

# CULTURAL HERITAGE RESOURCE AND CULTURAL HERITAGE LANDSCAPE **ASSESSMENT REPORT**

## **Southwestern Landfill Proposal Environmental Assessment**

Township of Zorra

Date:

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# 1. Introduction

An Environmental Assessment (“EA”) is being prepared by Walker Environmental Group Inc. (“Walker”) under Ontario’s *Environmental Assessment Act* (“Act”) for the ‘*provision of future landfill capacity at the Carmeuse Lime (Canada) Ltd. (Carmeuse) site in Oxford County for solid, non-hazardous waste generated in the Province of Ontario*’.

This is one in a series of technical studies that have been completed by qualified experts to examine the potential effects of the proposed landfill site on the environment, all in accordance with the requirements set out in the *Approved Amended Terms of Reference* (“ToR”) dated May 10, 2016. This report accompanies and supports the *Environmental Assessment Report* prepared by Walker.

Note that Walker has carried out extensive consultation with government agencies, Aboriginal groups and interested members of the public regarding this study; details are provided separately in the EA report.

## 2. Purpose & Objectives

The **purpose** of this study is to complete a Cultural Heritage Resource and Cultural Heritage Landscape assessment of the landfill proposed by Walker.

The overall **objectives** of the study are listed below, in accordance with the requirements for the assessment of an undertaking as set out in Section 6.1(2)(c) of the *Environmental Assessment Act*, and as specifically detailed in Section 8.1 of the ToR:

- (a) Describe the **environment potentially affected** by the proposed undertaking, including both the existing environment as well as the environment that would otherwise be likely to exist in the future without the proposed undertaking.
- (b) Carry out an evaluation of the **environmental effects** of the proposed undertaking, using the relevant environmental assessment criteria set out in the ToR (see Appendix B).
- (c) Carry out an evaluation of any additional impact management actions that may be necessary to **prevent, change or mitigate any (negative) environmental effects**.
- (d) Prepare a description and evaluation of the **environmental advantages and disadvantages** of the proposed undertaking, based on the net environmental effects that will result following mitigation.
- (e) Prepare monitoring, contingency and impact management plans to **remedy the environmental effects** of the proposed undertaking.

### 3. The Proposed Undertaking

The landfill proposed by Walker is described in detail in the *Environmental Assessment Report*. Following is a brief summary for the benefit of the reader, highlighting aspects of the proposal most relevant to this study.

The landfill is to be located on a portion of Carmeuse's land holdings at its Beachville Quarry Operations in the Township of Zorra, Oxford County. Approximately 17.4 million m<sup>3</sup> of solid, non-hazardous waste and daily/intermediate cover will be deposited within a footprint of about 59 ha. The balance of the of the 81.6 ha site will be comprised of buffer areas for monitoring, maintenance, environmental controls and other necessary infrastructure. (see **Figure 1**).

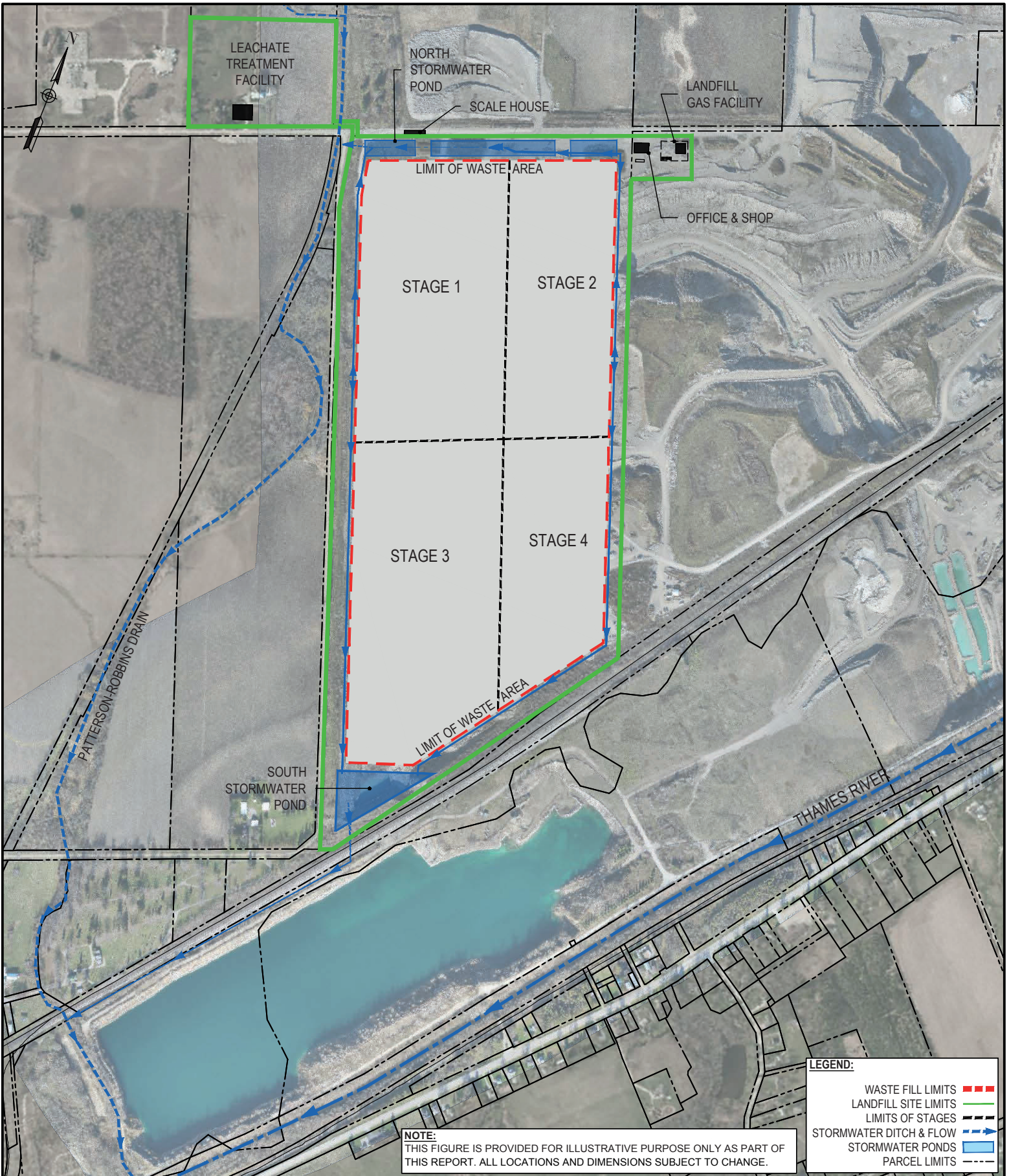
Landfill construction will proceed progressively in a series of cells, generally from north-to-south (Figure 1). The former quarry floor will be backfilled to within about 30 to 40 metres below ground surface with engineered fill, and then a *Generic Design Option II – Double Liner* system (as specified by the Ministry of Environment, Conservation & Parks in the *Landfill Standards* under *O. Reg. 232/98*; see **Figure 2**) will be constructed across the bottom and up the sides of the landfill to contain and collect leachate (**Figure 3**). Up to 850,000 tonnes *per year* of solid, non-hazardous waste, and up to 250,000 tonnes *per year* of daily/intermediate cover soils<sup>1</sup> will be placed and compacted above the liner in a series of small working areas approximately 0.2 ha in size at any given time, in order to minimize the exposed waste. Waste will be covered with soil, or other approved materials on a daily basis, and a final cap with vegetation will be applied when the landfill reaches its final height, which peaks at about 15 m above ground (**Figure 4**). A landfill gas collection system will also be installed as the landfill/cell development progresses.

Most of the supporting infrastructure for the landfill will be located in the buffer area along the northern site perimeter, including the leachate and gas treatment plants. Leachate collected from the liner system will be treated on-site and the clean effluent from the treatment plant will be discharged into the Patterson-Robbins Drain next to the treatment plant. Clean precipitation that has not come into contact with waste within the constructed sections of the landfill, will be segregated and treated in a stormwater management pond before being discharged from the site (**Figure 1**). Landfill gas will be collected in a network of extraction wells and pipes. Initially the landfill gas will be flared (combusted), but when the quantities permit the gas will be beneficially utilized as a renewable fuel.

The site will be open for waste deliveries from 7:00 a.m. to 5:00 p.m. on weekdays and from 7:00 a.m. to 1:00 p.m. on Saturdays, but closed on Sundays and statutory holidays. On-site construction activities may start up to one hour before opening and continue up to two hours after closure. The primary designated haul route (i.e., for all waste trucks except deliveries from the local area) is from Highway 401 north along County Road #6, then west into the quarry property; trucks will then follow a newly constructed haul route across the quarry site to a landfill site entrance at the northwestern corner of the

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<sup>1</sup> The daily/intermediate cover soil could consist of acceptable and suitable waste soils, and would be reported as waste, so the total reported waste receipts could be up to 1,100,000 tonnes per year.

