

H.08 Workshop Presentation Material
(August 26, 2019)

**Tour of City Facilities Including W12A Landfill
List of Attendees**

Oneida Nation of the Thames

- Chief Jessica Hill
- Levi Antone, Environment Committee member
- Brandon Doxtator, Consultation Coordinator

Munsee Delaware Nation

- Carol Antone, Executive Assistant to the Chief
- Stacey Phillips, Consultation Coordinator

Chippewas of the Thames First Nation

- Mackenzie Deleary, summer student
- Martina Albert, summer student



Groundwater Workshop/ Information Session

Date: Monday, August 26, 2019

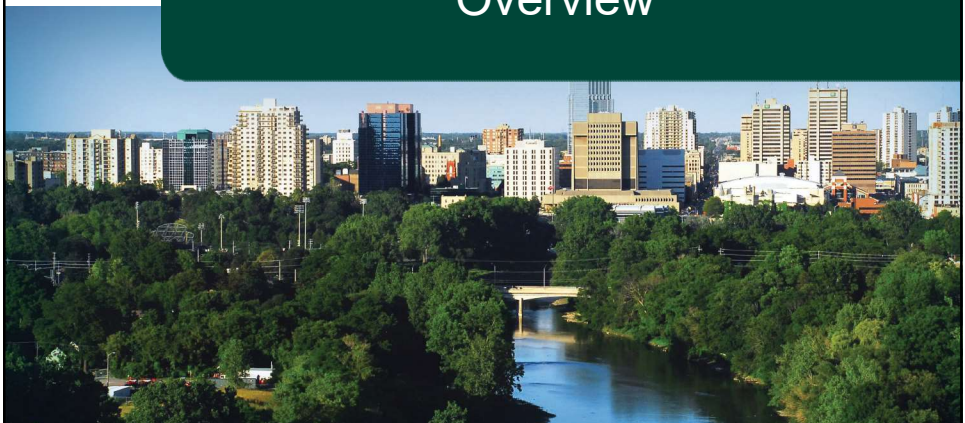
Time: 10 a.m. to 2 p.m.

Location: 328 Chippewa Rd, Chippewas of
the Thames First Nation Community Center

Item #	Item	Initial Comments	Approximate Time (minutes)
1.	Greetings		10
2.	Overview of Environmental Assessment, W12A Landfill and Study Team	City	20
3.	Overview of Groundwater Issues and Proposed Work Plan (Attachment A)	Dillon	20
4.	Review and Comments on Proposed Work Plan (Attachment B)	Dragun	20
5.	Discussion on Changes to Proposed Work Plan to Address Comments	Dragun/ Dillon	20
6.	Lunch (Meeting/discussions will continue during lunch)	-	30
7.	Overview of other Work Plans	City	10
8.	Discussion on Future Engagement/Consultation	City	20
9.	Other Business	-	10



EA and W12A Landfill Overview



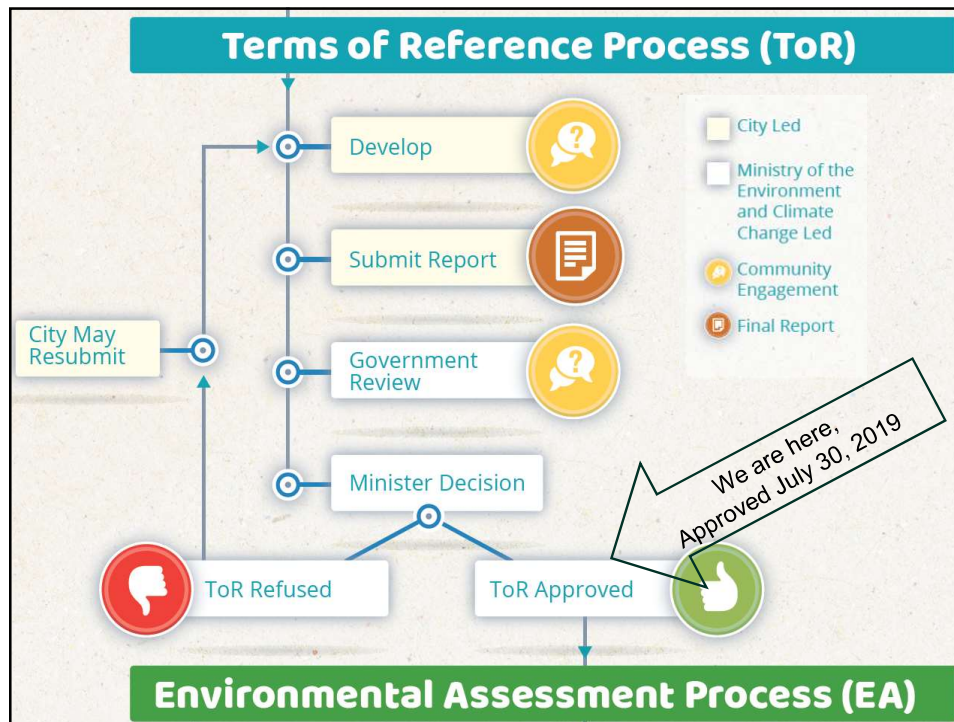
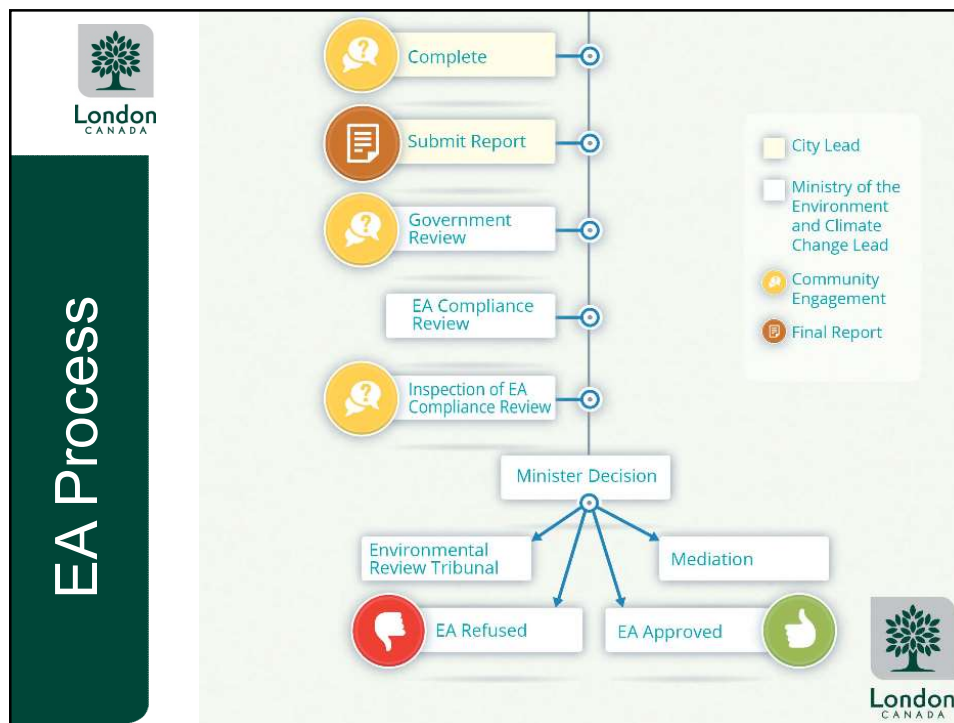
August 26, 2019



Overview

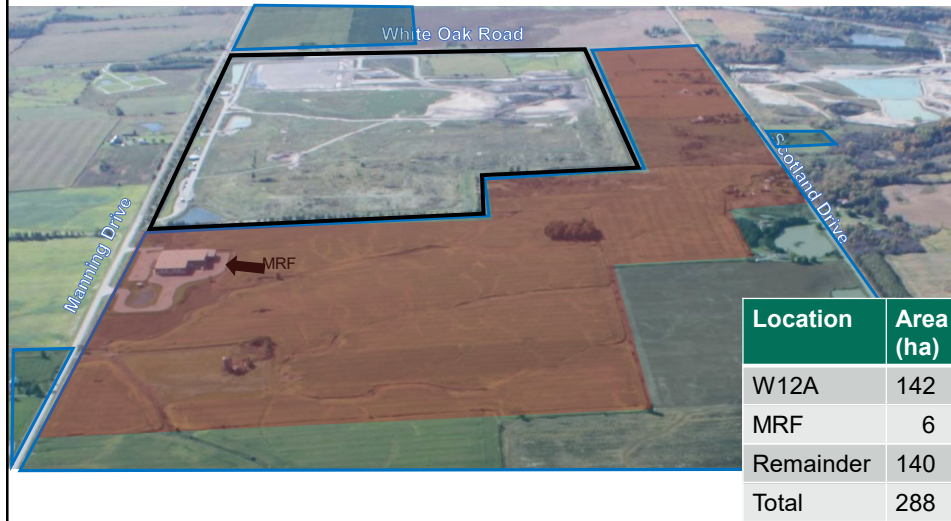
Part A – EA

Part B – W12A Landfill

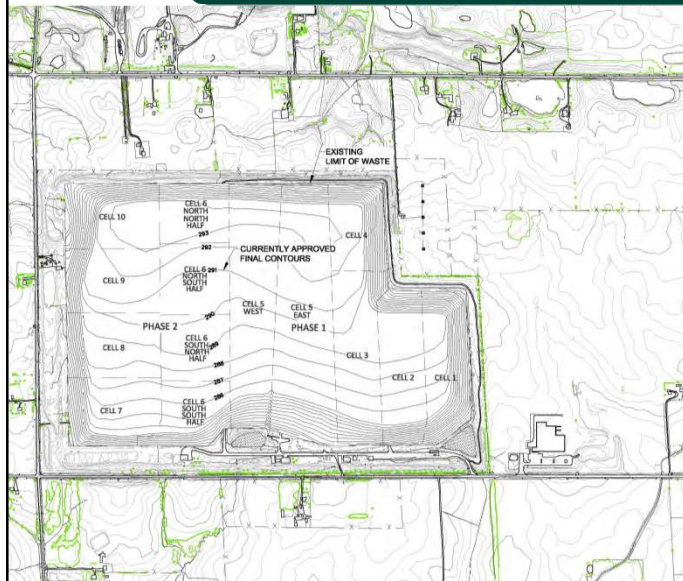




ToR Overview - Disposal Method

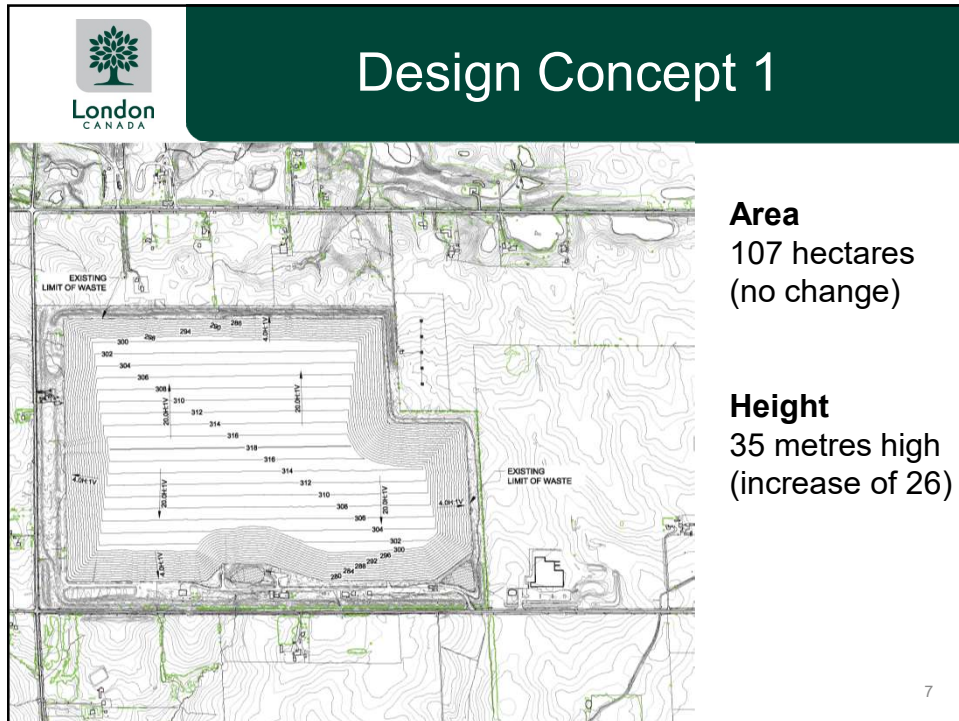
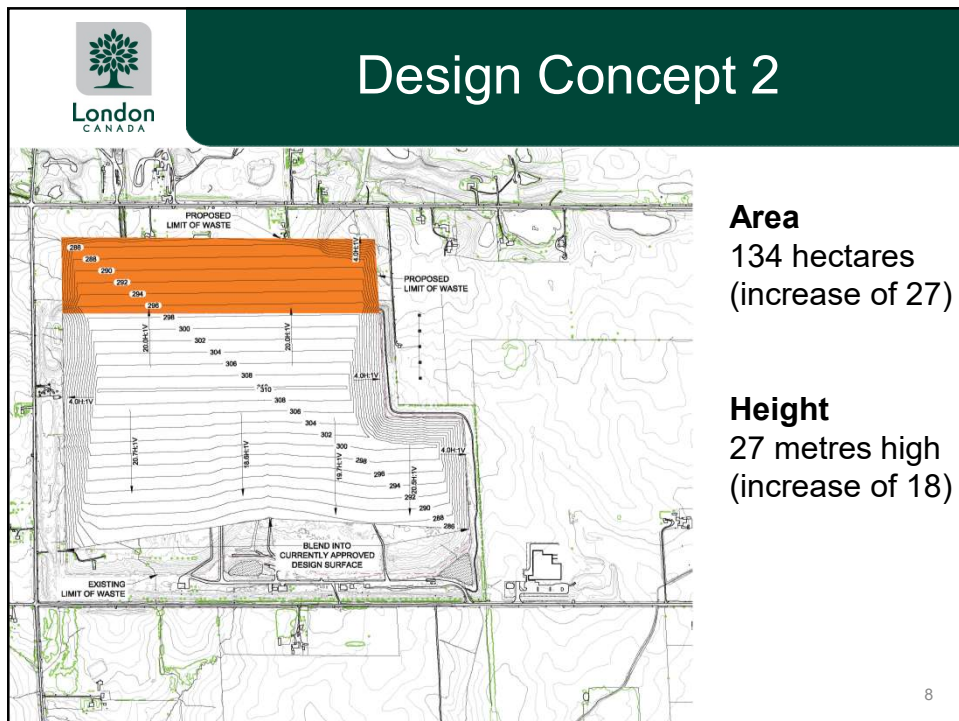


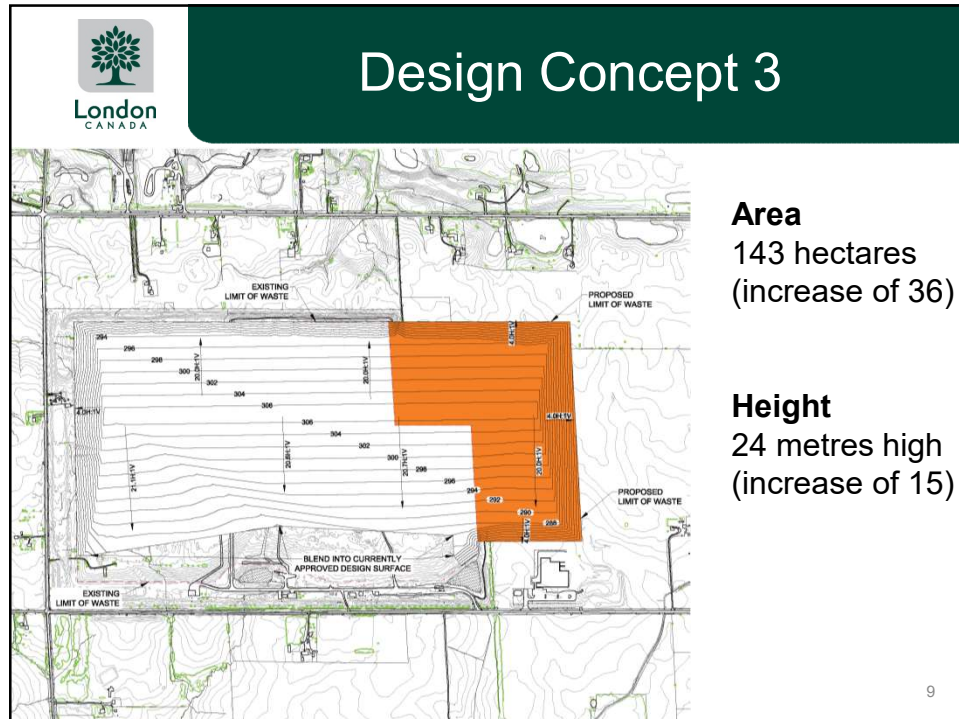
Existing Design



Area
107 hectares

Height
9 metres high





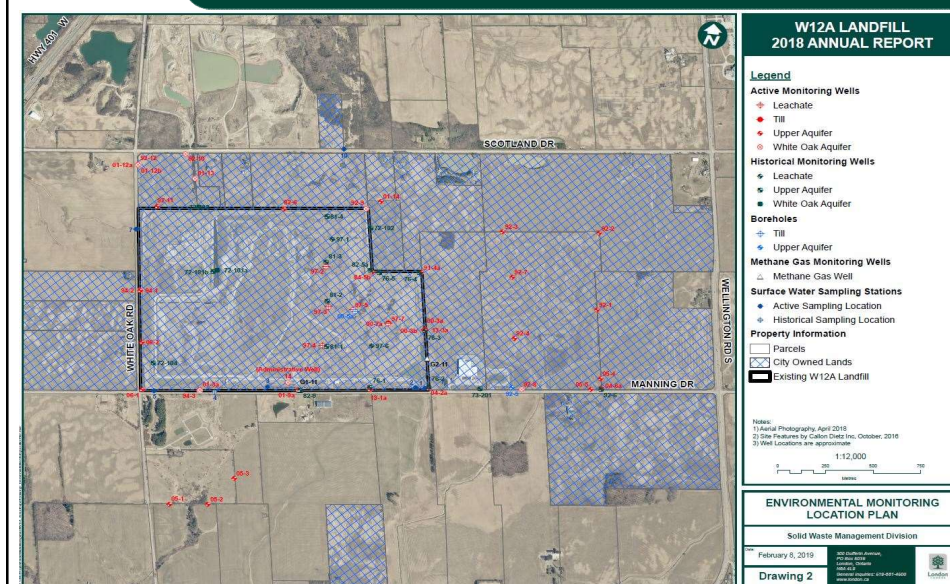
 **Part B**

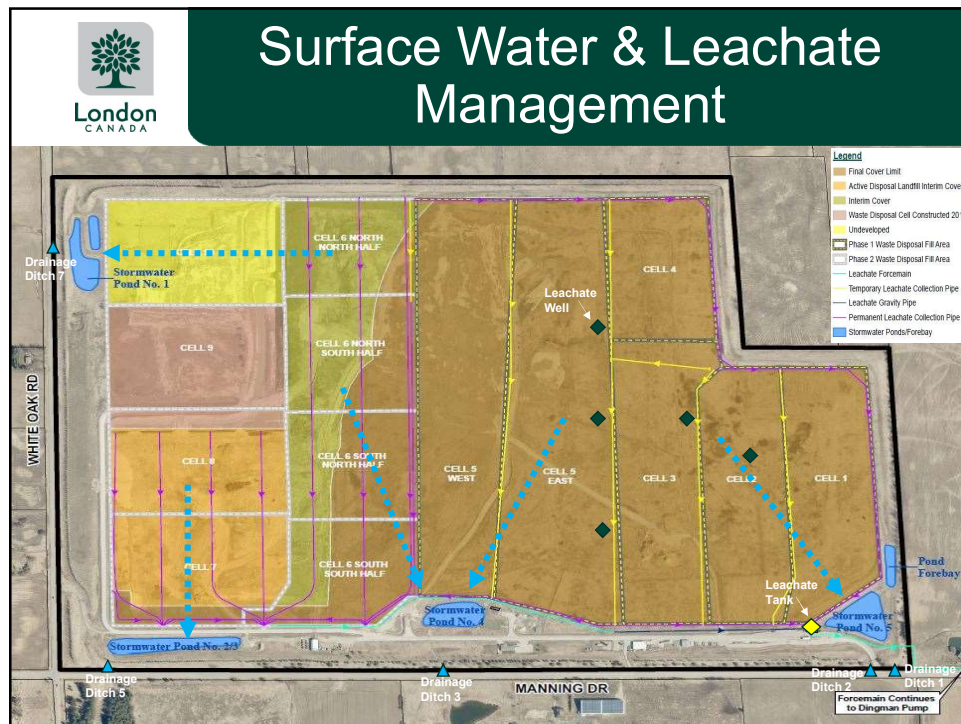
- 1. Groundwater**
- 2. Surface Water**
- 3. Air Quality**

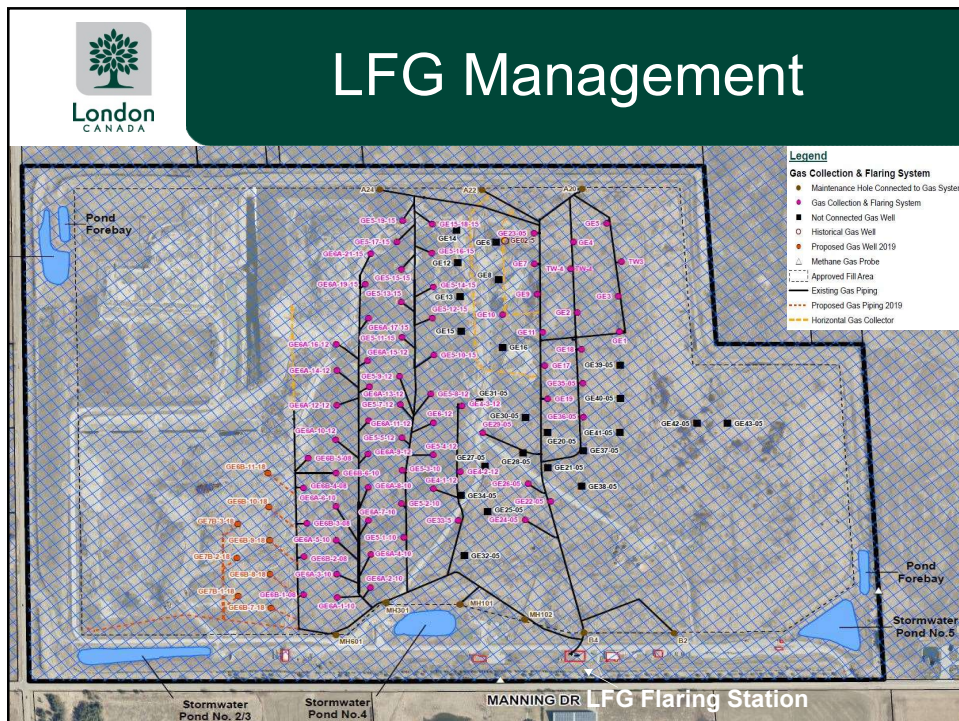
(untreated/have not gone through natural attenuation)

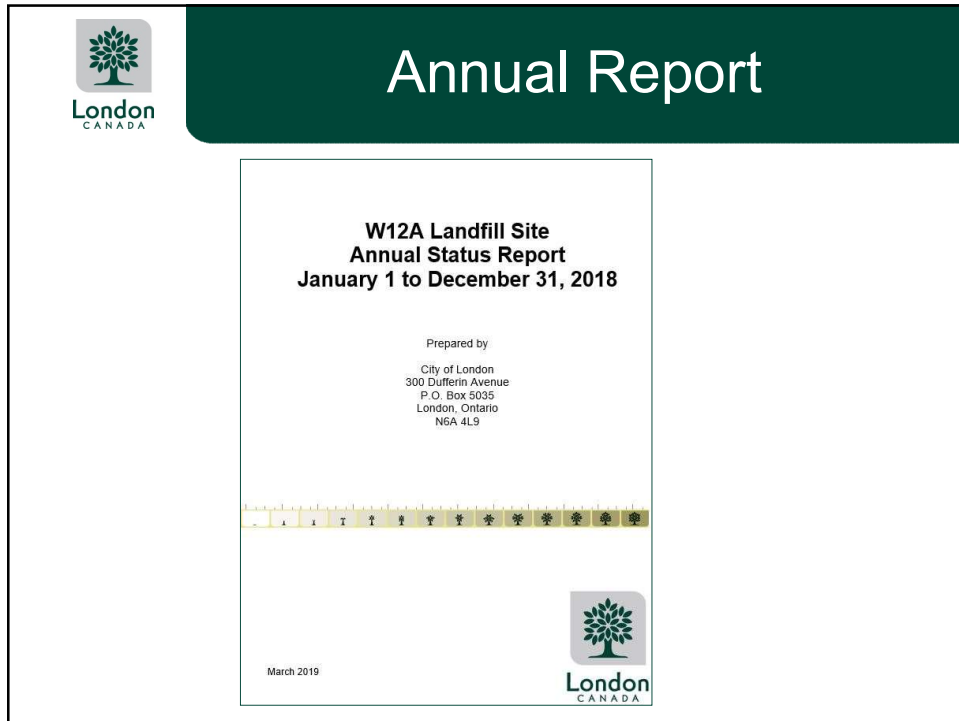
Compound	Detected above Drinking Water Standards
General Chemistry	✓
Metals	✓
Volatile Organics	✓
Pesticides and Herbicides	x
Dioxins & Furans	x
PCBs	x
Other (e.g., PAHs)	x

Groundwater Monitoring Wells











Studies with Detailed Work Plans



Atmosphere

Prepare air, noise, dust and odour emission estimates and execute air quality dispersion modelling to predict worst-case effects.

- First Nation Communities
- MECP



Biology

Identify potential impacts to aquatic and terrestrial features (i.e., species at risk, wetlands, woodlands) and identify mitigation measures.

- First Nation Communities
- MECP
- MNFR



Geology/ Hydrogeology

Prepare a contaminant transport model to predict worst-case groundwater impacts at the property boundary.

- First Nation Communities
- MECP



Surface Water

Predict potential impacts on surface water quality and execute surface water model to estimate peak flows and stormwater management requirements.

- First Nation Communities
- MECP
- UTRCA
- KCCA



Other Studies



Agriculture

Determine potential disruption to local farm operations and identify mitigation measures.



Archaeology

Identify archaeological sites that are anticipated to be impacted.



Cultural

Predict potential impacts to important cultural vistas, views and protected heritage properties or newly identified properties of cultural heritage value or interest.



Socio-economic

Predict impacts on employment and calculate the net economic effect. Evaluate the level of nuisance effect to surrounding residence and communities.



Other Studies



Land Use

Determine potential disruption to sensitive land uses and identify mitigation measures.



Visual

Identify potential effects on views from off-site vantage points using a 3D model.



Design and Operations

Complete a geotechnical assessment. Develop an estimate of the quantity of landfill gas and leachate (water that has come in contact with waste) generated from the expansion. Estimate cost of environmental and engineering controls for the alternative design concepts.



Transportation

Assess traffic operation and safety requirements for the haul route study area.



Environmental Components

Category	Proposed Environmental Components	
	Environmental Component	Environmental Sub-components
Environmental	Atmosphere	<ul style="list-style-type: none"> Air quality (including dust, odour and greenhouse gases) Noise
	Biology	<ul style="list-style-type: none"> Aquatic ecosystems Terrestrial ecosystems
	Geology & Hydrogeology	<ul style="list-style-type: none"> Groundwater quality
	Surface Water	<ul style="list-style-type: none"> Surface water quality Surface water quantity
Social	Agriculture	<ul style="list-style-type: none"> Agriculture
	Archaeology	<ul style="list-style-type: none"> Archaeology
	Culture	<ul style="list-style-type: none"> Cultural heritage landscapes Cultural heritage resources (including built heritage)
	Land Use	<ul style="list-style-type: none"> Current and planned future land uses
	Socio-economic	<ul style="list-style-type: none"> Local economy Residents and community
	Visual	<ul style="list-style-type: none"> Visual
Technical	Design and Operations	<ul style="list-style-type: none"> Technical Considerations Financial Considerations
	Transportation	<ul style="list-style-type: none"> Traffic

Top Ranked

- Groundwater Quality
- Aquatic Ecosystems
- Terrestrial Ecosystems
- Air Quality

Bottom Ranked

- Heritage Landscapes
- Heritage Resources
- Archaeology
- Noise



City of London W12A Landfill Groundwater Workshop

Rob Kell, P.Eng., P.Geo.

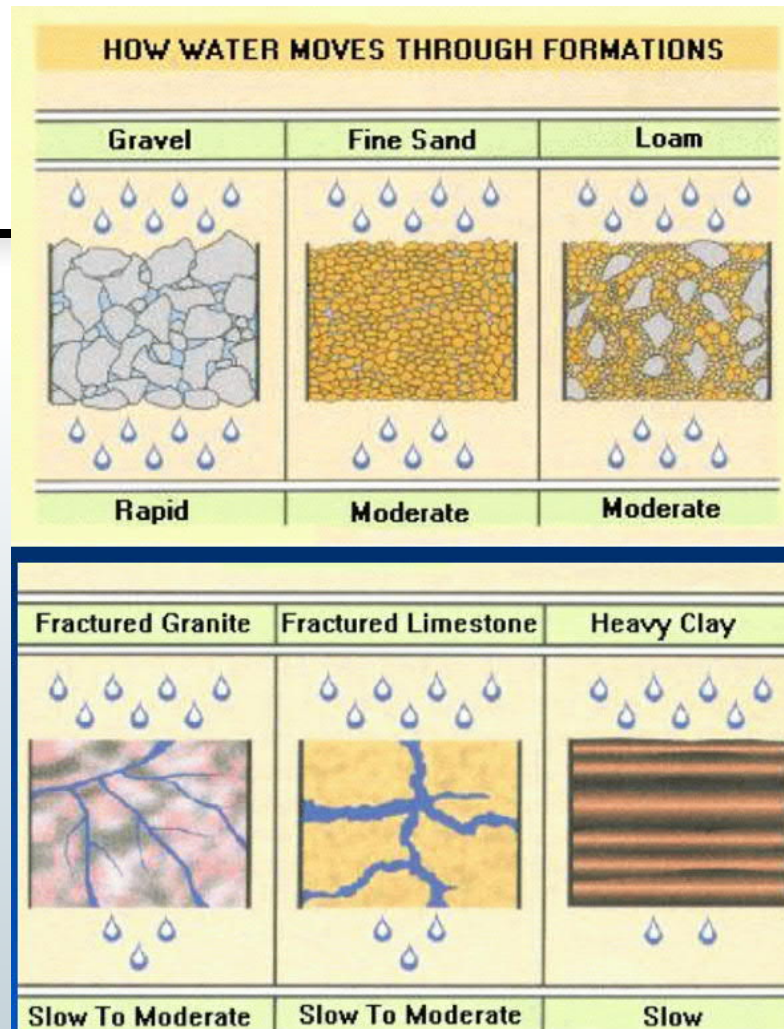
August 23, 2019

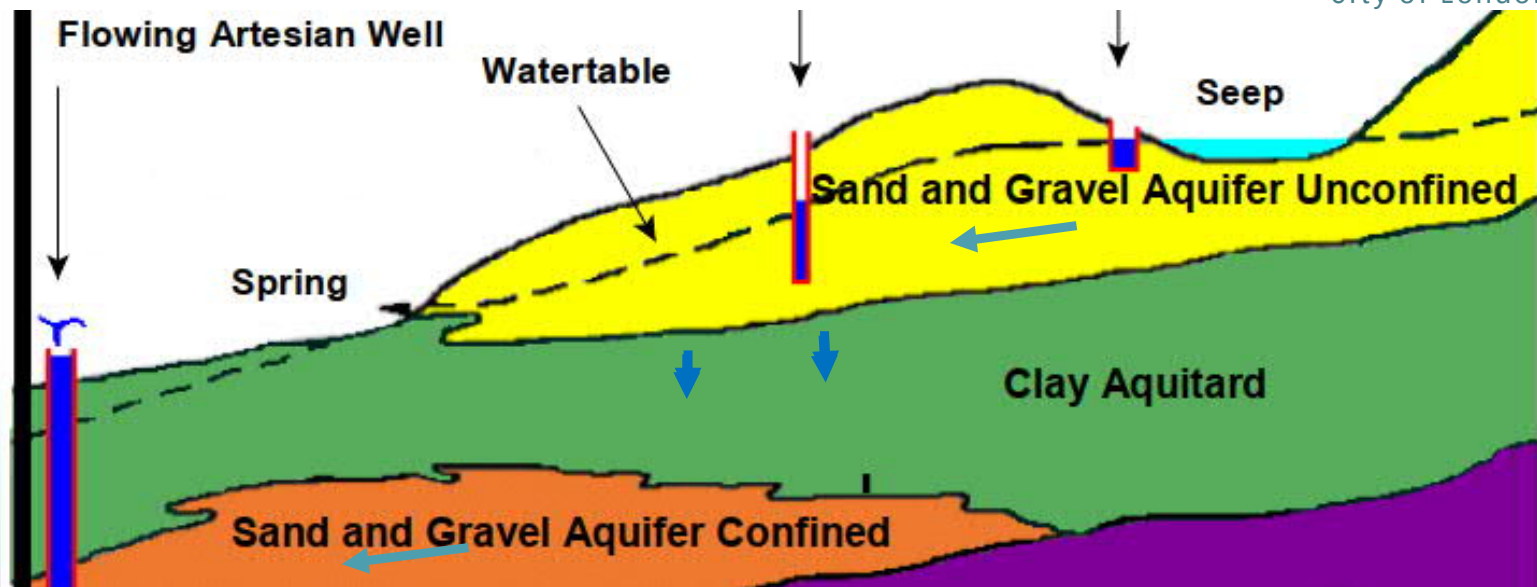
Presentation Summary

- Overview of Groundwater Fundamentals
- Landfill Site Groundwater Conditions (Hydrogeology)
- Proposed Additional Investigations
- Questions??

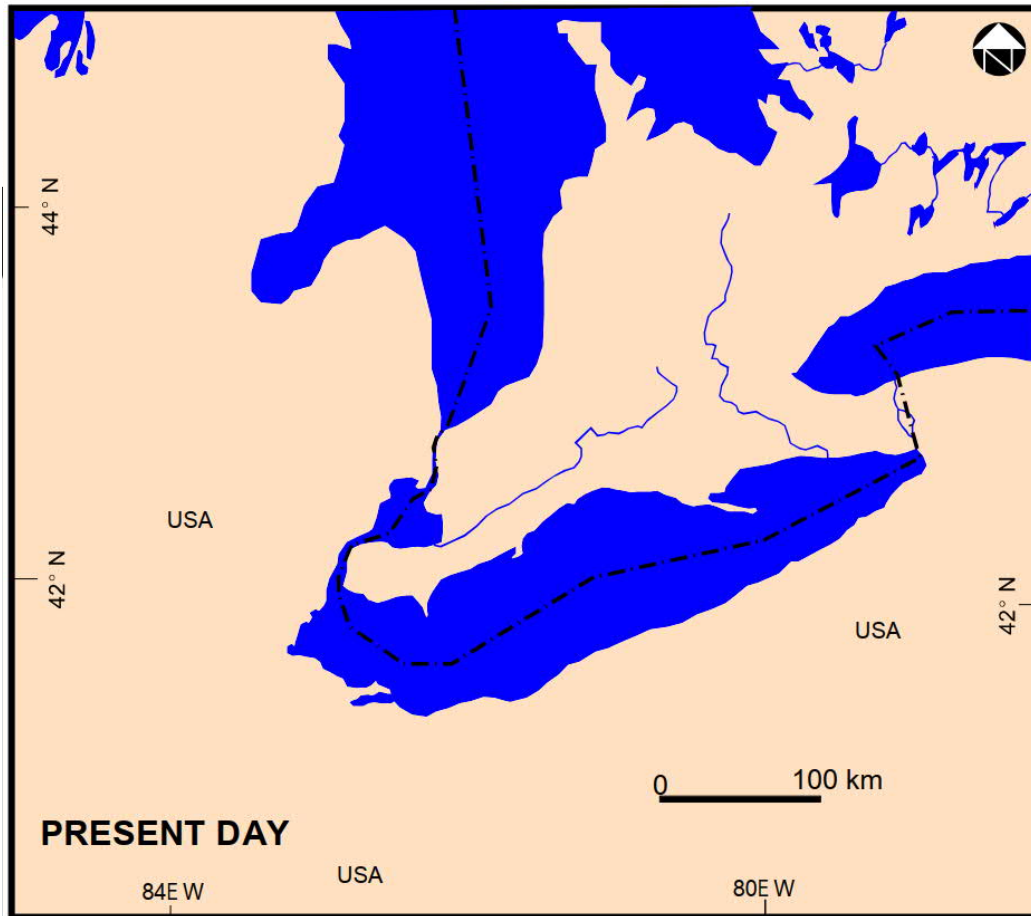
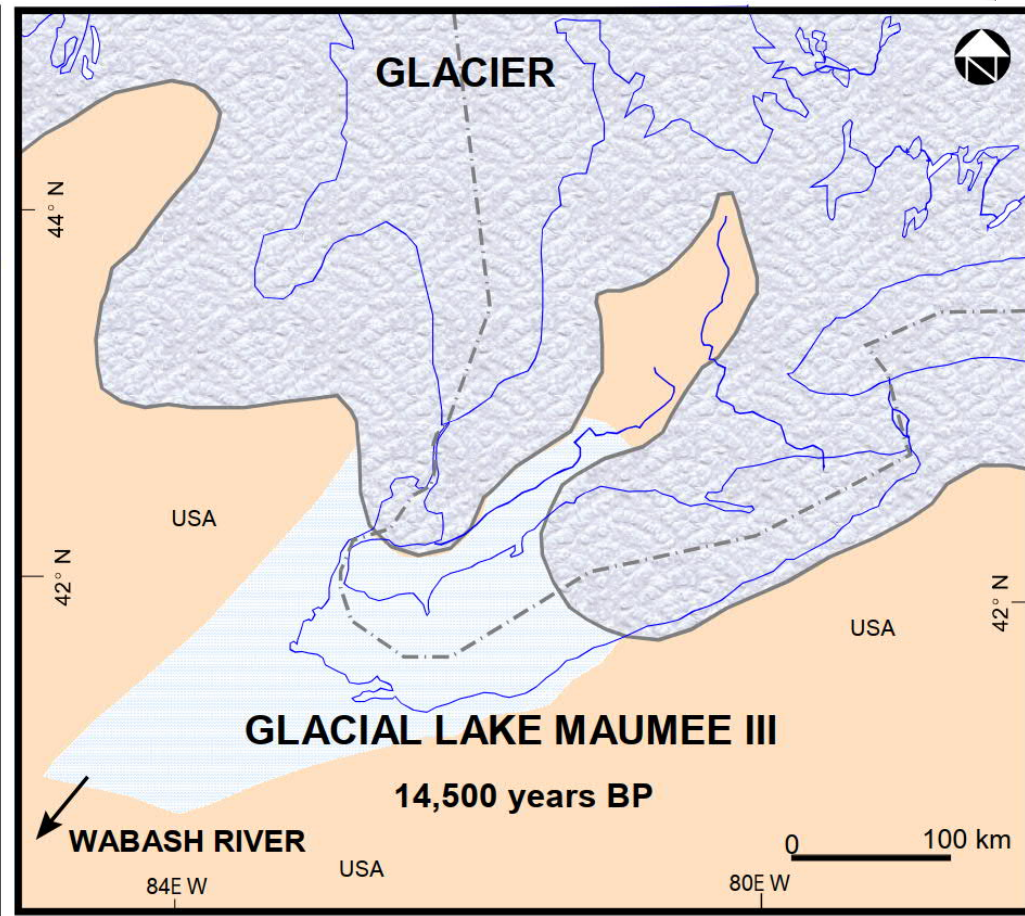
Groundwater Flow Fundamentals

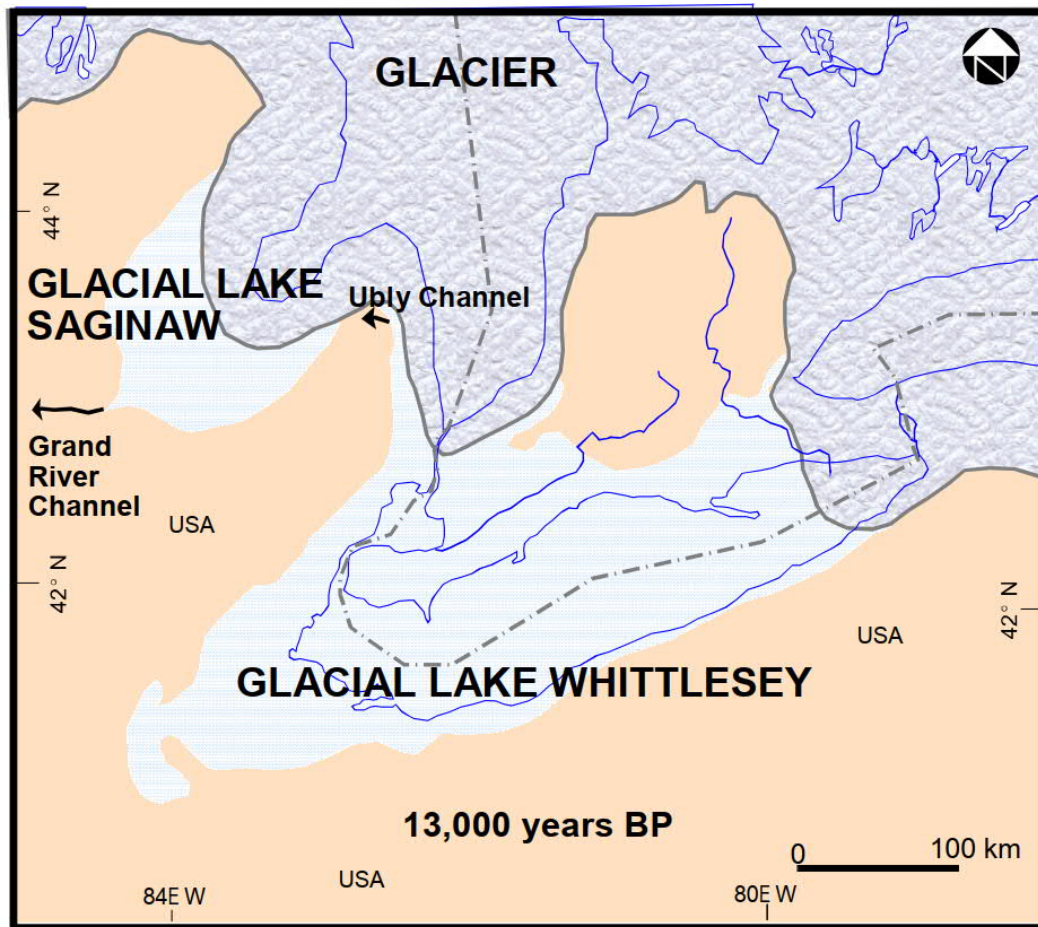
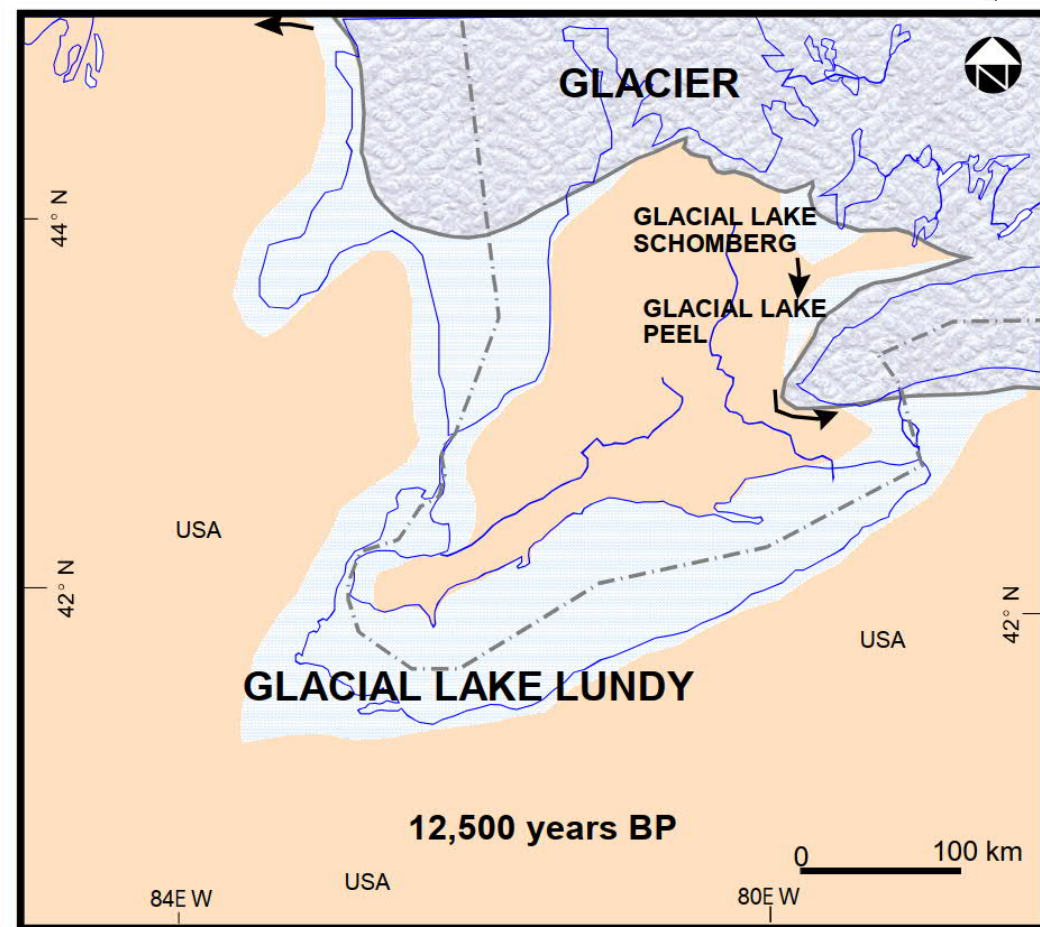
- Unconsolidated Soils
- Glaciation (~12,000 years ago)
- Soil Components (sand, gravel, silt, clay)
- Complex geology (interbedded)
- Variable thickness in Southwestern Ontario (0 to >100 metres)

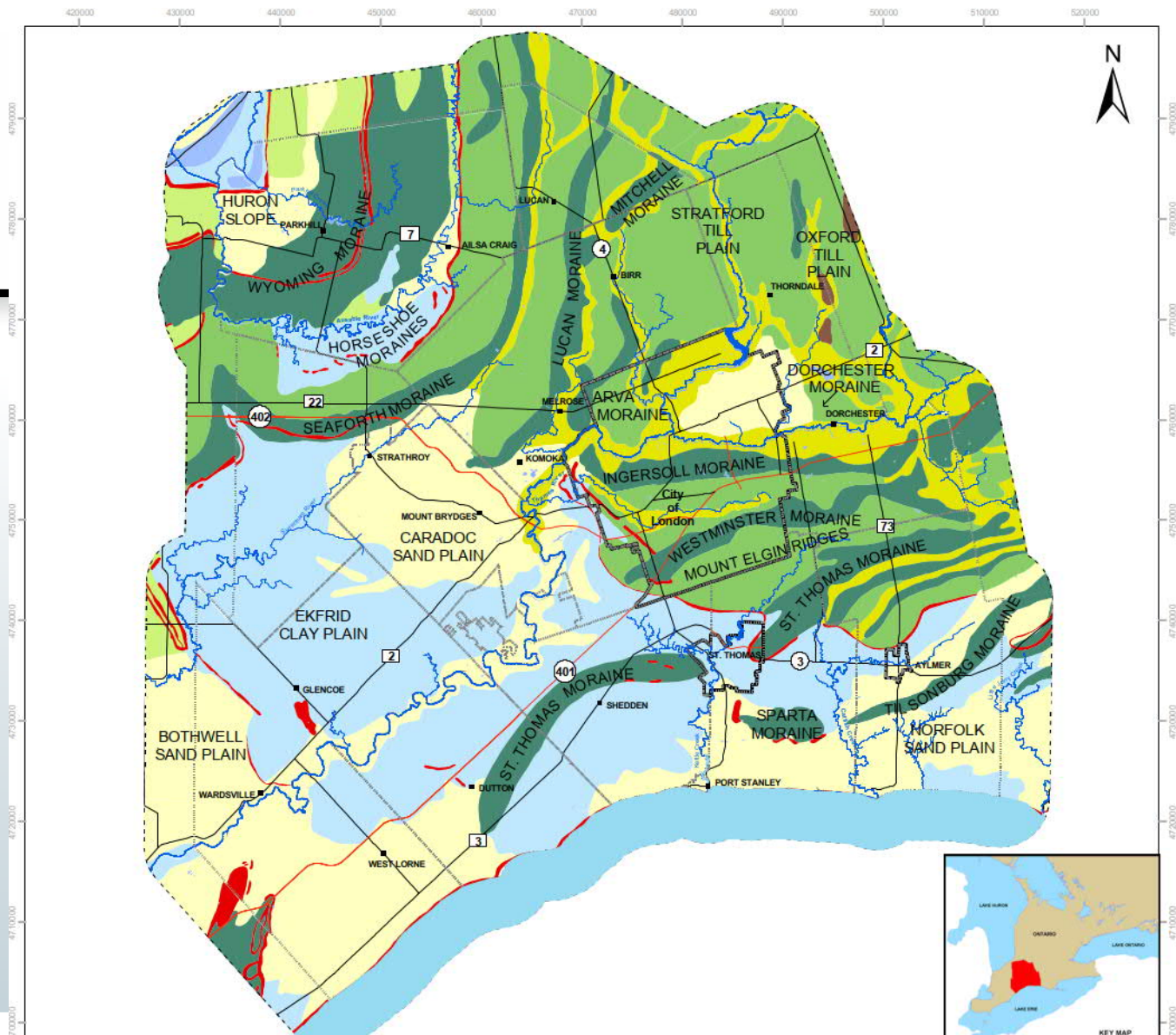


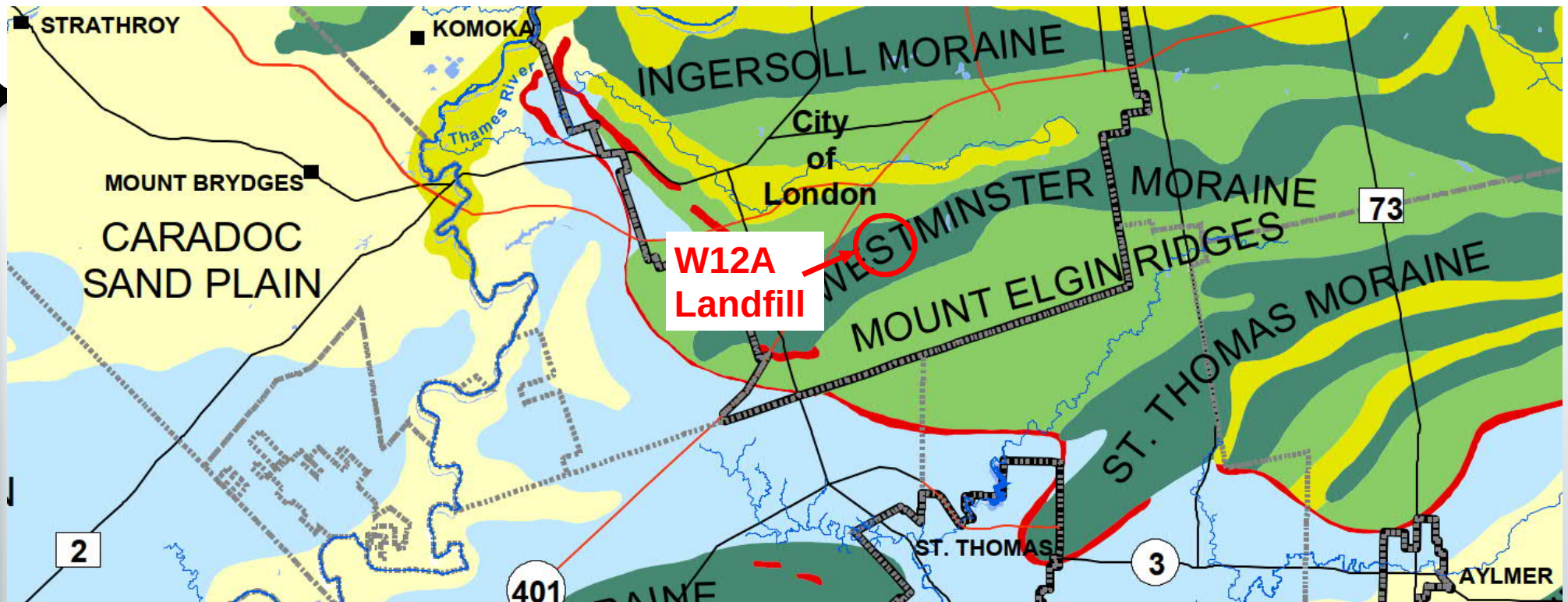


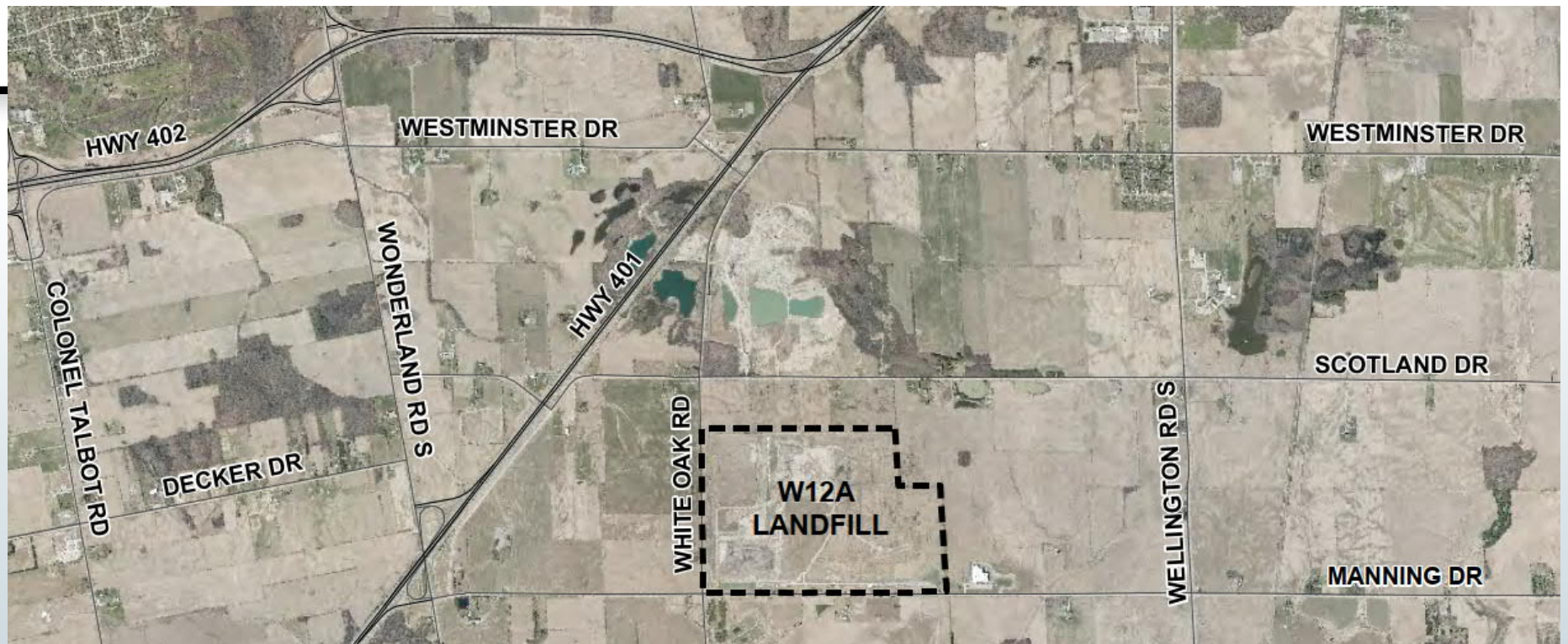
- **Aquifer**: high permeable layer capable of producing significant quantities of water
- **Aquitard**: low permeable layer – low flow
- **Confined**: aquifer where static water level is above the aquifer
- **Unconfined**: aquifer where static level is in aquifer (water table)







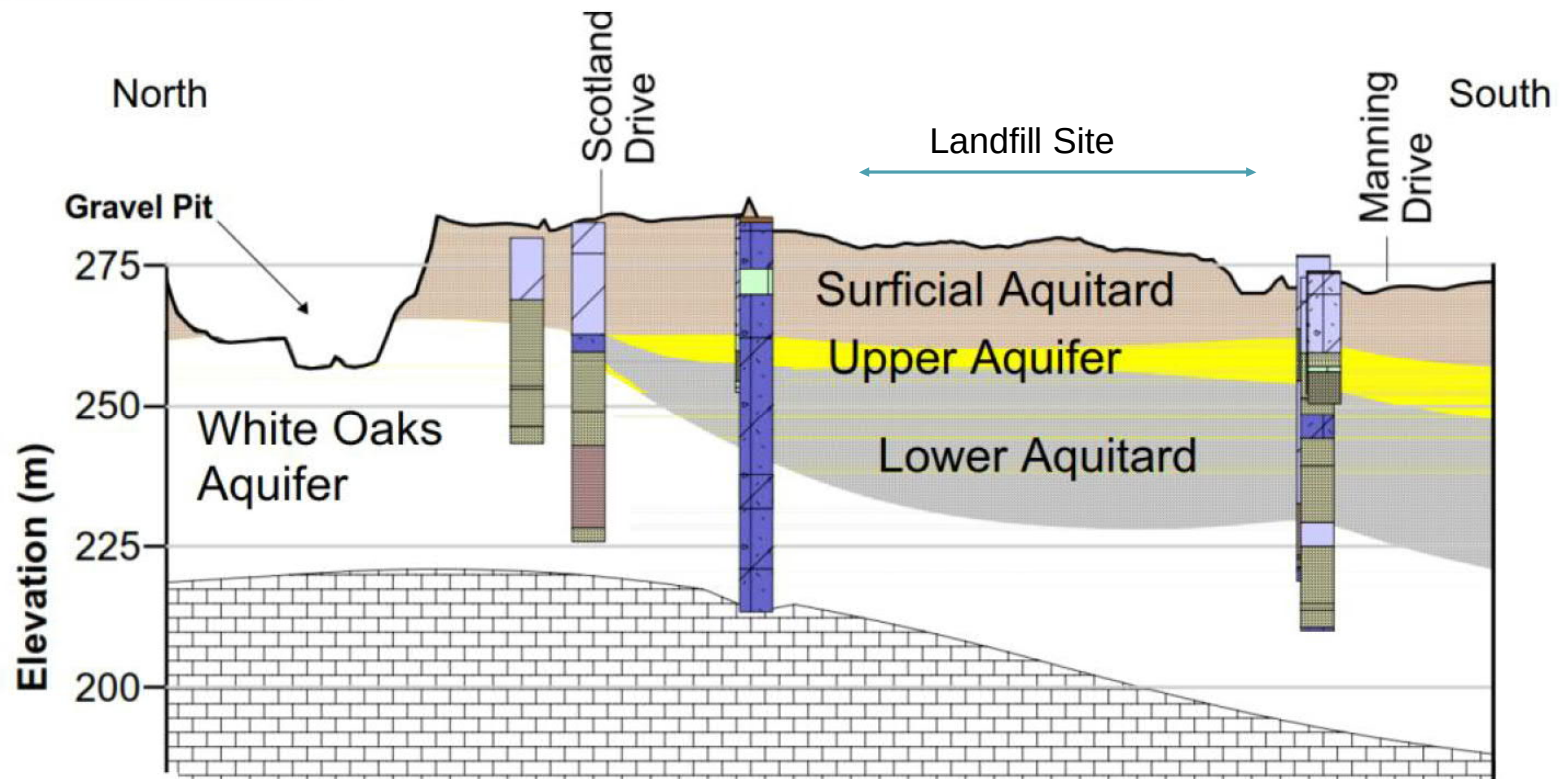


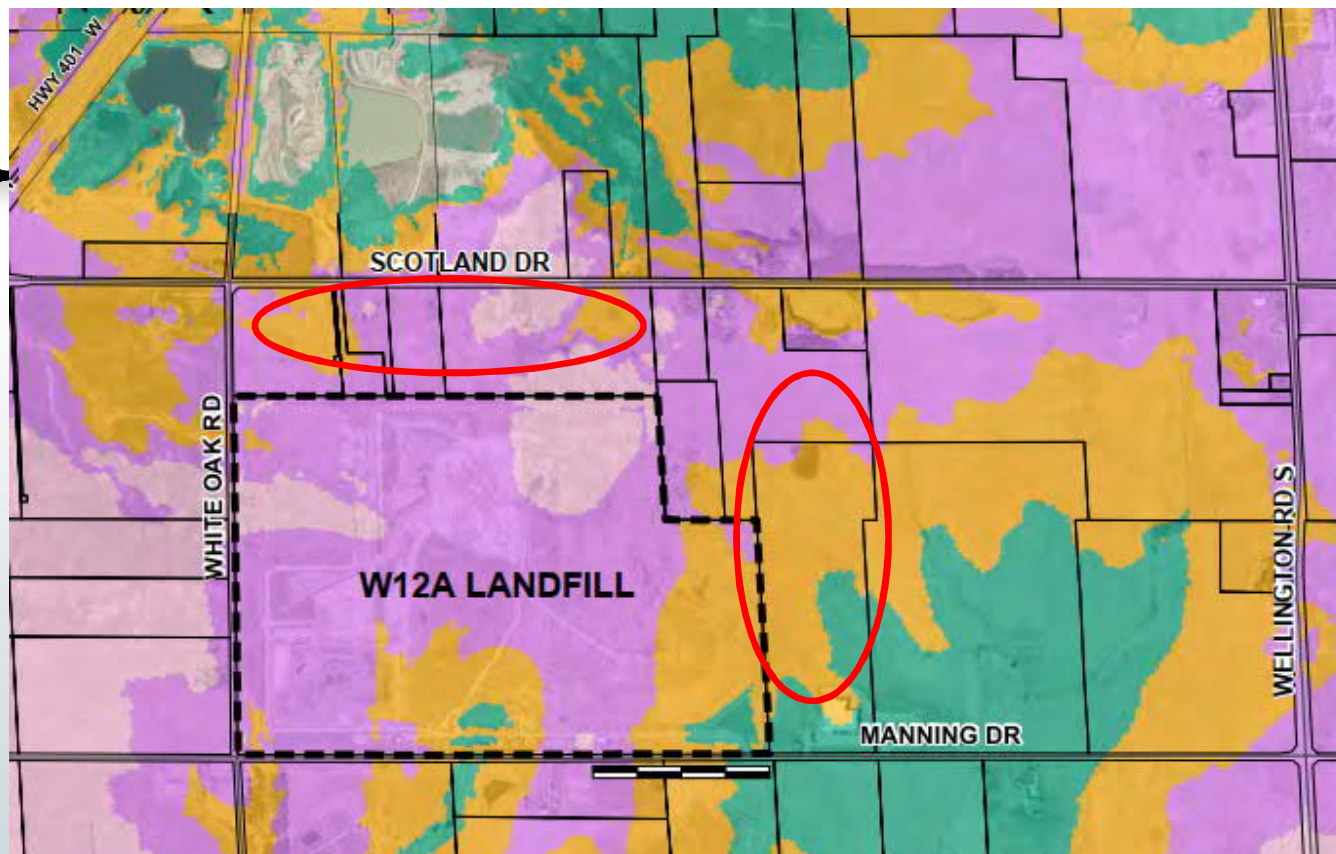


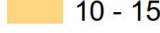
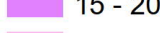
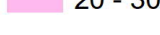


W12A Landfill Hydrogeology

- Generally, the hydrogeology of the W12A Landfill is well understood as a results on several investigations that have been completed from the late 1970's until present
- Four principal hydrogeologic units are present under the landfill site:
 - Surficial Aquitard
 - Upper Aquifer
 - Lower Aquitard
 - White Oaks Aquifer



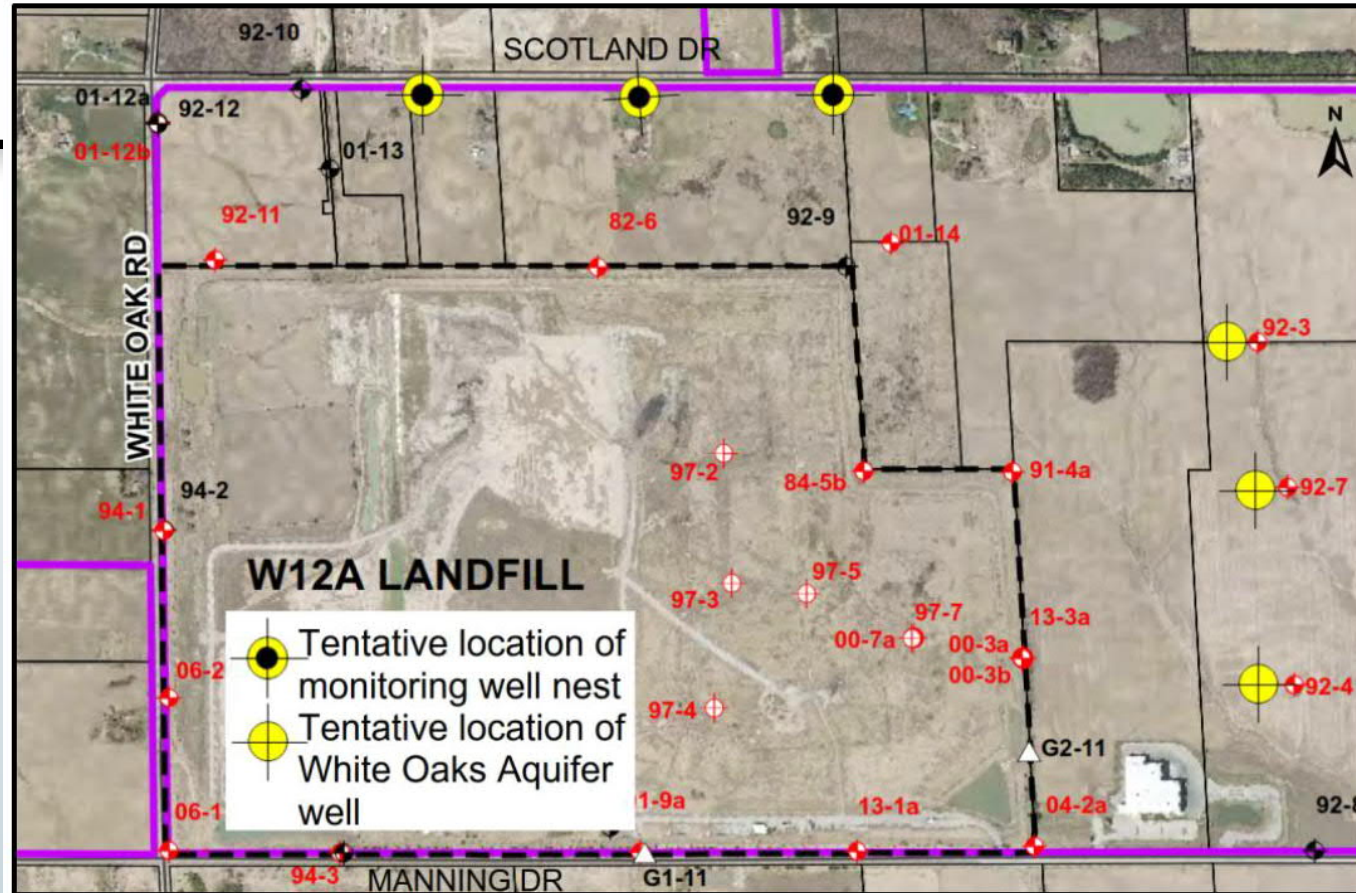
**Legend****Thickness of Surficial Aquitard (m)**

-  <5
-  5 - 10
-  10 - 15
-  15 - 20
-  20 - 30

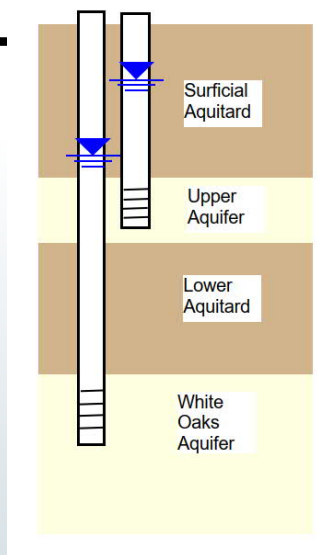
Property Information

-  Existing W12A Landfill
-  Parcels

Future Drilling Locations



Nested Monitoring Wells

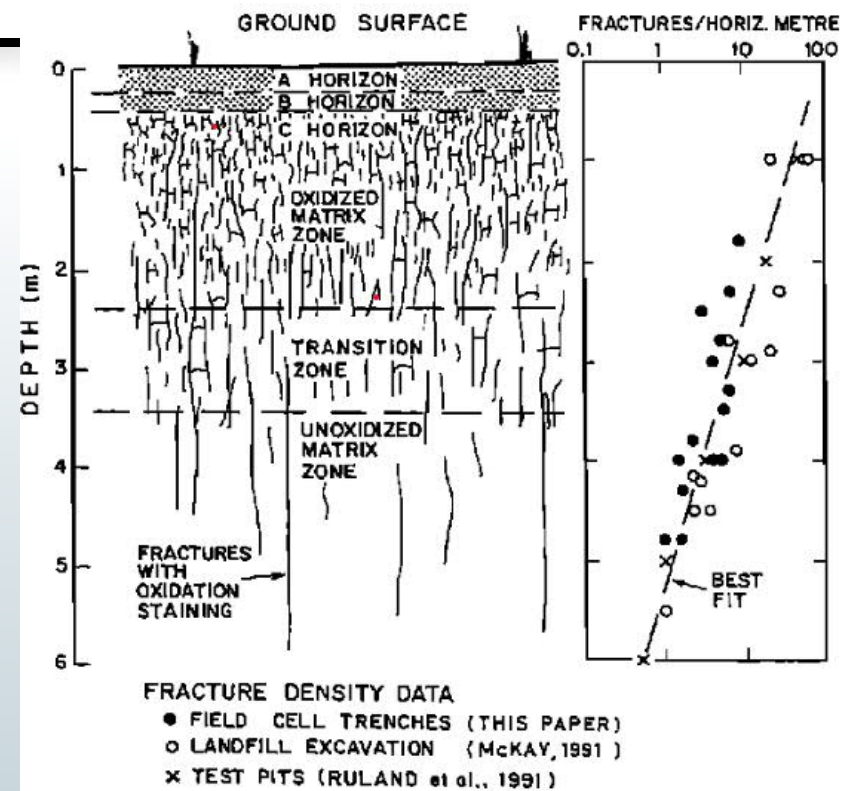


Soil and Aquifer Testing

Table 4.2-1 Approximate Number and Type of Soil and Hydrogeological Tests

Test	Hydrostratigraphic Unit			
	Surficial Aquitard	Upper Aquifer	Lower Aquitard	White Oaks Aquifer
Grain Size Analysis, Moisture Content	20	8	12	8
Fraction of Organic Carbon, Cation Exchange Capacity	6		3	
Geotechnical Parameters (Atterburg Limits)	6			
Triaxial Permeability	6			
Single Well Response Tests		6		6
X-Ray Diffraction	2			
Conventional Water Quality Analysis		6		6
Isotope Analysis (porewater extracted from aquitard soil cores, groundwater from monitoring wells installed in aquifers)	8	2	2	4

Fractured and Weathered Clayey Till Soils



Fractured and Weathered Clayey Till Soils

- Investigation of Surficial Aquitard
- Primary Investigation Method is a large test pit to allow physical examination of fractures - frequency and depth
- May be supplemented by monitoring wells installed in the surficial aquitard

Questions???

