Brooks Road Environmental

Proposed Terms of Reference
Brooks Road Landfill Site
Vertical Capacity Expansion
Environmental Assessment

Brooks Road Landfill Site
160 Brooks Road
Haldimand County, Ontario

APRIL 2014
REF. NO. 018235 (38)

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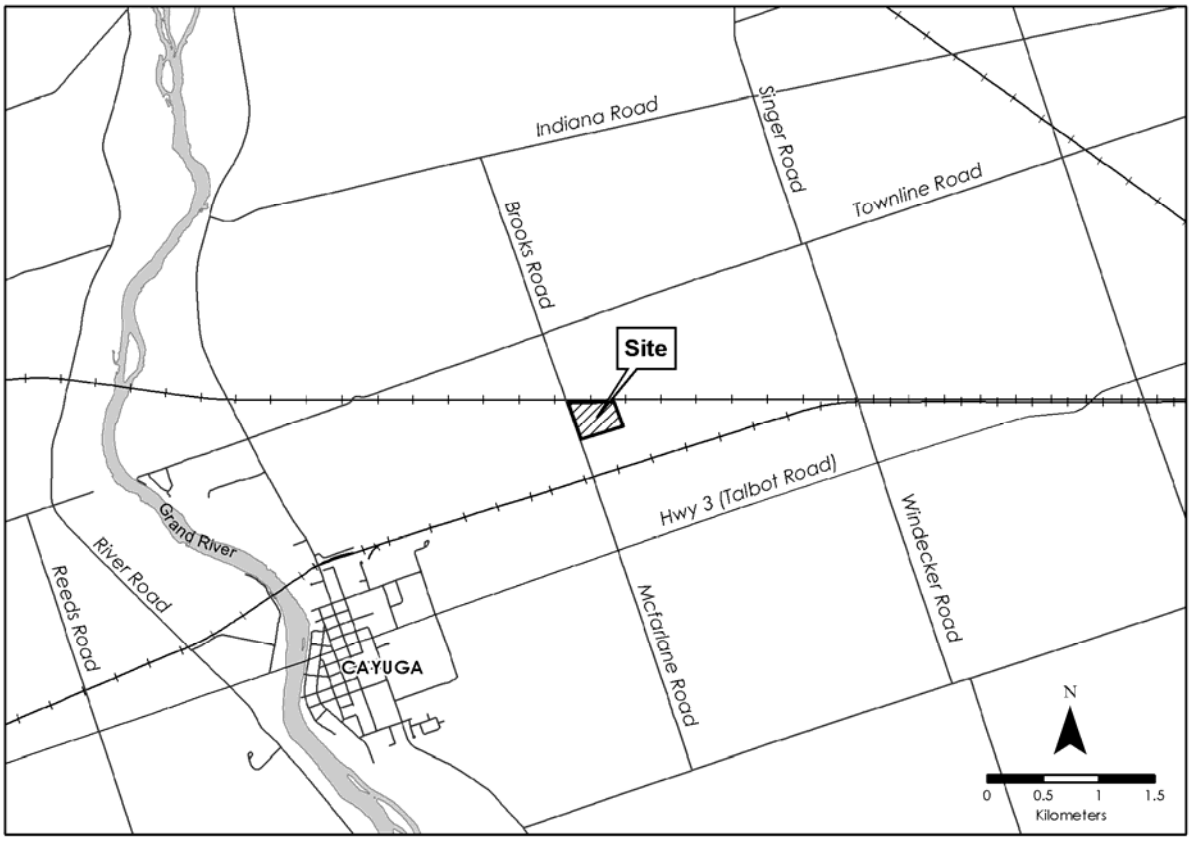
Section 1.0 Introduction

This proposed Terms of Reference (ToR) provides the framework for the preparation and review of an Individual Environmental Assessment (EA) of a proposed vertical expansion of the waste disposal capacity of the Brooks Road Landfill Site (Site), located at 160 Brooks Road, near Cayuga, Haldimand County, Ontario. The Site is owned and operated by 2270386 Ontario Limited, herein referred to as Brooks Road Environmental (Owner, Proponent). The location of the Site is shown in **Figure 1**.

Figure 1. Location of the Proposed Undertaking



The Site, which operates under Environmental Compliance Approval (ECA)[1] No. A110302, has an approved fill rate of 500 tonnes per day and a capacity of 624,065 m^3 (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 (MOE) in 1980, 2002, 2004, 2005, 2007, 2011, 2012, and 2013.

[1] As a result of changes to the Ontario *Environmental Protection Act* in 2011 the term 'Certificate of Approval' (CofA) was changed to 'Environmental Compliance Approval' (ECA). All previously-issued CofAs are now deemed to be ECAs.

Under the ECA, the Site is licenced to receive post-diversion solid non-hazardous Industrial, Commercial & Institutional (IC&I) waste from across Ontario. The 12.4 ha Site contains an approved fill area of 6 ha. The vertical capacity expansion proposed under this ToR will be for approximately 421,000 m^3 (including waste and daily/final cover) of additional capacity over a 5 to 7 year planning period. The planning period is a function of the constraints of the site (i.e., small footprint, ability to develop on existing waste footprint) and that the site will most likely not operate at the maximum annual fill rate at all times. Further, the planning period is a function of the business procured by the owner and the rate at which waste is received. This will be achieved through a re-engineering of the Site's final contours. The revision of final contours proposed under the EA may also require some redesign of the approved on-Site stormwater management system (due to altered waste slopes). However, all changes will occur within the Site's existing waste footprint and Site boundaries.

Also proposed as part of the EA is an alteration from a daily maximum to an annual maximum rate of waste received on-site. As noted above, the current approved rate of fill is a maximum of 500 tonnes per day. The proposal will be to maintain the current rate, but allow for an annual maximum, rather than a daily maximum. The annual rate of fill (maximum of 151,000 tonnes per year) is equal to the daily maximum (500 tonnes per day[2]). The rationale behind this change is to accommodate busier months of operation in the spring and summer, given that this time of year typically produces more construction waste than the winter months. Further details on the above are in provided Sections 4.0 and 5.0.

The methodology described in this ToR reflects a focused process that will meet the requirements of the Ontario *Environmental Assessment Act* (*EA Act*) and Ontario Regulation 101/07, the Waste Management Projects Regulation, made under the *EA Act.*

This ToR has been prepared in accordance with Sections 6(2)(c) of the *EA Act* and sets out the commitments of the Proponent for the preparation of the EA. The EA will be prepared in accordance with subsection 6.1(3) of the *EA Act*. This ToR has been prepared in accordance with and having regard for the following MOE guidance documents:

- Code of Practice *Preparing and Reviewing Terms of Reference for Environmental Assessments in Ontario* (MOE, January 2014)
- Code of Practice *Preparing and Reviewing Environmental Assessments in Ontario* (MOE, January 2014)
- Code of Practice *Consultation in Ontario's Environmental Assessment Process* (MOE, January 2014)

[2] Achieving 500 tonnes per day over 302 days (six days per week per year minus 10 public holidays) equals 151,000 tonnes.

- *Guide to Environmental Assessment Requirements for Waste Management Projects in Ontario* (MOE, March 2007)

During preparation of this ToR, the Proponent has consulted with the MOE, other federal, provincial and local government agencies, the public, Aboriginal communities and other interested persons (see Section 11.0).

1.1 History of the Site

The Site has gone from being a rural 'dump' (i.e., non-engineered, unlined, waste disposal pits) to a modern engineered and operated waste management facility/landfill. Due to the nature of some of the waste historically disposed of, the Site has been remediated to remove previous waste deposited on-Site from the unlined disposal pits, some of which was deemed to be hazardous under Ontario Regulations. Since Brooks Road Environmental has taken ownership, the Site has undergone numerous improvements from an operational and safety standpoint, as described in the paragraphs following. A short summary of the Site's history is provided below.

The Site was first established in 1959 as a rural dump for the surrounding area. A lack of provincial environmental protections and waste legislation at the time allowed for the accumulation of hazardous wastes in areas of the Site that gave rise to concerns about toxic contamination. In 1971, provincial legislation was enacted requiring that all waste disposal operators apply for a CofA (now referred to as an ECA). Renamed the Edwards Landfill in 1971, the Site continued to operate and accept IC&I waste from the County between 1971 and 1977.

From 1977 to 2002 waste disposal at Edwards Landfill occurred only on an intermittent basis. The Site was purchased by Haldimand-Norfolk Sanitary Landfill Inc. in 2002, and an application was submitted to reopen the Site. The MOE granted an ECA for the Edwards Landfill to reopen, subject to a list of conditions. The main requirement of the owners was to decommission the disposal pits that had historically accepted potentially hazardous wastes.

Haldimand-Norfolk Sanitary Landfill Inc. submitted an application in 2004 to amend the maximum daily fill rate from 10 tonnes per day to 500 tonnes per day. The proposal was granted by the MOE in February 2005; however, an application seeking leave to appeal the MOE's decision was filed in June of that same year. A Settlement Agreement was reached between the appellants, Haldimand-Norfolk Sanitary Landfill Inc., and the MOE in November of 2006, and the appeal was withdrawn, but a number of important issues and concerns related to the Site (known at this time as the Edwards Landfill Site) and its operation were raised during the appeal (see Section 1.3 for further information on historic public issues).

Significant management and financing issues led Haldimand-Norfolk Sanitary Landfill Inc. to declare bankruptcy in 2007, leaving no plan in place for cleaning up the areas of concern at the Site. The Site went into receivership in September 2007, with SF Partnership Chartered Accountants as acting receivers. Community members and Aboriginal communities expressed concerns over the following years about mismanagement of the Site.

In May 2012, Brooks Road Environmental purchased the Site with a plan for the future of the landfill as a modern facility managed in accordance with MOE requirements. To date, the Site has been fully decommissioned, which included excavation and off-Site disposal of 193.37 tonnes of suspected hazardous waste and impacted soils at Newalta's waste disposal facility at 65 Green Mountain Road in Stoney Creek, Ontario; excavation and off-Site disposal of five over-packed drums of solid non-hazardous waste to Tervita's waste transfer station at 1650 Upper Ottawa Street in Hamilton, Ontario; off-Site disposal of 27,680 litres of liquid industrial waste to Newalta's facility at 1131 Snow Valley Road, Barrie, Ontario; and relocation of 60,204 cubic metres of non-hazardous solid waste and impacted soil from the unlined disposal pits, referred to as the Original Landfill Area (OLA), to the on-Site engineered landfill cells. Results of the soil sampling program confirmed that all waste and impacted soils have been removed from the OLA and the remaining native soil within the decommissioning area meets the applicable Ontario Soil Criteria standards provided in Ontario Regulation 153/04. All decommissioning activities are documented in the Site Decommissioning Report (CRA, 2014) submitted to the MOE on January 30, 2014. Brooks Road Environmental has also provided an irrevocable letter of credit to the Ontario Government to satisfy the Financial Assurance requirements stipulated by the ECA. Further, a renewed Aboriginal community, Agency and public consultation/outreach program has been put in place to provide immediate data and to consult on future plans for the Site.

1.2 Future of the Site

As mentioned, the Proponent has carried out systematic remediation of the Site and, as of June 2013, has removed all hazardous waste associated with historic landfilling operations.

Going forward, the Site will continue to operate as a modern, state of the art non-hazardous solid waste landfill for the disposal of IC&I wastes. The Proponent has shown a commitment to environmental stewardship and community involvement/outreach, and will fully comply with all permits and approvals.

The vertical capacity expansion proposed under this ToR entails re-engineering of the Site's approved final contours (i.e., height and slope) while continuing to operate within the same footprint (i.e., current base area permitted to accept waste). In the simplest of terms, the proposed expansion would see additional waste placed on top of the existing landfill footprint.

Due to the change in waste slopes that will result from the altered final contours of the landfill, the capacity of the existing stormwater management ditches and ponds will be reviewed and may also be revised and improved to accommodate both quality and quantity of surface water on Site. Further, an application for a Sequencing Batch Reactor (SBR) to pre-treat leachate generated by the landfill on-Site has recently been approved by the MOE.

1.3 Addressing Historic Public Issues

As noted above, the MOE Director's decision to grant Haldimand-Norfolk Sanitary Landfill Inc.'s application to increase the maximum daily fill rate from 10 tonnes per day to 500 tonnes per day was met with an appeal in 2006 from members of the local community, specifically Haldimand Against Landfill Transfer (HALT) and Six Nations of the Grand River. Through discussions with the community and the Public Liaison Committee (PLC) during the ToR process, it was suggested that a review of previous concerns raised be undertaken and analyzed to fully appreciate past concerns raised. For discussion purposes, these issues/concerns raised are summarized based on the grounds upon which the appeal was filed as follows:

Inexperience of Operator (Haldimand-Norfolk Sanitary Landfill Inc. at the time) – no experience, expertise, or capability to operate a landfill receiving up to 500 tonnes of waste per day, nor to decommission historic waste disposal pits.

Non-compliance – not in compliance with a number of the conditions contained in the existing Site ECA and the County's Tree Control Bylaw.

Inadequacies of Site Decommissioning Plan – Site Decommissioning Plan at the time of the previous application was inadequate and its implementation could have resulted in significant harm to the environment.

Truck Traffic Impacts – suitability of the Site to sustain the traffic volumes and loads associated with a fill rate of 500 tonnes per day was not assessed, nor was the impact of truck traffic on several other area roads.

Fundamental Unsuitability of Site – the location is fundamentally unsuitable for a landfill, particularly in regard to hydrogeological conditions, including the potential presence of karst topography and abandoned gypsum mines in the Site vicinity and the proximity of Provincially Significant Wetlands (PSW) and a National Historic Site.

Flawed Approvals Process – a Proponent wishing to establish a new 600,000 m^3 landfill in Ontario would ordinarily be subject to a mandatory public hearing, and the approval process

followed by Haldimand-Norfolk Sanitary Landfill Inc. was designed to purposely circumvent that requirement.

Although these above concerns were raised when a different owner was responsible for the management of the Site, Brooks Road Environmental has reviewed these issues as a starting point with respect to addressing community concerns. With respect to landfill operations experience, non-compliance, and Site decommissioning, Brooks Road Environmental has been operating the existing approved landfill from May 2012 to present. During this time, Brooks Road Environmental has fully decommissioned the OLA at the Site of all historic waste and provided an irrevocable letter of credit to the Ontario Government to satisfy the Financial Assurance requirements.

Issues with respect to traffic on local roads related to the Site operating at a fill rate of 500 tonnes per day have not been raised to date. This would indicate that the surrounding road network is able to sustain the traffic volumes associated with this rate of fill. Existing available information with respect to traffic and local roads will be utilized in the EA.

Studies completed for previous Site approvals have sufficiently characterized and analysed the existing geology and hydrogeology. As part of the EA, this existing available information on the geological and hydrogeological environment will be presented to the public, including the potential for karst geology and abandoned gypsum mines within the area.

With respect to the approvals process, the proposed undertaking is subject to Part II of the EA Act, otherwise known as an Individual EA, which is a two-step approval process, requiring the preparation of a ToR and an EA. Under Part II of the EA Act, both the ToR and the EA decisions rest with the Ontario Minister of Environment.

Section 2.0 Proponent

The Proponent of this ToR and the proposed EA described in this ToR is Brooks Road Environmental, which currently owns and operates and will continue to own and operate, the Brooks Road Landfill Site.

Contact information for the Proponent is as follows:

Mr. Richard Weldon
Brooks Road Environmental (2270386 Ontario Limited)
162 Cumberland St., Suite 300
Toronto, Ontario M5R 3N5

Section 3.0 Justification for Submitting a 'Focused' ToR

Given that the Owner is successfully operating the Site and wishes to continue the business opportunity at this Site, the establishment of a new landfill site or an alternative form of waste disposal facility (e.g., a new landfill site or a thermal treatment facility) elsewhere are not feasible options. As a result, the vertical expansion of the capacity of the existing Site is the only practical, environmentally sound and financially feasible means of addressing the Owner's solid, non-hazardous waste disposal business opportunity for the foreseeable future (approximately 5 to 7 years) (see Section 6.0 for further discussion regarding alternative options or 'Alternatives To').

The practical realities of the Proponent (i.e., geography, financial constraints, and need for cost-effective solid, non-hazardous waste disposal capacity) demonstrate that a so-called 'focused' EA under Section 6.(2)(c) of the *EA Act* is justified and appropriate in this case.

The MOE Code of Practice *Preparing and Reviewing Terms of Reference for Environmental Assessments in Ontario* (January 2014) outlines the consideration for 'focussing' a ToR. The Code of Practice allows a proponent to proceed under subsection 6(2)(c) and 6.1(3) if the proponent is further along in the defined planning process and additional detail is known regarding their proposal. As an example, The Code of Practice states:

> *…what is reasonable for one proponent to implement may not be reasonable for another when trying to solve a similar problem because the circumstances between proponents may vary widely. A private sector proponent's inability to expropriate land or implement public programs will influence the range of alternatives it may examine.*

As it relates to the Proponent and its business, the Code of Practice also makes reference to private sector proponents in the waste industry as follows:

> *The private sector proponent may only consider landfill or on-site diversion because:*
> - *It cannot implement a municipal waste diversion program such as curbside recycling;*
> - *Export would affect their business; and,*
> - *Thermal technology is not economically viable because waste volumes are too small.*

Brooks Road Environmental is a privately owned and operated company, conducting business in the Province of Ontario. As such, the question as to whether there is a need for the services

that they provide is largely based on business decisions. Similarly, the question as to how they might provide these services is a Brooks Road Environmental business decision. For example, a broad search of alternative technologies or sites for new landfill footprints within an EA process could result in decisions that would be economically unacceptable or present too great of a risk. Consequently, these assessments and decisions regarding financial viability have been taken by the Proponent prior to carrying out the EA. Section 6.0 discusses the following four Alternatives To that result in the focusing of this ToR: Alternative 1 - Do nothing, Alternative 2 - Establish a new landfill elsewhere, Alternative 3 - Expand the existing landfill (vertically), and Alternative 4 - Export waste to other disposal facilities. Discussion regarding other options (i.e., thermal treatment and horizontal expansion) and why they have not been included is also provided in Section 6.0.

Section 4.0 Description and Purpose of the Undertaking

The proposed undertaking will be the vertical expansion of the capacity of the existing Brooks Road Landfill Site to allow the continued receipt of post-diversion IC&I waste over a 5 to 7 year planning period and an amendment to the Site's rate of fill to provide for a maximum of 151,000 tonnes per year. The rationale behind this fill rate amendment is to accommodate busier months of operation in the spring and summer, given that these times of year typically produce more construction waste than the winter months, while not increasing the total annual waste received. The undertaking proposed is for Brooks Road Environmental to continue operating the landfill on a 'business as usual' perspective. The planning period is a function of the constraints of the site (i.e., small footprint, ability to develop on existing waste footprint) and the fact that the site will most likely not operate at the maximum annual fill rate at all times. Further, the planning period is a function of the business procured by the owner and the rate at which waste is received. It should be noted that a volumetric calculation, using a (potential) vertical expansion of 4:1 slope to show total airspace and subtracting the currently approved capacity, was undertaken to arrive at 421,000 m^3. Assuming a density of 1 tonne per cubic metre of air space consumed for the landfill waste, there is potential capacity for 421,000 tonnes. A 5-7 year planning period has been provided for as the amount of waste received tends to fluctuate year over year. Ultimately, the landfill will not exceed 421,000 m^3 (total), nor will it exceed 151,000 tonnes for any given year.

