



**Brooks Road  
Environmental**



## **Environmental Screening Report Brooks Road Landfill Fill Rate Increase**

**Brooks Road Landfill Site  
160 Brooks Road  
Haldimand County, Ontario**

**April 2021  
REF NO. 018235 (103)**

## Executive Summary

Brooks Road Landfill (the Site), is located at 160 Brooks Road, near Cayuga, Haldimand County, Ontario and is owned and operated by 2270386 Ontario Limited, herein referred to as Brooks Road Environmental (BRE, Owner, Proponent).

The Site, which operates under Environmental Compliance Approval (ECA) No. A110302, has an approved annual fill rate of 151,000 tonnes per year and a total approved capacity of 1,045,065 cubic metres (m<sup>3</sup>) (including waste and daily/final cover). The Site has accepted waste (in one form or another) since 1959 and received a Certificate of Approval (CofA) in 1980, with amendments approved by the Ministry of the Environment<sup>1</sup> in 1980, 2002, 2004, 2005, 2007, 2011, 2012, 2013, 2014, 2017 and 2018. Under the current ECA, the Site is licensed to receive post-diversion solid non-hazardous Industrial, Commercial & Institutional (IC&I) waste from across Ontario. The 14.3 hectare (ha) Site contains an approved fill area of 6 ha.

In 2018, BRE completed an Individual Environmental Assessment (EA) to increase the total approved capacity at the site to allow for the continued receipt of post-diversion IC&I waste over a five to seven year planning period and an amendment to the Site's rate of fill to provide for a maximum of 151,000 tonnes per year (known as the Brooks Road Landfill Vertical Capacity Expansion EA). Previously, the Site was approved to accept up to 500 tonnes per day. The approved Brooks Road Landfill Vertical Capacity Expansion EA assessed the effects to the environment based on a maximum daily fill rate of 1,000 tonnes per day to demonstrate that the Site could manage this daily quantity, while maintaining the same annual limits (151,000 tonnes per year). Therefore, the 1,000 tonnes per day was used in the EA as a benchmark for the environmental effects analysis.

Any proposed change in the annual fill rate limits requires a modification to Condition 3(7) of the approved ECA, which specifies the maximum amount of waste that may be received at the landfill on an annual basis. With this in mind, BRE is proposing to amend the approved ECA to allow for receipt of this maximum daily quantity (1,000 tonnes per day) throughout the year, increasing the annual fill rate from 151,000 tonnes per year to 250,000 tonnes per year. This change to the annual fill rate will allow for BRE to respond to the growing demands from waste generators/ customers who need a safe and reliable waste management facility for their residual material. This includes the ability to accommodate BRE's customers facing seasonal volume increases at certain times of the year (i.e., increased construction generated wastes) which the Site might not be able to be accommodate with the current annual fill rate. If this Project is approved and the maximum tonnage proposed as part of this Screening were received annually at the Site starting in 2021, the approved capacity of the Site may be reached earlier.

This ECA amendment is subject to the Environmental Screening Process in accordance with Section 15 of the Waste Management Projects Regulation, (O. Reg. 101/07) of the *Environmental Assessment Act*. The Environmental Screening Process was conducted in accordance with the Ontario Ministry of Environment, Conservation and Parks (MECP) "Guide to Environmental Assessment Requirements for Waste Management Projects".

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<sup>1</sup> Now known as the Ministry of Environment, Conservation and Parks

Through the Environmental Screening Process, the potential for the Project to result in adverse environmental effects was assessed. As there will be no changes to the currently approved total landfill volume, footprint, final Site contours or types of waste received, it was concluded in the Screening Criteria Checklist that the Project could have potential environmental effects on the following environmental components:

- Air Quality and Odour
- Noise
- Traffic

In addition to the above, BRE included leachate generation and an operational assessment as part of the overall assessment at the direction of MECP.

To further evaluate the potential effects on the environmental components identified through the initial Screening process, studies were completed to review the existing environmental conditions within the Site Study Area, identify potential effects, apply appropriate mitigation measures and determine the resultant net effects to the environment. With this in mind, separate stand-alone evaluations were completed for the following environmental components:

1. Air Quality and Odour Assessment
2. Methane Generation Analysis
3. Leachate Assessment
4. Noise Impact Assessment
5. Traffic Impact Assessment

Through the assessment of the Project's potential environmental effects of the Project, it was determined that increasing the annual fill rate would result in minor environmental impacts. However, through the application of mitigation measures, the Project is not anticipated to result in any new net negative effects on the environment. As a result, the advantages of the Project outweigh the disadvantages.

Upon completion of the Environmental Screening Process an application will be made to amend the existing ECA No. A110302.

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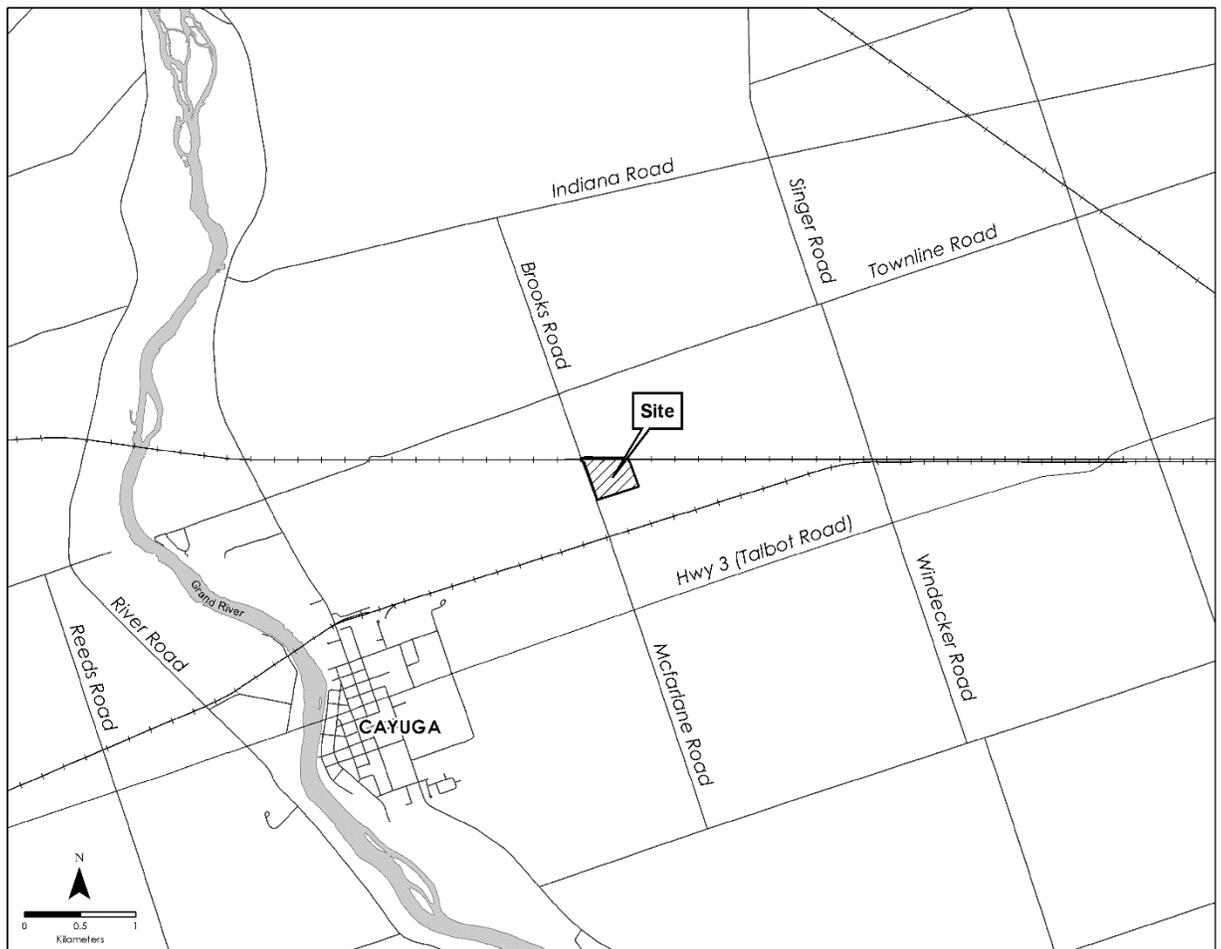
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# 1. Project Description

## 1.1 Introduction

The Brooks Road Landfill Site (Site), is located at 160 Brooks Road, near Cayuga, Haldimand County, Ontario and is owned and operated by 2270386 Ontario Limited, herein referred to as Brooks Road Environmental (BRE, Owner, Proponent). The location of the Site is shown in **Figure 1.1**.



**Figure 1.1 Site Location**

The Site, which operates under Environmental Compliance Approval (ECA) No. A110302, has an approved annual fill rate of 151,000 tonnes per year and a total approved capacity of 1,045,065 cubic metres (m<sup>3</sup>) (including waste and daily/final cover). The Site has accepted waste (in one form or another) since 1959 and received a Certificate of Approval (CofA) in 1980, with amendments approved by the Ministry of the Environment<sup>2</sup> in 1980, 2002, 2004, 2005, 2007, 2011, 2012, 2013, 2014, 2017 and 2018. Under the current ECA, the Site is licensed to receive post-diversion solid

<sup>2</sup> Now known as the Ministry of Environment, Conservation and Parks

non-hazardous Industrial, Commercial & Institutional (IC&I) waste from across Ontario. The 14.3 hectare (ha) Site contains an approved fill area of 6 ha.

In 2018, BRE completed an Individual Environmental Assessment (EA) to increase the total approved capacity at the Site to allow for the continued receipt of post-diversion IC&I waste over a five to seven year planning period and an amendment to the Site's rate of fill to provide for a maximum of 151,000 tonnes per year (known as the Brooks Road Landfill Vertical Capacity Expansion EA). Previously, the Site was approved to accept up to 500 tonnes per day. The approved Brooks Road Landfill Vertical Capacity Expansion EA assessed the effects to the environment based on a maximum daily fill rate of 1,000 tonnes per day to demonstrate that the Site could manage this daily quantity, while maintaining the same annual limits (151,000 tonnes per year). Therefore, the 1,000 tonnes per day was used in the EA as a benchmark for the environmental effects analysis.

Any proposed change in the annual fill rate limits requires a modification to Condition 3(7) of the approved ECA, which specifies the maximum amount of waste that may be received at the Site on an annual basis. The proposed Project would amend the approved ECA to allow for receipt of this maximum daily quantity (1,000 tonnes per day) throughout the year, increasing the annual fill rate from 151,000 tonnes per year to 250,000 tonnes per year. There is no change to the currently approved total landfill volume, size of landfill footprint, or final Site contours. This change to the annual fill rate will allow for BRE to respond to the growing demands from waste generators/ customers who need a safe and reliable waste management facility for their residual material. This includes the ability to accommodate BRE's customers facing seasonal volume increases at certain times of the year (i.e. increased construction generated wastes) which the Site might not be able to accommodate with the current annual fill rate. If this Project is approved and the maximum tonnage proposed as part of this Screening were received annually at the Site starting in 2021, the approved capacity of the Site may be reached earlier.

This ECA amendment is subject to the Environmental Screening Process in accordance with Section 15 of the Waste Management Projects Regulation, (O. Reg. 101/07) of the EA Act. Ontario Regulation 101/07 – Waste Management Projects Act exempts this Project from Part II of the Environmental Assessment Act and subjects it to the Environmental Screening Process. The Project falls under Section 15 of the Regulation – Change to Landfilling site, increase in rate of fill.

This Screening is being conducted in accordance with the planning and design process outlined in Ontario Ministry of Environment, Conservation and Parks (MECP) "*Guide to Environmental Assessment Requirements for Waste Management Projects*". The Screening process includes identifying and applying screening criteria to determine and describe potential environmental effects, public/external agency consultation, and the development of measures to mitigate identified environmental effects. The results of the Study are documented within this Draft Environmental Screening Report (ESR), which will be released for review to Stakeholders including Indigenous communities, the public, and government agencies for a defined comment period. BRE will incorporate stakeholder feedback as necessary and where possible into a revised ESR and post the Final ESR for a 60-day stakeholder review and comment period. Upon completion of the Environmental Screening Process an application will be made to amend the existing ECA No. A110302.

## **1.2 Problem, Purpose, and Opportunity**

The purpose of the Project is to increase the annual waste fill rate currently approved at the Site. The proposed Project would allow for receipt of a maximum daily quantity (1,000 tonnes per day) throughout the year, which would increase the permitted annual fill rate from 151,000 tonnes per year to 250,000 tonnes per year. This annual maximum assumes the Site will operate 5 days a week, (closed on holidays) accepting 1,000 tonnes per day. The proposed change to the annual fill rate requires no additional landfill infrastructure and there is no change to the currently approved landfill volume, footprint, or final contours.

The proposed undertaking provides an opportunity for BRE to capture additional wastes generated by their customers during busier months of operation and to fill the Site rapidly. If this proposed undertaking is approved and the maximum tonnage proposed as part of this Screening were received annually at the Site starting in 2021, the ultimate approved capacity of the Site may be reached earlier than contemplated as part of the 2018 EA.

## **1.3 Description of Project Components and Activities**

The proposed Project outlined in this ESR does not involve a change to the final Site capacity, contours or footprint. No construction is required to implement the proposal. There will be no change to the existing infrastructure and no new facilities are proposed for on-site. The Site will continue to operate within currently approved operating hours and current construction activities and daily operations will continue as usual.

From a traffic perspective there will be no changes to existing haul routes or Site entrance. Increasing the maximum annual fill rate will result in increased truck traffic on the haul route from Highway 3 along Brooks Road only on a total annual basis. It should be noted that as part of the Vertical Capacity Expansion EA completed in 2018, the assessment of impacts to traffic was based on 1,000 tonnes per day to demonstrate that the Site could manage this daily quantity and the potential effects resulting from this volume of traffic could be mitigated to acceptable levels.

GHD built on the analysis completed in the 2018 Vertical Capacity Expansion EA which reviewed the total daily maximum quantity of waste that the Site can accommodate from an operational perspective (1,000 tonnes per day) to evaluate the potential effects and mitigation measures required to maintain this daily volume over the course of a year to reach the annual fill rate of 250,000 tonnes per year.

If this Project is approved and the maximum tonnage proposed as part of this Screening were received annually at the Site starting in 2021, the approved capacity of the Site may be reached earlier than contemplated as part of the 2018 EA.

## **1.4 Approval Requirements**

A change in the annual fill rate limit requires a modification to Condition 3(7) of the approved ECA, which specifies the maximum amount of waste that may be received at the Site. This ECA amendment is subject to the Environmental Screening Process in accordance with Section 15 of the Waste Management Projects Regulation, (O. Reg. 101/07) of the EA Act.

When the Environmental Screening Process has been completed, BRE will initiate the ECA Amendment process by preparing and submitting an application to the MECP to amend ECA No. A110302.

## **2. Environmental Screening Process for Waste Management Projects**

As stated above, the study will follow the Environmental Screening Process under the Waste Management Projects Regulation (O.Reg.101/07) of the EA Act. As per Section 15 of Ontario Regulation 101/07 (bold format added by GHD),

“A change to a landfilling site or dump described in paragraph 1 of subsection 2 (1) or paragraph 1 of subsection 11 (1), or to a landfilling site or dump that is a waste disposal site described in paragraph 4 of subsection 2 (1), is defined as a major commercial or business enterprise or activity and is designated as an undertaking to which the Act applies, **if the rate at which the landfilling site or dump is filled after the change would exceed the rate at which the landfilling site or dump was authorized to be filled under the *Environmental Protection Act* before the change.**”

In accordance with Section 15 of Ontario Regulation 101/07, an increase in the fill rate is exempt from Part II of the EA Act, subject to fulfilling the Environmental Screening process.

O. Reg. 101/07 came into place in 2007, to ensure that the environmental effects of waste management projects are appropriately reviewed, given their potential significance. In support of O. Reg. 101/07, the MECP published the “Guide to Environmental Assessment Requirements for Waste Management Projects<sup>3</sup>”(the Guide), which outlines the planning and design process for the Environmental Screening Process. This Study will be conducted in accordance with the planning and design process outlined in the Guide, following the process as illustrated in **Table 2-1**.