Groundwater Workshop - Notes

Environmental Assessment (EA) for the Proposed Expansion of the W12A Landfill

Meeting Details

Date: August 26, 2019

Location: Chippewa Community Centre

Attendees

Aamjiwnaang First Nation (AFN): Sharilyn Johnston (Environment Coordinator),

Chippewas of the Thames First Nation (COFFTN): Kelly Riley (Lands and Environment Director), Rochelle Smith (Events & Promotions Coordinator)

Munsee-Delaware First Nation: Stacey Phillips (Consultation Coordinator)

Dragun Corporation (Dragun): Cliff Lawton (Project Manager), Chris Pare (Project Manager) Corporation)

City of London (City): Wesley Abbott (Project Manager – Solid Waste Management), Mary Alikakos (Project Manager – Wastewater and Drainage Engineering), Jane Kittmer (Solid Waste Planning Coordinator)

Discussion Topics

There were two main discussion topics during the workshop which are summarized below:

1. Importance of the Thames River

All First Nations expressed the importance of the Thames River to their communities. This included from an environmental, cultural (e.g. ceremonies) and fishing perspective.

There was general agreement that the City should take all practical measures to prevent raw leachate being bypassed into the Thames River during have large rainfall events.

2. Peer Review of the Groundwater Work

Dragun Corporation prepared a peer review letter report (*“City of London W12A, Landfill Area Plan Study, Review of Hydrogeological Conditions and Draft Groundwater Work Plan London Ontario”*, dated August 13, 2019) which noted four issues with the proposed *“Groundwater Work Plan for the Environmental Assessment of the Proposed W12A Landfill Expansion”* (Dillon, 2019). These four issues were discussed at the workshop. The issues are listed below along with what was agreed to at the workshop and follow up actions since the workshop.

Issue #1

The Investigation Team is proposing the use of vertical boreholes to investigate the presence of fractures in the surficial aquitard. As Dragun (2019) previously noted: “Even though 80% of the investigation locations in 1972 and 1973 identified fracturing evidence to a maximum observed depth of 18 feet (5.49 m) bgl, the chance of encountering a vertical fracture at depths greater than 10 to 12 feet (3.05 to 3.66 m) bgl using a vertical soil boring is very slim.” To maximize the potential to identify deep fractures, the Investigation Team should consider angled drilling of the surficial aquitard.

Workshop – The City agreed that a test pit would be dug to examine fractures in the surficial till soils and the work plan would be revised accordingly.

Follow up Actions since Workshop – The following additional text has been added to the work plan regarding the digging of test pit:

“Presence of Fractures in the Surficial Aquitard

The presence of fractures within the surficial aquitard is a well-known phenomenon. To evaluate the nature of the fractures and their potential to create a preferred pathway for leachate migration from the landfill expansion, a benched test pit measuring approximately 18 m x 18 m in plan and 6 m in depth, or deeper if fractures are visible, is proposed. The test pit would give a good indication of fracture spacings and depths. Ideally, the location of the test pit should be outside of any potential future cell so that the aquitard is not disturbed and a preferential pathway for future leachate migration is not created. Tentatively the test pit is proposed on the east side of the existing landfill, but outside any contemplated areas for landfill expansion.

Upon excavation of the test pit, the vertical (1.2 m high) walls at the benched sideslopes will be cut into along apparent fractures using a hand trowel. This step is necessary in order to remove clay material smeared by the excavator bucket and fully expose the fractures for measurement of spacings and depths. The fracture network will be logged and photographs taken.

Once the test pit is complete the results will be evaluated and the need for any further monitoring wells within the surficial aquitard will be considered.”

Issue #2

Within the “Review of Hydrogeological Conditions” document, there was a reference to water taking from municipal groundwater in close proximity to the landfill. Can documentation be provided regarding the location of pumping well(s), construction details (well screen length and depth/elevation), timeframe of use, pumping rates, well abandonment documentation, water quality data, and reason(s) why the well(s) was/were taken out of service?

Workshop – At the workshop it was agreed that additional information would be provided on former municipal wells in the area.

Follow up Actions since Workshop – Documents with the requested information were provided to Dragun on September 10, 2019 and are listed in the table below.

Document Title	Description of Document
Water Works System	Document dated May 1969 titled <i>London Public Utilities Commission Waterworks System</i> . Document provides a brief history of London’s water supply system. Document describes the many well fields that were used to supply London with drinking water. With respect to the White Oak well field it notes: <ul style="list-style-type: none">• five wells were drilled in White Oak area in 1959 and one drilled in 1961• the White Oak well field had an iron removal system because of the elevated iron levels• London started using Lake Huron water on June 27, 1967 and by July 27, 1967 all drinking water supply wells were shut down.
Observation Well Data for London	Letter from the Ministry of the Environment to the London Public Utilities Commission dated September 25, 1990 containing water level data from 1959 to 1980 for observation well 513.
Buchanan Letter	First page of letter to Dr. Buchanan dated March 12, 1968 showing pumping capacity of the individual wells in the White Oaks White Field. We do not have the remaining pages of this letter.
Burnell Hodgins Letter	Letter from W.G. Keck & Associates Ltd. to L. Burnell and P. Hodgins of International Water Supply dated April 20, 1965. The letter contains information on water levels and pumping rates at various times.

Document Title	Description of Document
McManamna Letter	Letter from W.G. Keck & Associates Ltd. to T. L. McManamna of International Water Supply dated March 1, 1961. The letter contains information on water levels and pumping rates at various times.
Water Quality Data	Various water quantity reports from 1959 to 1962
Municipal White Oak Well #1	Various well construction documents and decommissioning report. For your information this well is identified as well 67 in City documents (e.g., W12A Landfill Annual Status Reports).
Municipal White Oak Well #2	Various well construction documents and decommissioning report. For your information this well is identified as well 68 in City documents (e.g., W12A Landfill Annual Status Reports).
Municipal White Oak Well #3	Various well construction documents and decommissioning report. For your information this well is identified as well 69 in City documents (e.g., W12A Landfill Annual Status Reports).
Municipal White Oak Well #4	Various well construction documents and decommissioning report. For your information this well is identified as well 28 in City documents (e.g., W12A Landfill Annual Status Reports).
Municipal White Oak Well #5	Various well construction documents and decommissioning report. For your information this well is identified as well 6 in City documents (e.g., W12A Landfill Annual Status Reports).
Municipal White Oak Well #6	Various well construction documents and decommissioning report. For your information this well is identified as well 29 in City documents (e.g., W12A Landfill Annual Status Reports).

Issue # 3

Regarding the high chloride and sodium concentrations at the monitoring well 92-6 (04-6a) location, could shallow soil samples be collected around this wellhead and tested for SAR and conductivity? Is it possible to review historical aerial photographs, if available, they may show areas of salt storage.

Workshop –It was agreed soil samples around monitoring well 92-6 (04-6a) location would be collected and tested for SAR and conductivity. It was noted at the meeting that a previous review of historical photographs did not show any buildings in the vicinity of monitoring well 92-6 (04-6a).

Issue #4 - The work plan does not present any investigation tasks related to installation of monitoring wells within the upper aquitard. The investigation team could consider the installation of three monitoring wells within the upper aquitard.

Workshop –It was agreed that information on existing till monitoring wells would be reviewed before making decisions on the installation of additional till monitoring wells.

Follow up Actions since Workshop – Documents with the requested information were provided to Dragun on September 10, 2019 and are listed in the table below.

Document Title	Description of Document
Monitoring Wells at Location 13-3a	Borehole logs for monitoring wells: <ul style="list-style-type: none"> • 13-3a (screened in top of upper aquifer, approximately 16 metres below grade) • 00-3a (screened in till approximately 10 metres below grade) • 00-3b (screened in till approximately 4 metres below grade)
Historical Water Quality Data for Monitoring Wells at Location 13-3a	Historical water quality data for 13-3a, 00-3a and 000-3b
Hydrograph for Monitoring Wells at Location 13-3a	Hydrograph from 2000 to present
Monitoring Wells at Location 97-7	Borehole logs for monitoring wells: <ul style="list-style-type: none"> • 97-7 (screened in leachate mound) • 00-7a (screened in till approximately 1.5 metres below base of landfill)
Historical Water Quality Data for Monitoring Wells at Location 97-7	Historical water quality data for 97-7 and 00-7a
Hydrograph for Monitoring Wells at Location 97-7	Hydrograph from 1997 to present
W12A Water Levels	Historical water level data for all monitoring wells.

H.09 City of London Comment Response to Dragun
Peer Review Letter

From: Abbott, Wesley <WAbbott@London.ca>
Sent: September 10, 2019 2:50 PM
To: Cliff Lawton <clawton@dragun.com>; cpare@dragun.com
Cc: SJohnston@aamjiwnaang.ca; 'Kell, Rob' (rkell@dillon.ca) <rkell@dillon.ca>; Edmond, Trish <Trish_Edmond@golder.com>; Kittmer, Jane <jkittmer@London.ca>
Subject: Environmental Assessment for Proposed Expansion of the W12A Landfill - Follow-up Information

EXTERNAL EMAIL

Cliff, Chris

Your peer review letter report ("City of London W12A, Landfill Area Plan Study, Review of Hydrogeological Conditions and Draft Groundwater Work Plan London Ontario", dated August 13, 2019) noted four issues with the proposed "Groundwater Work Plan for the Environmental Assessment of the Proposed W12A Landfill Expansion" (Dillon, 2019). These issues were discussed at the Groundwater Workshop on August 26, 2019 which was attended by the Aamjiwnaang First Nation, Chippewas of the Thames First Nation, Munsee-Delaware First Nation, Oneida First Nation, City of London, Dragun Corporation, Dillon Consulting and the City of London. The four issues and how they will be addressed are listed below.

Issue #1 - The Investigation Team is proposing the use of vertical boreholes to investigate the presence of fractures in the surficial aquitard. As Dragun (2019) previously noted: "Even though 80% of the investigation locations in 1972 and 1973 identified fracturing evidence to a maximum observed depth of 18 feet (5.49 m) bgl, the chance of encountering a vertical fracture at depths greater than 10 to 12 feet (3.05 to 3.66 m) bgl using a vertical soil boring is very slim." To maximize the potential to identify deep fractures, the Investigation Team should consider angled drilling of the surficial aquitard.

At the workshop it was agreed that a test pit would be dug to examine fractures in the surficial till soils. Below is the additional text that has been added to the work plan regarding the digging of test pit:

"Presence of Fractures in the Surficial Aquitard"

The presence of fractures within the surficial aquitard is a well-known phenomenon. To evaluate the nature of the fractures and their potential to create a preferred pathway for leachate migration from the landfill expansion, a benched test pit measuring approximately 18 m x 18 m in plan and 6 m in depth, or deeper if fractures are visible, is proposed. The test pit would give a good indication of fracture spacings and depths. Ideally, the location of the test pit should be outside of any potential future cell so that the aquitard is not disturbed and a preferential pathway for future leachate migration is not created. Tentatively the test pit is proposed on the east side of the existing landfill, but outside any contemplated areas for landfill expansion.

Upon excavation of the test pit, the vertical (1.2 m high) walls at the benched sideslopes will be cut into along apparent fractures using a hand trowel. This step is necessary in order to remove clay material smeared by the excavator bucket and fully expose the fractures for measurement of spacings and depths. The fracture network will be logged and photographs taken.

Once the test pit is complete the results will be evaluated and the need for any further monitoring wells within the surficial aquitard will be considered."

A copy of the revised work plan is attached.

Issue #2 - Within the "Review of Hydrogeological Conditions" document, there was a reference to water taking from municipal groundwater in close proximity to the landfill. Can documentation be provided regarding the location of pumping well(s), construction details (well screen length and depth/elevation), timeframe of use, pumping rates, well abandonment documentation, water quality data, and reason(s) why the well(s) was/were taken out of service?

At the workshop it was agreed that additional information would be provided on former municipal wells in the area. Documents with the requested information are listed in the table below. The documents will be sent to you via the City's File Transfer Site because of the combined size of all the files. You can expect the files to be sent to you later today.

Document Title	Description of Document
Water Works System	Document dated May 1969 titled <i>London Public Utilities Commission Waterworks System</i> . Document provides a brief history of London's water supply system. Document describes the many well fields that were used to supply London with drinking water. With respect to the White Oak well field it notes: <ul style="list-style-type: none">• five wells were drilled in White Oak area in 1959 and one drilled in 1961• the White Oak well field had an iron removal system because of the elevated iron levels• London started using Lake Huron water on June 27, 1967 and by July 27, 1967 all drinking water supply wells were shut down.
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Buchanan Letter	wells in the White Oaks White Field. We do not have the remaining pages of this letter.
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Municipal White Oak Well #2	Various well construction documents and decommissioning report. For your information this well is identified as well 68 in City documents (e.g., W12A Landfill Annual Status Reports).
Municipal White Oak Well #3	Various well construction documents and decommissioning report. For your information this well is identified as well 69 in City documents (e.g., W12A Landfill Annual Status Reports).
Municipal White Oak Well #4	Various well construction documents and decommissioning report. For your information this well is identified as well 28 in City documents (e.g., W12A Landfill Annual Status Reports).
Municipal White Oak Well #5	Various well construction documents and decommissioning report. For your information this well is identified as well 6 in City documents (e.g., W12A Landfill Annual Status Reports).
Municipal White Oak Well #6	Various well construction documents and decommissioning report. For your information this well is identified as well 29 in City documents (e.g., W12A Landfill Annual Status Reports).

Issue # 3 - Regarding the high chloride and sodium concentrations at the monitoring well 92-6 (04-6a) location, could shallow soil samples be collected around this wellhead and tested for SAR and conductivity? Is it possible to review historical aerial photographs, if available, they may show areas of salt storage.

At the workshop it was agreed soil samples around monitoring well 92-6 (04-6a) location would be collected and tested for SAR and conductivity. It was noted at the meeting that a previous review of historical photographs did not show any buildings in the vicinity of monitoring well 92-6 (04-6a)

Issue #4 - The work plan does not present any investigation tasks related to installation of monitoring wells within the upper aquitard. The investigation team could consider the installation of three monitoring wells within the upper aquitard.

At the workshop it was agreed that information on existing till monitoring wells would be reviewed before making decisions on the installation of additional till monitoring wells. Documents with the requested information are listed in the table below. The documents will be sent to you via the City's File Transfer Site because of the combined size of all the files. You can expect the files to be sent to you later today.

Document Title	Description of Document
Monitoring Wells at Location 13-3a	Borehole logs for monitoring wells: <ul style="list-style-type: none"> 13-3a (screened in top of upper aquifer, approximately 16 metres below grade) 00-3a (screened in till approximately 10 metres below grade) 00-3b (screened in till approximately 4 metres below grade)
Historical Water Quality Data for Monitoring Wells at Location 13-3a	Historical water quality data for 13-3a, 00-3a and 000-3b
Hydrograph for Monitoring Wells at Location 13-3a	Hydrograph from 2000 to present
Monitoring Wells at Location 97-7	Borehole logs for monitoring wells: <ul style="list-style-type: none"> 97-7 (screened in leachate mound) 00-7a (screened in till approximately 1.5 metres below base of landfill)
Historical Water Quality Data for Monitoring Wells at Location 97-7	Historical water quality data for 97-7 and 00-7a
Hydrograph for Monitoring Wells at Location 97-7	Hydrograph from 1997 to present
W12A Water Levels	Historical water level data for all monitoring wells.

Please let me know if you have any questions regarding the above.

Regards


Wesley Abbott, P. Eng.
 Project Manager
 Solid Waste Management
 City of London

PO Box 5035, 300 Dufferin Ave., London, N6A 4L9
 P: 519.661.CITY (2489) x 1812 | Cell: 519.636.8745 | Fax: 519.661.2354
wabbott@london.ca | www.london.ca

H.10 Email Notifications of August 2020 Workshop

From: [Abbott, Wesley](#)
To: SJohnston@aamjiwnaang.ca; kriley@cottfn.com; rsmith@cottfn.com; consultation@munsee.ca; [Oneida Environment](#)
Cc: [Kittmer, Jane](#); [Alikakos, Mary](#)
Subject: Environmental Assessment for Proposed Expansion of the W12A Landfill - City of London

Hello Everyone,

Background - Environmental Assessment (EA) for the Expansion of the W12A Landfill

The City's existing landfill (W12A Landfill) is expected to reach its currently approved capacity in 2024. It is proposed to 1) expand the W12A Landfill by approximately doubling its current capacity and extend its life to 2049 and 2) increase the service area to a regional area, which includes: City of London, County of Huron, County of Perth, County of Elgin, County of Lambton, and County of Middlesex.

First Workshop

In August 2019, you attended a workshop which was initiated by Aamjiwnaang First Nation and hosted by the Chippewas of the Thames First Nation. Several issues were discussed at the workshop including protection of the Thames River, groundwater issues and using native plant species as part of any rehabilitation plans.

Proposed Second Workshop

As agreed to at the first workshop, a second workshop *would* be held for all interested Indigenous Communities in order for the City to present information and receive feedback on the preferred landfill expansion alternative, as well as actions proposed to address the issues previously raised. A planned workshop for the Spring 2020 was postponed due to COVID-19.

With the Province entering Stage 3 of its COVID-19 plan and the limited capacity remaining at the W12A Landfill, we would like to proceed with the second workshop in late August or early September if a suitable way to hold the workshop can be found. One option would be to hold the workshop over a video conference app like zoom or teams. Another option could be an in-person meeting with appropriate Covid-19 safety measures such limiting the number of persons attending, social distancing, face masks, hand sanitizer, etc. You may have other ideas on how best to hold the workshop.

At the workshop we plan to discuss:

- Reasons for selecting the vertical expansion of the W12A Landfill as the preferred expansion alternative
- Results of the groundwater investigations and what it means moving forward
- Key results from the archaeological and biology investigations
- Landfill design features
- Other topics of interest by participants
- Next steps

Questions

What type of workshop would you prefer (virtual, in-person, other format)?

What (if any) dates would you be available to participate in the workshop?

Regards,

Wesley Abbott
226-376-2311 (Cell)

From: [Kittmer, Jane](#)
To: drskoke@wifn.org; chief.duckworth@caldwellfirstnation.ca; jason.henry@kettlepoint.org; denise.stonefish@delawarenation.on.ca
Cc: [Abbott, Wesley](#); [Alikakos, Mary](#)
Subject: Environmental Assessment for Proposed Expansion of the W12A Landfill - City of London
Date: August 18, 2020 11:55:25 AM
Attachments: [image001.png](#)

Hello Everyone,

Background - Environmental Assessment (EA) for the Expansion of the W12A Landfill

The City's existing landfill (W12A Landfill) is expected to reach its currently approved capacity in 2024. It is proposed to 1) expand the W12A Landfill by approximately doubling its current capacity and extend its life to 2049 and 2) increase the service area to a regional area, which includes: City of London, County of Huron, County of Perth, County of Elgin, County of Lambton, and County of Middlesex.

First Workshop

In August 2019, a workshop which was initiated by Aamjiwnaang First Nation and hosted by the Chippewas of the Thames First Nation. Unfortunately, a member of your community was not able to attend. Several issues were discussed at the workshop including protection of the Thames River, groundwater issues and using native plant species as part of any rehabilitation plans.

Second Workshop

As agreed to at the first workshop, a second workshop would be held for all interested Indigenous Communities in order for the City to present information and receive feedback on the preferred landfill expansion alternative, as well as actions proposed to address the issues previously raised. A planned workshop for the Spring 2020 was postponed due to COVID-19.

The second workshop will be held on August 27, 2020 from 1:00 to 3:00 pm using a virtual conference app.

At the workshop we plan to discuss:

- Reasons for selecting the vertical expansion of the W12A Landfill as the preferred expansion alternative
- Results of the groundwater investigations and what it means moving forward
- Key results from the archaeological and biology investigations
- Landfill design features
- Other topics of interest by participants
- Next steps

Please let me know if you are interested in joining the virtual workshop or if you have any questions.

Regards,
Jane



Jane Kittmer
Technician
Solid Waste Management
City of London

300 Dufferin Ave, P.O. Box 5035, London ON N6A 4L9
P: 519.661.CITY(2489) x 2334 | Fax: 519.661.2354
jkittmer@london.ca | www.london.ca

As part of our ongoing efforts to stop the spread of COVID-19, the City of London has made changes to many City services. Visit our [website for the latest information about City services and COVID-19](#).

Join Microsoft Teams Meeting <https://teams.microsoft.com/l/meetup-join/19%3ameeting_ZWRjOGY4OWUtnZnmZmC00njhlLWlWOTYtNWeyNjU0MTk3ODc2%40thread.v2/0?context=%7b%22tid%22%3a%2203bffd5-8383-4ffd-80d3-77de9409d5ca%22%2c%22oid%22%3a%22e399a665-226a-4b10-b7b3-bd5930310a53%22%7d>
Learn more about Teams <<https://aka.ms/JoinTeamsMeeting>> | Meeting options <https://teams.microsoft.com/meetingOptions/?organizerId=e399a665-226a-4b10-b7b3-bd5930310a53&tenantId=03bffd5-8383-4ffd-80d3-77de9409d5ca&threadId=19_meeting_ZWRjOGY4OWUtnZnmZmC00njhlLWlWOTYtNWeyNjU0MTk3ODc2@thread.v2&messageId=0&language=en-US>



W12A Landfill Workshop/ Information Session

Date: Thursday, August 27, 2020
Time: 1 p.m. to 3 p.m.
Location: Teams Meeting

Draft Agenda

Item #	Item	Initial Comments	Approximate Time (minutes)
1.	Greetings, Review of Agenda	Everyone	15
2.	Status of Environmental Assessment	City	15
3.	Overview of Groundwater Field Work and Findings	Dillon/Golder	15
4.	Review and Comments on Field Work and Findings	Dragun	10
5.	Biology Findings and Recommendations	AECOM	15
6.	Thames River Protection	City	10
7.	Other Considerations <ul style="list-style-type: none"> • Archeological • Native Plantings • Air quality, cumulative impacts, health impacts 	City	15
8.	Discussion on Future Engagement/Consultation	City	15
9.	Other Business	-	10

General Rules for Virtual Workshop

- Turn video and sound off when not speaking starting at item #2
- Use the chat function to ask to speak or alternatively type your questions/comments.
- You can ask questions or provide comments during the presentation for an item or wait till the end of the presentation.

H.11 Workshop Presentation Material
(August 27, 2020)



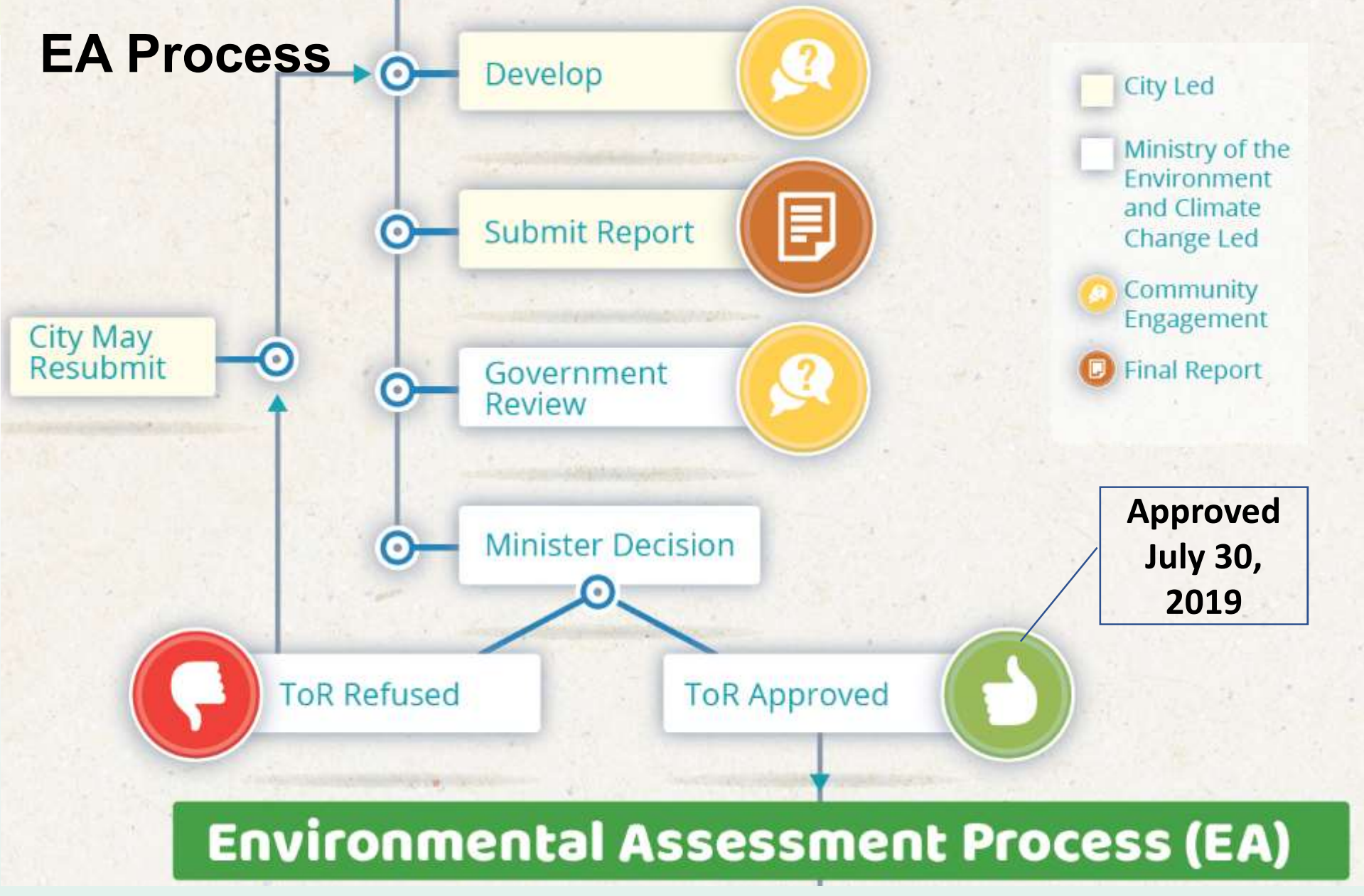
W12A Landfill Workshop and Information Session



August 27, 2020

Terms of Reference Process (ToR)

EA Process





Phase 2:

EA Technical Studies & EA Report

Environmental Assessment Process (EA)





Complete Studies & Finalize EA

First
Workshop
Aug. 2019

We
are
here

Steps	Status
1. Characterize the existing environmental conditions	Complete
Work Plans online for review and comment Indigenous community review	
2. Identify the alternatives for landfill expansion (and incorporate conceptual design mitigation measures)	Complete
3. Evaluation of alternatives	Complete
4. Comparison of the alternatives for landfill expansion for each component of the environment and then identify the overall preferred alternative for landfill expansion	Complete
Open House #3 – February 26 & 27, 2020	
5. Refine the mitigation measures and determine the net effects on the environment of the preferred alternative for landfill expansion	90% complete
6. Describe the preferred alternative for landfill expansion	90% complete
7. Consideration of climate change	50% complete
8. Cumulative impact assessment	25% complete
Open House #4 – Fall 2020 Indigenous community review	
9. Preparation of the EA Study Report	25% complete
Various opportunities will be available to comment on the EA Study Report through the City and the Ministry of Environment, Conservation and Parks (MECP)	



Website

getInvolved.london.ca



Meetings

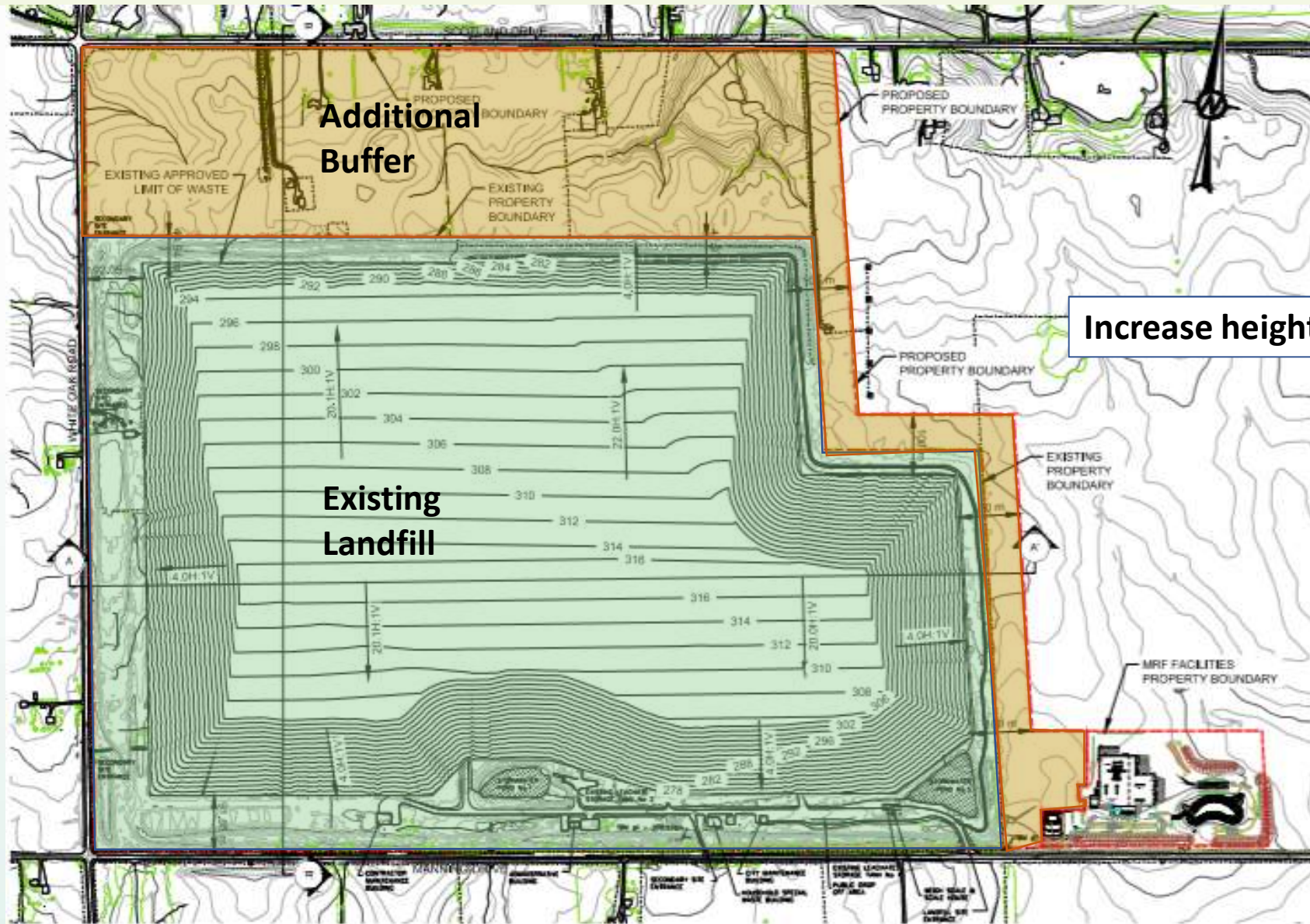
W12A Landfill PLC, Waste Management CLC, Waste Management Working Group



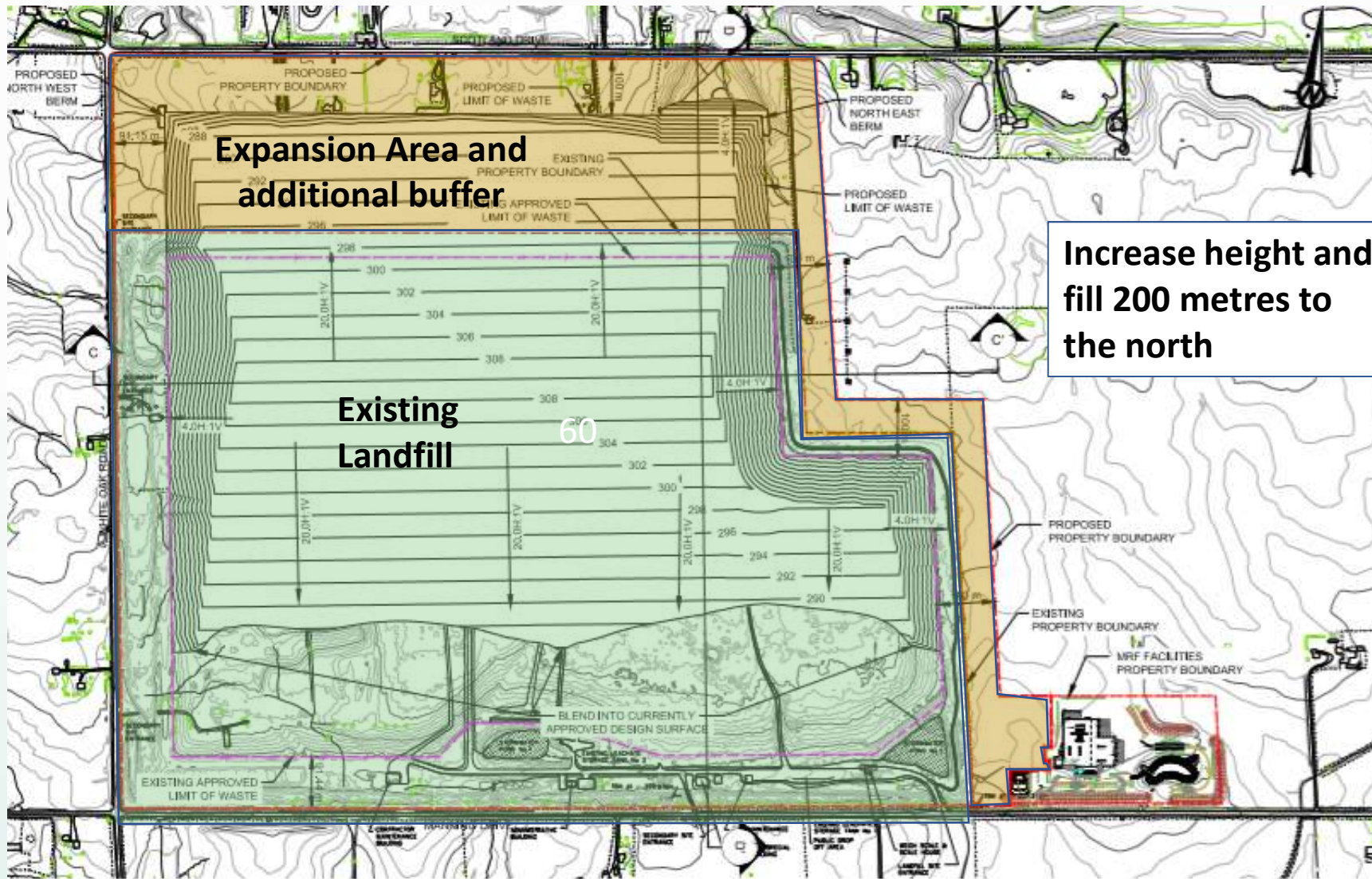
Meet with residents

(If requested)

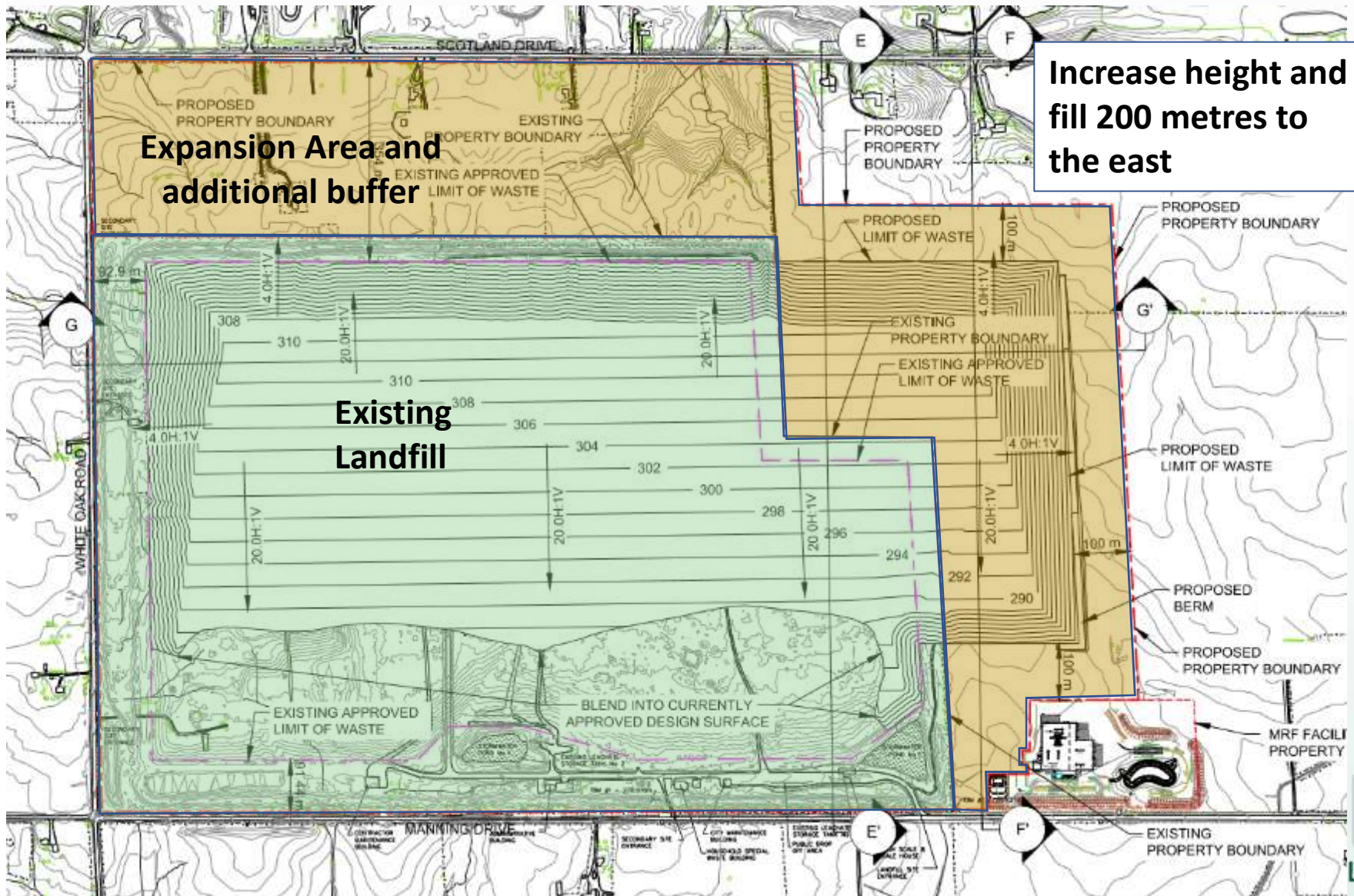
Step 2 Alternative Method 1



Step 2 Alternative Method 2



Step 2 Alternative Method 3





Steps 3 and 4: Compare Alternatives

All work
complete

Environmental Component	Environmental Sub-component	Preferred (Overall Result)			Public Ranking Group
		Alternative 1	Alternative 2	Alternative 3	
Atmosphere	Air quality (including dust, odour and LFG)	✓			More Important
	Noise	✓			Less Important
Geology and Hydrogeology	Ground water quality	✓			More Important
Surface Water	Surface water quality	✓			More Important
	Surface water quantity	✓			Important
Biology	Aquatic ecosystems	✓			More Important
	Terrestrial ecosystems	✓			More Important
Land Use Agriculture	Current and planned future land uses	✓			Important
	Agriculture	✓			Important
Archaeology	Archaeology	✓		✓	Less Important
Cultural Heritage	Cultural heritage resources (including built heritage)	✓	✓	✓	Less Important
Socio-economic	Local economic		✓	✓	Important
	Residents and community	✓			More Important
Visual	Visual			✓	Less Important
Transportation	Traffic	✓	✓	✓	Less Important
Design and Operations	Technical considerations			✓	Important
	Financial considerations	✓			Important



Step 4: Compare Alternatives

Alternative #1 Advantages:

- Highest degree of groundwater protection
- Best alternative to limit odours
- Fewest changes to stormwater management system
- Least potential for air quality, archaeology, agricultural, aquatic ecosystem, community, land use, noise and terrestrial ecosystem impacts
- Lowest cost alternative

Alternative #1 Disadvantages:

- Greatest visual impact
- More complex design



Step 5: Detailed Assessments

	Component	Comments
Environmental	Atmosphere	Detailed impact assessments of noise, odour, health related air quality and noise underway.
	Biology	Mitigation measures being developed to protect Species at Risk and Significant Wildlife habitat located on the landfill footprint and buffer areas.
	Geology and Hydrogeology	Detailed impact assessments underway
	Surface Water	Assessment has determined the need for stormwater management pond improvements.
Social	Agriculture	No detailed assessment required.
	Archaeology	Mitigation measures required for significant archaeology site located within on-site buffer land.
	Cultural Heritage	No detailed assessment required.
	Land Use	No detailed assessment required.
	Socio-economic	No detailed assessment required.
	Transportation	Assessment underway to determine the need (if any) for roadway upgrades.
	Visual	Mitigation measures being developed to reduce visual impact.
Technical	Design and Operations	Design enhancements included to improve leachate management and landfill gas capture.



Thames River Protection

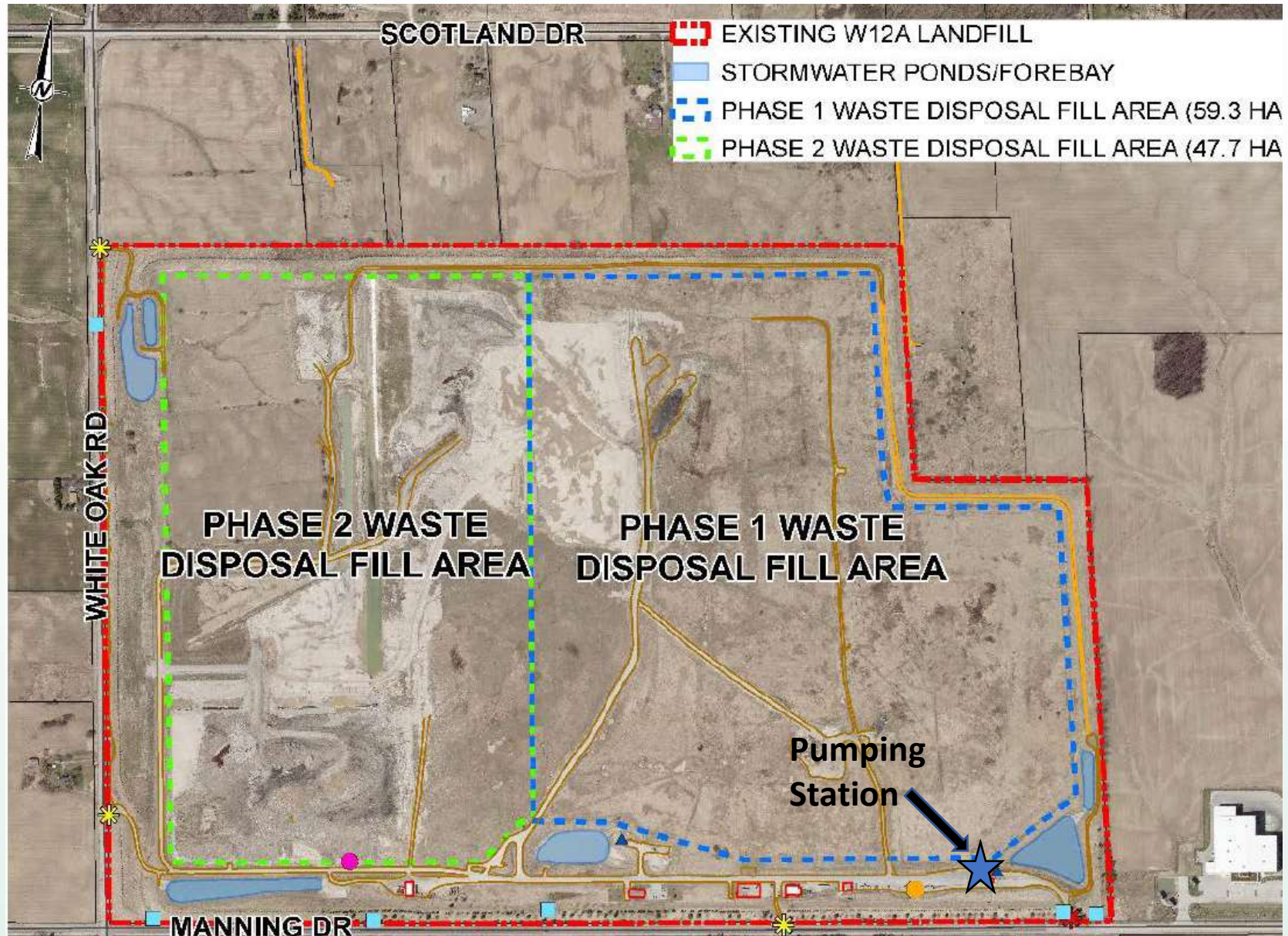




Thames River Protection

- Landfill leachate < 0.5% of Greenway flows
- Integrate (new) landfill pumping station with wastewater system
- Create on-site storage for leachate to be used when by-passes occur
- Minimum of 4 days of leachate storage
- Storage within landfill and tanks
- Estimated cost = \$3 to \$4 million

Thames River Protection

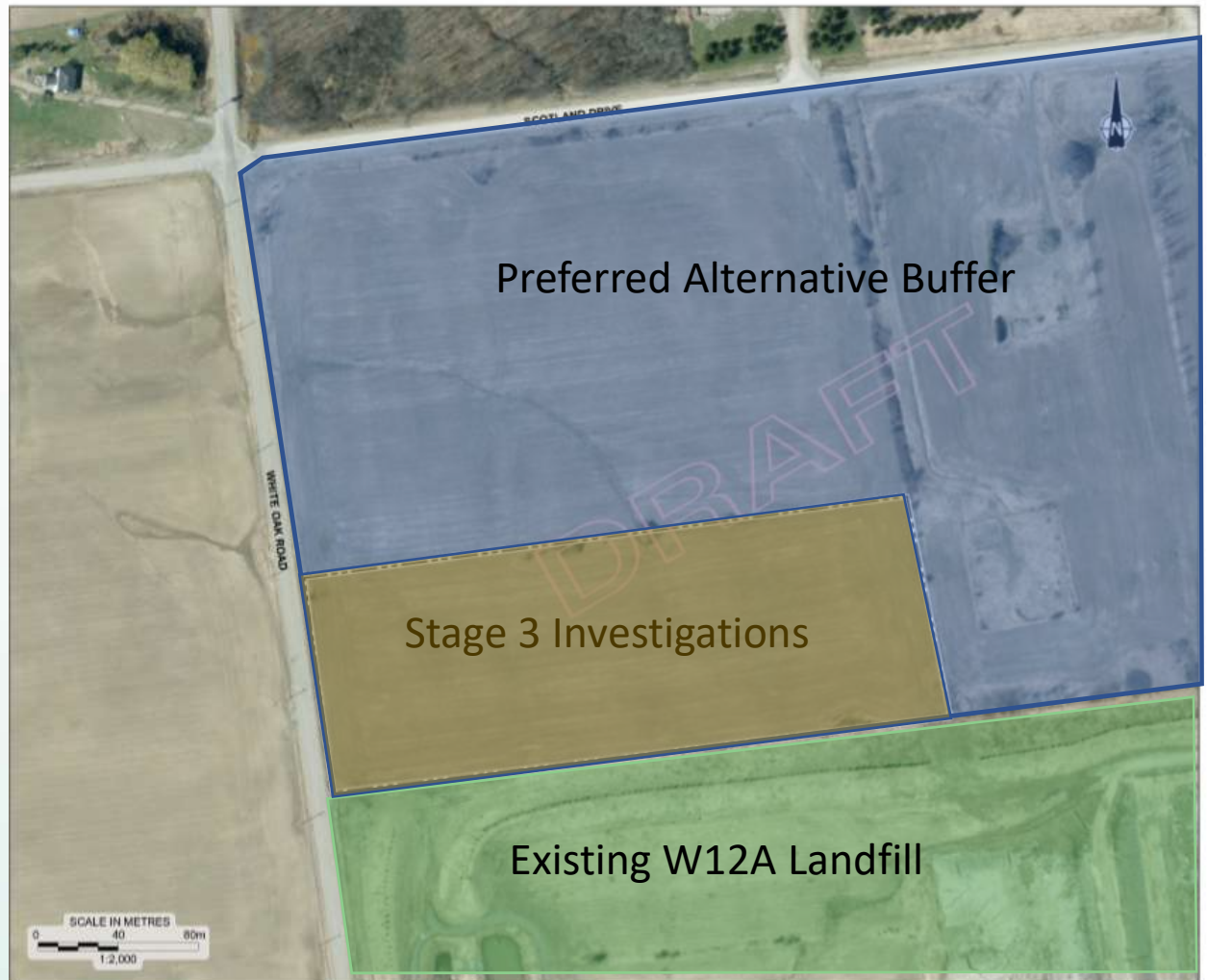




Other Considerations

Archeological

- Significant archaeology site located within on-site buffer land
- Area to remain undisturbed

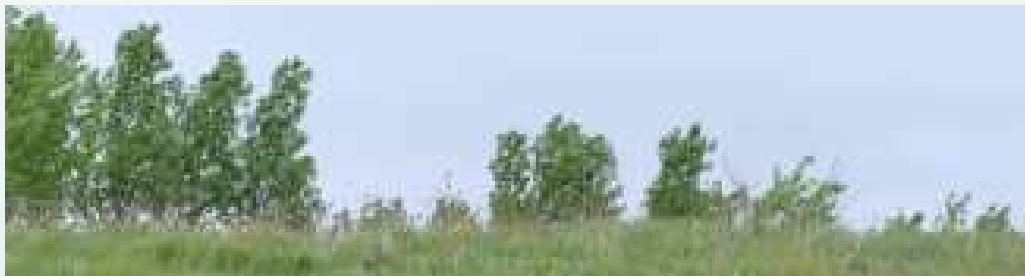
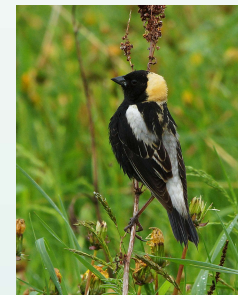




Other Considerations

Native Vegetation

- native vegetation with final cover as part of compensation for natural communities
- consultation with the MECP for Bobolink and Eastern Meadowlark habitat compensation
- include common milkweed for Monarch Butterfly





Other Considerations

Air Quality

- \$13 to \$20 million in gas collection system infrastructure
- Meet provincial standards except odour two locations (see figure)
- Both locations owned by City and homes were demolished in previous years
- May have to place building restrictions on property





Other Considerations

- Undertaking cumulative impact assessment
- Key Landfill Features
 - Placement of garbage to maximize screening
 - Additional leachate storage
 - Gas collection system improvements
 - Stormwater management pond upgrades
 - Replace/upgrade buildings
 - Enhanced public drop-off area
- **Preliminary Cost Estimate for Landfill is \$53 million to \$88 million**



City of London W12A Landfill Overview of Groundwater Field Work and Findings

Rob Kell, P.Eng., P.Geo., Dillon
Frank Barone, P.Eng., Golder

Presentation Summary

- Overview of Groundwater Investigation (Dillon)
 - Investigation Findings (Dillon)
 - Approach for Assessment of Potential Groundwater Impacts (Golder)
 - Questions??
-

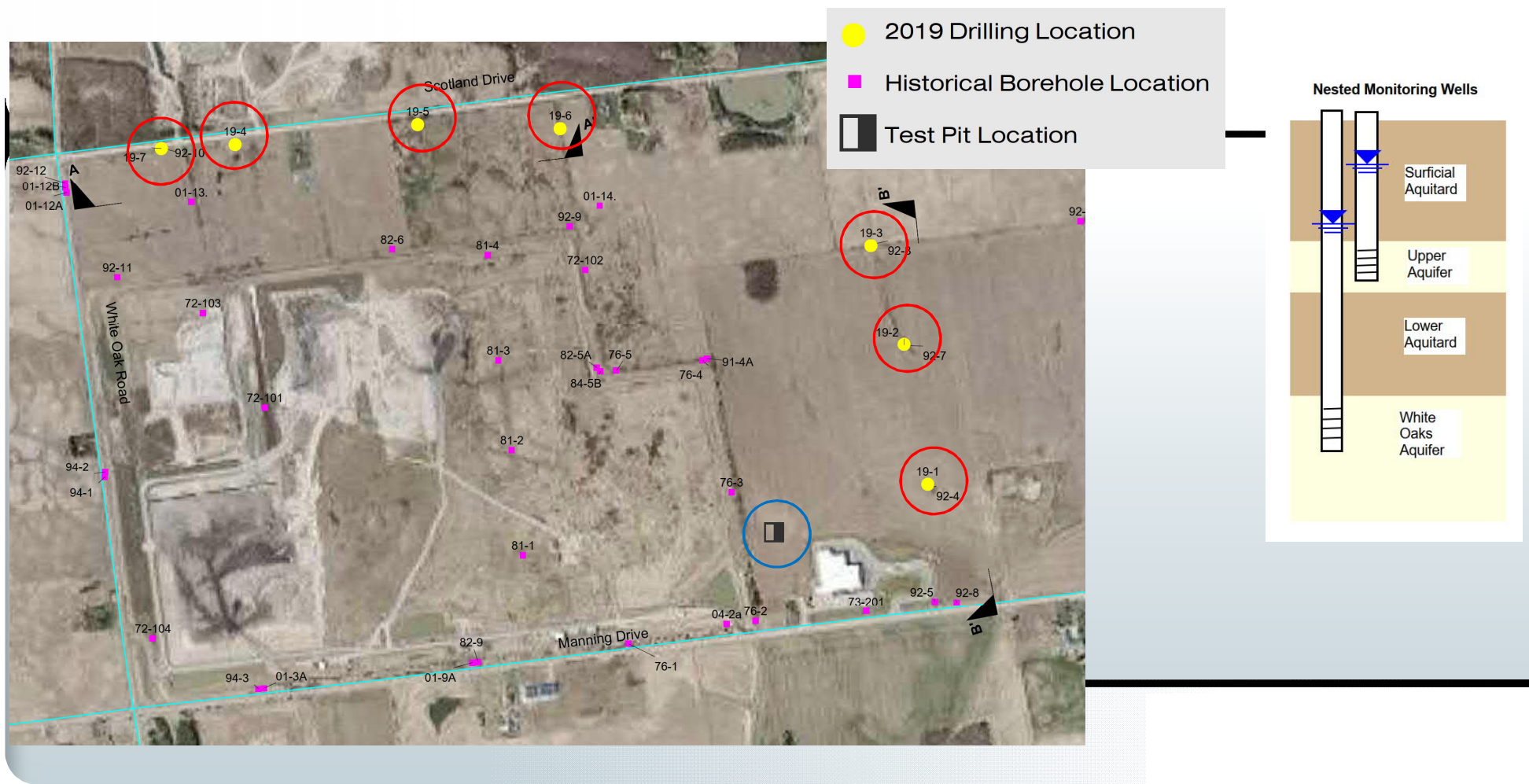


W12A Landfill Hydrogeology

- Generally, the hydrogeology of the W12A Landfill is well understood as a results on several investigations that have been completed from the late 1970's until present
 - Four principal hydrogeologic units are present under the landfill site:
 - Surficial Aquitard
 - Upper Aquifer
 - Lower Aquitard
 - White Oaks Aquifer
-

Drilling Locations

City of London W12A Landfill



Drilling

City of London W12A Landfill

6

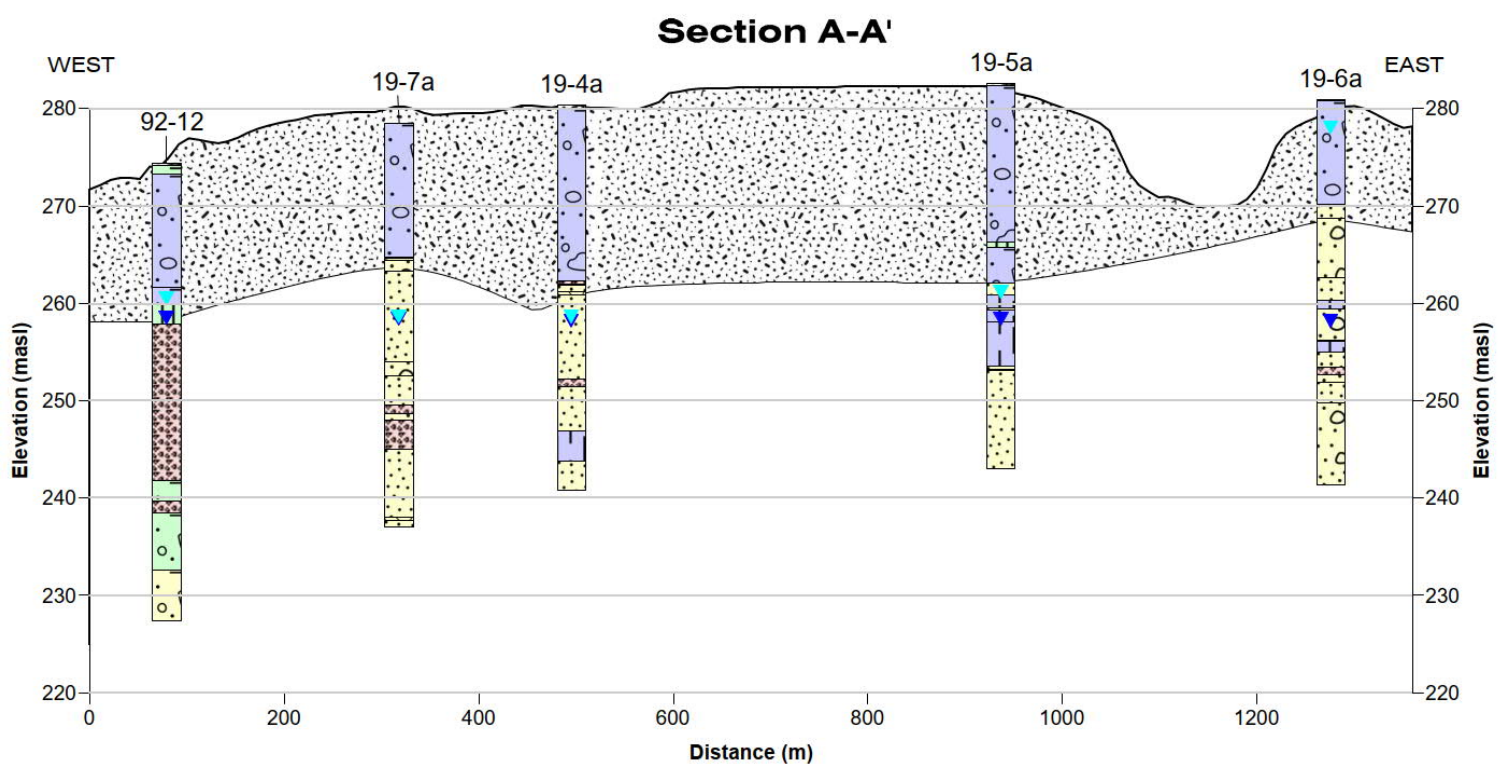


Soil and Aquifer Testing

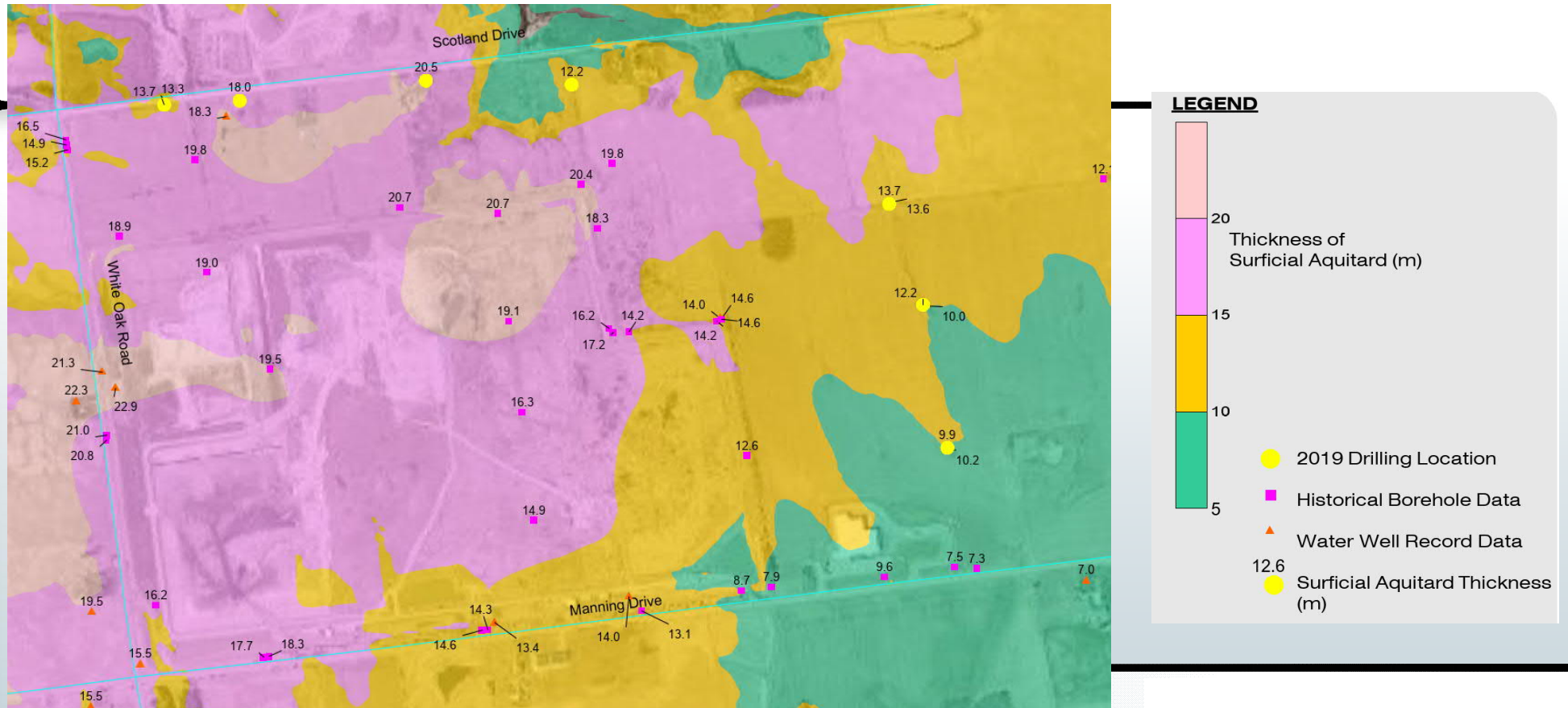
Number and Type of Soil and Hydrogeological Tests

Test	Hydrostratigraphic Unit			
	Surficial Aquitard	Upper Aquifer	Lower Aquitard	White Oaks Aquifer
Grain Size Analysis, Moisture Content	13	4	4	4
Fraction of Organic Carbon, Cation Exchange Capacity	6	1		
Flexible Wall Permeability Tests	6			
Conventional Water Quality Analysis		5		4
Isotope Analysis (porewater extracted from aquitard soil cores)	8			

Cross Section

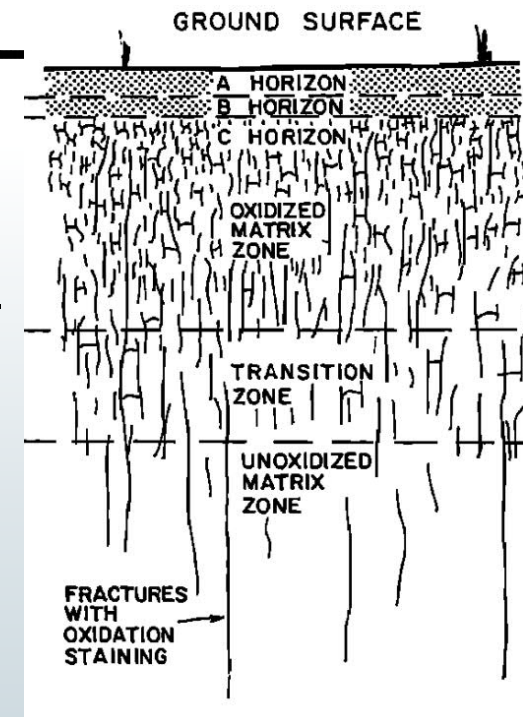


Thickness of Surficial Aquitard



Fractured and Weathered Clayey Till Soils

- Investigation of Surficial Aquitard
- Primary Investigation Method was a large test pit to allow physical examination of fractures - frequency and depth



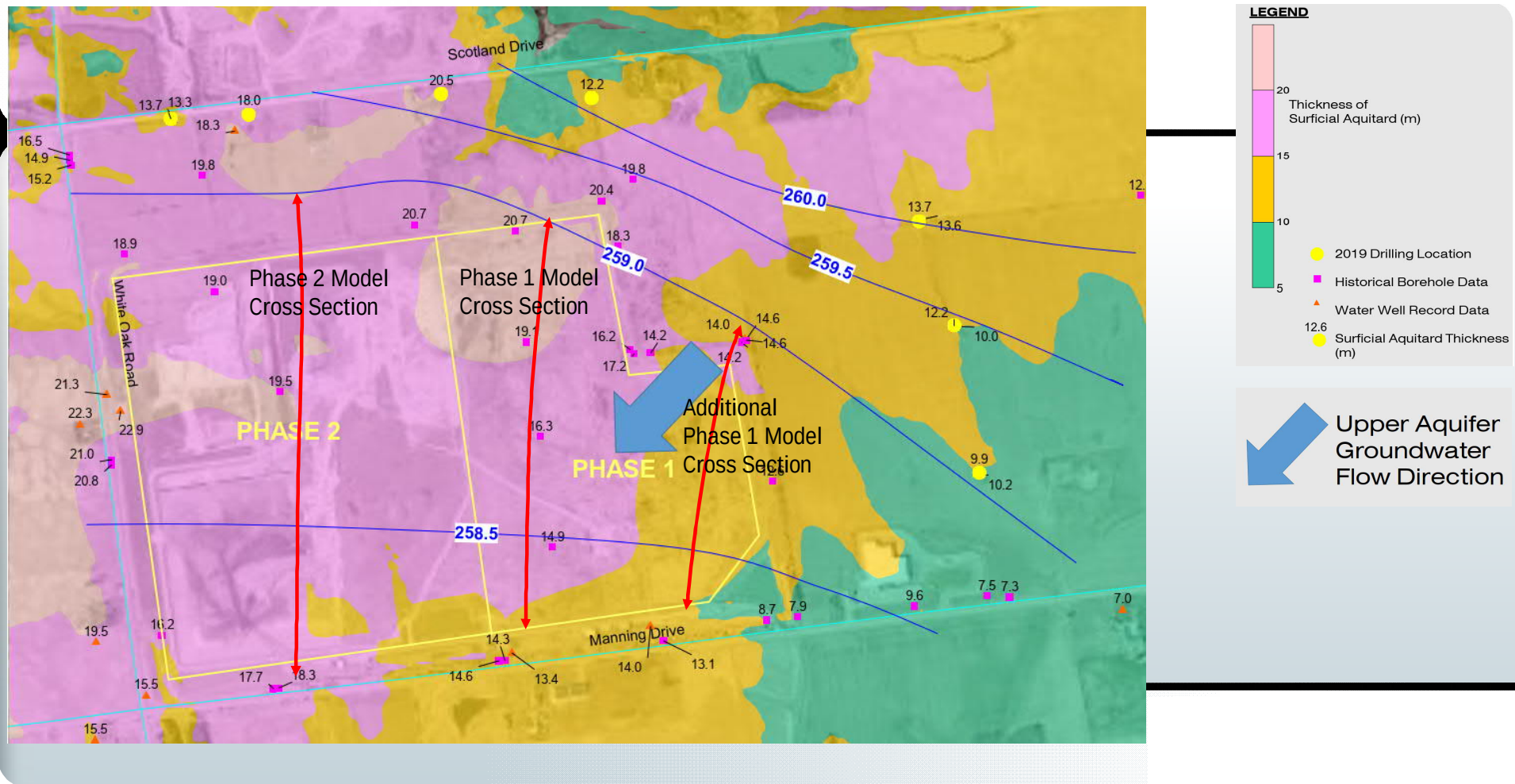
Fractured and Weathered Clayey Till Soils



Groundwater Impact Modelling

City of London W12A Landfill

12



Questions???



W12A Landfill Expansion Environmental Assessment: Biology

Presented by:

Jessica Walker, MES

Ecologist, AECOM Canada Ltd.

