

**REPORT ON SITE REMEDIATION
FOR THE NORTH CAMPUS OF THE
UNIVERSITY OF TORONTO SCARBOROUGH**

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Prepared by the Office of the Assistant Vice President, Campus and Facilities Planning

UNIVERSITY OF TORONTO SCARBOROUGH

REPORT ON SITE REMEDIATION

I. BACKGROUND

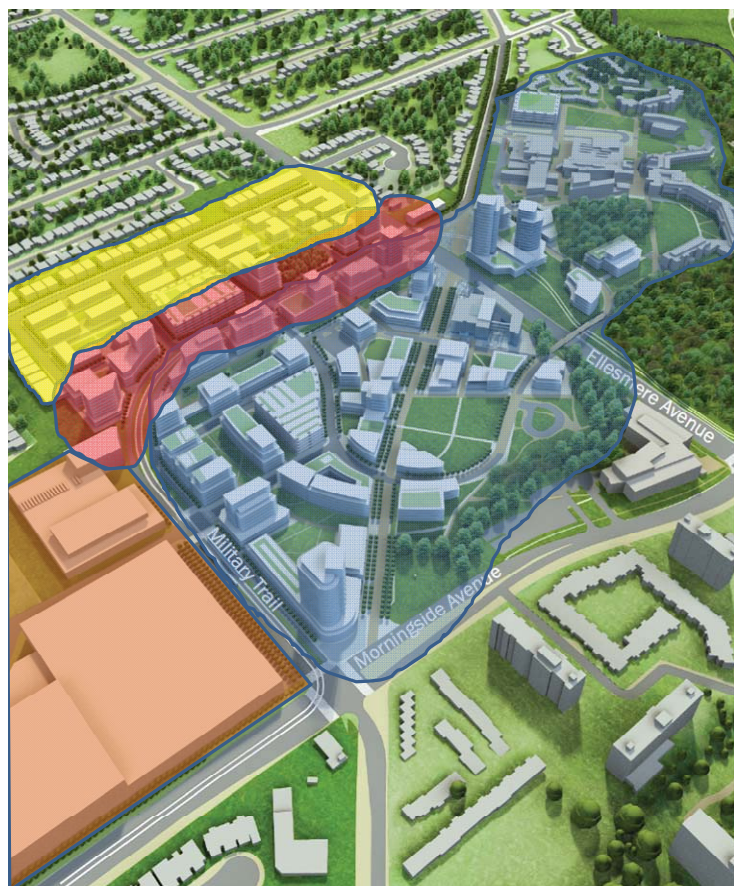
The University of Toronto Scarborough (UTSC) campus comprises three areas: the valley lands, protected from development by the Toronto Conservation Authority, the south campus, where all development to 2009 has occurred, and the north campus, where most recently, the Instructional Centre is being completed on land which can support development. The north campus lands, comprising approximately 73 acres provide the necessary area to allow University of Toronto Scarborough to construct facilities that will meet space deficiencies in the required space allocations as well as to allow for planned enrolment increases which have been identified. An extensive master planning exercise has been underway to determine viable opportunities for physical expansion, resulting in an update of the UTSC Campus Master Plan of 2000. Remediation is an essential component of the UTSC Campus Master Plan 2010.



UTSC Campus

For many years, academic, non academic and student space on the University of Toronto Scarborough (UTSC) campus has been inadequate when compared with the Council of Ontario University space standards. Analysis has demonstrated that the campus will be at 71 per cent of the space recommended for a campus having a student population of 9,300 FTE students in 2011/12. The 2030 plan for expansion has identified enrolment growth to 12,100 students within the next 20 years, and with no further construction UTSC will have only 50-60% of the space required for that student population.

UTSC is a vibrant teaching and research community, comparable in size to other comprehensive, mid-sized universities in the Ontario system and is uniquely positioned in Ontario to accommodate future growth. With appropriate investment, UTSC can accommodate substantial enrolment growth that is foreseen.



Campus Precincts

Academic

Academic Partnership

Residential

Athletics Partnership

2010 UTSC Campus Master Plan

Growth in the north campus relies on the need to remediate the lands shown in figure #1 below in blue and identified as the ‘area of remediation’. This site is approximately 7.5 hectares (18.5 acres) in size and is situated on lands owned by the university on the south and the city on the north. This site is part of a much larger area of land, largely to the north and on city lands, historically used as a sand and gravel pit or quarry, and subsequently as a site for municipal waste and construction debris.

