Siting Report
Mixed Waste Transfer / Pre-Sort and Anaerobic Digestion Organics Processing Facility
Regional Municipality of Durham
Waste Planning and Technical Services

Sitin
Mixed Waste Anaerobic Digestion Process

Regional Waste Services
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1. **Introduction**

On June 26, 2019, the Regional Municipality of Durham (Region) Council granted approval to proceed with the Region’s preferred long-term organics management technology solution, with the capital project to include both a mixed waste transfer and pre-sort facility and an anaerobic digestion (AD) organics management processing facility (Facility).

In order to facilitate the development of the Facility, a suitable site within the Region is required. With this in mind, the Region engaged GHD Limited to undertake a siting exercise to evaluate and identify a preferred site that would be brought forward and recommended to Council. The siting process includes the following three steps:

1. **Develop Siting Methodology and Evaluation Criteria** – Determine the search area and minimum site requirements, and develop a siting methodology along with a series of criteria to evaluate potential sites.
2. **Long-List Evaluation** – Apply an initial set of evaluation criteria to the list of candidate sites to arrive at a short-list of sites.
3. **Short-List Evaluation** – Comparative evaluation of short-listed sites against additional evaluation criteria. Assess the advantages and disadvantages of developing a facility on each site, and perform a comparative ranking to determine the recommended site.

This report provides an and description, summary of the site selection methodology with evaluation criteria, establishment of a long-list of potential sites, evaluation of the long-list of sites, generation and comparative evaluation of the short-list of sites, and a recommended site for future development of the Facility.

2. **Facility Need and Background**

The Region manages municipal solid waste within its jurisdiction serving single-family residences, multi-family residential properties (multi-residential), and business improvement areas from eight municipalities: Pickering, Ajax, Clarington, Brock, Scugog, Uxbridge, Whitby, and Oshawa. The Region is responsible for non-hazardous municipal solid waste management programs, including collection, processing, diversion, haulage, and disposal of Blue Box recycling. The Region maintains responsibility of garbage, Source Separated Organics (SSO), and leaf and yard waste for all municipalities except for the Town of Whitby and City of Oshawa.

The Region adopted its first Long-Term Waste Management Strategy Plan in 1999. One of the main goals of the strategy plan was to divert at least 50 percent of the residential waste from disposal by 2007. In spring 2019, Regional Council directed staff to begin working on a new Long-Term Waste Management Plan 2021 – 2040, that will include new waste diversion goals over that time horizon.

In 2017, the Region determined a need to focus on an Organics Management Strategy in order to ensure future organics processing capacity would be achieved, particularly in light of the Provincial Organics Action Plan (OAP). Through additional work completed by the Region, it is evident that

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1 Region of Durham Report, Report #2017-COW-180, June 7, 2017
there are several key drivers to ensure the Region provides adequate organics processing capacity to its residents, including:

- **Current Diversion Rates** – Small increments are required to move the needle on diversion in order for Durham to achieve 70 percent diversion. Increasing capacity for recovery of organics will assist in the Region in making incremental steps to the overall diversion goal.

- **Growth in the Region** – The Region continues to experience significant and rapid single-family and multi-residential growth, thereby increasing the amount of organic material generated for processing within the Region.

- **Other Waste Management Infrastructure** – The removal of organics and recyclables from other waste management infrastructure, for example, the Durham York Energy Centre (DYEC) will preserve capacity for materials that cannot be diverted.

- **Legislation** – The Province has implemented the Food and Organic Waste Action Plan and Policy Statement, which sets targets for the Region with respect to recovery and processing of food and organic waste.

With this in mind, expanded organics capacity through AD and mixed waste processing (MWP) pre-sort technologies will allow the extraction of organics from both single-family households and the multi-residential residual stream, and help increase the Region's diversion rate, while ensuring the legislative requirements are also met.

The Region's SSO program currently accepts all food wastes, household plant clippings, paper fibre wastes, and potting soils. In 2018, a waste composition study was conducted on single and multi-family residential waste samples from within the Region. The waste composition results indicated that the residual waste stream from both single-family and multi-residential households includes up to 40 percent of uncaptured organics materials, which could potentially be diverted through the Facility.

Up to 25,000 tonnes of the Region’s SSO are processed by Miller Waste Systems Inc. at a composting facility on Squires Beach Road in Pickering, Ontario. In addition, up to 20,000 tonnes of the Region’s SSO are processed by Walker Environmental - All Treat Farms at a composting facility on Wellington County Road in Arthur, Ontario. The Region’s SSO are processed aerobically in an in-vessel technology to generate compost that meets the current Ontario Composting Guidelines for “AA” grade compost. Aerobic composting introduces limitations because, in order to produce “AA” compost, it cannot accept difficult to compost materials such as animal waste, and hygiene and incontinence products. It also cannot accept more contaminated organics that could be generated in the multi-residential sector or from community centres, civic facilities, fairs and festivals, and other sources of organics with relatively high contamination. This limits the Region’s ability to reach its waste diversion goals by limiting the amount of waste the Region can divert from disposal.

While the Region does provide collection of SSO for low-to medium density multi-residential residences, there is limited SSO collection by the Region at high-density multi-residential residences (e.g., high-rise apartments). There are unique challenges in the collection of SSO from high-density multi-residential residences based in part on the lack of infrastructure for separation of the waste stream. The Region is not considering the expansion of the SSO program to include high-density multi-residential residences at this time.
Mixed waste is sent to the DYEC for thermal processing and generation of electricity. Thermal processing in Ontario does not count towards diversion metrics, and is treated as an alternate form of disposal.

There are a number of drivers being encountered by the Region that dictate moving towards the Facility. The additional components to the existing system are in part dictated by the Region’s waste profile and existing assets, the Region’s goals, and the additional drivers and opportunities generated by new legislation (i.e. the Food and Organic Waste (FOW) Action Plan and the Food and Organic Waste Policy Statement).

With respect to the drivers, this Facility will achieve the following alignment:

• The Facility can harvest organics and recyclables from the mixed waste that will decrease the amount of materials that need to be processed by the DYEC. This preserves capacity at the DYEC for current and future volumes of waste, accommodates growth in the Region, and extends the timeline for expansion of this asset.

• The Facility can harvest organics and recyclables that are currently being sent for disposal at the DYEC and will help increase diversion for the Region on its road towards a 70 percent diversion goal. It is expected that the implementation of this type of system, which is the only viable approach for isolating organics from mixed waste, as part of the Region’s completed integrated waste management system would increase diversion towards the Region’s goal.

• The Facility can harvest incremental volumes of recyclables and organics, which can then be used to demonstrate greenhouse gas (GHG) reductions. Reducing GHG emissions from solid waste through such diversion and alternative treatment options (including energy from waste) is a strategy included in the Region’s Community Climate Change Local Action Plan 2012. The Regional Council also declared a climate emergency in January 2020, thereby recognizing environmental sustainability and climate change as strategic priorities for the Region.

• The Facility can successfully cull organics from mixed waste, attending to the requirements that could be imposed when/if an organics disposal ban is implemented.

The application of an organics management system consisting of the Facility to supplement the Region’s existing waste management infrastructure is expected to generate a number of positive outcomes, including the following:

• More than doubling the amount of organics captured compared to the Region’s current baseline, adding an initial 27,000 tonnes per year of organic material into the Region’s diversion stream. This material will necessitate additional processing and represents a new diversion stream. This approach will further isolate approximately 3,000 tonnes per year of additional recyclable materials.

• Decrease the total amount of waste sent to the DYEC creating excess capacity.

• It is estimated that the Facility would create technical employment opportunities for approximately 30 to 40 highly-skilled staff during full-time operations. For comparison, the DYEC currently employs approximately 40 full-time staff to operate the facility under the Region’s supervision for the lifecycle of the Facility (up to 30 years).
• Additional benefits could be driven from advanced technologies such as AD, which can produce energy streams that can be commoditized.

There are two key components to the Facility proposed by the Region. The first is the mixed waste/transfer pre-sort process that isolates the recyclables and organics from the mixed waste. Recyclables are typically sorted, baled, and sent to secondary markets. The isolated organic fraction from the mixed waste will be sent to the organics processing system. SSO from the curbside Green Bin program will also be sent to the organics processing system (See Figure 1).

**Figure 1 - Facility Process Flow Chart**

Mixed waste transfer/pre-sort processing of mixed waste, removes hazardous, dangerous, or oversized materials using equipment or manual sorting, and then utilizes mechanical equipment to separate organics and recyclables. Once organics are removed from the waste stream, the remaining waste is sent to mechanical automated equipment that can sort a variety of recyclable products: metals, aluminum, fibre, different grades of plastics, glass, etc. These commodities can then be sent into the recyclables market to reduce the use of virgin materials in manufacturing. Currently, the organics and recyclables in the mixed waste are combusted in the DYEC. The organic materials culled from the mixed waste can then be processed using the organics processing system.

Wet AD was approved as the Region’s technology for processing organic materials including SSO and the separated organics from mixed waste processing, which is also referred to as facility separated organics (FSO). Wet AD technology includes continuously-stirred or plug-flow type, anaerobic digesters where the digestate can be pumped through pipes to the subsequent processing steps. AD occurs in the absence of oxygen and organic materials breaking down in the
absence of oxygen create biogas, which is rich in methane (i.e., natural gas but biologically-based). This methane can be used to create a variety of products such as electricity, renewable natural gas for injection into the natural gas distribution system, vehicle fuel for fueling vehicles, and possibly for liquid fuels to supplement ethanol blend requirements. The production of a fuel product further displaces fossil-based fuels and can generate revenues as a low-carbon fuel or from cap-and-trade offsets. Finally, AD can produce a variety of final products, including digestate, liquid fertilizer, solid fertilizer, or compost. Specific AD technologies have the ability to generate quality final organic products that can be beneficially-utilized, increasing diversion metrics.

3. **Facility Description**

The Region’s service delivery approach for implementing the Region’s long-term organics management solution includes public ownership of the Facility with a long-term (estimated to be for 20 years) single contract to be obtained from the private sector to design, build, operate, and maintain (DBOM) the Facility.

The Facility will be sited to accommodate a design for the projected 20-year processing capacity requirements of mixed waste and SSO. FSO recovered from the mixed waste along with the SSO will be sent for AD to the organics processing system. The Facility will be designed with space allocated for the potential transfer of waste to and from the Facility allowing for the potential transfer of mixed waste, SSO, recyclables, and leaf and yard waste.

After having identified the need and the preferred technology, it is important to find an appropriate site to accommodate the type of Facility and preferred technology (i.e. different technologies or approaches to organics management require different footprint sizes and mitigation measures for nuisances). A key consideration for the selection of a site is the approximate size of the lands required to accommodate the Facility. The preliminary sizing of the Facility is based on the mass balance previously developed by GHD for a 20-year and 50-year processing capacity. The mass balance was developed using information provided by and previously presented to the Region. The information provided by the Region included the growth projections and waste composition data.

The preliminary sizing of the buildings/facility includes tip floors, mixed waste pre-sort area, organic pre-processing and AD facilities, residue management area, and material transfer areas. The general assumptions and area assumption used to generate the site sizing requirements resulted in a site footprint ranging from 8 to 15 hectares.

4. **Siting Process**

With the above context in mind, GHD developed a methodology for the siting of the Facility. In order to ensure that the optimal location is identified, the siting process should:

- Follow a clearly defined methodology.
- Meet all applicable regulations and standards.
- Be consistent with best practices.
- Consider relevant evaluation criteria.
The goal of this Section of the report is to establish a practical siting methodology with associated evaluation criteria that will be undertaken in a step-wise process, which ultimately leads to a recommended site for developing the Facility.

4.1 Regulatory Framework

As part of the siting and development process, it is important to highlight the appropriate legislative framework that applies to waste management in Ontario and, specifically, the development and operation of supporting infrastructure. The mandate of the Ministry of Environment, Conservation and Parks (MECP) is to ensure protection, and where degraded, rehabilitation occurs of the natural environment, and the conservation of environmental and material resources for the enjoyment and benefit of present and future generations of people, as well as for other users of the environment. This mandate is supported by several pieces of applicable Ontario legislation, including:

Managing Waste in Ontario
(3) Waste Diversion Transition Act, 2016
(4) Food and Organic Waste Policy Statement, 2018
(5) A Made-in-Ontario Environment Plan, 2018
(6) Reducing Litter and Waste in Our Communities: Discussion Paper, 2019

Siting and Development of Waste Infrastructure
(1) Environmental Assessment Act
  - Ontario Regulation 101/07 (Guide to Environmental Assessment Requirements for Waste Management Projects)
(2) Environmental Protection Act
  - Ontario Regulation 347 (General Waste Management)
  - Ontario Regulation 419/05 (Air Pollution – Local Air Quality)
  - Ontario Regulation 419/05 and Guide for Applying for Approval (Air and Noise), S.9 EPA, November 2005, Guideline 4174e
(3) Ontario Water Resources Act

Land Use Planning
(1) The Planning Act
  - Provincial Policy Statement, 2014 (PPS)
  - Growth Plan for the Greater Golden Horseshoe, 2017
  - Oak Ridges Moraine Conservation Plan, 2017
These Acts, along with the Regulations under them, are used to establish and detail the authority and responsibility of the MECP as well as the legal requirements for proponents of various proposals. These Acts detail the obligations of facility owners with respect to their impact on public health and the environment, along with the rights of residents of Ontario.

