

# LAND USE ASSESSMENT AND PLANNING JUSTIFICATION **REPORT**

Southwestern Landfill  
Township of Zorra

Date:

**January 2020 (DRAFT)**

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## Table of Contents

<b>1.</b>	<b>Introduction</b> .....	<b>1</b>
<b>2.</b>	<b>Purpose &amp; Objectives</b> .....	<b>2</b>
<b>3.</b>	<b>The Proposed Undertaking</b> .....	<b>3</b>
<b>4.</b>	<b>Environmental Assessment Criteria &amp; Indicators</b> .....	<b>5</b>
<b>5.</b>	<b>Study Durations</b> .....	<b>6</b>
<b>6.</b>	<b>Study Areas</b> .....	<b>7</b>
<b>7.</b>	<b>Methodology and data collection</b> .....	<b>8</b>
<b>8.</b>	<b>Environment Potentially Affected by the Undertaking</b> .....	<b>9</b>
8.1	Baseline Assumptions .....	9
8.1.1	Land Use Forecast .....	9
8.1.2	Climate Change Forecast .....	9
8.2	Environmental Baseline Conditions.....	10
8.2.1	Existing Conditions.....	10
8.2.2	Future Baseline Conditions .....	11
<b>9.</b>	<b>Land Use Planning Context</b> .....	<b>13</b>
9.1	Provincial Policy Statement .....	13
9.2	Oxford County Official Plan.....	14
9.3	Zoning By-laws .....	16
9.4	Population and employment growth.....	16
<b>10.</b>	<b>Evaluation of the Proposed Landfill</b> .....	<b>18</b>
10.1	Summary of supporting technical reports .....	18
10.1.1	Surface Water .....	18
10.1.2	Geology and Groundwater .....	19
10.1.3	Ecology.....	19
10.1.4	Visual impact.....	20
10.1.5	Cultural heritage .....	20
10.1.6	Archaeology .....	20
10.1.7	Agriculture .....	20
10.1.8	Transportation .....	21
10.1.9	Noise and vibration.....	21
10.1.10	Air quality.....	22
10.1.11	Human Health .....	22
10.1.12	Social impact.....	23
10.1.13	Economic impact.....	23
10.1.14	Summary .....	24
10.2	Planning analysis and compatibility.....	24
<b>11.</b>	<b>Proposed Planning Act applications</b> .....	<b>29</b>
<b>12.</b>	<b>Conclusions</b> .....	<b>30</b>
<b>13.</b>	<b>References</b> .....	<b>31</b>



## List of Figures

Figure 1	Site plan.....	following 3
Figure 2	Landfill Liner System .....	following 3
Figure 3	Section Views .....	following 3
Figure 4	Plan View Top of Cover .....	following 3
Figure 5	Haul Route & Site Entrance.....	following 4
Figure 6	Study Area and Receptor Locations .....	following 7
Figure 7	Excerpt from Land Use Planning Forecast 2023 site conditions .....	11
Figure 8	Oxford County Official Plan land use schedule excerpt.....	following 14
Figure 9	Zoning By-law schedule excerpts.....	following 16

## List of Appendices

Appendix A:	Environmental Assessment Criteria and Studies
Appendix B:	Land Use Planning Forecast Report
Appendix C:	Curriculum vitae

# 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.

This report also provides the land use planning justification and rationale to support required *Planning Act* applications that are being processed concurrently with the Environmental Assessment process. Accordingly, applicable policy evaluation and assessment components have been incorporated as applicable.

Note that Walker has carried out extensive consultation with government agencies, Indigenous 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 provide a land use compatibility assessment of the landfill proposed by Walker, as well as to provide the applicable planning justification to aid in decision-making regarding the *Planning Act* applications that will implement the proposal.

The overall **objectives** of the study are listed below, in general 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 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 then 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 as 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.

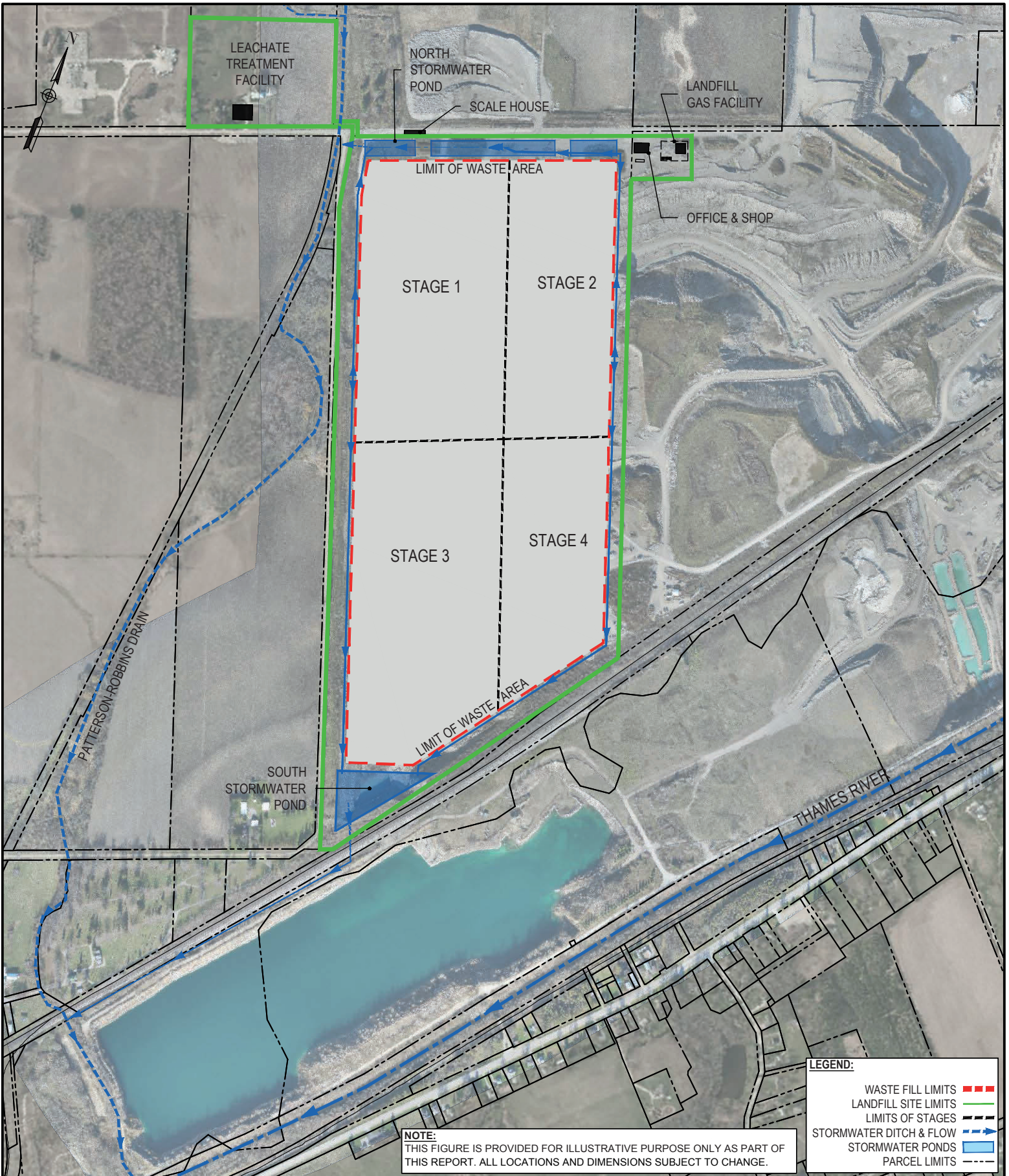
Most of the supporting infrastructure for the landfill will be located in the buffer area along the northern site perimeter, including the leachate and gas treatment plants. Leachate collected from the liner system will be treated on-site and the clean effluent from the treatment plant will be discharged into the Patterson-Robbins Drain next to the treatment plant. Clean precipitation and groundwater 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*.



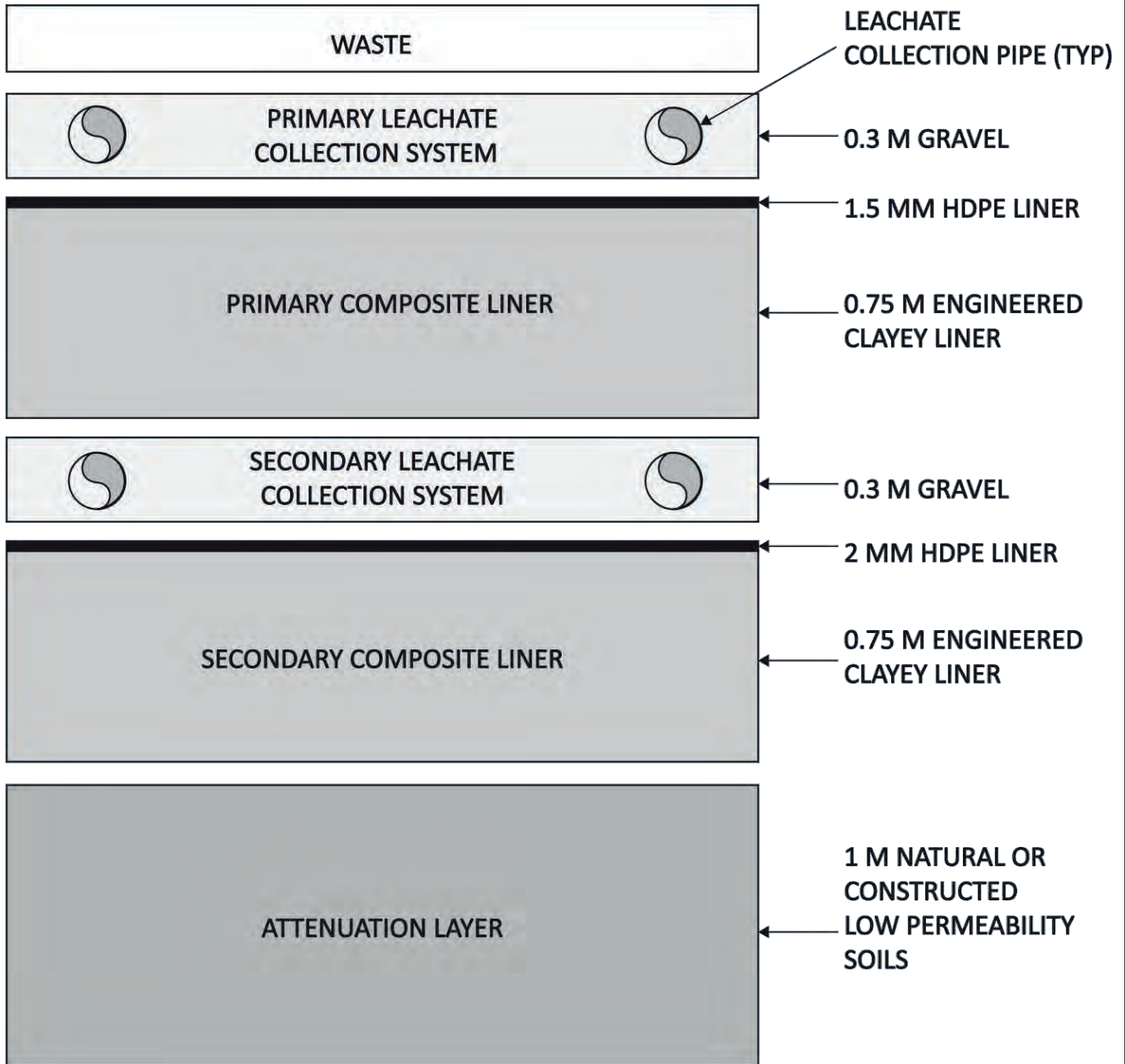


**NOTE:**  
THIS FIGURE IS PROVIDED FOR ILLUSTRATIVE PURPOSE ONLY AS PART OF THIS REPORT. ALL LOCATIONS AND DIMENSIONS SUBJECT TO CHANGE.


LEGEND:	
WASTE FILL LIMITS	---
LANDFILL SITE LIMITS	—
LIMITS OF STAGES	- - -
STORMWATER DITCH & FLOW	- - - - ->
STORMWATER PONDS	■
PARCEL LIMITS	- - - - -

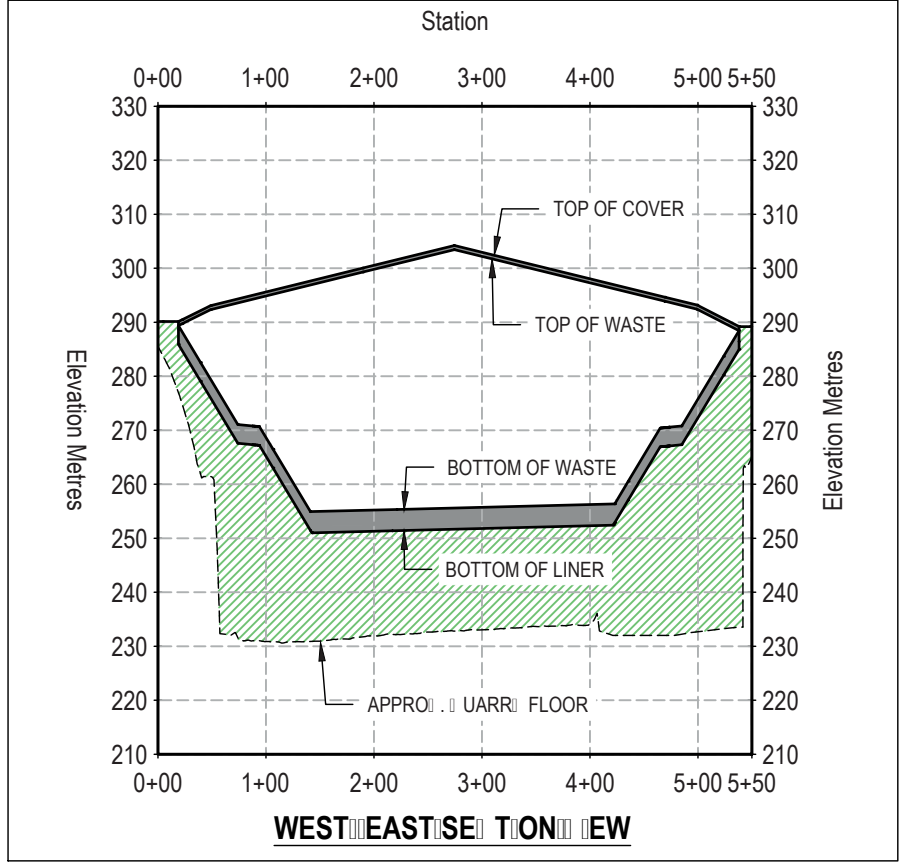
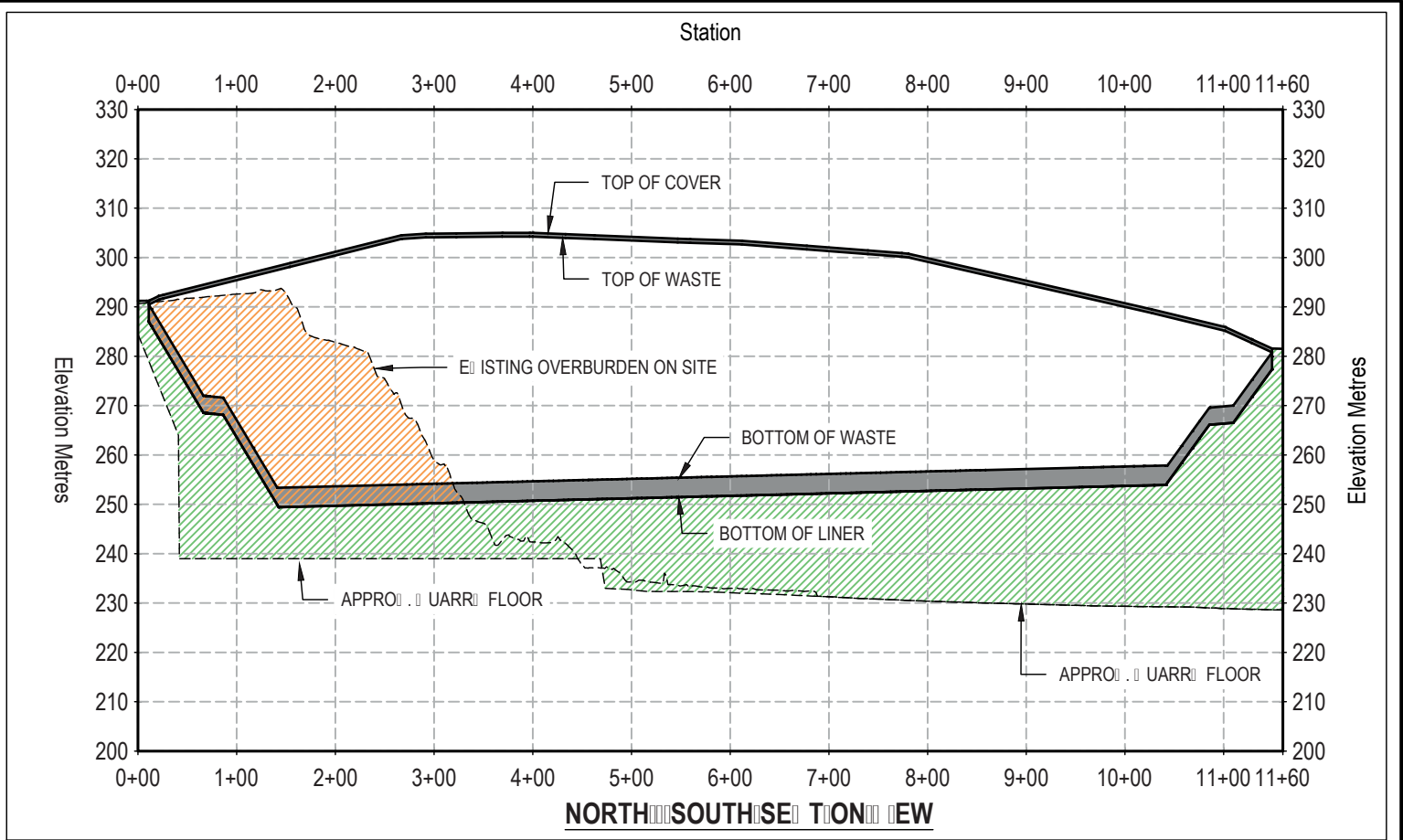
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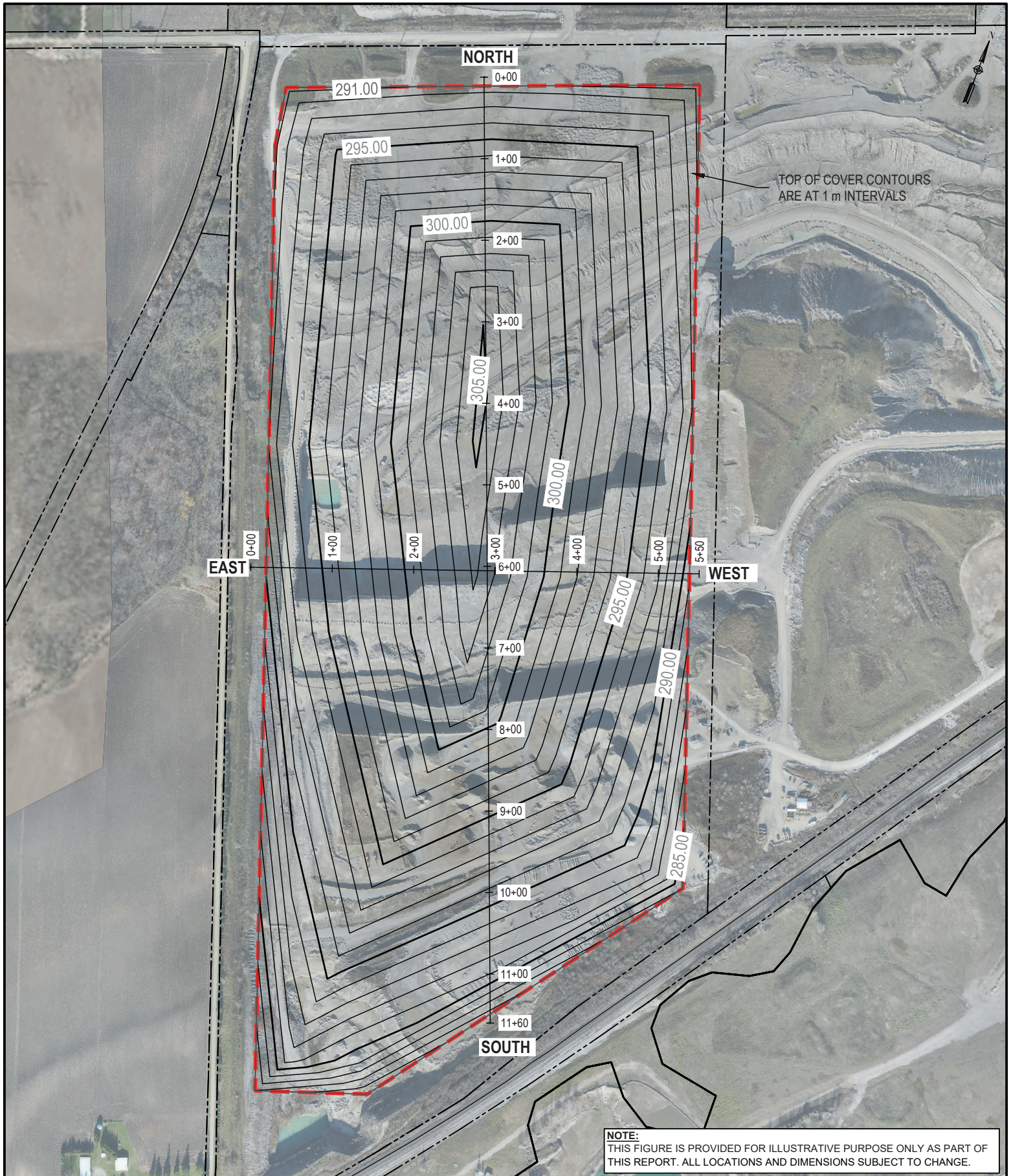
	Project	<b>SOUTHWESTERN LANDFILL</b>		Project No.	967243		Scale Bar		
	Drawing	<b>LANDFILL LINER SYSTEM</b>		Drawn	TTamburri	Scale	NTS	Date (D/M/Y)	7 JAN 19
				Approved	DFry	Drawing No.	<b>Figure 2</b>	Revision No.	<b>C</b>





