Agenda Including Addeds
Waste Management Working Group

2nd Meeting of the Waste Management Working Group
March 8, 2018, 4:00 PM
Committee Room #3

Pages

1. **Call to Order**

   1.1 Disclosures of Pecuniary Interest

2. **Scheduled Items**

   2.1 4:05 PM DELEGATION 2

   Jay Stanford, Director, Environment, Fleet and Solid Waste and Wesley Abbott, Project Manager, Environmental and Engineering Services - Decision Report #6: Preliminary Proposed Draft Terms of Reference

   (Note: the Preliminary Proposed Draft Terms of Reference will be provided under separate cover.)

3. **Consent**

   3.1 1st Report of the Waste Management Working Group 15

   3.2 Progress Report #5: Community Engagement Program Update January 11, 2018 to February 28, 2018 23

   3.3 Background Report #3: Development of 60% Waste Diversion Action Plan 27

4. **Items for Discussion**

5. **Deferred Matters/Additional Business**

   5.1 (ADDED) Waste Management Community Liaison Committee Meeting #5 *42*

6. **Adjournment**

Next Meeting Date: To Be Determined

TO:	**CHAIR AND MEMBERS WASTE MANAGEMENT WORKING GROUP MEETING ON FEBRUARY 15, 2018**
FROM:	**JAY STANFORD, M.A., M.P.A. DIRECTOR - ENVIRONMENT, FLEET & SOLID WASTE**
SUBJECT:	**DECISION REPORT #6: PRELIMINARY PROPOSED DRAFT TERMS OF REFERENCE**

RECOMMENDATION

That, on the recommendation of the Director - Environment, Fleet and Solid Waste, the following actions **BE TAKEN** with respect to the report *Preliminary Proposed Draft Terms of Reference Environmental Assessment of the Proposed W12A Landfill Expansion, City of London*;

a) The Report **BE RECEIVED** for information; and,

b) Release of the report for review and comment by the Government Review Team and the general public **BE SUPPORTED** noting that minor changes/revisions to the report may be made prior to release to accommodate preliminary comments from the Ministry of the Environment and Climate Change scheduled to be received by March 14, 2018.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

Relevant reports that can be found at www.london.ca under City Hall (Meetings) include:

- Appointment of Consulting Engineer for Various Technical Studies as part of the Environmental Assessment Process for the Proposed Expansion of the W12A Landfill Site (July 17, 2017 meeting of the Civic Works Committee (CWC), Item #6)
- Update and Next Steps – Resource Recovery Strategy and Residual Waste Disposal Strategy as part of the Environmental Assessment Process (February 7, 2017 meeting of the CWC, Item #10)
- Individual Environmental Assessment Long Term Solid Waste Resource Recovery & Disposal Plans (October 6, 2015 meeting of the CWC, Item #14)

Relevant reports that can be found at www.london.ca under City Hall (Meetings – Advisory and other Committees) include:

- Terms of Reference Outline and Next Steps (January 18, 2018 meeting of the Waste Management Working Group (WMWG), Item #9)
- General Framework for the Community Engagement Program for the Resource Recovery and Residual Waste Disposal Strategies as part of the Environmental Assessment Process (January 19, 2017 meeting of the WMWG, Item #7)

COUNCIL'S 2015-2019 STRATEGIC PLAN

Municipal Council has recognized the importance of solid waste management in its 2015-2019 - Strategic Plan for the City of London (2015 – 2019 Strategic Plan) as follows:

Building a Sustainable City
- Strong and healthy environment
- Robust infrastructure

Growing our Economy
- Local, regional, and global innovation
- Strategic, collaborative partnerships

Leading in Public Service
- Proactive financial management
- Innovative & supportive organizational practices
- Collaborative, engaged leadership
- Excellent service delivery

BACKGROUND

PURPOSE:

The purpose of this report is to seek support from the Waste Management Working Group for release of the *Proposed Draft Terms of Reference Environmental Assessment of the Proposed W12A Landfill Expansion, City of London* for review and comment from the various stakeholders.

CONTEXT:

An Environmental Assessment (EA) under the EA Act is a planning study that assesses environmental effects and advantages and disadvantages of a proposed project. The environment is considered in broad terms to include the natural, social, cultural and economic aspects of the environment.

The first phase of the Individual EA process, used for large-scale projects like landfill sites, is the development and approval of a Terms of Reference (ToR) by the Minister. The ToR becomes the framework or work plan for the preparation and review of the individual EA. The ToR allows the proponent to produce an EA that is more direct and easier to be reviewed by interested persons.

The second phase of the individual EA process is completion and approval of an EA. The proponent completes the EA in accordance with the approved ToR.

DISCUSSION

Terminology
The ToR has a different title depending how far along it is in the approval process. For clarity these various titles are listed below in Table 1.

Table 1 - ToR Terminology

Title	Definition
Preliminary Draft Proposed ToR	An early draft of the Draft Proposed ToR. The MOECC does a preliminary screening of the Preliminary Draft Proposed ToR to ensure all documentation requirements have been met.
Draft Proposed ToR	Council approves release of the Draft Proposed ToR for feedback. The Draft Proposed ToR is submitted to the Government Review Team, public and other stakeholders for review and comment.
Proposed ToR	Council approves submission of the Proposed ToR to the MOECC for approval. The MOECC may ask for revisions to the Proposed ToR to address concerns prior to MOECC staff submitting the Proposed ToR to the Minister for approval.
(Final) ToR	ToR as approved by the Minister of Environment and Climate Change. EA must be carried out according to the ToR.

Development of ToR
Development of the ToR began on March 30, 2017 with the release of the Notice of Commencement and the start of the Community Engagement Program. The Community Engagement Program included:

- Project Website (Getinvolved.London.ca/WhyWasteDisposal) that had over 1,300 unique visitors;
- Series of Open Houses in May 2017 and November 2017. Each series of open houses was followed by a virtual open house on the project website ;
- Indigenous Community engagement;
- Creation of Waste Management Community Liaison Committee with includes representatives from various stakeholder groups;
- Presentations to key City advisory committees (ACE, AAC, and EEPAC);
- Regular updates to the W12A Landfill Public Liaison Committee;
- Booths at various community events (e.g., Sunfest, Gathering on the Green, Neighbourhood Service Days); and,
- Traditional media and social media advertising.

Overview of Preliminary Draft Proposed ToR
The full Preliminary Draft Proposed ToR is provided under separate cover. The Executive Summary of the report is provided in Appendix A.

It is worth noting that the majority of the Preliminary Draft Proposed ToR has been before the WMWG, Civic Works Committee, Council, and community stakeholders as it was being developed. The current report pulls all these details together in a prescribed format to ensure that future activities are identified, how items will be evaluated is documented, and how further input and review will occur is known.

The key features of the ToR are:

- Previous waste management studies (e.g., W12A Landfill Area Plan) allows the City to focus the EA to look at expansion of the W12A Landfill.

- The landfill expansion will be based on;
    - 25 year site life;
    - committing to 60% diversion of residential waste by 2022 noting this does not prevent increasing London's residential waste diversion rate above 60%;
    - consider allowing neighbouring municipalities to use the landfill noting City of London Council will have the authority to determine which, if any, municipalities or businesses outside of London are allowed to use any City residual waste disposal facility or facilities in the future; and
    - reducing the maximum annual amount of waste that will be allowed to be landfilled from current approved level of 650,000 tonnes per year to 500,000 tonnes per year.

- Landfill expansion alternatives are limited to vertical expansion and/or lateral expansion to the north and/or east of the landfill within the Waste Management Resource Recovery Area. The Waste Management Resource Recovery Area is already approved for landfilling in the City's Official Plan.

- The different landfill expansion alternatives will be assessed based on atmosphere, geology and hydrogeology, surface water, biology, land use, agriculture, archeology, culture, socio-economic, visual, transportation, and design & operations factors.

- The assessment of alternatives will consider three study areas; on-site (the area where landfilling could occur); site-vicinity (land extending a minimum of 500 metres in all directions around the on-site area); and haul route study area (likely only relevant to the traffic assessment and noise portion of the atmosphere assessment).

Next Steps
The next steps and tentative timetable for approval of the ToR is presented below.

Table 1 - Tentative Timetable for ToR Approval

Date	Step
March 19, 2018	• CWC to receive Draft Proposed ToR and approve for stakeholder circulation
March 27, 2018 to early May	• Circulate Draft Proposed ToR to Government Review Team • Notify interested stakeholders; place Draft Proposed ToR on-line and in libraries, City Hall for review
Late May, 2018	• Review of Proposed ToR by WMWG
June 19, 2018	• CWC to hold public participation meeting for Proposed ToR • CWC to consider recommending approval for submission to MOECC
Late June/Early July	• Formal submission of Proposed ToR to MOECC (includes notice to all stakeholders)
July to late 2018/ early 2019	• MOECC provides 30 day review period for stakeholders to provide comments to the MOECC • MOECC evaluates Proposed ToR submission and makes recommendation to the Minister • Minister makes Decision to Approve or Reject

ACKNOWLEDGEMENTS

This report was prepared with assistance from Mike Losee, Division Manager, Solid Waste Management and Jane Kittmer, Solid Waste Planning Coordinator.

PREPARED BY:	
WESLEY ABBOTT, P. ENG. **PROJECT MANAGER** **SOLID WASTE MANAGEMENT**	

PREPARED AND RECOMMENDED BY:	**CONCURRED BY:**
JAY STANFORD, M.A., M.P.A. **DIRECTOR, ENVIRONMENT, FLEET & SOLID WASTE**	**KELLY SCHERR, P.ENG., MBA, FEC** **MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER**

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Appendix A: Executive Summary – Preliminary Proposed Draft Terms of Reference
Preliminary Proposed Draft Terms of Reference (under separate cover)

Appendix A
Executive Summary – Preliminary Proposed Draft Terms of Reference

Phase 1: Preparation of a Terms of Reference:

An Individual Environmental Assessment (EA) for expansion of the W12A Landfill site is being undertaken by the City of London and requires approval under the provincial *Environmental Assessment Act*. The first phase in the EA process is preparation of a Terms of Reference (ToR). Work on the ToR started in March, 2017. The ToR becomes the framework for carrying out the EA.

This is an Executive Summary of the content of the draft proposed ToR which has been prepared by the City and will be circulated to government review agencies, Indigenous communities, a number of City committees and the public for comment. The comments received will be considered by the City of London in making revisions and preparing the proposed ToR, which will then be submitted to the Minister of Environment and Climate Change (Minister) for a decision. Once approved by the Minister, the ToR provides the framework or work plan that must be subsequently completed to prepare the EA, and the basis for review and approval.

