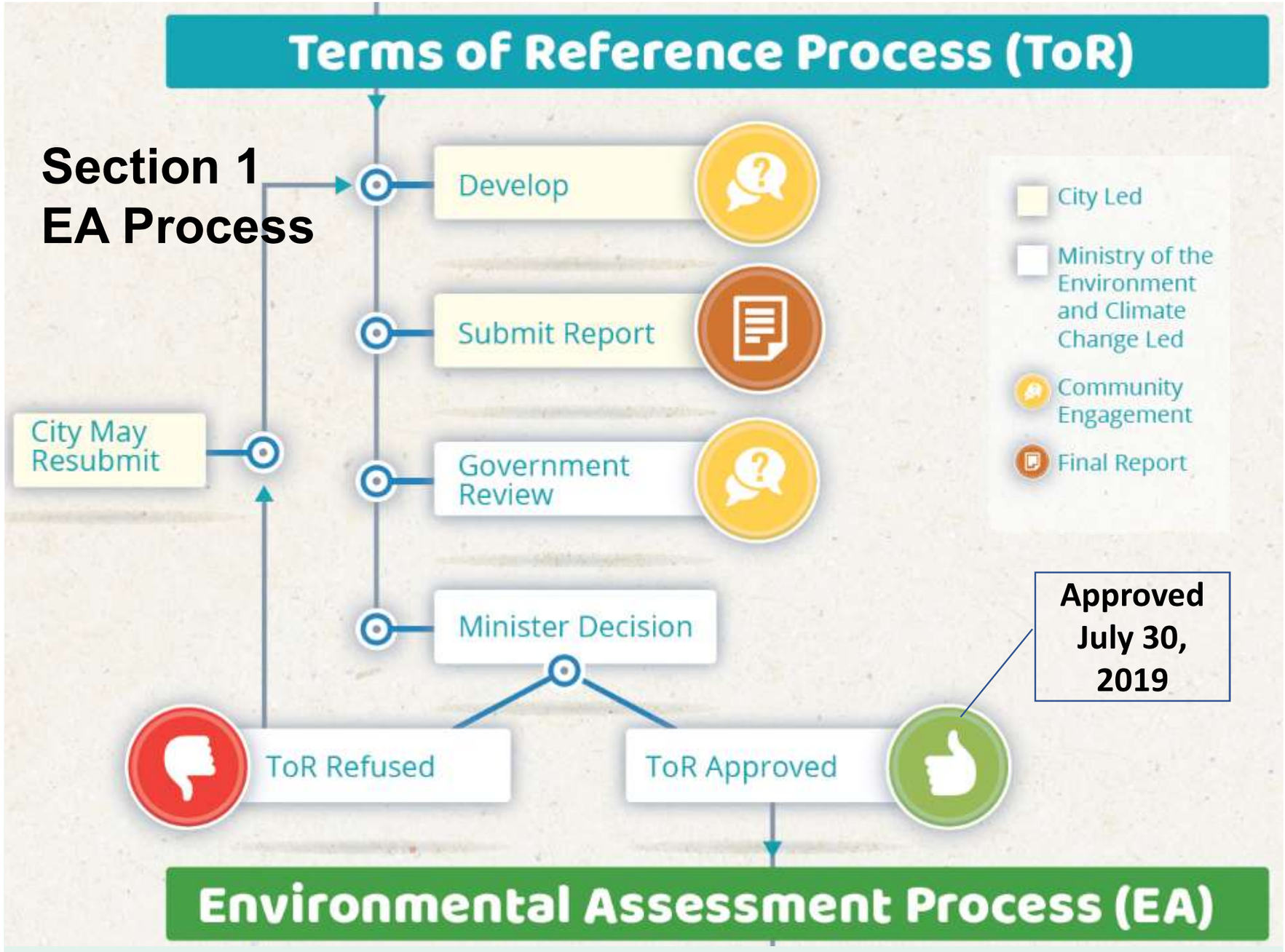
Background and Status on:

Environmental Assessment Process

Waste Management Working Group

August 13, 2020


Terms of Reference Process (ToR)
Section 1
EA Process
Develop
Submit Report
Government Review
Minister Decision
City May Resubmit
ToR Refused
ToR Approved
City Led
Ministry of the Environment and Climate Change Led
Community Engagement
Final Report
Approved July 30, 2019
Environmental Assessment Process (EA)