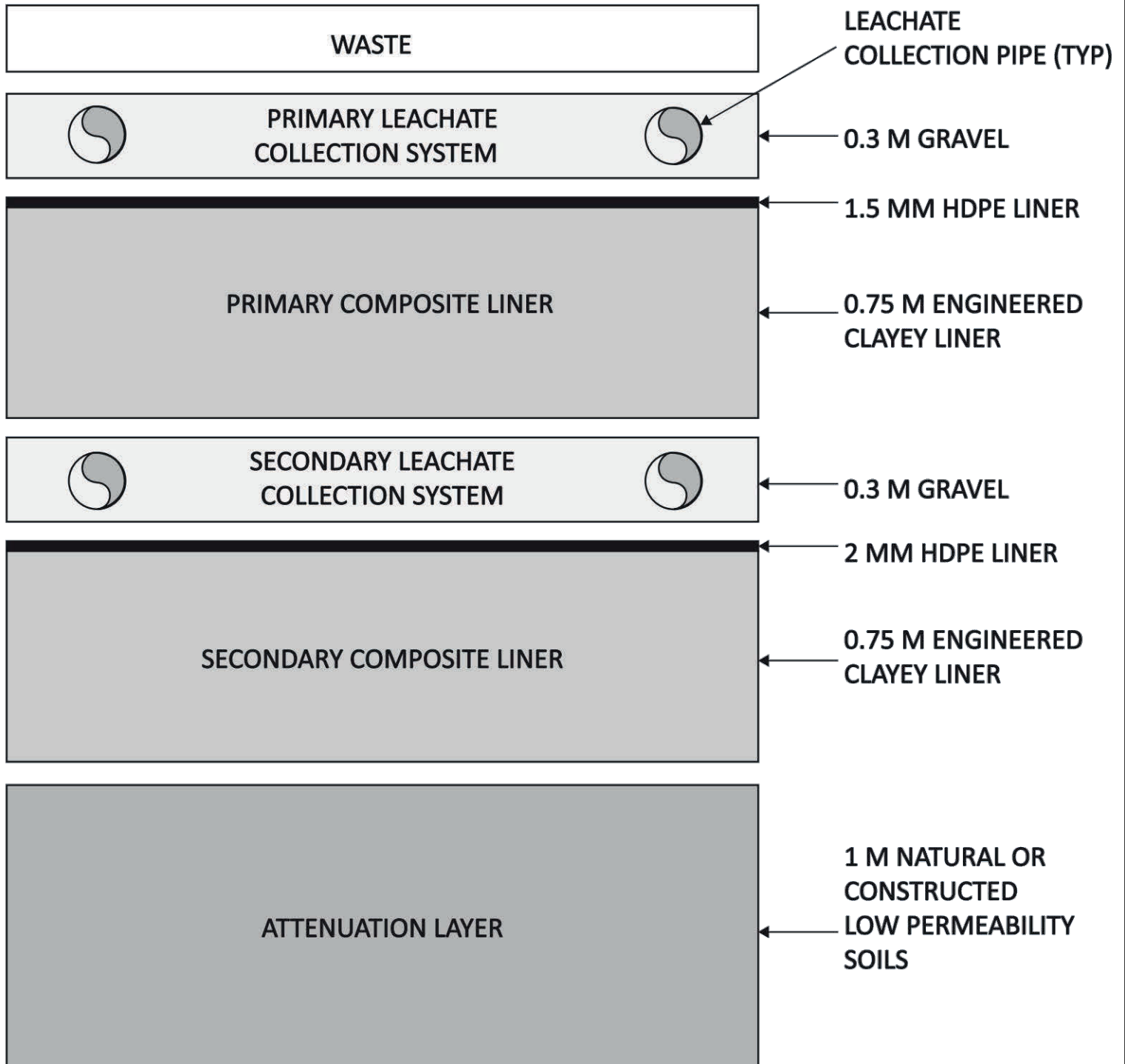


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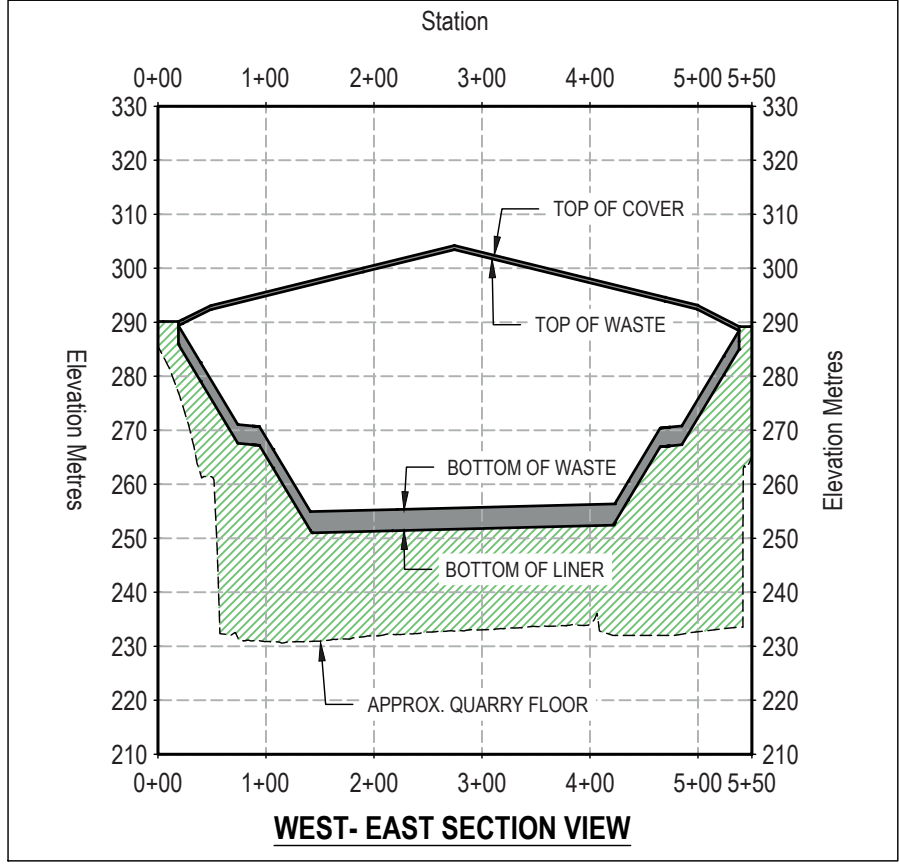
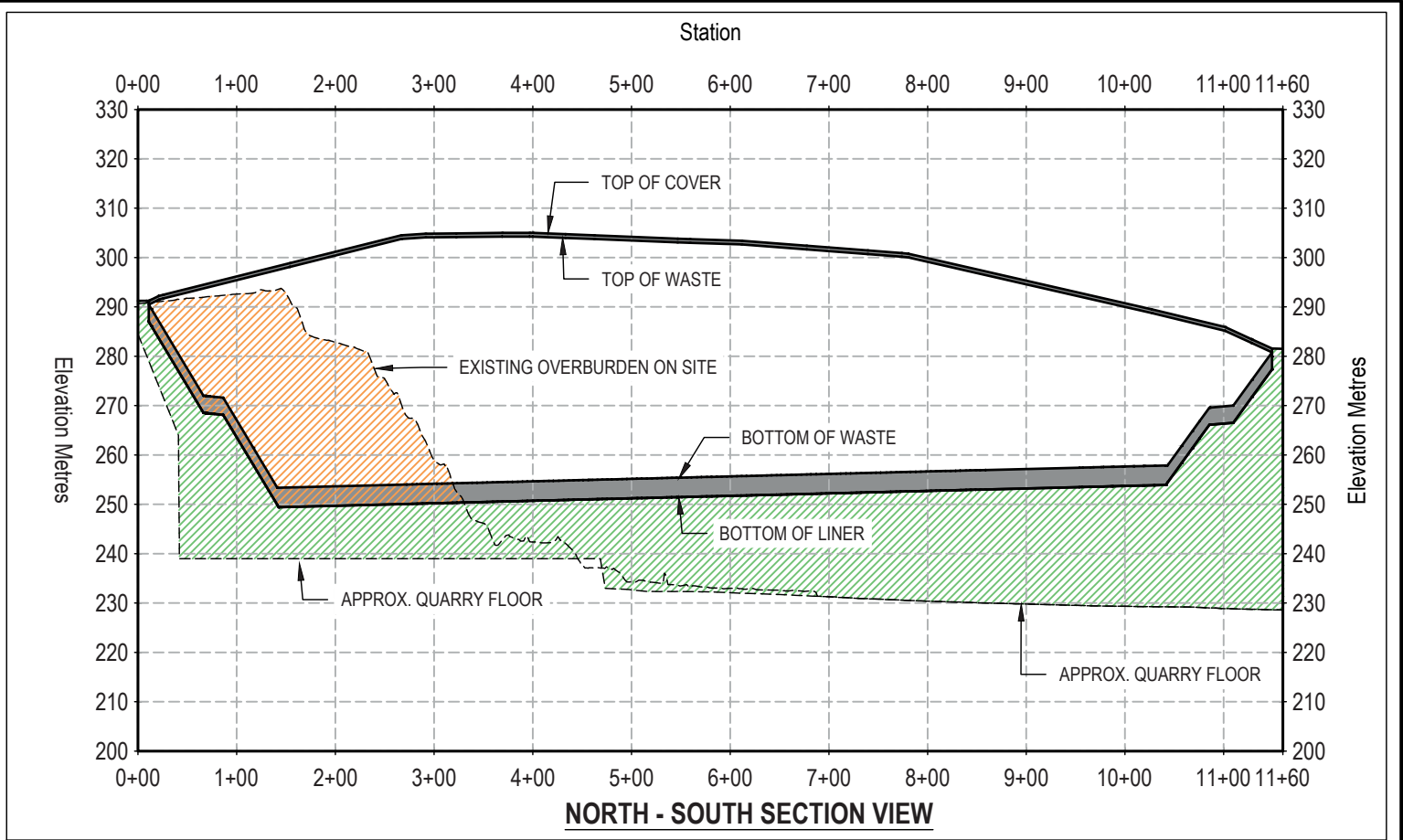
WASTE FILL LIMITS	---
LANDFILL SITE LIMITS	---
LIMITS OF STAGES	---
STORMWATER DITCH & FLOW	---
STORMWATER PONDS	---
PARCEL LIMITS	---

	Project	<b>SOUTHWESTERN LANDFILL</b>		Project No.	967243		Scale Bar
	Drawing	<b>SITE PLAN</b>		Drawn	JThompson		Scale
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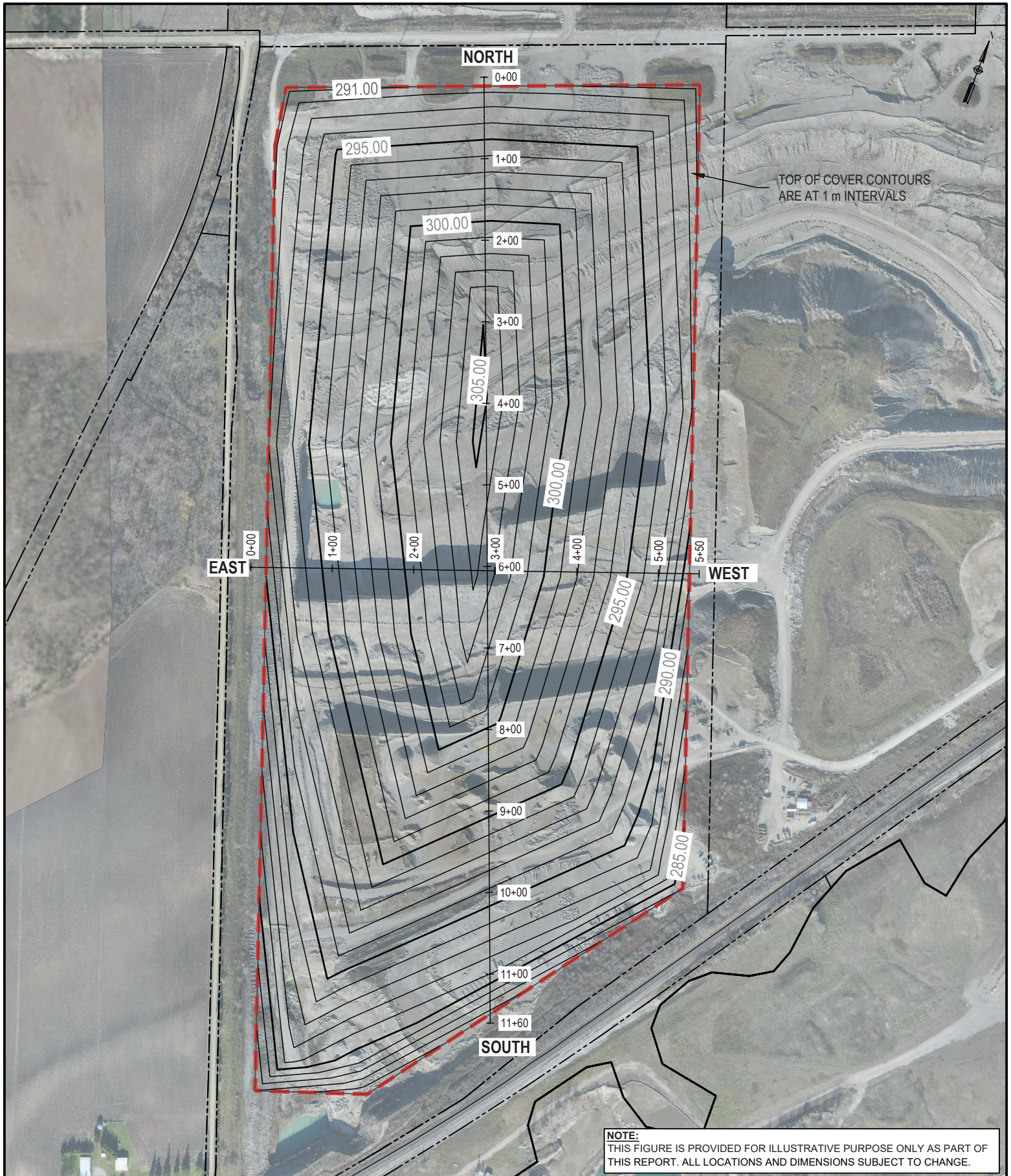
	Project	<b>SOUTHWESTERN LANDFILL</b>		Project No.	967243		Scale Bar		
	Drawing	<b>LANDFILL LINER SYSTEM</b>		Drawn	TTamburri	Scale	NTS	Date (D-M-Y)	7JAN19
				Approved	DFry	Drawing No.	<b>Figure 2</b>	Revision No.	<b>C</b>




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	Project	<b>SOUTHWESTERN LANDFILL</b>		Project No.	967243		Scale Bar	
	Drawing	<b>SECTION VIEWS</b>		Drawn	JThompson	Scale	NTS	
				Approved	DFry	Drawing No.	Figure 3	Date (P.M.Y)
							Revision No.	E





	Project	<b>SOUTHWESTERN LANDFILL</b>		Project No.	967243	Scale Bar		
	Drawing	<b>PLAN VIEW TOP OF COVER</b>		Drawn	JThompson	Scale	NTS	Date (p.m/y)
				Approved	DFry	Drawing No.	<b>Figure 4</b>	
						Revision No.	<b>E</b>	

site (**Figure 5**). Vehicle traffic, including waste trucks as well as construction vehicles and staff, is expected to average approximately 210 trips *per day*.

Nuisance controls will include speed enforcement, regular haul road cleaning on internal and external paved areas, litter fencing and pick-up, odour control, and bird/pest management, with a public complaints reporting and response system.

There will be monitoring programs for leachate, groundwater, surface water, air emissions, gas, noise, and particulates (dust).

The landfill is anticipated to receive waste for approximately 20 years commencing in about 2023. After closure, maintenance and operation of the relevant environmental controls and monitoring will carry on during the post-closure period, until there is no further risk of environmental contamination. The end-use is assumed to be passive green space and/or agriculture, but the design is flexible to accommodate other potential end-uses at the time of closure.