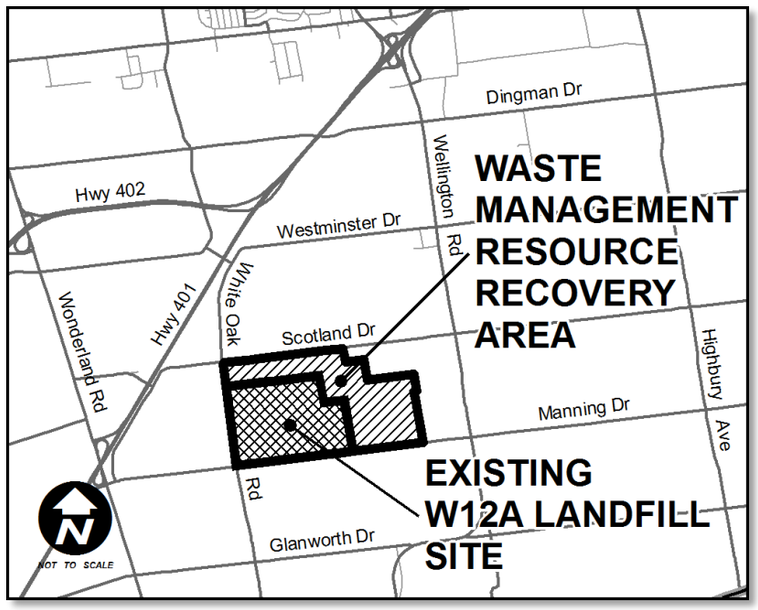
The City of London has implemented many waste diversion programs over the years and has achieved 45% diversion of its residential waste stream (Figure 1). This diversion rate is comparable to other medium to large size municipalities in Ontario with the exception of communities with Green Bin programs. The City has commenced the development of its long-term Resource Recovery Strategy. The first component of the strategy is to complete a 60% Diversion Action Plan to determine how best to increase residential waste diversion to 60% by 2022.

Figure 1 - Residential Waste Diversion

In parallel, and recognizing that despite measures to maximize diversion there will still be waste requiring disposal, expansion of the W12A Landfill site is the approach the City is taking for the long term Residual Waste Disposal Strategy for materials that cannot be diverted.

The W12A Landfill Site

Figure 2 - W12A Landfill Location



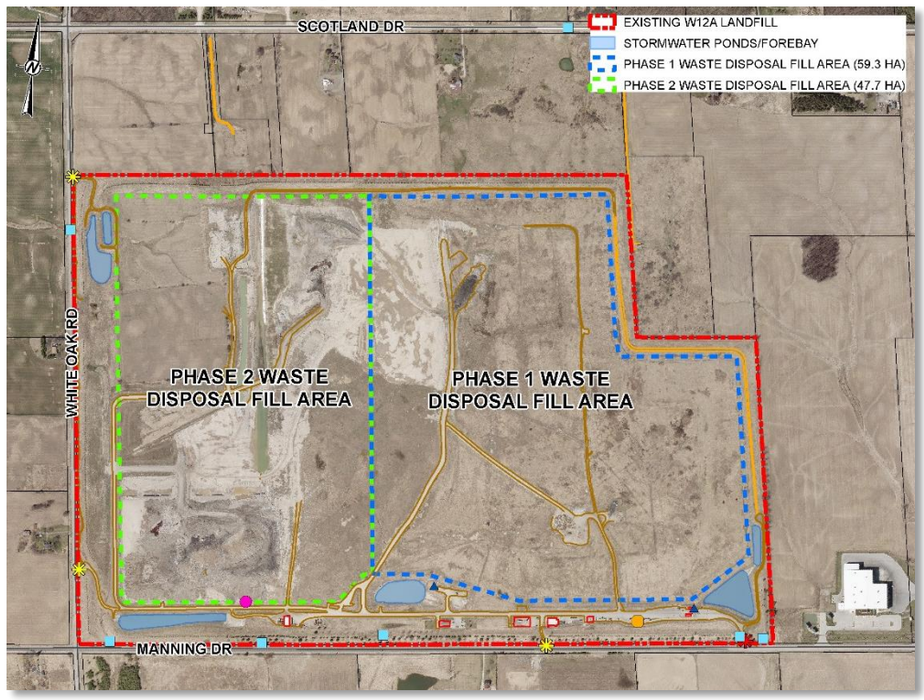
The W12A landfill site is located in the south portion of the City of London, within the western part of the block of land bounded by Manning Drive, Scotland Drive, White Oak Road and Wellington Road South (Figure 2). The site is currently licensed by the Province of Ontario to dispose of waste within a 107 hectare disposal area, which is located within a 142 hectare property. There is an approved site capacity of 12,500,000 cubic metres for waste (about 10,000,000 tonnes), cover soil and final cover. The site is allowed to accept solid non-hazardous waste from a specified area, consisting of the City of London, the Municipality of Thames Centre, the Lake Huron and Elgin Area water treatment plants and Try Recycling Facilities located adjacent to the City's northern boundary. The site can also accept Municipal Hazardous or Special Waste from the City of London, the County of Elgin and the County of Middlesex for transfer off-site for recycling or disposal.

The landfill property is located within the Waste Management Resource Recovery Area, which is a large area of City-owned land identified within the City's Official Plan for future waste management facilities. A City-owned Material Recycling Facility (MRF) is located within these lands just east of the landfill site.

The W12A Landfill Site has been in operation since 1977. The majority of the wastes that it receives are from London residences and some businesses. The remainder of the businesses within the city export their waste for disposal to facilities outside the City. At current disposal rates, the W12A Landfill is expected to reach its approved capacity at the beginning of 2025.

The landfill is divided into two phases (Figure 3). Phase 1 occupies the eastern portion of the disposal area and was filled to capacity in the first 25 years of operation. Phase 2 occupies the remaining western portion and has been constructed with a number of engineering design and operational upgrades (i.e., modern landfill design), and is the active area being used for the residual waste materials generated and requiring disposal. There are engineered collection systems for the leachate (the contaminated liquid produced by precipitation contacting the waste) produced at the site.

Figure 3 - W12A Landfill



For Phase 1 there is a leachate collection system around the perimeter of the disposal area, while for Phase 2 there is a full underdrain collection system below the entire base area. The collected leachate is sent off-site through a piping system for treatment at the Greenway Wastewater Treatment Plant. There is an active landfill gas collection system installed within the completed areas that have received final cover. The collected gas is flared. This gas management system reduces greenhouse gas and odour emissions from the landfill site. There is also a stormwater management system to control the quality and quantity of runoff discharged from the site.

The landfill property and surrounding area is underlain by an extensive deposit of low permeability clayey glacial till soil that provides a natural barrier to control migration of leachate into the groundwater. There are two permeable aquifer zones within the till deposit that are used for water supply from private wells by residences, agricultural and other business purposes in this rural area of the City.

Based on the results from ongoing groundwater and residential well monitoring programs, there is no evidence of leachate effects on the aquifer zones and the W12A Landfill is operating in accordance with the province's requirements in terms of effects on groundwater quality at the property boundary. The W12A Landfill is not having an effect on off-site water well quality.

The ongoing surface water quality monitoring program indicates that the surface water discharged via the stormwater management system meets provincial requirements. The landfill gas monitoring program indicates that landfill gas is not migrating off-site through the subsurface.

Rationale for Expanding the W12A Landfill Site

Since 1969, the City has undertaken a number of waste management planning studies to be able to provide secure, long-term waste management infrastructure for the city. The continued operation of the W12A Landfill site has been a component of the City's long-term plan to provide waste management services since 1977. In 1991 a provincially-appointed arbitrator addressed the City's request to annex additional lands in the Township of Westminster. The arbitrator reported that the W12A Landfill was the most desirable location for a landfill site and that the adjacent lands were likely suitable for an additional landfill site. In the City's 'Vision 96' strategic planning process, it was concluded that the W12A Landfill was a key component of the City's long-term waste management infrastructure.

From 1995 to 1999 the City of London and County of Middlesex were involved in a cooperative long term waste management planning exercise referred to as the London/Middlesex Waste Management plan. This project was 50% funded by the Province. Outcomes of the planning exercise included the approval of the City's long term strategy known as the Waste Management Continuous Improvement System and expansion of the City's Household Special Waste depot to serve the County of Middlesex.

The City commenced the W12A Landfill Area Plan study process in 2005 to study the evolution of the W12A Landfill facility within an overall integrated waste management centre with a planning horizon of 40 years. The study compared seven alternatives that included closing the W12A Landfill and either establishing a new landfill within London or exporting the waste for disposal outside its boundaries, and expanding the W12A Landfill. This study, which included public consultation events, concluded in 2008 and identified the preferred approach as expansion of the W12A Landfill within an integrated resource recovery centre. This was followed by establishment and designation of the Waste Management Resource Recovery Area in the City's Official Plan, and additional public consultation to develop a Community Enhancement and Mitigative Measures Program to involve the community in the site operations and to benefit the community in the area of the landfill site.

As part of developing this ToR, an updated screening assessment of the seven alternatives evaluated in the previous study was completed and the results presented to the public, various committees and City Council. This assessment confirmed that expansion of the W12A Landfill site remains the preferred approach for the City's Residual Waste Disposal Strategy.

Previous waste management studies and work completed as part of the TOR process concluded that expansion of the W12A Landfill is the most appropriate disposal option. Consequently, the City is proposing not to look at other disposal alternatives as part of the EA.

It is proposed that additional assessment of long-term waste disposal alternatives (known as 'Alternatives To' the undertaking) will not be part of the EA.

Description of the Project

Based on previous community engagement activities and ongoing input received, Guiding Principles were developed by the City and approved by City Council to direct the development of the Residual Waste Disposal Strategy. Among these guiding principles, the most support was received for making waste reduction the highest priority, being socially responsible and ensuring that the solution is financially sustainable. In addition, there was support for London managing its waste within its own boundaries.