**NOTE:**  
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	Project	<b>SOUTHWESTERN LANDFILL</b>		Project No.	967243		Scale Bar			
	Drawing	<b>SECTION VIEWS</b>		Drawn	JThompson	Scale	NTS	Date (P.M.Y)	07JAN20	
				Approved	DFry	Drawing No.	<b>Figure 3</b>		Revision No.	<b>E</b>





	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)	07JAN20
				Approved	DFry	Drawing No.	<b>Figure 4</b>	Revision No.	<b>E</b>



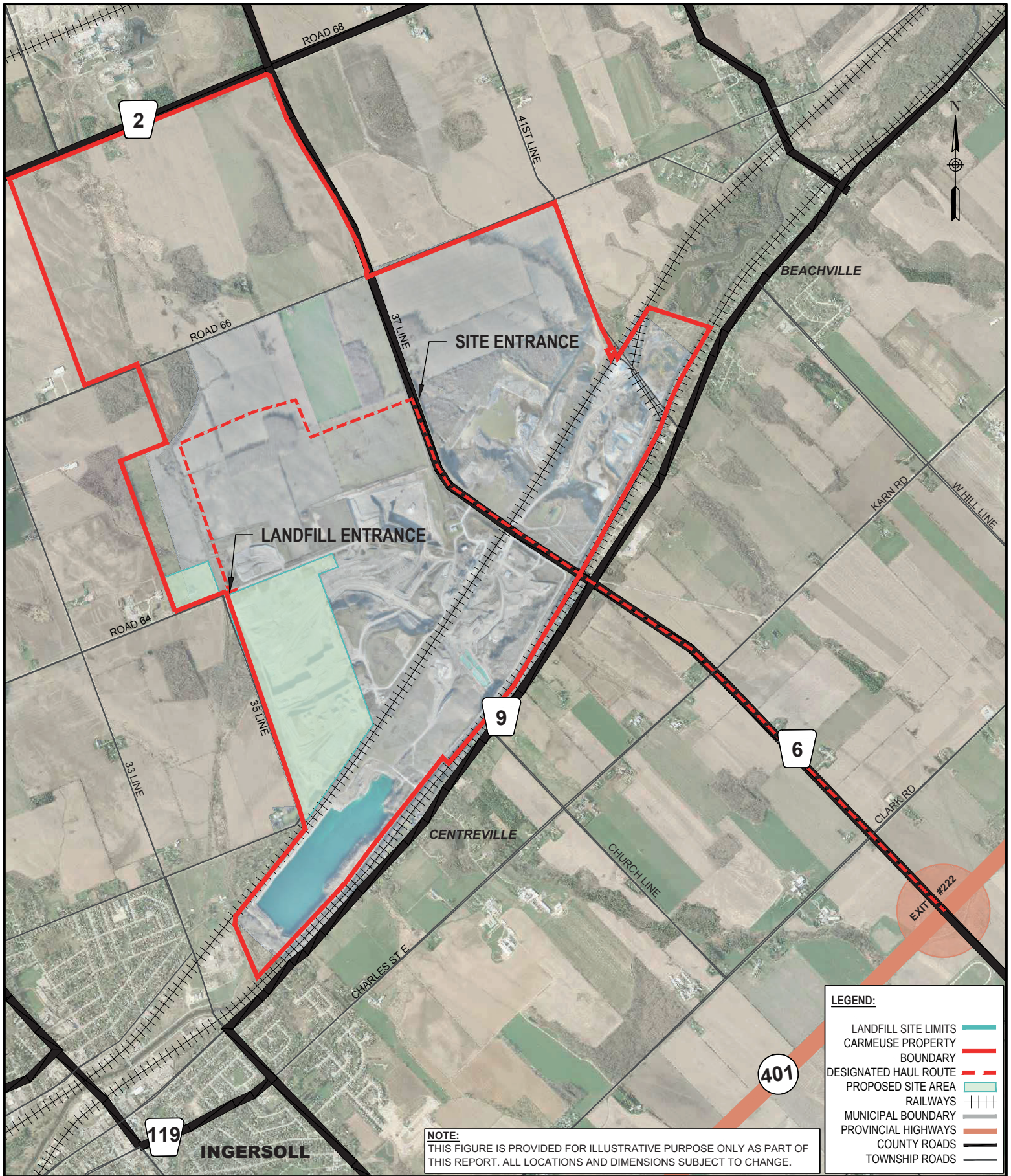
site (**Figure 5**). Vehicle traffic, including waste trucks as well as construction vehicles and staff, is expected to average approximately 210 trips *per day*.

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 equipment operations, 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.

Specific to potential impacts 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.



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



Owner	Project	Project No.	Scale Bar
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		DFry	08JAN20
			Drawing No.
			Revision No.
			<b>Figure 5</b>
			<b>E</b>



## 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 are the EA criteria which are assigned to this study:

EA Criteria	Definition/Rationale
Compatibility with municipal land use designations and official plans.	A waste disposal facility has the potential to affect the viability of present and future land uses, which may have an effect on planning decisions made in the surrounding community.
Sterilization of industrial mineral resources.	The establishment of a waste disposal facility may limit the opportunity to extract industrial mineral resources located beneath the site.
Displacement of forestry resources.	The establishment of a waste disposal facility may limit the opportunity to utilize forestry resources on or near the site.

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.

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):

- **Agricultural**
- **Cultural heritage**
- **Economic / financial**
- **Social**
- **Traffic**

**Indicators** identify how the potential environmental effects will be measured for each criterion. Each of the supporting technical studies contained a specific set of indicators, as well as specific means by which to assess potential impacts as a result of the proposed landfill operation.

## 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 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.

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. For information purposes, **Figure 6** depicts the study area and common receptor locations in the context of the subject lands.



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



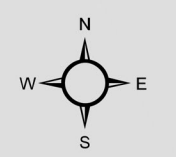
**Legend**

Subject Lands	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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## 7. Methodology and data collection

The methodology by which this Planning Justification Report was undertaken following typical procedures for undertaking a land use planning justification exercise. In general, the methods involved the following steps:

- Site visits by MHBC staff to the subject lands and surrounding area in order to develop an understanding of the site context.
- A review of background documentation regarding the proposed site operation and particulars of proposed staging.
- Review of applicable *Aggregate Resources Act (ARA)* Site Plans for the existing quarry operation.
- A detailed review of applicable land use planning policy documents, including Province (Provincial Policy Statement), County of Oxford (Official Plan), Town of Ingersoll (Zoning By-law), Township of Zorra (Zoning By-law), and Township of South-West Oxford (Zoning By-law).
- Review of supporting technical reports prepared in conjunction with this proposal.
- Consultation with County of Oxford Planning staff through the pre-submission consultation process associated with the *Planning Act* applications.

This report provides a summary of the background information reviewed, detailed planning policy analysis, and an assessment of the compatibility of the proposed operation with the surrounding areas.

## 8. 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).

### 8.1 Baseline Assumptions

#### 8.1.1 Land Use Forecast

A common set of assumptions were provided by MHBC Planning on behalf of Walker Environmental Group regarding the forecast land uses in the area, so that the various background studies 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). These assumptions are summarized in Walker’s *Environmental Assessment Report*, and the full Land Use Planning Forecast Report is included with this report as Appendix B. A brief review of the aspects relevant to this study follows.

In order to guide the forecasting of future baseline conditions, a set of working assumptions 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 were developed. This information 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*, the various studies completed compared 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).

#### 8.1.2 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



essentially 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*.

## 8.2 Environmental Baseline Conditions

### 8.2.1 Existing Conditions

The subject lands are located within a rural area, just east of the Town of Ingersoll. The subject lands are 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 currently owned by Carmeuse Lime (Canada) Ltd. for quarry operations, where quarry activities have been in operation for over 100 years. 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 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. Two major railway corridors pass through the southern portion of the site. The southern limit of the site 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 site vicinity (1 km) Study Area include licenced future quarry lands (presently farmland), non-farm residential uses, existing quarry operations, railway tracks, (Canadian National Railway & Ontario Southland Railway), 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 about 305 - 365 metres above sea level (1000 - 2000 feet 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).

The areas surrounding the subject lands mainly consist of gentle to moderately undulating agricultural lands. The lowest elevation is the south branch of the Thames River, located to the south of the site. The highest point of land within 5 kilometers of the site is located to the southeast, south of Highway 401.

Vegetation onsite is sparse given the existing use as a quarry operation. There is existing landscape screening around the periphery of the quarry operation (e.g. berms), as well as mixed woodlots located in the areas around the site.

### 8.2.2 Future Baseline Conditions

In the absence of the proposed Southwest Landfill proposal, future baseline conditions would include continued quarrying activities on the subject site and also within the 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.

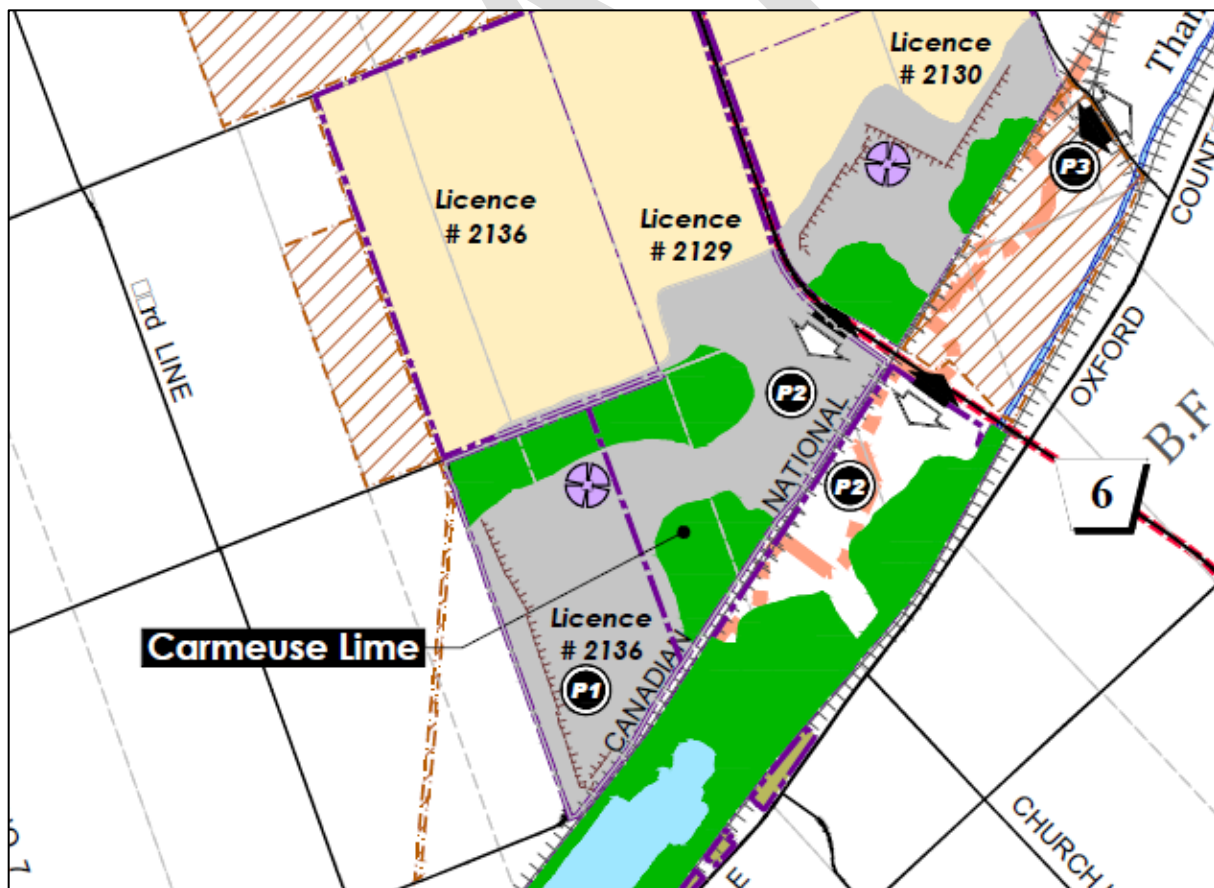


Figure 7 - Excerpt from Land Use Planning Forecast 2023 site conditions (source: MHBC)

The proposed Southwest Landfill would result in changes to the rehabilitation plans for a portion of the Carmeuse Quarry. It is anticipated that quarrying will continue to progress 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.

## 9. Land Use Planning Context

This purpose of this section is to provide an overview of the applicable land use planning policy documents, in order to provide a context of the various considerations to take into account. In addition, this section provides a summary of the projected population and employment growth for the broader community, including beyond the project-specific study area.

### 9.1 Provincial Policy Statement

The 2014 Provincial Policy Statement (“PPS”) was issued by the Province of Ontario in accordance with Section 3 of the Planning Act and applies to all decisions in respect of the exercise of any planning authority that affects a planning matter made on or after April 30, 2014. All decisions must be “consistent with” the PPS.

The 2014 PPS provides policy direction on matters of provincial interest related to land use planning and development, and sets the policy foundation for regulating the development and use of land. The PPS provides for the appropriate development of land, while protecting resources of provincial interest, public health and safety, and the quality of the natural and built environment.

