

Executive Summary

1. Introduction

This Environmental Assessment (EA) has been completed by Waste Connections of Canada Inc. (referred to as “Waste Connections” and the proponent for this Undertaking) for the proposed Ridge Landfill expansion so it can continue operations from 2021 to 2041.

The Ridge Landfill reaching capacity in 2021 is part of Ontario’s waste capacity crisis where only 12-15 years of disposal capacity remain. Even with goals of increased diversion rates, southwestern Ontario will still run out of currently approved landfill capacity by 2035ⁱ unless expansions like the Ridge are approved.

The proposed expansion will enable Waste Connections to continue to serve current and future demands. Specifically, the proposed expansion will provide long-term, residual waste disposal capacity for the company’s Industrial, Commercial and Institutional (IC&I) customer base and provide long-term, cost-effective service for the municipal solid waste disposal needs of its host community, Chatham-Kent.

The Ridge Landfill is located at 20262 Erieau Road near Blenheim, Ontario in the Municipality of Chatham-Kent as shown on **FIGURE A**. The Ridge

Landfill Site is located on a thick deposit of low permeability clay till. Hydrogeological testing of the clay indicates very slow downward groundwater flow velocities of approximately 1 cm per year. It would require more than 3,000 years for leachate, if it escaped

FIGURE A: LOCATION OF THE RIDGE LANDFILL



ⁱ GHD, Policy Integrity, HDR for MOECC, Landfill Management and Planning in Ontario Study, September 2018.

through the Landfill's leachate collection system, to reach the underlying aquifer by which time the quality of the leachate would meet all current drinking water criteria. Over the 50 plus years that the landfill has been in operation to date, there have been no impacts to groundwater or drinking water wells in the area. The Ridge Landfill has an excellent environmental record and has strong local support for its continued operation and expansion.

The landfill expansion proposal includes a reduction of the service area to only Chatham-Kent for residential waste, and to southern and central Ontario for IC&I waste. The proposed landfill expansion, if granted, would allow the Ridge Landfill to maintain the amount of residual waste it takes in annually (1.3 million tonnes) for an additional 20-year period, from 2021 to 2041. According to the Ministry of Finance, the populations of central and southwestern Ontario are projected to grow by 27% and nearly 16% respectively, or over 1.1 million people by 2041 supporting a need for waste disposal capacity. Being a regional and inter-regional facility, servicing the projected increase in population and economic growth in southern and central Ontario, an expansion would enable the Ridge Landfill to continue to be an essential component of the waste management infrastructure of Ontario.

The Ridge is perceived positively by the host community and those that it serves. Positive attributes like the environmental track record and host community relationships, combined with the uncertainty associated with the transportation and disposal of waste to the US, a projected landfill capacity shortage in Ontario and overall Provincial economic growth, confirm the essential role the Ridge Landfill plays in the Province's waste management infrastructure.

The Ministry of the Environment, Conservation and Parks (MECP) approved Waste Connections' Amended Terms of Reference for a full EA on May 1, 2018, to fulfill the requirements of the *Environmental Assessment Act* (Act). This EA has been prepared in accordance with the Approved Amended Terms of Reference (ToR).

2. Overview of the EA Process

As a decision-making and planning process, the EA for the Ridge Landfill expansion considered alternatives methods, assessed environmental effects, and developed mitigation plans for the preferred alternative in order to reduce potential effects to the environment, namely: the natural environment, the socio-economic environment, the cultural environment and the built environment. Under these broad categories are the specific technical disciplines that provided input to the EA including: agriculture, archaeology, atmospheric, bird hazard and aviation

safety, biology, climate change, cultural heritage, hydrogeology, landfill design and operations, noise, socio-economic, surface water, transportation and visual landscape.

Work plans were prepared for each impact assessment study. The work plans were finalized and approved by the MECP in September 2018. The work plans were circulated to interested stakeholders, key government reviewers and Indigenous Communities and Organizations who desired to review them; and they were posted on the Future Plans page of the Ridge Landfill website for public review and comment. The input received during that review has been carefully considered and incorporated into this study, where applicable. Commitments made during the development of the ToR and EA work plans are documented in **Appendix C – Commitments Table**.