Further details on the rationale developed to support this continuation of waste disposal service as well as potential Alternatives To the Undertaking are provided in Sections 5.0 and 6.0, respectively.

Section 5.0 Rationale for the Undertaking

The business opportunity identified by Brooks Road Environmental to continue to provide IC&I solid, non-hazardous waste disposal capacity primarily to Haldimand County and the surrounding areas, as well as from across Ontario, was determined based on the following factors:

- Current IC&I waste diversion rate and disposal capacity in Ontario
- Recovering a portion of the financial capital spent to remediate the existing landfill
- Minimizing environmental impacts by offering a modern, engineered landfill as a local solution for waste disposal (rather than shipping to the United States [U.S.])

IC&I Waste Diversion & Disposal Capacity

The overall waste diversion rate for the IC&I sector in Ontario has steadily decreased over the past decade or so, with the latest numbers from Statistics Canada (2010) indicating a rate of approximately 13 percent for the non-residential sector (including IC&I and Construction and Demolition (C&D) sectors). Given that the residential sector waste diversion rate is almost three times higher at 37 percent (Statistics Canada, 2010), two conclusions can be drawn: 1) as the majority of Ontario's IC&I waste is not diverted from landfill, there remains a continued need for significant disposal capacity in Ontario, and 2) the opportunity for improvement in the waste diversion rate for the IC&I sector is considerable.

In 2010 the Auditor General of Ontario estimated that the remaining capacity for Ontario's 32 largest landfills, at the current rate of fill, was 25 years (Office of the Auditor General of Ontario, 2010). Coupled with the fact that the landfill capacity available in Ontario is already less than the disposal capacity required for IC&I and C&D waste generated by Ontario sources (RIS International Ltd., 2005), it would appear that additional capacity for IC&I in Ontario may soon be required. Further data released in February 2013 from the Michigan Department of Environmental Quality highlights that the IC&I sector in Canada still remains dependant upon exporting waste to Michigan, sending approximately 5.5 million m^3 of waste last year[3].

The proposed Ontario Waste Reduction Act (WRA) (currently in draft and Second Reading in the Provincial Legislature) may provide the necessary solution. The proposed WRA would introduce 'Extended Producer Responsibility' (EPR) into Ontario's waste management system, essentially, in very general terms, making individual producers responsible for costs associated with disposal (including collection) of their products. The rationale for introducing EPR is to encourage producers to both minimize the volume of waste and increase the possibilities for

[3] Report of Solid Waste Landfilled in Michigan, October 1, 2012-September 30, 2013

reuse and recycling for their products and/or packaging. The introduction of the proposed WRA will no doubt revolutionize Ontario's waste industry; however, it will be some time yet (at least 4 years, according to a July 2013 Technical Briefing (MOE, 2013)) before the WRA is finalized and its policies launched formally. Until such time as the WRA is up and running smoothly, the issue of decreasing disposal capacity in Ontario remains.

For the reasons described above (in Sections 4.0 and 5.0), Brooks Road Environmental is seeking approval for a vertical capacity expansion for approximately 421,000 m^3 (including waste and daily/final cover) to dispose of up to 151,000 tonnes of waste per year (same rate as the existing landfill) for 5 to 7 years (not 20 years, as is standard). This expansion would allow Brooks Road Environmental to continue to accommodate solid, non-hazardous IC&I waste disposal from Haldimand County and the surrounding area until such time as the proposed WRA is rolled out over the next several years.

Recovering Costs

Since purchasing the Site in May 2012, Brooks Road Environmental has dedicated substantial resources to the transformation of the existing landfill into a modern engineered facility in full compliance with MOE requirements. The vertical expansion of the existing Site and operation for a further 5 to 7 years would allow Brooks Road Environmental to recoup some of the costs (into the $Millions for equipment and decommissioning activities) incurred for remediation.

Environmental Solution

In addition to supplying necessary IC&I waste disposal capacity and allowing for recovery of decommissioning costs, Brooks Road Environmental believe that providing a local disposal option for residual IC&I waste generated locally is an environmentally responsible practice and wish to continue to provide this service.

Section 6.0 Consideration of Alternatives To the Undertaking

After establishing that there is a need for waste disposal capacity, Brooks Road Environmental looked at different ways of meeting this need. In EA terms, this is the assessment of 'Alternatives To' the proposed undertaking.

'Alternatives To' a proposed undertaking are functionally different ways of approaching and dealing with a problem or opportunity. There are a number of possible options or Alternatives To for satisfying the business opportunity identified by Brooks Road Environmental to provide continued IC&I solid, non-hazardous waste disposal capacity within Haldimand County and the surrounding areas, including: establishing a new landfill; expanding the existing landfill (vertically); and exporting waste to another disposal facility. As stated in the Code of Practice

and noted in Section 3.0, "a private sector proponent's inability to expropriate land or implement public programs will influence the range of alternatives it may examine," and, as such, the Alternatives To explored for this ToR do not include thermal treatment, biological processing, or expanding horizontally onto land not owned by the proponent. In order to identify the most appropriate way to satisfy the identified need or 'Preferred Alternative To', Brooks Road Environmental applied a set of screening criteria to each of the proposed Alternatives To the undertaking, including the option to do nothing. The screening criteria selected range from approvability to feasibility to economic viability. The results of the screening of Alternatives To the undertaking are found in **Table 6-1** below.

Table 6-1. Screening of Alternatives To

Is the Alternative To…	**Alternative 1** Do nothing	**Alternative 2** Establish a new landfill elsewhere	**Alternative 3** Expand the existing landfill (vertically)	**Alternative 4** Export waste to other disposal facilities
reasonably capable of being approved (e.g., must meet environmental requirements)?	Yes	Yes	Yes	Yes
technically feasible?	Yes	Yes	Yes	Yes
consistent with principles of responsible waste management?	No	Yes	Yes	No
consistent with the identified business opportunity?	No	Yes	Yes	Yes
resilient to market fluctuations and/or international waste transfer policies?	Yes	Yes	Yes	No
capable of enabling Brooks Road Environmental to continue to provide cost effective services to its customers?	No	No	Yes	No
economically viable for the company and are the economic benefits and risks acceptable?	No	No	Yes	No

Based on the results of the screening, the following conclusions can be drawn with respect to each of the Alternatives To the undertaking:

Alternative 1 – Do nothing

While approvable, technically feasible, and resilient to market fluctuations and international waste transfer policy, Brooks Road Environmental does not consider this alternative to be a reasonable option for its ongoing business, as it does not satisfy the identified need for additional IC&I solid, non-hazardous waste disposal capacity.

Alternative 2 – Establish a new landfill elsewhere

Unlike the 'do nothing' option, this alternative, in addition to being approvable, technically feasible, and resilient, is consistent with the core principles of responsible waste management and satisfies the identified need for additional waste disposal capacity. However, Brooks Road Environmental does not own other land in proximity to its current Site that has been identified as suitable for new waste disposal capacity nor does the company have the ability to expropriate land for a new site, thus making this option unfeasible.

Alternative 3 – Expand the existing landfill (vertically)

This 'Alternative To' the proposed undertaking satisfies all of the screening criteria as it is approvable, technically feasible, resilient to market fluctuations and international waste transfer policies, consistent with the core principles of responsible waste management and satisfies the identified need for additional waste disposal capacity. Further, on the economic side, this Alternative To is both viable and cost-effective, given that the existing Site is available, fully engineered, built to the appropriate standard, well-understood and already permitted to receive waste.

Alternative 4 – Export waste to other disposal facilities

While this alternative is approvable, technically feasible, and satisfies the identified need for additional waste disposal capacity, it is both a costly and risky option as operations may be heavily impacted by market fluctuations and international waste transfer policy, given that the most economical means of disposal would be exporting the waste to the U.S. As it cannot be assumed that it will always be possible for waste to be exported to the U.S., based on restrictions that have been put in place in the past, this is not a viable option for Brooks Road Environmental. Further, providing a local solution for the disposal of waste is consistent with responsible waste management principles as it minimizes greenhouse gas emissions associated with long-distance hauling of waste.

Given that Brooks Road Environmental is successfully operating the existing Site and wishes to continue the business opportunity at this Site, the establishment of a new landfill site or export of waste elsewhere are not feasible options. As a result, Alternative 3, the vertical capacity expansion of the existing Site, is the only practical, environmentally sound and financially feasible means of addressing the identified business opportunity for providing solid, non-hazardous waste disposal capacity within Haldimand County and the surrounding areas for the next 5 to 7 years.

Other 'Alternatives To', such as recycling at source and thermal treatment, are beyond the Proponent's control and, in addition, do not allow the Proponent to meet the identified business opportunity. It should be noted that a horizontal expansion of the site will not be looked at as part of the Alternative Methods due to natural and technical environmental

constraints; namely: 1) the Site is constrained by a PSW and Brooks Road; and 2) investing in new landfill infrastructure (i.e., additional liner construction) is not economically feasible for the company. As such, these 'Alternatives To' the undertaking have not been considered in the screening.

Section 7.0 Overview of Environmental Assessment Methodology

'Alternative Methods' of carrying out a proposed undertaking (i.e., the proposed vertical expansion of the capacity of the Site) are different ways of doing/achieving the same activity. In accordance with the 'focused' nature of the EA proposed under this ToR, alternative methods will include alternative conceptual vertical capacity expansion designs. These options will be similar in addressing the problem/opportunity for the project, but operationally different enough to conduct a proper comparative evaluation.

It should be noted that we will not look at a horizontal expansion of the site as part of the Alternative Methods due to natural and technical environmental constraints; namely: 1) the Site is constrained by a PSW and Brooks Road; and 2) investing in new landfill infrastructure (i.e., additional liner construction) is not economically feasible for the company. This will be reiterated in the EA.

The EA will include a description of the purpose of the undertaking as well as a description of and statement of rationale for the undertaking, as included in this ToR.

The EA will include a description of and rationale for these alternative methods, to be developed in the early stages of the EA. Draft alternative methods will be presented to the public, agencies and Aboriginal communities for review and comment (see Section 11.0). The alternatives will be refined in response to public, agency and Aboriginal comment. A comparative evaluation of the alternative options using a Reasoned Argument (or Trade-off) method will be conducted, using evaluation criteria (see Section 8.0) as a basis for comparison, and one or more preferred alternatives will be selected.

The EA will address how each alternative method will conform to the requirements of Ontario Regulation 232/98 and related MOE landfill design guidelines.

7.1 Existing Environment

The existing environment within the Site Study Area and Local Study Area (defined in Section 9.0) will be studied and described in the EA. The studies and descriptions will address the five aspects of the environment, as defined in the EA Act; namely: (a) natural environment;

(b) cultural environment; (c) built environment; (d) social environment; and (e) economic environment (for the purposes of this study the social and economic environments are grouped together under the category 'socio-economic environment'). While Aboriginal environmental interests are comprised of parts from each of the five aspects of the environment, for the purposes of this study, we have chosen to present them separately (see Section 10.0).

7.2 Potential Effects

Positive and negative environmental effects that could potentially arise from the undertaking and from alternative methods will be identified, assessed and described in the EA (see Section 10.0).

7.3 Mitigation Measures

Measures for mitigating (i.e., eliminating or reducing to acceptable levels) potential negative environmental effects arising from the undertaking and from alternative methods will be identified and described in the EA.

7.4 Advantages and Disadvantages

Advantages and disadvantages of the alternative methods of carrying out the proposed undertaking to the environment will be identified and described in the EA. In addition, although not formally required under the EA Act, a discussion on cumulative effects will be provided in the EA.

7.5 EA Compliance Monitoring

As set out in Section 13.0 below, the EA will provide a strategy and schedule for preparation of a post-EA approval compliance monitoring plan to address:

1. Fulfillment of EA conditions of approval
2. Actual net effects, over time
3. The fulfillment of commitments made during preparation of the ToR and EA

Section 8.0 Alternative Method Assessment Criteria and Indicators

'Alternative Methods' to be evaluated in the EA will be focused on alternative Site cell configurations.

The alternatives will be developed based on criteria such as: constraints posed by existing topographical, geophysical and spatial conditions; relative financial and technical feasibility; staging/phasing of Site development; etc., and will be evaluated using a simple comparison process to identify the preferred alternative method.

The development and consideration of alternative methods will utilize historical data developed at the Site during the past 40+ years, including geological, hydrogeological and geotechnical information; facility engineering and design information; groundwater and surface water monitoring data as well as new data to be acquired (e.g., through new monitoring wells and boreholes, hydrology studies, etc.)

A comparative evaluation of the alternatives will be carried out during the EA using a Reasoned Argument (or Trade-off) method, using evaluation criteria as the basis for comparison. Under the Reasoned Argument approach, the differences in the net effects associated with each alternative are highlighted. Based on these differences, the advantages and disadvantages of each alternative can be identified according to the evaluation of tradeoffs between the various evaluation criteria and indicators. The relative significance of potential impacts is then examined to provide a clear rationale for the selection of a preferred alternative. The term Trade-offs is defined as "things of value given up in order to gain different things of value". Each alternative will be compared against the others to distinguish relative differences in impacts to the environment, taking into account possible mitigation measures.

Evaluation criteria may be broadly grouped into natural, cultural, built, social and economic (grouped together as 'socio-economic' in this ToR) environment categories. Although not considered to be a separate aspect of the environment within the EA Act, given the aboriginal interests within the area, the evaluation of alternative methods will include a comparison of the potential effects on aboriginal communities as well. A list of the proposed evaluation criteria and indicators are provided in **Table 8-1**, below, and a more detailed list, including a rationale for each criterion and proposed data sources, is provided in **Appendix B**. These criteria form the basis for characterizing existing environmental conditions within the Study Areas; assessing the potential adverse effects of each alternative method on the environment; identifying mitigation measures; determining net environmental effects; and comparing alternative methods. Evaluation criteria and indicators will be finalized during the EA.

Table 8-12: Evaluation Criteria & Indicators

	Environmental Component	Evaluation Criteria	Indicators
NATURAL	**Atmospheric Environment**	Air quality	• Predicted off-Site point of impingement concentrations (µg/m^3) of indicator compounds • Number of off-Site receptors potentially affected (residential properties, public facilities, businesses, and institutions)
		Noise	• Predicted off-Site noise level • Number of off-Site receptors potentially affected (residential properties, public facilities, businesses, and institutions).
		Odour	• Predicted off-Site odour concentrations (µg /m^3 and odour units) • Number of off-Site receptors potentially affected (residential properties, public facilities, businesses and institutions)
	Geology & Hydrogeology	Groundwater quality	• Predicted effects to groundwater quality at property boundaries and off-site
		Groundwater flow	• Predicted groundwater flow characteristics
	Surface Water Resources	Surface water quality	• Predicted effects on surface water quality on-site and off-site
		Surface water quantity	• Change in drainage areas • Predicted occurrence and degree of off-site effects
	Terrestrial & Aquatic Environment	Terrestrial ecosystems	• Predicted impact on vegetation communities • Predicted impact on wildlife habitat • Predicted impact on vegetation and wildlife including rare, threatened or endangered species
		Aquatic ecosystems	• Predicted changes in water quality • Predicted impact on aquatic habitat • Predicted impact on aquatic biota
CULTURAL	**Archaeology & Cultural Heritage**	Cultural and heritage resources	• Cultural and heritage resources (built and landscapes) in the Local Study Area and predicted impacts on them
		Archaeological resources	• Archaeological resources in the Local Study Area and predicted impacts on them
BUILT	**Transportation**	Effects on airport operations	• Bird strike hazard to aircraft in Local Study Area
		Effects from truck transportation along access roads	• Potential for traffic collisions • Disturbance to traffic operations
	Land Use	Effects on current and planned future land uses	• Current land use • Planned future land use • Type(s) and proximity of off-site recreational resources within 500 m of landfill footprint potentially affected • Type(s) and proximity of off-site sensitive land uses (i.e., dwellings, churches, cemeteries, parks) within 500 m of landfill footprint potentially affected
	Agriculture/ Soils & Mining	Effects on soils and existing agricultural and mining operations	• Predicted impacts on surrounding agricultural operations; • Type(s) and proximity of agricultural operations (i.e., organic, cash crop, livestock) • Type(s) and proximity of mining operations • Soil classification
	Site Design & Operation	Site design and operational characteristics	• Complexity of Site infrastructure • Operational flexibility
SOCIO-ECONOMIC	**Economic**	Effects on/benefits to local community	• Employment at site (number and duration) • Opportunities to provide products or services

	Environmental Component	Evaluation Criteria	Indicators
	Social	Visual impact of facility	• Predicted changes in perceptions of landscapes and views • Predicted changes to local residents use of property
		Effects on Local Residents	
ABORIGINAL	**Aboriginal Communities**	Potential effects on Aboriginal communities	• Potential effects on use of lands for traditional purposes

Section 9.0 Study Areas

Two study areas will be established for preparation of the EA: the Site Study Area and the Local Study Area (see **Figure 2**).

The reason for two study areas is that some components of the 'existing environment' that will be addressed in the EA either do not exist on the Site or will not be affected by the proposed vertical capacity expansion and therefore do not require description and assessment within the Site Study Area. Examples include cultural heritage and archaeology, socio-economic conditions, transportation conditions, existing and planned land use, and soils/agriculture (there are virtually no undisturbed native soils and no agricultural activities anywhere in the Site Study Area).

Conversely, within the Local Study Area there are components of the 'existing environment' that do not exist in the Site Study Area. For example, socio-economic conditions, cultural heritage and archaeology, transportation, existing and planned land use will be addressed in the Local Study Area, but not Design and Operations Considerations. It is recognized that biophysical components of the 'existing environment' within the Local Study Area could experience potential effects from the proposed undertaking (e.g., off-Site migration of surface water and air emissions and the potential effects of those impacts on off-Site watercourses and terrestrial/aquatic flora, fauna, ecosystems and species (including species at risk)) and, as such those components of the 'existing environment' in the Local Study Area will be identified and assessed in the EA.

9.1 Site Study Area

The Site Study Area will include all lands (i.e., 12.4 ha) within the existing, approved boundaries of the Site, as defined by ECA No. A110302 (as amended). Figure 2 illustrates the Site Study Area.

9.2 Local Study Area

The Local Study Area will include all lands and waters within a 1 km radius of the Site Study Area boundaries. Figure 2 also illustrates the Local Study Area. It should be noted that this is a generic delineation of the Local Study Area that may be modified during the EA to suit the particular requirements of each environmental component. Each technical discipline will modify the Local Study Area as required.

Figure 22: Site Study Area and Local Study Area

Section 10.0 Description of the Environment and Potential Effects

Within the Site Study Area and Local Study Area studies will be undertaken to identify and describe existing environmental features and conditions along with estimates of potential environmental effects. Descriptions will be based on existing databases; available studies, reports, and other relevant information; National Topographic Series; Ontario Base Mapping;

Canada Land Inventory; soils mapping and Geographic Information System materials; aerial photographs; Site visits and field studies (e.g., land use surveys, biology surveys, additional boreholes, monitoring wells, and test pits).

