

FURTHER TO AUTHORITY MEETING #4/09
To be held on Friday, May 22, 2009

FURTHER TO:

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7. CONSIDERATION OF REPORTS TO THE AUTHORITY

SECTION I - ITEMS FOR AUTHORITY ACTION

ITEM 7.7 - LISTED ON AGENDA AS REPORT TO FOLLOW

7.7 GREENLANDS ACQUISITION PROJECT FOR 2006-2010

Flood Plain and Conservation Component, Duffins Creek Watershed
City of Toronto (Brock North and South)
CFN 24260

60-66

Item 7.7

TO: Chair and Members of the Authority
Meeting #4/09, May 22, 2009

FROM: James W. Dillane, Director, Finance and Business Services

RE: **GREENLANDS ACQUISITION PROJECT FOR 2006-2010**
Flood Plain and Conservation Component, Duffins Creek Watershed
City of Toronto (Brock North and South)
CFN 24260

KEY ISSUE

Request to the City of Toronto to convey to Toronto and Region Conservation Authority the Brock North and South Landfill Site located on the north and south sides of 5th Concession Road, east of Brock Road, in the City of Pickering and the Town of Ajax, Regional Municipality of Durham.

RECOMMENDATION

WHEREAS the City of Toronto properties (approximately 969 acres / 362 hectares) located on the north and south sides of the 5th Concession Road, east of Brock Road in the City of Pickering and the Town of Ajax, known as the Brock North and Brock South Landfill Sites, have been declared surplus to the City of Toronto's Solid Waste Management Division operational requirements;

AND WHEREAS the City of Pickering owns a property (approximately 8 acres / 3 hectares) located on the south side of Highway #7, east of Brock Road, in the City of Pickering (Pickering property), Regional Municipality of Durham;

AND WHEREAS Toronto and Region Conservation Authority (TRCA) had identified the Brock North, Brock South and Pickering property as part of TRCA's Terrestrial Natural Heritage Target System;

AND WHEREAS if these properties are renaturalized and managed in conjunction with the adjacent Greenwood Conservation Area, this complex has the potential to become one of the most significant natural heritage parcels south of the Oak Ridges Moraine in TRCA's jurisdiction;

AND WHEREAS the City of Pickering has expressed an interest in using a portion of the Brock North site for future expansion of the Pickering Museum and a district park facility;

THEREFORE LET IT BE RESOLVED THAT TRCA respectfully request that the City of Toronto convey the Brock North and the Brock South landfill sites containing 969 acres, more or less, and being Part of Lots 12 to 16 inclusive and Part of Road allowance between Lots 12 & 13 and between Lots 14 & 15, Concession 5, City of Pickering and Part of Lots 15 & 16, Concession 4, Town of Ajax to TRCA for nominal consideration of \$2.00;

THAT TRCA staff work with representatives of the Cities of Toronto and Pickering to determine what portion of the sites can be made available to the City of Pickering for use as future expansion of the Pickering Museum and a district park facility in accordance with the following conditions:

- (a) payment by the City of Pickering of the appropriate compensation to the City of Toronto, for lands to be used by the City of Pickering;**
- (b) City of Pickering convey the Pickering property to TRCA for nominal consideration of \$2.00;**
- (c) the portion of the Brock North site used for future expansion of the Pickering Museum and a district park facility would be under a management agreement between the City of Pickering and TRCA;**
- (d) also included in the management agreement would be the remainder of Brock North, the Pickering property and the portion of Greenwood Conservation Area in Pickering.**

THAT TRCA staff work with the City of Pickering and the Town of Ajax to develop a renaturalization and management plan for the complex that includes Brock North, Brock South, Pickering property and Greenwood Conservation Area;

THAT the Town of Ajax be requested to include Brock South in the existing management agreement for the portion of Greenwood Conservation Area in Ajax;

AND FURTHER THAT authorized TRCA officials be directed to take whatever action may be required to give effect to the foregoing, including the obtaining of necessary approvals and the signing and execution of any documents.

BACKGROUND

In the late 1960's the former Municipality of Metropolitan Toronto (now the City of Toronto) identified the need for three landfill sites in the Region of Durham. In 1969, TRCA granted approval to the City of Toronto for the temporary use of those lands owned by TRCA falling within the designated Brock Landfill Sites. In exchange the City of Toronto agreed that on completion of the landfill sites, the areas would be turned over to TRCA for recreational purposes. In the 1970's, the City of Toronto acquired the three sites. These sites are identified as Brock West, Brock North and Brock South.

Brock West is located west of Brock Road, north of the 3rd Concession Road in the City of Pickering. This site was used as a landfill site until it closed in the 1990's. The site is presently leased to Eastern Power. Brock North is located between the 5th Concession Road and Highway #7, east of Brock Road in the City of Pickering. Brock North was temporarily used as landfill site in the late 1970's. All the waste was excavated from Brock North in 1997 and was deposited in Brock West. Brock South is located south of the 5th Concession Road, east of Brock Road, Town of Ajax and was never used for waste disposal.

