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TECHNICAL BULLETIN #3 | November 2021

What is the ToR?

The Terms of Reference (ToR) sets out the framework for the planning and decision-making process to be followed during the preparation of the EA.

What is the EA?

The EA is a study that assesses the potential environmental effects (positive or negative) of this Waste Management Plan.

Terms of Reference (ToR)

The ToR for the EA of the Township's Waste Management Plan was approved by the Minister of Environment, Conservation and Parks in July 2020.

EA Process Tips

The Environmental Assessment Process requires the study to consider an option to "Do Nothing" along with the list of options being considered in the study.

Environmental Assessment

An Environmental Assessment (EA) of the Township of North Dundas (Township) Waste Management Plan (WMP) is being undertaken under the provincial *Environmental Assessment Act*.

In the previous technical bulletin (February 2021), the Township identified the preferred 'Alternative To' as Landfill Site Expansion.

Boyne Road Landfill Site Expansion was determined to be the most preferred overall by comparison of the environmental components. No public feedback was received in disagreement with the proposed alternative of Landfill Site Expansion. No feedback was received on the relative importance of environmental components. Public feedback received was only in regard to general Project questions and consultation methods.

The next steps of the EA Study are to: identify 'Alternative Methods' of expanding the landfill, compare the 'Alternative Methods', identify mitigation measures and determine net environmental effects of the preferred method of landfill expansion. This technical bulletin describes and requests public feedback about the identified preferred 'Alternative To' (landfill expansion), the proposed 'Alternative Methods' of landfill expansion and the comparison of those methods.

What's the difference between 'Alternatives To' and 'Alternative Methods'?

'Alternatives To' are functionally different ways of dealing with the problem or opportunity (which in this case is to provide environmentally safe, long-term waste management).

'Alternatives Methods' are different ways of doing the same activity. 'Alternative Methods' are different ways of doing the preferred 'Alternative To'.

Examples of 'Alternative Methods' for landfill expansion: *horizontal expansion, vertical expansion, or a combination of vertical and horizontal expansion.*

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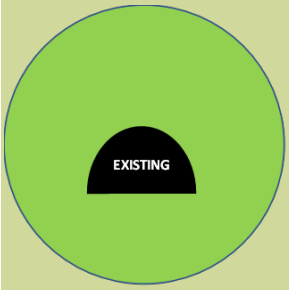
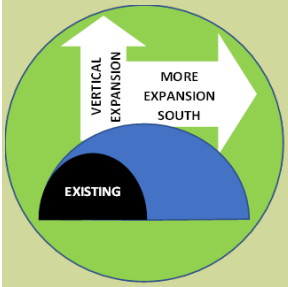
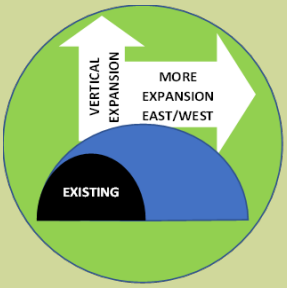
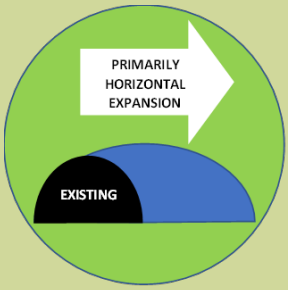
'Alternative Methods' of Landfill Site Expansion

Considerations	Existing Landfill	Alternative 1	Alternative 2	Alternative 3
Description		 Combined Vertical and Horizontal Expansion with Larger East and West Buffers	 Combined Vertical and Horizontal Expansion with Larger South Buffer	 Primarily Horizontal Expansion
Site/Property Area (ha)	89.03	89.03	89.03	89.03
Total Waste Footprint Area (ha)	8.1	12.0	12.6	11.9
Peak Waste Elevation (metres above sea level)	87.75	89.75	89.75	89.75
Height of Peak above Average Ground Elevation (m)	12.5	15	15	15
Horizontal Expansion Area Bottom of Waste Elevation (metres above sea level)	-	75.75	75.75	75.75
Volume of Excavation (m^3)	-	12,650	14,150	12,100
Total Additional Airspace (m^3)	-	450,000	458,300	450,000
Expansion Area Existing Property Boundary Buffer Distances (m)	-	South: 44 East: 100 West: 50	South: 52 East: 71 West: 34	South: 57 East: 100 West: 30