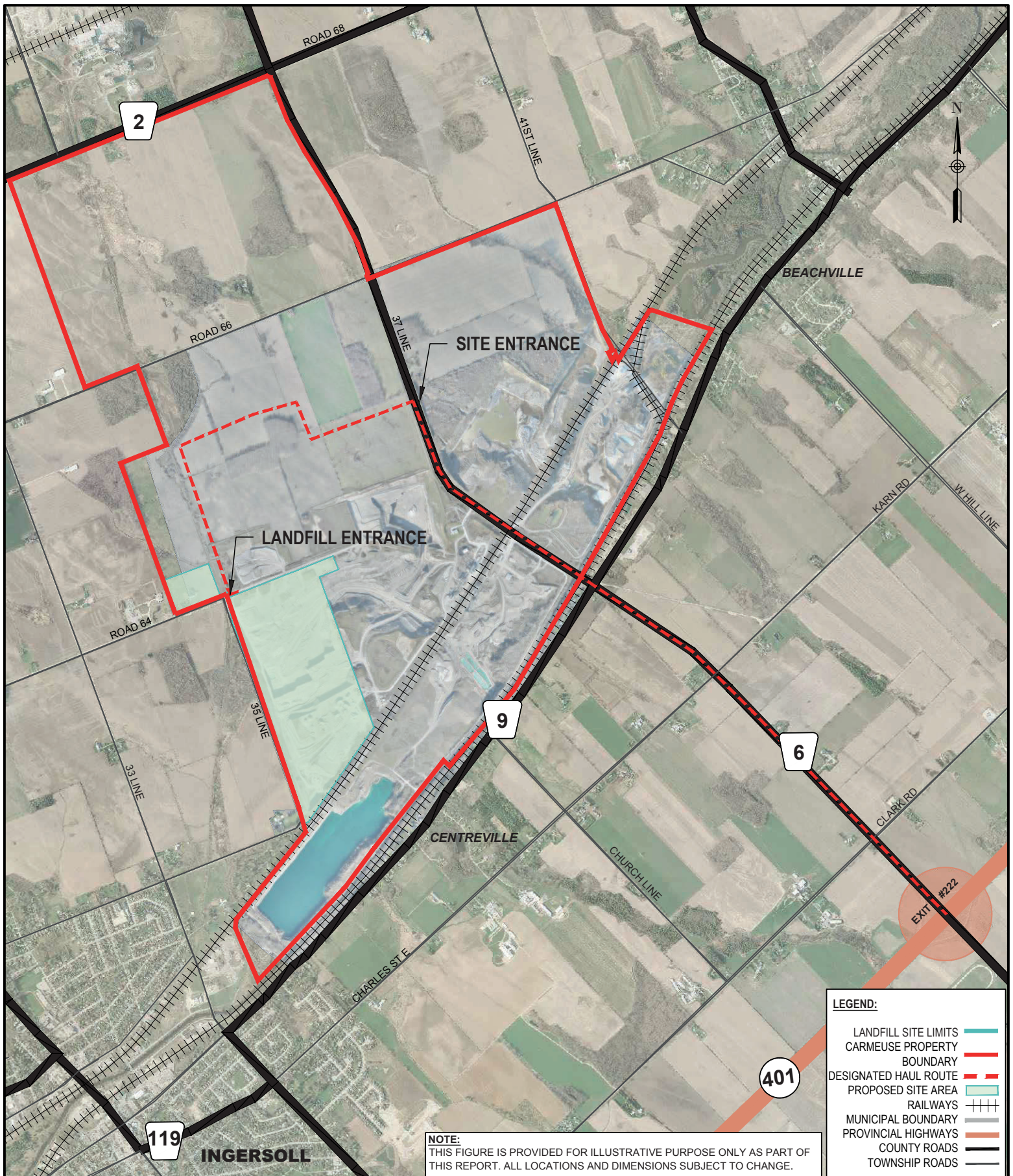
Specific to potential impacts to cultural heritage resources, there is interest in any buildings proposed to be demolished or any disturbance to cultural heritage landscapes. Accordingly, the areas of greatest interest are those associated with the proposed haul route, and the area which contains the leachate treatment system.

## 4. Environmental Assessment Criteria & Indicators

The **environmental assessment criteria**, as approved in the ToR, are tabulated in **Appendix B**, Table B-1. In Table B-1, check marks indicate which technical studies are assigned primary (“lead”) responsibility for assessing each of the criteria. Following is the EA criterion which is assigned to this study:

EA Criteria	Definition/Rationale
Displacement / disturbance of cultural heritage resources.	Cultural resources (including heritage buildings, cemeteries and cultural landscapes) are an important component of human heritage. These non-renewable cultural resources may be displaced by the construction of a waste disposal facility. The use and enjoyment of cultural resources may also be disturbed by the ongoing operation and traffic. Disturbances could result from noise, dust, odour, visibility, birds, litter and traffic congestion.

Furthermore, the criteria for this EA were designed to be cross-disciplinary to permit an assessment of cumulative effects. Table B-2 in Appendix B, from the ToR, illustrates some (though not necessarily all) of the key interconnectivities between the studies.



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LEGEND:	
LANDFILL SITE LIMITS	
CARMUSE PROPERTY BOUNDARY	
DESIGNATED HAUL ROUTE	
PROPOSED SITE AREA	
RAILWAYS	
MUNICIPAL BOUNDARY	
PROVINCIAL HIGHWAYS	
COUNTY ROADS	
TOWNSHIP ROADS	



Owner	Project	Project No.	Scale Bar
	<b>SOUTHWESTERN LANDFILL</b>	967243	0 500 1000 Meters
Drawing	<b>SITE LOCATION &amp; HAUL ROUTE</b>	Drawn	Scale
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As a result, this study provides input/data to additional EA criteria that will be addressed through studies conducted by other experts including (but not limited to):

- **Economic / financial**
- **Social**
- **Visual landscape**

Typically, cultural heritage resources comprise three types of resources: archaeology, built heritage resources and cultural heritage landscapes. In this EA, archaeology is addressed in a separate study due to specific inherent differences, notably its below ground or subsurface nature and the specific licensing and practice requirements of archaeology professionals under the *Ontario Heritage Act*.

The analysis throughout the study process that derives from this work plan is concerned with that part of the environment which is defined in the *Environmental Assessment Act* which is defined in subsection 1(c) to include:

*“...cultural conditions that influence the life of man or a community”*

as well as,

*“...any building, structure, machine or other device or thing made by man”.*

**Indicators** identify how the potential environmental effects will be measured for each criterion. Landfill design and operations have the potential to affect cultural heritage resources in a number of ways. These include the displacement, through demolition or removal of resources or the disturbance or disruption of cultural heritage resources by introducing physical, audible, or atmospheric elements that are not in keeping with individual resources or their settings. There are a number of statutes, regulations, policies and guidelines that have some bearing either directly or indirectly on the conservation and protection of cultural heritage resources as part of planning, land use and development activities.

Within the on-site study zone there is typically the greatest potential for the displacement, i.e., loss of either built heritage resources or cultural heritage landscapes. Accordingly, the loss of all potential built heritage resources or cultural heritage landscapes will be identified as indicators or measures.

Within the vicinity or off-site study areas and the haul route study area the potential for loss of built heritage structures or cultural heritage landscapes is diminished and only potentially may occur with any subsequent road improvements associated with the haul route, such as intersection improvements. The disturbance of all potential built heritage resources or cultural heritage landscapes will be identified as indicators or measures within the study areas.

Following are the indicators that were applied to the primary EA criteria addressed in this assessment:

EA Criteria	Proposed Indicators/Measures
Displacement / disturbance of cultural heritage resources.	<ul style="list-style-type: none"> <li>• Displacement of built heritage resources</li> <li>• Displacement of cultural heritage landscapes</li> <li>• Disruption of built heritage resources (both habitable and non-habitable)</li> <li>• Disruption of cultural heritage landscape</li> </ul>

Accordingly, in addition to the indicators or measures noted above for the disturbance of cultural heritage resources, an additional indicator will be used for the disturbance that may accrue specifically to habitable built heritage resources.

## 5. Study Durations

Two main **study durations** (or time frames) for this proposed landfill have been identified in the ToR:

### *Operational Period*

The time during which the waste disposal facility is constructed, filled with waste, and capped. These activities are combined since they occur progressively (i.e., overlap) on a cell-by-cell basis, and they have a similar range of potential effects (e.g., there is heavy equipment active on the site).

### *Post-Closure Period*

The time after the site is closed to waste receipt. Activities are normally limited to operation of control systems, routine property maintenance and monitoring, and thus have a more limited range of potential effects.

The approved EA Criteria in Table B-1, Appendix B indicate the relevant study duration(s) associated with each of the criteria used in this assessment.

## 6. Study Areas

For the purposes of this EA, three general study areas were established in the ToR:

<i>On-Site and in the Site Vicinity:</i>	<i>On-site</i> includes the proposed waste disposal facility plus the associated buffer zones. <i>Site vicinity</i> is the area immediately adjacent to the waste disposal facility property that is directly affected by the on-site activities. Its size is variable depending on the particular criteria being addressed.
<i>Along the Haul Routes:</i>	The primary route along which the waste disposal facility truck traffic would move between a major provincial highway and the proposed waste disposal facility primary site entrance, plus the properties directly adjacent to these roads.
<i>Wider Area:</i>	The broader community, generally beyond the immediate site vicinity. Depending on the particular criteria this may include neighbourhoods, local municipalities, Oxford County, or the Province of Ontario.

The tables of approved EA Criteria in Appendix B indicate the relevant study duration(s) associated with each of the criteria in this assessment.

Although these three general study areas were common across all of the studies, their actual physical boundaries were not necessarily identical for every study or criterion; a flexible approach was used and the study area boundaries were adjusted as the work progressed to ensure that they adequately encompassed the significant effects of the proposed landfill.

For the purposes of this Cultural Heritage Resources assessment, the study areas based on the current understanding of the proposed site and experience with other landfills, is as follows:

<i>On-Site and in the Site Vicinity</i>	The on-site study area includes land and property that contains the waste disposal facility and has the potential to contain cultural heritage resources. The site vicinity study area comprises a one (1) kilometer catchment area in which it is anticipated that potential noise, dust, odour, and visual effects may be experienced.
<i>Along the Haul Routes</i>	The haul route is the primary route along which waste disposal facility traffic moves between the waste disposal facility and a major provincial highway. The study area comprises a 100 metre area on either side of the route measured from the edge of the road right-of-way in which it is anticipated that potential noise, dust, odour, vibration and visual effects may be experienced.

Where appropriate and relevant, common receptor points were also selected collaboratively by the technical experts so that the potential overlapping or cumulative effects of the proposed landfill could be assessed at these common receptor points. The common receptor points used in this study are:

**Table 1: Common receptor points**

ID	Location	Use
ZOR-5	334789 33 <sup>rd</sup> Line	Schoolhouse / residence
ZOR-6	334742 33 <sup>rd</sup> Line	farmhouse
ZOR-11	623851 Rd 62/ North Townline East	farmhouse
ZOR-12	603806 Cemetery Lane	cemetery

For information purposes, **Figure 6** depicts the on-site study area and applicable receptor locations in the context of the proposed landfill location.

## 7. Methodologies

All built heritage features and cultural heritage landscapes are evaluated according to those criteria contained in Ontario Regulation 9/06 pursuant to the *Ontario Heritage Act*, as well as information available from the Ministry of Tourism, Culture and Sport, as well as Parks Canada related to cultural heritage landscapes. Use of the *Ontario Heritage Act* criteria is typically prescribed strictly for the designation of property under Part IV of the *Ontario Heritage Act*. The criteria are used in this assessment for identifying and distinguishing amongst various cultural heritage values. Those cultural heritage resources that have perceived greater value (i.e., those that may have many heritage attributes), are regarded as more sensitive to potential changes that result from the establishment and operation of a landfill. The significance of the attributes is also taken into account, so the number of attributes and importance are both examined. Importantly, the criteria also provide a benchmark for objectively identifying a traceable and transparent evaluation process. Supporting information includes information on the type and location of all cultural heritage resources including maps and photographs. Analysis of resource integrity, i.e., how much heritage fabric remains, is also undertaken by a qualified heritage professional in order to derive suitable measures of overall cultural heritage value. Following evaluation of cultural heritage value, analysis of potential impacts and adverse effects to identified cultural heritage resources is undertaken. Permanent and temporary impacts are identified, as well as whether impacts are short or long in duration.

Recommendations on mitigation measures, including the establishment of conservation plans, monitoring and additional recording are provided where applicable and necessary.

**Figure 6:  
Study Area and Receptor Locations**



**Legend**

- |                    |             |
|--------------------|-------------|
| On-site Study Area | Waterbody   |
| Waste Fill Area    | Wooded Area |
| 500 m Buffer       | Highways    |
| 1000 m Buffer      | Major Roads |
| Flares (3)         | Minor Roads |
| Municipal Boundary | Railway     |
| Visual Receptors   |             |

**Sources of Information**

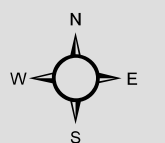
- Contours derived from Digital Terrain Model (SWOOP 2015 Land Information Ontario)
- Base Data (Walker Environmental)
- Imagery: Oxford County 2015
- Contains information licensed under the Open Government License - Ontario
- All measurements are in meters unless otherwise specified
- Projection: NAD 1983 UTM Zone 17N

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## 8. Data Collection

### 8.1 Background Data

Background data was collected for the on-site, site vicinity and haul route study areas. Background historical research was undertaken in order to provide a historical context that would explain past development of, and physical changes to individual properties and historical Euro-Canadian settlement patterns. Additionally, this information assists in identifying heritage values that are not wholly vested in physical features or property, such as historical family ties to the land that may have persisted to the present day.

Background data collection comprised a review of primary and secondary historical source materials, including local histories, historical County Atlases and topographic maps, municipal inventories of cultural heritage resources and relevant heritage reports.

Additional information about cultural heritage resources was also sought from the following sources and agencies as applicable:

- Beachville District Museum
- Beachville District Historical Society
- Ingersoll District Historical Society
- County of Oxford
- County of Oxford Archives
- Ingersoll Cheese and Agricultural Museum
- Ontario Heritage Properties Database
- Ontario Heritage Trust
- Oxford County Museum School
- Oxford County Library
- Oxford Historical Society
- Oxford County Branch of the Ontario Genealogical Society
- Town of Ingersoll
- Township of Zorra
- Township of South-West Oxford

It is also noted that through ongoing dialogue and engagement with community stakeholders through the review of this draft report, additional information respecting cultural heritage resources may be brought forward for consideration.