Approvals or permits must be obtained prior to implementation of proposals with a potential for impact on public health or the environment. The residents of Ontario also have the right to be made aware of the proposal, so that the public has the opportunity to comment. Applications for MECP approvals go through the Environmental Bill of Rights public posting (30 days), during which time they are displayed publicly for comment on the material. The MECP and the Facility proponent must take due account of all comments and respond in a reasonable fashion.

4.1.1 Managing Waste in Ontario

The Waste-Free Ontario Act, 2016, which is comprised of the Resource Recovery and Circular Economy Act, 2016 and the Waste Diversion Transition Act, 2016 replaces the Waste Diversion Act, 2002. It and the accompanying Strategy for a Waste Free Ontario – Building the Circular Economy (Strategy), set goals for the waste sector with interim targets of 30 per cent diversion by 2020, 50 per cent diversion by 2030, and 80 per cent diversion by 2050. The legislation and Strategy seek to transform our current linear take-make-dispose consumption model that treats our resources and energy as limitless and disposal as inexpensive, to a circular model whereby wastes are reduced and what remains is captured and returned as productive resource inputs into our economy. The Strategy identifies food and organic wastes as an action item to ensure the volume going to landfill is reduced (Action 10: Implement an action plan to reduce the volume of food and organic wastes going to landfill). The Strategy acknowledges that there is a lack of regional infrastructure capacity, including organics processing capacity as it relates to the diversion targets.

The Resource Recovery and Circular Economy Act, 2016 establishes a new waste diversion framework, which includes allowing the Province to provide direction related to resource recovery and waste reduction activities through policy statements and provincial interests. Municipal Official Plans must be consistent with policy statements and zoning by-laws must conform within three years of changes to Official Plans. These requirements are similar to those in the Planning Act.

The first Policy Statement established pursuant to Section 11 of the Resource Recovery and Circular Economy Act was the FOW Policy Statement. The FOW Policy Statement provides (amongst other items) policy direction across the production chain including the Province, municipalities, and the private sector. The Resource Recovery and Circular Economy Act, 2016 requires relevant instruments (e.g. environmental approvals, municipal by-laws and Official Plans) to be consistent with appropriate policies in the FOW Policy Statement. Section 3(8) of the Planning Act now includes a provision that a Policy Statement issued under s. 11 of the Resource Recovery and Circular Economy Act is deemed to be a policy statement for the purpose of s. 3(1) of the Planning Act, ensuring that there is a “consistency” requirement for policy statements.

The FOW Policy Statement contains direction on supporting resource recovery infrastructure (Section 6), which seeks to ensure the Province as a whole develops the infrastructure required to address the increased food and organic waste processing capacity needs. Section 6 of the FOW Policy Statement describes this as follows:
“As the province, municipalities and the private sector take action to increase resource recovery of food and organic waste, Ontario will face significant demand for new or expanded resource recovery systems. Ontario will need to support existing resource recovery systems and develop additional capacity to process food and organic waste. These facilities must be well-planned and suitably sited to ensure the long-term effectiveness of our resource recovery systems.”

The FOW Policy Statement establishes direction based on the language used (i.e., 'shall' - clear direction, 'should' - moderate direction, and 'encourage' or 'may' which is minimal direction). The following would apply to the Region under the FOW Policy Statement:

- Municipalities that currently provide green bin collection **shall:**
  - Achieve a performance target of 70 per cent waste reduction and resource recovery of food and organic waste generated by its single-family dwellings by 2023.
  - Achieve a performance target of 50 per cent waste reduction and resource recovery of food and organic waste generated by multi-residential building owners by 2025.
  - Ensure that official plans are consistent by end of period determined under section 26(1) of the *Planning Act*, while municipal bylaws must be amended within three years after official plan amendment.
  - Ensure that approvals for new or expanded resource recovery systems address the D-Series Land Use Compatibility Guidelines and the Guideline for the Production of Compost in Ontario.

- Municipalities that currently provide green bin collection **should:**
  - Ensure official plans, zoning bylaws, plan or subdivision approvals and site plan approvals support resource recovery of food and organic waste.
  - Protect existing and planned resource recovery systems from incompatible uses and plan for new systems, where appropriate, to meet projected needs.

- Municipalities that currently provide green bin collection **are encouraged:**
  - To engage in additional waste reduction and resource recovery efforts to achieve their target with respect to additional types of organic waste, including personal hygiene wastes, sanitary products, shredded paper, additional paper fibre products, compostable products and packaging and pet food/wastes.

With respect to mixed waste processing, the FOW provides guidance for those municipalities, such as the Region, that already provide curbside collection of SSO to meet food and organic waste diversion targets (Section 4.1 of FOW):

> “Municipalities that, as of the effective date, provide curbside collection of source separated food and organic waste shall maintain or expand these services to ensure residents have access to convenient and accessible collection services.”

i. **In addition to curbside collection of source separated food and organic waste, other collection methods, such as directing disposal streams to mixed waste processing, may be used to support collection of additional food and organic waste.**

As the Region has an established curbside program in place, the proposed Facility will expand the Region’s services and assist in increasing the overall diversion rate, while ensuring the proposed
facility is in keeping with the FOW Policy Statement. Other parameters around mixed waste processing within the FOW Policy Statement that the Region has considered includes:

6.12 *When undertaking* mixed waste processing, owners and operators of resource recovery systems *should only accept source separated* food and organic waste *in instances when contamination or availability issues arise.*

6.13 *When undertaking* mixed waste processing, owners and operators of resource recovery systems *should demonstrate that recovered organic resources will regularly meet all applicable environmental quality standards.*

6.14 *When undertaking* mixed waste processing, owners and operators of resource recovery systems *should send recovered organic resources for further processing, such as composting or anaerobic digestion, where necessary.*

In concert with the need for developing the necessary infrastructure to accommodate the goals and targets for food and organic waste diversion from landfill, the FOW Policy Statement also discusses the importance of both timely approvals to develop the facilities, as well as developing the facilities within close proximity to the generated material:

"*Municipal and provincial approvals (e.g. land use and environmental approvals) ensure that resource recovery systems are designed, sited and developed to address matters related to the environment, economy and society. A strategic and collaborative approach will help facilitate timely decisions for these essential facilities.*

6.5 The province, municipalities and other planning authorities should co-ordinate and complement approaches to provincial and municipal approvals, wherever possible, to facilitate timely decisions for resource recovery systems.

6.9 Owners and operators of resource recovery systems are encouraged to reduce greenhouse gas emissions generated from their operations, where feasible. Food and organic waste should be managed as close to the source as is realistically possible to limit greenhouse gas emissions resulting from transportation and haulage."

The Made-in-Ontario Environment Plan and subsequent Reducing Litter and Waste in Our Communities: Discussion Paper, specifically speaks to improving the organics diversion program in Ontario, ensuring the FOW Policy Statement moves forward and that “The province will look for opportunities to support the localized management of organic waste such as on-site management or small-scale composting.”

The discussion paper also touches on the potential for an organics landfill ban, which would require “the development of additional resource recovery systems”. With this in mind, the Province is currently in an organics processing deficit from an infrastructure perspective, particularly if they want to meet key diversion targets within the FOW Policy Statement and implement a food waste ban. Note that under the FOW Policy Statement/Framework, there is a focus on improving the approvals process – but only in the context of streamlining Environmental Compliance Approvals (the “ECAs”).

In order to implement the FOW Policy Statement and Action Plan, the Province will require the development of additional infrastructure to divert from landfill and process the material.
With the above in mind, the Region’s proposed facility will facilitate the development of the necessary infrastructure to meet the diversion targets, as well as ensuring the management of the food and organic waste occurs as close to the generated source as possible. Providing context around how Policy is shaping the development of infrastructure is important when developing and applying a siting methodology that will move rapidly to determine an appropriate site to facilitate the achievement of key FOW Policy goals.

4.1.2 Environmental Assessment Act

The Ontario Environmental Assessment Act (EA Act) is a provincial statute that sets out a planning and decision-making process to evaluate the potential environmental effects of a proposed undertaking. In March of 2007, the Ontario Government enacted Ontario Regulation (O. Reg.) 101/07, the Waste Management Projects Regulation, made under the EA Act. The purpose of the Regulation was to bring greater clarity as to which types of waste projects require an EA to be completed under the EA Act.

The Regulation provides for three waste project EA processes:

- Projects exempt from Part II of the EA Act (generally small scale and known through past experience to have insignificant environmental effects).
- Projects exempt from Part II of the EA Act, subject to the legal requirement of completion of the Environmental Screening Process (generally moderate in scale, considered to have predictable environmental effects that can be readily reduced to acceptable levels).
- Projects designated under the EA Act that must undergo an Individual EA (usually more complex and major in scale with potentially far-reaching environmental effects requiring significant levels of assessment and mitigation. This process requires both a Terms of Reference and an EA).

If a proposed undertaking has not been designated or defined under the EA Act or O. Reg. 101/07, then the legislation does not apply. We have reviewed O. Reg 101/07 as well as the accompanying Guide to Environmental Assessment Requirements for Waste Management Projects and based on the assumed volumes², the potential facility will not transfer, on an annual basis, an average of more than 1,000 tonnes of waste per day from the site for final disposal (including to the DYEC). Therefore, it will not require any EA Act approvals as it is not designated as an undertaking to which the EA Act applies.

It should be noted, however, that as an application under the Environmental Protection Act (EPA), the public has the opportunity to request that the application be subjected to a discretionary hearing and/or be designated under the EA Act.

4.1.3 Environmental Protection Act

Under EPA Regulation 347, various Environmental Compliance Approvals (ECA) or Amendments to existing ECAs will be required for the potential facility. ECAs typically required for this type of facility

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² Preliminary Facility Siting – Mixed Waste Processing and Anaerobic Digestion Facility Integrated Waste Management System – Pre-sort and Anaerobic Digestion, GHD, August 7, 2019
include: a Waste Disposal Site ECA; an Air and Noise ECA; and a Stormwater Management ECA under Section 53 of the Ontario Water Resources Act.

The statutory requirement for an ECA for a Waste Disposal Site is contained under Part V, Section 27 of the EPA. Section 27 requires that approval be obtained from the Director of the Environmental Assessment & Permissions before using, operating, establishing, altering, enlarging, or extending a waste management system or a Waste Disposal Site. For clarification, this type of a facility is considered under the legislation as a Waste Disposal Site even though it does not necessarily correspond with the conventional definition of waste disposal (i.e., landfill, incineration). Supporting information and documentation typically required for a Waste Disposal Site ECA includes a Design and Operations Report, a Site Drainage Report, and a Waste Analysis Plan. For the proposed facility, the Part V approval would typically set out limits on incoming material, define on-site traffic patterns and delivery schedules, identify storage and processing functions, and quantify residual wastes produced.

Air and Noise ECAs are required for facilities that release emissions into the natural environment (excluding water). Section 9 of the EPA requires equipment, structures, or processes that may discharge a contaminant to the atmosphere to be approved before construction, alteration, extension, or replacement of any equipment or structure of any ongoing operation. For the proposed facility, a Section 9 approval typically relates to treatment of process air through abatement systems such as biofilters, and describes possible noise sources such as shredding and screening equipment.

Section 33 of Ontario Regulation 419/05 states that emissions of any air contaminant may not cause discomfort to persons, cause loss of enjoyment of normal use of property, interfere with the normal conduct of business, or cause damage. Although no specific odour limits are set out in the Regulation, an odour criterion/guideline of 1 odour unit (o.u.) at the property line is routinely required by the MECP and defined in the Section 9 approval. Generally, compliance with this criterion is assessed using a source testing methodology at the odour source (such as a biofilter) and then modeled to estimate the odour profile at the property line and at sensitive receptors.

Supporting information and documentation typically required for Air and Noise ECAs includes a full and detailed air and noise analysis, and a summary of emission calculations in an Emission Summary and Dispersion Modeling (ESDM) Report.