In addition to considering the potential for impact on the environment based on the technical disciplines noted above, the EA considered how changing climate has the potential to impact the expansion and how adaptive measures can be incorporated into the site design to manage the potential for extreme weather events to impact the Ridge Landfill operation in the future.

Throughout each stage of the EA process, refinements were made to the technical assessment criteria as a result of extensive consultation with agency stakeholders, Indigenous Communities and Organizations, and members of the public. It is important to Waste Connections that they maintain open dialogue and continue to build on its strong relationships with the community and stakeholders.

3. Description of the Environment Potentially Affected

A comprehensive series of environmental studies was undertaken to support this EA. These studies document the existing and anticipated future environmental conditions on-site, off-site, along the haul route and in the broader community (as applicable). Study Areas for each discipline were determined based on the potential extent of the effects from the proposed expansion and the haul route.

The existing on-site environment of the Ridge Landfill includes disposal areas, namely the Old Landfill, the West Landfill and the South Landfill; and other features including: material storage areas and soil stockpiles, administration and maintenance buildings, weigh scales/scalehouse,

leachate storage, landfill gas (LFG) flaring station, stormwater ponds and a flood control facility, internal roadways, three (3) woodlots, agricultural areas, and perimeter screening berms. The waste being landfilled consists of solid non-hazardous material of which approximately 98% is from IC&I sources and 2% is from residential sources from within the Municipality of Chatham-Kent. The landfill has been in operation since 1966 and is an important facility in the local community and in the province of Ontario.

The off-site environment is comprised of agricultural operations, a few small businesses, the Chatham-Kent Municipal Airport and rural residential dwellings. Agricultural uses include mainly the growing of soybeans, corn and other crops as well as pasture land, hay and orchards.

The haul route includes portions of Communication Road, Drury Line and Erieau Road which are identified as the “designated haul route” for the Ridge Landfill site. Land use along the haul route consists mainly of agricultural fields, a greenhouse operation, small businesses and institutions (e.g., Ministry of Transportation works yard) near the Highway 401 interchange.

The broader community of Chatham-Kent includes seven (7) urban areas including nearby Blenheim and Chatham; and six (6) secondary settlement areas, including the nearby hamlets of Cedar Springs and Charing Cross. The broader community has experienced a 2% decrease in population between 2011 and 2016. The population of Chatham-Kent has a median age of 45.9 years which is 4.6 years higher than the province of Ontario. The defining features of the broader community include its farming landscape interspersed by small residential clusters and wind turbines.

4. Consideration of the Alternative Methods

The preferred methods for site development, landfill gas (LFG) management and leachate treatment were determined through a comparative evaluation that began with characterization of the baseline conditions of the existing environment, developing alternative methods to expand the Ridge Landfill, and then predicting the potential net effects for each alternative. In determining the net effects for each of the alternative methods the “do nothing” alternative was considered.

The “do nothing” alternative represents what is expected to happen if no expansion is carried out, and serves as a benchmark for comparing effects and to highlight the advantages of proceeding with a particular alternative. In a “do nothing” scenario, the Ridge Landfill would close in 2021 and would no longer accept waste, exacerbating the Province’s waste disposal issue as disposal capacity for the lost 1.3 million tonnes would have to be found each year at other approved waste disposal facilities in the province or exported out of Canada.

The consideration of site development alternative methods looked at three (3) ways to configure additional waste fill areas on the site:

- Alternative 1 - a footprint expansion and the vertical expansion of the Old Landfill;
- Alternative 2 - a slightly smaller footprint expansion than Alternative 1 and both landfill mining and vertical expansion of the Old Landfill; and
- Alternative 3 - a larger footprint expansion than Alternative 1 and no vertical expansion of the Old Landfill.

Alternative 1 was identified as the preferred site development alternative as it maintains the important southeast woodlot, which would be removed by Alternative 3, and does not involve the prolonged off-site odour impact and other disruptions anticipated from landfill mining with Alternative 2.

The LFG management alternative methods considered were:

- Alternative 1 – continued flaring of collected LFG;
- Alternative 2 – utilization of collected LFG by selling it to a third party; and
- Alternative 3 – utilization of collected LFG by converting it to electricity likely with involvement of a third party and supplying it to the provincial grid.