## 8.2 Field Data

Fieldwork was undertaken to identify and photographically record those built heritage resources and cultural heritage landscapes in the on-site, site vicinity and haul route study areas. Results of field survey and cultural heritage resource inventory work were recorded on survey forms including written observations, photographs and supplemental historical research information. It is usual practice to use a “rolling” forty year time period to determine a cut-off date for identifying potential cultural heritage resources and potential cultural heritage values (resources constructed prior to 1977). Over the course of potential future landfill development there remains a remote possibility that some features may become of future cultural heritage interest, such as unique architectural building forms. In undertaking fieldwork the cultural heritage discipline experts recorded such potential built heritage resources and cultural heritage landscapes where appropriate.

Due to the nature of the study areas and their derivation from nuisance impacts notably noise, vibration, dust, litter, odour, gulls and visibility, both types of cultural heritage resources (built heritage resources and cultural heritage landscapes) were subject to comprehensive survey. Built heritage resources may include farmhouses, barns, silos, places of worship, dwellings, stores, cemeteries and above-ground ruins. Cultural heritage landscapes may include roads, farm complexes, agricultural lands, waterscapes, quarries and railway rights-of-way.

## 9. Environment Potentially Affected by the Undertaking

Section 6.1(2)(c)(i) of the Act requires a “*description of the environment that will be affected or might reasonably be expected to be affected, directly or indirectly*”. Section 8.2 of the ToR describes the methodology by which the environment potentially affected by the proposed landfill is to be developed, notably including both the existing environment as well as the environment that would be expected to exist in the future without the proposed undertaking (i.e., the environmental baseline conditions, or the “*do nothing*” alternative).

### 9.1 Baseline Assumptions

#### 9.1.1 Land Use Forecast

A common set of assumptions were provided by MHBC Planning on behalf of Walker Environmental Group regarding the forecasted land uses in the area, so that this study could reflect any reasonably foreseeable changes in the uses of the land on and around the proposed landfill site (including the expected ongoing operation of the quarries and lime plants in the vicinity of the site).

In order to guide the forecasting of future baseline conditions, a set of working assumptions has been provided regarding future land uses (including community growth, other industrial activities such as quarrying, etc.) at the site, in the surrounding area and in the broader community. This includes:

- Details of existing land use conditions in the surrounding area.
- Information regarding existing and projected conditions at nearby area aggregate extraction operations.
- Land use forecast and development trends.

In order to address cumulative effects, in accordance with the methodology set out in the *Approved Amended Terms of Reference*, this study compares the potential effects of the proposed landfill at its different stages of development to the forecast baseline conditions at that same period of time (i.e., the “do nothing” alternative).

### **9.1.2 Climate Change Forecast**

Another set of common assumptions that were established for the purpose of this EA is the potential for climate change, so that these could be considered in the individual studies of the potential effects of the proposed landfill. These assumptions are detailed in Walker’s *Environmental Assessment Report* and basically adopt the guidance in the Ontario Ministry of Natural Resources and Forestry’s *Climate change projections for Ontario: An updated synthesis for policymakers and planners*.

## **9.2 Environmental Baseline Conditions**

### **9.2.1 Existing Conditions**

The proposed landfill operation is located within a rural area, just east of the Town of Ingersoll. The on-site study area is 74ha (183 acres) in area with an approximate 1.4km frontage along 35<sup>th</sup> Line. The site is serviced with a main entrance located on County Road #6. The proposed landfill site is located on lands used by Carmeuse Lime Quarry operations that, at the time of writing, have been partially depleted of aggregate resources. The Carmeuse site consists of several bedrock quarries at various stages of development, along with a lime processing plant. The existing quarry will remain functioning during landfill site development, and will continue to function in other approved areas after the landfill operations are complete.

Other lands owned by Carmeuse, generally to the north of the current quarries, remain in agricultural or rural uses. Some of this land is licensed for future extraction. A major railway corridor passes through the southern portion of the Carmeuse property, and another is adjacent to the southern boundary of the property. The southern limit of the Carmeuse property is bordered by the south branch of the Thames River which has been straightened and channelized in this stretch.

The surrounding land uses that exist within the 1 km site vicinity study area include licenced future quarry lands (presently farmland), non-farm residential uses, existing quarry operations, CNR Railway tracks, the rural cluster of Centreville, a cemetery (Ingersoll Rural Cemetery), agricultural uses, and hydro lines. The Thames River is also located within the 1 km site vicinity study area

Much of the study area falls within the physiographic region known as the Oxford Till Plain, which covers more than 385,000 acres in Oxford County. It ranges from 1,000 – 1,200 feet above sea level (305 – 365 metres above sea level). Drumlins have formed on the till plain south of Woodstock, where the glacier passed over an existing moraine. The land is cut by valleys formed by glacial melt-water streams, now containing tributaries of the Thames River. At present, the streams are considerably smaller than the valleys that they occupy. The Till Plain contains primarily Guelph loam soil, a grey-brown luvisol that appears under maple and beech forest land. The Till Plain generally has good drainage medium-textured soil and gentle slopes, making it a good soil without a large amount of stones, well suited to agriculture.

The land was sparsely settled in the late 18<sup>th</sup> century, but became more populated with the arrival of Scottish immigrants after the Napoleonic wars. Population peaked in the 1880s, and did not begin to increase again until after the 1950s. The Till Plain has primarily been settled for agriculture, with larger farms developing by the mid twentieth century. The area is known for its prominent agricultural industry, specifically dairy and cheese (Chapman and Putnam 145-146, 1984).

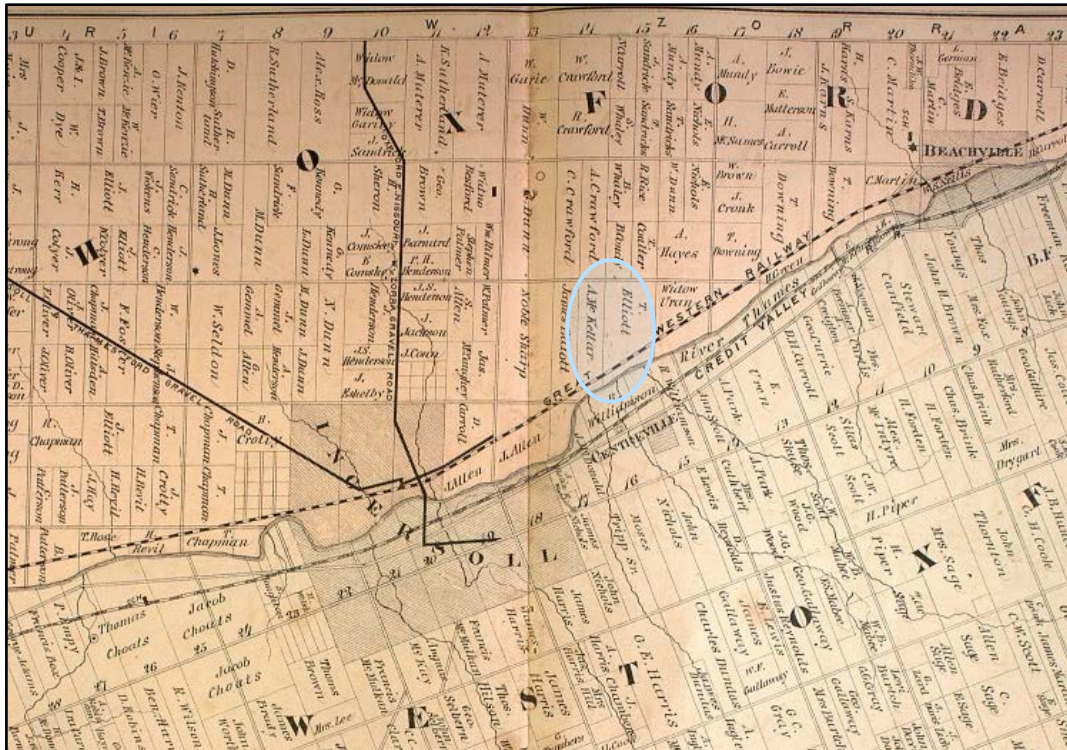
## **9.2.2 History of on-site study area and surrounding area**

### **Township Survey and Settlement**

The study area is within what was previously known as North Oxford Township. It was surveyed between 1797-1799 by William Hambly. The first lots were apparently granted by the Government, and only appear to have been granted prior to 1800. It appears that for the most part, settlement did not begin until the 1830s (Seldon, 1967). According to the Economic Atlas of Ontario, the township was surveyed using the single front system, where 200 acre lots spanned between concession roads in narrow strips.

### **1876 Illustrated Historical Atlas**

The study area is located in the former North Oxford Township of Oxford County, spanning several lots between Concessions One and Three. The Township is bound by the Thames River at its southern edge. The three towns of Beachville, Centreville and Ingersoll are located along what was previously known as the Great Western Railway and Credit Valley Railway.



**Figure 7:** Excerpt from Oxford County Atlas (Source: Walker and Mills, 1876), with added identification of the general study area.

### Ingersoll

The area was settled by Sir Thomas Ingersoll, who obtained a grant of 66,000 acres of land from Governor Simcoe in 1793. The settlement was originally named “Oxford on the Thames”. Ingersoll’s granddaughter was Laura Secord, who warned the British against an American attack during the War of 1812 (Town of Ingersoll, 2012).

The village was incorporated in 1852 as Ingersoll, named by Thomas’ son Charles. In 1861, it was incorporated as a Town (Town of Ingersoll, 2012). Ingersoll was part of a thriving cheese/dairy industry during the 19<sup>th</sup> century (Town of Ingersoll, 2012).

The cemetery located outside Ingersoll on Cemetery Lane dates to 1864, and it contains a veterans section and the tombstone of Charles Ingersoll (father of Laura). The cemetery is owned by Town of Ingersoll and Township of Zorra. The cemetery was formed by shareholders of the Ingersoll Rural Cemetery Company and created during a diphtheria epidemic. The management of the cemetery was taken over by the municipality in 1955 (Seldon, 1967).

### Dunn’s Corners

Dunn’s corners is located northwest of quarry, and is associated with William Dunn, a Scottish immigrant. William Dunn built and operated the Ingersoll foundry, and Dunn’s cheese factory, which opened in 1872 on the north half of lot 13 Con. 2. The factory passed between several owners over the years, and was rebuilt in brick in 1902. By the 1960s, all milk was shipped to William Neilson Co. of Beachville, who purchased the property in 1962 (Seldon, 1967).

Farms along 33<sup>rd</sup> Line to County Rd 6 were populated by Irish and Scottish immigrants in the mid-nineteenth century. Some of these families started the Zorra highland games.

### **Beachville**

The first settler in the Beachville area was reportedly John Carroll of New Jersey, who came in 1784. He returned to the area with his family in 1789 (Cropp, 1967). Other settlers may have been in the area at this time, though there are few records to confirm it. The founding of the settlement dates from 1791 when the first postal service was requested. The area was named Beachville (after Mr. Beach who ran a grist mill), and was applied to the surrounding area, as it was not large enough to be a village. Settlers at this stage were essentially squatters, as the land had not yet been surveyed or open for settlement. Even prior to surveying, much of the land was given to Sir Ingersoll, who encouraged those already there to stay (Cropp 10, 1967).

Settlers likely do not really begin to appear until the 1820s and 30s when a saw mill, store and blacksmith were opened (Seldon, 1967). Beachville is also reportedly home to the first recorded baseball game in North America, which occurred in 1838.

Karn Road, located south of Beachville Road, used to be called “Old Stage Road”. The road was originally a plank road that stage coaches traveled on between Hamilton and London.

### **Centreville**

In the 1876 Historical Atlas, Centreville appears to be located within the front quarter of a 200 acre lot, adjacent to a grist mill. Settlers apparently arrived to the area before the land was granted to Sir Ingersoll. One of the earliest saw mills was located nearby off Folden’s Creek, and the area reportedly was the centre of milling prior to the development of Ingersoll, Woodstock and Tillsonburg. Centreville was reportedly also a pilgrimage/meeting point for First Nations peoples.

### **Quarry History**

Diary reports suggest that lime was burned in the township as early as 1833. It was likely removed from small quarry holes in the river bed (Seldon, 1967). The Standard White Lime Company began operating in the west end of Beachville around the 1900s, and the Beachville White Lime Company began operating farther west. The two operations became merged later as Gypsum Lime and Alabastine, and Domtar. Beachville White Lime apparently began a new operation further west, and was taken over by Cyanamid (later Carmeuse) (Seldon, 1967).

Data from the Ontario Ministry of Northern Development and Mines lists the Beachville White Lime Co. operating on the site as early as 1907. The quarry appears to have changed hands in 1929 to Cyanamid of Canada, to Dofasco Beachvilime Ltd in 1973, Domtar Beachvilime in 1984, and has been operated by Carmeuse (in various incarnations) since 1992 (MNDMF, 2012).

### **Thames River**

The Thames River was formally designated a Canadian Heritage River on August 14<sup>th</sup>, 2000 and was nominated for the designation in 1999. Canadian Heritage Rivers are recognized for their outstanding contributions to the country's cultural heritage, natural heritage, and recreational opportunities. The management plan for the Thames River lists a number of natural heritage, cultural heritage, and recreational values of the river (UTRCA, 2019).