The W12A Landfill site expansion project will be defined by:

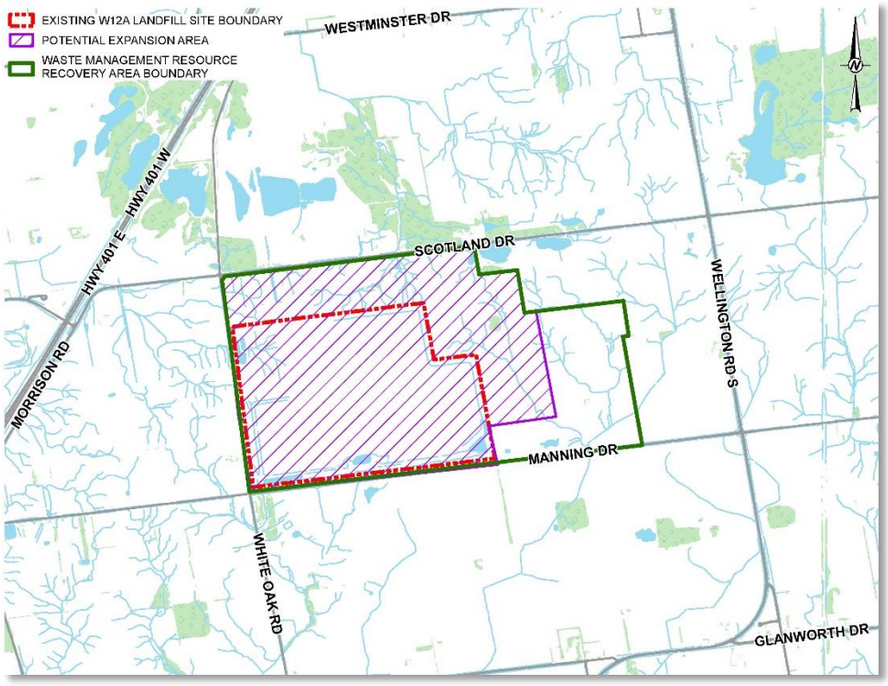
- A 25 year planning period beyond 2025, i.e., until 2050.
- The service area will be expanded to neighbouring municipalities to create a regional service area: The City of London and the Counties of Huron, Perth, Elgin and Lambton and Middlesex will be included in the regional service area. The City of London Council will have the authority to decide which, if any, of these other municipalities will be allowed to use of the W12A Landfill for disposal of their wastes, and under what conditions.
- Reduction in the maximum allowable annual tonnage that can be accepted at the landfill from 650,000 tonnes to 500,000 tonnes.
- Achieving 60% residential waste diversion by 2022.

At current disposal rates, the site is expected to reach its approved capacity at the beginning of 2025. An additional 14,600,000 cubic metres of airspace at the W12A Landfill site, which will about double the current approved capacity, will be required to satisfy disposal requirements for residual waste for the next 25 year period.

To satisfy these disposal requirements, expansion of the W12A Landfill should allow for an additional landfill capacity of 14,600,000 cubic metres.

The different ways in which this additional airspace can be achieved on the W12A Landfill site are known as ‘Alternative Methods.’ The alternative methods of expanding the W12A Landfill site will be developed and described during the EA and will consist of a vertical expansion above the existing waste disposal area and/or a horizontal expansion to the north and/or to the east within a portion of the Waste Management Resource Recovery Area (Figure 4).

Figure 4 – Potential Expansion Area



The area proposed for horizontal expansion extends beyond the current landfill site about 300 metres northward to Scotland Drive, and eastward about 420 metres. These expansion alternatives will consist of variations in and combinations of landfill height, landfill area and configuration. It is expected that there will be three or four different landfill expansion alternatives developed at a conceptual level, their potential effects on the environment assessed, and the alternatives then compared to identify the overall preferred expansion alternative.

Phase 2: Environmental Assessment

The EA work will be undertaken in a series of seven steps:

Step 1 – Identify the 'Alternative Methods' of landfill expansion (and incorporate conceptual design mitigation measures);

Step 2 – Characterize the existing environmental conditions;

Step 3 – Qualitative evaluation of 'Alternative Methods';

Step 4 – Compare the 'Alternative Methods' for landfill expansion and identify the preferred alternative;

Step 5 – Determine the net effects of the preferred alternative;

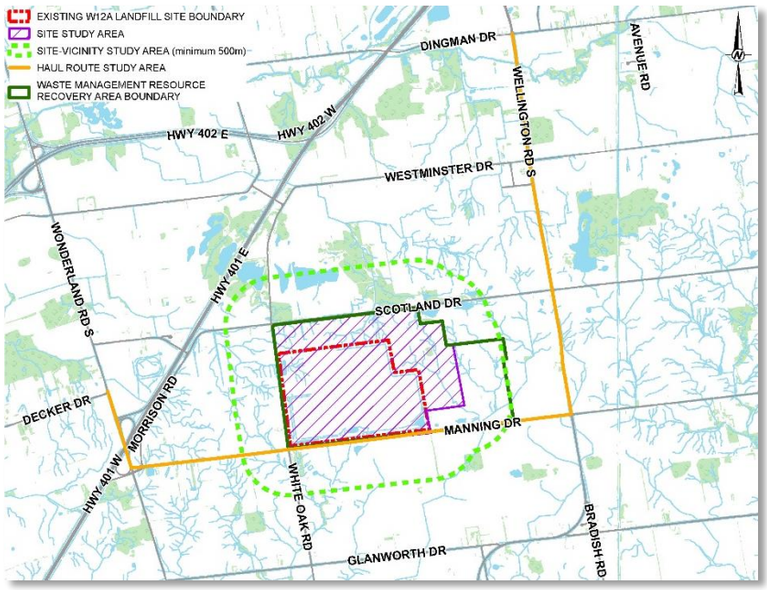
Step 6 – Describe the preferred 'Alternative Method' for landfill expansion; and,

Step 7 – Consideration of climate change.

Consultation (community engagement) with the public, Indigenous communities, Government review team members, City of London Advisory Committees, and other stakeholders will be ongoing throughout the EA process.

The EA study area is the area within which activities associated with the proposed project will occur and where potential environmental effects will be studied. Three generic study areas (Figure 5) for the assessment have been identified as follows:

Figure 5 – Proposed Study Areas



Site Study Area – The existing W12A Landfill Site, located at 3502 Manning Drive and adjacent lands where landfill expansion may occur.

Site-vicinity Study Area – The lands in the vicinity of the W12A Landfill extending at a minimum of 500 m in all directions around the limits of the proposed expansion lands.

Haul Route Study Area – This consists of Manning Drive between Wellington Road South and Highway 401, Wellington Road South between Dingman Drive and Manning Drive, and Wonderland Road South between Decker Drive and Manning Drive. This study area is only relevant to the traffic assessment and atmospheric noise assessment.

The components and sub-components of the environment that will be evaluated during the EA such that the potential effects of the proposed landfill expansion alternatives are determined and compared using a set of comparative evaluation criteria, are:

Environmental Components:	Atmosphere (air and noise)
	Geology and Hydrogeology (groundwater quality)
	Surface Water (quality and quantity)
	Biology (aquatic and terrestrial)
Socio-Economic Components:	Land Use
	Agriculture
	Archaeology and Cultural Heritage
	Socio-economic
	Visual Impacts
Technical Components:	Design & Operations
	Transportation

The ToR provides detailed technical work plans for each of these components and sub-components that will be undertaken during the EA study.

Consultation (Community Engagement)

The ToR describes the Community Engagement Program prepared and undertaken by the City for the development of this ToR, as well as the program proposed for the subsequent EA process.

Engagement and consultation with the public and other stakeholders is a key component of the EA process. It enables stakeholders to participate in the planning process and enhance the quality of the project. The key instruments in the Community Engagement Program that were used to engage the public and the other stakeholders and elicit feedback during the ToR preparation are summarized in Table 1 below). Input received from this program was considered by the City in preparing the draft proposed ToR.

Table 1 - Key Community Engagement Activities Between March 2017 and January 2018

Community Engagement Activity	Comments
Open Houses	• Two sets of open houses (one in May, one in November 2017) • Each set had an afternoon and evening sessions at two locations plus a follow-up virtual open house on the project website
W12A Landfill Public Liaison Committee	• Existing committee • Provided updates at six meetings
City of London Advisory Committees	• Advisory Committee on the Environment, Agricultural Advisory Committee and Environmental and Ecological Planning Advisory Committee • Attended and presented at two meetings for each advisory committee
Community Liaison Committee	• New committee with members representing various stakeholder groups • Four meetings
Community Events	• Booth at 10 community events (e.g., Sunfest, Lifestyle Home Show, etc.)
Project Website	• Getinvolved.London.ca/WhyWasteDisposal • Over 1,300 unique visitors
Letter/email correspondence	• Contacted 275 nearby property owners and residents, 28 landfill customers, 15 stakeholder groups and over 30 government agencies on three occasions (Notice of Commencement and both sets of open houses)
Newspaper and social media advertisements	• Numerous ads at various point in the process

A list of potentially affected Indigenous communities was developed in consultation with the MOECC during the development of this ToR. A program to engage and consult with the eight identified Indigenous communities was carried out considering their specific needs and specific issues. The Indigenous communities were consulted on how they would like to be involved in the EA process. City staff were available to meet with interested Indigenous communities and discuss the proposed project at any time during the development of the ToR.

To assist in the comparative evaluation of the expansion alternatives during the EA, the public was asked at open house #2 to rank the environmental components that they considered more important, important and less important. Based on the input received, groundwater quality, aquatic ecosystems and terrestrial ecosystems were the environmental components identified as most important, while cultural heritage landscapes, cultural heritage resources and archaeology were ranked less important.

Following approval of this ToR and during preparation of the EA, a consultation program will be continued to engage the public, businesses, the Government review team, Indigenous communities, as well the various groups and committees interested during the EA process. Input will be obtained through a number of engagement activities, which will be generally similar to the activities completed during preparation of the ToR.

The Draft EA will be circulated for a seven week public comment period prior to finalization and submission to the MOECC for approval. In addition, consultation specific to individual Indigenous communities will also be carried out.

Other Regulatory Approvals

In addition to EA approval, the W12A Landfill expansion will also require approvals under the *Environmental Protection Act*, the *Ontario Water Resources Act* and the *Planning Act*, and perhaps from the Upper Thames and Kettle Creek Conservation Authorities in terms of a permit to undertake specific works associated with the expansion. These approvals processes are expected be undertaken after EA approval is in place.

Overview of the EA Schedule

The following schedule is anticipated:

Circulation of Draft ToR for public and agency review	March 2018
Submission of Proposed ToR for Minister’s Approval	June 2018
Approval of ToR	Late 2018/Early 2019
EA Studies and EA Submission for Minister`s Approval	2019 and 2020
Approval of EA	Mid-2021
Other Approvals	2021-2022

It is anticipated that all approvals will be in place to allow final design of the preferred landfill expansion and any required construction prior to the W12A Landfill reaching its currently approved capacity, which is predicted at the beginning of 2025.

1ST REPORT OF THE

WASTE MANAGEMENT WORKING GROUP

Meeting held on January 18, 2018, commencing at 4:02 PM, in Committee Room #3, Second Floor, London City Hall.