Summary of Field Investigations

Aquatic Habitat & Fisheries

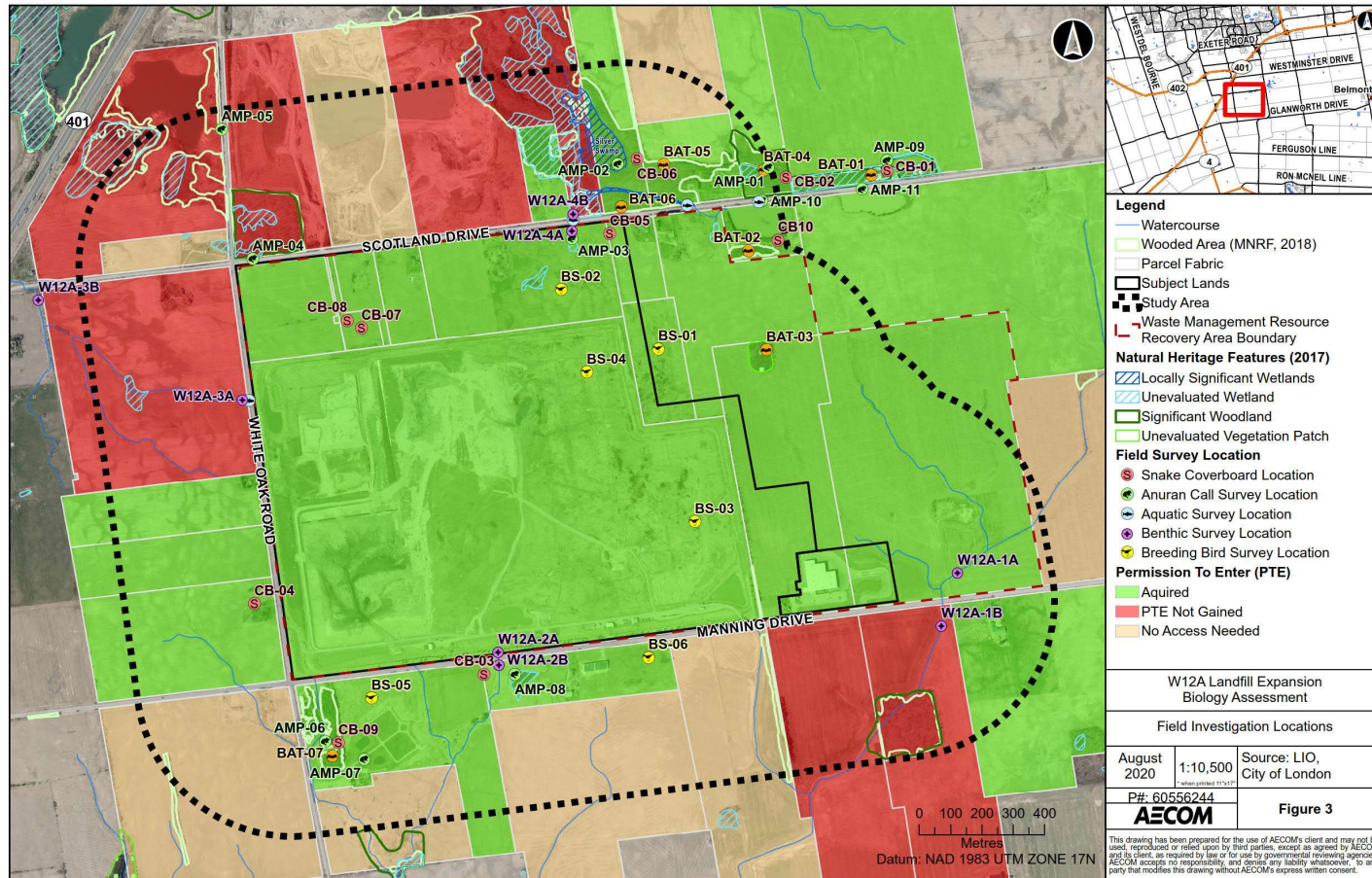
- Aquatic Habitat Assessments
- Benthic Invertebrate Surveys (StraightUp Environmental Consulting – Dave Johnson)



Terrestrial Ecosystems & Species

- Vegetation Community Surveys (ELC)
- Floral Species Inventory
- Snake Visual Encounter Surveys (VES)
- Snake Cover Board Surveys
- Anuran Call Surveys
- Vernal Pool Assessments
- Breeding Bird Surveys
- Bat Habitat Assessments
- Lepidoptera/Odonata Surveys
- Species at Risk (SAR) and Significant Wildlife Habitat(SWH) Assessments

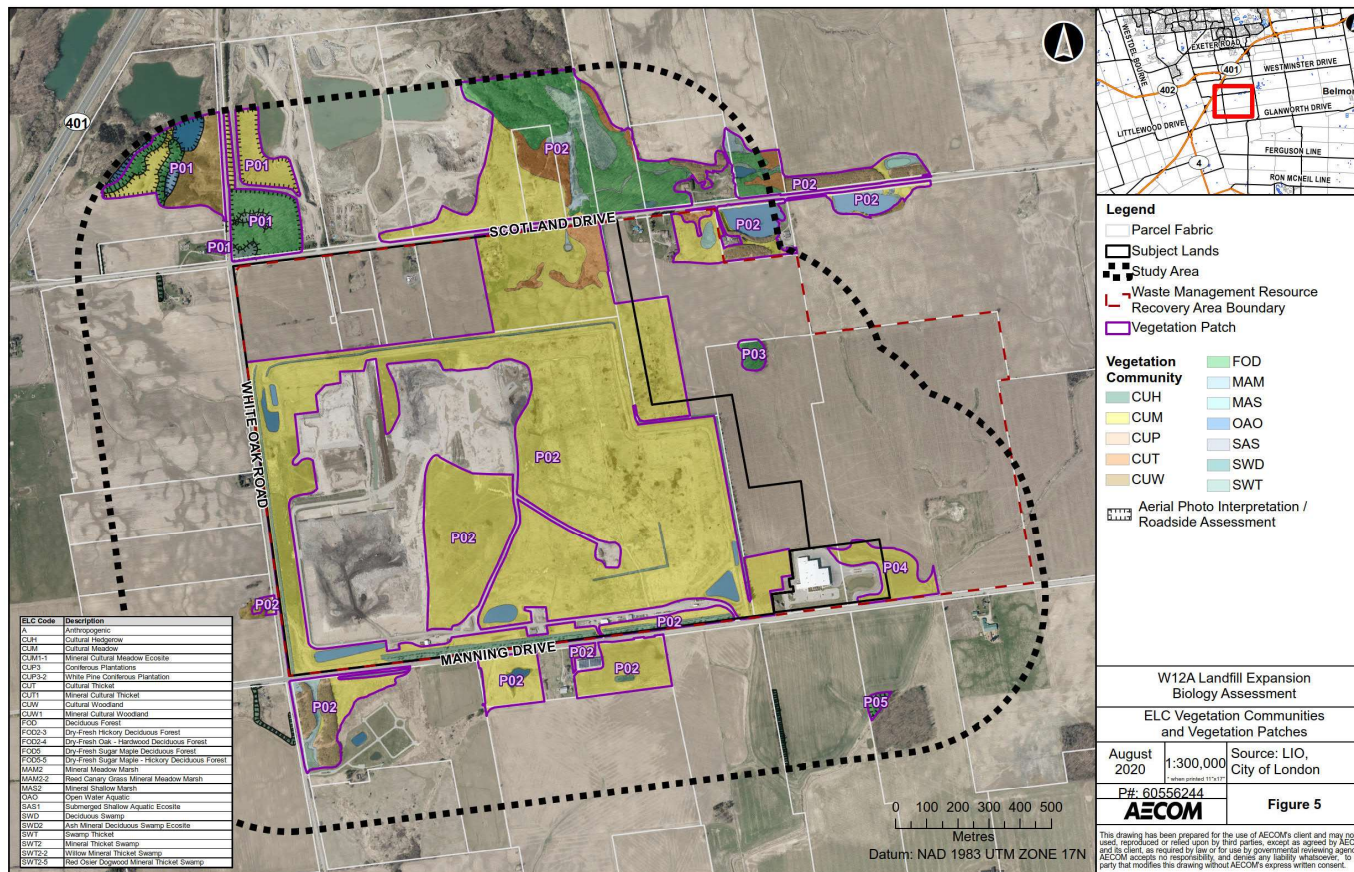
Field Investigations



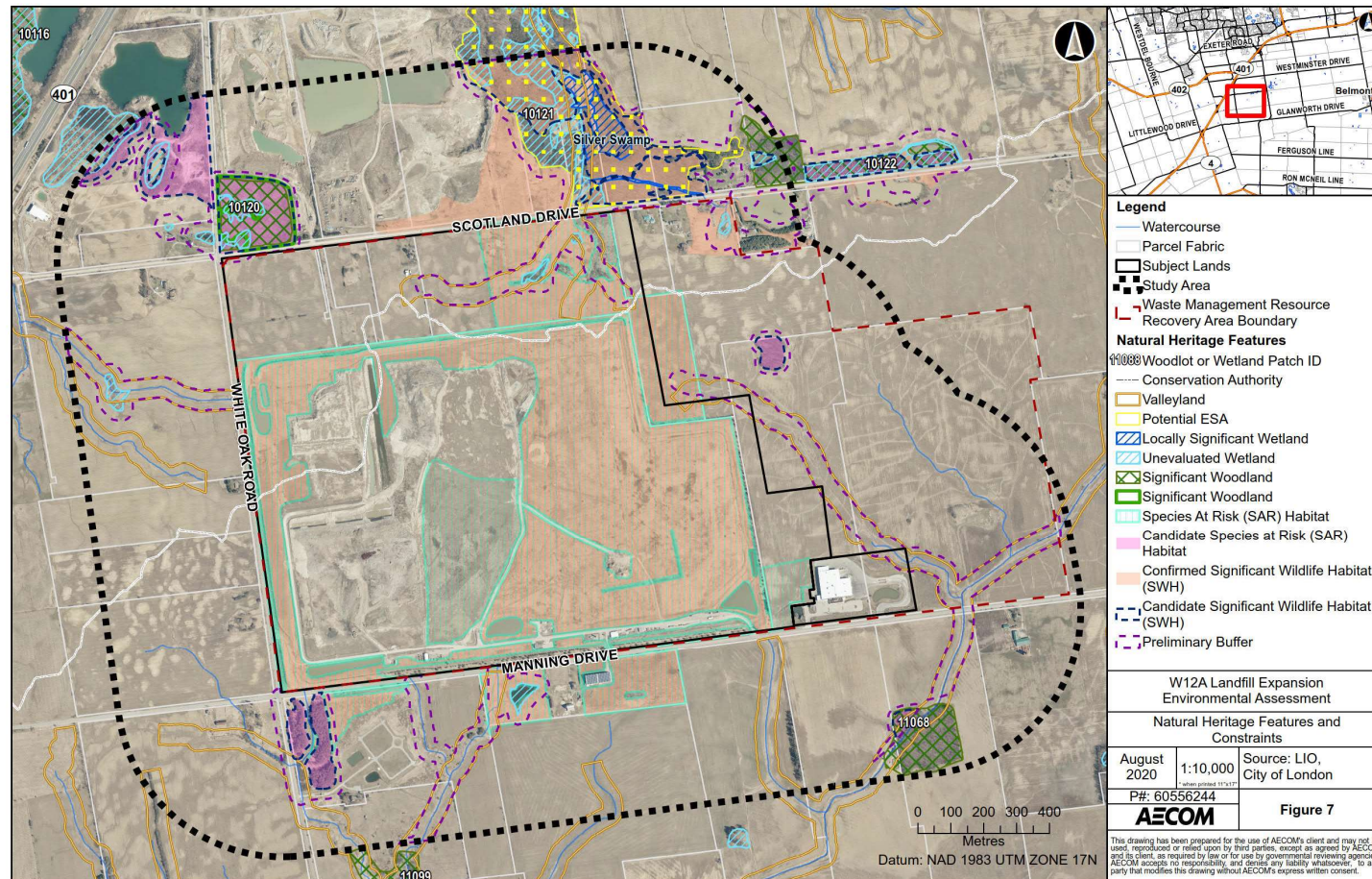
Aquatic Ecosystems & Species

- Bannister-Johnson Drain, Unnamed Pond and Drain (3502 and 3405 Scotland Drive), and C.B. Smith Drain have potential to support fish and fish habitat regulated under the *Fisheries Act*.
- No habitat for critical life stages (i.e., spawning and rearing), no SAR habitat.
- Impaired, very poor water quality with likely severe organic pollution based on water quality assessments (StraightUp Environmental Consulting).

ELC Vegetation Communities and Vegetation Patches



Natural Heritage Features and Constraints



Recommended Mitigation Measures

- Environmental Monitoring and Management Plan
- SAR and Wildlife Handling Protocol
- Vegetation clearing timing restriction – breeding bird window (April 1 – Aug 31)
- Slopes of topsoil or excavated materials piles $<70^\circ$ to deter nesting birds (e.g., Bank Swallow)
- Compensation measures such as habitat enhancement or creation for loss of SAR habitat (Bobolink, Eastern Meadowlark) and SWH (Monarch)

Anticipated Permit Requirements

- *Endangered Species Act* - Notice of Activity or Overall Benefit Permit in consultation with MECP for Bobolink and Eastern Meadowlark Habitat.
- *Planning Act* and *The London Plan* – potential requirement for an Environmental Impact Study to determine impacts under the *Provincial Policy Statement*.
- *Conservation Authorities Act* – potential Section 28 Permit under *O. Reg 157/06* (UTRCA) and *O. Reg 181/06* (KCCA) in consultation with Conservation Authorities.

H.12 Workshop Meeting Summary (August 27, 2020)

W12A Landfill Workshop/Information Session - Notes Environmental Assessment (EA) for the Proposed Expansion of the W12A Landfill

Meeting Details

Date: August 27, 2020

Location: Teams Meeting

Attendees

Aamjiwnaang First Nation (AFN): Sharilyn Johnston (Environment Coordinator),

Chippewas of the Thames First Nation (COTTFN): Fallon Burch
(Consultation Coordinator)

Munsee-Delaware First Nation: Chief Mark Peters, Stacey Phillips
(Consultation Coordinator)

AECOM: Jessica Walker (Terrestrial Ecologist)

Dillon Consulting: Rob Kell (Hydrogeologist, Environmental Engineer)

Dragun Corporation (Dragun): Cliff Lawton (Project Manager), Chris Pare
(Project Manager)

Golder Associates: Frank Barone (Senior Geotechnical Engineer)

Wesley Abbott: EA Technical Project Manager

City of London (City): Mary Alikakos (Project Manager – Wastewater and Drainage
Engineering), Jane Kittmer (Solid Waste Technician)

Discussion Topics

Below is a summary of the main discussion topics during the workshop/information session.

1. EA Process

The City of London is in the first step of the EA Process – completing the studies before moving on to write the draft EA Report.

Consultants were hired to conduct a “study of existing conditions” for various areas (Environmental Components):

- Atmosphere (air quality and noise),
- Geology & Hydrogeology(groundwater quality),
- Surface water (quality and quantity),
- Biology (aquatic & terrestrial ecosystems),
- Land Use and Agriculture,
- Archaeology,
- Cultural Heritage,
- Socio-Economic,
- Visual,
- Transportation
- Design & Operations.

The consultant that prepared the “study of existing conditions” for each Environmental Component identified their preferred landfill expansion alternative for their Environmental Component. Alternative 1 – Vertical Expansion over Existing Footprint is the proposed overall Preferred Alternative.

The consultants are completing more detailed impact assessment studies for key environmental components (e.g., groundwater) as well as looking at overall climate change implications and cumulative effects.

2. Groundwater Field Work

There are four hydrogeologic units under the landfill site:

- Surficial Aquitard
- Upper Aquifer
- Lower Aquitard
- White Oaks Aquifer

Seven new boreholes were drilled into the Upper and White Oak Aquifer to gain more information about the surficial aquitard and the aquifers.

A test pit was dug to examine the fracturing of the clay in the surficial aquitard. The top 3 metres are very fractured and hydraulically active. There is a transition zone from 3 – 5 metres which has less fractures and is less hydraulically active and below 5 metres, there are very few fractures and the zone is not hydraulically active.

Modelling will be done that simulates vertical transport of the chemical compounds found commonly in leachate. This will be completed for two areas: where the leachate mounding is the greatest, where garbage depth is the greatest and where garbage width is the greatest.

Dragun has requested that modelling be completed for a third area in the southeast corner of the landfill where the surficial aquitard is not as thick. Dragun wants to ensure that the worst case scenario is being considered.

The modelling results will be compared with the Reasonable Use Guideline (water quality criteria that landfills must meet and which are more stringent than Ontario's Drinking Water Standards). The consultants are confident that the Reasonable Use Guideline will be met at the property boundary.

3. Biology Field Work

Aquatic ecosystems

- No habitat for critical life stages (i.e., spawning and rearing), no SAR habitat.
- Very poor water quality with likely severe organic pollution based on water quality assessments.

Terrestrial ecosystems

- Two species at risk – Eastern Meadowlark and Bobolink
- 1 species of concern - Monarch butterfly
- Need to implement an Environmental Monitoring and Management Plan and follow SAR and Wildlife Handling Protocol to minimize disruption to species, include compensation measures such as habitat enhancement or creation for loss of SAR habitat (establish new habitat the season prior to removing the existing habitat). There will be 5 years of post-construction monitoring of the new SAR habitat.
- Vegetation clearing will be restricted during the breeding bird window (April 1 – Aug 31).
- Slopes of topsoil or excavated materials piles <70° to deter nesting birds (e.g., Bank Swallow).

4. Thames River Protection

The groundwater flow under W12A Landfill does not flow towards the Thames River. Most of the surface water flow goes to Kettle Creek. All of the leachate is pumped to the Greenway Wastewater Treatment Plant.

Currently, very large storm events could result in a discharge of the mixed leachate/sewage to Dingman Creek or the Thames River if the wastewater treatment plant is in a bypass situation. For the expansion, temporary storage area for the Phase 1 leachate will be created by pumping the leachate to Phase 2 of the landfill or storing leachate in an enclosed structure (underground chamber(s) or tank) located at the southeast corner.

Leachate can be retained within Phase 2 of the landfill because it has an underdrain leachate collection system whereas Phase 1 of the landfill only has a perimeter drain. Based on modelling and historical information, accommodating four days of temporary leachate storage will be appropriate. It is estimated that twelve days of generated leachate could be stored within the Phase 2 leachate collection system if required.

The leachate generated at the W12A Landfill is monitored regularly as part of the Site's ongoing monitoring program. Leachate quality is determined from sampling the monitoring wells installed at the base of the waste, and by analysis of the combined leachate at the main pump station. The leachate quality is considered when treating the wastewater at Greenway Wastewater Treatment Plant. Based on estimates, the W12A Landfill leachate will represent less than 0.5 % of the flow receiving treatment at the wastewater treatment plant. The main factors determining the quantity of leachate generated are the landfill footprint area and the amount of precipitation that infiltrates into the waste.

Leachate is collected within the landfill site and directed to the pumping station. The pumping station pumps the leachate through a forcemain (a pressurized sewer pipe). The forcemain runs eastward along Manning Drive, north along Wellington Road South and then west along Dingman Drive to the Dingman Drive Pumping Station. As part of the expansion, it is proposed to replace the existing main pumping station with a new pumping station that will operate more efficiently. The existing forcemain has adequate capacity to convey the estimated leachate flows associated with the expansion.

5. Archeology

Archeological monitoring was done with the assistance of monitors from COTTEN. Studies in the field north, adjacent to the existing landfill site have determined the area to be a Pre-contact Indigenous archaeological site. Items that were discovered included:

- (Late Archaic Period, ca. 1500 – 500 BC) - Found a total of 132 Indigenous artifacts (a projectile point, a scraper, and 130 stone flakes from tool manufacture and/or maintenance)

The area is to remain undisturbed.

6. Native Vegetation

The final cover will be seeded with native vegetation as part of compensation for natural communities. Aamjiwnaang has offered to assist with this.

MECP will be consulted for Bobolink and Eastern Meadowlark habitat compensation.

Vegetation planted at the landfill will include common milkweed for Monarch butterflies.

7. Air Quality

The W12A Landfill currently uses vertical collection wells to capture landfill gas. The expansion will include both horizontal collection pipes and vertical collection wells to capture landfill gas. The cost of the gas collection system for the landfill expansion is estimated to range from \$13 to \$20 million.

Air quality modelling indicates that there will be no exceedences of any health related parameters, but provincial odour guidelines may be exceeded at two locations immediately adjacent to the landfill. Both of these locations are owned by City and the homes at these locations were demolished in previous years. The City may have to place building restrictions on these lots as part of the approval process.

8. Future Engagement/Consultation

A copy of the draft Environmental Study Report will be provided to Indigenous Communities for comment. This is expected to occur in Fall 2020.

The City is available to meet with anyone to discuss the material presented at the workshop or any other aspect of the Environmental Assessment.

H.13 Indigenous Community Events

Losee, Michael

From: Losee, Michael
Sent: Thursday, November 18, 2021 11:49 AM
To: consultation@cottfn.com
Cc: Alikakos, Mary; fburch@cottfn.com; Stanford, Jay; Scherr, Kelly
Subject: Submission for November 23 COTTfN Council Meeting
Attachments: London - DRAFT EASR Comm - COTTfN Nov 18.pdf

Please find attached a letter the City of London would like to submit to the COTTfN Council meeting that is scheduled for November 23, 2021.

Thank you.



Michael Losee B.Sc.

Division Manager, Waste Management
Climate Change, Environment & Waste Management
Environment & Infrastructure Service Area
City of London

300 Dufferin Ave N6A 4L9

P: 519.661.CITY(2489) x 7369 | Cell: 226.268.7353 | Fax: 519.661.2354

mlosee@london.ca | www.london.ca

As part of our ongoing efforts to stop the spread of COVID-19, the City of London has made changes to many City services. Visit our [website for the latest information about City services and COVID-19](#)



London
CANADA

300 Dufferin Avenue
P.O. Box 5035
London, ON
N6A 4L9

November 18, 2021

Attn: Chief Jacqueline French
R.R. #1 320 Chippewa Road
Muncney, ON N0L 1Y0

City of London Staff Commitment Arising from Consultation on the Draft Environmental Assessment Study Report for the Proposed Expansion of the W12A Landfill Site

Aanii Chief French,

This submission relates to the recent consultation that occurred on November 4, 2021 between City of London and Chippewa of the Thames First Nation staff regarding comments and responses provided on the Draft Environmental Assessment Study Report (Draft EASR) for the proposed expansion of the W12A Landfill Site.

Background

As you are aware, The City of London is conducting an Environmental Assessment (EA) to expand the existing W12A Landfill site. It is expected that W12A will reach its waste disposal capacity some time in 2024. The proposal for expansion, as documented in the Draft EASR, seeks approval for an additional 13,800,000 cubic metres (m³) of air space which is expected to accommodate an additional 9,900,00 tonnes of waste. This expansion is expected to provide approximately 25 years of waste management capacity. The City of London commenced the EA for the proposed expansion of the W12A Landfill site in 2017 and is at the stage in the EA process where it is seeking feedback from stakeholders and First Nation communities on the Draft EASR.

Consultation and Community Engagement

From the onset of the EA in 2017, the City of London has engaged and consulted with stakeholders and First Nations communities. Below is a summary of the process to date:

- Provided in-person presentations summarizing the details of the proposed expansion and had discussions with First Nation communities who requested them.

- Funded in-person First Nations monitors to review and oversee the Archaeological assessments that were completed as part of the proposed expansion.
- Funded an external consultant to peer review the geologic and hydrogeologic investigation results. This included fundamental hydrogeological concepts and the results of the review which were presented during a workshop attended by various First Nation community representatives.
- As a result of these events and processes, City staff made the following commitments as part of the proposed expansion:
 - Ensuring leachate can be held on-site when the Greenway Wastewater Treatment Plant is in a by-pass situation;
 - Protecting an Indigenous archeological site located in the buffer area north of the landfill; and,
 - Active revegetation of the landfill using native plant species

Additional Commitments Made as Part of November 4 Consultation on Draft EASR

As a result of the most recent consultation and discussion between City staff and COTTfN Staff, City staff have made the following commitments related to waste management and climate change matters:

- City staff have committed to meet at least twice each year with COTTfN staff to discuss operations, programs and projects at the W12A Landfill. The first meeting is scheduled for February 2022.
- City staff have committed to further engagement and involvement with COTTfN staff on the development of the City's long-term Resource Recovery Plan. The focus of this plan is on higher levels of waste diversion, advanced resource recovery and a greater focus on the circular economy.
- City staff have committed to further engagement and involvement with COTTfN staff on the City's plan to beneficially use resources generated from the current and proposed expanded W12A landfill such as renewable natural gas (RNG).
- City staff have committed to expand the work on climate change as it applies to the proposed landfill expansion by using the City's Climate Lens Process. This work will begin in January 2022 and should be completed by March 2022. This process will include the ongoing work related to landfill gas recovery and utilization (RNG) and transportation practices and initiatives for delivering waste. This work will be peer-reviewed. The above work will be added among the many waste management items that have already been identified for the Climate Screening Process in a report to Municipal Council on August 31, 2021. This work will be outside of the current EA work and will be considered part of the ongoing work on climate change and the continuous improvement system for waste management.

City staff are grateful for the comments received to date from COTTFN on these matters. City staff are committed to ensuring there will be further opportunities for collaboration and learnings with COTTFN to achieve mutual goals with respect to climate change mitigation and adaptation as the City moves forward with implementing its Climate Emergency Action Plan, which will be considered for approval by City Council in early 2022,

City staff look forward to engaging with COTTFN staff as outlined above and on a go-forward basis on other projects and programs in an effort to achieve our common goals with respect to waste management, climate change and other matters of interest. Should you have any questions, please do not hesitate to reach out to either of us.

Sincerely,



Kelly Scherr, P.Eng., M.B.A., F.E.C.
Deputy City Manager
Environment & Infrastructure
519 661-2489, ext. 2391
kscherr@london.ca



Jay Stanford, M.A., M.P.A.
Director, Climate Change, Environment
& Waste Management
519 661-2489, ext. 5411
jstanfor@london.ca

APPENDIX I

Comments Received on the EA

- I.01 Example Notices and Advertisement of Draft EASR
- I.02 Comments on the Draft EASR
- I.03 Disposition of Comments on the Draft EASR

I.01 Example Notices and Advertisement of Draft EASR

**Notice of Draft Environmental Assessment Study Report
Environmental Assessment for Proposed W12A Landfill Expansion
City of London**

The City of London is seeking community input on the draft Environmental Assessment Study Report (EASR) for the proposed expansion of the W12A Landfill. The EASR details all work completed during the environmental assessment. The draft EASR will be available for public review until May 21, 2021 on the project website (getinvolved.london.ca/WhyWasteDisposal). Hardcopies and/or memory sticks of the draft EASR are available for loan and can be obtained by contacting the persons listed below.

The City is proposing to approximately double the current capacity of the landfill by increasing the height of the existing waste footprint which will extend its life to 2049. In addition, the service area will be increased to a regional area, which includes: City of London, County of Huron, County of Perth, County of Elgin, County of Lambton, and County of Middlesex. The proposed design capacity for landfill expansion over the 25 year planning period is 9.9 million tonnes including 0.5 million tonnes from neighbouring municipalities (about 5%).

Following the review period, the draft EASR will be updated to address comments received and then submitted to the Ontario Ministry of the Environment, Conservation and Parks (MECP) for approval. The MECP approval process will also include opportunities to provide comments.

Interested persons are encouraged to review the draft EASR and provide comments by May 21, 2021. Comments may be submitted through the project website getinvolved.london.ca/WhyWasteDisposal or by mail, e-mail or fax to the contacts for the project provided below. If you have any questions or comments regarding the draft EASR Report, please contact either of the individuals listed below.

Jay Stanford, M.A., M.P.A.

Director - Environment, Fleet and Solid Waste

Phone – (519) 661-CITY (2489) ext. 5411

Fax – (519) 661-2354

E-mail - jstanfor@london.ca

Wesley Abbott, P. Eng.

Project Manager

Phone – (226) 376-2311

Fax – (519) 661-2354

E-mail – wabbott@london.ca

Mailing Address for the above staff is:

Solid Waste Management Division, 8th Floor, City Hall

300 Dufferin Avenue, P.O. Box 5035

London, ON N6A 4L9

All personal information included in a submission – such as name, address, telephone number and property location – is collected, maintained and disclosed by the MECP for the purpose of transparency and consultation. The information is collected under the

authority of the *Environmental Assessment Act* or is collected and maintained for the purpose of creating a record that is available to the general public as described in s.37 of the *Freedom of Information and Protection of Privacy Act*. Personal information you submit will become part of a public record that is available to the general public unless you request that your personal information remain confidential. For more information, please contact the MECP's Freedom of Information and Privacy Coordinator at 416-327-1434.

Veillez noter qu'il vous est possible de nous communiquer vos commentaires ou vos questions sur le projet en français en les adressant à Trish Edmond dont les coordonnées sont indiquées ci-dessus.

Trish Edmond, P. Eng., EA Manager
Golder Associates Ltd
1931 Robertson Road
Ottawa, ON K2H 5B7
Telephone: 1-800-275-3281
Fax: 613-592-9601 E-mail: trish_edmond@golder.com

Public Notices & BIDDING OPPORTUNITIES



MINOR VARIANCES

The **Committee of Adjustment** for the City of London will meet on **Thursday May 13, 2021**, commencing at 1:30 p.m., for the purpose of hearing the following applications for Minor Variance to Zoning By-law Z.-1. Due to the COVID-19 emergency in the Province of Ontario, public hearings before the committee will be held virtually. Those who wish to attend the public hearing, or to provide written submissions regarding the matter should contact the Secretary - Treasurer, London Committee of Adjustment at 519-661-2489 ext. 4988 by 4:30 p.m. the day before the committee meeting. Additional information regarding the matter being considered by the committee is available to the public for inspection by contacting the Secretary-Treasurer, London Committee of Adjustment.

1:30 p.m. – A.052/21 - 914 Princess Avenue, PLAN 352 BLK P PT LOT 41 REG 0.10AC 33.00FR 132.00D, north of Princess Avenue, east of Ontario Street. To permit a converted three-unit dwelling. To permit a lot area of 407.3m², whereas 540.0m² is the minimum required. To permit a lot frontage of 10.1m, whereas 12.0m is the minimum required. To permit a landscaped open space of 28.0%, whereas 30% is the minimum required. To permit a parking area coverage of 40.8%, whereas 30% is the maximum permitted.

1:50 p.m. – A.049/21 - 840 Wellington Road, CON 2 PT LOT 25 RP 33R4397 PARTS 2 & 3 east side of Wellington Road, south of Southdale Road East. To permit reduced parking. To permit 36 parking spaces under the Highway Service Commercial (HS(1)) Zone variation for the existing building, whereas 75 parking spaces is the minimum required.

2:10 p.m. – A.043/21 - 2705 Oriole Drive, PLAN 33M735 LOT 20 west side of Oriole Drive, east of Constance Avenue. To construct a single detached dwelling. To permit an exterior side yard setback of 1.3m, whereas 4.5m is the minimum required.

2:00 p.m. - A.050/21 - 237 Sherwood Avenue, PLAN 261 PT LOT 10 PLAN 30 PT LOT 40 AND RP 33R13446 PART 3, south side of Sherwood Avenue, east of Richmond Street. To construct an addition. To permit a rear yard setback of 5.3m, whereas 7.0m is the minimum required. To permit a maximum gross floor area of 248m², whereas 245m² is the maximum permitted.

*If you wish to be notified of a decision of the Committee of Adjustment, you must appear in person or by Counsel at the hearing **and** file a written request with the Secretary-Treasurer of the Committee of Adjustment. An appeal from a decision of the Committee of Adjustment to the Local Planning Appeal Tribunal (LPAT) shall be filed within 20 days of making the decision. Any appeal must be filed with the Secretary-Treasurer of the Committee of Adjustment, in person at 6th Floor, City Hall, 300 Dufferin Ave., London, ON, or Mail to City of London, P.O. Box 5035, ON N6A 4L9. 519-661-2489 ext. 4988*

CONSENTS

The **London Consent Authority** will be considering the following application for consent. **Comments are due May 6, 2021** to the London Consent Authority.

B.016/21 – 980-990 Gainsborough Rd – Request to sever approx. 1 666m² of land for future development of an office building and retain 7 414.6m² for the existing medical/dental/office building. Driveway access and parking areas will be shared between severed and retained lands. Planner: E.Ling ext. 2786

If a person or public body that files an appeal of a decision of the City of London Consent Authority in respect of the proposed consent does not make written submissions to the Consent Authority, before it gives or refuses to give a provisional consent, the Local Planning Appeal Tribunal (LPAT) may dismiss the appeal. If you wish to be notified of the decision of the Consent Authority in respect of the proposed consent you must make a written submission to the City of London Consent Authority, 300 Dufferin Avenue, 6th Floor, London, Ontario, N6A 4L9. Additional information on these applications is available at the Consent Authority Office, Development and Compliance Services, Development Services, 6th Floor, City Hall, 300 Dufferin Avenue, London, Ontario 519-930-3500.

NOTICES

Draft Environmental Assessment Study Report – W12A Landfill

The City of London is seeking community input on the draft Environmental Assessment Study Report (EASR) for the proposed expansion of the W12A Landfill. The EASR details all work completed during the environmental assessment. The draft EASR will be available for public review until May 21, 2021 on the project website (getinvolved.london.ca/WhyWasteDisposal). Hardcopies (for loan) and/or memory sticks of the draft EASR are available and can be obtained by contacting Tracey Lee by phone at 519-661-CITY (2489) ext. 8413 or by e-mail at tlee@london.ca.

The City is proposing to approximately double the current capacity of the landfill by increasing the height of the existing waste footprint which will extend its life to 2049. In addition, the service area will be increased to a regional area, which includes: City of London, County of Huron, County of Perth, County of Elgin, County of Lambton, and County of Middlesex. The proposed design capacity for landfill expansion over the 25 year planning period is 9.9 million tonnes including 0.5 million tonnes from neighbouring municipalities (about 5%).

Following the review period, the draft EASR will be updated to address comments received and then submitted to the Ontario Ministry of the Environment, Conservation and Parks (MECP) for approval. The MECP approval process will also include opportunities to provide comments.

Interested persons are encouraged to review the draft EASR and provide comments by May 21, 2021. Comments may be submitted through the project website getinvolved.london.ca/WhyWasteDisposal or by mail, e-mail or fax to the contacts for the project provided below. If you have any questions or comments regarding the draft EASR Report, please contact either of the individuals listed below.

Jay Stanford, M.A., M.P.A.

Director - Environment, Fleet and Solid Waste
Phone: 519-661-CITY (2489) ext. 5411
Fax: 519-661-2354
E-mail: jstanfor@london.ca

Wesley Abbott, P. Eng.

Project manager
Phone: 226-376-2311
Fax: 519-661-2354
Email: wabbott@london.ca

Mailing Address for the above staff is:

Solid Waste Management Division, 8th Floor, City Hall
300 Dufferin Avenue, P.O. Box 5035
London, ON N6A 4L9

All personal information included in a submission – such as name, address, telephone number and property location – is collected, maintained and disclosed by the MECP for the purpose of transparency and consultation. The information is collected under the authority of the Environmental Assessment Act or is collected and maintained for the purpose of creating a record that is available to the general public as described in s.37 of the Freedom of Information and Protection of Privacy Act. Personal information you submit will become part of a public record that is available to the general public unless you request that your personal information remain confidential. For more information, please contact the MECP's Freedom of Information and Privacy Coordinator at 416-314-4075.

Veillez noter qu'il vous est possible de nous communiquer vos commentaires ou vos questions sur le projet en français en les adressant à Trish Edmond dont les coordonnées sont indiquées ci-dessus.

Trish Edmond, P. Eng., EA Manager

Golder Associates Ltd
1931 Robertson Road
Ottawa, ON K2H 5B7
Telephone: 1-800-275-3281
Fax: 613-592-9601
E-mail: trish_edmond@golder.com

Notice of Heritage Designation By-Laws

TAKE NOTICE THAT the Council of The Corporation of the City of London has enacted the following heritage designation by-law pursuant to the Ontario Heritage Act, R.S. O. 1990:
Property Description
3303 Westdel Bourne
By-law Enactment Date
April 13, 2021
By-law Number
L.S.P.-3490-112

A copy of this heritage designation By-law may be obtained from the Office of the City Clerk by telephoning 519-661-CITY (2489) ext. 0916, or by emailing docservices@london.ca.

DATED at London, Ontario on April 22, 2021.
Catharine Saunders, City Clerk

Notice of Study Commencement and Public Information Centre No. 1 – Wastewater Treatment Operations Master Plan

The City of London operates five wastewater treatment plants and 36 pumping stations to collect and treat London's wastewater. This study will look at the need for new and upgraded facilities as part of our commitment to protecting the environment and ensuring that our facilities can continue to serve London as it grows. This Master Plan needs to consider the entire city. We are seeking input from everyone who wants their voice heard.

Background:

The proper collection and treatment of wastewater has a direct impact of the health of residents, our environment, and the ability of the City to grow and prosper. Operating a wastewater treatment system often requires the upgrade of existing facilities and the construction of new infrastructure. By developing an informed long-term plan, the City will ensure that the improvements we make today will effectively contribute to our long-term goals.

Public Information Centre – event details:

A virtual Public Information Centre will be held on Thursday, April 22 at 5:00 p.m. to present some of the key opportunities, challenges, and constraints of this Wastewater Treatment Operations Master Plan. The link to register for the online event will be available at the project's Get Involved page (getinvolved.london.ca/wastewater-master-plan) along with a recorded presentation video following the event.

Wastewater Treatment Operations Master Plan project page:

For the most up-to-date information, including project updates, please visit the Wastewater Treatment Operations Master Plan project page (www.london.ca/projects/wastewater-treatment-operations-master-plan).

Your input is important:

The City wants to hear from you. This Master Plan would not be complete if it does not consider the needs of all of the City's residents and neighbours. If you would like to ask a question, make a comment or add your name to the contact list, please visit the project's Get Involved page (getinvolved.london.ca/wastewater-master-plan) or contact the

City Project Manager:

Marcy McKillop, P.Eng.
City of London, Environmental & Engineering Services
Phone: 519-661-2489 ext. 4976
Email: mmckillo@london.ca
Please also watch the study webpage for future public information centres, which are an excellent opportunity to discuss wastewater treatment operations, and how they can contribute to healthy living and a cleaner environment.

This document is available in accessible formats, including electronic formats, large-print formats, and/or audio formats. Please contact the City Project Manager to submit your request.

Municipal Class Environmental Assessment Process:

This study is being undertaken in accordance with the Municipal Class Environmental Assessment process (MEA, 2000 as amended in 2007, 2011, and 2015). For details on this process, please refer to the Municipal Class Environment Assessment website (www.municipalclass.ca) or contact the City Project Manager listed above.

Thank you in advance for your participation and contribution to the planning process that will impact your life in the City of London in a meaningful way. We look forward to working with you towards building a more sustainable and environmentally responsible city.



April 21, 2021

Andrea Pastori
Cabinet Liaison and Strategic Policy Branch Coordinator
Ministry of Energy
Strategic Policy and Analytics Branch, Strategic, Network and Agency Policy Division
77 Grenville St
6th Floor
Toronto ON
M7A 2C1

Dear Ms. Pastori,

**Notification to the Government Review Team
Environmental Assessment for the Proposed W12A Landfill Expansion
City of London, Ontario**

We previously sent you correspondence regarding the City of London's (the City) Environmental Assessment (EA) for a proposed landfill expansion. The City's existing landfill (W12A) is expected to reach capacity in 2024.

A Notice of Commencement of the EA was published on March 30, 2017 and four Open Houses have been held to date to provide information and receive comments from the public and other stakeholders.

The City has now completed the Draft Environmental Assessment Study Report and is seeking feedback prior to formally submitting the documents to the Ministry of the Environment, Conservation and Parks.

The Draft Environmental Assessment Study Report consists of five volumes which are listed below.

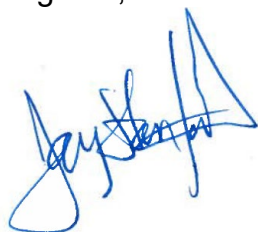
- Volume I, Draft Environmental Assessment Study Report
- Volume II, Approved Amended Terms of Reference
- Volume III, Technical Work Plans and Waste Quantity Projections
- Volume IV, Existing Conditions and Impact Assessment Reports
- Volume V, Record of Consultation

The documents will be forwarded to you via the City's File Transfer Site due to the size of the documents.

We invite you to review and provide comments on the draft documents. We are requesting that comments be provided by Friday May 21, 2021. Please let us know by email if you do not intend to provide comments.

If you have any questions, please do not hesitate to contact me (jstanfor@london.ca, 519.661.CITY (2489) ext. 5411) or Wesley Abbott, Project Manager (wabbott@london.ca; 226.376.2311). For further information, please visit our website at getinvolved.London.ca/WhyWasteDisposal.

Regards,

A handwritten signature in blue ink, appearing to read "Jay Stanford", with a stylized flourish at the end.

Jay Stanford, M.A., M.P.A.
Director - Environment, Fleet and Solid Waste

cc: Trish Edmond, Golder Associates Ltd.
Devon Wills, Ministry of the Environment and Climate Change



April 20, 2021

Tracy Annett
Manager of Planning and Regulations Unit
Upper Thames River Conservation Authority
1424 Clarke Road
London ON
N5V 5B9

Dear Ms. Annett,

**Notification to the Government Review Team
Environmental Assessment for the Proposed W12A Landfill Expansion
City of London, Ontario**

We previously sent you correspondence regarding the City of London's (the City) Environmental Assessment (EA) for a proposed landfill expansion. The City's existing landfill (W12A) is expected to reach capacity in 2024.

A Notice of Commencement of the EA was published on March 30, 2017 and four Open Houses have been held to date to provide information and receive comments from the public and other stakeholders.

The City has now completed the Draft Environmental Assessment Study Report and is seeking feedback prior to formally submitting the documents to the Ministry of the Environment, Conservation and Parks.

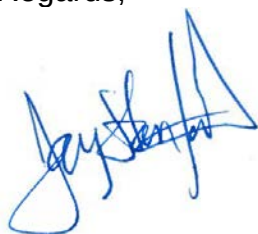
The following draft documents are attached:

- Volume I, Draft Environmental Assessment Study Report
- Volume II, Approved Amended Terms of Reference
- Volume III, Technical Work Plans and Waste Quantity Projections
- Volume IV, Existing Conditions and Impact Assessment Reports
- Volume V, Record of Consultation

We invite you to review and provide comments on the attached draft documents. We are requesting that comments on the attached documents be provided by Friday May 21, 2021. Please let us know by email if you do not intend to provide comments.

If you have any questions, please do not hesitate to contact me (jstanfor@london.ca, 519.661.CITY (2489) ext. 5411) or Wesley Abbott, Project Manager (wabbott@london.ca; 226.376.2311). For further information, please visit our website at getinvolved.London.ca/WhyWasteDisposal.

Regards,



Jay Stanford, M.A., M.P.A.
Director - Environment, Fleet and Solid Waste

cc: Trish Edmond, Golder Associates Ltd.
Devon Wills, Ministry of the Environment, Conservation and Parks

Attachments:

Volume I, Draft Environmental Assessment Study Report
Volume II, Approved Amended Terms of Reference
Volume III, Technical Work Plans and Waste Quantity Projections
Volume IV, Existing Conditions and Impact Assessment Reports
Volume V, Record of Consultation

Abbott, Wesley

From: Bunn, Jerri-Joanne
Sent: Friday, April 23, 2021 12:58 PM
Subject: FW: AAC - EA the Expansion of W12A Landfill
Attachments: AAC_EEPAC EA Update April 2021.pptx; FAQ 9.pdf

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Good afternoon AAC members

Please see the message below and the attachments.

Thanks!



Jerri-Joanne Bunn (she/her)
Committee Clerk
City Clerk's Office
City of London

300 Dufferin Avenue, London, ON N6A 4L9
P: 519.661.CITY (2489) x 0835 | Fax: 519.661.4892
jbunn@london.ca | www.london.ca

As part of our ongoing efforts to stop the spread of COVID-19, the City of London has made changes to many City services. Visit our [website for the latest information about City services and COVID-19](#).

From: Stanford, Jay <JSTANFOR@London.ca>
Sent: Friday, April 23, 2021 12:53 PM
To: Bunn, Jerri-Joanne <jbunn@London.ca>
Cc: Abbott, Wesley <WAbbott@London.ca>
Subject: AAC - EA the Expansion of W12A Landfill

Hi Jerri. . see below for circulation please along with the attachments

Thanks. . Jay

.....
Hello Chair and Members of AAC

In the past, City staff have come before AAC to provide an update on the status of the Environmental Assessment (EA) for the expansion of the City's W12A Landfill site as well as the City's plans to increase waste diversion. Listed below are a few background details and how to provide feedback during this round of engagement. Additional details about the environmental assessment can be found in the attached FAQs and presentation. **Please note that feedback from members of AAC will be accepted up until Friday, May 21, 2021.**

The City has now completed the Draft Environmental Assessment Study Report and is seeking feedback prior to formally submitting the documents to the Ministry of the Environment, Conservation and Parks. The EASR details all work completed during the environmental assessment.

The City is proposing to approximately double the current capacity of the landfill by increasing the height of the existing waste footprint which will extend its life to 2049. In addition, the service area will be increased to a regional area, which includes: City of London, County of Huron, County of Perth, County of Elgin, County of Lambton, and County of Middlesex. The proposed design capacity for landfill expansion over the 25 year planning period is 9.9 million tonnes including 0.5 million tonnes from neighbouring municipalities (about 5%).

The Draft Proposed Terms of Reference consists of:

- Volume I, Draft Environmental Assessment Study Report
- Volume II, Approved Amended Terms of Reference
- Volume III, Technical work plans and Waste Quantity Projections
- Volume IV, Existing Conditions and Impact Assessment Reports
- Volume V, Record of Consultation

The draft documents are available for public review on the project website (getinvolved.london.ca/WhyWasteDisposal). Hardcopies (for loan) and/or memory sticks of the draft EASR are available and can be obtained by contacting Tracey Lee by phone at (519) 661-CITY (2489) ext. 8413 or by e-mail at tlee@london.ca.

Feedback or questions can be sent to me or Wesley Abbott (wabbott@london.ca). Comments can also be left on the project website getinvolved.london.ca/WhyWasteDisposal.

Regards. . . . Jay



Jay Stanford, M.A., M.P.A. (he/him)
Director, Environment, Fleet & Solid Waste
Environmental & Engineering Services
City of London

300 Dufferin Ave, P.O. Box 5035 London, Ontario N6A 4L9

P: 519.661.CITY (2489) x 5411 | Cell: 519.851.5423

jstanfor@london.ca | www.london.ca

From: [Kittmer, Jane](#)
To: eugenemorrison@hotmail.com; joannem@skynet.ca; sheilg@londonhydro.com; jsifton@sympatico.ca; dave@mxinsulation.com; darrenhelenmackay@gmail.com; [roy.hanson; ca.tillie@yahoo.ca](mailto:roy.hanson@ca.tillie@yahoo.ca); allantipping1@gmail.com; jwliddiard@hotmail.com; hildanf@yahoo.com
Cc: [Stanford, Jay](#); [Abbott, Wesley](#)
Subject: Draft EASR for the Proposed W12A Landfill Expansion
Date: Thursday, April 22, 2021 12:48:31 PM
Attachments: [Notice_Draft EASR PLC Members.docx](#)
[image001.png](#)

Good afternoon,

Please find attached information regarding the Draft Environmental Assessment Study Report (EASR) for the proposed landfill expansion by the City of London.

Regards,
Jane



Jane Kittmer
Technician
Solid Waste Management
City of London

300 Dufferin Ave, P.O. Box 5035, London ON N6A 4L9
P: 519.661.CITY(2489) x 2334 | Fax: 519.661.2354
jkittmer@london.ca | www.london.ca

As part of our ongoing efforts to stop the spread of COVID-19, the City of London has made changes to many City services. Visit our [website for the latest information about City services and COVID-19](#).



April 22, 2021

Islamic Cemetery of London
28 Somerset Cr
London ON
N6K 3M2

**Draft Environmental Assessment Study Report
Environmental Assessment for the Proposed W12A Landfill Expansion
City of London, Ontario**

We previously sent you correspondence regarding the City of London's (the City) Environmental Assessment (EA) for a proposed landfill expansion. The City's existing landfill (W12A) is expected to reach capacity in 2024.

A Notice of Commencement of the EA was published on March 30, 2017 and four Open Houses have been held to date to provide information and receive comments from the public and other stakeholders.

The City has now completed the Draft Environmental Assessment Study Report (EASR) and is seeking feedback prior to formally submitting the documents to the Ministry of the Environment, Conservation and Parks. The EASR details all work completed during the environmental assessment.

The City is proposing to approximately double the current capacity of the landfill by increasing the height of the existing waste footprint which will extend its life to 2049. In addition, the service area will be increased to a regional area, which includes: City of London, County of Huron, County of Perth, County of Elgin, County of Lambton, and County of Middlesex. The proposed design capacity for landfill expansion over the 25 year planning period is 9.9 million tonnes including 0.5 million tonnes from neighbouring municipalities (about 5%).

The Draft EASR consists of:

- Volume I, Draft Environmental Assessment Study Report
- Volume II, Approved Amended Terms of Reference
- Volume III, Technical Work Plans and Waste Quantity Projections
- Volume IV, Existing Conditions and Impact Assessment Reports
- Volume V, Record of Consultation

The draft documents are available for public review on the project website (getinvolved.london.ca/WhyWasteDisposal) until May 21, 2021. Hardcopies (for loan) and/or memory sticks of the Draft EASR are available and can be obtained by contacting Tracey Lee by phone at (519) 661-CITY (2489) ext. 8413 or by e-mail at tlee@london.ca.

Following the review period, the Draft EASR will be updated to address comments received and then submitted to the Ontario Ministry of the Environment, Conservation and Parks (MECP) for approval. The MECP approval process will also include opportunities to provide comments.

Interested groups are encouraged to review the Draft EASR and provide comments by May 21, 2021. Comments may be submitted through the project website getinvolved.london.ca/WhyWasteDisposal or by mail, e-mail or fax to the contacts for the project provided below. If you have any questions or comments regarding the Draft EASR Report, please contact either of the individuals listed below.

Jay Stanford, M.A., M.P.A.

Director - Environment, Fleet and Solid Waste

Phone – (519) 661-CITY (2489) ext. 5411

Fax - (519) 661-2354

E-mail - jstanfor@london.ca

Wesley Abbott, P. Eng.

Project Manager

Phone – (226) 376-2311

Fax - (519) 661-2354

E-mail – wabbott@london.ca

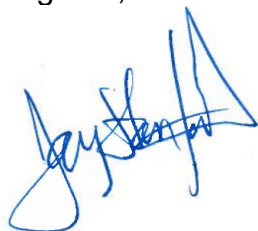
Mailing Address for the above staff is:

Solid Waste Management Division, 8th Floor, City Hall

300 Dufferin Avenue, P.O. Box 5035

London, ON N6A 4L9

Regards,



Jay Stanford, M.A., M.P.A.

Director - Environment, Fleet and Solid Waste

cc: Trish Edmond, Golder Associates Ltd.

Devon Wills, Ministry of the Environment, Conservation and Parks

Abbott, Wesley

From: Lysynski, Heather
Sent: Friday, April 23, 2021 5:54 PM
Cc: Stanford, Jay; Abbott, Wesley
Subject: FW: EEPAC - EA the Expansion of W12A Landfill
Attachments: AAC_EEPAC EA Update April 2021.pptx; FAQ 9.pdf

Hello Chair and Members of EEPAC

In the past, City staff have come before EEPAC to provide an update on the status of the Environmental Assessment (EA) for the expansion of the City's W12A Landfill site as well as the City's plans to increase waste diversion. Listed below are a few background details and how to provide feedback during this round of engagement. Additional details about the environmental assessment can be found in the attached FAQs and presentation. **Please note that feedback from members of EEPAC and/or directly from EEPAC will be accepted up until Friday, May 21, 2021. If more time is required, please advise Jay Stanford. There will also be a meeting scheduled at Civic Works Committee later this summer.**

The City has now completed the Draft Environmental Assessment Study Report and is seeking feedback prior to formally submitting the documents to the Ministry of the Environment, Conservation and Parks. The EASR details all work completed during the environmental assessment.

The City is proposing to approximately double the current capacity of the landfill by increasing the height of the existing waste footprint which will extend its life to 2049. In addition, the service area will be increased to a regional area, which includes: City of London, County of Huron, County of Perth, County of Elgin, County of Lambton, and County of Middlesex. The proposed design capacity for landfill expansion over the 25 year planning period is 9.9 million tonnes including 0.5 million tonnes from neighbouring municipalities (about 5%).

The Draft Proposed Terms of Reference consists of:

- Volume I, Draft Environmental Assessment Study Report
- Volume II, Approved Amended Terms of Reference
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- Volume V, Record of Consultation

The draft documents are available for public review on the project website (getinvolved.london.ca/WhyWasteDisposal/). Hardcopies (for loan) and/or memory

sticks of the draft EASR are available and can be obtained by contacting Tracey Lee by phone at (519) 661-CITY (2489) ext. 8413 or by e-mail at tlee@london.ca.

Feedback or questions can be sent to me or Wesley Abbott (wabbott@london.ca). Comments can also be left on the project website getinvolved.london.ca/WhyWasteDisposal.

Regards. . . . Jay



Jay Stanford, M.A., M.P.A. (he/him)
Director, Environment, Fleet & Solid Waste
Environmental & Engineering Services
City of London

300 Dufferin Ave, P.O. Box 5035 London, Ontario N6A 4L9
P: 519.661.CITY (2489) x 5411 | Cell: 519.851.5423
jstanfor@london.ca | www.london.ca



April 20, 2021

Try Recycling Inc.
Jim Graham
11110 Longwoods Rd
Delaware ON
N0L 1E0

**Draft Environmental Assessment Study Report
Environmental Assessment for the Proposed W12A Landfill Expansion
City of London, Ontario**

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Interested groups are encouraged to review the Draft EASR and provide comments by May 21, 2021. Comments may be submitted through the project website getinvolved.london.ca/WhyWasteDisposal or by mail, e-mail or fax to the contacts for the project provided below. If you have any questions or comments regarding the Draft EASR Report, please contact either of the individuals listed below.

Jay Stanford, M.A., M.P.A.

Director - Environment, Fleet and Solid Waste

Phone – (519) 661-CITY (2489) ext. 5411

Fax - (519) 661-2354

E-mail - jstanfor@london.ca

Wesley Abbott, P. Eng.

Project Manager

Phone – (226) 376-2311

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Mailing Address for the above staff is:

Solid Waste Management Division, 8th Floor, City Hall

300 Dufferin Avenue, P.O. Box 5035

London, ON N6A 4L9

Regards,



Jay Stanford, M.A., M.P.A.

Director - Environment, Fleet and Solid Waste

cc: Trish Edmond, Golder Associates Ltd.

Devon Wills, Ministry of the Environment, Conservation and Parks



April 22, 2021

Chief Charles Sampson
Bkejwanong Territory (Walpole Island)
117 Tahgahoning Road, R. R. #3
Walpole Island, ON
N8A 4K9

Dear Chief Sampson,

**Notification to Indigenous Communities
Environmental Assessment for the Proposed W12A Landfill Expansion
City of London, Ontario**

Background

We previously sent you correspondence regarding the City of London's (the City) Environmental Assessment (EA) for a proposed landfill expansion. The City's existing landfill (W12A) is expected to reach capacity in 2024.

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Draft Environmental Assessment Study Report Review

The City has now completed the Draft Environmental Assessment Study Report (EASR) and is seeking feedback prior to formally submitting the documents to the Ministry of the Environment, Conservation and Parks. The EASR details all work completed during the environmental assessment and consists of five volumes as listed below:

- Volume I, Draft Environmental Assessment Study Report
- Volume II, Approved Amended Terms of Reference
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- Volume V, Record of Consultation

A copy of the documents will be forwarded to you via the City's file transfer site as the documents are too large to attach to an email. The documents are also available for review on the project website (getinvolved.London.ca/WhyWasteDisposal).

We invite you to review and provide comments on the draft documents. Please contact the undersigned if you have any questions or would prefer to receive a printed copy of the documents. We are requesting that comments on the draft documents be provided by Friday May 21, 2021.

Workshops

The participation of Indigenous Communities is an important element of the EA process. In August 2019 and August 2020, we attended workshops which were initiated by Aamjiwnaang First Nation and attended by four other Indigenous Communities. Several issues were discussed at the workshop including protection of the Thames River, groundwater issues and using native plant species as part of any rehabilitation plans.

Table 13.2 of the Draft EASR contains commitments by the City to include native planting when placing final cover, provide additional groundwater protection measures and undertake actions to protect the Indigenous archeology site located in the landfill's buffer lands. Section 8.1.2 of the Draft EASR describes how the expanded landfill will provide temporary leachate storage on the W12A Landfill site during storm events that result in a by-pass situation at the pumping station or wastewater treatment plant that manages leachate from the landfill. The leachate will be discharged only after these facilities are no longer in a by-pass situation.

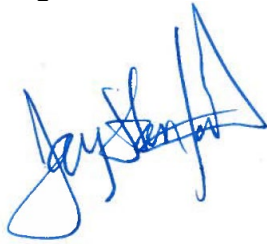
Closing

In addition, we would be pleased to work with you to develop and carry out additional separate events, if desired, specifically designed to engage your community.

Following the review period, the draft EASR will be updated to address comments received and then submitted to the Ontario Ministry of the Environment, Conservation and Parks (MECP) for approval. The MECP approval process will also include opportunities to provide comments.

If you have any questions, please do not hesitate to contact me (jstanfor@london.ca, 519.661.CITY (2489) ext. 5411) or Wesley Abbott, Project Manager (wabbott@london.ca; 226-376-2311). For further information, please visit our website at getinvolved.London.ca/WhyWasteDisposal.

Regards,



Jay Stanford, M.A., M.P.A.
Director - Environment, Fleet and Solid Waste

cc: Lynne Livingstone, City Manager
Kelly Scherr, P.Eng., Managing Director, Environmental & Engineering Services
and City Engineer
Trish Edmond, Golder Associates Ltd.
Devon Wills, Ministry of the Environment, Conservation and Parks
Dean Jacobs, Bkejwanong Territory (Walpole Island)
Janet Macbeth, Bkejwanong Territory (Walpole Island)

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Communities no workshop.docx



April 22, 2021

Chief Christopher Plain
Aamjiwnaang First Nation
978 Tashmoo Avenue
Sarnia, ON
N7T 7H5

Dear Chief Plain,

**Notification to Indigenous Communities
Environmental Assessment for the Proposed W12A Landfill Expansion
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Regards,



Jay Stanford, M.A., M.P.A.
Director - Environment, Fleet and Solid Waste

cc: Lynne Livingstone, City Manager
Kelly Scherr, P.Eng., Managing Director, Environmental & Engineering Services
and City Engineer
Trish Edmond, Golder Associates Ltd.
Devon Wills, Ministry of the Environment, Conservation and Parks
Sharilyn Johnston, Aamjiwnaang First Nation

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Communities workshop.docx



April 20, 2021

**Notification to Tenants and Property Owners Within Two Kilometres of the Waste Management and Resource Recovery Area
Draft Environmental Assessment Study Report
Environmental Assessment for the Proposed W12A Landfill Expansion
City of London, Ontario**

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Jay Stanford, M.A., M.P.A.

Director - Environment, Fleet and Solid Waste

Phone – (519) 661-CITY (2489) ext. 5411

Fax - (519) 661-2354

E-mail - jstanfor@london.ca

Wesley Abbott, P. Eng.

Project Manager

Phone – (226) 376-2311

Fax - (519) 661-2354

E-mail – wabbott@london.ca

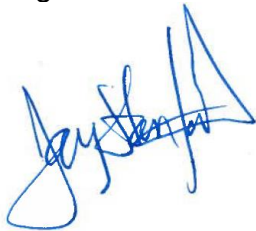
Mailing Address for the above staff is:

Solid Waste Management Division, 8th Floor, City Hall

300 Dufferin Avenue, P.O. Box 5035

London, ON N6A 4L9

Regards,



Jay Stanford, M.A., M.P.A.

Director - Environment, Fleet and Solid Waste

cc: Trish Edmond, Golder Associates Ltd.

Devon Wills, Ministry of the Environment, Conservation and Parks

Attachment – Frequently Asked Questions (FAQs #9)

From: [Kittmer, Jane](#)
To: [Kittmer, Jane](#)
Cc: [Stanford, Jay](#); [Abbott, Wesley](#)
Bcc: [1heenal@gmail.com](#); [2cg@sympatico.ca](#); [2george@rogers.com](#); [687233@ican.net](#); [a_varewyck@hotmail.com](#); [Abercromby11@rogers.com](#); [acthompson@rogers.com](#); [aharnish70@gmail.com](#); [ahey@teksavvy.com](#); [alheure2@gmail.com](#); [alyssapenney@gmail.com](#); [amyboot@hotmail.com](#); [amybell12@gmail.com](#); [ann_w_@hotmail.com](#); [ashley_tozer@hotmail.com](#); [ashleygleba@gmail.com](#); [av.dykeman@gmail.com](#); [bearsa25@hotmail.com](#); [blohnes@hotmail.com](#); [blunzr1966@yahoo.ca](#); [bmofofatt@stormfisher.com](#); [bonniemail@gmail.com](#); [bradkelly@gmail.com](#); [brandiwillson@outlook.com](#); [brenda.chuck1973@gmail.com](#); [brentandwendy14@gmail.com](#); [briddellrmt@gmail.com](#); [bsheldon@sympatico.ca](#); [cagreen@gmail.com](#); [caitlincore@gmail.com](#); [candicemc@live.ca](#); [cathalloaker@icloud.com](#); [chantal.fete@gmail.com](#); [chardupuis@gmail.com](#); [chardy76@sympatico.ca](#); [christiannafilias@hotmail.com](#); [cindykim722@gmail.com](#); 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[hendriks_charlotte@hotmail.com](#); [heveritt@uwo.ca](#); [hlsolway@yahoo.com](#); [hmeyer1950@gmail.com](#); [hockeychik09@hotmail.com](#); [houghton.jason@gmail.com](#); [houghton.kristen@gmail.com](#); [hughesandrea@live.com](#); [irkcousins@gmail.com](#); [i.aleccio9@hotmail.com](#); [i.todd36@hotmail.com](#); [jackieprince68@outlook.com](#); [jamiegunness@gmail.com](#); [jamielfperry@gmail.com](#); [jane_h_m@yahoo.ca](#); [janice_m6@hotmail.com](#); [jannabe@hotmail.com](#); [jason.jordan.id@gmail.com](#); [jasonkohls@gmail.com](#); [jaspence@hotmail.com](#); [jbannon7700@gmail.com](#); [jbosborn@hotmail.com](#); [jd_badgley@rogers.com](#); [jen.jones2000@hotmail.com](#); [jenhodge@rogers.com](#); [Jennifer.m.robinson@hotmail.com](#); [jforrester877@gmail.com](#); [jfraser429@gmail.com](#); [jhowitt@gmail.com](#); [jimsammy99@gmail.com](#); [jlraysman@aol.com](#); [jmzehr11@gmail.com](#); [joanne.bobier@sympatico.ca](#); [jodigallagherhealy@gmail.com](#); [jodyditrolio@gmail.com](#); [jogaick@gmail.com](#); [jtwigg1@gmail.com](#); [julia.eastabrook@gmail.com](#); [kchekiri@dragun.com](#); [kcm.create.16@gmail.com](#); [kellyelapp@gmail.com](#); [kevinsphone@exceed.ca](#); [kimber_lee_bartlett10@hotmail.com](#); [kimhutch@gmail.com](#); [knott.melissa@gmail.com](#); [kristadotcom@hotmail.com](#); [kristinveenstra@gmail.com](#); [krysa247@hotmail.com](#); [ktytschen@uwo.ca](#); [lambeth04@rogers.com](#); [landrews@dillon.ca](#); [laurelsboyz@hitmail.com](#); [leah.paterson@gmail.com](#); [leanne_clark@live.ca](#); [leilanattagh@gmail.com](#); [levogiani@gmail.com](#); [lhansenkohls@gmail.com](#); [lhuralbin@gmail.com](#); [lil_ekj@hotmail.com](#); [lindaellen1956@hotmail.com](#); [lindasogreat@yahoo.ca](#); [Lindsaycallon@gmail.com](#); [lisacsimmons@gmail.com](#); [Ljibson@yahoo.com](#); [lorrainestuyt@gmail.com](#); [lramstrong@sympatico.ca](#); [m.n.morris@hotmail.com](#); [maggs.dickson@gmail.com](#); [mandy_malone15@hotmail.com](#); [margaretgoodyear@gmail.com](#); [marie.olds@gmail.com](#); [marijke.altenburg@gmail.com](#); [Martykolls@gmail.com](#); [maryleeduggan@gmail.com](#); [marylynnwalker@outlook.com](#); [matthew.peloz@gmail.com](#); [mattsmcdougall@gmail.com](#); [megan_leigh@hotmail.com](#); [megcartier@gmail.com](#); [megcat72@outlook.com](#); [mfrance.tremblay@gmail.com](#); [mglassford@gmail.com](#); [michellenwagler@hotmail.com](#); [mikejones4755@gmail.com](#); [mingly@me.com](#); [mirrishadow@gmail.com](#); [mkrahn3@uwo.ca](#); [mlveenman@hotmail.com](#); [mollymiks@gmail.com](#); [momsaid@rogers.com](#); [morris.jessica@hotmail.com](#); [mpulente@live.ca](#); [mr.wren9@gmail.com](#); [ms.jacqueline.thompson@gmail.com](#); [mujeeb.gmurak@gmail.com](#); [mygoodgarden@gmail.com](#); [nafa.amina@live.ca](#); [nanmoore61@gmail.com](#); [nevdw81@hotmail.com](#); [newfriend27@hotmail.com](#); [nostalgicsega@gmail.com](#); [nwfc65@hotmail.com](#); [obibonkenobi@gmail.com](#); [onelalondon3@gmail.com](#); [pamvango@outlook.com](#); [patkins.mba1980@ivey.ca](#); [paulwkernohan@gmail.com](#); [pierre@murphycontracting.ca](#); [pmchardy@sympatico.ca](#); [pu_fletcher@yahoo.ca](#); [pvanderwyst@3wayste.com](#); [rebecca.tyre@gmail.com](#); [reidjane@icloud.com](#); [relbeig@yahoo.ca](#); [richard.todd@toronto.ca](#); [richings50@gmail.com](#); [rick.vandersluis@tryrecycling.com](#); [rick@greenvalleyrecycling.ca](#); [rimbault@execulink.com](#); [ritaverhulst1@hotmail.com](#); [rjwicks@gmail.com](#); [rmcgarry1987@gmail.com](#); [robnwanda@sympatico.ca](#); [Rsmlythegilbert@gmail.com](#); [ryanparsons@mail.com](#); [sail2chris@hotmail.com](#); [sandramcm@teksavvy.com](#); [sapphirescottwedding@gmail.com](#); [sarahbeyea@hotmail.com](#); [sarahsoda18@hotmail.com](#); [sasha.novakovic1@gmail.com](#); [sbmoore@rogers.com](#); [sendbonniemail@gmail.com](#); [shannonsinclair36@gmail.com](#); [shelahbrook@me.com](#); [siroisrose@gmail.com](#); [skatingmama29@rogers.com](#); [snowboundinlondon@msn.com](#); [sooty28@rogers.com](#); [sparkykaboom@gmail.com](#); [srazt@hotmail.ca](#); [ssbrac2012@gmail.com](#); [ssivilotti@rogers.com](#); [sszabo22@gmail.com](#); [stempleton595@gmail.com](#); [stephanieb120@gmail.com](#); [stephenharrott@gmail.com](#); [swar02@gmail.com](#); [swibonne@gmail.com](#); [taniaenright@hotmail.com](#); [tanyaface.face@gmail.com](#); [Thomas, Tara](#); [thomas.christensen@rogers.com](#); [timothyconlon@gmail.com](#); [tjrossco@gmail.com](#); [Tobie04@yahoo.com](#); [toes18@hotmail.com](#); [TonnerD@aol.com](#); [uma3000@hotmail.com](#); [urbanagvocate@gmail.com](#); [vanderdspg@sympatico.ca](#); [vdubzryd@gmail.com](#); [victor@globalwaste.ca](#); [vinamedina@hotmail.com](#); [waltergeraghty@gmail.com](#); [waynetingle47@gmail.com](#); [weber905@gmail.com](#); [wee_des@hotmail.com](#); [wendy_mcmurray17@hotmail.com](#); [wendydance@rogers.com](#); [wilkieje@gmail.com](#); [wvthomasvi@hotmail.com](#); [wxsharon@gmail.com](#); [yurikotokuda@gmail.com](#); [zoewy04@gmail.com](#)
Subject: Draft EASR for the Proposed W12A Landfill Expansion, London
Date: Friday, April 23, 2021 11:08:47 AM
Attachments: [FAQ 9.pdf](#)
[image001.png](#)

Good morning,

We previously sent you correspondence regarding the City of London's (the City) Environmental Assessment (EA) for a proposed landfill expansion. The City's existing landfill (W12A) is expected to reach capacity in 2024.

A Notice of Commencement of the EA was published on March 30, 2017 and four Open Houses have been held to date to provide information and receive comments from the public and other stakeholders.

The City has now completed the Draft Environmental Assessment Study Report (EASR) and is seeking feedback prior to formally submitting the documents to the Ministry of the Environment, Conservation and Parks. The EASR details all work completed during the environmental assessment.

The City is proposing to approximately double the current capacity of the landfill by increasing the height of the existing waste footprint which will extend its life to 2049. In addition, the service area will be increased to a regional area, which includes: City of London, County of Huron, County of Perth, County of Elgin, County of Lambton, and County of Middlesex. The proposed design capacity for landfill expansion over the 25 year planning period is 9.9 million tonnes including 0.5 million tonnes from neighbouring municipalities (about 5%). Further information is provided in the attached FAQs.

The Draft EASR consists of:

- Volume I, Draft Environmental Assessment Study Report
- Volume II, Approved Amended Terms of Reference
- Volume III, Technical Work Plans and Waste Quantity Projections
- Volume IV, Existing Conditions and Impact Assessment Reports
- Volume V, Record of Consultation

The draft documents are available for public review on the project website (getinvolved.london.ca/WhyWasteDisposal) until May 21, 2021. Hardcopies (for loan) and/or memory sticks of the Draft EASR are available and can be obtained by contacting Tracey Lee by phone at (519) 661-CITY (2489) ext. 8413 or by e-mail at tlee@london.ca.

Following the review period, the Draft EASR will be updated to address comments received and then submitted to the Ontario Ministry of the Environment, Conservation and Parks (MECP) for approval. The MECP approval process will also include opportunities to provide comments.

Interested persons are encouraged to review the Draft EASR and provide comments by May 21, 2021. Comments may be submitted through the project website getinvolved.london.ca/WhyWasteDisposal or by mail, e-mail or fax to the contacts for the project provided below. If you have any questions or comments regarding the Draft EASR Report, please contact either of the individuals listed below.