### **Highways and road networks**

Highway 401 is the largest major roadway that travels near the study area. By the 1930s it was apparent that a large-scale highway system was needed to replace the two-lane Highway #2 that ran between towns on the Windsor-Quebec corridor. The first section of the Highway was completed in 1947, between Scarborough and Oshawa, and the Toronto Bypass was completed by the mid-1950s. Other high priority areas, such as the stretch between London and Woodstock, were completed in the 1960s. Outside of Toronto, the highway was widened from four lanes to six lanes beginning in the 1970s. The London-Woodstock stretch was widened in the 1990s (Bever, 2012).

### **9.2.3 Potential cultural heritage resource inventory**

Fieldwork was undertaken as described in above in Section 8.2, and consisted of site visits and historical research. Photos were taken and base information utilized in order to determine the presence of potential cultural heritage resources within or near the on-site study area. The 1 km radius was used as the preliminary screening area, with a focus on the areas within 500 metres of the on-site study area. The potential haul route was also investigated in order to understand the site context.

As part of the background research conducted for this project, a search was undertaken of the municipal, provincial and federal heritage properties database in order to understand if any nearby properties are identified. The search consisted of Heritage Conservation Districts, *Ontario Heritage Act* property designations (Part IV and V), provincially-owned heritage properties and National Historic Sites. In addition, the Town of Ingersoll was contacted in order to determine if there are any properties either designated under the *Ontario Heritage Act* located within the study area, or if there are any properties listed by the Municipal Heritage Committee under the *Ontario Heritage Act*. No such properties were identified within the site vicinity study area based on all searches noted above.

As per the guidance provided by the Ministry of Tourism, Culture and Sport, properties with buildings that were generally 40 years or older were the focus of the investigations. The 1976 series of topographic maps assisted in this regard. This rolling age of 40 years for the preliminary identification of cultural heritage resource of potential cultural heritage value or interest has been accepted at the provincial and federal level as per the *Environmental Guide for Built Heritage and Cultural Heritage Landscapes* (Ministry of Transportation, 2007). While this is true, resources which are slightly older or younger than 40 years old does not determine their cultural heritage value. Resources must be





evaluated as per *Ontario Regulation 9/06* or *Ontario Regulation 10/06* in order to determine whether or not they are of significant cultural heritage value.

In addition to the investigation of built heritage resources, potential cultural heritage landscapes were reviewed both onsite and within the surrounding area as well.

### 9.2.3.1 Offsite cultural heritage resource inventory

The following provides a summary of the preliminary screening for cultural heritage resources within the on-site study area and the 1 km site vicinity study area identified for the purposes of the cultural heritage work.

**Table 2: List of cultural heritage resources**

CHR Number / Name	Location	Heritage Recognition	Description	Photograph / map
ZOR-5	334789 33 <sup>rd</sup> Line	None (identified during field review)	1.5 storey c.1850's schoolhouse converted into a residential dwelling	 <p>(source: MHBC)</p>
ZOR-6	334742 33 <sup>rd</sup> Line	None (identified during field review)	Remnant farm complex, with historic house and newer outbuildings	 <p>(source: MHBC)</p>
ZOR-11	623851 Rd 62/ North Townline East	None (identified during field review)	Farm complex consisting of 19 <sup>th</sup> century farmhouse, silo, barns, and outbuildings.	 <p>(source: MHBC)</p>
ZOR-12	603806 Cemetery Lane	None (identified during field review)	Cemetery dating from mid-19 <sup>th</sup> century, containing burial sites of many early settlers to Ingersoll and Beachville area, including a veterans section.	 <p>(source: MHBC)</p>



### 9.2.3.2 On-site cultural heritage resource inventory

The majority of the on-site study area is presently occupied by existing and former active quarrying areas. A portion of the on-site study area currently contains an existing remnant farmstead, as well as agricultural fields. The purpose of this section is to document features located within the on-site study area.

#### Remnant farmstead

A remnant farmstead (currently owned by Carmeuse) is located within the on-site study area, near the intersection of Road 64 and 35<sup>th</sup> Line, northwest of the proposed landfill area (see **Figure 8**, below). The property has a municipal address of 643845 Rd 64. The property contains a former house site<sup>2</sup> and barn.



**Figure 8:** Aerial photo excerpt depicting subject area and remnant farmstead (source: Oxford County)

The dwelling was two-storeys in height, and featured a 3-bay design. The front façade facing the road featured a central door on the main floor, flanked by two larger picture windows (one on each side). The upper floor featured one window in each bay. The side elevations were also of a 3-bay design, with the right (east) side featuring three windows on the main floor and one off-centre window on the upper floor of the home. The left (west) side of the home featured two windows on each floor, located off-centre from the typical bays. The rear of the building featured a small addition. The home was painted blue and showed signs of damage to bricks on the front elevation as well as the sides with cracking apparent on the corners and around the windows (see below photos).

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<sup>2</sup> Since completion of the fieldwork in early 2019, the dwelling on the property has been removed by Carmeuse. For completeness, the photos / description of the dwelling have been included in this report. The barn remains on the property.

A contemporary garage outbuilding was located to the northeast of the dwelling, accessed via the existing driveway on the property. A former driveway is located immediately east of the dwelling, but the property has been fenced and the driveway reconfigured to be accessed further to the east.



**Photos 1-4:** Views of front, east and west dwelling facades, as well as contemporary garage – now removed (source: MHBC, 2019)

An existing barn is located further to the northeast of the onsite dwelling, approximately 100 metres. The barn appears to date from the early 1900's, is clad in wooden plank siding, and features a steel roof. There are 11 6-over-6 windows located on the ground floor facing the road, and a large door on the western elevation. A sliding door and additional openings are also found on the second floor.



**Photos 5 & 6:** Views of barn and former farmyard areas between buildings ([source](#): MHBC, 2019)

A small pasture area is located to the south of the barn (towards the road), and remained in use for livestock (horses) as of early 2019.

### **Agricultural fields**

Portions of the on-site study area remain under agricultural cultivation, including some areas surrounding the remnant farmstead. Some areas appear to be former pasture lands, with areas to the rear of the buildings being used for farm production (see below).



**Photos 7 & 8:** Views of field areas west and east of remnant farm cluster ([source](#): MHBC, 2019 / 2018)

Field areas are also located to the north of the existing quarry excavation, and remain in agricultural production in the interim before aggregate extraction activities commence.



**Photos 9 & 10:** Views of field areas from Road 66 / 37<sup>th</sup> Line, and from 37<sup>th</sup> Line near proposed haul route entrance ([source](#): MHBC, 2018)

### Quarry area

The majority of the on-site study area is currently occupied by a quarry operation, which operates as part of the larger Carmeuse Lime operation. Historically, quarrying has occurred in the general area since the early 1900's. The quarry within the on-site study area began operating in the mid-20<sup>th</sup> century, likely the early 1960's given the information available from historical airphotos and topographic maps.



**Photos 11 & 12:** Views of active quarry excavation, looking west towards 35<sup>th</sup> Line and existing berm ([source](#): MHBC, 2019)

## 9.2.4 Future Baseline Conditions

In the absence of the proposed Southwestern Landfill, future baseline conditions would include continued quarrying activities on the subject site and also within the site vicinity study area and beyond. The activities would occur in accordance with the *Aggregate Resources Act* (ARA) Site Plans approved for the broader quarry area, which would include progressive extraction and then subsequent rehabilitation of the site over many decades.

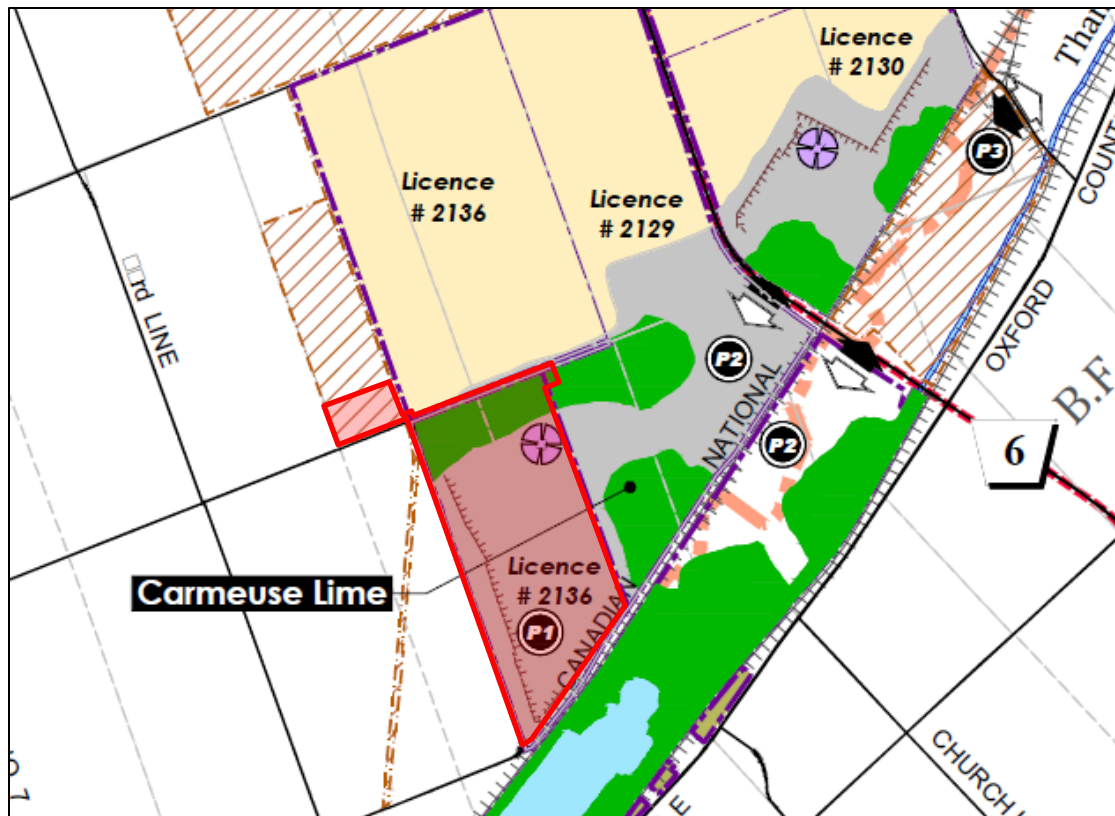


Figure 9 - Excerpt from Land Use Planning Forecast 2023 site conditions (proposed landfill shown in red) (source: MHBC)

The proposed Southwestern Landfill will result in changes to the rehabilitation plans for a portion of the Carmeuse Quarry. It is anticipated that quarrying will continue to progress to the south as the proposed Southwestern Landfill is also operating. In the context of the proposed landfill, there are two periods of operation that are to be considered:

*Operational Period*

The time during which the waste disposal facility is constructed, filled with waste, and capped. These activities are combined since they occur progressively (i.e., overlap) on a cell-by-cell basis, and they have a similar range of potential effects (e.g., there is heavy equipment active on the site).

*Post-Closure Period*

The time after the site is closed to waste receipt. Activities are normally limited to operation of control systems, routine property maintenance and monitoring, and thus have a more limited range of potential effects.

These two operational periods are to be considered in assessing the potential impacts of the proposed landfill operation.

## 10. Evaluation of cultural heritage resources

The purpose of this section is to provide an evaluation of the potential cultural heritage resources onsite or within the immediate area. This task will utilize *Ontario Regulation 9/06* to determine whether potential resources should be considered a cultural heritage resource under this legislation. In addition, an assessment of cultural heritage landscape potential is provided.

In addition to the above, specific guidance and information related to cultural heritage landscapes is contained within the Provincial Policy Statement (PPS). The PPS defines cultural heritage landscapes as:

*a defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Aboriginal community. The area may involve features such as structures, spaces, archaeological sites or natural elements that are valued together for their interrelationship, meaning or association. Examples may include, but are not limited to, heritage conservation districts designated under the Ontario Heritage Act; villages, parks, gardens, battlefields, mainstreets and neighbourhoods, cemeteries, trailways, viewsheds, natural areas and industrial complexes of heritage significance; and areas recognized by federal or international designation authorities (e.g. a National Historic Site or District designation, or a UNESCO World Heritage Site).*

As described in guidance from the Ministry of Tourism, Culture and Sport (MTCS), cultural heritage landscapes may be characterised by three types:

- *Designed landscapes: those which have been intentionally designed e.g. a planned garden or in a more urban setting, a downtown square.*
- *Evolved landscapes: those which have evolved through the use by people and whose activities have directly shaped the landscape or area. This can include a 'continuing' landscape where human activities and uses are still on-going or evolving e.g. residential neighbourhood or mainstreet; or in a 'relict' landscape, where even though an evolutionary process may have come to an end, the landscape remains historically significant e.g. an abandoned mine site or settlement area.*
- *Associative landscapes: those with powerful religious, artistic or cultural associations of the natural element, as well as with material cultural evidence e.g. a sacred site within a natural environment or a historic battlefield.*

### 10.1 Onsite cultural heritage resources

As reviewed in Section 9 of this report, there are potential cultural heritage resources located within the on-site study area that would be displaced by the proposed landfill (to house the leachate treatment facility). These consist of the existing remnant farmstead located at 643845 Rd 64, which contains a

former dwelling site, barn and existing / former pasture areas. Agricultural fields are also located in the broader landscape surrounding the building cluster.

