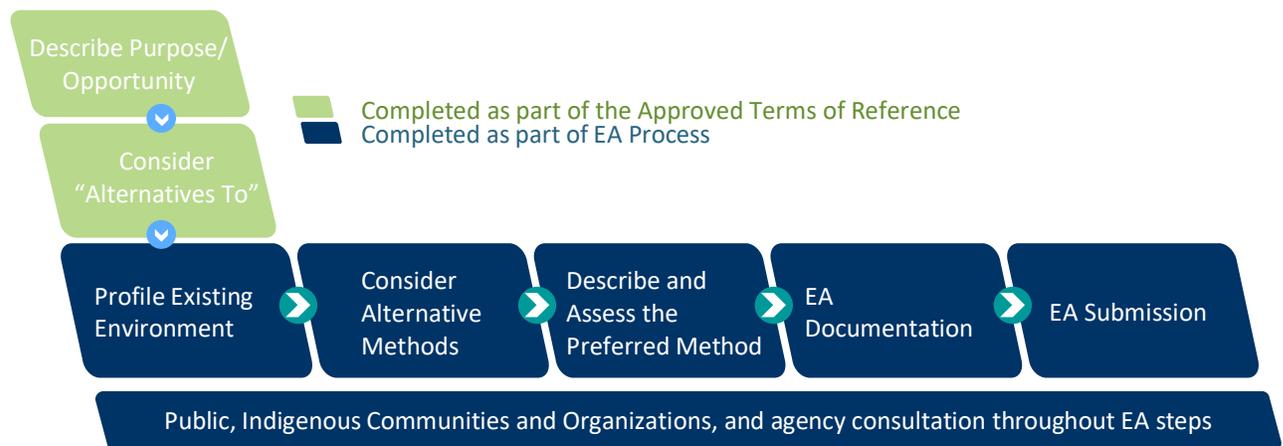


2.0 Overview of the EA Process

2.1 Environmental Assessment (EA) Process

The MECP’s Code of Practice²⁶ for preparing EAs defines it as a study, which assesses the potential environmental effects (positive or negative) of a project. It is intended to be a planning and decision-making process designed to assist proponents in making environmentally responsible decisions. The EA process includes: the consideration of alternatives, the assessment of environmental effects, and the development of mitigation plans to reduce any potential effects on the environment. The environment, as defined in the *EA Act* is to include: natural, social, economic, cultural and built environments. **FIGURE 2-1** shows the key steps in the EA process.

FIGURE 2-1: OVERVIEW OF THE EA PROCESS



The primary objective of this EA was to prepare a document that addresses the requirements of the approved EA Terms of Reference as per Section 6.1 of the *EA Act*.²⁷ This EA was prepared in accordance with subsection 6(2)(c) and 6.1(3) of the *Environmental Assessment Act*, which allows a proponent to set out through the Terms of Reference what the EA will contain. Allowing proponents to “focus” an EA accounts for the limitations of a private company, such as Waste Connections, who may be unable to implement some alternative ways of managing waste. An example is that private companies do not have the ability to expropriate land for the purpose. Waste Connections has completed a “focused” EA for this Undertaking.

²⁶ Ministry of the Environment, Conservation and Parks (2014a). Code of Practice: Preparing and Reviewing Environmental Assessments in Ontario, January 2014.

²⁷ Ministry of the Environment, Conservation and Parks (1990). Environmental Protection Act, R.S.O. 1990, Chapter E.19, Last amendment 2019, c. 9, Sched. 7.

The Terms of Reference (ToR), approved by MECP on May 1, 2018, outlined the framework for what was to be studied in the EA and included a description of the purpose and opportunity, the “alternatives to” the Undertaking, the existing environment, and the work proposed to develop and evaluate the alternative methods of carrying out the Undertaking and assessing potential effects on the environment as defined in the *EA Act*.

Table 2-1 outlines where the requirements of Section 6(1) of the *EA Act* are fulfilled.