The following is a preliminary description of the existing environment within the Site Study Area and Local Study Area. A more detailed description, based on studies to be completed, will be provided in the EA. Similarly, environmental effects and the means by which to manage/mitigate such effects for each subject area will be determined as part of the EA and included in the EA Report.

Studies and evaluations will be conducted within the following subject environment areas. The environment areas are grouped in accordance with Section 4.2.3, page 20 of the MOE Code of Practice *Preparing and Reviewing Environmental Assessments in Ontario* (MOE, January 2014), namely: natural, cultural, built, social and economic ('socio-economic' for the purposes of this study), as well as Aboriginal, although not specified in the *EA Act*. As noted above, not all components of the environment are present in each of the two study areas.

10.1 Site Study Area

10.1.1 Natural Environment

10.1.1.1 Atmospheric - Air Quality, Odour & Noise

The ambient air quality, odour and noise conditions at the Site have been monitored for at least the past 10 years, and therefore significant data exists describing these conditions.

The air quality and noise conditions at a landfill site are primarily a function of site operations (e.g., odour from open disposal faces prior to the application of daily cover, dust from on-Site vehicle traffic and earth-moving operations, back-up beepers, etc.). Since the quantity of waste being brought to the Site will not change, potential effects on air quality, odour and noise levels within the Site Study Area are anticipated to be similar to those that have historically occurred during operation (i.e., existing conditions).

The existing air quality, odour and noise conditions at the Site and the potential effects of the alternative methods on air quality, odour and noise levels within the Site Study Area will be identified and described in the EA.

10.1.1.2 Geology/Hydrogeology

The overburden geology is relatively uniform beneath the Site. In general, the Site is characterized by a thick (14 to 18 m) glaciolacustrine layer of stratified silty clay, silty clay till

and varied clays, underlain by a thin (1 to 3 m) discontinuous layer of silty sand till with varying concentrations of gravel and clay. The bedrock is encountered at depths varying from 15.2 to 20.2 m below ground surface (bgs). A thin surficial deposit of topsoil is generally observed at the surface of the Site, with the exception of the southwestern portion, where refuse associated with historical waste disposal activities is observed.

The silty clay deposits are described as being locally fractured (weathered) from the surface down to depths varying from 3 to 5 m bgs, and are characterized as a very stiff to hard unit with low plasticity. At depths in excess of 5 m, the silty clay deposits have little to no fracturing and the consistency of the units decrease from stiff to very stiff.

Underlying the silty clay deposits, a thin, discontinuous silty sand till with varying concentration of clay and gravel is encountered across the Site. The silty sand till ranges in thickness from 1 to 3 m and often contains cobbles and/or broken angular bedrock fragments. This deposit is usually well-graded, with fine to medium grained sand, minor silt and trace clay, and is described as dense to compact, grey and saturated. The silty sand till rests directly over the bedrock.

Bedrock underlying the Site has been described as a fractured shale, dolostone and gypsum of the Salina Formation. The top of bedrock elevation ranges from 180.80 to 185.73 m above mean sea level, and forms a small bedrock valley from northwest to southeast across the Site. The small depression is characterized by the thicker silty sand till deposit. Regionally the bedrock topography dips to the south.

In general, the geologic units identified at the Site may be grouped into two main hydrogeologic units, as follows:

i) An unconfined water table (shallow overburden) unit within the shallow fractured silty clay (weathered) unit

ii) A confined basal overburden/shallow bedrock aquifer

These two hydrogeological units are separated by a thick (between 9 and 12 m) layer of stratified silty clay, silty clay till and varied clays which form an aquitard of very low hydraulic conductivity. Groundwater level data historically gathered from the shallow overburden unit and basal overburden/shallow bedrock aquifer indicate that the presence of the clay aquitard results in hydraulic separation of the two units. A water head varying from 9.5 to 15 m has been historically measured at the location of nested wells.

Based on the groundwater data historically obtained, the shallow overburden unit is generally encountered at depths varying from 0.5 to 4 m bgs across the Site. The groundwater flow within the shallow overburden unit has generally been documented as radiating outwards from the Site. The shallow overburden unit is essentially a perched water table resting on the impermeable un-weathered clay unit.

Underlying the silty clay aquitard, a confined basal overburden/shallow bedrock aquifer was observed within the lower portion of the silty sand till unit and the shallow fractured bedrock. Groundwater quality and water level data historically gathered from monitoring wells screened within the lower silty sand till unit exhibited similar hydrostatic levels and hydrochemical characteristics which are not substantially different from samples obtained from well nests screened solely with the shallow bedrock. Therefore, these two geological units have been generally considered to form one aquifer.

Based on the groundwater data obtained to date, the basal overburden/shallow bedrock aquifer is generally encountered at depths varying from 14 to 17 m bgs. The groundwater flow pattern of this aquifer is generally characterized by a weak gradient and a southerly flow. It should be noted that the groundwater is well below the base of the existing landfill.

Geologic and hydrogeologic features and conditions within the Site Study Area will be identified and described in the EA to provide information at a level of detail sufficient to enable the identification of potential environmental effects that may be expected to occur on groundwater. Previously completed geology and hydrogeology studies will be utilized to characterize the existing environment.

10.1.1.3 Surface Water

The Site is located within the Haldimand Clay Plain, which is characterized by level topography and relatively poor drainage. In November 2013, an interim stormwater management (ISWM) system was installed on-Site. The function of the ISWM system is to capture stormwater runoff from capped portions of the landfill and direct the stormwater to the upgraded temporary dewatering sedimentation (TDS) pond by way of perimeter ditching. Stormwater that has come into contact with waste (i.e. non-capped areas of the landfill) is directed to the leachate collection system within the landfill cell. Drainage from the disturbed areas of the Site (through construction activities as part of landfill upgrades and improvements) is collected and pumped to the upgraded TDS pond located in the north-west corner of the Site, prior to discharge to the road side ditch on the east side of Brooks Road following surface water trigger parameter analysis.

The roadside ditch along the east side of Brooks Road, adjacent to the Site, drains south through a culvert under the abandoned railway corridor and empties into a small, apparently natural, stream channel which is part of the head waters of Norton Creek. Drainage from adjacent lands to the west of Brooks Road also flows in culverts under Brooks Road to provide surface runoff to Norton Creek. Other surface runoff contributions include ditches on lands south of the Site that enter Norton Creek via culverts under the abandoned railway corridor.

Potential effects on the surface water that drains from the Site could include increased temperature, siltation, quantity flow variations and introduction of contaminants originating in waste being deposited at the Site or from vehicles/equipment operating on the Site.

Surface water features and conditions within the Site Study Area will be identified and described in the EA to provide information at a level of detail sufficient to enable the identification of potential environmental effects that may be expected to occur on surface water quantity/flow rates and quality.

10.1.1.4 Terrestrial & Aquatic Environment

Since the Site has been disturbed by landfilling and related activities for more than 40 years, there are few 'original' flora or fauna, or terrestrial or aquatic ecosystems on the Site, with the exception of the southeast portion of the Site, as identified in the Design and Operations Report (CRA, 2002 amended 2003), as approved under the current ECA.

Existing biological features and conditions within the Site Study Area (e.g., terrestrial and aquatic flora and fauna and ecosystems, including species at risk under the federal *Species at Risk Act* and *Ontario Endangered Species Act*) will be identified and described in the EA to provide information at a level of detail sufficient to enable the identification of potential environmental effects on those biological features and conditions.

10.1.2 Built Environment

10.1.2.1 Land Use

Land use for the Site is designated in the Haldimand County Official Plan (2009) as 'Active Waste Disposal'.

10.1.2.2 Design and Operations Considerations

Proposed design and operations, including one or more conceptual designs, supported by appropriate geotechnical information, demonstrating possible Site configurations, will be prepared as part of the EA. Potential effects of Site design and operations for the proposed

undertaking will be identified and described in the EA. While most of this identification and evaluation will occur within the Site Study Area, potential effects of Site design and operations (e.g., Site access/egress, Site configuration, location of berms to mitigate potential visual and noise effects, etc.) within the Local Study Area will also be identified, illustrated on Site conceptual design plans and described.

10.2 Local Study Area

10.2.1 Natural Environment

10.2.1.1 Air Quality, Odour & Noise

The existing landfill Site has resulted in ambient air quality, odour, and noise conditions in the nearby surrounding Local Study Area that have been monitored for at least 10 years and for which significant data exist.

Since air quality, odour and noise at a landfill site are primarily a function of site operations (e.g., odour from open disposal faces prior to the application of daily cover, truck movements, vehicle/equipment operations, including combustion engines and electric motors, back-up beepers, etc.) and since the quantity of waste being brought to the Site will not change, potential effects on air quality, odour, and noise levels are anticipated to be similar to those that have historically occurred.

Current air quality, odour and noise conditions and potential effects on air quality, odour and noise within the Local Study Area will be identified and described.

10.2.1.2 Geology/Hydrogeology

The Local Study Area is located within the Haldimand Clay Plain, which is characterized by level topography and relatively poor drainage.

Geologic and hydrogeologic features and conditions within the Local Study Area will be identified and described to provide information at a level of detail sufficient to enable the identification of potential environmental effects that may be expected to occur on groundwater. Existing monitoring data will be utilized to inform the potential effects assessment.

The Local Study Area geology/hydrogeology will be assessed to determine its potential for groundwater conductivity.

10.2.1.3 Surface Water

The roadside ditch along the east side of Brooks Road adjacent to the Site drains south through a culvert under the abandoned railway corridor and empties into a small, apparently natural stream channel, which is the head waters of Norton Creek. Drainage from adjacent lands to the west of Brooks Road also flows in culverts under Brooks Road to provide surface runoff to Norton Creek. Other surface runoff contributions include ephemeral streams on lands south of the Site that enter Norton Creek via culverts under the abandoned railway corridor.

Potential effects on the water that drains from the Local Study Area could include increased temperature, siltation, quantity flow variations and introduction of contaminants originating in waste being deposited at the Site or from vehicles/equipment operating on the Site.

Surface water features and conditions within the Local Study Area will be identified and described to provide information at a level of detail sufficient to enable the identification of potential environmental effects that may be expected to occur on surface water quantity/flow rates and quality.

10.2.1.4 Terrestrial & Aquatic Environment

To the north of the Site, beyond the former Canada Southern Railway right-of-way (an abandoned railway corridor now owned by the Proponent), is a rural property (also owned by the Proponent) consisting of old fields (i.e., long-term inactive agricultural crop production lands, now undergoing natural regeneration) and forested areas. To the south and east of the Site are privately owned, undeveloped, rural properties used primarily for passive livestock pasture purposes and consisting of a combination of old fields and forested areas. The Site is bounded to the west by Brooks Road. On the west side of Brooks Road is an undeveloped, rural property. This property has historically been stocked for bird hunting purposes and the property itself is characterized primarily by undeveloped fields with occasional bush lots.

Existing biological features and conditions in the Local Study Area (e.g., ecosystems and terrestrial and aquatic flora and fauna, including species at risk under the federal *Species at Risk Act* and Ontario *Endangered Species Act*) will be identified and described to provide information at a level of detail sufficient to enable the identification of potential environmental effects on those biological features and conditions.

10.2.2 Cultural Environment

10.2.2.1 Cultural Heritage and Archaeology

The nearest (and only) historic site listed on the Ontario Heritage Directory for Haldimand County is Ruthven Park, located approximately 3.5 km northwest of the Site (i.e., beyond the Local Study Area).

While the undertaking will involve no excavation or other physical disturbance in the Local Study Area, existing heritage structures could experience potential effects due to truck vibration and dust. Traffic congestion/safety effects for people traveling to and from heritage/archaeology features and conditions could also occur.

Cultural heritage (built and landscapes) and archaeological features and conditions within the Local Study Area will be identified and described in accordance with the requirements of the *Ontario Heritage Act* and its associated regulations, policies and guidelines to provide information at a level of detail sufficient to enable the identification of potential environmental effects that may be expected to occur on those heritage and archaeological features and conditions of importance to Aboriginal and non-Aboriginal communities.

10.2.3 Built Environment

10.2.3.1 Transportation

The Local Study Area includes the following transportation features:

- Highway #3 (Talbot Road)
- Brooks Road, fronting the Site
- Townline Road, north of the Site
- Abandoned railway corridors (one abutting the northern Site boundary, a second approximately 370 m south of the Site)

Potential effects on area roads may include safety impacts arising from truck traffic entering and leaving the Site, noise, air quality (e.g., engine exhaust) and traffic congestion issues.

As the frequency of truck traffic to and from the Site will change due to the proposed amendment to the Sites daily maximum rate of fill, further analysis on potential effects related to traffic will be reviewed in the EA, utilizing current data.

All roads in the Local Study Area will be identified, mapped and described (e.g., including traffic volumes and patterns, safety and access/egress). The EA will also include a description of traffic accessing the Site from area roads.

The nearest airports are: John C. Munro Hamilton International Airport (26 km north of the Site); York Aeroclub (a private airfield used for soaring, 7.5 km north of the Site); and Niagara District Airport (65 km to the northeast of the Site).

10.2.3.2 Land Use

The existing and planned land use component of the EA will include a review of the undertaking in reference to the MOE Land Use Planning Guidelines D-4. The proposed undertaking will also be reviewed in the context of the policies contained in the Provincial Policy Statement (2014) (PPS) to ensure that it has regard for, and is consistent with, the PPS.

10.2.3.2.1 Existing

Existing land uses in the Local Study Area include:

- Active and semi-active Class 3 farmland (primarily cash crops, hay and pasture) in the east, west and south portions of the Local Study Area
- Residential dwellings along Highway 3, south of the Site

Existing land uses (e.g., residential, industrial, commercial, institutional, public open space, etc.) within the Local Study Area will be identified, mapped and described in the EA.

10.2.3.2.2 Planned

Planned land uses (e.g., development applications including Plans of Subdivision/Condominium, Consent applications, Official Plan amendment applications, Zoning By-law amendment applications) within the Local Study Area will be identified, mapped and described in the EA.

10.2.3.3 Agriculture/Soils & Mining

Lands in the Local Study Area include active and semi active Class 3 farmland (primarily cash crops, hay and pasture) in the east, west and south. The potential effects on these features could include odour, litter, dust, noise, traffic-related effects, and groundwater and surface water effects.

There is an abandoned gypsum mine at the corner of Townline Road and Brooks Road, within the Local Study Area.

Agricultural/soils and mining features, conditions and activities in the Local Study Area will be identified and described to provide information at a level of detail sufficient to enable the identification of potential environmental effects that may be expected to occur.

10.2.4 Social-Economic Environment

10.2.4.1 Social Environment

The Local Study Area would be considered a rural setting, including agricultural operations, and residences. Social conditions in the Local Study Area, including number of residences and any social and recreational facilities will be identified and described so as to determine any potential adverse effects on their access, use of property, etc. Potential effects including but not limited to, noise, air quality, odour, litter, traffic access, etc., will be identified and assessed so as to identify any appropriate measures to mitigate those potential effects.

In terms of the visual landscape, the existing Site is completely screened along Brooks Road by a 5 m vegetative buffer. Studies to determine the potential visual effects of the proposed undertaking will be carried out in the EA.

10.2.4.2 Economic Environment

Economic conditions in the Local Study Area will be identified and described so as to determine any potential adverse effects on the economic (i.e., business) aspects of human activities, including, but not limited to commercial/business operations, recreational and social facilities and activities, etc. Potential effects, including, but not limited to noise, air quality (i.e., odour), litter, traffic access, etc., will be identified and assessed so as to identify any appropriate measures to mitigate those potential effects.

10.2.5 Aboriginal Environment

10.2.5.1 Aboriginal Communities

The existing Site is located approximately 16 km east of the Six Nations of the Grand River community at Ohsweken and falls within the Haldimand Tract, a swath of land roughly 9.6 km (6 miles) on either side of the Grand River that was granted to the Six Nations of the Grand River under the Haldimand Proclamation on October 25, 1784.

The Mississaugas of New Credit First Nation is located approximately 18 km to the west of the Site in Hagersville.

Other Aboriginal communities have been contacted due to historic claims/use of the land within the wider Haldimand area.

The EA will include studies to identify potential effects on the use of lands for traditional Aboriginal purposes within the Local Study Area.

Section 11.0 Terms of Reference Consultation Program

11.1 Terms of Reference Consultation

The Proponent completed a consultation program during the preparation of this ToR.

The program consisted of:

- Conduct of ToR initiation communication with MOE (Hamilton District office and MOE Environmental Approvals Branch); the Brooks Road Landfill Site Public Liaison Committee (PLC); Chief and Council of the Six Nations of the Grand River Territory; and Chief and Council of the Mississaugas of New Credit First Nation, during which current conditions at the Site were reviewed and the proposed approach to the ToR and EA were discussed. Questions and comments were invited and responses were provided, to the best of the Proponent's ability.
- Publication of a notice in the Sachem/Glanbrook Gazette announcing the commencement of the ToR and EA processes and the date, place, time and subject matter for a ToR Public Open House (OH) (#1).
- Direct distribution of letters to the following Aboriginal communities announcing the commencement of the ToR and EA processes; inviting participation in the processes; advising of the date, place, time and subject matter for ToR OH #1; and inviting attendance at OH #1:
  - Métis Nation of Ontario (Head Office, Niagara Region Métis Council and Hamilton-Wentworth Métis Council)
  - Six Nations of the Grand River Territory
  - Haudenosaunee Development Institute (HDI)
  - Haudenosaunee Confederacy Chiefs Council
  - Mississaugas of the New Credit First Nation

- Direct distribution of letters to the following stakeholder groups announcing the commencement of the ToR and EA processes; advising of the date, place, time and subject matter for ToR OH #1; and inviting attendance at OH #1:
  - Members of the PLC for the existing landfill
  - Members of the public who have previously expressed an interest in the existing landfill
- Direct distribution of letters and/or e-mails to the following government review team (GRT) agencies announcing the commencement of the ToR and EA processes; advising of the date, place, time and subject matter for ToR OH #1; and inviting attendance at OH #1:
  - Haldimand County Mayor, Councillors, and relevant staff (County)
  - Grand River Conservation Authority (GRCA)
  - Niagara Peninsula Conservation Authority (NPCA)
  - Niagara Escarpment Commission
  - MOE
  - Ministry of Aboriginal Affairs (MAA)
  - Ministry of Agriculture & Food and the Ministry of Rural Affairs (OMAFRA)
  - Ministry of Tourism, Culture and Sport (MTCS)
  - Ministry of Education
  - Ontario Provincial Police (OPP)
  - Ministry of Infrastructure
  - Ministry of Health and Long-Term Care (MHLTC)
  - Ministry of Municipal Affairs and Housing (MMAH)
  - Ministry of Natural Resources (MNR)
  - MTO
  - Canadian Environmental Assessment Agency (CEAA)
  - Aboriginal Affairs and Northern Development Canada (AANDC)
  - Environment Canada (EC)
  - Fisheries and Oceans Canada (DFO)
  - Health Canada (HC)
  - Transport Canada (TC)
- Distribution of the Notice of Commencement and ToR OH #1 advertisement via unaddressed Canada Post mail-drop to 2,069 addresses within the N0A postal code, covering the communities of Cayuga and Canfield.