4.1.4 Ontario Water Resources Act

The Environmental Assessment & Approvals section of the MECP issues ECAs under the Ontario Water Resources Act (OWRA) for the treatment and disposal of sewage by municipal and private systems. An ECA is required for any facility that discharges contaminants to groundwater and/or surface water. Section 53 of the OWRA requires that an ECA be obtained in order to establish any sewage works (sewage works are defined as works used for the collection, transmission, treatment, or disposal of wastewater) including stormwater management facilities.

If any surface water discharge were to be directed to an existing sanitary system, an OWRA approval will likely be required. However, discharging surface water directly to a sanitary system is not a common practice or generally employed methodology. Discharge of process water to the sanitary sewer is regulated by the municipal sewer use by-laws, but requirements for a Section 53
ECA should be examined, especially where surface water is utilized in the facility as make-up water. Any discharge of process water to the natural environment requires either a new Section 53 ECA or an amendment to an existing one. Supporting information and documentation typically required for a Sewage Works ECA includes an Environmental Study report (including a hydrogeological assessment and drainage study). The particular area of consideration for the proposed Facility is the requirement to adequately control any stormwater management on-site.

4.1.5 Other Approvals

Aside from the MECP, requirements under the following authorities and standards may also be applicable for the Site works:

- Ministry of Natural Resources and Forestry.
- Ministry of Transportation.
- Ontario Building Code.
- Ontario Fire Code.

Standard municipal approvals such as building permits and Site Plan approval will also be required for the potential Facility. The Planning Act establishes land use by means of Official Plans at both the upper tier municipality (Region) and the lower tier municipality (City/Township), and zoning by-laws at the lower tier municipal level.

4.1.6 Guidelines

In addition to the Regulations noted above, existing Guidelines were reviewed with respect to the siting and development of waste management facilities of a similar type, including:

- "Guideline for the Production of Compost in Ontario: Companion to the Ontario Compost Quality Standards"3 which provides recommendations regarding planning, design and operational practices for composting facilities, including site selection considerations (e.g., separation distances from sensitive receptors and buffer zones), site and facility design considerations, operating procedures during each stage of material handling, feedstock management (e.g., acceptance of plastic bags, compostable plastic bags, disposable diapers and sanitary items), and odour prevention and control measures.

- "Technical Document on Municipal Solid Waste Organics Processing"4 developed by Environment Canada. The document provides insight on many aspects of organics processing, including: the science and principles of aerobic and anaerobic processing, processing technologies, system selection, facility siting and design considerations, supporting infrastructure

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4 Government of Canada, 2013
and equipment, procurement approaches, odour control and management, and market considerations.

4.2 Siting Methodology - Overview

With the above Regulatory and Guidance Documents in mind, the following represents an overview of the siting methodology utilized to develop, evaluate, and recommend a site for the Facility within and under the current control of Durham Region.

1. Determine search area / minimum site requirements.
2. Identify list of candidate sites based on minimum site requirements.
3. Develop evaluation criteria for candidate / long list of sites and short-list of sites.
4. Apply evaluation criteria to the long list of sites to determine a short-list of sites.
5. Stakeholder consultation – municipal (February 19, 2020) and public (February 27, 2020).
6. Apply evaluation criteria to short-list of sites to undertake a comparative evaluation to establish advantages / disadvantages between sites.
7. Identify preferred site

A summary of each of the steps highlighted above is presented below.

As there is not one set of guidelines or approach to siting this type of infrastructure in Ontario, a number of complementary policies, technical guidance documents and approaches to siting facilities were reviewed to establish a transparent and traceable siting methodology. One overarching element utilized in establishing the methodology was to model the general approach after the MECP’s Statement of Environmental Values (SEV), which is considered whenever decisions that might significantly affect the environment are made by the MECP. The SEV outlines the MECP’s vision for an "Ontario with clean and safe air, land and water that contributes to healthy communities, ecological protection, and environmentally sustainable development for present and future generations". In this regard, the siting and development of the Facility will be based on the:

- Prevention, reduction, and elimination of impacts to the environment.
- Protection and conservation of natural resources and ecologically sensitive areas.
- Integration of social, economic, and other considerations.
- Provision of opportunities for consultation.

Incorporating these principles throughout the siting process will assist in identifying the optimal site that not only satisfies the objectives of the Facility, but accomplishes it in a manner that is both efficient and fully approvable. The siting methodology should also be well defined to ensure that the site selection process itself runs smoothly, and that the decisions being made are traceable and defendable.

In addition to the incorporating the SEV into the evaluation methodology, the siting process proposed includes elements of the Ontario EA Act. On September 20, 2019, the Region submitted a letter to Ms. Barb McMurray at the MECP requesting to meet with the Partnerships unit to discuss
the Facility. On August 16, 2019, the Region submitted a letter to Ms. Heather Malcolmson at the MECP to receive confirmation from the MECP that the proposed Facility would not be considered an undertaking under the *Ontario Environmental Assessment Act*. The MECP confirmed that an EA is not required for the Facility. Although the proposed facility is exempt from the EA Act requirements, the siting process undertaken was modelled after the EA Act by utilizing the broad definition of "environment" under the EA Act as the basis for developing the site evaluation criteria, as well as incorporating a comparative evaluation of the advantages and disadvantages of each of the sites commonly utilized in an EA process.

### 4.2.1 Define the Search Area and Establish Candidate Sites

The first step in the siting process was to define the search area within which the Facility will be located. The search area included all of Durham Region, encompassing all eight member municipalities. It is the Region’s desire to develop the Facility within the Region’s boundaries to be able to better manage the waste generated therein.

A list of Region-owned sites was provided by the Region for consideration, based on an inventory of existing sites. The list of candidate sites were limited to Region-owned properties only, which included opened/closed waste management facilities, operations facilities, or vacant lots that are currently undeveloped. It was important for the Region to conduct this high level candidate list generation early in the planning process to focus the siting efforts and resources within potentially suitable areas. As discussed in Section 3, the Region has set and prioritized goals to increase diversion to 70 percent, preserve capacity at the DYEC, and extend the timeline for expansion of the DYEC. Thus, the Region is on a tight procurement timeline for this Facility and aims to release the Request for Prequalification (RFPQ) in early 2020 that includes information on the selected site.

Region-owned sites can offer significant advantages over privately-owned sites, with the potential to simplify the siting process and to decrease capital costs. Siting the Facility on Region-owned property is an effective way to maximize the use of resources, and provides an opportunity to build a facility that complements the Region’s existing infrastructure. The Region's open and closed waste facilities may have the required regulatory framework in place for a waste management site such as permits and ECAs, simplifying the approvals process and avoiding potential delays. It is also likely that the zoning and land use considerations for these sites are consistent with the surrounding properties, limiting exposure of the Facility to sensitive receptors. Region-owned sites helps mitigate the exposure to risk and liability that could arise during the procurement of a private site. For the abovementioned reasons and as per the Region’s direction, privately-owned facilities were excluded from consideration.

Most parcels of land in Ontario are assigned a unique Property Identification Number (PIN), which is associated with information such as: legal ownership, geographic location (municipal street address and/or lot and concession numbers), size, and boundaries. PINs are maintained through the Province of Ontario Land Registration Information System (POLARIS) and associated mapping database, which is managed by Teranet Enterprises Inc., under an agreement with the Ontario government (Land Information Ontario), and the Municipal Property Assessment Corporation (MPAC).

PINs for each site were provided by the Region and included in the list of Region-owned sites for consideration.
4.2.1.1 Candidate/ Long List of Sites

Based on the search details outlined above, a total of 16 sites were identified for consideration in siting the Facility. A complete listing of the candidate sites is provided in Table 1.
<table>
<thead>
<tr>
<th>ID</th>
<th>Municipality</th>
<th>Address</th>
<th>PIN</th>
<th>Size (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Brock</td>
<td>133 Main St., Beaverton, ON</td>
<td>720380119</td>
<td>3.82</td>
</tr>
<tr>
<td>2</td>
<td>Pickering</td>
<td>West of Whites Road and South of Granite Court southerly along East side of Canadian National Railway (CNR) tracks, designated as Bayly St. 40M-1334 City of Pickering</td>
<td>263110524</td>
<td>1.96</td>
</tr>
<tr>
<td>3</td>
<td>Clarington</td>
<td>3094 Liberty St. N.</td>
<td>266930067</td>
<td>0.21</td>
</tr>
<tr>
<td>4</td>
<td>Clarington</td>
<td>339 Courtice Road, Courtice</td>
<td>266050113</td>
<td>3.26</td>
</tr>
<tr>
<td>5</td>
<td>Clarington</td>
<td>1797 South Service Road, Courtice (now named 1797 Megawatt Drive)</td>
<td>266050114</td>
<td>7.67</td>
</tr>
<tr>
<td>6</td>
<td>Clarington</td>
<td>1797 South Service Road, Courtice (now named 1797 Megawatt Drive)</td>
<td>266050116</td>
<td>4.90</td>
</tr>
<tr>
<td>7</td>
<td>Clarington</td>
<td>1835 Energy Drive, Clarington</td>
<td>266050111</td>
<td>12.12</td>
</tr>
<tr>
<td>8</td>
<td>Pickering</td>
<td>Seaton Lands South of Highway 7, ON</td>
<td>263860136</td>
<td>2.96</td>
</tr>
<tr>
<td>9</td>
<td>Scugog</td>
<td>#10 Regional Road No. 21 (full address is 10 Goodwood Rd, Port Perry, ON L9L 1B5)</td>
<td>268190095</td>
<td>41.35</td>
</tr>
<tr>
<td>10</td>
<td>Clarington</td>
<td>9293 Woodley Rd, Municipality of Clarington, ON</td>
<td>267430092</td>
<td>8.49</td>
</tr>
<tr>
<td>11</td>
<td>Oshawa</td>
<td>1640 Ritson Road North, City of Oshawa, ON</td>
<td>162700206</td>
<td>32.37</td>
</tr>
<tr>
<td>12</td>
<td>Brock</td>
<td>C22480 Side Road #17, Township of Brock, ON</td>
<td>720230047</td>
<td>42.06</td>
</tr>
<tr>
<td>13</td>
<td>Scugog</td>
<td>1623 Reach Road, Port Perry, ON</td>
<td>268040072</td>
<td>119.02</td>
</tr>
<tr>
<td>ID</td>
<td>Municipality</td>
<td>Address</td>
<td>PIN</td>
<td>Size (ha)</td>
</tr>
<tr>
<td>----</td>
<td>--------------</td>
<td>--------------------------------------------------------------------------</td>
<td>-------------</td>
<td>-----------</td>
</tr>
<tr>
<td>14</td>
<td>Scugog</td>
<td>3590 Edgerton Road, Blackstock, Township of Scugog, ON</td>
<td>267460002</td>
<td>1.98</td>
</tr>
<tr>
<td>15</td>
<td>Uxbridge</td>
<td>12630 Concession 6, Township of Uxbridge, ON</td>
<td>268720016</td>
<td>1.60</td>
</tr>
<tr>
<td>16</td>
<td>Whitby</td>
<td>4600 Garrard Road, Whitby, ON</td>
<td>162650054</td>
<td>19.87</td>
</tr>
</tbody>
</table>

### 4.2.2 Develop and Apply Exclusionary Criteria

Once the candidate/long list of sites was established, a list of exclusionary criteria was established in order to reduce the long list of sites down to a manageable short-list for further evaluation. These criteria can be considered as "must pass", which a given candidate site must satisfy in order to be carried forward for further evaluation.

The exclusionary criteria are based largely on the technical requirements of the facility that meet the program needs set out by the Region. If a site generally failed to meet all of the requirements set out in the exclusionary criteria listed above, it was excluded from further consideration. Each of the sites considered are presented in a tabular and mapped format to show the results of the preliminary evaluation. Table 3 shows those sites that meet all of the exclusionary criteria and are therefore carried forward to form the short-list of sites for further evaluation.

The final list of exclusionary criteria, was developed by GHD with input from the Region. Prior to applying the exclusionary criteria to the long-list of candidate sites, available information on existing conditions and spatial data was collected and reviewed from a variety of sources. The information collected was focused on the criteria and indicators for both the exclusionary criteria, as well as the further, more detailed criteria established for the short-list of sites. The most current GIS data from the Region, Conservation Authorities, and the lower tier municipalities were obtained, including:

- Property parcel information including size/dimensions, boundaries, and locations.
- Waterbodies/watercourses.
- Location of existing Provincially Significant Wetlands (PSW).
- Environmentally Significant Areas (ESA).
- Location/extent of Areas of Natural and Scientific Interest (ANSI).
- Presence of significant wooded areas.
- Oak Ridges Moraine.
- Regulated floodplains.
- Source Water Protection Areas, including: Wellhead Protection Areas, Intake Protection Zones, Vulnerable Aquifers, and Significant Groundwater Recharge Areas.
Draft/approved development.