PRESENT: Councillor M. van Holst (Chair); Mayor M. Brown; Councillors M. Cassidy, J. Helmer, S. Turner and H.L. Usher and J. Bunn (Secretary).

ALSO PRESENT: W. Abbott, M. Losee and J. Stanford.

I. CALL TO ORDER

1. Disclosures of Pecuniary Interest

That it BE NOTED that no pecuniary interests were disclosed.

2. Election of Chair and Vice Chair for the term ending November 30, 2018

That it BE NOTED that the Waste Management Working Group elected Councillor M. van Holst and Councillor S. Turner as Chair and Vice Chair, respectively, for the term ending November 30, 2018.

II. SCHEDULED ITEMS

3. Update Report #7: Proposed Alternative Methods (Alternative Landfill Design Concepts for Expansion)

That it BE NOTED that the Waste Management Working Group received the attached presentation from W. Abbott, Project Manager, Environmental and Engineering Services and J. Stanford, Director, Environment, Fleet and Solid Waste with respect to alternative landfill design concepts for expansion. (2018-E07)

III. CONSENT ITEMS

4. 3rd Report of the Waste Management Working Group

That the 3rd Report of the Waste Management Working Group from its meeting held on September 28, 2017, BE RECEIVED.

5. Waste Management Community Liaison Committee Meeting #3

That the Waste Management Community Liaison Committee Agenda and Summary from its meeting held on October 16, 2017, BE RECEIVED. (2018-C06)

6. Waste Management Community Liaison Committee Meeting #4

That the Waste Management Community Liaison Committee Agenda and Summary from its meeting held on November 20, 2017, BE RECEIVED. (2018-C06)

7. STAFF REPORT – Progress Report #4: Community Engagement Program Update from September 13, 2017 to January 8, 2018

That, on the recommendation of the Director, Environment, Fleet and Solid Waste, the staff report dated January 18, 2018, with respect to an Update on the Community Engagement Program from September 13, 2017 to January 10, 2018, BE RECEIVED. (2018-E07)

8. STAFF REPORT – Update Report #8: Programs, Projects and Provincial Activities that will Inform and/or Influence Strategies

That, on the recommendation of the Director, Environment, Fleet and Solid Waste, the staff report dated January 18, 2018, with respect to programs, projects and Provincial activities that will inform and/or influence the Resource Recover and Residual Waste Disposal Strategies, BE RECEIVED. (2018-E07)

IV. ITEMS FOR DISCUSSION

9. STAFF REPORT – Update Report #9: Terms of Reference Outline and Next Steps

That, on the recommendation of the Director, Environment, Fleet and Solid Waste, the staff report dated January 18, 2018, with respect to an update on the Draft Terms of Reference for the Individual Environmental Assessment (EA) for the expansion of the W12A Landfill. (2018-E07)

V. DEFERRED MATTERS/ADDITIONAL BUSINESS

None.

VI. ADJOURNMENT

The meeting adjourned at 5:17 PM.

NEXT MEETING DATE: February 15, 2018

Alternative Landfill Design Concepts for Expansion

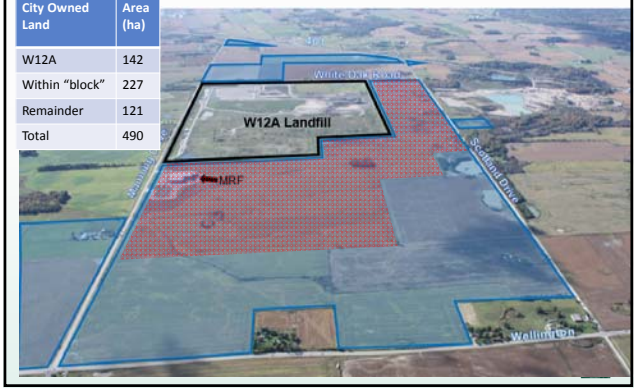
Waste Management Working Group

January 18, 2018

Waste Management Resource Recovery Area & "Landfill Block"

Waste Management Resource Recovery Area

City Owned Land	Area (ha)
W12A	142
Within "block"	227
Remainder	121
Total	490



W12A Landfill Site Features

Primary Concerns Raised About W12A Over the Years

- Odour issues
- Groundwater quality
- Truck traffic
- Why still open at this location?

Source: London Free Press, April 16, 2015

Monitoring & Compliance Program

- Groundwater (25 wells)
- Surface water (6 stations)
- Leachate collection (monthly testing)
- Landfill gas collection & flaring; other odour prevention/ reduction actions
- Tipping face inspector
- Housekeeping (litter, landscaping, road sweeping, dust)
- MOECC staff inspections
- Annual report (to MOECC)
- W12A Landfill PLC

Residual Waste Strategy

(All 4 Approved by Council October 30, 2017)

Four Key Parameters for the Proposed Expansion of W12A Landfill

1. Expand to 2050 (25 years beyond existing capacity).
2. Place limits on annual tonnage that can be landfilled.
3. Consider allowing neighbouring municipalities to use new/expanded facilities.
4. Commit to increasing residential waste diversion from 45% to 60%.

Second Series of Open Houses (November 29 & 30, 2017)

8

WELCOME

to the Second Series of Open Houses For the Residual Waste Disposal and Resource Recovery Strategies

Today you will learn about:

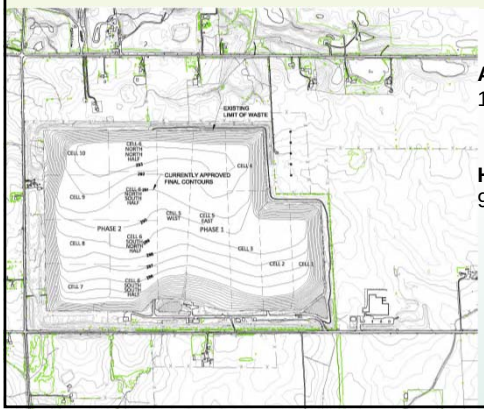
- Environmental Assessment for Proposed W12A Landfill Expansion, including:
  - Purpose of the proposed landfill expansion
  - Landfill expansion alternatives (know as 'Alternative Methods') being considered
  - Proposed criteria (known as "environmental components") to compare and evaluate the 'Alternative Methods'
  - Proposed studies to gather data about the proposed criteria
- Resource Recovery Strategy including:
  - Update on changes to waste management and diversion coming from the Province
  - Potential programs/initiatives to get to 60% waste diversion
  - Key technologies for advanced diversion and resource recovery
- How you can be involved, stay informed and provide feedback

getinvolved.london.ca/ WhyWasteDisposal

getinvolved.london.ca/ WhyWasteResource

Existing Design

9

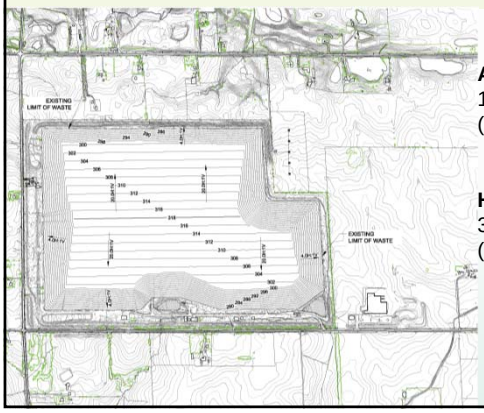


Area
107 hectares

Height
9 metres high

Design Concept 1

10

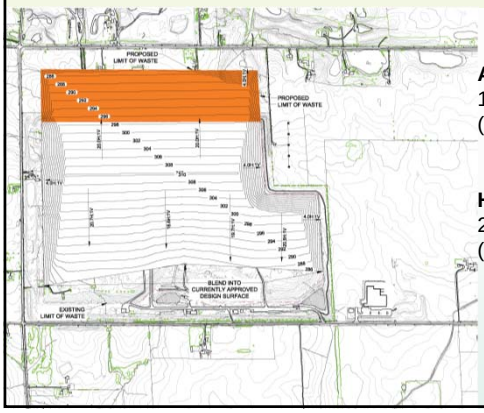


Area
107 hectares
(no change)

Height
35 metres high
(increase of 26)

Design Concept 2

11

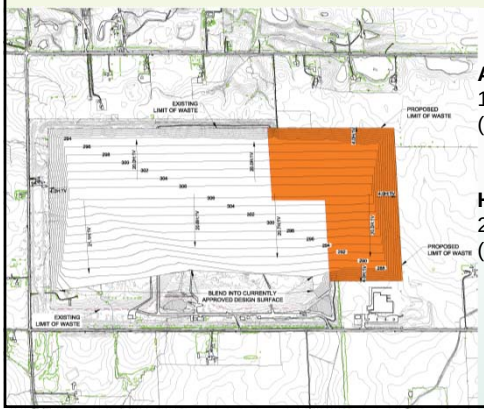


Area
134 hectares
(increase of 27)

Height
27 metres high
(increase of 18)

Design Concept 3

12



Area
143 hectares
(increase of 36)

Height
24 metres high
(increase of 15)

Environmental Components

13

Category	Environmental Component	Environmental Sub-components
Environmental	Atmosphere	• Air quality (including dust, odour and greenhouse gases) • Noise
	Biology	• Aquatic ecosystems • Terrestrial ecosystems
	Geology & Hydrogeology	• Groundwater quality
	Surface Water	• Surface water quality • Surface water quantity
Social	Agriculture	• Agriculture
	Archaeology	• Archaeology
	Culture	• Cultural heritage landscapes • Cultural heritage resources (including built heritage)
	Land Use	• Current and planned future land uses
	Socio-economic	• Local economy • Residents and community
	Visual	• Visual
Technical	Design and Operations	• Technical Considerations • Financial Considerations
	Transportation	• Traffic

Feedback received suggests:

Top Ranked
- Groundwater Quality
- Aquatic Ecosystems
- Terrestrial Ecosystems
- Air Quality

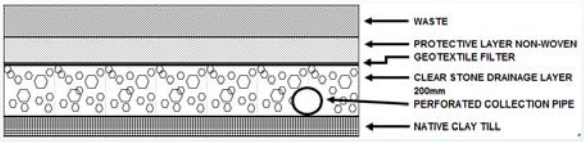
Visual (middle ranked)
- 401
- Manning and Wellington
- Wellington south of Glanworth Road

Bottom Ranked
- Heritage Landscapes
- Heritage Resources
- Archaeology
- Noise

Groundwater Quality

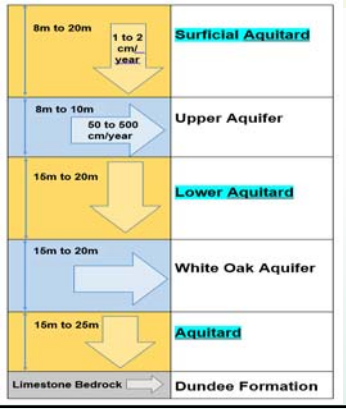
14

- Preliminary hydrogeological assessment suggests geomembrane liner likely not required to met groundwater quality standards
- Existing liner