- Conduct of ToR OH #1, in Cayuga. The purpose of the OH was to provide information and invite questions/comments on the proposed undertaking.
- Email invitation to PLC members and conduct of ToR PLC meeting #1 to discuss the current Site operations as well as the ToR.
- Conduct of ToR GRT meeting #1 to discuss the ToR.
- Distribution by regular mail and/or e-mail of the draft ToR to the following GRT agencies:
  - County
  - GRCA
  - NPCA
  - MOE
  - OMAFRA
  - MTCS
  - Ministry of Education
  - OPP
  - Ministry of Infrastructure MHLTC
  - MMAH
  - MNR
  - MTO
  - CEAA
  - AANDC
  - EC
  - DFO
  - HC
  - TC
- Distribution by regular mail and/or e-mail of the draft ToR to the following Aboriginal communities:
  - Métis Nation of Ontario (Head Office, Niagara Region Métis Council and Hamilton-Wentworth Métis Council)
  - Six Nations of the Grand River Territory
  - HDI
  - Haudenosaunee Confederacy Chiefs Council
  - Mississaugas of the New Credit First Nation
- Distribution by e-mail of the draft ToR to members of the PLC.

- Direct distribution of letters announcing the availability of the draft ToR to members of the public who have previously expressed an interest in the existing landfill.
- Availability of copies of draft ToR on the Proponent's website and in printed form at Haldimand County offices in Cayuga, Caledonia and Hagersville; the MOE Hamilton District office; and the Cayuga public library.
- Publication of a notice in the Sachem/Glanbrook Gazette announcing the availability of the draft ToR for review and comment; locations where the draft ToR may be viewed; and the comment period end date.
- Conduct of follow-up communication with MOE and Aboriginal communities to engage in the Terms of Reference process.
- Revision and formal submission of the ToR to the MOE on April 25, 2014, taking into consideration all comments received from agencies, Aboriginal communities, members of the public, and other stakeholders.
- Publication of a notice in the Sachem/Glanbrook Gazette announcing the submission of the ToR; posting of the notice on the Proponent's website; deposition of copies of the notice at locations accessible to the public, such as the Haldimand County office, the Cayuga public library, and the MOE Regional and District offices; and distribution by mail and/or email of the notice to members of the GRT, Aboriginal communities, PLC, individuals on the project mailing list, neighbours, and 2,069 residents within the N0A postal code.
- Distribution of the ToR to the PLC, GRT and Aboriginal communities.
- Availability of copies of ToR on the Proponent's website and in printed form at the MOE Environmental Approvals Access & Service Integration Branch; Haldimand County offices; the MOE Hamilton District office; and the Cayuga public library.

Copies of documentation, including a list of comments/concerns made during preparation of the ToR (and the Proponent's responses to those comments/concerns) pertaining to the public, agency and Aboriginal community consultation conducted during preparation of this ToR may be found in the document 'Record of Consultation' for the ToR. That document accompanies and supports this ToR.

In accordance with Section 4.3.1 of the Code of Practice *Preparing and Reviewing Terms of Reference for Environmental Assessments in Ontario* (MOE, January 2014) the Record of Consultation for the ToR includes information about the consultation process, including copies of all correspondence by the Proponent and its consultants sent to and received from members of the public, Aboriginal communities, government agencies, other interested parties; and records of public information events. The Record of Consultation includes copies of all comments, questions, issues and concerns expressed by members of the public, Aboriginal communities, government agencies, and other interested parties; how those comments,

questions, issues and concern were responded to by the Proponent and its consultants; and how the draft proposed ToR was affected (i.e., amended or not) by those comments, questions, issues and concerns. A rationale for any comments, questions, issues or concerns that did not result in changes to the draft ToR is also provided.

11.2 EA Consultation Plan

Preparation of the EA will include a consultation plan based on the following principles:

(a) EA consultation will be accessible and inclusive, making all reasonable efforts to ensure that potentially-affected or interested parties have full information made available to them and are given the opportunity to make their views known.

(b) EA consultation will be transparent by documenting the consultation process that is carried out for the development of the EA so that the process can be understood and traced.

(c) EA consultation will be responsive by providing opportunities for interested parties to comment on the EA at key stages and by ensuring that such comments are addressed in the EA.

(d) EA consultation will be meaningful by identifying how comments and concerns have been considered throughout the EA process.

(e) EA consultation will be flexible by allowing response to new issues that emerge as the EA proceeds.

The proposed EA consultation plan will include, but not be limited to, the activities described below. The EA consultation plan described here is considered preliminary and will be finalized during the EA.

1. Publication of a notice in the Sachem/Glanbrook Gazette announcing the approval of the ToR, commencement of the EA; posting of the notice on the Proponent's website; deposition of copies of the notice at locations accessible to the public, such as the Haldimand County office, the Cayuga public library, and the MOE Regional and District offices; and distribution by mail and/or email of the notice to members of the GRT, Aboriginal communities, PLC, individuals on the project mailing list, neighbours, and 2,069 residents within the N0A postal code.
2. Conduct of EA PLC meeting #1 to discuss the existing Site; the approved ToR; the existing environment; draft alternative methods (including evaluation criteria); potential environmental effects; the assessment of potential effects; the identification of mitigation measures and net effects; and the preferred alternative method.

3. Conduct of EA GRT meeting #1 to discuss the existing Site; the approved ToR; the existing environment; draft alternative methods (including evaluation criteria); potential environmental effects; the assessment of potential effects; the identification of mitigation measures and net effects; and the preferred alternative method.
4. Publication of a notice in the Sachem/Glanbrook Gazette announcing the date, place, time and subject matter for EA OH #1; posting of the notice on the Proponent's website; deposition of copies of the notice at locations accessible to the public, such as the Haldimand County office, the Cayuga public library, and the MOE Regional and District offices; and distribution by mail and/or email of the invitation to members of the GRT, Aboriginal communities, PLC, individuals on the project mailing list, neighbours, and 2,069 residents within the N0A postal code.
5. Conduct of EA OH and separate Aboriginal community consultation events, if requested, at a local facility to present information on the existing environment, draft alternative methods (including evaluation criteria), potential environmental effects, the assessment of potential effects, the identification of mitigation measures and net effects, and the preferred alternative method; and to invite questions and comments on the EA. Project team members will be in attendance to answer any questions pertaining to the EA.
6. Comments received from members of the public, Aboriginal communities, agencies, and other interested stakeholders throughout the EA process will be considered in preparation of the draft EA Report. Comments may be received at the EA OH or may be directed to the Proponent or its consultant at any time throughout the EA process by means of telephone, email, letter or fax.
7. Publication of a notice in the Sachem/Glanbrook Gazette announcing that the draft EA Report has been completed and is available for review and comments; where copies of the draft EA Report are available for viewing; how public comments can be made; and the deadline for comments and who to address them to.
8. Distribution of a similar notice by mail and/or email to members of the GRT, Aboriginal communities, PLC, individuals on the project mailing list, neighbours, and 2,069 residents within the N0A postal code.
9. Posting of a similar notice on the Proponent's website, the Cayuga website, and a printed copy of the newspaper notice at the Municipal office for the duration of the comment period on the draft EA Report.
10. Copies of the draft EA Report, in printed or electronic format, will be sent to several locations accessible by the public for viewing, including:
    - Haldimand County office
    - Haldimand County website
    - Proponent's website

- MOE Hamilton District office
- MOE Hamilton Regional office
- Aboriginal community offices, including Six Nations of the Grand River Territory, Mississaugas of New Credit First Nation, HDI, Haudenosaunee Confederacy Chiefs Council, Métis Nation of Ontario, Hamilton-Wentworth Métis Council and the Niagara Region Métis Council

11. All GRT agencies and Aboriginal communities identified on the contact list will receive a printed or electronic copy, based on their confirmed preference, of the draft EA Report along with an individually-addressed letter. A preliminary list of review agencies and Aboriginal communities includes:

- County
- GRCA
- NPCA
- MOE
- MAA
- OMAFRA
- MTCS
- Ministry of Education
- OPP
- Ministry of Infrastructure
- MHLTC
- MMAH
- MNR
- MTO
- CEAA
- AANDC
- EC
- DFO
- HC
- TC
- Métis Nation of Ontario (Head Office, Niagara Region Métis Council and Hamilton-Wentworth Métis Council)
- Six Nations of the Grand River Territory

- HDI
- Haudenosaunee Confederacy Chiefs Council
- Mississaugas of the New Credit First Nation

12. Comments received from members of the public, Aboriginal communities, agencies, and other interested stakeholders on the draft EA Report will be considered in preparation of the final EA Report. Comments on the draft EA Report may be directed to the Proponent or its consultant at any time by means of telephone, email, letter or fax within the comment period.

13. Conduct of EA PLC meeting #2 to discuss the existing Site and draft EA Report during the draft EA Report review period.

14. Conduct of EA GRT meeting #2 to discuss the existing Site and draft EA Report during the draft EA Report review period.

15. After the draft EA Report comment period, the report will be revised, if and as necessary, to reflect comments and concerns identified by the public, Aboriginal communities, agencies and other interested stakeholders in order to produce the final EA Report. An updated stakeholder list (including members of the public, Aboriginal communities, agencies, and other interested stakeholders) will be prepared following completion of the initial round of consultation for the draft EA Report. This revised list will be provided to the MOE for its use in the formal EA Review.

16. Direct in-person contact or via email, telephone, fax and/or regular post with the following Aboriginal communities and agencies to provide and invite comment on all draft documents disseminated for review, as described in this ToR:

    - Aboriginal communities, including the Six Nations of the Grand River Territory, Mississaugas of New Credit First Nation, HDI, Haudenosaunee Confederacy Chiefs Council, the Métis Nation of Ontario, the Niagara Region Métis Council and the Hamilton-Wentworth Métis Council
    - AANDC
    - MAA

17. Preparation of an EA 'Record of Consultation'. The Record of Consultation will include information about the EA consultation program, including copies of all letters, e-mails, faxes and other correspondence by the Proponent and its consultants sent to and received from members of the public, government agencies, other interested parties and Aboriginal communities; records of public information events, including information about the event locales and layout/programs, copies of materials provided at the events, sign-in sheets, comment sheets, news media communications, notices published, etc. The Record of Consultation will include copies of all comments, questions, issues and concerns expressed by members of the public, government

agencies, other interested parties and Aboriginal communities, how those comments, questions, issues and concern were responded to by the Proponent and its consultants, and how the EA process and the draft EA Report were affected (i.e., amended or not) by those comments, questions, issues and concerns. A rationale as to why any comments, questions, issues or concerns did not result in changes to the EA process or draft EA Report will also be provided.

18. A description of the consultation that was undertaken during the EA will be included in the EA Report. The description will include the following:

- A description of the consultation activities that took place
- Identification of all persons consulted during the preparation of the EA, how they were notified, and how their comments and/or concerns were obtained and addressed
- A description of how interested Aboriginal communities were identified and how they were consulted, and how their comments and/or concerns were obtained and addressed
- A summary of the comments and concerns raised during the consultation activities and during the preparation of the EA
- A description of the Proponent's response to comments and how concerns were considered in the preparation of the EA
- A description of any outstanding concerns

11.3 Conflict Resolution

The Proponent is committed (through implementation of the EA Consultation Program) to ensuring that the proposed vertical capacity expansion resulting from this EA process is in the best interest and reflects the values and priorities of the area residents, the general public, Aboriginal communities, government agencies and other interested stakeholders. The Proponent is committed to working with all interested parties to address and resolve concerns to the greatest extent possible.

Section 12.0 Environmental Assessment Work Plan

The proposed work plan presenting the scope of work required to complete the EA, including as attachments individual work plans for each technical discipline, is found in **Appendix C**. The draft work plan includes the scope of technical studies for each of the environmental components, effects assessment, mitigation, EA documentation and submission. The following tasks are outlined in the draft work plan:

- **Task 1** – Identify Alternative Methods for Vertical Expansion
- **Task 2** – Describe the Environment Potentially Affected
- **Task 3** – Identify Mitigation Measures to be Incorporated in the Design of each Alternative
- **Task 4** – Predict Environmental Effects for each Alternative
- **Task 5** – Refine Mitigation Measures and Determine Net Effects
- **Task 6** – Comparatively Evaluate Alternatives
- **Task 7** – Identify a Preferred Alternative
- **Task 8** – Prepare EA Documentation
- **Task 9** – Submit Draft EA Report for Comment
- **Task 10** – Revise & Submit Final EA Report to the MOE

The work plan will be finalized during the initial stage of the EA, following approval of the ToR by the Minister of the Environment.

The following is a general summary of the key tasks to be carried out in completing the EA:

- Distribution of information about the proposed EA via publication of notices in the Sachem / Glanbrook Gazette; on the Proponent's website; via e-mail and regular mail; placement and/or posting of information flyers at areas/facilities normally accessed by the public, such as the Haldimand County office, post office outlets and libraries. Information distributed will also contain details about the purpose, date, place and time of the EA open house.
- Conduct of EA studies and evaluations to describe the existing environment (planned in consultation with the appropriate approving ministry or agency), including, but not limited to:
  - Air quality, odour and noise conditions
    - Concentrations of indicator compounds, odour emissions, and noise levels in the Site and Local Study areas at a level of detail sufficient to enable the identification of potential environmental effects that may be expected to occur.
  - Geologic and hydrogeologic features and conditions
    - Geologic and hydrogeologic features and conditions within the Local Study Area will be identified and described to provide information at a level of detail sufficient to enable the identification of potential environmental effects that may be expected to occur on groundwater. Past geology and hydrogeology studies will be reviewed and utilized.

- Surface water features and conditions
    - Surface water features and conditions within the Local Study Area will be identified and described to provide information at a level of detail sufficient to enable the identification of potential environmental effects that may be expected to occur on surface water quantity/flow rates and quality.
- Terrestrial & aquatic ecosystem features and conditions
    - Existing biological features and conditions within the Site and Local Study Areas (e.g., terrestrial and aquatic flora and fauna and ecosystems, including species at risk under the federal *Species at Risk Act* and Ontario *Endangered Species Act*) will be identified and described in the EA to provide information at a level of detail sufficient to enable the identification of potential environmental effects on those biological features and conditions.
- Significant archaeological and heritage features and conditions
    - Cultural heritage and archaeological features and conditions in the Local Study Area will be identified and described in accordance with the requirements of the Ontario Heritage Act and its associated regulations, policies and guidelines, to provide information at a level of detail sufficient to enable the identification of potential environmental effects that may be expected to occur on those heritage and archaeological features and conditions of importance to Aboriginal and non-Aboriginal communities. Aboriginal communities on the project mailing list will be contacted and offered to observe and / or participate in any archaeological and / or cultural heritage assessments carried out as part of the EA
- Transportation features (roads/routes) and conditions
    - All roads in the Local Study Area will be identified, mapped and described (e.g., including traffic volumes and patterns, safety and access/egress). The EA will also include a description of traffic accessing the Site from area roads.
- Existing and planned land use
    - Existing land uses (e.g., residential, industrial, commercial, institutional, public open space, etc.) within the Local Study Area will be identified, mapped and described in the EA. The existing and planned land use component of the EA will include a review of the undertaking in reference to the MOE Land Use Planning Guidelines D-4 and the PPS.
- Agriculture/soils and mining features, conditions and activities
    - Agricultural/soils and mining features, conditions and activities in the Local Study Area will be identified and described to provide information at a level of detail

sufficient to enable the identification of potential environmental effects that may be expected to occur.

- Design and operations considerations (i.e., conceptual design)
  - Proposed design and operations, including one or more conceptual designs, supported by appropriate geotechnical information, demonstrating possible Site configurations, will be prepared as part of the EA. Potential effects of Site design and operations for the proposed undertaking will be identified and described in the EA. While most of this identification and evaluation will occur within the Site Study Area, potential effects of Site design and operations (e.g., Site access/egress, Site configuration, location of berms to mitigate potential visual and noise effects, etc.) within the Local Study Area will also be identified, illustrated on Site conceptual design plans and described.
- Socio-economic features and conditions
  - Social conditions in the Local Study Area, including number of residences and any social and recreational facilities will be identified and described so as to determine any potential adverse effects on their access, use, etc.
  - The existing visual landscape will be described to allow for the identification of potential visual effects associated with the proposed undertaking.
  - Economic conditions in the Local Study Area will be identified and described so as to determine any potential adverse effects on the economic (i.e., business) aspects of human activities, including, but not limited to commercial/business operations, recreational and social facilities and activities, etc.
- Use of lands for traditional Aboriginal purposes
  - The traditional uses of the lands within the Local Study Area by Aboriginal communities will be documented in the EA.

- Identification of potential effects, mitigation measures and net effects of the alternative methods and the proposed undertaking, including a statement of advantages and disadvantages to the environment. Net effects are those effects that may remain after application of mitigation measures.
- Development of a strategy and schedule for completing an EA Compliance Monitoring Plan.
- Preparation of a draft EA report, including any maps or documents as required under the EA Act and/or based on provisions of Ontario Regulation 334 under the EA Act.
- Distribution of information about the draft EA Report via publication of notices in the Sachem/Glanbrook Gazette; on the Proponent and Haldimand County websites; e-mail and regular mail; and placement and/or posting of information flyers at areas/facilities normally accessed by the public, such as the Haldimand County office and libraries, within the EA

Study Area. Information distributed will also contain details about the purpose, date, place and time of EA OH.

- Conduct of EA OH and separate consultation events for Aboriginal communities, if requested, to provide updated information on the EA work to date; and to present information and receive comments on the EA (including the purpose, work plan/process/progress of EA, preliminary EA information, evaluation, ranking, criteria and weighting used to analyze and assess the alternatives, etc.).
- Compilation of the results of OH and related public, agency and Aboriginal community comments/questions for inclusion in the EA Report.
- Finalization of the EA Report, including any maps or documents as required under the EA Act and/or based on provisions of Ontario Regulation 334 under the EA Act.
- Submission of the final EA Report to MOE.
- Preparation of the Proponent's response to the MOE review.

Section 13.0 Environmental Assessment Commitments and Monitoring

A strategy and schedule for completing an EA Compliance Monitoring Plan will be developed and included in the EA.

The EA Compliance Monitoring Plan will cover all phases of the implementation of the undertaking (e.g., planning, detailed design, tendering, construction, operation, closure and decommissioning) and will provide for an annual review and reporting to MOE of the following key areas:

- Any conditions applied by the Minister in approving the EA undertaking.
- Action on commitments made by the Proponent during preparation of the EA. The EA will include a list of specific commitments made during preparation of the EA, including, but not limited to: impact management measures (such as mitigation measures); additional works and studies to be carried out; monitoring; public consultation and contingency planning.
- Documentation and correspondence.
- Results of environmental effects monitoring and a comparison of those actual effects with the potential effects predicted during preparation of the EA and, where actual effects exceed predicted effects, an assessment, in consultation with MOE, of whether additional mitigation measures may be needed.
- Implementation of additional mitigation measures, as necessary.

Section 14.0 Other Approvals

In addition to approval of the EA under the *EA Act*, applications will be made, as necessary, under a number of provincial statutes for approval to implement the proposed undertaking, including but not being limited to:

- *Environmental Protection Act*
- *Ontario Water Resources Act*
- *Conservation Authorities Act*
- *Planning Act*

During the preparation of the EA, any federal agencies that may have interests applicable to the proposed undertaking will be identified by way of consultations with relevant federal agencies and any necessary approvals under federal statutes will be identified.

