneath the southern portion of the Morningside Works Yard. It is believed that gasoline impacts may still be present at the Morningside Works Yard with the potential to migrate onto the RSC A Phase One Property. Potential COCs in soil and groundwater include BTEX and PHCs. In addition, current fuel (gasoline and diesel) aboveground storage tanks (ASTs) represent a potential off-site source of impairment. Potential COCs from the use of road salting, snow clearing, and snow piling include sodium, chloride, BTEX, within stormwater runoff.

Placement and Quality of Unknown Fill



*Condition of land during the remediation process.*

(APEC #3): Fill of unknown origin was placed across the RSCA Phase One Property and over the refuse upon completion of the waste placement. Although some of the fill materials may have originated from other areas of the City and UTSC lands, the quality of the fill was not well documented and some fill may have been imported from off-site. Potential COCs included metals and inorganics, BTEX, PHCs, VOCs, PAHs, PCBs, and pesticides.

### List of Contaminants Found in Soil

Petroleum hydrocarbons (PHCs), metals, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), PCBs, pesticides PHC; Benzene, toluene, ethylbenzene, xylenes (BTEX); sodium; chloride, pesticide.

### Cleanup

York/GFL completed the remediation work under the City of Toronto Contract 11FS – 11SW. Remediation of development was completed between April 2011 and May 2012. The remedial design was completed in accordance with the “Design and Operations Plan – Remedial Program, Morningside Landfill Site, Toronto Ontario, Prepared for the City of Toronto and the University of Toronto Scarborough Campus.” Remediation included removal of waste, which required excavation of the soil fill cover and waste to the underlying natural soil over most

of the property. After removal of waste, natural soil located beneath the waste was also removed for redevelopment. No groundwater treatment was required as part of this remediation. No sediment remediation was required. Soil at the property was stored and reused to allow for CRA to collect samples and approve it as soil for use as backfill. CRA completed field screening to collect soil samples for laboratory analyses. CRA concluded that soil was appropriate. All detected concentrations of contaminants in the confirmatory samples collected were less than the Table 3 Standards and PSS's.

Removed Material:

Waste: 352,695.63 Tonnes to Petrolia Landfill, Twin Creeks Landfill, Napanee Landfill, Newalta Concrete: 608.70 Tonnes to Strada Aggregates Asphalt: 762.78 Tonnes to Strada Aggregates Tree Stumps: 201.58 Tonnes to Gro-Bark (Ontario) Ltd.  
Tires: 9.85 Tonnes to National Rubber Technologies Corp.  
Soil: 37,290 Cubic metres for reuse.

### Planning and Regulatory Pressures

With Toronto selected as the host for the 2015 Pan Am Games, a huge weight was placed on the City and the GTA to construct facilities to host these major events. The University of Toronto campus was chosen to house the swimming and

Source: The Varsity

fencing events, so infrastructure was needed fast and in a short period of time. Key issues were:

- Major site remediation to develop the TPASC.
- Exploring the requirements and processes that lead to innovative public and private sector partnerships including: The City of Toronto, University of Toronto, Pan Am Toronto 2015 and the Canadian Sports Institute Ontario.
- Identifying sustainable design principles to lead the overall reduction of operating costs and protecting the environment.
- Creating an accessible, legacy facility for the University and community at large (flexibility, green standards, energy features, etc.).
- Recognize the delivery of the legacy project through an alternative finance and procurement model.

### Legal Background

By-law No. 969-2014 was adopted by the City of Toronto in October 2013 to authorize entering into an agreement for the provision of a municipal capital facility at the Toronto Pan Am Sports Centre. Section 252 of the City of Toronto Act, 2006 states that the City may exempt taxation for municipal and school purposes, and an agreement for municipal capital facilities for operation. Paragraph 2 of Section 2 of the Ontario Regulation 598/06: Municipal and School Capital facilities agreements prescribes municipal facilities used for a community centre, and for parking. Subsection 6(1) of this regulation requires that municipal facilities are used primarily for local community activity (for students, public, events, etc).

### Decision History and Issue Background

On December 2008, City Council endorsed the City's participation in a bid to host the 2015 Games, to be held in Toronto. The bid was initiated and funded by the Government of Ontario. City Council approved investments of \$49.5 million in city-owned assets to be used for venues during the 2015 games. \$37.5 million was allocated by the City of Toronto for the development of the Pan Am Aquatic Centre. During a May 25, 2011 meeting, Scarborough Community Council approved a rezoning application for the Pan Am Aquatic Centre site; this was adopted by City Council on June 14th, 2011. On November 2012, City Council endorsed the establishment of a joint not-for-profit corporation with a Governing Council

at the University of Toronto for the purpose of managing and operating the City. City Council also adopted the report "EX24.12", which states the Governance and Operations of the Pan Am Aquatic Centre. This report authorized staff to request the Province to amend O.Reg 609/06 made under the City of Toronto Act, 2006, to allow the City to establish a corporation, joint with the University of Toronto. The Province approved O. Reg. 159/13 which amended the previous regulation (O.Reg 609/06) to the City's request. The City provided the opportunity for public input before establishing a corporation for the development.