The PPS supports a comprehensive, integrated and long-term approach to planning, and recognizes linkages among policy areas. The PPS is to be read in its entirety and the relevant policies are to be applied to each situation. The policies in the PPS are outcome-oriented, and some policies provide flexibility in their implementation provided that provincial interests are upheld.

The Province’s natural heritage resources, water resources, agricultural resources, mineral resources, and cultural heritage and archaeological resources provide important environmental, economic and social benefits. The wise use and management of these resources over the long term is a key provincial interest. This PPS direction aligns closely with the purpose of the *Environmental Assessment Act*, which speaks to providing for the betterment of the people of the whole or any part of the Province by providing for the protection, conservation and wise management of the environment.

There are a number of areas of policy interest contained within the PPS that must be taken into account when evaluating a use such as the Southwestern Landfill. These include: availability of natural resources (such as mineral aggregate resources); protection of agricultural land; protection of significant natural heritage features and areas and ecological functions; the protection of groundwater and surface water resources; protecting cultural heritage resources; and minimizing risk to public health and safety. Land use compatibility of major facilities is addressed in Section 1.2.6.1 of the PPS, which notes that major facilities and sensitive land use should be planned to ensure they are designed, buffered and separated from each other to prevent or mitigate adverse effects and ensure the long-term viability of major facilities.

The PPS provides general policy direction related to rural lands (defined to include rural settlement areas, rural lands, prime agricultural lands, natural heritage features and areas, and resource areas) in Section 1.1.5, and notes that permitted uses are the management of resources, resource-based recreational uses, limited residential development, home occupations / industries, cemeteries and other rural land uses. Further policy direction specifically related to landfill sites is included with infrastructure and public services facilities policies starting in Section 1.6. This section directs that such facilities be provided in a coordinated, efficient and cost-effective manner. The PPS definition of infrastructure is as follows:

*Infrastructure: means physical structures (facilities and corridors) that form the foundation for development. Infrastructure includes: sewage and water systems, septage treatment systems, stormwater management systems, waste management systems, electricity generation facilities, electricity transmission and distribution systems, communications/telecommunications, transit and transportation corridors and facilities, oil and gas pipelines and associated facilities.*

Further, the PPS definition of waste management system is as follows:

*Waste management system: means sites and facilities to accommodate solid waste from one or more municipalities and includes recycling facilities, transfer stations, processing sites and disposal sites*

The PPS policies will be further reviewed and assessed as part of Section 10 of this report, with relevant policy sections also reviewed by each applicable technical consulting team.

## 9.2 Oxford County Official Plan

The County of Oxford Official Plan was originally approved in December 1995, and has been subject to a number of amendments and updates since approved. The Oxford Official Plan is applicable to the subject lands. The Official Plan contains policies adopted by the Council of the County of Oxford to guide and manage the extent, pattern and type of settlement and the use of land and resources desired to maintain and improve the quality of the environment and the quality of life for County residents and to address matters of Provincial interest.

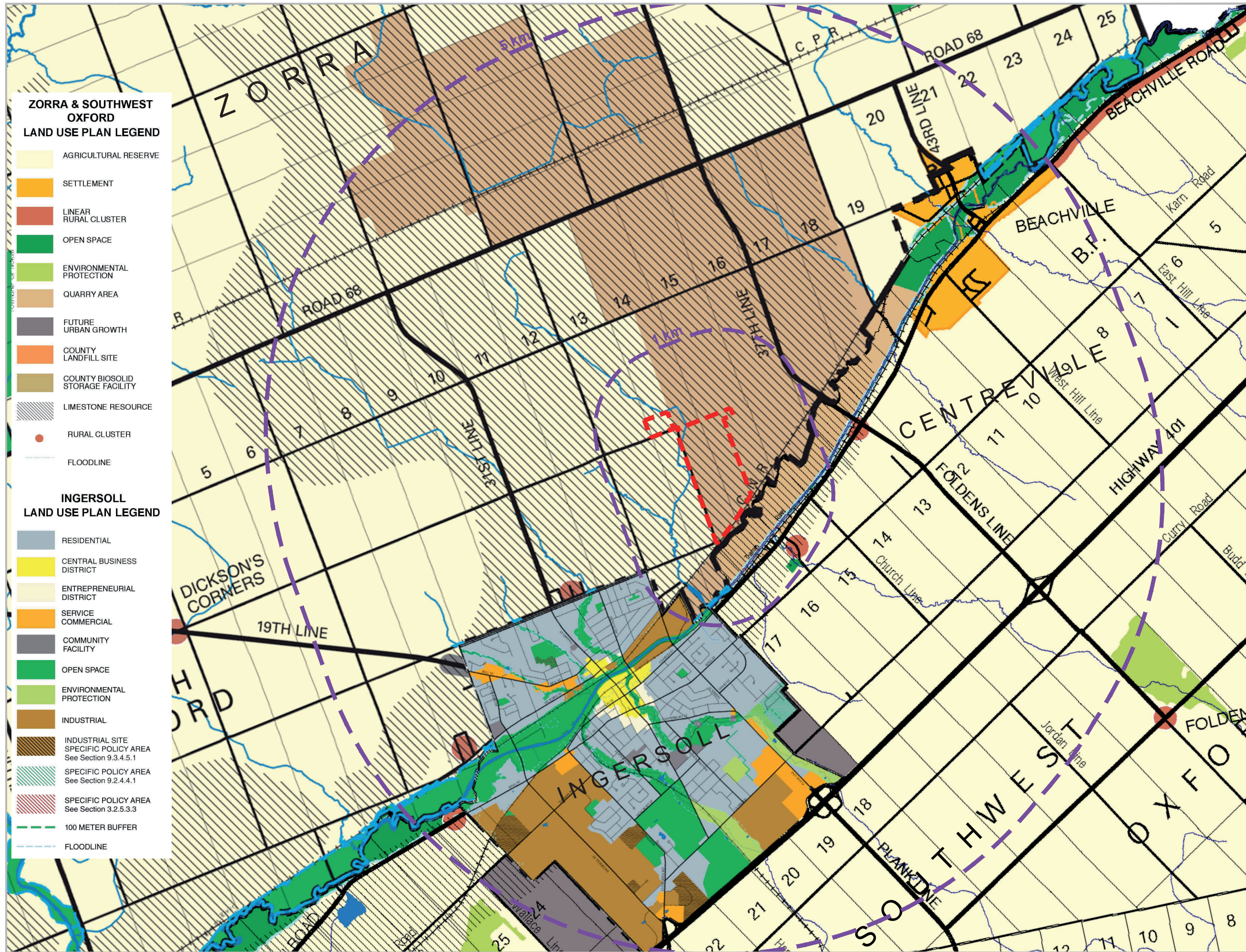
The portion of the proposed Southwestern Landfill that is located within the existing quarry operation is designated Quarry Area, while the small portion of the site proposed for the leachate facility is currently designated Agricultural Reserve. The majority of the 5km and 1km Study Areas outside the Town of Ingersoll are designated Agricultural Reserve and/or Quarry Area, or identified as Limestone Resource Area (see **Figure 8**). The Agricultural Reserve designation contains lands most suitable for agricultural production within the County, and are intended to be protected for agricultural and resource extraction uses. The Quarry Area designation applies to existing licenced aggregate operations and adjacent lands where new or expanded quarries may be considered without amendment to the Official Plan. The Limestone Resource Area designation applies to lands within and outside the Quarry Area designation, where limestone resources have been identified by the Province. In accordance with policy direction, it is anticipated that development in these areas would be generally limited to agriculture and resource related uses.



Figure 8

# Land Use Plan

County of Oxford Official Plan  
Walker Environmental Group  
Township of Zorra,  
County of Oxford



### ZORRA & SOUTHWEST OXFORD LAND USE PLAN LEGEND

- AGRICULTURAL RESERVE
- SETTLEMENT
- LINEAR RURAL CLUSTER
- OPEN SPACE
- ENVIRONMENTAL PROTECTION
- QUARRY AREA
- FUTURE URBAN GROWTH
- COUNTY LANDFILL SITE
- COUNTY BIOSOLID STORAGE FACILITY
- LIMESTONE RESOURCE
- RURAL CLUSTER
- FLOODLINE

### INGERSOLL LAND USE PLAN LEGEND

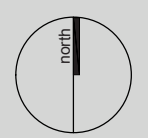
- RESIDENTIAL
- CENTRAL BUSINESS DISTRICT
- ENTREPRENEURIAL DISTRICT
- SERVICE COMMERCIAL
- COMMUNITY FACILITY
- OPEN SPACE
- ENVIRONMENTAL PROTECTION
- INDUSTRIAL
- INDUSTRIAL SITE
- SPECIFIC POLICY AREA See Section 9.3.4.5.1
- SPECIFIC POLICY AREA See Section 9.2.4.4.1
- SPECIFIC POLICY AREA See Section 3.2.5.3.3
- 100 METER BUFFER
- FLOODLINE

### LEGEND

- Subject Lands
- Municipal Boundary
- 1 km & 5 km Study Area

Source: Township of Zorra Official Plan, Schedule Z-1 Land Use Plan  
Town of Ingersoll Official Plan, Schedule I-2 Residential Density Plan  
Township of Southwest Oxford Official Plan, Schedule S-1 Land Use Plan

DATE: February 5, 2020  
SCALE: N.T.S.  
JOB: 9811AG  
DRN: NZ/JB



K:\9811AG-WALKER ENVIRONMENTAL GROUP-LANDSCAPE TERMS OF REFERENCE\PT\FIGURE 8 - LAND USE PLAN.DWG



The County of Oxford Official Plan contains policies related to various policy interests and resource uses within the County boundary, including natural heritage, agricultural, surface and groundwater, resource extraction (including mineral aggregate resources), and cultural heritage resources.

There are also specific policies contained within the Official Plan which address the future consideration of landfill sites (OPA 197). The OPA specific to landfill policies was initiated in late 2015, adopted by Council in mid-2016 and subsequently appealed to the Ontario Municipal Board (now the Local Planning Appeals Tribunal). The LPAT approved the amendment with some modifications in May 2018. Section 5.3.4 of the Official Plan contains policy direction related to new landfill sites, and notes that an amendment to the Official Plan is required in order to establish any new landfill facilities. Proponents of new landfill sites are required to demonstrate the following:

- *the proposal complies with the provisions and approval requirements of the Environmental Assessment Act, Environmental Protection Act and any other relevant Provincial legislation and regulations and is consistent with the principles, objectives and policies of this Plan;*
- *alternative sites, landfill design and operations have been thoroughly assessed against all reasonable alternatives and that the proposed landfill is necessary to meet the County's waste disposal needs, or where this cannot be demonstrated, either the proposal is subject to approved Terms of Reference pursuant to the Environmental Assessment Act or that a reasonable range of alternatives outside of the County has been fully investigated and that the proposed site is demonstrated to be the preferred siting option, based on a full assessment of the environmental impacts of the options considered;*
- *the impact on individuals and communities has been assessed through a systematic process which identifies the potential risks to human health and the said assessment demonstrates that there will be no significant adverse effects thereto;*
- *the impact on agriculture, mineral and petroleum resources, and off-site ground and surface water resources, air quality, noise, litter and other nuisance impacts and other social and community impacts resulting from the landfill facility has been assessed and that the said assessment demonstrates that there will be no significant adverse effects;*
- *the impact on the natural heritage system has been assessed and that said assessment demonstrates that there will be no negative impact on natural heritage features or areas and that the proposal will comply with the applicable policies of Section 3.2.3 of this Plan; and*
- *plans for the after-use of the site are compatible with existing and planned land uses in the area.*

The policies further require that new or expanding landfill sites be located and designed in accordance with Provincial legislation and standards. The policies also encourage the integration of Official Plan amendments for new operations with the Provincial environmental assessment process, so that all applicable requirements are taken in to account concurrently. This approach has been taken by the applicant and review agencies. Section 5.3.5 of the Official Plan sets out requirements related to public consultation and 3<sup>rd</sup> party review of application materials.

### 9.3 Zoning By-laws

The subject lands are located within the Township of Zorra, and are therefore governed by the Township of Zorra Zoning By-law. Given the location of the subject lands within the County of Oxford, the site is also located in close proximity to the Town of Ingersoll and Township of Southwest Oxford. Therefore, the Zoning By-laws of those municipalities are also relevant in understanding a land use planning context. **Figure 9** on the following page depicts the applicable zoning information from the Township of Zorra and other nearby municipalities.

The in-force Township of Zorra Zoning By-law is By-law 35-99. The latest consolidation of the By-law is dated December 31<sup>st</sup>, 2017. The subject lands are zoned a mixture of MQ – Quarry Industrial and A2 – General Agriculture, with the existing quarry being zoned MQ. The MQ zone permits aggregate extraction operations (quarry / gravel pit), as well as related uses such as aggregate storage, aggregate recycling, an asphalt or concrete batching plant, cement / lime manufacturing plant, and farming. The A2 zone permits a variety of agriculture and agricultural-related uses and home occupations. Neither the MQ nor A2 zones permit a landfill operation.

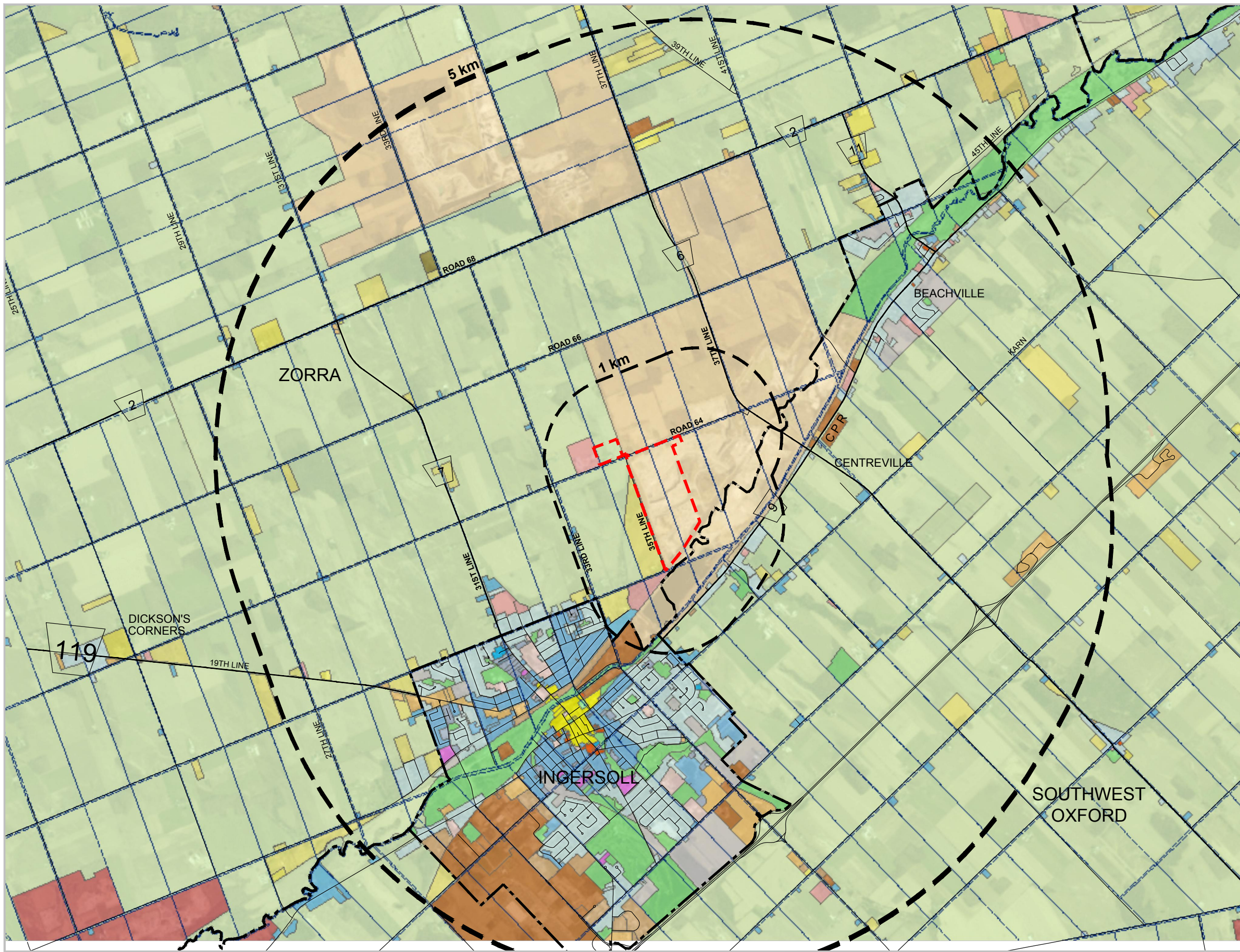
### 9.4 Population and employment growth

MHBC prepared a Land Use Planning Forecast in October 2017 (included as **Appendix C**), in order to examine long-range development patterns in the surrounding area and understand future land uses to be taken into consideration by the project team. A component of this work was a review of expected population and employment growth, based on 2014 work undertaken by Oxford County.

The work undertaken through the Land Use Forecast Report investigated the population and employment growth projections for the general area. The report concluded that some lands in the vicinity of the proposed Southwestern Landfill can be expected to be developed in the future, with the vast majority of development located outside the 1km Study Area. With respect to the broader area, the report concluded that future development is expected to occur within the 5km Study Area, but predominately in the south east area of the Town of Ingersoll. Residential and employment development is expected to occur throughout the 30 year planning horizon in response to moderate population and employment growth.

With respect to population and employment growth, the report concluded that the Toyota and CAMI manufacturing plants have been strong contributors to local employment and help to spur demand in both employment and residential lands. The report concluded that the County is forecast to experience modest population growth over the Baseline-2043 period, with population growth forecast to be the strongest during the Baseline-2023 horizon and gradually slowing down post 2023 as a result of the County's aging population.