Alternative 1 was identified as the preferred LFG management alternative as it effectively manages LFG reducing greenhouse gases and it can be implemented with limited complications. Both Alternatives 2 and 3 require third party involvement and Alternative 3 requires an opportunity to add electricity to the provincial system and neither alternative is currently feasible.

Leachate treatment alternatives considered included:

- Alternative 1 – continued discharge of leachate to the existing sanitary sewer and treatment at the Blenheim Wastewater Treatment Lagoons (BWTL);
- Alternative 2 – on-site pretreatment of leachate prior to discharge to the existing sanitary sewer with further treatment at the BWTL; and
- Alternative 3 – on-site full treatment of leachate and discharge to a surface water feature.

Alternative 1 was identified as the preferred leachate treatment alternative. It was confirmed with the Chatham-Kent Public Utilities Commission (PUC) that the BWTL can manage the anticipated quality and quantity of leachate into the future and continuation of the existing system has less risk of impacts from leachate spills on-site than the other alternatives which have more on-site handling of the leachate.

5. Description of the Preferred Alternative

The preferred alternative consists of the following components:

- Lateral expansion of the West Landfill;
- Lateral and slight vertical expansion of the South Landfill;
- Vertical expansion of the Old Landfill;
- Expansion of the current LFG collection and flaring systems; and
- Expansion of the current leachate collection system with continued leachate treatment off-site at the BWTL.

The proposed configuration of the expansion is shown on **FIGURE B**.

All expansion areas will have a maximum elevation of 241 metres above sea level (masl) which is 0.3 m below the maximum elevation permitted by Transport Canada Airport Zoning Regulations. The expansion is designed to contain almost 29 million m³ of waste. The West Landfill expansion area is approximately 32 ha and will necessitate the removal of the southwest woodlot, changes to on-site stormwater ponds and the realignment of the on-site section of the Howard Drain. The South Landfill expansion area is approximately 23 ha and includes a lateral expansion along with a slight reshaping of the existing waste mound and minor vertical expansion to a maximum elevation of 241 masl. The Old Landfill expansion is a

vertical expansion of the approximately 55 ha existing footprint with a small infill area on the east side to remove an irregularity in its existing shape.

LFG will be captured on-site through a series of vertical extraction wells and from the leachate collection system. The collected gas will then be flared at the existing flare station on-site. The current approval for the landfill contains a provision to add a third flare, for a total of three (3) flares and this is expected to be completed in the year 2020. Over the life of the expansion additional vertical gas collection wells and flares will be installed to capture and flare LFG.

Leachate will be collected on-site through an underdrain leachate collection system below the West and South Landfills and from a perimeter drain and finger drains from the Old Landfill. The leachate that is collected at the site will be conveyed to the holding tank in the area east of the Old Landfill and pumped via the existing underground forcemain to the BWTL. The PUC has confirmed that their facility has sufficient capacity to treat the quantity of leachate expected over the landfill expansion period.

The proposed design of the engineered facilities for the expansion of the Ridge Landfill is in compliance with all applicable Engineered Facility Guidelines and Landfill Standards.

The landfilled areas will be progressively completed and rehabilitated as each landfill development area reaches its final contours. A Closure Plan will be submitted to the Regional Director of the MECP for approval when the landfill site is two (2) years from its projected closure.

The preferred alternative was compared at a high level to a “do nothing” alternative to determine if it was reasonable to continue to the detailed impact assessment stage of the EA. This comparison confirmed that the potential impacts associated with the preferred alternative are considered minimal, and proceeding with a full impact assessment of the preferred alternative for the Undertaking was appropriate.

6. Impact Assessment of the Preferred Alternative

Criteria to assess the potential environmental impacts were initially proposed in the ToR and then confirmed through consultation with government agencies, Indigenous Communities and Organizations and interested members of the public. Using these criteria, the potential effects of the Undertaking were determined. Mitigation measures to minimize impacts to the features of the environment on-site, off-site and along the designated haul route were also identified including standard operating practices such as setting limits on the hours of operation, placement of daily cover on waste, placement of litter fencing around the site, and implementing leachate and LFG management systems.

Potential net environmental effects (i.e., effects remaining after mitigation is applied) resulting from the proposed landfill expansion's construction, operation, closure and post-closure activities were evaluated through technical impact assessments.