The following table outlines the criteria found in *Ontario Regulation 9/06* as it relates to the existing buildings within the remnant farm cluster.

**Table 3: Cultural heritage resource evaluation: on-site study area**

<b>Ontario Regulation 9/06</b>		
<b>1. Design/Physical value</b>		
i.	Rare, unique, representative or early example of a style, type, expression, material or construction method	<input type="checkbox"/>
ii.	Displays high degree of craftsmanship or artistic merit	<input type="checkbox"/>
iii.	Demonstrates high degree of technical or scientific achievement	<input type="checkbox"/>
<b>2. Historical/associative value</b>		
i.	Direct associations with a theme, event, belief, person, activity, organization, institution that is significant	<input type="checkbox"/>
ii.	Yields, or has potential to yield information that contributes to an understanding of a community or culture	<input type="checkbox"/>
iii.	Demonstrates or reflects the work or ideas of an architect, artist, builder, designer, or theorist who is significant to the community.	<input type="checkbox"/>
<b>3. Contextual value</b>		
i.	Important in defining, maintaining or supporting the character of an area	<input type="checkbox"/>
ii.	Physically, functionally, visually, or historically linked to its surroundings	<input type="checkbox"/>
iii.	Is a landmark	<input type="checkbox"/>

The former house was of a vernacular style and constructed prior to 1954 (based on aerial photos), likely in either the late 19<sup>th</sup> or early 20<sup>th</sup> century. The wood frame barn is likely of a similar time period due to its scale, massing, and materials. The property is not of significant design/physical value as it is not a rare, representative, or early example of built form in Ontario and does not display a high degree of craftsmanship, artistic merit or scientific achievement.

The property is not of significant historical or associative value as it does not have any known direct associations with a theme, belief, event, or person significant to the local community. The property is also not known to reflect the work of an architect, builder, or theorist significant to the community.

Regarding contextual value, the property is not unique in terms of contextual value. The remnant farmstead is one of many farm properties throughout the broader area, and is of a typical age and character. The context surrounding the property has changed over the years through the construction of hydro infrastructure in the immediate area, as well as the continuation of quarrying activities in the areas as well. The property is not physically, functionally, visually or historically linked to its surroundings, since it does not present any unique physical, functional, or visual features, or links.

The potential for cultural heritage landscapes were evaluated based on the criteria established in the PPS and also by the MTCS. The on-site study area contains features associated with a typical rural agricultural area, and can be considered an evolved landscape in that it has continued to be altered to suit the needs of the owners of the properties. The properties can both be thought of as containing two distinctive potential cultural heritage landscape areas: the farm building cluster and the fields.

In determining whether an area is a significant cultural heritage landscape, three additional criteria should be met: cultural heritage value or interest; community value; and historical integrity. The on-site study area retains some cultural heritage value associated with the agricultural past, but the property is not demonstrated to be valued by the community and the historic integrity has been altered in recent decades.

## 10.2 Offsite cultural heritage resources

As noted in Section 9.2.3, there are several potential cultural heritage resources located within the site vicinity study area, but would not be physically displaced or altered by the proposed landfill. These resources have not been previously evaluated, therefore an evaluation based on *Ontario Regulation 9/06* criteria has been completed herein. Photos have been provided where applicable to further illustrate the results of the evaluation.

### ZOR-5 (334789 33<sup>rd</sup> Line)

The property contains a 1.5 storey c.1850's schoolhouse converted into a residential dwelling. The building features a t-shape design, with a large cross-gable and a smaller gable protruding from the front. A newer addition has been added to the east side, towards the road.



**Photos 13 & 14:** Photo of property from 33<sup>rd</sup> Line and aerial photo excerpt ([source](#): MHBC, 2018 [left] / Google, 2018 [right])



The following table outlines the results of the evaluation of the property per Ontario Regulation 9/06:

**Table 4: Cultural heritage resource evaluation – ZOR-5**

<b>Ontario Regulation 9/06</b>		
<b>1. Design/Physical value</b>		
i.	Rare, unique, representative or early example of a style, type, expression, material or construction method	<input checked="" type="checkbox"/> Representative early school design
ii.	Displays high degree of craftsmanship or artistic merit	<input type="checkbox"/>
iii.	Demonstrates high degree of technical or scientific achievement	<input type="checkbox"/>
<b>2. Historical/associative value</b>		
i.	Direct associations with a theme, event, belief, person, activity, organization, institution that is significant	<input checked="" type="checkbox"/> Associated with early education in Zorra Township
ii.	Yields, or has potential to yield information that contributes to an understanding of a community or culture	<input type="checkbox"/>
iii.	Demonstrates or reflects the work or ideas of an architect, artist, builder, designer, or theorist who is significant to the community.	<input type="checkbox"/>
<b>3. Contextual value</b>		
i.	Important in defining, maintaining or supporting the character of an area	<input checked="" type="checkbox"/> Important to character of area.
ii.	Physically, functionally, visually, or historically linked to its surroundings	<input type="checkbox"/>
iii.	Is a landmark	<input type="checkbox"/>

### ZOR-6 (334742 33<sup>rd</sup> Line)

The property contains a late-19<sup>th</sup> century 2-storey dwelling constructed in the Italianate architectural style. The building is constructed in an L-shaped design with a protruding bay on the front-left façade. A rear addition extends eastward. The building features yellow brick, slate roofs, and decorative wood trim. Several newer outbuildings are located to the east of the main dwelling.



**Photos 15 & 16:** Photo of property from 33<sup>rd</sup> Line and aerial photo excerpt (source: MHBC, 2018 [left] / Google, 2018 [right])

The following table outlines the results of the evaluation of the property per Ontario Regulation 9/06:

**Table 5: Cultural heritage resource evaluation – ZOR-6**

<b>Ontario Regulation 9/06</b>		
<b>1. Design/Physical value</b>		
i.	Rare, unique, representative or early example of a style, type, expression, material or construction method	<input checked="" type="checkbox"/> Representative Italianate design
ii.	Displays high degree of craftsmanship or artistic merit	<input type="checkbox"/>
iii.	Demonstrates high degree of technical or scientific achievement	<input type="checkbox"/>
<b>2. Historical/associative value</b>		
i.	Direct associations with a theme, event, belief, person, activity, organization, institution that is significant	<input type="checkbox"/>
ii.	Yields, or has potential to yield information that contributes to an understanding of a community or culture	<input type="checkbox"/>
iii.	Demonstrates or reflects the work or ideas of an architect, artist, builder, designer, or theorist who is significant to the community.	<input type="checkbox"/>
<b>3. Contextual value</b>		
i.	Important in defining, maintaining or supporting the character of an area	<input checked="" type="checkbox"/> Important to character of area.
ii.	Physically, functionally, visually, or historically linked to its surroundings	<input type="checkbox"/>
iii.	Is a landmark	<input type="checkbox"/>

### **ZOR-11 (623851 Rd 62/ North Townline East)**

The property contains a late-19<sup>th</sup> century 2-storey dwelling constructed in the Italianate architectural style. The building is constructed in an L-shaped design with a protruding bay on the front-left façade. A rear addition extends northward. Several newer outbuildings are located north and east of the main dwelling.



**Photos 17 & 18:** Photo of property from Rd 62 and aerial photo excerpt (source: MHBC, 2018 [left] / Google, 2018 [right])

The following table outlines the results of the evaluation of the property per Ontario Regulation 9/06:

**Table 6: Cultural heritage resource evaluation – ZOR-11**

<b>Ontario Regulation 9/06</b>		
<b>1. Design/Physical value</b>		
i.	Rare, unique, representative or early example of a style, type, expression, material or construction method	<input checked="" type="checkbox"/> Representative Italianate design
ii.	Displays high degree of craftsmanship or artistic merit	<input type="checkbox"/>
iii.	Demonstrates high degree of technical or scientific achievement	<input type="checkbox"/>
<b>2. Historical/associative value</b>		
i.	Direct associations with a theme, event, belief, person, activity, organization, institution that is significant	<input type="checkbox"/>
ii.	Yields, or has potential to yield information that contributes to an understanding of a community or culture	<input type="checkbox"/>
iii.	Demonstrates or reflects the work or ideas of an architect, artist, builder, designer, or theorist who is significant to the community.	<input type="checkbox"/>
<b>3. Contextual value</b>		
i.	Important in defining, maintaining or supporting the character of an area	<input checked="" type="checkbox"/> Important to character of area.
ii.	Physically, functionally, visually, or historically linked to its surroundings	<input type="checkbox"/>
iii.	Is a landmark	<input type="checkbox"/>

**ZOR-12 (603806 Cemetery Lane)**

The property contains a cemetery dating from the mid-19<sup>th</sup> century, known as Ingersoll Rural Cemetery. The site is characterized by a long access road (Cemetery Lane), and features a curvilinear internal road layout. The cemetery is the final resting place for many early residents of the broader area, and includes a veteran’s area. The site is a cultural heritage landscape.





**Photos 19 - 22:** Photos of property and aerial photo excerpt  
 (source: MHBC, 2018 [top and lower-left] / Google, 2018 [lower-right])

The following table outlines the results of the evaluation of the property per *Ontario Regulation 9/06*:

**Table 7: Cultural heritage resource evaluation – ZOR-12**

<b>Ontario Regulation 9/06</b>		
<b>1. Design/Physical value</b>		
i.	Rare, unique, representative or early example of a style, type, expression, material or construction method	<input type="checkbox"/>
ii.	Displays high degree of craftsmanship or artistic merit	<input type="checkbox"/>
iii.	Demonstrates high degree of technical or scientific achievement	<input type="checkbox"/>
<b>2. Historical/associative value</b>		
i.	Direct associations with a theme, event, belief, person, activity, organization, institution that is significant	<input checked="" type="checkbox"/> Associated with early memorials and settlement of Zorra Township and Ingersoll, including veterans
ii.	Yields, or has potential to yield information that contributes to an understanding of a community or culture	<input type="checkbox"/>
iii.	Demonstrates or reflects the work or ideas of an architect, artist, builder, designer, or theorist who is significant to the community.	<input type="checkbox"/>
<b>3. Contextual value</b>		
i.	Important in defining, maintaining or supporting the character of an area	<input checked="" type="checkbox"/> Important to character of area.
ii.	Physically, functionally, visually, or historically linked to its surroundings	<input type="checkbox"/>
iii.	Is a landmark	<input checked="" type="checkbox"/> Landmark within area.

### 10.3 Proposed haul route

The proposed haul route was investigated for known and potential cultural heritage resources. As noted earlier in this report, the haul route as well as areas within 100 metres on either side were reviewed. The proposed haul route is characterized by rural land uses, consisting of residential / agricultural and industrial uses, and presently carries a broad range of traffic types. The existing roads are also used as a haul route for the existing quarry operations in the area.

The segment of road between Highway #401 and Beachville Road contains several rural buildings with access onto the road. The road crosses two side roads (Clarke Road and Karn Road), which include buildings near the intersections. Buildings date from a variety of time periods.

The segment of road north of Beachville Road includes a crossing of the Thames River, as well as accesses to the industrial operations that characterize this section. This includes the main entrance / exit to the Carmeuse Quarry. North of the quarry entrance / exit are agricultural lands. No built features are located along this segment.

The last segment of haul route is proposed to cross agricultural fields identified as future quarry operations, and provided a link between the planned active landfill and existing County Road (see **Figure 5**). There are no existing buildings located within this area, and the lands are presently used for agricultural purposes.

No identified cultural heritage resources or cultural heritage landscapes are located along the proposed haul route.

### 10.4 Summary of cultural heritage evaluation

The on-site study area and site vicinity study areas have been evaluated according to *Ontario Regulation 9/06*, which is the legislated criteria for determining significant cultural heritage value. Within the on-site study area, no built heritage resources or cultural heritage landscapes were identified which demonstrate significant cultural heritage value and warrant conservation. Within the site vicinity study area, several built heritage resources and a cultural heritage landscape have been identified, as outlined above. The haul route does not pass by any of the identified heritage resources, and does not contain any identified cultural heritage resources. The fields subject to the new haul route location are approved for future quarrying activities.

## 11. Evaluation of the Proposed Landfill

This section presents the assessment of these matters as it relates to Cultural Heritage Resources and Cultural Heritage Landscapes, and for each of the EA criteria related to this study.

Section 6.1 (2)(c) and (d) of the Act, and the ToR, require an evaluation of:

- The effects that will be caused on the environment;
- The actions necessary to prevent, change, mitigate or remedy the effects on the environment;
- An evaluation of the advantages and disadvantages (net effects) to the environment.

In the context of cultural heritage resources, this section will use *Ontario Regulation 9/06* to determine whether potential resources should be considered a cultural heritage resource under this legislation, and further, what the anticipated impacts are to cultural heritage resources.

### 11.1 Displacement / disturbance of cultural heritage resources

Cultural resources (including heritage buildings, cemeteries and cultural landscapes) are an important component of human heritage. These non-renewable cultural resources have the potential to be displaced by the construction of a waste disposal facility or impacted by the operations as outlined below. The use and enjoyment of cultural resources could also be disturbed by the ongoing operation of a landfill through matters such as noise, dust, odour, visibility, birds, litter and traffic congestion, which will be examined further through the separate social impact assessment completed for the proposed operation.

