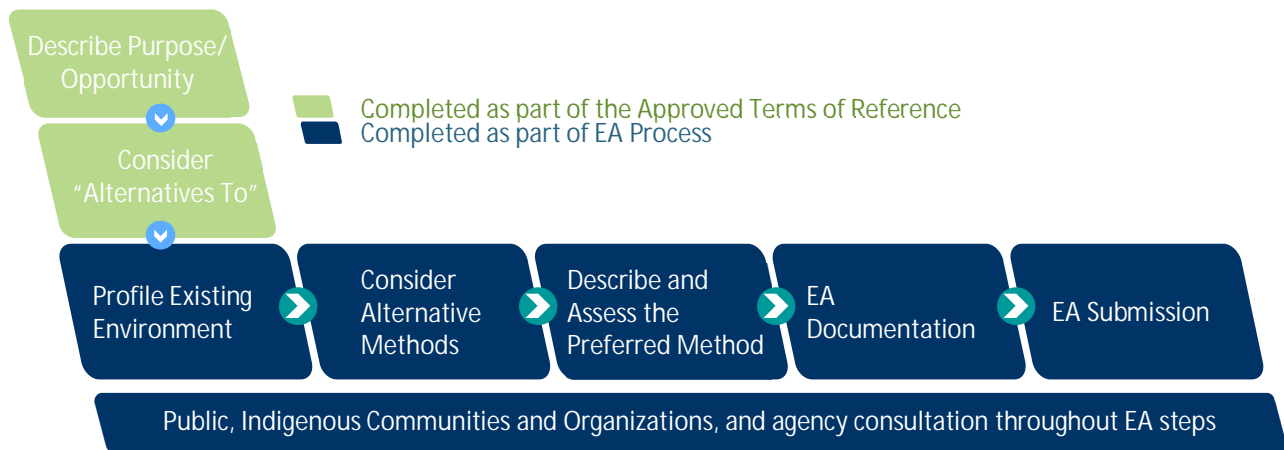


## 2. Overview of the EA Process

### 2.1 Environmental Assessment (EA) Process

An EA is 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 Act is to include: natural, social, economic, cultural and built environments. **Figure 2-1** shows the key steps in the EA process that were completed and are documented in this draft EA document.

FIGURE 2-1: OVERVIEW OF THE EA PROCESS



The first step in the process was the development of the Terms of Reference (ToR) which outlined the framework for what was to be studied including 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 Act. The MECP approved Waste Connections’ Amended Terms of Reference for a full EA on May 1, 2018, to fulfill the requirements of the EAA. This EA has been prepared in accordance with the Approved Amended Terms of Reference (ToR).

Based on the existing environment profiled in the ToR, Waste Connections’ considered alternative methods of carrying out the proposed landfill expansion, i.e., the different ways of expanding the landfill, treating leachate and managing LFG. This involved describing and comparatively evaluating the alternatives, to determine a preferred alternative. Information on the existing environment was gathered in sufficient detail to characterize baseline conditions.

The alternative methods were each described conceptually and in sufficient detail to allow for a comparative evaluation, and the potential for environmental effects identified based on the broad definition of the environment within the *Act*, and a set of evaluation criteria. To show relative differences, the alternatives were qualitatively evaluated through professional judgement and ranked as one of the following: ‘preferred’, ‘less preferred’, ‘least preferred’, and ‘equally preferred’.

The third step was to complete an impact assessment of the preferred alternative taking into a full 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 in a Draft EA Document. This draft document is submitted for public and agency review to receive feedback and comments to refine the final EA report prior to formal submission.

On-going consultation with the public, Indigenous Communities and Organizations, and agencies has been conducted throughout the EA process. See **Section 8** and **Appendix B – EA 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**.

The final EA process step is the formal submission of the final EA document, expected to be in the fall of 2019.

## 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** presents an introduction to the EA, a brief description of the project, the history of the landfill site, an overview of current operations, and the purpose and rationale for the Undertaking;
- **Section 2** describes the EA process, provides an overview of the EA report, lists the technical discipline studies completed;
- **Section 3** provides a description of the Study Areas and the existing environment;

- **Section 4** presents the consideration of alternative methods for site development, leachate treatment, and LFG management;
- **Section 5** describes the preferred alternative in terms of the proposed engineering design and site features;
- **Section 6** summarizes the potential environmental effects, proposed mitigation measures and any resulting net effects;
- **Section 7** provides a summary of the monitoring and reporting requirements, environmental management systems, contingency measures and EA commitments;
- **Section 8** 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** provides a description of proposed 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 Discipline Studies Conducted

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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 blanket categories are specific disciplines as noted in **Table 2-1**.

TABLE 2-1: TECHNICAL STUDIES COMPLETED

Technical Discipline Study	Appendix	What Was Studied
<b>Natural Environment</b>		
Biology	D5	<ul style="list-style-type: none"> <li>• Endangered or Threatened species;</li> <li>• Medicinal or culturally sensitive species of importance to Indigenous Communities and Organizations;</li> <li>• Terrestrial biological systems (e.g., vegetation, wildlife and wildlife habitat, significant woodlots); and</li> <li>• Fish and fish habitat (e.g., ponds, drains and streams).</li> </ul>
Hydrogeology	D7	<ul style="list-style-type: none"> <li>• Contaminating lifespan;</li> <li>• Groundwater quality and quantity; and</li> <li>• Water supply wells.</li> </ul>
Surface Water	D10	<ul style="list-style-type: none"> <li>• Surface water quality and quantity and benthic impacts.</li> </ul>
Atmospheric & Climate Change	D3	<ul style="list-style-type: none"> <li>• Air quality;</li> <li>• GHG emissions potential; and</li> <li>• Climate Change Mitigation.</li> </ul>
<b>Socio-Economic Environment</b>		
Archaeology	D2	<ul style="list-style-type: none"> <li>• Archaeological resources.</li> </ul>
Cultural Heritage	D2A	<ul style="list-style-type: none"> <li>• Cultural heritage resources.</li> </ul>
Economic and Social	D9	<ul style="list-style-type: none"> <li>• Displacement of residences or residential properties;</li> <li>• Disruption effects to off-site residents and businesses (e.g., odour, dust, litter);</li> <li>• Disruption to residents and businesses from dust along the haul route;</li> <li>• Impacts and benefits to Indigenous Communities and Organizations;</li> <li>• Impacts to the wider economy in the Municipality of Chatham-Kent;</li> <li>• Property values;</li> <li>• Capital and operating costs;</li> <li>• Land use designations; and</li> <li>• Additional approvals or permits.</li> </ul>
Noise	D8	<ul style="list-style-type: none"> <li>• Noise effects to off-site residents and businesses; and</li> <li>• Noise along the haul route.</li> </ul>
Visual	D12	<ul style="list-style-type: none"> <li>• Visual disruption to off-site residents and businesses).</li> </ul>

Technical Discipline Study	Appendix	What Was Studied
Agriculture	D1	<ul style="list-style-type: none"> <li>• Agricultural resources;</li> <li>• Farm operations e; and</li> <li>• Loss of agricultural employment.</li> </ul>
<b>Built Environment</b>		
Bird Hazards to Aviation Safety	D4	<ul style="list-style-type: none"> <li>• Chatham-Kent Municipal Airport.</li> </ul>
Landfill Design and Operations	D6	<ul style="list-style-type: none"> <li>• Climate change resilience (climate adaptation); and</li> <li>• On-site infrastructure.</li> </ul>
Transportation	D11	<ul style="list-style-type: none"> <li>• Transportation service; and</li> <li>• Traffic safety.</li> </ul>