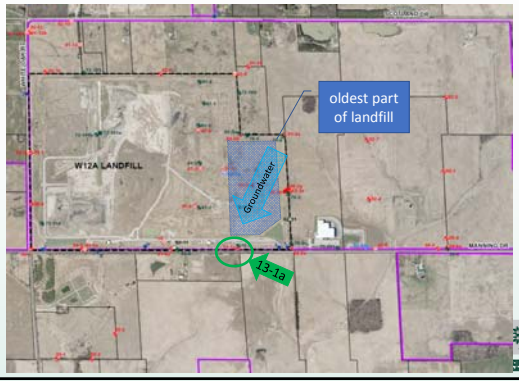


Groundwater Quality

15

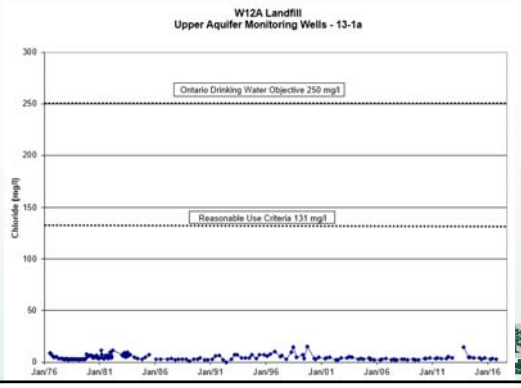


Groundwater Quality



Groundwater Quality

17



Visual Impact – Worst Case

18

401

Visual Impact – Worst Case

19

Manning Drive and Wellington Road

Visual Impact – Worst Case

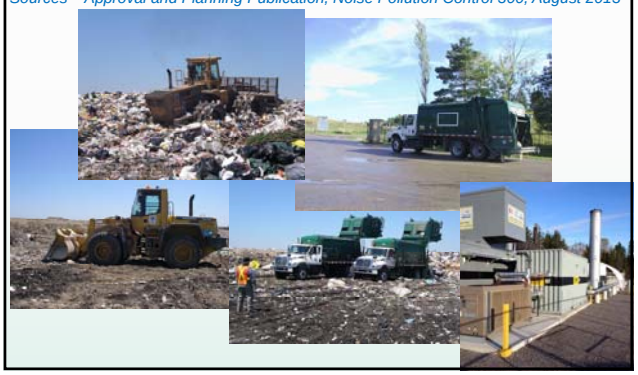
20

Wellington south of Glanworth Road

Noise

21

MOECC Environmental Noise Guideline – *Stationary and Transportation Sources – Approval and Planning Publication, Noise Pollution Control 300, August 2013*



EA Key Upcoming Dates

22

Major Activity	Date / Timeframe
Waste Management Working Group	February 2018
Submission of Draft Proposed Terms of Reference (ToR) to Civic Works Committee (CWC)	March 2018
Seek stakeholder input on Draft Proposed Terms of Reference	April/May 2018
Public Participation Meeting (PPM) at CWC	June 2018
Council approval of Proposed ToR and submission to the Province	June/July 2018

23

Questions ?????

TO:	**CHAIR AND MEMBERS WASTE MANAGEMENT WORKING GROUP MEETING ON MARCH 8, 2018**
FROM:	**JAY STANFORD, M.A., M.P.A. DIRECTOR - ENVIRONMENT, FLEET & SOLID WASTE**
SUBJECT:	**PROGRESS REPORT #5: COMMUNITY ENGAGEMENT PROGRAM UPDATE JANUARY 11, 2018 TO FEBRUARY 28, 2018**

RECOMMENDATION

That, on the recommendation of the Director, Environment, Fleet and Solid Waste, this report **BE RECEIVED** for information.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

Relevant reports that can be found at www.london.ca under City Hall (Meetings) include:

- Update and Next Steps – Resource Recovery Strategy and Residual Waste Disposal Strategy as part of the Environmental Assessment Process (February 7, 2017 meeting of the Civic Works Committee (CWC), Item #10)
- Individual Environmental Assessment Long Term Solid Waste Resource Recovery & Disposal Plans (October 6, 2015 meeting of the CWC, Item #14)

Relevant reports that can be found at www.london.ca under City Hall (Meetings – Advisory and other Committees) include:

- Progress Report #4: Community Engagement Program (January 18, 2018 meeting of the Waste Management Working Group (WMWG), Item #7)
- Update Report #4: Community Engagement Program (September 28, 2017 meeting of the WMWG, Item #6)
- Progress Report #1: Community Engagement Program (June 27, 2017 meeting of the WMWG, Item #6)
- General Framework for the Community Engagement Program for the Resource Recovery and Residual Waste Disposal Strategies as part of the Environmental Assessment Process (January 19, 2017 meeting of the WMWG, Item #7)

COUNCIL'S 2015-2019 STRATEGIC PLAN

Municipal Council has recognized the importance of solid waste management in its 2015-2019 - Strategic Plan for the City of London (2015 – 2019 Strategic Plan) as follows:

Building a Sustainable City
- Strong and healthy environment
- Robust infrastructure

Growing our Economy
- Local, regional, and global innovation
- Strategic, collaborative partnerships

Leading in Public Service
- Proactive financial management
- Innovative & supportive organizational practices
- Collaborative, engaged leadership
- Excellent service delivery

BACKGROUND

PURPOSE:

This report provides the Waste Management Working Group (WMWG) with an update on Community Engagement Program activities for the Resource Recovery and Residual Waste Disposal Strategies that have taken place between January 11, 2018 and February 28, 2018.

CONTEXT:

In February 2017 Municipal Council directed City staff to undertake a number of actions with respect to the development of a long term Resource Recovery Strategy and a Residual Waste Disposal Strategy for the City of London. These actions included approving the general framework of the Community Engagement Program including:

- Using the following community engagement tools and forums: public notices, project website including use of the *getinvolved.london.ca* website, interested stakeholders contact and distribution list, open houses, meetings/presentations, City of London Advisory Committees, and using a range of information and communications tools; and,

- Contacting individuals and groups within the following broad stakeholder categories: the general public, the Government Review Team and Indigenous Communities.

The Community Engagement Program began on March 30, 2017 with the release of the Notice of Commencement.

The WMWG received its first update summary of community engagement activities on June 27, 2017 for the period March 30, 2017 to June 5, 2017, its second update on September 28, 2017 for the period June 6, 2017 to September 12, 2017, and its third update on January 18, 2018 for the period September 13, 2017 to January 10, 2018.

The WMWG has received community engagement activity updates for the following periods:

1. March 30, 2017 to June 5, 2017
2. June 6, 2017 to September 12, 2017
3. September 13, 2017 to January 10, 2018

DISCUSSION

Overview

A formal Public Consultation Report (i.e., the title assigned by the Ministry of Environment and Climate Change - MOECC) for the Residual Waste Disposal Strategy will be required as part of the EA process. This report will document all aspects of the Community Engagement Program including information on advertising, outreach, events and activities as well as comments received. A similar report will be prepared for the Resource Recovery Strategy by City staff. Below is a brief summary of the recent Community Engagement Program activities.

Summary of Community Engagement Activities

Table 1 provides an update summary of the community engagement activities that took place from January 11, 2018 to February 28, 2018.

Table 1 – Community Engagement Activities January 11, 2018 to February 28, 2018

Activity	Description
Project Website (*Getinvolved. London.ca*)	*Residual Waste Disposal Strategy* • Second Virtual Open House closed on January 15, 2018. • Over 190 visits to the website when the Virtual Open House was operational between December 1, 2017 and January 15, 2018 with over 120 unique visitors. • Total visits since community engagement program started exceeds 1,900 visits with over 1,300 unique visitors. • 8 individuals have provided comments. *Resource Recovery Strategy* • Over 1,000 visits since the Virtual Open House opened on December 1, 2017 with over 700 unique visitors. • Total visits since the community engagement program started exceeds 3,300 visits with over 2,400 unique visitors. • Virtual Open Houses closes March 31, 2018. • 25 individuals have provided comments
Lifestyle Home Show at Western Fair (January 26 to January 28, 2018)	• Information provided to public about the EA. • Feedback was sought from residents regarding potential waste diversion options and how much they would be willing to pay for each option. • Over 500 residents provided feedback.
Indigenous Communities	• City staff met with Chippewas of the Thames First Nation (COTTFN) on February 12, 2018. City staff provided an overview of the Terms of Reference process for the expansion of the W12A Landfill as well as the 60% Diversion Action Plan as part of the Resource Recovery Strategy.
Community Liaison Committee (CLC)	• Fourth meeting on February 26, 2018; meeting covered updates of next steps of the EA and the 60% Diversion Action Plan.
Other	• Presentations to Advisory Committee of the Environment on January 10, 2018. • Presentation to the Agricultural Advisory Committee on January 17, 2018. • Presentation to Environmental and Ecological Planning Advisory Committee (EEPAC) on January 18, 2018. • Update provided to the W12A Landfill Public Liaison Committee February 15, 2018. • Social media (Facebook). • Personal meetings as requested.

ACKNOWLEDGEMENTS

This report was prepared with assistance from Mike Losee, Division Manager, Solid Waste Management and Jane Kittmer, Solid Waste Planning Coordinator.