Potential effects to onsite cultural heritage resources could occur during the operational period and also the post-closure period of the proposed Southwestern Landfill. There is also the potential for impacts to occur during the quarrying period, given that quarry operations will continue and also expand in the coming decades. The condition of most of the field areas can also be considered temporary, as the majority of the agricultural areas within the on-site study area are owned by Carmeuse and are either licenced for quarrying or identified in municipal and County publications as bedrock resource areas.

As it relates to cultural heritage resources, there are three classifications of impacts that the effects of a proposed development may have: beneficial, neutral or adverse.

Beneficial impacts may include retaining a resource of cultural heritage value, protecting it from loss or removal, restoring/repairing heritage attributes, or making sympathetic additions or alterations that allow for the continued long-term use of a heritage resource.

Neutral effects have neither a markedly positive or negative impact on a cultural heritage resource.

Adverse effects may include the loss or removal of a cultural heritage resource, unsympathetic alterations or additions which remove or obstruct heritage attributes. The isolation of a cultural heritage resource from its setting or context, or addition of other elements which are unsympathetic to the character or heritage attributes of a cultural heritage resource are also considered adverse impacts. These adverse impacts may require strategies to mitigate their impact on cultural heritage resources.

The impacts of a proposed development or change to a cultural heritage resource may occur over a short or long-term duration, and may occur during a pre-construction phase, construction phase or post-construction phase. Impacts to a cultural heritage resource may also be site specific or widespread, and may have low, moderate or high levels of physical impact. According to the Ontario Heritage Tool Kit, the following constitutes negative impacts which may result from a proposed development:

- Destruction;
- Alteration;
- Shadows;
- Isolation;
- Direct or indirect obstruction;
- A change in land use; and
- Land disturbances.

An analysis of potential impacts to the cultural heritage resources related to onsite and offsite resources has been undertaken in order to understand potential effects, or impacts.

### **11.1.1 Potential Effects - onsite**





There are no identified onsite cultural heritage resources located on the subject site. Therefore, no potential effects exist.

While not a cultural heritage resource, the remaining existing remnant farmstead located at 643845 Rd 64 will be completely removed as part of the proposed landfill operation. The area is proposed to be used as a leachate treatment facility and therefore new infrastructure is proposed for the area.

### **11.1.2 Potential Effects – nearby resources**

A review of the potential for impacts to nearby heritage resources was conducted, based on the criteria utilized by accepted standards. The following table outlines the results of the review.

**Table 8: Evaluation of effects on nearby resources**

Photo	ID No. / Address	CHV*?	Proximity to project	Direct Impact		Indirect Impact				
				Destruction	Alteration	Shadows	Isolation	Obstruction	Change in Land Use	Land Disturbance
	ZOR-5 (334789 33 <sup>rd</sup> Line)	Yes	Within study area	N	N	N	N	N	N	N
	ZOR-6 (334742 33 <sup>rd</sup> Line)	Yes	Within study area	N	N	N	N	N	N	N
	ZOR-11 (623851 Rd 62 / North Townline)	Yes	Within study area	N	N	N	N	N	N	N
	603806 Cemetery Lane	Yes	Within study area	N	N	N	N	N	N	N

\* Cultural Heritage Value (CHV)

### 11.1.3 Potential Effects – haul routes

There are no identified onsite cultural heritage resources located along the existing or proposed haul route sections. Additionally, no improvements to existing roads are required in order to accommodate the proposed landfill haul route. Further, the existing field areas proposed for the final segment of haul route are planned for future quarry uses. Therefore, no potential effects exist.

### 11.1.4 Potential for Cumulative Effects

Since there are no expected impacts on identified cultural heritage resources, there is no potential for overlapping effects as a result of site activities.

### 11.1.5 Additional Mitigation Recommendations

Given the results of the above review, there are no required mitigation measures identified.



### **11.1.6 Summary**

The review and assessment completed related to cultural heritage resources has demonstrated that there are no negative impacts to cultural heritage resources. There are no onsite cultural heritage resources, and nearby cultural heritage resources will be conserved.

## **12. Monitoring, Contingency & Impact Management Recommendations**

Given that there are no anticipated negative impacts to the adjacent cultural heritage resources, no recommendations are provided related to monitoring, contingency or impact management.

## **13. Conclusions**

In closing, the proposed Southwestern Landfill has been evaluated in terms of potential impacts to onsite and offsite cultural heritage resources. Research regarding the history of the area was undertaken, and inventory work was conducted to identify potential cultural heritage resources. It was determined that there are no cultural heritage resources located within the on-site study area. Cultural heritage resources within the site vicinity study area were inventoried and a preliminary evaluation of cultural heritage significance was undertaken. While there are cultural heritage resources located within the site vicinity study area, there are no negative impacts identified.

Based on the analysis undertaken, it was determined that there is no potential for negative impacts to cultural heritage resources. Given the results, mitigation and monitoring recommendations are not provided.

## 14. References

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## Appendix A

### Glossary of Terms

**Built heritage resource** means a building, structure, monument, installation or any manufactured remnant that contributes to a property's cultural heritage value or interest as identified by a community, including an Aboriginal community. Built heritage resources are generally located on property that has been designated under Parts IV or V of the *Ontario Heritage Act*, or included on local, provincial and/or federal registers. (Source: Provincial Policy Statement 2014)

**Conserved** means the identification, protection, management and use of built heritage resources, cultural heritage landscapes and archaeological resources in a manner that ensures their cultural heritage value or interest is retained under the *Ontario Heritage Act*. This may be achieved by the implementation of recommendations set out in a conservation plan, archaeological assessment, or heritage impact assessment. Mitigative measures or alternative development approaches can be included in these plans and assessments. (Source: Provincial Policy Statement 2014)

**Cultural heritage landscape** means a defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Aboriginal community. The area may involve features such as structures, spaces, archaeological sites or natural elements that are valued together for their interrelationship, meaning or association. Examples may include, but are not limited to, heritage conservation districts designated under the *Ontario Heritage Act*; villages, parks, gardens, battlefields, mainstreets and neighbourhoods, cemeteries, trailways, viewsheds, natural areas and industrial complexes of heritage significance; and areas recognized by federal or international designation authorities (e.g. a National Historic Site or District designation, or a UNESCO World Heritage Site). (Source: Provincial Policy Statement 2014)

**Designated property** means property designated under Part IV or Part V of the *Ontario Heritage Act*.

**Heritage attributes** mean, in relation to real property, and to the buildings and structures on the real property, the attributes that contribute to their cultural heritage value or interest. (Source: *Ontario Heritage Act*)

**Listed property** means property listed as non-designated on the Municipal Register of Cultural Heritage Properties.

**Preservation** is the action or process of protecting, maintaining, and/or stabilizing the existing materials, form, and integrity of a historic place or of an individual component, while protecting its heritage value. (Source: Standards and Guidelines for the Conservation of Historic Places in Canada)

**Protected heritage property:** means property designated under Parts IV, V or VI of the *Ontario Heritage Act*; property subject to a heritage conservation easement under Parts II or IV of the *Ontario Heritage Act*; property identified by the Province and prescribed public bodies as provincial heritage property under the Standards and Guidelines for Conservation of Provincial Heritage Properties; property protected under federal legislation, and UNESCO World Heritage Sites. (Source: Provincial Policy Statement 2014)

**Significant** means, in regard to cultural heritage and archaeology, resources that have been determined to have cultural heritage value or interest for the important contribution they make to our understanding of the history of a place, an event, or a people. (Source: Provincial Policy Statement 2014)

**Appendix B**  
**Environmental Assessment Criteria and Studies**  
**(from the Approved Amended Terms of Reference)**

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Criteria	Definition/ Rationale	Studies Addressing the Criteria											Study Areas			Duration			
		Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period
<b>Public Health &amp; Safety</b>																			
1	Explosive hazard due to combustible gas accumulation in confined spaces.						<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Effects due to exposure to air emissions.		<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	Effects due to fine particulate exposure.		<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
4	Effects due to contact with contaminated groundwater or surface water.						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	Flood hazard.						<input checked="" type="checkbox"/>							<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6	Disease transmission <i>via</i> insects or vermin.				<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7	Potential for traffic collisions.											<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	

Criteria	Definition/ Rationale	Studies Addressing the Criteria											Study Areas			Duration			
		Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period
<b>Public Health &amp; Safety (continued)</b>																			
8	Aviation impacts due to bird interference.					<input checked="" type="checkbox"/>												<input checked="" type="checkbox"/>	
<b>Social and Cultural</b>																			
9	Displacement of residents from houses.													<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10	Disruption to use and enjoyment of residential properties.													<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
11	Disruption to use and enjoyment of public facilities and institutions.													<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
12	Disruption to local traffic networks.														<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
13	Visual impact of the waste disposal facility.																	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
14	Nuisance associated with vermin.													<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Study that will be primarily responsible for addressing criterion.

**Note:** Many of the studies will provide key input to criteria that will be address through other impact assessment studies.





Criteria	Definition/ Rationale	Studies Addressing the Criteria											Study Areas			Duration			
		Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period
<b>Social and Cultural (continued)</b>																			
20	Changes to community character/cohesion.										<input checked="" type="checkbox"/>								
21	Compatibility with municipal land use designations and official plans.																		
<b>Economics</b>																			
22	Displacement/disruption of businesses or farms.																		
23	Property value impacts.																		
24	Direct employment in waste disposal facility construction and operation.																		
25	Indirect employment in related industries and services.																		

Study that will be primarily responsible for addressing criterion.

**Note:** Many of the studies will provide key input to criteria that will be address through other impact assessment studies.

Criteria	Definition/ Rationale	Studies Addressing the Criteria											Study Areas			Duration			
		Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic/ Financial	Groundwater/ Surface Water	Human Health	Land Use	Noise/Vibration	Social	Traffic	Visual/ Landscape	On-Site & Site Vicinity	Along the Haul Routes	Wider Area	Operational Period	Post-Closure Period
<b>Economics (continued)</b>																			
26	New business opportunities related directly to waste disposal facility construction and operation.					<input checked="" type="checkbox"/>										<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
27	New business opportunities in related industries and services.					<input checked="" type="checkbox"/>										<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
28	Public costs for indirect liabilities.					<input checked="" type="checkbox"/>										<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
29	Effects on the municipal tax base.					<input checked="" type="checkbox"/>										<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
30	Effect on the cost of service to customers.					<input checked="" type="checkbox"/>										<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
31	Effects on the provincial/ federal tax base.					<input checked="" type="checkbox"/>										<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Natural Environment &amp; Resources</b>																			
32	Loss/displacement of surface water resources.						<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
33	Impact on the availability of groundwater supply to wells.						<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
34	Effects on stream baseflow quantity/quality.						<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Study that will be primarily responsible for addressing criterion.

**Note:** Many of the studies will provide key input to criteria that will be address through other impact assessment studies.



**Table B-2 – EA Technical Studies Interconnectivity Matrix**

Because effectively evaluating the EA criteria provided in Table B-1 may require input from experts in many disciplines, WEG adopted a methodology that facilitates a cross-functional approach among the experts. Each EA criterion has been assigned a 'lead' expert for reporting purposes (see Table B-1). The lead expert is responsible for coordinating efforts with any other expert they determine necessary to effectively report on that criterion as well as providing information to other experts who need input from them to report on any other criteria. Table B-2 provides possible relationships required between experts to effectively report on their respective EA criteria. The actual relationships will be developed during the EA process in consultation with interested parties.

		Reference Studies												
		Agriculture	Air Quality	Archaeology	Cultural Heritage	Ecology	Economic / Financial	Groundwater / Surface Water	Human Health	Land Use	Noise / Vibration	Social	Traffic	Visual / Landscape
Technical Studies	Agriculture		✓						✓	✓		✓		
	Air Quality											✓		
	Archaeology													
	Cultural Heritage								✓		✓		✓	
	Ecology		✓				✓			✓		✓		
	Economic / Financial	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	
	Groundwater / Surface Water	✓									✓			
	Human Health		✓							✓				
	Land Use													
	Noise / Vibration													
	Social	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Traffic	✓								✓		✓		
	Visual Landscape											✓		

## **Appendix C**

### **Displacement / disturbance of cultural heritage resources**

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**Criterion 15: Displacement/disturbance of cultural/heritage resources**

Study Lead: Cultural Heritage

Definition/Rationale: Cultural resources (including heritage buildings, cemeteries and cultural landscapes) are an important component of human heritage. These non-renewable cultural resources may be displaced by the construction of a waste disposal facility. The use and enjoyment of cultural resources may also be disturbed by the ongoing operation and traffic. Disturbances could result from noise, dust, odour, visibility, birds, litter and traffic congestion.