Phase 2:

EA Technical Studies & EA Report

Complete Studies & Finalize EA

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)	

We are here

Website
getinvolved.london.ca

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

Meet with residents
(If requested)

Step 4: Compare Alterna-tives

All work complete

Environmental Component	Environmental Sub-component	Preferred (Overall Result) Alternative 1	Alternative 2	Alternative 3	Public Ranking Group
Atmosphere	Air quality (including dust, odour and LFG)	✓			More Important
	Noise	✓			Less Important
Geology and Hydrogeology	Gound 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

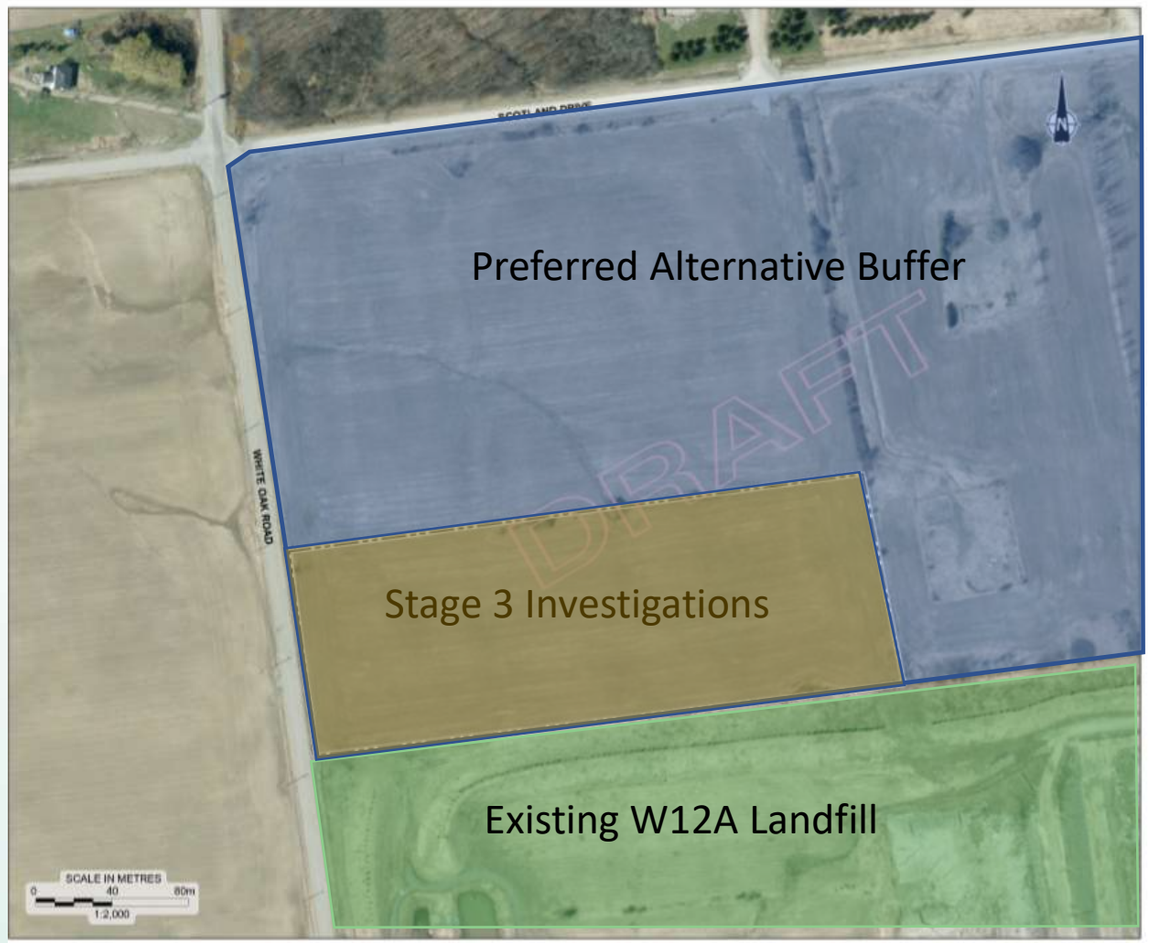
Step 5: Detailed Assessments

	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	Preliminary assessment shows no impact. Preliminary assessment currently being reviewed by First Nations' consultant.
	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.
Tech-nical	Design and Operations	Design enhancements included to improve leachate management and landfill gas capture.