As shown in **Table A**, there are some potential net effects from the proposed landfill expansion, all of which are considered to be minimal or temporary and not significant. Waste Connections is not aware of any past, present or future activities in the vicinity of the Ridge Landfill that would overlap in time or physical geography with the proposed expansion. As such no further analysis of cumulative effects was undertaken.

TABLE A: SUMMARY OF NET EFFECTS

Natural Environment – Terrestrial
<ul style="list-style-type: none"> Habitat for the eastern meadowlark on the Old Landfill will be removed temporarily. As the West Landfill is capped and seeded, new habitat will be provided. The area to be removed, once landfilled will also be capped and seeded with new habitat. Not significant (negligible impact and temporary) Potential to temporarily remove barn swallow nests. Not significant (negligible impact and temporary) Over time the woodlot replanting and berm restoration will balance the removal of on-site natural features. The involvement of Indigenous Community and Organization members in the replanting/restoration will provide valuable insights into appropriate native species. Not significant (low impact and temporary) Some disruption to terrestrial ecosystems could occur during construction. Not significant (negligible impact and infrequent)
Natural Environment– Aquatic
<ul style="list-style-type: none"> Fish habitat will be temporarily impacted. The impact is considered temporary as the re-located drain can be designed to incorporate suitable fish habitat where possible providing an

improvement over the existing condition. Potential for positive net effect in the longer term. Not significant (negligible impact and infrequent)
<ul style="list-style-type: none"> No net effect from the temporary disturbance or disruption resulting from construction and operation anticipated.
Natural Environment – Groundwater
<ul style="list-style-type: none"> No net effect from contaminating lifespan anticipated.
<ul style="list-style-type: none"> No net effect to groundwater quality or quantity anticipated.
<ul style="list-style-type: none"> No net effect to water supply wells anticipated.
Natural Environment - Surface Water
<ul style="list-style-type: none"> Short term net effect on benthos due to relocation of Howard Drain which will recolonize over time. No other net effect to surface water quality or quantity anticipated. <p>Not significant (negligible impact and temporary)</p>
Natural Environment – Atmospheric
<ul style="list-style-type: none"> No net effect to air quality from the landfill anticipated.
<ul style="list-style-type: none"> No net effect to air quality from the haul route anticipated.
Natural Environment - Climate Change
<ul style="list-style-type: none"> No net effect from greenhouse gas emissions anticipated.
Socio-Economic Environment - Social
<ul style="list-style-type: none"> The two (2) leased residences on Waste Connections property will be terminated. Appropriate notice will be given. <p>Not significant (negligible impact)</p>
<ul style="list-style-type: none"> Some potential for off-site odour in certain conditions. <p>Not significant (negligible impact and infrequent)</p>
<ul style="list-style-type: none"> Some potential for off-site dust in certain conditions. <p>Not significant (negligible impact and infrequent)</p>
<ul style="list-style-type: none"> Some potential for off-site blowing litter under certain conditions. <p>Not significant (negligible impact and infrequent)</p>
<ul style="list-style-type: none"> Some potential for off-site noise under certain conditions. <p>Not significant (negligible impact and infrequent)</p>
<ul style="list-style-type: none"> The expanded landfill will be able to be seen by three (3) new receptors however there will be no increase in height. <p>Not significant (negligible impact)</p>
<ul style="list-style-type: none"> Trucks going to the landfill will lead to some dust along the haul route when compared to a do-nothing scenario. The number of trucks and associated dust will not change over existing conditions. <p>Not significant (negligible impact)</p>
<ul style="list-style-type: none"> Trucks going to the landfill will create noise along the haul route when compared to a do-nothing scenario. The number of trucks and associated noise level will not change over existing conditions. <p>Not significant (negligible impact)</p>
<ul style="list-style-type: none"> Potential for positive effect for Waste Connections and the Indigenous Communities and Organizations participating in replanting and naturalization efforts. <p>Not significant (positive, low impact and infrequent)</p>