This Environmental Screening Report has been prepared as a part of the Environmental Screening Process, documenting the potential adverse environmental effects of the Project on the environment. Where adverse environmental effects have been identified, mitigation and monitoring measures have been recommended to reduce or eliminate the effects.

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<sup>3</sup> MECP, (2007). Guide to Environmental Assessment Requirements for Waste Management Projects.

**Table 2-1 Steps in the Environmental Screening Process**

Step 1	Publish Notice of Commencement and Public Open House
Step 2	Identify Problems or Opportunities and Project Description
Step 3	Apply Screening Criteria
Step 4	Describe Potential Environmental Effects, Concerns & Issues
Step 5	Consultation and Public Open House #1
Step 6	Conduct Studies and Assessment of Potential Environmental Effects
Step 7	Develop Impact Management / Mitigation Measures
Step 8	Consultation and Public Open House #2
Step 9	Identify Significant Net Effects and Resolve Concerns (if required)
Step 10	Conduct Additional Studies and Assessments (if required)
Step 11	Prepare Environmental Screening Report
Step 12	Publish Notice of Completion
Step 13	Resolve Elevation Requests (if required)
Step 14	Submit Statement of Completion to MECP

### **3. Screening Criteria Checklist**

At the beginning of the Environmental Screening, the Screening Criteria Checklist (provided as Schedule I, pp 62 – 64, to the “Guide to Environmental Assessment Requirements for Waste Management Projects”) is to be completed based on the information provided in the Project Description. The Screening Criteria reflect the broad definition of “environment” contained in the *Environmental Assessment Act*.

As noted in the Guide:

“The Screening Criteria are presented in the form of a checklist with the option of a “Yes” or “No” response. Mitigation measures are not to be considered in concluding whether there is “No” potential environmental effect. That is, the proponent is required to answer “Yes” even if the proponent believes that a potential environmental effect could likely be mitigated. The reason for requiring a “Yes” is to ensure that mitigation measures are open to discussion and review. Another reason for



this approach is that further discussion and review of a potential effect may reveal that there is no actual effect, in which case no mitigation is required. Where a “Yes” has been identified, the proponent is to provide additional information in the Environmental Screening Report, explaining the potential effect(s), methods to mitigate or address the effect(s), any net effects that are anticipated and if so, their significance. Even where the proponent indicates that “No” environmental effects are anticipated, it is recommended that additional information be provided in the Environmental Screening Report in order to support the “no effects” conclusion”. Each criterion is based on a question which is prefaced with the phrase, “Might the Project...”. The result of the screening level analysis is provided in **Table 3-1**.

**Table 3-1 Screening Criteria Checklist**

	Criterion	YES	NO	Additional Information
	Might the project...			
<b>1. Surface and Groundwater</b>				
1.1	Cause negative effects on surface water quality, quantities or flow?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint, cover designs (daily, intermediate, final), final contours, or on-site operations and will not cause negative effects on surface water quality, quantities or flows.
1.2	Cause negative effects on groundwater quality, quantity or movement?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint, on-site operations or leachate generation rates and will not cause negative effects on groundwater quality, quantity or movement.
1.3	Cause significant sedimentation or soil erosion or shoreline or riverbank erosion on or off site?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause significant sedimentation or soil erosion or shoreline or riverbank erosion on or off site.
1.4	Cause negative effects on surface or groundwater from accidental spills or releases (e.g., leachate) to the environment?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint, cover designs, final contours, or on-site operations and will not cause negative effects on surface or groundwater from accidental spills or releases (e.g., leachate) to the environment.
<b>2. Land</b>				
2.1	Cause negative effects on residential, commercial, institutional or other sensitive land uses within 500 metres from the site boundary?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause negative effects on nearby residential, commercial, institutional or other sensitive land uses.
2.2	Not be consistent with the Provincial Policy Statement, provincial land use or resource management plans?		X	The proposed Environmental Compliance Approval amendment will continue to be consistent with the Provincial Policy Statement, provincial land use and/or resource management plans.
2.3	Be inconsistent with municipal land use policies, plans and zoning bylaws (including municipal setbacks)?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will continue to be consistent with municipal land use policies, plans and zoning bylaws (including municipal setbacks). No new lands are required and no changes to existing zoning are required.
2.4	Use lands not zoned as industrial, heavy industrial or waste disposal?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and do not require new lands or changes to existing zoning.

	Criterion	YES	NO	Additional Information
	Might the project...			
2.5	Use hazard lands or unstable lands subject to erosion?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and do not require the use of hazard lands or unstable lands subject to erosion.
2.6	Cause negative effects related to the remediation of contaminated land?		X	The proposed Environmental Compliance Approval amendment will not cause negative effects related to the remediation of contaminated land.
<b>3. Air and Noise</b>				
3.1	Cause negative effects on air quality due to emissions (for parameters such as temperature, thermal treatment exhaust flue gas volume, nitrogen dioxide, sulphur dioxide, residual oxygen, opacity, hydrogen chloride, suspended particulates, or other contaminants)?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause negative effects on air quality due to emissions.
3.2	Cause negative effects from the emission of greenhouse gases (e.g., carbon dioxide, carbon monoxide, methane)?	X		The proposed Environmental Compliance Approval amendment will result in a potential increase in emissions associated with additional truck movements to/from the Site.
3.3	Cause negative effects from the emission of dust or odour?	X		The proposed Environmental Compliance Approval amendment will result in a potential increase in dust and odour emissions associated with additional truck movements to/from the Site.
3.4	Cause negative effects from the emission of noise?	X		The proposed Environmental Compliance Approval amendment will result in a potential increase in noise emissions associated with additional truck movements to/from the Site.
3.5	Cause light pollution from trucks or other operational activities at the site?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause negative effects from light pollution.
<b>4. Natural Environment</b>				
4.1	Cause negative effects on rare (vulnerable), threatened or endangered species of flora or fauna or their habitat?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause negative effects on rare (vulnerable), threatened or endangered species of flora or fauna or their habitat. It should be noted that none are present on-site.
4.2	Cause negative effects on protected natural areas such as, ANSIs, ESAs or other significant natural areas?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause negative

	Criterion	YES	NO	Additional Information
	Might the project...			
				effects on protected natural areas such as, ANSIs, ESAs or other significant natural areas.
4.3	Cause negative effects on designated wetlands?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause negative effects on designated wetlands.
4.4	Cause negative effects on wildlife habitat, populations, corridors or movement?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause negative effects on wildlife habitats, populations, corridors or movements.
4.5	Cause negative effects on fish or their habitat, spawning, movement or environmental conditions (e.g., water temperature, turbidity, etc.)?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause negative effects on fish or their habitat, spawning, movement or environmental conditions (e.g., water temperature, turbidity, etc.). It should be noted that none are present on-site.
4.6	Cause negative effects on locally important or valued ecosystems or vegetation?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause negative effects on locally important or valued ecosystems or vegetation.
4.7	Increase bird hazards within the area that could impact surrounding land uses (e.g., airports)?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause increase to bird hazards.
<b>5. Resources</b>				
5.1	Result in practices inconsistent with waste studies and/or waste diversion targets (e.g., result in final disposal of materials subject to diversion programs)?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will be consistent with diversion targets.
5.2	Result in generation of energy that cannot be captured and utilized?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations. No energy recovery/ utilization is proposed.
5.3	Be located a distance from required infrastructure (such as availability to customers, markets and other factors)?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill location, footprint or on-site operations.
5.4	Cause negative effects on the use of Canada Land Inventory Class 1-3,		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause negative

	Criterion	YES	NO	Additional Information
	Might the project...			
	specialty crop or locally significant agricultural lands?			effects on Canada Land Inventory Class 1-3, specialty crop or locally significant agricultural lands.
5.5	Cause negative effects on existing agricultural production?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause negative effects on agricultural production.
<b>6. Socio-Economic</b>				
6.1	Cause negative effects on neighbourhood or community character?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause negative effects to neighbourhood or community character.
6.2	Result in aesthetics impacts (e.g., visual and litter impacts)?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause aesthetic impacts (e.g., visual and litter impacts).
6.3	Cause negative effects on local businesses, institutions or public facilities?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause negative effects on local businesses, institutions or public facilities.
6.4	Cause negative effects on recreation, cottaging or tourism?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause negative effects on recreation, cottaging or tourism.
6.5	Cause negative effects related to increases in the demands on community services and infrastructure?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause negative effects related to increases in the demands on community services and infrastructure.
6.6	Cause negative effects on the economic base of a municipality or community?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause negative effects on the economic base of a municipality or community.
6.7	Cause negative effects on local employment and labour supply?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause negative effects on local employment and labour supply.
6.8	Cause negative effects related to traffic?	X		The proposed Environmental Compliance Approval amendment will result in an increase in the daily frequency/ volume of vehicle traffic on the local road to the site.
6.9	Be located within 8 km of an aerodrome/airport reference point?		X	While the landfill is located within proximity to an aerodrome, as the final approved elevation will not change, there are no anticipated effects.



	Criterion	YES	NO	Additional Information
	Might the project...			
6.10	Interfere with flight paths due to the construction of facilities with height (i.e. stacks)?		X	The proposed Environmental Compliance Approval amendment will not interfere with flight paths.
6.11	Cause negative effects on public health and safety?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause negative effects on public health and safety.
<b>7. Cultural Heritage Resources</b>				
7.1	Cause negative effects on heritage buildings, structures or sites, archaeological sites or areas of archaeological importance, or cultural heritage landscapes?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause negative effects on heritage buildings, structures or sites, archaeological sites or areas of archaeological importance, or cultural heritage landscapes.
7.2	Cause negative effects on scenic or aesthetically pleasing landscapes or views?		X	The proposed Environmental Compliance Approval amendment will not change the existing landfill footprint or on-site operations and will not cause negative effects on scenic or aesthetically pleasing landscapes or views.
<b>8. Aboriginal</b>				
8.1	Cause negative effects on land, resources, traditional activities or other interests of Aboriginal communities?		X	Consultation with Indigenous communities will take place throughout the Environmental Screening Process.



	Criterion	YES	NO	Additional Information
	Might the project...			
<b>9. Other</b>				
9.1	Result in the creation of non-hazardous waste materials requiring disposal?		X	The proposed Environmental Compliance Approval amendment will not change the types of wastes the facility is permitted to receive and will not result in the creation of non-hazardous waste materials requiring disposal (the landfill currently <u>receives</u> non-hazardous wastes as permitted by the existing Environmental Compliance Approval).
9.2	Result in the creation of hazardous waste materials requiring disposal?		X	The proposed Environmental Compliance Approval amendment will not change the types of wastes the facility is permitted to receive and will not result in the creation of non-hazardous waste materials requiring disposal (the landfill currently <u>receives</u> non-hazardous wastes as permitted by the existing Environmental Compliance Approval).
9.3	Cause any other negative environmental effects not covered by the criteria outlined above?		X	The proposed Environmental Compliance Approval amendment will not cause any other negative environmental effects not covered by the criteria outlined above.

## **4. Potential Environmental Effects**

The potential positive and negative environmental effects anticipated to occur as a result of the Project were identified using the screening criteria in the Screening Criteria Checklist described above and included in **Section 3**. It should be noted that between 2015 and 2018, a number of studies were completed in support of the Vertical Capacity Expansion EA, which includes the potential effects, mitigation measures and net effects of the landfill that were reviewed and remain valid for current and proposed operations.

A summary of the potential effects are described for each environmental component below.

### **4.1 Surface and Ground Water**

The proposed annual fill rate change will not result in changes to the landfill design, footprint or on-Site landfill operations. The proposed increase of the annual fill rate is not anticipated to negatively affect surface water quality, quantity or flow, or groundwater quality, quantity or movement. The Project is not anticipated to cause measurable changes to sedimentation or erosion on-Site or off-Site, or cause negative effects on surface water or groundwater due to accidental spoils or releases (e.g., leachate) to the environment.

No negative environmental effects are anticipated on surface water or groundwater as a result of the Project.

### **4.2 Land Use**

The proposed annual fill rate change amendment will not result in changes to the landfill design, footprint or on-Site landfill operations. The Site will continue to be consistent with the Provincial Policy Statement, provincial land use, resource management plans, and municipal land use policies, plans and zoning by-laws. Furthermore, as no new lands are required, there will be no changes to existing zoning and the Project will not use hazard lands or unstable lands subject to erosion or land deemed to be contaminated.

No negative environmental effects are anticipated on the lands or land uses surrounding the Site as a result of the Project.

### **4.3 Air and Noise**

The proposed annual fill rate change will result in an increase in the daily frequency and volume of truck traffic on local roads and at the Site. The following potential environmental effects on air and noise are anticipated:

- Potential increase in emissions of greenhouse gases from additional truck movements to and from the Site.
- Potential increase in dust and odour emissions from gases from additional truck movements to and from the Site.
- Potential increase in noise emissions from additional truck movements to and from the Site.



#### **4.4 Natural Environment**

The proposed annual fill rate change will not result in changes to the landfill design, footprint or on-Site landfill operations, and the transportation of waste will continue along approved haul routes.

No negative environmental effects are anticipated on the natural environment including protected natural areas, and wildlife habitat, populations, corridors and movement. No effects are anticipated to rare (vulnerable), threatened or endangered species and habitats, fish and fish habitat, designated wetlands, locally important or valued ecosystems and vegetation, as none are present on Site.

#### **4.5 Resources**

The proposed annual fill rate change will not result in changes to the landfill design, footprint or on-Site landfill operations, and the landfill will continue to be consistent with waste diversion targets. The Project will not involve energy recovery and is not anticipated to result in negative effects on locally significant agricultural lands or existing agricultural production surrounding the Site, since the Project will occur within the existing Site boundary.

#### **4.6 Socio-Economic**

The proposed annual fill rate change will not result in changes to the landfill design, footprint or on-Site landfill operations; consequently, no negative environmental effects to the following social or economic aspects of the surrounding community are anticipated: aesthetics (visual litter); local businesses, institutions or public facilities; recreation, cottaging or tourism; community services and infrastructure; local economic base; local employment and labour supply, or public health and safety.

The Project is anticipated to result in potential effects on traffic from additional truck traffic to and from the Site.

#### **4.7 Cultural Heritage Resources**

There are no known heritage buildings, structures or sites, archaeological sites or areas of archaeological importance, or cultural heritage landscapes on the Site, which was confirmed through completion of the Vertical Capacity Expansion EA via the Ministry of Heritage, Sports, Tourism, and Culture Industries (MHSTCI) checklists: the *Criteria for Evaluating Archaeological Potential*; and the *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes*. Copies of the completed checklists are provided in **Appendix A**.

The proposed annual fill rate change will not result in changes to the landfill design, footprint or on-Site landfill operations; consequently, no negative environmental effects are anticipated on heritage and cultural features including heritage buildings, structures or Sites archaeological sites or cultural heritage landscapes. In additions, no negative environmental effects on scenic or aesthetically pleasing landscapes or views are anticipated.



## 4.8 Indigenous

The proposed annual fill rate change is not anticipated to have negative effects on land, resources, traditional activities or other interests of Indigenous Communities, as the Site is not subject to any land claims.

Three Indigenous Communities were contacted upon study commencement: Six Nations of the Grand River First Nation, Mississaugas of the New Credit First Nation, and the Metis Nation of Ontario. **Section 6.2** outlines consultation with Indigenous communities.

## 4.9 Other

As part of the consultation process, BRE carried out a follow-up meeting with the MECP to discuss comments provided on the initial Environmental Screening Checklist results. As part of the discussions between BRE and MECP, BRE agreed to include the potential effects related to leachate generation. Specifically, MECP requested the effects of increasing the fill rate be evaluated within the context of the Leachate Management Plan (LMP) that was developed and incorporated into the ECA issued in March 2020. GHD has prepared a Leachate Assessment Report on behalf of BRE for the proposed undertaking, which is summarized in **Section 5.4**.

