



CITY OF KINGSTON
REPORT TO COUNCIL

Report No.: 10-229

TO: Mayor and Council

FROM: Cynthia Beach, Commissioner, Sustainability & Growth Group

RESOURCE STAFF: Paul MacLatchy
Director Strategy, Environment & Communications

DATE OF MEETING: 2010-07-20

SUBJECT: Kingston's Participation in Pilot-Scale Soil Washing Project

EXECUTIVE SUMMARY:

On November 26, 2008 the Province of Ontario and the Government of the Netherlands signed a memorandum of understanding to, among other things; advance the use of Dutch soil washing and remediation technologies within Ontario. As a prelude to this, the Provincial Ministry of the Environment (MOE) and the Netherlands Soil Partnership (NSP) wish to establish one or more test scale projects to demonstrate the feasibility of one or more soil and sediment remediation processes currently being utilized in the Netherlands.

In keeping with the Kingston's reputation for progress on brownfield redevelopment as well as our aspirations to undertake a clean-up of Cataraqui River sediments, the MOE has encouraged the City of Kingston to explore the possibility of working with the Netherlands Soil Partnership to host a demonstration project. The Sustainability and Growth Group recognizes that this may be an excellent opportunity to advance the prospects of brownfield remediation while at the same time reinforcing Kingston's image as a leader in sustainability initiatives.

As part of the plan to revitalize Toronto's waterfront area, a pilot scale soil recycling facility has been created in partnership with Dutch contracting firms. The facility utilizes soil washing and soil treatment technologies that enable contaminated soils to be cleaned and re-used with only small residual amounts requiring landfilling. Processing of soil materials derived from several local properties will allow staff to assess whether similar technologies may be feasible for clean-up of brownfield sites within Kingston so that our reliance on landfill may also be reduced.

This report follows up on Council's earlier approval to move forward with exploration of this opportunity and presents a recommendation to participate in a demonstration of soil washing technologies by sending bulk samples of contaminated soils from Kingston to a pilot scale soil washing/treatment facility in Toronto.

RECOMMENDATION:

THAT Council approve the City of Kingston as a participant in the Toronto Waterfront soil treatment pilot project and other soil treatment operations as available, and

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THAT the Mayor and City Clerk be authorized to sign agreements, in a form satisfactory to the Director of Legal Services, for the treatment and management of a maximum of 1,000 tonnes of soils from City of Kingston brownfield properties, on a pilot scale basis and

THAT a capital project budget of \$100,000 be established and be funded by:

- a) \$30,000 of existing unspent capital budget for municipal brownfield clean-up,
- b) \$20,000 from the Working Fund Reserve
- c) \$50,000 from anticipated grants from others.

and,

THAT staff proceed with making application to the Federation of Canadian Municipalities' (FCM) Green Municipal Fund (GMF) to seek a grant of 50% of eligible project costs.

AUTHORIZING SIGNATURES:

ORIGINAL SIGNED BY COMMISSIONER Cynthia Beach, Commissioner, Sustainability & Growth Group
ORIGINAL SIGNED BY CHIEF ADMINISTRATIVE OFFICER Gerard Hunt, Chief Administrative Officer

CONSULTATION WITH THE FOLLOWING COMMISSIONERS:

Terry Willing, <i>Community Services</i>	N/R
Denis Leger, <i>Transportation, Properties & Emergency Services</i>	√
Jim Keech, President and CEO, <i>Utilities Kingston</i>	√

(N/R indicates consultation not required)

OPTIONS/DISCUSSION:

Background

On November 26, 2008 the governments of Ontario and the Netherlands signed a Memorandum of Understanding on Environmental Cooperation that seeks to facilitate cooperative work on, among other things, brownfields redevelopment and soil remediation with an emphasis on technologies being used by Dutch contractors that allow for “washing” of contaminated soils so that a large proportion of the soil can be beneficially re-used and only a small proportion needs landfilling.

As part of a clean-up and redevelopment of the Lower Don Lands area of Toronto’s waterfront, a pilot scale soil processing project has been established. The pilot scale soil processing project seeks to utilize two separate soil washing and treatment processes that, if successful, will allow clean-up of contaminated soils so that cleaned soils may be re-used on site and there will be significantly less need for conventional landfilling. The Waterfront Toronto Pilot Soil Processing Project will operate from July through November of 2010. A more fulsome description of the Pilot Scale Soil Processing Project is provided as Exhibit A.