Socio-Economic Environment - Economic
<ul style="list-style-type: none"> A continued positive net effect on the wider Chatham-Kent economy is anticipated. Not significant (positive, low to moderate impact) No net effect on property values is anticipated. It is anticipated there will be a net positive effect due to continued employment and spending in the local community on goods and services associated with the Ridge Landfill site. Not significant (low impact)
Socio-Economic Environment - Agriculture
<ul style="list-style-type: none"> There will be some on-site Class 2 lands that are removed from agricultural use during site operation. Not significant (low impact) No anticipated net effects to tile drainage/surface ditches. There will be some on-site crop production area lost from tenants who have short term leases. Farming will continue on these lands as long as possible however, these on-site lands will eventually be removed from agricultural use due to landfill development activities. Not significant (low impact) No anticipated net effects on farm or livestock infrastructure or operations in the site vicinity. No anticipated net effects to farm operations along the haul route. No anticipated net effects to agricultural employment.
Cultural Environment – Cultural Heritage
<ul style="list-style-type: none"> Cultural resources will be documented before removal. No anticipated net effects to cultural heritage resources.
Cultural Environment – Archaeology
<ul style="list-style-type: none"> Some potential for archaeological resources may remain. Should any artifacts be uncovered during construction, work will stop and the Ministry of Culture, Tourism and Sport will be contacted. Not significant (low impact and infrequent)
Built Environment - Land Use
<ul style="list-style-type: none"> No net effects are anticipated for changes to land use designations. No net effects are anticipated for additional permits or approvals.
Built Environment – Transportation
<ul style="list-style-type: none"> No anticipated net effects on transportation service or safety.
Built Environment – Aviation Safety & Bird Hazard
<ul style="list-style-type: none"> No anticipated net effects on the Chatham-Kent Municipal Airport.
Built Environment – Design and Operation
<ul style="list-style-type: none"> Ability to design the site for climate change resilience with no anticipated net effects. No anticipated net effects on existing landfill infrastructure.

7. Monitoring, Reporting and Commitments

An effective monitoring program ensures that the Ridge Landfill is working as expected, that mitigation measures are effective, and that unforeseen problems are identified and addressed. Monitoring programs provide assurance to the surrounding community and the regulators that the facility is safe and potential environmental impacts are minimized.

The Ridge Landfill operates under Environmental Compliance Approval (ECA) No. A021601. As part of Condition No. 9 in the ECA, there are currently monitoring programs for groundwater, off-site private wells, surface water, and the leachate and gas collection systems. The results of the monitoring programs are documented each year in the Annual Monitoring Report for the Ridge Landfill site. Waste Connections will continue monitoring and will comply with the preparation of similar monitoring reports as would be required in an updated ECA for the expansion should it be approved.

A contingency plan is defined as a response to a recognized but unexpected failure event. Contingency measures are proposed for groundwater, surface water, leachate, LFG, archaeology and transportation.

Commitments made throughout this EA related to the construction, operation, closure and post-closure of the landfill are shown in **Table B**. An *Environmental Assessment Act* (EAA) Compliance Monitoring Program will be prepared and an EAA Compliance Monitoring Report will be submitted annually to the MECP.

TABLE B: SUMMARY OF COMMITMENTS

Category	EA Reference	Commitment	Timing
Compliance Monitoring	6.0	Implement the mitigation measures detailed in Section 6.0.	Ongoing
	7.1	Implement the monitoring programs as described in Section 7.1.	Ongoing
	7.2	Implement the complaint monitoring program in Section 7.2.	Ongoing
	7.2	Update the policies and procedures as required to include the mitigation and monitoring noted above.	Ongoing, as needed
	7.3	Prepare an EAA Compliance Monitoring Program which will include the commitments described in Sections 6.0 and 7.0 of this EA document. Subsequently, prepare an annual EAA Compliance Monitoring Report.	EAA Compliance Monitoring Program to be completed following EA Approval. EAA Compliance Monitoring Report completed annually.
Consultation	Appendices B and D9	Continue to engage the Municipality of Chatham-Kent to ensure that the requirements of the Official Plan and Zoning By-law amendments are satisfactorily met.	Prior to construction
	Appendices B and E	Waste management education is a priority of Chatham-Kent. Waste Connections will partner with the Municipality to implement suitable educational programs.	Ongoing
	Appendix B	Continue to update WIFN, and other Indigenous Communities and Organizations on the timing of expansion events as the Undertaking progresses.	Ongoing
	Appendix B	Future Annual Monitoring Reports will be available on request. WIFN and AFN will be notified, as requested.	Following submission of Annual Monitoring Reports