In addition, existing guidance documents and regulatory requirements information was obtained, including:

- Region of Durham Official Plan.
- Official Plans of lower-tier municipalities.
- Greenbelt Protection Plan.
- Provincial Policy Statement.
- Oak Ridges Moraine Conservation Plan.
- Ontario Clean Water Act.
- Region of Durham Draft Strategic Communications and Public Consultation Plan.

The available existing conditions information collected was incorporated into a GIS database and model to assist in the generation and evaluation of candidate sites and short-listed sites.

In order to assess the long-list of candidate sites against the exclusionary criteria, GIS layers (as identified above) were compiled and mapped in conjunction with the site locations and boundaries as defined by their property boundaries. Each site was assessed to determine which criteria, if any, would exclude it from being considered further. To assist in the analysis, ortho-imagery from Google Earth was utilized to gain a better understanding of the local site conditions and the regional context.

If a site was affected by multiple criteria, it was eliminated based on the criterion that had the most significant impact or would be the most difficult to overcome when considering the development of the Facility (e.g., constructing the facility in a wetland).

The exclusionary criteria were developed based on other complimentary processes that utilize criteria as part of their evaluation process. This includes past siting experiences by GHD as well as a review of the various guidance documents identified in Section 4.1.6.

The exclusionary criteria developed by GHD that was applied to the long list of sites has been grouped by component (mirroring the broad definition of environment under the Ontario EA Act) and is accompanied by a statement of rationale for each criterion – see Table 2.

**Table 2 – Exclusionary Criteria Grouping**

<table>
<thead>
<tr>
<th>Component</th>
<th>Criteria/Indicator</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical</td>
<td>Site Suitability</td>
<td>The facility must ensure that the site is suitable for construction and operation from a size, location and site constraints perspective. The site must be owned by the Region of Durham with minimal existing development on the site.</td>
</tr>
<tr>
<td></td>
<td>• Meets minimum size requirements (8-15 ha)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Meets minimum buffer area requirements to sensitive receptors (e.g., residential areas, parks, recreational areas, and institutions)</td>
<td></td>
</tr>
<tr>
<td>Component</td>
<td>Criteria/Indicator</td>
<td>Rationale</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>• Must be Regional owned land within the Search Area</td>
<td>The facility requires connections to municipal services and other utilities for both construction and operation.</td>
</tr>
<tr>
<td>Utilities and Services</td>
<td>• Availability to connect utilities and services including hydro, water, sewer, etc.</td>
<td>The facility has the potential to affect local sensitive receptors from a nuisance perspective.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social/Environmental/Cultural</td>
<td>Land Use Compatibility</td>
<td>The facility may remove or disturb the functioning of natural heritage habitats (terrestrial and aquatic, species at risk) and protected sources of water.</td>
</tr>
<tr>
<td></td>
<td>• Avoids sensitive receptors (number and distribution of)</td>
<td>Agricultural land may be displaced by the development of the facility.</td>
</tr>
<tr>
<td></td>
<td>• Avoids natural heritage elements including Designated Greenlands (Oak Ridges Moraine, Greenbelt Areas, etc.), Source Water Protection Areas</td>
<td>Archaeological and Cultural Heritage resources are non-renewable cultural resources that can be permanently displaced by the development of the facility.</td>
</tr>
<tr>
<td></td>
<td>• Avoids Class 1 and 2 Agricultural Areas</td>
<td>The construction of the facility 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.</td>
</tr>
<tr>
<td></td>
<td>• Avoids Cultural Heritage/Archaeological Potential areas</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Avoids Wetlands, Floodplains and Water Bodies</td>
<td></td>
</tr>
</tbody>
</table>

An ideal site carried forward in the evaluation process is one that is completely clear of potential conflicts with exclusionary criteria. However, if through the evaluation, it is determined that a majority of sites are affected or a part of the site is partially affected by at least 1 exclusionary criteria, GHD determined if the site should be carried forward for further analysis in the short-list evaluation. If a site is partially affected by an exclusionary criteria, but the remainder of the site still meets the minimum size requirements, with no further potential conflicts, the site will be carried forward to the short-list. If the potential conflicts can be rationalized in a way that would still allow for the development of the facility, then the site will be carried forward to the short-list for further evaluation. This does not necessarily signify that the criteria in question would not ultimately rule the site out, but merely that it should be exposed to further scrutiny during subsequent analyses.
4.2.2.1 Exemptions

Certain exemptions were considered during the application of the evaluation criteria. Sites that were exempt from meeting a given criteria passed the exclusionary criteria, though will be evaluated in greater detail when reviewing the short-list of sites.

Size

With respect to site size, individual sites were assessed in conjunction with adjacent sites if they could be combined to meet the minimum size requirement of 8 ha. For example, adjacent sites with respective areas of 7 ha and 2 ha would not meet the minimum size requirement if assessed individually; however, since the total area of both sites exceeds the minimum size requirement, these sites would be combined and carried forward as a single site. In cases where it was not advantageous to combine adjacent sites to meet the minimum size requirement (e.g., adjacent sites with respective areas of 1 ha and 9 ha), then these sites were evaluated on an individual basis.

Agricultural

Although the Provincial Policy Statements (PPS), 2014, state that Prime Agricultural Areas should be protected for long term use for agriculture (which includes Specialty Crop Areas, followed by Class 1, 2 and 3 lands, in that order of importance), some sites affected by this criteria were carried forward through to the short-list for further analysis. Exclusionary criteria relies heavily on secondary source information, which in this particular case includes mapping from Canada Lands Inventory (CLI), which the Region utilizes for their Official Plan mapping. The CLI mapping is a significant database of information, but does not necessarily reflect land use changes over the years. Further, the CLI mapping itself is based largely on secondary sources. Therefore, to be prudent, certain site(s) were carried forward to the long list of sites to ensure that the sites could be assessed further in subsequent screening to confirm the agricultural use(s) on-site. For example, some exemptions included lands that have not been farmed in the last 10 years, or lands that have been historically used for a purpose other than agriculture (e.g., quarries, waste management facilities). Therefore, some exempted sites passed the exclusionary criteria, and were assessed in greater detail by confirming the current land use and the Official Plan designation of the lower-tier municipality.

Source Water Protection

Certain sites are constrained with a number of Source Water Protection designations, as well as other surface water features, such as watercourses and unevaluated wetlands, which can result in a potential site being excluded from further evaluation. However, certain site(s) were exempt from meeting this criteria based on existing zoning or previously disturbed land use and were carried forward from the long list to the short-list of sites. It should be noted that none of the sites evaluated as part of this process fall within the Wellhead Protection Area (WPA) designation under the Source Water Protection Plan, as this designation represents the most vulnerable areas and significant threats to drinking water. Sites with other Source Water Protection Plan designations were carried forward, including Intake Protection Zones (IPZ), Highly Vulnerable Aquifers (HVA) and Significant Groundwater Recharge Areas (SGRA).
4.2.3 Short-List Evaluation (Develop and Apply Evaluation Criteria)

The purpose behind this step is to ensure that each site’s characteristics are adequately defined to ensure the comparative evaluation is consistent across all short-listed sites. Table 5 presents additional criteria that were applied to the short-list of sites.

Once the application of the more detailed evaluation criteria occurred, a review of the relative advantages and disadvantages of each site was undertaken in order to determine which site was the optimal in comparison to all other short-listed sites. A recommended site will be presented to Council.

It should be noted that for the recommended site, further investigative work will be required.

5. Site Evaluation and Results

5.1 Long List to Short-Listed Sites

An ideal site carried forward in the evaluation process was one that was completely clear of potential conflicts with exclusionary criteria. However, it should be noted that some sites contained at least some areas that were affected by the exclusionary criteria. In these cases, the sites passed the exclusionary criteria if the remaining area of the site with no potential conflicts was large enough to meet the minimum size requirement of 8 ha. This analysis was only required in a fraction of the sites, as most were affected by at least one criteria, or the remaining area of the site free from conflicts was too small.

Final assessment considered the exemptions noted in Section 4.2.2.1. If the potential conflicts could be rationalized in a way that would still allow for the development of the Facility, then the site was carried forward for further evaluation. This did not necessarily signify that the criteria in question would not ultimately rule the site out, but merely that it should be exposed to further scrutiny during subsequent analyses.

Table 3 shows which sites meet all of the exclusionary criteria and which ones were excluded from being carried forward to the short-list of sites for further evaluation.

Table 3 – List of candidate sites carried forward to the short-list

<table>
<thead>
<tr>
<th>ID</th>
<th>Municipality</th>
<th>Address</th>
<th>PIN</th>
<th>Size (ha)</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Brock</td>
<td>133 Main St., Beaverton, ON</td>
<td>720380119</td>
<td>3.82</td>
<td>Excluded from Short List as the minimum site size requirement is not met.</td>
</tr>
<tr>
<td>2.</td>
<td>Pickering</td>
<td>West of Whites Road and South of Granite Court southerly along East side of CNR tracks, designated as Bayly St. 40M-1334 City of Pickering</td>
<td>263110524</td>
<td>1.96</td>
<td>Excluded from Short List as the minimum site size requirement is not met.</td>
</tr>
<tr>
<td>ID</td>
<td>Municipality</td>
<td>Address</td>
<td>PIN</td>
<td>Size (ha)</td>
<td>Decision</td>
</tr>
<tr>
<td>----</td>
<td>--------------</td>
<td>---------</td>
<td>-------------</td>
<td>-----------</td>
<td>-----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>3</td>
<td>Clarington</td>
<td>3094 Liberty St. N.</td>
<td>266930067</td>
<td>0.21</td>
<td>Excluded from Short List as the minimum site size requirement is not met.</td>
</tr>
<tr>
<td>4</td>
<td>Clarington</td>
<td>339 Courtice Road, Courtice</td>
<td>266050113</td>
<td>3.26</td>
<td>Amalgamated into one site to meet the minimum site size requirement. Carried forward to Short List.</td>
</tr>
<tr>
<td>5</td>
<td>Clarington</td>
<td>1797 South Service Road, Courtice (now named 1797 Megawatt Drive)</td>
<td>266050114</td>
<td>7.67</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Clarington</td>
<td>1797 South Service Road, Courtice (now named 1797 Megawatt Drive)</td>
<td>266050116</td>
<td>4.90</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Clarington</td>
<td>1835 Energy Drive, Clarington</td>
<td>266050111</td>
<td>12.12</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Pickering</td>
<td>Seaton Lands South of Highway 7, ON</td>
<td>263860136</td>
<td>2.96</td>
<td>Excluded from Short List as the minimum site size requirement is not met.</td>
</tr>
<tr>
<td>9</td>
<td>Scugog</td>
<td>#10 Regional Road No. 21 (full address is 10 Goodwood Rd, Port Perry, ON L9L 1B5)</td>
<td>268190095</td>
<td>41.35</td>
<td>Carried forward to Short List.</td>
</tr>
<tr>
<td>10</td>
<td>Clarington</td>
<td>9293 Woodley Rd, Municipality of Clarington, ON</td>
<td>267430092</td>
<td>8.49</td>
<td>Carried forward to Short List.</td>
</tr>
<tr>
<td>11</td>
<td>Oshawa</td>
<td>1640 Ritson Road North, City of Oshawa, ON</td>
<td>162700206</td>
<td>32.37</td>
<td>Carried forward to Short List.</td>
</tr>
<tr>
<td>12</td>
<td>Brock</td>
<td>C22480 Side Road #17, Township of Brock, ON</td>
<td>720230047</td>
<td>42.06</td>
<td>Excluded from Short List as the minimum site size requirement is not met following avoidance of environmental constraints covering site.</td>
</tr>
<tr>
<td>13</td>
<td>Scugog</td>
<td>1623 Reach Road, Port Perry, ON</td>
<td>268040072</td>
<td>119.02</td>
<td>Carried forward to Short List.</td>
</tr>
<tr>
<td>14</td>
<td>Scugog</td>
<td>3590 Edgerton Road, Blackstock, Township of Scugog, ON</td>
<td>267460002</td>
<td>1.98</td>
<td>Excluded from Short List as the minimum site size requirement is not met.</td>
</tr>
<tr>
<td>15</td>
<td>Uxbridge</td>
<td>12630 Concession 6, Township of Uxbridge, ON</td>
<td>268720016</td>
<td>1.60</td>
<td>Excluded from Short List as the minimum site size requirement is not met.</td>
</tr>
<tr>
<td>16</td>
<td>Whitby</td>
<td>4600 Garrard Road, Whitby, ON</td>
<td>162650054</td>
<td>19.87</td>
<td>Carried forward to Short List.</td>
</tr>
</tbody>
</table>
The sites that comprise the short-list are summarized in Table 4. As outlined, a total of 6 sites were carried forward to the short-list evaluation.