PREPARED BY:
WESLEY ABBOTT, P. ENG. **PROJECT MANAGER** **SOLID WASTE MANAGEMENT**

PREPARED AND RECOMMENDED BY:	CONCURRED BY:
JAY STANFORD, M.A., M.P.A. **DIRECTOR, ENVIRONMENT, FLEET & SOLID WASTE**	**KELLY SCHERR, P.ENG., MBA, FEC** **MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER**

TO:	**CHAIR AND MEMBERS WASTE MANAGEMENT WORKING GROUP MEETING ON MARCH 8, 2018**
FROM:	**JAY STANFORD, M.A., M.P.A. DIRECTOR - ENVIRONMENT, FLEET & SOLID WASTE**
SUBJECT:	**BACKGROUND REPORT #3: DEVELOPMENT OF 60% WASTE DIVERSION ACTION PLAN**

RECOMMENDATION

That, on the recommendation of the Director, Environment, Fleet and Solid Waste, this report **BE RECEIVED** for information.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

Relevant reports that can be found at www.london.ca under City Hall (Meetings) include:

- Residual Waste Disposal Strategy Scope of Work as Part of the Environmental Assessment Process (February 7, 2017 meeting of the Civic Works Committee (CWC), Item #14)
- Update and Next Steps – Resource Recovery Strategy and Residual Waste Disposal Strategy as part of the Environmental Assessment Process (February 7, 2017 meeting of the CWC, Item #10)

Relevant reports that can be found at www.london.ca under City Hall (Meetings – Advisory and other Committees) include:

- Update Report #8 - Programs, Projects and Provincial Activities that will Inform and/or Influence Strategies (January 18, 2018 meeting of the Waste Management Working Group (WMWG), Item #8)
- Update Report #5 - Programs, Projects and Provincial Activities that will Inform and/or Influence Strategies (September 28, 2017 meeting of the WMWG, Item #7)
- Decision Report #5 – Residual Waste Disposal Strategy, Scope of Work as Part of the Environmental Assessment Process (September 28, 2017 meeting of the WMWG, Item #7)
- Update Report #2 - Programs, Projects and Provincial Activities that will Inform and/or Influence Strategies (June 14, 2017 meeting of the WMWG, Item #8)
- Update Report #1 - Resource Recovery Update (January 19, 2017 meeting of the WMWG, Item #7)

COUNCIL'S 2015-2019 STRATEGIC PLAN

Municipal Council has recognized the importance of solid waste management in its 2015-2019 - Strategic Plan for the City of London (2015 – 2019 Strategic Plan) as follows:

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- Strategic, collaborative partnerships

Leading in Public Service
- Proactive financial management
- Innovative & supportive organizational practices
- Collaborative, engaged leadership
- Excellent service delivery

BACKGROUND

PURPOSE:

This report provides the Waste Management Working Group with an overview of how the 60% Waste Diversion Action Plan (Action Plan) will be developed.

CONTEXT:

At the October 30, 2017 City Council meeting passed a resolution stating:

> *"The W12A Landfill expansion be sized assuming the residential waste diversion rate is 60% by 2022 noting this does not prevent increasing London's residential waste diversion rate above 60% between 2022 and 2050."*

This 60% waste diversion goal will be included in the environmental assessment as part of the commitments made by the City and will be a key consideration in the MOECC approval of the environmental assessment for expansion of the W12A Landfill.

Key considerations on development of the 60% waste diversion goal were:

- 60% diversion rate being the practical limit in Ontario at this time based on the following: many with Green Bin program are between 50% and 55% diversion; about three municipalities have diversion rates around 60% (Simcoe County, Dufferin County, City of Kingston) and a few are pushing higher (York Region including the city of Markham);
- feedback received from residents; and
- increasing from the current 45% diversion to 60% diversion represents a 33% improvement which is a significant undertaking.

DISCUSSION

Resource Recovery Strategy and 60% Waste Diversion Plan Action Plan

To plan for the future the City is developing a long term Resource Recovery Strategy. The Resource Recovery Strategy involves the development of a plan to maximize waste reduction, reuse, recycling and resource recovery in an economical viable and environmentally responsible manner.

As part of the Resource Recovery Strategy, the City will develop a short term Action Plan to achieve at least 60% waste diversion by 2022. It will be important that programs and initiatives that are part of the Action Plan are implemented in such a way as to allow maximum flexibility for change in the future. In other words, any programs or initiatives do not restrict or impede new waste diversion and resource recovery programs and initiatives in the future.

The overall Resource Recovery Strategy will look at the longer term steps the City should take to move beyond 60% waste diversion activities in these primary categories:

Development of Action Plan

The Action Plan will outline the steps that the City will need to take in order to reach 60% waste diversion by 2022. Development of the Action Plan includes:

1. Preliminary Review of Potential Programs, Initiatives and Technologies

Complete:	100%	In Progress:	0%	Not Started:	0%

Preliminary review of potential programs, initiatives and technologies to develop a long list of waste diversion programs, initiatives and technologies that required further investigation.

2. Review of Other Ontario Municipalities

Complete:	100%	In Progress:	0%	Not Started:	0%

A comprehensive review of waste diversion programs/initiatives in other large Ontario municipalities. In summary, the City has similar programs to most other large municipalities with the exception of a Green Bin program.

3. Community Feedback

Complete:	75%	In Progress:	25%	Not Started:	0%

Residents will have a number of opportunities to provide feedback on what should be included in the Action Plan. Summary information on potential programs/initiatives (Appendix A) was presented to the public at the November 2017 Waste Management Open Houses, the LifeStyle Homeshow (January 2018) and is available on-line at *getinvolved.london.ca/WhyWasteResource* until the end of March 2018. Over 500 residents have provided feedback to-date.

Information and feedback has also been sought from various City advisory committees and the Waste Management Community Liaison Committee.

4. Request for Information

Complete:	10%	In Progress:	40%	Not Started:	50%

The City will be releasing a Request for Information (RFI) to obtain information about resource recovery (i.e., waste processing) technologies that might be suitable for the City of London to divert waste away from the City's Landfill. It is expected that the 60% diversion could be achieved by a combination of enhanced waste reduction initiatives, increased capture of Blue Box materials, the introduction of recycling of various bulky items and the introduction of an organics management program.

Data collected as part of this RFI will be used to assist City staff in determining if there are other options for reaching 60% diversion, how likely is it to increase diversion beyond 60% diversion in the near term, and how a transition program to advanced resource recovery can be designed now.

Specifically the City is looking for technology providers for Mechanical Biological Treatment (MBT) or Waste Conversion systems. MBT systems refer to systems that separate mixed garbage in two or more waste streams for further processing. Further processing can include anaerobic or aerobic processing of an organics rich stream, capture of low quality recyclables, and production of a solid refuse fuel. Waste Conversion refers to technologies such as gasification, pyrolysis, etc. that typically produce a syngas, biochar and/or other products from garbage.

5. Consideration of Regional Resource Recovery Opportunities

Complete:	25%	In Progress:	0%	Not Started:	75%

In 2017, the City canvassed nearby municipalities (Elgin County, Huron County, Lambton County, Middlesex County, Oxford County and Perth County) responsible for waste management to determine their interest in using any future resource recovery facility(ies). All municipalities expressed an interest in being included in discussions about any new resource recovery facilities and indicated they would consider using the facility depending on the cost.

The potential for a regional facility may make it possible to consider technologies that require larger waste quantities in order to be economically feasible.

6. Alignment with Provincial Strategies and Legislation

Complete:	75%	In Progress:	25%	Not Started:	0%

Development of the Action Plan will need to align with the provincial *Strategy for a Waste-Free Ontario: Building the Circular Economy* as well as new provincial waste management planning initiatives including the *Proposed Food and Organic Waste Framework* and the *Amended Blue Box Program Plan.*

7. Comparative Analysis

Complete:	25%	In Progress:	25%	Not Started:	50%

A comparative analysis of the potential programs/initiatives will be completed looking at environmental (diversion rate, Greenhouse Gas benefits); social (public support, resident benefits/issues); financial (costs, revenue) and technical (collection/processing issues, stability of end markets, proven technology) considerations.

8. Peer Review

Complete:	0%	In Progress:	10%	Not Started:	90%

A consulting firm that specializes in waste management technologies will be used to conduct a peer review of the portions of the Action Plan dealing with any technical analysis and newer resource recovery technologies.

9. Consideration of Learnings from the Mixed Waste Processing Working Group

Complete:	0%	In Progress:	100%	Not Started:	0%

The Region of Peel is the coordinator of a Mixed Waste Processing Working Group comprised of several Ontario municipalities including the City of London, City of Toronto, Region of York, Region of Waterloo, Region of Niagara, County of Oxford, and County of Simcoe. This Working Group shares updates, research results, Committee/ Council reports, site visit experience and related operational experiences.

10. Consideration of Learnings from London Waste to Resources Innovation Centre (LWRIC)

Complete:	0%	In Progress:	100%	Not Started:	0%

Input and advice acquired through the working relationships established as part of the LWRIC. The primary goals of LWRIC are to:

- build on the existing foundation of traditional and innovative projects to divert waste from landfill and create value added products from residues and waste;
- create a focal point (location or locations) for the ongoing examination of innovative solutions for waste reduction, resource recovery, energy recovery and/or waste conversion into value-added materials, chemicals, heat and power;
- establish partnerships and collaborations between government, academia and businesses to synergistically build on existing strengths to create opportunities to prevent waste, to create products of value from waste, and to solve existing waste management challenges; and
- be known as an innovative centre of excellence with shared facilities and resources providing leadership, implementing best practices, undertaking leading edge research, providing knowledge and support to industry, while educating and training students, researchers and postdoctoral fellows in the various fields of resource and waste management.

Next Steps

The next steps and tentative timetable for approval of the Action Plan are presented below.

Table 1 - Tentative Timetable for 60% Waste Diversion Action Plan

Date	Step
Early March 2018	• Release Request for Information (RFI) on Resource Recovery Technologies
March 31, 2018	• End of community feedback period (including on-line feedback at getinvolved.london.ca/WhyWasteResource)
Early April 2018	• RFI due
April to Late May 2018	• Development of Draft Action Plan document

Table 1 - Tentative Timetable for 60% Waste Diversion Action Plan

Date	Step
Late May 2018	• Review of Draft Action Plan by WMWG
June 19, 2018	• CWC to receive Draft Action Plan and release for community feedback (after Council approval)
July 17, 2018	• Public participation meeting for Draft Action Plan at CWC meeting
July 24, 2018	• Approval by Council

ACKNOWLEDGEMENTS

This report was prepared with assistance from Mike Losee, Division Manager, Solid Waste Management, Anne Boyd, Manager – Waste Diversion Programs and Jane Kittmer, Solid Waste Planning Coordinator.

PREPARED BY:	
WESLEY ABBOTT, P. ENG. **PROJECT MANAGER** **SOLID WASTE MANAGEMENT**	
PREPARED AND RECOMMENDED BY:	**CONCURRED BY:**
JAY STANFORD, M.A., M.P.A. **DIRECTOR, ENVIRONMENT, FLEET & SOLID WASTE**	**KELLY SCHERR, P.ENG., MBA, FEC** **MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER**

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Appendix A : Summary Information on Potential Programs/Initiatives that was Presented to the Public

Appendix A

Summary Information on Potential Programs/Initiatives that was Presented to the Public

Why Waste?

Getting to 60% by 2022

3
FEEDBACK REQUESTED

The following boards focus on the specific strategies that will help get us to our waste diversion target of 60% by 2022. **Please complete the Feedback Booklet and tell us what you think about the different options.**

Organics Management

- Food waste reduction initiatives
- Home composting
- Community composting
- City wide organics program

Recyclables

- Carpet, mattresses and textiles
- Electronics, scrap metal and small metal appliances
- Wooden furniture
- Bulky plastics

Waste Reduction & Reuse Programs (examples)

- Waste Reduction Programs: lending libraries, repair workshops
- Community outreach programs: environment days
- Policies and by-laws: landfill bans, reduced garbage limit, pay per container, use of clear bags for garbage, mandatory separation programs

getinvolved.london.ca

London CANADA

Why Waste?