Jay Stanford, M.A., M.P.A.

Director - Environment, Fleet and Solid Waste

Phone – (519) 661-CITY (2489) ext. 5411

Fax - (519) 661-2354

E-mail - jstanfor@london.ca

Wesley Abbott, P. Eng.

Project Manager

Phone – (226) 376-2311

Fax - (519) 661-2354

E-mail – wabbott@london.ca

Mailing Address for the above staff is:

Solid Waste Management Division, 8th Floor, City Hall

300 Dufferin Avenue, P.O. Box 5035

London, ON N6A 4L9

Regards,



Jane Kittmer

Technician

Solid Waste Management

City of London

300 Dufferin Ave, P.O. Box 5035, London ON N6A 4L9

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As part of our ongoing efforts to stop the spread of COVID-19, the City of London has made changes to many City services. Visit our [website for the latest information about City services and COVID-19](#).

I.02 Comments on the Draft EASR

GRT

Reference to EA	Reference to Question #	Comments	Proponent's Response	Changes to the EASR
Devon Wills, Project Officer, Environmental Assessment and Permissions Branch, MECP February 17, 2021				
General Comments	1	Please ensure that an Executive Summary is provided in the next updated version of the Draft EA document as a requirement under section 4.3 of the Codes of Practice, and was requested during comments on the ToR.	Acknowledged.	An Executive Summary has been added to the draft EASR for circulation to the public stakeholders, Indigenous Communities and GRT.
General Comments	2	Throughout the pre-Draft EA a number of references were made to certain parameters (for example, components and indicators and study areas) where the City makes the statements that they've been carried forward from the approved amended ToR and used in the planning of the EA. Caution should be taken when using the language "approved amended ToR". It should be clear to readers that the parameters considered during the ToR were not finalized, but can be modified as necessary during the EA stage. As per section 4 of the Codes of Practice, flexibility was built into the EA process whereby the City can provide the necessary rationale for any change to parameters or criteria that were outlined during the ToR stage.	Acknowledged. The preliminary draft EASR has been reviewed to clarify language around 'approved Amended ToR' and modified where warranted to ensure the reader understands that certain parameters were not final in the ToR and were further reviewed and possibly updated during the EA.	Sections 2.6, 2.7.2, 3.0, 4.0, 5.1, 7.1, 7.2.1.1, 7.2.1.2, 7.2.2, 7.2.3.1, 7.2.3.2, 7.2.4.1, 7.2.4.2, 7.2.5, 7.2.6, 7.2.7, 7.2.8.1, 7.2.8.2, 7.2.9.1, 7.2.9.2, 7.2.10, 7.2.11, 7.2.12.1, and 7.2.12.2 of the EASR were updated accordingly.

Reference to EA	Reference to Question #	Comments	Proponent's Response	Changes to the EASR
General Comments	3	You may wish to consider including amending procedures in the EA. This is not a requirement, but is a tool to provide you with greater flexibility allowing the City to make minor modifications to the approved undertaking without having to fulfil the requirements of the Environmental Assessment Act again.	Acknowledged.	Section 13.1 was added to the EASR to allow for future potential project modifications.
Section 1.0: Introduction	1	Section 1.3.3.4 LFG Monitoring, bullet two states that there is periodic testing of LFG to determine its composition. Please update the EA documentation to include where this periodic LFG testing occurs.	Acknowledged.	Additional text was added to the second bullet to describe the location where the landfill gas is collected for analysis.
Section 1.0: Introduction	2	Section 1.3.2 Landfill Components, the City should provide a summary of the rationale of its need for additional capacity in the landfill's existing service area. Please update the EA documentation to include an overview of the City's justification for its landfill expansion within the existing service area.	Section 1.3.2 of the EASR describes the physical components of the existing landfill site and does not include the rationale for needing the landfill expansion.	Updates to the EASR to address this comment are provided in Sections 2.1, 2.4, 2.5 and 2.6 of the EASR.

Reference to EA	Reference to Question #	Comments	Proponent's Response	Changes to the EASR
Section 2.0: Overview of the Environmental Assessment Process, the Project and Environmental Assessment Study Report	3	<p>Section 2.4 Updated Service Area, explains that the City approached nearby municipalities to determine their interest in being included in the landfill's service area. These municipalities confirmed their interest in being included, thus no changes to the proposed regional service area are proposed.</p> <p>In this section the City should also consider including an examination of population growth, per capita waste generation rates and diversion projections for those municipalities within a given planning period. The City must provide sufficient rationale to justify the need to service the surrounding areas in the EA.</p> <p>Please provide a summary of the results of the analysis in the body of the EA, to justify why these areas need to be serviced by this landfill. Additionally, it would be helpful to readers to indicate the expected timelines for municipalities to be included in the landfill's service area.</p>	Acknowledged. All of this requested information was available in Volume III, Appendix C. A summary of the information from Volume III, Appendix C to satisfy this request was added to Section 2.4.	Section 2.4 of the EASR was updated.

Reference to EA	Reference to Question #	Comments	Proponent's Response	Changes to the EASR
Section 3.0: Methodology of the Assessment	1	Section 3.3 Step 3 – Evaluation of 'Alternative Methods', please consider rewording of the first sentence in paragraph one for clarity: The effects on the environment were qualitatively and/or quantitatively predicted for each 'Alternative Method' (i.e., including conceptual design mitigation measures). Please provide the rationale for why certain components were listed in Table 3.3-1 were selected for the EA. Since the ToR did not finalize the parameters considered in the EA, the City may modify them as necessary provided a rationale is given. As per section 4.2.4 of the Codes of Practice, the Draft EA should explain the reasons for selecting the criteria and indicators should be clearly explained. This will help all interested persons understand the judgements that were made and allow them to participate more effectively in the process. An outline of the data sources for the criteria and indicators is also required in the EA.	Acknowledged and agreed.	The first sentence of Section 3.3 of the EASR has been re-written as requested. The rationale why certain components were selected and presented in Table 3.3-1 has been added to Section 3.1. The reason for selecting the criteria and indicators has been added directly into Table 3.3-1. The data sources for the criteria and indicators have been added directly into Table 3.3-1.

Reference to EA	Reference to Question #	Comments	Proponent's Response	Changes to the EASR
Section 3.0: Methodology of the Assessment	2	The City made decisions on the landfill's alternatives at the ToR stage, since it was "focused" by using the supporting information provided. These alternatives were brought forward as alternative methods at the EA stage. The City should provide more background as to why the ToR was focused, and why these alternative methods selected were brought forward to the Draft EA.	As described in Section 6 of the EASR, during the preparation of the ToR, preliminary design concepts for the 'Alternative Methods' were developed to illustrate possible ways that the landfill site could be expanded to provide an additional 13,600,000 cubic metres of airspace, with these concepts to be refined and confirmed during the EA to provide the expansion alternatives for purposes of comparative evaluation and identification of the preferred alternative." This EA was not focused as it relates to 'Alternative Methods', it was focused as it relates to 'Alternatives To', which is fully described in Section 2.5 of the EASR.	Section 3.2 of the EASR has been amended with text describing that only preliminary 'Alternative Methods' were presented in the ToR and these 'Alternative Methods' were refined and more fully developed in the EA.

Reference to EA	Reference to Question #	Comments	Proponent's Response	Changes to the EASR
Section 4.0: Consultation Methods and Activities	1	Section 4.4.2 Indigenous Communities, this section lists a number of Indigenous Communities, however, the Southern First Nations Secretariat that was listed on the ToR's Notice of Completion distribution list was not listed here. Please update this section with the rationale of why they were not included.	As an organization with membership representing five of the Indigenous Communities the Southern First Nations Secretariat involvement in consultation would be initiated by their members and, hence they were not always contacted directly.	Section 4.4.2 has been modified to include the rationale as to why the Southern First Nations Secretariat did not receive notifications.
Section 4.0: Consultation Methods and Activities	2	Section 4.6 Summary of Consultation Events, this section should be updated following circulation of Draft EA to ensure all comments are incorporated into the document if appropriate and how they were addressed in the record of consultation. As per section 4.3.7 of the Codes of Practice, the Draft EA should include a comprehensive description of the consultation activities that took place during the preparation of the environmental assessment. A narrative description of the different activities, rather than just a listing of them, is required.	Acknowledged, the current description of consultation activities is descriptive and not just a listing of activities. After circulation of the Draft EA, Section 4.6 of the EASR will be updated incorporating comments received on the Draft EA and how they were incorporated into the Proposed EASR.	None

Reference to EA	Reference to Question #	Comments	Proponent's Response	Changes to the EASR
Section 5.0: Description of the Environment Potentially Affected	1	Section 5.8.2 Archaeological Potential, this section provides an explanation of the site's archaeological assessment to identify known archaeological potential resources. Please update this section to include the results of the Stage 2 assessment (Indigenous artifacts found, etc.).	Acknowledged, information will be added to the EASR.	Section 5.8.2 has been updated to include the findings from the Stage 2 assessment.
Section 5.0: Description of the Environment Potentially Affected	2	Section 5.1 Study Areas and Timeframes, this section defines the Site Study Area, the Site-vicinity Study Area and the Wider Study Area, however, the "regional scale" referred to in Section 5.0 has not been defined here. Please include the definition of "regional scale" in section 5.1 for clarity.	Acknowledged, the regional scale in this EA is defined as the Wider Study Area.	In Section 5.1 of the EASR, text has been updated to clarify that the regional scale is defined as the Wider Study Area.

Reference to EA	Reference to Question #	Comments	Proponent's Response	Changes to the EASR
Section 5.0: Description of the Environment Potentially Affected	3	Table 5.1-1: Proposed Preliminary Study Areas, includes a list of components studied and the rationale for including them in the site, site and site-vicinity, and the wider study area, but no rationale for why these components were selected. Please provide an explanation of how these components were selected and the rationale for doing so in this section. As per section 4.2.4 of the Codes of Practice, the Draft EA should explain the reasons for selecting the criteria and indicators should be clearly explained. This will help all interested persons understand the judgements that were made and allow them to participate more effectively in the process. An outline of the data sources for the criteria and indicators is also required in the EA.	Acknowledged and agreed.	The rationale for why the site components were selected has been added to Section 3.1 where they are first introduced in the EASR. An outline of the data sources for the criteria and indicators has been added to Section 3.3 where they are first introduced in the EASR.

Reference to EA	Reference to Question #	Comments	Proponent's Response	Changes to the EASR
Section 7.0: Assessment of Net Environmental Effects for 'Alternative Methods' and Component Comparison of 'Alternative Methods'	1	Section 7.2, Please consider rewording the first paragraph for clarity, "It is noted that this assessment did not identify any additional mitigation measures as required, but indicated if additional mitigation measures, beyond those included in the proposed expansion design or normal operating practices at the site, are required to achieve site compliance with provincial standards".	Acknowledged.	The first paragraph of Section 7.2 has been modified as requested.
Section 8.0: Description of the Preferred Undertaking	1	Section 8.1.5.1 Pond 1, this paragraph provides a description of stormwater management Pond 1. Please indicate if this stormwater management feature meets Enhanced Level Protection (80% TSS removal).	The information requested was provided in EASR section 9.3.2; Pond 1 does provide Enhanced Level Protection.	This information has been added into Section 8.1.5.1 of the EASR.
Section 8.0: Description of the Preferred Undertaking	2	Section 8.1.5.4 Pond 5, this paragraph provides a description of stormwater management Pond 5. Please indicate if this stormwater management feature meets Enhanced Level Protection (80% TSS removal).	The information was provided in EASR section 9.3.2; Pond 5 does provide Enhanced Level Protection.	This information has been added into Section 8.1.5.4 of the EASR.

Reference to EA	Reference to Question #	Comments	Proponent's Response	Changes to the EASR
Section 9.0: Impact Assessment and Net Effects	1	Section 9.2 Geology and Hydrogeology, this section provides the assessment of impacts on groundwater quality and quantity for the proposed expansion of the Landfill. Please add a citation in this paragraph to the Appendix of where these discussions with Indigenous communities can be found.	Acknowledged.	Section 9.2 has been updated to include reference to the August 2020 meeting summary in which feedback was received to consider additional transport modelling (Volume V Appendix H.12).

Abbott, Wesley

From: Grady, Sarah
Sent: Tuesday, April 13, 2021 12:08 PM
To: Abbott, Wesley
Cc: Chamorro, Juan; Dales, Garfield
Subject: RE: W12A Landfill Expansion

Hi Wesley,

Juan has reviewed on behalf of our team and we have no comments on the Traffic Assessment.

Thanks
Sarah

From: Abbott, Wesley <WAbbott@London.ca>
Sent: Thursday, March 18, 2021 12:32 PM
To: Dales, Garfield <gdales@london.ca>
Cc: Grady, Sarah <sgrady@london.ca>
Subject: RE: W12A Landfill Expansion

Dale

I will be using the File Transfer Site to forward the Transportation technical study due to the size of the document.

Wesley

From: Dales, Garfield <gdales@london.ca>
Sent: Monday, March 15, 2021 5:09 PM
To: Abbott, Wesley <WAbbott@London.ca>
Cc: Grady, Sarah <sgrady@london.ca>
Subject: RE: W12A Landfill Expansion

Wesley,

Thanks for the opportunity to be involved with your study. If you can send us the Transportation technical study, we will arrange to review and provide comments.

Garfield



Garfield Dales, P.Eng (he/him pronouns)
Division Manager
Transportation Planning and Design
City of London

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As part of our ongoing efforts to stop the spread of COVID-19, the City of London has made changes to many City services. Visit our [website for the latest information about City services and COVID-19](#).

From: Abbott, Wesley <WAbbott@London.ca>
Sent: Monday, March 15, 2021 9:45 AM
To: Dales, Garfield <gdales@london.ca>
Subject: W12A Landfill Expansion

Dale

Background - Environmental Assessment

We are nearing completion of the Environmental Assessment (EA) for the proposed expansion of the W12A Landfill. This is the first individual EA completed by the City in over 25 years.

The first phase of the Individual EA process was the development of a Terms of Reference (ToR) which began in Spring 2017. The ToR becomes the framework or work plan for the preparation and review of the EA. The Amended ToR was approved by the Minister of the Environment, Conservation and Parks on July 30, 2019.

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. All aspects of the EA process are documented in the Environmental Assessment Study Report (EASR).

We will be going to March 30 CWC meeting to get permission to release the draft EASR to the Government Review Team (GRT) and other stakeholders for review. The GRT was established by the Ministry of Environment, Conservation and Parks and has been involved throughout the process. The GRT consists of approximately 45 staff in 30 different federal, provincial and local agencies.

Internal City Review

We have had limited involvement from internal City departments to date. Does your group want to review the Transportation technical study (supporting document) for the EASR? Do you want to review the EASR?

Wesley Abbott
226-376-2311 (Cell)

From: Abbott, Wesley
To: [Edmond, Trish](#); [Kyer, Heather](#)
Cc: [Kittmer, Jane](#)
Subject: FW: W12A EASR Comments (Cultural Heritage, Biology, Land Use, and Agriculture)
Date: May 13, 2021 10:26:06 AM
Attachments: [image001.png](#)
[Memo - City Planning Comments on Draft W12A EA March 2021.pdf](#)
[Comments London Transportation Department.pdf](#)

EXTERNAL EMAIL

Trish, Heather

We have received comments from the City's Planning and Development Service Area (attached).

Let me know if you want to discuss the comments before I forward the Biology comments to AECOM and the land use/agricultural comments to MHBC. Do we plan on using a standard format for recording the comments and responses? If that is the case I will need to forward that to AECOM and MHBC as well.

I have also attached an email from the Transportation Planning and Design Division stating they have no comments on the Transportation Study (not sure if I have already forwarded this). The Division Manager for the Wastewater Treatment Operations Division has verbally advised that their group has no comments or concerns with what is proposed. Comments from the Stormwater Management Division on the surface water and groundwater reports are expected by May 21, 2021.

Wesley

From: Macbeth, Travis <tmacbeth@london.ca>
Sent: Wednesday, May 12, 2021 5:29 PM
To: Abbott, Wesley <WAbbott@London.ca>
Cc: Williamson, Emily <ewilliam@london.ca>; Gonyou, Kyle <kgonyou@london.ca>; Adema, Justin <jadema@london.ca>
Subject: W12A EASR Comments (Cultural Heritage, Biology, Land Use, and Agriculture)

Hello Wesley,

Attached are Planning and Development's staff comments regarding the draft EASR and impact studies for the W12A expansion project.

The comments pertain to Land Use, Agriculture, Biology, and Cultural Heritage.

Please feel free to contact us if there are any questions.

Best regards,

Travis



Travis Macbeth, MCIP, RPP

Senior Planner, Long Range Planning & Research
City Planning
City of London

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As part of our ongoing efforts to stop the spread of COVID-19, the City of London has made changes to many City services. Visit our [website for the latest information about City services and COVID-19](#).



Memo

To: Wesley Abbott
Division Manager, Solid Waste Engineering

From: City Planning

Date: May 12, 2021

RE: City Planning Staff Comments on Draft W12A Environmental Assessment Study Report and Existing Conditions and Impact Assessment Reports

Land Use and Agriculture

City staff have reviewed the EASR and December 2020 draft Land Use and Agriculture Existing Conditions and Impact Assessment Reports, prepared by MHBC. The draft impact assessments identify the preferred alternative of the EASR, which is Alternative 1: vertical expansion over the existing landfill footprint with an expanded site boundary to allow buffering and a waste and resource material drop-off area. Staff generally concur with the findings of the land use and agriculture existing conditions and impact assessment reports evaluating Alternative 1 of the EASR. Staff provide the following comments:

- Staff concur with the opinion that the Project is consistent with the Provincial Policy Statement, 2020.
- In addition to the PPS policies identified in the December 2020 draft impact assessment report, Staff note that the preferred “Alternative 1” is consistent with PPS section 2.3.5, Removal of Land from Prime Agricultural Areas. In accordance with this PPS section, Planning authorities may only exclude lands from prime agricultural areas for expansions of an urban growth boundary for planned urban uses. Expansion of the W12A landfill would not be an expansion of the urban growth boundary. Therefore, vertical expansion over the existing footprint of the W12A landfill is consistent with this requirement to not remove prime agricultural area land.
- Staff concur with the 1989 Official Plan and London Plan conformity reviews. The Project conforms to the specific area policies within the “Agriculture” designation of the 1989 Official Plan and to the “Waste Management Resource Recovery Area” Place Type of the London Plan. Additionally, please note that since the draft report was written in December 2020, the Local Planning Appeal Tribunal (LPAT) has made orders regarding certain

appeals of the London Plan. The LPAT Order that was issued on April 15, 2021, brought into force and effect certain Map 1 Place Types, including the “Waste Management Resource Recovery Area”, “Farmland”, “Green Space”, and “Environmental Review” Place Types. Therefore, the determinative analysis for this review is the “Waste Management Resource Recovery Area” Place Type, and not the specific area policies within the Agriculture designation of the 1989 Official Plan.

- Staff also concur with the report’s interpretation of the Provincial D-Series Guidelines and specifically Guideline D-4, Land Use on or Near Landfills and Dumps). Proposed monitoring and mitigation measures, as identified in the various impact studies as part of this EASR, as well as implementation of a “vertical expansion” of W12A, mean the expansion is expected to have minimal land use impact on existing agricultural uses and sensitive land uses within the 500 metre “site-vicinity study area”.
- Additionally, staff concur with the evaluation of Minimum Distance Separation (MDS) Formulae for uses adjacent to livestock operations, and that no MDS is required for a landfill (per Guideline #3, publication 853, OMAFRA).
- A Zoning review will need to be undertaken during the detailed design stage of this Environmental Assessment. All lands used for waste and resource management uses in the Waste Management Resource Recovery Area Place Type of the *London Plan* will require a Waste and Resource Management (WRM) Zone. The consultant’s report identifies that the buffer lands within the expanded W12A site are intended to be used as fallow agricultural fields (zoned AG2). A Zoning By-law Amendment application will be required if, during the detailed design stage of the EA, it is determined that a portion of those buffer lands are required for waste management uses. The Zoning By-law Amendment application should be undertaken concurrent with this Environmental Assessment.

Biology

City staff have reviewed the EASR prepared by Golder. The draft EASR identifies the preferred alternative as Alternative 1: vertical expansion over the existing landfill footprint with an expanded site boundary to allow buffering and a waste and resource material drop-off area. Staff have identified the following issues to be addressed before the EASR is finalized:

- 5.5.2.3 Vegetation Communities – As described in the below Existing Conditions and Impact Assessment: Biology Report comment, the vegetation communities were not noted on individual community plant lists. The vegetation community sensitivity cannot be assessed as a single plant list across such a large study area. Staff suggest revising both reports to analyze vegetation communities within each of the ELC polygon for quality and sensitivity.

- Table 7.2 - Staff agree that Alternative 1 poses the greatest loss of SAR (Bobolink and Eastern Meadowlark) and confirmed Significant Wildlife Habitat, however several SWH that occur outside the existing landfill footprint may be confirmed during species specific studies. Staff agree that Alternative 1 is the preferred alternative.
- Section 9.4.3.2 – Staff note that compensation is not appropriately used in the context of the natural heritage system or London Plan policies.

Suggested Revision: Activities associated with landfill closure include the addition of topsoil and plantings of native vegetation; as such, the project closure will result in ~~an overall compensation~~ no net loss of natural heritage features and functions despite short term impacts to natural communities ~~lost~~ during construction and operations.

City staff have reviewed the EASR and December 2020 draft Existing Conditions and Impact Assessment - Biology Report, prepared by AECOM and generally concur with the findings of the report. Staff have identified the following issues to be addressed before the Biology component is finalized:

- Throughout - The London Plan should be cited consistently as (London Plan, 2016).
- The Report indicates that it is consistent with the Environmental Management Guidelines. Study Scoping is undertaken with City Ecology Staff as part of the Environmental Management Guidelines prescribed process. The report assesses the impact of the proposed W12 Expansion on the surrounding area and is referred to as an Impact Study. Staff wonder why it wasn't labelled an SLR/EIS and why Ecology wasn't looped in as part of the scoping of these reports, particularly as the works impact potential ESA patches. Although we appreciate the opportunity to review the report now, we request being involved earlier in the process to expedite review moving forward. The project was scoped in 2017 and again in 2019 with other agencies.
- Staff agree that this report is consistent with the Provincial Policy Statement (PPS, 2020), the Natural Heritage Reference Manual (2010).
- Generally, the EIS requires an administrative formatting review to include appropriate page/section breaks and ensure pages can be read in the pdf form. Staff note that the mapping appears in higher quality and appropriately rotated in Volume 1 of the EASR report.
- Staff question how was the 500 m buffer around the subject area was selected. What was the rationale for this large a study area? Staff agree that this provides a sufficient study area limit, but request more information on the rationale for establishing this area.

- Section 2.2.3 - As ELC plant lists were not separated into individual units (Appendix F) it isn't possible to establish coefficient of conservatism, floristic quality index, weediness index, or wetness index. Why has this information been included?
- Dry-Fresh Hickory Deciduous Forest is noted in Appendix F and Table 6. FOD2-3 is considered S3/S4 (S3 rare-uncommon, S4 apparently secure) at the Provincial level. Within the highly urbanized London landscape the City of London does consider this specific habitat to be rare in the region in accordance with the S3 designation. References to this habitat shall note the Provincial status.
- Section 5 Mitigation and Compensation - Staff can assist with identifying appropriate restoration lands during the detailed design phase.
- Section 7.1 - The report should have been scoped as an SLSR/EIS and Scoped with a City Ecologist. Agree that the report satisfies the requirements under the Planning Act, however scoping the study as an SLSR/EIS could have avoided subsequent EIS scope requirements. Subsequent study requirements will be determined during Detailed Design.

Planning Act- Provincial Policy Statement

The requirement for an EIS as it relates to SWH may be met by the similar requirement under municipal policies, as noted in the next section (Section 7.2). This report is considered to meet the requirements for an EIS under the PPS.

The London Plan

As noted above, the preparation of an EIS can meet the requirements under the Provincial Policy Statement (2020) and The London Plan. The requirement for any additional work to meet the requirements for an EIS will be determined in consultation with the City of London (as outlined in Section 2.2.11 and 7.1).

- Appendix A – Staff request that the study area is superimposed onto the mapping.
- Appendix E – Text overlaps on pages 61, 71 and 91. Please revise so that table header is legible.
- Appendix F – Only a single Master Plant List has been provided for the entire Study Area. The floristic quality, wetness and weediness index assessments are not helpful on a Study Area basis if the intent is to assess the least impactful alternative. Plant lists would have been provided noted per ELC unit and are informative as such. Regionally Significant Species has been left with 'enter manually' and should be included. Please revise.
- Appendix G - Missing/ hidden text for:
 - o 3298 Scotland Drive (MAM2-2/MAS2)
 - o 3483 Westminster Drive (FOD5)

- 3483 Westminster Drive (FOD2-4)
 - 3483 Westminster Drive (SWD/SWT2-5)
 - 3483 Westminster Drive (FOD2-4)
 - 3483 Westminster Drive (SWD/SWT2-5)
 - 3583 Westminster Drive (SWT2)
 - 3691 Manning Drive (CUM1-1/OAO)
 - 6100 White Oak Road (CUP3/ CUM1-1)
- Appendix J:
- Bank Swallow - Nesting habitat was not observed, or foraging habitat was not observed? Please clarify.
 - Eastern Wood Peewee - Please revise table comment to match conclusions/ recommendations for Monarch as all SC species should be included in the SWH section.

Cultural Heritage

City staff have reviewed the Environmental Assessment Study Report (EASR) (Golder Associates, March 2021) for the Proposed W12A Landfill Expansion, as well as the background documents:

- Archaeology Existing Conditions and Impact Assessment Report (Golder Associates, November 2020) (Appendix D.08, Volume IV)
- Stage 2 Archaeological Assessment (Golder Associates, May 7, 2020, P364-0126-2018) (Appendix D.08, Volume IV)
 - Note: this Stage 2 Archaeological Assessment was submitted to the MHSTCI in May 2020 but has not been reviewed
- Stage 1-2 Archaeological Assessment (Golder Associates, September 24, 2018, P364-0125-2018)
 - MHSTCI compliance letter dated November 2, 2018
- Stage 3 Archaeological Assessment (Golder Associates, June 12, 202, P457-0071-2018) (Appendix D.08, Volume IV)
 - MHSTCI compliance letter dated June 30, 2020 (Appendix D.08)
- Heritage Impact Assessment (Golder Associates, August 2020) (Appendix D.09, Volume IV)

City staff concur that the preferred alternative, Alternative 1: vertical expansion over the existing landfill footprint with an expanded site boundary to allow buffering and a waste and resource material drop-off area, is preferred from a cultural heritage perspective as it minimizes direct impacts to built heritage resources, cultural heritage landscapes, and archaeological resources.

City staff would like to provide the following comment for revision in the EASR and its background documents:

- Throughout the documents, Inventory of Heritage Resources Register of Cultural Heritage Resources
- Table 3.3-1, EASR: Archaeological Management Master Plan
- Section 5.8 does not refer to the one of the two Stage 2 Archaeological Assessments (P364-0125-2018) or the Stage 3 Archaeological Assessment (P457-0071-2018) that are of relevant to this Environmental Assessment
- The entire road name should be used consistently throughout the document; it was missing from Section 5.9 of the EASR in particular
- The impact assessments in Section 7.2.8.1 and 7.2.8.2 would benefit from distinguishing between direct impacts (e.g. demolition or alteration) and indirect impacts (e.g. vibration, shadowing, etc.) in articulating the that the preferred alternative will not directly impact any built heritage resources or cultural heritage landscapes
- Table 9.13-1 states “cultural heritage landscapes were removed as none were identified” – which is incorrect; please revise based on the information presented in the Heritage Impact Assessment (Appendix D.09, Volume IV)
- Correction of reference to Tremaine’s *Map of Essex County* in Section 4.2.3.3 of the Heritage Impact Assessment

Long-term avoidance and protection are the preferred approach for the registered archaeological site White Oak 1 (AfHh-926) (P364-0125-2018, P457-0071-2018). The location of the registered archaeological site must remain confidence to protect this sensitive resource. Any ground alteration must avoid the registered archaeological site and its protective buffer. Stage 4 archaeological mitigation is required for any alterations with the potential, either temporarily or permanently, to affect the registered archaeological site. This includes minor forms of soil disturbance such as tree removal, minor landscaping, and utilities installation.

City staff also note that further archaeological assessment (Stage 3+) is required for Location 4 (AfHh-945) (P364-0126-2018).

Y:\Shared\policy\Environmental Assessments\W12A EA - March 2021

KG/EW/TM
kg/ew/tm

Abbott, Wesley

From: Cerniavskaja, Karina (MNRF) <Karina.Cerniavskaja@ontario.ca>
Sent: Friday, May 21, 2021 3:35 PM
To: Stanford, Jay; Abbott, Wesley
Cc: Kittmer, Jane
Subject: [EXTERNAL] RE: Draft EASR for the Proposed W12A Landfill Expansion, London, Ontario

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Good afternoon,

Thank you for circulating the draft Environmental Assessment Study Report for the Proposed W12A Landfill Expansion in the City of London to the Ministry of Natural Resources and Forestry (MNRF) Aylmer District Office.

MNRF staff have reviewed the documents and do not have any comments to provide at this time.

MNRF notes the presence of un-evaluated wetlands at the subject site as identified in the documents, including the potential removal of 0.33ha of un-evaluated wetland as a possible option for expansion of the facility. If the City of London determines that additional studies of these wetlands are necessary to assess their level of significance, MNRF would be interested in reviewing any future studies that become available, including wetland evaluations.

Please let me know if you have any questions.

Thanks again,
Karina

Karina Černiavskaja, District Planner

Ministry of Natural Resources and Forestry

Tel: 519-200-2276 | Email: karina.cerniavskaja@ontario.ca



As part of providing [accessible customer service](#), please let me know if you have any accommodation needs or require communication supports or alternate formats.

From: Jane Kittmer <jkittmer@London.ca>
Sent: April-21-21 4:00 PM
To: Cerniavskaja, Karina (MNRF) <Karina.Cerniavskaja@ontario.ca>
Subject: Draft EASR for the Proposed W12A Landfill Expansion, London, Ontario

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Secure Delivery

As requested, we are forwarding all correspondence regarding the environmental assessment for the proposed expansion of the W12A Landfill electronically. No hardcopy will be mailed.

The following file(s) have been sent to you from jkittmer@London.ca. To download, please click on the following link.

[Click here to download the file\(s\) listed below](#)

Cover Letter _Draft EASR_GRT_e-copy K Cerniavskaja.pdf	162.19 KB
Draft EASR Volume 1.pdf	74.72 MB
Draft EASR Volume 2.pdf	4.75 MB
Draft EASR Volume 3.pdf	13.15 MB
Draft EASR Volume 4.pdf	114.13 MB
Draft EASR Volume 5.pdf	55.82 MB

If the link above does not open, please copy and paste the following URL into your browser:

<https://transfer.london.ca/pkg?token=b00c4ff6-e91e-40a8-91fa-77d340cdfbf7>

This email is confidential and is intended solely for the use of the named addresses.
This notification has been sent to you by [GoAnywhere Services](#).

Edmond, Trish

From: Abbott, Wesley <WAbbott@London.ca>
Sent: May 27, 2021 10:22 AM
To: Edmond, Trish; Kyer, Heather
Cc: Kittmer, Jane
Subject: FW: W12A Landfill Expansion

EXTERNAL EMAIL

Trish. Heather

Comments from the City Stormwater Division. I have not looked at the comments but will later today.

Wesley

From: Sones, Adrienne <asones@london.ca>
Sent: Wednesday, May 26, 2021 2:53 PM
To: Abbott, Wesley <WAbbott@London.ca>; Losee, Michael <mlosee@London.ca>
Subject: RE: W12A Landfill Expansion

Hi Wesley and Michael,

I've reviewed the W12A Landfill Expansion EA documents and have the following comments below. It may be prudent for SWED to meet with your consultant to discuss these comments after they've had a chance to review.

Comments to the EA Stormwater Management Approach:

- The Dingman Creek Subwatershed Stormwater Servicing Study Master Plan and Schedule B Municipal Class Environmental Assessment for Stage 1 Lands (Aquafor Beech, September 2020) should be referenced in the document. The W12A EA should reference the hierarchy of stormwater control and how it applies to this site.
- Section 9.3.1 – Pond 1 has a retention time of 150 hours for the 25 mm event. This is a longer drawdown time than typical and seems to be driven by the 2002 Earth Tech report that identified baseflow of 10L/s should be maintained. Baseflow augmentation isn't a current SWM design target in urban environments. Recent studies have shown that urbanization results in an increase to baseflow conditions. Attenuation to meet previously recommended baseflow targets is not required and if provided, potential impacts to thermal loading should be considered.
- The EA detailed the Stormwater Management Pond sizing requirements to support the preferred option for landfill expansion. The EA included targets, sizing and release rates for each SWM Pond. Will these parameters be refined in the detailed design process? The EA should identify how the EA SWM targets should be considered into the detailed design. For example, the stormwater management report shows that the stormwater facility sizing significantly reduces peak flows during the 2-year through 250-year event. What is driving the large retention volumes for these facilities and is there an opportunity for the SWM design to be refined through the detailed design process for the release rates to closely match pre to post development conditions?

- It is preferable to not increase the Dingman Creek drainage area. SWED is currently initiating the Stage 2 Dingman Creek EA that will assess flood mitigation options for Dingman Creek.
- The detailed design should consider if the SWM pond release rates meet capacity restrictions of downstream culverts.
- Road crossings within the site should also be evaluated following MTO design criteria and demonstrate safe passage during the 250-year event.
- As part of the climate change analysis, the stormwater design should include assessment of conditions during a Hurricane Hazel storm event. The 250-year event analysis is required to ensure safe passage of the regulatory event.
- Erosion and sediment control plans should be developed following the most recent industry standards and guidelines (e.g. Erosion and Sediment Control Guideline for Urban Construction, TRCA 2019) and should be addressed as part of the detailed design.

I understand that Jeff Hachey has already follow up directly with his comments on this EA.

Please let me know if you have any questions.

Best regards,
Adrienne



Adrienne Sones, P.Eng
Environmental Services Engineer
Stormwater Engineering Division
City of London

As part of our ongoing efforts to stop the spread of COVID-19, the City of London has made changes to many City services. Visit our [website for the latest information about City services and COVID-19](#).

From: Chambers, Shawna <schambers@london.ca>
Sent: Wednesday, May 5, 2021 2:45 PM
To: Sones, Adrienne <asones@london.ca>; Hachey, Jeff <jhachey@london.ca>
Cc: Abbott, Wesley <WAbbott@London.ca>; Losee, Michael <mlosee@London.ca>
Subject: FW: W12A Landfill Expansion

Hi Adrienne and Jeff,

See below. This is an important EA study for the City. Despite the large government review team, we should generally confirm that the SWM strategy and hydrogeo components are consistent with our approach taken at other City SWM facilities. Comments are due back by May 21 with some flexibility noted below.

Adrienne – can you please follow up with Wesley to obtain the EA documents and review the SWM strategy?

Jeff – Welcome Back! Once you have your bearings, Adrienne can send you a link to the files in our directory if you can look at the hydrogeo components.

Best regards,

Shawna Chambers, P.Eng., DPA
Division Manager

Stormwater Engineering
City of London
Cell: 226-688-5546

As part of our ongoing efforts to stop the spread of COVID-19, the City of London has made changes to many City services. Visit our [website for the latest information about City services and COVID-19](#).

From: Abbott, Wesley <WAbbott@London.ca>
Sent: Wednesday, May 5, 2021 2:09 PM
To: Chambers, Shawna <schambers@london.ca>
Cc: Losee, Michael <mlosee@London.ca>
Subject: RE: W12A Landfill Expansion

Shawna

Ideally we would have comments by May 21 (current deadline) but there would be no issues if they came in a week or two later.

Have whoever is reviewing the documents contact me and I will send them the document(s) via the file transfer (given the size of the files).

All the documents for the EA are also on the get involved website but they are “chopped up” because we were limited to 10 gigabyte files.

Wesley

From: Chambers, Shawna <schambers@london.ca>
Sent: Wednesday, May 5, 2021 2:00 PM
To: Abbott, Wesley <WAbbott@London.ca>
Cc: Losee, Michael <mlosee@London.ca>
Subject: RE: W12A Landfill Expansion

Hi Wes,

Sorry for the lack of response. What is the deadline for comments?

I'll forward this to staff to take a look at the SWM servicing information.

Jeff Hachey returns on Monday. He may want to take a look at the groundwater EASR.

Best regards,

Shawna Chambers, P.Eng., DPA
Division Manager
Stormwater Engineering
City of London
Cell: 226-688-5546

As part of our ongoing efforts to stop the spread of COVID-19, the City of London has made changes to many City services. Visit our [website for the latest information about City services and COVID-19](#).

From: Abbott, Wesley <WAbbott@London.ca>
Sent: Wednesday, May 5, 2021 1:18 PM
To: Chambers, Shawna <schambers@london.ca>
Cc: Losee, Michael <mlosee@London.ca>
Subject: RE: W12A Landfill Expansion

Shawna

Just following up on my earlier email. The Draft EASR was forwarded to the the Government Review Team (GRT) and other stakeholders for review in April with comments due by May 21, 2021. I want to confirm that your group does not want to review the surface water technical study (includes design parameters for the re-design of the on-site stormwater management ponds) or the groundwater technical study which are supporting documents for the EASR.

Thanks, Wesley Abbott
226-376-2311 (Cell)

From: Abbott, Wesley
Sent: Wednesday, March 10, 2021 10:34 AM
To: Chambers, Shawna <schambers@london.ca>
Cc: Losee, Michael <mlosee@london.ca>
Subject: W12A Landfill Expansion

Shawna

Background - Environmental Assessment

We are nearing completion of the Environmental Assessment (EA) for the proposed expansion of the W12A Landfill. This is the first individual EA completed by the City in over 25 years.

The first phase of the Individual EA process was the development of a Terms of Reference (ToR) which began in Spring 2017. The ToR becomes the framework or work plan for the preparation and review of the EA. The Amended ToR was approved by the Minister of the Environment, Conservation and Parks on July 30, 2019.

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. All aspects of the EA process are documented in the Environmental Assessment Study Report (EASR).

We will be going to March 30 CWC meeting to get permission to release the draft EASR to the Government Review Team (GRT) and other stakeholders for review. The GRT was established by the Ministry of Environment, Conservation and Parks and has been involved throughout the process. The GRT consists of approximately 45 staff in 30 different federal, provincial and local agencies.

Internal City Review

Does your group want to review the surface water technical study (includes design parameters for the re-design of the on-site stormwater management ponds) or the groundwater technical study which are supporting documents for the EASR? Do you want to review the EASR?

Wesley Abbott
226-376-2311 (Cell)

**Ministry of Heritage, Sport,
Tourism and Culture Industries**

Programs and Services Branch
401 Bay Street, Suite 1700
Toronto, ON M7A 0A7
Tel: 416.768.7553

**Ministère des Industries du Patrimoine,
du Sport, du Tourisme et de la Culture**

Direction des programmes et des services
401, rue Bay, Bureau 1700
Toronto, ON M7A 0A7
Tél: 416.768.7553



May 26, 2021

EMAIL ONLY

Jay Stanford
City of London
Solid Waste Management Division, 8th Floor
300 Dufferin Avenue, P.O. Box 5035
London ON N6A 4L9
jstanfor@london.ca

MHSTCI File : 0006472
Proponent : City of London
Subject : Draft Environmental Assessment Study Report
Project : W12A Landfill Expansion
Location : City of London, Ontario

Dear Mr. Stanford:

Thank you for providing the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) with the draft Environmental Assessment Study Report (EASR) for the above-referenced project (prepared by Golder, dated March 2021). MHSTCI's interest in this Environmental Assessment (EA) project relates to its mandate of conserving Ontario's cultural heritage, which includes:

- Archaeological resources, including land and marine;
- Built heritage resources, including bridges and monuments; and,
- Cultural heritage landscapes.

Project Summary

The purpose of this EA study is to create additional waste disposal capacity as the existing W12A landfill approaches its approved total disposal capacity by 2024. The planning period for this EA is 2024 through 2048, inclusive.

Draft EASR Comments

We have reviewed the draft EASR and offer the following comments.

1. The term "cultural heritage" or "cultural heritage resources" properly encompasses archaeological resources, built heritage resources, and cultural heritage landscapes. We would therefore recommend that the term "cultural heritage" in the title and content of Sections 5.9, 7.2.8, 9.8, and corresponding parts of the Executive Summary be replaced with "built heritage resources and cultural heritage landscapes". In 7.2.8.2 it should be replaced with simply "built heritage resources", as cultural heritage landscapes are dealt with separately in 7.2.8.1.
2. In Table 13.2, the content of the commitment in row X appears to be missing, likely due to a formatting error.
3. Table 13.2 needs to include a commitment for the case of unexpectedly encountering archaeological resources during construction. Under this scenario, all activities impacting archaeological resources must cease immediately, MHSTCI should be notified, and a licensed archaeologist is to be engaged to carry out an archaeological assessment in accordance with the *Ontario Heritage Act* and the *Standards and Guidelines for Consultant Archaeologists*. If human remains are encountered, all activities must cease immediately and the local police as well as the Registrar, Burials of the Ministry of Government and Consumer Services (416-326-8800) must be

contacted. In situations where human remains are associated with archaeological resources, MHSTCI should also be notified to ensure that the site is not subject to unlicensed alterations which would be a contravention of the *Ontario Heritage Act*.

4. Section 13.2 states under the Ontario Heritage Act heading that the project will require a “letter of concurrence” from MHSTCI to confirm that potential archaeological and cultural heritage resources have been appropriately considered and that the implementation of the expansion as proposed can proceed. The only official letters that MHSTCI would issue in an approval-like capacity outside the Environmental Assessment review process are “review letters” for archaeological assessment reports, indicating that the reports have been found to be compliant with the Standards and Guidelines for Consultant Archaeologists and entered into the Ontario Public Register of Archaeological Reports. Construction should not proceed until such letters have been received regarding archaeological assessment reports that recommend no further concern throughout the footprint of the proposed undertaking. With respect to built heritage resources and cultural heritage landscapes, MHSTCI’s review of related technical documents is part of our review of the Environmental Assessment itself through the Government Review Team; we do not have a distinct approval function for such documents and will not issue letters to that effect (except in the rare case of a cultural heritage resource designated by the Minister).
5. It is unclear why the Stage 2 Archaeological Assessment Report completed under PIF# P364-0125-2018 (referenced in the body of the EASR as Golder 2018) is not included in Appendix D.08. Moreover, the wording of Section 3.0 of Appendix D.08 appears to suggest that the attached Stage 2 report identified the need for the attached Stage 3 report on Site AfHh-926, when in fact this Stage 3 survey was recommended in the above-noted Stage 2 report not attached to the appendix. We would recommend that the wording of Appendix D.08 be clarified, and that the 2018 Stage 2 report and its review letter be referenced and attached.

Thank you for consulting MHSTCI on this project and please continue to do so throughout the EA process. If you have any questions or require clarification, do not hesitate to contact me.

Sincerely,

Dan Minkin
Heritage Planner
dan.minkin@ontario.ca

Copied to: Jane Kittmer, City of London
Trish Edmond, Golder
Devon Wills, MECP

It is the sole responsibility of proponents to ensure that any information and documentation submitted as part of their EA report or file is accurate. MHSTCI makes no representation or warranty as to the completeness, accuracy or quality of the any checklists, reports or supporting documentation submitted as part of the EA process, and in no way shall MHSTCI be liable for any harm, damages, costs, expenses, losses, claims or actions that may result if any checklists, reports or supporting documents are discovered to be inaccurate, incomplete, misleading or fraudulent.

**Ministry of Agriculture, Food
and Rural Affairs**

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**Ministère de l'Agriculture,
de l'Alimentation et des
Affaires rurales**

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Tél.: (519) 846-0941



**POLICY DIVISION
FOOD SAFETY & ENVIRONMENTAL POLICY BRANCH
LAND USE PLANNING & STEWARDSHIP UNIT**

May 21, 2021

Jay Stanford
Director of Environment, Fleet and Solid Waste
City of London
300 Dufferin Avenue
London, Ontario
N6A 4L9

**Re: Draft Environmental Assessment Study Report (EASR) Submission
for the Proposed W12A Landfill Expansion Environmental
Assessment (EA) – City of London – OMAFRA Comments**

Hello Jay,

In response to the Draft Environmental Assessment Study Report (EASR) published in March 2021, please accept the following comments which reflect the mandate of OMAFRA as it relates to the Ministry's role under the *Environmental Assessment Act*.

It is understood that the City of London is proposing an expansion of the existing W12A Landfill site, located at 3502 Manning Drive (London, Ontario). The proposed landfill expansion will incorporate a vertical expansion over 106.3 ha of the existing landfill footprint. The facility boundary is proposed to be extended to accommodate additional on-site buffering north and east of the existing landfill and a new small vehicle "Waste and Resource Material Drop-Off Area". These proposed site modifications would increase the landfill boundary from approximately 140.0 ha to approximately 192.4 ha. It is understood that the landfill is projected to reach approved capacity in 2025.

It is confirmed that the Site Study Area and Site-Vicinity Study Area are currently in an agricultural use (e.g. field crops). The Canada Land Inventory (CLI) soil classification for the Site Study Area and Site-Vicinity Study Area is predominantly characterized as Class 2 and 3 lands. Portions of the northern and southern Site-Vicinity Study Areas are

recognized as Class 5 lands. CLI Class 1-3 lands represent prime agricultural lands, as defined by the Provincial Policy Statement (PPS 2020).

OMAFRA staff appreciate the opportunity to review the Draft EASR, and we can offer the following comments for your consideration.

Volume I Draft EASR

As outlined in the Draft EASR Volume I (ES-19), MHBC completed an assessment of impacts on agricultural lands and operations within the Site-Vicinity Study Area and were based on the OMAFRA Draft Agricultural Impact Assessment (AIA) Guidelines (2018). The project team used the following methodologies and data sources to assess potential mitigation measures:

- Site-specific studies;
- Preferred 'Alternative Method' landfill phasing plan;
- Applicable Provincial regulations, standards and guidelines,
- Provincial Policy Statement (2020);
- City of London Official Plan (1989) and the London Plan (2016);
- City of London Zoning By-law;
- Aerial photographic and topographic mapping;
- Available soils mapping (Soils of Middlesex County mapping, CLI Mapping);
- Municipal Drain Mapping;
- Available ownership information (based on municipal assessment information and including farm tax credit information);
- Field reconnaissance (by way of windshield survey);
- Statistics Canada agricultural profiles;
- Interviews with farmers, if necessary. (3-11).

It is understood that as an outcome of the undertaken AIA-based report the Project is expected to generate minimal land use impacts on agricultural lands and/or operations within the Site-vicinity Study Area. Further, mitigation and monitoring programs associated with the landfill operations will be implemented to minimize any potential impacts of local agricultural activities and the larger agricultural system. That said, OMAFRA has the following comments for consideration.

Open House Consultation:

OMAFRA requests additional information on potential impacts pertaining to the *agricultural system*:

Comment Received	Proposed Mitigation	OMAFRA Comment
Nuisance wildlife (i.e., vultures) cause damage by roosting on nearby structures	Pilot project on using various turkey vulture control measures to keep	Will this pilot project include adjacent farm operations?

	turkey vultures off private property.	Was consideration given to whether disease transmission to farm produce or livestock associated with insects, vermin or birds had been assessed?
Bad odours (with potential to increase)	<p>Air quality modelling/reports identified that the landfill expansion is expected to meet all provincial criteria with air quality.</p> <p>Municipal commitment to additional air quality monitoring and modelling will be undertaken for Environmental Protection Act approvals.</p>	Does this study include airborne contamination of crops or soils including air emissions or fine particulate (i.e. dust)?
Clarification of what agricultural land included in the on-site buffer will be used for	<p>Additional buffer lands that are currently in active agricultural production will be seeded and left fallow, with the following exceptions:</p> <ul style="list-style-type: none"> • Fencing along the new landfill boundary; • Berms constructed along the new landfill boundary that runs long White Oak Road and Scotland Drive and; • Land between the existing landfill and Material Recovery (recycling) Facility that will accommodate a new small vehicle Waste and Resource Material Drop-off Area. 	OMAFRA understands that no landfill expansions onto prime agricultural lands are being proposed.

Litter from trucks	Potential changes to the landfill's off-site litter management program can be considered as a part of the review of the existing CEMMP. Any changes can be formalized and added to the revised CEMMP and/or to the Design and Operations report for the landfill expansion.	OMAFRA encourages proposed changes to the off-site litter management program as blowing litter nuisance has the potential to negatively impact farm operations, with regard to livestock hazards and potential damage to farm machinery.
Road traffic concerns	Concerns relating to traffic movement may include changes to access/egress to the site for trucks and increased truck traffic. No changes to access/egress are anticipated from the expanded site.	Have potential traffic hazards been assessed with regard to the movement of farm machinery across or along the proposed haul routes?

It is clear that project team undertook a number of consultation events and that neighbours within 2 kilometers proximate to the proposed Project were invited to attend, however, it is unclear if agricultural stakeholders were present, nor if interviews with farmers were undertaken (as per suggested methodology in 3-11). If consultation and/or interviews with farmers were undertaken, this discussion would ideally be summarized within the AIA to demonstrate how consultation with local agricultural representation was undertaken, which agricultural representatives were present for consultation events, key thoughts and opinions brought to attention by the agricultural stakeholders and how the provided feedback was integrated and reflected within the reporting and recommendations. It is recommended that the project team provide additional comments pertaining to if consultation with local agricultural representation occurred and if so, if it helped to inform the development of the AIA.

Section 5.7 (Agriculture)

Through a 2019 windshield survey (5-78) and mapping exercise (Figure 5.7-1), it has been identified that the majority of the Site Study Areas and the Site-Vicinity Study Areas are actively used for agricultural purposes (i.e. cash-cropping) with two noted agricultural buildings to the South, and one active livestock operation, located approximately 400 metres to the Southeast. That said, Table 5.1-1 states Provincial requirements (MECP Guideline D-4 Land Use on or Near Dumps) govern the potential emissions or discharges from landfill site and further states potential effects on agriculture are expected to be limited to 500 metres from the Site Study Area. As stated, an active livestock operation has been identified within the Site-Vicinity Study Area, approximately 400 metres to the Southeast of the landfill footprint. It would be helpful to accurately quantify the distance from the proposed landfill footprint to the livestock

operation, as additional mitigation measures for this livestock operation may be required.

Agriculture Existing Conditions and Impact Assessment

It is understood that project team at MHBC undertook an Agriculture Existing Conditions and Impact Assessment, predicated on the Draft AIA Guidelines (2018) and that the following considerations within the assessment included:

- Degree of investment/ agricultural infrastructure (e.g. fencing, tile drainage);
- Soil capability; and
- Potential impacts on agricultural lands, surrounding uses and the wider agricultural system.

Section 4.1.1.1 (Provincial Policy Statement, 2020)

As previously identified, the Site-Vicinity Study Area is a prime agricultural land, comprised of predominantly Class 2 and 3 lands, with Class 5 lands identified in the South and Northern portions. CLI Class 1-3 lands represent prime agricultural lands, as defined by the PPS (2020).

PPS Policy 2.3.3.1 states “in *prime agricultural areas*, permitted uses and activities are: *agricultural uses*, *agriculture-related uses* and *on-farm diversified uses*”. Given that the proposed expansion is not one of the three aforementioned uses, permitting such a use would therefore be considered a limited non-agricultural use and would be subject to PPS Policy 2.3.6.1 (b). Policy 2.3.6.1 (b) states: Planning authorities may only permit non-agricultural uses in a *prime agricultural area* for limited non-residential uses, provided that all of the following are demonstrated:

1. The land does not comprise a *speciality crop area*;
2. The proposed use complies with the minimum distance separation formulae (MDS);
3. There is an identified need within the planning horizon provided for in policy 1.1.2 for additional land to accommodate the proposed use; and
4. Alternative locations have been evaluated, and
 - There are no reasonable alternatives which avoid *prime agricultural areas*; and
 - There are no reasonable alternative locations in *prime agricultural areas* with lower priority lands.

That said, the AIA-based report has demonstrated consistency with Policy 2.3.6.1 (b) in that:

- The proposed expansion does not compromise a *speciality crop area*;
- MDS setbacks are not required for landfills;

- There is an identified need within the planning horizon and nothing in policy 1.1.2 limits the planning for *infrastructure* ... beyond a 25-year time horizon; and
- Alternative locations have been evaluated (as reported in a 2005 Agricultural Resources Background Study, completed by IBI Group) and this location includes lower priority lands (Class 5 lands).

Further, it is understood that the expansion area is already located within the defined boundary of the site-specific W12A Landfill policy area within the Official Plan. That said, OMAFRA is satisfied that the proposed expansion is aligned with the PPS (2020).

4.2.1.3 (Potential Impacts on Agricultural Land within Site Area)

It is understood that the landfill boundary will increase from 140.0 ha to 192.4 ha, with no expansion planned for the landfill footprint. The expansion area would be predominantly used for buffering purposes, with limited infrastructure like fencing planned for the affected lands. Additionally, it is understood that a portion of the expansion area fronting Manning Road would be used for a new Waste and Resource Material Drop-off Area.

4.2.1.4 (Potential Impacts on Agricultural Land within the Site-Vicinity Study Area)

It is understood that the project team evaluated the Project against the components of the Land Use Compatibility (D-Series Guidelines), administered by the Ministry of the Environment, Conservation and Parks. This analysis typically pertains to the potential noise, odour and air quality effects that a proposed development may have on sensitive land uses. That said, as this report is said to be based on Draft AIA Guidelines, it would be helpful to specifically identify and address any potential impacts to the *agricultural system*. This assessment should take into consideration whether impacts are short- or long-term, whether they are limited to the proposed development (or are more regional in scope), and where they are on the spectrum of severity, from minor to severe. Some types of potential impacts to consider in an AIA are:

- Fragmentation of agricultural operations (Is there an impact on supply chain, as a beef operation has been identified within the Site-Vicinity Study Area?);
- Traffic and safety issues (Is there a conflict with farm vehicles using local roads due to increased traffic?);
- Ability to implement normal farm practices (Is there a risk of nuisance complaints over lighting, odour and/or noise?);
- Nuisance impacts (Are farms impacted within the Site-Vicinity Study Area by the frequency, timing and intensity of proposed impacts?);
- Cumulative impacts to the viability of the *agricultural system* in the area (does this proposal have the ability to weaken the agricultural system? Does the proposal undermine long-term agricultural potential?);
- Was edge planning considered, particularly to the Southeast, where the active beef operation is present?

- Has a process been put in place for reporting and responding to landowner concerns?

According to the Draft AIA Guidelines, following the identification of impacts on the *agricultural system*, direct and indirect mitigation measures should be introduced. While the Agriculture Existing Conditions and Impact Assessment states the potential impacts of the Project on local agricultural land and operations are expected to be minor, it is unclear if potential impacts were fully assessed.

Summary

These comments reflect the Ministry of Agriculture, Food and Rural Affairs interpretation of provincial policy with regard to agricultural land, and do not reflect an overall provincial position on this matter. There may be planning concerns or interests of other agencies that should be considered, in addition to any municipal planning considerations.

The Ministry would be pleased to discuss the content of this letter with the project team. Please contact the undersigned if further comment or clarification is required.

Warm regards,

Sarah Kielek-Caster

Sarah Kielek-Caster
Rural Planner
Ontario Ministry of Agriculture, Food and Rural Affairs
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Elora, Ontario
N0B 1S0
(M): 226-962-8933

CC: Shannon Gauthier, Project Officer, Ministry of the Environment, Conservation and Parks

**Ministry of the Environment,
Conservation and Parks**

**Ministère de l'Environnement,
de la Protection de la nature
et des Parcs**

Environmental Assessment
and Permissions Branch

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June 8, 2021

MEMORANDUM

TO: Mr. Wesley Abbott
Project Manager, Solid Waste Management
City of London

FROM: Devon Wills
Project Officer
Environmental Assessment and Permissions Branch
Ministry of the Environment and Climate Change

RE: Draft Environmental Assessment for the City of London W12A Landfill
Expansion

As requested, the Ministry of the Environment and Climate Change's (ministry) Environmental Assessment and Permissions Branch has completed its preliminary review of the Draft Environmental Assessment (EA) for the City of London's (City) W12A Landfill Expansion. The ministry is providing comments from the following disciplines:

- Environmental assessment process;
- Land use planning;
- Source Water Protection;
- Surface water;
- Ground water;
- Wastewater;

- Leachate management;
- Noise; and
- Air quality

Detailed comments on the draft EA, including technical reviews above are found in the attachments to this memo.

Ministry comments have been compiled in the enclosed table except for the comments from the ministry's Indigenous consultation advisor, and certain technical reviewers (e.g. species at risk reviewers) which will be sent to you at a later date.

As multiple changes to the draft EA are anticipated, the ministry suggests that the City submit a revised draft EA for the ministry's review accompanied by proponent responses in the comment table format provided. The ministry will review the draft EA in more detail concurrent to the review by Indigenous communities. It would assist the ministry's review if the proponent would send a comment/response table for the comments made by the ministry as soon as feasible. The ministry also would request a record of all comments received by Indigenous communities as well as the proponent's response to these comments. The City should attempt to address any concerns raised by Indigenous communities and notify the ministry as soon as possible if any significant concerns are identified (i.e., opposition to the project; assertions that the duty to consult has not been met).

Should you have any questions or would like clarification on the comments provided, please do not hesitate to contact Devon Wills, Project Officer via email at Devon.Wills@ontario.ca or by phone at 416-270-4457.

Regards,



Devon Wills
Project Officer
Environmental Approvals Branch
Ministry of the Environment, Conservation and Parks

cc. Kiran Anwar, Supervisor, Project Coordination Unit

Ministry of the Environment, Conservation and Parks

Comment Response Table

Document Reviewed: Draft Environmental Assessment for the City of London W12A Landfill Expansion

Proponent: City of London

Date: June 8, 2021

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
Environmental Assessment and Permissions Branch, Project Officer				
1	5.1 Study Areas and Timeframes <i>Table 5.1-1: Proposed Preliminary Study Areas</i>	<p>Table 5.1-1: Proposed Preliminary Study Areas, includes a list of components studied and the rationale for including them in the site, site and site-vicinity, and the wider study area, but no rationale for why these components were selected. The rationale for why each component was considered at the site study, site-vicinity and wider study areas was included in the table, but not for why each component was selected. For example why were the specific components such as “atmosphere”, “biology” and “visual” selected instead of a wider range of other components?</p> <p>As per section 4.2.4 of the <u>Code of Practice: Consultation in Ontario’s Environmental Assessment Process</u> (January 2014), the Draft EA should clearly explain the reasons for selecting the criteria and indicators . This will help all interested persons understand the judgements that were made and allow them to participate more effectively in the process. An outline of the data sources for the criteria and indicators is also required in the EA.</p>	Please provide an explanation of how these components were selected and the rationale for doing so in this section.	

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
Environmental Assessment and Permissions Branch, Review Engineer				
1	Draft EA document	<u>Stormwater Management (surface water)</u> Considering the different sources of waste at this landfill site, the City should assess the site-specific contaminants of concern, work with the ministry's regional office to identify the site-specific parameters that need to be sampled/monitored, and the trigger threshold.	Please provide mitigation measures (such as housekeeping practices) to prevent potential contaminants leaving the site.	

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
Environmental Permissions Branch, Senior Noise Engineer				
1	Volume I	Table 5.2-5: The listed six noise level columns do not comply with the guidance provided in the MECP 1998 Noise Guidelines for Landfill Sites. The existing road traffic noise levels should be derived from the maximum hourly Leq sound levels with and without the landfill site off-site vehicles (trucks) from/to the landfill site. The existing landfill operations noise levels	The overall average noise level is incorrect and should be deleted from this table. The latter two column (from the right) should be replaced with the existing hourly	

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
		should be derived from the maximum day (7am – 7pm) and night (7pm – 7am) hourly Leq sound levels due to landfilling operations.	maximum Leq sound levels due to ancillary facilities.	
2	Volume I	Table 7.2-4: the use of relative criteria to compare Alternatives 1, 2 and 3 is incorrect.	The comparisons among these three alternatives should be based on the absolute (not relative) criteria of the MECP 1998 Noise Guidelines for Landfill Sites and Publication NPC-300.	
3	Volume I	Table 7.2-9: the use of the maximum potential change in noise level as a differentiating factor among Alternatives 1, 2 and 3 is incorrect as this is based on relative (not absolute) criteria which is not supported by the two MECP guidance documents noted above.	This row should be deleted from Table 7.2-9.	
4	Volume I	Table 7.2-10: the use of relative criteria to compare Alternatives 1, 2 and 3 is incorrect. The comparisons among these three alternatives should be based on the absolute (not relative) criteria of the MECP 1998 Noise Guidelines for Landfill Sites and Publication NPC-300.	This table is incorrect and should be deleted.	
5	Volume I	Tables 9.1-8 and 9.1-9: the listed predicted sound levels should be based on the maximum (not average) day (7am – 7pm) and night (7pm – 7am) hourly Leq sound levels.	Please update the tables.	
6	Volume I	Table 9.1-11: the existing traffic average noise level (2 nd column from the left) should be based on the hourly Leq sound levels due to existing traffic without the existing traffic from/to the landfill site.	Please update the tables.	
7	Volume I	Table 9.1-12: the use of relative criteria to compare Alternatives 1, 2 and 3 is incorrect. The comparisons among these three alternatives should be based	This table is incorrect and should be deleted.	

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
		on the absolute (not relative) criteria of the MECP 1998 Noise Guidelines for Landfill Sites and Publication NPC-300.		
8	Volume I	Table 9.1-13: the use of relative criteria to compare Alternatives 1, 2 and 3 is incorrect. The comparisons among these three alternatives should be based on the absolute (not relative) criteria of the MECP 1998 Noise Guidelines for Landfill Sites and Publication NPC-300. Columns 2, 3, 4 and 6 (from the left) are incorrect.	Please update the table.	
9	Volume I	Table 9.1-16: the use of relative criteria to compare Alternatives 1, 2 and 3 is incorrect. The comparisons among these three alternatives should be based on the absolute (not relative) criteria of the MECP 1998 Noise Guidelines for Landfill Sites and Publication NPC-300. Columns 2, 3, 4 and 6 (from the left) are incorrect.	Please update the table.	
10	Volume I	Figure 7.2-1: this figure should show the heights and lengths of the property line earthen berms.	Please update.	
11	Volume I	Figure 9.1-3: this figure should indicate the height and length of the earthen berm installed to shield point of reception R15 from the landfill site operations / equipment.	Please update the table..	
12	Volume I	Figure 9.1-2: the number of this figure is incorrect (5.2-4).	Please update the table..	
13	Volume IV	Table 1 (page 142/1674): this tables lists 11 points of reception used in the noise assessment.	Provide justification / explanation for not including the remaining numerous points of reception identified in Figure 1 (page 170/1674).	
14	Volume IV	Page 146/1674: It was assumed that the landfiling operations scenarios do not occur concurrently.	Provide justification for this assumption.	

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
15	Volume IV	RLS-90: this software was used for prediction of road traffic noise. The use of RLS-90 software for road traffic noise predictions is not acceptable to MECP. Acceptable software includes STAMSON and TNM 3.0.	Please update with the requested information.	
16	Volume IV	Table 6 (page 148/1674): see comment above regarding the use of RLS-90 for road traffic noise predictions.	Please update with the requested information.	
17	Volume IV	Table 7 (page 150/1674): the existing traffic volumes (column 3 from the left) should not include the existing volumes of off-site vehicles from/to the landfill site.	Please update with the requested information.	
18	Volume IV	Table 8 (page 151/1674): the use of relative criteria to compare Alternatives 1, 2 and 3 is incorrect. The comparisons among these three alternatives should be based on the absolute (not relative) criteria of the MECP 1998 Noise Guidelines for Landfill Sites and Publication NPC-300.	This table is incorrect and thus, should be changed to be based on the absolute (not relative) criteria for three alternatives comparison.	
19	Volume IV	Table 12 (page 156/1674): the listed six noise level columns do not comply with the guidance provided in the MECP 1998 Noise Guidelines for Landfill Sites. The existing road traffic noise levels should be derived from the maximum hourly Leq sound levels with and without the landfill site off-site vehicles (trucks) from/to the landfill site. The existing landfill operations noise levels should be derived from the maximum day (7am – 7pm) and night (7pm – 7am) hourly Leq sound levels due to landfiling operations.	The overall average noise level is incorrect and should be deleted from this table. The latter two column (from the right) should be replaced with the existing hourly maximum Leq sound levels due to ancillary facilities.	
20	Volume IV	Table 6 (page 160/1674) the existing traffic average noise level (2nd column from the left) should be based on the hourly Leq sound levels due to existing traffic without the existing traffic from/to the landfill site.	Please update with the requested information.	
21	Volume IV	Table 17 (page 161/1674): the use of relative criteria to compare Alternatives 1, 2 and 3 is incorrect. The comparisons among these three alternatives should be based on the absolute (not relative) criteria of the	Please update with the requested information.	

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
		MECP 1998 Noise Guidelines for Landfill Sites and Publication NPC-300. Columns 2, 3, 4 and 6 (from the left) are incorrect.		
22	Volume IV	Section 7.2 (page 161/1674): the description of the specified mitigation measures (berms) is not clear.	Provide figures to scale to show the locations, extents, heights and lengths of the recommended mitigation measures (berms) for Phase 1E, Phase 2E, Phase 5E and Phase 7E.	
23	Volume IV	Table 20 (page 164/1674): the use of relative criteria to compare Alternatives 1, 2 and 3 is incorrect. The comparisons among these three alternatives should be based on the absolute (not relative) criteria of the MECP 1998 Noise Guidelines for Landfill Sites and Publication NPC-300. Columns 2, 3, 4 and 6 (from the left) are incorrect.	Please update with the requested information.	
24	Volume IV	Section 11.0 (page 166/1674): The second criteria used an assessment of changes to noise levels relative to existing noise levels at the most sensitive PORs within the Site-vicinity Study Area. The use of the second criteria (i.e. relative criteria) to compare Alternatives 1, 2 and 3 is incorrect. The comparisons among these three alternatives should be based on the absolute (not relative) criteria of the MECP 1998 Noise Guidelines for Landfill Sites and Publication NPC-300.	Please update with the requested information.	
25	Volume IV	Figure 1 (page 170/1674): this figure should show the heights and lengths of the property line earthen berms.	Please update with the requested information.	
26	Volume IV	Figure 2 (page 171/1674): this figure should show the length and height of the earthen berm installed to shield point of reception R15 from the landfill site operations / equipment.	Please update with the requested information.	

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
Southwest Region Technical Support Section, Air Quality Analyst				
1	<p>Volume I, Section 12.1 and Table 12.1-1, Pages 12-1 and 12-2</p> <p>Volume IV, Section 8.0</p>	<p>Section 12.1 states:</p> <p><i>“An effective monitoring program provides results to: indicate whether the facility is working as expected and that the assumptions used in the assessment were correct; assess on an ongoing basis whether mitigation measures as designed and operated are effective; and identify unforeseen problems so they can be addressed in a timely manner.”</i></p> <p>The proposed follow-up program outlined in Table 12.1-1 proposes a one time only sampling of unpaved and paved road silt loadings and landfill gas. While Table 12.1-1 also includes preparing a fugitive dust management plan and updating the odour management plan, one time only sampling does not address assessing mitigation measures on an ongoing basis or unforeseen problems.</p>	<p><u>Existing Monitoring</u></p> <p>The report should clarify if there are any existing air monitoring activities at the W12A landfill. Additional details regarding how the W12A landfill has monitored for odour emissions and addressed odour complaints in the past should also be included.</p> <p><u>Follow-up Monitoring</u></p> <p>Additional details should be included for the follow-up plan regarding how worst-case conditions will be captured by a one-time sampling event.</p> <p><u>Additional Monitoring</u></p> <p>Section 8.0 in Volume IV states that “...monitoring will likely be a condition of environmental approvals and/or permits, and the final details will be confirmed in the ECA(s) for the Project.”</p> <p>Considering that this project is an expansion of a landfill with a history of odour complaints, it is recommended that the ambient air monitoring plan be included at the EA stage for review. The ambient air</p>	

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
			monitoring plan should aim to assess off-site odour, such as through H ₂ S, and VOCs, including vinyl chloride, around the W12A landfill and nearby sensitive receptors. The plan should also discuss frequency and duration of the proposed monitoring, as well as how the results of the monitoring will be representative of worst-case conditions.	
2	Volume I, Table 11.3-1, Page 11-6.	Table 11.3-1 indicates that there are existing nearby sources of odour and a precedent of impact in the area. Therefore, a one-time monitoring event is suggested as well as more stringent controls around operational plans and mitigation measures. However, specifics regarding the monitoring event and more stringent controls are not provided.	Additional details should be added to Section 11.3 regarding how cumulative effects on air quality and odour will be addressed through monitoring and more stringent controls. More detail should also be provided for what facilities fall under the “additional small commercial operations” and “waste disposal and waste processing facilities” categories in Table 11.3-1 and how they impact air quality and odour around the W12A landfill.	
3	Volume IV, Section 3.0, Table 1, Page 8	Please note that a more recent version of the AAQC list was published on May 1, 2020 (ambient air quality criteria (ontario.ca))	Please update footnote (a) in Table 1. Please also change the heading “Ontario Ambient Air Quality Guidelines” to “Ontario Ambient Air Quality Criteria”.	
4	Volume IV, Section 3.1, Page 9 and Table 2	Section 3.1 states: <i>“Hydrogen sulphide is not measured at any of the above three stations, therefore the 1-hour background concentration was taken from the</i>	Please provide additional details supporting the selection of the 10-minute and 24-hour	

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
		<p><i>ECCC's draft Screening Assessment for H₂S (ECCC, 2017) and converted to the relevant averaging periods using MECP recommended methodologies in the Air Dispersion Modelling Guideline for Ontario (MECP, 2017)."</i></p> <p>The H₂S data selected from the ECCC report for background concentrations are 0.84 ug/m³ (10-min) and 0.21 ug/m³ (24-hour). The value of 0.84 ug/m³ appears to be taken from the lower end of a range of maximums from Lethbridge (where the average was 1.4 ug/m³) and the lower end of a range of 99th percentiles at Saint John. Therefore, it is not clear whether the H₂S background concentrations chosen are conservative. It is also unclear from where the value of 0.21 ug/m³ was obtained.</p>	background H ₂ S concentrations.	
5	Volume IV, Section 3.2, Page 11	Section 3.2 does not include details regarding the Landfill Gas collection system expansion and 2020 odour complains, as noted in Volume 1, Section 5.2.1.2.	Section 3.2 should include the additional information regarding the Landfill Gas collection system expansion and 2020 odour complains that is provided in Volume 1, Section 5.2.1.2.	
6	Volume IV, Section 5.2, Table 6, Page 22	Table 6 indicates that emissions from wind erosion for storage piles were calculated but considered negligible.	Section 5.2 should elaborate on how the storage pile emissions were calculated and determined to be negligible. This section should also describe the best management practices used to minimize wind erosion from storage piles.	
7	Volume IV, Section 3.0, Table 1, Page 8	It is unclear why the NO ₂ , O ₃ and SO ₂ CAAQS were converted from ppb to ug/m ³ . Although Section 2.1 of Appendix C indicates that regulatory criteria are established on the basis of ug/m ³ , the cumulative	Please clarify what temperatures were used to convert background concentrations and CAAQS for NO ₂ , SO ₂ and O ₃ . It is	

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
		concentrations (background + predicted maximums) are not compared against O. Reg. 419/05 Schedule 3 standards. Appendix A, Section 2.1, Page 5 states that 25 degrees was used for the conversion. However, it appears that the O ₃ 8-hour CAAQS was converted from ppb to ug/m ³ using a temperature of 10 degrees Celsius, while the NO ₂ and SO ₂ 1-hour and annual CAAQS were converted using 25 degrees Celsius.	recommended to be consistent in the temperature used for conversion.	
8	Volume IV, Appendix B, Section 3, Table B-4. Page 7	Table B-4 states the landfill gas collection efficiency is 85% based on MECP recommendation.	Please clarify what MECP recommendation the table is referring to.	
9	Volume IV, Appendix B, Section 3, Table B-4. Page 7	Table B-4 references that estimates are based on similar landfills for density of daily cover, average lane width and vehicle height for paved roads and average lane width for unpaved roads.	Please clarify which landfills were used for these estimates.	
10	Volume IV, Section 3.3, Page 13	Section 3.3 states that “model predictions for most of the indicator compounds are presented as the highest value from any modelled receptor” for existing landfill emissions.	Please clarify what is meant by “most” and confirm that this statement refers to values presented in Table 4.	
11	Volume IV, Section 5.5, Page 25	Section 5.5 states that the “Maximum predicted concentrations for the expansion scenario (that represents the maximum predicted concentration from Phase 2E, 4E or 8E) at the sensitive receptors are presented in Table 8.” Table 8 does not indicate during which Phase and at which sensitive receptor the maximum predicted concentration reported occurred. Volume IV does not provide all the maximum predicted concentration results for each sensitive receptor for each of the three/eight phases modelled for the indicator compounds/odour.	Revise Table 8 to indicate during which phase and at which sensitive receptor the maximum predicted concentration from the proposed landfill expansion occurred. Include an appendix for Volume IV that shows all the maximum predicted concentrations for each sensitive receptor for each of the three/eight phases modelled for the indicator compounds/odour.	