In addition, the MECP requested a review of Site operations and the ability to undertake the required inspections, monitoring, maintenance, and operating procedures when operating at the peak fill rate for an extended period of time. GHD prepared a comprehensive Operations Plan, which is summarized in **Section 5.5**.

The Project is not anticipated to result in other negative environmental effects not covered by the Screening Criteria Checklist provided in **Section 3**.

# 5. Environmental Effects Assessment

Five studies were completed to assess/confirm the potential environmental effects identified in the Screening Checklist (**Section 3**) and Potential Effects (**Section 4**):

1. Air Quality and Odour Assessment (**Appendix B.1**)
2. Methane Generation Analysis (**Appendix C.1**)
3. Noise Impact Assessment (**Appendix D.1**)
4. Traffic Impact Analysis (**Appendix E.1**)
5. Leachate Assessment (**Appendix F**)

In addition to the environmental effects studies, an assessment of operations was conducted in the Operations Plan included in **Appendix G**.

The following section provides a detailed description of the potential environmental effects identified in **Section 4** and identifies the necessary mitigation and impact management measures, if needed, and the overall anticipated net effects.



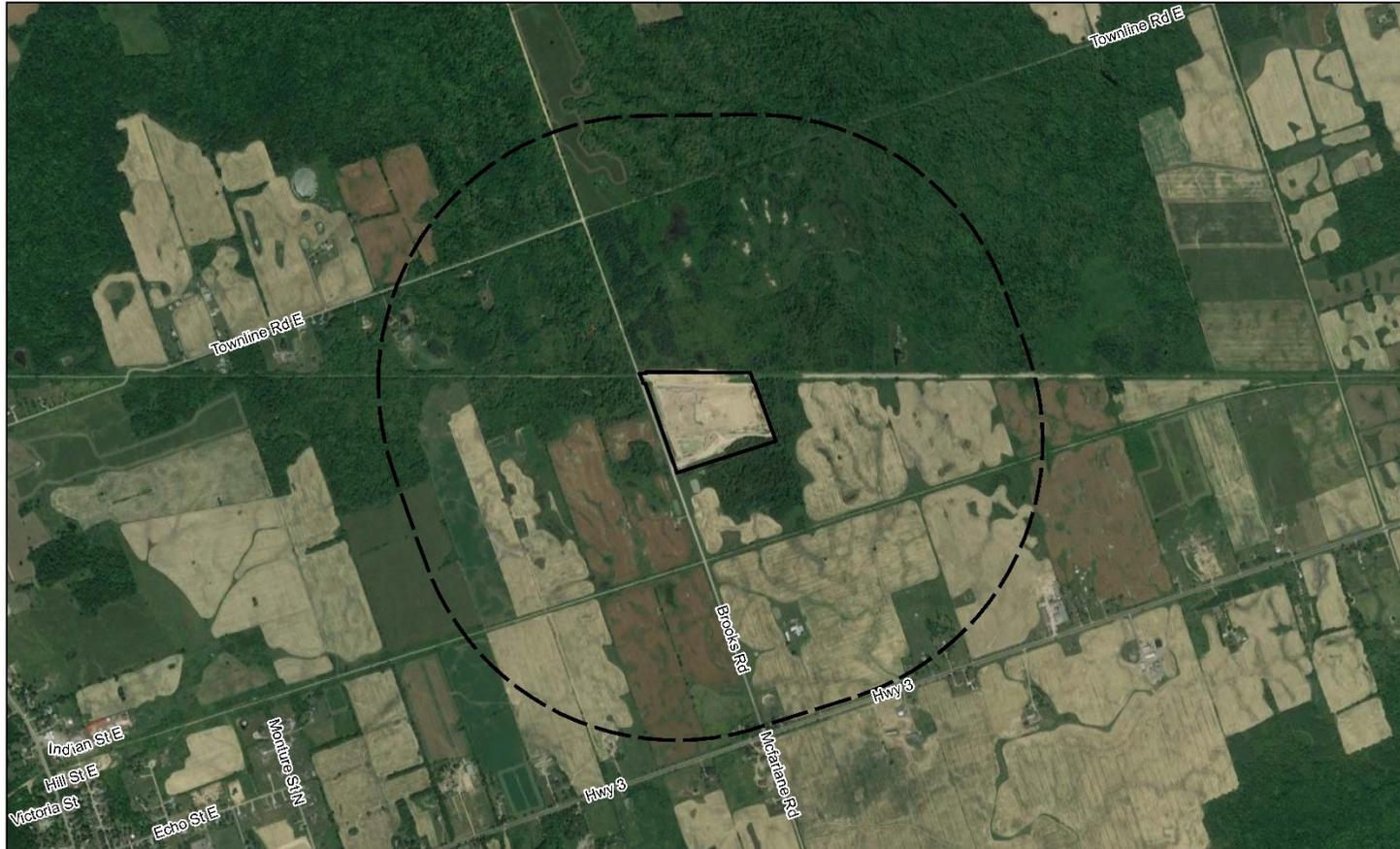
## **5.1 Air Quality and Odour**

The potential environmental effects of the Project on air quality and odour were identified as:

- Potential increase in emissions of greenhouse gases from additional truck movements to and from the Site.
- Potential increase in dust and odour emissions from gases from additional truck movements to and from the Site.

### **5.1.1 Background**

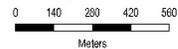
The Site is located approximately 2.8 km northeast of Cayuga and 25 km south of Hamilton and is surrounded by agricultural land. The closest residential building is approximately 232 m from the Site and there are no major industrial sources within the identified Study Area for Air Quality and Odour (**Figure 5.1**). The Site has a berm that runs along the west side of the site and a clay stockpile located along the north side that would reduce the line of sight and fugitive particulate matter emissions when the landfill is in operation.



**Legend**

-  Site Study
-  Local Study Area (1 km Radius)

Paper Size ANSI A



Map Projection: Transverse Mercator  
Horizontal Datum: North American 1983  
Grid: NAD 1983 UTM Zone 17N



**BROOKS ROAD LANDFILL**  
160 BROOKS ROAD, CAYUGA, ONTARIO

**STUDY AREAS FOR THE  
AIR QUALITY AND ODOUR ASSESSMENT**

Project No. 018235  
Revision No. -  
Date Mar 03/2021

**FIGURE 5-1**

0:\GIS\PROJECT\31180235\18235\Layouts\2120-18235(132)CIS-OT000.mxd  
Print date: 05 Mar 2021 10:38

Data Source: MNR/NRVS, 2014. Processed by GHD under license from Ontario Ministry of Natural Resources and Forestry. © Cartes Printer 2021, Imagery - Google, 2018.

**Figure 5.1 Study Area for the Air Quality and Odour Assessment**

The Site does not have a landfill gas collection and control system. O. Reg. 232/98 requires the mandatory collection of landfill gas for sites with a waste capacity greater than 1.5 million m<sup>3</sup>. Given that the total approved capacity remains under this threshold (approved capacity is 1,045,065 m<sup>3</sup>) and that the total approved volume will not change as a result of this Project, gas collection is not required. Further, given that the anticipated types of waste to be accepted will consist primarily of non-hazardous IC&I wastes, there will be insufficient landfill gas produced to warrant collection.

To confirm the above, methane generation modelling analysis was completed for the Vertical Capacity Expansion EA. As part of this ESR, this modelling was updated and is described further under **Section 5.1.2**.

### **Air Quality**

Particulate emissions related to vehicles operating at the Site are the primary emissions of concern at the landfill. Particulate may be defined in various particle size categories; including total suspended particulate (TSP), particulate less than 10 microns (PM10) and particulate less than 2.5 microns (PM2.5). All fractions of particulate were assessed under the previously prepared and approved Vertical Capacity Expansion EA based on an increased annual fill rate at the maximum receipt of 1,000 tonnes per day. The study found:

- Potential TSP, PM10, and PM2.5 emissions from vehicle exhaust and break and tire wear for the on-Site vehicles was concluded to be insignificant.
- Other tailpipe/combustion emissions, such as nitrogen oxides (NOx) and carbon monoxide (CO), are insignificant based on the small volume of daily traffic at the landfill, and the significant distances to sensitive receptors.
- Landfill gases, such as hydrogen sulfide (H<sub>2</sub>S) and vinyl chloride, are concluded to be insignificant based on the operations at the landfill.

### **Odour**

GHD has conducted on-Site and off-Site odour analyses in 2014, 2016, 2017, and 2019. These studies indicated that there was no measurable odour off-site. GHD completed odour measurements during daytime and nighttime periods to try and observe odours in the surrounding community. During all the odour monitoring events, no odours that could be attributed to the Site were detected off-Site. However, the 2014, 2016, and 2017 odour studies concluded that there were high on-Site odour levels near the leachate tank and the working face.

In 2019, BRE completed modifications to the leachate treatment facility that resulted in reductions in the generation of odours at the Site. The most recent odour monitoring was completed in 2019 which confirmed that the leachate treatment system has reduced the potential for odour impacts. Faint odours were detected throughout the Site during the most recent odour monitoring however no odour that would be attributed to the Site was detected at any off-Site monitoring locations.

The Site currently implements several operational measures in order to reduce and/or mitigate odour impacts from the Site and they will continue to implement these measures. These include:

- Continuing with the daily Odour Monitoring Program carried out by the Site Operator.

- If odours are evident on the property boundary, increase the amount of daily cover applied on the waste.
- Minimize the active working face. Apply interim cover at a minimum thickness of 300 mm on areas of the landfill where landfilling has ceased for 6 months or more.
- Continue with the use of odour control granules for odour mitigation. Assess areas of placement and their effect on odour mitigation.

As part of BRE's commitment to ensuring that odour complaints are minimized from the existing and proposed operations a standard operating procedure (SOP) was developed as part of the previously prepared Vertical Capacity Expansion EA. The purpose of the SOP is to include odour mitigation measures that would be implemented to ensure that odour complaints are investigated and the condition that resulted in the odour complaint is mitigated.

The landfilling activities are currently operating within the acceptable air quality and odour criterion and the proposed increase in the annual fill rate will also be required to meet the same criterion.

### **5.1.2 Potential Air Quality and Odour Effects**

This Section provides an assessment of the potential negative environmental effects (i.e., those for which a "Yes" answer was given in the Screening Criteria Checklist) for those Air Quality and Odour criteria which might be affected by the Project as identified in **Section 3**. The effects assessment describes how existing environmental conditions in the Study Area(s) would change as a result of the construction and operation of the proposed undertaking.

As described in **Section 3**, a "Yes" was applied to the following Air Quality and Odour criteria:

- Cause negative effects from the emission of greenhouse gases (e.g., carbon dioxide, carbon monoxide, methane)?
- Cause negative effects from the emission of dust or odour?

With respect to the above criteria/criterion, a description of the potential negative environmental effects, necessary mitigation measures and the resultant net effects on the environment are discussed. Studies conducted during the screening showed that the anticipated effects will be much less than expected or will not occur at all. In all cases, mitigation measures have been identified that, when applied, will eliminate the potential environmental effects or reduce them to acceptable levels.

#### ***Air Quality***

The air contaminant of concern for this Site is particulate matter. Other air contaminants are expected to be insignificant. As previously discussed, potential tailpipe and brake and tire wear emissions from vehicles operating at the landfill are insignificant. Also, the estimated landfill gas production of only 200 cfm confirms that any potential off-site impacts of compounds in the gas, such as methane, would be insignificant.

Particulate is primarily produced by vehicle traffic on the landfill roads. The particulate matter that is of concern is based on the re-suspension of particulate matter from traffic on the roads. The tailpipe and brake and tire wear has been determined to be insignificant sources of particulate matter. The Ontario ambient air quality criterion for TSP is 120 µg/m<sup>3</sup> on a 24-hour basis. There are other

particulate provincial and federal criteria for particulate less than 10 microns (PM-10) and particulate less than 2.5 microns (PM-2.5). These particulate emissions would also occur from vehicle traffic on the Site roads.

It is GHD's experience that if one can show compliance with the TSP standard, a site with road traffic being the major source, then the PM10 and PM2.5 concentrations will also be below criteria. However, for completeness, GHD has modeled the TSP, PM10 and PM2.5 emissions in the assessment of the alternatives.

The TSP, PM10 and PM2.5 emissions from the on-site roads were estimated based on truck traffic and emissions factors from the United States Environmental Protection Agency (USEPA). Particulate off-site concentrations were estimated using the AERMOD air dispersion model which is an approved dispersion model under Ontario Regulation 419/05. The AERMOD model incorporates 5 years of meteorological data to determine the worst-case air concentration. Therefore, the modeling results can be considered to be conservative.

The on-Site haul roads were previously modelled for a conservative worst-case scenario of 50 trucks per day. This is the same amount of daily trucks proposed in this ESR. The Site will complete the paving of the on-Site roadway from the Site entrance to the landfill as was identified in the Vertical Capacity Expansion EA.

TSP, PM10 and PM2.5 from the Site were previously evaluated at the property boundary and all residential dwellings. The predicted worst-case particulate impact at the property boundary is as follows:

- TSP – 50 trucks per day - 122.4  $\mu\text{g}/\text{m}^3$
- PM10 – 50 trucks per day – 64.18  $\mu\text{g}/\text{m}^3$
- PM2.5 – 50 trucks per day – 8.8  $\mu\text{g}/\text{m}^3$

The predicted maximum worst case particulate impact at the sensitive receptors is as follows:

- TSP – 50 trucks per day - 5.78  $\mu\text{g}/\text{m}^3$
- PM10 – 50 trucks per day – 4.56  $\mu\text{g}/\text{m}^3$
- PM2.5 – 50 trucks per day – 0.61  $\mu\text{g}/\text{m}^3$

The MECP AAQC for TSP is 120  $\mu\text{g}/\text{m}^3$ , 50  $\mu\text{g}/\text{m}^3$  for PM10, and 30  $\mu\text{g}/\text{m}^3$  for PM2.5.

The modelled concentration at the sensitive receptors well below the MECP AAQC for all particulate matter fractions.

The modelled concentration at the property boundary is right at the AAQC for TSP and PM10 and the concentration of PM2.5 remains well below the MECP AAQC. There have been no changes to the modelled impacts from the previous application.

### **Landfill Gas**

As previously mentioned, the methane generation modelling analysis that was completed for the Vertical Capacity Expansion EA was updated for this ESR. Modelling used an average annual waste quantity calculated based on actual Site waste disposal numbers for the period October 8, 2009

through October 9, 2016 and annual reports for the period of 2016 through 2020 (See **Appendix C.1** for further materials acceptance/breakdown). A waste acceptance rate (WAR) of 250,000 tonnes per year was assumed for future years (starting in 2021) until the landfill design capacity is reached (1,045,065 m<sup>3</sup>). The landfill accepts mostly construction/ demolition waste and inert material. These waste categories contain a very low amount of degradable organic content (DOC) when compared with higher organic materials such as bulk waste and food waste. Therefore, the landfill is not expected to generate a large amount of methane emissions as a typical Municipal Solid Waste Landfill would.

Waste composition for future years was assumed to be consistent with the 2016-2020 waste composition. Without a landfill gas collection and control system, peak methane emissions from the Site (in 2025) are estimated to be approximately 801 tonnes of methane (approximately 20,023 tonnes of carbon dioxide equivalent [CO<sub>2</sub>e]). Converting to units of standard cubic feet per minute (scfm), the maximum methane generation rate is approximately 80 scfm (in 2025). Based on the low level of methane generation at the Site and the negative environmental, energy and economic factors associated with a landfill gas collection and control system (see **Appendix C.1** for a discussion of the impacts associated with the operation of a gas collection and control system), it is concluded that the operation of such a system is not feasible.

### **Odour**

Ontario does not have an odour standard. However, a value of one odour unit (OU) is sometimes used by the MECP as a limit for odour impacts at sensitive receptors such as residences. Based on the existing conditions odour studies, it has been shown that odour levels at the nearest sensitive receptors will not exceed one OU.

Odour was not modelled for this Environmental Screening as odour impacts from the increased annual capacity were assessed under the previous application and the conditions will remain the same at the maximum receipt of 1,000 tonnes per day.