Table 2-1: EA Act, Section 6.1 Requirements

Sub-Section	Requirement	Where to Find
(1)	<i>The proponent shall prepare an environmental assessment for an undertaking in accordance with the approved terms of reference (ToR).</i>	Appendix A Approved Terms of Reference
(2)	<i>Subject to subsection (3), the environmental assessment must consist of:</i>	
(a)	<i>a description of the purpose of the undertaking;</i>	Section 1.2 - Purpose For The EA
(b)	<i>a description of and a statement of the rationale for,</i> <i>(i) the undertaking,</i>	Description found in Section 1.2 - Purpose For The EA & Section 1.5 - Rationale for the Proposed Undertaking
	<i>(i) the alternative methods of carrying out the undertaking, and</i>	Section 4.0 – Consideration of the Alternative Methods
	<i>(ii) the alternatives to the undertaking;</i>	Appendix A - ToR
(c)	<i>a description of,</i> <i>(i) the environment that will be affected or that might reasonably be expected to be affected, directly or indirectly,</i> <i>(ii) the effects that will be caused or that might reasonably be expected to be caused to the environment, and</i> <i>(iii) the actions necessary or that may reasonably be expected to be necessary to prevent, change, mitigate or remedy the effects upon or the effects that might reasonably be expected upon the environment, by the undertaking, the alternative methods of carrying out the undertaking and the alternatives to the undertaking;</i>	Section 3.0 – Description of the Environment Potentially Affected Section 6.0 – Impact Assessment of the Preferred Alternative Section 6.0 – Impact Assessment of the Preferred Alternative (proposed impact management measures sub-sections) & Section 7.0 – Monitoring, Reporting and Commitments

Sub-Section	Requirement	Where to Find
(d)	<i>an evaluation of the advantages and disadvantages to the environment of the undertaking, the alternative methods of carrying out the undertaking and the alternatives to the undertaking; and</i>	Section 6.14 – Summary of Net Effects & Evaluation Section 4.1.3-Comparative Evaluation of Site Development Alternatives Appendix A - ToR
(e)	<i>a description of any consultation about the undertaking by the Proponent and the results of the consultation.</i>	Section 8.0 - Consultation

The first step of the EA was to complete technical studies to profile the existing environment. Information on the existing environment was gathered in sufficient detail to characterize baseline conditions. As a second step and based on existing environmental conditions Waste Connections considered alternative methods of carrying out the proposed landfill expansion. This involved assessing the potential impact of each alternative, and comparatively evaluating the alternatives to determine a preferred alternative. The alternative methods were each described in sufficient detail to be able to determine the effects of the alternative relative to a “do nothing” scenario. For each alternative the potential for environmental effects was assessed based on the broad definition of the environment within the *Act*, using a set of evaluation criteria. Quantitative data was used for this assessment, with qualitative data used where quantitative data was not available. Based on the assessment results the alternative methods were ranked as one (1) of the following: ‘preferred’, ‘less preferred’, ‘least preferred’, or ‘equally preferred’. This relative preference was used to select the preferred alternative which consists of the preferred site development, landfill gas management and leachate treatment alternatives.

The third step was to complete an impact assessment of the preferred alternative taking into account the full definition of the environment (i.e., natural, socio-economic, cultural and built environments). Mitigation measures to minimize potential effects along with any remaining net effects were determined.

The fourth step was to formally document all work completed. A draft document was submitted for public, stakeholder, Indigenous Communities and Organizations and agency review on July 22, 2019. This current document represents the final EA document formally submitted to the MECP on January 24, 2020.

On-going consultation with the public, Indigenous Communities and Organizations, and agencies has been conducted throughout the EA process. See **Section 8.0** and Appendix B – Record of Consultation for details regarding consultation efforts. Commitments made during the development of the ToR and EA work plans are documented in Appendix C – Commitments Table.