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
12	Volume IV	Volume IV should provide more details regarding how truck traffic will change with the landfill expansion.	Provide additional details in Volume IV regarding truck traffic during the landfill expansion.	
13	Volume I, Table 11.3-1, Page 11-6.	Table 11.3-1 indicates that there are existing nearby sources of odour and a precedent of impact in the area. Therefore, a one-time monitoring event is suggested as well as more stringent controls around operational plans and mitigation measures. However, specifics regarding the monitoring event and more stringent controls are not provided.	Additional details should be included to address how cumulative effects on air quality and odour are being addressed through monitoring and more stringent controls.	
#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
Source Water Protection Branch				
1		The proposed site is not located in any type of vulnerable area for the protection of drinking water sources, and no changes from the ToR was reviewed in 2018.	No additional action required.	
#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
Environmental Permissions Branch, Senior Waste Engineer				

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
1	Volume I, Section 8.1.4.5, page 8-17.	The Draft EASR commits to a landfill gas collection efficiency of 60%; and MECP's current requirement for requirement is an efficiency of 85%.	Please work toward the MECP's current requirement for 85% for landfill gas collection efficiency.	
#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
Southwest Region Technical Support Section, Surface Water Specialist				
1	Draft EA	No further comments at this time.	No additional action recommended.	
Southwest Region Technical Support Section, Groundwater Specialist				
1	Vol. I, Section 7.2.2, pg 7-17	The subsection "Maximum Thickness of Waste" does not mention the potential for increased leachate mounding within the landfill footprint.	This section should be amended to note that a greater thickness of waste will also lead to greater leachate mounding within the landfill footprint. An increased leachate mound height will increase the downward hydraulic gradient, potentially increasing the rate of leachate migration through the surficial aquitard. An increased leachate mound height also increases the risk of leachate breakouts to ground surface along the side slopes of the landfill.	
2	Vol I. Section 7.2.2, pg 7-17	The subsection "Waste Footprint Configuration Relative to Groundwater Flow Direction" should also indicate that a smaller footprint would be preferred.	For clarity, this section should note that the key parameter is the length of the landfill footprint in the direction parallel to the	

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
			direction of groundwater flow. (i.e. a longer groundwater flow path under the landfill footprint will lead to greater peak concentrations in the leachate plume). All else being equal, a smaller landfill footprint should be preferred.	
3	Vol I, Table 7.2-11, pg 7-18	In the second row of Table 7.2-11 (Waste Footprint Configuration), Alternative 1 should be ranked as the most preferred option.	As per the previous comment, for the waste footprint configuration (2 nd row in the table), the option with a smaller total area should be preferred. The table should be edited to list Alternative 1 as the most preferred option. Since the other two options have a similar waste footprint area, Alternative 3 would be ranked above Alternative 2 because the long axis of the footprint is oriented perpendicular to the groundwater flow direction.	
4	Vol I, Section 8.1.2.1, pg. 8-6	The description of the proposed leachate collection system does not include a discussion of the proposed combined leachate/gas collectors to be installed on the existing surface of Phase 1.	This section should refer to the proposed mitigation measures detailed in Section 9.2.3 (pg 9.28)	
5	Vol IV, D.03, Attachment A (Existing Groundwater Conditions – Dillion Consulting	The stable isotope data presented on the figures do not appear consistent with the laboratory report provided in Appendix G. The data presented on the laboratory report does not indicate a consistent pattern of increasingly depleted $\delta^{18}\text{O}$ and $\delta^2\text{H}$ with depth.	The isotope data presented in the figures should be checked against the raw laboratory data and corrected if required. The interpretations and conclusions presented in Section 4.8 of the report should be updated if required.	

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
	Limited), Figures 6 & 7, pg 29)		A thorough QA/QC check should be made to confirm that all data presented in tables and figures is accurate.	
6	Vol IV, D.03, Attachement B (Groundwater Impact Assessment – Golder Associates Ltd., Section 3.0 pg 4 - 24	The POLLUTE model did not include a sensitivity analysis to evaluate the uncertainty in these modelling projections. Any uncertainty in these estimates may have significant implications for the selected mitigation measures given that the projected chloride concentrations were very close to the Reasonable Use criteria.	It is recommended that a sensitivity analysis be completed to evaluate the uncertainty in the modelling projections. Additional work may be required to refine key model input parameters before making a final decision on the design and implementation of additional mitigation measures.	
7	Vol I, Section 12.1.2, pg 12-3	The proposed groundwater monitoring program does not include monitoring wells installed in the upper weathered/fractured surficial till aquitard.	Section 12.2.1 of the report identifies horizontal migration of leachate or leachate impacted groundwater through the upper fractured clay till zone as a potential mechanism of off-site contamination; however, this unit is not currently monitored by the existing monitoring well network. Consideration should be given to installing additional monitoring wells within the shallow fractured till at key locations around the landfill perimeter.	

Ministry of the Environment, Conservation and Parks

Comment Response Table

Document Reviewed: Draft Environmental Assessment for the City of London W12A Landfill Expansion

Proponent: City of London

Date: June 10, 2021

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
MECP Environmental Assessment Program Support – Indigenous Advisor				
1	Vol I, Section 4.6.6, p. 4-10 and Vol V, Appendix H.01	It is not evident that all communities received letters or emails at the end (December) of 2018. Records for five communities only are included in Appendix H.01 of Vol V.	Please include all relevant records in the Record of Consultation. It is recommended that the name of the community not be redacted from these records.	
2	Vol I, Section 4.6.6, p. 4-10	It is not clear why Moravian of the Thames did not receive the April 23, 2019 email update.	Please indicate why Moravian of the Thames did not receive this email, and/or if the community received any follow-up/related correspondence.	
3	Vol I, Section 4.7.3, p. 4-22 and Vol V	Comment-response tables should include issues raised at all the meetings and workshops with Indigenous communities (e.g., archaeological monitors, replanting with native vegetation, fires, leachate treatment, landfill gas, surface water/Thames River, groundwater).	The summary of comments and responses in Section 4.7.3 should include all key issues raised by Indigenous	

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
			communities through all consultation activities conducted throughout the EA. Please be sure to include all comments received from Indigenous communities on the draft EASR in the record of consultation for the final EASR, and also include a summary of all key issues raised and responses to them in Section 4.7.3.	
4	Vol V, Appendix H.12; Overall	The summary report for workshop #2 does not include any comments, questions, etc. raised by community members during the workshop.	Please be sure to include all input (comments, questions and concerns) received from Indigenous communities in the record of consultation for the final EASR, and summarize it in the body of the EASR, including how key issues have been or will be addressed.	

Ministry of the Environment, Conservation and Parks

Comment Response Table

Document Reviewed: Draft Environmental Assessment for the City of London W12A Landfill Expansion

Proponent: City of London

Date: June 22, 2021

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
Species At Risk Branch, Management Biologist				
1	Volume IV, D.05 (Biology Existing Conditions and Impact Assessment Report)	<p>SARB understands that the following species at risk have been identified as present on the Study Lands (as identified in the report) or likely to be present:</p> <ul style="list-style-type: none">• SAR bats (endangered) – receive species and general habitat protection• Bank Swallow (threatened) – receives species and general habitat protection• Barn Swallow (threatened) – receives species and general habitat protection• Bobolink (threatened) – receives species and general habitat protection• Eastern Meadowlark (threatened) – receives species and general habitat protection <p>MECP understands that the proposed project involves vertical expansion of</p>	MECP understands there will be further consultation with Species at Risk Branch regarding impacts to SAR grassland birds and requirements under the Endangered Species Act, 2007.	

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
		the existing landfill and while this expansion may not impact potential SAR bat habitat, impacts to SAR grassland birds (Bobolink and Eastern Meadowlark) and their habitat are expected to occur.		
2	Volume IV, D.05, Sections 5.1 and 5.2 (Biology Existing Conditions and Impact Assessment Report)	Section 5.1 – Construction Phase and Section 5.2 – Operations Phase (Mitigation of Direct Impacts to Species at Risk and Wildlife) should include appropriate mitigation measures for Bank Swallow (e.g. grading stockpile faces to avoid nesting). The <i>Best Management Practices for the Protection, Creation and Maintenance of Bank Swallow Habitat in Ontario</i> (OMNRF 2017) outlines appropriate mitigation measures for this species and should be referenced in the report.	Please update.	

Abbott, Wesley

From: Brent Verscheure <verscheureb@thamesriver.on.ca>
Sent: Thursday, June 24, 2021 3:40 PM
To: Abbott, Wesley
Cc: Kittmer, Jane
Subject: [EXTERNAL] Re: Draft EASR for the Proposed W12A Landfill Expansion, London, Ontario - UTRCA Comments

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Good afternoon, Mr. Abbott,

Following a high level review of the draft EASR for the expansion of the W12A Landfill, UTRCA staff provide the following comments:

- UTRCA acknowledges that watercourse and flood plain alteration will result from the implementation of the preferred alternative to accommodate the necessary improvements and meet future landfill capacity requirements. Prior to any site alteration and construction, a complete UTRCA Section 28 permit application package will be required that will include the following:
 - Section 28 Permit Application - [application for consent.indd \(thamesriver.on.ca\)](#)
 - Section 28 Permit Fee - to be determined based on the detailed site plan/proposal - [Upper Thames River Conservation Authority Fees Policy](#)
 - Site plan and Project Drawings
 - Comprehensive compensation plan that provides an overall net environmental benefit as a result of the loss of any regulated watercourses/features. Compensation plan shall be based on the technical and ecological studies that identify and confirm the extent of the existing features and functions on the landscape and shall be consistent with the *draft* UTRCA Environmental and Ecological Offsetting Policies;
 - No negative impacts shall be incurred to the adjacent locally significant wetlands, supported by technical studies (EIS, water balance, hydroG)

Please continue to keep UTRCA engaged throughout the EA process.

Should you have any questions regarding the above, please do not hesitate to reach out.

Regards,



Brent Verscheure

Land Use Regulations Officer

1424 Clarke Rd, London, ON N5V 5B9

Tel: [519-451-2800](tel:519-451-2800) Ext. 318

Email: verscheureb@thamesriver.on.ca

Web: www.thamesriver.on.ca

Abbott, Wesley

From: David Pavletic <David.Pavletic@mlhu.on.ca>
Sent: Monday, June 28, 2021 10:32 AM
To: Abbott, Wesley
Cc: Kittmer, Jane
Subject: [EXTERNAL] RE: Draft EASR for the Proposed W12A Landfill Expansion, London, Ontario

Hi Wesley, I have not had an opportunity to review it in great detail and we have been sidetracked with a lot of COVID related work, I will try to get to this soon but in the interest of time, you may want to proceed as I don't want to hold up the process. My apologies. Dave

From: Abbott, Wesley <WAbbott@London.ca>
Sent: Monday, June 28, 2021 10:28 AM
To: David Pavletic <David.Pavletic@mlhu.on.ca>
Cc: Kittmer, Jane <jkittmer@London.ca>
Subject: RE: Draft EASR for the Proposed W12A Landfill Expansion, London, Ontario

David

I am the City's project manager for the above project.

I am following up on when we might expect your comments. We have received comments from all other key reviewers and need to move forward with finalizing the document. The Landfill's remaining capacity is limited given the expected time the MECP approvals will take

Let me know if you have any questions.

Thanks

Wesley Abbott
Cell 226-376-2311

From: David Pavletic <David.Pavletic@mlhu.on.ca>
Sent: Wednesday, June 2, 2021 12:57 PM
To: Kittmer, Jane <jkittmer@London.ca>
Cc: Stanford, Jay <JSTANFOR@London.ca>; Stephen Turner <Stephen.Turner@mlhu.on.ca>; Stephanie Egelton <Stephanie.Egelton@mlhu.on.ca>; Abbott, Wesley <WAbbott@London.ca>
Subject: [EXTERNAL] FW: Draft EASR for the Proposed W12A Landfill Expansion, London, Ontario

Hi Jane,

Could you please pass along the draft EA report - I know it is quite extensive. I can reach out to Jay if I have questions, as I would like to review for comments. We've been quite busy with COVID related matters and I have not looked into this in any great detail as of yet.

Dave

From: Kittmer, Jane <jkittmer@London.ca>
Sent: Wednesday, June 2, 2021 11:38 AM
To: Stephanie Egelton <Stephanie.Egelton@mlhu.on.ca>
Cc: Stanford, Jay <JSTANFOR@London.ca>; Abbott, Wesley <WAbbott@London.ca>
Subject: Draft EASR for the Proposed W12A Landfill Expansion, London, Ontario

Good morning,

In April 2021, we sent you the Draft Environmental Assessment Study Report for the City of London's Environmental Assessment for a proposed landfill expansion. The City's existing landfill (W12A) is expected to reach capacity in 2024.

We are seeking feedback prior to formally submitting the documents to the Ministry of the Environment, Conservation and Parks. The comment period formally ended on May 21, 2021. Could you please respond to this email to confirm that you do not intend to provide comments?

If you would like to review the documents, please contact me and I will resend the links to the Draft Environmental Assessment Study Report.

If you have any questions, please do not hesitate to contact Jay Stanford (jstanfor@london.ca, 519.661.CITY (2489) ext. 5411) or Wesley Abbott, Project Manager (wabbott@london.ca; 226.376.2311). For further information, please visit our website at getinvolved.London.ca/WhyWasteDisposal.

Regards,



Jane Kittmer
Technician, Waste Management
Climate Change, Environment & Waste Management
Environment & Infrastructure Service Area
City of London

300 Dufferin Ave, P.O. Box 5035, London ON N6A 4L9
P: 519.661.CITY(2489) x 2334 | Fax: 519.661.2354
jkittmer@london.ca | www.london.ca

As part of our ongoing efforts to stop the spread of COVID-19, the City of London has made changes to many City services. Visit our [website for the latest information about City services and COVID-19](#).

===== Middlesex-London Health Unit E-Mail Disclaimer =====

Private and confidential, intended only for named recipient. If otherwise



July 9, 2021

VIA: EMAIL

Wesley Abbott, Project Manager
City of London
300 Dufferin Avenue, PO Box 5035
London, Ontario, N6A 4L9

Dear Mr. Abbott:

RE: Draft Environmental Assessment for the Proposed W12A Landfill Expansion

Staff of Kettle Creek Conservation Authority (KCCA) received your letter dated April 21, 2021 and email dated May 27, 2021 regarding the draft Environmental Assessment for the Proposed W12A Landfill expansion. KCCA staff have had the chance to review the draft documents and offer the following comments and recommendations that might be considered moving forward:

1. Questions and comments raised during the review of the Draft Terms of Reference (ToR) have been sufficiently addressed in the Final ToR and Draft Environmental Assessment Study Report (EASR) and have been provided in a summary table that will be included in the final EASR Volume V Consultation Log.
2. While the proposed W12A Landfill expansion area does not directly overlap with the Regulation Limits for the KCCA, it does immediately abut the limits. Therefore, it would be prudent to continue to engage KCCA in discussions to determine the potential requirements for a Section 28 Permit of the *Conservation Authorities Act* prior to undertaking such works. KCCA must be satisfied that any works proposed within its regulatory jurisdiction will not have an effect upon flooding, erosion, dynamic beach, pollution or the conservation of land. Further information regarding KCCA's permitting procedures and matters relating to the regulation can be obtained by contacting Joe Gordon, KCCA's Director of Operations at 519-631-1270 ext.226 or by email at joe@kettlecreekconservation.on.ca.
3. Volume 4 page 474 indicates that under existing conditions, only SWM pond #1 was designed to provide Enhanced 80% long-term suspended solids removal, while SWM ponds 2/3, 4 and 5 were all designed with Normal 70% long-term suspended solids removal. Page 477 suggests that modifications to the SWM ponds will meet design criteria where possible, including providing Enhanced Level Protection (80% TSS removal). KCCA would support these modifications to provide Enhanced TSS removal, however, SWM pond 1 does not meet the minimum criteria for buffer, SWM pond 2/3 does not meet the minimum criteria for active storage depth, side slopes and buffer, SWM pond 4 does not meet minimum criteria for forebay, length-to-width ratio, side slopes and buffer, and SWM pond 5 does not meet the minimum criteria for side slopes and buffer. As a result, it must be clearly demonstrated how this 80% TSS removal will be achieved without adhering to the wet pond design requirements in the guidelines (such as implementing a form of pre-treatment (e.g. enhanced grassed swales) or end-of-pipe treatment (e.g. an OGS) and implementing an enhanced monitoring program to confirm the 80% TSS removal).



4. Pre-existing or current surface water flows through the SWM ponds were directed to Dodd Creek. However, due to the proposed vertical expansion of the landfill, there will be a 0.20% decrease in drainage area that flows to Dodd Creek and a 0.12% increase in drainage area that flows to Dingman Creek (Volume 4, page 495). This alteration in drainage area, and as a result potential change in the rate of discharge into the Dodd Creek subwatershed is *“expected to have a negligible effect on the runoff and drainage within areas of the subwatershed downstream of the W12A Landfill site.”* However, it is recommended that local conditions be monitored to confirm the “negligible effect” to mitigate any negative effects downstream in an already negatively impacted water system. While the loss of 0.20% drainage area and subsequent surface water flow may be considered negligible under normal circumstances, the negative effects of climate change are being experienced throughout the region as either long periods of low or no flow conditions or high flows brought on by intense and severe storm systems. To this end, alterations to the SWM pond system the rate of discharge into Dodd Creek should be made only if the effects of climate change have been taken into consideration and if monitoring is conducted on a local, watershed level. KCCA staff is willing to sit down with the MECP and City staff to further discuss this recommendation if needed
5. The City should investigate potentially implementing a long term water quality monitoring program for the three surface water features that convey runoff from the W12A Landfill property to downstream receiving water systems within the Dodd Creek subwatershed. This monitoring program could include surface water quality and benthic community data collected during and post-closure of the landfill under the technical review and direction of the MECP.

Please note that this letter does not release the proponent of the responsibilities for obtaining any other permits that may be required under federal, provincial or municipal legislation.

If you have any questions regarding the above, or should there be any changes to the proposed work, please contact Jennifer Dow at (519) 631-1270 x228, by fax at (519) 631-5026, or by email at jennifer@kettlecreekconservation.on.ca.

Please continue to include KCCA in the circulation of documents and updates as they pertain to the EA process. KCCA reserves the right to provide comments/changes when the final EA has been submitted for review. Thank you for the opportunity to participate in the EA process.

Yours truly,

Jennifer Dow
Water Conservation Supervisor

Ministry of the Environment, Conservation and Parks

Comment Response Table

Document Reviewed: Draft Environmental Assessment for the City of London W12A Landfill Expansion

Proponent: City of London

Date: July 30, 2021

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
Southwest Region, Environmental Officer				
1	Vol. I - Section 12.1.1.1 Air	Historically we have received odour complaints related to W12A operations. Odour issues should be considered in the approval process (requirements for cover, smaller working faces and gas and leachate collection systems).	Requirements to regularly assess for odour off-site and procedures for responding to odour complaints should also be considered.	
2	Vol. I - Section 12.1.1.1 Air	With increased volumes of waste coming to the site, traffic into and out of the landfill will also increase. We often hear complaints from residents living near landfills about mud and dust being tracked out onto nearby roads.	Requirements to assess and address off-site dust and mud should be considered.	
3	Vol. I - Section 8.0	The proposed landfill height means the landfill's sides will be significantly sloped.	Regular assessment and maintenance should be required to ensure side slopes are in good order to minimize the release of gases, and leachate to surface waters.	

Ministry of the Environment, Conservation and Parks

Proposal: DRAFT EASR for the W12A Landfill

Proponent: City of London

Comment #	Reference to draft EA Provide the specific volume(s), section(s) and page number(s)	Comments & Rationale Please provide an explanation of your comments. Describe the rationale for why issue of concern is important for EA purposes. Identify if your issue of concern is related to the EA or related to regulatory instruments, or both.	Proposed Action/Solution Please describe in detail what action you recommended to address your comments/concerns. Actions may include but not limited to: amendments to the document, information requests, proposed commitments, future permits and approvals etc.)
MECP Department – Resource Recovery Policy Branch, Senior Policy Advisor			
1	Volume III – Supporting Studies, , APPENDIX C, 2019 Updated Residual Waste Projections and Landfill Capacity Assessment, Section 2.3 Waste Diversion	<p>There is no reference to the following MECP waste policy elements:</p> <ul style="list-style-type: none"> - <i>The Food and Organic Waste Policy Statement</i> (MECP, April 2018), - <i>A Made-in-Ontario Environment Plan</i> (MECP, November 2018) or - <i>The Discussion Paper on Reducing Waste and Litter in Our Communities</i> (MECP, March 2019) 	<p>Include consideration of food and organic diversion policies in the F&OW Policy Statement, including relevant policies in section 4 that require the City of London to put in place a collection system and meet a waste reduction and resource recovery target of 70% by 2025, and Policy 6.8 that directs proponents of new or expanded waste management systems for disposal to consider recovery opportunities for organics. These policies, along with others that may be relevant, should be considered in the forecast of residual waste needing disposal, if/as they apply to both the existing and proposed expanded service areas.</p>

Ministry of the Environment, Conservation and Parks

Proposal: DRAFT EASR for the W12A Landfill

Proponent: City of London

Comment #	Reference to draft EA Provide the specific volume(s), section(s) and page number(s)	Comments & Rationale Please provide an explanation of your comments. Describe the rationale for why issue of concern is important for EA purposes. Identify if your issue of concern is related to the EA or related to regulatory instruments, or both.	Proposed Action/Solution Please describe in detail what action you recommended to address your comments/concerns. Actions may include but not limited to amendments to the document, information requests, proposed commitments, future permits and approvals etc.)
Resource Recovery Policy Branch – Senior Policy Advisor			
1	Volume II, Approved Amended Terms of Reference, APPENDIX A, February 2019, Section 3.0 Rationale and Description of the Undertaking – 3.2 Guiding Principles, pp. 20-21	<p>Subsection 6.1 (1) of the <i>Environmental Assessment Act (EAA)</i> requires a proponent to prepare an environmental assessment for an undertaking in accordance with the approved terms of reference.</p> <p>The Approved Amended Terms of Reference for this draft EA provides direction in the form of the following guiding principles (which were approved by London City Council) and the statement below:</p> <p>Table 3.2-1: Guiding Principles includes the following 2 (of 11) principles (p. 20):</p> <ul style="list-style-type: none"> - <i>Implement more Resource Recovery Solutions</i> – Residual waste needs to be minimized and any waste that is generated needs to be treated as a resource, when practical. ... 	<p>It is strongly recommended that the proponent demonstrates, through the inclusion of data and analysis in their Environmental Assessment application, that their description of the proposed undertaking is based on an expectation that the proponent will comply with Ontario's Food and Organic Waste Policy Statement.</p> <p>This should include data and analysis demonstrating anticipated consistency with relevant policies in the Policy Statement:</p> <ul style="list-style-type: none"> - Section 2, which sets out a target for waste reduction and resource recovery of food and organic waste to be met by the City of London.

<p>Comment #</p>	<p>Reference to draft EA</p> <p>Provide the specific volume(s), section(s) and page number(s)</p>	<p>Comments & Rationale</p> <p>Please provide an explanation of your comments. Describe the rationale for why issue of concern is important for EA purposes. Identify if your issue of concern is related to the EA or related to regulatory instruments, or both.</p>	<p>Proposed Action/Solution</p> <p>Please describe in detail what action you recommended to address your comments/concerns. Actions may include but not limited to amendments to the document, information requests, proposed commitments, future permits and approvals etc.)</p>
	<p>Volume III – Supporting Studies, , APPENDIX C, 2019 Updated Residual Waste Projections and Landfill Capacity Assessment, Section 2.3 Waste Diversion</p>	<ul style="list-style-type: none"> - <i>Make Waste Reduction the First Priority</i> – The City’s first goal is to reduce the amount of material being generated by residents and businesses that requires management (e.g., encourage food waste avoidance, composting at home, local policies to encourage waste reduction, supporting producer responsibility and other provincial and federal programs.) <p><i>“In addition to these Guiding Principles, provincial legislation related to waste management will be integral to this EA. This includes the Waste-Free Ontario Act along with the province’s new Strategy for a Waste-Free Ontario: Building the Circular Economy and the Food and Organic Waste Policy Statement.” (p. 21)</i></p> <p>Despite the above reference in the TOR, the draft EASR Volume III does not have reference to the following MECP waste policy elements:</p> <ul style="list-style-type: none"> - <i>The Food and Organic Waste Policy Statement</i> (MECP, April 2018), - <i>A Made-in-Ontario Environment Plan</i> (MECP, November 2018) or - <i>The Discussion Paper on Reducing Waste</i> 	<ul style="list-style-type: none"> - Section 4, which requires the City of London to put in place a collection system and meet a waste reduction and resource recovery target of 70% by 2025. - Policy 6.8, which directs proponents of new or expanded waste management systems for disposal to consider recovery opportunities for organics. <p>Consistency with these policies, along with others that may be relevant, should be demonstrated in the forecast of residual waste needing disposal, both with respect to the existing and the proposed expanded service areas.</p> <p>Information relating to how resource recovery and waste reduction under applicable Ontario policy has been considered in the application is relevant to the Ministry’s review of the submission and may be information the Minister would require in order to make a decision on the application. The additional information provided would also support the</p>

Comment #	Reference to draft EA Provide the specific volume(s), section(s) and page number(s)	Comments & Rationale Please provide an explanation of your comments. Describe the rationale for why issue of concern is important for EA purposes. Identify if your issue of concern is related to the EA or related to regulatory instruments, or both.	Proposed Action/Solution Please describe in detail what action you recommended to address your comments/concerns. Actions may include but not limited to amendments to the document, information requests, proposed commitments, future permits and approvals etc.)
		<p><i>and Litter in Our Communities</i> (MECP, March 2019)</p> <p>Nor is there data or analysis indicating how the waste reduction and resource recovery targets under policy 2.1 of Ontario's Food and Organic Waste Policy Statement are considered when determining the projection of residual waste needing disposal for the undertaking.</p>	<p>description and statement of the rationale for a description of the undertaking.</p>

Please return this table in both PDF and Word formats.

Public

EMAIL paula.lombardi@siskinds.com

FILE NO. 858158

Delivered By Email

May 21, 2021

Jay Stanford, M.A., M.P.A
Director, Environment, Fleet and Solid Waste
City of London
Solid Waste Management Division
City Hall, 8th Floor
300 Dufferin Avenue
London, ON N6B 1Z2
Email: jstanfor@london.ca

Wesley Abbott, P.Eng
Project Manager
City of London
Solid Waste Management Division
City Hall, 8th Floor
300 Dufferin Street
London, ON N6B 1Z2
Email: wabbott@london.ca

**Re: Notice of Draft Environmental Assessment Study Report
W12A Landfill Expansion, City of London**

We act on behalf of Farhi Holdings Corporation (the “**Client**” or “**FHC**”) and have been retained to review and comment on the Draft W12A Landfill Environmental Assessment Study Report prepared by Golder and the City of London (“**W12A Landfill Expansion Environmental Assessment**”). Our Client received the Notification to Tenants and Property Owners for properties situated within two kilometres of the Waste Management and Resource Recovery Area, Draft Environmental Assessment Study Report, City of London.

Our Client owns a significant parcel of land located at 4545 Scotland Drive that is being proposed for development of commercial and other travel-oriented uses. Our Client’s property is situated in close proximity to the City’s W12A Landfill and its proposed expansion. The FHC property is located at the southeast corner of the Wonderland Road / Scotland Drive intersection in the City of London and is approximately 21.6 hectares in area. The lands in the area situated to the north, east and south are predominately agriculture and include some

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institutional activities and rural residences and in proximity to the Wonderland Road South gateway corridor.

Our Client is concerned that the proposed expansion of the City's W12A Landfill will result in increased risk of particulate matter, blowing garbage and odour associated with the operation of the City's W12 Landfill and result in detrimental impacts on the FHC property.

The W12A Landfill currently utilizes a 107 hectare fill area and is situated on property that is approximately 142 hectares in size. The average height of the landfill above ground is approximately 9 to 12 metres having a peak elevation of 17 metres above grade. The W12A Landfill Expansion Environmental Assessment proposes to significantly increase the height of the landfill to approximately 43 metres above grade. The on-site buffer land is increased to Scotland Drive to the north and situated in immediate proximity of our Client's property.

Our Client has significant concerns relating to litter, odour and particulate matter and its impacts on its Scotland Drive property. The W12A Landfill Expansion Environmental Assessment appears to fail to incorporate appropriate mitigation measures to stop the particulate matter and garbage from impacting the FHC property significantly limiting the opportunities for our Client's property that is uniquely situated at the Highway 401 / Highway 402 Corridor and Wonderland Road South gateway area.

While the potential for off-site dust in certain conditions is recognized within the W12A Landfill Expansion Environmental Assessment it fails to address or acknowledge the social impacts of the off-site dust on our Client's property. In addition to the social impacts from the particulate matter. The FHC property is at risk of refuse, debris and garbage blowing from the City's W12 Landfill in addition to impacts from the trucks entering and exiting the W12A Landfill on a regular basis. These indirect effects of the City's W12A Landfill Expansion is likely to result in significant impacts on our Client's property.

There are significant social impacts as a result of the material, debris and garbage impacting the FHC property from the City's W12A Landfill and its associated truck traffic. The W12A Landfill Expansion Environmental Assessment indicates that the nuisance effects of noise, odour and/or dust are "fairly commonplace" and that nuisance effects are expected to be managed and mitigated appropriately so as not to cause increased issues for the area. The mitigation measures proposed include updating the plans and best management practices associated with the operation of the City's W12A Landfill without providing any clear direction as to any measures that will be implemented to effectively mitigate the potential impacts.

The W12A Landfill Expansion Environmental Assessment report confirms the most likely potential impacts from its operations on the surrounding area in the form of nuisance effects such as litter, noise, odour or dust which can affect the use and enjoyment of private properties and/or outdoor spaces.

While the proposed W12A Landfill expansion is *“not expected to result in any out-migration of existing residents who are accustomed to living in an area where agricultural and industrial noise is common place.”*¹ Such an approach fails to recognize any development in the area including but not limited to the FHC property.

The term “precautionary principle” at its core, calls for preventative, anticipatory measures to be taken when an activity raises threats of harm including social impacts. The social impacts of the litter and dust (particulate matter), noise and odour on the FHC property needs to be taken into consideration when determining appropriate mitigation measures including compensation for these social impacts.

Our Client is willing to meet with the City of London to discuss a resolution to these social impacts.

By copy of this letter we request notification of any public meetings, town hall meetings, council meetings special or otherwise, statutory or otherwise, as they relate to the proposed expansion of the City’s W12A Landfill.

Should you have any questions or concerns, please do not hesitate to contact us.

Yours very truly,

Siskinds LLP



e-signature

Per:

Paula Lombardi
Partner

¹ Volume 4, Appendix D. 10, page 13, Golder Draft Socio-Economic Report

From: JJCFERGUSON <jjjcferguson@fergusonbros.com>
Sent: Wednesday, July 28, 2021 11:21 AM
To: Stanford, Jay <JSTANFOR@London.ca>
Subject: RE: [EXTERNAL] Meeting

Hello Jay,

How are things with you.

We have heard the dump is currently working on expansion plans to go nine stories higher than it currently is today.

We would be **opposed** to this expansion; before this dump is made bigger – the problem of odor and debris in the surrounding area needs to be solved.

The land use designation of surrounding area needs to be addressed, including surrounding areas from Highway 4 on the 401 corridor to Wellington Road.

Thank you
Jeff and John Ferguson

Please note our email address has changed to jjjcferguson@fergusonbros.com. Please change your contact information accordingly.

Thank you,
Joanne Ferguson

43850 Ferguson Line,
St. Thomas, ON N5P 3T1
CANADA
T: 519-631-3463
T: 519-631-3592
F: 519-631-8843

From: Stanford, Jay <JSTANFOR@London.ca>
Sent: Wednesday, March 24, 2021 3:47 PM
To: JJCFERGUSON <jjjcferguson@fergusonbros.com>
Subject: RE: [EXTERNAL] Meeting

Greetings

Thanks for your email. I do hope you are staying and as well as possible in these difficult times.

All details associated with the landfill expansion are posted here:
<https://getinvolved.london.ca/whywastedisposal>

This report goes to Civic Works Committee on March 30, 2021. It contains the most up-to-date details.
<https://pub-london.escribemeetings.com/filestream.ashx?DocumentId=79214>

Land around the landfill is generally classified as agriculture. Details can be found on this Interactive map.
<https://london.maps.arcgis.com/apps/webappviewer/index.html?id=20327d3bcfb34bb488a7c3f74c05d2d3>

<https://london.ca/business-development/zoning>

Inquiries about specific parcels are best to go to
CONTACT INFORMATION
Zoning

zoning@london.ca

PHONE

519-930-3510

. to ensure that you are provided specific detail about parcels. Some sites may have different designations that I may not be aware of

Regards. . . .



Jay Stanford, M.A., M.P.A. (he/him)

Director, Environment, Fleet & Solid Waste

Environmental & Engineering Services

City of London

300 Dufferin Ave, P.O. Box 5035 London, Ontario N6A 4L9

P: 519.661.CITY (2489) x 5411 | Cell: 519.851.5423

jstanfor@london.ca | www.london.ca

From: JJCFERGUSON <jjcferguson@fergusonbros.com>

Sent: Wednesday, March 24, 2021 9:32 AM

To: Stanford, Jay <JSTANFOR@London.ca>

Subject: FW: [EXTERNAL] Meeting

Hello Jay,

Hope all is well with you, has been a while since we have spoken and COVID has certainly thrown a wrench into our lives.

Last year we had sent the below emails and just wondered if we could get an update.

- Dump expansion plan
- Land use designation for surrounding lands

Your knowledge on the above would be great.

Thanks

John and Jeff Ferguson

Please note our email address has changed to jjcferguson@fergusonbros.com. Please change your contact information accordingly.

Kindly,

Joanne Ferguson

43850 Ferguson Line,
St. Thomas, ON N5P 3T1
CANADA
T: 519-631-3463

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F: 519-631-8843

From: jjjcferguson@execulink.com <jjjcferguson@execulink.com>
Sent: Thursday, February 27, 2020 9:13 AM
To: Stanford, Jay <JSTANFOR@London.ca>
Subject: RE: [EXTERNAL] Meeting

Hello Jay,

Thank you for the email today.

One thing that we have discussed with you in the past is land usage designation around the dump and south London. Our request today is that the City of London promote and support the lands from Wellington to White Oaks and Manning to Glanworth for the Job Site Challenge Request for Submission. On behalf of the Ministry of Economic Development , Job Creation and Trade with the Ontario Government.

This matter is time sensitive by the end of March – this is of a timely manner.

Await your response.

Will send you meeting dates in the next few days.

Joanne Ferguson



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T: 519-631-3463
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F: 519-631-8843

From: Stanford, Jay <JSTANFOR@London.ca>
Sent: Thursday, February 27, 2020 7:37 AM
To: jjjcferguson@execulink.com
Cc: Losee, Michael <mlosee@London.ca>
Subject: RE: [EXTERNAL] Meeting

Good Morning

Thanks for the email. Yes, we had an Open House last night and another tonight.

The early part of March is very full of activities but later in March is open. Can you suggest a few meeting dates after March 16 and the items you wish to discuss.

We hope all is well on your end. . . .cheers. . .



Jay Stanford, M.A., M.P.A.

Director, Environment, Fleet & Solid Waste
Environmental & Engineering Services
City of London

300 Dufferin Ave, P.O. Box 5035 London, Ontario N6A 4L9

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jstanfor@london.ca | www.london.ca

From: jjjcferguson@execulink.com [<mailto:jjjcferguson@execulink.com>]

Sent: Tuesday, February 18, 2020 4:21 PM

To: Stanford, Jay <JSTANFOR@London.ca>; Abbott, Wesley <WAbbott@London.ca>

Subject: [EXTERNAL] Meeting

Hello Jay and Wes,

Long time since we have gotten together.

We see you are still working on expansion plans for the City Dump.

Wondering if we can get together sometime in the next few weeks, let us know your schedule availability.

Thanks

Jeff and John

Joanne Ferguson



43850 Ferguson Line,
St. Thomas, ON N5P 3T1
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T: 519-631-3592

F: 519-631-8843

Edmond, Trish

Subject: FW: Resident at 3702 Westminster Drive

From: Stanford, Jay <JSTANFOR@London.ca>

Sent: Sunday, May 9, 2021 7:46 PM

To: Pelosa, Elizabeth <epelosa@london.ca>

Cc: mattsmcdougall@gmail.com; Losee, Michael <mlosee@London.ca>; Abbott, Wesley <WAbbott@London.ca>

Subject: Resident at 3702 Westminster Drive

Hi Elizabeth. . . just a quick update.

On Thursday May 6, Mike, Wesley and me spoke with Matt McDougall (3703 Westminster Drive – see map below) regarding the EA for the expansion of the W12A Landfill. Matt shared his concerns primarily dealing with the height of proposed landfill and what he may be seeing from his property. These concerns were raised by Matt previously and have been noted in our public reports.

We have agreed to a visit to his property in late May for further discussion and look at both on-property solutions for the expansion (e.g., how landfill operations can be undertaken to reduce visual impact) and off-property solutions (e.g., tree planting).

The McDougall's have been in the area for decades. Matt has provided many helpful comments to us about the area and also follows the work of the W12A PLC closely.

Regards . . . Jay



Jay Stanford, M.A., M.P.A. (he/him)

Director, Climate Change, Environment & Waste Management
Environment & Infrastructure Service Area
City of London

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jstanfor@london.ca | www.london.ca

Indigenous



CHIPPEWAS OF THE THAMES FIRST NATION

July 2, 2021

VIA EMAIL

Wesley Abbott
Project Manager
City of London
300 Dufferin Ave, PO Box 5035
London, ON N6A 4L9

RE: Draft EASR for the Proposed W12A Landfill Expansion, London, Ontario

Dear Wesley,

The proposed project is located within the McKee Treaty Area (1790) to which Chippewas of the Thames First Nation (COTTfN) is a signatory, it is also located within the Big Bear Creek Additions to Reserve (ATR) land selection area, as well as COTTfN's Traditional Territory.

Thank you for taking the time to meet with representatives of Chippewas of the Thames First Nation on June 28, 2021. As discussed, there were a number of concerns that we would like the City of London to address based on the review of the Draft Environmental Assessment Study Report for the proposed W12A Landfill Expansion Project. In terms of specific comments, there are many information gaps and potential opportunities for more information to be provided. Please find the comments attached to this letter.

Lastly, for future notifications and others that may arise, we request that an electronic copy of each Notice or Report be sent to COTTfN via e-mail at consultation@cottfn.com. We also ask that if there are any changes to this Study that you keep us informed. COTTfN also requests that if there are any archaeology assessments to be conducted in relation to this study that we be notified with the invitation to actively participate by sending a Archaeology Field Liaison on behalf of this First Nation.



CHIPPEWAS OF THE THAMES FIRST NATION

We look forward to continuing this open line of communication, we are more than happy to schedule a time to discuss our comments in more detail but will be satisfied with a written response. To implement meaningful consultation, COTTfN has developed its own protocol — a document and a process that will guide positive working relationships.

As per Appendix 'D' of the Wiindmaagewin, please find attached invoice 0132. Please do not hesitate to contact me if you need further clarification of this letter.

Sincerely,

A handwritten signature in black ink, appearing to read "Fallon Burch".

Fallon Burch
Consultation Coordinator
Chippewas of the Thames First Nation
(519) 289-5555 Ext. 251
consultation@cottfn.com

c: Jane Kittmer, Technician, Waste Management, City of London
Jay Stanford, Director, Environment, Fleet and Solid Waste, City of London



CHIPPEWAS OF THE THAMES FIRST NATION

Environmental Assessment of the Proposed W12A Landfill Expansion City of London / Golder June 2021

General Comments

Consultation - Accessibility & Accommodation Expectations

At 496 pages, with obfuscating references throughout, Volume 1 (of 5) of the draft Environmental Assessment of the Proposed W12A Landfill Expansion is difficult to read, understand and/or interpret for an average or advanced reader.

Given recognition that Ministerial reporting requirements necessitate full disclosure of the draft Environmental Assessment Scoping Report document(s), the provision of a second, more succinct and concise revised summary version of the draft EASR, based on a city response to the comments provided herein, is necessary for continued public review and affected community consultation.

A well-considered, meaningful written response incorporating consultation comments and feedback, from the city and its consultant, would provide enhanced and continued opportunities for collaborators and partners to provide review comments on the city's efforts to incorporate meaningful feedback on the proposed landfill expansion, for mutual co-benefits and capacity-building efforts to protect the environment for current and future generations.

As currently presented, the draft EASR information provided does not allow for meaningful evaluation by average or advanced readers without great effort, and thus detracts from transparent, accountable City waste management policy and planning efforts related to environmental management, which in turn reflects poorly on the city's efforts to genuinely engage collaborators, partners and stakeholders meaningfully in the document review process, for the expressed purpose of improving the draft EASR and the planned sustainability of the expanded landfill and its development outcomes.

Furthermore, under the consultation directives provided to proponents in Chippewas of the Thames First Nations (COTTfN) Duty to Consult protocols ([Wiindmaagewin-CONSULTATION-PROTOCOL-website.pdf \(cottfn.com\)](#)), the draft EASR does not adhere to COTTfN Duty to Consult codes and standards, under Traditional Law and in the spirit of reconciliation.

Thank you for the opportunity to provide comments on the draft EASR and thank you in advance for your thoughtful review, your attention in responding to these comments, and your genuine efforts to address the substantial issues raised in the subsequent comments in a second revised draft of the EASR, with an accompanying summary response indicating where changes have been made to address the comments and concerns contained herein.



CHIPPEWAS OF THE THAMES FIRST NATION

Key Areas of Concern

As directly communicated on June 28 to the City of London consultation consultant, the key areas of concern related to the proposed draft EASR for the W12A Landfill expansion include, but are not limited to, the following:

- Potent, climate changing greenhouse gases produced as a result of anerobic decomposition of food waste and organics, and the directly related organic waste management planning and policy practices (not) implemented in the City of London, particularly related to the implementation and targeted levels of waste diversion achievable through a municipal Green Bin composting program in the City of London, on a meaningfully aggressive timeline to reduce the amount of waste disposed of in the current landfill *and* to contribute to the reduction in the level of production of methane and carbon dioxide gases resultant in future landfill expansion
- Regional waste management planning goals and objectives and a lack of clarity on city processes for municipal waste management prioritization practices for the use of expanded landfill to accommodate both London, and regional, waste disposal in the coming decades, particularly given anticipated increases in city and regional population levels;
- The veracity and analysis given to climate change impacts, modelling and projections related to extreme weather probabilities, and related stormwater water conveyance and management practices, with potential cumulative and negative downstream impacts on COTTfN resultant from the situational bypass discharge of untreated effluent into the Thames River as a result of increased quantities of wastewater, including landfill stormwater, being treated at Greenway in relation to more extreme, severe and frequent weather events such as increased levels of precipitation and flooding related to climate change
- A lack of expressed internal City of London policy and planning alignment of the proposed W12A Landfill expansion with current and future city policies and plans such as the London Plan, the Community Energy Action Plan and the Climate Change Emergency Action Plan – specifically in relation to providing greater planning and policy clarity surrounding mitigation goals and targets for GHG reductions and adaptive management of climate change impacts in the proposed landfill expansion as a part of internal policy and planning alignment practices within the City of London on matters of municipal waste management and climate change adaptation and mitigation
- External City of London policy and planning alignment with globally recognized science-based targets and Federal goals and objectives related to achieving net-zero emissions by 2050, in accordance with the goals and objectives of the Paris Agreement to prevent global climate change increase from rising above +1.5-2 degrees of global average temperatures by 2050, in accordance with Climate Change Emergency declarations in the City of London and the country of Canada and globally, that recognize the potential for catastrophic interference with the global climate system resultant from negligent and poor GHG mitigation planning and policy efforts in 2020-2030 in high-per capita emitting countries like Canada, particularly related to the continued and increased release of potent GHGs like methane (CH₄) and long-lived GHGs like carbon dioxide (CO₂) from landfills, and landfill flaring practices, in comparison to alternatives such as the capture/reuse of landfill gas
- Lack of specific planning and policy goals and objectives related to the capture and reuse of landfill gas as a co-beneficial, potential source of renewable natural gas on City and regional levels, including a need for providing greater considerations of potential co-benefits related to regional collaborations and community benefit agreements for the affected treaty-rights of First Nations communities located in proximity to the landfill(s) in the area, including potential opportunities for clarifying regional Landfill Gas planning with the City of Toronto's Greenlane site and the City of London's proposed W12A expansion, as a part of regional energy planning for GHG mitigation from landfills



CHIPPEWAS OF THE THAMES FIRST NATION

- Unclear or inaccurate population growth projections related to the city and region, potentially under-estimating the level of waste generated locally and regionally and sought to be stored and disposed of in the proposed landfill expansion
- Unclear or non-existent information related to consultation timelines and engagement activities related to the Duty to Consult with affected First Nations on matters related to potential Archaeological sites; and, unclear documentation of efforts to clearly engage BIPOC communities on affected cultural sites, notably including the Islamic Cemetery directly impacted by the landfill expansion

Specific Comments

Vol. 1 ES-2

Paragraph 1

RE: Resource Recovery Strategy / Residual Waste Disposal Strategy does not explicitly mention municipal organics composting in CoL as a planning objective to reduce organic waste in landfill operations and expansion plans.

Which strategy does municipal composting explicitly fall under in CoL waste management planning and what are the planned goals / timelines for implementation of composting efforts to reduce landfill in London?

Paragraph 5

RE: Plans to offer waste management services to adjacent municipalities should be considered in the prioritized context of CoL meeting its waste reduction / diversion goals before allowances for increased disposal of waste from regional municipalities

What planning / policy provisions will be passed to ensure CoL does not capitalize on waste service provision to other municipalities without first meeting its waste reduction / diversion goals and objectives?

Vol 1 ES-7 /8

RE: Alternative 1 (vertical expansion) has been identified as the preferred option for landfill expansion, citing least amount of impacts and costs as key factors for preference of this option.

What risk and vulnerability assessment and impact analyses were conducted to support this alternative as the preferred option, in the context of increasing incidence of extreme weather due to climate change and/or impacts on slope gradient stability associated with the vertical expansion of the landfill over the next 3-4 decades?

Vol 1 ES-11

RE: LFG management proposes the flaring of methane gas.

What are the anticipated impacts of flaring on CoL's GHG reduction goals and objectives associated with the flaring of methane? What alternatives are being considered, if any, for the collection and utilization of



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LFG as an alternative fuel source for CoL energy planning and needs, in the context of municipal / federal net-zero goals and climate emergency plans for 2050?

Vol 1 ES-12

The air quality analysis methodologies outlined do not include discussion of methane emissions (CH4).

Vol 1 ES-14

No discussion of climate change models are included in the slope stability methodologies outlined for surface water management and planning / engineering in landfill expansion.

Vol 1 ES-20

What, if any, consideration was given to the potential socio-economic and employment impact associated with increased capture of LFG and development of infrastructure & economic developments to support the utilization of local LFG in CoL and/or adjacent communities as a source of local, transitional NG for meeting climate change goals and targets, on aggressive 2050 net-zero timelines, and, the high capital costs of landfill expansion and projected increase commodity price in imported, fracked NG as a result of carbon taxation and environmental impact concerns?

Vol 1 ES-24

Management of LFG: Please provide the estimated GHG impacts of LFG flaring associated with landfill expansion, in comparison to a business case for LFG capture and reuse in CoL and adjacent energy systems for NG.

Geotechnical Considerations: Please provide demonstration of the anticipated impacts of more extreme weather events (e.g. heavy precipitation) on slope stability with the associate slope stability associated with vertical expansion.

Climate Change Considerations (Adaptation): Climate change impacts are cumulative and anticipated to occur within the operation of the expanded landfill, including more extreme weather events and increased likelihood of flooding and precipitation impacts on slope stability and SWM. No reference or validity is provided in sentence one to substantiate the assertion that landfill expansion will not be significantly affected by climate impacts. No background studies or reference materials are provided.

What is the source that recommended the use of 1:250 return periods for SWM guidelines?

No reference to slope stability under climate impacts and scenarios are provided. No modelling or risk/vulnerability studies are provided. All information is generalized and therefore is lacking in validity / verification, indicating a low-level of future scenarios and modelling of climate impacts on landfill expansion was included or considered in the scoped EA for this study.



CHIPPEWAS OF THE THAMES FIRST NATION

Vol 1 ES 24

Climate Change Considerations (Mitigation): Deforestation and increased GHGs are discussed. Provide evidence and analysis supporting the assertion that GHG levels will peak in 2049 (a year after closure); and provide a business case that includes cost/benefit analysis of LFG flaring in comparison to LFG capture and local reuse as a transitional source of NG that can create economic opportunities for green jobs and result in energy costs savings / GHG savings consistent with municipal / federal GHG reductions targets for 2050 and anticipated escalation of NG prices as a result of carbon taxation / environmental concerns with imported NG.

Vol 1 ES 26

Monitoring and Contingency

Air quality considerations includes the release of CH₄. What details are there for monitoring CH₄, consistent with municipal / federal targets for GHG reductions by 2050?

Vol 1 ES 1-10

1.3.3.4

LFG - Methane testing and flaring identifies a sample of profile of 55%-60% methane / 40-45% carbon dioxide, indicating this landfill site is a significant contributor of GHGs in CoL. What impact does LFG release have on CoL's municipal GHG profile, currently? What impact will growth in LFG quantity have due to landfill expansion? What impact will LFG expansion and growth have on anticipated municipal GHG reduction goals for 2030, 2040 and 2050?

1.3.3.6

The quantity of LFG currently emitted annually is 1.2K scfm of LFG, on average, flared in 2019; and 1.7K scfm LFG flared in 2020. This indicates growth of 29.4% LFG, a significant source of GHGs, year over year (2019-2020). London is the second fastest growing city in Canada and landfill expansion will result in increased landfill + LFG and potent GHGs like CH₄ and CO₂.

What forecast scenarios have been identified for the increased LFG growth and flaring anticipated with landfill expansion? What impact will this flaring have on municipal climate change and GHG reduction goals in 2030, 2040 and 2050 in CoL? How does this modelling compare with the costs/benefits of LFG capture and reuse for NG transitional fuel sourcing as a contribution to municipal / federal net-zero targets and goals?

Vol 1 ES 2-1

Waste diversion via composting is identified as implemented by the City and / or private & institutional sectors.

What composting programs have specifically been implemented by the City and how much waste diversion via composting is currently achieved through City programs, policies and the implementation of specific City-led programs and initiatives to specifically support composting in the residential sector?

"The only significant diversion component that remains undecided and unimplemented is a residential organics management program".



CHIPPEWAS OF THE THAMES FIRST NATION

Residential organic waste is a significant source of landfill quantity and LFG due to organic decomposition. Please outline the history of CoL composting efforts and explicitly specify the reasons why CoL has failed to deliver a residential composting program over the past 25 years.

COTTfN identifies residential organic waste as a significant source of LFG and the landfill quantity increase in CoL waste, necessitating the proposed expansion needed for the CoL waste management responsibilities, via vertical growth of the existing landfill footprint as a result of maximum capacity being reached by 2024.

Table 2.3-1

Curbside Organics Management Program (10%)

Why is this diversion rate anticipated to be so low?

MURB Organics Management Program (0.6%) + Other Organic Management Program (0.4%)

Why are these diversion rates anticipated to be so low?

How do these anticipated diversion rates compare to other mid-sized cities elsewhere in Canada with long-standing established organic waste diversion and composting programs (e.g. Halifax)?

What business case planning for organic waste diversion has been considered by CoL as a cost-benefit opportunity to promote circular economic activities, offset municipal costs, create waste-management value for taxpayers and create green jobs in organic waste management in CoL, using CoL organics?

Vol 1

2-6

"It was assumed that there is no [regional] increase in population or per capita waste generation rate in the future"

This assumption is deeply problematic. References below:

<https://www.cbc.ca/news/canada/london/london-population-1.5464669>

<https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CMACA&Code1=555&Geo2=PR&Code2=35&SearchText=London&SearchType=Begins&SearchPR=01&B1=All&GeoLevel=PR&GeoCode=555&TABID=1&type=0>

What prioritization will be given to CoL meeting waste diversion goals in relationship to the potential acceptance of regional waste for disposal at the expanded landfill site? How do these factors align or detract from City waste management priorities and the municipal costs of expanding the landfill, in context of unaccounted for regional + local population growth in the EA?



CHIPPEWAS OF THE THAMES FIRST NATION

Vol 1
2-12

'Alternative To' identifies the development of an Integrated Resource Recovery Centre with the expansion of the landfill over 25 years to promote diversion / recovery and energy.

Please provide further plans and goals outlining the details of the costs and benefits associated with an IRRC as an alternative to landfill expansion, including potential details and opportunities for LFG capture and reuse, organics capture and value-added activities, including job creation.

Vol 1
4-12

"People have expressed that guidance and restrictions are required before proceeding to accept waste from neighboring municipalities"

What guidance and restrictions are recommended for CoL in advance of regional service provisions for increased waste at the expanded landfill?

Vol 1
4-14

"The City is interested in finding a use for the LFG created and is currently exploring renewable natural gas options"

It is positive that CoL is interested in renewable NG from LFG. Please provide further information and details about the strategic options and details being considered as it relates to the prior approval of the expanded landfill site, in the context of climate change emergency planning and GHG reduction targets for 2030, 2040 and 2050 locally and federally.

Vol 1
4-15

"The surface water impact assessment in Section 9.3 does not predict any surface water quality impacts from the proposed landfill expansion design".

What climate change scenarios, assumptions and modelling supports this assertion that surface water impacts will not impact the Thames River?

Vol 1
4-19

"Having a sunset clause when the landfill has to close is a disincentive for waste reduction"

This is a counter-intuitive response from CoL, considering that future expansion of a landfill post-2048 would likely be horizontal and have significant impacts on agricultural and future residential development in the vicinity of future landfill expansion lands. It is difficult to understand how a sunset clause would disincentivize CoL waste reduction, if properly communicated to the public as a driving factor for organic



CHIPPEWAS OF THE THAMES FIRST NATION

waste composting and other City initiatives to reduce waste inputs to the current / expanded landfill. Provide feedback and comments.

Vol 1 Table 4.7-4

“The test pit was completed on November 6 2019”

What were the results of this borehole on surficial aquitard vertical fracturing, as requested by Dragun?

Vol 1 5.5.5.5

5-70

“Development within and adjacent to natural heritage features identified within the W12A Landfill Study Area should be consistent with the policies outlined in the London Plan (2017) which adheres to PPS (2020).”

Advanced, precautionary buffer requirements, development distancing and environmental impacts should be considered as a necessary, not optional, required component of landfill expansion. Environment Impact Statements should be completed as a required component of the EA for landfill expansion, including impacts on unevaluated wetlands, valley lands and potential Environmental Significant Areas, as designated by CoL in accordance with Provincial and Federal legislation and guidelines and policies related to nature conservation and preservation.

Vol 1 5.10.2

5-92

“The Islamic Cemetery of London is located close to the South of the Site Area and is the only notable cultural feature in the area... potential [effects] could be noise, odour or dust from landfill operations and construction activities”

Greater socio-cultural sensitivity and CoL efforts of investigation regarding the impacts of landfill expansion on the Islamic Cemetery of London should be considered within the scope of this EA.

Vol 1

6-3

“For the preferred expansion alternative, the capacity of the existing LFG management infrastructure (which consists of vertical wells, blower and flare) will be assessed to determine, what, if any, upgrading / increased capacity may be needed”

Will this assessment of LFG infrastructure include assessment of the costs/benefits associated with LFG capture and NG utilization in CoL and private buildings, as a part of cumulative GHG reduction efforts consistent with CoL climate emergency planning and NG fuel substitution efforts consistent with 2030, 2040 and 2050 GHG reduction planning and potential procurement of lower cost, renewable LFG?



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Vol 1
6-10

“Based on this geotechnical assessment, it is concluded the overall stability of the proposed expansion... is acceptable and that the settlement of... sub-grade beneath the existing footprint will adversely affect the performance life...”

Did the geotechnical assessment include consideration of increased incidence of precipitation and subsidence induced by the likelihood of increased severity and frequency of extreme weather events? Provide evidence.

Vol 1
7-46

“There are known archeological sites to the north of the existing landfill site that require further assessment... they could be affected by the new land-fill related infrastructure constructed within the buffer area”

CoL should provide a detailed plan and timeline for the assessment of known archeological sites, consistent with the Duty to Consult with local First Nations.

Vol 1
7-47

“... there are areas of archeological significance or potential within the existing landfill... that have not been previously assessed and require further work (Stage 2 Assessment)”

CoL should provide a detailed plan and timeline for the assessment of un-assessed archeological sites, consistent with the Duty to Consult with local First Nations and proceed to Stage 2 Assessment to identify potential sites and previous disturbance.

Vol 1 9.7
9-62

Provide a clear summary of Stage 2 Assessment actions.

Vol 1
Table 7.2-27

***“A change in land use where the change in use may impact the cultural heritage value”
“No expected impacts”***

“The Islamic Cemetery of London is located close to the South of the Site Area and is the only notable cultural feature in the area... potential [effects] could be noise, odour or dust from landfill operations and construction activities”

5-92



CHIPPEWAS OF THE THAMES FIRST NATION

Greater socio-cultural sensitivity and CoL efforts of investigation + consultation with the affected cultural community regarding the impacts of landfill expansion on the Islamic Cemetery of London should be considered within the scope of this EA.

Vol 1
7-53

Local Economy

Did CoL EA ToR incorporate cost-benefit analysis associated with integrated waste resource management options, including organics composting waste recovery and LFG development in scenario planning and alternatives in the EA? If not, why not?

Vol. 1
8-5

“... horizontal LFG collection pipes will be installed progressively...”

CoL should provide a detailed and integrated LFG recovery plan that coincides with CoL climate change emergency and energy planning objectives for GHG reduction goals and targets for 2030, 2040 and 2050, consistent with municipal and federal policy directions.

Vol 1
8-7

“... it is proposed to consider options to provide temporary leachate storage on site during storm events of significant magnitude that could result in discharge of mixed leachate / sewage to Dingman Creek or the Thames River if the WWTP is in a bypass situation”

CoL should pursue and provide greater attention to the details and risk analysis, including remediation options, associated with and pertaining to ‘storm events of a significant magnitude’ in accordance with climate change scenarios and modelling projections up to and beyond 2048, as a part of due diligence in averting the release of ‘mixed leachate / sewage to DC or the TR if the WWTP is in a bypass situation’.

Further information related WWTP bypass situations and remediation planning should be provided, in relation to increased volume flows associated with landfill expansion and the aversion of untreated bypass releases from Greenway WWTP, with appreciation to downstream impacts on COTTfN and adjacent First Nation communities.

Vol 1
8-11

“All components of this system (WWTP) are part of City owned, operated and maintained infrastructure, and are accessible for repair, upgrade or replacement if and as needed...”

CoL should provide a detailed and costed schedule for the repair, upgrade or replacement of WWTP infrastructure and piping necessary to avoid bypass situations that could result in the release of leachate and/or contaminated sewage to the Thames River.



CHIPPEWAS OF THE THAMES FIRST NATION

Vol 1

8-12 - 8-18

Please include LFG estimates related to GHGs and potential options and alternatives for the capture of LFG as a means of integrated approaches to climate change and energy planning in accordance with municipal and federal targets for climate change mitigation for 2030, 2040 and 2050.

Vol 1

8-20

“The 1:250 year return period design storm will also be assessed to predict conditions during such an event to accommodate climate change”

Provide this technical assessment as a part of due diligence in engineering design and planning for landfill expansion, consistent with climate science and known increases in risks and impacts associated with climate change projections and municipal climate change vulnerability and risk assessment and analysis.

Vol 1

8-25

“The source of heating for all site buildings will be natural gas”

Please specify if the building heating using NG will be locally sourced from LFG.

Vol 1

9-4

Table 9.1-2

Provide an explanation why CO₂ and CH₄ are not included in the summary table.

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Provide clear illustration of compliance with London Plan and objectives for Policy 1256 “best practices in site selection, site design, operation [waste recovery] and remediation” and Policy 1258 objectives for “waste reduction, re-use, recycling, resource recovery, treatment and waste disposal; and Eco-Industrial Parks where industries use materials available from the Waste Management Resource Recovery Area”

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Provide further information related to waste resource recovery (green organics, LFG) as a part of economic scenario planning in EA review.



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“Impacts from climate change... possibly affect... the performance of the components that comprise the SWMS... and the exceedance of the capacity of the SWMS”

Describe the identified components of the SWMS that could be affected by climate change impacts over the short, medium and long-term timelines associated with the operation and post-operation of the proposed landfill expansion.

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10-2

“Changing climate patterns may result in extreme heat or cold for extended periods of time.. strong wind”

Besides occupational health and safety concerns, what impacts will temperature change (+/- 1.5- 2 degrees C global average temperatures above pre-industrial levels by 2050, higher in the Canadian and regional context) and wind conditions have on erratic and more frequent freeze-thaw cycles and drought conditions, and debris spread, SWMS etc., impacting the proposed landfill expansion and adjacent areas of concern in the buffering zone?

“It is considered reasonable to expect ... a marginal increase in leachate generation compared to what is currently being collected from the landfill footprint and conveyed for treatment”

Provide evidence to support this assertion that an increase in leachate production and conveyance for treatment is a reasonable expectation in comparison to alternatives.

“... if the WWTP is in a bypass situation temporarily”

Provide cross reference to a CoL timetable and strategic plan for WWTP emergency response and longer-term infrastructure planning to end temporary bypass situations from CoL wastewater into the Thames River.

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10.1

Provide comprehensive evidence that slope stability of the proposed vertical expansion of the landfill site has taken into account subsidence related to climate change impacts (due to extreme weather and precipitation) over the short, medium and long-term operation of the landfill.

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10-3

Provide evidence of the projected increase in GHGs associated with regional service provision and the transportation of regional waste for disposal in the proposed landfill expansion.



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Provide evidence of the projected increase in GHGs associated with landfill expansion under and in relation to CoL GHG reduction targets and timelines associated with Community Energy Action Planning and Climate Change Emergency Planning

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“There is no prescribed method... for estimating fugitive methane [+ carbon dioxide?] emitted through the landfill [and flare].... Therefore GHG emissions from these emissions were estimated using engineering calculations”

Describe the engineering calculation and the source of information used to derive the calculation. Describe and contrast the supplemental engineering calculation in comparison to best practices from other regional LFG capture and monitoring in landfills (e.g. City of Toronto Greenlane), countries (e.g. USA, Germany etc.) and/or similar Canadian sectors for fugitive releases (e.g. oil and gas).

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“... peak LFG generation were predicted to occur in 2049.”

Provide details and explanation regarding this prediction.

“... negligible contribution... to Ontario emissions and... Canada emissions; therefore the project will have a negligible effect on climate change...”

Provide GHG equivalency calculations based on best practices for calculating methane related climate impacts of the proposed project, cumulatively over time as opposed to annual projections, as methane is a shorter-lived but more powerful GHG.

“GHGs generated from the landfill expansion will be controlled by active LFG collection and flaring... that the resulting GHGs would have a negligible contribution... to GHG emissions”

Provide analysis supplemental to this assertion that assess and compares costs and benefits of alternatives to LFG flaring and GHG release (e.g. local re-uses in agriculture, building heating and for renewable materials; renewable natural gas; renewable electricity production including hydrogen fuel; concrete production; greenhouses; hydrogen fuel for transportation purposes)



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Table 11.2-1

Atmosphere

Provide explanation and validation as to why the cumulative impact of GHGs (NH4 and CO2) were not included in the consideration of residual effects of landfill expansion.

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Table 11.3-1

Atmosphere

Expected GHG emissions are identified. No cumulative effects are discussed. Potential effects “notes that GHG emissions are expected to be lower...” Provide evidence that supports this assumption.

Socio-economic

There are no effects discussed in relation to the impacts on the Islamic Cemetery. Provide an explanation why this significant cultural feature and the cumulative impact have been not included.

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Table 12.1-1

Air Quality

Objectives and program activities make no mention of GHG monitoring. How will the effectiveness of LFG be monitoring and evaluated in the absence of objectives and program activities for NH4 and CO2? How will the absence of objectives and program activities for NH4 and CO2 contribute or detract from CoL Climate Change Emergency Action Planning and Community Energy Action Planning and related London Plan goals and objectives related to waste management and environmental sustainability?

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“...dedicated perimeter landfill gas monitoring wells will be sampled three times per year...”

Describe how sampling results will incorporate GHGs in the context of GHG reduction targets for 2030, 2040 and 2050 and CoL goals and objectives and federal goals and objectives related to GHG mitigation in accordance with best practices and scientific urgency related to net zero emissions by 2050. Describe associated measures and alternatives to LFG management, capture, reuse, storage etc.



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13-3

“The city will... involve Indigenous groups in the EA process”

Provide a response from CoL respecting plans for the continued involvement of COTTfN and other impacted Indigenous populations with respect to continued involvement in the EA scoping process and review process, as well as future involvement in LFG reuse and green organic composting programs and policy developments associated with the proposed expansion, and potential regional planning for LFG and related renewable NG developments in nearby landfill sites.

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“The City will share work plans with Indigenous Communities...”

Provide a response with respect to the comments submitted on this EA review from COTTfN and with respect to the formulation of alternatives and workplans to mitigate GHGs and advance comprehensive adaptation planning in advance of landfill expansion.

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13-5

“The preferred expansion alternative will be assessed from the perspective of climate change.”

Provide responses to comments with relationship to the mitigation of GHGs and adaptation impacts and concerns raised in previous comments.

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Table 13-2

Atmosphere

Provide an explanation as to why CoL has made no GHG related LFG commitments during this EA, and in accordance with municipal and federal climate change goals and targets for climate mitigation.

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13-11

“Climate Change - Include the [pre-construction] of possibility of increased leachate generation from climate change into the design... during storm events of significant magnitude that could result in discharge of mixed leachate / sewage to... the Thames River if the WWTP is in a bypass situation temporarily.”

Provide responses to comments raised with respect to pre-construction WWTP bypass contingency planning, timelines and prevention/remediation/compensation actions.