As discussed above, the estimated landfill gas production for the Site is extremely small and is not expected to result in any off-Site odour impacts.

Odours at the concentration currently observed at the Site typically do not result in complaints at off-Site sensitive receptor locations. This has been investigated through numerous odour monitoring programs that did not identify any on-Site odours being observed at off-Site locations.

The Emission Summary and Dispersion Modelling Report (ESDM Report) has been updated to incorporate the potential increase in landfill gas/ methane generation at the Site as a result of the proposed Project.

### **5.1.3 Mitigation Measures**

The Site has completed numerous mitigation measures since the Vertical Capacity Expansion EA, including the introduction of SOPs for odour and dust and commissioning a leachate treatment system. The Air Quality and Odour were assessed for the proposed conditions in the previous assessment and the identified mitigation measures were implemented. The Site is committed to the continuation of the mitigation measures identified above. With specific reference to odour, the Site currently implements several operational measures in order to reduce and/or mitigate odour impacts

from the Site and they will continue to implement these throughout the operation of the Site. These include:

- Continuing with the daily odour monitoring program carried out by the Site Operator.
- If odours are evident on the property boundary, increase the amount of daily cover applied on the waste.
- Minimize the active working face. Apply interim cover at a minimum thickness of 300 mm on areas of the landfill where landfilling has ceased for 6 months or more.
- Continue with the use of odour control granules for odour mitigation. Assess areas of placement and their effect on odour mitigation.

#### **5.1.4 Net Effects**

The net effects to Air Quality and Odour are low. The previously prepared and approved Vertical Capacity Expansion EA was completed based on an increased annual fill rate at the maximum receipt of 1,000 tonnes per day, including appropriate mitigation measures. This ESR has confirmed that increasing the annual fill rate to 250,000 tonnes per year will not increase potential effects to Air Quality and Odour.

#### **5.1.5 Monitoring**

There are no new monitoring requirements at this time. BRE will continue to with the daily odour monitoring program carried out by the Site Operator.

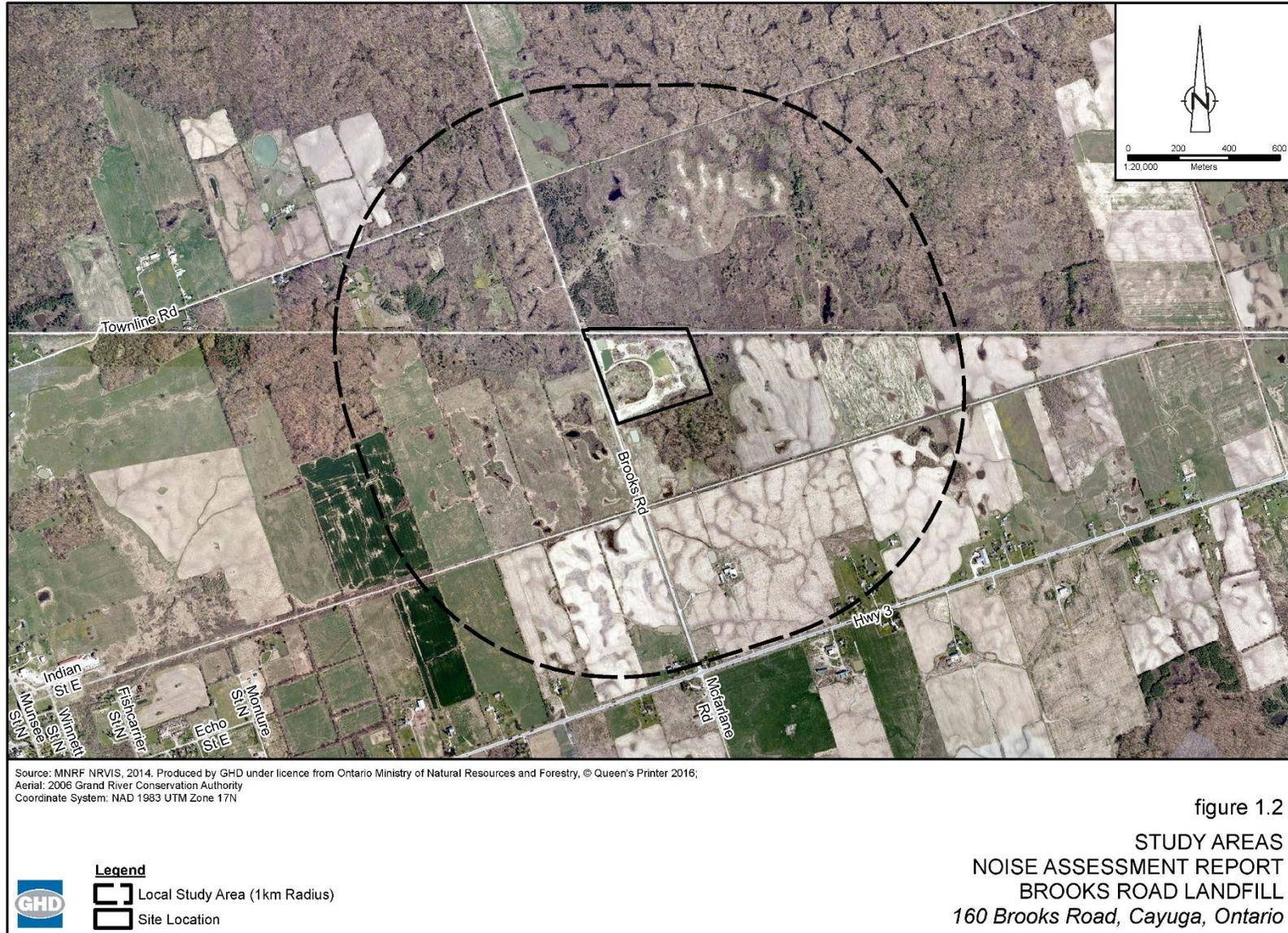
Further details are provided in **Appendix B.1** (Air Quality and Odour Impact Study for this ESR), **Appendix B.2** (Air Quality and Odour Assessment Report for the Vertical Capacity Expansion EA), **Appendix C.1** (Methane Generation Analysis for this ESR), and **Appendix C.2** (Methane Generation Analysis for the Vertical Capacity Expansion EA).

## 5.2 Noise

The potential environmental effects of the Project were identified as potential increase in noise emissions from additional truck movements.

### 5.2.1 Background

The Study Area for Noise (see **Figure 5.2**) discipline was defined by the area extending 1 km from the existing Brooks Road Landfill property boundary. The MECP Noise Screening Process Questionnaire requires that industries with significant potential environmental noise profiles, or equipment, evaluate the off-site environmental noise impact within 1 km from the Site; the noise impact beyond 1 km is expected to be environmentally insignificant. The Study Area is rural in character and surrounded by agricultural fields. There are no existing industries within the Study Area other than the Facility that may contribute to the background noise levels. The nearest residential dwelling is approximately 232 m northwest of the existing property boundary. There are approximately 14 existing one-storey (1.5 m above grade) and two-storey (4.5 m above grade) residential dwellings within the Study Area as identified on **Figure 5.2**.



018235-20(INT004)GIS-WA007 Jul 08/2016

**Figure 5.2 Study Area for Noise**

The Site is located in a mixed Acoustical Class 2 and Class 3 area, depending on the proximity of the sensitive receiver to the Highway 3 corridor. Acoustical Class 2 areas are defined by NPC 300<sup>4</sup> as an acoustic environment with elevated daytime noise levels. Acoustical Class 3 areas are defined by NPC 300 as rural areas with an acoustical environment that is dominated by natural sounds having little or no road traffic.

The nine residential dwellings located along Highway 3 are considered to be Class 2 receivers and the five residential dwellings situated away from the corridor are considered to be Class 3 receivers. However, N-1 is the applicable regulatory Guideline for compliance assessment purposes for this Facility.

The significant environmental noise sources at the Site include:

- 1 x Leachate Treatment Plant (pumps and aerator equipment located inside heavy gauge sheet steel structure) (91.5 dBA)
- 2 x Caterpillar 826G Compactors (106.5 dBA)
- 16 trips/hr. - John Deere 225 Rock Trucks on Primary Haul Route (109.9 dBA)
- 2 x Caterpillar 330/Hyundai 210 Excavators (102.0 dBA)
- 4 x Caterpillar D5/D6/D7 Bulldozers (106.3 dBA)
- 2 x John Deere 270 Skid Steers (109.1 dBA)
- 1 x HAMM 64 inch sheepsfoot packer (106.5 dBA)

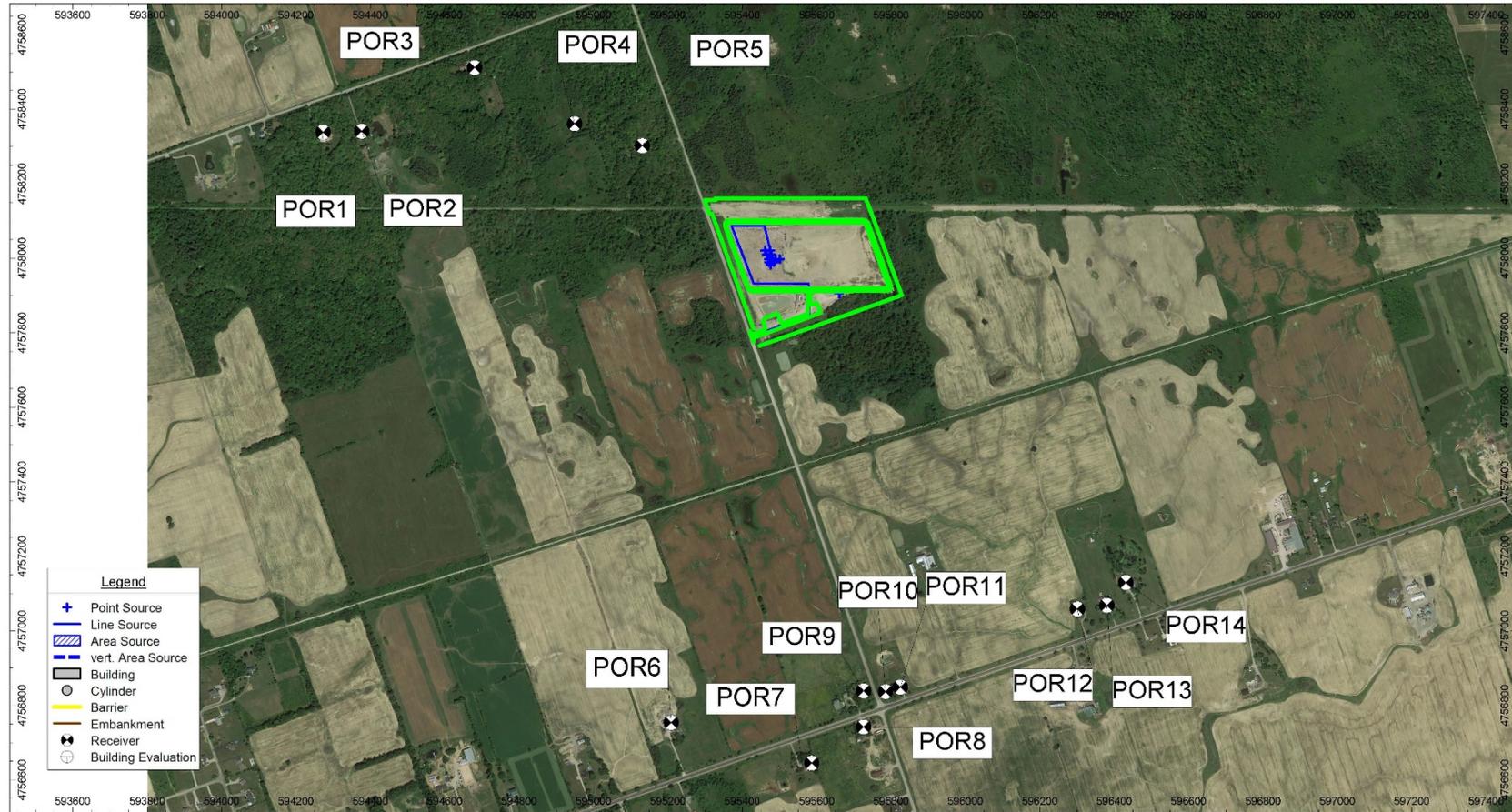
These noise sources generate continuous steady state mechanical noise and will be the subject of analysis for the evaluation.

BRE has not received any noise complaints for the previous operations on-site based on information provided by BRE Site operators as of September 2015.

The landfilling activities are currently operating within the acceptable noise criterion and the proposed increase in the annual fill rate will also be required to meet the same criterion.

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<sup>4</sup> Ontario's Environmental Noise Guidelines – Stationary and Transportation Sources – Approvals and Planning (NPC-300):  
<https://www.ontario.ca/page/environmental-noise-guideline-stationary-and-transportation-sources-approval-and-planning>



Source: Google Satellite



NOISE ASSESSMENT REPORT  
BROOKS ROAD LANDFILL  
160 BROOKS ROAD, CAYUGA, ONTARIO  
POINT OF RECEPTION LOCATION PLAN

018235  
12.02.2021

FIGURE 3.2

CadnaA File: \\ghdnet\ghd\CA\Waterloo\Projects\662\018235\Tech\Noise\2021 Base Existing conditions.cna

**Figure 5.3 Sensitive Receiver Locations**

### **5.2.2 Potential Effects on Noise Environment**

This Section provides an assessment of the potential negative environmental effects (i.e., those for which a “Yes” answer was given in the Screening Criteria Checklist) for those Natural Environment criteria which might be affected by the Project as identified in **Section 3**. The effects assessment describes how existing environmental conditions in the Study Area would change as a result of the construction and operation of the proposed undertaking.

As described in **Section 3**, a “Yes” was applied to the following Noise criteria:

- Cause negative effects from the emission of noise?

With respect to the above criteria/criterion, a description of the potential negative environmental effects, necessary mitigation measures and the resultant net effects on the environment are discussed. Studies conducted during the screening showed that the anticipated effects will be much less than expected or will not occur at all. In all cases, impact management (mitigation) measures have been identified that, when applied, will eliminate the potential environmental effects or reduce them to acceptable levels.

#### ***Landfill Operations and Haul Route***

In order to consider future compliance of noise levels from the Site, an evaluation was carried out on the on the predicted sound levels that will be associated with the proposed increase in the annual fill rate. The criteria for landfilling-related sound levels are established in the MECP guidelines for Site<sup>5</sup>, and are as follows:

- 55 dBA for daytime operations (7 am to 7 pm)
- 45 dbA for nighttime operations (7 pm to 7 am)

The assessment considered the potential increase in truck traffic on-Site and on the haul route to support the proposed annual fill rate change.

These noise sources are input into an industry standard acoustic model that includes all significant on-Site structures (buildings, equipment, storage tanks and silos). Computer Aided Noise Abatement Acoustical Modeling Software (CADNA A), version 2020, is based on the ISO 9613-2 standard “Acoustics – Attenuation of Sound During Propagation Outdoors – Part 2: General Method of Calculation.” The CADNA model is the industry standard for environmental noise modeling in Ontario.

The worst-case cumulative site-wide sound levels estimated at the receptor(s) included attenuation effects due to geometric divergence, atmospheric attenuation, barriers/berms, ground absorption and directivity, as applicable significant noise sources at off-site buildings were input into the model as intervening structures.