In 2008, the City of Toronto's Solid Waste Management Division declared Brock North and Brock South sites surplus to its operational requirements. In May of 2008 the sites were introduced into the city's disposal process. TRCA staff identified to City of Toronto staff, TRCA's interest in the two sites related to the original agreement between the former Municipality of Metropolitan Toronto and TRCA and the important environmental features of the properties.

The City of Pickering has also expressed an interest in approximately 170 acres of the site for the future expansion of the Pickering Museum and a district park facility. Pickering currently has a deficit of outdoor active recreation areas and playing fields and there is a scarcity of land in southern Pickering and Seaton to accommodate a large scale facility. The Brock North site is in a good location and appears to be of sufficient size to accommodate the proposed use. The district park facility will also act as a buffer to future development to the west. Pickering also owns a parcel of land located on the south side of Highway #7, east of Brock Road and containing approximately 8 acres (3 hectares). Pickering staff has indicated a willingness to add this property to the complex.

The Town of Ajax supports retaining the sites for natural heritage purposes.

Brock North is approximately 732 acres (296 hectares) in size and Brock South is approximately 237 acres (96 hectares) in size for a total of 969 acres (392 hectares) and are located adjacent to TRCA's 735 acre (297 hectares) Greenwood Conservation Area (CA). Brougham Creek which is a significant cold water tributary crossed Brock North before it joins with the East Branch of Duffins Creek in the Greenwood CA. There are also a number of other smaller tributaries that cross the properties. The sites are located on the former Lake Iroquois Shoreline which is a complex feature comprising sand, gravel, boulders and other old beach deposits which are critical terrestrial habitat features. These particular sites have a complex groundwater flow system, operating as both a recharge and discharge area.

Zoning and Official Plan

Both sites are designated as Major Open Space Area in the Regional Municipality of Durham's Official Plan. Brock North is designated as Open Space System - Natural Areas in the City of Pickering Official Plan and is zoned Rural Agricultural Zone A. Brock South is designated as Rural Areas in the Town of Ajax Official Plan and is zoned Permanent Country.

Greenbelt Plan

The two sites are designated as Protected Countryside - natural heritage system.

Ontario Regulation 166/06

Approximately one quarter of the two sites are regulated by TRCA under Ontario Regulation 166/06. This mainly relates to Brougham Creek and its tributaries.

Terrestrial Natural Heritage System Strategy

The terrestrial ecological value of the Brock sites is partly dependent on its relationship to the rest of the natural system in the region. The sites are located at the hub of two large natural corridors, that provide breeding source areas for species and a backbone for their movement within the Duffins watershed. The Brock sites play their part within the corridors that run north-south along the East Duffins Creek and east-west along the old Iroquois Shoreline. The sites are knitted ecologically to the natural system of the Seaton Natural Heritage System to the west and the Greenwood Conservation Area to the east. South of Taunton Road are the forests, wetlands and creeks associated with the Duffins Heights planning area. These lands contain large blocks of contiguous habitat within Urfe and Ganatsekiagon creeks. To the north are found the forests at the confluence of Spring and Brougham creeks at the Cherry Downs Golf Course and further north is the Glen Major Tract complex on the Oak Ridges Moraine.

Ecological Function

Landscape analysis is the study of ecosystems using remote-sensing, in this case looking at habitat patch character, size, shape and matrix influence (surrounding land uses) – and at how that character determines ecological function. The larger and rounder a patch is, and the more natural its surrounding, the better it can support species communities. TRCA’s landscape analysis model categorizes habitat patches into a range of L-ranks (local ranks) from L1 to L5 where L5 is very poor and L1 is excellent in terms of size, shape and matrix influence. The bulk of natural areas in urban lands are L4 patches (poor), but an increase from L4 to L3 is very significant for biodiversity. The general character of most patches in the existing natural system throughout the TRCA watersheds is L3. The TRCA Terrestrial Natural Heritage System Strategy aims to improve this to L2 as the overall character of the target system which is above the threshold for losses in biodiversity. Improvements in patch ranks will only be achieved by increasing the size, and improving the shape and matrix of existing patches. The target system is therefore a combination of “existing natural cover” and “potential natural cover”, the latter being where ecosystem restoration will be undertaken.

Target System Site Scale Refinement

The target system was designed at the regional scale, that is, without the benefit of site level knowledge that would guide refinements for local scale decision-making. When the entire concession block is modeled as a contiguous habitat patch it improves the shape to be more square and regularly-edged and therefore more resilient to edge effect (sun, wind, human disturbance, etc.). The outcome of this landscape analysis ranks the patches of the site as L1. L1 patch character indicates “excellent” habitat considering all lands are restored.

There is currently only one area in the TRCA watersheds with existing L1 patches – the Glen Major complex. The implementation of the target system would produce more L1 patches, approximately a dozen in the Humber watershed's headwaters on the Oak Ridges Moraine and one in the Rouge Park. The Brock/Greenwood complex would become one of only two L1 patches south of the Oak Ridges Moraine with both being located on the Iroquois Shoreline.