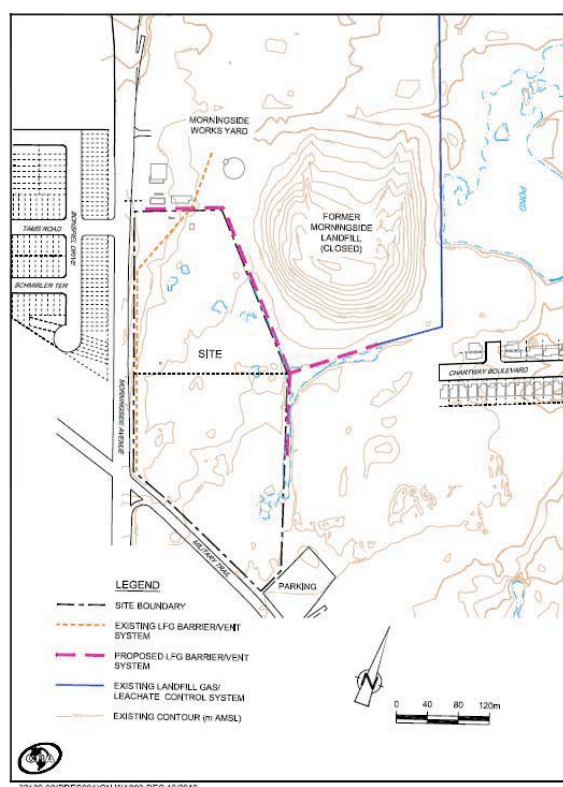


Figure 1: Area of Remediation

This old municipal waste site is referred to in survey documents as the “Morningside Landfill” has been closed since 1968. The decomposition of buried waste generates landfill gas and the methane concentrations exceed the minimum acceptable levels. Even though there have been steps to contain the gases, such as barrier and slurry wall construction around portions of the perimeter, the north campus is compromised by these conditions and would continue to be compromised by methane migration should remediation not occur. In 2000 the UTSC Campus Master Plan identified remediation as the major impediment to the development of the north campus lands.

In 2004, the UTSC and the City began to explore a joint student recreation and sport centre/community centre. When Toronto was awarded the bid for the 2015 Pan Am / Para Pan Games (PAAC/CSIO) a large site on the north campus was selected as the location for the major Aquatics venue and a co-venture partnership was developed for the project. The aquatics

facility, comprising approximately 37,000 gross square meters required a site that was large enough to accommodate the planned venues, parking areas and also be located in an area close enough to the campus for use by the student community. The site that was selected, which requires remediation can easily be accessed by the broader community as well regional high performance athletes. Adjacent to the 401 highway and along future transit routes, it will be situated for ongoing use by many participants. Because the facility will be co-owned by the City and the university this site comprising lands owned by each institution was ideal.



Location of Aquatics Facility

PAAC/CSIO has definitive time lines, is itself a major opportunity for a legacy facility, and has very much advanced the need and provided an opportunity to remediate the site and will in turn make the remaining north campus lands able to be developed.

Remediation within the identified area is essential, and must be completed as one project, by one contractor (secured through a tender process which will be managed by the City), over a

one year period beginning in the spring 2011, in order to provide a clean site to Infrastructure Ontario (IO). Construction of the Aquatics Centre is scheduled to begin in spring 2012, and has a completion date of mid-year 2014. The schedule is aggressive, and all of the key initiatives have been taken to ensure that the schedule can be achieved:

- the procurement documents for the remediation are ready to be issued
- the IO procurement process to select the design, build, finance (construction only) teams is underway
- the process that fully respects the user requirements (city and university) has been underway several months and continues