GOLDER MEMBER OF WSP

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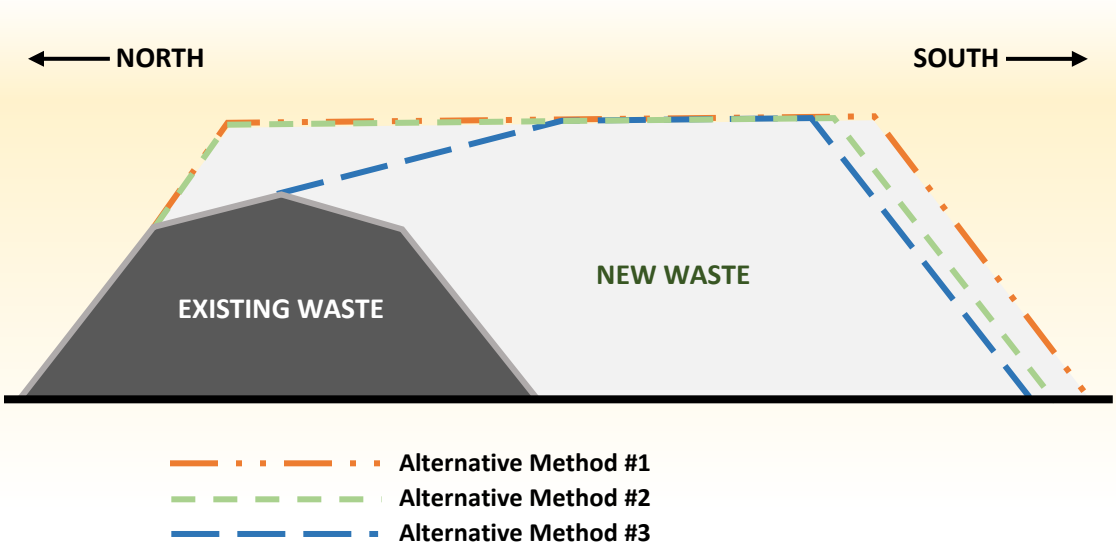
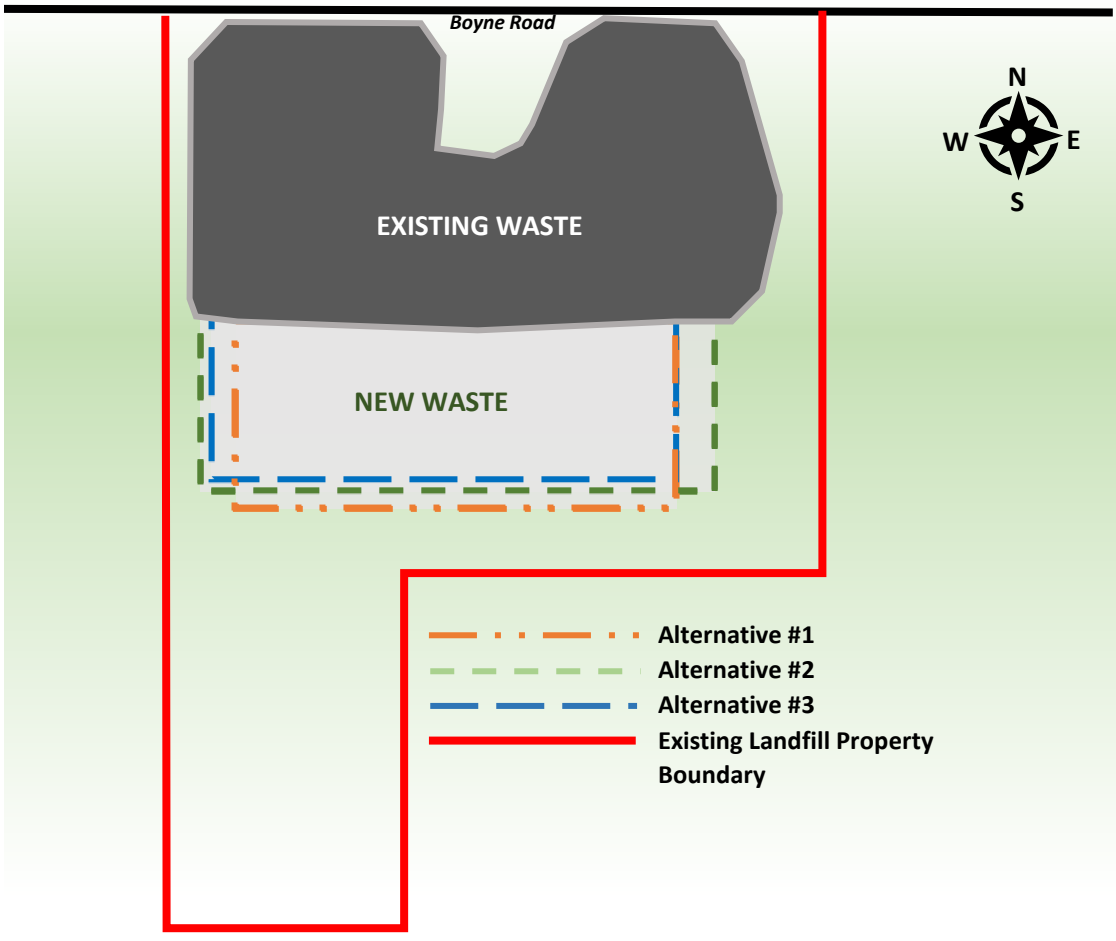
Comparison of 'Alternative Methods' of Site Expansion