5.2 Short-List of Sites

Six of the 16 candidate sites assessed through the application of Long-List to Short-List criteria were carried forward for comparative evaluation. The six short-listed sites are listed in Table 4 and include the remaining site size available for development following avoidance of environmental constraints (PSW, ESA, ANSI). A map showing the locations of these short-listed sites is provided as Figure 2. Individual maps of each of the short-listed sites are provided as Figures 2A to 2F.

### Table 4 – List of Short-List Sites

<table>
<thead>
<tr>
<th>ID</th>
<th>Municipality</th>
<th>Site Name</th>
<th>Address</th>
<th>PIN</th>
<th>Utilization</th>
<th>Remaining Site Size (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Clarington</td>
<td>South Clarington</td>
<td>339 Courtice Road, Clarington Road, Clarington</td>
<td>266050113</td>
<td>Vacant</td>
<td>12.45</td>
</tr>
<tr>
<td></td>
<td>Clarington</td>
<td>South Clarington</td>
<td>1797 South Service Road, Clarington</td>
<td>266050114</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Clarington</td>
<td>South Clarington</td>
<td>1797 South Service Road, Clarington</td>
<td>266050116</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Township of Scugog</td>
<td>West Scugog</td>
<td>#10 Regional Road No. 21</td>
<td>268190095</td>
<td>Scugog Depot Site - Balance Future Gravel Pit</td>
<td>41.35</td>
</tr>
<tr>
<td>3</td>
<td>Clarington</td>
<td>North Clarington</td>
<td>9293 Woodley Rd, Municipality of Clarington, ON</td>
<td>267430092</td>
<td>Darlington Closed Landfill - Located within CLOCA conservation area. Currently being used by Flyers Club</td>
<td>8.49</td>
</tr>
<tr>
<td>4</td>
<td>Oshawa</td>
<td>Oshawa</td>
<td>1640 Ritson Road North, City of Oshawa, ON</td>
<td>162700206</td>
<td>Former City of Oshawa Landfill - current location of WMF</td>
<td>24.13</td>
</tr>
<tr>
<td>5</td>
<td>Township of Scugog</td>
<td>East Scugog</td>
<td>1623 Reach Street, Port Perry, ON</td>
<td>268040072</td>
<td>Closed Landfill - houses WMF - Parent property includes Water Pollution Control Plant (WPCP)</td>
<td>52.75</td>
</tr>
<tr>
<td>6</td>
<td>Whitby</td>
<td>Whitby</td>
<td>4600 Garrard Road, Whitby</td>
<td>162650054</td>
<td>Material Recovery Facility (MRF)</td>
<td>10</td>
</tr>
</tbody>
</table>

5.3 Short-List Evaluation Criteria

Information related to the short-list evaluation criteria was collected and reviewed from a variety of sources, including: the Region, conservation authorities, utility providers, other stakeholders, and through professional experience (e.g., technical and economic data). Additional information regarding select criteria is summarized below.
5.3.1 **Region Greenlands**

The 2017 Durham Regional Official Plan (OP) provides relevant policies and mapping related to the Region’s Greenlands System. In 2019, the Region launched Envision Durham, which is a municipal comprehensive review of the 2017 OP. The status of the OP review is being monitored to ensure that any newly-approved policies that may apply are considered in the evaluation process.

During the evaluation process, GHD utilized Greenbelt Area and Oak Ridges Moraine (ORM) Conservation Plan Area mapping – both sets of Greenlands System mapping were utilized in the evaluation of the short-listed sites. At this point in time, it is recognized that further investigations and approvals may be necessary should the OP review result in new Greenlands System mapping prior to the development of the Facility.

It should be noted that sites that are currently designated or may be designated (under revised 2017 mapping) as Greenlands were carried forward for the short-list evaluation. Under 2017 OP policies, it is noted that infrastructure (such as a waste management facility) may be permitted within the Region Greenlands designation in accordance with the OP, which outlines how site alteration/development may take place on lands designated as Region Greenlands. Further, a number of criteria used in the site evaluation and selection process already considered certain elements that fall under the Region Greenlands designation, including ANSIs, species at risk (SAR), and significant wetlands (i.e., PSWs, evaluated and unevaluated wetlands).

With respect to completing further work on sites that are mapped as Region Greenlands (both approved and pending approval subject to 2017 OP revisions), following the identification of the preferred site(s), the Region will follow the processes and policies outlined in the applicable Region OP with respect to re-designating lands within the Region Greenlands designation. This includes consultation amongst internal departments, affected lower tier municipalities, and external agencies such as Conservation Authorities, to determine the required steps, including a scoped Environmental Impact Statement (EIS), which will be undertaken to support the land use planning applications.

5.3.2 **Source Protection**

In 2006, the provincial government passed the Clean Water Act, which aims to protect municipal drinking water in the province with a multi-barrier approach, starting with Source Protection (also referred to as Source Water Protection). Within the Region, Source Protection Committee approved the Source Protection Plan in March 2019, which outlines policies to address potential threats to drinking water in vulnerable areas:

1. **Highly Vulnerable Aquifers (HVA)** – An aquifer is an area underground that is highly saturated with water, enough so to be drawn for human use. A HVA is one that is particularly susceptible to contamination because of either its location near the ground's surface or because of the type of materials found in the ground around it (for instance, clay versus sand versus fractured rock).

2. **Significant Groundwater Recharge Areas (SGRA)** – These are areas on the landscape that are characterized by porous soils, such as sand or gravel that allow the water to seep readily into the ground and flow to an aquifer. A recharge area is considered significant when it helps maintain the water level in an aquifer that supplies a community with drinking water.
3. Wellhead Protection Areas (WHPA) – WHPA are areas on the land around a municipal well, the size of which is determined by how quickly water travels underground to the well, measured in years. WHPA designations range from WHPA-A to WHPA-D, which represent travel times between zero and 25 years, respectively.

4. Intake Protection Zones (IPZ) – IPZ are the area on the water and land surrounding a municipal surface water intake. The size of each zone is determined by how quickly water flows to the intake, in hours.

If a Waste Disposal Site is determined to be a significant threat to drinking water (e.g., located within a WHPA), then the proposed use would be prohibited in that particular location. For clarification, the proposed Facility is considered as a Waste Disposal Site under the legislation even though it does not necessarily correspond with the conventional definition of waste disposal (i.e., landfill, incineration). The definition of a Waste Disposal Site under Part V of the Environmental Protection Act means:

a) Any land upon, into, in or through which, or building or structure in which, waste is deposited, disposed of, handled, stored, transferred, treated or processed.

b) Any operation carried out or machinery or equipment used in connection with the depositing, disposal, handling, storage, transfer, treatment or processing referred to in clause (a).

With respect to the SGRA, HVA, WHPA, and IPZ designations, and in accordance with the Technical Rules: Assessment Report under the Clean Water Act, 2006 (MOE, 2009)\(^5\), mapping must delineate three separate areas – Low, Medium, and High Vulnerability.

In addition to the vulnerability of an area, potential threats, or more specifically, land use activities (such as a waste facility) are also factored into the decision making process to understand whether the proposed use would pose a Low, Moderate or Significant Threat to drinking water. The vulnerability scoring approach relies upon the extensive Tables of Drinking Water Threats created by the MECP to identify and rank drinking water threats.

The proposed Facility is categorized as a municipal Waste Disposal Site (Part V of Environmental Protection Act) and would fall under a Drinking Water Threat that involves the establishment, operation or maintenance of a Waste Disposal Site. In reviewing the Clean Water Act, 2006, Table 1 identifies a number of Drinking Water Threats with respect to the establishment, operation or maintenance of a Waste Disposal Site within the meaning of Part V of the Environmental Protection Act. However, all of the references to "Municipal Waste" only equate a threat to "Land Disposal" as defined in Section 1 of O. Reg. 347. "Land Disposal" means, with respect to a waste, the deposit or disposal of the waste upon, into, in or through land, including:

a. The deposit of the waste at a dump.

b. The landfilling of the waste.

c. The discharge of the waste into a geological formation by means of a well.

d. The landfarming of the waste, in the case of a petroleum refining waste.

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It is clear based on the definition above that the proposed Facility does not involve land disposal. However, to be conservative, GHD reviewed Table 1 (Tables of Drinking Water Threats, Clean Water Act, 2006) for all references to Municipal Waste and Land Disposal. The Tables of Drinking Water Threats under the Clean Water Act show that lands identified as HVA and SGRA have a Low Threat level in areas with a vulnerability score of 6. Therefore, it is conceivable that the facility could be located within the Low, Medium or High Vulnerability HVA or SGRA, as per the provincial legislation.

Notwithstanding the above, the Source Protection Policies contained within the Source Protection Plan would still need to be considered. The Source Protection Policies for waste disposal sites were reviewed and it was determined that the policies only apply to Waste Disposal Sites (including the transfer or processing of waste) that are a Significant Threat which has a vulnerability score of 8 to 10. Because the maximum vulnerability score of 6 is applied to SGRAs, (i.e., not a Significant Threat), the policies prohibiting a waste facility would not apply. This is in keeping with the provincial legislation, Clean Water Act, 2006, which deems Moderate to Significant Threats as having a vulnerability score of 7-10.

Given the review of the provincial legislation and the Source Protection Policies contained within the Source Protection Plan, coupled with the conservative approach taken with respect to SGRA, it was determined that sites with a Low Vulnerability HVA and SGRA should be carried forward for further evaluation.

5.3.3 Mapping

Maps were prepared for each of the six short-listed sites and organized by components as follows:

- Site size.
- Source Water Protection Plan designations.
- Soils classification.
- Locations of sensitive receptors/residential areas with respect to potential air quality, odour, and noise criteria
- Natural Environment (SAR).

It should be noted that not all components, criteria, and indicators are shown in these figures (Figures 2A to Figure 2F – only those that are well-suited to mapping and available through existing sources of information. However, between the Site Review Summary Table (Table 5) and the maps, all components, criteria, and indicators are presented for each short-listed site.

5.3.4 Site Visits

To supplement the information from the desktop review, GHD conducted windshield survey site visits to each of the short-listed sites on Wednesday, January 15, 2020. The site visits were used to

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6 Tables of Drinking Water Threats are provided a Reference Number – all Municipal Solid Waste projects reviewed for this proposed undertaking are identified as References 1639-1673.
confirm surrounding land uses and the presence of sensitive receptors. Photo logs for each site are provided as Appendix A.

5.3.5 Comparative Evaluation

The assessment and evaluation of the short-listed sites was conducted in two steps:

Step 1 – Apply additional evaluation criteria

Step 2 – Carry out the Comparative Evaluation focused on the relative advantages and disadvantages for each site and rank each site.

6. Evaluation and Results

With the methodology of assessing and evaluating the short-listed sites presented, the following sub-sections review the advantages and disadvantages for each of the short-listed sites. It should be noted that there are a number of common potential effects across the short-listed sites to which common mitigation measures can be applied. Therefore, a number of Best Management Practices (BMPs) have been developed relating to mitigation measures that are applicable to all sites. Key BMPs that were applied as mitigation measures are detailed in the sections that follow and would be revisited during subsequent approvals.

It should be noted that these BMPs are not exhaustive, but will be augmented and tailored to the preferred site(s), and final design. Further, the BMPs will be reviewed with key stakeholders and neighbours of the preferred site(s) for their input and recommendations during subsequent approvals.

Dust, Noise & Odour BMPs

- Mitigation through design will address dust, odour and noise, by ensuring that: all material is received and processed indoors; the building will operate under negative air pressure (areas handling SSO material); air pollution control systems and biological filtering are incorporated as required, etc.

- Perimeter plantings, berms or other wind screens will be implemented as required.

- Dust suppression and control through the paving internal roads, routine cleaning, and use of water for suppression as necessary.

- Ensure construction and operation equipment are inspected and in good working condition.

- Truck idling will be minimized.

- All construction equipment should meet the sound emission standards as set out by MECP Publication NPC-115.

- Hours of construction as well as operation will be defined and adhered to.

- Facility layout will be designed to the greatest extent possible to reduce the use of vehicle back-up beepers.
Surface Water BMPs

- Surface water controls will be put in place to manage run-off from impervious surfaces and directed to appropriate storage or conveyance areas. This will also mitigate any potential effects on groundwater as the surface water controls will protect groundwater. An on-site stormwater management pond is envisioned which will include Oil-Grit Separators (OGS).

- All process water will be contained, re-circulated, or collected and treated either on-site or trucked off-site.