**Figure 9**  
**Surrounding Zoning**  
 within 5 kilometres

Walker Environmental Group  
 Township of Zorra,  
 County of Oxford



**LEGEND**

- Subject Lands
- Municipal Boundary
- 5 km & 1 km Study Area

	Residential Zones
	Commercial Zones
	Industrial Zones
	Institutional Zones
	Open Space / Environmental Zones
	Agriculture Zones
	Development Zones
	Village

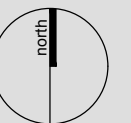
Source: County of Oxford Online Mapping, 2010 Airphoto

DATE: February 5, 2020

SCALE: N.T.S.

JOB: 9811AG

DRN: NZ/JB



K:\9811AG-WALKER ENVIRONMENTAL GROUP-LANDSCAPE TERMS OF REFERENCE\RPT\FIGURE 9 - SURROUNDING ZONING.DWG



With respect to residential growth, based on 2014 population and household projections, it was determined there would not be a need to designate additional land to accommodate residential demand. The current oversupply of residentially designated lands (under construction, in development process or vacant) will be sufficient to meet demand to 2043.

The report concluded that based on the existing supply of developable vacant employment land, Oxford County as a whole appeared to have a sufficient supply of employment lands to meet long-term needs to 2033. However, notwithstanding the County-wide employment land surplus identified, there is a forecast employment lands shortfall in Woodstock and Ingersoll over the planning period (i.e. 2013-2033). Additional areas of 36 gross ha (89 gross ac) and 65 gross ha (161 gross ac), respectively, were identified as being required.

Areas of future growth are located in the south east area of the Town of Ingersoll, with no future development proposed in the 1km Study Area that surrounds the subject lands. Designated resource areas (aggregate and agricultural) in the Township of Zorra, north of the Town of Ingersoll will limit the potential growth and land use changes in this area in accordance with Provincial and Official Plan policies requiring protection of these areas for long-term use. Area quarrying operations were expected to continue operating, or in the case of the Federal White Cement quarry, remain as future reserves.

Oxford County initiated a review process to update their population and growth projections in early 2019, resulting in the release of a draft document outlining growth projections for the County. Information related to this updated was reviewed by MHBC staff in order to understand changes. The updates extend the population projection timeline out to 2046 rather than 2043 as previously prepared, and land needs are examined to accommodate growth. In general, growth levels are higher than originally predicted, resulting in the need for some additional lands for future growth by 2039. These new population projections were taken into account as applicable in the preparation of supporting studies for the Southwestern Landfill. County staff are currently consulting on the report findings, and future consultation regarding specific areas of land to be identified is expected to occur during 2020.

## **10. Evaluation of the Proposed Landfill**

There are a number of measures by which land use compatibility can be determined and assessed, including locating land uses in compatible areas of the Province, as well as ensuring that nuisance-type effects (such as noise, dust, vibration and visual impact) are mitigated to acceptable levels based on Provincial standards and guidelines. In accordance with Provincial guidelines, Oxford County Official Plan requirements, and the approved Terms of Reference for the Environmental Assessment, there are a wide range of topics that are assessed.

The purpose of this section of the report is to provide an evaluation of the proposed Southwestern Landfill proposal, in the context of the various supporting studies prepared by the project team for the Environmental Assessment process. Based on a review of the supporting studies, a conclusion will be provided regarding the overall land use compatibility.

### **10.1 Summary of supporting technical reports**

As noted, a number of supporting studies have been prepared in accordance with various requirements. The required studies were completed on behalf of WEG, by independent experts in their respective fields.

#### **10.1.1 Surface Water**

A Surface Water Assessment Report has been prepared by Golder Associates, in order to understand and assess surface water resources within the study area. The Assessment characterized the surrounding area in terms of surface water features, including the Patterson-Robbins Drain, South Branch of the Upper Thames River, and existing depleted and flooded quarry. The report noted that the depleted quarry area drains directly to the Thames River through an approved stormwater management system. Regarding water quality, it was determined that water in the area is typical of run-off from agricultural land.

The report concluded that the only watercourse on the site is the Patterson-Robbins Drain, crossing in the northwestern corner between the proposed landfill and the leachate treatment plant, and that it may need to be diverted for future quarry development. The report also concluded that no water bodies or watercourses would be removed or displaced as part of the proposed landfill construction and that no cumulative effects would occur. In addition, the stormwater management system at the site will have sufficient capacity to ensure that the site will not be flooded, even during major regional storm events, and that there will be no significant increase in flooding in the adjacent Patterson-Robbins Drain or South Thames River.

### **10.1.2 Geology and Groundwater**

A Groundwater Assessment Report has been prepared by Golder Associates and Worthington Groundwater, in order to understand and assess groundwater resources within the study area. The report reviewed overburden soils at the site, as well the various groundwater aquifers that exist at the site. These consist of a shallow generally unconfined aquifer, an intermediate depth generally confined aquifer, and a deeply buried generally confined aquifer. It was determined that the bedrock does not have any significant large-scale Karst effects, but rather that the groundwater flows predictably through a regular network of small fractures in the rock. Local groundwater is recharged by precipitation and is currently affected by the dewatering activities at the surrounding quarry operation.

The Assessment determined there would be no impacts on groundwater resources or supply wells as a result of the proposed landfill operation. The groundwater levels as a result of quarrying will remain below the level of the landfill site, and the landfill will be further isolated from the groundwater by its liner system. After the landfill is complete, quarry dewatering will continue to control groundwater levels into the future.

### **10.1.3 Ecology**

An Ecological Assessment Report has been prepared by Beacon Environmental, in order to characterize and assess ecological resources within the study area. A comprehensive review of existing data was undertaken, and supplemented by field surveys through all seasons in order to determine the presence of both aquatic and terrestrial species and habitats on and around the site.

The Assessment determined that there were no key natural heritage features or rare, endangered or threatened species located on the site proposed to be utilized as a landfill operation.

Within 120 metres, it was determined there was fish habitat, woodlands which may provide endangered species habitat, a meadow that provides habitat for the threatened Eastern Meadowlark, swamp and marsh areas that are the site of amphibian breeding, and habitat for nesting Cliff Swallows along the northern wall of the former West Quarry.

The report concluded that there were no significant offsite effects on vegetation or wildlife in the vicinity of the site, except for the noise associated with bird control in some areas of the proposed landfill. In addition, no significant effects on terrestrial ecosystems were identified. Regarding aquatic resources, no habitat is required to be removed, and no significant effects on ecosystems were identified. Periodic monitoring was identified as a form of mitigation in order to confirm no impacts from stormwater discharge to the adjacent Patterson-Robbins Drain.

#### **10.1.4 Visual impact**

A Visual Impact Assessment Report has been prepared by MHBC Planning, in order to understand the existing visual environment within the study area and assess potential change as a result of the landfill operation. Through terrain modeling of potential views as well as field verification, the Assessment found that visual impacts are limited to minor impacts for two receptors (ZOR-10 and ZOR-11). Mitigation was recommended in the form of additional screening or plantings. The report concluded that there will be no unacceptable visual impacts or risks associated with mitigation or any remaining significant impacts after mitigation measures are in place.

#### **10.1.5 Cultural heritage**

A Cultural Heritage Resource and Cultural Heritage Landscape Assessment Report was prepared by MHBC Planning, in order to understand the existing and potential resources within the study area, as well as assess potential impacts. The Assessment determined that there were no properties designated within 1 km of the proposed Southwestern Landfill site, and also assessed properties with resources more than 40 years old onsite and within 1 km.

Potential built heritage resources and cultural heritage landscapes were evaluated using guidance provided by the Province through the *Ontario Heritage Act* and Ontario Heritage Toolkit. The study concluded that there were no significant cultural heritage resources located onsite, and that existing resources located within the study area would not be negatively impacted as a result of the proposed landfill operation.

#### **10.1.6 Archaeology**

An Archaeological Assessment Report has been prepared by Archaeological Research Associates, in order to characterize and assess the potential for archaeological resources within the study area. The Assessment determined there is one site of archaeological significance located in the area of the proposed leachate treatment plant. The site consists of primarily Euro-Canadian artifacts such as building materials and household items, which suggests the likely location of a previous farm dwelling from the mid- to late-19<sup>th</sup> century into the early 20<sup>th</sup> century. No other resources were identified.

Prior to any construction activities within the area of the proposed leachate treatment plant, a Stage 3 (and possibly Stage 4) archaeological assessment would need to be completed in order to ensure the resources are conserved in accordance with provincial requirements.

#### **10.1.7 Agriculture**

An Agricultural Assessment Report has been prepared by Conna Consulting Inc., in order to characterize and assess agricultural resources within the study area. The Assessment reviewed the

surrounding rural areas to determine the type of agricultural operations being undertaken, as well as the size of operations. The report found that the majority of the proposed landfill is currently an active limestone quarry rather than agriculture, aside from a small area proposed for the future leachate treatment plant (not licenced for quarrying).

The report concluded that there would be no displacement of agricultural land for the waste disposal area, and that a temporary displacement of rented fields would occur for the new access road, as well as 6.3 ha for the leachate facility. There was potential identified for new agricultural land on the closed and rehabilitated landfill area, as well as opportunities to enhance the agricultural potential of the closed landfill with diverted organic and bio-solid materials.

### **10.1.8 Transportation**

A Traffic Impact Assessment Report has been prepared by HDR Corporation, in order to characterize and assess potential traffic impacts associated with the proposed landfill operation. The study reviewed existing roads in the area, including the proposed haul route for the landfill operation. Average traffic counts were reviewed, as was intersections in the area and accident data in order to determine the existing condition of the traffic system. Future growth rates and projections were also determined in order to understand what is likely to occur with and without the proposed landfill.

The Report determined that Walker's landfill traffic would represent a small amount of the overall traffic on the primary haul route, translating less than 3% of the average daily traffic volume and 5% of the peak traffic volumes. It was determined the landfill will not have a significant effect on overall traffic safety, especially when combined with the fact that CR#6 is designed and designated by the County for high volumes of inter-municipal and long distance traffic, and the haul route and intersections will continue to have sufficient capacity and good levels of service in the future to accommodate the landfill traffic. In order assist with turn movements, the existing left turn lane on County Road 6 will be extended to allow for through traffic to pass turning landfill traffic. No additional mitigation measures were identified.

### **10.1.9 Noise and vibration**

A Noise and Vibration Assessment Report has been prepared by RWDI Air Inc., in order to understand the existing acoustic environment in the study area, and assess potential impacts as a result of the proposed landfill operation. The existing noise climate was reviewed as it relates to urban, industrial and farming activities, as well as road traffic in the area. Existing noise levels were found to be within Provincial guidelines as it relates to quarry activities and transportation noise, aside from the area around the intersection of Beachville Road and County Road #6. Impulsive noises were also reviewed, and it was found that there was a substantial amount of impulsive noise from uses such as trains in the area and quarry operations.

The Report found that noise from the landfill operations and traffic will not be significant at off-site locations. The addition of landfill traffic on the haul route has been calculated to raise sound levels at

residences along County Road #6 by less than 0.1 decibels, which is also considered insignificant. The only potential effect that has been identified through the noise assessment is an estimated increase of more than 3 decibels (i.e., a noticeable change in sound level) at the closest residence immediately southwest of the landfill during a portion of the Stage 3 landfill operation. As a result, a sound barrier has been recommended near this location for further mitigation.

The landfill operations are not expected to be a significant source of off-site vibration.

#### **10.1.10 Air quality**

An Air Quality Assessment Report has been prepared by RWDI Air Inc., in order to understand the existing air quality within the study area, and assess potential impacts as a result of the proposed landfill operation. The Assessment determined that air quality in the vicinity of the site is reflective of the surrounding land uses and transportation corridors, but generally meets Provincial standards. Two exceptions were chloroform and benzo(a)pyrene, which are found in the background for the area.

Through modeling future emissions, the report found that air quality at off-site residences and public facilities when the residual emissions from all landfill related sources are combined with the background air quality and other local emission sources (i.e., lime kilns) will continue to meet provincial standards. The two exceptions are noted above, and the landfill will contribute a negligible amount to both criteria. The report also found that the landfill gas collection and treatment operations will significantly reduce air emissions from the site. Regardless, additional mitigation measures regarding dust have been built into the proposed landfill operation, in order to further improve background levels.

A potential positive effect of the proposed landfill will be a substantial overall reduction in greenhouse gas emissions of approximately 4 to 5 million tonnes of CO<sub>2</sub>e compared to landfilling the equivalent amount of waste in Michigan landfills. This is comparable to removing about 30,000 cars *per* year from the road for 50 years.

#### **10.1.11 Human Health**

A Human Health Assessment Report has been prepared by Intrinsik Consulting, in order to understand the overall impact to human health as a result of the proposed landfill operation. The Assessment took into account other disciplines such as noise and vibration, air quality, and groundwater / surface water impacts, and also reviewed matters such as risk of disease transmission and risk of explosion due to landfill gas.

The results of the noise, air quality and water resource studies are discussed elsewhere in this report, but determined there were no negative impacts as a result of the proposed landfill operation. Regarding disease transmission, it was determined that the risk of disease transmission to humans from any vermin at the landfill is very unlikely in any event, but it is even further reduced with the modern landfill operations and pest controls that will be employed at this site. The risk of explosion due to gas from the landfill was determined to be negligible, primarily due to the efficient removal of landfill gas

(expected at 85%), as well as the extent of the liner system and buffer zones for monitoring.

### **10.1.12 Social impact**

A Social Impact Assessment Report has been prepared by SLR Consulting and Shared Value Solutions in order to characterize and assess the social impacts associated with the proposed landfill operation. The Assessment determined that no residents will have to be displaced from their homes in order to construct or operate the proposed landfill. There is one former residence owned by the quarry operator at the location of the proposed leachate treatment plant (in the northwest corner of the site), but this house has recently been removed. No public facilities, institutions or recreational recourses will be displaced either by the proposed landfill.

More broadly, the Social Impact Assessment Report reviewed the conclusions of the other technical reports in order to develop an overall understanding of broad impacts. The report found that the landfill operations are likely to result in, or add to, occasional nuisance effects from dust, odour, noise and visibility in the vicinity of the site (generally about 500 metres of the site). One residence that is likely to experience nuisance effects is located to the southwest, and intermittent nuisance effects could be experienced at the Ingersoll Rural Cemetery. Traffic was also noted to increase somewhat from the proposed operation. Overall, minor loss of enjoyment was noted as a possibility, but no adverse effect on the use and enjoyment of properties in the community was noted.

A number of mitigation measures are proposed for the landfill operation and are intended to lessen any residual social effects, including the formation of a Public Liaison Committee and regular community updates regarding activities at the landfill. Various mitigation and monitoring measures are also built into the landfill operation itself, including bird management, truck queuing and signage, property value protection agreements, further archaeological work, dust controls, leachate lagoon covers, noise / visual barrier, and maintaining agricultural drainage.

### **10.1.13 Economic impact**

An Economic Impact Assessment Report has been prepared by Keir Corp in order to characterize and assess the economic impact within the study area. A review of surrounding businesses was undertaken, as well as a review of Oxford County's overall economy, labour force and housing market. The Assessment found the landfill would add substantially to the economy of the County through direct output from the project in terms of GDP contributions and labour income. Other benefits were also identified such as reduced costs to local businesses related to waste disposal.

Property effects were also reviewed and it was determined that impacts consisted of a slight (less than 4%) dip in value immediately following the project announcement, followed by a period of growth that is in keeping with the surrounding areas. It was determined that property values in the immediate vicinity were not expected to be affected by the landfill operation. However, in order to mitigate against any potential effects on closest receptors, a property value protection agreement has been recommended.



### 10.1.14 Summary

Based on the findings of the technical reports prepared as part of the Environmental Assessment process and the commitments outlined with respect to mitigation and monitoring, it has been determined that the proposed Southwest Landfill can be operated in an environmentally safe manner in conformity with applicable guidance.

The conclusions and recommendations of the various technical reports have also been taken into account in the design of the proposed landfill facility, and further reviewed as part of the Environmental Assessment process in order to arrive at an overall mitigation strategy. Technical report recommendations will be implemented should the proposed development receive approval.

## 10.2 Planning analysis and compatibility

The PPS provides overall guidance related to land use compatibility on a Province-wide level, and directs that uses such as a landfill site be located within a rural area, and in areas where the use will minimize impacts on agriculture and other resource-related uses. The proposed operation is appropriately located within a rural area, and has been sited in order to minimize impacts on agriculture and other resource-related uses.

With respect to rural lands, Section 1.1.5.1 directs planning authorities to apply the relevant policies of Sections 1 (Building Strong Healthy Communities), as well as Section 2 (Wise Use and Management of Resources), and Section 3 (Protecting Public Health and Safety).

The PPS directs that major facilities (which includes landfill sites) and sensitive land uses should be planned to ensure they are appropriately designed, buffered and/or separated from each other to prevent or mitigate adverse effects from odour, noise and other contaminants, minimize risk to public health and safety, and to ensure the long-term viability of major facilities (Policy 1.2.6.1). The proposed facility (including fill area, leachate treatment, and haul road) has been designed to be well-separated and buffered from nearby sensitive land uses, and the comprehensive studies undertaken have been prepared to ensure that the use is compatible with surrounding areas and uses.

As noted earlier in this report, Section 1.6 of the PPS provides policy direction related to Infrastructure and Public Services. The policy directs that such facilities shall be provided in a coordinated, efficient and cost-effective manner that considers impacts from climate change while accommodating projected needs. Section 1.6.10 of the PPS specifically addresses waste management facilities, and notes that they shall be located and designed in accordance with provincial legislation and standards. The proposed Southwest Landfill is proceeding through a coordinated process that combines *Environmental Assessment Act* and *Planning Act* approvals into one concurrent review process. The detailed study process followed ensures that all aspects of the proposal are carefully reviewed and studied. This combined process ensures that the facility is designed and located in accordance with provincial

requirements.

