Agenda Item # Page #

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON OCTOBER 6, 2015**
FROM:	**JAY STANFORD, M.A., M.P.A. DIRECTOR, ENVIRONMENT, FLEET & SOLID WASTE**
SUBJECT:	**INDIVIDUAL ENVIRONMENTAL ASSESSMENT LONG TERM SOLID WASTE RESOURCE RECOVERY & DISPOSAL PLANS**

RECOMMENDATION

That, on the recommendation of the Director – Environment, Fleet & Solid Waste, the following actions **BE TAKEN** with respect to the long term solid waste planning:

a) staff **BE DIRECTED** to proceed with an Individual Environmental Assessment to develop long term solid waste resource recovery and disposal plans for the City of London; and

b) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this matter.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

Relevant reports that can be found at www.london.ca include:

- Waste Diversion and Garbage Collection Updates (November 25, 2013 meeting of the Civic Works Committee (CWC), Item #7)
- W12A Landfill Community Enhancement and Mitigative Measures Program, Environment and Transportation Committee (ETC) Meeting on May 11, 2009, Agenda Item #12
- City of London W12A Landfill Area Plan Study Meeting on Official Plan & Zoning By-Law Amendment, Planning Committee on February 9, 2009, Agenda Item #15
- Waste Diversion Strategy Public Consultation Document and Recent Waste Diversion Initiatives – *A Road Map to Maximize Waste Diversion* in London (December 10, 2007 meeting of ETC, Agenda Item # 9)
- Draft Guiding Principles for a W12A Community Mitigative Measures & Compensation Policy, ETC Meeting on June 19, 2006, Agenda Item #1.

BACKGROUND

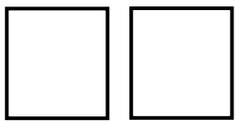
PURPOSE

The purpose of this report is to seek approval from Council to proceed with an Individual Environmental Assessment (EA) to develop long term resource recovery and disposal plans for the City of London.

CONTEXT

The W12A Landfill Site is one of the most important assets owned by the City as it ensures that residual waste from residents and businesses of London (after recycling and composting) can be managed within our boundaries at an affordable cost. The W12A Landfill has between 8 and 14 years of capacity remaining depending on how garbage is managed from residents and businesses in the future. For example, in the last two years, there has been a 20% reduction in the amount of garbage arriving at the landfill due to more business waste being set to landfills outside of London. With no changes to the existing waste management practices it is estimated that the W12A Landfill has 10 to 11 years of capacity remaining.

Approvals, design and construction of new long term resource recovery and disposal capacity will take several years. The first step in this process is completion of an EA to determine the most appropriate long term resource recovery and disposal methods.



An EA is a decision making process used to promote good environmental planning by assessing the potential effects of certain activities on the natural and human environment. EAs can be streamlined EAs or individual EAs.

Streamlined EAs (e.g., class EAs, Environmental Screening EAs, etc.) are for routine projects that have predictable and manageable environmental effects. Streamlined EAs (class EAs) are used for typical road, water and wastewater projects.

Individual EAs are prepared for large-scale, complex projects with the potential for significant environmental effects and require Ministry of the Environment and Climate Change (MOECC) approval. The City of London has only ever completed one individual EA. This was for the Wonderland Road realignment when the class EA process was found to be inadequate to address the issues raised by the public.

An Individual EA is mandatory for approval of new long term disposal capacity and can take between 3 and 12 years to complete. The average time to complete is approximately 7 years. Additional details on municipal experience in completing EAs for new long term disposal capacity is presented later in this report.

The individual EA for new long term disposal capacity will represent the most significant solid waste planning project in the last forty years. A brief history of major solid waste management planning events for the City of London is presented in Table 1.