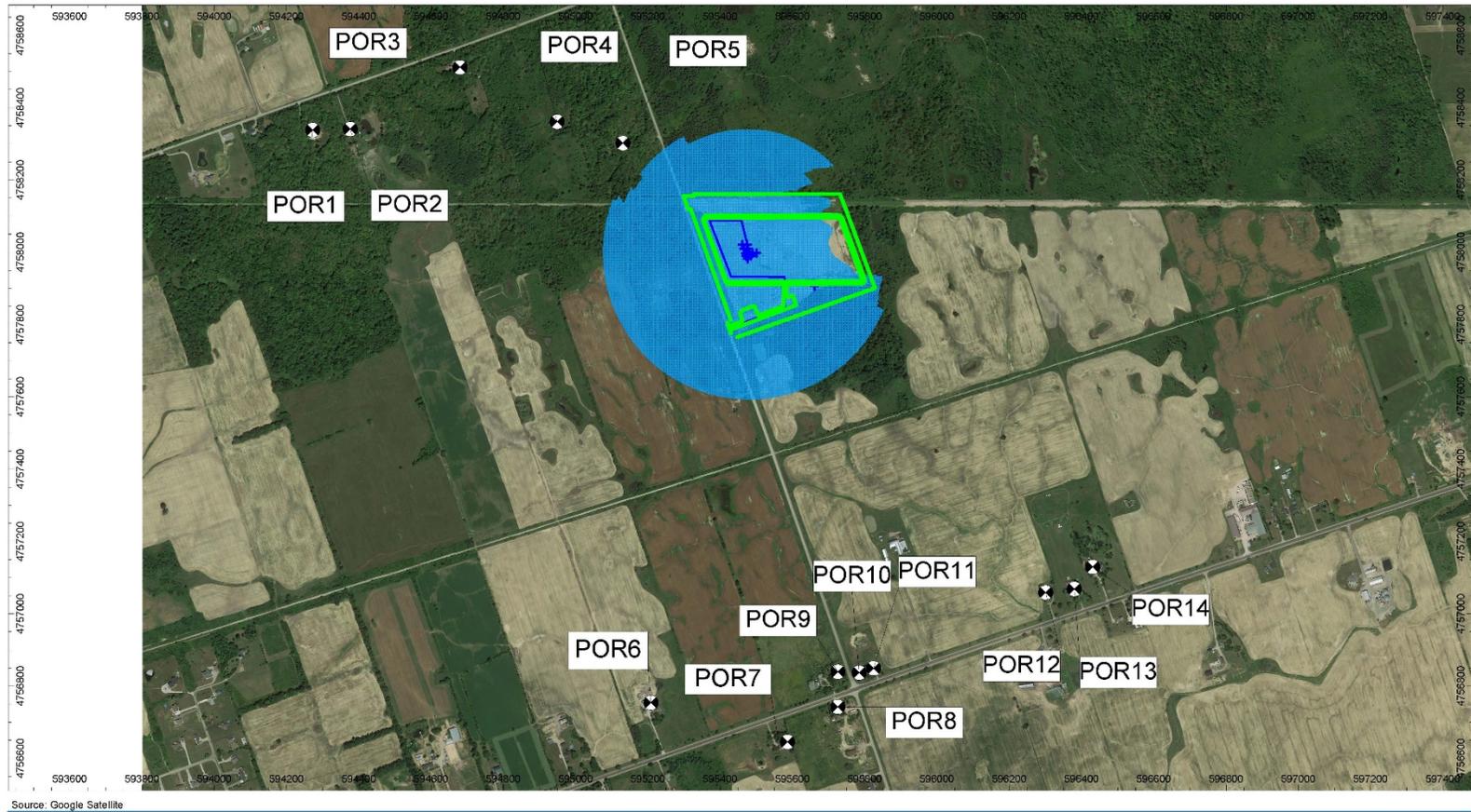
In order to predict the future worst-case noise impacts from the Project activities, representative octave band noise data was used, measured from construction/processing equipment similar to what is noted to be required for the Project. This data was obtained from the United Kingdom’s

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<sup>5</sup> MECP’s NPC-300 “Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning,” October 2013.

Department of Environment Food and Rural Affairs (DEFRA) Update of Noise Database for Prediction of Noise on Construction and Open Sites, 2005 and 2006 (common source used globally). The United States Department of Transportation, Federal Highway Administration (FHWA) document FHWA Roadway Construction Noise Model User's Guide, 2006 was used as a supplemental document to obtain sound level data for equipment not listed by DEFRA.

The existing Landfill noise contours are presented on **Figure 5.4**. The noise impacts predicted at the fourteen residential dwellings are below the 55 dBA noise limit defined in Guideline N-1. The future off-Site environmental noise impact from the Site were modelled using this industry standard acoustical model methodology to evaluate the capacity modifications in terms of the net effects. Noise contours for the Future Conditions are presented on **Figure 5.5**.



Source: Google Satellite



Legend  
■  $\geq 55$  dBA



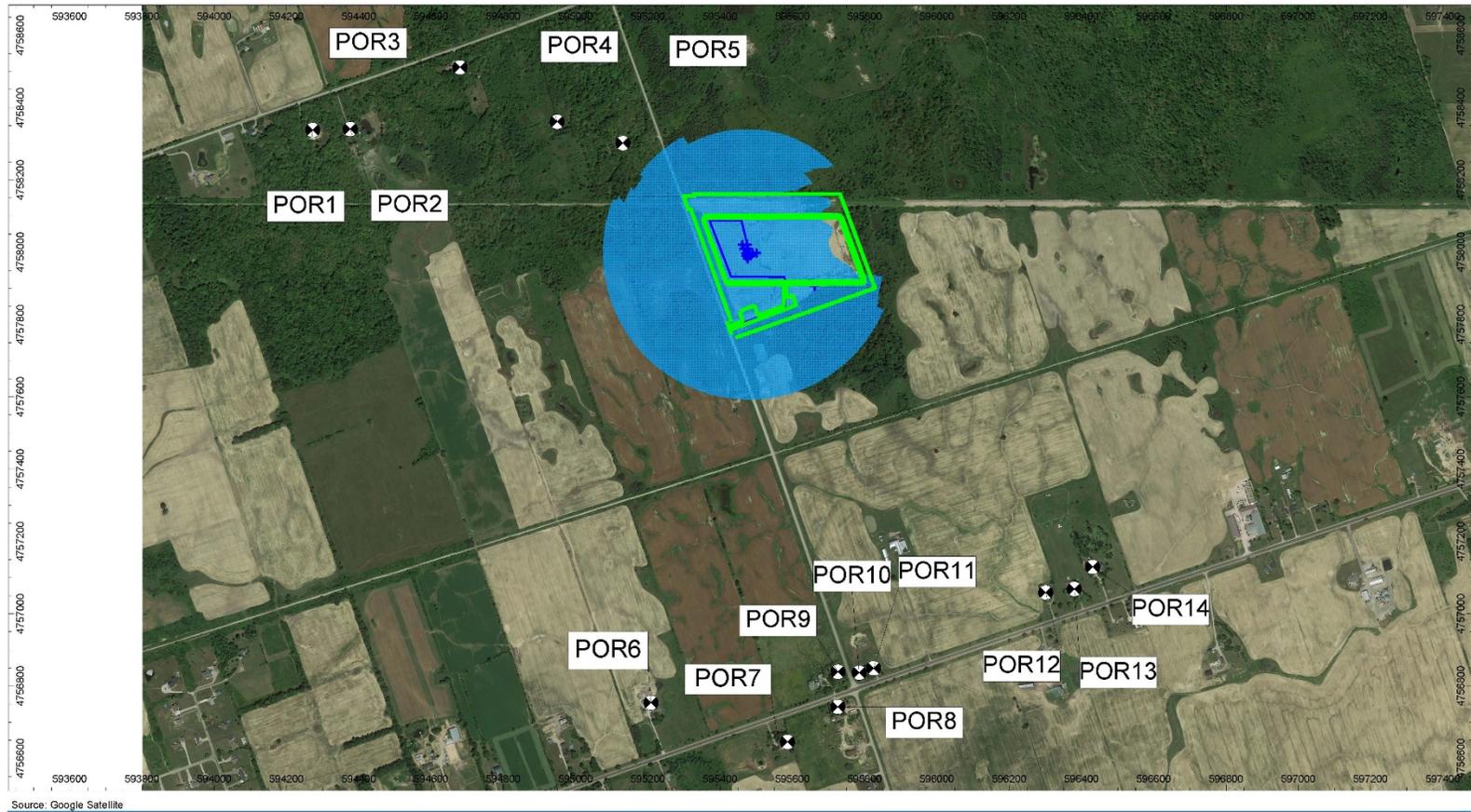
NOISE ASSESSMENT REPORT  
BROOKS ROAD LANDFILL  
180 BROOKS ROAD, CAYUGA, ONTARIO  
NOISE CONTOUR PLOT (Existing Conditions 4.5 m A.G.)

018235  
12.02.2021

FIGURE 3.3

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**Figure 5.4 Noise Contours - Existing Landfill Conditions**



Source: Google Satellite



Legend  
■  $\geq 55$  dBA



NOISE ASSESSMENT REPORT  
BROOKS ROAD LANDFILL  
180 BROOKS ROAD, CAYUGA, ONTARIO

NOISE CONTOUR PLOT (Future Conditions 4.5 m A.G.)

018235  
12.02.2021

FIGURE 4.8

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**Figure 5.5 Noise Contours - Future Landfill Conditions**

The proposed Project will result in a potential increase in noise emissions associated with additional truck movements to and from the Site. Fourteen off-Site residential dwellings will be potentially impacted from the existing Site activities. The predicted noise impact range is 42 to 55 dBA (rounded). POR5 is the most impacted at 53 dBA. All residential dwellings are below the 55 dBA noise limit.

Noise contours for the Existing Conditions are presented on **Figure 5.4**.

### **5.2.3 Mitigation Measures**

There are no mitigation measures recommended to be incorporated into the future conditions designs in order to avoid or minimize impacts from Noise. Mitigation measures are not required because the predicted off-site noise impact meets the applicable 55 dBA regulatory noise limit.

As all residential dwellings are below the 55 dBA noise limit, no specific mitigation measures are required. Continued implementation of Best Management Practices (BMPs) recommended as part of the Vertical Capacity Expansion EA, such as barriers and/or berms at the Landfill perimeter and administrative controls that limit on-Site landfilling activities, will serve to minimize noise impacts from the Site.

### **5.2.4 Net Effects**

Fourteen off-site residential dwellings will be potentially impacted from the existing Site activities. The predicted noise impact range is 42 to 53 dBA (rounded). POR5 is the most impacted at 53 dBA. All residential dwellings are below the 55 dBA noise limit.

Noise contours for the Future Conditions are presented on **Figure 5.5**.

### **5.2.5 Monitoring**

No new monitoring requirements are needed for on-going noise compliance.

Further details are provided in **Appendix D.1** (Noise Impact Study for this ESR) and **Appendix D.2** (Noise Assessment Report for the Vertical Capacity Expansion EA).

## **5.3 Traffic**

The potential environmental effects of the Project on the socio-economic environment were identified as potential changes to traffic from additional truck traffic to and from the Site.

### **5.3.1 Background**

The Site is located approximately 2.8 km northeast of Cayuga and 25 km south of Hamilton and is surrounded by agricultural land. The existing road network is illustrated in **Figure 5.6** and described below.

The following two major roads provide access to the Site:

**Brooks Road:** Brooks Road is a two-lane road that extends from Highway 3 (Talbot Road) in the south and terminates at Indiana Road to the north. The speed limit on this road is 50 km/h. Brooks



Road is paved from Highway 3 to just north of the Site driveway access where it changes to a gravel road for the remaining length to Indiana Road.

**Highway 3:** Within the vicinity of Brooks Road, Highway 3 (Talbot Road) is a two-lane road with a posted speed limit of 80 km per hour (km/h). The intersection of Highway 3 and Brooks Road is stop controlled on Brooks Road with both eastbound and westbound right turn taper on Highway 3.

The Site is permitted to accept waste during the week and on Saturdays. The Site is approved to accept 1,000 tonnes of material per day. The maximum daily truck traffic at the landfill, assuming delivery of 1,000 tonnes of material per day, is 34 inbound and outbound trucks per day plus another one or two trips for staff.



**Figure 5.6 Existing Road Network around the Site**

### 5.3.2 Potential Effects on Traffic

This Section provides an assessment of the potential negative environmental effects (i.e., those for which a “Yes” answer was given in the Screening Criteria Checklist) for those socio-economic criteria which might be affected by the Project as identified in **Section 3**. The effects assessment describes how existing environmental conditions in the Study Area would change as a result of the construction and operation of the proposed undertaking.

As described in **Section 3**, a “Yes” was applied to the following socio-economic criteria:

- Cause negative effects related to traffic?

GHD completed an assessment of the Transportation Future Conditions within the Study Area as part of the Vertical Capacity Expansion EA (**Appendix E.2**). The traffic analysis utilized the existing conditions as a baseline and incorporated future projected network volumes as well as additional Site truck volumes generated by the proposed increase in the maximum daily quantity to 1,000 tonnes per day. Forecasted 2021 and 2026 turning movement counts were projected at both the intersection of Highway 3 and Brooks Road and at the existing Site driveway during the weekday a.m., mid-day and p.m. peak periods and Saturday mid-day peak periods. This included an estimated 16 additional trucks per day as a result of the proposed vertical expansion. To provide a conservative and worst-case scenario analysis, all 16 of the daily new truck trips were applied to each of the peak hours (assuming all 16 new daily truck trips would enter/exit the Site within each peak hour).

The analysis of future traffic conditions concluded that the study intersections overall would operate with minimal delay and substantial excess capacity under the 2021 and 2026 traffic conditions. Individual movements at both study intersections were expected to operate with levels of service ‘B’ or better representing minimal delay with v/c ratios not exceeding 0.08 representing substantial excess capacity, during the weekday a.m., mid-day, p.m. and Saturday mid-day peak hours.

Since the proposed Project would allow for receipt of the same maximum daily quantity (1,000 tonnes per day), assessed as part of the Vertical Capacity Expansion EA, increasing the annual fill rate from 151,000 tonnes per year to 250,000 tonnes per year does not increase the expected traffic volumes at the study intersections during peak periods. Concerning the truck transportation effects along adjacent roads, with no increase in the daily or the hourly peak hour volumes, the Site will continue to be acceptable from a traffic operations and safety perspective. There is an expected minimal impact on traffic safety, an expected negligible impact on traffic operations, and no potential road improvements required or recommended with the change.

The proposed fill rate adjustment will not increase the expected traffic volumes at the study intersections. Further, there is no increase in the daily or the hourly peak hour volumes. There is an expected minimal impact on traffic safety, an expected negligible impact on traffic operations, and no potential road improvements required or recommended with the change.

Truck traffic associated with the proposed rate adjustment is not expected to adversely affect residents, businesses, institutions, and movement of farm vehicles in the local Study Area.

### **5.3.3 Mitigation Measures**

No mitigation measures are recommended in order to avoid or minimize impacts on Transportation.

### **5.3.4 Net Effects**

There are no anticipated net effects related to traffic.

### **5.3.5 Monitoring**

No new monitoring requirements are needed at this time.

Further details are provided in **Appendix E.1** (Traffic Impact Memo for this ESR) and **Appendix E.2** (the previously prepared Transportation Assessment Report for the Vertical Capacity Expansion EA).

## **5.4 Leachate Generation and Management**

As part of the consultation process, BRE carried out a follow-up meeting with the MECP to discuss comments provided on the initial Environmental Screening checklist results. As part of the discussions between BRE and MECP, BRE agreed to include the potential effects related to leachate generation. Specifically, MECP requested the effects of increasing the fill rate be evaluated within the context of the Leachate Management Plan (LMP) that was developed and incorporated into the ECA issued in March 2020. GHD has prepared a Leachate Assessment Report on behalf of BRE for the proposed undertaking, which is summarized in **Appendix F**.

### **5.4.1 Background**

The Site is 14.3 hectares (ha) with an approved landfill footprint of 6 ha. The landfill footprint forms a trapezoidal shape with a north side length of 365 m, a south side length of 367 m, and east and west side lengths of 176 m. The landfill footprint and final contours are shown on **Figure 5.7**. The final contours have a maximum slope of 4:1 (25%) side slopes to the crest elevation of 221 mASL, and a top (peak) slope of 20H to 1V (5%), with a peak elevation of 221.5 mASL. The Site has an approved landfill capacity of 1,045,065 m<sup>3</sup>, including waste and daily cover. Waste is placed and compacted to an assumed typical compacted refuse density of between 0.8 tonnes/m<sup>3</sup> and 1.8 tonnes/m<sup>3</sup>.