I.03 Disposition of Comments on the Draft EASR

GRT

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
City of London		City Planning - Land Use and Agriculture	May 12, 2021	
1	Volume IV D.06 Land Use and D.07 Agriculture Existing Conditions and Impact Assessment Reports	Staff concur with the opinion that the Project is consistent with the Provincial Policy Statement, 2020.	Acknowledged and agreed.	None
2	Volume I, Section 5.7.2 Provincial Policy Statement Volume IV D.06 Land Use and D.07 Agriculture Existing Conditions and Impact Assessment Reports	In addition to the PPS policies identified in the December 2020 draft impact assessment report, Staff note that the preferred "Alternative 1" is consistent with PPS section 2.3.5, Removal of Land from Prime Agricultural Areas. In accordance with this PPS section, Planning authorities may only exclude lands from prime agricultural areas for expansions of an urban growth boundary for planned urban uses. Expansion of the W12A landfill would not be an expansion of the urban growth boundary. Therefore, vertical expansion over the existing footprint of the W12A landfill is consistent with this requirement to not remove prime agricultural area land.	Acknowledged and agreed.	None

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
3	<p>Volume I, Section 5.6 Land Use</p> <p>Volume IV D.06 Land Use and D.07 Agriculture Existing Conditions and Impact Assessment Reports</p>	<p>Staff concur with the 1989 Official Plan and London Plan conformity reviews. The Project conforms to the specific area policies within the “Agriculture” designation of the 1989 Official Plan and to the “Waste Management Resource Recovery Area” Place Type of the London Plan. Additionally, please note that since the draft report was written in December 2020, the Local Planning Appeal Tribunal (LPAT) has made orders regarding certain appeals of the London Plan. The LPAT Order that was issued on April 15, 2021, brought into force and effect certain Map 1 Place Types, including the “Waste Management Resource Recovery Area”, “Farmland”, “Green Space”, and “Environmental Review” Place Types. Therefore, the determinative analysis for this review is the “Waste Management Resource Recovery Area” Place Type, and not the specific area policies within the Agriculture designation of the 1989 Official Plan.</p>	Acknowledged and agreed.	None

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
4	Volume I, Section 9.5.1 Policy Overview Volume IV D.06 Land Use and D.07 Agriculture Existing Conditions and Impact Assessment Reports	Staff also concur with the report's interpretation of the Provincial D-Series Guidelines and specifically Guideline D-4, Land Use on or Near Landfills and Dumps). Proposed monitoring and mitigation measures, as identified in the various impact studies as part of this EASR, as well as implementation of a "vertical expansion" of W12A, mean the expansion is expected to have minimal land use impact on existing agricultural uses and sensitive land uses within the 500 metre "site-vicinity study area".	Acknowledged and agreed.	None
5	Volume I, Section 9.5.1 Policy Overview Volume IV D.06 Land Use and D.07 Agriculture Existing Conditions and Impact Assessment Reports	Additionally, staff concur with the evaluation of Minimum Distance Separation (MDS) Formulae for uses adjacent to livestock operations, and that no MDS is required for a landfill (per Guideline #3, publication 853, OMAFRA).	Acknowledged and agreed.	None
6	Volume I, Section 9.5.1.4 City Zoning By-law Volume IV D.06 Land Use Existing Conditions and	A Zoning review will need to be undertaken during the detailed design stage of this Environmental Assessment. All lands used for waste and resource management uses in the Waste Management Resource Recovery Area Place Type of the <i>London Plan</i> will require a Waste and	Note this is an Individual Environmental Assessment and there is no detailed design stage of this study. For landfill expansion projects, the Provincial approvals and permitting process proceeds, in sequence, as follows:	Volume IV, Appendix D.06 will be modified accordingly that zoning amendment is expected, and a review will be completed after EA submission. Volume I, the main EASR,

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
	Impact Assessment Report	Resource Management (WRM) Zone. The consultant's report identifies that the buffer lands within the expanded W12A site are intended to be used as fallow agricultural fields (zoned AG2). A Zoning By-law Amendment application will be required if, during the detailed design stage of the EA, it is determined that a portion of those buffer lands are required for waste management uses. The Zoning By-law Amendment application should be undertaken concurrent with this Environmental Assessment.	<ul style="list-style-type: none"> • Environmental Assessment with an appropriate level of conceptual design to enable impact assessment for the applicable environmental components. • Environmental Protection Act (EPA) and Ontario Water Resources Act (OWRA) approval based on a more detailed design. <p>The applications for EA/EPA approvals are typically not submitted until after EA approval is received. As such, it is more common for any required Zoning By-law Amendment or Site Plan Approval (if required) to occur concurrently with the EPA and OWRA approvals process. Zoning review will occur after EA submission noting that it is now expected that re-zoning the buffer lands will be required.</p>	Section 9.5 will also be modified as described above, as well as updates to other approvals Section 13.2.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
City of London		City Planning - Biology	May 12, 2021	
1	Volume I Section 5.5.2.3 Vegetation Communities Volume IV D.05 Biology Existing Conditions and Impact Assessment	As described in the below Existing Conditions and Impact Assessment: Biology Report comment, the vegetation communities were not noted on individual community plant lists. The vegetation community sensitivity cannot be assessed as a single plant list across such a large study area. Staff suggest revising both reports to analyze vegetation communities within each of the ELC polygon for quality and sensitivity.	Acknowledged and agreed. This was an omission. The vegetation community specific plant lists will be provided.	Up-dated Biology Report Appendix F Plant Species List with community specific plant lists and metrics. Revised relevant text in the Biology Report. Revise relevant text (Section 5.5.2.3) in the EASR.
2	Volume I Table 7.2	Staff agree that Alternative 1 poses the greatest loss of SAR (Bobolink and Eastern Meadowlark) and confirmed Significant Wildlife Habitat, however several SWH that occur outside the existing landfill footprint may be confirmed during species specific studies. Staff agree that Alternative 1 is the preferred alternative.	Acknowledged and agreed.	None.
3	Volume I Section 9.4.3.2	Staff note that compensation is not appropriately used in the context of the natural heritage system or London Plan policies.	Acknowledged and agreed.	Edit text in EASR to reflect City staff's wording.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
		<i>Suggested Revision: Activities associated with landfill closure include the addition of topsoil and plantings of native vegetation; as such, the project closure will result in no net loss of natural heritage features and functions despite short term impacts to natural communities during construction and operations.</i>		
4	Volume IV D.05 Biology Existing Conditions and Impact Assessment	Throughout - The London Plan should be cited consistently as (London Plan, 2016).	Acknowledged and agreed.	Edit text in EASR to provide consistent citation for The London Plan. Edit text in the Biology Report similarly if required.
5	Volume IV D.05 Biology Existing Conditions and Impact Assessment	The Report indicates that it is consistent with the Environmental Management Guidelines. Study Scoping is undertaken with City Ecology Staff as part of the Environmental Management Guidelines prescribed process. The report assesses the impact of the proposed W12 Expansion on the surrounding area and is referred to as an Impact Study. Staff wonder why it wasn't labelled an SLSR/EIS and why Ecology wasn't looped in as part of the scoping of these reports, particularly as the works impact potential ESA patches.	Note this is an Individual Environmental Assessment subject to provincial approvals. For landfill expansion projects, the provincial approvals and permitting process proceeds, in sequence, as follows: <ul style="list-style-type: none"> Environmental Assessment with an appropriate level of conceptual design to enable impact assessment for the applicable environmental components. 	None

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
		<p>Although we appreciate the opportunity to review the report now, we request being involved earlier in the process to expedite review moving forward. The project was scoped in 2017 and again in 2019 with other agencies.</p>	<ul style="list-style-type: none"> Environmental Protection Act (EPA) and Ontario Water Resources Act (OWRA) approval based on a more detailed design. <p>The applications for EA/EPA approvals are typically not submitted until after EA approval is received. As such, it is more common for any required municipal approvals to occur concurrently with the EPA and OWRA approvals process. As such this is an Impact Assessment to support the provincial EA and not an SLRS or EIS. If municipal approvals are required at the site that involve the preparation of an SLRS and/or EIS, it is expected that much of the factual information and findings from the Impact Assessment can be used directly, or if necessary repackaged, as the SLRS and/or EIS.</p>	

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
6	Volume IV D.05 Biology Existing Conditions and Impact Assessment	Staff agree that this report is consistent with the Provincial Policy Statement (PPS, 2020), the Natural Heritage Reference Manual (2010).	Acknowledged and agreed.	None.
7	Volume IV D.05 Biology Existing Conditions and Impact Assessment	Generally, the EIS requires an administrative formatting review to include appropriate page/section breaks and ensure pages can be read in the pdf form. Staff note that the mapping appears in higher quality and appropriately rotated in Volume 1 of the EASR report.	Acknowledged.	None.
8	Volume IV D.05 Biology Existing Conditions and Impact Assessment	Staff question how was the 500 m buffer around the subject area was selected. What was the rationale for this large a study area? Staff agree that this provides a sufficient study area limit, but request more information on the rationale for establishing this area.	The Ministry of the Environment, Conservation and Parks (MECP) Guideline D-4 Land Use on or Near Dumps describes that the most significant potential impacts typically occur within 500 m of the perimeter of the waste disposal area on a landfill site (MOE, 1995). For this reason, this Guideline distance is often used by Ontario municipalities in their Official Plans to establish a holding zone around landfills; development within these zones requires proponents to demonstrate that	None.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
			their proposed development will not be adversely affected by the landfill site and its operations. As such, and as described in Section 5.1 of the EASR, Volume I, for most components, a Site-vicinity Study Area of 500 m from the Site Study Area limits is appropriate and was selected.	
9	Volume IV D.05 Biology Existing Conditions and Impact Assessment Section 2.2.3	As ELC plant lists were not separated into individual units (Appendix F) it isn't possible to establish coefficient of conservatism, floristic quality index, weediness index, or wetness index. Why has this information been included?	Acknowledged and agreed. This was an omission. The vegetation community specific plant lists will be provided.	Up-date Biology Report Appendix F Plant Species List with community specific plant lists and metrics. Revise relevant text in the Biology Report.
10	Volume IV D.05 Biology Existing Conditions and Impact Assessment	Dry-Fresh Hickory Deciduous Forest is noted in Appendix F and Table 6. FOD2-3 is considered S3/S4 (S3 rare-uncommon, S4 apparently secure) at the Provincial level. Within the highly urbanized London landscape the City of London does consider this specific habitat to be rare in the region in accordance with the S3 designation. References to this habitat shall note the Provincial status.	Acknowledged and agreed.	Up-date Biology Report Appendix G: ELC Descriptions by adding a Provincial ranking column. Note Provincial ranking in the Biology Report where communities are referenced.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
11	Volume IV D.05 Biology Existing Conditions and Impact Assessment Section 5 Mitigation and Compensation	Staff can assist with identifying appropriate restoration lands during the detailed design phase.	Acknowledged. Thank you.	None
12	Volume IV D.05 Biology Existing Conditions and Impact Assessment Section 7.1	<p>The report should have been scoped as an SLR/EIS and Scoped with a City Ecologist. Agree that the report satisfies the requirements under the Planning Act, however scoping the study as an SLR/EIS could have avoided subsequent EIS scope requirements. Subsequent study requirements will be determined during Detailed Design.</p> <p><i>Planning Act- Provincial Policy Statement</i></p> <p><i>The requirement for an EIS as it relates to SWH may be met by the similar requirement under municipal policies, as noted in the next section (Section 7.2). This report is considered to meet the requirements for an EIS under the PPS.</i></p> <p><i>The London Plan</i></p>	<p>As described above, this Impact Assessment supports an Individual Environmental Assessment study for approval under the Ontario <i>Environmental Assessment Act</i> and therefore it would not be appropriate for this study to be scoped as an SLR or EIS at this time.</p> <p>A more detailed design will be advanced during the EPA/OWRA approvals and is not part of this Environmental Assessment. At that time, municipal approval requirements will be reviewed and the City will be consulted to determine subsequent study requirements. It is acknowledged that additional work may be required at that</p>	None

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
		<i>As noted above, the preparation of an EIS can meet the requirements under the Provincial Policy Statement (2020) and The London Plan. The requirement for any additional work to meet the requirements for an EIS will be determined in consultation with the City of London (as outlined in Section 2.2.11 and 7.1).</i>	time for an EIS, if an EIS is determined to be required.	
13	Volume IV D.05 Biology Existing Conditions and Impact Assessment Appendix A	Staff request that the study area is superimposed onto the mapping.	Agreed.	Revise the Biology Report Appendix A maps to include an overlay of the study area.
14	Volume IV D.05 Biology Existing Conditions and Impact Assessment Appendix E	Text overlaps on pages 61, 71 and 91. Please revise so that table header is legible.	Our version does not show text overlap. Check report versions sent to City staff.	None
15	Volume IV D.05 Biology Existing Conditions and Impact Assessment Appendix F	Only a single Master Plant List has been provided for the entire Study Area. The floristic quality, wetness and weediness index assessments are not helpful on a Study Area basis if the intent is to assess the least impactful alternative. Plant	Acknowledged and agreed. This was an omission. The vegetation community specific plant lists will be provided.	Up-date Biology Report Appendix F Plant Species List with community specific plant lists and metrics. Revise relevant text in the Biology Report. Revise relevant text (Section 5.5.2.3) in the EASR.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
		lists would have been provided noted per ELC unit and are informative as such. Regionally Significant Species has been left with 'enter manually' and should be included. Please revise.		
16	Volume IV D.05 Biology Existing Conditions and Impact Assessment Appendix G	Missing/ hidden text for: <ul style="list-style-type: none"> • 3298 Scotland Drive (MAM2-2/MAS2) • 3483 Westminster Drive (FOD5) • 3483 Westminster Drive (FOD2-4) • 3483 Westminster Drive (SWD/SWT2-5) • 3483 Westminster Drive (FOD2-4) • 3483 Westminster Drive (SWD/SWT2-5) • 3583 Westminster Drive (SWT2) • 3691 Manning Drive (CUM1-1/OAO) • 6100 White Oak Road (CUP3/CUM1-1) 	Our version does not have missing or hidden text. Check report versions sent to City staff.	None

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
17	Volume IV D.05 Biology Existing Conditions and Impact Assessment Appendix J	<ul style="list-style-type: none"> Bank Swallow - Nesting habitat was not observed, or foraging habitat was not observed? Please clarify. Eastern Wood Pewee - Please revise table comment to match conclusions/ recommendations for Monarch as all SC species should be included in the SWH section. 	<p>Bank Swallow – Suitable nesting habitat was not observed</p> <p>Eastern Wood Pewee – Agree.</p>	<p>Up-date Biology Report Appendix J to include reference to habitat type.</p> <p>Up-date Biology Report Appendix J to ensure consistency between the Conclusions/Recommendations for Species of Special Concern.</p>

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
City of London		City Planning – Cultural Heritage	May 12, 2021	
1	Volume IV D.08 Archaeology Existing Conditions and Impact Assessment Report Volume I; EASR Volume IV D.09 Heritage Impact Assessment Report	Throughout the documents, Inventory of Heritage Resources <u>Register of Cultural Heritage Resources</u>	Acknowledged. Note that Attachment A of Volume IV D.08 was submitted to the Ministry of Heritage, Sport, Tourism and Cultural Industries (MHSTCI) in May of 2020 and cannot be updated at this time.	The reference to Inventory of Heritage Resources has been removed in Volume I EASR Sections 5.9, 7.2.8 and 9.8 and Volume IV D.09 Heritage Impact Assessment Section 5.2 and replaced with Register of Cultural Heritage Resources.
2	Volume I; EASR Section 3.3; Table 3.3-1	Table 3.3-1, EASR: Archaeological <u>Management</u> Master Plan	Within Volume I, EASR Section 3.3, Table 3.3-1 the reference provided is for the City of London's 1995 Archaeological Master Plan and not the 2017 Archaeological Management Plan.	Table 3.3-1 has been updated to add the date of the Archaeological Master Plan so that the reference is complete.
3	Volume I; EASR Section 5.8	Section 5.8 does not refer to the one of the two Stage 2 Archaeological Assessments (P364-0125-2018) or the Stage 3 Archaeological Assessment (P457-0071-2018) that are of relevant to this Environmental Assessment	Corrected.	Information and references from the Stage 2 Archaeological Assessments and Stage 3 Archaeological Assessment provided in Section 5.8 and Section 9.7 of Volume I.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
4	Volume I; EASR Section 5.9	The entire road name should be used consistently throughout the document; it was missing from Section 5.9 of the EASR in particular	Acknowledged.	Road names have been updated as follows: 3583 Westminster Drive, 5435 White Oak Road, 4067 Scotland Drive, and 3691 Manning Drive.
5	Volume I; EASR Section 7.2.8	The impact assessments in Section 7.2.8.1 and 7.2.8.2 would benefit from distinguishing between direct impacts (e.g. demolition or alteration) and indirect impacts (e.g. vibration, shadowing, etc.) in articulating the that the preferred alternative will not directly impact any built heritage resources or cultural heritage landscapes	Acknowledged	Sections 7.2.8.1 and 7.2.8.2 have been updated to identify and distinguish between direct and indirect impacts.
6	Volume I; EASR Section 9.13	Table 9.13-1 states “cultural heritage landscapes were removed as none were identified” – which is incorrect; please revise based on the information presented in the Heritage Impact Assessment (Appendix D.09, Volume IV)	Corrected.	The sentence: “cultural heritage landscapes were removed as none were identified” has been deleted and a row discussing cultural heritage landscapes has been added to the Do-nothing scenario.
7	Volume IV D.09 Heritage Impact Assessment Report	Correction of reference to Tremaine’s <i>Map of Essex County</i> in Section 4.2.3.3 of the Heritage Impact Assessment	Acknowledged.	Section 4.2.3.3 revised to “Tremaine’s 1862 <i>Map of the County of Middlesex</i> ”.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
8	Volume IV D.08 Archaeology Existing Conditions and Impact Assessment Report	Long-term avoidance and protection are the preferred approach for the registered archaeological site White Oak 1 (AfHh-926) (P364-0125-2018, P457-0071-2018). The location of the registered archaeological site must remain confidence to protect this sensitive resource. Any ground alteration must avoid the registered archaeological site and its protective buffer. Stage 4 archaeological mitigation is required for any alterations with the potential, either temporarily or permanently, to affect the registered archaeological site. This includes minor forms of soil disturbance such as tree removal, minor landscaping, and utilities installation.	Acknowledged.	None.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
9	Volume IV D.08 Archaeology Existing Conditions and Impact Assessment Report	City staff also note that further archaeological assessment (Stage 3+) is required for Location 4 (AfHh-945) (P364-0126-2018).	<p>At the time of existing conditions studies, the alternative methods of landfill expansion were still being evaluated and potential for development at or near Location 4 (AfHh-945) was possible. With the identification of the preferred alternative described in Volume I Section 8.0, there is no longer potential for development near Location 4 (AfHh-945).</p> <p>Note that Attachment A of Volume IV D.08 was submitted to the Ministry of Heritage, Sport, Tourism and Cultural Industries (MHSTCI) in May of 2020 and cannot be updated at this time.</p>	Sections 5.8.2 and 9.7 of Volume I EASR have been updated to confirm no project development at or near Location 4 (AfHh-945) and hence no need for Stage 3+ assessment at this time.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
	City of London	Environmental Services – Surface Water		May 26, 2021
1	Volume I Section 9.3.1 Stormwater Management System Design	The Dingman Creek Subwatershed Stormwater Servicing Study Master Plan and Schedule B Municipal Class Environmental Assessment for Stage 1 Lands (Aquafor Beech, September 2020) should be referenced in the document. The W12A EA should reference the hierarchy of stormwater control and how it applies to this site.	City: Acknowledged.	Section 4.1 of Volume IV Appendix D.04 will be updated to include the reference to the Subwatershed Study and how it applies to this site. Volume I, Section 9.3.1 will be updated as relevant.
2	Volume I Section 9.3.1 Stormwater Management System Design	Section 9.3.1 – Pond 1 has a retention time of 150 hours for the 25 mm event. This is a longer drawdown time than typical and seems to be driven by the 2002 Earth Tech report that identified baseflow of 10L/s should be maintained. Baseflow augmentation isn't a current SWM design target in urban environments. Recent studies have shown that urbanization results in an increase to baseflow conditions. Attenuation to meet previously recommended baseflow targets is not required and if provided, potential impacts to thermal loading should be considered.	City: Considering the Subwatershed Study noted above and discussions with the City of London Surface Water reviewer, the baseflow augmentation will not be maintained and the design will be updated to increase discharge rates more representative of pre-development (pre-landfill) flow rates for the Dingman Creek Subwatershed and Pond1.	The applicable sections of Volume IV Appendix D.04 will be updated as will the design drawings. Volume I, Section 9.3.1 will be updated as relevant.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
3	Volume I Section 9.3.1 Stormwater Management System Design	<p>The EA detailed the Stormwater Management Pond sizing requirements to support the preferred option for landfill expansion. The EA included targets, sizing and release rates for each SWM Pond. Will these parameters be refined in the detailed design process? The EA should identify how the EA SWM targets should be considered into the detailed design. For example, the stormwater management report shows that the stormwater facility sizing significantly reduces peak flows during the 2-year through 250-year event. What is driving the large retention volumes for these facilities and is there an opportunity for the SWM design to be refined through the detailed design process for the release rates to closely match pre to post development conditions?</p>	<p>City: It is anticipated that release rates and pond sizing presented in the detailed design and submitted for approvals and permits will be very similar to those presented in the EA and there will not be substantial adjustments.</p>	<p>As noted above, the Pond 1 design will be updated to reflect the removal of the baseflow augmentation. The sizing of the other ponds will remain as presented.</p>

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
4	Volume I Section 9.3.1 Stormwater Management System Design	It is preferable to not increase the Dingman Creek drainage area. SWED is currently initiating the Stage 2 Dingman Creek EA that will assess flood mitigation options for Dingman Creek.	City: The proposed drainage divide is primarily based on the proposed geometry and highpoints of the landfill and as well considering that the majority of the stormwater ditching and ponds are existing, as such there are limited options to mitigate the change in drainage areas.	No changes to the EASR are proposed.
5	Volume I Section 9.3.1 Stormwater Management System Design	The detailed design should consider if the SWM pond release rates meet capacity restrictions of downstream culverts.	City: Since the proposed release rates are proposed to be less than pre-development conditions there is not anticipated to be an adverse impact on downstream culvert capacities.	No changes to the EASR are proposed.
6	Volume I Section 9.3.1 Stormwater Management System Design	Road crossings within the site should also be evaluated following MTO design criteria and demonstrate safe passage during the 250-year event.	City: In accordance with the Landfill Standards, O.Reg. 232/98, all internal ditches will be designed for the 25-year event with overland conveyance of the 100-year event.	No changes to the EASR are proposed.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
7	Volume I Section 9.3.1 Stormwater Management System Design	As part of the climate change analysis, the stormwater design should include assessment of conditions during a Hurricane Hazel storm event. The 250-year event analysis is required to ensure safe passage of the regulatory event.	City: Acknowledged and will assess conditions during a Hurricane Hazel event in addition to the 250-year event analysis completed previously.	The applicable sections of Volume IV Appendix D.04 and Volume I, Section 9.3.1 will be updated.
8		Erosion and sediment control plans should be developed following the most recent industry standards and guidelines (e.g. Erosion and Sediment Control Guideline for Urban Construction, TRCA 2019) and should be addressed as part of the detailed design.	City: Acknowledged.	Erosion and sediment control plans will be developed as part of detailed design. No changes to the EASR are proposed.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
	Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	Programs and Services Branch		May 26, 2021
1	Volume I Sections 5.9 Cultural Heritage, 7.2.8 Cultural Heritage, 9.8 Cultural Heritage	The term “cultural heritage” or “cultural heritage resources” properly encompasses archaeological resources, built heritage resources, and cultural heritage landscapes. We would therefore recommend that the term “cultural heritage” in the title and content of Sections 5.9, 7.2.8, 9.8, and corresponding parts of the Executive Summary be replaced with “built heritage resources and cultural heritage landscapes”. In 7.2.8.2 it should be replaced with simply “built heritage resources”, as cultural heritage landscapes are dealt with separately in 7.2.8.1.	Acknowledged.	Requested changes to the EA sections have been made.
2	Volume I Section 13.0 Summary of Commitments and Other Approvals	In Table 13.2, the content of the commitment in row X appears to be missing, likely due to a formatting error.	Row X appears correctly in the master document but will be confirmed during printing and preparation of electronic versions of the final proposed EASR.	No changes to the EASR are proposed.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
3	Volume I Section 13.0 Summary of Commitments and Other Approvals	Table 13.2 needs to include a commitment for the case of unexpectedly encountering archaeological resources during construction. Under this scenario, all activities impacting archaeological resources must cease immediately, MHSTCI should be notified, and a licensed archaeologist is to be engaged to carry out an archaeological assessment in accordance with the <i>Ontario Heritage Act</i> and the <i>Standards and Guidelines for Consultant Archaeologists</i> . If human remains are encountered, all activities must cease immediately and the local police as well as the Registrar, Burials of the Ministry of Government and Consumer Services (416-326-8800) must be contacted. In situations where human remains are associated with archaeological resources, MHSTCI should also be notified to ensure that the site is not subject to unlicensed alterations which would be a contravention of the <i>Ontario Heritage Act</i> .	Acknowledged	Commitment has been added to table 13.2.
4	Volume I Section 13.0 Summary of Commitments and Other Approvals	Section 13.2 states under the Ontario Heritage Act heading that the project will require a “letter of concurrence” from MHSTCI to confirm that potential archaeological and cultural heritage resources have been appropriately	Acknowledged.	Text in Section 13.2 of the EASR has been updated to indicate that review letters for the archaeological assessment reports that have been submitted are

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		<p>considered and that the implementation of the expansion as proposed can proceed. The only official letters that MHSTCI would issue in an approval-like capacity outside the Environmental Assessment review process are “review letters” for archaeological assessment reports, indicating that the reports have been found to be compliant with the Standards and Guidelines for Consultant Archaeologists and entered into the Ontario Public Register of Archaeological Reports. Construction should not proceed until such letters have been received regarding archaeological assessment reports that recommend no further concern throughout the footprint of the proposed undertaking. With respect to built heritage resources and cultural heritage landscapes, MHSTCI’s review of related technical documents is part of our review of the Environmental Assessment itself through the Government Review Team; we do not have a distinct approval function for such documents and will not issue letters to that effect (except in the rare case of a cultural heritage resource designated by the Minister).</p>		<p>required. Text regarding letters of concurrence for built heritage resources and cultural heritage landscapes has been removed.</p>

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
5	Volume IV D.08 Archaeology Existing Conditions and Impact Assessment Report	It is unclear why the Stage 2 Archaeological Assessment Report completed under PIF# P364-0125-2018 (referenced in the body of the EASR as Golder 2018) is not included in Appendix D.08. Moreover, the wording of Section 3.0 of Appendix D.08 appears to suggest that the attached Stage 2 report identified the need for the attached Stage 3 report on Site AfHh-926, when in fact this Stage 3 survey was recommended in the above-noted Stage 2 report not attached to the appendix. We would recommend that the wording of Appendix D.08 be clarified, and that the 2018 Stage 2 report and its review letter be referenced and attached.	The Stage 2 Archaeological Assessment Report completed under PIF# P364-0125-2018 was originally completed to evaluate landfill development for the existing landfill and not the landfill expansion footprints. However, the land area evaluated in this report does overlap with area required for landfill expansion, and hence should be referenced in both the EASR and Volume IV, Appendix D.08.	The Stage 2 Archaeological Assessment Report completed under PIF# P364-0125-2018 and its review letter have been added as an attachment to Appendix D.08. Furthermore, the references and discussion in Section 3.0 of Appendix D.08 have been updated.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
	Ministry of Agriculture, Food, and Rural Affairs – Policy Division	Food Safety & Environmental Policy Branch – Land Use Planning & Stewardship Unit		May 21, 2021
1	Volume I EASR, Section 4 Consultation Methods and Activities	<p>Nuisance Wildlife (i.e., vultures) cause damage by roosting on nearby structures.</p> <p>Proposed mitigation: Pilot project on using various turkey vulture control measures to keep turkey vultures off private property.</p> <p>Will this pilot project include adjacent farm operations?</p> <p>Was consideration given to whether disease transmission to farm produce or livestock associated with insects, vermin or birds had been assessed?</p>	<p>City: A pilot project is proposed as part of the updated CEMMP with entitlement to be determined as part of that update. That said, anyone with an existing turkey vulture issue should make it know to the City for appropriate consideration.</p> <p>No neighbours have noted concern regarding transmission to farm produce or livestock related to vector or vermin. The existing and proposed landfill expansion has a program to mitigate vector and vermin.</p>	No changes proposed.
2	Volume I EASR, Section 4 Consultation Methods and Activities	<p>Bad Odours (with potential to increase)</p> <p>Proposed mitigation: Air quality modelling/reports identified that the landfill expansion is expected to meet all provincial criteria with air quality.</p> <p>Municipal commitment to additional air quality monitoring and modelling</p>	<p>City: Volume I EASR, Section 9.1.1 and Volume IV Appendix D.01 provide a full detailed description of the predictive air quality assessment that includes odour, dust and typical landfill airborne contaminants. The study did not provide conclusions about airborne contamination of crops or soils; however, this comments on this potential effect can be</p>	Details about the indirect effects, planned best management practices and mitigation and expected affect will be added to Volume I EASR, Section 9.6 and Volume IV, Appendix D.07, Section 4.2.1.3.,

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
		<p>will be undertaken for Environmental Protection Act approvals.</p> <p>Does this study include airborne contamination of crops or soils including air emissions or fine particulate (i.e. dust)?</p>	<p>provided. It is not expected that vegetation will be adversely affected as a result of dust emissions from the landfill expansion.</p>	
3	<p>Volume I EASR, Section 4 Consultation Methods and Activities</p>	<p>Clarification of what agricultural land included in the on-site buffer will be used for.</p> <p>Proposed mitigation: Additional buffer lands that are currently in active agricultural production will be seeded and left fallow, with the following exceptions:</p> <ul style="list-style-type: none"> • Fencing along the new landfill boundary; • Berms constructed along the new landfill boundary that runs along White Oak Road and Scotland Drive and; • Land between the existing landfill and Material Recovery (recycling) Facility that will accommodate a new small vehicle Waste and Resource Material Drop-off Area. <p>OMAFRA understands that no landfill expansions onto prime agricultural lands are being proposed.</p>	<p>City: Volume I EASR, Section 8.1 provides the complete, detailed description of the landfill expansion. There will be no landfill expansion on prime agricultural land but land surrounding the landfill is required as buffer land for ancillary facilities such as roads, berms, soil stockpiles buildings, scales, etc. A detailed description of what will be in the buffer lands is provided in Section 8.1.1. Some agricultural land north of both the existing and expanded landfill between the landfill edge and Scotland Drive will be lost as a result of berms and soil stockpiling activities.</p>	<p>No changes proposed.</p>

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
4	Volume I EASR, Section 4 Consultation Methods and Activities	<p>Litter from trucks Proposed mitigation: Potential changes to the landfill's off-site litter management program can be considered as a part of the review of the existing CEMMP. Any changes can be formalized and added to the revised CEMMP and/or to the Design and Operations report for the landfill expansion.</p> <p>OMAFRA encourages proposed changes to the off-site litter management program as blowing litter nuisance has the potential to negatively impact farm operations, with regard to livestock hazards and potential damage to farm machinery.</p>	City: As documented in the most recent Annual Monitoring Report (2020), there were no litter complaints related to litter from the landfill or trucks. The existing landfill has a comprehensive litter management program that appears to be effective, and the plan moving forward would be to continue that program and document it in the Design and Operations Report as part of the Environmental Protection Act approval process for the expansion. As mentioned in Section 4.7.2 of Volume I of the EASR, changes to the landfill's off-site litter management program can also be considered and instigated as a part of the upcoming review of the existing CEMMP.	No changes proposed.
5	Volume I EASR, Section 4 Consultation Methods and Activities	Road traffic concerns Potential mitigation: Concerns relating to traffic movement may include changes to access/egress to the site for trucks and increased truck traffic. No changes to access/egress are anticipated from the expanded site.	City: Volume I EASR, Section 9.11 and Volume IV Appendix D.12 provides a full detailed description of the traffic impact assessment completed for the Project, including an assessment of existing and future traffic volumes for designated haul routes.	Details regarding the findings of the traffic impact assessment have been added to Volume IV, Appendix D.07, Section 4.1.1.1 EASR. A summary of the AAC consultation has been added to Volume IV,

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
		Have potential traffic hazards been assessed with regard to the movement of farm machinery across or along the proposed haul routes?	<p>This study did not identify any specific concerns with the safe and efficient movement of agricultural vehicles within the Site-Vicinity Study Area during or following completion of the landfill expansion.</p> <p>Further, through consultation, the City of London Agricultural Advisory Committee (AAC) did not identify any existing or potential concerns with the movement of farm vehicles in the vicinity of the W12A Landfill or along its designated haul routes.</p>	Appendix D.07, Appendix A.
6	Volume I EASR, Section 4 Consultation Methods and Activities	It is clear that project team undertook a number of consultation events and that neighbours within 2 kilometers proximate to the proposed Project were invited to attend, however, it is unclear if agricultural stakeholders were present, nor if interviews with farmers were undertaken (as per suggested methodology in 3-11). If consultation and/or interviews with farmers were undertaken, this discussion would ideally be summarized within the OMAFRA Draft Agricultural Impact Assessment (AIA) to demonstrate how consultation with local agricultural representation was undertaken,	<p>City: While all neighbours within 2 kilometres were invited to all consultation events, individuals attending were not obligated to disclose their names or addresses in accordance with privacy requirements, nor did they disclose if they operated a farm.</p> <p>As discussed in comment 5, the City also consulted with the City's AAC which provides liaison between agricultural and rural communities and the Municipal Council and helps to ensure that the City of London maintains a</p>	A summary of the AAC consultation has been added to Volume IV, Appendix D.07, Appendix A. Reference to Appendix A has been added in Section 4.1 of Volume IV, Appendix D.07.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
		<p>which agricultural representatives were present for consultation events, key thoughts and opinions brought to attention by the agricultural stakeholders and how the provided feedback was integrated and reflected within the reporting and recommendations. It is recommended that the project team provide additional comments pertaining to if consultation with local agricultural representation occurred and if so, if it helped to inform the development of the AIA.</p>	<p>secure, economically viable agricultural industry.</p>	
7	Volume I Section 5.7 Agriculture	<p>Through a 2019 windshield survey (5-78) and mapping exercise (Figure 5.7-1), it has been identified that the majority of the Site Study Areas and the Site-Vicinity Study Areas are actively used for agricultural purposes (i.e. cash-cropping) with two noted agricultural buildings to the South, and one active livestock operation, located approximately 400 metres to the Southeast. That said, Table 5.1-1 states Provincial requirements (MECP Guideline D-4 Land Use on or Near Dumps) govern the potential emissions or discharges from landfill site and further states potential effects on agriculture are expected to be limited to 500 metres</p>	<p>City: Section 5.1 of Volume I the EASR says that the MECP Guideline D-4 Land Use on or Near Dumps describes that the most significant potential impacts typically occur within 500 m of the perimeter of a waste disposal area on a landfill site. For this reason, this Guideline distance is often used by Ontario municipalities in their Official Plans to establish a holding zone around landfills; development within these zones requires proponents to demonstrate that their proposed development will not be adversely affected by the landfill site and its operations.</p>	<p>No changes proposed.</p>

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
		<p>from the Site Study Area. As stated, an active livestock operation has been identified within the Site-Vicinity Study Area, approximately 400 metres to the Southeast of the landfill footprint. It would be helpful to accurately quantify the distance from the proposed landfill footprint to the livestock operation, as additional mitigation measures for this livestock operation may be required.</p>	<p>Conversely, in the case of landfill expansion and Environmental Assessment process, the proponent, in this case the City, must demonstrate that the expanded landfill site will not adversely affect off-site operations including agriculture activities within 500 m. Guideline D-4 does not govern the potential emissions and does not suggest there will always be impacts within 500 m of a landfill, but that potential impacts within this distance should be evaluated. This distance was considered as part of the agriculture assessment. The livestock operation is noted as being approximately 400 m to the southeast of the MRF and not the proposed landfill expansion footprint that is the same separation distance as the existing landfill footprint of approximately 800 m. Potential impacts were evaluated and discussed in Section 9.6 of Volume I and Volume IV, Appendix D.07.</p>	

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
8	Volume IV Appendix D.07 Agricultural Resources Existing Conditions and Impact Assessment Report	<p>As previously identified, the Site-Vicinity Study Area is a prime agricultural land, comprised of predominantly Class 2 and 3 lands, with Class 5 lands identified in the South and Northern portions. CLI Class 1-3 lands represent prime agricultural lands, as defined by the PPS (2020).</p> <p>PPS Policy 2.3.3.1 states “in prime agricultural areas, permitted uses and activities are: agricultural uses, agriculture-related uses and on-farm diversified uses”. Given that the proposed expansion is not one of the three aforementioned uses, permitting such a use would therefore be considered a limited non-agricultural use and would be subject to PPS Policy 2.3.6.1 (b). Policy 2.3.6.1 (b) states: Planning authorities may only permit non-agricultural uses in a prime agricultural area for limited non-residential uses, provided that all of the following are demonstrated:</p> <ol style="list-style-type: none"> 1. The land does not comprise a speciality crop area; 2. The proposed use complies with the minimum distance separation formulae (MDS); 	City: Acknowledged and agreed.	None.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
		<p>3. There is an identified need within the planning horizon provided for in policy 1.1.2 for additional land to accommodate the proposed use; and</p> <p>4. Alternative locations have been evaluated, and</p> <ul style="list-style-type: none"> • There are no reasonable alternatives which avoid <i>prime agricultural areas</i>; and • There are no reasonable alternative locations in <i>prime agricultural areas</i> with lower priority lands. <p>That said, the AIA-based report has demonstrated consistency with Policy 2.3.6.1 (b) in that:</p> <ul style="list-style-type: none"> • The proposed expansion does not compromise a speciality crop area; • MDS setbacks are not required for landfills; • There is an identified need within the planning horizon and nothing in policy 1.1.2 limits the planning for infrastructure ... beyond a 25-year time horizon; and 		

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
		<ul style="list-style-type: none"> Alternative locations have been evaluated (as reported in a 2005 Agricultural Resources Background Study, completed by IBI Group) and this location includes lower priority lands (Class 5 lands). <p>Further, it is understood that the expansion area is already located within the defined boundary of the site-specific W12A Landfill policy area within the Official Plan. That said, OMAFRA is satisfied that the proposed expansion is aligned with the PPS (2020).</p>		
9	Volume IV Appendix D.07 Agricultural Resources Existing Conditions and Impact Assessment Report	It is understood that the landfill boundary will increase from 140.0 ha to 192.4 ha, with no expansion planned for the landfill footprint. The expansion area would be predominantly used for buffering purposes, with limited infrastructure like fencing planned for the affected lands. Additionally, it is understood that a portion of the expansion area fronting Manning Road would be used for a new Waste and Resource Material Drop-off Area.	City: Acknowledged and agreed.	None.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
10	Volume IV Appendix D.07 Agricultural Resources Existing Conditions and Impact Assessment Report	This assessment should take into consideration whether impacts are short- or long-term, whether they are limited to the proposed development (or are more regional in scope), and where they are on the spectrum of severity, from minor to severe. Some types of potential impacts to consider in an AIA are: Fragmentation of agricultural operations (Is there an impact on supply chain, as a beef operation has been identified within the Site-Vicinity Study Area?).	City: As set out in Volume I EASR, Section 9.6 and Volume IV Appendix D.07, the assessment of agricultural impacts was scoped, given the nature of the Project (i.e., vertical landfill expansion, limited farmland taken out of production from lands designated for non-agricultural uses). Notwithstanding, an additional review of potential site-specific and cumulative impacts, has been carried out to address the noted comments.	Additional commentary regarding the findings of the agricultural impact assessment and related considerations has been added to Volume I EASR, Volume IV, Appendix D.07 Sections 4.1.1.1 and in several subsections of Section 4.2.
11		Traffic and safety issues (Is there a conflict with farm vehicles using local roads due to increased traffic?);	City: See response to comment #5.	See response to comment #5.
12		Ability to implement normal farm practices (Is there a risk of nuisance complaints over lighting, odour and/or noise?);	City: As outlined in Volume I EASR Section 9 and Volume IV, Appendices D.01 and D.02, the potential odour and noise nuisance impacts have been evaluated and the proposed landfill expansion is expected to meet the regulatory limits of the MECP. Notwithstanding, there are a number of proposed best management practices and monitoring to minimize any potential nuisance effects occurring.	

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
			Lighting was not identified as an aspect of the environment to evaluate for this proposed landfill expansion and has never been brought up in any of the prior consultation events or reviews. The existing landfill has lighting and has not previously received any lighting complaints in its operational history; the proposed expansion would use the same lighting with no planned changes.	
13		Nuisance impacts (Are farms impacted within the Site-Vicinity Study Area by the frequency, timing and intensity of proposed impacts?);	City. It is anticipated that any nuisance effects associated with the landfill expansion will be at worst occasional and of low magnitude. However, the response to comment #2 identifies that additional information is provided regarding nuisance impacts.	See response to comment #2.
14		Cumulative impacts to the viability of the agricultural system in the area (does this proposal have the ability to weaken the agricultural system? Does the proposal undermine long-term agricultural potential?)	City: See response to comment #10.	See response to comment #10.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
15		Was edge planning considered, particularly to the Southeast, where the active beef operation is present?	City: As per Ontario Regulation 232/98, for new and expanding landfills a buffer area of a minimum of 30 metres from the edge of the landfill footprint to the property boundary is required to allow for vehicle movement; structures and activities; and to ensure the landfill effects do not have an unacceptable impact outside the site. As described in Section 8.1 of Volume I, the buffer (which seems to serve the same purpose as the described "edge planning", is a minimum of 100 m on the east side of the landfill and is greater than 100 m in the southeast corner as depicted in Figure 8.1-1.	No changes required.
16		Has a process been put in place for reporting and responding to landowner concerns?	City: The existing landfill has a long and well established complaints procedure that will continue during landfill expansion.	No changes required.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
17		According to the Draft AIA Guidelines, following the identification of impacts on the agricultural system, direct and indirect mitigation measures should be introduced. While the Agriculture Existing Conditions and Impact Assessment states the potential impacts of the Project on local agricultural land and operations are expected to be minor, it is unclear if potential impacts were fully assessed.	City: Based on the results of the assessments of potential off-site effects from the landfill expansion, which indicate that compliance with provincial standards is expected to be achieved, it is considered that the potential impacts on agricultural lands and operations have been fully assessed.	Details about the indirect effects of dust on vegetation, planned best management practices and mitigation and expected affect have been added to Volume I EASR, Section 9.6 and Volume IV, Appendix D.07.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
	Ministry of Environment Conservation and Parks (MECP)	Environmental Assessment and Permissions Branch, Project Officer		June 8, 2021
1	Volume I Section 5.1 Study Areas and Timeframes <i>Table 5.1-1: Proposed Preliminary Study Areas</i>	Table 5.1-1: Proposed Preliminary Study Areas, includes a list of components studied and the rationale for including them in the site, site and site-vicinity, and the wider study area, but no rationale for why these components were selected. The rationale for why each component was considered at the site study, site-vicinity and wider study areas was included in the table, but not for why each component was selected. For example, why were the specific components such as “atmosphere”, “biology” and “visual” selected instead of a wider range of other components? As per section 4.2.4 of the <u>Code of Practice: Consultation in Ontario’s Environmental Assessment Process</u> (January 2014), the Draft EA should clearly explain the reasons for selecting the criteria and indicators. This will help all interested persons understand the judgements that were made and allow them to participate more effectively in the process. An outline of the data sources for the criteria and indicators is also required in the EA.	MECP: Please provide an explanation of how these components were selected and the rationale for doing so in this section. City: The rationale for why the site components were selected has been added to Section 3.1 where they are first introduced in the EASR.	No change required.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
MECP		Environmental Assessment and Permissions Branch, Review Engineer		June 8, 2021
1	Volume I Section 9.3 Surface Water	<u>Stormwater Management (surface water)</u> Considering the different sources of waste at this landfill site, the City should assess the site-specific contaminants of concern, work with the ministry's regional office to identify the site-specific parameters that need to be sampled/monitored, and the trigger threshold.	MECP: Please provide mitigation measures (such as housekeeping practices) to prevent potential contaminants leaving the site. City: Section 9.3 of Volume I describes the surface water impact assessment. Sections 12.1.3 and 12.2.2 of Volume I provide the details of proposed surface water monitoring and contingency measures, respectively. The contingency measures discussed are what to do in the event of exceedances of monitored parameters. Within Table 13.2 of Volume I, the City has provided some commitments related to preventing contaminants leaving the site. Specifically, commitments Q and R	No changes required.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
			<p>indicate that surface drainage from potentially contaminated areas is to be contained locally within berms and discharged into the waste and eventually into the leachate management system, and separated from surface drainage from non-contaminated areas and ESC measures inspected during construction on a weekly basis, and after significant rainfall events (e.g. greater than approximately 10 mm), respectively.</p>	

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
MECP		Southwest Region Technical Support Section, Air Quality Analyst		June 8, 2021
1	Volume I, Section 12.1 and Table 12.1-1, Pages 12-1 and 12-2 Volume IV D.01 Air Quality Existing Conditions and Impact Assessment Report, Section 8.0	<p>Section 12.1 states: <i>“An effective monitoring program provides results to: indicate whether the facility is working as expected and that the assumptions used in the assessment were correct; assess on an ongoing basis whether mitigation measures as designed and operated are effective; and identify unforeseen problems so they can be addressed in a timely manner.”</i></p> <p>The proposed follow-up program outlined in Table 12.1-1 proposes a one time only sampling of unpaved and paved road silt loadings and landfill gas. While Table 12.1-1 also includes preparing a fugitive dust management plan and updating the odour management plan, one time only sampling does not address assessing mitigation measures on an ongoing basis or unforeseen problems.</p>	<p>MECP: <u>Existing Monitoring</u> The report should clarify if there are any existing air monitoring activities at the W12A landfill. Additional details regarding how the W12A landfill has monitored for odour emissions and addressed odour complaints in the past should also be included.</p> <p>City: The City does not presently do any existing air monitoring activities at the W12A Landfill. All existing monitoring activities have been documented in Volume I, Section 1.3.3.</p> <p>The City monitors and records odours daily based on daily site inspections as well as documents</p>	Volume I, Section 5.2.1 outlines odour complaints received in the past and has been updated to include more recent odour complaint data and odour inspection information as well as how verified odour issues are addressed. Section 12.1 has not been updated as this is a section about future monitoring requirements not current monitoring.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
			<p>complaints received. In each case the source of the odour is investigated based on wind direction, site activities, etc. If the odour source is the landfill then the MECP is notified and remediation measures are sought, if available. All odour inspections and complaints are documented in the annual monitoring report.</p>	
			<p>MECP: <u>Follow-up Monitoring</u> Additional details should be included for the follow-up plan regarding how worst-case conditions will be captured by a one-time sampling event.</p> <p>City: The purpose of the sampling is to verify the inputs into the emission rates calculated from emission factors used</p>	No changes proposed.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
			<p>in the air quality assessment are conservative.</p> <p>Sampled emission rates will be compared to modelled emission rates (not measured air concentrations) to confirm that the values used in the modelling assessment are conservative.</p> <p>The review and update of the management plan and complaints response protocol is to verify that the mitigation measures are being implemented appropriately.</p>	
			<p>MECP: <u>Additional Monitoring</u> Section 8.0 in Volume IV states that "...monitoring will likely be a condition of environmental approvals and/or permits, and the final details will be confirmed in the ECA(s) for the Project."</p> <p>Considering that this</p>	<p>Further discussion has been added to Volume IV Appendix D.01, Section 3.2 and Volume I, Section 5.2.1.2 identifying the decrease in odour complaints in 2020. Given the absence of odour complaints for the last 8 months, an ambient air monitoring program is</p>

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
			<p>project is an expansion of a landfill with a history of odour complaints, it is recommended that the ambient air monitoring plan be included at the EA stage for review. The ambient air monitoring plan should aim to assess off-site odour, such as through H₂S, and VOCs, including vinyl chloride, around the W12A landfill and nearby sensitive receptors. The plan should also discuss frequency and duration of the proposed monitoring, as well as how the results of the monitoring will be representative of worst-case conditions.</p> <p>City: While it is acknowledged that the site has a history of odour complaints, upgrades were made to</p>	<p>not provided in the EA at this time.</p> <p>The monitoring presented in the reports is primarily sampling to verify the inputs into the air quality modelling to confirm that the assessment is conservative.</p>

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
			the LFG collection system in 2020, which significantly reduced the potential for odour emissions from the site, and consequently the number of odour complaints.	
2	Volume I, Table 11.3-1, Page 11-6.	Table 11.3-1 indicates that there are existing nearby sources of odour and a precedent of impact in the area. Therefore, a one-time monitoring event is suggested as well as more stringent controls around operational plan and mitigation measures. However, specifics regarding the monitoring event and more stringent controls are not provided.	MECP: Additional details should be added to Section 11.3 regarding how cumulative effects on air quality and odour will be addressed through monitoring and more stringent controls. More detail should also be provided for what facilities fall under the “additional small commercial operations” and “waste disposal and waste processing facilities” categories in Table 11.3-1 and how they impact air quality and odour around the W12A landfill. City: It should be noted that Section 11 of the EASR Volume I is the	Language in Section 11 of the EASR Volume I has been amended to differentiate the qualitative cumulative impacts from the quantitative air quality cumulative impacts provided in Section 9.1.1 of Volume I, EASR. It is not common in Environmental Assessments to name exact businesses for privacy reasons, but additional details regarding the additional small commercial operations and waste disposal and waste processing facilities without naming them

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
			<p>overall cumulative assessment of the project as briefly outlined as a requirement in the Code of Practice for Preparing and Reviewing Environmental Assessments in Ontario (MOECC, 2014). This cumulative impact assessment is qualitative and considers identified negative effects of the W12A Landfill expansion and the potential for these residual effects to interact with other projects or activities, which when combined may result in a greater and in particular adverse effect to the environment. This should not be confused with the quantitative cumulative air quality effect outlined in Section 9.1.1 of the</p>	<p>have been added to Section 11.2.4.</p>

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
			<p>EASR Volume I where the background concentrations of indicator parameters are added to the predicted maximum effect of the proposed landfill expansion.</p> <p>The purpose of the sampling is to verify the inputs used in the air quality assessment. Sampled emission rates will be compared to modelled emission rates to confirm that the values used in the modelling assessment are conservative. The modelling assessment in Section 9.1.1 provided a quantitative cumulative assessment of air quality. Verifying the emission rates included in the modelling are conservative will verify the results of the cumulative assessment.</p>	

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
3	Volume IV D.01 Air Quality Existing Conditions and Impact Assessment Report, Section 3.0, Table 1, Page 8	Please note that a more recent version of the AAQC list was published on May 1, 2020 (ambient air quality criteria (ontario.ca))	MECP: Please update footnote (a) in Table 1. Please also change the heading "Ontario Ambient Air Quality Guidelines" to "Ontario Ambient Air Quality Criteria".	This reference has been updated
4	Volume IV D.01 Air Quality Existing Conditions and Impact Assessment Report, Section 3.0, Table 1, Page 8	<p>Section 3.1 states: <i>"Hydrogen sulphide is not measured at any of the above three stations, therefore the 1-hour background concentration was taken from the ECCC's draft Screening Assessment for H₂S (ECCC, 2017) and converted to the relevant averaging periods using MECP recommended methodologies in the Air Dispersion Modelling Guideline for Ontario (MECP, 2017)."</i></p> <p>The H₂S data selected from the ECCC report for background concentrations are 0.84 ug/m³ (10-min) and 0.21 ug/m³ (24-hour). The value of 0.84 ug/m³ appears to be taken from the lower end of a range of maximums from Lethbridge (where the average was 1.4 ug/m³) and the lower end of a range of 99th percentiles at Saint John. Therefore, it is not clear whether the H₂S background concentrations chosen are conservative. It is also</p>	<p>MECP: Please provide additional details supporting the selection of the 10-minute and 24-hour background H₂S concentrations.</p> <p>City: The average 1 hour background H₂S data for Southwestern Ontario was taken from the ECCC report (0.504 µg/m³). It was converted to 10-minute and 24-hour averaging periods using the conversion factors identified in Section 17 of Ontario Regulation 419/05 and documented in section 4.4 of MECP guidance document "Air Dispersion Modelling Guideline for Ontario"</p>	No change proposed.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
		unclear from where the value of 0.21 ug/m ³ was obtained.	dated February 2017	
5	Volume IV D.01 Air Quality Existing Conditions and Impact Assessment Report, Section 3.2, Page 11	Section 3.2 does not include details regarding the Landfill Gas collection system expansion and 2020 odour complaints, as noted in Volume 1, Section 5.2.1.2.	MECP: Section 3.2 should include the additional information regarding the Landfill Gas collection system expansion and 2020 odour complaints that is provided in Volume 1, Section 5.2.1.2.	This information has been added to Volume IV, as requested
6	Volume IV D.01 Air Quality Existing Conditions and Impact Assessment Report, Section 5.2, Table 6, Page 22	Table 6 indicates that emissions from wind erosion for storage piles were calculated but considered negligible.	MECP: Section 5.2 should elaborate on how the storage pile emissions were calculated and determined to be negligible. This section should also describe the best management practices used to minimize wind erosion from storage piles. City: Wind erosion from stockpiles were calculated using emission factors from U.S. EPA Control of Open Fugitive Dust Source (EPA-45/3-88-008), September 1988, Page 4-17. However,	Further details have been added to section 5.2, as requested

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
			six of the eight onsite stockpiles, used for storing clay and topsoil, are seeded, which minimizes the surface area.	
7	Volume IV D.01 Air Quality Existing Conditions and Impact Assessment Report, Section 3.0, Table 1, Page 8	<p>It is unclear why the NO₂, O₃ and SO₂ CAAQS were converted from ppb to ug/m³. Although Section 2.1 of Appendix C indicates that regulatory criteria are established on the basis of ug/m³, the cumulative concentrations (background + predicted maximums) are not compared against O. Reg. 419/05 Schedule 3 standards.</p> <p>Appendix A, Section 2.1, Page 5 states that 25 degrees was used for the conversion. However, it appears that the O₃ 8-hour CAAQS was converted from ppb to ug/m³ using a temperature of 10 degrees Celsius, while the NO₂ and SO₂ 1-hour and annual CAAQS were converted using 25 degrees Celsius.</p>	<p>MECP: Please clarify what temperatures were used to convert background concentrations and CAAQS for NO₂, SO₂ and O₃. It is recommended to be consistent in the temperature used for conversion.</p> <p>City: Air dispersion models provide modelled concentrations in ug/m³. Therefore, CAAQS were converted from ppb to ug/m³ to allow for direct comparison of modelled concentrations to the CAAQS. The CAAQS for NO₂ and SO₂ were presented in ug/m³ in the work plan that</p>	The conversion of the 2025 O ₃ CAAQS (60 ppb) has been updated to use the same conversion temperature (25 degrees).

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
			was previously submitted and approved by MECP.	
8	Volume IV D.01 Air Quality Existing Conditions and Impact Assessment Report, Appendix B, Section 3, Table B-4. Page 7	Table B-4 states the landfill gas collection efficiency is 85% based on MECP recommendation.	MECP: Please clarify what MECP recommendation the table is referring to. City: As per comments from the MECP Environmental Permissions Branch, waste engineer further below in this table the objective in system design and operation is to achieve 85% efficiency. There is no reference document, but the waste unit has been using this value for a few years.	No changes proposed.
9	Volume IV D.01 Air Quality Existing Conditions and Impact Assessment Report, Appendix B, Section 3, Table B-4. Page 7	Table B-4 references that estimates are based on similar landfills for density of daily cover, average lane width and vehicle height for paved roads and average lane width for unpaved roads.	MECP: Please clarify which landfills were used for these estimates. City: Density of daily cover was estimated based on Golder's experience at similar landfills in Ontario and confirmed to be representative by the	Text has been added to Appendix B of Volume IV to clarify.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
			<p>City. Estimates of lane widths were provided by the City.</p> <p>Vehicle heights were estimated based on the types of vehicles using each road type, provided by City of London.</p>	
10	Volume IV D.01 Air Quality Existing Conditions and Impact Assessment Report, Section 3.3, Page 13	Section 3.3 states that “model predictions for most of the indicator compounds are presented as the highest value from any modelled receptor” for existing landfill emissions.	<p>MECP: Please clarify what is meant by “most” and confirm that this statement refers to values presented in Table 4.</p> <p>City: The values presented in Table 4 are the highest value for any modelled sensitive receptor following the removal of meteorological anomalies in accordance with section 6.5 of MECP guidance document “Air Dispersion Modelling Guideline for Ontario” dated February 2017, as indicated in footnote (c) of Table 4.</p>	No changes proposed.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
			<p>The only exception is odour which is presented at the 99.5%ile in Table 4. This is indicated in footnote (b) of the table. This approach for presenting odour results at the 99.5%ile is consistent with the guidance identified in MECP technical bulletin "Methodology for Modelling Assessments of Contaminants with 10- minute Average Standards and Guidelines of Odour under O.Reg. 419/05" dated September 2016.</p>	
11	Volume IV D.01 Air Quality Existing Conditions and Impact Assessment Report, Section 5.5, Page 25	<p>Section 5.5 states that the "Maximum predicted concentrations for the expansion scenario (that represents the maximum predicted concentration from Phase 2E, 4E or 8E) at the sensitive receptors are presented in Table 8."</p> <p>Table 8 does not indicate during which Phase and at which sensitive receptor the maximum predicted concentration reported occurred. Volume IV does not provide all the</p>	<p>MECP: Revise Table 8 to indicate during which phase and at which sensitive receptor the maximum predicted concentration from the proposed landfill expansion occurred. Include an appendix for Volume IV that shows all the maximum</p>	<p>Table 8 has been revised to indicate the location and phase during which the maximum predicted concentration occurs. The maximum predicted concentration of all compounds assessed are below the relevant Ontario AAQC, therefore a breakdown</p>

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
		maximum predicted concentration results for each sensitive receptor for each of the three/eight phases modelled for the indicator compounds/odour.	predicted concentrations for each sensitive receptor for each of the three/eight phases modelled for the indicator compounds/odour.	of maximum concentration by receptor has not been provided.
12	Volume IV D.01 Air Quality Existing Conditions and Impact Assessment Report	Volume IV should provide more details regarding how truck traffic will change with the landfill expansion.	MECP: Provide additional details in Volume IV regarding truck traffic during the landfill expansion. City: To represent the change in expected truck traffic associated with the landfill expansion the emissions and model assessment considered a truck trips and vehicles increase for the expansion phases of 20 to 25% as provided by the City and in alignment with the traffic study data. Additionally, the routes travelled on-site were updated based on the proposed landfill expansion. Further details of the vehicle	No changes proposed.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
			kilometres travelled per hour (VKT/hour) that were included in each modelling scenario are provided in Appendix B of Volume IV.	
13	Volume I, Table 11.3-1, Page 11-6.	Table 11.3-1 indicates that there are existing nearby sources of odour and a precedent of impact in the area. Therefore, a one-time monitoring event is suggested as well as more stringent controls around operational plans and mitigation measures. However, specifics regarding the monitoring event and more stringent controls are not provided.	MECP: Additional details should be included to address how cumulative effects on air quality and odour are being addressed through monitoring and more stringent controls. City: See response to comment 2.	See response to comment 2.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
MECP		Source Water Protection Branch	June 8, 2021	
1		The proposed site is not located in any type of vulnerable area for the protection of drinking water sources, and no changes from the ToR was reviewed in 2018.	MECP: No additional action required.	No changes required.
MECP		Environmental Permissions Branch, Senior Waste Engineer	June 8, 2021	
1	Volume I, Section 8.1.4.5, page 8-17.	The Draft EASR commits to a landfill gas collection efficiency of 60%;and MECP's current requirement is an efficiency of 85%.	MECP: Please work toward the MECP's current requirement for 85% for landfill gas collection efficiency. City: This section of the EASR assesses the efficiency of the current collection system operation, both prior to and after the 2020 collection system expansion. It estimates that prior to the 2020 collection system expansion, the collection efficiency was approximately 60%. However, the efficiency is expected to improve as the collection system is progressively	No changes required.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
			expanded. It is acknowledged that the objective in system design and operation is to achieve 85% efficiency.	
MECP		Southwest Region Technical Support Section, Surface Water Specialist		June 8, 2021
1	Draft EA	No further comments at this time.	MEPC: No additional action recommended.	No changes required.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
MECP		Environmental Permissions Branch, Senior Noise Engineer	June 8, 2021	
1	Volume I Section 5.2.2 Noise <i>Table 5.2 5: Predicted Existing Noise Levels</i>	Table 5.2-5: The listed six noise level columns do not comply with the guidance provided in the MECP 1998 Noise Guidelines for Landfill Sites. The existing road traffic noise levels should be derived from the maximum hourly L_{eq} sound levels with and without the landfill site off-site vehicles (trucks) from/to the landfill site. The existing landfill operations noise levels should be derived from the maximum day (7am – 7pm) and night (7pm – 7am) hourly L_{eq} sound levels due to landfilling operations.	MECP: The overall average noise level is incorrect and should be deleted from this table. The latter two column (from the right) should be replaced with the existing hourly maximum L_{eq} sound levels due to ancillary facilities. City: The existing average noise levels are related to the assessment of change from baseline due to the Project, which supports the EA. This information remains in the report but is presented separately from the MECP compliance assessment in accordance with MECP 1998 Noise Guidelines for Landfill Sites and Publication NPC-300 (MECP Compliance Assessment). Section 5.2.2 was updated to separate the MECP Compliance Assessment and the assessment of change to support the EA. For existing conditions related to the MECP Compliance Assessment, a table of existing noise levels along the haul route	Updated Section 5.2.2 of Volume I.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
			will be included, corresponding to the hour with the predicted maximum worst case impacts due to the Project.	
2	Volume I Section 7.2.1.1 Air Quality <i>Table 7.2-4: Air Quality Evaluation of 'Alternative Methods'</i>	Table 7.2-4: the use of relative criteria to compare Alternatives 1, 2 and 3 is incorrect.	MECP: The comparisons among these three alternatives should be based on the absolute (not relative) criteria of the MECP 1998 Noise Guidelines for Landfill Sites and Publication NPC-300. City: Based on this comment and the next comment (#3), the alternatives assessment has been updated to remove the assessment of potential change in noise level as a Differentiating Factor from Section 7.2.1.2, including Table 7.2-8 of Volume I.	Updated Section 7.2.1.2 of Volume I. EASR
3	Volume I Section 7.2.1.2 Noise <i>Table 7.2 9: Noise Evaluation of the 'Alternative Methods'</i>	Table 7.2-9: the use of the maximum potential change in noise level as a differentiating factor among Alternatives 1, 2 and 3 is incorrect as this is based on relative (not absolute) criteria which is not supported by the two MECP guidance documents noted above.	MECP: This row should be deleted from Table 7.2-9. City: The alternatives assessment has been updated to remove the potential change in noise level as a Differentiating Factor from Section 7.2.1.2 and Table 7.2-9 of Volume I.	Updated Section 7.2.1.2 and Table 7.2-9 of Volume I.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
4	Volume I Section 7.2.1.2 Noise <i>Table 7.2 10: Evaluation of Advantages and Disadvantages for Noise</i>	Table 7.2-10: the use of relative criteria to compare Alternatives 1, 2 and 3 is incorrect. The comparisons among these three alternatives should be based on the absolute (not relative) criteria of the MECP 1998 Noise Guidelines for Landfill Sites and Publication NPC-300.	MECP: This table is incorrect and should be deleted. City: The alternatives assessment has been updated to remove the potential change in noise level as a Differentiating Factor from Section 7.2.1.2, Volume I. Table 7.2-10 Volume I was updated accordingly.	Updated Table 7.2-10, Volume I.
5	Volume I Section 9.1.2.1 Compliance with MECP Guidelines <i>Table 9.1 8: Daytime Landfilling Operations Predictable Worst Case Noise Predictions</i>	Tables 9.1-8 and 9.1-9: the listed predicted sound levels should be based on the maximum (not average) day (7am – 7pm) and night (7pm – 7am) hourly L_{eq} sound levels.	MECP: Please update the tables. City: As stated in Section 9.1.2.1, Tables 9.1-8 and 9.1-9 provide a summary of the predictable worst case (i.e., maximum) one hour predicted noise levels for the landfill operation scenarios.	Updated table captions to include 'Worst Case One Hour Period Noise Predictions'.
6	Volume I Section 9.1.2.1 Compliance with MECP Guidelines <i>Table 9.1 11: Predicted Change in Noise Levels along Haul Routes</i>	Table 9.1-11: the existing traffic average noise level (2 nd column from the left) should be based on the hourly L_{eq} sound levels due to existing traffic without the existing traffic from/to the landfill site.	MECP: Please update the tables. City: Table 9.1-11 has been updated to include the existing traffic noise level with and without the existing landfill traffic, corresponding to the hour with the predicted maximum worst case impacts due to the Project.	Updated Table 9.1-11, Volume I.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
7	Volume I Section 9.1.2.1 Change from Existing Noise Levels <i>Table 9.1 12: Magnitude Ratings for Potential Noise Effects</i>	Table 9.1-12: the use of relative criteria to compare Alternatives 1, 2 and 3 is incorrect. The comparisons among these three alternatives should be based on the absolute (not relative) criteria of the MECP 1998 Noise Guidelines for Landfill Sites and Publication NPC-300.	MECP: This table is incorrect and should be deleted. City: Table 9.1-12 does not discuss the three alternatives; it provides the magnitude rating to support the assessment of potential noise impacts for the preferred expansion alternative. The assessment of relative change in noise level supports the EA. This information remains valid and is staying in the report but presented in a new section, separately from the MECP Compliance Assessment.	Updated Section 9.1.2, Volume I to further separate the assessment of change from the MECP Compliance Assessment.
8	Volume I Section 9.1.2.1 Change from Existing Noise Levels <i>Table 9.1 13: Predicted Daytime and Nighttime Noise Levels and Change from Baseline due to the Project</i>	Table 9.1-13: the use of relative criteria to compare Alternatives 1, 2 and 3 is incorrect. The comparisons among these three alternatives should be based on the absolute (not relative) criteria of the MECP 1998 Noise Guidelines for Landfill Sites and Publication NPC-300. Columns 2, 3, 4 and 6 (from the left) are incorrect.	MECP: Please update the table. City: Table 9.1-13 does not discuss the three alternatives; it is the assessment of potential noise impacts for the preferred expansion alternative. This information remains valid and is staying in the report, but presented in a new section separately from the MECP Compliance Assessment. The information related to permitting (i.e., worst- case one hour noise levels) is presented in Section 9.1.2.1, Volume I.	Updated Section 9.1.2, Volume I to further separate the assessment of change from the MECP Compliance Assessment.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
9	Volume I Section 9.1.2.1 Change from Existing Noise Levels <i>Table 9.1 16: Mitigated Predicted Daytime and Nighttime Noise Levels and Change from Baseline due to the Project</i>	Table 9.1-16: the use of relative criteria to compare Alternatives 1, 2 and 3 is incorrect. The comparisons among these three alternatives should be based on the absolute (not relative) criteria of the MECP 1998 Noise Guidelines for Landfill Sites and Publication NPC-300. Columns 2, 3, 4 and 6 (from the left) are incorrect.	MECP: Please update the table. City: Table 9.1-16 does not discuss the three alternatives; it is the assessment of potential noise impacts for the preferred expansion alternative. This information remains valid and is staying in the report, but presented in a new section separately from the MECP Compliance Assessment. The information related to permitting (i.e., worst- case one hour noise levels) is presented in Tables 9.1-14 and 9.1-15, Volume I.	Updated Section 9.1.2, Volume I to further separate the assessment of change from the MECP Compliance Assessment
10	Volume I Section 7.2.1.1 Air Quality <i>Figure 7.2-1 Air and Noise Evaluation and Comparison of Landfill Expansion Alternatives</i>	Figure 7.2-1: this figure should show the heights and lengths of the property line earthen berms.	MECP: Please update. City: This was added to the figure.	Figure 7.2-1, Volume I was updated
11	Volume I Section 9.1.2.3 Additional Mitigation Measures <i>Figure 9.1 3: Mitigation at Existing Point of Reception R15</i>	Figure 9.1-3: this figure should indicate the height and length of the earthen berm installed to shield point of reception R15 from the landfill site operations / equipment.	MECP: Please update the table. City: This was added to the figure representing a single potential scenario (i.e., operating location of equipment).	Figure 9.1-3, Volume I was updated

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
12	Volume I Section 9.1.2 Noise <i>Figure 9.1 2: Noise Study Areas and Points of Reception</i>	Figure 9.1-2: the number of this figure is incorrect (5.2-4).	MECP: Please update the table. City: The figure number was updated.	Figure number of Figure 9.1-12, Volume I was updated
13	Volume IV Appendix D.02 Noise Existing Conditions and Impact Assessment Report	Table 1 (page 142/1674): this table lists 11 points of reception used in the noise assessment.	MECP: Provide justification / explanation for not including the remaining numerous points of reception identified in Figure 1 (page 170/1674). City: The most sensitive points of reception in each cardinal direction from the landfill were considered. This justification was added to the report.	Text was added above Table 1, Volume IV Appendix D.02.
14	Volume IV Appendix D.02 Noise Existing Conditions and Impact Assessment Report	Page 146/1674: It was assumed that the landfilling operations scenarios do not occur concurrently.	MECP: Provide justification for this assumption. City: This information was provided by the City of London.	The text was updated to include "Based on information from the City, ...".
15	Volume IV Appendix D.02 Noise Existing Conditions and Impact Assessment Report	RLS-90: this software was used for prediction of road traffic noise. The use of RLS-90 software for road traffic noise predictions is not acceptable to MECP. Acceptable software includes STAMSON and TNM 3.0.	MECP: Please update with the requested information. City: It is our experience that RLS-90 is acceptable to be used for EA purposes. Regardless, the road prediction modelling was updated using ORNAMENT.	Road modelling assessment was updated, including results and supporting text in both Section 9.1.2, Volume 1 and in Appendix D.02

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
16	Volume IV Appendix D.02 Noise Existing Conditions and Impact Assessment Report	Table 6 (page 148/1674): see comment above regarding the use of RLS-90 for road traffic noise predictions.	MECP: Please update with the requested information. City: The road prediction modelling was updated using ORNAMENT.	Table 6, Volume IV Appendix D.02 was updated to remove reference to RLS-90.
17	Volume IV Appendix D.02 Noise Existing Conditions and Impact Assessment Report	Table 7 (page 150/1674): the existing traffic volumes (column 3 from the left) should not include the existing volumes of off-site vehicles from/to the landfill site.	MECP: Please update with the requested information. City: Table 7 was updated in the MECP Compliance Assessment to include the existing traffic volumes without the existing landfill traffic.	Table 7, Volume IV Appendix D.02 was updated
18	Volume IV Appendix D.02 Noise Existing Conditions and Impact Assessment Report	Table 8 (page 151/1674): the use of relative criteria to compare Alternatives 1, 2 and 3 is incorrect. The comparisons among these three alternatives should be based on the absolute (not relative) criteria of the MECP 1998 Noise Guidelines for Landfill Sites and Publication NPC-300.	MECP: This table is incorrect and, thus should be changed to be based on the absolute (not relative) criteria for three alternatives comparison. City: Table 8 does not discuss the three alternatives; it is the assessment of potential noise impacts for the preferred expansion alternative. This information was removed and presented in a separate report from the MECP Compliance Assessment.	The noise assessment related to change from existing noise levels was removed and presented in a separate report from the MECP Compliance Assessment.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
19	Volume IV Appendix D.02 Noise Existing Conditions and Impact Assessment Report	Table 12 (page 156/1674): the listed six noise level columns do not comply with the guidance provided in the MECP 1998 Noise Guidelines for Landfill Sites. The existing road traffic noise levels should be derived from the maximum hourly L_{eq} sound levels with and without the landfill site off-site vehicles (trucks) from/to the landfill site. The existing landfill operations noise levels should be derived from the maximum day (7am – 7pm) and night (7pm – 7am) hourly L_{eq} sound levels due to landfilling operations.	MECP: The overall average noise level is incorrect and should be deleted from this table. The latter two column (from the right) should be replaced with the existing hourly maximum L_{eq} sound levels due to ancillary facilities. City: The existing average noise level is related to the assessment of change from baseline, which supports the EA. This information was removed and presented in a separate report from the MECP Compliance Assessment.	The noise assessment related to change from existing noise levels was removed and presented in a separate report from the MECP Compliance Assessment
20	Volume IV Appendix D.02 Noise Existing Conditions and Impact Assessment Report	Table 6 (page 160/1674) the existing traffic average noise level (2nd column from the left) should be based on the hourly L_{eq} sound levels due to existing traffic without the existing traffic from/to the landfill site.	MECP: Please update with the requested information. City: Table 16 was updated to include the existing traffic noise level without the existing landfill traffic, corresponding to the hour with the predicted maximum worst case impacts due to the Project.	Table 16, Volume IV Appendix D.02 was updated