- Emergency management measures will be developed and implemented to address potential accidental spills.

- Storage and refueling of equipment to prevent potential fuel, oil, and grit runoff.

Terrestrial/Aquatic BMPs

- Confirm through investigations that no Species at Risk are present, or where they are present, habitat is avoided, if possible.

- Minimize removal of vegetation and where vegetation is removed; identify plant material for possible salvage.

- Replace vegetation removed on a minimum 1:1 basis, either on-site or off-site.

- Install appropriate measures to protect trees beyond the clearing limits.

- Minimize grade changes/alterations to topography.

- Minimize loss of confirmed Class 1-3 soils (Prime Agricultural Lands).

- Wildlife management (in terms of vectors) includes ensuring all waste is stored in an enclosed area.

Visual BMPs

- Internal roadway should be designed to minimize site lines from the site entrance.

- Berms and vegetated buffers should be implemented as close to the facility as reasonable.

6.1 South Clarington Site

The application of the short-list evaluation criteria for the South Clarington Site includes the criteria mapping (see figures) and additional criteria application (see Table 5). Key aspects are summarized below.

Advantages

- The site meets the minimum criteria of 8 hectares and provides for flexibility due to the availability of area on adjoining parcels of property.

- There are no sensitive receptors within 500 metres of the site boundary.
• The site has the shortest waste transfer distance from the three contracted transfer stations to the site, with recyclables and residuals transferred to the DYEC adjacent to site; resulting in the lowest waste transfer costs from a transportation perspective.

• There will be minimal impact on local traffic as waste is currently sent to the adjacent DYEC.

• No significant road infrastructure upgrades are required for either Energy Drive or Megawatt Drive. There is a dedicated road for waste delivery trucks along the CNR track. Minimal traffic impacts expected as waste is currently transported to adjacent DYEC.

• There are synergies with the existing DYEC and WPCP within the Energy Park. The potential exists to build on the energy related character of the Energy Park through the development of this Facility and new energy production facilities, including District Energy and sustainable energy. It is adjacent to the existing DYEC where pre-sorted recyclables and Facility residue will be processed. It is adjacent to the WPCP which may be able to treat Facility effluent, thereby reducing wastewater treatment plant costs. As a result, this site will likely require minimal utility upgrades.

• There are no designated Greenlands or Oak Ridges Moraine Land Use areas on the site.

• There are no PSWs, ESAs, ANSI on site.

• The site is within the Municipal Official Plan designation of Business Park and the Regional Official Plan designation of Employment Area. With respect to Employment designation, this facility will provide employment in the range of 30-40 full time positions (estimated). The zoning designation is Industrial (M).

• No known areas of archeological significance or important cultural heritage were noted on any of the short-listed sites. Previous archaeological studies were completed for the Region on the site and on the adjacent DYEC site and determined no archaeological significance.

• The site is not in proximity to an airport; therefore there is no major concern from a safety perspective (i.e. site is compatible with the safe operation of an airport, and will not cause interference with aircraft signals/communications or collision with birds).

• From a cost perspective:
  
  o The site is undeveloped land, therefore no significant site demolition costs are required.

  o The site is not a closed landfill, thus no significant site remediation costs are required in contaminated waste and soil removal.

  o The nearest natural gas utility pipeline connection is approximately 1 km from the site, translating to a capital cost ranging from approximately $2,000,000 to $5,500,000. The Oshawa and Whitby sites have shorter pipeline connection distances; however, this site contains access to all other utility connections (water, hydro, and sewer).

  o The site has the lowest overall site remediation capital costs (i.e. utility connection, contaminated waste/soil removal, existing building demolition, and road upgrades) when compared to all short-listed sites.
Disadvantages

- A new waste and air/noise ECA will be required for this site.
- Vegetation on-site requires removal. Plantings and earthworks would be required for visual screening, as well as for dust and noise mitigation.
- The sites have an irregular shape, with Energy Drive bisecting the three amalgamated properties.
- The CLOCA Regulated Area covers portions of the site. Should the design of the facility require land within the Regulated Area, a permit would be required from CLOCA to alter or encroach upon the Regulated Area. Further studies would be required to make this determination, should the future design of a facility require CLOCA Regulated lands.
- There is a Significant Groundwater Recharge Area along the western edge of the 339 Courtice Road property.

6.2 West Scugog Site

The application of the short-list evaluation criteria for the West Scugog Site includes the criteria mapping (see figures) and additional criteria application (see Table 5). Key aspects are summarized below.

Advantages

- The site has a total of approximately 41 hectares available for development, which satisfies the minimum criteria of 8 hectares.
- There are 3 sensitive receptors within 500 metres of the site boundary. However, with the implementation of appropriate design and BMPs for odour, dust, and noise, net effects will be minimized. Further, on-site wind measurements should be collected to determine actual wind conditions (speed and direction) at the site.
- Limited natural environment constraints (PSWs, ESAs, ANSI) on site as per Kawartha Conservation Authority.
- No known areas of archeological significance or important cultural heritage were noted on any of the short-listed sites. However, each site can still have the potential for archaeological significance. A Stage 1 Archaeological Assessment can be completed on the preferred site.

Disadvantages

- The site is within the Municipal Official Plan designation of Oak Ridges Moraine Countryside Area and the Regional Official Plan designation of Oak Ridges Moraine Area. The zoning designation is Rural Industrial (ORM-M3). There is a policy conflict with ORM Conservation Plan as it covers part of site (countryside area) with respect to development of infrastructure. However, there are no designated Greenlands.
- The site has the second longest waste transfer distance from the three contracted transfer stations to the site, with recyclables and residuals transferred to the DYEC adjacent to site; resulting in the second highest waste transfer costs from a transportation perspective.
• A new waste and air/noise ECA will be required for this site.

• Highly Vulnerable Aquifer and Significant Groundwater Recharge Area covers the entire site except for a very small portion of northeast corner of the site.

• Displacement of existing Regional infrastructure may be required as it is an existing operations facility depot.

• The site is in proximity to proposed Pickering Airport and is within the Wildlife Hazard Zone (secondary bird hazard zone) as per Transport Canada’s proposed drawings for the airport an airport. Therefore, there is a concern from a safety perspective (i.e. site is incompatible with the safe operation of an airport, and may cause interference with aircraft signals/communications or collision with birds).

• From a cost perspective:
  o Nearest municipal water supply and sanitary sewer connection is more than 9km from site, resulting in utility costs ranging from $10,000,000 to $18,000,000. Natural gas, hydro and telecommunication utilities are available on site.
  o The site is not a closed landfill, thus no significant site remediation costs required in contaminated waste and soil removal.
  o Road infrastructure upgrades are required on Goodwood Rd (widen left turning lane) to allow room for queuing and not block intersection, for which costs range from $500,000 to $1,000,000.

6.3 North Clarington Site

The application of the short-list evaluation criteria for the North Clarington Site includes the criteria mapping (see figures) and additional criteria application (see Table 5). Key aspects are summarized below.

Advantages

• There are 2 sensitive receptors within 500 metres of the site boundary. However, with the implementation of appropriate design and BMPs for odour, dust, and noise, net effects will be minimized. Further, on-site wind measurements should be collected to determine actual wind conditions (speed and direction) at the site.

• Limited natural environment constraints (PSWs, ESAs, ANSI) on site within the CLOCA regulated area.

• The site is not in proximity to an airport; therefore there is no major concern from a safety perspective (i.e. site is compatible with the safe operation of an airport, and will not cause interference with aircraft signals/communications or collision with birds).

• Minimal traffic impact expected as Woodley Rd. is a dead end road with no through traffic. However, some little existing traffic volume due to Long Sault Conservation Area multi-use trail north of site.
• No known areas of archeological significance or important cultural heritage were noted on any of the short-listed sites. However, each site can still have the potential for archaeological significance. A Stage 1 Archaeological Assessment can be completed on the preferred site.

**Disadvantages**

• The site has a total of approximately 8 hectares available for development, which narrowly satisfies the minimum site size requirement for the Facility.

• There is a policy conflict with ORM Conservation Plan as it covers part of site (natural core area) with respect to the development of infrastructure. However, there are no designated Greenlands.

• Long Sault Conservation Area multi-use trail directly north of site and parking area, which is considered a passive sensitive receptor.

• The site has the fourth longest waste transfer distance from the three contracted transfer stations to the site, with recyclables and residuals transferred to the DYEC adjacent to site; resulting in the second highest waste transfer costs from a transportation perspective.

• Eastern 2/3 of site is within Highly Vulnerable Aquifer and Significant Groundwater Recharge Area covers the entire site. While this site has Source Water Protection Plan designations, it should be noted that it was previously disturbed.

• New waste and air/noise ECA will be required for this site.

• From a cost perspective:
  
o The site has no utility connections available on site. There is no natural gas supply line in vicinity of site, with the nearest municipal water supply and sanitary sewer connection over 11km from site, resulting in utility costs ranging from $43,000,000 to $100,000,000. Some hydro connection costs are included as Hydro tower is approximately 350m south of site, and nearest telecommunication connection is 890m from site.

  o The site is a closed landfill with significant site remediation costs required in contaminated waste and soil removal, ranging from $4,000,000 to $14,000,000.

  o Road infrastructure upgrades are required on Woodley Rd to support traffic transfer trailer volume and loads. Vehicle turning lanes are likely required in east and east bound direction of Durham Regional Road 20. Costs range from $1,000,000 to $2,000,000.

### 6.4 Oshawa Site

The application of the short-list evaluation criteria for the Oshawa Site includes the criteria mapping (see figures) and additional criteria application (see Table 5). Key aspects are summarized below.

**Advantages**

• The site has a total of approximately 34 hectares available for development, which satisfies the minimum criteria of 8 hectares.
The site has the second shortest waste transfer distance from the three contracted transfer stations to the site, with recyclables and residuals transferred to the DYEC adjacent to site; resulting in the second lowest waste transfer costs from a transportation perspective.

Water, sewer, and hydro utility connections available on site.

An amended waste and air/noise ECA will be required for this site.

The CLOCA regulates west and northwest edge of the property, however most of the site is not within the regulated area.

There are no designated Greenlands or Oak Ridges Moraine Land Use areas on the site.

Limited natural environment constraints (PSWs, ESAs, ANSI) on site.

No known areas of archeological significance or important cultural heritage were noted on any of the short-listed sites. However, each site can still have the potential for archaeological significance. A Stage 1 Archaeological Assessment can be completed on the preferred site.

**Disadvantages**

There are a significant amount of off-site receptors and several residential neighbourhoods developed within 500 metres of the site boundary.

There will be a great impact on local traffic as high traffic volumes are already experienced on Ritson Rd North due to residential properties in close proximity to site and existing WMF operations.

The site is in proximity to proposed Oshawa Executive Airport and is within the flight path (within approach Surface Slope 1:50) as per Transport Canada's Oshawa Airport Zoning Regulations. Therefore, there is a concern from a safety perspective (i.e. site is incompatible with the safe operation of an airport, and may cause interference with aircraft signals/communications or collision with birds).

Highly Vulnerable Aquifer covers 80% of the site (except a few pockets on the eastern boundary). Western portion of the site is within Intake Protection Zone 3.

Displacement of existing Regional infrastructure will be required as it is an existing public waste drop-off / transfer site.

There are no synergies with the existing WMF building as it is too small to be used for the pre-sort portion of the Facility.

From a cost perspective:

- The nearest natural gas supply line is 600m from the site, with utility connection costs ranging from $1,000,000 to $3,000,000.

- The site is a closed landfill with significant site remediation costs required in contaminated waste and soil removal, ranging from $4,000,000 to $14,000,000.
Road infrastructure upgrades are required on northbound Ritson Road (widen left turning lane) to allow room for queuing to support traffic transfer trailer volume and loads. Costs range from $250,000 to $500,000.

6.5 East Scugog Site

The application of the short-list evaluation criteria for the East Scugog Site includes the criteria mapping (see figures) and additional criteria application (see Table 5). Key aspects are summarized below.

**Advantages**

- The site has a total of approximately 120 hectares available for development, which satisfies the minimum criteria of 8 hectares.
- Limited natural environment constraints (PSWs, ESAs, ANSI) on site within the Kawartha CA regulated area.
- The site is not in proximity to a municipal airport; therefore there is no major concern from a safety perspective (i.e. site is compatible with the safe operation of an airport, and will not cause interference with aircraft signals/communications or collision with birds).
- Minimal traffic impact expected as there is little existing traffic volume on Reach Street. However, new development on Sherrington Drive south of site may increase traffic volumes in the near future.
- No known areas of archeological significance or important cultural heritage were noted on any of the short-listed sites. However, each site can still have the potential for archaeological significance. A Stage 1 Archaeological Assessment can be completed on the preferred site.
- An amended waste and air/noise ECA will be required for this site.