### Financing

#### TPASC Operating Costs and Funding

The total budget to operate the TPASC on an annual basis is estimated around \$14.1 million. \$1.5 million will be an annual contribution from the Legacy Fund for major maintenance and capital expenditures. Approximately \$1.0 million will be an annual contribution from office space rentals.

#### Legacy Fund Contributions

The establishment of a Toronto 2015 Legacy Fund was required and capitalized by the Federal Government of Canada. This was to provide an additional contribution to the operation and maintenance costs of the project. The fund is providing approximately \$4 million per year over a 20-year period.

#### Capital Costs and Reserves

A capital reserve has been established for the purpose of applying the contributions together with the earnings for funding maintenance and capital expenditures. \$1.5 million of the annual Legacy Fund contributions will be allocated to the capital reserve.

#### Loan Guarantee

The City of Toronto provided a line of credit guaranty jointly with the University. The purpose of this was to provide for operating working capital. The line of credit guarantee will be an amount not exceeding \$1.0 million.

#### City Programming

The cost of the City's recreational programming and service delivery by the Parks, Forestry and Recreation Division in 2015 was estimated an annual amount of \$2.1 million

gross and \$0.3 million net. In 2016, the City's recreation programming within the TPASC was estimated to require funding of \$3.3 million gross.

#### City Land Remediation

Due to the land being associated with a former landfill, the City was responsible for the costs of ongoing maintenance and remediation monitoring of the barrier wall and landfill gas venting systems, and any environmental monitoring associated with the bare of the waste. No exact cost was found for assessment and cleanup.

#### Current Use

After the 2015 Toronto Pan Am and Para Pan Am games were over, the TPASC continued to be used as a sports complex accessible to the public and students.

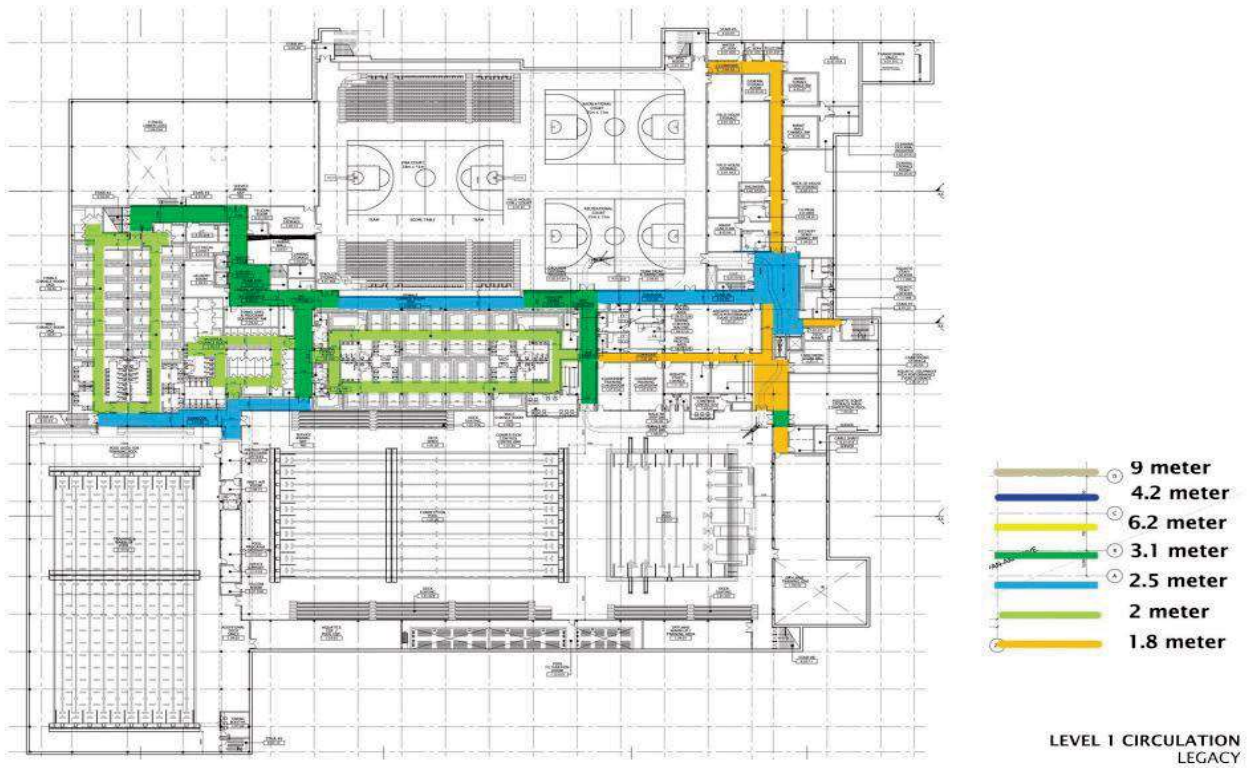
### Community Involvement and Consultation