Indicators: Displacement of built heritage resources  
 Displacement of cultural heritage landscapes  
 Disruption of built heritage resources (both habitable and non-habitable)  
 Disruption of cultural heritage landscapes

Study Area	Duration	Baseline ("Do Nothing" Alternative)	Potential Effects		Additional Mitigation	Net Effects		Impact Management
			Landfill	Cumulative		Landfill	Cumulative	
On-Site & Site Vicinity	Operational Period	There are no designated cultural heritage resources on-site or within 1 km, nor were any of the structures or landscapes on-site determined to have significant cultural heritage value in accordance with applicable regulations.	None. No removal of any significant built heritage resources or cultural heritage landscapes. No physical disturbance to any significant built heritage resources or cultural heritage landscapes in the site vicinity.	None.	Not required.	None. No removal of any significant built heritage resources or cultural heritage landscapes. No physical disturbance to any significant built heritage resources or cultural heritage landscapes in the site vicinity.	None.	Not required.
	Post-Closure Period	As above, but with continued removal of agricultural fields to the north of the site as the quarry progresses, and rehabilitation of completed quarry to private green space.	None, as above.	None.	Not required.	None, as above.	None.	Not required.
Along the Haul Routes	Operational Period	There are no designated cultural heritage resources along the proposed haul route. Continued use of the existing haul routes would occur for quarry operations.	None. There are no physical modifications proposed to CR#6. The new portion of the haul route across Carmeuse property is not a significant cultural heritage landscape.	None.	Not required.	None. There are no physical modifications proposed to CR#6. The new portion of the haul route across Carmeuse property is not a significant cultural heritage landscape.	None.	Not required.
	Post-Closure Period	As above, but with the potential for future road upgrades once background traffic volumes warrant.	None, as above.	None.	Not required.	None, as above.	None.	Not required.

## **Appendix D**

### **Curriculum vitae**

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## CURRICULUM VITAE

### Dan Currie, MA, MCIP, RPP, CAHP

Dan Currie, a Partner and Managing Director of MHBC's Cultural Heritage Division, joined MHBC Planning in 2009, after having worked in various positions in the public sector since 1997 including the Director of Policy Planning for the City of Cambridge and Senior Policy Planner for the City of Waterloo.

Dan provides a variety of planning services for public and private sector clients including a wide range of cultural heritage policy and planning work including strategic planning, heritage policy, heritage conservation district studies and plans, heritage master plans, heritage impact assessments and cultural heritage landscape studies.

#### EDUCATION

2006

Masters of Arts (Planning)  
University of Waterloo

1998

Bachelor of Environmental Studies  
University of Waterloo

1998

Bachelor of Arts (Art History)  
University of Saskatchewan

#### PROFESSIONAL ASSOCIATIONS

Full Member, Canadian Institute of Planners

Full Member, Ontario Professional Planners Institute

Professional Member, Canadian Association of Heritage Professionals

#### SELECTED PROJECT EXPERIENCE

##### HERITAGE PLANNING

City of Hamilton Heritage Impact Assessment for Pier 8

Town of Erin Designation of Main Street Presbyterian Church

City of Kitchener Homer Watson House Heritage Impact Assessment and Parking Plan

Region of Waterloo Schneider Haus Heritage Impact Assessment

Niagara Parks Commission Queen Victoria Park Cultural Heritage Evaluation Report

City of Guelph Cultural Heritage Action Plan

Town of Cobourg, Heritage Master Plan

Municipality of Chatham Kent, Rondeau Heritage Conservation District Plan

City of Kingston, Barriefield Heritage Conservation District Plan Update

Burlington Heights Heritage Lands Management Plan

City of Markham, Victoria Square Heritage Conservation District Study

City of Kitchener, Heritage Inventory Property Update

Township of Muskoka Lakes, Bala Heritage Conservation District Plan

Municipality of Meaford, Downtown Meaford Heritage Conservation District Plan

City of Guelph, Brooklyn and College Hill Heritage Conservation District Plan

#### CONTACT

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www.mhbcplan.com



## CURRICULUM VITAE

### Dan Currie, MA, MCIP, RPP, CAHP

City of Toronto, Garden District Heritage Conservation District Plan  
City of London, Western Counties Cultural Heritage Plan

Other heritage consulting services including:

- Preparation of Heritage Impact Assessments for both private and public sector clients
- Requests for Designations
- Alterations or new developments within Heritage Conservation Districts
- Cultural Heritage Evaluations for Environmental Assessments

#### MASTER PLANS, GROWTH MANAGEMENT STRATEGIES AND POLICY STUDIES

City of Vaughan Municipal Land Acquisition Strategy  
Town of Frontenac Islands Marysville Secondary Plan  
Niagara-on-the-Lake Corridor Design Guidelines  
Cambridge West Master Environmental Servicing Plan  
Township of West Lincoln Settlement Area Expansion Analysis  
Ministry of Infrastructure Review of Performance Indicators for the Growth Plan  
Township of Tiny Residential Land Use Study  
Port Severn Settlement Area Boundary Review  
City of Cambridge Green Building Policy  
Township of West Lincoln Intensification Study & Employment Land Strategy  
Ministry of the Environment Review of the D-Series Land Use Guidelines  
Meadowlands Conservation Area Management Plan  
City of Cambridge Trails Master Plan  
City of Kawartha Lakes Growth Management Strategy  
City of Cambridge Growth Management Strategy  
City of Waterloo Height and Density Policy  
City of Waterloo Student Accommodation Study  
City of Waterloo Land Supply Study  
City of Kitchener Inner City Housing Study

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## CURRICULUM **VITAE**

**Dan Currie, MA, MCIP, RPP, CAHP**

### DEVELOPMENT PLANNING

Provide consulting services and prepare planning applications for private sector clients for:

- Draft plans of subdivision
- Consent
- Official Plan Amendment
- Zoning By-law Amendment
- Minor Variance
- Site Plan

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## CURRICULUM VITAE

### Nicholas P. Bogaert, BES, MCIP, RPP, CAHP

#### EDUCATION

2004  
Bachelor of Environmental Studies,  
Honours Urban and Regional  
Planning, University of Waterloo

Nicholas Bogaert joined MHBC as a Planner in 2004 after graduating from the University of Waterloo with a Bachelor of Environmental Studies Degree (Honours Planning – Co-operative Program).

Mr. Bogaert provides urban and rural planning, analysis for all aspects of the firm's activities. He has experience in providing planning consulting services to municipalities and private sector clients, aggregate site planning and licensing processes related to aggregate applications, and conducting aggregate production research for a variety of clients. He also has experience related to the approval and registration of plans of subdivision, the re-development of brownfield and greyfield sites, providing planning services to a rural municipality, and various projects related to cultural heritage planning matters.

Mr. Bogaert is a full member of the Canadian Institute of Planners and the Ontario Professional Planners Institute. He is also a Professional Member of the Canadian Association of Heritage Professionals.

Mr. Bogaert is a member of the Cultural Heritage Division of MHBC, and Chair of the Heritage Wilmot Advisory Committee.

#### PROFESSIONAL ASSOCIATIONS

Full Member, Canadian Institute of Planners  
Full Member, Ontario Professional Planners Institute  
Professional Member, Canadian Association of Heritage Professionals

#### PROFESSIONAL SERVICE

2012-Present      Chairperson, Heritage Wilmot Advisory Committee  
2011-2012        Vice-Chair, Heritage Wilmot Advisory Committee

#### PROFESSIONAL HISTORY

Jan. 2019 - Present      Associate, MacNaughton Hermsen Britton Clarkson  
Planning Limited  
  
Jan. 2004 – Jan. 2019      Planner / Senior Planner, MacNaughton Hermsen  
Britton Clarkson Planning Limited

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## CURRICULUM **VITAE**

**Nicholas P. Bogaert**, BES, MCIP, RPP, CAHP

### SELECTED PROJECT EXPERIENCE – CULTURAL HERITAGE

Involved in the preparation of Cultural Heritage Action Plan for the City of Guelph.

Involved in the preparation of an updated Heritage Conservation District Plan for the Port Credit Heritage Conservation District (City of Mississauga).

Involved in the preparation of a Heritage Impact Assessment for the redevelopment of the Queenston Quarry (Niagara-on-the-Lake).

Involved in the preparation of a Heritage Impact Assessment for the redevelopment of a portion of the Huronia Regional Centre (Orillia).

Involved in the preparation of a Cultural Heritage Survey for a proposed aggregate extraction operation in the Town of Caledon.

Involved in the preparation of a Cultural Heritage Study for a proposed aggregate extraction operation in Melancthon Township.

Involved in the preparation of a Cultural Heritage Evaluation Report for the 6<sup>th</sup> Line overpass in the Town of Innisfil.

Involved in the preparation of a Heritage Impact Assessment for the redevelopment of a vacant property in the City of London.

Involved in the preparation of a Heritage Impact Assessment for the redevelopment of a portion of Bob-lo Island in the Town of Amherstburg.

Involved in the preparation of a Heritage Conservation District Study and Plan for Rondeau Provincial Park cottages (Municipality of Chatham-Kent).

Involved in the preparation of a Heritage Master Plan and updated Heritage Conservation District Plans for the Town of Cobourg.

Involved in the preparation of an updated Heritage Conservation District Plan for the Village of Barriefield (City of Kingston).

### CONTACT

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## CURRICULUM VITAE

### Nicholas P. Bogaert, BES, MCIP, RPP, CAHP

Involved in the preparation of a Heritage Impact Assessment for a rural farmhouse in the City of Kitchener.

Involved in the preparation of a Heritage Conservation District Study for the Victoria Square area (City of Markham).

Involved in the preparation of a Heritage Conservation District Study and Plan for the Village of Bala (Township of Muskoka Lakes).

Involved in a pilot project to work on integrating heritage attributes into building inspection reports for provincially significant heritage properties (Infrastructure Ontario).

Involved in the preparation of a Heritage Conservation District Study and Plan for the Garden District (City of Toronto).

Involved in the preparation of a Heritage Conservation District Study and Plan for Downtown Meaford.

Involved in the preparation of a Heritage Conservation District Plan for the Village of Port Stanley (Municipal of Central Elgin).

Involved in the preparation of a Cultural Heritage Study related to a proposed Sand and Gravel Pit (Manvers Township).

Involved in the preparation of a Background and Issues Identification Report and Management Plan for the Burlington Heights Heritage Lands (Hamilton / Burlington).

Involved in the preparation of a Heritage Conservation District Study and Plan for Downtown Oakville.

Involved in the preparation of a Heritage Conservation District Study and Plan for the Brooklyn and College Hill areas in the City of Guelph.

Involved in a Cultural Heritage Landscape Study for Rondeau Provincial Park.

Involved in the preparation of a Heritage Impact Assessment for a rural farmstead in City of Cambridge.

Involved in a Commemorative Integrity Statement Workshop for Oil Heritage District, and assisted in preparation of Commemorative Integrity Statement (Lambton County).

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## CURRICULUM VITAE

### Nicholas P. Bogaert, BES, MCIP, RPP, CAHP

Involved in an assessment of feasibility of acquiring Federal surplus land for development as affordable housing within a Heritage Conservation District (Kingston - Barriefield).

#### PROFESSIONAL DEVELOPMENT COURSES / CONFERENCES

- |      |  |
|------|--|
| 2004 | Course: 'Plain Language for Planners', Ontario Professional Planners Institute, Toronto.   |
| 2004 | Conference: 'Leading Edge – The Working Biosphere', Niagara Escarpment Commission, Burlington.   |
| 2011 | Conference: 'Ontario Heritage Conference – Creating the Will', Cobourg.  |
| 2012 | Workshop: 'Heritage Conservation District Workshop', University of Waterloo Heritage Resources Centre, Stratford.  |
| 2012 | Conference: 'Ontario Heritage Conference - Beyond Borders: Heritage Best Practices, Kingston.  |
| 2012 | Conference: 'National Heritage Summit - Heritage Conservation in Canada: What's Working?; What's Not?; And What Needs to Change?', Heritage Canada Foundation, Montreal. |
| 2012 | Conference presentation: Heritage Conservation District Misconceptions, Heritage Canada Conference, Montreal.  |
| 2013 | Course: 'Planner at the Ontario Municipal Board', Ontario Professional Planners Institute, Waterloo.   |
| 2013 | Conference presentation: Ideas for Effective Community Engagement – Case Study: Downtown Oakville Heritage Conservation District, OPPI Conference, London.               |
| 2013 | Conference: 'Regeneration – Heritage Leads the Way', Heritage Canada Foundation, Ottawa.   |
| 2013 | Conference presentation: Rondeau Provincial Park: A Cultural Heritage Landscape?, Heritage Canada Conference, Ottawa (with Peter Stewart, George Robb Architect).        |

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## CURRICULUM **VITAE**

### Nicholas P. Bogaert, BES, MCIP, RPP, CAHP

- |      |   |
|------|---|
| 2014 | Conference: 'Ontario Heritage Conference' – Bridging the Past, Crossing into the Future, Cornwall.  |
| 2015 | Conference: 'Ontario Heritage Conference' – Ontario Heritage: An Enriching Experience, Niagara-on-the-Lake.   |
| 2015 | Conference presentation: Heritage Conservation and Urban Design: Challenges, Success, Balance, OPPI Conference, Toronto (with Dan Currie and Lashia Jones, MHBC). |
| 2016 | Conference: 'Ontario Heritage Conference' – Preservation in a Changing World, Stratford-St. Marys.  |
| 2019 | Conference: 'Ontario Heritage Conference', Bluewater & Goderich.  |

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