While the Proponent's proposed undertaking is subject to the requirements of the *EA Act,* it is believed that the *Canadian Environmental Assessment Act, 2012* (*CEAA 2012*) will not apply. Having reviewed the Regulations Designating Physical Activities under *CEAA 2012*, the proposed undertaking does not appear on the list of Activities subject to *CEAA 2012*. This will be confirmed early in the EA with the Canadian Environmental Assessment Agency.

A specific list of other approvals required for the undertaking will be provided in the EA.

Section 15.0 Flexibility of this Terms of Reference

If approved by the Minister of the Environment, this ToR will provide the framework for preparing the EA Report and will serve as a benchmark for reviewing the EA Report.

It is understood that, given the nature of the ToR, it is not intended to present every detail of all the activities that will occur when preparing the EA. It is therefore possible that, in carrying out the work contemplated by this ToR, it may become evident that certain modifications to this ToR may be necessary. It is important to note that the commitments described in this ToR are a minimum that must be met, and that more may be required, if necessary. It is envisioned that such changes may include:

- Delineation of the Local Study Area to suit the particular requirements of each environmental component. Each technical discipline will modify the Local Study Area, as required
- Requirements for additional or expanded evaluations, studies or work, (e.g., in the areas referred to in Section 10.0), to ensure that the nature and magnitude of potential positive and negative environmental effects are fully and accurately identified.
- Changes in methodology of the studies referred to in Section 10.0. This may be in response to studies that showed environmental effects to be greater or less than previously estimated.
- Modifications to the consultation program.
- Any other modifications required or available through changes to Acts or Regulations.

This list is not intended to be exhaustive. Rather, it sets out, by example, the types of changes that will be considered routine and/or that are likely to result in insignificant effects on the environment, and therefore can be accommodated within the framework of the approved ToR.

In the event of uncertainty as to whether a proposed change should be considered routine or of note, the MOE will be consulted through the MOE EA project officer.

Section 16.0 Summary

This ToR provides the framework for a process to be followed by the Proponent for preparation of an Individual EA of the vertical expansion of the capacity of the Site so that it will be capable of receiving post-diversion solid non-hazardous waste over a 5 to 7 year planning period, and to change the Site's rate of fill to provide for an annual average of 140,000 tonnes received at the Site. The final description of the undertaking will be included in the EA Report.

The Proponent of the EA is Brooks Road Environmental, which currently owns and operates, and will continue to own and operate, the Brooks Road Landfill Site.

The Proponent has successfully remediated the Site's previous hazardous waste issues, and hopes to continue operation of the Site for the duration of the planning period under extensive and rigorous environmental controls and generally improved Site management.

This ToR outlines the basis for conduct of a program of consultation with the MOE and other provincial and federal government agencies, the public, Aboriginal communities and other interested persons.

The 'Record of Consultation' for the ToR accompanies and supports, but is not part of, this ToR.

Section 17.0 References

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Haldimand County. Haldimand County Official Plan, 2009. Available at http://www.haldimandcounty.on.ca/OurCounty.aspx?id=38

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Office of the Auditor General of Ontario. 2010 Annual Report - Section 3.09: Non-hazardous Waste Disposal & Diversion. Available at http://www.auditor.on.ca/en/reports_en/en10/309en10.pdf.

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RIS International Ltd. The Private Sector IC&I Waste Management System in Ontario, 2005. Available at http://www.solidwastemag.com/posteddocuments/pdfs/2005/aprmay/iciprivatesectorwastestudy.pdf.

Statistics Canada. Waste Management Industry Survey, 2008. Available at http://www.statcan.gc.ca/pub/16f0023x/16f0023x2010001-eng.pdf.

Appendix A

Glossary of Terms

Glossary of Terms

Acronym	Definition
AANDC	Aboriginal Affairs and Northern Development Canada
C of A	Certificate of Approval
C&D	Construction and Demolition
CEAA	Canadian Environmental Assessment Act
D&O	Design & Operations
DFO	Fisheries and Oceans Canada
EA	Environmental Assessment
EA Act	Ontario *Environmental Assessment Act*
EC	Environment Canada
ECA	Environmental Compliance Approval
EPA	*Environmental Protection Act*
EPR	Extended Producer Responsibility
GHG	Greenhouse Gases
GRT	Government Review Team
HC	Health Canada
IC&I	Industrial Commercial and Institutional
ISWM	Interim Stormwater Management
MAA	Ontario Ministry of Aboriginal Affairs
MMAH	Ontario Ministry of Municipal Affairs and Housing
MNR	Ontario Ministry of Natural Resources
MOE	Ontario Ministry of the Environment
MTCS	Ministry of Tourism, Culture and Sport
MTO	Ontario Ministry of Transportation
OH	Open House
OLA	Original Landfill Area
OMAFRA	Ontario Ministry of Agriculture, Food & Rural Affairs
OPP	Ontario Provincial Police
PLC	Public Liaison Committee
PPS	Provincial Policy Statement
PSW	Provincially Significant Wetland
PWQMN	Provincial Water Quality Monitoring Network
SAR	Species at Risk
SBR	Sequencing Batch Reactor
TC	Transport Canada
TDS	Temporary Dewatering Sedimentation
ToR	Terms of Reference
WDA	Waste Diversion Act
WRA	Waste Reduction Act

Unit	Definition
ha	hectare
km	kilometre
L	litre
m	metre
m^3	cubic metres
m bgs	metres below ground surface

Term	Definition
Approval	Permission granted by an authorized individual or organization for an undertaking to proceed. This may be in the form of program approval, certificate of approval or provisional certificate of approval
Certificate of Approval	A licence or permit issued by the Ministry of the Environment for the operation of a waste management site/facility (now referred to as an Environmental Compliance Approval)
Construction and demolition (C&D) waste	Solid waste produced in the course of residential, commercial, industrial or institutional building construction, demolition or renovation (e.g., lumber, brick, concrete, plaster, glass, stone, drywall, etc.)
Cover material	Material used to cover the waste in the disposal cells during or following landfilling operations. May be daily, intermediate or final
Design and operations (D&O) plan	A document required for obtaining a Certificate of Approval, which describes in detail the function, elements or features of the landfill site/facility, and how a landfill site/facility would function including its monitoring and control/management systems
Design capacity (Total Disposal Volume)	The maximum total volume of air space available for disposal of waste at a landfill site for a particular design (typically in m^3); includes both waste and daily cover materials, but excludes the final cover
Environment	As defined by the Environmental Assessment Act, environment means: (a) air, land or water, (b) plant and animal life, including human life, (c) the social, economic and cultural conditions that influence the life of humans or a community, (d) any building, structure, machine or other device or thing made by humans, (e) any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from human activities, or (f) any part or combination of the foregoing and the interrelationships between any two or more of them (ecosystem approach)
Environmental Assessment	A systematic planning process that is conducted in accordance with applicable laws or regulations aimed at assessing the effects of a proposed undertaking on the environment Evaluation criteria Evaluation criteria are considerations or factors taken into account in assessing the advantages and disadvantages of various alternatives being considered
Hazardous waste	Any residual hazardous materials which by their nature are potentially hazardous to human health and/or the environment, as well as any materials, wastes or objects assimilated to a hazardous material. Hazardous waste is defined by Ontario Regulation 347 and may be explosive, gaseous, flammable, toxic, radioactive, corrosive, combustive or leachable
Indicators	Indicators are specific characteristics of the evaluation criteria that can be measured or determined in some way, as opposed to the actual criteria, which are fairly general
Industrial, commercial and institutional (IC&I) wastes	Wastes originating from the industrial, commercial and institutional sectors Landfill gas The gases produced from the wastes disposed in a landfill; the main constituents are typically carbon dioxide and methane, with small amounts of other organic and odour-causing compounds
Landfill site	An approved engineered site/facility used for the final disposal of waste Leachate Liquid that drains from solid waste in a landfill and which contains dissolved, suspended and/or microbial contaminants from the breakdown of this waste
Non-hazardous waste	Non-hazardous wastes includes all solid waste that does not meet the definition of hazardous waste and includes designated wastes such as asbestos waste
Proponent	A person who: (a) carries out or proposes to carry out an undertaking, or (b) is the owner or person having charge, management or control of an undertaking Service life The period of time during which the components of a properly designed and maintained engineered facility will function and perform as designed
Site life	The period of time during which the landfill can continue to accept wastes

Appendix B

Evaluation Criteria

Evaluation Criteria

This appendix to the proposed Terms of Reference (ToR) for the Brooks Road Landfill Site Vertical Capacity Expansion Environmental Assessment (EA) describes the evaluation criteria, indicators and data sources that are proposed to assess the alternative methods of carrying out the project. The outcome of the EA, which will be carried out in accordance with the approved ToR, will include the identification of a preferred alternative method of carrying out the project.

Table B-1 presents the set of evaluation criteria proposed for the EA, which may be broadly grouped into Natural, Cultural, Built, and Socio-economic categories. Each criterion includes a statement of rationale, indicators that will be used for measurement and data sources.

Table B-1: Proposed Evaluation Criteria, Rationale, Indicators and Data Sources for the EA

	Environmental Component	Evaluation Criteria	Study Area	Rationale	Indicators	Data Sources
NATURAL	**Atmospheric Environment**	Air quality	Site & Local Study Areas	Waste disposal facilities and associated operations can produce gases containing contaminants that degrade air quality if they are emitted to the atmosphere. Construction and operation activities at a waste disposal facility may also result in changes to the levels of particulates (dust) in the air.	• Predicted off-Site point of impingement concentrations (µg/m3) of indicator compounds • Number of off-Site receptors potentially affected (residential properties, public facilities, businesses, and institutions)	• Environment Canada or Ontario Ministry of the Environment hourly meteorological data and climate normals • Site ambient air monitoring, continuous emissions monitoring data • Applicable MOE guidelines and technical standards (i.e., O.Reg. 419/05 Schedule 2, Schedule 3 and Schedule 6 Standards) • Aerial photographic mapping and field reconnaissance • Off-Site receptors confirmed on recent mapping • Emissions Summary and Dispersion Modelling (ESDM) reports • Available background ambient air data • Waste materials and leachate characterization and sampling data • Proposed facility characteristics • Landfill design and operation data

	Environmental Component	Evaluation Criteria	Study Area	Rationale	Indicators	Data Sources
		Noise	Site & Local Study Areas	The cumulative environmental noise from the existing facility and the proposed vertical capacity landfill expansion may result in increased noise impacts off-site	• Predicted off-Site noise level • Number of off-Site receptors potentially affected (residential properties, public facilities, businesses, and institutions).	• Site-specific equipment noise measurements • Manufacturer provided noise specifications • Applicable MOE guidelines and technical standards (Noise guidelines for landfill sites, Oct, 1998; NPC-300, August, 2013; NPC-233). • Aerial photographic mapping and field reconnaissance to confirm off-Site receptors • Land Use Zoning Plans • Acoustic Assessment Reports • Proposed facility operational characteristics and scenarios • Landfill design and operations data
		Odour	Site & Local Study Areas	The proposed vertical expansion may result in changes in the degree and frequency of odours from the Site.	• Predicted off-Site odour concentrations (μg /m^3 and odour units) • Number of off-Site receptors potentially affected (residential properties, public facilities, businesses and institutions).	• Published odour studies for similar source types • Site specific odour source data and/or ambient odour monitoring data • Environment Canada or Ontario Ministry of the Environment hourly meteorological data and climate normals • Applicable MOE guidelines and technical standards (i.e., O.Reg. 419/05 Schedule 2, Schedule 3 and Schedule 6 Standards) • Site odour complaints history • Aerial photographic mapping and field reconnaissance • Off-site receptors confirmed on recent mapping • Odour assessment reports • Waste materials and leachate characterization and sampling data • Proposed facility characteristics • Landfill design and operation data

	Environmental Component	Evaluation Criteria	Study Area	Rationale	Indicators	Data Sources
	Geology & Hydrogeology	Groundwater quality	Site & Local Study Areas	Contaminants associated with waste disposal sites have the potential to enter the groundwater and impact off-Site groundwater.	• Predicted effects to groundwater quality at property boundaries and off-Site	• Hydrogeological and geotechnical studies • Water well records • Determination of water well users in the area • Annual Site Monitoring Reports • Proposed leachate control concept designs • Environment Canada Canadian Climate Normals • Leachate generation assessment • Provincial Water Quality Monitoring Network (PWQMN)
		Groundwater flow	Site & Local Study Areas	Physical works may disrupt natural groundwater flows.	• Predicted groundwater flow characteristics	• Hydrogeological and geotechnical studies • Water well records • Determination of water well users in the area • Annual Site Monitoring Reports
	Surface Water Resources	Surface water quality	Site & Local Study Areas	Contaminants associated with waste disposal sites have the potential to seep or runoff into surface water.	• Predicted effects on surface water quality on-site and off-site	• Topographic maps • Air photos • Facility layout, drainage maps and figures • Proposed on-site stormwater management concept designs for vertical expansion alternatives • Existing leachate management system • Annual monitoring reports • Interviews and discussions with staff, MOE, Conservation Authorities, and Environment Canada • Published water quality and flow information from MOE, Environment Canada and conservation authorities • Site reconnaissance • PWQMN
		Surface water quantity	Site & Local Study Areas	The construction of physical works may disrupt natural surface drainage patterns and may alter runoff and peak flows. The presence of the facility may also affect base flow to surface water.	• Change in drainage areas • Predicted occurrence and degree of off-site effects	

	Environmental Component	Evaluation Criteria	Study Area	Rationale	Indicators	Data Sources
	Terrestrial & Aquatic Environment	Terrestrial ecosystems	Site & Local Study Areas	Continued operation of the waste disposal facility may disturb the functioning of natural terrestrial habitats and vegetation, including rare, threatened or endangered species.	• Predicted impact on vegetation communities • Predicted impact on wildlife habitat • Predicted impact on vegetation and wildlife including rare, threatened or endangered species	• Site surveys • Published data sources
		Aquatic ecosystems	Site & Local Study Areas	Continued operation of the waste disposal facility may disturb the functioning of natural aquatic habitats and species, including rare, threatened or endangered species.	• Predicted changes in water quality • Predicted impact on aquatic habitat • Predicted impact on aquatic biota	• Site surveys • Published data sources
CULTURAL	**Archaeology and Cultural Heritage**	Cultural and heritage resources	Local Study Area	The use and enjoyment of cultural resources may also be disturbed by the ongoing operation.	• Cultural and heritage resources (built and landscapes) in the Local Study Area and predicted impacts on them	• Published data sources • Cultural/heritage assessments • Commemorative statements
		Archaeological resources	Local Study Area	Archaeological resources are nonrenewable cultural resources that can be destroyed by the construction and operation of a waste disposal facility.	• Archaeological resources in the Local Study Area and predicted impacts on them	• Published data sources • Stage 1 and Stage 2 (possibly Stage 3 and 4) archaeological assessments • Commemorative statements
BUILT	**Transportation**	Effects on airport operations	Local Study Area	There is the potential for bird strikes for aircraft using nearby airports and airfields.	• Bird strike hazard to aircraft in Local Study Area	• Transport Canada data sources
		Effects from truck transportation along access roads	Local Study Area	Truck traffic associated with the continued operations of the landfill may adversely affect residents, business, institutions and movement of farm vehicles in the local study area.	• Potential for traffic collisions • Disturbance to traffic operations • Potential road improvement requirements	• Transport Canada data sources • Previous traffic study

	Environmental Component	Evaluation Criteria	Study Area	Rationale	Indicators	Data Sources
	Land Use	Effects on current and planned future land uses	Local Study Area	The continued operation of the landfill may not be fully compatible with certain current and/or planned future land uses in the Local Study Area. Current land uses (e.g., agriculture) may be disturbed by the continued operation of the landfill. Waste disposal facilities can potentially affect the use and enjoyment of recreational resources in the vicinity of the site.	• Current land use • Planned future land use • Type(s) and proximity of off-site recreational resources within 500 m of landfill footprint potentially affected • Type(s) and proximity of off-site sensitive land uses (i.e., dwellings, churches, cemeteries, parks) within 500 m of landfill footprint potentially affected	• Haldimand County Official Plan • Aerial photographic mapping and field reconnaissance • Published data on public recreational facilities/ activities • Haldimand County Zoning • Provincial Policy Statement, 2005
	Agriculture/ Soils & Mining	Effects on soils and existing agricultural and mining operations	Local Study Area	Soils, agricultural and mining operations in the Local Study Area may be disturbed by the continued operation of the landfill.	• Predicted impacts on surrounding agricultural operations; • Type(s) and proximity of agricultural operations (i.e., organic, cash crop, livestock) • Type(s) and proximity of mining operations • Soil classification	• Provincial Policy Statement, 2005 • Haldimand County Official Plan • Aerial photographic mapping and field reconnaissance • Haldimand County Zoning • Canadian Lands Inventory (CLI) mapping
	Site Design & Operation	Site design and operational characteristics	Site Study Area	The characteristics of the existing and proposed site design and engineered system requirements, will affect site activities and operational and maintenance requirements.	• Complexity of site infrastructure • Operational flexibility	• Existing and proposed site environmental control system designs and operational requirements • Vertical expansion alternatives and associated phasing of operations • Potential daily cover and soil/aggregate quantities
SOCIO-ECONOMIC	**Economic**	Effects on/benefits to local community	Local Study Area	The continued use of the facility will provide economic benefits to the local community in the form of new employment opportunities in both the construction and day-to-day operation. This also has the potential for increased employment opportunities in local firms.	• Employment at site (number and duration) • Opportunities to provide products or services	• Census Data for Haldimand County • Vertical expansion alternatives

	Environmental Component	Evaluation Criteria	Study Area	Rationale	Indicators	Data Sources
	Social	Visual impact of facility	Local Study Area	The contours of a waste disposal facility can affect the visual appeal of a landscape.	• Predicted changes in perceptions of landscapes and views	• Vertical expansion alternatives • Site grading plans • Aerial mapping and field reconnaissance • Canadian Society of Landscape Architects reference library • Ontario Horticultural Trades Association reference manual
		Effects on Local Residents	Local Study Area	Waste disposal facilities can potentially affect local residents in the vicinity of the site.	• Number of residences	• Aerial mapping and field reconnaissance • Census information
ABORIGINAL	**Aboriginal Communities**	Potential effects on Aboriginal communities	Local Study Area	The landfill construction and operations may adversely affect local aboriginal communities.	• Potential effects on use of lands for traditional purposes	• Discussions with local Aboriginal communities

Appendix C

Draft Work Plans

Draft Work Plan

Section 1.0 Introduction

The purpose of this document is to present the proposed work plan for the Brooks Road Landfill Site Vertical Capacity Expansion environmental assessment (EA).

The proposed work plan, which is part of the Terms of Reference (ToR), presents the scope of work required to complete the EA, including the scope of technical studies for each of the environmental components, public consultation, effects assessment, mitigation, EA documentation and submission. Work plans for individual technical disciplines are included in the Attachments to this document.

Section 2.0 Environmental Assessment Approach

It is proposed that the EA will be undertaken in three phases as follows:

- Phase 1 – Characterize existing environment and predict effects of the proposed alternatives;
- Phase 2 – Identify a preferred alternative; and
- Phase 3 – Prepare and submit EA documentation

Consultation with public, agencies, Aboriginal communities and other stakeholders will be ongoing throughout the EA process.