The table below outlines the various resource considerations of Section 2 of the PPS, and how the relevant studies have shown to comply with the applicable policy direction:

<b>Policy direction / reference</b>		<b>Notes</b>
2.1.4	Development and site alteration not permitted in significant wetlands and significant coastal wetlands.	No development or site alteration is proposed within significant wetlands or coastal wetlands.
2.1.5	Development and site alteration not permitted in significant wetlands, significant woodlands, significant valleylands, significant wildlife habitat, significant ANSIs unless it is demonstrated that there will be no negative impacts.	No development or site alteration is proposed within significant wetlands, woodlands, valleylands, wildlife habitat or ANSIs.
2.1.6	Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.	No development or site alteration is proposed in fish habitat.
2.1.7	Development and site alteration shall not be permitted in habitat of endangered and threatened species, except in accordance with provincial and federal requirements.	No development or site alteration is proposed within habitat of endangered or threatened species.
2.1.8	Development and site alteration not permitted in adjacent lands to above, unless it is demonstrated that there will be no negative impacts on the natural heritage features or on their ecological functions.	Development and site alteration is proposed in adjacent lands to fish habitat and endangered and threatened species habitat. Applicable study has been completed and it has been determined there are no negative impacts.
2.2.2	Development and site alteration shall be restricted in or near sensitive surface water or groundwater features such that the features will be protected, improved or restored.	No development or site alteration is proposed in sensitive surface water features or groundwater features. The supporting technical reports prepared by Golder Associates determined nearby features will be protected.
2.3.1	Prime agricultural areas shall be protected for long-term use for agriculture.	Most of the proposed landfill operation is located within an existing quarry site, not determined to be prime agricultural land. A small portion of the site containing agricultural lands will be utilized for the leachate treatment plant. The supporting technical report reviewed the broader prime agricultural area and determined it would be protected for long-term agricultural use.
2.4.1	Minerals and petroleum resources shall be protected for long-term use.	There are no mineral or petroleum resources located within the subject site.
2.5.1	Mineral aggregate resources shall be protected for long-term use.	The mineral resources on the subject site will have been extracted by the time the landfill operation commences, and future licenced areas will be protected.

2.6.1	Significant built heritage resources and significant cultural heritage landscapes shall be conserved.	As demonstrated, the subject site does not contain any significant cultural heritage resources.
2.6.2	Development and site alteration shall not be permitted on lands containing archaeological resources unless significant resources have been conserved.	Much of the proposed landfill site has been previously disturbed through quarry operations, but some archaeological resources were identified on the area of the site proposed to be used for the leachate treatment plant. Stage 3 (and possibly Stage 4) archaeological assessments will be completed prior to site disturbance, in order to ensure resources are conserved.
2.6.3	Development and site alteration shall not be permitted on adjacent lands to protected heritage property except where it has been demonstrated that the heritage attributes will be protected.	As demonstrated, there are no adjacent cultural heritage resources, and therefore no impacts on resources.

Section 3 of the PPS relates to protecting public health and safety, and deals primarily with natural hazards such as shorelines, flooding hazards, steep slopes. The subject site is not located within areas of natural hazards, and the background work undertaken has confirmed that nearby natural hazards associated with area watercourses (Thames River and Patterson-Robbins Drain) will not be impacted as a result of site operations.

The policy requirements of the Oxford County Official Plan set out detailed criteria to be considered in the evaluation of potential new or expanded landfill sites. As noted earlier in this report, Section 5.3.4 of the Official Plan contains specific items to address prior to considering approval of an Official Plan amendment to establish a new landfill site. The following outlines how the various criteria have been addressed through the application submission:

<b>Policy requirement</b>	<b>Notes</b>
<ul style="list-style-type: none"> <li><i>the proposal complies with the provisions and approval requirements of the Environmental Assessment Act, Environmental Protection Act and any other relevant Provincial legislation and regulations and is consistent with the principles, objectives and policies of this Plan;</i></li> </ul>	<p>The proposed Southwestern Landfill has been proceeding in accordance with the requirements of the EA process. Where required, applications for approval under the <i>Environmental Protection Act</i> and other applicable legislation will be made. Should these approvals be obtained, the Landfill will be deemed to comply with the requirements of the Act. The proposal is consistent with the Oxford Official Plan, in that the studies will ensure that various resources are protected and the use is compatible with the surrounding area.</p>



<ul style="list-style-type: none"> <li><i>alternative sites, landfill design and operations have been thoroughly assessed against all reasonable alternatives and that the proposed landfill is necessary to meet the County's waste disposal needs, or where this cannot be demonstrated, either the proposal is subject to approved Terms of Reference pursuant to the Environmental Assessment Act or that a reasonable range of alternatives outside of the County has been fully investigated and that the proposed site is demonstrated to be the preferred siting option, based on a full assessment of the environmental impacts of the options considered;</i></li> </ul>	<p>The proposal is subject to an approved Terms of Reference established through the EA process. The EA process is comprehensive, and the Environmental Assessment Report addresses the matters identified by this policy, such as evaluation of alternatives, siting, design, and each technical criteria assessed by the various background reports. The Environmental Assessment Report concludes that with the implementation of applicable mitigation measures, the site can be operated in an environmentally safe manner.</p>
<ul style="list-style-type: none"> <li><i>the impact on individuals and communities has been assessed through a systematic process which identifies the potential risks to human health and the said assessment demonstrates that there will be no significant adverse effects thereto;</i></li> </ul>	<p>Impacts on the community and surrounding land uses has been thoroughly studied by the project team, as documented in this report, the Human Health Assessment Report, and the Environmental Assessment Report. Based on the conclusions of the work undertaken, it has been determined the site can operate in a manner that ensures no significant adverse effects on human health.</p>
<ul style="list-style-type: none"> <li><i>the impact on agriculture, mineral and petroleum resources, and off-site ground and surface water resources, air quality, noise, litter and other nuisance impacts and other social and community impacts resulting from the landfill facility has been assessed and that the said assessment demonstrates that there will be no significant adverse effects;</i></li> </ul>	<p>Impacts on various resources and the community have been reviewed and studied by the project team. Individual reports will be submitted concurrent with the Environmental Assessment and <i>Planning Act</i> proposals for each of the disciplines listed. The reports have found the site can operate in an environmentally safe manner, and in accordance with applicable policies and regulations for the various disciplines reviewed, and that, following application of appropriate mitigation measures, there will be no significant adverse effect.</p>
<ul style="list-style-type: none"> <li><i>the impact on the natural heritage system has been assessed and that said assessment demonstrates that there will be no negative impact on natural heritage features or areas and that the proposal will comply with the applicable policies of Section 3.2.3 of this Plan; and</i></li> </ul>	<p>Impacts on the natural heritage system have been reviewed and studied by the project team, including the components listed in Section 3.2.3 of the Official Plan. The report prepared by Beacon Environmental found that there will be no negative impacts on natural heritage features or areas.</p>
<ul style="list-style-type: none"> <li><i>plans for the after-use of the site are compatible with existing and planned land uses in the area.</i></li> </ul>	<p>The after-use of the site is planned to include passive green space and/or agriculture uses, consistent with existing and currently planned land uses in the area. However, the design is flexible enough to accommodate other potential end-uses should they be desired. In accordance with regulation requirements, post-closure plans will be finalized in the final stages of site operation.</p>

The proposed Southwest Landfill utilizes a portion of an existing quarry operation, and is able to take advantage of the existing landform to help reduce overall impacts (i.e., by keeping the majority of the landfill operations below the surrounding grade in the former quarry and thereby minimizing its above-ground exposure). The landfill construction and operation is an industrial use that is similar to that currently taking place in the area due to quarrying and related activities.

The proposed operation has been appropriately designed and buffered to mitigate adverse effects on sensitive land uses near the site and ensure the proposed Southwestern Landfill is compatible with the surrounding area. The work completed demonstrates that the applicable policies of the County of Oxford Official Plan have been satisfactorily addressed related to site operations, and the applicable recommendations from each discipline have been incorporated into the site design through the EA process.

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## 11. Proposed Planning Act applications

In order to facilitate the approval of the proposed Southwestern Landfill, in accordance with the County Official Plan requirements, the proposal will require an amendment to the County of Oxford Official Plan to designate the property for landfill purposes. It is proposed to modify the existing “Quarry Area” designation to also permit a landfill site on the subject lands. This approach recognizes that the site will continue to be used for quarrying purposes until the commencement of landfill operations, and also that the broader lands will remain under Carmeuse ownership and continue to be a quarry.

An amendment to the Township of Zorra Zoning By-law will also be required in order to permit the proposed operation, including the leachate treatment facility and landfill related operations. Similar to the Official Plan, it is proposed to modify the existing zoning for the quarry to also permit the proposed landfill operation, including the leachate treatment facility and landfill related operations. The leachate treatment facility in the northwestern portion of the property (outside the active landfill area) is proposed to be placed in a separate agricultural-industrial zone, since it is located outside the existing quarry area.

In addition to the above, should the project be approved, a consent application will be required in order to sever the proposed landfill site and lands required for operations relating to the landfill from the larger land holdings owned by Carmeuse. It is proposed that this application be submitted such that a recommendation can come forward for all land use applications concurrently.

Finally, approval of a site plan control application will be required from the Township of Zorra for the leachate treatment facility . This application will be processed concurrently with the other *Planning Act* applications, with final approval to occur following resolution of the other related applications.

## 12. Conclusions

In closing, the proposed Southwestern Landfill project has been the subject of a detailed and thorough study process, in order to ensure that a comprehensive set of criteria are examined that will ensure all relevant aspects are evaluated. The scope of studies completed ensures that matters to be covered through the *Environmental Assessment Act* and *Planning Act* processes are examined and evaluated.

The land use is appropriately located within a rural area, buffered from other sensitive land uses, and is able to take advantage of a former quarry site to assist in mitigating impacts of the proposed operation. The proposed landfill will continue the industrial character already existing in the area, utilize existing infrastructure, and be comprehensively rehabilitated alongside the existing operating quarry.

Based on the studies prepared as it relates to the proposed landfill site, and subject to obtaining other applicable necessary approvals, it is concluded that the project can be undertaken in an environmentally safe and acceptable manner that is also in conformity with applicable Provincial policies, County of Oxford policies, and local municipal policies and guidelines.



## 13. References

- Archaeological Research Associates Ltd., 2020. *Stage 1 and 2 Archaeological Assessment Report , Southwestern Landfill Proposal Environmental Assessment*. August, 2019.
- Beacon Environmental Ltd., 2020. *Ecological Assessment Report (Draft), Southwestern Landfill Proposal Environmental Assessment*. January, 2020.
- Conna Consulting Inc., 2020. *Agricultural Assessment Report (Draft), Southwestern Landfill Proposal Environmental Assessment*. January, 2020.
- Corporation of the County of Oxford. *Official Plan*, December 31, 2017 consolidation.
- GHD Group Pty Ltd., 2020. *Greenhouse Gas Quantification Report (Draft), Southwestern Landfill Proposal Environmental Assessment*. January, 2020.
- Golder Associates Inc., 2020. *Groundwater Assessment Report (Draft), Southwestern Landfill Proposal Environmental Assessment*. January, 2020.
- Golder Associates Inc., 2020. *Surface Water Assessment Report (Draft), Southwestern Landfill Proposal Environmental Assessment*. January, 2020.
- HDR Corporation, 2020. *Traffic Assessment Report (Draft), Southwestern Landfill Proposal Environmental Assessment*. January, 2020.
- Hemson Consulting Ltd. *Oxford County Phase 1 Comprehensive Review*. April 3, 2019.
- Intrinsic Corp., 2020. *Human Health Risk Assessment Report (Draft), Southwestern Landfill Proposal Environmental Assessment*. January, 2020.
- Keir Corp., 2020. *Economic and Financial Assessment Report (Draft), Southwestern Landfill Proposal Environmental Assessment*. January, 2020.
- MacNaughton Hermsen Britton Clarkson Planning Limited (MHBC), 2020. *Cultural Heritage Resource and Cultural Heritage Landscape Assessment Report (Draft), Southwestern Landfill Proposal Environmental Assessment*. January, 2020.
- MacNaughton Hermsen Britton Clarkson Planning Limited (MHBC), 2017. *Land Use Planning Forecast Report*, October 2017.
- MacNaughton Hermsen Britton Clarkson Planning Limited (MHBC), 2020. *Visual Impact Assessment Report (Draft), Southwestern Landfill Proposal Environmental Assessment*. January, 2020.
- Ontario Ministry of Municipal Affairs and Housing. *The Provincial Policy Statement*, 2014
- RWDI AIR Inc., 2020. *Air Quality Assessment Report (Draft), Southwestern Landfill Proposal Environmental Assessment*. January, 2020.

RWDI AIR Inc., 2020. *Noise and Vibration Assessment Report (Draft), Southwestern Landfill Proposal Environmental Assessment*. January, 2020.

SLR Consulting Ltd., 2020. *Social Assessment Report (Draft), Southwestern Landfill Proposal Environmental Assessment*. January, 2020.

Town of Ingersoll. *Zoning By-law 04-4160*, December 31, 2016 consolidation.

Township of South-West Oxford. *Zoning By-law 25-98*, December 31, 2017 consolidation.

Township of Zorra. *Zoning By-law 35-99*, December 31, 2017 consolidation.

Walker Environmental Group Inc., 2016. *Approved Amended Terms of Reference, Southwestern Landfill Proposal Environmental Assessment*. May, 2016.

Walker Environmental Group Inc., 2020\_. *Environmental Assessment Report (draft), Southwestern Landfill Proposal*.

**Appendix A**  
**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 Route	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"/>
3	Effects due to fine particulate exposure.		<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"/>

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 Route	Wider Area	Operational Period	Post-Closure Period
<b>Public Health &amp; Safety (continued)</b>																			
7	Potential for traffic collisions.											<input checked="" type="checkbox"/>							
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"/>				
10	Disruption to use and enjoyment of residential properties.										<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"/>			

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.

Social and Cultural (continued)																						
13	Visual impact of the waste disposal facility.	Development and operation of a waste disposal facility can affect the visual appeal of a landscape.															<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
14	Nuisance associated with vermin.	Waste disposal facilities can attract vermin and birds, which can be a nuisance and lead to a decrease in property enjoyment by area residents. Vermin and birds can also be a nuisance to agricultural operations.															<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
15	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.															<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
16	Effects on land resources, traditional activities or other interests of Aboriginal Communities.	Major new developments of any type may have positive or negative effects on the interests of Aboriginal Communities (i.e., businesses opportunities, joint ventures)															<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
17	Displacement/destruction of archaeological resources.	Archaeological resources are non-renewable cultural resources that can be destroyed by the construction and operation of a waste disposal facility.															<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	
18	Level of public service provided by the waste disposal facility.	The presence of a waste disposal operation within a municipality can provide an increased level of public service (e.g., convenient access to waste disposal services) to local residents and businesses, as well as those in the broader community(ies).															<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 B**  
**Land Use Planning Forecast Report**

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# LANDUSE PLANNING FORECAST **REPORT**

Proposed Southwestern Landfill  
Township of Zorra, Oxford County

Date:

**October 2017**

Prepared for:



**walker**  
environmental

Prepared by:

**MacNaughton Hermsen Britton Clarkson Planning Limited (MHBC)**

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Our File 9811AE

# CONTENTS

<b>1.0</b>	
<b>Summary of Findings</b>	<b>3</b>
<b>2.0</b>	
<b>Introduction and Objectives</b>	<b>4</b>
<b>3.0</b>	
<b>Background</b>	<b>5</b>
3.1 Study Area	5
3.2 Approach, Methodology and Data Collection	5
<b>4.0</b>	
<b>Existing Conditions</b>	<b>7</b>
4.1 Oxford County	7
4.2 5 Kilometre Study Area	7
4.3 Subject Lands & 1 Kilometre Site-Vicinity	8
<b>5.0</b>	
<b>Aggregate Operations</b>	<b>10</b>
5.1 Oxford County Limestone Resources	10
5.2 Lafarge Woodstock Quarry	11
5.3 Federal White Cement	13
5.4 Carmeuse Lime (Canada) Limited	14

# 6.0

## Land Use Forecast 18

6.1 Oxford County Official Plan	18
6.2 Population, Housing and Employment Trends	20
6.3 Planning Horizons	22
6.3.1 Baseline-2023 Horizon	23
6.3.2 2023-2033 Horizon	26
6.3.3 2033-2043 Horizon	28

# 7.0

## Conclusions 30

# LIST OF FIGURES

<b>Figure 1:</b>	Context Map - County of Oxford
<b>Figure 2:</b>	Study Area Context Map - Airphoto
<b>Figure 3:</b>	Oxford County Official Plan – Land Use Plan – 5km
<b>Figure 4:</b>	Consolidated Zoning – 5km
<b>Figure 5:</b>	1km Study Area – Official Plan Land Use
<b>Figure 6:</b>	1km Study Area – Zoning
<b>Figure 7:</b>	Limestone Quarries Baseline Conditions
<b>Figure 8:</b>	Limestone Quarries Projected Conditions 2023
<b>Figure 9:</b>	Limestone Quarries Projected Conditions 2033
<b>Figure 10:</b>	Limestone Quarries Projected Conditions 2043
<b>Figure 11:</b>	Oxford County Settlement Strategy
<b>Figure 12:</b>	Baseline-2023 Planning Horizon
<b>Figure 13:</b>	2023-2033 Planning Horizon
<b>Figure 14:</b>	2033-2043 Planning Horizon



# 1.0

## SUMMARY OF FINDINGS

The purpose of this Land Use Planning Forecast is to examine long range development patterns in the area surrounding the proposed Southwestern Landfill site. This planning forecast will aid in determining potential and future land uses in the area so that they can be taken into consideration during the preparation of technical studies and evaluation of the proposed landfill development.