TABLE B: SUMMARY OF COMMITMENTS

	Section 6.0 and Appendix B	Continue to work with Chatham-Kent on road related issues associated with the Haul Route.	Ongoing
Agriculture	Appendix B	Continue to provide Operations Updates to neighbours within 1 km of the site.	Ongoing
	Appendix B, Section 6.0	Continue to accommodate farming on the on-site lands not being used for waste management as long as practical.	Ongoing until lands are needed for landfill development purposes
Archaeology	Appendix B	Should archeology resources be discovered, work will be stopped and the Ministry of Culture, Tourism and Sport and Indigenous Communities and Organizations will be notified.	During construction
Climate Change	Appendices B, D3 and D10	Continue to review assumptions related to climate change and consider how any change in assumptions has the potential to impact the proposed expansion and how adaptive measures can continue to be incorporated into the site design.	Ongoing
Aviation and Bird Hazard	Appendices B and D4	Continue to communicate with the Chatham-Kent Municipal Airport regarding operations and continue the integrated/collaborative approach to bird/wildlife management.	Ongoing
	Appendices B and D4	Reimburse or supply the Chatham-Kent Municipal Airport with pyrotechnics for wildlife control at the Airport.	Ongoing
	Appendices B and D4	Share wildlife information between the Ridge Landfill and the Chatham-Kent Municipal Airport.	Ongoing
Biology	Appendices B and D5	Continue to use best practices, MNRF and DFO guidelines and requirements for conducting field work.	Ongoing
	Appendices B and D5	Continue to engage the Municipality of Chatham-Kent and MECP to ensure that potential effects to woodlots and/or other natural features are mitigated, as appropriate.	Ongoing

TABLE B: SUMMARY OF COMMITMENTS

Design and Operations	Appendices B and D5	Native species and/or beneficial plantings will be considered as part of tree planting and berm landscaping. Waste Connections will engage Indigenous Communities and Organizations in replanting.	Ongoing
	Appendix D6	Construct berms using mostly excavated soil from new cell construction.	Ongoing following EA and EPA approval
	Section 5.14 and Appendix D6B	A Closure Plan will be submitted to the Regional Director of the MECP for approval when the landfill site is two (2) years from its projected closure.	Two years from projected site closure
Hydrogeology	Appendix D7	Continue to provide residential well monitoring, as requested.	Ongoing
Surface Water	Appendix D10	Conduct regular communication with Chatham-Kent PUC to monitor capacity of Blenheim Wastewater Treatment Lagoons.	Ongoing
Socio-Economic	Appendix D9	Continue to provide compensation to eligible residents.	Ongoing
Transportation	Appendix D11	Continue to contribute towards maintenance of the haul route.	Ongoing
	Appendix B	Continue to educate new drivers on protocols for the use of the designated haul route.	Ongoing
Visual	Appendix D12	Construct berms and plant trees/vegetate.	Ongoing following EA and EPA approval
Diversion	Section 9.0 and Appendix E	Implement enhanced waste diversion programs for the IC&I sector as documented in this EA and partner with the Municipality of Chatham-Kent to align with Provincial objectives.	Ongoing
General	Appendices B and D9	Review and update the Commitments Report based on the results of the EA. Compensation will be a separate process to the EA and Waste Connections will discuss this with landowners individually on a case-by-case basis.	Update to Commitments Report following EA approval. One-time notification of ongoing compensation

TABLE B: SUMMARY OF COMMITMENTS

		Provide notification, in writing, to residents receiving compensation and continue to provide compensation to impacted residents.	following EA approval.
	Section 7.4	Waste Connections will continue to participate in the Ridge Landfill Liaison Committee.	Ongoing

8. Consultation

The overall goal of the EA consultation program was to prioritize an open dialogue with stakeholders, particularly residents, businesses, and Indigenous Communities and Organizations, throughout the EA process. The objectives of the consultation activities for the EA were to:

- Generate and maintain awareness of the Project;
- Gain insight into how the community wishes to be consulted; and
- Listen to, and address stakeholder input and concerns about the Project.