2.1 Environmental Components

The environmental components that will be evaluated in the EA are listed in the table below:

- Atmospheric Environment
- Geology & Hydrogeology
- Surface Water Resources
- Terrestrial & Aquatic Environment
- Archaeology & Cultural Heritage
- Transportation
- Land Use
- Agriculture / Soils & Mining
- Site Design & Operations
- Social-economic Environment
- Aboriginal Communities

A comprehensive list of the proposed environmental components, rationale, indicators and data sources are listed in the attachments to this document.

2.2 Study Areas

Two study areas will be established for preparation of the EA: the Site Study Area and the Local Study Area. The Site Study Area will include all lands (i.e., 12.4 hectares (ha)) within the existing, approved boundaries of the Brooks Rd. landfill Site (Site), as defined by Environmental Compliance Approval (ECA) No. A110302, dated May 5, 2004, as amended. The Local Study Area will include all lands and waters within a 1 km radius of the Site Study Area boundaries. It should be noted that this is a generic delineation of the Local Study Area that may be modified during the EA to suit the particular requirements of each environmental component. Each technical discipline may modify the Local Study Area, as required, during the EA.

2.3 Time Frame

The EA will consider potential effects on the environment associated with the following timeframes:

- Operation (5 to 7 years); and,
- Closure/Post-closure.

Section 3.0 Work Scope

3.1 Phase 1 – Characterize Existing Environment and Predict Effects of the Proposed Alternatives

This initial phase of the EA comprises the following four tasks:

- **Task 1** – Identify Alternative Methods for Vertical Expansion
- **Task 2** – Describe the Environment Potentially Affected
- **Task 3** – Identify Mitigation Measures to be Incorporated in the Design of each Alternative
- **Task 4** – Predict Environmental Effects for each Alternative

3.1.1 Task 1 – Identify Alternative Methods for Vertical Expansion

Early in the EA process, a reasonable number of alternative vertical capacity expansion configurations within the footprint of the existing Brooks Rd. Landfill will be developed by the project team in consultation with the public, Aboriginal communities, agencies, and other interested stakeholders. The vertical capacity expansion will provide approximately 421,000 cubic metres (m^3) of air space and will be designed to meet all applicable Ministry of the Environment (MOE) requirements. During the EA, the

project team will describe each vertical capacity expansion alternative and any associated facilities (i.e., stormwater management ponds) to a sufficient level of detail (i.e., conceptual designs) to allow for their assessment by technical discipline leads for further analysis. The characteristics of the existing and proposed site design and engineering requirements, including in-design mitigation measures, can affect the environment. These potential effects will be assessed in the EA.

3.1.2 Task 2 – Describe the Environment Potentially Affected

The project team will collect information and conduct studies (desktop and field) to describe components of the existing environment identified in the ToR that may be affected by the undertaking. This will be done for each of the alternative methods identified in Task 1. The environmental components, rationale, indicators and data sources that will be used in the analysis of each component are presented in the attachments to this document.

3.1.3 Task 3 – Identify Mitigation Measures to be Incorporated in the Design of each Alternative

Following identification of a reasonable number of alternatives in Task 1 and the characterization of the existing environmental conditions in Task 2, the project team will conduct a preliminary assessment of potential effects. Potential mitigation measures to be incorporated into the conceptual design of the vertical capacity expansion alternatives will also be developed. The project team will then finalize the conceptual design report (CDR), updating the conceptual designs, including in-design mitigation measures. The CDR will serve as the comment basis for conducting the assessment of alternatives.

3.1.4 Task 4 – Environmental Effects for each Alternative

In this final Phase 1 task, the project team will predict the effects of each alternative, including in-design mitigation measures determined in Task 3, on the environment. The assessment will be done for each environmental component based on the existing environmental conditions determined in Task 2 and the conceptual designs for each vertical expansion alternative.

3.2 Phase 2 – Identify a Preferred Alternative

The second phase of the EA comprises the following three tasks:

- **Task 5** – Refine Mitigation Measures and Determine Net Effects
- **Task 6** – Comparatively Evaluate Alternatives
- **Task 7** – Identify a Preferred Alternative

3.2.1 Task 5 – Refine Mitigation Measures and Determine Net Effects

The project team will identify linkages (i.e., direct or indirect effect of the undertaking on an environmental component via another component, such as groundwater discharge to surface water).

Prediction of future environmental conditions associated with each alternative landfill footprint will be undertaken by each technical discipline lead using modelling and other methods. Assessment of potential effects will be done using appropriate objectives, standards, policies and legislation. Further mitigation measures, beyond those already incorporated into the conceptual designs of the alternatives, if required, will be identified and refined as necessary. The project team will update and revise the conceptual design plans for the vertical capacity expansion alternatives accordingly. The final conceptual designs will be documented in the EA Report. Any predicted effects remaining following application of these final mitigation measures, or "net effects", will be documented in the EA Report.

3.2.2 Task 6 – Comparatively Evaluate Alternatives

The project team may also consider additional vertical capacity expansion alternatives that may have been identified by the public or other parties during the EA process. Should any additional alternatives be developed, they would be subjected to the same procedure outlined in Task 3.

Following completion of Task 5, the net effects for each vertical capacity expansion alternative will be comparatively evaluated using a Reasoned Argument (or Trade-off) method as a means of selecting the Preferred Alternative Method. Application of this assessment method will be based on identifying the advantages and disadvantages of each alternative and using them to establish preferences among the alternatives. Each alternative will be compared using the criteria, indicators and data sources presented in the ToR. This analysis will be undertaken by the project team. The information generated through the comparison of the alternative methods will be summarized in a series of tables and documented in the EA Report.

3.2.3 Task 7 – Identify a Preferred Alternative

In this task, the advantages and disadvantages of each alternative will be described based on the comparative evaluation. The outcome of this ranking exercise will be the identification of a preferred alternative.

A comprehensive impact assessment of the preferred alternative will be completed to determine the net effects that will be caused, or that might reasonably be caused, on the environment (i.e., the advantages and disadvantages to the environment). This includes consideration of any mitigation that might be necessary to reduce or eliminate impacts, and the appropriate monitoring, contingency and impact management plans.

3.3 Phase 3 – Prepare and Submit Environmental Assessment Documentation

The third and final phase of the EA will be the preparation and submission of the EA documentation and will include the following three tasks:

- **Task 8** – Prepare EA Documentation
- **Task 9** – Submit Draft EA Report for Comment
- **Task 10** – Revise & Submit Final EA Report to the MOE

The EA Report will be based on the results of the individual technical discipline studies and the consultation plan, the full documentation of which will be included as supporting documents to the EA Report.

3.3.1 Task 8 – Prepare EA Documentation

All key information and findings from the technical discipline studies and consultation reports will be included in the EA Report. Meetings and telephone calls with the MOE and key agencies will take place throughout the preparation of the EA Report to discuss technical discipline studies and findings. Input and comments received from the public, Aboriginal communities, government agencies, municipal officials, and other stakeholders throughout the EA process will be considered in the preparation of the EA Report.

3.3.2 Task 9 – Submit Draft EA Report for Comment

A complete draft of the EA Report will be distributed to the MOE, members of the Government Review Team (GRT), and Aboriginal communities for review and comment. Hard copies of the draft EA Report will be made available for review at various locations accessible to the public and will also be posted on the project website. Comments received during the draft EA Report comment period will be compiled by the project team and considered in the finalization of the Report. The draft EA Report review period will be 7 weeks.

3.3.3 Task 10 – Revise & Submit Final EA Report to the MOE

The EA Report will be finalized, taking into consideration all comments received on the draft EA Report, and submitted to the MOE. The EA Report will also be distributed to the GRT and Aboriginal communities; hard copies will be made available for review at various locations accessible to the public; and the complete report will be posted on the project website.

Throughout the MOE review period, the project team will be available to provide technical support, as required. This will include answering questions and comments received and documenting responses. It is anticipated that comments and responses will be presented in a separate report.

3.4 Consultation

The following is a summary of the tasks that make up the consultation plan, described in further detail the ToR, to be carried out for the EA.

3.4.1 Task 11 – EA Open House

EA Open House (OH) will present information on the existing environment, draft alternative methods (including evaluation criteria), potential environmental effects, the assessment of potential effects, the identification of mitigation measures and net effects, and the preferred alternative method.

3.4.2 Task 12 – Aboriginal Community Consultation

The following Aboriginal communities were contacted during the ToR and will be invited to participate in the EA:

- Métis Nation of Ontario (Head Office, Niagara Region Métis Council and Hamilton-Wentworth Métis Council)
- Six Nations of the Grand River Territory
- Haudenosaunee Development Institute (HDI)
- Haudenosaunee Confederacy Chiefs Council
- Mississaugas of the New Credit First Nation

Consultation activities with Aboriginal communities will include the following:

- Letters and emails inviting participation in public consultation events (i.e., OH), soliciting input and comments on EA documentation, and providing updates on the EA process; and
- Meetings to be held at the request of Aboriginal communities to engage them and obtain feedback on their specific interests and concerns.

It is proposed that consultation with the Métis Nation of Ontario reflect the framework set out in "Métis Consultation and Accommodation: A Guide for Government and Industry on Engaging Métis in Ontario."

It is proposed that consultation with the Six Nations of the Grand River Territory be carried out as per the "Six Nations of the Grand River Consultation and Accommodation Policy." (http://www.sixnations.ca/LRConsultationPolicySept2413.pdf)

It is proposed that consultation with the Haudenosaunee Confederacy of Chiefs reflect the framework set out in the "Haudenosaunee Engagement Policy." (http://haudenosauneeconfederacy.com/HDI/policies/consultation-policy/)

3.4.3 Task 13 – Public Liaison Committee

Conditions 86 and 87 of ECA No. A110302 for the existing Brooks Road Landfill Site require the maintenance of a Public Liaison Committee (PLC) to serve as a focal point for dissemination, review and exchange of information regarding the operation of the Site, including environmental monitoring, maintenance, complaint resolution, and new approvals or amendments to existing approvals related to the operation of the Site. Consultation activities with the PLC during the EA process will include the following:

- Letters inviting participation in public consultation events (i.e., OH), soliciting input and comments on EA documentation, and providing updates on the EA process; and
- Holding PLC EA Meeting #1 and PLC EA Meeting #2 following the OH.

3.4.4 Task 14 – Project Mailing List

The public stakeholder list established and expanded upon during the ToR will form the basis of the public stakeholder list for the EA. When possible, information on the project and consultation invitations will be sent via email to members of the public stakeholder list. For individuals on the list for whom there is no email on file, letters will be posted instead.

3.4.5 Task 15 – Project Website

The project website was established during the ToR to provide clear and accurate information to stakeholders as well as opportunities for participants to provide feedback. All public notices and EA material for review will be posted on the project website.

3.4.6 Task 16 – Agency Coordination & Meetings

A GRT was established and expanded upon during the ToR and will form the basis for the GRT for the EA. It is anticipated that two full GRT meetings (i.e., teleconferences) will be held during the EA, prior to and following the OH, and that meetings with individual agencies may also be required at various stages of the EA.

ATTACHMENT 1 – Atmospheric Environment Work Plan

The atmospheric environment is comprised of three sub-components: air quality, noise and odour. The following tasks will be carried out to characterize existing environmental conditions, predict and assess potential environmental effects, determine mitigation measures (if required) and compare alternative methods of carrying out the undertaking:

- Compile and interpret information from existing data sources, including information available from the following resources:
  - Previous monitoring summary reports for the existing Site
  - Environment Canada and MOE air quality monitoring data from local stations
  - Review Site complaints records related to air quality emissions, odour and noise
- Conduct Site reconnaissance to confirm site information compiled from existing documentation and finalize location and nature of potential off-site receptors.
- Consult with the MOE and other members of the GRT to decide on air dispersion / noise modelling approach and protocols to be used in the assessment.
- Based on consultation with MOE, the review of existing information and the project description, identify information gaps and data needs.
- Conduct on-site odour sampling to characterize sources of odour and provide data for input to the air quality and odour assessments.
- Conduct noise measurements on-site for environmentally significant mechanical noise sources (stationary and mobile landfill equipment) and off-site measurements as necessary to input into an acoustical model to determine the existing baseline environmental noise levels at potential sensitive points of reception.
- Define baseline conditions for the project, based on available monitoring data.

Upon collection of data required for the assessment of air quality and odour emissions, embark on the following studies:

- Assessment of Alternatives: This study will assess emissions from the various vertical capacity expansion options for the Site. Emissions from each alternative (including delivery of raw wastes, LFG collection system, etc.) will be estimated. This will be followed by the execution of an atmospheric dispersion model for each alternative. The results of this study will be predicted maximum air quality and odour effects associated with each of the alternatives. This study will focus on property line and sensitive receptors. Results will be used to assist in ranking of project alternatives.

In support of the air quality and odour studies listed above, the following will be completed:

- The development of an AERMOD atmospheric dispersion model for the site, which will be used to predict effects of the proposed operations. Based on the complexity (or simplicity) of local

conditions, changes to the selected atmospheric dispersion model may be made. Changes to the dispersion model will be done in consultation with the MOE. The sources of the data will be reviewed with the MOE prior to finalization of the modelling dataset.

- Assessment of mitigation measures inherent in the project design and those that may be necessary to improve operations.

Upon collection of data required for the assessment of noise emissions, embark on the following studies:

- Assessment of Alternatives: This study will assess emissions from the various vertical capacity expansion options for the Site. Emissions from equipment operating within each alternative (including haul roads, excavation operations, etc.) will be based on measurements from the existing landfill or data from a database of similar and representative noise sources. This will be followed by the execution of a noise prediction model for each alternative. The results of this study will predict the worst-case, one hour, off-site environmental noise impacts from each of the alternatives at the points of reception subject of the study. A point of reception means an MOE prescribed location on a noise sensitive land use (existing dwelling or zoned land use) where noise from a stationary source is received. The results will be used to assist in the ranking of alternatives.

In support of the noise study listed above, the following will be completed:

- The development of an ISO 9613 prediction model for the Site, which will be used to predict effects of the proposed operations.
- Haul route noise analysis, using an approved prediction model, to predict the effects of the proposed haul route noise on sensitive points of reception.
- Provide acoustic performance specifications for noise mitigation measures inherent in the project design and those that may be necessary to improve operations and ensure compliance with MOE noise guidelines.

In support of the atmospheric studies listed above, the following will be completed:

- Generate predictions (air quality, odour and noise) for use in non-atmospheric EA components (e.g., terrestrial component).
- Compile and document climate normals for the project site, and document the existing climatic conditions.
- Document the assessments listed above, data sources and assessment results in an Atmospheric Environment Technical Support Document (TSD) that will form an appendix to the EA.
- Participate in meetings with the GRT agencies as required.
- Provide technical support during the review of the draft EA Report by the GRT, Aboriginal communities and the public.

Table 1-1 – Criteria, Rationale, Indicators and Data Sources

Environmental Component	Evaluation Criteria	Study Area	Rationale	Indicators	Data Sources
Atmospheric Environment	Air quality	Site & Local Study Areas	Waste disposal facilities and associated operations can produce gases containing contaminants that degrade air quality if they are emitted to the atmosphere. Construction and operation activities at a waste disposal facility may also result in changes to the levels of particulates (dust) in the air.	• Predicted off-Site point of impingement concentrations (µg/m3) of indicator compounds • Number of off-Site receptors potentially affected (residential properties, public facilities, businesses, and institutions)	• Environment Canada or Ontario Ministry of the Environment hourly meteorological data and climate normals • Site ambient air monitoring, continuous emissions monitoring data • Applicable MOE guidelines and technical standards (i.e., O.Reg. 419/05 Schedule 2, Schedule 3 and Schedule 6 Standards) • Aerial photographic mapping and field reconnaissance • Off-Site receptors confirmed on recent mapping • Emissions Summary and Dispersion Modelling (ESDM) reports • Available background ambient air data • Waste materials and leachate characterization and sampling data • Proposed facility characteristics • Landfill design and operation data
	Noise	Site & Local Study Areas	The cumulative environmental noise from the existing facility and the proposed vertical capacity landfill expansion may result in increased noise impacts off-site	• Predicted off-Site noise level • Number of off-Site receptors potentially affected (residential properties, public facilities, businesses, and institutions).	• Site-specific equipment noise measurements • Manufacturer provided noise specifications • Applicable MOE guidelines and technical standards (Noise guidelines for landfill sites, Oct, 1998; NPC-300, August, 2013; NPC-233). • Aerial photographic mapping and field reconnaissance to confirm off-Site receptors • Land Use Zoning Plans • Acoustic Assessment Reports • Proposed facility operational characteristics and scenarios • Landfill design and operations data

	Odour	Site & Local Study Areas	The proposed vertical expansion may result in changes in the degree and frequency of odours from the Site.	• Predicted off-Site odour concentrations (µg /m^3 and odour units) • Number of off-Site receptors potentially affected (residential properties, public facilities, businesses and institutions).	• Published odour studies for similar source types • Site specific odour source data and/or ambient odour monitoring data • Environment Canada or Ontario Ministry of the Environment hourly meteorological data and climate normals • Applicable MOE guidelines and technical standards (i.e., O.Reg. 419/05 Schedule 2, Schedule 3 and Schedule 6 Standards) • Site odour complaints history • Aerial photographic mapping and field reconnaissance • Off-site receptors confirmed on recent mapping • Odour assessment reports • Waste materials and leachate characterization and sampling data • Proposed facility characteristics • Landfill design and operation data

ATTACHMENT 2 – Geology & Hydrogeology

The geology and hydrogeology environmental component includes two sub-components: groundwater quality and groundwater flow. The following tasks will be undertaken to characterize existing environmental conditions, predict and assess potential environmental effects, determine mitigation measures and compare alternative methods of carrying out the undertaking.

- Compile and interpret information from defined background sources.
- Compile and review published geological and hydrogeological maps and reports, water well data, regional groundwater and wellhead protection studies, regional and local topographic and drainage mapping, previous subsurface investigation findings, properties and interpretation.
- Compile and review current conceptual geological and hydrogeological model of site and existing landfill.
- Determine seasonal variation in groundwater levels and flow orientations.

Based on the Conceptual Design Report:

- Conduct predictive modelling of contaminating lifespan as per Ontario Regulation 232/98 for each vertical expansion alternative.
- Based on the proposed conceptual design alternatives, in-design mitigation measures and the results of predictive modelling, complete an evaluation of potential effects of each alternative on the hydrogeological environment.
- Compare the degree of potential effects using the criteria and indicators for the geological and hydrogeological component, rank the alternatives, and identify the preferred alternative from the geological and hydrogeological perspective.
- Prepare a groundwater monitoring program for the preferred alternative, and conceptual contingency plan approaches.
- Document the factual information, analysis and comparative assessment in a Geology and Hydrogeology Technical Supporting Document that will form an appendix to the EA.
- Participate in meetings with GRT agencies, as required.
- Provide technical support during the review of the draft EA Report by the GRT, Aboriginal communities and the public.