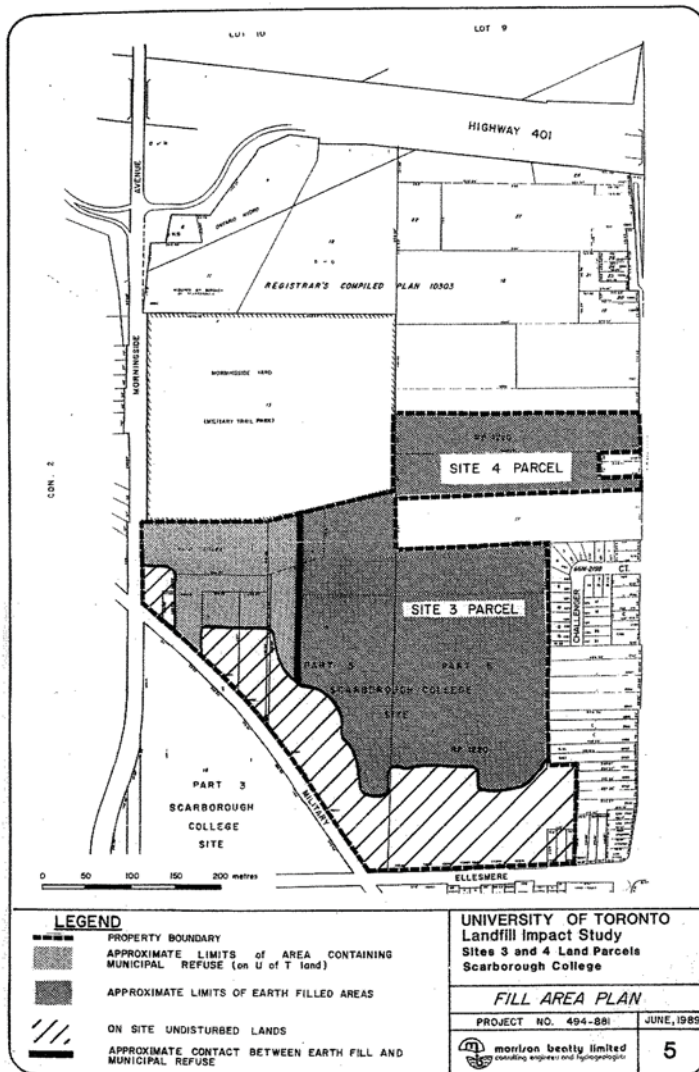
The PAAC/CSIO will not only bring international attention to the UTSC campus as the site of swimming, water polo and diving competitions of the 2015 Games, it will also provide a focal point for both the community and university students to come together for fitness and recreation. These new high quality facilities will also significantly enhance UTSC's ability to recruit new students and develop programs that can leverage access and activities associated with this facility

Further, it will enable to long term objective for enrolment growth and campus expansion to be realized through development of new academic facilities in the north campus.

II. PROJECT DESCRIPTION

The project involves remediating a large portion of the north campus including City of Toronto lands that served as a quarry for surrounding development in the 1930s, then as a site for both construction debris and for municipal waste. The site was never properly lined or prepared to serve as a permanent landfill site, and once covered in the 1960s, the land has been open space and parkland. Gas migration barriers and vents were installed in the site in the late 1990s, and both UTSC and the City of Toronto monitor methane gas, groundwater and surface water conditions around the area of the waste. The illustration which follows provides the site information from previous studies of the site and of the other areas of the north campus. Detailed technical information has been compiled as the areas have been continually monitored and is available upon request.

Although it is monitored and risks are controlled in the undeveloped space, the regeneration of this land is necessary for all future capital projects, including the PAAC/CSIO. The project restores prime land, and eliminates future and more costly measures to control the migration of gas associated with the waste. The best and most expedient way to deal with these future risks



Appendix E2: Landfill Impact Study

is to excavate and relocate the waste in its entirety and construct a barrier wall on the northeast of the PAAC/CSIO.

Approximately 200,000 to 250,000 square meters of waste will be excavated and hauled off-site to licensed land fills, starting in the spring 2011 with completion early 2012. The resulting clean site will be given to Infrastructure Ontario in April 2012 to permit the start of construction of the PAAC/CSIO. The process of remediation will be approved by the Ministry of the Environment (MOE) and the work to achieve a full understanding of the waste and remediation process is well underway. Further joint city in university consultations with the community is already under way and the local community is very supportive of this remediation project in spite of the local disruptions this project will cause during the course of the clean up.