The County of Oxford will experience modest residential and employment growth to the year 2043, with development expected to occur throughout all stages of the 30 year planning horizon. Population growth is forecasted to be strongest during the Baseline-2023 horizon, driven by relatively strong levels of net migration during this period. Post 2021, population growth is forecast to gradually slow down as a result of the County's aging population.

Major employment sectors are anticipated to demonstrate growth, largely driven by employment growth in automotive manufacturing, warehousing and transportation, and agribusiness. The County's primary sectors (i.e. agricultural and resource-based employment) are forecast to experience minimal growth over the next 30 years. Total employment is forecast to increase at a rate which is lower than the average attained for the 2001-2011 period.

The City of Woodstock represents the largest growth area for both residential and employment land within the County. The Town of Ingersoll will infill currently vacant lands, located predominately in the south near Highway 401. To meet future employment land needs, growth will likely occur in designated Future Urban Growth Areas (FUG), with the Urban Area boundary expanding into South-West Oxford if needed.

The surrounding Townships of South-West Oxford and Zorra, including the Village of Beachville, and the Rural Cluster of Centerville, will experience minimal change and/or growth. Future development outside of the Town of Ingersoll will be minimal, with the majority of growth occurring by infill. These areas will remain relatively similar to current built conditions, with agricultural and existing quarries as the dominant land use.

The majority of growth to occur in the 5km Study Area will be a mix of low, medium and high density residential development. No new residential and/or employment development is proposed in the site vicinity, defined as the area within a 1 km radius of the site.

# 2.0

## INTRODUCTION AND OBJECTIVE

MacNaughton Hermsen Britton Clarkson Planning Limited (MHBC) was retained to act on behalf of Walker Environmental Group (WEG) to undertake a planning and land use forecast designed to examine long range development patterns in the area surrounding the proposed Southwestern Landfill site. This forecast will detail existing and proposed municipal and regional initiatives for growth and development, developer initiated planning proposals, and document existing and proposed aggregate operations within a defined Study Area that surrounds the proposed landfill site. The planning analysis will examine growth in the surrounding area over a planning horizon of 30 years, with focus on 2023, 2033 and 2043 horizons. This planning horizon will aid in determining potential and future land uses in the area so that they can be taken into consideration during the preparation of technical studies and evaluation of the proposed landfill development.

This report considers existing land use initiatives, proposals and studies including: infrastructure and servicing, subdivision and development, growth areas and urban area boundary expansion, population and growth projections, town and settlement growth projections, environmental assessments and environmental impact review (EA's) and any other relevant planning studies and reports. To evaluate future growth in the Study Area, phased growth projection maps for 2023, 2033 and 2043 have been included in this report. These maps are intended to provide visual reference of expected growth and development throughout the study period.

This report will also make reference to:

- The County of Oxford Official Plan, and the Town of Ingersoll Zoning By-law (04-4160), Township of Zorra Zoning By-law (35-99), and Township of South-West Oxford Zoning By-law (25-98);
- County of Oxford Vacant Land Study (Prepared by The County of Oxford, 2009);
- Oxford County Economic Strategy (Prepared by Hemson Consulting Ltd. and Matthew Fisher & Associates Inc., 2006);
- County of Oxford Population, Household and Employment Forecasts 2001-2031 (Prepared by Hemson Consulting Ltd., 2006);
- Oxford County Population Household and Employment Forecasts and Employment Lands Study (Prepared by Watson & Associates, 2014);
- Aggregate Resource Act Site Plans for existing and proposed aggregate operations in the area; and
- Other relevant documents, reports and studies.



# 3.0

## BACKGROUND

The lands potentially available to WEG for the proposed landfill are those owned by Carmeuse Lime (Canada) in Zorra Township, County of Oxford, currently in industrial use by Carmeuse as a limestone quarry licenced under the Aggregate Resources Act. The Carmeuse lands (herein referred to as “the subject lands”) are located in the County of Oxford, in the Township of Zorra, located to the east of Ingersoll, and falls on the east side of 35<sup>th</sup> Line. The site is approximately 74 hectares (183 acres) in size (The County of Oxford location is shown in **Figure 1** (context map). The Study Area includes lands located in the Township of Zorra, Township of South-West Oxford, the Town of Ingersoll, the Village of Beachville and the Rural Cluster of Centerville. The proposed landfill lands (the “subject lands”) are designated Quarry Area in the County of Oxford Official Plan (1995), and zoned Quarry Industrial (MQ) in the Township of Zorra Zoning By-law (35-99).

### 3.1 Study Areas

In providing an assessment of future growth and development over time, three levels of study are examined in increasing level of detail as follows:

1. County level -The broader community, generally beyond the immediate site vicinity.
2. Lands located within 5 km of the subject lands - The 5 km Study Area was selected to capture all growth and development that may be potentially impacted by the proposed landfill<sup>1</sup>.
3. Lands located within 1 km of the subject lands – Evaluation of potential for development on the subject lands and within the site vicinity in greater detail.

The various Study Areas are shown on **Figure 2** (airphoto).

### 3.2 Approach, Methodology and Data Collection

In order to forecast future land use in these study areas, MHBC has:

- Contacted and met with staff at the County of Oxford to attain information on existing and pending secondary plans, development proposals, EA’s, infrastructure improvements, and municipal objectives;

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<sup>1</sup> Based on Ontario Guideline D-4, Section 5.4 - "Historical evidence in Ontario has shown that the maximum distance within which adverse effects could be experienced while a landfill is operating is up to 3 km." This distance was extended to 5 km for the purposes of this study.

- Collected relevant plans of development and infrastructure related plans and resources from municipal websites;
- Reviewed population and employment forecasts;
- Conducted an inventory of existing land uses included in the 5km and 1km Study Areas.
- Obtained the Aggregate Resources Act (ARA) site plans for the aggregate operations in the Study Area.

A short summary of each future land use change and expected timelines has been included in Section 6.0 of this report. All collected information is summarized and referenced in the planning horizon assessment where applicable to a specific location. Mapping has been included for each planning horizon (2023, 2033 and 2043), and identifies areas of current and proposed development, as well as areas of significant growth in the future.

# 4.0

## EXISTING CONDITIONS

### 4.1 Oxford County

The Oxford County is composed of eight area municipalities covering an area of 2,028 square kilometres (783 square miles) including the Township of Zorra where the subject lands are located. **Figure 1** identifies the subject lands within the County (Context Map).

The County is primarily recognized by its three large Urban Centres. The City of Woodstock is a focal point for employment, commerce, recreation and administration in the County. The Town of Tillsonburg fulfills similar roles for southern Oxford and portions of Elgin and Norfolk Counties. The Town of Ingersoll is a major centre of employment and commerce. The rural municipalities are known for agriculture and aggregate extraction. Rural settlements provide residential opportunities, population related services and employment functions on a smaller scale.

Agriculture in Oxford County has maintained its position as an extensive user of land and an industry of significant importance to the local economy. Approximately 91 percent of agricultural land in the County is within Classes I, II and III agricultural land capability and in 2001, 89 percent of the total County land base was devoted to agricultural production.

Oxford County is characterized by significant reserves of mineral aggregates, including bedrock-derived crushed stone and naturally occurring sand and gravel. The presence of high quality aggregate deposits has led to the establishment of significant quarrying and sand and gravel extraction industries in the County. Oxford County has consistently ranked high in total mineral aggregate production in Ontario and plays a particularly important role in mineral aggregate production in the Windsor-Woodstock corridor. This is due in large part to the extensive deposits of high calcium limestone in Zorra Township which are recognized as the thickest, most uniform and purest limestone in Ontario.

### 4.2 5 Kilometre Study Area

The subject lands are located in the Township of Zorra approximately 1.2km east of Ingersoll. The Town of Ingersoll is located to the southwest, the Township of South-West Oxford and the Rural Cluster of Centerville to the South, and the Village of Beachville to the east.



Land uses within the Town of Ingersoll include a Central Business District surrounded by a mix of low, medium and high density residential land uses. Industrial lands are generally located on the southwest limits of the Town, along Highway 401, and along the CN Rail line. Future Urban Growth areas are also identified at the southwest and southeast boundaries of the Town.

The Township of Zorra is primarily agricultural land, with existing quarry operations, resource areas and some residential dwellings. Agricultural lands predominate in the Township of South-West Oxford, with some residential dwellings. The Village of Beachville and Rural Cluster of Centerville include low density residential units with limited commercial development (e.g. a corner store).

**Figure 3** illustrates the land use designations from the County of Oxford Official Plan including the Township of Zorra, South-West Oxford, and the Town of Ingersoll.

**Figure 4** illustrates the zoning of lands within 5km including the Township of Zorra, South-West Oxford, and the Town of Ingersoll.

### 4.3 Subject Lands & 1 Kilometre Site Vicinity

The subject lands is 74ha (183 acres) in size 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. The Carmeuse site consists of several rock quarries at various stages of development along with a lime processing plant. The existing quarry will remain functioning during landfill site development.

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. Two major railway corridors pass through the southern portion of the site. The southern limit of the site is bordered by the south branch of the Thames River which has been straightened and channelized in this stretch.

The surrounding land uses (as shown in **Figure 5**) that exist within the 1km Study Area includes:

**NORTH:** Lands north of the subject site are zoned Quarry Industrial (MQ) and licensed for quarry purposes under the Aggregate Resource Act. At present, these lands are vacant farmland and agricultural lands. Lands further north include farmland with some single non-farm residential uses.

**EAST:** Existing quarry operations are located on both the east and west sides of County Road #6 (37<sup>th</sup> Line).

**SOUTH:** CNR Railway tracks and existing quarry operations are to the south of the tracks. The "Rural Cluster" of Centerville is within the southern limit of the 1km Study Area along Beachville Road (County Road 9) across the river.

**WEST:** Opposite 35<sup>th</sup> Line, agricultural uses predominate with a cemetery (Ingersoll Rural Cemetery) and horse farm (Killean Acres Horse Farm) located to the south west of the subject site. A vacant farm and a hydro servicing area are located to the north west of the subject site.

**Figure 5** illustrates the land use designations for the lands in the 1km Study Area from the County of Oxford Official Plan including the Township of Zorra, South-West Oxford, and the Town of Ingersoll.

**Figure 6** illustrates the zoning of lands within 1km including the Township of Zorra, South-West Oxford, and the Town of Ingersoll.

# 5.0

## AGGREGATE OPERATIONS

### 5.1 Oxford County Limestone Resources

Since the early 1900s, the Township of Zorra has contributed to the cement-making, construction and lime industry in North America. The County of Oxford has recognized that the limestone resource in the Township of Zorra is the thickest, most uniform and purest high calcium limestone available in Ontario. The County of Oxford Official Plan states,

*“Oxford County is characterized by significant reserves of mineral aggregates, including bedrock-derived crushed stone and naturally occurring sand and gravel. The presence of high quality aggregate deposits has led to the establishment of significant quarrying and sand and gravel extraction industries in the County. Oxford County has consistently ranked high in total mineral aggregate production in Ontario and plays a particularly important role in mineral aggregate production in the Windsor-Woodstock corridor. This is due in large part to the extensive deposits of high calcium limestone in Zorra Township which are recognized as the thickest, most uniform and purest limestone in Ontario. This resource contributes approximately 40% of the total Ontario production of lime and 10% of the total Ontario production of cement.*

*Since mineral aggregates are a fixed location, non-renewable resource, their effective management is essential. It is equally important to ensure that mineral aggregate extraction is environmentally responsible.” (County of Oxford Official Plan, Section 3.4.1)*

#### **Resource**

The Lucas Formation is represented in all operating quarries and consists predominantly of a high purity limestone. The Lucas limestone formation extends outside the Township of Zorra but the quality characteristics change outside of the proven resource area in the Township. The thickness of the resource (+/- 100 feet) coupled with its high purity and usefulness in a wide variety of applications means that the removal of a large depth of overburden is warranted.

#### **Uses of Resource**

There are two basic products that are produced from the high calcium limestone in the Township of Zorra: lime and cement. The deposit is also a source for construction aggregate and limestone that is a key ingredient in the manufacture of: fertilizer, livestock/poultry/pet



food calcium supplements, glass, fiberglass, carpeting, roofing materials, bricks, mortars, paints, caulking compounds, sealants, adhesives and lubricants, to mention a few.

Limestone is one of the most widely used raw materials in industry. Limestone is used to produce lime which is consumed in almost every branch of industry as a chemical and metallurgical intermediate, fluxing agent, additive, soil conditioner and stabilizer, building material, and a host of other uses.

The pure high calcium limestone mined and produced in the Township of Zorra is particularly suitable for steel making and environmental applications. Lime is used as a basic fluxing agent in iron and steel making processes. Environmental uses include:

- Naturalization of wastes from metal smelters and refineries
- Naturalization of acidic wastes from chemical plants, pulp and paper mills, textile plants and food processing plants
- Water treatment
- Sewage treatment
- Scrubbing of acidic gas emissions from thermal power plants and boilers
- Mitigation from effects of acid precipitation
- PH control
- Agricultural applications

Cement, in combination with water, sand and other aggregate materials forms concrete and is one of the most versatile building materials known.

The market for the products produced in this area is essentially all of North America.

### **Quarries Background**

Generally, quarrying has been occurring in this area since the early 1900s. Currently, 1,405.75 ha (3,473.68 acres) are licenced by three companies: Lafarge Canada Inc., Federal White Cement and Carmeuse Lime (Canada) Limited. The quarries range in depth from approximately 214 mASL to 250 mASL. These operations are described in more detail in the following section of this report.

## **5.2 Lafarge Woodstock Quarry**

### **Location/Area**

Lafarge operates a quarry, known as the Woodstock Quarry, in Lots 2 to 5, Concession 2 and 3 and Lots 1 to 3, Concession 4 in the Township of Zorra (see **Figure 7**). Lafarge owns or controls approximately 717 ha of land associated with the quarry, including 549.6 ha of which are licenced for extraction.

There are a number of components associated with the Lafarge Woodstock Quarry:

- Permanent cement plant (currently not operational) in Lots 1 and 2, Concession 4 identified as P4 on Figure 7;
- A portable plant (crushed stone) operating within the active quarry in Lot 2, Concession 3, identified as P7 on Figure 7; and

A permanent aggregate plant is located in Lot 2, Concession 4 (identified as P5 on Figure 7) which is operated by IKO Industries Ltd. and produces asphalt shingles.

## History

Canada Cement was formed in 1909 as a result of the merging of 10 cement companies. The company owned a large tract of land between Beachville and Woodstock and initiated the construction of a cement plant on Lots 1 and 2, Concession 4 in 1955. By 1956, the quarry was ready to supply limestone to the cement plant. In 1970, Lafarge Cement North America and Canada Cement merged to form Canada Cement Lafarge (CCL). In 1988, CCL was renamed Lafarge Canada Inc.

In September 2006, after many decades of additions and updates, the plant celebrated its 50<sup>th</sup> anniversary, and its production of close to 20 million tonnes of cement.

Lafarge's cement plant closed 2008 and is currently inactive. Lafarge's decision to close the plant related to the decline in the cement market in Ontario and adjacent U.S. states and the plant's inability to gain approval for 'Alternative Fuels in Ontario,' which would have helped reduce consumption of fossil fuels, carbon footprint and cost.<sup>2</sup>

## Current Operations

The Lafarge Woodstock quarry has an annual tonnage limit of 4 million tonnes. The quarry is currently operational in Lot 2, Concession 3 and mining in a northerly direction. The quarry is licenced to a maximum depth of 214 mASL. The current depth of extraction is approximately 220 mASL.

Lafarge produces crushed limestone products at the Woodstock quarry. The crushed limestone is used in the production of concrete, cement, asphalt, roofing shingles and road bases. Limestone products from the Woodstock Quarry travel to projects within Oxford County, London, Woodstock, Sarnia and Lambton.

Material from the quarry is currently being used as construction aggregate for Southwestern Ontario and to supply the Federal White Cement plant and IKO plant nearby.

A quarry sump is currently located within Lot 2, Concession 3. The sump location will move northward as the quarry progresses. From the sump, the water is pumped and transported to the first settling pond. A portion of that water is used in the portable wash plant located within the quarry next to the portable processing plant and may move within the extraction

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<sup>2</sup> Woodstock Sentinel Review, November 7, 2008



area as the mining face moves. The remaining overflow from the second settling pond is discharged into the channel toward McKenzie Creek.

The haul route for the Lafarge Woodstock Quarry is predominantly south on County Road 6 to Highway 401 via Lafarge's entrance/exit on 35<sup>th</sup> Line south to County Road 2. Some of the trucks travel north of 35<sup>th</sup> Line to deliver material to the adjacent Federal White Cement plant.

### **Rehabilitation**

Progressive rehabilitation of the quarry includes backfilling overburden within the centre of the quarry and along the eastern limit of the licence area. As the operation proceeds to the north, and the sump is moved north, backfilling of the quarry with overburden will commence.

### **Projected Conditions**

Based on current aerial photography the quarried area is approximately 51.5 hectares which corresponds with approximately 50 years of production. There is approximately 52.5 hectares remaining to be mined in Concession 3. It is anticipated that mining will continue to proceed in a northerly direction within Concession 3 throughout the next 30 years as shown on **Figures 8 to 10**. Mining within Concession 2 or 4 is not anticipated within the specified horizon to 2043. Progressive rehabilitation within the Concession 3 will continue over the time period as generally shown on Figures 8 to 10.

It is also assumed that Lafarge's cement plant will remain inactive over this time period.

## **5.3 Federal White Cement**

### **Location/Area**

Federal White Cement (FWC) operates a dry process cement plant within Lots 3 and 4, Concession 3 in the Township of Zorra (identified as P6 on **Figure 7**). Stockpiles associated with the cement plant extend north into Lot 4 and Part of Lot 5.

FWC also owns licenced reserves on Part of Lots 17 and 18, Concession 1 in the Township of Zorra. The licenced area is 168.6 ha and the quarry has an annual tonnage limit of 1 million tonnes. The quarry is not active.