Food Waste Reduction Initiatives

4
FEEDBACK REQUESTED

Background:

On average each London household wastes about $600 worth of food over the course of the year. This is food that could have been eaten but wasn't.

This is waste that could have been avoided. Below are moderate and significant initiatives that will focus on reducing food waste.

Tell us how much you want us to invest in this initiative?[1]	Moderate (investment of resources)	Significant (investment of resources)
How will resources be invested?	• Promotion and community outreach programs, and information to households.	• Same as Moderate plus provide each household with a food waste reduction tool kit to help them reduce food waste.
How much closer will it get us to the 60% goal?	0.12% (190 tonnes) →	1.3% (2,100 tonnes)
Annual cost	$180 K →	$1.2 M
Cost per household	$1 →	$7
Cost per tonne	$950 ←	$570
Expected annual household savings	$ 1 M →	$10 M
GHG[2] avoided	600 tonnes →	6,100 tonnes
GHG reduction for every tonne diverted	2.9 tonnes	

One tonne of GHG reduction is equivalent to removing 1 car off the road for 3 months.

1. Approximate range of costs and tonnes are provided based on best available data.
2. Greenhouse Gas

getinvolved.london.ca

2cg

London CANADA

Why Waste?

Home Composting

5
FEEDBACK REQUESTED

Background:

Home composting plays an important role in waste reduction in London. The City has sold close to 56,000 units that contribute to an estimated 5,600 tonnes of food and yard waste that is managed in backyards across London.

Tell us how much you want us to invest in this initiative?[1]	Existing (Home Composting Program)	Moderate (investment of resources)	Significant (investment of resources)
How will resources be invested?	• Promoted seasonally, sell 'at cost' at EnviroDepots	• Moderate additional promotion and 50% subsidy of composters	• Significant additional promotion and outreach and 75% subsidy of composters
How much closer will it get us to the 60% goal?	3.5% (included in 45% current diversion rate)	0.2% 300 tonnes → 0.7% 1,100 tonnes	
Annual cost	$150 K (saved in avoided landfill/processing costs)	$130 K → $210 K	
Cost per household	No additional	$0.75 → $1.20	
Cost per tonne	No additional	$450 ← $190	
GHG[2] avoided		240 tonnes → 900 tonnes	
GHG reduction for every tonne diverted	0.8 tonnes		

One tonne of GHG reduction is equivalent to removing 1 car off the road for 3 months.

1. Approximate range of costs and tonnes are provided based on best available data.
2. Greenhouse Gas

getinvolved.london.ca

2cg

London CANADA

Why Waste?

Community Composting

6

FEEDBACK REQUESTED

Background:

Community composting options can range from setting up backyard composters for resident use at a multi-residential building to installing higher tech composter units for public use in parks and community spaces.

What type of program? [1]	Low Tech (Private)	Low Tech (Public)	High Tech (Public)
How will resources be invested?	• Composting at apartment buildings where residents can compost kitchen waste using large backyard composters or three-compartment wooden composters.	• Community locations where citizens can compost their garden or kitchen waste using large backyard composters or three-compartment wooden composters.	• Community locations where citizens can compost their garden or kitchen waste using technologies such as small-scale digesters or mechanical composting units.
How much closer will it get us to the 60% goal?	0.01% (20 tonnes)	0.01% (20 tonnes)	0.1% (200 tonnes)
Annual cost	$2 K	$4 K	$80 K
Cost per household	$0.01	$0.02	$0.45
Cost per tonne	$150	$300	$400
GHG[2] avoided	16 tonnes	16 tonnes	160 tonnes
GHG reduction for every tonne diverted	0.8 tonnes		

One tonne of GHG reduction is equivalent to removing 1 car off the road for 3 months.

1. Approximate range of costs and tonnes are provided based on best available data.
2. Greenhouse Gas

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London CANADA

Why Waste?

City Wide Organics – Curbside Program

FEEDBACK REQUESTED

Background:

A City wide organics collection program would provide the biggest boost to our waste diversion target of 60% by 2022. It is estimated that it would increase our diversion rate in the range of 9 to 14%.

A green bin is the most common type of program in Ontario for managing household organic waste and will be considered for London. Mixed Waste Processing is another option. Organics would continue to be collected with garbage, but instead of going to landfill the collected waste would be sorted to remove organics and recyclables, and anything left over would be landfilled.

What type of program?[1]	Curbside Green Bin Program	Mixed Waste Program
How will resources be invested?	• Weekly collection of kitchen organics from approximately 120,000 curbside households. • Organic waste is separated by homeowners and placed out for a separate organics pickup.	• Residents would continue to place organic waste in garbage. • Organic waste would be separated from garbage at a mixed waste processing facility to be composted or anaerobically digested
How much closer will it get us to the 60% goal?	9% 14,000 tonnes	→ 14% 22,000 tonnes
Annual cost	$3.5 M	→ $7 M
Cost per household	$20	→ $40
Cost per tonne diverted	$250	→ $300
GHG[2] avoided	11,000 tonnes	→ 18,000 tonnes
GHG reduction for every tonne diverted	0.8 tonnes	

One tonne of GHG reduction is equivalent to removing 1 car off the road for 3 months.

1. Approximate range of costs and tonnes are provided based on best available data.
2. Greenhouse Gas

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London CANADA

Why Waste?

City Wide Organics - Multi-Residential Program

8
FEEDBACK REQUESTED

Background:

About 30% of London's households live in multi-residential (apartment/condo) buildings and generate approximately 22,000 tonnes of garbage per year. The garbage from multi-residential buildings is similar to the garbage from single family households. The main difference is a higher percentage of recyclables in the garbage and less of the garbage is compostable. Options for diversion of organic waste from the multi-residential sector are the same as for curbside households: separation of organics in the home for collection (e.g., green bin program) or collection of unsorted waste that is later sorted in a mixed waste processing facility.

What type of program?[1]	Multi-residential Green Bin Program	Mixed Waste Program
How will resources be invested?	• Weekly collection of kitchen organics from approximately 55,000 multi-residential units. • Organic waste is separated by homeowners and placed out for a separate organics pickup. Collection carts would be stored in a common common area similar to how recycling is stored.	• Residents would continue to place organic waste in garbage. • Organic waste would be separated from garbage at a mixed waste processing facility to be composted or anaerobically digested.
How much closer will it get us to the 60% goal?	1.5% (2,500 tonnes) →	5% (8,000 tonnes)
Annual cost	$1.3 M →	$2.4 M
Cost per household	$7 →	$14
Cost per tonne diverted	$500 ←	$300
GHG[2] avoided	2,000 tonnes →	6,400 tonnes
GHG reduction for every tonne diverted	0.8 tonnes	

One tonne of GHG reduction is equivalent to removing 1 car off the road for 3 months.

1. Approximate range of costs and tonnes are provided based on best available data.
2. Greenhouse Gas

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London CANADA

Why Waste?

Other Recyclables

9a
FEEDBACK REQUESTED

Background:

Mattresses, carpets and wooden furniture are currently collected as garbage in London. There is potential to recycle these materials. In fact, the Province has already identified mattresses and carpet as materials they wish to target for recycling in the future.

How will resources be invested?[1]	Moderate (Collection at an EnviroDepot)	Significant (Semi-annual collection + EnviroDepot program)
	The data below reflect the two investment options.	
	Carpet	Mattresses & Box Springs	Wooden Furniture
Impact on Diversion	0.1% 160 tonnes	0.3% to 0.6% 500 to 1,000 tonnes	0.1% 160 tonnes
Annual cost[2]	$50 K to $140 K	$0.5 M to $1.1 M	$9 K to $90 K
Cost per household	$0.30 to $0.80	$3 to $6	$0.05 to $0.50
Cost per tonne	$350 to $850	$900 to $1 K	$50 to $500
GHG[3] avoided	400 tonnes	1,300 to 2,600 tonnes	600 tonnes
GHG reduction for every tonne diverted	2.6 tonnes	2.6 tonnes	3.8 tonnes
One tonne of GHG reduction is equivalent to removing 1 car off the road for 3 months			

1. Approximate range of costs and tonnes are provided based on best available data.
2. Program costs may be covered in future under provincial program.
3. Greenhouse Gas

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London CANADA

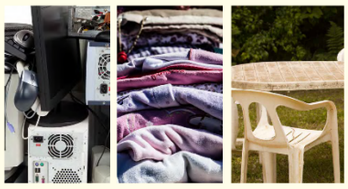
Why Waste?

Other Recyclables

9b
FEEDBACK REQUESTED

Background:

Electrical equipment & scrap metal, textiles and bulky plastic items are currently being recycled and reused in London. However, a significant quantity of these materials continue to be landfilled. There is potential to increase diversion of these materials.



How will resources be invested?[1]	Moderate (Collection at an EnviroDepot)	Significant (Semi-annual collection + EnviroDepot program)
	The data below reflect the two investment options.	
	Electrical Equipment, Metal	Textiles	Bulky Plastics
Impact on Diversion	0.1% to 0.2% (160 to 320 tonnes)	0.2% to 0.5% (320 to 800 tonnes)	0.03% to 0.06% (50 to 100 tonnes)
Annual cost[2]	$20 K to $110 K	$0 K to $110 K	$20 K to $80 K
Cost per household	$0.10 to $0.60	$0 to $0.60	$0.01 to $0.40
Cost per tonne	$125 to $350	$0 to $150	$400 to $800
GHG[3] avoided	700 to 1,400 tonnes	3,000 to 8,000 tonnes	50 to 100 tonnes
GHG reduction for every tonne diverted	4.4 tonnes	10 tonnes	1 tonne
One tonne of GHG reduction is equivalent to removing 1 car off the road for 3 months			

1. Approximate range of costs and tonnes are provided based on best available data.
2. Program costs may be covered in future under provincial program.
3. Greenhouse Gas

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London CANADA

Why Waste?

Waste Reduction & Reuse Initiatives

10
FEEDBACK REQUESTED

Background:

These initiatives focus on raising awareness of options to reduce waste and engage citizens to make small changes to daily life.

The impact of any one initiative may not be significant, but together small changes contribute to cultivating a culture of waste reduction, and over time could make a significant difference to how we manage resources.

As some of those listed are already underway in our community through other organizations, we could explore options to build partnerships as well as establish new sharing programs where they are needed.