Table 2-1 – Criteria, Rationale, Indicators and Data Sources

Environmental Component	Evaluation Criteria	Study Area	Rationale	Indicators	Data Sources
Geology & Hydrogeology	Groundwater quality	Site & Local Study Areas	Contaminants associated with waste disposal sites have the potential to enter the groundwater and impact off-Site groundwater.	• Predicted effects to groundwater quality at property boundaries and off-Site	• Hydrogeological and geotechnical studies • Water well records • Determination of water well users in the area • Annual Site Monitoring Reports • Proposed leachate control concept designs • Environment Canada Canadian Climate Normals • Leachate generation assessment • Provincial Water Quality Monitoring Network (PWQMN)
	Groundwater flow	Site & Local Study Areas	Physical works may disrupt natural groundwater flows.	• Predicted groundwater flow characteristics	• Hydrogeological and geotechnical studies • Water well records • Determination of water well users in the area • Annual Site Monitoring Reports

ATTACHMENT 3 – Surface Water Resources

The surface water environmental component has two sub-components: surface water quality and surface water quantity. The following tasks will be undertaken to characterize existing environmental conditions, predict and assess potential environmental effects, determine mitigation measures and compare alternative methods of carrying out the undertaking.

- Compile and interpret information from defined background sources, including:
  - Annual monitoring reports;
  - Topographical mapping and aerial photography to define drainage network and drainage watersheds/sub-watersheds and discharge locations; and
  - Published sources (annual reports, MOE, Environment Canada, Conservation Authorities) to characterize water quality and stream flow.
- Conduct site reconnaissance to confirm the information from available sources.
- Summarize existing surface water flow and quality representative of conditions upstream and downstream of the Site.
- Based on the Conceptual Design Report, predict and assess future surface water runoff and peak flows and quality conditions associated with each of the proposed expansion alternatives.
- Compare these predictions to the existing conditions; determine changes and potential adverse effects on downstream watercourses; determine if mitigation measures are required and, if so, develop conceptual mitigation (i.e., engineered stormwater management measures/facilities).
- Based on the proposed conceptual design alternatives, in-design mitigation measures and the results of predictive modelling, complete an evaluation of potential effects of each alternative on the surface water environment.
- Compare the degree of potential effects using the criteria and indicators for the surface water component, rank the alternatives, and identify the preferred alternative from a surface water perspective.
- Document the factual information, analysis and comparative assessment in a Surface Water Technical Support Document that will form an appendix to the EA.
- Participate in meetings with GRT agencies, as required.
- Provide technical support during the review of the draft EA Report by the GRT, Aboriginal communities and the public.

Table 3-1 – Criteria, Rationale, Indicators and Data Sources

Environmental Component	Evaluation Criteria	Study Area	Rationale	Indicators	Data Sources
Surface Water Resources	Surface water quality	Site & Local Study Areas	Contaminants associated with waste disposal sites have the potential to seep or runoff into surface water.	• Predicted effects on surface water quality on-site and off-site	• Topographic maps • Air photos • Facility layout, drainage maps and figures • Proposed on-site stormwater management concept designs for vertical expansion alternatives • Existing leachate management system • Annual monitoring reports • Interviews and discussions with staff, MOE, Conservation Authorities, and Environment Canada • Published water quality and flow information from MOE, Environment Canada and conservation authorities • Site reconnaissance • PWQMN
	Surface water quantity	Site & Local Study Areas	The construction of physical works may disrupt natural surface drainage patterns and may alter runoff and peak flows. The presence of the facility may also affect base flow to surface water.	• Change in drainage areas • Predicted occurrence and degree of off-site effects	

ATTACHMENT 4 – Terrestrial & Aquatic Environment

The terrestrial and aquatic environmental component has two sub-components: terrestrial ecosystems and aquatic ecosystems. The following tasks will be undertaken to characterize the existing terrestrial and aquatic environmental conditions, predict and assess potential environmental effects, determine mitigation measures and compare alternative methods of carrying out the undertaking.

- Compile and interpret information from defined background sources, including:
  - Ongoing terrestrial and aquatic surveys;
  - Available information from MNR, DFO and Conservation Authorities, including potential Species at Risk (SAR);
  - Available local natural features information from Aboriginal communities and naturalist organizations; and
  - Aerial photo and topographic and drainage mapping.
- Characterize existing terrestrial ecosystems within the Site and Local Study Areas, including occurrence of distribution of wetlands, vegetation communities and wildlife (e.g., birds, mammals, reptiles, amphibians by means of existing breeding bird surveys, amphibian surveys, rare plant and insect assessment, snake/turtle surveys, mammal surveys, specific surveys for any identified SAR), natural areas such as significant wetlands, woodlands, valley lands and wildlife habitat, and habitat for endangered and threatened species, conducting additional field surveys for these terrestrial features if or as necessary.
- Characterize existing aquatic ecosystems within the Site and Local Study Areas, including drainage ditches and natural watercourses by means of existing fish community surveys, aquatic habitat assessment, benthic invertebrate sampling programs, water quality and flow information, conducting additional field surveys if or as necessary.
- Based on the Conceptual Design Report, and considering in-design mitigation measures, assess potential impacts of the proposed vertical expansion alternatives on the terrestrial and aquatic ecosystem.
- Determine if mitigation and/or habitat compensation measures are require to avoid or reduce potential adverse impacts and, if so, develop conceptual mitigation.
- Document the factual information, analysis and comparative assessment in a Terrestrial and Aquatic Environment Technical Support Document that will form an appendix to the EA.
- Participate in meetings with GRT agencies, as required.
- Provide technical support during the review of the draft EA Report by the GRT, Aboriginal communities and the public.

Table 4-1 – Criteria, Rationale, Indicators and Data Sources

Environmental Component	Evaluation Criteria	Study Area	Rationale	Indicators	Data Sources
Terrestrial & Aquatic Environment	Terrestrial ecosystems	Site & Local Study Areas	Continued operation of the waste disposal facility may disturb the functioning of natural terrestrial habitats and vegetation, including rare, threatened or endangered species.	• Predicted impact on vegetation communities • Predicted impact on wildlife habitat • Predicted impact on vegetation and wildlife including rare, threatened or endangered species	• Site surveys • Published data sources
	Aquatic ecosystems	Site & Local Study Areas	Continued operation of the waste disposal facility may disturb the functioning of natural aquatic habitats and species, including rare, threatened or endangered species.	• Predicted changes in water quality • Predicted impact on aquatic habitat • Predicted impact on aquatic biota	• Site surveys • Published data sources

ATTACHMENT 5 – Archaeology & Cultural Heritage

The archaeology and cultural heritage environmental component includes two sub-components: cultural and heritage resources (built and landscapes) and archaeological resources. It should be noted that, as the proposed vertical expansion would take place on top of the existing landfill, there is no potential for disturbance to cultural and heritage resources (built and landscapes) or archaeological resources within the Site Study Area as a result of this project.

The following task will be undertaken to characterize the existing environmental conditions within the Local Study Area, predict and assess potential environmental effects, determine mitigation measures and compare alternative methods of carrying out the undertaking.

- Compile and interpret information from defined background sources to identify any cultural and heritage resources and/or archaeological resources within the Local Study Area.
- Provide mitigation measures, as required, to manage potential impacts.
- Based on the Conceptual Design Report, predict and assess potential impacts on cultural heritage resources associate with each of the proposed vertical expansion alternatives.
- Compare the degree of potential effects using the criteria and indicators for the archaeology and cultural heritage component, rank the alternatives, and identify the preferred alternative from an archaeology and cultural heritage perspective.
- Document the factual information, analysis and comparative assessment in an Archaeology and Cultural Heritage Technical Support Document that will form an appendix to the EA.
- Complete submissions to MTCS to obtain the required approvals and clearances, if required.
- Participate in meetings with GRT agencies, as required.
- Provide technical support during the review of the draft EA Report by the GRT, Aboriginal communities and the public.

Table 5-1 – Criteria, Rationale, Indicators and Data Sources

Environmental Component	Evaluation Criteria	Study Area	Rationale	Indicators	Data Sources
Archaeology and Cultural Heritage	Cultural and heritage resources	Local Study Area	The use and enjoyment of cultural resources may also be disturbed by the ongoing operation.	• Cultural and heritage resources (built and landscapes) in the Local Study Area and predicted impacts on them	• Published data sources • Cultural/heritage assessments • Commemorative statements
	Archaeological resources	Local Study Area	Archaeological resources are nonrenewable cultural resources that can be destroyed by the construction and operation of a waste disposal facility.	• Archaeological resources in the Local Study Area and predicted impacts on them	• Published data sources • Stage 1 and Stage 2 (possibly Stage 3 and 4) archaeological assessments • Commemorative statements

ATTACHMENT 6 – Transportation

The transportation environmental component has two sub-components: airport operations and access roads. The following tasks will be undertaken to characterize the existing environmental conditions, predict and assess potential environmental effects, determine mitigation measures and compare alternative methods of carrying out the undertaking.

- Compile information from background sources, including:
  - Traffic volumes and mix;
  - Vehicular operating speeds;
  - Roadway and intersection geometrics (including horizontal and vertical curves; passing zones; turning radii, etc.);
  - Traffic controls as well as regulatory signage and pavement markings;
  - Historical collision records;
  - Trip generation information from other comparable landfill sites; and
- Provide input to the assessment of vertical expansion alternatives (i.e. site accesses).
- Compare the degree of potential effects using the criteria and indicators for the transportation component, rank the alternatives, and identify the preferred alternative from a transportation perspective.
- Document the analysis assumptions, findings and mitigation measures in a Transportation Technical Support Document that will form an appendix to the EA.
- Participate in meetings with the GRT, as required.
- Provide technical support during the review of the draft EA Report by the GRT, Aboriginal communities and the public.

Table 6-1 – Criteria, Rationale, Indicators and Data Sources

Environmental Component	Evaluation Criteria	Study Area	Rationale	Indicators	Data Sources
Transportation	Effects on airport operations	Local Study Area	There is the potential for bird strikes for aircraft using nearby airports and airfields.	• Bird strike hazard to aircraft in Local Study Area	• Transport Canada data sources
	Effects from truck transportation along access roads	Local Study Area	Truck traffic associated with the continued operations of the landfill may adversely affect residents, business, institutions and movement of farm vehicles in the local study area.	• Potential for traffic collisions • Disturbance to traffic operations • Potential road improvement requirements	• Transport Canada data sources • Previous traffic study

ATTACHMENT 7 – Land Use

The land use environmental component addresses effects on current and planned future land uses. The following tasks will be undertaken to characterize the existing environmental conditions, predict and assess potential environmental effects, determine mitigation measures and compare alternative methods of carrying out the undertaking.

- Compile and interpret information from defined background sources, including:
  - Provincial Policy Statement, 2005;
  - Haldimand County Official Plan;
  - Haldimand County Zoning;
  - Aerial photographic mapping and field reconnaissance;
  - Published data on public recreational facilities/ activities; and
  - Reconnaissance to confirm data from information sources.
- Meet with municipal officials to determine planned development and land use, including any applications for approval currently submitted.
- Based on the Conceptual Design Report, and considering in-design mitigation measures, identify potential adverse effects on current and planned future land use.
- Compare these predictions to the existing conditions. Determine if mitigation measures are required and, if so, develop mitigation.
- Compare the degree of potential effects using the criteria and indicators for the land use component, rank the alternatives, and identify the preferred alternative from a land use perspective.
- Document the factual information, analysis and comparative assessment in the Land Use Technical Support Document that will form an appendix to the EA.
- Participate in meetings with the GRT, as required.
- Provide technical support during the review of the draft EA Report by the GRT, Aboriginal communities and the public.

Table 7-1 – Criteria, Rationale, Indicators and Data Sources

Environmental Component	Evaluation Criteria	Study Area	Rationale	Indicators	Data Sources
Land Use	Effects on current and planned future land uses	Local Study Area	The continued operation of the landfill may not be fully compatible with certain current and/or planned future land uses in the Local Study Area. Current land uses (e.g., agriculture) may be disturbed by the continued operation of the landfill. Waste disposal facilities can potentially affect the use and enjoyment of recreational resources in the vicinity of the site.	• Current land use • Planned future land use • Type(s) and proximity of off-site recreational resources within 500 m of landfill footprint potentially affected • Type(s) and proximity of off-site sensitive land uses (i.e., dwellings, churches, cemeteries, parks) within 500 m of landfill footprint potentially affected	• Haldimand County Official Plan • Aerial photographic mapping and field reconnaissance • Published data on public recreational facilities/ activities • Haldimand County Zoning • Provincial Policy Statement, 2005

ATTACHMENT 8 – Agriculture/ Soils & Mining

The agriculture / soils and mining environmental component addresses the potential effects on soils and existing agricultural and mining operations in the Local Study Area. The following tasks will be undertaken to characterize the existing environmental conditions, predict and assess potential environmental effects, determine mitigation measures and compare alternative methods of carrying out the undertaking.

- Compile and interpret information from defined background sources, including:
  - Provincial Policy Statement, 2005;
  - Haldimand County Official Plan;
  - Haldimand County Zoning;
  - Aerial photographic mapping and field reconnaissance;
  - Published data on agricultural land classification, agricultural or agri-related uses in the area, soils and mining operations in the area; and
  - Reconnaissance to confirm data from information sources.
- Meet with municipal officials to determine planned agricultural operations, including any application for approval currently submitted.
- Based on the Conceptual Design Report, and considering in-design mitigation measures, identify potential adverse effects on agricultural land and agricultural operations.
- Compare these predictions to the existing conditions. Determine if mitigation measures are required and, if so, develop mitigation.
- Compare the degree of potential effects using the criteria and indicators for the agriculture/soils and mining environmental component, rank the alternatives, and identify the preferred alternative from an agriculture/soils and mining perspective.
- Document the factual information, analysis and comparative assessment in the Agriculture/Soils and Mining Technical Support Document that will form an appendix to the EA.
- Participate in meetings with the GRT, as required.
- Provide technical support during the review of the draft EA Report by the GRT, Aboriginal communities and the public.

Table 8-1 – Criteria, Rationale, Indicators and Data Sources

Environmental Component	Evaluation Criteria	Study Area	Rationale	Indicators	Data Sources
Agriculture/ Soils & Mining	Effects on soils and existing agricultural and mining operations	Local Study Area	Soils, agricultural and mining operations in the Local Study Area may be disturbed by the continued operation of the landfill.	• Predicted impacts on surrounding agricultural operations; • Type(s) and proximity of agricultural operations (i.e., organic, cash crop, livestock) • Type(s) and proximity of mining operations • Soil classification	• Provincial Policy Statement, 2005 • Haldimand County Official Plan • Aerial photographic mapping and field reconnaissance • Haldimand County Zoning • Canadian Lands Inventory (CLI) mapping

ATTACHMENT 9 – Site Design & Operations

The site design and operations environmental component has the sub-component of site design and operations characteristics. The following tasks will be undertaken to characterize the existing environmental conditions, predict and assess potential environmental effects, determine mitigation measures and compare alternative methods of carrying out the undertaking.

- Compile information from background sources, including:
  - Digital topographic mapping, drainage features, ground cover;
  - Aerial photographic;
  - Existing site infrastructure and facilities; and
  - Requirements for site design specified in Ontario Regulation 232/98.
- Develop vertical expansion alternatives to reasonably represent the characteristics of the possible range of alternatives.
- Develop draft Conceptual Design Report (CDR) for the alternatives, including leachate containment and management, final cover system, etc.
- Circulate Conceptual Design Report to each technical discipline for preparation of their individual net effect analyses and comparative evaluations.
- Update the draft Conceptual Design Report based on individual technical discipline feedback.
- Based on the Conceptual Design Report, and considering in-design mitigation measures, identify potential adverse effects on site design and operations.
- Compare these predictions to the existing conditions. Determine if mitigation measures are required and, if so, develop mitigation.
- Compare the degree of potential effects using the criteria and indicators for the site design and operations environmental component, rank the alternatives, and identify the preferred alternative from a site design and operations perspective.
- Document the factual information, analysis and comparative assessment in the Site Design and Operations Technical Support Document that will form an appendix to the EA.
- Participate in meetings with the GRT, as required.
- Provide technical support during the review of the draft EA Report by the GRT, Aboriginal communities and the public.

Table 9-1 – Criteria, Rationale, Indicators and Data Sources

Environmental Component	Evaluation Criteria	Study Area	Rationale	Indicators	Data Sources
Site Design & Operation	Site design and operational characteristics	Site Study Area	The characteristics of the existing and proposed site design and engineered system requirements, will affect site activities and operational and maintenance requirements.	• Complexity of site infrastructure • Operational flexibility	• Existing and proposed site environmental control system designs and operational requirements • Vertical expansion alternatives and associated phasing of operations • Potential daily cover and soil/aggregate quantities

ATTACHMENT 10 – Socio-economic Environment

The socio-economic environmental component has two sub-components: effects on / benefits to local community and visual impact of facility. The following tasks will be undertaken to characterize the existing environmental conditions, predict and assess potential environmental effects, determine mitigation measures and compare alternative methods of carrying out the undertaking. The indicators associated with the effects on / benefit to the local community utilize information that comes directly from the Conceptual Design Report. As such, there are no work plan tasks specific to these sub-components.

Visual Impact of the Facility

- Define the existing visual conditions of the Site from off-site viewpoints within the Local Study Area and document through written and photographic record.
- Determine the viewpoints (directions, distances) from which the proposed vertical expansion alternatives will be visible and take photographs from those viewpoints.
- Develop strategies to mitigate visual impacts and improve the appearance of the site, as required.

Comparison of the Alternatives

- Compare the degree of potential effects using the criteria and indicators for the socio-economic environmental component, rank the alternatives, and identify the preferred alternative from a socio-economic perspective.
- Document the factual information, analysis and comparative assessment in the Socio-Economic Technical Support Document that will form an appendix to the EA.
- Participate in meetings with the GRT, as required.
- Provide technical support during the review of the draft EA Report by the GRT, Aboriginal communities and the public.

Table 10-1 – Criteria, Rationale, Indicators and Data Sources

Environmental Component	Evaluation Criteria	Study Area	Rationale	Indicators	Data Sources
Economic	Effects on / benefits to local community	Local Study Area	The continued use of the facility will provide economic benefits to the local community in the form of new employment opportunities in both the construction and day-to-day operation. This also has the potential for increased employment opportunities in local firms.	• Employment at site (number and duration) • Opportunities to provide products or services	• Census Data for Haldimand County • Vertical expansion alternatives
Social	Visual impact of facility	Local Study Area	The contours of a waste disposal facility can affect the visual appeal of a landscape.	• Predicted changes in perceptions of landscapes and views	• Vertical expansion alternatives • Site grading plans • Aerial mapping and field reconnaissance • Canadian Society of Landscape Architects reference library • Ontario Horticultural Trades Association reference manual
	Effects on Local Residents	Local Study Area	Waste disposal facilities can potentially affect local residents in the vicinity of the site.	• Number of residences	• Aerial mapping and field reconnaissance • Census information

ATTACHMENT 11 – Aboriginal Communities

Potential effects on Aboriginal communities in the Local Study Area associated with the vertical expansion alternatives will be identified through discussions with local Aboriginal communities. Appropriate measures to mitigate any potential effects will also be identified through discussions with Aboriginal communities, and the resulting net effects will be compared to one another to determine a preferred vertical expansion alternative from an Aboriginal community perspective.