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
21	Volume IV Appendix D.02 Noise Existing Conditions and Impact Assessment Report	<p>Table 17 (page 161/1674): the use of relative criteria to compare Alternatives 1, 2 and 3 is incorrect. The comparisons among these three alternatives should be based on the absolute (not relative) criteria of the MECP 1998 Noise Guidelines for Landfill Sites and Publication NPC-300.</p> <p>Columns 2, 3, 4 and 6 (from the left) are incorrect.</p>	<p>MECP: Please update with the requested information.</p> <p>City: Table 17 does not discuss the three alternatives; it is the assessment of potential noise impacts for the preferred expansion alternative. However, the overall average noise level is related to the assessment of change from baseline, which supports the EA. This information was removed and presented in a separate report from the MECP Compliance Assessment.</p>	<p>The noise assessment related to change from existing noise levels was removed and presented in a separate report from the MECP Compliance Assessment.</p>
22	Volume IV Appendix D.02 Noise Existing Conditions and Impact Assessment Report	<p>Section 7.2 (page 161/1674): the description of the specified mitigation measures (berms) is not clear.</p>	<p>MECP: Provide figures to scale to show the locations, extents, heights and lengths of the recommended mitigation measures (berms) for Phase 1E, Phase 2E, Phase 5E and Phase 7E.</p> <p>City: Additional figures were prepared similar to Figure 2 for the other landfill phases where mitigation is required. Details of the berms have been shown on the figures representing a single potential scenario (i.e., operating location of equipment) for each phase.</p>	<p>Figure 2, Volume IV Appendix D.02 was updated and additional figures were developed</p>

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
23	Volume IV Appendix D.02 Noise Existing Conditions and Impact Assessment Report	Table 20 (page 164/1674): the use of relative criteria to compare Alternatives 1, 2 and 3 is incorrect. The comparisons among these three alternatives should be based on the absolute (not relative) criteria of the MECP 1998 Noise Guidelines for Landfill Sites and Publication NPC-300. Columns 2, 3, 4 and 6 (from the left) are incorrect.	MECP: Please update with the requested information. City: Table 20 does not discuss the three alternatives; it is the assessment of potential noise impacts for the preferred expansion alternative. However, the overall average noise level is related to the assessment of change from baseline, which supports the EA. This information was removed and presented in a separate report from the MECP Compliance Assessment.	The noise assessment related to change from existing noise levels was removed and presented in a separate report from the MECP Compliance Assessment.
24	Volume IV Appendix D.02 Noise Existing Conditions and Impact Assessment Report	Section 11.0 (page 166/1674): The second criteria used an assessment of changes to noise levels relative to existing noise levels at the most sensitive PORs within the Site-vicinity Study Area. The use of the second criteria (i.e. relative criteria) to compare Alternatives 1, 2 and 3 is incorrect. The comparisons among these three alternatives should be based on the absolute (not relative) criteria of the MECP 1998 Noise Guidelines for Landfill Sites and Publication NPC-300.	MECP: Please update with the requested information. City: Section 11 does not discuss the three alternatives; it is the assessment of potential noise impacts for the preferred expansion alternative. However, the assessment of change in noise level from baseline supports the EA. This information was removed and presented in a separate report from the MECP Compliance Assessment.	The noise assessment related to change from existing noise levels was removed and presented in a separate report from the MECP Compliance Assessment.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
25	Volume IV Appendix D.02 Noise Existing Conditions and Impact Assessment Report	Figure 1 (page 170/1674): this figure should show the heights and lengths of the property line earthen berms.	MECP: Please update with the requested information. City: This was added to the figure.	Figure 1, Volume IV Appendix D.02 was updated
26	Volume IV Appendix D.02 Noise Existing Conditions and Impact Assessment Report	Figure 2 (page 171/1674): this figure should show the length and height of the earthen berm installed to shield point of reception R15 from the landfill site operations / equipment.	MECP: Please update with the requested information. City: This was added to the figure representing a single potential scenario (i.e., operating location of equipment).	Figure 2, Volume IV Appendix D.02 was updated

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
MECP		Southwest Region Technical Support Section, Groundwater Specialist		June 8, 2021
1	Vol. I, Section 7.2.2, pg 7-17	The subsection "Maximum Thickness of Waste" does not mention the potential for increased leachate mounding within the landfill footprint.	<p>MECP: This section should be amended to note that a greater thickness of waste will also lead to greater leachate mounding within the landfill footprint. An increased leachate mound height will increase the downward hydraulic gradient, potentially increasing the rate of leachate migration through the surficial aquitard. An increased leachate mound height also increases the risk of leachate breakouts to ground surface along the side slopes of the landfill.</p> <p>City: It is agreed that the greater thickness of waste can potentially increase the height of the leachate mound within the Phase 1 area that is not underlain by a leachate collection system, which can potentially increase the rate of downward leachate migration in the subsurface below the landfill and potentially increase leachate breakouts. However, Section 6.1 describes that the design of the expansion alternatives will include perimeter finger drains for the Phase 1 area to control leachate breakout; as such the greater waste thickness is</p>	Section 7.2.2 was updated to describe that the greater thickness of waste can potentially increase the height of the leachate mound within the Phase 1 area that is not underlain by a leachate collection system, which can potentially increase the rate of downward leachate migration in the subsurface below the landfill and leachate breakout.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
			not expected, in this case, to appreciably increase the potential for leachate breakout.	
2	Vol I. Section 7.2.2, pg 7-17	The subsection "Waste Footprint Configuration Relative to Groundwater Flow Direction" should also indicate that a smaller footprint would be preferred.	<p>MECP: For clarity, this section should note that the key parameter is the length of the landfill footprint in the direction parallel to the direction of groundwater flow. (i.e., a longer groundwater flow path under the landfill footprint will lead to greater peak concentrations in the leachate plume). All else being equal, a smaller landfill footprint should be preferred.</p> <p>City: It is considered that the description of this factor in the EASR accurately describes the content of the reviewer's comment, noting that the description in the EASR refers to the length of the landfill perpendicular to the groundwater flow direction rather than the parallel direction. This factor is not related to the size of the landfill footprint, so it is not considered appropriate to describe a preference related to landfill size, nor is it considered necessary to add a separate factor related to landfill footprint size (which would not change the identification of the preferred alternative in terms of groundwater quality). Based on the discussion of length parallel and perpendicular to</p>	Updates to Table 7.2-11 and 7.2-12 were made as a result of this discussion.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
			groundwater flow, the ranking of the Alternatives with respect to the factor 'configuration of the waste footprint area for placement of waste in the expansion' has been updated.	
3	Vol I, Table 7.2-11, pg 7-18	In the second row of Table 7.2-11 (Waste Footprint Configuration), Alternative 1 should be ranked as the most preferred option.	MECP: As per the previous comment, for the waste footprint configuration (2 nd row in the table), the option with a smaller total area should be preferred. The table should be edited to list Alternative 1 as the most preferred option. Since the other two options have a similar waste footprint area, Alternative 3 would be ranked above Alternative 2 because the long axis of the footprint is oriented perpendicular to the groundwater flow direction. City: See response to previous comment regarding consideration of the size of the waste footprint.	Updates to Table 7.2-11 and 7.2-12 were made as a result of this discussion.
4	Vol I, Section 8.1.2.1, pg. 8-6	The description of the proposed leachate collection system does not include a discussion of the proposed combined leachate/gas collectors to be installed on the existing surface of Phase 1.	MECP: This section should refer to the proposed mitigation measures detailed in Section 9.2.3 (pg 9.28) City: The description of the landfill expansion design provided in Section 8, including Section 8.1.2.1 On-site Leachate Management Systems, is the description of the proposed expansion and its components used as the basis for the detailed impact assessment, the results of which are	No changes required.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
			<p>provided in Section 9.0 of the EASR. The need for the combined leachate mound control/LFG collection system on the Phase 1 area was only determined subsequently from the results of the detailed impact assessment of potential effects on groundwater quality compliance, as described in Sections 9.2.1 and 9.2.3. As such, it is not considered appropriate to describe or refer to the proposed leachate mound control/LFG collection system in Section 8.1.2.1. The City's commitment to install this system is stated in the EA Commitments Table 13-2, commitment M.</p>	
5	<p>Vol IV, D.03 Groundwater Existing Conditions and Impact Assessment Report, Attachment A (Existing Groundwater Conditions – Dillion Consulting Limited), Figures 6 & 7, pg 29)</p>	<p>The stable isotope data presented on the figures do not appear consistent with the laboratory report provided in Appendix G. The data presented on the laboratory report does not indicate a consistent pattern of increasingly depleted $\delta^{18}\text{O}$ and $\delta^2\text{H}$ with depth.</p>	<p>MECP: The isotope data presented in the figures should be checked against the raw laboratory data and corrected if required. The interpretations and conclusions presented in Section 4.8 of the report should be updated if required.</p> <p>A thorough QA/QC check should be made to confirm that all data presented in tables and figures is accurate.</p> <p>City: The comment is correct and the interpretation of isotope will be modified to reflect the actual data. The travel time through the upper</p>	<p>Changes have been made in Volume IV, D.03, Attachment A regarding the interpretation of the isotope results.</p>

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
			<p>aquitard has been estimated to be in the order of 500 years. The previous isotope data interpretation that erroneously had increasing depletion with depth suggested that the groundwater “age” was greater than 500 years. The lack of increasing isotope depletion with depth is consistent with a 500 year travel time and therefore is not inconsistent with the hydrogeological conceptual model of groundwater movement at the site. A QA/QC check has been completed and there are no additional changes beyond the isotope results discussion.</p>	
6	<p>Vol IV, D.03 Groundwater Existing Conditions and Impact Assessment Report, Attachment B (Groundwater Impact Assessment – Golder Associates Ltd., Section 3.0 pg 4 - 24</p>	<p>The POLLUTE model did not include a sensitivity analysis to evaluate the uncertainty in these modelling projections. Any uncertainty in these estimates may have significant implications for the selected mitigation measures given that the projected chloride concentrations were very close to the Reasonable Use criteria.</p>	<p>MECP: It is recommended that a sensitivity analysis be completed to evaluate the uncertainty in the modelling projections. Additional work may be required to refine key model input parameters before making a final decision on the design and implementation of additional mitigation measures.</p> <p>City: A sensitivity analysis was completed although not explicitly presented in a separate section of the groundwater impact assessment report, Volume IV, Appendix D.03. Typically for landfill expansions there is one cross-section considered through the centre of the landfill</p>	<p>No changes proposed.</p>

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
			<p>expansion where hydrogeological and waste characteristics are approximated to represent the entire landfill. Within Volume IV, Appendix D.03, three cross-sections were evaluated to model the variability in hydrogeological characteristics (i.e., the soil layer thicknesses and piezometric levels) and variation in waste thickness. These three cross-sections provided the required sensitivity analysis. Additionally, for the W12A landfill one of the hydrogeological characteristics of most interest is the hydraulic conductivity of the fractured Surficial Aquitard. There has been evidence that the fractured Surficial Aquitard experiences healing and/or clogging of the fractures thereby not providing a preferred pathway for leachate migration or higher hydraulic conductivity. Despite this evidence, the team decided to conservatively apply a higher hydraulic conductivity to this unit, thereby making the overall model conservative.</p>	

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
7	Vol I, Section 12.1.2, pg 12-3	The proposed groundwater monitoring program does not include monitoring wells installed in the upper weathered/fractured surficial till aquitard.	<p>MECP: Section 12.2.1 of the report identifies horizontal migration of leachate or leachate impacted groundwater through the upper fractured clay till zone as a potential mechanism of off-site contamination; however, this unit is not currently monitored by the existing monitoring well network. Consideration should be given to installing additional monitoring wells within the shallow fractured till at key locations around the landfill perimeter.</p> <p>City: The proposed groundwater monitoring program provided in Section 12.1.2 of the EASR does include one fractured clay till monitor, 00-7a, although it is within the waste. The proposed groundwater monitoring program did not include additional upper fractured clay till aquitard monitoring wells. This has not been considered necessary in view of the distance from the footprint to the landfill property boundary, and the on-site buffer distance will be increased on the north (300 m) and east (100 m) sides of the footprint. In addition, there is infrastructure within the south buffer (i.e., leachate forcemains) that would be expected to impede/ intercept leachate migration though</p>	Section 12.1.2 of the EASR was modified to state that monitoring wells will be installed in the upper fractured clay till zones at key locations on the east and/or south sides of the Phase 1 area, with the details to be determined and proposed as part of the subsequent EPA approvals process for the expansion. A commitment in this regard was added in Table 13-2 in Section 13 of the EASR.

#	Reference to EA	Comments & Rationale	Proposed Action / Solution	Changes to the EASR
			<p>the upper fractured clay till to the south property line. However, without monitoring wells in this upper zone it will not be possible to determine the need for contingency measures in this groundwater zone. It is proposed to modify the groundwater monitoring program description in Section 12.1.2 of the EASR to state that monitoring wells will be installed in the upper fractured clay zones at key locations on the east and/or south sides of the Phase 1 area, with the details to be determined and proposed as part of the subsequent EPA approvals process for the expansion. A commitment in this regard will be added in Table 13-2 in Section 13 of the EASR.</p>	

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
	MECP	Environmental Assessment Program Support – Indigenous Advisor		June 10, 2021
1	Vol I, Section 4.6.6, p. 4-10 and Vol V, Appendix H.01	It is not evident that all communities received letters or emails at the end (December) of 2018. Records for five communities only are included in Appendix H.01 of Vol V.	MECP: Please include all relevant records in the Record of Consultation. It is recommended that the name of the community not be redacted from these records. City: In December 2018 the City contacted Indigenous communities who, during the EA, 1) requested future meeting/input in response to receiving the Proposed ToR (AFN, Oneida and WIFN), 2) had previously met with the City (COTTEN), or 3) was close to the W12A Landfill (Munsee).	Section 4.6.6 of EASR was revised to include rationale for why only five communities were contacted in December 2018. Community names in Appendix H.01 of Vol V will not be redacted.
2	Vol I, Section 4.6.6, p. 4-10	It is not clear why Moravian of the Thames did not receive the April 23, 2019 email update.	MECP: Please indicate why Moravian of the Thames did not receive this email, and/or if the community received any follow-up/related correspondence. City: Section 4.6.6 of the EASR notes that the Moravian of the Thames did not receive the April 23, 2019 email. This was an error on the City's part, and they should have received the email. The email provided an update on the EA process. Moravian of the Thames received all future communications.	No change required.

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
3	Vol I, Section 4.7.3, p. 4-22 and Vol V	<p>Comment-response tables should include issues raised at all the meetings and workshops with Indigenous communities (e.g., archaeological monitors, replanting with native vegetation, fires, leachate treatment, landfill gas, surface water/Thames River, groundwater).</p>	<p>MECP: The summary of comments and responses in Section 4.7.3 should include all key issues raised by Indigenous communities through all consultation activities conducted throughout the EA. Please be sure to include all comments received from Indigenous communities on the draft EASR in the record of consultation for the final EASR, and also include a summary of all key issues raised and responses to them in Section 4.7.3.</p> <p>City: There were many topics discussed at the various meetings and workshops held with the Indigenous communities. Many of the topics raised by the Indigenous communities were for information gathering purposes and to better understand the process. Sometimes, during the discussions of these topics, a request for additional information or action by the City was requested. These additional actions to be taken by the City are noted in the EASR in various section but should have been included in Section 4.7.3.</p>	<p>Section 4.7.3 in the EASR was changed to Section 4.7.44 and has been revised to include all issues raised and agreements made to the Indigenous communities during the various meetings and workshops held with them.</p>

#	Reference to draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
4	Vol V, Appendix H.12; Overall	The summary report for workshop #2 does not include any comments, questions, etc. raised by community members during the workshop.	Please be sure to include all input (comments, questions and concerns) received from Indigenous communities in the record of consultation for the final EASR, and summarize it in the body of the EASR, including how key issues have been or will be addressed.	See response to comment 3.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How to be Addressed in the EA
	MECP	Species at Risk Branch, Management Biologist		June 22, 2021
1	Volume IV, D.05 Biology Existing Conditions and Impact Assessment Report	<p>SARB understands that the following Species at Risk have been identified as present on the Study Lands (as identified in the report) or likely to be present:</p> <ul style="list-style-type: none"> • SAR bats (endangered) – receive species and general habitat protection • Bank Swallow (threatened) – receives species and general habitat protection • Barn Swallow (threatened) – receives species and general habitat protection • Bobolink (threatened) – receives species and general habitat protection • Eastern Meadowlark (threatened) – receives species and general habitat protection <p>MECP understands that the proposed project involves vertical expansion of the existing landfill and while this expansion may not impact potential SAR bat habitat, impacts to SAR grassland birds (Bobolink and Eastern Meadowlark) and their habitat are expected to occur.</p>	<p>MECP: MECP understands there will be further consultation with Species at Risk Branch regarding impacts to SAR grassland birds and requirements under the Endangered Species Act, 2007.</p> <p>City: Agreed. The specific permitting requirements for SAR grassland birds affected by the Construction and Operations Stages of the proposed landfill expansion will be addressed as a part of Detailed Design.</p>	No changes required.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How to be Addressed in the EA
2	Volume IV, D.05 Biology Existing Conditions and Impact Assessment Report, Sections 5.1 and 5.2 ()	Section 5.1 – Construction Phase and Section 5.2 – Operations Phase (Mitigation of Direct Impacts to Species at Risk and Wildlife) should include appropriate mitigation measures for Bank Swallow (e.g. grading stockpile faces to avoid nesting). The Best Management Practices for the Protection, Creation and Maintenance of Bank Swallow Habitat in Ontario (OMNRF 2017) outlines appropriate mitigation measures for this species and should be referenced in the report.	MECP: Please update. City: We agree that mitigation measures such as stockpiles and other exposed faces should be graded to prevent nesting of bank swallows. The intent is to include such recommendations in the Environmental Monitoring and Mitigation Plan (EMMP). We can provide reference to the MNRF (2017) Best Management Practices for the Protection, Creation and Maintenance of Bank Swallow Habitat in Ontario in the Biology Report and EASR to ensure that the appropriate BMPs are included in future protocols and documents.	Provided a reference to the Best Management Practices for the Protection, Creation and Maintenance of Bank Swallow Habitat in Ontario (2017) in the Biology Report and in the relevant section(s) of the EASR.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
	Upper Thames River Conservation Authority (UTRCA)	Land Use Regulations Officer		June 24, 2021
1	Volume I, Section 13.2	<p>UTRCA acknowledges that watercourse and flood plain alteration will result from the implementation of the preferred alternative to accommodate the necessary improvements and meet future landfill capacity requirements. Prior to any site alteration and construction, a complete UTRCA Section 28 permit application package will be required that will include the following:</p> <ul style="list-style-type: none"> • Section 28 Permit Application - application_for_consent.indd (thamesriver.on.ca) • Section 28 Permit Fee - to be determined based on the detailed site plan/proposal - Upper Thames River Conservation Authority Fees Policy • Site plan and Project Drawings • Comprehensive compensation plan that provides an overall net environmental benefit as a result of the loss of any regulated watercourses/features. Compensation plan shall be based on the technical and ecological studies that identify and confirm the extent of the existing features and functions on the landscape and shall be consistent with the draft UTRCA Environmental and Ecological Offsetting Policies • No negative impacts shall be incurred to the adjacent locally significant wetlands, supported by technical studies (EIS, water balance, hydroG) 	<p>City: Acknowledged. Section 13.2 of the EASR Volume I outlines the need to engage UTRCA in assessment and requirements of a Section 28 permit application package.</p>	No change suggested.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
	Kettle Creek Conservation Authority (KCCA)	Comment on Draft Terms of Reference (ToR)		May 25, 2021 requested update how ToR comments addressed
1	Volume II Amended Terms of Reference (ToR)	If any of the proposed expansion alternatives encroach into the Kettle Creek Conservation Authority's regulation limit, further review by KCCA will be required to determine whether a permit under Section 28 of the Conservation Authorities Act must be obtained prior to undertaking such works. KCCA must be satisfied that any works proposed within its regulatory jurisdiction will not have an effect upon flooding, erosion, dynamic beach, pollution or the conservation of land. Further information regarding KCCA's permitting procedures and matters related to the regulation can be obtained by contacting Joe Gordon, KCCA's Director of Operations at 519-631-1270 ext. 226 or by email at joe@kettlecreekconservation.on.ca .	Response in Final ToR (Volume III of ToR, Pages 1299 -1303): Acknowledged. Section 9.4 of the proposed ToR speaks to the need for a KCCA permit if the preferred 'Alternative Method' for the landfill expansion requires the construction in or alteration of a watercourse within KCCA jurisdiction.	See Draft EASR, Volume I, Section 13.2 Other Approvals (page 13-12). It is stated "While the proposed W12A Landfill expansion area does not directly overlap with the Regulation Limits for the UTRCA and the KCCA, it does immediately abut limits for both authorities. It will, therefore, be prudent to engage both the UTRCA and KCCA in discussions to determine the potential requirements for a Section 28 Permit under the Ontario Regulation 157/06 (UTRCA) and Ontario Regulation 181/06 (KCCA) under the <i>Conservation Authorities Act</i> ."

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
2	Volume II Amended ToR	That the existing aquatic environmental conditions in the study area are thoroughly monitored and assessed using acceptable methods. This information would then be used to characterize the receiving watercourses and mitigate potential adverse effects and water quality impairment of the downstream environment of the receiving water bodies in the Dodd Creek subwatershed. This data could also be used to identify environmental goals and objectives to help guide various states of the proposed expansion. KCC recommends that the Watershed Report Cards (2013 and 2018) and the 2008 Kettle Creek Watershed Characterization Report (prepared by the Lake Erie Source Water Protection Region) be included as sources of information to contribute to the characterization process.	Response in Final ToR (Volume III of ToR, Pages 1299 -1303): Acknowledged.	See Draft EASR, Volume I, Table 3.3-1: Components, Rationale, Indicators and Data Sources for the EA (Pages 3-7 and 3-8). Table 3.3-1 lists potential data sources to be consulted for the surface water assessment. Data sources include "Watershed/subwatershed reports, including the Watershed Report Cards (2013 and 2018) and the 2008 Kettle Creek Watershed Characterization Report."

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
3	Volume II Amended ToR	That the City investigate potentially implementing a long term water quality monitoring program for the three surface water features that convey runoff from the W12A Landfill property to downstream receiving water systems within the Dodd Creek subwatershed. This monitoring program could include surface water quality and benthic community data collected during and post closure of the landfill under the technical review and direction of the MOECC.	<p>Response in Final ToR (Volume III of ToR, Pages 1299 -1303):</p> <p>At present the City has a surface water monitoring program for the existing landfill within the stormwater management ponds and at locations where surface water leaves the landfill property. This program has been modified over the years and the results reviewed annually by the MECP. A trigger mechanism has been developed such that if leachate or spills are released to the surface water bodies, actions are taken before the situation approaches levels of environmental concern. The surface water program conducted remains in compliance with the MECP approved trigger mechanism. It is the City's understanding that the MECP typically only</p>	<p>The existing and proposed surface water quality monitoring program for the W12A Landfill can be found in the Draft EASR, Volume I, Section 12.1.3 Surface Water (pages 12-9 to 12-11).</p> <p>The proposed surface water monitoring program does not include benthic monitoring. One-time benthic monitoring undertaken as part of the EA existing conditions surveys can be found in the Biology Report by AECOM in Volume III of the Draft EASR. The results of the benthic monitoring are summarized in Table 4: Benthic Water Quality Indices Results (page 20) and the complete benthic invertebrate sampling results are provided in the StraightUp Environmental Consulting W12A Landfill</p>

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
			requests benthic monitoring when a perceived discharge or impact has or is occurring. As this is not the case for the existing W12A landfill, monitoring water quality off of the landfill property is not considered warranted as part of the EA study or future monitoring programs. For the same reason stated above, benthic monitoring is not considered required; however, benthic monitoring will be included in the aquatic biology assessment during the EA.	Benthic Water Quality Report in Appendix E.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
4	Volume II Amended ToR	<p>That the rate of discharge into the Dodd Creek subwatershed be monitored/ controlled to mitigate any negative effects due to an already negatively impacted water system. In addition, the effects of climate change have been felt in recent months with an increase in the number and severity of intense storm systems affecting the region, resulting in an increase in high water/flooding events throughout the watershed. To this end, new storm water management ponds built to accommodate the surface water runoff created by the proposed expansion should be properly engineered to mitigate the effects of climate change.</p>	<p>Response in Final ToR (Volume III of ToR, Pages 1299 -1303)</p> <p>Acknowledged. The City will evaluate pre and post landfill expansion development stormwater flows such that the rate of discharge post landfill expansion should be the same or less than the pre landfill expansion rate of discharge.</p> <p>Section 7.5.7 of the proposed ToR indicates that as per Ontario Regulation 232/98 Landfill Standards, the stormwater management facilities will be designed to accommodate a 100 year storm. This section goes on to indicate that to consider climate change, the preferred 'Alternative Method' will also include stormwater management evaluation for a 250 year storm. Depending on the results of this climate change</p>	<p>Information on the proposed stormwater management system for the proposed expanded landfill can be found in the Stormwater Management Report by Golder in Volume IV of the Draft EASR including the analysis of the pond design performance considering climate change for the 250-year storm.</p> <p>Estimated pre-development and proposed peak flow rates for proposed stormwater management ponds can be found in Table 3 (Pond #1), Table 5 (Pond 2/3), Table 7 (Pond 4) and Table 9 (Pond 5).</p>

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
			analysis, the stormwater management requirements may have to change for the preferred 'Alternative Method'.	
5	Volume II Amended ToR	That the existing groundwater monitoring program be expanded to include the proposed expansion area and that all potential contaminants be considered as part of a comprehensive monitoring program under the technical direction of the MOECC.	Response in Final ToR (Volume III of ToR, Pages 1299 -1303) The City notes that the existing groundwater monitoring program already includes the proposed expansion area and potential contaminants and is being completed and reported to the MOECC annually.	The proposed groundwater quality monitoring program for the W12A Landfill can be found in the Draft EASR, Volume I, Section 12.1.2 Geology and Hydrogeology.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
6	Volume II Amended ToR	That the Draft Proposed Terms of Reference for the Environmental Assessment for the Proposed W12A Landfill Expansion be circulated to the Elgin Area Primary Water Supply System (EAPWSS) for inclusion in their risk registry and possible assessment for Source Protection planning purposes. Additional discharge to the Dodd Creek subwatershed, even if it is surface water runoff, could have a negative impact on the drinking water system located downstream (e.g., storm water management pond failure, leachate spill, etc.).	<p>Response in Final ToR (Volume III of ToR, Pages 1299 -1303)</p> <p>The City will circulate the proposed ToR to the EAPWSS for inclusion in their risk registry and possible assessment for Source Protection planning purposes.</p> <p>The EA study will assess potential impacts on surface water in the reaches in proximity to and downstream of the site. Mitigation measures will be developed, as required, to protect the surface water quality from adverse effects. This approach also provides protection for surface water used for a drinking water system located much further downstream, noting there are many runoff sources that contribute to the stream flow</p>	The Draft EASR has been forwarded to EAPWSS for inclusion in their risk registry and possible assessment for Source Protection planning purposes.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
			between the W12A Landfill and the water system intake.	
7	Volume II Amended ToR	<p>If a spill is reported to the MOECC Spills Action Centre that affects water courses that drain into the Dodd Creek subwatershed (and eventually out to Lake Erie), that KCCA and the Elgin Area Primary Water Supply System (EAPWSS) is included in that circulation and details regarding the spill is shared (i.e., date, time, amount, status etc.). A suggested procedure for downstream notification in the event of a spill would be:</p> <ul style="list-style-type: none"> a. Spills Action Centre b. Kettle Creek Conservation Authority. Primary contact for spills reporting to KCCA would be Jennifer Dow, water conservation supervisor (519-280-1631), jennifer@kettlecreekconservation.on.ca c. Elgin Area Primary Water Supply System. Primary contact for spills reporting to EAPWSS would be the duty officer at the Water Treatment Plant-Control Room (519-782-3101) and Andrew Henry (519-930-3505, ext1355, ahenry@HuronElginWater.ca) 	<p>Response in Final ToR (Volume III of ToR, Pages 1299 -1303)</p> <p>Acknowledged. The City will keep a record of these contacts with its design and operations report at the landfill.</p>	The City had added KCCA and EAPWSS to their spills contact list.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
KCCA		Other Requests	May 25, 2021	
	Other Requests	The KCCA and EAPWSS receive copies of the environmental monitoring data for the W12A Landfill.	The KCCA and EAPWSS will be forwarded the landfill's Annual Status Report each year going forward. The Annual Status report contains all environmental monitoring data for the year.	This comment and response will be included in the final EASR Volume V Consultation Log. A commitment has been added to Table 13-2 in Volume I.
KCCA		Water Conservation Supervisor	July 9, 2021	
1	Volume II Amended ToR	Questions and comments raised during the review of the Draft Terms of Reference (ToR) and have been sufficiently addressed in the Final ToR and Draft Environmental Assessment Study Report (EASR) and have been provided in a summary table that will be included in the final EASR Volume V Consultation Log.	Acknowledged.	No changes required.
2	Volume I Section 13.2 - Other Approvals	While the proposed W12A Landfill expansion area does not directly overlap with the Regulation Limits for the KCCA, it does immediately abut the limits. Therefore, it would be prudent to continue to engage KCCA in discussions to determine the potential requirements for a Section 28 Permit of the Conservation Authorities Act prior	As described in Volume I Section 13.2 - Other Approvals, the City of London intends to engage in discussion with the KCCA to determine if there are any permit requirements associated with	No changes required.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
		to undertaking such works. KCCA must be satisfied that any works proposed within its regulatory jurisdiction will not have an effect upon flooding, erosion, dynamic beach, pollution or the conservation of land. Further information regarding KCCA's permitting procedures and matters relating to the regulation can be obtained by contacting Joe Gordon, KCCA's Director of Operations at 519-631-1270 ext.226 or by email at joe@kettlecreekconservation.on.ca.	implementing the expansion. The City of London appreciates the KCCA providing the contact information for this engagement.	
3	Volume IV Appendix D.04 Surface Water Existing Conditions and Impact Assessment Report	Volume 4 page 474 indicates that under existing conditions, only SWM pond #1 was designed to provide Enhanced 80% long-term suspended solids removal, while SWM ponds 2/3, 4 and 5 were all designed with Normal 70% long-term suspended solids removal. Page 477 suggests that modifications to the SWM ponds will meet design criteria where possible, including providing Enhanced Level Protection (80% TSS removal). KCCA would support these modifications to provide Enhanced TSS removal, however, SWM pond 1 does not meet the minimum criteria for buffer, SWM pond 2/3 does not meet the minimum criteria for active storage depth, side slopes and buffer, SWM pond 4 does	Pond 1 Buffer: this criterion is a design objective for safety. The pond already exists and is located on a site with restricted access. There are space constraints such that the minimum criteria for this design element was not met. This will have no impact on treatment efficiency. Pond 2/3 Active Storage Depth: The minimum criteria of 1 m in the report was noted incorrectly and should	The design criterion for active storage depth has been changed to <1.5 m in the pond summary tables in Volume IV Appendix D.04, and in the Pond 2/3 summary table noting that the criteria has been satisfied. An addition to the text in Volume I Section 8.1.5.3 has been made to state that during the detailed design and ECA process, the feasibility of adding in east and west forebays will be evaluated. This has also been added as a

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
		<p>not meet minimum criteria for forebay, length-to-width ratio, side slopes and buffer, and SWM pond 5 does not meet the minimum criteria for side slopes and buffer. As a result, it must be clearly demonstrated how this 80% TSS removal will be achieved without adhering to the wet pond design requirements in the guidelines (such as implementing a form of pre-treatment (e.g. enhanced grassed swales) or end-of-pipe treatment (e.g. an OGS) and implementing an enhanced monitoring program to confirm the 80% TSS removal).</p>	<p>have been 1.5 m (the 1 m depth is the preferred criterion). Therefore, the criterion for the active storage depth has been satisfied.</p> <p>Pond 2/3 sideslopes and buffer: Regarding the buffer, refer to Pond 1 response. Pond 2/3 is a modification of an existing pond and it is proposed to maintain its current sideslopes.</p> <p>Pond 4 sideslopes and buffer: Pond 4 is an existing pond with space constraints, see the Pond 1 response regarding buffer. It is also proposed to maintain its current established sideslopes.</p> <p>Pond 4 forebay and length to width ratio: The drainage area reporting to Pond 4 will be greatly reduced with the proposed expansion landform and the</p>	<p>commitment in Volume I Section 13, Table 13-2.</p>

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
			<p>sideslopes of the landfill will have well established vegetation, as do the inlet swales and ditches. Because the existing pond is oversized for the proposed drainage area, it also includes over 600 m³ of permanent pool volume above the design volume. It is anticipated that the above circumstances will result in suitable TSS removal efficiency. However, it is proposed that during the detailed design and ECA process, the feasibility of adding in east and west forebays will be evaluated, which will also increase the length to width ratio.</p> <p>Pond 5 sideslopes and buffer: See response above for Ponds 1, 2 and 4.</p>	

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
4	Volume I Section 5.4 Surface Water and Volume IV D.04 Surface Water Existing Conditions and Impact Assessment Report	<p>Pre-existing or current surface water flows through the SWM ponds were directed to Dodd Creek. However, due to the proposed vertical expansion of the landfill, there will be a 0.20% decrease in drainage area that flows to Dodd Creek and a 0.12% increase in drainage area that flows to Dingman Creek (Volume 4, page 495). This alteration in drainage area, and as a result potential change in the rate of discharge into the Dodd Creek subwatershed is “expected to have a negligible effect on the runoff and drainage within areas of the subwatershed downstream of the W12A Landfill site.” However, it is recommended that local conditions be monitored to confirm the “negligible effect” to mitigate any negative effects downstream in an already negatively impacted water system. While the loss of 0.20% drainage area and subsequent surface water flow may be considered negligible under normal circumstances, the negative effects of climate change are being experienced throughout the region as either long periods of low or no flow conditions or high flows brought on by intense and severe storm systems. To this end, alterations to the SWM pond system</p>	<p>It was considered in the EA that there could be more extreme weather events associated with climate change that could contribute to issues with stormwater management (SWM). As such, the SWM facilities proposed for the expansion were evaluated for a 1:250 year return period storm. It is noted that under normal conditions, as per the O.Reg. 232/98 Landfill Standards, the SWM facilities are assessed for a 1:100 year return period storm. The details of this assessment have been provided in Section 10 of Volume I.</p> <p>The City of London stormwater management system design staff have requested analysis of a Hurricane Hazel event in addition to the 1:250 year return period storm to assess climate</p>	<p>Addition of Hurricane Hazel event in climate change analysis of stormwater facilities detailed in Section 10, Volume I.</p>

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
		<p>and the rate of discharge into Dodd Creek should be made only if the effects of climate change have been taken into consideration and if monitoring is conducted on a local, watershed level. KCCA staff is willing to sit down with the MECP and City staff to further discuss this recommendation if needed.</p>	<p>change impacts on stormwater management facilities.</p> <p>For high flow conditions, the discharge from Ponds 2/3, 4 and 5 have post-expansion flows up to and including the 1:250 year return period storm at lower than pre-development conditions. The analysis of the Hurricane Hazel event, and the required changes to design, has been included in an updated Section 10.</p> <p>In terms of drier periods, compared to pre-landfill conditions and the currently approved landfill, the expansion has much higher and marginally steeper sideslopes, which will result in an increase in runoff to the SWM ponds from storm events for subsequent release from the ponds. In addition, for drier periods, Pond 2/3 provides a baseflow</p>	

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
			<p>storage volume with a resultant release rate over an extended pond drawdown period. Similarly, Pond 4 and Pond 5 both have extended drawdown times for the quality control 25mm design storm. These will offset, to some degree, the potential effects of the small reduction in contributing drainage area</p> <p>The City is willing to discuss this further with the KCCA on request.</p>	
5	Volume I Section 9.3 Surface Water	The City should investigate potentially implementing a long term water quality monitoring program for the three surface water features that convey runoff from the W12A Landfill property to downstream receiving water systems within the Dodd Creek subwatershed. This monitoring program could include surface water quality and benthic community data collected during and post-closure of the landfill under the technical review and direction of the MECP.	The ECA for the W12A Landfill, for both the existing site and proposed for the expansion, includes a monitoring program for the quality of discharge from the SWM ponds. It also includes a trigger mechanism that, if parameter concentrations are	No changes required.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	How Addressed in the EA
			<p>exceeded, requires release of stormwater to be suspended until testing demonstrates that normal operations can resume. Also, the W12A Landfill does not discharge wastewater, i.e., treated leachate effluent to downstream off-site receiving water courses, the site only discharges stormwater runoff (which has not been in contact with waste or leachate) after its passage through a SWM pond. The City feel that this fulfills their responsibilities regarding the quality of stormwater released from the W12A site and does not feel they should be responsible for off-site monitoring of potential effects in downstream receiving water courses.</p>	

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
	Ministry of Environment Conservation and Parks (MECP)	Southwest Region, Environmental Officer		July 30, 2021
1	Vol. I - Section 12.1.1.1 Air	Historically we have received odour complaints related to W12A operations. Odour issues should be considered in the approval process (requirements for cover, smaller working faces and gas and leachate collection systems).	<p>MECP: Requirements to regularly assess for odour off-site and procedures for responding to odour complaints should also be considered.</p> <p>City: The City acknowledges that the landfill has received odour complaints; as discussed in Volume I Section 5.2.2.2, the number of odour complaints received in 2020 since active landfill gas collection was expanded was reduced significantly. The EASR describes proposed cover requirements which include minimizing the active area to the extent practical.</p> <p>It is proposed to use horizontal gas collection (in addition to vertical well collection) within the waste to further reduce air emissions during the landfilling process.</p> <p>A commitment has been made (Volume I Section 13.2 Table 13-2, ID - K) to review and update the odour management plan and complaints response protocol; another commitment ID - H relates to controlling the size of the active working area. Additional details on</p>	No changes required.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			mitigation and handling of odour-related issues will be included in the updated Design & Operations report to be subsequently submitted in support of an ECA amendment application for the expansion.	
2	Vol. I - Section 12.1.1.1 Air	With increased volumes of waste coming to the site, traffic into and out of the landfill will also increase. We often hear complaints from residents living near landfills about mud and dust being tracked out onto nearby roads.	MECP: Requirements to assess and address off-site dust and mud should be considered. City: These are operational considerations. Details on measures to control potential issues from mud being tracked out of the landfill site onto off-site roads, as well as dust associated with the mud on these off-site roads, will be provided in the undated Design & Operations Report to be subsequently submitted in support of an ECA amendment application for the expansion.	No changes required.
3	Vol. I - Section 8.0	The proposed landfill height means the landfill's sides will be significantly sloped.	MECP: Regular assessment and maintenance should be required to ensure side slopes are in good order to minimize the release of gases, and leachate to surface waters. City: Regular inspection and maintenance of the landfill, including the sideslope area, is part of current site operations and will be continued	No changes required.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			<p>during the expansion. Additional details on site inspection and maintenance will be provided in the updated Design & Operations report to be subsequently submitted in support of an ECA amendment application for the expansion. As described in Volume I Section 8.2.2.1, as part of the expansion design it is proposed to install a system of finger drains around the perimeter of the Phase 1 area to control potential leachate seeps on the sideslopes and thereby direct any seepage into the perimeter leachate collection system, and thereby separate it from clean surface runoff to the stormwater management system. As described in Volume I Section 9.2.3, as part of expansion design it is also proposed that the Phase 1 area horizontal landfill gas collectors also be designed for dual purpose as gas and leachate mound control collectors, to control both the leachate mound that could contribute to perimeter seeps and potential gas emissions.</p>	

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
	Ministry of Environment Conservation and Parks (MECP)	Resource Recovery Policy Branch, Senior Policy Advisor		August 3, 2021
1	Volume III – Supporting Studies, APPENDIX C, 2019 Updated Residual Waste Projections and Landfill Capacity Assessment, Section 2.3 Waste Diversion	<p>There is no reference to the following MECP waste policy elements:</p> <ul style="list-style-type: none"> - <i>The Food and Organic Waste Policy Statement</i> (MECP, April 2018), - <i>A Made-in-Ontario Environment Plan</i> (MECP, November 2018) or - <i>The Discussion Paper on Reducing Waste and Litter in Our Communities</i> (MECP, March 2019) 	<p>MECP: Include consideration of food and organic diversion policies in the F&OW Policy Statement, including relevant policies in section 4 that require the City of London to put in place a collection system and meet a waste reduction and resource recovery target of 70% by 2025, and Policy 6.8 that directs proponents of new or expanded waste management systems for disposal to consider recovery opportunities for organics. These policies, along with others that may be relevant, should be considered in the forecast of residual waste needing disposal, if/as they apply to both the existing and proposed expanded service areas.</p> <p>City: Consideration of food and organic waste diversion was included in the development of the City's 60% Waste Diversion Action Plan, which was then used to develop the residual waste quantity</p>	No changes proposed.

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			<p>projections for the EA and is referenced in Volume III Appendix C. The City is not responsible to apply the MECP waste diversion policies to the municipalities that comprise the expanded service area.</p> <p>The 60% Waste Diversion Action Plan, which was approved by City Council, includes the following food and organic diversion measures:</p> <ul style="list-style-type: none"> • Green Bin for curbside residential collection • Bi-weekly garbage collection coupled with weekly Green Bin collection to increase Green Bin participation • Mixed waste pilot processing program for multi-residential units • Food waste reduction strategy • Reduced cost for composters sold at EnviroDepots • Financial support to community groups or environmental organizations that want to set up a community composting program 	

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			<p>It is expected that these food and organic diversion measures should achieve the 70% waste reduction and resource recovery of food and organic waste generated by single-family dwellings as required within the Food and Organic Waste Policy Statement, MECP 2018.</p> <p>It is the City's opinion that it is not necessary to make reference to and include the names of the MECP's specific waste policies in the Volume III Appendix C document, the purpose of which is to present the basis of the projected diversion of each waste category that can reasonably be expected to be achieved in the City of London and to project the remaining residual disposal from the City, plus accommodation for some residual waste from the expanded service area, that will require landfilling over the planning period of the expansion.</p>	

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
	Ministry of Environment Conservation and Parks (MECP)	Resource Recovery Policy Branch, Senior Policy Advisor		September 15, 2021
1	Volume II, Approved Amended Terms of Reference, APPENDIX A, February 2019, Section 3.0 Rationale and Description of the Undertaking – 3.2 Guiding Principles, pp. 20-21	<p>Subsection 6.1 (1) of the <i>Environmental Assessment Act</i> (EAA) requires a proponent to prepare an environmental assessment for an undertaking in accordance with the approved terms of reference.</p> <p>The Approved Amended Terms of Reference for this draft EA provides direction in the form of the following guiding principles (which were approved by London City Council) and the statement below:</p> <p>Table 3.2-1: Guiding Principles includes the following 2 (of 11) principles (p. 20):</p> <ul style="list-style-type: none"> • Implement more Resource Recovery Solutions – Residual waste needs to be minimized and any waste that is generated needs to be treated as a resource, when practical. ... 	<p>MECP: It is strongly recommended that the proponent demonstrates, through the inclusion of data and analysis in their Environmental Assessment application, that their description of the proposed undertaking is based on an expectation that the proponent will comply with Ontario's Food and Organic Waste Policy Statement.</p> <p>This should include data and analysis demonstrating anticipated consistency with relevant policies in the Policy Statement:</p> <ul style="list-style-type: none"> • Section 2, which sets out a target for waste reduction and resource recovery of food and organic waste to be met by the City of London. • Section 4, which requires the City of London to put 	<p>The City will add a reference to <i>The Food and Organic Waste Policy Statement</i> (MECP, April 2018) and <i>A Made-in-Ontario Environment Plan</i> (MECP, November 2018) in Volume III Appendix B.</p> <p>The City will provide additional details in Volume III Appendix B about how residual waste estimates for residual waste from the City which it has control over is consistent with <i>The Food and Organic Waste Policy Statement</i> (MECP, April 2018) and <i>A Made-in-Ontario Environment Plan</i> (MECP, November 2018).</p>

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		<ul style="list-style-type: none"> • <i>Make Waste Reduction the First Priority</i> – The City’s first goal is to reduce the amount of material being generated by residents and businesses that requires management (e.g., encourage food waste avoidance, composting at home, local policies to encourage waste reduction, supporting producer responsibility and other provincial and federal programs.) <p><i>“In addition to these Guiding Principles, provincial legislation related to waste management will be integral to this EA. This includes the Waste-Free Ontario Act along with the province’s new Strategy for a Waste-Free Ontario: Building the Circular Economy and the Food and Organic Waste Policy Statement.” (p. 21)</i></p> <p>Despite the above reference in the TOR, the draft EASR Volume III does not have reference to the following MECP waste policy elements:</p>	<p>in place a collection system and meet a waste reduction and resource recovery target of 70% by 2025.</p> <ul style="list-style-type: none"> • Policy 6.8, which directs proponents of new or expanded waste management systems for disposal to consider recovery opportunities for organics. <p>Consistency with these policies, along with others that may be relevant, should be demonstrated in the forecast of residual waste needing disposal, both with respect to the existing and the proposed expanded service areas.</p> <p>Information relating to how resource recovery and waste reduction under applicable Ontario policy has been considered in the application is relevant to the Ministry’s review of the submission and may be information the Minister would require in order to make a decision on</p>	<p>The City will confirm that in Volume III Appendix B that its Food and Organic waste diversion program should result in the City meeting the targets in Section 2 of <i>The Food and Organic Waste Policy Statement</i>.</p> <p>A summary of the City’s Food and Organic waste diversion program will be included in Volume III Appendix B.</p>

#	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		<ul style="list-style-type: none"> • <i>The Food and Organic Waste Policy Statement</i> (MECP, April 2018), • <i>A Made-in-Ontario Environment Plan</i> (MECP, November 2018) or • The Discussion Paper on <i>Reducing Waste and Litter in Our Communities</i> (MECP, March 2019) <p>Nor is there data or analysis indicating how the waste reduction and resource recovery targets under policy 2.1 of Ontario's Food and Organic Waste Policy Statement are considered when determining the projection of residual waste needing disposal for the undertaking.</p>	<p>the application. The additional information provided would also support the description and statement of the rationale for a description of the undertaking.</p>	

Public



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August 24, 2021

SISKINDS The law firm
680 Waterloo Street
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Sent by e-mail:
paula.lombardi@siskinds.com

Attention: Paula Lombardi

Re: Response to May 21, 2021 Letter Regarding the Notice of Draft Environmental Assessment Study Report W12A Landfill Expansion, City of London

Thank you for responding to the City's Notice of Draft Environmental Assessment Study Report W12A Landfill Expansion, City of London. In your letter dated May 21, 2021 you expressed concerns on behalf of your client that the proposed expansion of the City's W12A Landfill will result in increased risk of particulate matter (including dust), blowing garbage and odour associated with the operation of the City's W12 Landfill and this will result in detrimental impacts to your client's property. Your letter also discusses the social impacts because of the aforementioned potential nuisance effects. Each of these concerns are discussed below.

Particulate Matter

Particulate matter at landfills is typically associated with airborne dust from vehicles travelling on on-site paved roads and unpaved roads/haul routes, as well as material loading and unloading activities.

The Environmental Assessment Study Report (EASR), Volume I and Volume IV, Appendix D.01 includes an assessment of the potential for adverse impacts from particulate matter on surrounding properties. The assessment of particulate matter focuses on predicting changes in the concentrations of indicator compounds. These indicator compounds represent compounds that are typically emitted from landfills, have the highest potential to cause adverse and/or non-mitigatable effects, and for which air quality criteria exist. The indicator parameters for particulate matter are suspended particulate matter (SPM, which in Ontario is defined as particles <44 µm diameter), particles nominally smaller than 10 µm in diameter (PM10), and particles nominally smaller than 2.5 µm in diameter (PM2.5). Modelling shows that the proposed expansion of the W12A Landfill is expected to meet all air quality criteria for the previously mentioned parameters at the property boundary of the landfill.

The City has committed to undertake several measures to reduce particulate matter. Key commitments are listed in the EASR, Volume I, Table 13-2: Table of Commitments made by the City during the EA. The portion of this table related to particulate matter is reproduced below.

ID	Component (if applicable)	Commitment (<i>Location of Where Commitment was Made in the EA Document Package</i>)	Project Phase
C	Atmosphere	Application of dust suppressant on unpaved roads on a routine basis. (EASR –Volume IV – Appendix D.01)	Construction and operations
D	Atmosphere	Sweep/clean the roads as required to prevent mud track out on vehicles. (EASR –Volume IV – Appendix D.01)	Construction and operations
E	Atmosphere	On-site vehicles and equipment engines will meet Tier 3 emission standards and be maintained in good working order. (EASR – Volume IV – Appendix D.01)	Construction and operations
F	Atmosphere	Minimize idling of vehicles on-site. (EASR – Volume IV – Appendix D.01)	Construction and operations
I	Atmosphere	Prepare a fugitive dust management plan and complaints response protocol. (EASR – Section 12.1.1.1 and Volume IV – Appendix D.01)	Pre-construction

The above measures are discussed in more detail in the EASR, Volume I and Volume IV, Appendix D.01 (Air Quality Existing Conditions and Impact Assessment). This report also discussed other measures that will be taken including sampling of unpaved and paved road silt loadings to confirm particulate emission estimates.

Considering the above, there should be no adverse impact to the property at 4545 Scotland Drive from particulate matter from the operation of the expanded landfill.

Blowing Garbage

As discussed in the EASR Volume I, the City will continue to follow applicable municipal and provincial guidelines and use of best management practices at the W12A Landfill site related to control and mitigation of effects such as litter. These practices include minimizing the size of the tipping face, progress placement of final cover, litter fences at the location of the screening berms and regular collection of litter. Litter from roads surrounding the landfill is collected at least weekly and more frequently, if required. Additional details on the measures to be taken to prevent litter will be provided when the City develops the Design and Operations Report for the landfill expansion should the Environmental Assessment be approved.

The existing measures at the W12A Landfill (that are similar to proposed expansion measures) have resulted in no litter complaints in 2019, 2020 or so far in 2021. It is also noted that the distance from the landfill to 4545 Scotland Drive makes it unlikely that any litter that did make it off-site would ever reach your property. The landfill is greater than 1.5 kilometers from your property. The property is upgradient of prevailing winds (west of the landfill) and the 401 is located between your property.

Given the above, there should be no adverse impact to your property from litter from the operation of the expanded landfill.

Odour

When approving projects, the Ministry of the Environment, Conservation and Parks (MECP) uses a guideline of 1 OU/m³ based on the 99.5 percentile on a ten-minute time averaging period to assess the potential for odour nuisance at a potential receptor off the landfill site. Preliminary air quality monitoring completed for the Environmental Assessment indicates that with the proposed expansion we will be within the MECP guideline. This preliminary assessment is documented in the draft report the EASR, Volume I, and Volume IV, Appendix D.01 (Air Quality Existing Conditions and Impact Assessment).

Additional air quality modelling and monitoring will be undertaken as we seek the more technical *Environmental Protection Act* approval for the landfill expansion and during initial operations of the landfill expansion. This will include:

- Verifying that the odour emission rates used in the odour assessment were reasonable, but conservative. This will include:
 - One-time landfill gas sampling early in the expansion to confirm emission rates from the site of indicator compounds
 - Sampling analysis to include odourous compounds, Vinyl Chloride and Hydrogen Sulphide
- Review and update the odour management plan and complaints response protocol

In reality, the goal of the MECP and the City is to reduce and minimize off-site odours from landfill site operations as much as possible. This is why the design of the landfill expansion will incorporate a number of measures to reduce odours such as:

- Installation of both horizontal collector pipes during ongoing landfilling operations and vertical wells during landfill cell closure to increase the capture of landfill gas (which contains the compounds that cause odour)
- Approximately double the size of the existing gas flaring station
- Minimize the size of the active tipping face as much as practical
- Progressively place final cover and expand the gas collection system on the landfill (every six months to 12 months)

The City started using both horizontal collector pipes and vertical wells to capture landfill gas in the most recent landfill gas collection system expansion this past Spring. This has resulted in a significant increase in the amount of landfill gas being captured from this area of the landfill, which is demonstrated by a much lower number of odour complaints received in 2021.

Key commitments by the City with respect to odour control are listed in the EASR, Volume I, Table 13-2: Table of Commitments made by the City during the EA. The portion of this table related to odour is reproduced on the next page.

ID	Component (if applicable)	Commitment (<i>Location of Where Commitment was Made in the EA Document Package</i>)	Project Phase
H	Atmosphere	Landfill will be capped and LFG collection system installed and put into operations progressively as Phases of landfilling are completed. (EASR – Volume IV – Appendix D.01)	Operations and post-closure
J	Atmosphere	Review and update the odour management plan and complaints response protocol. (EASR – Section 12.1.1.1 and Volume IV – Appendix D.01)	Pre-construction
L	Groundwater	Design horizontal landfill gas collectors for dual purpose as gas and leachate collectors, in the north-south direction at 30 m spacing and to a depth of 3 m into the existing waste fill over the top surface of the Phase 1 area. (EASR – Section 9.2 and Volume IV – Appendix D.03)	Pre-construction

Social Impacts

In your letter you state “the social impacts of the litter and dust (particulate matter), noise and odour on the FHC property needs to be taken into consideration when determining appropriate mitigation measures including compensation for these social impacts”.

We believe we have done this. As discussed above, the impacts from particulate matter, blowing garbage and odour associated with the operation of the City’s W12 Landfill will be mitigated and be within applicable provincial guidelines (where applicable).

The W12A Landfill has been in operation since the 1970’s and we expect no or minimal increase within regulatory limits from particulate matter, odour and noise with the proposed expansion of the W12A Landfill. We expect no increase and possibly a reduction in impacts from blowing garbage associated with the expansion of the W12A Landfill.

Request for Notification

In your letter requested “*notification of any public meetings, town hall meetings, council meetings special or otherwise, statutory or otherwise, as they relate to the proposed expansion of the City’s W12A Landfill*”.

In the past, the property owner of 4545 Scotland Drive has been provided notification of Commencement of the Terms of Reference (ToR), Open House #1, Open House #2, Review of Draft ToR, Notice of Submission of the ToR, Open House #3, Open House #4 and Review of Draft EASR. An opportunity was provided to comment with each of these events.

The property owner will continue to be provided notice of upcoming meeting and other opportunities to provide comments. This will include a public meeting before the City’s Civic Works Committee and the Notice of Submission of the EA.

To assist you and your client, the City will also add your name directly to our notification process for the EA process for the proposed expansion of the W12A Landfill.

After review of the City's response, if there is a need for a meeting with representatives from Farhi Holdings Corporation, one will be arranged.

Please do not hesitate to contact me if you require further details (519-661-2489, ext. 5411 or jstanfor@london.ca).

Regards

Jay Stanford, M.A., M.P.A.
Director, Climate Change, Environment & Waste Management

c Wesley Abbott, Project Manager

Abbott, Wesley

From: Stanford, Jay
Sent: Wednesday, August 25, 2021 8:33 AM
To: JJJCFERGUSON
Cc: Abbott, Wesley; Losee, Michael
Subject: RE: [EXTERNAL] Meeting

Follow Up Flag: Follow up
Flag Status: Flagged

Hello Jeff, John and Joanne Ferguson

Nice to hear from you as well. Thank you for your comments. They will be added to our community engagement log. Answers are as follows:

Odour management at W12A Landfill

When approving projects, the Ministry of the Environment, Conservation and Parks (MECP) uses a guideline of 1 OU/m³ based on the 99.5 percentile on a ten minute time averaging period to assess the potential for odour nuisance at a potential receptor off the landfill site. Preliminary air quality monitoring completed for the Environmental Assessment indicates that with the proposed expansion the City's landfill will be within the MECP guideline. This preliminary assessment is documented in the draft report *Air Quality Existing Conditions and Impact Assessment W12A Landfill Expansion EA, City of London, Ontario* (Golder Associates, 2020) and available for review at www.getinvolved.london.ca/whywastedisposal.

Additional air quality modelling and monitoring will be undertaken as we seek the more technical *Environmental Protection Act* approval for the landfill expansion and during initial operations of the landfill expansion. This will include:

- Verifying that the odour emission rates used in the odour assessment were reasonable, but conservative. This will include:
 - One-time landfill gas sampling early in the expansion to confirm emission rates from the site of indicator compounds
 - Sampling analysis to include odourous compounds, Vinyl Chloride and Hydrogen Sulphide
- Reviewing and updating the odour management plan and complaints response protocol

In reality, the goal of the MECP and the City is to reduce and minimize off-site odours from landfill site operations as much as possible. This is why the design of the landfill expansion will incorporate a number of measures to reduce odours such as:

- Installation of both horizontal collector pipes during ongoing landfilling operations and vertical wells during landfill cell closure to increase the capture of landfill gas (which contains the compounds that cause odour)
- Approximately double the size of the existing gas flaring station
- Minimize the size of the active tipping face as much as practical
- Progressively place final cover and expand the gas collection system on the landfill (every six months to 12 months)

We started using both horizontal collector pipes and vertical wells to capture landfill gas in the most recent landfill gas collection system expansion this in the Spring 2020. This has resulted in a significant increase in the amount of landfill gas we are capturing from this area of the landfill, which is demonstrated by a much lower number of odour complaints received in 2020 and so far in 2021.

Debris in surrounding area

The existing landfill has a comprehensive litter management program that includes daily roadside litter inspections/collection in the immediate vicinity of the landfill and litter collection from neighbouring fields on an as needed basis. The plan moving forward would be to continue that program and document it in the Design and Operations Report as part of the *Environmental Protection Act* approval process for the expansion. As mentioned in Section 4 of Volume I of the EASR, changes to the landfill's off-site litter management program can also be considered and instigated as a part of the upcoming review of the existing Community Enhancement and Mitigative Measures Program (CEMMP).

The land use designation of surrounding area needs to be addressed, including surrounding areas from Highway 4 on the 401 corridor to Wellington Road.

This question is better directed to the City's Planning and Economic Development Service Area and is unrelated to the environmental assessment for the proposed expansion of the W12A Landfill. The current contact at the City would be:

Mark Henderson
Planning and Economic Development
Director, Economic Services & Supports
380 Wellington Street
mhenderson@london.ca
519-661-CITY (2489) Ext. 5992

Should you have any further comments, please do not hesitate to contact us.



Jay Stanford, M.A., M.P.A. (he/him)

Director, Climate Change, Environment & Waste Management
Environment & Infrastructure Service Area
City of London

300 Dufferin Ave, P.O. Box 5035 London, Ontario N6A 4L9

P: 519.661.CITY (2489) x 5411 | Cell: 519.851.5423

jstanfor@london.ca | www.london.ca

From: JJCFERGUSON <jjjcferguson@fergusonbros.com>

Sent: Wednesday, July 28, 2021 11:21 AM

To: Stanford, Jay <JSTANFOR@London.ca>

Subject: RE: [EXTERNAL] Meeting

Hello Jay,

How are things with you.

We have heard the dump is currently working on expansion plans to go nine stories higher than it currently is today.

We would be **opposed** to this expansion; before this dump is made bigger – the problem of odor and debris in the surrounding area needs to be solved.

The land use designation of surrounding area needs to be addressed, including surrounding areas from Highway 4 on the 401 corridor to Wellington Road.

Thank you
Jeff and John Ferguson

Please note our email address has changed to jjjcferguson@fergusonbros.com. Please change your contact information accordingly.

Thank you,
Joanne Ferguson

43850 Ferguson Line,
St. Thomas, ON N5P 3T1
CANADA
T: 519-631-3463
T: 519-631-3592
F: 519-631-8843

From: Stanford, Jay <JSTANFOR@London.ca>
Sent: Wednesday, March 24, 2021 3:47 PM
To: JJCFERGUSON <jjjcferguson@fergusonbros.com>
Subject: RE: [EXTERNAL] Meeting

Greetings

Thanks for your email. I do hope you are staying and as well as possible in these difficult times.

All details associated with the landfill expansion are posted here:
<https://getinvolved.london.ca/whywastedisposal>

This report goes to Civic Works Committee on March 30, 2021. It contains the most up-to-date details.
<https://pub-london.escribemeetings.com/filestream.ashx?DocumentId=79214>

Land around the landfill is generally classified as agriculture. Details can be found on this Interactive map.
<https://london.maps.arcgis.com/apps/webappviewer/index.html?id=20327d3bcfb34bb488a7c3f74c05d2d3>

<https://london.ca/business-development/zoning>

Inquiries about specific parcels are best to go to
CONTACT INFORMATION
Zoning

zoning@london.ca

PHONE

519-930-3510

. to ensure that you are provided specific detail about parcels. Some sites may have different designations that I may not be aware of

Regards. . . .



Jay Stanford, M.A., M.P.A. (he/him)

Director, Environment, Fleet & Solid Waste

Environmental & Engineering Services

City of London

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jstanfor@london.ca | www.london.ca

From: JJCFERGUSON <jjcferguson@fergusonbros.com>

Sent: Wednesday, March 24, 2021 9:32 AM

To: Stanford, Jay <JSTANFOR@London.ca>

Subject: FW: [EXTERNAL] Meeting

Hello Jay,

Hope all is well with you, has been a while since we have spoken and COVID has certainly thrown a wrench into our lives.

Last year we had sent the below emails and just wondered if we could get an update.

- Dump expansion plan
- Land use designation for surrounding lands

Your knowledge on the above would be great.

Thanks

John and Jeff Ferguson

Please note our email address has changed to jjcferguson@fergusonbros.com. Please change your contact information accordingly.

Kindly,

Joanne Ferguson

43850 Ferguson Line,
St. Thomas, ON N5P 3T1
CANADA
T: 519-631-3463

T: 519-631-3592
F: 519-631-8843

From: jjjcferguson@execulink.com <jjjcferguson@execulink.com>
Sent: Thursday, February 27, 2020 9:13 AM
To: Stanford, Jay <JSTANFOR@London.ca>
Subject: RE: [EXTERNAL] Meeting

Hello Jay,

Thank you for the email today.

One thing that we have discussed with you in the past is land usage designation around the dump and south London. Our request today is that the City of London promote and support the lands from Wellington to White Oaks and Manning to Glanworth for the Job Site Challenge Request for Submission. On behalf of the Ministry of Economic Development , Job Creation and Trade with the Ontario Government.

This matter is time sensitive by the end of March – this is of a timely manner.

Await your response.

Will send you meeting dates in the next few days.

Joanne Ferguson



43850 Ferguson Line,
St. Thomas, ON N5P 3T1
CANADA
T: 519-631-3463
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F: 519-631-8843

From: Stanford, Jay <JSTANFOR@London.ca>
Sent: Thursday, February 27, 2020 7:37 AM
To: jjjcferguson@execulink.com
Cc: Losee, Michael <mlosee@London.ca>
Subject: RE: [EXTERNAL] Meeting

Good Morning

Thanks for the email. Yes, we had an Open House last night and another tonight.

The early part of March is very full of activities but later in March is open. Can you suggest a few meeting dates after March 16 and the items you wish to discuss.

We hope all is well on your end. . . .cheers. . .



Jay Stanford, M.A., M.P.A.

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jstanfor@london.ca | www.london.ca

From: jjjcferguson@execulink.com [<mailto:jjjcferguson@execulink.com>]

Sent: Tuesday, February 18, 2020 4:21 PM

To: Stanford, Jay <JSTANFOR@London.ca>; Abbott, Wesley <WAbbott@London.ca>

Subject: [EXTERNAL] Meeting

Hello Jay and Wes,

Long time since we have gotten together.

We see you are still working on expansion plans for the City Dump.

Wondering if we can get together sometime in the next few weeks, let us know your schedule availability.

Thanks

Jeff and John

Joanne Ferguson



43850 Ferguson Line,
St. Thomas, ON N5P 3T1
CANADA

T: 519-631-3463

T: 519-631-3592

F: 519-631-8843

Abbott, Wesley

From: Stanford, Jay
Sent: Tuesday, August 24, 2021 5:57 PM
To: Matt mcdougall
Cc: Abbott, Wesley; Losee, Michael
Subject: Meeting Notes

Good Afternoon Matt McDougall

I am just writing to confirm the details of our site visit to your property on June 28, 2021 regarding the EA for the proposed W12A Landfill expansion. Also in attendance was Ward 12 Councillor Peloza and current Chair of the Civic Works Committee, Wesley Abbott, Mike Losee and me. We appreciate the open dialogue that City staff have had with you throughout this process.

Items covered in our discussion included revisiting and/or further discussing these items:

1. Visual impacts that will be observed from 3703 Westminster Drive in particular when landfill operations will be closest to the property. Further drawings on the visual component were reviewed in person.
2. Odour issues
3. The role of the W12A Public Liaison Committee
4. The City of London Community Enhancement and Mitigative Measures Program (CEMMP)
5. The fact that many property owners have been in the “broader” area well before the W12A Landfill was established in the mid-1970s
6. The desire for ongoing dialogue on the proposed expansion and further community enhancements

Summary overview of City Comments

1. Visual impacts – the City is undertaking further analysis about the role of trees being planted closer to homes to assist with screening. More details on this opportunity will be available in the fall.
2. Odour issues – continued to acknowledge that this is one of the City’s highest priorities. Identified the additional measures being incorporated into the new landfill design including horizontal landfill gas collectors (which are already in place as part of the most recent landfill gas collection system expansion). Discussed the current low levels of odour incidents in 2021 and why this is likely occurring.
3. The role of the W12A Public Liaison Committee – provided brief overview of how the W12A PLC was approved by Municipal Council. The membership was highlighted. Indicated that Mr. McDougall’s name will be raised with the Chair as an interested potential member.
4. The City of London Community Enhancement and Mitigative Measures Program – further details on this program will be forwarded directly to households as a follow-up to the materials released in November 2020.

5. The fact that many property owners have been in the “broader” area well before the W12A Landfill was established – City staff acknowledged this and indicated that ongoing dialogue occurs directly with many households and through the W12A PLC.
6. Ongoing dialogue on the proposed expansion and further community enhancements - agreement

Further information on the EA process and next steps will be forthcoming along with details on the CEMMP process.

If you have any further questions, please do not hesitate to reach out to me.



Jay Stanford, M.A., M.P.A. (he/him)

Director, Climate Change, Environment & Waste Management

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jstanfor@london.ca | www.london.ca

Abbott, Wesley

From: Stanford, Jay
Sent: Wednesday, August 25, 2021 8:22 AM
To: jcmercer5@gmail.com
Cc: Abbott, Wesley; Losee, Michael
Subject: Proposed W12A Landfill Expansion

Good Morning Cynthia and Joel

I am just writing to confirm our telephone conversation in late May 2021 regarding the proposed W12A Landfill expansion. You raised three issues/questions that we said we would follow up on and provide a written response so you have a record.

1. Are we part of the Right of First Refusal Program?

The City offers to pay an annual fee for the “right of first refusal” on the sale of residential and agricultural properties within the vicinity of the W12A Landfill. Your property (4260 Glanworth Drive) is within the area that qualifies for the “right of first refusal” program. As discussed with Wesley Abbott on June 1, our records show the City has sent offers to 4260 Glanworth Drive for each of the last 5 years. Cynthia advised that she had recently found the offer sent for 2021. As of August 25, 2021, we have not received the signed (three copies). Payments for 2021 have already been released to those participating in the program. **We can extend the deadline for your property until September 9, 2021** if you wish to participate in the program. Forms can be resent if that is helpful. If you have any further questions, please contact Mike Losee at mlosee@london.ca or 519-661-2489 x 7369.

2. Visual Impact

You expressed concerns over the potential for visual impacts because on the increased height of the landfill.

The existing Community Enhancement and Mitigative Measures Program (CEMMP) is seeking stakeholder feedback on how the program can be improved including what are appropriate screening measures for private properties. Based on the feedback received to date it is likely changes to the program would include funding to construct screening measures (e.g., plant trees) on properties with visual impacts.

In addition, the landfill will be developed in such a way as to maximize screening to properties to the south of the landfill. This will be done by initially placing waste to build a berm along the south side of the landfill’s waste footprint and will be covered with final cover soil and seeded to establish vegetation. The berm will screen the view of subsequent filling operations north of the berm from offsite vantage points to the south. The south side perimeter waste berm would be raised sequentially and filled in behind until the highest elevation is reached.

3. City Owned Properties

You expressed concerns over the condition of City owned properties in the vicinity of the landfill. The condition of properties, including City owned properties, in the vicinity of the landfill has been discussed at W12A Landfill Public Liaison Committee (PLC) in the past but there has been no consensus on any actions going forward. Improvements to City owned properties could potentially be

included as a commitment by the City as part of the changes to the existing CEMMP. This item has been raised again at the most recent W12A PLC meeting in August.