2.2 Overview of Ridge Landfill EA Report

This report summarizes the baseline environment in the area surrounding the Ridge Landfill site and potential changes to the future environment due to the Undertaking. The report consists of the following:

- Section 1.0 – presents an introduction to the EA, a brief description of the project, the history of the landfill site, an overview of current operations, the purpose and rationale and alternatives to the Undertaking;
- Section 2.0 – the EA process, provides an overview of the EA report, lists the technical discipline studies completed;
- Section 3.0 – provides a description of the Study Areas and the existing environment;
- Section 4.0 – presents the consideration of alternative methods for site development, leachate treatment, and LFG management;
- Section 5.0 – describes the preferred alternative in terms of the proposed engineering design and site features;
- Section 6.0 – summarizes the potential environmental effects, proposed mitigation measures and any resulting net effects;
- Section 7.0 – provides a summary of the monitoring and reporting requirements, environmental management systems, contingency measures and EA commitments;
- Section 8.0 – provides a description of the consultation conducted including an overview of the plan, the objectives and the results achieved, contacts made, and efforts undertaken;
- Section 9.0 – provides a description of waste diversion activities proposed by Waste Connections and a summary of the assessment of waste diversion alternatives; and
- Section 10.0 – provides information on other approvals required for the Project.

2.3 Technical Work Completed

There were extensive technical studies conducted during the EA process, with the objective of completing the required investigations and analysis of data to support the EA approval required for expansion of the landfill site. Technical work plans to guide the completion of the individual studies were developed in the ToR stage and confirmed through consultation during the EA.

The main features of the environment include the **natural environment**, the **socio-economic environment**, **cultural environment** and the **built environment**. Under each of these categories are specific disciplines as noted in **Table 2-2**. The various reports, studies and surveys conducted for the EA are listed.

2.3.1 Socio-Economic Interviews

As part of the work completed for the Socio-Economic Impact Assessment (Appendix D9), residents and businesses located within 1 km of the site and along the haul route were invited to participate in individual interviews between November and December 2018. Invitations were mailed to all residents and businesses in the two (2) study areas in October 2018 (i.e., within 1 km of the site and along the haul route). Participants were also informed of the interview opportunity at the first Open House held on July 25, 2018 and provided with an opportunity to arrange a time and location for the interview.

The interview included meeting with individual respondents to ascertain information regarding social and economic characteristics of the land uses surrounding the Ridge Landfill. Respondent interviews included a brief summary of the proposed landfill expansion, and followed a pre-defined questionnaire. A total of 18 interviews were conducted, representing 55 residents (there were multiple members of households at each interview). All respondents used their properties as their primary residences, with the average length of residency being approximately 36 years. Eleven of the 18 respondents indicated that the property also served as a location for primarily agricultural purposes. A copy of the questionnaire used during interviews is included in Appendix D9-A - Socio-Economic Impact Assessment.

2.3.2 Waste Diversion and Recycling Survey

As part of the work completed for the Review of Diversion Options (Appendix E), an online waste diversion and recycling survey was conducted between October 24 and November 16, 2018, for the residents of Chatham-Kent. Advertisements were placed in local newspapers across the Municipality with a total circulation of over 60,000. Letters were also sent to 99 residents and businesses adjacent to the landfill requesting them to complete the online survey. In total, 31 residents responded to the online survey. Respondents indicated that a drop-off depot at the

Ridge Landfill would be of benefit but they had concerns related to traffic increase, litter, noise, and odour. There was also a desire for increased Household Hazardous Waste (HHW) services, recycling, and garbage collection/depots across the Municipality. A complete description of the survey and supporting documentation is contained in Appendix E- (Sub-appendix C) – Review of Diversion Options.

An online waste diversion and recycling survey was also conducted from October 26 to November 16, 2018 for IC&I stakeholders in the Municipality. Invitations were e-mailed to 77 stakeholders requesting that they participate in the survey. A total of nine (9) stakeholders responded. The responses identified specific materials such as excess paint, furniture, pallets, organics (e.g., restaurant food waste) as having potential for diversion. As well, extended hours and/or days of operation at the Municipal Transfer Stations were requested, as were increased HHW, recycling, garbage collection/depots opportunities. A complete description of the survey and supporting documentation is contained in Appendix E-(Sub-appendix D) – Review of Diversion Options.

The results of the surveys were shared with the Municipality of Chatham-Kent and informed other disciplines, such as the Agricultural Impact Assessment.