More research is required to understand the potential impact on diversion and GHG reduction.

How will resources be invested?		Moderate Investment	Significant Investment
Program Cost for Examples		Per household **Net annual cost**	
Lending libraries	• Lending of materials and equipment that are used infrequently means less product production and can save money for households. Tool sharing libraries, for example, are being developed in London.	$0.25 **$45 K**	$0.50 **$90 K**
Repair workshops	• There is potential to reduce waste through repair and reuse workshops. These workshops will train interested citizens on how to fix household items (e.g., bikes, furniture, etc.) and extend their lives.	$0.25 **$45 K**	$0.50 **$90 K**
Promote reuse events	• Explore options for reuse events to facilitate trading, selling or giveaway of materials for reuse (e.g., furniture, toys) in a convenient, yet structured way so that the events do not contribute to litter or illegal dumping.	$0.25 **$45 K**	$0.50 **$90 K**
Waste reduction education and outreach	• In addition to the above, increase of general awareness campaigns on waste reduction (e.g., buy in bulk, buy products that last, repair products, avoid disposable products, unaddressed ad mail opt out, etc.)	$0.55 **$100 K**	$1.10 **$200 K**

Why Waste?

Waste Reduction Policies

11
FEEDBACK REQUESTED

Background:

Many of the City's waste diversion and reduction programs are voluntary; there is no mandatory recycling by-law for example. Other programs are written into the waste collection by-law, such as the 3 container limit on garbage, and a collection ban on materials such as scrap metal, appliances, and electronics.

Expanding the power of the by-law to reduce waste can be an effective means of increasing waste diversion. Changes to the by-law can also be implemented at relatively low cost. However, implementing by-law changes may not be popular, and this needs to be considered as we go forward. Alternative approaches that provide incentives to reduce will also be explored.

More research is required to understand costs, citizen acceptance of by-law changes, potential impact on diversion, and GHG reduction.

Do you support changes to the By-law to increase waste diversion? Indicate which of the examples below you support.	Yes	No

Expand & enforce material bans

Some materials are banned from collection at the curb and landfill (e.g., electronics, scrap metal, appliances, and tires). This could be expanded to include materials that can be recycled/composted now or in the future, such as: recyclables, wooden furniture, mattresses, carpet, and organics. An expanded list of banned materials may require additional enforcement to be effective.

Clear bags for garbage

Some municipalities have introduced clear bags for garbage to facilitate enforcement of material bans. Generally, clear bag programs have an allowance for one non-clear privacy bag.

Reduced garbage container limits

Further reduction of garbage container limits may be implemented in conjunction with new diversion programs, such as a city-wide organics program. This may also be accomplished by reducing frequency of collection of garbage (from once per six business days to bi-weekly collection).

User pay

In larger communities, user pay for garbage is typically restricted to cart based programs; residents pay an annual fee based on the size of cart they select.

Performance-based incentives

Some examples include: use of incentives such as point reward systems, or a "gold box" for correct recycling, rebate in User Pay programs for selection of the small size cart.

Waste Management Community Liaison Committee Meeting #5 Summary

Meeting #5 Monday February 26, 2018
6:00 pm – 7:30 pm
Location: Covent Garden Market

CLC Member Attendance: Skylar Franke (Co-Chair), Dave Raney, Mike George, Toni Krahn, Derek Armstrong, Marie Ross

City Staff Attendance: Jay Stanford, Wesley Abbott, Jane Kittmer

Previous Meeting November 20, 2017

Item #	Item
1	**CALL TO ORDER**
a	Review of Agenda ▪ *No items added*
b	Items that Must be Added to this Agenda ▪ *No items added*
c	Approval of notes from November 20, 2017 meeting ▪ *Notes approved*
2	**ITEMS FOR THIS AGENDA**
	Community Engagement Update including results of Open House 2 and Home Show ▪ *Home Show was very successful at obtaining feedback – over 550 responses. A small blue box was provided to those who provided feedback. 80% of people want changes to waste diversion programs.* ▪ *Open House 2 was also very successful with 72 visitors and 34 responses.* ▪ *Mattresses, carpet, wood furniture etc are considered as potential City of London driven diversion programs because producer funded programs are several years away for these items.*
3	**STANDING ITEMS**
a	Update Resource Recovery Strategy (Between November 20, 2017 and February 23, 2018)

	▪ *Information provided* ▪ *The organics program must be ready to be implemented by 2022. This isn't enough time to implement a new process (mixed processing) in London. We need to choose an option that won't trap us into something long-term. Orgaworld, Stormfisher, perhaps something further away or a small organics handling facility around W12A would be short-term options.* ▪ *The steps to achieve 60% diversion won't be a big surprise. Options presented on the boards at the Open House and the Home Show result in enough diversion to reach 60%. Some of the options presented on the boards at the Open House and the Home Show will be community driven without City involvement. A detailed report will be created for council outlining the initiatives to achieve 60% diversion.*
b	Next Steps – Resource Recovery Strategy ▪ *Information provided* ▪ *The 60% Diversion Plan will aim for 60%, but will be flexible so that we can increase beyond 60% diversion.* ▪ *The Resource Recovery Strategy will be a document outlining a 10 year time frame which will be re-evaluated regularly and request public input.*
c	Update – Residual Waste Disposal Strategy – EA for a Proposed Landfill Expansion (Between November 20, 2017 and February 23, 2018) ▪ *Information provided* ▪ *General comments from the Open House included: preference for going up rather than out for the landfill expansion; the environmental components that people are most concerned about are groundwater quality, aquatic and terrestrial ecosystems and air quality; the environmental components that people are least concerned about are cultural heritage resources and landscapes and archaeology.* ▪ *We are creating the Draft Terms of Reference document to provide to the public and government review team. Hope to have this finalized and ready for submission to the Minister of the Environment and Climate Change by June 2018. The election could interfere if responses from the government review team aren't received quickly. Council may not be able to approve the report if it's too close to the election.*
d	Next Steps – Residual Waste Disposal Strategy – EA for a Proposed Landfill Expansion ▪ *Information provided* ▪ *Request for Information (RFI) will be issued to service providers to capture new, emerging and next generation waste diversion and resource recovery technologies.*
4	**CLC DISCUSSION**
a	Discussion about 60% Diversion Plan and the individual components that will make up the plan (i.e., encourage any remaining CLC members to go on-line and submit

	their answers/comments. Also, consider creating a collective CLC response that considers all questions and is based on the average score of the CLC). ▪ *CLC members group response is shown on Attachment A*
b	Discuss 2018 plan for the CLC group ▪ *Meetings will be held when there is new information to provide to the group.* Meeting dates for 2018 ▪ *Next meeting will likely be in April when the Draft Terms of Reference is ready to submit to public and government review team.* ▪ *Meeting date will be decided by Doodle Poll.* Fill vacancies in membership ▪ *5 vacant spots will be advertised on getinvolved.london.ca specifically looking for 1 or 2 members from a community association, 1 member from the local business community, 1 member from the W12A PLC and 1 member at large*
5	**ADDITIONAL BUSINESS**
a	Key items for next meeting ▪ Status of Draft Terms of Reference
b	Date of next meeting: in April 2018, exact date to be determined by Doodle Poll 5:30 pm Food, mingle/network time 6:00 pm Meeting

Attachment A
CLC Members Group Response to 60% Diversion Plan

60% Diversion Plan Feedback Results of CLC Members

#1 Getting to 60% by 2022		Count	Percentage
$0 per household per year		0	0%
$1 to $25 per household per year		3	50%
$26 to $50 per household per year		3	50%
$51 to $75 per household per year		0	0%
$76 to $100 per household per year		0	0%
	Total Votes	6	

#2 Food Waste Avoidance		Count	Percentage
No Change	$0, 0% Diverted	0	0%
Moderate Program	$1 per household, 0.12% Diverted	5	83%
Significant Program	$7 per household, 1.3% Diverted	1	17%
	Total Votes	6	

#3 Home Composting		Count	Percentage
No Change	$0, 0% Diverted	2	33%
Moderate Program	$0.75 per household, 0.2% Diverted	3	50%
Significant Program	$1.20 per household, 0.7% Diverted	1	17%
	Total Votes	6	

#4 Community Composting		Count	Percentage
No Change	$0, 0% Diverted	3	50%
Low Tech, Private	$0.01 per household, 0.01% Diverted	2	33%
Low Tech, Public	$0.15 per household, 0.01% Diverted	1	17%
High Tech, Public	$0.45 per household, 0.1% Diverted	0	0%
	Total Votes	6	

#5 City Wide Organics - Curbside Program		Count	Percentage
No Change	$0, 0% Diverted	0	0%
Green Bin Program	$20 per household, 9% Diverted	6	100%
Mixed Waste Program	$40 per household, 14% Diverted	0	0%
	Total Votes	6	

#6 City Wide Organics - Multi-Residential Program		Count	Percentage
No Change	$0, 0% Diverted	1	17%
Green Bin Program	$7 per household, 1.5% Diverted	5	83%
Mixed Waste Program	$14 per household, 5% Diverted	0	0%
	Total Votes	6	

#7 A&B Other Recyclables		Count	Percentage
No Change	$0, 0% Diverted	0	0%
Carpet	$0.30 to $0.80 per household, 0.1% Diverted	6	100%
Mattresses and Box Springs	$3 to $6 per household, 0.3% to 0.6% Diverted	6	100%
Wood Furniture	$0.05 to $0.50 per household, 0.1% Diverted	6	100%
Electrical Equipment	$0.10 to $0.60 per household, 0.1% to 0.2% Diverted	6	100%
Textiles	$0.0 to $0.60 per household, 0.2% to 0.5% Diverted	6	100%
Bulky Plastics	$0.01 to $0.40 per household, <0.1% Diverted	0	0%
	Total Voters*	6	

* all voters preferred "significant" resources to be invested

#8 Other Waste Reduction Initiatives		Count	Percentage
Lending Libraries	$0.25 to $0.50 per household	5	83%
Repair Workshops	$0.25 to $0.50 per household	5	83%
Promote Reuse Events	$0.25 to $0.50 per household	5	83%
Waste Reduction Education/Outreach	$0.55 to $1.10 per household	6	100%
	Total Voters**	6	

** 17% of voters preferred "significant" resources to be invested, 66% of voters preferred "moderate" resources to be invested, 17% of voters preferred "low" resources to be invested

#9 Waste Reductions Policies and By-Laws	Count	Percentage
Expand and enforce material bans	5	83%
Clear bags for garbage	2	33%
Reduce garbage container limits	4	67%
User pay (pay per bag or container)	3	50%
Performance - based incentives	2	33%
Total Votes	6	