Table 1 – Chronology of Major Waste Management Planning Events

Year	Major Waste Management Planning Events
1969	City of London commissioned James F. MacLaren Limited to develop a long term solid waste disposal plan which resulted in the selection of the W12A Landfill (located in the former Township of Westminster).
1973	The landfill received approval under the Environmental Protection Act (EPA).
1975	The Provincial Environmental Assessment Act (EAA) is passed. However, the EAA does not apply to W12A Landfill as it already had EPA approval.
1977	W12A Landfill begins operations. W12A Landfill was originally expected to last twenty years. Due to the addition of the London Health Sciences Centre (LHSC, formerly Victoria Hospital) Energy From Waste (EFW) facility as part of the waste management program coupled with significant additional activities with waste diversion and waste export, the life of the W12A Landfill site more than doubled.
1987	LHSC EFW facility begins operation.
1995	The London/Middlesex Waste Management Plan, a cooperative project between the City and the County of Middlesex, designed to look at long term waste management needs (next 25 to 40 years), started.
1997	City approves the waste management strategy referred to as the Continuous Improvement System as part of the Waste Management Plan. The long term waste disposal strategy was put on hold as the EA process, as it applied to waste management projects, was undergoing numerous revisions.
1999	LHSC EFW facility closes due to operational and financial challenges.
2005	The City undertakes an Area Plan for the larger neighbourhood around the W12A Landfill. This included the development of the W12A Landfill Community Enhancement and Mitigative Measures Program (approved in 2009).
2006	London Municipal Council reconfirmed its desire to continue to use the W12A Landfill site as its disposal option. This was done out of an abundance of caution as an agreement to use the landfill until 2006 was made with the former Township of Westminster (which no longer exists as it was amalgamated with London).
2007	*A Road Map to Maximize Waste Diversion* is released.
2011	Manning Drive Material Recovery Facility begins operations. This regional facility is currently processing recyclables from eight other municipalities and several institutions/businesses (e.g., Waste Management, Goodwill, Western).
2014	*Road Map 2.0 – The Road to Increased Resource Recovery and Zero Waste* is released.

DISCUSSION

Individual EA Process:

The Individual EA process in Ontario has two distinct parts. The first part is the preparation and submission to the MOECC of a proposed terms of reference (ToR). Once approved by the Minister, the ToR sets out the requirements for the subsequent EA study which is conducted by the proponent (i.e., City of London).

The ToR is essentially the work plan for the EA and will typically define the "need" and the "alternatives" being considered to address the need. In this case, the need (additional long term disposal capacity required by the City) will depend on several factors including:

- the size of the study area
- time period being covered
- waste types being included
- future improvements in the diversion rate (e.g., higher levels of resource recovery)

The "alternatives" that need to be considered are split into two groups ("alternatives to" and "alternative methods") in an EA:

- "Alternatives to" the proposed undertaking are functionally different ways of approaching and dealing with a problem or opportunity. For example, "alternatives to" in an EA look at long term disposal needs and includes landfilling, increased diversion, advanced resource recovery, thermal treatment and waste conversion technologies (e.g., energy-from-waste, gasification, gas phase reduction, etc.), waste export, etc.

- "Alternative methods" are different ways of performing the same activity. For example, an EA considering landfilling will look at "alternative methods" such as different footprint configurations, leachate and landfill gas collection designs, different types of landfilling (e.g., bioreactor landfill, landfill mining, balefill), etc.

The EA, which consists of the approved ToR and the subsequent EA conducted in accordance with the approved ToR, is submitted to the Minister for approval.

Recent Municipal Experience with EAs for Long Term Disposal Capacity

As noted earlier, an Individual EA for approval of new long term disposal capacity can take between three and twelve years to complete with an average time to complete of approximately seven years.

Since 2005 there have only been ten EAs approved for new long term disposal capacity for a municipality. Eight of these approvals were for small rural municipalities. Approval for larger municipalities occurred in Ottawa in 2005 for expansion of the Trail Road Landfill and in the Region of Durham & Region of York in 2010 for a new shared thermal treatment facility.

It should also be noted that several municipalities have attempted to get approval for new long term disposal capacity and have been unsuccessful over the years (e.g., Toronto, Guelph, Owen Sound, County of Simcoe, etc.).

There are currently at least a dozen municipalities in the EA process in Ontario seeking new disposal capacity. In addition, there several private sector EAs underway including the Southwestern Landfill Proposal by Walker Environmental in Ingersoll.

London's Resource Recovery Plan and Long Term Disposal EA

The approximate schedule and cost for the individual EA long term disposal capacity for the City is shown in Table 2 (next page). Table 2 also includes EPA approval costs and preliminary schedule. EPA approvals are required for the Design and Operations of the long term disposal solution.

EA approval is expected to take approximately four years which is less than a typical EA. Completion of an Area Plan for the W12A Landfill (2009) and the establishment of a Community Enhancement and Mitigative Measures Program (2009) are activities that contribute to the shorter timeframe as significant work has already been undertaken in the area around the W12A Landfill.

Funding for this project will come from the Sanitary Landfill Reserve Fund. The capital financing for the EA has always been part of long term planning and financing (capital budgeting) for waste disposal. Currently $700,000 has been approved. The additional financing has been identified in the 2016 to 2019 capital budget.