The Site currently has an approved fill rate of 1,000 tonnes per day to a maximum of 151,000 tonnes per calendar year. Landfilling is conducted in stages, with progressive placement of cover material, as follows:

- **Daily Cover:** Daily cover is placed on the working face of the landfill at the end of each working day to cover exposed refuse at a thickness of 150 mm. Daily cover consists of either soil, compost, or woodchips.
- **Interim Cover:** Certain areas of the landfill may be completed with interim cover to allow additional settlement and consolidation of the waste prior to final refuse placement to final contours. Interim cover is generally applied to areas that will remain inactive for longer than six months. Interim cover consists of a 0.3 m layer of soil placed over the waste and graded to promote surface runoff. Any surface water runoff from areas completed with interim cover, which does not come into contact with waste, is considered to be clean and is directed to the on-Site surface watercourse(s). Surface water that does contact waste is treated as leachate. Prior to resumption of landfilling, interim cover will be removed to promote hydraulic connections between waste lifts.
- **Final Cover:** The landfill final cover will consist of a 0.6 m thick cover soil layer, overlaid by a 0.15 m thick vegetated topsoil layer. The final cover will be constructed progressively, as the various stages reach final waste contours. Progressive final cover placement will reduce leachate generation by promoting surface runoff thereby reducing infiltration into the landfill.

The landfill has been constructed with a landfill base, which consists of a single composite liner consisting of a 1.5 mm thick high density polyethylene (HDPE) liner overlying a 750 mm thick engineered clayey liner. The landfill base has 2:1 side slopes and a bottom that is contoured and sloped to facilitate the leachate collection system overlying the composite liner. The base is divided into two halves, each with a central swale (i.e., lateral swale) that are joined to a common header swale at the toe of the east slope.

The leachate collection system consists of a stone layer placed over the base of the landfill at a minimum thickness of 0.3 m on the side slopes and a minimum thickness of 0.5 m elsewhere. Non-woven geotextile was installed between the stone layer and the underlying geomembrane layer. Woven geotextile was installed on top of the stone layer to provide separation from the overlying waste. Perforated leachate collection pipes are located within each of the two base lateral swales and the header swale. A main leachate pump riser pipe is connected to the leachate collection system pipe network in the southeast corner of the landfill. The leachate pump discharges through a buried HDPE forcemain that feeds the on-Site Leachate Treatment Facility (LTF).

The on-Site LTS treats collected leachate prior to discharge to the Brooks Road roadside ditch. The LTS uses an activated sludge process to remove BOD and ammonia while also filtering out suspended solids. The activated sludge process consists of a membrane bioreactor system that includes the following components:

- A primary settling tank with baffle walls to settle coarse solids
- Aeration tanks for BOD removal and nitrification
- Membrane filtration for removal of solids

- Chemical injection for pH adjustment as necessary, to enhance coagulation of solids, and for membrane cleaning
- UV disinfection
- Sludge storage for transport back to the landfill
- Effluent pumps and storage tanks

The LTS was designed with a maximum treatment capacity of 200 cubic metres per day (m<sup>3</sup>/day). The current Industrial Sewage Works ECA No. 1122-BKUPSM permits the discharge of an average 45 m<sup>3</sup>/day of treated leachate. Treated effluent in excess of the rated capacity for discharge to the roadside ditch is stored prior to hauling off Site to a facility licensed to receive the treated effluent or such other removal of effluent from the Site completed in compliance with law, including Ontario Regulation 347.

Leachate generation forecasting was completed as part of the Design and Operations Report - Vertical Expansion using the Hydrologic Evaluation of Landfill Performance (HELP) model. The HELP model scenarios presented in the Design & Operations (D&O) Report were used to develop infiltration rates (and therefore leachate generation rates) for three surface types; active waste areas, interim cover, and final cover. The resulting rates are then applied to the respective areas of the landfill based on current and future Site development. As noted in the D&O Report, the estimated leachate generation rate ranges from a peak of 49 m<sup>3</sup>/day during the final stage of filling to 33 m<sup>3</sup>/day during the post-closure period.

Furthermore, the Waste ECA requires the Site to comply with the Leachate Removal Plan (LRP), which documents the plan to reduce the depth of leachate stored in the landfill to an average of 0.3 metres, as measured in the leachate collection system. The LRP includes compliance leachate elevations based on the anniversary of the issuance of the Waste ECA or based on the landfilled volume. The intention behind these two methods of determining the compliance leachate elevation is to ensure that the leachate volume is reduced within 5 years or prior to the Site reaching the approved capacity, whichever is first.

#### **5.4.2 Potential Effects on Leachate Generation and Management**

This Section provides an assessment of the potential negative environmental effects (i.e., those for which a “Yes” answer was given in the Screening Criteria Checklist) for those leachate related criteria which might be affected by the Project as identified in **Section 3**. The effects assessment describes how existing environmental conditions in the Study Area would change as a result of the construction and operation of the proposed undertaking.

As described in **Section 3**, a “Yes” was not applied to any leachate related criteria, however this criterion was included based on consultation with the MECP. It should be noted that the proposed fill rate amendment will not change any existing approved conditions of the operation of the Leachate Management System.

The Study Area for the leachate assessment (**Figure 5.8**) focuses on the landfill footprint, as the landfill is constructed with an engineered liner intended to contain leachate for collection and treatment. The majority of the collected leachate is pumped to the on-Site LTF for treatment and discharged to the Brooks Road roadside ditch. For periods where leachate generation exceeds the

approved discharge rate of the LTF, excess leachate is trucked from Site for treatment and disposal at a licensed treatment facility. As such, the leachate assessment focuses on evaluation of the proposed fill rate amendment with regards to leachate generation rates and operation of the Leachate Management System.



The proposed fill rate increase will not change the currently approved total landfill volume, size of landfill footprint, final Site contours, Site operations, or cover and base designs. As such, there are no anticipated changes to the conditions or operation of the Leachate Management System.

Further, the assessment on how increasing the annual fill rate to 250,000 tonnes per may affect the leachate generation at the Site was based on a review of the existing approved conditions and comparison against proposed conditions. The proposed fill rate increase will not result in a change in the landfill base or cover designs, and there are no changes to the landfill footprint or operations. As such, the previous estimates of infiltration rates (i.e., HELP model results) and leachate generation rates remain unchanged from those identified in the approved D&O Report. Additionally, leachate quality is anticipated to remain consistent and therefore evaluation of the anticipated LTS performance is not required.

The increased fill rate is anticipated to result in an earlier closure of the landfill, which in turn will see the landfill progressing to the lower leachate generation rates (i.e., final cover conditions) earlier than currently projected. This in turn will result in peak leachate generation rates reducing below the LTS discharge limits earlier than currently projected, reducing the requirement to haul excess treated leachate off Site for disposal.

The required leachate removal rates for compliance with the LRP were assessed assuming filling at the maximum proposed fill rate and varying density. The leachate volumes in the landfill were modeled using a model calibrated based on the leachate removal activities implemented since the development of the LRP. Site operations have demonstrated capable of removing treated effluent from the LTS at an average of 10 trucks per day. The assessment noted a peak required trucking rate of 8 trucks per day, indicating that the Site will be capable of meeting the leachate removal requirements of the LRP under the proposed fill rate amendment.

### **5.4.3 Mitigation Measures**

No mitigation measures have been identified with regards to the Leachate Management System.

### **5.4.4 Net Effects**

There are no anticipated net effects associated with the Leachate Management System (i.e., no mitigation measures or additional approvals).

### **5.4.5 Monitoring**

No new monitoring requirements are needed for on-going leachate generation and management compliance.

Further details are provided in **Appendix F** (Leachate Assessment Report for this ESR).

## **5.5 Operations**

As part of the consultation process, BRE carried out a follow-up meeting with the MECP to discuss comments provided on the initial Environmental Screening checklist results. As part of the discussions between BRE and MECP, BRE agreed to include an assessment on the effects of the proposed fill rate amendment on Site operations. GHD has prepared an Operations Plan on behalf

of BRE for the proposed undertaking, which is summarized in **Appendix G**. The Operations Plan has been prepared in draft, with the final Operations Plan to be developed with the ECA amendment application.

### **5.5.1 Background**

A Design and Operations Report was prepared for the Site and forms part of the ECA. The Design and Operations Report provides an overview of the required training, personnel, and operating procedures for the Site at the current fill rate. The Design and Operations Report will require revision when applying for an ECA amendment for the proposed fill rate and the Operations Plan will be finalized along with the revised Design and Operations Report.

### **5.5.2 Potential Effects on Operations**

The current fill rate allows for receipt of up to 1,000 tonnes per day. However, with the annual maximum of 151,000 tonnes, there will be days that 1,000 tonnes are not received. This provides for an increased frequency of down time to manage ancillary Site operations not directly related to waste receipt.

By receiving 1,000 tonnes per day five days a week every week, the frequency of down time for ancillary Site operations is reduced and it may result in the need for dedicated personnel to complete required inspections, monitoring, and maintenance.

The Operations Plan provided in **Appendix G** provides an overview of all operating requirements for the Site based on existing approvals and the assumptions that the fill rate is amended. The Operations Plan identifies the required personnel, training requirements, time on Site, and responsibilities.

### **5.5.3 Mitigation Measures**

Mitigation measures involve conducting operations in accordance with the Operations Plan to ensure all required inspections, monitoring, and maintenance are completed.

### **5.5.4 Net Effects**

The Site operations are anticipated to be impacted by the fill rate amendment due to the increased frequency of receipt of the maximum allowable waste tonnage. This results in less available time for waste receipt personnel to conduct ancillary Site operations. An Operations Plan was developed to outline the required personnel and responsibilities to mitigate this effect.

### **5.5.5 Monitoring**

Monitoring of the effectiveness of the mitigation measures is completed by monitoring of Site compliance. If the Site is able to operate in compliance with approvals at the proposed fill rate, then the Operations Plan is considered to be effective. Therefore, no additional monitoring is required related to operations.

Further details are provided in **Appendix G** (Operations Plan).

## 6. Consultation and Engagement

BRE strived to openly communicate the facts of the Project to various stakeholder groups who might be affected by the Project. The stakeholder groups who have been consulted include: Government Agencies, Indigenous Communities, and the public (**Table 6-1**).

The consultation activities described in the following sections, and the consultation documentation provided in **Appendix H** were developed in accordance with the consultation expectations set out in the *Ontario Environmental Assessment Act*, MECP's Code of Practice for Preparing and Reviewing Environmental Assessments in Ontario (January 2014), and in MECP's Guide to Environmental Assessment Requirements for Waste Management Projects (March 2007).

**Table 6-1 List of Agencies and Indigenous Communities Contacted**

Provincial Agencies
<ul style="list-style-type: none"> <li>• Ministry of the Environment, Conservation and Parks</li> <li>• Ministry of Natural Resources and Forestry</li> <li>• Ministry of Heritage, Sport, Tourism and Culture Industries</li> <li>• Ministry of Agriculture, Food and Rural Affairs</li> <li>• Ministry of Municipal Affairs</li> <li>• Ministry of Transportation</li> <li>• Ministry of Education</li> <li>• Ontario Provincial Police</li> <li>• Grand River Conservation Authority</li> <li>• Niagara Peninsula Conservation Authority</li> </ul>
Municipal Agencies
<ul style="list-style-type: none"> <li>• Haldimand County</li> </ul>
Indigenous communities
<ul style="list-style-type: none"> <li>• Six Nations of the Grand River First Nation</li> <li>• Mississaugas of the New Credit First Nation</li> <li>• Metis Nation of Ontario</li> </ul>

### 6.1 Consultation Activities

#### 6.1.1 Notice of Commencement and Online Open House #1

Letters and emails announcing the Project's commencement and Online Open House #1 were sent to the Government Agencies, Indigenous Communities, and stakeholder groups listed in **Section 6.0** during the week of November 1, 2020.

Copies of these letters and the email notice are found in **Appendix H**.

#### 6.1.2 Online Open House #1

The highlights of Online Open House #1 are provided below. For more details regarding the Open House please see the documentation related to Online Open House #1 in **Appendix H**.

### **Objective of Online Open House #1**

The purpose of Open House #1 was to present an overview of the proposed Project, including a description of the purpose/ rationale for undertaking the amendment as well as presenting the Screening results of the potential environmental effects. In addition, the overall legislative requirements (i.e., screening process/ steps) were presented to demonstrate the steps involved as well as to signal to stakeholder's the key milestones and opportunities for their input. Feedback from community members, Indigenous communities, and government agencies on the proposed Project will be considered by the Project Team during subsequent steps of the Environmental Screening process.

### **Date, Time & Location of Online Open House #1**

At the time of the consultation event, the Ontario government had an emergency order in place prohibiting public gatherings in order to limit the spread of COVID-19. As such, in-persons gatherings were not possible and therefore the more traditional drop-in style Public Information Centre events were not feasible. BRE made efforts to notify community members in a variety of ways and provided a number of consultation opportunities to participate (online) in order to reach a broad range of interested community members during the limitations presented by COVID-19. The consultation period for the Environmental Screening process was from November 12 to November 26, 2020.

### **Notice of Online Open House #1**

**Table 6.2** summarizes the methods for notifying community members of Online Open House #1.

**Table 6-2 Methods of Notifying and Communicating**

Method	Method Details
Email	Project subscribers received email notifications in advance of the start of the Public Consultation period on November 5, 2020 and a subsequent reminder email on November 19, 2020 when the Online Open House was “live”.
Print Newspaper Ads	A traditional Print Advertisement was placed in the Sachem Gazette, the Glanbrook Gazette, and the Haldimand Press on November 5, 2020.
Mail Notification	Mailed notification to Project Distribution list (developed during the Vertical Capacity Expansion EA) including 150 households in the project study area the week of November 1, 2020.
Project Website	Notifications were posted on the BRE Project website ( <a href="http://www.brenvironmental.com">www.brenvironmental.com</a> ) in the Home section and the Documents section on November 5, 2020.

Method	Method Details
Media Article	A newspaper article was included in the November 26, 2020 circulation of the Haldimand Press. The title of the article was: Brooks Road Landfill Seeking Fill Rate Increase to 250,000 Tonnes Per Year: Request Follows Vertical Expansion Granted in 2019

To view a copy of the notices, see **Appendix H**.

### *Information Presented*

Online Open House #1 followed a format similar to an in-person drop-in style Public Information Centre where community members are able to review the information at their own pace and provide comments at the end. With this in mind, the Online Open House #1 included the following features:

- **Main Page:** A clear and simple homepage welcoming participants, which outlined the purpose of the consultation and provided instructions on how to navigate the self-directed website and information about Brooks Road.
- **Environmental Screening Process:** Details of the Environmental Screening process and the Steps BRE needs to take to complete the Screening and the ECA amendment.
- **Screening Criteria Checklist:** Details the Screening Criteria Checklist and the potential adverse environmental impacts that will be outlined in the Environmental Screening Report.
- **Thank You & Next Steps:** Outlines how the Project Team will use the feedback from the Online Public Consultation and the subsequent steps in the Screening process. This page also had an embedded comment form for community members to provide their feedback on the information presented.

### *Online Open House #1 Analytics*

The following section summarizes the analytic details for the self-directed Online Open House #1:

- A total of 59 unique visitors
- A total of 158 page views
- All visitors accessed Online Open House #1 directly by visiting [www.breenvironmental.com](http://www.breenvironmental.com)
- Visitors accessed Online Open House #1 using their desktop (91%), mobile (7%), and table (2%) devices
- A total of 7 comments were received, four comments through the Online Open House and 3 comments by email

All 59 visitors to Online Open House #1 were from Ontario. The top locations interested in the Project were located as followed:

- Toronto: 35 people
- Scarborough 18 people
- Caledonia: 2 people
- Brantford: 2 people
- Hamilton: 1 person
- Hagersville: 1 person

### *Summary of Comments Received*

All comments received throughout the consultation period (November 12 to 26, 2020) were considered as part of this Environmental Screening consultation process.

The embedded comment form on the BRE Online Open House #1 website (<https://brooksroad.esr.squarespace.com/>) included the following questions:

- Do you have any comments or questions about the Environmental Screening Process?
- Do you have any comments or questions on the Screening Criteria Checklist?
- Do you have any comments about the identified potential effects of the project?
- Do you have any additional comments or questions?