The Project

Rather than duplicating a similar facility within Kingston, staff are recommending that bulk samples of soil and fill from brownfield properties within Kingston be collected and transported to the Waterfront Toronto facility for treatment. Successfully treated soils would be re-used within the Lower Don Lands redevelopment and contaminated residuals, left over from the treatment would be conventionally landfilled. Contaminated soil treatment operations may soon also become available within Kingston and area and may be candidates for evaluation within the scope of this pilot-scale project.

City of Kingston staff would coordinate the collection and transportation of soil samples to the soil treatment facilities and payment would be based on a per tonne treated plus per tonne of contaminated residual basis.

Performance of the project and the feasibility of using similar technologies on a larger scale as an option for remediating brownfield properties within Kingston will be monitored, analyzed and reported on by the Environmental Sciences Group (ESG) of the Royal Military College of Canada (RMC) under the direction of Dr. Ken Reimer. The involvement of RMC will be funded by an existing “Best in Science” grant from the Ontario Ministry of the Environment.

While not finalized, staff expect that bulk samples of soils and fill would be derived from:

- City Yard property at 701 Division Street
- 362 Montreal Street
- Street sweepings and catch basin clean-outs
- Former I. Cohen & Sons property
- Capital Road Reconstruction projects
- Other brownfield properties within the “failed tax sale” portfolio

Strategic Rationale – Community Sustainability

The project provides alignment to two important themes within Kingston’s Integrated Community Sustainability Plan – *Sustainable Kingston*.

Within the Economic Development theme of the Economic Pillar, there is a goal of establishing Kingston as a leader in green technologies. The subject project, if successful, will demonstrate the feasibility of using new environmental process technologies within Kingston and support the establishment of soil treatment businesses locally.

Within the Solid Waste theme of the Environmental Pillar, there are goals to reduce solid waste generation and to utilize wastes for beneficial re-use. The subject project seeks to advance both of these goals through taking contaminated soils that are typically considered waste and landfilled, and treating them so that they can be beneficially re-used and the amount that goes to landfill can be significantly reduced.

EXISTING POLICY/BY LAW:

N/A

NOTICE PROVISIONS:

N/A

ACCESSIBILITY CONSIDERATIONS:

N/A

FINANCIAL CONSIDERATIONS:

This report recommends creation of a new capital project with a budget of \$100,000. Funding of this budget would be:

- \$30,000 from an existing capital budget for municipal site clean-up.
- \$50,000 from a GMG grant from the Federation of Canadian Municipalities.
- \$20,000 from the municipal Working Fund Reserve.

Should GMF funding not materialize the project will be reassessed and a recommendation for how to proceed will be brought back to City Council.

CONTACTS:

Paul MacLatchy, Director of Strategy, Environment & Communications

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OTHER CITY OF KINGSTON STAFF CONSULTED:

Alan McLeod, Senior Legal Counsel
Damon Wells, Director, Public Works
Speros Kanellos, Director, Real Estate and Construction Services
Stephen Dickey, Manager, Accounting Services

EXHIBITS ATTACHED:

Exhibit A – Soil Recycling Pilot Facility Backgrounder



Soil Recycling Pilot Facility Backgrounder

Waterfront Toronto is committed to making the city's waterfront a model of sustainable development. What we do on the waterfront can and will set new standards for best practices not only in Canada, but around the world. Waterfront Toronto is conducting a soil recycling pilot in the Port Lands as part of our Soils Management Strategy to determine the viability of treating and reusing impacted soils as an alternative to the traditional "dig-and-dump" approach.

The purpose of the soil recycling facility is to treat soils near their source, divert soils from landfill, and provide a source of treated soil that can be used in waterfront revitalization projects.

Much of Toronto's waterfront was constructed by filling in parts of Lake Ontario with materials that are considered contaminated by current standards. The current common treatment of contaminated soil is to "dig and dump", a practice that simply transfers the contaminants and problem to a secure landfill setting.

By employing global best practices and made-in-Toronto solutions, the city's new waterfront communities will protect and enhance our natural environment, and will ultimately be recognized as global models for sustainability. Waterfront Toronto's Lower Don Lands Plan, for instance, is one of the 16 founding projects of the Clinton Climate Initiative and was recently awarded the 2010 Transportation Achievement Award by the Institute of Transportation Engineers for excellence in the advancement of transportation to meet human needs. The Lower Don Lands is the first Canadian project to be honoured.