Ground level inventories of the subject site have uncovered a variety of wetland types including thicket swamp, cattail marsh and meadow marsh that provide habitat for species of concern including Virginia rail, swamp sparrow, wood frog and spring peeper. The scattered treed communities support magnolia warbler, mourning warbler and ruffed grouse. Wood frog and spring peeper that breed on the subject site in the spring likely spend their summer and winter under forest cover on adjacent TRCA lands.

Water Quality and Quantity Significance

These lands afford unique opportunities from a research and monitoring perspective to understand surface and groundwater linkages in the Duffins Creek watershed, and changes over time in the quality of groundwater and surface waters. The geology of the site is complex, as it acts as both a recharge and discharge area at the same time, and has flora and fauna communities that are adapted to these varying flow regimes. Continued monitoring of stream flow/water balance at this site will help with the calibration and validation of predictive groundwater models and may afford opportunities to investigate restoration practices which help maintain water balance.

Aquatic Significance

From an aquatic perspective, the Brock North site is ideally situated to protect and enhance the aquatic integrity of sensitive habitats within the Duffins watershed. These lands contain the confluence of two sensitive watercourses, including Brougham Creek, a true cold-water stream, and Spring Creek, more reflective of a cool water aquatic ecosystem. Brougham Creek, contains sensitive salmonid species such as Brook Trout, which requires cold, clean water, and the species often spawns directly over locations of groundwater discharge (upwellings). Brougham has historically supported redbside dace a provincially endangered and nationally threatened fish species. The habitat potential for this species in this system is likely very high. The Duffins Fish Management Plan (FMP) identifies high discharge occurring in Brougham Creek through the subject lands, an important ecological function for both brook trout and redbside dace habitat.

Redside dace has been observed in Spring Creek. This species likely benefits from the cool water habitat present in the watercourse in association with high water clarity, which enables the species to capture insect prey above the water column.

The FMP targets both the sections of Brougham and Spring creeks through the subject lands for redbside dace. The Brock North site is also situated along the Iroquois Shoreline, which is the ancient beach shoreline of Lake Ontario. The sands and gravels of the Iroquois Shoreline are a recharge/discharge zone, and provide groundwater discharge opportunities for aquatic species such as brook trout and redbside dace.

Since 2006, TRCA and Ministry of Natural Resources (MNR) have been stocking Atlantic Salmon at Greenwood Conservation Area, which is immediately to the east of these lands. Agencies have been involved in reintroduction efforts through stocking of juvenile salmon. It is expected that, if the project is successful, once adults return to spawn (starting as early as this fall) that they will utilize Brougham and Spring creeks.

Restoration of the Brock North lands will mean improved habitat for these sensitive species. Further, these lands could potentially be critical to the survival of redbside dace within the Duffins Creek given the planned future development within the watershed. The fate of redbside dace in Ganatsekiagon Creek is uncertain because of potential impacts associated with the development of the Seaton Lands. Redside dace are currently known to occur on the Brock North lands, along most of the Spring Creek subwatershed and along parts of the Brougham Creek subwatershed which are in the Greenbelt planning area. Brock North may become a critical land holding for the long term protection of the species in the watershed depending on what unfolds in the coming years. The property would become one of only a handful of TRCA properties where we could work to protect the species for long term survival.

RATIONALE

The subject property falls within TRCA's approved master plan for acquisition for the Duffins Creek watershed as outlined in the approved Greenlands Acquisition Project for 2006-2010. The site currently contributes significantly to achieving Duffins Watershed Plan objectives and with the implementation of the target system and careful management and restoration of terrestrial and aquatic habitats, will increase the ecological function of these lands exponentially. Acquisition of these lands will also facilitate the monitoring of water quality and quantity to better assist in the development of water balance models and in restoration planning. These lands offer an opportunity to protect and restore the populations of sensitive species, including aquatic species at risk. Benefits to north-south-east-west ecological connectivity and to ecosystem services in the southern portion of the watershed are unusual in metropolitan regions where urban ecosystems are impacted and not easily comparable to the healthier headwater areas.

DETAILS OF WORK TO BE DONE

Staff will enter into discussions with the cities of Toronto and Pickering to determine what portion of the sites can be made available to the City of Pickering for use as future expansion of the Pickering Museum and a district park facility.

Staff will develop a renaturalization and management plan for the complex that includes Brock North, Brock South, Pickering property and Greenwood CA with the assistance of the City of Pickering and the Town of Ajax. The terms of reference and the final management plan will be brought forward to the Authority at a future date for approval.

The City of Pickering will be requested to manage the entire Brock North property including that portion of Greenwood CA located in Pickering and the Pickering property. The Town of Ajax is currently managing that portion of Greenwood CA located in Ajax and has expressed an interest in managing Brock South. Details of the management of the properties will be determined through the management planning process.

FINANCIAL DETAILS

Funds for the costs related to this acquisition are available in the TRCA land acquisition capital account.

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Attachments: 1

Attachment 1