It is not possible to remediate only the PAAC/CSIO site, and then at a later date to remediate the University lands. It is neither practical nor technically feasible to reduce the size of the area to be remediated (to remediate for example ‘only the footprint under the facility’), and, it would be prohibitively costly and time consuming to remediate each future development on the north campus on a project by project basis.

There are significant technical and financial reasons which do not allow the area of remediation to be reduced. A facility of this size and use has never been built anywhere in the world on a site that is known to have these environmental concerns and extraordinary costly building modifications. Ongoing monitoring measures would be required (outside of the project scope of the Aquatics Centre) for many years into the future. In addition, building and operating the facility in the centre of a site that has residual waste fill within the property limits that form the site, would likely not be approved. The project consultants advise that without the removal of the waste in the immediate vicinity of the facility and within the proposed limits of the site, there would be extensive monitoring and maintenance programs to allow for the use of the facility.

It is also necessary relevant to understand the cost of delaying this remediation project, as all future development on the north campus, proposed to be constructed on a project by project basis would be subject to the following:

Increased project cost: Each respective new construction project would require barrier walls, reinforced foundations, and venting systems to ensure that methane gas from surrounding lands safely dissipates.

Ongoing monitoring: Monitoring (and regular reporting to the MOE) and insurance would be required for the life of each building.

Prolonged approval process for each new building: Each new capital project would require additional geotechnical investigation and reporting on the impact of the un-remediated lands prior to municipal approval and receipt of permits, which will cause considerable time delay/impact.

Partnerships will be more costly: Projects located in an area that is subject to potential risks (i.e. municipal waste and areas of methane gas migration) incur increased costs of financing if at all possible.

“Shovel ready” projects will not be possible: Consequence of delays and extra costs, UTSC – and the province – would miss opportunities to initiate projects that require work to commence immediately as a condition of funding.

For the reasons identified above, it makes programmatic and economic sense to remediate the area shown to eliminate this major obstacle impacting both the PAAC/CSIO and future development in the north campus at once, at this time, as one project.

III. PROJECT IMPLEMENTATION

The remediation project will be managed by the City of Toronto. The procurement documents are being prepared by Conestoga Rovers (CRA), consultants retained jointly by the City and the University. The project will be tendered in January 2011 and the awarding of any contract conditional upon final approvals for the project and the funding by each of the city and the university. The anticipated start date for the project is the spring 2011.

IV. RESOURCE IMPLICATIONS

The total project cost of the remediation, including the installation of a barrier wall extending further to the east, has been estimated at \$52 million. The cost of the remediation under the facility is estimated at \$30 million; with the remaining lands and barrier wall at \$22 million. This estimate was prepared in August 2010 and has been the basis for discussions requesting external funding support. Total project cost includes all hard and soft costs, such as all testing required for site characterization and to satisfy all of the requirements of the Ministry of the Environment approvals under Part V of the Environmental Protection Act.

V. FUNDING SOURCES

The City and the University have agreed to divide the cost of remediation under the Pan Am Aquatics Facility on a 2:1 basis, having a total cost of \$30 Million. Funding for the University of Toronto portion, \$10 Million, will be provided by UTSC/UofT Central, separate from the UTSC/ student contribution to the PAAC/CSIO facility. The City of Toronto will contribute \$20 million.

The City will consider the funding request for its portion of the cost of remediation at the February meeting of Council. The recommendation will state that both institutions have determined a fair and reasonable approach to the allocation of costs of remediation.

The funding required to remediate the remaining portions of the site is contingent on the University receiving support from the government for a high performance sport facility, thus allowing an equivalent amount to be redirected towards remediation.

VI. RECOMMENDATIONS

That the Planning and Budget Committee recommend to the Academic Board:

Subject to all required government approvals and subject to funding being in place prior to commencing the work:

1. THAT the recommendations identified in the “Report on Site Remediation for the North Campus of the University of Toronto Scarborough”, dated January 6, 2011, be approved in principle.
2. THAT subject to all other approvals and funding being in place prior to commencing construction, the University of Toronto contribution for the remediation, having a total project cost of \$52 Million (2010 dollars) comprise:
 - \$5 Million from UTSC resources
 - \$5 Million debt to be repaid by UTSC