Table 11-1 – Criteria, Rationale, Indicators and Data Sources

Environmental Component	Evaluation Criteria	Study Area	Rationale	Indicators	Data Sources
Aboriginal Communities	Potential effects on Aboriginal communities	Local Study Area	The landfill construction and operations may adversely affect local Aboriginal communities.	• Potential effects on use of lands for traditional purposes	• Discussions with local Aboriginal communities

CONESTOGA-ROVERS
& ASSOCIATES

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January 21, 2015 (Original DRAFT - November 24, 2014 and amended on December 19, 2014)
Reference No. 018235-20

Mr. Andrew Evers
Project Officer
Ontario Ministry of the Environment & Climate Change
2 St. Clair Ave. W., Floor 12A
Toronto, ON
M4V 1L5

Dear Mr. Evers:

Re: Brooks Road Terms of Reference
Errata Letter - FINAL
EA FILE NO. EA03-08-02

The purpose of this Errata Letter is to provide responses to comments raised by the Ministry of the Environment and Climate Change (MOECC) on the Brooks Road Landfill Vertical Expansion Terms of Reference (ToR). The comments relate to a memorandum (September 22th, 2014) and our telephone conversations (November 12th, 2014 and January 20, 2015). The concerns raised are based on the same numbering as provided in your original memo (**Attachment #1**), as well as an additional point (#6) based on our recent telephone conversation

1.0 Provincially Significant Wetland

As requested, **Section 10.2.1.4** (pg. 24) of the ToR will be modified to include a brief description of the Provincially Significant Wetland (PSW) located adjacent to the Brooks Road Landfill Site. The modification to this section is shown in red text below:

"To the north of the Site, beyond the former Canada Southern Railway right-of-way (an abandoned railway corridor now owned by the Proponent), is a rural property (also owned by the Proponent) consisting of old fields (i.e., long-term inactive agricultural crop production lands, now undergoing natural regeneration) and forested areas. A portion of the area undergoing natural regeneration is referred to as the North Cayuga Swamp Wetland Complex, which is a PSW complex. This wetland complex is made up of numerous individual wetlands dominated by swamp with some marsh wetlands (MNR, 2010). To the south and east of the Site are privately owned, undeveloped, rural properties used primarily for passive livestock pasture purposes and consisting of a combination of old fields and forested areas. The Site is

bounded to the west by Brooks Road. On the west side of Brooks Road is an undeveloped, rural property. This property has historically been stocked for bird hunting purposes and the property itself is characterized primarily by undeveloped fields with occasional bush lots.

Existing biological features and conditions in the Local Study Area (e.g., ecosystems and terrestrial and aquatic flora and fauna, including species at risk under the federal Species at Risk Act and Ontario Endangered Species Act) will be identified and described to provide information at a level of detail sufficient to enable the identification of potential environmental effects on those biological features and conditions."

In addition, on-going consultation with Ministry of Natural Resources and Forestry (MNRF) and Conservation Authorities (among others) has been provided for within **Section 11.2 – EA Consultation Plan**, of the ToR. We will continue to engage and work with appropriate agencies during the EA that form part of our Government Review Team (GRT) as we have in the ToR.

2.0 & 3.0 EA Method & Alternative Methods

As requested, a statement within **Section 7.0** (pg. 12-13) of the ToR that the EA will consider potential effects on the environment over a specified timeframe has been added. Further, the comment was raised that a statement be included within **Section 7** (pg. 12-13) with respect to the review and evaluation of leachate treatment alternatives. The modification to this section is shown in red text below:

"'Alternative Methods' of carrying out a proposed undertaking (i.e., the proposed vertical expansion of the capacity of the Site) are different ways of doing/achieving the same activity. In accordance with the 'focused' nature of the EA proposed under this ToR, alternative methods will include alternative conceptual vertical capacity expansion designs. These options will be similar in addressing the problem/opportunity for the project, but operationally different enough to conduct a proper comparative evaluation.

It should be noted that we will not look at a horizontal expansion of the site as part of the Alternative Methods due to natural and technical environmental constraints; namely: 1) the Site is constrained by a PSW and Brooks Road; and 2) investing in new landfill infrastructure (i.e., additional liner construction) is not economically feasible for the company. This will be reiterated in the EA.

The EA will include a description of the purpose of the undertaking as well as a description of and statement of rationale for the undertaking, as included in this ToR. The EA will consider potential effects on the environment associated with the following timeframes:

- *Construction/Operation (5 to 7 years); and,*
- *Closure/Post-closure.*

The EA will include a description of and rationale for these alternative methods, to be developed in the early stages of the EA. Draft alternative methods will be presented to the public, agencies and Aboriginal communities for review and comment (see Section 11.0). The alternatives will be refined in response to public, agency and Aboriginal comment. A comparative evaluation of the alternative options using a Reasoned Argument (or Trade-off) method will be conducted, using evaluation criteria (see Section 8.0) as a basis for comparison, and one or more preferred alternatives will be selected.

The EA will address how each alternative method will conform to the requirements of Ontario Regulation 232/98 and related MOE landfill design guidelines. An assessment of leachate treatment alternatives will be assessed in the EA."

4.0 Compliance

Further to the compliance item raised, Brooks Road Environmental has been working with the Hamilton District Office (HDO) to address the concerns raised by MOECC. A copy of the minutes from the on-site meeting between BRE, CRA and MOECC on October 9th, 2014 are attached (**Attachment #2**) to demonstrate the agreement that was reached with respect to the compliance parameters. The main point of relevance is as follows:

"April 2014 would be taken as the date beginning the compliance period and an inspection would be conducted mid December 2014, demonstrating 8-months of ECA compliance. If the results of the December 2014 inspection reflect the overall positive changes in the management and operation of the landfill, HDO agreed to write a letter of support to Environmental Assessment Services (EAS) regarding the Terms of Reference for the Vertical Expansion of Waste Contours."

An email (**Attachment #2**) was provided to MOECC on October 30, 2014 from the HDO District Manager, Mr. Geoffrey Knapper, which reiterates the meeting minutes:

"I am writing this email in order to confirm the Hamilton District Office did meet with representatives from Brooks Road Landfill to review and confirm a compliance strategy for the landfill. It was agreed at this meeting that the landfill has taken a number of positive steps forward in its operation and management of the landfill. The District performed an inspection in the spring of 2014 and has scheduled another inspection for December 2014. If the results of the December inspection reflect the overall changes in the management and operation of the landfill the district has agreed to write a letter of support to EAS the TOR. The letter will be issued in December 2014."

A letter (**Attachment #2**) from Ms. Adrienne Clark of MOECC was provided to Mr. Andrew Evers of MOECC with respect to the outcomes of the site investigation as it relates to compliance on December 18, 2014. The following statement shows that the inspection by MOECC revealed that the site is in compliance and that the EA should proceed:

"*As a result of these inspections, it was found that since fall 2014, 2270386 Ontario Inc. (Brooks Road Environmental) operated in compliance with a majority of the ECA terms and conditions and applicable legislation. The company continues to make strides towards improvement of their day-to-day operations. Subsequent to the Terms of Reference, the Hamilton District Office is in support of 2270386 Ontario Inc. (Brooks Road Environmental) through the Environmental Assessment process."*

Based on the above, the compliance issue has been addressed. Further, BRE has committed to ensure that maintaining compliance at the site continues throughout the EA process and the life of the landfill. Future MOECC inspections will ensure this is reviewed and confirmed during the EA process.

5.0 Path Forward

As requested, an Errata Letter has been prepared to address the concerns raised and state the amendments to the ToR that will be made. In addition, we expect that EAS will receive a letter of support from the HDO for inclusion in the Minister's decision package.

6.0 Climate Change

As discussed on the phone, the MOECC raised the issue of Climate Change and in particular, Greenhouse Gas (GHG) emissions from the facility. While we did not include a specific section on Climate Change within the ToR, if the Ministry requests that the EA address this, we will certainly address this as part of the EA (i.e. incorporating Climate Change Adaptation measures within the evaluation of alternative methods). In addition, based on our further conversations with respect to reviewing a landfill gas collection system at Brooks Road Landfill, as part of the EA, we will review the landfill gas production/emissions to be compiled as part of the Air study. From this, we will provide further commentary on a landfill gas collection system. It should be noted that under the design requirements of *O. Reg 232/98*, Brooks Road Landfill is not required to install a landfill gas collection system, as the landfill is less than the Regulation threshold of 1.5 million m^3 (Section 15(2) of *O. Reg 232/98*).

We trust that you have the information required to address your concerns raised, save for the letter from HDO, which we expect will be sent within the second week of December. Should you have any additional questions, please do not hesitate to contact me.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Blair Shoniker, MA., MCIP, RPP
Senior Environmental Planner

Att.

Attachment #1 – Memo from MOECC

Ministry of the Environment and Climate Change

Environmental Approvals Branch

2 St. Clair Avenue West
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Toronto ON M4V 1L5
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Ministère de l'Environnement et de l'Action en matière de changement climatique

Direction des autorisations environnementales

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Ontario

September 24, 2014

MEMORANDUM

TO: Richard Weldon, Romspen
Paul Zizek, Brooks Road Environmental
Blair Shoniker, Conestoga Rovers & Associates
Peter Kemp, Conestoga Rovers & Associates
Greg Ferraro, Conestoga Rovers & Associates

FROM: Andrew Evers
Project Officer
Environmental Approvals Branch

RE: Path Forward on the Proposed Brooks Road Landfill Vertical Expansion Terms of Reference
EA FILE NO. EA03-08-02

The purpose of this memorandum is to outline the path forward on the Brooks Road Landfill Vertical Expansion Terms of Reference. A meeting was held between the Ministry of the Environmental and Climate Change (MOECC), Brooks Road Environmental and Conestoga Rovers & Associates on September 15, 2014 at the MOECC office in Toronto, to discuss MOECC's outstanding concerns with the Terms of Reference (ToR) and recommendations on how these concerns may be addressed.

1. Provincially Significant Wetland

The Grand River Conservation Authority (GRCA), Ministry of Natural Resources and Forestry (MNRF), and Lower Grand River Land Trust provided comments expressing concern about the field methods, specifically those related to the assessment of the Provincially Significant Wetland (PSW) located adjacent to the Brooks Road Landfill site. In addition, there is the potential for species at risk to occur in the PSW. The MOECC has requested that a brief description of the PSW be inserted in Section 10.2.1.4 of the ToR. In addition, the MOECC has requested that a commitment be

inserted in 10.2.1.4 and/or Attachment 4 of Appendix C, which indicates that the proponent will consult with the appropriate agencies (e.g., MNRF, conservation authorities) on the field program prior to initiating terrestrial field studies.

2. EA Method

Section 7.0 of the ToR does not adequately define the scope of the EA in terms of what activities of the proposed undertaking are being assessed (e.g., construction, operation, closure). The work plans located in Appendix C of the ToR provide some context on the activities; however, they are not clearly identified in the main text of the ToR. The MOECC requests that a statement be inserted in Section 7.0 of the ToR indicating that the EA will evaluate potential effects on the environment, as well as consider impact management measures over a specified timeframe for the undertaking (i.e., construction, operation, closure, post closure).

3. Alternative Methods

As mentioned by the proponent at the meeting, a leachate management system has been installed at the current landfill site; however, it is not in operation. Section 8.0 of the ToR mentions that only alternative site cell configurations will be evaluated in the EA. To address this, the MOECC requests that a statement is inserted in Section 7.0 and 8.0 to indicate that leachate treatment alternatives will also be evaluated. The MOECC also recommends that a statement of flexibility regarding alternative methods be inserted in Section 8.0 of the ToR. The statement should indicate that if through the EA process and consultation other alternative methods (e.g., new technologies) are identified that have not been considered in the current ToR, that they may also be evaluated in the EA, if applicable.

4. Compliance

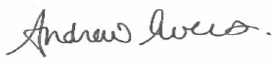
On page 4 of the ToR, the proponent states that “[t]he Proponent has shown a commitment to environmental stewardship…and will fully comply with all permits and approvals”. In addition, the proponent states on page 10 of the ToR, “[s]ince May 2012, BRE has dedicated substantial resources to the transformation of the existing landfill site into a modern engineered facility in full compliance with MOE requirements.” The Hamilton District Office (HDO) indicates that there are on-going compliance issues at the current landfill site, which is contrary to the statements made in the ToR, mentioned above.

To address this, the MOECC has requested that the proponent work with HDO to develop and implement a plan to remain in compliance for a pre-determined period of time. A commitment should be made in Section 1.2, which commits the proponent to continue working with the HDO to remain in compliance at the site throughout the EA process. Once the HDO is satisfied with the progress made by the proponent, the HDO will issue a letter to Environmental Assessment Services (EAS) that will support the Ministry’s decision on the ToR.

5. Path Forward

In order for the Minister to make a decision on the ToR, the MOECC has requested that the proponent submit an errata letter with the details of the amendments described above that will be made to the ToR to address the MOECC's concerns. The MOECC will review the extent of the proposed amendments and determine the best approach for implementation.

Concurrent to the submission of the errata letter, the proponent will be in contact with the HDO (Geoffrey Knapper) to develop and implement a plan to remain in compliance at the landfill site throughout the EA process. Once the HDO is satisfied with the progress made by the proponent, the HDO will provide a letter to (EAS) that will be submitted with the decision package to the Minister for a decision on the ToR.



Andrew Evers

Attachment

c: Alex Blasko, Supervisor, Environmental Approvals Branch
Annamaria Cross, Manager, Environmental Approvals Branch
John Beals, District Manager, Sarnia District Office
Geoffrey Knapper, Manager, Hamilton District Office

Attachment #2 – Email from Hamilton District Office

CONESTOGA-ROVERS & ASSOCIATES

MEETING MINUTES

Reference No. 018235

PROJECT: Brooks Road Landfill

OWNER: Brooks Road Environmental c/o 2270386 Ontario Limited

RE: Meeting with MOECC Hamilton District Office – Site ECA Compliance

LOCATION: Brooks Road Landfill Site DATE: October 9, 2014 TIME: 11:00 a.m.

Participants:

Richard Weldon (BRE)	Paul Zizek (BRE)	Adrienne Clark (MOECC)	Peter Kemp (CRA)
Geoffrey Knapper (MOECC)			

Item	*Description*	*Action By*
1.	**<u>Relocation of the Temporary Dewatering Sedimentation Pond</u>** • Kemp provides a summary of the temporary dewatering sedimentation (TDS) pond history: - Pre-2012 there were three TDS ponds - In 2012, at the request of the MOECC Hamilton District Office (HDO), Conestoga-Rovers & Associates (CRA) prepared an Interim Stormwater Management Plan (ISWMP) which was approved by the HDO in January 2013 - The ISWMP included combining the three TDS ponds into one upgraded TDS pond - In April 2014, CRA notified Adrienne Clark that Brooks Road Environmental (BRE) intended to relocate the TDS pond to facilitate construction of the Stage 3B landfill cell. Ms. Clark acknowledged and presented no issues at the time. - The relocated TDS pond was constructed in May 2014 - The relocated TDS pond is used for the same purposes as the upgraded TDS pond and maintains the same volumetric capacity • The relocated TDS pond was sampled and analyzed for TSS and pH per Table 6 of Amended ECA No. 1907-99NSF2 (TDS pond trigger parameters), which were under the trigger levels • Kemp – Requested permission to discharge the relocated TDS pond from the MOECC HDO • Knapper – Needs to discuss the matter in private with Ms. Clark prior to a decision being made. The outcome of that decision will be sent by email, likely today.	MOECC

Item	*Description*	*Action By*
2.	**<u>Status of Compliance with Site Environmental Compliance Approval</u>** • Historical inspection reports and compliance with the Site ECAs were discussed by all parties in attendance at the meeting • Kemp - Requested to solidify start and end dates which would comprise the Site compliance period as requested in the MOECC Environmental Approvals Branch (EAB) memorandum from Andrew Evers dated September 24, 2014 • Knapper – Noted that April 2014 would be taken as the date beginning the compliance period and an inspection would be conducted mid December 2014, demonstrating 8-months of ECA compliance. If the results of the December 2014 inspection reflect the overall positive changes in the management and operation of the landfill, HDO agreed to write a letter of support to Environmental Assessment Services (EAS) regarding the Terms of Reference for the Vertical Expansion of Waste Contours.	
3.	**<u>Other Business</u>** • BRE noted that they were following up on all administrative items identified in the September 30, 2014 MOECC HDO inspection No other business.	BRE

☐
Attachments: _____

Prepared By: Peter Kemp Date Issued: November 18, 2014

This confirms and records CRA's interpretation of the discussions which occurred and our understanding reached during this meeting. Unless notified in writing within 3 days of the date issued, we will assume that the following interpretation or description is complete and accurate.

Shoniker, Blair

From: Richard Weldon <RichardWeldon@romspen.com>
Sent: Thursday, October 30, 2014 2:23 PM
To: Kemp, Peter; Shoniker, Blair
Cc: Ferraro, Greg
Subject: FW: Brooks Road Landfill

Richard Weldon
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From: Knapper, Geoffrey (ENE) [mailto:Geoffrey.Knapper@ontario.ca]
Sent: Thursday, October 30, 2014 2:21 PM
To: Blasko, Alex (ENE); Evers, Andrew (ENE); Cross, Annamaria (ENE)
Cc: Clark, Adrienne (ENE); Richard Weldon
Subject: Brooks Road Landfill

I am writing this email in order to confirm the Hamilton District Office did meet with representatives from Brooks Road Landfill to review and confirm a compliance strategy for the landfill. It was agreed at this meeting that the landfill has taken a number of positive steps forward in its operation and management of the landfill. The District performed an inspection in the spring of 2014 and has scheduled another inspection for December 2014. If the results of the December inspection reflect the overall changes in the management and operation of the landfill the district has agreed to write a letter of support to EAS the TOR. The letter will be issued in December 2014.

Geoffrey Knapper M.A.
District Manager, Hamilton
West Central Region
Ministry of the Environment and Climate Change
119 King Street West, 9th Floor
Hamilton, Ontario L8P-4Y7

Tel. 905.521.7680
Cell 905.979.7680

"" I care not what others think of what I do, but I care very much about what I think what I do: That is character! " — Theodore Roosevelt

Ministry of the Environment and Climate Change

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Ministère de l'Environnement et de l'Action en matière de changement climatique

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Ontario

December 18, 2014

Mr. Andrew Evers
Project Officer
Environmental Assessment Services
2 St. Clair Ave. W. Floor 12A
Toronto, ON M4V 1L5

Dear Mr. Evers:

RE: Brooks Road Landfill Status of Compliance, Haldimand County

The Hamilton District Office has been conducting routine inspections of the Brooks Road Landfill, in Cayuga, for the purpose of monitoring compliance with the terms and conditions of the site's Environmental Compliance Approval (ECA) and applicable environmental legislation.

As a result of these inspections, it was found that since fall 2014, 2270386 Ontario Inc. (Brooks Road Environmental) operated in compliance with a majority of the ECA terms and conditions and applicable legislation. The company continues to make strides towards improvement of their day-to-day operations. Subsequent to the Terms of Reference, the Hamilton District Office is in support of 2270386 Ontario Inc. (Brooks Road Environmental) through the Environmental Assessment process.

If you have any further questions or concerns, please do not hesitate to contact me directly.

Sincerely,

AClark

Adrienne Clark
Senior Environmental Officer
Hamilton District Office

cc: Geoff Knapper, Hamilton District Manager