**Disadvantages**

- The site has the longest waste transfer distance from the three contracted transfer stations to the site, resulting in the highest waste transfer costs from a transportation perspective.
- There are Policy conflicts due to designated Greenlands – Protected Countryside with respect to infrastructure development.
- The property is affected by a number of Source Water Protection Plan designations. A portion of the property is designated as a Highly Vulnerable Aquifer along northeast boundary. 75% of site is within a Significant Groundwater Recharge Area, while a majority of site is within the Intake Protection Zone 3. While this site has Source Water Protection Plan designations, it was previously disturbed.
- Displacement of existing Regional infrastructure as there is an existing waste management facility on site.
- From a cost perspective:
Nearest natural gas supply line is approximately 2.5km from site. Nearest municipal water supply is approximately 300m from site. Sanitary sewer costs are low as site backs onto WPCP. Resulting utility costs range from $6,000,000 to $15,000,000. Hydro and telecommunication connections are available on site.

- The site is a closed landfill with significant site remediation costs required in contaminated waste and soil removal, ranging from $4,000,000 to $14,000,000.

- Road infrastructure upgrades are required when approaching site from the west on Reach Street (widen left turning lane) to allow room for queuing, for which costs range from $500,000 to $1,000,000.

### 6.6 Whitby Site

The application of the short-list evaluation criteria for the Whitby Site includes the criteria mapping (see figures) and additional criteria application (see Table 5). Key aspects are summarized below.

#### Advantages

- Large areas of provincially significant wetlands within and adjacent to site. However, since the site is already developed/previously disturbed for waste management/processing, it can be modified as per Facility requirements.

- No amendments to the Regional and Municipal Official Plan and Zoning By-Law are anticipated.

- No known areas of archeological significance or important cultural heritage were noted on any of the short-listed sites. However, each site can still have the potential for archaeological significance. A Stage 1 Archaeological Assessment can be completed on the preferred site.

- An amended waste and air/noise ECA will be required for this site.

#### Disadvantages

- There are 8 sensitive receptors within 500 metres of the site boundary and proposed future residential development to occur north of site.

- The site is in proximity to proposed Oshawa Executive Airport and is within the flight path (within Outer Surface Elevation 180.0 ASL) as per Transport Canada’s Oshawa Airport Zoning Regulations. Therefore, there is a concern from a safety perspective (i.e. site is incompatible with the safe operation of an airport, and may cause interference with aircraft signals/communications or collision with birds).

- The site has the third longest waste transfer distance from the three contracted transfer stations to the site, with recyclables and residuals transferred to the DYEC adjacent to site; resulting in the third highest waste transfer costs from a transportation perspective.

- Approval may be required from Ministry of Infrastructure for work under Hydro corridor.

- Highly Vulnerable Aquifer and Significant Groundwater Recharge Area covers the entire site. While this site has Source Water Protection Plan designations, the site was previously disturbed. Depending on area for development, proximity to on-site Wetlands may create potential effects.
Displacement of existing Regional infrastructure as there is an existing material recovery facility on-site. With incoming Extended Producer Responsibility legislation, the material recovery facility may become a stranded asset.

From a cost perspective:

- Nearest natural gas supply line connection is 500m from site. Nearest sanitary sewer connection is 1.5km from site (currently using underground septic tank), resulting in utility costs ranging from $2,000,000 to $4,000,000. Hydro, municipal water, and telecommunication utilities are available on-site.

- The site is not a closed landfill, thus no significant site remediation costs required in contaminated waste and soil removal. However, the site has existing MRF buildings, which will need to either be demolished or remediated to account for new Facility. This will add site demolition costs of about $2,000,000 to $4,000,000.

- Road infrastructure upgrades will likely require left and right vehicle turning lanes on Garrard Rd and Conlin Rd if used as entrance to site, for which costs range from $2,000,000 to $4,000,000.

6.7 Comparative Evaluation

The comparative evaluation results are summarized in the sections that follow, with additional details provided in the Comparative Evaluation Tables following the text – Table 7 presents the comparative evaluation for the Facility. Sites are ranked from most preferred to least preferred.

6.7.1 Environmental

Air Quality, Odour, Noise

A wind rose was generated based on 10-year hourly average wind data (March 6th, 2010 to January 19th, 2020) collected at the Oshawa Municipal Airport Station, which is considered central and representative for the short-listed sites. The average hourly wind speed was 3.97 m/s or 14.29 km/h and the prevailing wind blows was predominately coming from a northwesterly to southwesterly direction. The wind rose is included at the top left corner of Figure 6 and in Figures 6A to 6F for each of the short-listed sites to demonstrate which surrounding sensitive receptors are most susceptible to wind blows during construction and potential odours during Facility start-up/commissioning.

While this wind rose provides a general overview of historic wind data within the Region of Durham, further meteorological data should be collected to determine site-specific information using anemometer and vane equipment (for wind speed and wind direction respectively). For example, the wind directionality from the North Clarington site can vary from the South Clarington site, as it can be strongly influenced by local factors such as topography and the measurement location relative to large bodies of water. In other words, a higher percentage of southerly winds could be expected at the South Clarington site due to Lake Breeze effects.

All sites are expected to be within compliance from an air quality, odour and noise perspective (based on design specifications for the Facility), although a majority of the sites have sensitive receptors (residential neighbourhoods) within close proximity. The South Clarington Site and the North Clarington Site have significantly less number of sensitive receptors within close proximity.
Terrestrial

Affected Greenland – East Scugog Site falls within Greenbelt area with Protected countryside. None of the other sites are affected by greenlands. ORM Conservation Plan Area covers part of West Scugog and North Clarington sites. None of the other sites are affected by ORM Land Use areas. Further study and analysis such as an Environmental Impact Statement (EIS) would be required to provide additional mitigation and compensation measures and to demonstrate that there would be no negative impacts to the natural features at the preferred site. This would be undertaken on the area of the site required for the Facility footprint.

Species of Special Concern, Threatened, and/or Endangered – Potential SAR habitat was identified by The Natural Heritage Information Centre (NHIC) on all short-listed sites. Recent records of SAR were identified at the West Scugog, Oshawa, and East Scugog sites. Through appropriate avoidance measures, the effects on SAR are likely low. Further detailed field investigations will be required to confirm presence (if any) of SAR on the preferred site. SAR potential mapping are included as Figures 8. Key SAR identification terms are as follows:

- END – Endangered
- THR – Threatened
- EXP – Extirpated
- SC – Special Concern
- NAR – Not at Risk
- DD – Data Deficient
- EXT – Extinct
- S2 – Imperiled
- S3 – Vulnerable
- S4 – Apparently Secure
- N – non-breeding

Aquatic

There are no aquatic SAR listed as potentially occurring at any of the sites.

Surface Water

The Oshawa, East Scugog, Whitby, and South Clarington sites have a number of surface water features on-site, which acts as a constraint for siting the facility. The East Scugog site contains the Nonquon River Water Pollution Control Plant and much of the site is within the Kawartha CA regulated area, which reduces the site size from 120 to 52 hectares. The CLOCA regulated area occupies a portion of the South Clarington site, which would require an approval from CLOCA to encroach or development within the Regulated Area (should this be required once a conceptual design is established). Based on this, the West Scugog and North Clarington sites are preferred from a surface water perspective.
Groundwater

Source Water Protection Areas – All of the short-listed sites either have Significant Groundwater Recharge Area or a Highly Vulnerable Aquifer covering a portion of the property, with East Scugog having an Intake Protection Zone (IPZ) designation. The site with the least amount of area designated under the Source Water Protection Plan is the South Clarington site. Further discussion on the approach to Source Protection Areas is provided in Section 5.3.2.

Agricultural

All sites have been either previously disturbed or have not been utilized for agricultural purposes in the recent past. The South Clarington site is Class 1, East Scugog site is Class 1 and 2 - Oshawa and Whitby are Class 2. West Scugog and North Clarington are Class 6.

Overall – Environmental

Based on the above and the comparative evaluation tables, the following sites are more preferred:

- South Clarington Site.
- Whitby Site.
- Oshawa Site.

6.7.2 Social

Sensitive Receptors

With respect to the Facility and sensitive receptors, the South Clarington, North Clarington, and East Scugog are the preferred sites due to the combination of the number of sensitive receptors within 500 metres of the site/Facility boundary and the proximity of those receptors (i.e., number of residences immediately adjacent to the site boundary, reduced buffers, etc.). The Oshawa site is least preferred as it is immediately surrounded by residential neighbourhoods. Although mitigation measures would be applied to this site, the relative setback distances from the proposed facility footprint are the lowest of all potential sites.

Land Use/Zoning

South Clarington site will not require any amendments to the current Regional and Municipal Official Plan and Zoning By Law as it currently permits the proposed use of the site for a mixed waste transfer and pre-sort facility with anaerobic digestion. A new waste and air/noise ECA will be required for this site. West Scugog site will also require a new waste and air/noise ECA. The South Clarington site also meets the Energy Park objectives, including energy related development, employment for energy related development, and ability for district energy/ sustainable energy.

For all remaining sites, an amendment to existing waste and air/noise ECAs will be required. Some ECAs are old/outdated and will require greater amendment efforts than others.

Transportation

From a transportation perspective, each site presents its own constraints with respect to the two indicators under this criterion, which relate to existing or required transportation infrastructure and neighbourhood impacts from traffic. Viewing the sites from a Facility-only perspective, the South
Clarington site is most preferred as it requires no major upgrades to nearby existing roads, and it will have a smaller impact on local traffic as waste is currently sent to the adjacent DYEC.

**Visual**

No discernible difference between sites from a visual perspective as each site would need to implement typical mitigation measures to ensure the sites are appropriately screened.

**Overall – Social**

Based on the above and the comparative evaluation tables, the following sites are more preferred:
- South Clarington Site
- Whitby Site
- Oshawa Site

**6.7.3 Cultural**

**Archaeological**

The only site to be cleared of archaeological significance is the South Clarington site as a previous archaeological investigation was completed. No known archeologically significant areas were found on or adjacent to any of the short-listed sites. However, each site can still have the potential for archaeological significance. A Stage 1 Archaeological Assessment can be completed on the preferred site.

**Heritage**

No known areas of important cultural heritage were found on or adjacent to any of the short-listed sites. North of the Oshawa site is a Class A (greatest historic interest) campground/scouts called Camp Samac, however, it will not be affected as a result of developing the Facility, given the relative distance and mitigation measures proposed. The Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTC) may provide additional information as further studies are initiated on the preferred site.

**Overall – Cultural**

Based on the above and the comparative evaluation tables, no preference for a site from a Cultural Component perspective has been identified. Further work will be completed on the preferred site, as required by the MHSTC.

**6.7.4 Technical**

**Permitting/Approvals**

While most sites will require an amendment to existing waste, air/noise ECAs, the South Clarington and West Scugog sites will require new ECAs.

**Safety**

A commercial airport – the Oshawa Municipal Airport is located within Durham Region. In addition, Greenbank Airport is a small private airport within Durham Region. The Pickering lands, owned by
the Federal Government, were declared an “airport site” in August 2001. To protect Federal Lands for future aviation needs, the Pickering Airport Site Zoning Regulations (AZR) came into effect September 2005. The AZR restrict the height of buildings, structures and objects including natural growth on regulated lands and protect aircraft from potential hazards such as bird strikes and electronic signal interference for a distance of up to 15 km off the end of each runway.

The two national railroads that run through the study area are the main line of the Canadian National Railway (CNR) and the main line of the Canadian Pacific Railway (CPR).

From a safety perspective, the South Clarington site was identified as the most preferred over all other sites as it is not in proximity to an airport (i.e. site is compatible with the safe operation of an airport, and will not cause interference with aircraft signals/communications or collision with birds). A railroad track runs approximately 50 metres south of site, though there is a road in between (site access road forDYEC).

All other sites have another facility or a use that may allow for an interaction and increase the safety risk. This includes West Scugog site (proximity to proposed Pickering airport, within secondary bird hazard zone), North Clarington site (Long Sault Conservation Area multi-use trail), Oshawa site (proximity to Oshawa airport – flight path within approach surface slope), East Scugog site (proximity to Greenbank airport), and Whitby site (proximity to Oshawa airport - flight path within outer surface elevation).

Utilities and Services

Municipal Water – Municipal water connection information was provided by the Region. The West Scugog and North Clarington sites do not have nearby access to municipal water connection, with the nearest connection point being over 9km and 11km respectively.

Sanitary Sewer – Sanitary sewer connection information was provided by the Region. The West Scugog and North Clarington sites do not have nearby access to municipal water connection, with the nearest connection point being over 9km and 24km respectively. The Whitby site utilizes an underground septic tank(s), with the nearest connection being over 1km away. The East Scugog site contains the Nonquon River Water Pollution Control Plant, with the nearest connection being only 300m away.

Natural Gas – Enbridge was contacted to provide natural gas pipeline connection information for the short-listed sites. Enbridge has noted that the North Clarington site does not have existing gas network within proximity, with the nearest connection being over 11km away. Since the Facility will require an incoming natural gas pipeline for utility purposes and an outgoing renewable natural gas (RNG) pipeline, this makes the North Clarington site the least preferred from a cost perspective.

Enbridge requires a Non-Disclosure Agreement (NDA) to be signed so that information shared between Enbridge and GHD or the Region is classified as confidential. They have asked for a 7-year confidentiality agreement, the purpose of which would be to obtain a network connection assessment and cost estimates for pipe reinforcement and RNG injection station at the proposed site. Enbridge also requires additional information including but not limited to: RNG injection volume flow rate, and biogas outlet pressure and temperature, which has not been established at this stage of the Facility.
Enbridge will need to conduct a further detailed study to ensure proper gas supply is available for each site. RNG injection station will be required at each of the sites, with an additional cost of approximate $1,000,000. Reinforcement to existing pipeline connection will also be required by Enbridge.

**Hydro/ Electricity** – Hydro One and Oshawa Power were contacted to provide hydro related information for each of the short-listed sites, however, Hydro One was unable to provide information at this time. Oshawa Power confirmed power availability to supply the Oshawa Site from their existing overhead 13.8kV power lines on Ritson Road. Oshawa Power also noted that the maximum service that can be connected from the 13.8kV lines is a 1200A-600/347V main switch. Should the Facility require a service larger than 1200A-600/347V, the 44kV line up Ritson Road will need to be extended, which can be costly.

The North Clarington site has a hydro tower running 350m south of the property, and the Whitby site has a hydro tower passing through south of the property. Further investigation is required to retrieve accurate hydro information.

**Telecommunication** – Rogers and Bell were contacted to provide telecommunication related information for each of the short-listed sites. Bell has noted that they provide telecommunication services to all sites except for the North Clarington, for which the nearest connection point is 890m from the site.

Rogers has noted that there are no coax or fiber internet options available at these locations. However, Rogers is launching a new service at the end of February 2020 called a Fixed Wireless Internet solution. The concept will work off of the cell phone wireless network, and equipment would need to be installed on a building within the site. Rogers has provided a high-level cost estimate of $500/month for each site, which translates to a lifecycle cost of $150,000 for a 25-year operating Facility. This was used as a minimum cost for the North Clarington site. Should the Region wish to install underground cables, the cost will roughly be the same at around $180,000 based on GHD experience (maximum cost scenario).

**Suitability of Area**

The South Clarington site was determined to be the most preferred from a suitability perspective as it has the greatest compatibility with existing adjacent DYEC waste infrastructure. Waste is currently hauled from the private transfer stations to the DYEC for incineration. Recyclables that will be pre-sorted at the Facility, and remaining residual waste from the Facility can easily be transported to the DYEC (i.e. waste can be transported via conveyor belts from Facility across to the DYEC site). Typically, MWP/AD facilities of this capacity require construction of separate wastewater treatment plants to treat high-strength effluent from the facility. Since there is a WPCP located south of the site, it may have the capacity to process Facility effluent with minimal new infrastructure requirements. At the very least, a new full-sized wastewater treatment plant will not be required.

**Overall – Technical**

Based on the above and the comparative evaluation tables, the following sites are more preferred:

- South Clarington Site.
- Whitby Site.
6.7.5 Economic

Capital Costs

From a capital cost perspective, the most preferred site is South Clarington, as it is not located on a closed landfill (low remediation costs), is undeveloped (no demolition costs), does not require upgrades to existing transportation infrastructure, and only requires connection to natural gas utility pipeline (existing water, sanitary sewer, hydro, and telecommunication utility connections are already in place). The North Clarington site is the least preferred site due as it being situated on a closed landfill and being a remote location, which translates to high utility connections costs, site remediation costs, and transportation infrastructure upgrades.

Further breakdown of all capital costs are attached separately as Table 6.

Utility Connection Costs – All sites require natural gas supply line connection costs. Based on GHD’s experience, a gas pipeline costs $1,500 per metre of pipeline construction (minimum cost scenario). However, with Enbridge being the natural gas provider for all of these sites, their participation will be required at an early stage. To account for Enbridge’s stringent specifications, pipeline costs are expected to increase by at least 2.5 times base costs (maximum cost scenario). As noted earlier, Enbridge has noted that they will need to conduct a further detailed study to ensure proper gas supply is available for each site. An RNG injection station will be required at each of the sites, each with an additional cost of approximate $1,000,000. Reinforcement to existing pipeline connection will also be required by Enbridge.

Municipal water supply and sanitary sewer connections are required at most of the short-listed sites. Based on GHD’s experience, relevant pipeline construction unit costs range from $500 to $1,000 per metre and were used to develop minimum and maximum cost estimates respectively.

Hydro connection is available at all sites, except for the North Clarington site, for which the nearest connection point is 350m south of the property. Based on GHD’s experience, hydro line installation unit costs range from $500 per metre (minimum cost scenario) to $1,000 per metre (maximum cost scenario). However, further investigation is required to retrieve accurate hydro information.

Telecommunication connection is available at all sites, except for the North Clarington site, for which the nearest connection point is 890m from the site. As noted earlier, costs are minor and range from $150,000 to $180,000 (based on unit costs of $200/metre based on GHD experience).

Transportation Infrastructure Upgrade Costs – In order for waste to be transferred to and from the Whitby site, several major upgrades to the existing transportation infrastructure will be required. No major road improvements are required at the South Clarington site. All sites will require a traffic impact study.

Site Remediation Costs – In order for the Facility to be located at the North Clarington, Oshawa, and East Scugog sites, a significant quantity of contaminated waste and soil will require removal as they are situated on closed landfills, resulting in high site remediation costs. As the extent (depth) of waste at the closed landfills is unknown, site remediation costs were calculated on a per metre depth basis. The Region should note that the costs will double as the depth doubles. In order to incorporate a range of site remediation costs, a minimum cost scenario, whereby 30% of the building
footprint was estimated to require contaminated soil/waste removal was considered. A maximum cost scenario considered ultimate building footprint estimates as provided in Memo No. 1 for this project.

**Site Demolition Costs** – In order for the Facility to be located at the Whitby site, the former MRF and current MRF buildings will need to be demolished or remediated to include the new Facility due to the limited site size available. In order to incorporate a range of demolition costs, a minimum cost scenario, whereby the existing building demolition costs are considered negligible due to sales from existing building components was considered. A maximum cost scenario considered no re-sale value of existing building components.

For the West Scugog site, as it is a much larger site, a minimum demolition cost was not applied as it was assumed that the Facility could be constructed on other undeveloped parts of the site. Similar to the Whitby site, a maximum cost scenario of site demolition with no re-sale value of existing building components was considered.

**Transportation / Waste Transfer Costs**

From a transportation perspective, the South Clarington site was identified as the preferred site, as the site has the lowest waste transfer costs. The site has the shortest waste transfer distance from the three private transfer stations to the site (Miller’s Squires Beach Transfer Station, Miller’s Pebblestone Transfer Station, and the Waste Management of Canada Courtice Road Transfer Station), with the recyclables and residuals then transferred to the adjacent DYEC.

The next comparable site will cost more than twice as much for waste transfer on a per transfer trailer basis. The East and West Scugog sites are least preferred as these sites will cost more than 5 times for waste transfer, when compared to the South Clarington Site.

Transportation to markets and end users for the beneficial use end-product from the Facility depends on the type of technology used at the Facility and is the responsibility of the preferred Proponent. This aspect was not evaluated.

**Employment**

All sites offer the same employment opportunities (estimated to be between 30-40 full time jobs), however the South Clarington site meets specific objectives within the Energy Park plan, including providing for employment for energy related developments.

**Overall – Economic**

Based on the above and the comparative evaluation tables, the following sites are more preferred:

- South Clarington.
- Whitby.
- Oshawa.
7. **Recommended Site**

Based on a review of the advantages and disadvantages described in Section 6, the South Clarington Site is the Recommend site for development as it has a greater number of advantages than disadvantages when compared against all other short-listed sites from an Environmental, Social, Cultural, Technical, and Cost perspective.

The advantages of the South Clarington site in comparison to the other short-listed sites include:

- No off-site sensitive receptors within 500 metres of the site.
- No policy conflicts from a provincial policy/plan perspective (i.e. Oak Ridges Moraine, Greenbelt, etc.)
- No wetlands on site and limited areas of Source Water Protection Plan designations (small portion of site), particularly in comparison to all other short-listed sites
- Consistent with existing, proposed and surrounding land uses and land use designations and allows for an acceptable use within the land use planning context. The site is within the Municipal Official Plan designation of Business Park and the Regional Official Plan designation of Employment Area. With respect to Employment designation, this facility will provide employment in the range of 30-40 full time positions (estimated). The zoning designation is Industrial (M).
- The potential exists to build on the energy related character of the Energy Park through the development of this Facility and new energy production facilities, including District Energy and sustainable energy. The Facility fits into the Energy Park’s sustainable development and design standards, and future opportunities in the renewable and alternative energy sector. This would also meet the Provincial objectives of ensuring facilities such as the Region’s are well-planned and suitably sited to ensure long-term effectiveness of the resource recovery system and campus.
- Synergies with existing solid waste management infrastructure, including DYEC where mixed-waste residuals would be processed, will help create energy savings and environmental benefits. By removing the organic waste material (SSO and FSO) through the pre-sorting process at the Facility, which generally contains more moisture, the combustion process at the DYEC will become more efficient. Synergies with adjacent WPCP may be able to treat Facility effluent and utilize natural gas.
- Road network to the site has been upgraded to accommodate volumes of traffic that would be generated for the proposed use. There is a dedicated road for waste delivery trucks along the Canadian National railroad track.
- Previous archaeological studies were completed for the Region on the site and on the adjacent DYEC site and determined no archaeological significance.
- Utilities and servicing are available on-site with nearest natural gas line in close proximity
- Lowest Capital costs (remediation, demolition and utilities)
• Lowest transportation costs, thereby reducing transportation emissions as waste material outputs from the Facility could enter the DYEC in close proximity.

With the above in mind, the South Clarington site is the preferred site for the proposed Facility.

8. **Municipal Staff and Public Consultation**

Consultation was undertaken as follows:

*Municipal Consultation*

- February 19, 2020: Meeting with local municipal staff

*Public Information Centre (PIC)*

- February 27, 2020: PIC
- March 20, 2020: Close of PIC comment period

These consultation sessions allowed GHD and the Region to engage directly with members of the public. At the same time, these sessions also allow the public to provide their input, thoughts and perspectives to GHD and the Region, creating an open, two-way dialogue. For example, GHD will present their evaluation results from the long list of sites to the short-list, which is based on a number of Region and Region Council endorsed evaluation criteria. Members of the public will have the opportunity to provide site specific information from a historical and local perspective that may be important to include in the overall recommendation for the preferred site.

The results of the municipal staff and public consultation events, for the information presented in this Report, will be reviewed and addressed. This Report will be revised to incorporate all appropriate feedback and comments.

9. **Next Steps**

Prior to moving forward with further detailed work and further approvals on the preferred site for the Facility, Regional Council approval and endorsement of the preferred site will be sought. The Region anticipates undertaking the following steps once Regional Council have provided further direction on the preferred site for the Facility:

- Work Plans will be established for each technical discipline involved in further investigations on the site, which may include: planning justification report, geotechnical investigations, EIS, Traffic Impact Study, noise assessment, site plan, hydrogeological studies, archaeological studies etc. Timelines for data collection and assessment of findings will be established as part of the Work Plans.
- Further consultation with neighbouring landowners will occur, with discussion on potential further approvals required (i.e., land use, ECA), facility footprint location on the site, potential design/technology, mitigation measures, Best Management Practices, and anticipated schedule of major milestones. Discussion will also include details on how best to seek their input on future site design and selection of technology.
• Further public information/consultation sessions on Facility milestones and the procurement process.

• Initiation of the Planning approvals process, working in cooperation with both Regional planning staff and the host municipalities Planning staff.

• Advancing the site-specific design that will be put forward in the procurement process.

• Preparation of Request for Pre-Qualification (RFPQ) documents, followed by the preparation of Request for Proposal (RFP) documents as the procurement of processing technology is advanced.

• Continue to seek guidance from the MECP in preparation for submitting application(s) for ECA(s).