### **History**

FWC is a privately owned Canadian Company. FWC began its operation in Woodstock, Ontario in 1979 and that same year established a cement plant in the Township of Zorra. The company has expanded throughout Canada and United States. FWC produces a unique white cement product, such as white portland and masonry cement, used for specialized construction and architectural applications. Over the past 10 years, FWC has invested over \$100 million in upgrades and improvements to the cement plant and its operations.

## **Current Operations**

FWC's raw material used in the manufacturing of the cement comes from a variety of offsite sources, including local limestone quarries (Lafarge's Woodstock Quarry and Carmeuse Lime). Delivery of the raw material to the existing cement plant is by transport truck. The existing cement plant receives approximately 15-17 truck deliveries per day of raw aggregate material.

Access to the FWC plant is from an existing entrance on 35th Line. An internal lane between the cement plant lands and stockpile areas to the north facilitate the movement of raw material.

The quarry is licenced to remove 30 metre of overburden and 40 metres of Anderdon member of Lucas formation. The quarry has an annual tonnage limit of 1 million tonnes. The approved quarry floor is at an elevation of 235 mASL. The quarry, once operational, will commence with an initial cut in the southwest quadrant and move south to the limits of the quarry. The next phases move eastward and northward. Internal haul routes will run between the quarry face and the portable crushing plants and between the plants and the entrance/exit to County Road 6. The only access to be used for purposes of hauling aggregate from the site will be onto County Road 6.

## **Rehabilitation**

Rehabilitation of the quarry, once operational, will consist of progressively backfilling the depleted quarry areas with onsite overburden. Backfilling or depleted quarry areas will progress as space and access allows. Actual backfilled elevations, lake areas, depth and configuration will depend on exact overburden quantities available and maximum extraction elevation realized.

## **Projected Conditions**

It is assumed that the FWC plant will continue operating over the next 30 years. It is also assumed that the FWC quarry will not be opened during the study period (refer to **Figures 8 to 10**).

## **5.4 Carmeuse Lime (Canada) Limited**

### **Location/Area**

Carmeuse Lime (Canada) Limited (Carmeuse) operates the Beachville Quarry under 3 licences as follows:

- Licence 2130 – Bounded by the CN Railway to the south, County Road 6 to the west, Road 66 to the north, and 41<sup>st</sup> Line (Domtar Lin) to the east. Licence 2130 has an area of 126.32 ha.



- Licence 2129 - Bounded by the Thames River to the south, Licence 2136 to the west, Road 66 to the north, and County Road 6 to the east. Licence 2129 has area of 274.18 ha.
- Licence 2136 – Bounded by the Thames River to the south, 35<sup>th</sup> Line to the west, Road 66 to the north, and Licence 2129 to the east. Licence 2136 has area of 287.1 ha.

The 3 licences have a total licence area of 687 ha and extraction area of approximately 614 ha.

There are 3 processing plants associated with the Beachville Quarry:

- Permanent aggregate plant within Lot 18, Concession 2, south of Licence 2130, identified as P3 on Figure 7;
- Permanent lime plant (operational) within Lot 16, Concession 2, straddling the CN Railway within Licence 2129, identified as P2 on Figure 7; and
- Portable plant, sand and gravel (operational) within Lot 14, Concession 2, within Licence 2136, identified as P1 on Figure 7.

## History

The quarry and plant associated with Licence 2130 to the east, formerly owned by Domtar, formed a fully integrated production facility for hydrated lime, pulverized lime, pebble lime and granular limestone. In 1929, Gypsum, Lime and Alabastine Co. purchased three quarries and two lime plants from Standard White Lime Co. The entire operation was consolidated and purchased in 1959 by Domtar. BeachviLime Ltd. purchased the operation in 1984.

The quarry and plant associated with Licence 2129 in the centre, was owned by BeachviLime Ltd., a subsidiary of Dofasco Inc. This property has been active since 1907, when the Beachville White Lime Co. commenced sales of lime to Cyanamid of Canada Ltd. in Niagara. Cyanamid subsequently opened its own quarry and in 1929 purchased Beachville White Lime. Dofasco acquired Cyanamid operation in 1973.

The west quarry (Licence 2136) was originally operated by Stelco before being acquired by Ingersoll Lime in 2007.

## Current Operations

Licence 2130 has an annual tonnage lime of 2,267,500 tonnes. The quarry is licenced to remove 30 meters of overburden and 30 to 40 metres of Anderdon Member of Lucas Formation. The maximum depth of extraction is 235 mASL. Previous extraction has been to approximately 250 mASL. Quarry operations south of the CN Railway were depleted/abandoned before 1972. Quarry operations north of the CN Railway were connected by a tunnel to the processing plants to the south. Extraction continued in a northerly direction. The quarry and the plant have been inactive since the early 1990s.

Licence 2129 has an annual tonnage limit of 3 million tonnes. The quarry is licenced to remove 30 metres of overburden and 30 to 40 metres of Anderdon Member of Lucas Formation. The maximum depth of extraction is 235 mASL. Extraction has been as deep as approximately 244 mASL in some areas of the quarry. Extraction commenced south of the CN Railway and proceeded in a northerly direction via a tunnel. Extraction continued in a northerly direction through a slot under the Hydro Corridor. Extraction will continue in a northerly direction to Road 66 before proceeding east under County Road 6. There has been limited extraction since Licence 2136 was acquired by Carmeuse.

The stone processing and lime plant associated with Licence 2129 is operational and running full time. Material for the plant is sourced from Licence 2136 to the west via internal haul routes.

Licence 2136 to the west has an annual tonnage limit of 3 million tonnes. The quarry is licenced to remove 25 metres of overburden, 5 metres of cap rock, and 30 meters of Anderdon Member of Lucas Formation. The maximum depth of extraction is 228 mASL. Current extraction appears to be about 10 metres shallower at 238 mASL.

Licence 2136 is currently active and mining in a southerly direction from Road 64 (closed road allowance acquired by Carmeuse) towards the CN Railway in Concession 3. Overburden is piled to the north. Phase 1 to the south of the CN Railway has been depleted and rehabilitated to a waterbody. All stone processing is done on the adjacent Licence 2129 and the lime plant on this licence has been removed. Site preparation includes sand and gravel operation with a portable processing plant (P1) operated by Oxford Sand & Gravel. Caprock is removed and managed by Blue-Con Construction who separately market the armor stone products from the quarry. There is no external haulage for stone directly from Licence 2136. All materials are moved to the adjacent licenced area for processing. Sand and gravel is also shipped via the adjacent licence onto County Road 6.

## **Rehabilitation**

The rehabilitation plan for all three licences includes a combination of backfilling with available onsite overburden around future lakes. Progressive rehabilitation is currently ongoing in Licences 2136 and 2129. Rehabilitation in the active area will continue along the southern limit of the quarry and to the south of Road 64. Licence 2129 is inactive but some areas to the south along the CN Railway and County Road 6 have been rehabilitated.

## **Amalgamation**

Carmeuse has submitted an application to amalgamate Licence No. 2129 with Licence No. 2130 and No. 2136. As part of this amalgamation, the area of the three licensed sites will be licenced under the reference No. 2136, with one comprehensive site plan and one tonnage condition. A major site plan amendment has been requested to approve the comprehensive site plan with revised operations and rehabilitation. Specifically, the proposed amendments include:

- Revised phasing of operations for the amalgamated site;
- A revised rehabilitation plan as a result of the revised phasing; and



- The addition of an entrance/exit onto the east side of County Road 6 and an option for the creation of a tunnel under County Road 6.

The requested revisions to the rehabilitation plan do not entail any change in the final land use of the amalgamated site, which will be rehabilitated to several lakes with vegetated, stable side slopes and grading to match the surrounding lands. The rehabilitated site will be suitable for recreation/open space.

In addition to the amalgamation, the Carmeuse has made application for a combined tonnage condition of 6,000,000 tonnes annually for the amalgamated site (Licence numbers 2129, 2130 and 2136).

### **Projected Conditions**

It is anticipated that Licence 2130 and the portion of Licence 2129 east of County Road 6 will remain inactive over the next 30 years.

Mining will continue in a southerly direction within Licence 2136 through the first time period (see **Figure 8**). Within the second time period, mining will shift to a northerly direction, north of Road 64 (see **Figure 9**). At some stage within this time period, the portable sand and gravel plant may also move to the north within Lot 16, Concession 3. During the final time period, mining will continue in a northerly direction (see **Figure 10**) and the sump will be relocated.

It is assumed that the entrance/exit to County Road 6 and the haul route will remain unchanged over the 30 year time period.



# 6.0

## LAND USE FORECAST

### 6.1 Oxford County Official Plan

The County of Oxford Official Plan was originally approved in December 1995 and is applicable to the subject lands. The Official Plan contains policies adopted by the Council of the County of Oxford to guide and manage the extent, pattern and type of settlement and the use of land and resources desired to maintain and improve the quality of the environment and the quality of life for County residents and to address matters of Provincial interest. The policies of the Official Plan relevant to the Land Use Planning Forecast are summarized as follows:

*"In recognition of the prime agricultural land base and of substantial mineral and environmental resources in the County which form the basis of the rural economy and of the importance of rural resources to social and environmental well-being in the County, it is a principle of County Council to clearly define and make a distinction between urban and rural areas. Accordingly, this Plan incorporates the following strategic initiatives to protect agricultural and rural resources:*

*Prime farmlands will be preserved for their value as areas for current and future food and fibre production and as a permanent integral feature of the heritage of Oxford County.*

*Land uses which are not compatible with food production, mineral resource extraction or which may result in detrimental impacts to other rural resources such as wetlands, groundwater recharge areas and wildlife or which are more appropriately developed on centralized waste water or water supply facilities, will be prevented from locating outside of designated settlements." (County Official Plan Policy 2.1.3)*

The majority of the 5km and 1km Study Areas outside the Town of Ingersoll are designated Agricultural Reserve and/or Quarry Area/Limestone Resource. Development in these areas will be limited to agriculture and resource related uses.

- **Growth Management**

*"Lands which have been designated in the County Official Plan for settlement and employment purposes...are anticipated to be adequate to meet growth expectations for the planning period and include a margin of surplus to provide for effective market operation and competition. In addition, lands have been designated to identify areas where long term urban level development is feasible.*

*The policies of this Plan have been structured to provide opportunities for environmentally responsible growth which protects and prevents conflicts with the County's natural resources in all Area Municipalities. Consequently, different levels of growth are planned for the following areas:" (Policy 4.2.2)*

- **Rural Clusters** – A grouping of non-farm related development which is of insufficient size to be considered a village. Growth in Rural Clusters in the County will only occur through infilling. There are 5 Rural Clusters within the 5km Study Area including Centreville.
- **Villages** without centralized waste water and water supply facilities – Settlements characterized by a broader range of land uses and activities and which have been developed in depth as well as through infilling. Proposals to expand the limits of a Village designation will only be considered through a *comprehensive review* and will require an Amendment to the Official plan to re-designate the Village to a Serviced Village category. Growth in the Village designation will occur through infilling and by small plans of subdivision which would constitute minor infilling and rounding out of existing development within the limits of the Village designation. The Village of Beachville is located within the 5km Study Area.
- **Serviced Villages** – Settlements characterized by a broad range of uses and activities which have been developed or are proposed for development on centralized waste water and water supply facilities. There are no Serviced Villages within the Study Area.
- **Large Urban Settlements** – Woodstock, Ingersoll and Tillsonburg are the Large Urban Settlements within Oxford County. The Town of Ingersoll is entirely within the 5km Study Area.
- **Future Urban Growth Areas** - Lands designated Future Urban Growth (FUG) represent lands which are capable of being fully serviced by the County and the Area Municipality with centralized waste water and water supply facilities and which are anticipated to be required to accommodate urban level development during the planning period and beyond. It is intended that Future Urban Growth Areas will be developed as orderly and logical extensions to the lands designated as Large Urban Centre and Serviced Village. FUGs within the 5km Study Area include:
  - lands within the Township of South West Oxford in part of Lot 18, Concessions 1 and 2 (West Oxford) which are generally to be developed for business, industrial and service commercial uses;
  - lands within the Township of Zorra in Part Lot 8, Concession 4 (North Oxford) which are generally to be developed for business, industrial and service commercial uses;
  - lands within the Township of South-West Oxford, in Lots 23 and 24, Concession 1 and Part Lots 23 and 24, Concession 2 (West Oxford) which are generally to be developed for industrial uses..

Prior to permitting new development within FUGs, a number of conditions must be satisfied subject to a *comprehensive review*, including: land needs justification (less than a 10 year supply of vacant, unconstrained land to accommodate expected growth);



preparation of a servicing strategy; the preparation of a secondary plan; and County Council approval.

**Figure 11** (Settlement Strategy) identifies the location of Large Urban Centres, Villages, Rural Clusters, and Future Urban Growth areas in the 5km Study Area.

## 6.2 Population, Housing and Employment Trends

The County of Oxford retained Watson & Associates Economists Ltd. in the spring of 2013 to undertake an update of the population, housing and employment forecasts for the County and the Area Municipalities which was last updated in 2006. The update focused on the population, housing and employment forecasts for the County and its eight Area Municipalities from 2011 to 2041. A long-term employment land needs analysis was also provided for the County by Area Municipality over the next 20 years. The results of this analysis are intended to guide decision making and policy development specifically related to planning and growth management, urban land needs, master plans and municipal finance at the County-wide and Area Municipal levels. The results of study, relevant to this Land Use Planning Forecast, are summarized as follows:

### Population and Housing Trends, 1991-2011

- Oxford County's population grew by approximately 14% between 1991 and 2011, increasing from 92,900 to 105,000 over this 20-year period. This represents an annual population growth rate of 0.6% during this period.
- New residential development activity has been predominately associated with low-density housing forms (i.e. single and semi-detached); however, recent building permit activity indicates that demand for high-density housing (i.e. apartments) has been increasing, most notably in the City of Woodstock.

### Employment Growth Trends

- Over the past 10 years, Oxford County's employment base grew by approximately 18%, increasing from 44,200 to 52,000 jobs. This represents an annual employment growth rate of approximately 1.6% over the 2001-2011 period.
- During this period, approximately 93% of the County-wide employment growth occurred within the County's Urban Centres (i.e. Woodstock, Ingersoll and Tillsonburg), largely driven by employment growth within the City of Woodstock.

### Population and Housing Forecast, 2011-2041

The County is forecast to experience modest population growth over the 2011-2041 time frame. Population growth is forecast to be the strongest during the 2011-2021 frame, driven by relatively strong levels of net migration during this time period. Post 2021, population growth is forecast to gradually slow down as a result of the County's aging population. Key findings regarding the County-wide and Area Municipal population and housing forecasts are summarized below:

- Oxford County's housing base is forecast to increase from approximately 41,600 in 2011 to 52,900 in 2041, an increase of 11,300 units;
- All local municipalities are expected to experience housing growth over the long-term forecast period;
- The County's population is forecast to increase by approximately 17,500 persons over the forecast period, growing from 108,200 persons in 2011 to 125,700 in 2041;
- Over the 2011-2041 period, approximately 52% of County-wide housing growth has been allocated to the City of Woodstock.
- Average annual housing growth over the next 30 years is forecast to be lower than the 2001-2011 period for the Urban Centres (i.e. Woodstock, Ingersoll and Tillsonburg).
- The rate of incremental population and housing growth is forecast to decline for all local municipalities over the forecast period as a result of the aging of the population and labour force; and
- The average number of persons per unit (PPU) is forecast to steadily decline for all Area Municipalities due to the aging of the population.

### **Employment Forecast, 2011-2041**

- Total employment is forecast to increase from 52,000 in 2011 to 65,000 in 2041, an increase of approximately 13,000 over the period. This represents an average annual rate of growth of 0.7%, which is lower than the average attained over the 2001-2011 period of 1.7%. All of the Area Municipalities are anticipated to experience employment growth over the forecast period;
- Employment growth is expected to be strongest over the 2016-2021 period. Post 2021, the rate of employment growth is anticipated to slow with the aging of the labour force within the County and surrounding commuter-shed;
- All major employment sectors are anticipated to demonstrate growth, largely driven by employment growth in automotive manufacturing, warehousing and transportation, agribusiness, retail trade and business services;
- The County's industrial sector is forecast to increase by approximately 5,900 jobs. The commercial and institutional sectors are also expected to experience steady employment growth over the forecast period, increasing by 4,000 and 2,000 new jobs, respectively. A further 1,000 jobs are anticipated to be generated through "work at home" employment. Lastly, the County's primary sector (i.e. agricultural and resource-based employment) is forecast to experience minimal employment growth over the next 30 years; and
- It is estimated that approximately 88% of the County-wide employment growth will occur in Oxford County's Urban Centres (Woodstock, Ingersoll and Tillsonburg) over the 2011-2041 period.

### **Oxford County Employment Lands Inventory and Needs**

- The County's employment lands are concentrated in Woodstock, Tillsonburg and Ingersoll with additional employment lands located in the County's Serviced Villages. Of the County's approximately 1,400 net Ha of developed employment land, 61% is located in Woodstock;



- Oxford County has experienced varied levels of industrial development activity in recent years. Over the 2009-2012 period, industrial land absorption averaged 15 net Ha (37 net acres) annually in Oxford County, of which 72% was in Woodstock;
- The County's net vacant designated employment lands supply is estimated at 579 net Ha (1,430 net acres). Approximately 57% of the supply is located in Woodstock (330 net Ha) and approximately 8% is located in Ingersoll (46 net Ha);
- Of the County's vacant employment lands inventory, 187 net Ha (462 net acres) is shovel-ready of which 80% (147 net Ha) is located in Woodstock while Ingersoll has a supply of 17 net Ha (12%);
- Oxford County is expected to add a total of approximately 5,490 jobs on employment lands. To accommodate this employment growth, Oxford is expected to absorb 24 net Ha (58 net acres) of employment lands annually. Employment land demand is expected to total 473 net Ha (1,169 net acres);
- Based on the existing supply of developable vacant employment land, Oxford County as a whole appears to have a sufficient supply of employment lands to meet long-term needs to 2033. However, notwithstanding the County-wide employment land surplus identified, there is a forecast employment lands shortfall in Woodstock and Ingersoll over the planning period (i.e. 2013-2033); and
- Woodstock and Ingersoll will need to designate a minimum of approximately 36 gross Ha (89 gross acres) and 65 gross Ha (161 gross acres), respectively of employment land to meet long-term need to 2033.