Waste Connections adopted five (5) consultation and communication principles for the EA:



Consistent with the ToR Record of Consultation, there were three (3) key milestones during the EA process where input from stakeholders was specifically sought.

1. Confirmation of Alternative Methods – One-on-one neighbour, stakeholder and Indigenous Community and Organization meetings, an evaluation criteria workshop, Open House #1 and a newsletter provided opportunities for the community to learn about and provide input on the alternative methods and the evaluation approach and criteria;
2. Evaluation of Alternative Methods - One-on-one neighbour, stakeholder, and Indigenous Community and Organization meetings, and Open House #2 provided opportunities for the community to learn about and provide input on the evaluation of alternative methods; and
3. Assessment of Potential Effects and Development of Mitigation Measures for Preferred Alternative Method - One-on-one neighbour, stakeholder and Indigenous Community and Organization meetings, Open House #3 and a newsletter provided the community

opportunities to learn about and provide input on the preferred alternative including measures to mitigate potential effects.

A comprehensive list of issues and concerns raised and how each was addressed in the EA was compiled and is included in the EA Record of Consultation. The input received during that review was carefully considered and incorporated into the EA, where applicable. The following are some of the concerns raised during the EA process:

- Odour, blowing litter, noise from crows and back-up beepers;
- Poor road conditions on the haul route;
- Trucks going to the landfill using roads other than the haul route and not obeying traffic rules (speed, stop signs);
- Potential contamination of residential wells;
- The potential for hazardous waste being brought to the Ridge Landfill;
- Removal of woodlots;
- Need for more communication with neighbours; and
- Property value protection and compensation.

9. Waste Diversion

Increased waste diversion is an important component of Waste Connections' efficient, integrated system. Waste Connections is committed to considering opportunities to enhance waste diversion and assist the Province in meeting its diversion goals and objectives as laid out in the Province's Made-in-Ontario Environment Plan and the Food and Organic Waste Policy Statement.

Waste Connections is committed to enhancing its waste diversion programs either at-source, at the Ridge Landfill or elsewhere in the integrated system. In addition, Waste Connections' integrated waste management network, strong customer base and numerous business arrangements in Ontario enables Waste Connections to share its expertise to educate and respond to customers to meet both Provincial targets and the customer's own corporate waste diversion targets and objectives. The company has the financial resources and desire to invest in infrastructure, research and innovation that supports its business, which includes waste diversion initiatives in Ontario. In addition, Waste Connections is a founding member of Environmental Research and Education Foundation (EREF) which funds and directs scientific

research and educational initiatives for waste management practices to benefit industry participants and the communities they serve.