Cross Section and Plan View of Methods





What is a Buffer Area?

A Buffer Area is the part of the landfill site property not used for waste disposal, usually between the perimeter of the disposal area and the landfill property boundary.

Increased buffer distances help reduce the potential for waste placed on-site from having unacceptable impacts outside the site property. Increased buffer distances can help:

- Improve Visual Aesthetics.
- Reduce potential for off-site impacts (dust, odour, groundwater, and noise).

Did You Know?

The purpose of this EA is to provide environmentally safe and cost-effective long-term waste management for the Township of North Dundas for a 25-year planning period.

* Figures presented here are schematic, not to scale.

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Preliminary Results of Comparison of 'Alternative Methods'

Environmental Component	Evaluation Criterion/Criteria	Evaluation of 3 Alternative Methods		
		Alt. #1	Alt. #2	Alt.#3
Atmosphere	▪ Potential effects on air quality (including dust, odour, GHG) ▪ Potential effects on noise	✓	✓	✓
Geology and Hydrogeology	▪ Potential effects on groundwater resources	✓	✓	✓
Surface Water	▪ Potential effects on surface water resources	✓	✗	✓
Biology	▪ Potential effects on natural environment features (aquatic and terrestrial ecosystems)	–	✗	✓
Agriculture	▪ Potential effects on existing agriculture	✓	✓	✓
Land Use	▪ Potential effects on existing land use	✓	✓	✓
Cultural Heritage	▪ Potential effects on archaeology ▪ Potential effects on cultural environment (cultural heritage landscapes, cultural heritage resources)	✓	✓	✓
Socio-economic	▪ Potential site operational effects on sensitive off-site receptors (i.e., noise, litter, air quality) ▪ Relative potential changes in employment, impacts to local commercial businesses and capital/operational costs ▪ Potential changes in visibility of the landfill	✓	✓	✓
Transportation	▪ Potential effect on road network	✓	✓	✓
Design and Operations	▪ Potential effects on capital/operational costs	✓	✗	✓

Alternative #3 was identified by the Township and Project Team as the preferred 'Alternative Method' for landfill expansion. Public opinion regarding the 'Alternative Methods' and their comparison is being sought via this technical bulletin.

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What are 'Monitoring and Contingency Plans'?

Monitoring plans are how the Township will comply with the commitments made during this assessment such that the expected environmental effects are verified and meet regulations. (e.g., annually monitor groundwater and surface water quality).

Contingency plans are what the Township will do to manage any adverse environmental impacts discovered by the monitoring programs.

Next Steps?

- Collect feedback from public and stakeholders on the proposed 'Alternative Methods' and the identified preferred 'Alternative Method'
- Determine net effects on the environment of the proposed 'Alternative Method' of landfill expansion including a comparison to 'Do Nothing'
- Develop mitigation measures for the preferred 'Alternative Method'
- Consider climate change impacts of the preferred 'Alternative Method'
- Assess cumulative impacts of the preferred 'Alternative Method'
- Develop Monitoring and Contingency Plans
- Prepare the Environmental Assessment Study Report

What is a cumulative impact assessment?

A cumulative impact assessment reviews the potential qualitative effects of the proposed landfill expansion in combination with past, present, and reasonably foreseeable future activities, where possible.

Climate change includes:

Potential impact of climate change on the landfill expansion (i.e., climate change adaptation) and its potential impact on climate change (i.e., climate change mitigation).

Next Consultation Activities:

Open House #3: planned in-person event to present the proposed EA and inform the public about the identification of the preferred 'Alternative Method', as well as inform them of the results of the existing conditions studies and the predicted effects on the environment, and the commitments the Township is making to mitigate any adverse effects.

Questions, Feedback and Comments?

We encourage you to let us know your thoughts by sending your comments to dfroats@northdundas.com and/or using the attached comment form by December 8, 2021.

Or contact us at 613-774-2105 ext. 235 for any accessibility requirements.

If you would like to be notified of any project updates, please let us know and provide either an email address or your mailing address.