Waterfront Toronto's sustainable development approach is guided by a comprehensive Sustainability Framework, which serves as a roadmap to make certain that consistent principles are woven into every facet of operations and decision making.

Treatment of soils within the Designated Waterfront is needed to allow for revitalization efforts, including the development of new parks and public spaces.

DESCRIPTION

Waterfront Toronto is conducting a soil recycling pilot in the Port Lands as part of our Soils Management Strategy. Prior to committing to a full scale soil recycling facility, Waterfront Toronto is constructing a smaller-scale pilot recycling facility.

Remediation efforts within the waterfront include the excavation and removal of contaminated soil, which is expected to generate in excess of two-million cubic metres of impacted soil. Soil treatment, remediation, and reuse will prevent the excavated soil from being transported to landfill. Recycling soil would remediate it to an environmental condition that allows it to be reused.

The pilot is a first step in the larger plan to treat contaminated soil to an environmental condition that allows it to be reused in future residential, parkland and commercial areas. Conducting the pilot will enable us to better assess the effectiveness and economic performance of the technologies and optimize operational features before developing a full-scale facility.

The goals of the pilot are to identify the range of treatment options and costs of remediating soil; to confirm that impacted soil can be treated to environmental standards set by the Ministry of the Environment; and to showcase treatment technologies.

ENVIRONMENTAL SUSTAINABILITY

Recycling soil is a sustainable alternative to “digging and dumping”. Digging and dumping simply transfers the contaminants to a secure landfill.

Revitalization of much of the 800 hectares of the waterfront area depends on the ability to deal with soil that has been impacted by decades of industrial uses and by infilling long ago when standards were not as stringent as today. As part of our sustainability objectives, Waterfront Toronto wants to use the latest and best technologies to wherever possible treat and reuse soil rather than transporting contaminated soil to landfill sites in other communities.

Recycling soil would remediate it to an environmental condition that allows it to be reused, which will not only reduce Green House Gas (GHG) emissions, but also reduce revitalization costs. Using remediated soil in revitalization projects will reduce the need to import soil, which in turn will reduce truck traffic which is a large producer of GHG emissions. Revitalization costs will also be reduced because the recycled soil will be used to construct waterfront parks, public realm and open spaces, reducing the need to purchase and import clean soil.

Before receipt at the pilot facility, all incoming soil will undergo pre-testing to determine soil quality and the levels and types of contamination. Soils containing hazardous waste will not be accepted for treatment. Soils deemed to be hazardous will be transferred to a Ministry of the Environment (MOE) licensed hazardous waste landfill facility. Dust control, air monitoring and runoff control measures will be in place as part of the operational procedures.

The soil management facility will operate to ensure that soils within the Designated Waterfront Area are managed in a way that is protective of human health and the natural environment. The soils will be managed in a sustainable manner - as a resource to be reused and recycled to the extent possible within the Designated Waterfront Area.

Waterfront Toronto is advancing the project to ensure that sufficient soils of appropriate quality are available when required to support revitalization activities, while reducing the need to import soils from sources outside of Toronto or to transport soil to landfill.

LOCATION

294–348 Unwin Avenue

The proposed 8.2 hectare (20.26 acres) site located at 294–348 Unwin Avenue, which is owned by Toronto Port Lands Company (formerly TEDCO), is currently zoned industrial and was most recently used for salt storage and aggregate processing.

PUBLIC CONSULTATION

- Presentation to Community: Port Lands Pilot Soil Recycling Facility Plan (06/16/10)
- Public Open House: Port Lands Pilot Soil Recycling Facility (03/11/2010)
- Public Open House: Port Lands Soils Management Stockpiling Facility (10/06/2009)

To learn more about Waterfront Toronto's Soil Management Approach visit www.waterfronttoronto.ca

BUDGET AND TIMING

- **Timing:** The Pilot will start in summer 2010 and run for approximately six to twelve months.
- **Budget:** Proponents were chosen through a competitive procurement process. To protect the commercially sensitive and proprietary information of the Pilot proponents, costs will be disclosed at the conclusion of the Pilot.