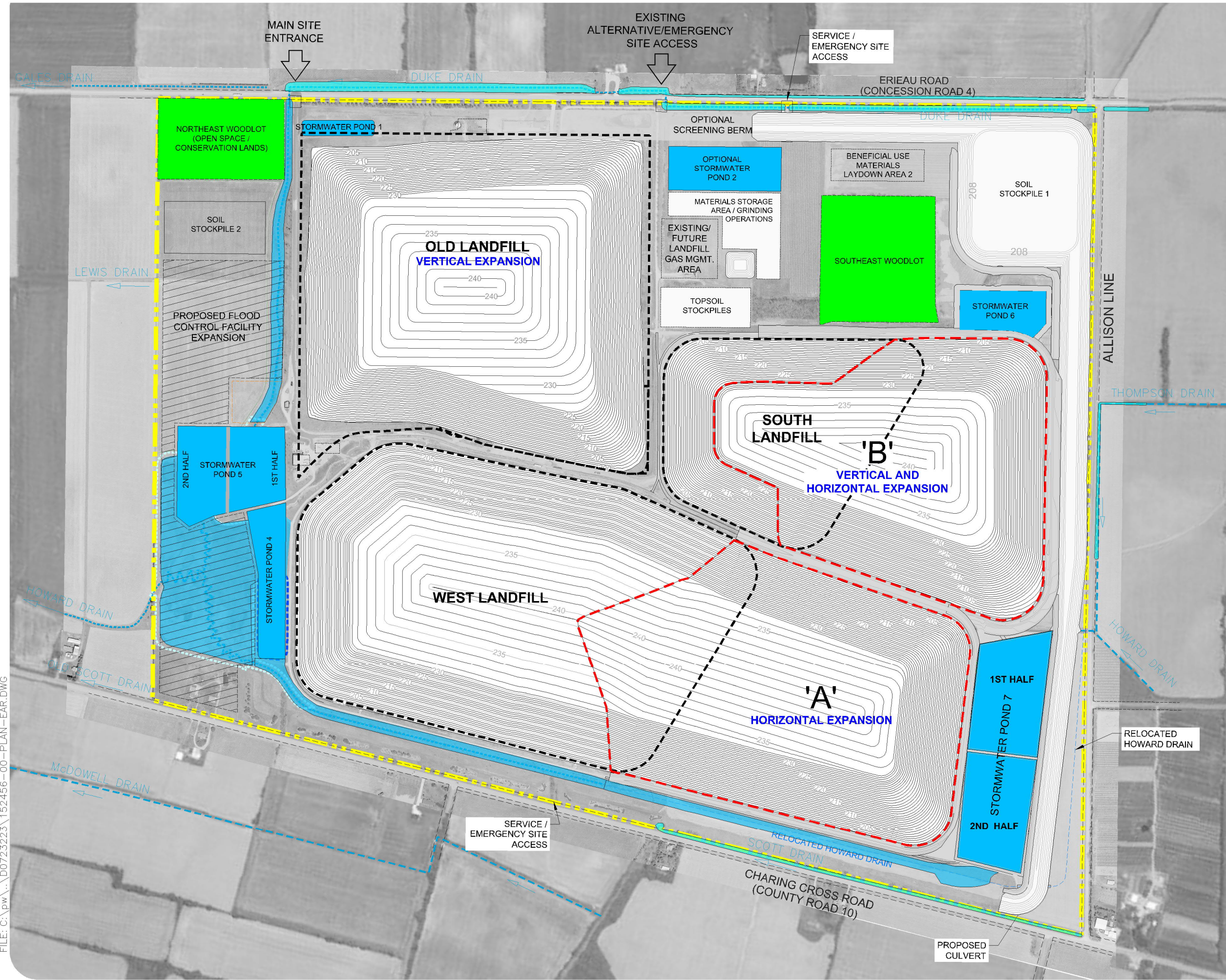
Waste Connections will assist the Province in its efforts to minimize the amount of waste sent for landfilling and achieving diversion and recovery targets. However, the additional diversion opportunities identified in this report will not reduce the Province's need for the 1.3 million tonnes of annual waste disposal capacity provided per year during the 20-year planning period for the Ridge Landfill.

10. Other Approvals

The following other approvals are required for this Undertaking:

- Chatham-Kent *Drainage Act Approval* will be required for the relocation of the Howard Drain;
- Chatham-Kent approval of Official Plan, Zoning By-law, and Site Plan Control Amendments to consolidate the small irregular parcels in municipal policies and reflect current and future waste management functions at the Ridge Landfill site;
- MECP ECA amendment to incorporate EA recommendations; and
- *Endangered Species Act* permit to temporarily remove eastern meadowlark habitat.

FILE: C:\pw\152456-00-PLAN-EAR.DWG



**RIDGE LANDFILL
ENVIRONMENTAL ASSESSMENT**

**PROPOSED LANDFILL EXPANSION -
PREFERRED ALTERNATIVE**

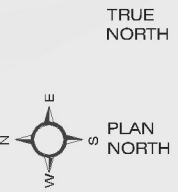
FIGURE B

- PROPERTY BOUNDARY
- APPROVED WASTE LIMIT
- EXISTING WATER COURSE
- PROPOSED WASTE LIMIT FOR EXPANSION AREAS
- PROPOSED STORMWATER POND
- EXISTING WOODLOT AREAS
- EXISTING FLOOD CONTROL FACILITY



MAP/DRAWING INFORMATION
MAPPING FROM THE BASE MAP CO. LTD.,
MAY 1, 2018

CREATED BY: SKB
CHECKED BY: CO
DESIGNED BY: FG



PROJECT: 15 2456
STATUS: DRAFT
DATE: 07/03/19