In order for the City to benefit after the games were over, the community gained access to the facility, as it provides recreational services to the public, the University and other users. To achieve this, the community and University had to commit their involvement regarding the development during consultation. The City of Toronto recommended that the centre be jointly owned by the City of Toronto and the University of Toronto. The board of directors proposed the TPASC Inc., consisting of 10 members, 5 of them appointed each by the City and the University. A lobbying by-law was suggested to be passed to enter a municipal capital facility agreement, and a loan guaranty plan was established to fund the project.

### Lessons Learned

The completion of remediation resulted in the rapid development of a recreational centre which currently holds benefits for the University of Toronto and Toronto's community. It is important for the development of the Toronto Pan Am Sports Centre to act as a catalyst for future Brownfield projects. This is because the project is a perfect representation of how work should be completed when public/private partnerships are involved and external pressure is applied.



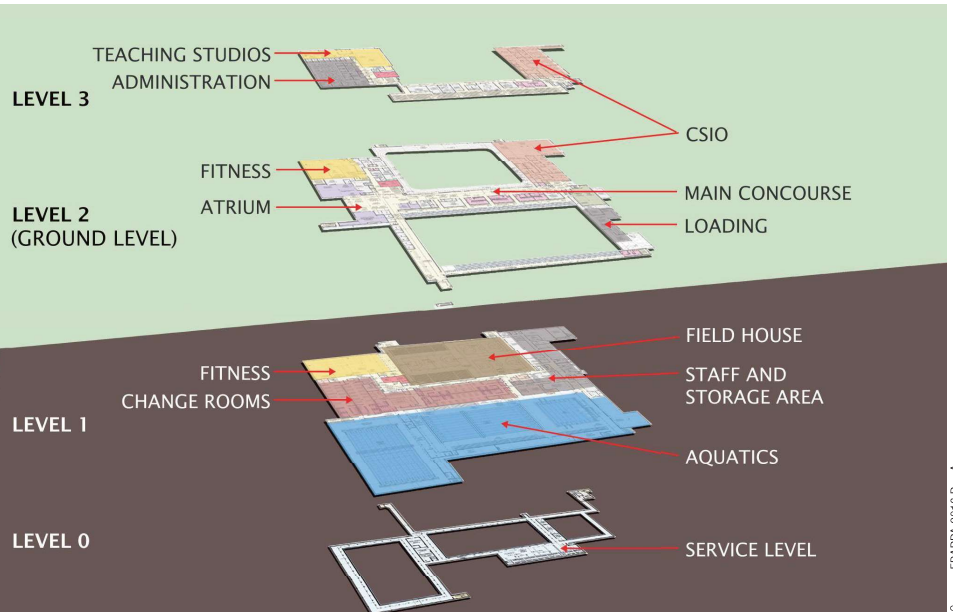
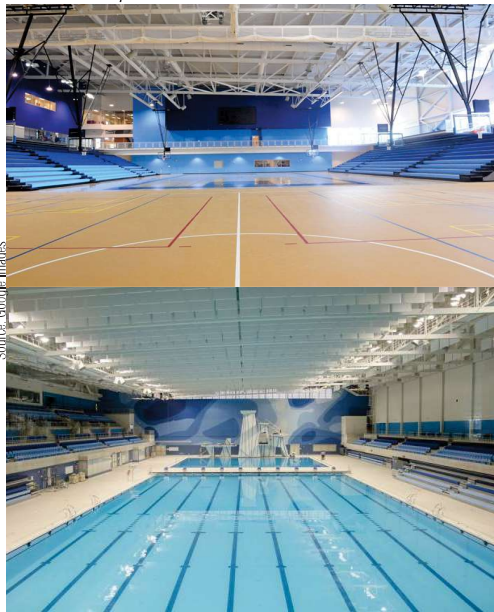


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Source: ERAPPA 2016 Pan Am

Recreational Spaces

Floor Plan



Source: Google Images

Source: ERAPPA 2016 Pan Am



Frontage rendering of the Pan Am Centre

Source: ERAPPA 2016 Pan Am

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## Endnotes

1. City Manager, Toronto Pan Am Sports Centre - Governance Structure (City of Toronto Staff Reports, 2013)
2. City Staff, BY-LAW No. 969-2014 (City of Toronto Staff Reports, 2013)
3. ERAPPA Niagara Falls Ontario Climate of Change, The Toronto Pan Am Sports Centre (PDF, 2016)
4. Environmental Assessment, Record of Site Condition #208166 (Ontario Ministry of the Environment, 2012)
5. Google Images (2019)