**Table 6-3** summarizes the comments received from the public through all consultation activities from Online Open House #1. **Table 6-4** summarizes the comments received from agencies during Online Open House #1. It is not intended to be a verbatim summary of all feedback received. The summary has categorized participant feedback into the main subject areas covered in the study and discussed throughout the consultation process. No comments were received from Indigenous communities during Online Open House #1.



**Table 6-3 Summary of Comments Received from the Public During Online Open House #1**

Summary of Public Comments Received	Response to Comments Received
<b>Aerodrome Comments</b>	
<p>There is an aerodrome operated by Skydive Cayuga (located at Highway 3 and Windecker Road) and an airport (located on Stoney Creek Road) in operation within proximity to the study area that were not included on the Online PIC.</p>	<p>Thank you for your comment. The Project Team will revisit the Screening Checklist based on these comments and include the two facilities as part of the consideration of potential effects in the next steps of the Screening process, including subsequent studies.</p>
<b>Traffic Impacts Comments</b>	
<p>Concerned with the increased GHG emissions from the additional truck traffic and on-site equipment.</p>	<p>As identified in the Screening Checklist, the Fill Rate Amendment will add additional trucks on an annual basis, which has the potential to cause effects on traffic and increase GHG emissions. With this in mind, GHD will conduct additional studies to determine the potential effects and apply mitigation measures to determine the overall net effect from a traffic and GHG perspective as part of the next steps of the Screening Process. The findings of this study will be included in the final Environmental Screening Report and presented at the second Online Public Consultation.</p>
<p>Concerned about the additional number of heavy trucks on County roads and the impact this will have on road infrastructure and traffic.</p>	<p>The Environmental Screening process will address the additional days of increased vehicle movements to and from the Site while operating at 1,000 tonnes per day. This assessment will review more than the annual total vehicles to and from the Site. A local road network capacity analysis under peak operations would review the number of days of increased traffic to the Site and whether or not this would constrain capacity on the local area road network (i.e. Highway 3 and Brooks Road. This analysis was completed in the 2018 Vertical Expansion Environmental Assessment (EA), which determined that any additional traffic as a result of accepting 1,000 tonnes per day would be negligible. This work is ongoing and will be presented at the second virtual public open house in the 1st quarter of 2021.</p>
<p>How many days per week will the landfill accept waste?</p>	<p>The amendment currently being sought is to allow for the Site to receive up to a maximum 250,000 tonnes of waste per year. This quantity is based on receiving 1,000 tonnes per day of operation, 5 days per week for 50 weeks (the Site is closed on holidays).</p>
<b>Odour &amp; Leachate Impacts Comments</b>	
<p>Concerned that the additional waste will result in increased volumes of leachate and that the additional leachate result in adverse odour impacts to the surrounding community.</p>	<p>As identified in the Screening Checklist, the Fill Rate Amendment has the potential to cause effects from an odour perspective. With this in mind, GHD will conduct additional studies to determine the potential effects and apply mitigation measures to determine the overall net effect from an odour perspective as part of the next steps of the</p>



	Summary of Public Comments Received	Response to Comments Received
		<p>Screening Process. The findings of this study will be included in the final Environmental Screening Report and presented at the second Online Public Consultation.</p> <p>It should be noted that odour can come from many sources. Odour control systems and daily monitoring measures have been put in place to allow for the Site to address potential issues off-site. A key part of reducing odour issues on Site is to reduce the leachate levels as well as overall leachate generated on-site. In recent months, the Site operators have worked tirelessly to ensure leachate levels are reduced and specific odour control measures put in place. These measures are still in place and will continue, and have had a demonstrable positive impact as the Site has received little to no odour complaints from June to October.</p>
	<p>Will the project cause negative effects on public health and safety due to the odour and leachate from the landfill?</p>	<p>Odour control systems and daily monitoring measures have been put in place to allow for the Site to address potential issues off-site. A key part of reducing odour issues on Site is to reduce the leachate levels as well as overall leachate generated on-site. In recent months, the Site operators have worked tirelessly to ensure leachate levels are reduced and specific odour control measures put in place. These measures are still in place and will continue, and have had a demonstrable positive impact as the Site has received little to no odour complaints from June to October.</p>
	<p>Will BRE be able to manage the leachate volumes in years with heavy rainfall?</p>	<p>Yes. In recent months, the Site operators have worked tirelessly to ensure leachate levels are reduced. Month over month, the Site has been able to reduce leachate levels taking into consideration additional rainfall events at the Site.</p>
<p><b>ECA Compliance Comments</b></p>		
	<p>Concerned that BRE has not, and will continue to not, comply with ECA requirements to cover the landfill daily.</p>	<p>BRE operate the facility in compliance with the ECA and are able to rapidly address any issues brought to our attention from the Ministry or members of the public. Cover is applied as per the conditions of the ECA. On extremely windy days at the Site, BRE regularly employs staff to collect any windblown litter around the Site. This includes increasing working hours and the number of staff.</p>
	<p>Concern that BRE will apply for another ECA amendment if this project is approved including a larger footprint and additional vertical capacity.</p>	<p>The purpose of this Environmental Screening is to increase the annual waste fill rate currently approved at the Site. The proposed change to the annual fill rate requires no additional landfill infrastructure and there is no change to the currently approved landfill volume, footprint, or final contours. There are no further approvals being sought or currently being contemplated by BRE.</p>



Summary of Public Comments Received	Response to Comments Received
<b>General Comments</b>	
Can public concerns be sent directly to MECP?	As the Environmental Screening Process for Waste management projects is a proponent-driven process, and there is a requirement for the proponent to consult with interested persons, including the public, Indigenous communities, and government agencies, we recommend that any concerns about the Project be first sent directly to BRE or to their consultant, GHD. The Consultation Summary Report is shared with MECP for their review and all comments/ concerns will be taken into account when making the final decision on the Project.

**Table 6-4 Summary of Comments Received from Agencies During Online Open House #1**

Summary of Agency Comments Received	Response to Comments Received
<b>Heritage, Sport, Tourism and Culture Industries</b>	
Based on the review of the Screening information, MHSTCI has no comment on the Environmental Screening. Should the project undergo any changes from its current proposal, particularly in expanding the footprint, please contact the undersigned as we may have comments on the modifications.	Thank you for your comments. The proposed change to the annual fill rate requires no additional landfill infrastructure and there is no change to the currently approved landfill volume, footprint, or final contours. There are no further approvals being sought or currently being contemplated by BRE.
<b>Environment, Conservation and Parks</b>	
It is expected that as part of this screening, notification and consultation will continue to be undertaken with the Six Nations of the Grand River, the Mississaugas of the Credit First Nation and the Metis Nation of Ontario, specifically Region 9 chapters.	Consultation with Indigenous communities will take place throughout the Environmental Screening Process. An initial Notice of Commencement email was sent to Indigenous communities on November 5, 2020, followed by a reminder email regarding the Online Open House on November 19, 2020. We have contacted the Indigenous communities that are referenced by the MECP.
As part of the assessment of air quality impacts you should:  1. Confirm that the landfill gas/methane generation analysis performed earlier is still valid or will be updated based on this new proposal (disposal rates).	Thank-you for the comments. An Air Quality Impact Assessment was completed in June 2016 as part of the <i>Brooks Road Landfill Site Vertical Capacity Expansion Environmental Assessment (2017)</i> . The analysis estimated the emission (i.e., landfill gas, methane, carbon dioxide, non-methane organic compounds) rates that the proposed vertical expansion would produce and found that the amount of landfill gas generated was anticipated to be insignificant from an overall Site profile.  With this in mind and as identified in the Screening Checklist, the Fill Rate Amendment has the potential to cause effects from an emission of greenhouse gas (e.g., carbon dioxide, carbon monoxide) and odour perspective. The Project Team will build off the 2017 findings



Summary of Agency Comments Received	Response to Comments Received
<ol style="list-style-type: none"><li>2. Confirm that the leachate treatment system can accommodate the proposed increased volume of waste.</li><li>3. Update the ESDM Report accordingly (considering landfill gas/methane generation and leachate treatment).</li><li>4. Revise the Odour Management Plan in consideration of any resulting changes in site operations and 1 and 2 above.</li></ol>	<p>and revisit the landfill gas/ methane generation analysis to determine if an increase to the annual fill rate has the potential to cause an effect. Further, the Odour Management Plan will be reviewed as a starting point when drafting applicable mitigation measures in the next stage of the Project.</p>
<p>We suggest that impacts relating to leachate generation should also be scoped into the screening. Specifically, the effects of increasing the fill rate will need to be evaluated within the context of the leachate management plan (LMP) that was recently reviewed and incorporated into the ECA issued in March, 2020. The LMP has both capacity and leachate elevation-based targets for the volume of leachate that is currently stored in the base of the landfill. Increasing the fill rate will shorten the timeframe for meeting these leachate targets, which will need to be addressed.</p>	<p>BRE will review the potential impacts from a leachate generation perspective and incorporate these findings into the Environmental Screening.</p>

### 6.1.3 Online Open House #2

The highlights of Online Open House #2 are provided below. For more details, please see the documentation of the Online Open House #2 in **Appendix H**.

#### *Objective of Online Open House #2*

The purpose of Online Open House #2 was to present the results of the completed technical studies on the potential environmental effects of the Project and outline the proposed mitigation measures. Feedback from community members, Indigenous communities, and government agencies on the proposed mitigation measures will be considered by the Project Team during subsequent steps of the Environmental Screening process.

#### *Date, Time & Location of Online Open House #2*

At the time of the consultation events, the Ontario government had an emergency order in place prohibiting public gatherings in order to limit the spread of COVID-19. As such, in-persons gatherings were not possible and therefore the more traditional drop-in style Public Information Centre events were not feasible. BRE made efforts to notify community members in a variety of ways and provided a number of consultation opportunities to participate (online) in order to reach a broad range of interested community members during the limitations presented by COVID-19. The consultation period for Online Open House #2 started on March 3, 2021 and ended on March 17, 2021.

#### *Notice of Online Open House #2*

**Table 6-5** summarizes the methods for notifying community members of Online Open House #2.

**Table 6-5 Methods of Notifying and Communicating**

Method	Method Details
Email	Project subscribers received email notifications for Online Open House #2 on March 3, 2021. A reminder email was sent on March 11, 2021.
Print Newspaper Ads	A traditional Print Advertisement was placed in the Sachem Gazette and The Haldimand Press on March 11, 2021.
Mail Notification	Mailed notification to Project Distribution list (developed during the Individual EA) including 150 households in the project study area the week of March 1, 2021.
Project Website	The Project website is <a href="http://www.brenvironmental.com">www.brenvironmental.com</a> . Notifications were posted on the BRE website ( <a href="http://www.brenvironmental.com">www.brenvironmental.com</a> ) in the Home section and the documents section on March 3, 2021.

To view a copy of the notices, see **Appendix H**.

### *Information Presented*

Online Open House #2 followed a format similar to an in-person drop-in style Public Information Centre where community members are able to review the information at their own pace and provide comments at the end. With this in mind, the Online Open House #2 included the following features:

- **Main Page:** A clear and simple homepage welcoming participants, which outlined the purpose of Online Open House #2 and provided instructions on how to navigate the self-directed website and information about Brooks Road.
- **Environmental Screening Process:** Details of the Environmental Screening process and the Steps BRE needs to take to complete the Screening and the ECA amendment.
- **Technical Studies and Impact Assessment:** Details of the completed technical studies and the proposed mitigation measures that will be outlined in the draft Environmental Screening Report.
- **Project Summary:** Provides a high-level summary of the Project, including the purpose, objective and outcomes of the Study.
- **Thank You & Next Steps:** Outlines how the Project Team will use the feedback from the Online Open Houses and the subsequent steps in the Screening process. This page also had an embedded comment form for community members to provide their feedback on the information presented.

### *Online Open House #2 Analytics*

The following section summarizes the analytic details for Online Open House #2:

- A total of 59 unique visitors.
- A total of 169 page views.
- Visitors accessed the Online Open House by directly link (78%), the BRE website (15%), a Google search (4%), or by unknown methods (3%).
- Visitors accessed the Online Open House #2 using their desktop (88%), mobile (10%), and table (2%) devices.
- A total of four comments were received. Two comments were received from the public through the embedded comment form via the Online Open House and two comments were received from email for government agencies.

All 59 visitors to the Online Open House were from Ontario. The top locations interested in the Project were located as followed:

- Toronto: 19 people
- Hamilton: 6 people
- Cayuga: 4 people
- Brantford: 3 people
- Orangeville: 2 people
- Dunnville: 1 person

### ***Summary of Comments Received***

All comments received throughout the consultation period (March 3 to March 17, 2021) were considered as part of this Environmental Screening consultation process.

The embedded comment form on the BRE Online Open House #2 website (<https://brooksroad.esr.squarespace.com/>) included the following questions:

- Do you have any comments or questions about the Environmental Screening Process?
- Do you have any comments or questions on the technical studies conducted?
- Do you have any comments or questions on the proposed mitigation measures?
- Do you have any additional comments or questions?

A summary of comments received during Online Open House #2 from the public (**Table 6-6**) and government agencies (**Table 6-7**) are provided below. These tables are not a verbatim of all feedback received. The summary has categorized participant feedback into the main subject areas covered in the study and discussed throughout the consultation process. Similar to Online Open House #1, no comments were received from Indigenous communities during Online Open House #2.



**Table 6-6 Summary of Comments Received During Online Open House # 2**

Summary of Public Comments Received	Response to Comments Received
<b>Traffic Impacts Comments</b>	
<p>Requested clarification regarding the change in truck traffic volumes along Highway 3 and Brooks Road as a result of the proposed annual fill rate increase.</p>	<p>The Site is approved to accept 1,000 tonnes of material per day (Monday to Saturday) up until the maximum approved annual fill rate is reached (151,000 tonnes per year). The proposed Project aims to amend the approved ECA to allow for receipt of this maximum daily quantity (1,000 tonnes per day) throughout the year, increasing the annual fill rate from 151,000 tonnes per year to 250,000 tonnes per year.</p> <p>The Traffic Impact Assessment completed during the Vertical Expansion EA used a worst-case scenario of 1,000 tonnes per day, which is consistent with the current application. The Traffic Impact Assessment found that the proposed Project does not increase the expected traffic volumes at the study intersections during peak periods on a daily basis. The maximum daily truck traffic at the landfill, assuming delivery of 1,000 tonnes of material per day, is 34 inbound and outbound trucks per day plus another one or two trips for staff.</p> <p>Section 5.3.2 of the final Environmental Screening Report has been revised to clearly describe the impacts to traffic as a result of the proposed Project, which for traffic is in keeping with the previous analysis completed during the Vertical Expansion EA.</p>
<p>Asked if the daily cover is stored on Site or if it needs to be trucked to the Site on a regular basis and how this impacts truck traffic volumes.</p>	<p>The daily cover material consists of soil, compost, and/ or woodchips. The cover is stored on-Site near the northern property boundary or within the landfill footprint. Some cover material comes from the existing native soils stockpiled on-Site and the remainder is trucked in as required. The truck trips required to transport cover to the Site is included in the total traffic volume (see Section 5.3 of the Environmental Screening Report).</p>
<b>Odour &amp; Leachate Impacts Comments</b>	
<p>Concerned that BRE does not have a landfill gas collection and control system in place.</p>	<p>Ontario Regulation 232/98 requires the mandatory collection of landfill gas for sites with a waste capacity greater than 1.5 million m<sup>3</sup>. The total approved waste capacity of the Site is under this threshold (approved capacity is 1,045,065 m<sup>3</sup>). The proposed Project will not result in a change to the total approved waste capacity of the Site, therefore, landfill gas collection is not required under Ontario Regulation 232/98.</p> <p>Further, given that the anticipated types of waste to be accepted will consist primarily of non-hazardous Industrial, Commercial &amp; Institutional (IC&amp;I) waste, there will be insufficient landfill gas produced to warrant collection.</p>