Regards. . . Jay



Jay Stanford, M.A., M.P.A. (he/him)

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Indigenous

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
	Chippewas of the Thames First Nation			July 2, 2021
1	General comments - Consultation - Accessibility & Accommodation Expectations	<p>At 496 pages, with obfuscating references throughout, Volume 1 (of 5) of the draft Environmental Assessment of the Proposed W12A Landfill Expansion is difficult to read, understand and/or interpret for an average or advanced reader.</p> <p>Given recognition that Ministerial reporting requirements necessitate full disclosure of the draft Environmental Assessment Scoping Report document(s), the provision of a second, more succinct and concise revised summary version of the draft EASR, based on a city response to the comments provided herein, is necessary for continued public review and affected community consultation.</p> <p>A well-considered, meaningful written response incorporating consultation comments and feedback, from the city and its consultant, would provide enhanced and continued opportunities for collaborators and partners to provide review comments on the city's efforts to incorporate meaningful feedback on the proposed landfill expansion, for mutual co-benefits and capacity-building efforts to protect the environment for current and future generations.</p>	<p>The intent of engagement/consultation on the draft EASR has been part of a larger engagement effort, within the spirit of Wiindmaagewin. Additionally, engagement on this project has also strengthened the City's working relationship with COTTFN.</p> <p>The City has made sure to address the needs and requests of COTTFN and other Indigenous communities over the last 4 years. The City has not heard anything to the contrary.</p> <p>Throughout the engagement process, the City has made available various simplified Frequently Asked Questions (and answers), slide decks, held numerous meetings, Open Houses and created a simplified document called Overview of Proposed W12A Landfill Expansion.</p> <p>This disposition table will provide responses to most of the comments submitted and provided by Chippewas of the Thames First Nation (COTTFN). The last column of this table outlines what changes, if any, were made to the EASR as a result of the comment provided and what sections were updated.</p>	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		<p>As currently presented, the draft EASR information provided does not allow for meaningful evaluation by average or advanced readers without great effort, and thus detracts from transparent, accountable City waste management policy and planning efforts related to environmental management, which in turn reflects poorly on the city's efforts to genuinely engage collaborators, partners and stakeholders meaningfully in the document review process, for the expressed purpose of improving the draft EASR and the planned sustainability of the expanded landfill and its development outcomes.</p> <p>Furthermore, under the consultation directives provided to proponents in Chippewas of the Thames First Nations (COTTFN) Duty to Consult protocols (Wiindmaagewin-CONSULTATION-PROTOCOL-website.pdf (cottfn.com)), the draft EASR does not adhere to COTTFN Duty to Consult codes and standards, under Traditional Law and in the spirit of reconciliation.</p> <p>Thank you for the opportunity to provide comments on the draft EASR and thank you in advance for your thoughtful review, your attention in responding to these comments, and your genuine efforts to address the substantial issues raised in the subsequent comments in a second revised draft of the EASR, with an accompanying summary</p>	<p>It is noted that a second draft of this EASR is not proposed; however, the updated proposed (final) EASR, which will consider all comments received from all reviewers of the draft EASR, will also be provided to the COTTFN for comment when it is available.</p> <p>The executive summary of Volume I of the EASR provides a high level, easy to read summary for the public and Indigenous communities.</p>	

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		response indicating where changes have been made to address the comments and concerns contained herein.		
2	Key Areas of Concern	Potent, climate changing greenhouse gases produced as a result of anerobic decomposition of food waste and organics, and the directly related organic waste management planning and policy practices (not) implemented in the City of London, particularly related to the implementation and targeted levels of waste diversion achievable through a municipal Green Bin composting program in the City of London, on a meaningfully aggressive timeline to reduce the amount of waste disposed of in the current landfill <i>and</i> to contribute to the reduction in the level of production of methane and carbon dioxide gases resultant in future landfill expansion	<p>Section 2.4 of the draft EASR describes what waste the landfill is designed to accommodate. The size of the landfill takes into consideration the City's 60% residential waste diversion goal as well as the waste diversion goals in the provincial document <i>Strategy for Waste-Free Ontario</i>.</p> <p>City council approved the 60% waste diversion plan and the necessary funds for the implementation of the plan which includes several initiatives to reduce organic waste from the landfill. These initiatives include:</p> <ul style="list-style-type: none"> • Green Bin for curbside residential collection • Bi-weekly garbage collection coupled with weekly Green Bin collection to increase Green Bin participation • Mixed waste pilot processing program for multi-residential units • Food waste reduction strategy • Reduced cost for composters sold at EnviroDepots • Financial support to community groups or environmental organizations that want 	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			<p>to set up a community composting program</p> <p>The 60% Waste Diversion Action Plan can be found at https://getinvolved.london.ca/12714/widgets/50491/documents/28876</p> <p>All landfill gases expected to be produced in meaningful quantities from the landfill that have Standards set by the Ministry of Environment, Conservation and Parks (MECP) were evaluated. It is noted that methane does not have a Standard, but its estimated generation and the portion not captured by the landfill gas control system that will be released to the atmosphere was quantified and its expected impact, along with other greenhouse gases, were discussed in Section 10 of Volume I.</p>	
3	Key Areas of Concern	Regional waste management planning goals and objectives and a lack of clarity on city processes for municipal waste management prioritization practices for the use of expanded landfill to accommodate both London, and regional, waste disposal in the coming decades, particularly given anticipated increases in city and regional population levels.	<p>The City has used comprehensive and reasonable assumptions in estimating the amount of waste from the City of London the proposed expanded landfill will need to accommodate. These assumptions are described in detail in Volume III, Appendix C (<i>2019 Updated Residual Waste Projections and Landfill Capacity Assessment</i>).</p> <p>The landfill's capacity was increased by 0.5 million tonnes (5% of the landfill's total capacity) to accommodate waste from the regional service area. As noted in Section</p>	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			<p>2.4, “It must be noted that having available residual waste disposal capacity for municipalities from the proposed regional service area does not mean that London is obligated to accept waste from these municipalities in the future. City Council will have the authority to determine which, if any, municipalities or businesses outside of London can use any City facilities and under what conditions they are allowed to do so. For example, the City may require municipalities and businesses to demonstrate that their diversion rate matches or exceeds the City’s diversion rate to be allowed to dispose of residual waste at the W12A Landfill.” The conditions under which waste from the regional service area will be accepted are still to be developed and approved by Council and will be done outside of the Environmental Assessment.</p> <p>The City does not have to worry about running out of capacity for the regional service area because it can stop accepting waste from the regional service area at any time. Waste disposal from sources outside of London will be within Council’s control and will be subject of an upcoming Council policy later in 2021 or 2022.</p> <p>There were many factors for why a regional service area was included in the Amended Terms of Reference, which was approved</p>	

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			by the MECP on July 30, 2019 and is presented in Volume II. One of the factors for having a regional service area was the potential for reduction of greenhouse gases (See section 3.3.7 of the Amended Terms of Reference).	
4	Key Areas of Concern	The veracity and analysis given to climate change impacts, modelling and projections related to extreme weather probabilities, and related stormwater water conveyance and management practices, with potential cumulative and negative downstream impacts on COTTFN resultant from the situational bypass discharge of untreated effluent into the Thames River as a result of increased quantities of wastewater, including landfill stormwater, being treated at Greenway in relation to more extreme, severe and frequent weather events such as increased levels of precipitation and flooding related to climate change	<p><u>Leachate</u> Leachate is water that has been in contact with garbage and is captured by the leachate collection system and sent to the Greenway WTP for treatment.</p> <p>The proposed on-site measures to minimize the release of untreated leachate to Dingman Creek or the Thames River during large storm events is clearly described in Sections 6.1 and 8.1.2.1 of Volume I.</p> <p>As described in Section 8.1.2.2, leachate contributes only about 0.5% of the flow through the Greenway WWTP. Because the proposed expansion is a vertical expansion above the existing waste footprint, the volume of leachate expected to be generated by the expansion is expected to be very similar to current conditions.</p> <p>It is also noted that in Table 13-1 of the Draft EASR the City commits to “Include the possibility of increased leachate generation from climate change into the design of the proposed replacement perimeter LCS for the Phase 1 area of the landfill, as well as</p>	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			<p>the design of the proposed system of temporary leachate storage on the W12A Landfill site during storm events of significant magnitude that could result in discharge of the mixed leachate/sewage to Dingman Creek or the Thames River if the WWTP is in a by-pass situation temporarily.”</p> <p>The above commitment means the City is planning to take into account the possibility of increased leachate generation when designing (i.e., pre-construction phase) the proposed replacement perimeter leachate collection system and the proposed temporary leachate storage facility.</p> <p>The temporary leachate storage facility will store leachate when the Dingman Pumping Station or the Greenway WWTP is in a by-pass situation. Leachate from the storage facility will be released once the by-pass situation has ended.</p> <p><u>Stormwater</u> Stormwater is water that has not been in contact with garbage, is directed to the stormwater management pond system and is not sent to the Greenway WWTP for treatment. Complete details of the modelling of rainfall events and the proposed stormwater management system to manage these rainfall events is presented in Volume IV, Appendix D.04 (<i>Surface</i></p>	

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			<p><i>Water Existing Conditions and Impact Assessment Report</i>). The report assesses and provides infrastructure to manage the one in 250 year storm.</p> <p>As part of the climate change analysis, the aforementioned report will be updated to include an assessment of conditions during a Hurricane Hazel storm event.</p>	
5	Key Areas of Concern	A lack of expressed internal City of London policy and planning alignment of the proposed W12A Landfill expansion with current and future city policies and plans such as the London Plan, the Community Energy Action Plan and the Climate Change Emergency Action Plan – specifically in relation to providing greater planning and policy clarity surrounding mitigation goals and targets for GHG reductions and adaptive management of climate change impacts in the proposed landfill expansion as a part of internal policy and planning alignment practices within the City of London on matters of municipal waste management and climate change adaptation and mitigation	<p>Waste Management, including waste disposal, has always been a key discussion item with appropriate actions taken to mitigate and adapt to climate change. As Council supported and approved different projects and actions including declaring a climate emergency, waste management continues to be an important area of focus now, and into the future.</p> <p>On August 31, 2021, City staff provided Committee and Council with a report on the application of a climate lens to current and future waste management activities, including the W12A landfill expansion. The Civic Works Committee report, Outcome of Climate Lens Process Applied to Waste Management Programs and Projects, can be found at</p> <p>https://pub-london.escribemeetings.com/filestream.ashx?DocumentId=83368</p>	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			This report also includes a brief history of previous waste diversion/waste management planning exercises.	
6	Key Areas of Concern	External City of London policy and planning alignment with globally recognized science-based targets and Federal goals and objectives related to achieving net-zero emissions by 2050, in accordance with the goals and objectives of the Paris Agreement to prevent global climate change increase from rising above +1.5-2 degrees of global average temperatures by 2050, in accordance with Climate Change Emergency declarations in the City of London and the country of Canada and globally, that recognize the potential for catastrophic interference with the global climate system resultant from negligent and poor GHG mitigation planning and policy efforts in 2020-2030 in high-per capita emitting countries like Canada, particularly related to the continued and increased release of potent GHGs like methane (CH ₄) and long-lived GHGs like carbon dioxide (CO ₂) from landfills, and landfill flaring practices, in comparison to alternatives such as the capture/reuse of landfill gas	<p>This comment appears to be more relevant to the City of London's response to its declaration of a Climate Emergency, specifically the establishment of goals and actions within the upcoming Climate Emergency Action Plan. This plan is in its development stages and will contain numerous actions, engagement opportunities, updates, targets, milestones and future directions.</p> <p>As noted in Item 5 above, City staff have provided Committee and Council with a report on the application of a climate lens to current and future waste management activities, including the W12A landfill expansion. Table 1 of this report summarizes the climate change mitigation and adaptation aspects of the City of London's waste management programs and projects. Table 2 of this report summarizes next steps to be taken for these programs and projects.</p> <p>It is important to note that carbon dioxide from a landfill, both from the decomposition of organic matter and from the combustion of landfill gas, is biogenic and thus</p>	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			considered carbon neutral for GHG emission accounting purposes as per s.4.2.2 of the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories.	
7	Key Areas of Concern	Lack of specific planning and policy goals and objectives related to the capture and reuse of landfill gas as a co-beneficial, potential source of renewable natural gas on City and regional levels, including a need for providing greater considerations of potential co-benefits related to regional collaborations and community benefit agreements for the affected treaty-rights of First Nations communities located in proximity to the landfill(s) in the area, including potential opportunities for clarifying regional Landfill Gas planning with the City of Toronto's Greenlane site and the City of London's proposed W12A expansion, as a part of regional energy planning for GHG mitigation from landfills	<p>Additional details on landfill gas utilization plans can be found in the September 24, 2019 Civic Works Committee report: Landfill Gas (LFG) Utilization: Next Steps in the Development of a Renewable Natural Gas (RNG) Facility.</p> <p>https://pub-london.escribemeetings.com/filestream.ashx?DocumentId=67337</p> <p>The above link also contains names of previous public reports on this matter.</p> <p>As noted in Item 5 above, City staff have provided Committee and Council with a report on the application of a climate lens to current and future waste management activities, including the W12A landfill expansion. Table 1 of this report identifies the RNG potential of both the W12A landfill as well as the future source-separated organics stream. As noted in Table 3, landfill gas utilization plans have been delayed during the pandemic and several adjusted policies in British Columbia and Ontario</p>	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			<p>have occurred with respect to purchasing RNG.</p> <p>City staff have had previous discussion with City of Toronto staff. To date, no First Nations staff have approached the City of London on this matter.</p>	
8	Key Areas of Concern	Unclear or inaccurate population growth projections related to the city and region, potentially under-estimating the level of waste generated locally and regionally and sought to be stored and disposed of in the proposed landfill expansion	<p>Information on population growth projections is described in detail in Volume III, Appendix C (<i>2019 Updated Residual Waste Projections and Landfill Capacity Assessment</i>).</p> <p>City of London (local) population projections in the aforementioned report were based on population projections approved City Council in 2018. The population projections approved by the City were developed by Watson & Associates Economists Ltd. (<i>City of London, Population, Housing and Employment Growth Forecast, 2016 to 2044</i>).</p> <p>The population of the regional service area was assumed to not increase in the future. This was done to ensure the amount of waste potentially coming from the regional service was not overestimated.</p>	No changes proposed.
9	Key Areas of Concern	Unclear or non-existent information related to consultation timelines and engagement activities related to the Duty to Consult with affected First Nations on matters related to	<p>All consultation activities have been documented in Volume V Consultation Log and summarized in Volume 1 Section 4.</p> <p>Additional details of the consultation</p>	Additional details on consultation activities will

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		potential Archaeological sites; and, unclear documentation of efforts to clearly engage BIPOC communities on affected cultural sites, notably including the Islamic Cemetery directly impacted by the landfill expansion	activities will be added to the summary in Volume 1 Section 4. The City initiated several consultation activities with First Nations and responded to requests from First Nations. This includes a collaborative approach to field work for archaeological investigations, archaeological report reviews, discussion of archeological studies at workshops (attended by several Indigenous communities) and at individual meetings with Indigenous communities. Discussions were held with a representative of the Islamic Cemetery and information provided to address their concerns.	be added to Volume 1, Section 4.
10	Vol. 1 ES-2 Paragraph 1	RE: Resource Recovery Strategy / Residual Waste Disposal Strategy does not explicitly mention municipal organics composting in CoL as a planning objective to reduce organic waste in landfill operations and expansion plans. Which strategy does municipal composting explicitly fall under in CoL waste management planning and what are the planned goals / timelines for implementation of composting efforts to reduce landfill in London?	See response to comment 2.	No changes proposed.
11	Vol. 1 ES-2 Paragraph 5	RE: Plans to offer waste management services to adjacent municipalities should be considered in the prioritized context of CoL	See responses to comments 2 and 3.	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		<p>meeting its waste reduction / diversion goals before allowances for increased disposal of waste from regional municipalities</p> <p>What planning / policy provisions will be passed to ensure CoL does not capitalize on waste service provision to other municipalities without first meeting its waste reduction / diversion goals and objectives?</p>		
12	Vol 1 ES-7 /8	<p>RE: Alternative 1 (vertical expansion) has been identified as the preferred option for landfill expansion, citing least amount of impacts and costs as key factors for preference of this option.</p> <p>What risk and vulnerability assessment and impact analyses were conducted to support this alternative as the preferred option, in the context of increasing incidence of extreme weather due to climate change and/or impacts on slope gradient stability associated with the vertical expansion of the landfill over the next 3-4 decades?</p>	<p>Upon selection of the preferred alternative, Alternative 1, for landfill expansion, a complete impact assessment for the preferred alternative including climate change considerations was completed as outlined in pages ES-11 to ES-25 of the Executive Summary and Sections 9.0 and 10.0, Volume I.</p> <p>Slope stability analysis for the landfill design was completed as outlined in Section 8.1.3, Volume I but the influence of climate change on this analysis was not previously described. In terms of overall slope stability, our analyses gave factors of safety of >2 for both translational and rotational failure modes. Increased precipitation because of climate change could result in increased infiltration into the waste, but this is unlikely to have a material effect on overall stability because it is not expected to result in an increased height of leachate mound within the waste, i.e., 1) Phase 2 area is underlain</p>	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			<p>by a continuous granular drainage blanket that prevents a leachate mound from forming, and 2) Phase 1 area will have a combined leachate mound control and LFG collection system installed at the base level of the expansion. Also, because the clay till deposit underlying the waste is quite stiff, the weight of the waste as it is gradually placed will not generate temporary excess pore water pressure in the stiff clay till below the landfill that could result in instability.</p> <p>Considering a scenario where climate change results in storms of greater intensity, this is also not expected to result in adverse effects on stability since once the upper surface layer of the landfill surface becomes saturated by the initial precipitation, the remainder of the precipitation will run off the sloped surface of the landfill. The final cover of the landfill will have a vegetated grass surface; the landfill will also have an active landfill gas collection system, which is intended to limit the release of landfill gas through the landfill cover surface that can otherwise cause damage to areas of the vegetation cover and lead to localized surface erosion. It is always possible that localized areas of the landfill surface could experience surficial erosion from storm runoff; however, this is part of normal landfill operations during both the active and post-</p>	

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			closure phases and is remedied through ongoing maintenance and repair.	
13	Vol 1 ES-11	<p>RE: LFG management proposes the flaring of methane gas.</p> <p>What are the anticipated impacts of flaring on CoL's GHG reduction goals and objectives associated with the flaring of methane? What alternatives are being considered, if any, for the collection and utilization of LFG as an alternative fuel source for CoL energy planning and needs, in the context of municipal / federal net-zero goals and climate emergency plans for 2050?</p>	<p>It is important to note that the flaring of landfill gas is a climate change mitigative action. It does not contribute to GHG emissions. Most of the GHG reduction benefits come from the destruction of methane, given its global warming potential (25-28 over 100 years). This occurs whether the methane is burned in the flare or burned as a fuel in a home or a vehicle's engine. The current landfill gas collection and flaring system prevents about 170,000 tonnes per year of equivalent CO₂ emissions due to methane destruction.</p> <p>The additional benefit derived from landfill gas utilization comes from the fossil fuel that its use displaces. In the case of biomethane (aka renewable natural gas, or RNG), it's the displacement of fossil methane (aka natural gas). Upgrading current quantities of landfill gas to RNG would supply over 380,000 GJ/year of RNG, which would reduce GHG emissions by an additional 17,000 tonnes/year for its users. Note that the emission reduction benefits associated by the collection and destruction of landfill gas methane are retained by the City of London.</p>	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			<p>As noted in Response 7 above, landfill gas utilization plans have been delayed during the pandemic and several adjusted policies in British Columbia and Ontario have occurred with respect to purchasing RNG.</p> <p>Actions to support landfill gas utilization and the additional potential for biogas generation and utilization from source-separated organics will be a key component of the City of London's upcoming Climate Emergency Action Plan. This plan will be presented to the Strategic Priorities and Policy Committee in late 2021.</p>	
14	Vol 1 ES-12	The air quality analysis methodologies outlined do not include discussion of methane emissions (CH ₄).	All landfill gases expected to be produced in meaningful quantities that have Standards from the MECP were evaluated. It is noted that methane does not have a Standard, but its estimated generation and the portion not captured by the landfill gas control system that will be released to the atmosphere was quantified and its expected impact, along with other greenhouse gases, were discussed in the Executive Summary page ES-24 to ES-25 and Section 10 of Volume I.	No changes proposed.
15	Vol 1 ES-14	No discussion of climate change models are included in the slope stability methodologies outlined for surface water management and planning / engineering in landfill expansion.	Page ES-14 of the Executive Summary provides details of the surface water assessment as required by the MECP for a landfill expansion. Slope stability analysis is provided on page ES-24 of the Executive Summary within the design component of	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			<p>the environment and also in Section 8.1.3 of Volume I. Climate change considerations are discussed separately on pages ES-24 to ES-25 of the Executive Summary and Section 10 of Volume I.</p> <p>As noted in response to comment #12, potential climate change influence on slope stability were not included in Section 10 of Volume I because it is not anticipated that there will be any negative affect.</p>	
16	Vol 1 ES-20	<p>What, if any, consideration was given to the potential socio-economic and employment impact associated with increased capture of LFG and development of infrastructure & economic developments to support the utilization of local LFG in CoL and/or adjacent communities as a source of local, transitional NG for meeting climate change goals and targets, on aggressive 2050 net-zero timelines, and, the high capital costs of landfill expansion and projected increase commodity price in imported, fracked NG as a result of carbon taxation and environmental impact concerns?</p>	<p>To date, these items have been part of the discussion on utilizing landfill gas for beneficial use as an energy source and/or feedstock (e.g., in greenhouses). It also has been explored as part of the London Waste to Resources Innovation Centre. These items will be considered as part of the Business Case for final implementation of the energy recovery component of the landfill gas management system.</p> <p>Actions to support landfill gas utilization and the additional potential for biogas generation and utilization from source-separated organics will be a key component of the City of London's upcoming Climate Emergency Action Plan. This plan will be presented to the Strategic Priorities and Policy Committee in late 2021.</p>	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
17	Vol 1 ES-24	Management of LFG: Please provide the estimated GHG impacts of LFG flaring associated with landfill expansion, in comparison to a business case for LFG capture and reuse in CoL and adjacent energy systems for NG.	<p>The estimated GHG impacts of LFG flaring associated with landfill expansion is provided in the EASR, Volume IV, Appendix D.13.</p> <p>Various opportunities to capture and reuse the gas as an energy source are part of other ongoing projects and initiatives approved by Council. Those projects are outside the scope of the EA for this project.</p> <p>See Responses 5 and 7.</p>	No changes proposed.
18	Vol 1 ES-24	Geotechnical Considerations: Please provide demonstration of the anticipated impacts of more extreme weather events (e.g. heavy precipitation) on slope stability with the associated slope stability associated with vertical expansion.	As noted in the response to Comment #12, slope stability analysis for the landfill design was completed as outlined in Section 8.1.3, Volume I, but the influence of climate change on this was not previously described. In terms of overall slope stability, our analyses gave factors of safety of >2 for both translational and rotational failure modes. Increased precipitation because of climate change could result in increased infiltration into the waste, but this is unlikely to have a material effect on overall stability because it is not expected to result in an increased height of leachate mound within the waste, i.e., 1) Phase 2 area is underlain by a continuous granular drainage blanket that prevents a leachate mound from forming and 2) Phase 1 area will have a combined leachate mound control and LFG	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			<p>collection system installed at the base level of the expansion. Also, because the clay till deposit underlying the waste is quite stiff, the weight of the waste as it is gradually placed will not generate temporary excess pore water pressure in the stiff clay till below the landfill that could result in instability.</p> <p>Considering a scenario where climate change results in storms of greater intensity, this is also not expected to result in adverse effects on stability since once the upper surface layer of the landfill surface becomes saturated by the initial precipitation, the remainder of the precipitation will run off the sloped surface of the landfill. The final cover of the landfill will have a vegetated grass surface; the landfill will also have an active landfill gas collection system, which should limit the release of landfill gas through the landfill cover surface that can otherwise cause damage to areas of the vegetation cover and lead to localized surface erosion. It is always possible that localized areas of the landfill surface could experience surficial erosion from storm runoff; however, this is part of normal landfill operations during both the active and post-closure phases and is remedied through ongoing maintenance and repair.</p>	
19	Vol 1 ES-24	Climate Change Considerations (Adaptation): Climate change impacts are cumulative and	Within the Executive Summary page ES-24 and Section 10, Volume I it is noted that the	Addition of Hurricane

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		<p>anticipated to occur within the operation of the expanded landfill, including more extreme weather events and increased likelihood of flooding and precipitation impacts on slope stability and SWM. No reference or validity is provided in sentence one to substantiate the assertion that landfill expansion will not be significantly affected by climate impacts. No background studies or reference materials are provided.</p>	<p>potential effects of climate change are not likely anticipated to occur within the operation time period of the expanded landfill as asserted in the comment, but more likely to be after the completion of operation (post 25 years). It was noted there could be more extreme weather events that could contribute to issues with stormwater management (SWM) and, as such, the facilities proposed for the expansion were evaluated for a 1:250 year return period storm. It is noted that under normal conditions the SWM facilities are assessed for a 1:100 year return period storm. The details of this assessment have been provided in Section 10 of Volume I.</p> <p>The City of London stormwater management system design staff have requested analysis of a Hurricane Hazel event in addition to the 1:250 year return period storm to assess climate change impacts on stormwater management facilities. This analysis, and the required changes to design, has been included in an updated Section 10.</p> <p>As noted in response to Comment #12 above, slope stability influenced by climate change was not included in the EA as it is not expected to have an effect.</p>	<p>Hazel event in climate change analysis of stormwater facilities detailed in Section 10, Volume I.</p>

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
20	Vol 1 ES-24	What is the source that recommended the use of 1:250 return periods for SWM guidelines?	Generally, most municipalities have requirements related to stormwater and climate change for the protection of infrastructure and public safety. This can be a factor of safety on another event analysis or use of a less frequent return period. Within the 2019 Design Specifications & Requirements Manual by the City of London, the Upper Thames River Conservation Authority defines the Regional event as the 250-year event for protection of infrastructure and public safety. As noted in response to comment 17, the City's stormwater management system design staff have reviewed the 250 year return period analysis and also suggested the addition of analysis of a Hurricane Hazel event to demonstrate protection of infrastructure and public safety.	Addition of Hurricane Hazel event in climate change analysis of stormwater facilities detailed in Section 10, Volume I.
21	Vol 1 ES-24	No reference to slope stability under climate impacts and scenarios are provided. No modelling or risk/vulnerability studies are provided. All information is generalized and therefore is lacking in validity / verification, indicating a low-level of future scenarios and modelling of climate impacts on landfill expansion was included or considered in the scoped EA for this study.	Page ES-24 is in the Executive Summary where model details would be inappropriate. All climate change analyses considered and completed are provided in Section 10, Volume I. As noted in response to Comment #12, climate change effects on slope stability were not included in Section 10 because there are not expected to be any adverse effects.	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
22	Vol 1 ES 24	Climate Change Considerations (Mitigation): Deforestation and increased GHGs are discussed. Provide evidence and analysis supporting the assertion that GHG levels will peak in 2049 (a year after closure); and provide a business case that includes cost/benefit analysis of LFG flaring in comparison to LFG capture and local reuse as a transitional source of NG that can create economic opportunities for green jobs and result in energy costs savings / GHG savings consistent with municipal / federal GHG reductions targets for 2050 and anticipated escalation of NG prices as a result of carbon taxation / environmental concerns with imported NG.	Landfill gas modelling was completed using the LandGem model. This model is the preferred model for the MECP and the United States Environmental Protection Agency. The LandGEM model summary reports with equations and further details are provided in Volume IV, Appendix D.13, sub-appendix B. Various opportunities to capture and reuse the gas as an energy source are part of other ongoing projects and initiatives approved by Council. Those projects are outside the scope of the EA for this project. See Responses 5 and 7.	No changes proposed.
23	Vol 1 ES 26	Monitoring and Contingency Air quality considerations includes the release of CH ₄ . What details are there for monitoring CH ₄ , consistent with municipal / federal targets for GHG reductions by 2050?	Presently there are no regulatory requirements for monitoring GHG or methane specifically from the landfills in the province and comparing results to municipal and federal targets. There is an MECP imposed LFG capture efficiency target of 85% that has been considered in the proposed design for this landfill expansion. The MECP will review the design and comment if there are any concerns from a LFG collection efficiency perspective. It is noted that as part of site operations, the collection and destruction of LFG at the flare is continually monitored, thereby allowing for	The GHG reporting requirement will be added to the Executive Summary and Section 12 (Monitoring and Contingency), Volume I.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			<p>ongoing evaluation and quantification of what is released from the flare.</p> <p>Landfills that generate over 10,000kt CO₂ equivalent of GHG are required to report GHG to the following as noted in Section 10, Volume I:</p> <ul style="list-style-type: none"> • Federal reporting under Section 46 of the Canadian Environmental Protection Act, (CEPA), SC 1999: Greenhouse Gas Emissions Reporting Program (GHGRP). • Provincial reporting under Ontario's Greenhouse Gas Emissions: Quantification, Reporting, and Verification Regulation, Ontario Regulation 390/18 (O. Reg 390/18). <p>The W12A Landfill has been and will continue to report its GHG generation.</p>	
24	Vol 1 ES 1-10 1.3.3.4	<p>LFG - Methane testing and flaring identifies a sample of profile of 55%-60% methane / 40-45% carbon dioxide, indicating this landfill site is a significant contributor of GHGs in CoL. What impact does LFG release have on CoL's municipal GHG profile, currently? What impact will growth in LFG quantity have due to landfill expansion? What impact will LFG expansion and growth have on anticipated municipal GHG reduction goals for 2030, 2040 and 2050?</p>	<p>The current landfill gas collection and flaring system prevents about 170,000 tonnes per year of equivalent CO₂ emissions due to methane destruction. Flaring of landfill gas is a climate change mitigative action. It does not contribute to GHG emissions.</p> <p>The estimated GHG impacts of LFG flaring associated with landfill expansion is provided in the EASR, Volume IV, Appendix D.13.</p> <p>Fugitive (not captured) methane emissions at the W12A landfill in 2020 were estimated</p>	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			<p>to be 115,000 tonnes of GHG. This works out to an estimated landfill gas collection efficiency of 60 per cent for the current landfill.</p> <p>Fugitive methane emissions from the W12A landfill currently account for 2 to 4 per cent of annual community wide GHG emissions.</p> <p>With the proposed expansion of the W12A landfill, it is anticipated that the landfill gas collection efficiency will be improved, with a designed efficiency of 85 per cent. As a result, annual fugitive methane emissions are expected to decrease to about 80,000 tonnes of equivalent CO₂ emissions per year, a reduction of about 30 per cent from current (2020) fugitive methane emissions. (see Volume 1, Section 10, Table 10.2-4 and Table 10.2-5).</p>	
25	Vol 1 ES 1-10 1.3.3.6	<p>The quantity of LFG currently emitted annually is 1.2K scfm of LFG, on average, flared in 2019; and 1.7K scfm LFG flared in 2020. This indicates growth of 29.4% LFG, a significant source of GHGs, year over year (2019-2020). London is the second fastest growing city in Canada and landfill expansion will result in increased landfill + LFG and potent GHGs like CH₄ and CO₂.</p> <p>What forecast scenarios have been identified for the increased LFG growth and flaring anticipated with landfill expansion? What</p>	<p>The climate impact of landfills come from fugitive (not captured) methane emissions. Fugitive methane emissions from the W12A landfill currently represent about 115,000 tonnes or between 2 and 4 per cent of local emissions.</p> <p>As noted in Response 24, the overall landfill gas collection efficiency will be improved with the landfill expansion, with a designed efficiency of 85 per cent per cent. As a result, annual fugitive methane emissions are expected to decrease to about 80,000</p>	

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		<p>impact will this flaring have on municipal climate change and GHG reduction goals in 2030, 2040 and 2050 in CoL? How does this modelling compare with the costs/benefits of LFG capture and reuse for NG transitional fuel sourcing as a contribution to municipal / federal net-zero targets and goals?</p>	<p>tonnes of equivalent CO₂ emissions per year.</p> <p>To clarify, the quantifies of LFG noted are quantities that have been collected and flared, not emitted. As outlined in Section 8.1.4, Volume I the increase in LFG collection from 2019 to 2020 is as a result of the LFG collection system expansion including horizontal collection pipes as well as vertical collection wells installed in the spring of 2020</p> <p>The predicted LFG quantities associated with the expansion are detailed in Section 8.1.4, Volume I and were generated using the LandGEM model.</p> <p>The landfill expansion will be expected to achieve 85% collection efficiency of generated LFG, compared to the 2019 estimated efficiency of 60%. As a result, when both collected and emitted landfill gas are considered, the landfill expansion is not anticipated to release more GHG than the existing landfill as outlined in Section 10, Volume I.</p> <p>For example, with the proposed landfill expansion, the potential RNG supply could increase by an additional 420,000 GJ/year of RNG, which would reduce GHG</p>	

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			emissions by an additional 19,000 tonnes/year for its users.	
26	Vol 1 ES 2-1	<p>Waste diversion via composting is identified as implemented by the City and / or private & institutional sectors.</p> <p>What composting programs have specifically been implemented by the City and how much waste diversion via composting is currently achieved through City programs, policies and the implementation of specific City-led programs and initiatives to specifically support composting in the residential sector?</p> <p>“The only significant diversion component that remains undecided and unimplemented is a residential organics management program”.</p> <p>Residential organic waste is a significant source of landfill quantity and LFG due to organic decomposition. Please outline the history of CoL composting efforts and explicitly specify the reasons why CoL has failed to deliver a residential composting program over the past 25 years.</p> <p>COTTfN identifies residential organic waste as a significant source of LFG and the landfill quantity increase in CoL waste, necessitating the proposed expansion needed for the CoL waste management responsibilities, via vertical growth of the existing landfill footprint</p>	<p>Information on the City’s existing residential composting programs are summarized in in Volume III, Appendix C (<i>2019 Updated Residual Waste Projections and Landfill Capacity Assessment, Appendix F</i>).</p> <p>It is agreed that residential organic waste is a significant source of LFG; however, the City of London has committed in the Terms of Reference (ToR) to achieve an overall 60% diversion target which will necessitate the implementation of a Green Bin Program as summarized in Table 13-1, Volume I. The waste that will be diverted in these future programs (noted for implementation in 2022) have been excluded within the projections of how much waste will require landfilling in the future.</p> <p>However, as a conservative measure and in line with MECP requirements, the LFG generating potential of the waste being landfilled has been estimated as if organic waste is still present within the future disposed waste as outlined in Section 8.1.4, Volume I.</p> <p>See Response 2 for further details on the City’s 60% Waste Diversion Action Plan. The City of London is in compliance with all waste diversion regulations and policies with</p>	

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		as a result of maximum capacity being reached by 2024.	<p>respect to organics management. The implementation plan for Green Bin and proposed launch date of fall 2022 will ensure the provincial target date of by 2025 is met.</p> <p>Council's action on how it balances and invests taxpayer and ratepayer funds on environmental protection activities, greenhouse gas reduction activities and related matters such as composting, and in consideration of other local government priorities, are well documented.</p> <p>Should this aspect - "please outline the history of CoL composting efforts and explicitly specify the reasons why CoL has failed to deliver a residential composting program over the past 25 years" City staff will be pleased to engage in discussion in a format that meets the needs of COTTEN and use of City staff time.</p>	
27	Table 2.3-1	<p>Curbside Organics Management Program (10%)</p> <p>Why is this diversion rate anticipated to be so low?</p> <p>MURB Organics Management Program (0.6%) + Other Organic Management Program (0.4%)</p>	The estimated diversion rates used in the draft EASR are consistent with similar programs that have been implemented in other Ontario municipalities. The diversion rates for diversion programs in other large Ontario municipalities are presented in Volume III, Appendix C (<i>2019 Updated Residual Waste Projections and Landfill Capacity Assessment, Appendix C</i>).	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		<p>Why are these diversion rates anticipated to be so low?</p> <p>How do these anticipated diversion rates compare to other mid-sized cities elsewhere in Canada with long-standing established organic waste diversion and composting programs (e.g. Halifax)?</p> <p>What business case planning for organic waste diversion has been considered by CoL as a cost-benefit opportunity to promote circular economic activities, offset municipal costs, create waste-management value for taxpayers and create green jobs in organic waste management in CoL, using CoL organics?</p>	<p>The calculation of the diversion rates for the various proposed diversion programs can be found in The 60% Waste Diversion Action Plan (located at https://getinvolved.london.ca/12714/widgets/50491/documents/28876)</p> <p>The key figures from this report used to estimate the diversion rate for the curbside organics management program (Green Bin) are summarized below:</p> <ul style="list-style-type: none"> • Total residential waste = 162,000 tonnes (100%) • Total residential waste diverted = 72,000 tonnes (45% diverted) • Total residential garbage = 90,000 tonnes (55% disposed) • Total residential curbside garbage = 61,000 tonnes (38% of all waste) • Residential curbside garbage is 45% “commonly collected organics” or 27,000 tonnes • A weekly green bin program with biweekly garbage collection typically captures approximately 60% of the organics which is equal to 16,200 tonnes. • 16,200 tonnes is 10% of the total residential waste stream <p>A summary of the financial, social, environmental and technical considerations</p>	

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			<p>of implementing a Green Bin Program is provided in Appendix F of the 60% Waste Diversion Action Plan. The net cost to implement the Green Bin program is estimated to be \$5 million per year.</p> <p>The City of London also operates the London Waste to Resources Innovation Centre that includes the circular economy as one of its important fields of activities. Western University is a key contributor to this work.</p>	
28	Vol 1 2-6	<p>“It was assumed that there is no [regional] increase in population or per capita waste generation rate in the future”</p> <p>This assumption is deeply problematic. References below:</p> <p>https://www.cbc.ca/news/canada/london/london-population-1.5464669</p> <p>https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CM&ACA&Code1=555&Geo2=PR&Code2=35&SearchText=London&SearchType=Begin&SearchPR=01&B1=All&GeoLevel=PR&GeoCode=555&TABID=1&type=0</p> <p>What prioritization will be given to CoL meeting waste diversion goals in relationship to the potential acceptance of regional waste for disposal at the expanded landfill site? How</p>	See response to comment 3.	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		do these factors align or detract from City waste management priorities and the municipal costs of expanding the landfill, in context of unaccounted for regional + local population growth in the EA?		
29	Vol 1 2-12	<p>'Alternative To' identifies the development of an Integrated Resource Recovery Centre with the expansion of the landfill over 25 years to promote diversion / recovery and energy.</p> <p>Please provide further plans and goals outlining the details of the costs and benefits associated with an IRRC as an alternative to landfill expansion, including potential details and opportunities for LFG capture and reuse, organics capture and value-added activities, including job creation.</p>	<p>As this is a focused EA related to landfill expansion, the reviewer is invited to seek additional details pertaining to 'Alternatives To' and in particular the Integrated Resource Recovery Centre found in the ToR (see Volume II) and the W12A Landfill Area Plan (2008).</p> <p>It is noted that the alternative previously identified of developing an Integrated Resource Recovery Centre <u>includes</u> expansion of the W12A Landfill; it is not an alternative to landfill expansion. There was an alternative that was more focused on diversion with no landfill expansion, but the analysis within the ToR and the W12A Landfill Area Plan did not find this more favourable than the Integrated Resource Recovery Centre including landfill expansion.</p> <p>The comparison of 'Alternatives To' considered a broad range of environmental, technical, and socio-economic factors; as such, a discussion specifically related to LFG capture and management of organic waste materials of an Integrated Resource</p>	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			Recovery Centre instead of a landfill expansion is not relevant or necessary.	
30	Vol 1 4-12	<p>“People have expressed that guidance and restrictions are required before proceeding to accept waste from neighboring municipalities”</p> <p>What guidance and restrictions are recommended for CoL in advance of regional service provisions for increased waste at the expanded landfill?</p>	See response to comment 3.	No changes proposed.
31	Vol 1 4-14	<p>“The City is interested in finding a use for the LFG created and is currently exploring renewable natural gas options”</p> <p>It is positive that CoL is interested in renewable NG from LFG. Please provide further information and details about the strategic options and details being considered as it relates to the prior approval of the expanded landfill site, in the context of climate change emergency planning and GHG reduction targets for 2030, 2040 and 2050 locally and federally.</p>	See responses to comments 5 and 7.	No changes proposed.
32	Vol 1 4-15	<p>“The surface water impact assessment in Section 9.3 does not predict any surface water quality impacts from the proposed landfill expansion design”.</p> <p>What climate change scenarios, assumptions and modelling supports this assertion that</p>	Section 4.7.1, Volume I as referenced summarizes comments and responses from Open House #3. Climate change scenarios that were modelled to assess potential surface water quality and quantity impacts are described in Section 10, Volume I. It is noted that surface water management is provided at the landfill site for release off the	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		surface water impacts will not impact the Thames River?	site, and is in no way connected to the Thames River.	
33	Vol 1 4-19	<p>“Having a sunset clause when the landfill has to close is a disincentive for waste reduction”</p> <p>This is a counter-intuitive response from CoL, considering that future expansion of a landfill post-2048 would likely be horizontal and have significant impacts on agricultural and future residential development in the vicinity of future landfill expansion lands. It is difficult to understand how a sunset clause would disincentivize CoL waste reduction, if properly communicated to the public as a driving factor for organic waste composting and other City initiatives to reduce waste inputs to the current / expanded landfill. Provide feedback and comments.</p>	<p>The landfill’s capacity and site life is based on achieving certain waste diversion targets. If these diversion targets are exceeded, the landfill’s life will be extended. This provides a strong incentive to exceed waste diversion targets and extend the landfill’s site life.</p> <p>If there is a sunset clause, exceeding the waste diversion targets does not extend the landfill’s site life. This results in a disincentive for waste diversion.</p>	No changes proposed.
34	Vol 1 Table 4.7-4	<p>“The test pit was completed on November 6 2019”</p> <p>What were the results of this borehole on surficial aquitard vertical fracturing, as requested by Dragun?</p>	Section 4.7.3, Volume I as referenced summarizes comments and responses from Indigenous community meetings. Within that meeting, Dragun asked for a test pit and one was completed. The actual details of the test pit activity and analysis are provided in Volume IV Appendix D.03 and the findings are summarized in Section 5.3, Volume I.	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
35	Vol 1 5.5.5.5 5-70	<p>“Development within and adjacent to natural heritage features identified within the W12A Landfill Study Area should be consistent with the policies outlined in the London Plan (2017) which adheres to PPS (2020).”</p> <p>Advanced, precautionary buffer requirements, development distancing and environmental impacts should be considered as a necessary, not optional, required component of landfill expansion. Environment Impact Statements should be completed as a required component of the EA for landfill expansion, including impacts on unevaluated wetlands, valley lands and potential Environmental Significant Areas, as designated by CoL in accordance with Provincial and Federal legislation and guidelines and policies related to nature conservation and preservation.</p>	<p>Section 5.5.5 of Volume I provides a background description of significant natural heritage features and species within the biology study area for the proposed landfill expansion with Section 5.5.5.5 of Volume I outlining identified development constraints. The assessment of environmental impacts associated with the Project on biology and any required mitigation is provided in Section 9.4, Volume I.</p>	No changes proposed.
36	Vol 1 5.10.2 5-92	<p>“The Islamic Cemetery of London is located close to the South of the Site Area and is the only notable cultural feature in the area... potential [effects] could be noise, odour or dust from landfill operations and construction activities”</p> <p>Greater socio-cultural sensitivity and CoL efforts of investigation regarding the impacts of landfill expansion on the Islamic Cemetery of London should be considered within the scope of this EA.</p>	<p>Section 5 of Volume I of the draft EASR represents the existing conditions description and does not present nor discuss impact assessment. The impact assessment is described in Section 9 of Volume I of the draft EASR.</p>	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
37	Vol 1 6-3	<p>“For the preferred expansion alternative, the capacity of the existing LFG management infrastructure (which consists of vertical wells, blower and flare) will be assessed to determine, what, if any, upgrading / increased capacity may be needed”</p> <p>Will this assessment of LFG infrastructure include assessment of the costs/benefits associated with LFG capture and NG utilization in CoL and private buildings, as a part of cumulative GHG reduction efforts consistent with CoL climate emergency planning and NG fuel substitution efforts consistent with 2030, 2040 and 2050 GHG reduction planning and potential procurement of lower cost, renewable LFG?</p>	<p>Items like this will be considered as part of the Business Case for final implementation of the energy recovery component of the landfill gas management system. Some of the items might be within the control of a private service provider and how they propose to operate the system. Some of the items will also be part of the Climate Emergency Action Plan.</p> <p>Even with the development of landfill gas utilization processes such as a RNG production facility, there will be a need for landfill gas flaring system as an emergency back-up in the event of a process upset to prevent the release of uncontrolled methane emissions as well as odourous compounds.</p>	No changes proposed.
38	Vol 1 6-10	<p>“Based on this geotechnical assessment, it is concluded the overall stability of the proposed expansion... is acceptable and that the settlement of... sub-grade beneath the existing footprint will adversely affect the performance life...”</p> <p>Did the geotechnical assessment include consideration of increased incidence of precipitation and subsidence induced by the likelihood of increased severity and frequency of extreme weather events? Provide evidence.</p>	<p>The geotechnical assessment did not include discussion of increased incidence of precipitation and subsidence induced by increased severity or frequency of weather events. This analysis was not included because in terms of overall slope stability, our analyses gave factors of safety of >2 for both translational and rotational failure modes. Increased precipitation because of climate change could result in increased infiltration into the waste, but this is unlikely to have a material effect on overall stability because it is not expected to result in an increased height of leachate mound within the waste, i.e., 1) Phase 2 area is underlain</p>	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			<p>by a continuous granular drainage blanket that prevents a leachate mound from forming and 2) Phase 1 area will have a combined leachate mound control and LFG collection system installed at the base level of the expansion. Also, because the clay till deposit underlying the waste is quite stiff, the weight of the waste as it is gradually placed will not generate temporary excess pore water pressure in the stiff clay till below the landfill that could result in instability.</p> <p>Considering a scenario where climate change results in storms of greater intensity, this is also not expected to result in adverse effects on stability since once the upper surface layer of the landfill surface becomes saturated by the initial precipitation, the remainder of the precipitation will run off the sloped surface of the landfill. The final cover of the landfill will have a vegetated grass surface; the landfill will also have an active landfill gas collection system, which should limit the release of landfill gas through the landfill cover surface that can otherwise cause damage to areas of the vegetation cover and lead to localized surface erosion. It is always possible that localized areas of the landfill surface could experience surficial erosion from storm runoff; however, this is part of normal landfill operations during both the active and post-</p>	

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			<p>closure phases and is remedied through ongoing maintenance and repair.</p> <p>Lastly, increased precipitation is not expected to cause additional subsidence, i.e., assumed to be referring to settlement of the surface of the landfill. The initial settlement results from compression of the compacted waste due to the weight of waste above it, followed by a gradually declining rate of settlement over time associated with decomposition of the waste and additional compression.</p>	
39	Vol 1 7-46	<p>“There are known archeological sites to the north of the existing landfill site that require further assessment... they could be affected by the new land-fill related infrastructure constructed within the buffer area”</p> <p>CoL should provide a detailed plan and timeline for the assessment of known archeological sites, consistent with the Duty to Consult with local First Nations.</p>	<p>Section 7.2.7, Volume I is a comparison of landfill expansion ‘Alternative Methods’ for the archaeology component. The assessment of the archaeological site noted to the north was completed and is described in Section 5.8.2, Volume I. Local First Nations were consulted and were present during the Stage 3 investigation.</p>	<p>Language in Section 7.2.7 has been updated to outline that future archaeological assessments are only required if landfill expansion development is near to identified archaeological sites</p>

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
40	Vol 1 7-47	<p>“... there are areas of archeological significance or potential within the existing landfill... that have not been previously assessed and require further work (Stage 2 Assessment)”</p> <p>CoL should provide a detailed plan and timeline for the assessment of un-assessed archeological sites, consistent with the Duty to Consult with local First Nations and proceed to Stage 2 Assessment to identify potential sites and previous disturbance.</p>	<p>Section 7.2.7, Volume I is a comparison of landfill expansion ‘Alternative Methods’ for the archaeology component and notes areas of archaeological significance within the landfill study area, not the landfill proper. All required assessment of archaeological sites has been completed and is described in Section 5.8.2, Volume I. Local First Nations were consulted and were present during more recent investigations.</p>	<p>Language in Section 7.2.7 has been updated to outline that future archaeological assessments are only required if landfill expansion development is near to identified archaeological sites.</p>

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
41	Vol 1 9.7 9-62	Provide a clear summary of Stage 2 Assessment actions.	Understood.	Details of the various archaeological assessments completed including the Stage 2 assessment have been updated and improved in Sections 5.8.2 and 9.7 of Volume I.
42	Vol 1 Table 7.2-27	<p>“A change in land use where the change in use may impact the cultural heritage value”</p> <p>“No expected impacts”</p> <p>“The Islamic Cemetery of London is located close to the South of the Site Area and is the only notable cultural feature in the area... potential [effects] could be noise, odour or dust from landfill operations and construction activities” 5-92</p> <p>Greater socio-cultural sensitivity and CoL efforts of investigation + consultation with the affected cultural community regarding the impacts of landfill expansion on the Islamic Cemetery of London should be considered within the scope of this EA.</p>	Table 7.2-27 presents a comparison of ‘Alternative Methods’ of landfill expansion on cultural heritage landscapes, including the Islamic Cemetery of London. The potential impacts of landfill expansion on cultural heritage landscapes are described in Section 9.8, Volume I. A representative of the Islamic Cemetery of London attended Open House #4 and noted their only concerns were related to wind and turkey vultures as documented in Section 4.7.2, Volume I. They did not express concerns regarding how the City of London conducted the Environmental Assessment nor the consultation conducted.	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
43	Vol 1 7-53	<p>Local Economy</p> <p>Did CoL EA ToR incorporate cost-benefit analysis associated with integrated waste resource management options, including organics composting waste recovery and LFG development in scenario planning and alternatives in the EA? If not, why not?</p>	<p>The ToR was provided in the EA package as Volume II. The identified 'Alternatives To' included: 1) Continued use and new greenfield landfill, 2) Expand W12A Landfill, 3) Develop an Integrated Resource Recovery Center and expand W12A Landfill, 4) Develop an industrial eco-park and expand W12A Landfill, 5) Close the W12A landfill in August 2006, export waste and new greenfield landfill, 6) Export waste and 7) Accelerate waste diversion to maximize W12A Landfill site life and expand W12A Landfill. The comparison of these 'Alternatives To' included the following cost related criteria: consumption/preservation of non-renewable resources, cost of waste management service to the taxpayer, level of public waste management service, potential for employment, and potential for new business opportunities and public/private partnerships. The comparison of the 'Alternatives To' included all aspects of the environment, not just cost aspects.</p>	No changes proposed.
44	Vol. 1 8-5	<p>"... horizontal LFG collection pipes will be installed progressively..."</p>	<p>Actions to support landfill gas utilization and the additional potential for biogas generation and utilization from source-separated organics continue to be a part of the Corporate Energy Management Conservation Demand Management (CDM) Plan and will be a key component of the City of London's upcoming Climate Emergency</p>	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		CoL should provide a detailed and integrated LFG recovery plan that coincides with CoL climate change emergency and energy planning objectives for GHG reduction goals and targets for 2030, 2040 and 2050, consistent with municipal and federal policy directions.	Action Plan. These items will also be a component of a future Business Case for RNG and other potential opportunities.	
45	Vol 1 8-7	<p>“... it is proposed to consider options to provide temporary leachate storage on site during storm events of significant magnitude that could result in discharge of mixed leachate / sewage to Dingman Creek or the Thames River if the WWTP is in a bypass situation”</p> <p>CoL should pursue and provide greater attention to the details and risk analysis, including remediation options, associated with and pertaining to ‘storm events of a significant magnitude’ in accordance with climate change scenarios and modelling projections up to and beyond 2048, as a part of due diligence in averting the release of ‘mixed leachate / sewage to DC or the TR if the WWTP is in a bypass situation’.</p> <p>Further information related WWTP bypass situations and remediation planning should be provided, in relation to increased volume flows associated with landfill expansion and the aversion of untreated bypass releases from Greenway WWTP, with appreciation to</p>	The conceptual approach to providing temporary storage of leachate described in Section 8.1.2, Volume I was developed using the leachate generation predictions for the proposed expansion. The potential risk of increased storm events and climate change on this temporary leachate storage were evaluated in Section 10.1, Volume I and the proposed conceptual design was found to be adequate, even with increased precipitation. It is noted that because the proposed expansion is a vertical expansion above the existing waste footprint, the volume of leachate expected to be generated by the expansion is expected to be very similar to current conditions.	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		downstream impacts on COTTFN and adjacent First Nation communities.		
46	Vol 1 8-11	<p>“All components of this system (WWTP) are part of City owned, operated and maintained infrastructure, and are accessible for repair, upgrade or replacement if and as needed...”</p> <p>CoL should provide a detailed and costed schedule for the repair, upgrade or replacement of WWTP infrastructure and piping necessary to avoid bypass situations that could result in the release of leachate and/or contaminated sewage to the Thames River.</p>	<p>The City is continuously working to reduce overflows and bypasses.</p> <p>The City is currently developing a Wastewater Treatment Operations Master Plan that outlines our strategy for the management of wastewater for the next 30-50 years. Overflow and bypass reduction forms a part of this Master Plan. Information on the Master Plan and how become involved in the process can be found at: Wastewater Treatment Operations Master Plan Get Involved London</p> <p>COTTFN has previously been circulated about the development of the Master Plan and will be included in future engagement. The project manager for the Master Plan is Marcy McKillop who can be contacted at: Phone -519-661-2489 x 4976 Email - mmckillop@london.ca</p>	No changes proposed.
47	Vol 1 8-12 - 8-18	Please include LFG estimates related to GHGs and potential options and alternatives for the capture of LFG as a means of integrated approaches to climate change and energy planning in accordance with municipal and federal targets for climate change mitigation for 2030, 2040 and 2050.	The W12A Landfill is estimated to generate approximately 290,000 tonnes/year of GHG with about 170,000 tonnes/year being captured. It is expected that peak production in 2049 will be approximately 540,000 with 460,000 tonnes being captured.	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			Actions to support landfill gas utilization and the additional potential for biogas generation and utilization from source-separated organics continue to be a part of the Corporate Energy Management Conservation Demand Management (CDM) Plan and will be a key component of the City of London's upcoming Climate Emergency Action Plan. These items will also be a component of a future Business Case for RNG and other potential opportunities.	
48	Vol 1 8-20	<p>"The 1:250 year return period design storm will also be assessed to predict conditions during such an event to accommodate climate change"</p> <p>Provide this technical assessment as a part of due diligence in engineering design and planning for landfill expansion, consistent with climate science and known increases in risks and impacts associated with climate change projections and municipal climate change vulnerability and risk assessment and analysis.</p>	The climate change stormwater management technical assessment is described in Section 10.1, Volume I on a section of the EA dedicated to climate change.	No changes proposed.
49	Vol 1 8-25	<p>"The source of heating for all site buildings will be natural gas"</p> <p>Please specify if the building heating using NG will be locally sourced from LFG.</p>	It has not been determined how future RNG will be used and or sold at this time.	No changes proposed.
50	Vol 1	Table 9.1-2	Table 9.1-2, Volume I summarizes emission rates for air emissions that have Standards	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
	9-4	Provide an explanation why CO ₂ and CH ₄ are not included in the summary table.	developed by the MECP. Carbon dioxide and methane do not have emission Standards in Ontario. GHG emissions are described and discussed in Section 10.2, Volume I.	
51	Vol 1 9-54	Provide clear illustration of compliance with London Plan and objectives for Policy 1256 “best practices in site selection, site design, operation [waste recovery] and remediation” and Policy 1258 objectives for “waste reduction, re-use, recycling, resource recovery, treatment and waste disposal; and Eco-Industrial Parks where industries use materials available from the Waste Management Resource Recovery Area”	<p>“Individual Environmental Assessments – Individual environmental assessments are prepared for large-scale, complex projects with the potential for significant environmental effects. They require Ministry of the Environment, Conservation and Parks approval.”</p> <p><u>Policy 1256</u> The Environmental Assessment being undertaken by the City is a best practice for site selection and selection of how the landfill will be developed (i.e., “alternative method”). The Environmental Assessment process has gone through a number of reviews over the years to ensure it is meeting the needs of those it serves.</p> <p><u>Policy 1258</u> This policy lists what is permitted within the area shown as Waste Management Resource Recovery Area place type in the Official Plan. Included in this list are landfills.</p>	No changes proposed.
52	Vol 1 9-68	Provide further information related to waste resource recovery (green organics, LFG) as a	The evaluation of ‘Alternatives To’, including diversion options and comparison of economic factors, was completed in the ToR	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		part of economic scenario planning in EA review.	<p>(Volume II) and in the W12A Landfill Area Study (2008). Volume I and Section 9.9 of Volume I only considers potential impacts associated with the preferred method of landfill expansion, as diversion options have already been described, discussed and reviewed. Please see Volume II for further information related to diversion.</p> <p>The City's long-term resource recovery plan is a work in progress. The most recent update to Committee and Council occurred on April 20, 2021</p> <p>https://pub-london.escribemeetings.com/filestream.ashx?DocumentId=80154</p> <p>The City would be pleased to engage further with the COTFFN on resource recovery opportunities.</p>	
53	Vol 1 10-1	<p>"Impacts from climate change... possibly affect... the performance of the components that comprise the SWMS... and the exceedance of the capacity of the SWMS"</p> <p>Describe the identified components of the SWMS that could be affected by climate change impacts over the short, medium and long-term timelines associated with the operation and post-operation of the proposed landfill expansion.</p>	The SWMS comprises the ditching and stormwater management ponds proposed for the landfill expansion and these are thoroughly described in Section 9.5.2, Volume I. The assessment of climate change impacts, being the 1:250 year return period storm event, is considered to represent the maximum event for all timelines (short, medium and long-term) as well as operational versus post-operational, noting that in the assessment it has been noted that the likelihood of such an event	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			occurring is within the post-operational time horizon.	
54	Vol 1 10-2	<p>“Changing climate patterns may result in extreme heat or cold for extended periods of time.. strong wind”</p> <p>Besides occupational health and safety concerns, what impacts will temperature change (+/- 1.5- 2 degrees C global average temperatures above pre-industrial levels by 2050, higher in the Canadian and regional context) and wind conditions have on erratic and more frequent freeze-thaw cycles and drought conditions, and debris spread, SWMS etc., impacting the proposed landfill expansion and adjacent areas of concern in the buffering zone?</p> <p>“It is considered reasonable to expect ... a marginal increase in leachate generation compared to what is currently being collected from the landfill footprint and conveyed for treatment”</p> <p>Provide evidence to support this assertion that an increase in leachate production and conveyance for treatment is a reasonable expectation in comparison to alternatives.</p> <p>“... if the WWTP is in a bypass situation temporarily”</p> <p>Provide cross reference to a CoL timetable and strategic plan for WWTP emergency</p>	<p>Potential impacts to the landfill or landfill infrastructure (i.e., SWM ponds) as a result of changes in temperature and wind due to climate change are limited to occupational health and safety concerns as documented in Section 10, Volume I. The changes in temperature and wind, and potential associated changes in frequency of freeze-thaw cycles or droughts are not expected to have any other impacts on the function of the landfill or its ancillary features.</p> <p>As noted, climate change is expected to result in larger and/or more frequent precipitation events and the management of the associated excess leachate generation and stormwater management associated with these precipitation events is described in Section 10, Volume 1.</p> <p>Please see response to Comment 46 with respect to the question on CoL timetable and strategic plan.</p>	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		response and longer-term infrastructure planning to end temporary bypass situations from CoL wastewater into the Thames River.		
55	Vol 1 10.1	Provide comprehensive evidence that slope stability of the proposed vertical expansion of the landfill site has taken into account subsidence related to climate change impacts (due to extreme weather and precipitation) over the short, medium and long-term operation of the landfill.	Please see response to Comments #10 and #36.	No changes proposed.
56	Vol 1 10-3	Provide evidence of the projected increase in GHGs associated with regional service provision and the transportation of regional waste for disposal in the proposed landfill expansion.	<p>None of the GHG estimates included in Section 10, Volume I include GHG from external transportation of waste from either the existing service area or the proposed expanded service area. This is in accordance with reporting requirements for:</p> <ul style="list-style-type: none"> Federal reporting under Section 46 of the <i>Canadian Environmental Protection Act</i>, (CEPA), SC 1999: Greenhouse Gas Emissions Reporting Program (GHGRP). Provincial reporting under Ontario's Greenhouse Gas Emissions: Quantification, Reporting, and Verification Regulation, Ontario Regulation 390/18 (O. Reg 390/18). 	No changes proposed.
57	Vol 1 10-3	Provide evidence of the projected increase in GHGs associated with landfill expansion under and in relation to CoL GHG reduction targets and timelines associated with	As noted in Section 10.2, Volume I there is no projected increase in GHGs related to the landfill expansion, largely as a result of the requirement to increase landfill gas	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		Community Energy Action Planning and Climate Change Emergency Planning	collection efficiency for the expanded landfill.	
58	Vol 1 10-3	<p>"There is no prescribed method... for estimating fugitive methane [+ carbon dioxide?] emitted through the landfill [and flare]... Therefore GHG emissions from these emissions were estimated using engineering calculations"</p> <p>Describe the engineering calculation and the source of information used to derive the calculation. Describe and contrast the supplemental engineering calculation in comparison to best practices from other regional LFG capture and monitoring in landfills (e.g. City of Toronto Greenlane), countries (e.g. USA, Germany etc.) and/or similar Canadian sectors for fugitive releases (e.g. oil and gas).</p>	<p>For the GHGRP, the methodology for LFG is not prescribed but standard GHG estimating procedures were used. Emissions of methane and CO₂ from the landfill were estimated using LandGEM, which is both an MECP and USEPA accepted emission estimation tool, see Section 8.1.4, Volume I. The collection efficiency was then used to estimate the proportion of emissions released fugitively. The collected % was assumed to be combusted in the flare. Methane emissions were calculated using the % destruction efficiency. CO₂ emissions were estimated using the same methodology and taking into account the conversion of methane to carbon dioxide, based on molecular mass ratios. N₂O was based on World Climate initiative methods for N₂O from flares. These are all industry standard procedures and procedures accepted by the main regulator for air emissions for this EA, the MECP. The MECP does not readily accept methods employed by other countries. The LandGEM model summary reports with equations and further details are provided in Volume IV, Appendix D.13, sub-appendix B.</p>	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
59	Vol 1 10-7	<p>“... peak LFG generation were predicted to occur in 2049.”</p> <p>Provide details and explanation regarding this prediction.</p> <p>“... negligible contribution... to Ontario emissions and... Canada emissions; therefore the project will have a negligible effect on climate change...”</p> <p>Provide GHG equivalency calculations based on best practices for calculating methane related climate impacts of the proposed project, cumulatively over time as opposed to annual projections, as methane is a shorter-lived but more powerful GHG.</p> <p>“GHGs generated from the landfill expansion will be controlled by active LFG collection and flaring... that the resulting GHGs would have a negligible contribution... to GHG emissions”</p> <p>Provide analysis supplemental to this assertion that assess and compares costs and benefits of alternatives to LFG flaring and GHG release (e.g. local re-uses in agriculture, building heating and for renewable materials; renewable natural gas; renewable electricity production including hydrogen fuel; concrete production; greenhouses; hydrogen fuel for transportation purposes)</p>	<p>The full details of how LFG predictions were made and the LandGEM model used to make the predictions are provided in Section 8.1.4, Volume I. The use of the LandGEM model for this purpose is the practice accepted by the MECP for similar types of projects.</p> <p>GHGs from the existing landfill and the proposed landfill expansion are and will be reported annually to:</p> <ul style="list-style-type: none"> • Federal reporting under Section 46 of the Canadian Environmental Protection Act, (CEPA), SC 1999: Greenhouse Gas Emissions Reporting Program (GHGRP). • Provincial reporting under Ontario's Greenhouse Gas Emissions: Quantification, Reporting, and Verification Regulation, Ontario Regulation 390/18 (O. Reg 390/18). <p>An anticipated cumulative GHG calculation could be prepared but it is not typical in waste EAs and there is nothing to compare the end result to; hence, it has not been included.</p> <p>The RNG potential for the existing landfill gas collection system can supply over 380,000 GJ/year of RNG, which would reduce GHG emissions by 17,000 tonnes/year for its users.</p>	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
			<p>With the proposed landfill expansion, the potential RNG supply could increase to 800,000 GJ/year of RNG, which would reduce GHG emissions by 36,000 tonnes/year for its users.</p> <p>Actions to support landfill gas utilization and the additional potential for biogas generation and utilization from source-separated organics continue to be a part of the Corporate Energy Management Conservation Demand Management (CDM) Plan and will be a key component of the City of London's upcoming Climate Emergency Action Plan. These items will also be a component of a future Business Case for RNG and other potential opportunities.</p>	
60	Vol 1 Table 11.2-1	Atmosphere Provide explanation and validation as to why the cumulative impact of GHGs (NH4 and CO2) were not included in the consideration of residual effects of landfill expansion.	For atmospheric effects, all landfill gases expected to be produced in meaningful quantities that have Standards from the MECP were evaluated. Table 11.2-1 focused on residual atmospheric effects likely to be evaluated by the MECP. However, GHGs were considered in Section 10, Volume I in relation to climate change and as such have been added to Table 11.2-1.	Table 11.2-1 has been updated to include GHG and Table 11.2-2 has also been updated
61	Vol 1 Table 11.3-1	Atmosphere Expected GHG emissions are identified. No cumulative effects are discussed. Potential effects "notes that GHG emissions are	The analysis supporting this statement can be found in Sections 8.1.4 and 10, Volume I.	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		expected to be lower..." Provide evidence that supports this assumption.		
62	Vol 1 Table 11.3-1	Socio-economic There are no effects discussed in relation to the impacts on the Islamic Cemetery. Provide an explanation why this significant cultural feature and the cumulative impact have been not included.	The cultural heritage landscape assessment within Section 9.8, Volume I did not identify any residual effects related to the Islamic Cemetery. The socio-economic assessment within Section 9.9, Volume I identified nuisance factors (noise, odour, dust) visual and traffic residual effects. However, in conversation with the Islamic Cemetery during Open House #4 they identified their only concerns being wind and turkey vultures, which are potential residual effects not identified by any of the environmental component teams nor effects to come from the other projects and activities in the area of the landfill expansion. As such, there are no contribution to cumulative impacts specifically associated with the Islamic Cemetery and none were discussed.	No changes proposed.
63	Vol 1 Table 12.1-1	Air Quality Objectives and program activities make no mention of GHG monitoring. How will the effectiveness of LFG be monitoring and evaluated in the absence of objectives and program activities for NH4 and CO2? How will the absence of objectives and program activities for NH4 and CO2 contribute or detract from CoL Climate Change Emergency	As noted above, the GHG reporting requirements will be added to Section 12 of Volume I. The amount of LFG collected is continually monitored as part of standard site operation. Occasionally, when there are odour complaints, this data is compared to assess	Update Section 12 to include provincial and federal GHG reporting.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		Action Planning and Community Energy Action Planning and related London Plan goals and objectives related to waste management and environmental sustainability?	<p>if the LFG system is not functioning as intended.</p> <p>At this point in time, there is currently no monitoring equipment capable of measuring the total site-wide flux of fugitive methane emissions from the surface of landfills. Remote sensing of fugitive methane emissions from the surface of the landfill can only provide qualitative indicators at this time (i.e., spot leaks in the collection system). The City of London is currently working in partnership with Western University through a MITACS grant to assess options for improving ambient monitoring of emissions as well as additional measures for mitigating fugitive methane emissions (e.g., biochar in landfill cover) at the W12A landfill</p>	
64	Vol 1 12-12	<p>“...dedicated perimeter landfill gas monitoring wells will be sampled three times per year...”</p> <p>Describe how sampling results will incorporate GHGs in the context of GHG reduction targets for 2030, 2040 and 2050 and CoL goals and objectives and federal goals and objectives related to GHG mitigation in accordance with best practices and scientific urgency related to net zero emissions by 2050. Describe associated</p>	As noted above, the City of London is currently working in partnership with Western University through a MITACS grant to assess options for improving ambient monitoring of emissions.	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		measures and alternatives to LFG management, capture, reuse, storage etc.		
65	Vol 1 13-3	<p>“The city will... involve Indigenous groups in the EA process”</p> <p>Provide a response from CoL respecting plans for the continued involvement of COTTfN and other impacted Indigenous populations with respect to continued involvement in the EA scoping process and review process, as well as future involvement in LFG reuse and green organic composting programs and policy developments associated with the proposed expansion, and potential regional planning for LFG and related renewable NG developments in nearby landfill sites.</p>	<p>City staff will be pleased to engage in discussion in a format that meets the needs of COTTfN and use of City staff time. Similar actions have already been demonstrated between COTTfN and City staff and positive feedback on these initiatives has been received by the City.</p> <p>The City of London has recently hired an Indigenous Community Liaison Advisor in addition to an existing Project Manager, Environmental Assessment that has been providing assistance with Indigenous community liaisons on this EA to ensure expectations are being met.</p> <p>It is noted that engagement on these projects/programs not related to the EA will be done outside of the consultation on the Environmental Assessment for the proposed expansion of the W12A Landfill.</p>	No changes proposed.
66	Vol 1 13-3	<p>“The City will share work plans with Indigenous Communities...”</p> <p>Provide a response with respect to the comments submitted on this EA review from COTTfN and with respect to the formulation of alternatives and workplans to mitigate GHGs and advance comprehensive</p>	<p>This table includes the responses to COTTfN comments on the EA including a number of reports, plans, actions, etc. that have been taken and will continue to be taken to mitigate GHG and advance comprehensive adaptation planning not only for waste disposal but also for waste management in general.</p>	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		adaptation planning in advance of landfill expansion.	<p>The assessment of GHGs has been completed in a manner commensurate with MECP requirements and expectations. The landfill expansion design has been prepared to achieve 85% collection efficiency of LFG as required by the MECP. Alternatives and workplans to mitigate GHGs are part of future work.</p> <p>We believe the analysis to support comprehensive adaptation considerations is provided within the EA in Section 10, Volume I.</p>	
67	Vol 1 13-5	<p>“The preferred expansion alternative will be assessed from the perspective of climate change.”</p> <p>Provide responses to comments with relationship to the mitigation of GHGs and adaptation impacts and concerns raised in previous comments.</p>	We believe the analysis to support comprehensive adaptation considerations is provided within the EA in Section 10, Volume I.	No changes proposed.
68	Vol 1 Table 13-2	<p>Atmosphere</p> <p>Provide an explanation as to why CoL has made no GHG related LFG commitments during this EA, and in accordance with municipal and federal climate change goals and targets for climate mitigation.</p>	The draft EASR documents the proposed improvements the City is committed to making to the landfill gas collection and flaring system. These system improvements are expected to increase the landfill gas capture rate to 85%. The current capture rate is approximately 60%.	No changes proposed.
69	Vol 1 13-11	“Climate Change - Include the [pre-construction] of possibility of increased leachate generation from climate change into	See responses to comments 4 and 54.	No changes proposed.

	Reference to Draft EA	Comments & Rationale	Proposed Action/Solution	Changes to the EASR
		<p>the design... during storm events of significant magnitude that could result in discharge of mixed leachate / sewage to... the Thames River if the WWTP is in a bypass situation temporarily.”</p> <p>Provide responses to comments raised with respect to pre-construction WWTP bypass contingency planning, timelines and prevention/remediation/compensation actions.</p>		