Table 2-2: Technical Work Completed

Technical Discipline	Located in Appendix	Technical Work
Natural Environment – Biological Environment		
Terrestrial & Aquatic	D5	<ul style="list-style-type: none"> Dillon Consulting Limited (January 2020). Ridge Landfill Expansion: Biological Impact Assessment. Appendix D5.
Natural Environment – Physical Environment		
Hydrogeological	D7	<ul style="list-style-type: none"> Dillon Consulting Limited (January 2020). Ridge Landfill Expansion: Hydrogeological Impact Assessment. Appendix D7.
Surface Water	D10	<ul style="list-style-type: none"> Dillon Consulting Limited (January 2020). Ridge Landfill Expansion: Surface Water Impact Assessment. Appendix D10; and Risk Sciences International (2018). Ridge Landfill Future Design Storm Values-Brief Description of Extreme Rainfall Projection Methodology. Ottawa ON.
Atmospheric	D3A	<ul style="list-style-type: none"> Dillon Consulting Limited (January 2020). Ridge Landfill Expansion: Atmospheric Impact Assessment. Appendix D3A; and

Technical Discipline	Located in Appendix	Technical Work
Climate Change	D3B	<ul style="list-style-type: none"> Dillon Consulting Limited (January 2020). Ridge Landfill Expansion: Climate Change Impact Assessment. Appendix D3B.
Cultural Environment		
Archaeological	D2B	<ul style="list-style-type: none"> Archaeological Services Inc. (May 2017). Stage 1 Archaeological Assessment – Ridge Landfill Expansion. ASI File: 16EA-143. Appendix D2B; and Stantec Consulting Ltd. (January 2020). Stage 2 and 3 Archaeological Assessment: Proposed Ridge Landfill Expansion. Stantec File: 160940484. Appendix D2B.
Cultural Heritage	D2A	<ul style="list-style-type: none"> Archaeological Services Inc. (July 2017). Stage 1 Cultural Heritage Resource Assessment: Built Heritage Resources and Cultural Heritage Landscapes – Existing Conditions – Preliminary Impact Assessment. ASI File: 16EA-144. Appendix D2A; and Stantec Consulting Ltd. (April 2019). Stage 2 Ridge Landfill EA: Heritage Impact Assessment. Final Report. Stantec File: 160940484. Appendix D2A.
Socio-Economic Environment		
Economic and Social	D9	<ul style="list-style-type: none"> Dillon Consulting Limited (January 2020). Ridge Landfill Expansion: Socio-Economic Impact Assessment. Appendix D9.
Noise	D8	<ul style="list-style-type: none"> Dillon Consulting Limited (January 2020). Ridge Landfill Expansion: Landfill Site and Haul Route Noise Impact Assessment. Appendix D8.
Visual	D12	<ul style="list-style-type: none"> Dillon Consulting Limited (January 2020). Ridge Landfill Expansion: Visual Impact Assessment. Appendix D12.
Agriculture	D1	<ul style="list-style-type: none"> Dillon Consulting Limited (January 2020). Ridge Landfill Expansion: Agricultural Impact Assessment. Appendix D1.
Built Environment		
Bird Hazards to Aviation Safety	D4	<ul style="list-style-type: none"> LGL Limited and AeroCan Aviation Specialists (May 2019). Ridge Landfill Expansion – Assessment of Potential Bird Hazards to Aircraft Safety. LGL Report No. FA0099-1. Appendix D4.
Landfill Design and Operations	D6	<ul style="list-style-type: none"> Golder Associates Ltd. (January 2020). Ridge Landfill Expansion: Design and Operations Report. Appendix D6.
Transportation	D11	<ul style="list-style-type: none"> Dillon Consulting Limited (January 2020). Transportation Impact Assessment. Appendix D11.

Technical Discipline	Located in Appendix	Technical Work
Diversion	E	<ul style="list-style-type: none"> • Dillon Consulting Limited (December, 2019). Review of Diversion Options. Appendix E.
Other Supporting Documents	A F1 F2	<ul style="list-style-type: none"> • Dillon Consulting Limited (Dec 2017). Supporting Document #1 - Purpose/Opportunity Assessment – Ridge Landfill Expansion Terms of Reference; • Carr, Jack L. (Dec 2017). An Economic Analysis of the Market for IC&I Waste in Central and Southwestern Ontario; and • Dillon Consulting Limited (January 2020). Update to Purpose/Opportunity Assessment Supporting Document #1. Appendix F1; and • Dillon Consulting Limited (June 2018). Landfill Mining Assessment Report. Appendix F2.