Step 5: Detailed Assessments
Archeological

Archeological Site Protection Measures

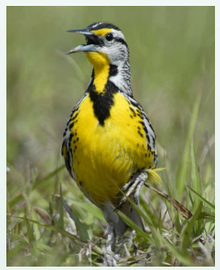
- Significant archaeology site located within on-site buffer land
- First Nations site
- Area to remain undisturbed

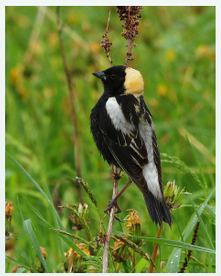


Step 5: Detailed Assessments
Biology

Habitat Protection Measures

- Timing Restriction on Vegetation Clearing (No clearing April to August)
- Compensation for loss of Species at Risk Habitat (Bobolink & Eastern Meadowlark)
- Habitat Enhancement for loss of Significant Wildlife Habitat (Monarch)





Groundwater Protection Measures

- Contaminant transport modelling indicates groundwater quality guideline for non-health related parameter (chlorides) exceeded in several hundred years
- 500 years old portion, 900 years newer portion
- A number of additional protection measures are currently being examined
  - Leachate mound control measures
  - Contaminant Attenuation Zone
  - Purge Wells

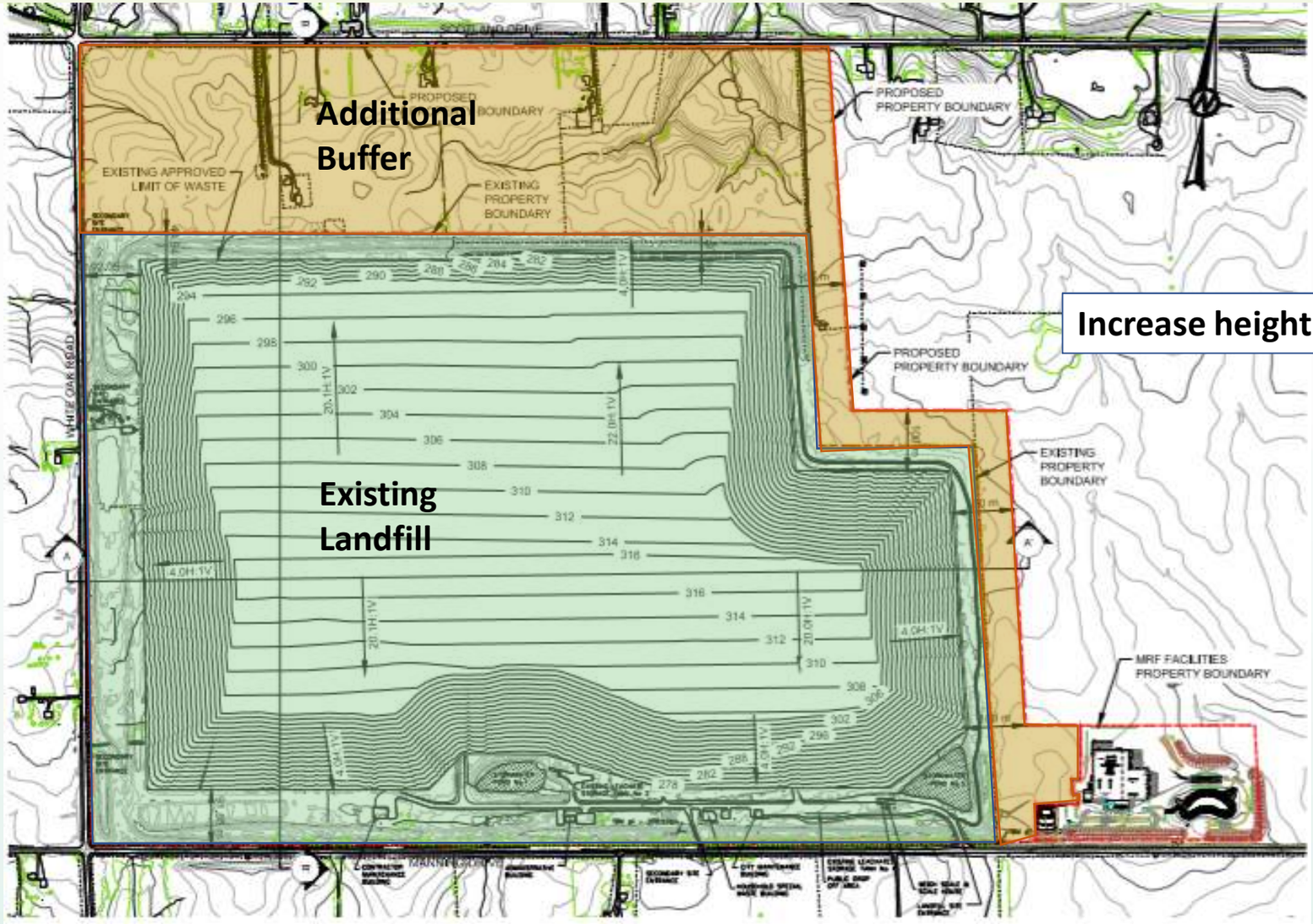
Step 5: Detailed Assessments
Odour

Odour Protection Measures

- $13 to $20 million in gas collection system infrastructure
- Meet provincial standards except two locations (see figure)

- Both locations owned by City and homes were demolished in previous years
- May have to place building restrictions on property

Step 6
Describe Preferred Alternative



Step 6
Describe Preferred Alternative

- Placement of garbage to maximize screening
- Additional groundwater protection measures
- Additional leachate storage (addresses First Nation concern)
- Gas collection system improvements
- Stormwater management pond upgrades
- Replace/upgrade buildings
- Enhanced public drop-off area

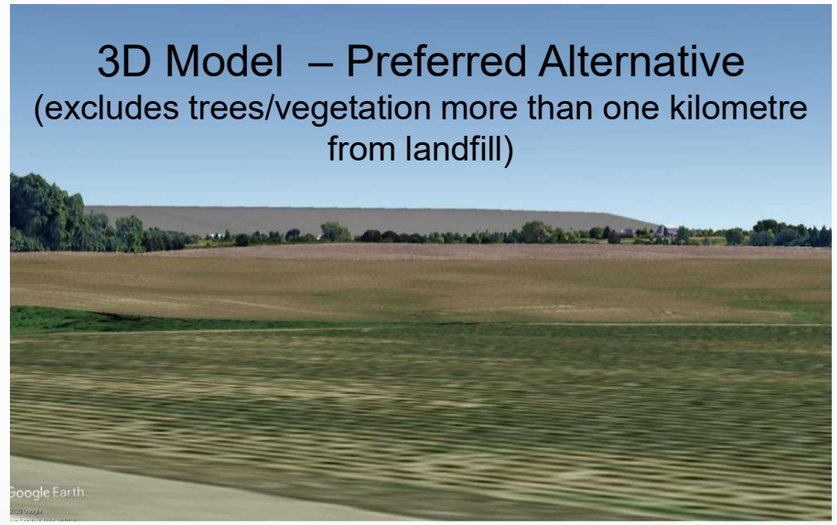
- **Preliminary Cost Estimate for Landfill is $53 million to $88 million ($5.5 to $9 per tonne)**