EA project management, government relations and stakeholder engagement will be undertaken by City staff with outside resources undertaking technical studies, as necessary, to meet the requirements of the EA. Using this approach will increase project control and cost containment, will reduce project management costs, allow for greater ability to accommodate change and adjustments, and ensure technical resources are being wisely used.

Table 2 – Tentative Schedule and Preliminary Budget

	Task	Date	Approximate Cost
Terms of Reference	**Development *of ToR*** - Publish Notice of Commencement - Develop Guiding Principles - Establish Need Study Area (London or Regional) Study Period (25 to 50 years) Waste Types - Develop Work Plan "Alternatives" be considered Evaluation criteria to be considered EA Consultation Program	December 2015 to September 2016	$500,000
	MOECC *Approval of ToR* - Government agency and public review - MOECC review - Ministers Decision	October 2016 to December 2016	
Environmental Assessment	**Completion *of EA*** - Collect data on alternatives Complete Technical Studies (Economic, Environment and Social) - Comparative evaluation of alternatives (based on selected criteria) - Select preferred alternative	January 2017 to May 2018	$1,550,000
	MOECC *Approval of EA* - Government agency and public review - Public inspection of MOECC review - Ministers Decision	June 2018 to December 2018	
Environmental Protection Act	***Preparation of EPA Documentation*** - Prepare design documents for waste, air and Ontario Water Resource Act approvals for new disposal capacity - Public consultation/Community engagement	January 2019 to December 2019	$750,000
	MOECC Approval of EPA Documentation	January 2020 to January 2021	
Total		***December 2015 to January 2021***	***$2,800,000***

Key considerations when undertaking the EA will include:

<u>Development of Guiding Principles</u>
A set of Guiding Principles will be developed to ensure the overall direction of the EA is consistent with the needs and goals of Municipal Council, residents and businesses. Key areas that will be addressed in the Guiding Principles include, but not limited to:

- Municipal Council roles and responsibilities
- Community engagement program
- Neighbourhood involvement and W12A Public Liaison Committee
- Openness and transparency
- Minimize potential harm and enhance benefits to the environment
- Sustainable financing
- Resource and waste quantities to be handled
- Balancing resource recovery (waste diversion) with disposal options

The Draft Guiding Principles and detailed TOR timeframe will be brought to CWC and Council for discussion and approval In January 2016 and then presented to the community for comment and input. The Guiding Principles will be brought back to Council for final approval in spring 2016.

Community Engagement

Engagement with interested persons and groups is a cornerstone of the EA process and a legal requirement. The City will need to involve interested persons and groups as early as possible in the planning process so that their concerns and ideas can be identified and considered before irreversible decisions and commitments are made on the chosen approach. A dedicated webpage will be used as the central location for all project details.

Academic Engagement Program

The City has a unique opportunity to involve local academic institutions (Western University and Fanshawe College). This involvement could include using co-op students to undertake specific tasks, providing learning opportunities for students and/or undertaking research on resource recovery technologies or understanding environmental impact assessment. For example, the Institute for Chemicals and Fuels from Alternative Resources (ICFAR), part of Western University, may provide opportunities to examine the potential of new or emerging resource recovery technologies applicable to the EA.

Resource Recovery Opportunities and Resource Recovery Plan

Integral to the City's EA will be consideration of Resource Recovery opportunities. *Road Map 2.0 – The Road to Increased Resource Recovery and Zero Waste* contained available details and identified the limitation with existing information and experience in North America with respect to certain resource recovery and waste conversion technologies. This EA will provide an overview of resource recovery and waste conversion technologies including facility costs, economic development opportunities, environmental and community concerns and benefits

W12A Mitigative Measures and Community Enhancement Program

The W12A Mitigative Measures and Community Enhancement Program has been in place since 2009. It is designed to address nuisance and property value impacts associated with living within a 1.5 kilometre radius of the landfill. The proposed EA process will identify if any adjustments are required to the current program from a community impact perspective.

ACKNOWLEDGEMENTS

This report was prepared with assistance from Anne Boyd, Coordinator - Waste Diversion and Mike Losee, Manager – Solid Waste Engineering & Planning.

PREPARED BY:	
WESLEY ABBOTT, P. ENG. **DIVISION MANAGER** **SOLID WASTE MANAGEMENT**	
PREPARED AND RECOMMENDED BY:	**REVIEWED & CONCURRED BY:**
JAY STANFORD, M.A., M.P.A. **DIRECTOR,** **ENVIRONMENT, FLEET & SOLID WASTE**	**JOHN BRAAM, P.ENG.** **MANAGING DIRECTOR,** **ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER**