DILLON CONSULTING

WASTE CONNECTIONS OF CANADA (WASTE CONNECTIONS)

Socio-economic Impact Assessment Work Plan (Final)

Ridge Landfill Expansion EA

September 2018 – 15-2456-1200

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1.0 Project and Work Plan Overview

This Socio-Economic Assessment work plan has been prepared to support the environmental assessment (EA) for the Ridge Landfill expansion and is based on the commitments made in the final amended Terms of Reference (ToR) for the EA that was approved by the Ministry of the Environment and Climate Change, which is now the Ministry of Environment, Conservation and Parks (MOECP), in May of 2018.

Waste Connections of Canada (Waste Connections) is proposing an expansion of the Ridge Landfill in order to continue to provide long-term residual disposal capacity for the company's large IC&I customer base and as a regional and inter-regional waste management facility to serve the projected increase in population and economic growth in southern and central Ontario.

The Ridge Landfill has been in operation since 1966 and was previously expanded in 1999. Waste Connections owns 340 hectares (ha) of land at the Ridge Landfill. The existing Landfill Site Area, which is permitted by an ECA from the MOECP for waste management and environmental work purposes, is 262 ha. The area within which waste disposal is permitted, called the Waste Fill Area, is 131 ha or half of the Landfill Site Area. As of December 2017, it is estimated that the existing Waste Fill Area at the Ridge Landfill site will provide waste disposal capacity until approximately 2021 at the current fill rate.

The current approved capacity for the Ridge Landfill is 21 million cubic metres (m3). The site is approved to accept a maximum of 1,300,000 tonnes of waste per year (the MOECP approved annual waste disposal rate). The EA does not propose to increase the maximum annual fill rate (this would remain as-is); however, Waste Connections is seeking the EA to increase the life of the facility for a 20 year planning period, from 2022-2041.

The waste being landfilled is approximately 98% IC&I waste and 2% residential waste. As part of the EA approval, Waste Connections would agree to reduce their IC&I service area from all of Ontario to just southern and central Ontario, and their residential service area from Chatham-Kent and the neighbouring counties of Essex, Lambton, Middlesex and Elgin, to only the Municipality of Chatham-Kent.

This Socio-Economic Assessment work plan outlines the tasks to support the evaluation of alternative methods, and to undertake an impact assessment once the preferred alternative method is determined. The following paragraphs provide a brief summary of the scope of the Socio-Economic Assessment work, including processes to be followed to complete the impact assessment.

The Socio-Economic Assessment will seek to identify potential social and economic impacts related to the proposed landfill expansion. The objectives of the Socio-Economic Assessment are as follows:

- Establish the baseline conditions on-site, off-site, along the haul route, and in the Municipality of Chatham-Kent with respect to socio-economic conditions related to the Ridge Landfill;

- Carry out an assessment of potential socio-economic impacts for each of the proposed landfill expansion site development alternatives (i.e., alternative methods); and
- Prepare a social and economic impact management plan for the purpose of mitigating potential impacts.

The scope of the Socio-Economic Assessment will include a careful review of existing background information, a review of input from the Municipality of Chatham-Kent, a review of public consultation input and the completion of interviews of potentially affected households and businesses (including agriculture). Based on the baseline information, an examination of potential socio-economic impacts for the proposed landfill expansion alternatives (i.e., alternative methods) will be completed. The criteria and indictors that will be applied to assess socio-economic impacts and mitigation recommendations are detailed in **Table 1** of this report. Identification of socio-economic impacts will be supported through input from a range of study disciplines including noise, air quality, transportation/traffic, visual and agriculture studies being undertaken as part of the EA.

Impacts and mitigation will be identified for four study areas. Three primary impact study areas have been identified and are illustrated in **Figure 1.** These include:

- **On-Site Study Area ("on-site")** – includes the property on which the current Ridge Landfill and proposed expansion is situated;
- **Off-Site Study Area ("off-site")** – encompasses the area within one kilometre of the proposed fill area limits. The Off-Site Study Area would be used to conduct surveys of local residents to determine the impact of the preferred alternative method to those neighbours and businesses within 1 kilometre of the landfill. This group will also be part of economic considerations due to their proximity to the site; and,
- **Haul Route Study Area ("haul route")** – encompasses lands immediately adjacent to Communication Road, Drury Line and Erieau Road which are identified as the designated haul routes for the site. The designated haul route will not change as a result of the expansion.

A fourth study area of relevance for the socio-economic environment includes consideration of wider social and economic impacts and benefits for the Municipality of Chatham-Kent (referred to as the wider regional economy). **Figure 2** illustrates the extents of the Municipality of Chatham-Kent that is considered in the broader assessment of socio-economic impacts and benefits.

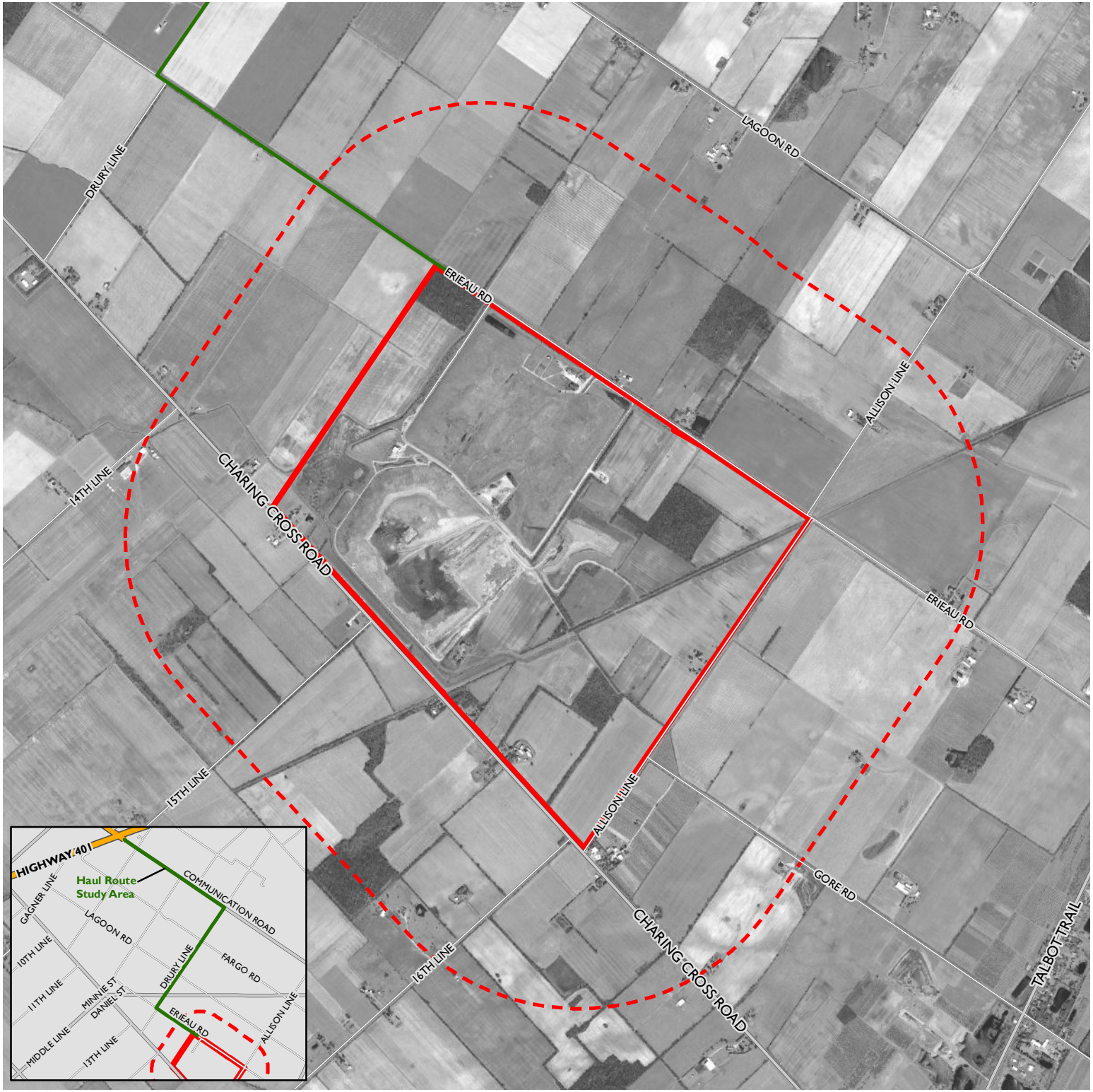
The study areas have been identified based on the potential for impacts to residents and businesses related to the proposed Ridge Landfill project. Impacts may vary depending on the location of the residents/business and depending on the issue. Different study areas will experience different impacts and ultimately have different mitigation recommendations. As such we have identified multiple study areas to capture the differences in potential impacts and provide recommendations for mitigation that reflect the different conditions in impact areas.

A comparative evaluation and ranking of the proposed alternative methods will be undertaken based on the results of the impact assessment with the objective of predicting the potential net effects associated with each alternative.

Following the selection of the preferred alternative method, a more detailed socio-economic impact assessment of the preferred alternative and the development of an impact management plan will be completed that will include considerations for land owner compensation and community benefits programs.

A summary of additional commitments for the socio-economic discipline is provided below.

Commitment	Reference to applicable section in EA or supporting document
The socio-economic impact assessment will assess potential effects within a regional study area that includes communities in the Municipality of Chatham-Kent.	Socio-economic work plan Figure 2. This will also be summarized in the EA (section TBD).



RIDGE LANDFILL

FIGURE 1: STUDY AREAS

Haul Route
On-Site Study Area
Off-Site Study Area

1:25,000

0 100 200 400 m

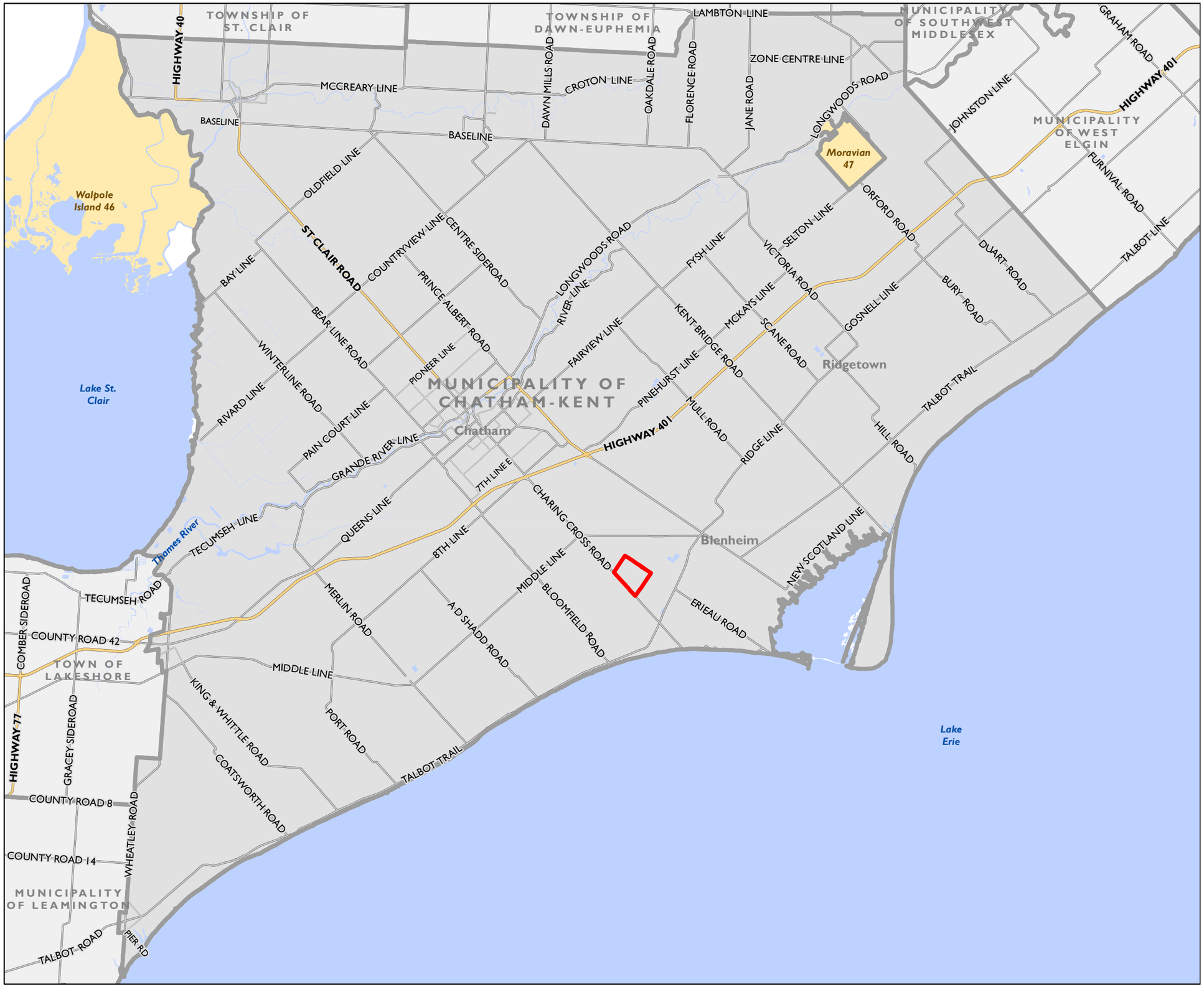
MAP DRAWING INFORMATION:
IMAGERY PROVIDED BY DIGITAL GLOBE/
DATA OBTAINED FROM MNRF

MAP CREATED BY: GM
MAP CHECKED BY: MB
MAP PROJECTION: NAD 1983 UTM Zone 17N

DILLON CONSULTING

PROJECT: 152456
STATUS: FINAL
ATE: 6/20/2016

File Location: I:\GIS\141382 - Ridge Landfill\Mapping\Ridge Landfill Study Areas.mxd



RIDGE LANDFILL
PRE-ENVIRONMENTAL ASSESSMENT

FIGURE 2:
MUNICIPALITY OF CHATHAM-KENT, BROADER SOCIO-ECONOMIC STUDY AREA

Ridge Landfill

1:250,000
0 1 2 4 km

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MAP DRAWING INFORMATION:
DATA OBTAINED FROM MNRF

MAP CREATED BY: GM
MAP CHECKED BY: MB
MAP PROJECTION: NAD 1983 UTM Zone 17N

DILLON CONSULTING

PROJECT: 152456
STATUS: FINAL
ATE: 2018-06-11

2.0 Socio-Economic Assessment Criteria

Based on the work completed for the Terms of Reference (ToR), the socio-economic impact assessment for the EA includes two assessment phases. The first is the assessment/evaluation of Alternative Methods of carrying out the proposed Project. The second is the impact assessment for the preferred site development alternative method.

For the evaluation of socio-economic environmental effects for each Alternative Method, the potential for effects will be identified based on a set of evaluation criteria. Preliminary evaluation criteria and indicators for the evaluation of Alternative Methods are presented in **Table 1**. Criteria are based on the approved ToR and focus on the issues that allow for differentiation between alternatives. The evaluation criteria and indicators will be confirmed during the EA and in consultation with the public, agencies and stakeholders. Criteria groups for the Alternative Methods evaluation include Socio-Economics (effects on residents and businesses), Agriculture, and Archaeology and Cultural Heritage.

Once the evaluation of the Alternative Methods is complete and the identification of a preferred site development alternative method is confirmed, a more detailed socio-economic impact assessment of the preferred method will be completed. Preliminary criteria for the preferred method impact assessment are presented in **Table 2** and are focused on specific impacts on-site, off-site within 1 km, and along the haul route**.** Criteria groups for the impact assessment include Socio-Economics (effects on residents and businesses), Regional Economy, Agriculture, Land Use, Archaeology, and Cultural Heritage. Many of the criteria are repeated from Table 1 with some additions, such as impact to property values, land use designations and regional economic benefits. In conjunction with the preferred site development alternative method impact assessment, this effort will include the identification of mitigation and monitoring measures to minimize potential socio-economic impacts.

It should be noted that to complete the socio-economic assessments, nuisance effects (traffic, noise, odour, dust, visual, etc.) will be identified in consultation with other disciplines. Receptors in the vicinity of the landfill expansion area (on-site and off-site) and along the haul route will be confirmed through mapping and site visits.

For the effects assessment of the preferred site development alternative method, the magnitude and duration of cumulative impacts to each resident/business in the vicinity of the landfill expansion area (on-site and off-site) and along the haul route will be identified. In order to account for the varying cumulative effects that combined nuisance impacts may have on any one property, and to recognize the differences between properties that experience several impacts and those that may experience one or two types of impact, an assignment of high (H), moderate (M), and low (L) cumulative impact ratings will be assigned to each residence/business. Considerations for assigning high, moderate and low ratings will include identification of whether direct interference with activities is likely for a given nuisance or whether the impact represents more of a nuisance rather than interference. For residences that may be

affected by nuisance impacts from both the landfill operations and the haul route, the cumulative impact rating will take into account both sources of impacts. The impact rating will also take into account the temporary or intermittent nature of some impacts.

Table 1: Alternative Methods – Socio-Economic Effects Assessment Criteria and Indicators

Criteria Group	Assessment Criteria	Indicators	Rationale	Data Sources
Socio-Economic	Potential for displacement of residents on-site	Number of residents displaced	Identify impacted residents required to move.	Personal communication; GIS Mapping; Public consultation activities;
	Potential for disruption (due to noise, dust, odour, litter and visual) of residents and/or businesses off-site	Number of occupied households/businesses disrupted and nature of disruption.	The degree of disruption will depend on the characteristics of the households/businesses, the extent of and proximity to the predicted nuisance effects.	Public consultation activities; Results of noise/air quality studies and visual assessment; Secondary sources
	Potential for disruption (due to noise, dust and traffic) of residents and/or businesses along the haul route for soil import or export	Number of occupied households/businesses disrupted; Number of trucks for soil import/export.	The degree of disruption will depend on the characteristics of the households/businesses, the extent of and proximity to the predicted nuisance effects, and the use of the route for other transportation purposes.	Public consultation activities; Results of other studies (noise, air quality, traffic); Secondary sources
	Potential for odour disruption as a result of landfill mining	Number of occupied households/businesses disrupted.	The degree of disruption will depend on the characteristics of the households/businesses, and the extent of and proximity to the predicted nuisance effect.	Results of noise/air quality studies; Secondary sources
	Potential for impacts on financial livelihoods	Potential for change in compensation Potential for change in financial contributions to the municipality and community trust.	If the landfill was no longer operating there may be changes to current compensation based on the terms of the existing community benefits and Ridge Landfill Trust agreements.	Public consultation Existing community benefits agreement

Criteria Group	Assessment Criteria	Indicators	Rationale	Data Sources
Agriculture[1]	Loss of agricultural products and employment on-site.	Area disturbed by landfill development; Number and extent of agricultural businesses impacted and employment at each.	The expansion will result in the permanent loss of agricultural lands.	GIS mapping; Personal Communication; Agricultural study
Archaeology	Potential for impact to as-yet undiscovered archaeological resources on-site	Potential for undocumented archaeological features within new landfill footprint on-site.	Potential to uncover archaeological resource(s) as part of expansion	Archaeological Assessment

Table 2: Preferred Expansion Method – Socio-Economic Impact Assessment Criteria and Indicators

Criteria Group	Assessment Criteria	Indicators	Rationale	Data Sources
Socio-Economic				
On-site	Loss of agricultural products and employment.[2]	Area disturbed by landfill development; Number and extent of agricultural businesses impacted and employment at each.	The expansion will result in the permanent loss of agricultural lands.	Interviews; GIS mapping; Agricultural Assessment
	Potential for displacement of on-site residences.	Number of residents displaced.	Impact to residents required to move.	Interviews; Public consultation activities

[1] The Agricultural Assessment Report will provide extensive investigation into the agricultural conditions, impacts and mitigation for the project. The Socio-Economic work will refer to the Agricultural report where required.

[2] The Agricultural Assessment Report will provide extensive investigation into the agricultural conditions, impacts and mitigation for the project. The Socio-Economic work will refer to the Agricultural report where required.

Criteria Group	Assessment Criteria	Indicators	Rationale	Data Sources
Off-site	Potential impacts to property values.	Home and property value in local area and comparable jurisdictions.	Expansion may or may not affect property values in the local area or along the haul route.	Review and evaluation of nuisance generating facilities; Comparison of property values between before and after previous expansion; Available literature
	Potential visual impacts.[3]	Number of occupied households with impacted views.	The degree of disruption will depend the extent of visual impacts for each impacted household.	Interviews; Public consultation activities; Results of Visual Assessment
	Potential nuisance effects to residences and businesses from odour, noise, litter and dust.	Number of occupied households and businesses disrupted.	The degree of disruption will depend on the characteristics of the affected residents/ businesses, the extent of and proximity to the predicted nuisance effects.	Interviews; Public consultation activities; Results of noise/air quality studies; Secondary sources
Haul Route	Potential nuisance effects to businesses and residences from dust and noise along the haul route	Number of occupied households and businesses disrupted.	The degree of disruption will depend on the characteristics of the affected households/ businesses, the extent of and proximity to the predicted nuisance effects.	Interviews; Public consultation activities; Results of noise/air quality studies
Regional Economy				
Off-site, Haul route and Municipality wide	Potential benefits to the wider economy in the Municipality of Chatham-Kent	Additional municipal revenue;	Expansion may result in benefits to the local and broader economy of the Municipality.	Waste Connections employment and spending estimates; Agency consultation;

[3] The Visual Assessment Report will provide extensive investigation into the agricultural conditions, impacts and mitigation for the project. The Socio-Economic work will refer to the Agricultural report where required.

Criteria Group	Assessment Criteria	Indicators	Rationale	Data Sources
		Additional employment opportunities (local and municipality wide)		Secondary sources; Municipal data.
Cultural Heritage				
Off-site	Potential disturbance of cultural heritage resources	Number of cultural heritage resources within the off-site study area and the change in the use/experience of those resources	Potential for the project to result in a change in the use/experience of cultural heritage resources	Cultural Heritage Assessment
Archaeology				
On-site	Potential disturbance of as-yet undiscovered archaeological resources	Area disturbed by landfill development	Potential to uncover archaeological resource(s) as part of expansion	Archaeological Assessment
Land Use				
On-site	Potential for changes to land use designations.	Change in existing land use designations	The expansion will result in the permanent change to the existing land use as designated in the municipal Official Plan	Official Plan Review; Agency consultation; GIS Mapping
	Potential for additional approvals or permits (e.g., zoning by-law)	Change in municipal and/or regional permitting or approvals as a result of landfill expansion	The identification of permits or approvals required from the local municipality and/or Region to ensure that the landfill expansion is in conformity with municipal plans and by-laws.	Agency consultation; Official Plan and Zoning-By-law Review

2.1 Data Collection

To complete the Alternative Methods evaluation and the preferred method impact assessment, data collection for the Socio-Economic Impact Assessment will include the following:

- review background data, including previous Ridge Landfill EA reports and Ridge Landfill annual reporting;
- review of secondary sources, such as Statistics Canada data and reports, MOECP records, municipal planning/land use/strategic planning documents and land use/development activity; local and municipal business directories;
- confirm existing municipal assessment roll information and mapping to identify property owners, as well as potential new receptors, within the off-site study area, along the haul route and within the study area;
- undertake socio-economic interviews of residents and businesses on-site, off-site (within 1,000m of site) and along the haul route. The purpose of the interviews will be to gather baseline information regarding potentially affected properties and people. Interviews will be conducted in-person through door-to-door visits and by arranged meeting as appropriate;
- undertake interviews with property owners within the off-site study area who do not reside on their property (non-resident owners). The interview questions will be mailed to property owners with the purpose of identifying the nature of their use of the property and any future plans they may have for the property;
- information and findings of other disciplines to assist in the characterization of the existing socio-economic environment and determine potential effects resulting from the Project, as well as mitigation measures to address such potential effects;
- information received through public comments received through public engagement activities;
- review of public input/complaints that Waste Connections has received over the last few years regarding existing landfill operations;
- review of municipal financial contributions by Waste Connections and the impact the Ridge Landfill operation has on municipal finances and local and regional employment (including economic spin-offs); and,
- review of how Waste Connections community financial contributions have been used and the benefits that have resulted from these contributions.

Specific correspondence related to participation in interviews will be prepared and provided to residents and businesses in the study area. The interview questions will be identified in consultation with Waste Connections. During the data collection phase, two (2) attempts at in-person interviews will be made, along with a follow-up call/letter as necessary.

2.2 Other Socio-economic Input

Other technical disciplines will be involved in establishing baseline conditions and conducting the associated effects assessment. These include:

- Cultural Heritage;
- Archaeology;
- Agriculture;
- Indigenous Peoples and Traditional Use of Land;
- Air Quality;
- Noise;
- Visual Impacts; and,
- Transportation.

The results of these assessments will inform the Socio-economic Impact Assessment and assist in the identification of mitigation measures as necessary to address potential effects.

3.0 Impact Management

Standard and customized (site specific) mitigation measures will be developed for the Project to minimize potential adverse Project-related effects. These will be further described in the EA. For example, mitigation as part of typical operating practices may include limited hours of operation, daily cover of waste, security fencing around the perimeter of the site, as well as leachate and gas emission management systems that are installed, monitored and maintained in accordance with provincial regulations. Mitigation measures will be developed in consultation with the public, stakeholders and interest groups, agencies, and Indigenous Peoples, as applicable. The Report will also identify potential effects resulting from the Project and consider appropriate avoidance, mitigation and monitoring options. Agreed upon avoidance, mitigation and monitoring options will be identified in contract specifications to be adhered to by Waste Connections staff and contractors.

As indicated in **Section 1.1** the socio-economic impact assessment will also include an assignment of high (H), moderate (M), and low (L) cumulative impact ratings to be assigned to each residence/business. Assignments of high, moderate and low will inform the impact management and mitigation program.

4.0 Reporting

The Socio-economic Impact Assessment Report will be structured based the major components of the socio-economic environment identified in Section 3, using the criteria and indicators to address

potential socio-economic effects resulting from the Project. The assessment of social and economic effects will rely on the input of other disciplines including air, noise, dust and visual to inform recommended avoidance, and/or mitigation and monitoring programs to address identified effects. Supporting information collected during the EA will be appended to the Socio-economic Impact Assessment.