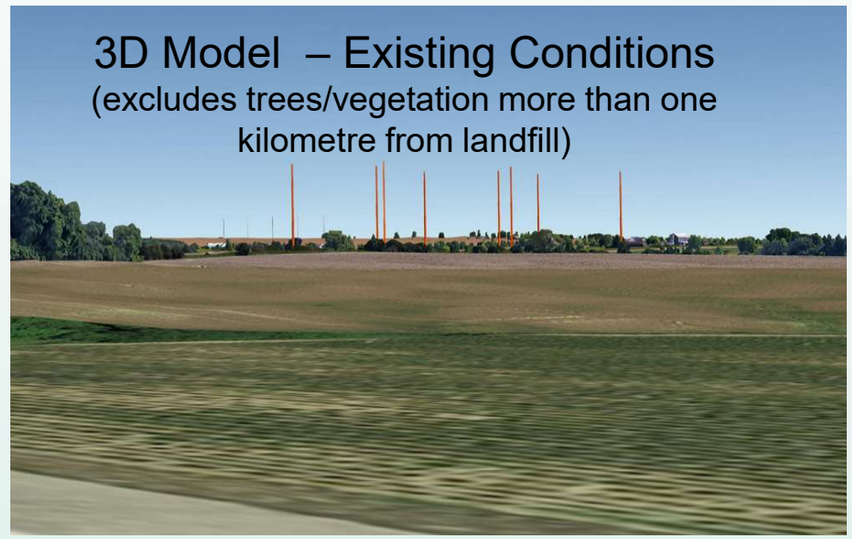
Step 6
Describe Preferred Alternative

	Existing View	"Highest Elevation" View (Vertical Expansion)
Wellington Rd. and Manning Dr.		
Wellington Rd. South of Glanworth Dr.		
401 North of Manning Dr.		

Step 6
Describe Preferred Alternative

View from 4248 Glanworth Drive



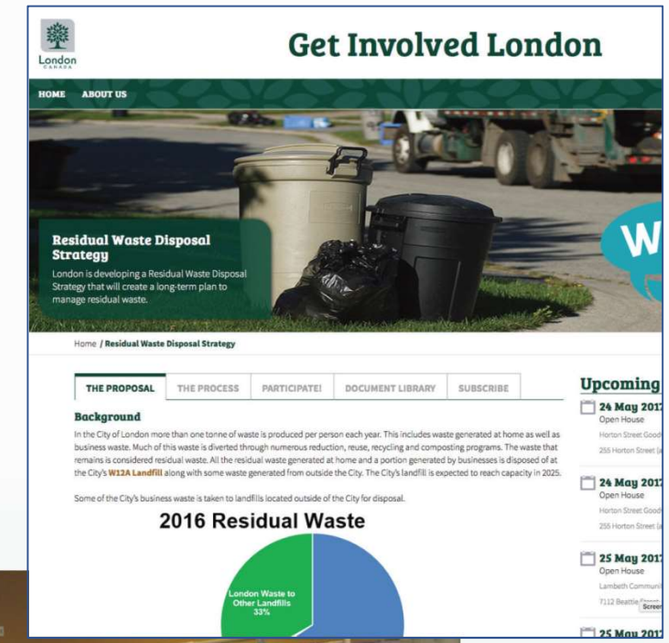


Schedule

Time Frame	Task
Aug. 2020 to Oct. 2020	• Complete detailed assessments • Additional consultation • Prepare preliminary Draft EA Report
Nov. 2020 to Jan. 2021	• Prepare Draft EA Report • Consultation on Draft EA Report
Feb. 2021	• Formal Submission of EA Documentation
March 2021 to Sept. 2021	• MECP Approval process (often takes longer than prescribe in Timelines Regulation)

Community Engagement

- Open Houses (October)
- First Nation workshop (August)
- Project Website
- Direct Mailings (e.g., residents within 2 km of Landfill, project mailing list, etc.)
- Community requests for meetings
- Traditional & Social Media
- PPM at CWC
- MECP Process



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Future Consulting Assignments

Future consulting assignments include:

- Groundwater modelling/landfill design ($33,000 to $37,000)
- Additional visual modelling ($12,000 to $15,000)

More than $700,000 remaining for other future technical assignments

Community Enhancement and Mitigative Measures Program

- Community Enhancement and Mitigative Measures Program (CEMMP) was approved in 2009
- Most recent update was 2014
- Will be reviewed and updated (if required)
- Update will include:
  - Review of what other landfills currently provide
  - Seek stakeholder feedback

Recommendation

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

b) “Alternative 1 - Vertical Expansion Over Existing Footprint” **BE SUPPORTED IN PRINCIPLE** as the preferred landfill expansion alternative; and

c) The Minutes from the August 13, 2020 Waste Management Working Group meeting include this entire report as an appendix when submitted the Civic Works Committee on September 22, 2020.