Summary of Public Comments Received	Response to Comments Received
	<p>As outlined in Section 5.1 of the Environmental Screening Report, the landfill accepts mostly construction/ demolition waste and inert material. These waste categories contain a very low amount of degradable organic content when compared with higher organic materials such as bulk waste and food waste. Therefore, the landfill is not expected to generate a large amount of methane emissions as a typical Municipal Solid Waste Landfill would. Based on the low level of methane generation at the Site and the negative environmental, energy and economic factors associated with a landfill gas collection and control system (see Appendix B-1 of the Environmental Screening Report for a discussion of the impacts associated with the operation of a gas collection and control system), it was concluded that the operation of such a system is not feasible.</p>
<p>Asked when the daily odour monitoring is conducted by the Site Operator.</p>	<p>The Site Operator conducts an odour monitoring inspection daily during operating hours. The monitoring activities include:</p> <ul style="list-style-type: none"><li>• Inspection of waste receiving areas, landfill working face, closed landfill areas, and leachate management infrastructure.</li><li>• Evaluate the waste receiving area and truck queue times to ensure that waste is landfilled in timely fashion.</li><li>• Evaluate the size of the working face.</li><li>• Check that a daily cover is applied to the working face at the end of each working day.</li><li>• Evaluate the interim and final cover in closed/decommissioned areas of the landfill for cracks, fissures and/or erosion and evaluate the coverage and health of vegetation.</li><li>• Inspect the leachate collection system, storage tanks for exposed areas, leaks and spills.</li><li>• Determine and document weather conditions including wind speed, direction, humidity, precipitation, and temperature.</li></ul> <p>If odours are evident on the Site boundary, the Site Operator will take mitigative actions. This may include increasing the amount of daily cover, application of odour control granules, operation of the odour control mister, and/or repairing cover in non-active areas of the landfill.</p>



Summary of Public Comments Received	Response to Comments Received
<p>Concerned that the additional waste will result in increased volumes of leachate and that BRE will not be able to manage the leachate volumes in years with heavy rainfall?</p>	<p>The Site has an effective Leachate Management System in place. The landfill has been constructed with a base that is designed to convey leachate into a collection system. The leachate is conveyed to the on-Site Leachate Treatment System (LTS). The LTS treats collected leachate prior to discharge to the Brooks Road roadside ditch. For periods where leachate generation exceeds the approved discharge rate of the LTS, excess leachate is trucked from Site for treatment and disposal at a licensed treatment facility. This practice is in compliance with law, including Ontario Regulation 347.</p> <p>Leachate generation is a function of precipitation and the various proportions of the landfill that are covered by daily, interim, and final cover. It is worth noting that the proposed fill rate increase will not change the currently approved total landfill volume, size of landfill footprint, final Site contours, Site operations, or cover and base designs. As such, there are no anticipated changes to the conditions or operation of the approved Leachate Management System and no anticipated increases in leachate generation.</p>
<p><b>General Comments</b></p>	
<p>Request for BRE to follow MECP regulations and the ECA.</p>	<p>BRE operates the Site in compliance with the ECA and are able to rapidly address any issues brought to our attention from the MECP or members of the public.</p>
<p>Recommendation for the shredder and drop operation locations to be relocated to the southwest corner of the Site in order to minimize the route from the Site entrance and maximize distance from the closest private dwelling.</p>	<p>As the landfill is progressively filled, the location of the active waste fill area will move. The location of landfill equipment and haul routes shown in the evaluations is intentionally selected to evaluate potential worst-case conditions to ensure impacts to private dwellings are minimized. They are not necessarily representative of long-term operations. It should be noted that the shredder is no longer in operation at the Site.</p>
<p>Concerned that BRE has not adequately informed community of Cayuga and Haldimand of the Environmental Screening process and consultation activities.</p>	<p>All consultation activities and documentation were developed in accordance with the consultation expectations set out in the Ontario Environmental Assessment Act, MECP's Code of Practice for Preparing and Reviewing Environmental Assessments in Ontario (January 2014), and in MECP's Guide to Environmental Assessment Requirements for Waste Management Projects (March 2007).</p> <p>A variety of communications methods (online and traditional print) were used to inform interested community members of the Environmental Screening at key stages in the process. All notices (i.e., Notice of Commencement and Online Open House #1, Online Open House #2, and Notice of Completion) are shared via email, print newspaper advertisements, direct mail notifications, and the BRE website. In addition, several email reminders of consultation activities and document publications (i.e., the Consultation Summary Report, and draft Environmental Screening Report) have been sent to the</p>



Summary of Public Comments Received	Response to Comments Received
	<p>project subscriber list, agencies, and Indigenous communities throughout the Screening process.</p> <p>Please note that for the Notice of Completion, we will utilize the following methods for notification:</p> <ul style="list-style-type: none"><li>• Advertising in the 2 local newspapers</li><li>• Direct Mail-outs</li><li>• Emails to our broader stakeholder list</li></ul>



**Table 6-7 Summary of Comments Received from Agencies During Online Open House #2**

Summary of Agency Comments Received	Response to Comments Received
<b>Ministry of Heritage, Sport, Tourism, and Culture Industries</b>	
Requested item 7 in Table 3.1 be renamed from “Heritage and Culture” to “Cultural Heritage Resources”, as this term refers to archaeological resources, built heritage resources and cultural heritage landscapes	Table 3.1 has been revised in the final Environmental Screening Report as requested.
Requested the subheading of Section 4.7 be renamed from “Heritage and Culture” to “Cultural Heritage Resources”, for the same reasons noted above.	The sub-heading of Section 4.7 has been revised in the final Environmental Screening Report as requested.
Requested the completed MHSTCI checklists be included in the final Environmental Screening Report, as they are considered supporting documentation regarding the statements that cultural heritage resources will not be impacted by the proposal.	The completed MHSRCI checklists (Criteria for Evaluating Archaeological Potential and the Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes) will be included in Appendix A of the final Environmental Screening Report as requested.
Request to update the name of the ministry in Table 6.1, as the old ministry name is listed.	Table 6.1 has been revised in the final Environmental Screening Report as requested.
<b>Ministry of the Environment, Conservation and Parks</b>	
<b>General Comments</b>	
No issues with how the company has addressed the impacts of the proposed change for increasing the number of days per year that 1000 tonnes/ day of waste can be received at the landfill.	No response required.
No changes to the design of the landfill would be required to accommodate the increase in waste received at the site on an annual basis.	No response required.
I’d also like to take this opportunity to introduce you to Joan Del Villar Cuicas. Joan is taking over as the REAC for the Ministry’s West Central Region effective March 31st. Accordingly, please amend your mailing lists	The Project Contact List has been updated.



**Summary of Agency Comments Received**

to remove me and add Joan for this and all future projects within this region.

**Leachate Impact Comments**

From an operational perspective, the company has not discussed nor demonstrated that they will be able to remain compliant with the conditions in the approval related to the management and removal of leachate that is stored in the landfill. The increase in the amount of waste received at the landfill on an annual basis will result in an accelerated schedule for leachate removal and this has not been addressed in the screening report.

Confirm that the leachate treatment system can accommodate the proposed increased volume of waste.

**Air Quality Impact Comments**

Confirm that the landfill gas/ methane generation analysis performed is still valid or needs to be updated based on this new proposal (disposal rates).

**Response to Comments Received**

Section 4.4 of the final Leachate Assessment Report and Section 5.4 of the final Environmental Screening Report have been updated to include information on the leachate management and the schedule for leachate removal at the Site.

A leachate assessment was carried out as part of the Screening process as per the Ministry's request. The assessment is documented in the Leachate Assessment Report dated March 2021 (Appendix F to the Environmental Screening Report). The Leachate Assessment Report includes an evaluation of the effects of increasing the fill rate be evaluated within the context of the Leachate Management Plan (LMP) that was developed and incorporated into the ECA issued in March 2020.

Our findings indicate that there are no anticipated changes to the conditions or operation of the Leachate Management System given the proposed fill rate adjustment will not change the currently approved total landfill volume, landfill footprint, final contours, operations, or cover and base designs. Therefore, there are no anticipated net effects associated with the Leachate Management System.

As mentioned above, the discussion included in Section 4.4 of the final Leachate Assessment Report has been updated and will also confirm the Leachate Treatment System is capable of accommodating the potential revisions to the schedule for leachate removal at the Site.

A landfill gas/ methane generation analysis was carried out as part of the Screening process. The assessment is documented in the Predicted Methane Generation Memo dated March 1, 2021 (Appendix B.1 to the Environmental Screening Report). The 2021 Memo is an update to the Predicted Methane Generation Memo dated November 16, 2016 to address the proposed increase in annual waste acceptance rates. The 2021



Summary of Agency Comments Received	Response to Comments Received
<p>Update the ESDM Report accordingly (considering landfill gas/ methane generation and leachate treatment).</p>	<p>Memo includes revised annual waste acceptance rates and updated methane gas generation rates.</p> <p>Page 3 of the 2021 Memo has been revised to reflect the methane generation volume predicted as a result of the proposed Project, as requested. Further, the Emission Summary and Dispersion Modelling Reports (ESDM Report) prepared for the Site is beening revised to include the landfill gas/ methane generation rates in the 2021 Memo.</p> <p>As requested, BRE is in the process of updating the Emission Summary and Dispersion Modelling Report (ESDM Report) to incorporate the potential increases in landfill gas/ methane generation at the Site as a result of the proposed Project. The updated ESDM Report will be submitted to MECP for review as part of the ECA process.</p>
<p>Revise the Odour Management Plan in consideration of any resulting changes in Site operations, landfill gas/ methane generation, and the Leachate Treatment System.</p>	<p>BRE has prepared an Odour Management Plan that describes the potential sources of odour and mitigation and contingency measures that may be implemented. The Odour Management Plan was developed based on the current approved fill rate of 1,000 tonnes per day. The changes to the Site are not expected to change the odour profile of the Site or the management of odour. The Site will continue to strive for zero odour complaints from the Site operations. The Odour Management Plan will be updated and submitted as part of the ECA process.</p>

#### **6.1.4 Notice of Completion**

As part of the process of making the Environmental Screening Report available for review, BRE issued a formal 'Notice of Completion' (**Appendix H**) to review agencies, Indigenous communities and the public. Specifically, this involved the following activities:

- Distributing by direct mailing to residents in the vicinity of the Project area based on the delivery service area defined by Canada Post, directly impacted property owners, and interested persons (subscribers).
- Distributing by email and/or direct mailing to the review agencies, Indigenous communities, and interested persons (subscribers).
- Publishing in the Haldimand Press, Sachem Gazette, and Glanbrook Gazette.
- Posted on the BRE's website ([www.brenvironmental.com](http://www.brenvironmental.com)) in the Documents Library section.

#### **60 Day Review Period**

BRE established the 60 calendar day review period starting on **April 15, 2021** and ending on **June 15, 2021**, whereby any interested person can inspect the Environmental Screening Report and provide comments. The comments, including any issues or concerns, should be sent first to GHD, on behalf of the BRE, for potential resolution.

#### **6.2 Indigenous Community Consultation**

A total of three Indigenous communities were contacted (**Table 6-1**).

The Notice of Commencement and Online Open House, along with the Project Description and the Screening Criteria Checklist were sent to the following three Indigenous communities by email on November 5, 2020:

- Six Nations of the Grand River First Nation
- Mississaugas of the New Credit First Nation
- Metis Nation of Ontario

No responses were received from Indigenous Communities in response to the Notice, Project description or the Screening Criteria Checklist. Follow-up emails were made on November 19, 2020 to each community to remind them of the Online Open House #1 and to determine their level on interest in the Project.

No Indigenous communities provided comments during Online Open House #1.

The Notice of Open House #2 was sent to the three Indigenous communities by email on March 3, 2021. Follow-up emails were made on March 11, 2021 to each community to remind them of the Online Open House #2.

No Indigenous communities provided comments during Online Open House #2.

Copies of all correspondence with Indigenous communities are included in **Appendix H**.

### 6.3 Review of the Draft Environmental Screening Report

Prior to filing the Environmental Screening Report and making it available for review for the 60 calendar day mandatory review period, a draft Environmental Screening Report was provided to the public, Indigenous communities and agencies with the opportunity to provide comments. The comments on the Draft ESR were summarized and included in the final ESR.

## 7. Overall Advantages and Disadvantages of the Project

In accordance with the *Environmental Assessment Act* and the Guide, the advantages and disadvantages to the environment of the proposed undertaking are required under O. Reg. 101/07. Advantages are positive net environmental effects, and disadvantages are negative net environmental effects. The advantages and disadvantages are based on the net effects described in **Section 5.1.4, 5.2.4, 5.3.4 and 5.4.4** and the problem/opportunity and purpose of the undertaking described in **Section 1.2**. The purpose of this exercise is to provide an overall conclusion as to whether the net negative environmental effects of the Project are acceptable, based on a balanced assessment against the positive benefits, the screening criteria, and the results and conclusions of the screening process.

In general, the advantages of the Project is that it will provide BRE with an opportunity to respond to the growing demands from existing customers (waste generators) who need a safe and reliable waste management facility for their residual material. This includes the ability to accommodate BRE's customers facing seasonal volume increases at certain times of the year (i.e. increased construction generated wastes) which the Site might not be able to be accommodate with the current annual fill rate. The assessment completed demonstrate that there are no new net negative environmental effects to increasing the operations to accommodate and handle the increased waste volumes to 250,000 tonnes per year. A disadvantage is that this amendment has the potential to reach the approved site capacity sooner and therefore decrease the previously anticipated lifespan of the site.

Based on the net effects evaluation and the advantages outlined above, the advantages of this Project outweigh any potential disadvantages as there are no new net negative effects on the environment.

## 8. Next Steps

Publishing of the Notice of Completion, included in **Appendix H**, marks the beginning of the 60 calendar day review period, during which time agencies, Indigenous communities, the public and other interested parties can review the draft Environmental Screening Report and provide comments.

If there are outstanding concerns that the Project may adversely impact constitutionally protected Aboriginal and treaty rights, which cannot be resolved in discussion with BRE, then a person or party may request that the Minister make an order for the Project to comply with Part II of the

*Environmental Assessment Act*. This is referred to as a Part II Order, which addresses Individual Environmental Assessments.

If no Part II Order requests are received within the 60-day review period, or if a Part II Order request is resolved or withdrawn, a Statement of Completion form (per Schedule II of the Guide to Environmental Assessment Requirements for Waste Management Project) will be submitted to the MECP. Upon acknowledgment of the Statement of Completion by the MECP, an application to amend ECA No. A110302 will be prepared and submitted to the MECP by BRE.

## **9. Summary and Conclusion**

Brooks Road Environmental, owners and operators of the Brooks Road Landfill, initiated an Environmental Screening process in accordance with the Waste Management Projects Regulation (O. Reg. 101/07) of the Ontario *Environmental Assessment Act* (EA Act) in order to amend the existing Environmental Compliance Approval (ECA) for the landfill. The landfill is currently approved to receive up to 1,000 tonnes per day and 151,000 tonnes per year of post-diversion solid non-hazardous Industrial, Commercial & Institutional (IC&I) waste. Brooks Road Environmental is seeking to amend the approved ECA to allow for receipt of this maximum daily quantity throughout the year, allowing for an annual fill rate of 250,000 tonnes per year. There is no change to the currently approved landfill volume, footprint, or final contours.

A change in the annual fill rate limit requires a modification to Condition 3(7) of the approved ECA, which specifies the maximum amount of waste that may be received at the landfill. This ECA amendment is subject to the Environmental Screening Process in accordance with Section 15 of the Waste Management Projects Regulation, (O. Reg. 101/07) of the *EA Act*. This change to the annual fill rate will allow for Brooks Road Environmental to capture additional wastes generated by their customers and to fill the Site faster and reach their ultimate approved capacity sooner.

Through the Environmental Screening Process, the potential for the Project to result in adverse environmental effects was assessed. As there will be no changes to the currently approved total landfill volume, size of landfill footprint, final Site contours, or types of waste received, it was concluded through the assessment of the Project's potential environmental effects, that minor environmental impacts are expected. However, through the application of mitigation measures, the Project is not anticipated to result in any new net effects on the environment. As a result, the advantages of the Project outweigh the disadvantages.