### **Oxford County Residential Lands Inventory and Needs**

- The 2009 Vacant Land Study prepared by Oxford County concluded that the Town of Ingersoll would have an adequate supply of vacant residential land to accommodate projected demand until 2019. The Vacant Land Study, which was based on 2006 projections, also concluded that there would be an under supply of residential units by 7% by 2029.
- However, more recent 2014 population and household projections to 2031 for the Town of Ingersoll are 13,900 people and 5,700 households respectively (Watson, 2014). This represents a decrease from the previous 2006 forecast by 3,200 people and 1,000 households respectively, indicating a continued over supply of residential units to 2031.
- 2014 population and household projections for the Town of Ingersoll to 2041 are 14,300 people and 6,000 households respectively (Watson, 2014) which is similar to what was forecasted for the year 2021 in the 2006 study. Based on the most recent population and household projections, there will be no need to designate additional land to accommodate residential demand before 2041.

## **6.3 Planning Horizons**

The 5km Study Area includes lands in the Town of Ingersoll, Township of Zorra, Township of South-West Oxford, (including the Village of Beachville and the Rural Cluster of Centerville). Potential long range land use changes and growth projections have been examined throughout the Study Area over a 30 year planning horizon. The following sections include a breakdown and evaluation of growth projections for 2023, 2033 and 2043.

### **6.3.1 Baseline-2023 Planning Horizon**

Expected growth and land use planning changes that are projected to occur within the various Study Areas over the next 10 years are summarized below, and identified on **Figure 12**.

#### **Oxford County**

- By 2026, The County is projected to reach a total population of approximately 118,800 persons with employment projected at 60,900 jobs and household growth at 48,500 (Watson, 2014).
- The majority of new growth within the County is projected in the three urban areas, including Woodstock, Ingersoll and Tillsonburg.

#### **5km Study Area**

##### **Town of Ingersoll**

- The Town of Ingersoll is expected to reach 13,500 persons, 9,500 jobs and 5,500 households by 2026.
- Given the extensive aggregate resources in Oxford County to the north east of the Town of Ingersoll, any future residential growth will be located in the area to the south east of Ingersoll, north of Clark Road, located in the Township of South-West Oxford.
- Current Town of Ingersoll development applications, at various stages of review, either approved, draft or circulated, are expected to contribute to housing and employment development into 2023. Below is a general summary of the proposed development applications within the Town of Ingersoll and 5km Study Area and shown on **Figure 12**:
  - A. 58 single detached lots and 41 rowhouse units on 13.3 acres of property is currently registered and currently under construction. The property is located on the west side of Ingersoll Street N. on Woodhatch Crescent.
  - B. Reeves Realty Corporation registered plan consisting of 5 single detached lots and 14 semi-detached lots (33 units) This site of development is located west of McKeand Street and north of Victoria Street and will be located behind existing residential units.
  - C. Approved draft plan for 10 single detached lots on 3.6 acres located on the south side of Victoria Street.
  - D. County Contracting of Wheatley Inc. approved draft plan consisting of 8 industrial lots located on the south side of Carnegie Street, west of Pemberton Street.



- E. ATSA Corp. has 2 approved draft plans on the west side of Whiting Street consisting of a total of 34 single detached lots.
  - F. 10 Single detached residential lots on a total site area of 3.1 acres will be serviced and completed. This site is located south of David Street, and west of Owen Street completing the crescent at Keith Mabee Boulevard.
  - G. The approved draft plan for Oak Country Homes Ltd. on 14.7 acres for a total of 42 single detached lots, 60 rowhouse units, and 32 apartment units located on the east border of Ingersoll, south of David Street and Lorne Moon Park in the existing subdivision of "Clover Ridge", should be completed.
  - H. The 82 single detached lots as proposed by 1658110 Ontario Ltd. in a phase 1 plan, located in a 20.3 acre parcel on the east boundary of Ingersoll including the roads Lewis Lane, Winders Trail, and Moffat Avenue, should be completed and well established.
  - I. Sifton Properties two registered draft plan of subdivision that include a total of 182 single detached residential lots, 3 townhouse blocks, 2 common blocks and 1 park block. The 57.2 acre site is located south of Centennial Lane, with access onto Harris Street to the east. Phase 1 and 2 of this plan should be completed during this planning horizon.
  - J. SB 12-02-6 and ZN 6-12-02- Schout Group Inc. (Draft Plan of Subdivision to permit 42 single dwelling units and an open space block; zone change from development zone to residential type 1 zone and open space zone. The site is located north of Clarke Road East, and will have frontage on Thames Street South.
  - K. The Town of Ingersoll controls a 110.5 acre parcel of land south of Clark Road East and is proposing 2 industrial blocks and 1 open space block. As of February 2016, the industrial subdivision application had been received/plan circulated.
- It is projected that a total of 1673 residential units will be available into 2020, while the demand will only be 970; a resultant surplus of 72%.
  - Although residential development will meet the overall demand, high density residential supply is forecasted at 71% less than the projected 2020 demand, and only capable of securing a 3 year supply. To meet the high density housing demand, objectives for low rise apartments in the medium density designation or redevelopment in mixed use areas will be encouraged. The town may also need to consider the re-designation of lands for high density uses to meet projected demand.

### **Township of Zorra**

- The Township of Zorra will reach a total population of 8,300 persons, employment of 2,900 and total households of 3,200 by 2026.

- Housing demand will be 490 residential units with a projected supply of 610, indicating a surplus of approximately 25%.
- Lands zoned as Development “D” in the Township of Zorra Zoning By-law can be approved for development at any time, with uses permitted including: farm, home occupation, public use, seasonal fruit stand, flower or farm produce sales outlet, and/or a single detached dwelling existing at the date of the passing of the by-law. These lands would require an amendment to the zoning by-law to permit new residential development or employment uses depending on their designation in the Oxford County Official Plan.
- There are no development applications within the portion of the Study Area within Township of Zorra as of September 2016.

### **Township of South West Oxford**

- The 2026 population projection for the Township of South-West Oxford is estimated at 7,600 persons with employment and households at 2,300 and 2,700 respectively.
- The Township of South-West Oxford will experience a surplus of residential units of approximately 88%, as 451 units are supplied when the demand is only 240 residential units.
- There are no development applications within the portion of the Study Area within South West Oxford as of September 2016.

### **1km Study Area**

- An approved draft plan of subdivision for a 1.3 acre development in the Town of Ingersoll, located south of North Town Line East, on the south end of Garland Crescent is zoned for 14 street fronting townhouse units.
- The Rural Cluster of Centerville is located within the 1km Study Area, but no growth and expansion, other than through infill is expected in this area.
- There are approximately 184 parcels within or intersecting the 1km Study Area, 23 of which are 20ha or greater in area. 14 of these properties are licensed by Carmeuse Lime leaving 9 rural properties with potential for severances.

Growth within the 2023 planning horizon includes employment and residential development located predominately in the Town of Ingersoll. Lands approved for residential development will yield a surplus housing supply which will outstrip demand. Development will be primarily located on the south east border of the Town of Ingersoll, and include a range of housing type and form.

None of the known proposed developments are located within the 1km Study Area, so no change is expected in the site vicinity.



### 6.3.2 2023-2033 Planning Horizon

The following provides a summary of anticipated land use changes and projected growth within the next 20 years. Each land use change is identified on **Figure 13** for reference.

#### County of Oxford

- By 2036, the County is expected to grow to a population of approximately 124,200 persons, with employment of approximately 64,300. The total household forecast is 52,000 units.
- The majority of growth will be continue to be directed to existing settlement areas with limited development permitted on private and/or partial services.
- Residential Intensification will be supported in existing settlement areas previously serviced by centralized wastewater and water supply with a minimum intensification target of 15% of all new residential dwelling units created in Urban Centres (20% of which should be in the form of affordable housing).
- The current surplus of residential lands will be sufficient to accommodate forecast population and household growth to 2033.
- Based on the 2014 supply of developable vacant employment land, Oxford County as a whole has a sufficient supply of employment lands to meet long-term needs to 2033. However, notwithstanding the County-wide employment land surplus identified, there is a forecast employment lands shortfall in Woodstock and Ingersoll over the planning period (i.e. 2013-2033).

#### 5km Study Area

##### Town of Ingersoll

- The Town of Ingersoll is expected to reach 14,100 persons, 9,900 jobs and 5,900 households by 2036.
- Town of Ingersoll development applications, at various stages of review, either approved, draft or circulated, are expected to contribute to housing and employment development into 2033. Below is a general summary of the proposed development applications within the Town of Ingersoll and 5km Study Area and shown on **Figure 13**:
  - A. Sifton Properties has also submitted an application for 128 single detached lots, 3 townhouse block, 2 common blocks, and 1 block in the 40 acre property.
  - B. Town of Ingersoll owned property on the south side of Clarke Road consisting of 2 industrial blocks and 1 open space block on 110.5 acres of land. This property is

part of South Ingersoll Secondary Plan Area and is currently vacant. Watson 2014 states these lands not available in the short term and the timing is unknown.

- C. As previously noted, there is a forecast County-wide employment land surplus however there is a forecast employment lands shortfall in Woodstock and Ingersoll over the planning period (i.e. 2013-2033). Ingersoll will need to designate a minimum of approximately 65 gross Ha (161 gross acres) of employment land to meet long-term need to 2033. Two Future Urban Growth (FUG) areas have been designated in the County Official Plan which are intended for employment uses:
- a. lands within the Township of South-West Oxford in part of Lot 18, Concessions 1 and 2 (West Oxford) which are generally to be developed for business, industrial and service commercial uses. This FUG is approximately 40ha in area.
  - b. lands within the Township of South-West Oxford, in Lots 23 and 24, Concession 1 and Part Lots 23 and 24, Concession 2 (West Oxford) which are generally to be developed for industrial uses. This FUG is approximately 140ha in area.

Prior to permitting new development within FUGs, a number of conditions must be satisfied subject to a *comprehensive review*, including: land needs justification (less than a 10 year supply of vacant, unconstrained land to accommodate expected growth); preparation of a servicing strategy; the preparation of a secondary plan; and County Council approval.

- The Town of Ingersoll has identified a number of lands which are currently designated residential as vacant with no active applications that represent a 10 year land supply. These properties could contribute to future residential growth into 2033 and 2043 depending on expected level and completion date of development. Below is a general summary of the proposed development applications.
  - D. Area of land located north of David Street and East of Harris Street, surrounded by currently developed single family residential dwellings that make up the "Clover Ridge" subdivision.
  - E. Lands located to the west of Owen Street and east of Harris Street, south of David Street, behind existing residential development.
  - F. Parcel of land to the south of Canterbury Street (behind existing dwellings), West of Hall Street, and North of Centennial Line and east of Wellington Street (behind existing dwellings).

### **Township of Zorra**

- The Township of Zorra will reach a total population of 8,400 persons, employment of 2,900 and total households of 3,300 by 2036.



- Household supply for 2030 could reach 1,404 units, an oversupply of 55% given that only 905 additional units will be required.

### **Township of South West Oxford**

- The 2036 population projection for the Township of South-West Oxford is estimated at 7,600 persons (same as 2021) with employment and households at 2,400 and 2,800 respectively.
- Given that there is no forecasted increase in population, households, or employment during this horizon, no growth or significant changes in land use are anticipated.

### **Village of Beachville**

- Similar to the 2023 planning horizon, the Village of Beachville will only accommodate new residential and employment uses through infilling.

### **1km Study Area**

- Like the Village of Beachville, growth in the rural cluster of Centerville is only permitted through infilling, and it is expected that a limited amount of development will occur in the future.
- No development is anticipated within the 1km Study Area.

Growth is expected to continue into the 2033 planning horizon with a range of residential and employment development. The Town of Ingersoll will also be investigating options of boundary expansion to address the employment land deficiency. Expansion is expected to occur to the south of Ingersoll, into the Township of South-West Oxford near Highway 401. Like the 2020 planning horizon, growth and development in the Village of Beachville, and the Rural Cluster of Centerville will be minimal, with growth predominately through infill. It is expected that developments identified in the 2023 planning horizon will be complete and/or nearing completion.

No proposed development areas are located within the 1km Study Area during this time period. The Rural Cluster of Centerville is located within this 1km Study Area, but only limited growth and expansion, through infill is expected in this area.

### **6.3.3 2033-2043 Planning Horizon**

The following provides a summary of expected growth to the 2043 planning horizon. It is understood that the County will continue to experience modest population growth which in turn may lead to changes in required residential and employment land consumption. Growth will continue into 2043, either in the form of new developments on currently vacant land, and/or completion of developments underway in a prior planning horizon. Each anticipated land use change is identified on **Figure 14**.

- By 2041, the County is expected to grow to a population of approximately 125,700 persons, with employment of approximately 65,000. The total household forecast is 52,900 units.
- The Town of Ingersoll is expected to reach 14,300 persons, 10,000 jobs and 6,000 households by 2041. FUGs designated in the County Official Plan may have been annexed into the Town of Ingersoll in the previous horizon and will supply sufficient employment lands to 2043 to accommodate the forecasted growth. Based on the most recent population and household projections (Watson, 2014) there will be no need to designate additional land to accommodate residential demand before 2041. To accommodate population and household demand beyond 2041 the Town of Ingersoll may investigate designating a proposed residential FUG Area north of Clark Road and east of Harris Street in the Township of South-West Oxford. This proposed Residential FUG Area is 75ha in area and identified in the Hemson Economic Strategy (2006).
- The Township of Zorra will reach a total population of 8,500 persons, employment of 3,000 and total households of 3,400 by 2041. Given the relatively low forecasted increase from the previous horizons, no significant development or change in land use are anticipated.
- The Township of South-West Oxford population will remain unchanged from 2021 (7,600 persons) as will employment and households at 2,400 and 2,800 respectively. Given that there is no forecasted increase in population, households, or employment during this horizon, no growth or significant changes in land use are anticipated.
- Growth in the Village of Beachville, and the Rural Cluster of Centerville will be minimal into 2040, and is expected continue through infill development only.

The majority of proposed residential and employment development detailed in previous horizons should be serviced and fully functional by the 2043 planning horizon. The Town of Ingersoll may have initiated boundary expansions into the Township of South-West Oxford to accommodate expected growth with future development and urban growth potential into future years. Aggregate resources will predominate in the north and north-east of the Town of Ingersoll and reflect existing uses currently in the area. Minimal to no change is expected for the 1km Study Area immediately surrounding the site of development.



# 7.0

## CONCLUSIONS

Some lands in the vicinity of the proposed Southwestern Landfill can be expected to be developed in the future, with the vast majority of development located outside the 1km Study Area. Future development is expected to occur within the 5km Study Area, but predominately in the south east area of the Town of Ingersoll.

Residential and employment development is expected to occur throughout the 30 year planning horizon in response to moderate population and employment growth. The following is a brief summary of the expected land use changes that are possible over the observed planning horizon:

- The Toyota and CAMI manufacturing plants have been strong contributors to overall growth and development and represent a significant percentage of employment leading to demand in both employment and residential lands in the past.
- The County is forecast to experience modest population growth over the Baseline-2043 period. Population growth is forecast to be the strongest during the Baseline-2023 horizon and gradually slowing down post 2023 as a result of the County's aging population.
- Average annual housing growth over the next 30 years is forecast to be lower than 2001-2011 for the Urban Centres (i.e. Woodstock, Ingersoll and Tillsonburg). The majority of housing growth will occur in the Urban Centres with approximately 52% of County-wide housing growth being allocated to the City of Woodstock, and 10% to the Town of Ingersoll.
- The rate of incremental population and housing growth is forecast to decline for all local municipalities.
- Based on 2014 population and household projections, there will be no need to designate additional land to accommodate residential demand. The current oversupply of residentially designated lands (under construction, in development process or vacant) will be sufficient to meet demand to 2043.
- Total employment is forecast to increase, although at a slower rate than in the past.
- Based on the existing supply of developable vacant employment land, Oxford County as a whole appears to have a sufficient supply of employment lands to meet long-term needs to 2033. However, notwithstanding the County-wide employment land surplus

identified, there is a forecast employment lands shortfall in Woodstock and Ingersoll over the planning period (i.e. 2013-2033).

- Woodstock and Ingersoll will need to designate a minimum of approximately 36 gross Ha (89 gross acres) and 65 gross Ha (161 gross acres), respectively of employment land to meet long-term need to 2033. Existing designated FUGs intended for employment uses may be annexed from the Township of South-West Oxford to address this demand.
- Growth will occur predominantly in the south east area of the Town of Ingersoll; no future development is proposed in the 1km Study Area that surrounds the subject lands.
- Designated resource areas (aggregate and agricultural) in the Township of Zorra, north of the Town of Ingersoll will limit the potential growth and land use changes in this area in accordance with Provincial and Official Plan policies requiring protection of these areas for long-term use.
- There are no plans to provide municipal services to the Village of Beachville. The Village of Beachville, and Rural Cluster of Centerville will only experience very limited growth through infilling.
- The Federal White Cement quarry will remain unopened and inactive.
- The Federal White Cement plant will continue operating generally at current production levels receiving raw materials from both Lafarge and Carmeuse.
- The Lafarge Woodstock quarry will remain within Concession 3 and the cement plant will remain inactive.
- The Carmeuse quarry will maintain production west of County Road 6 and the quarry east of County Road 6 will remain inactive until sometime after 2045. Lime production will continue.

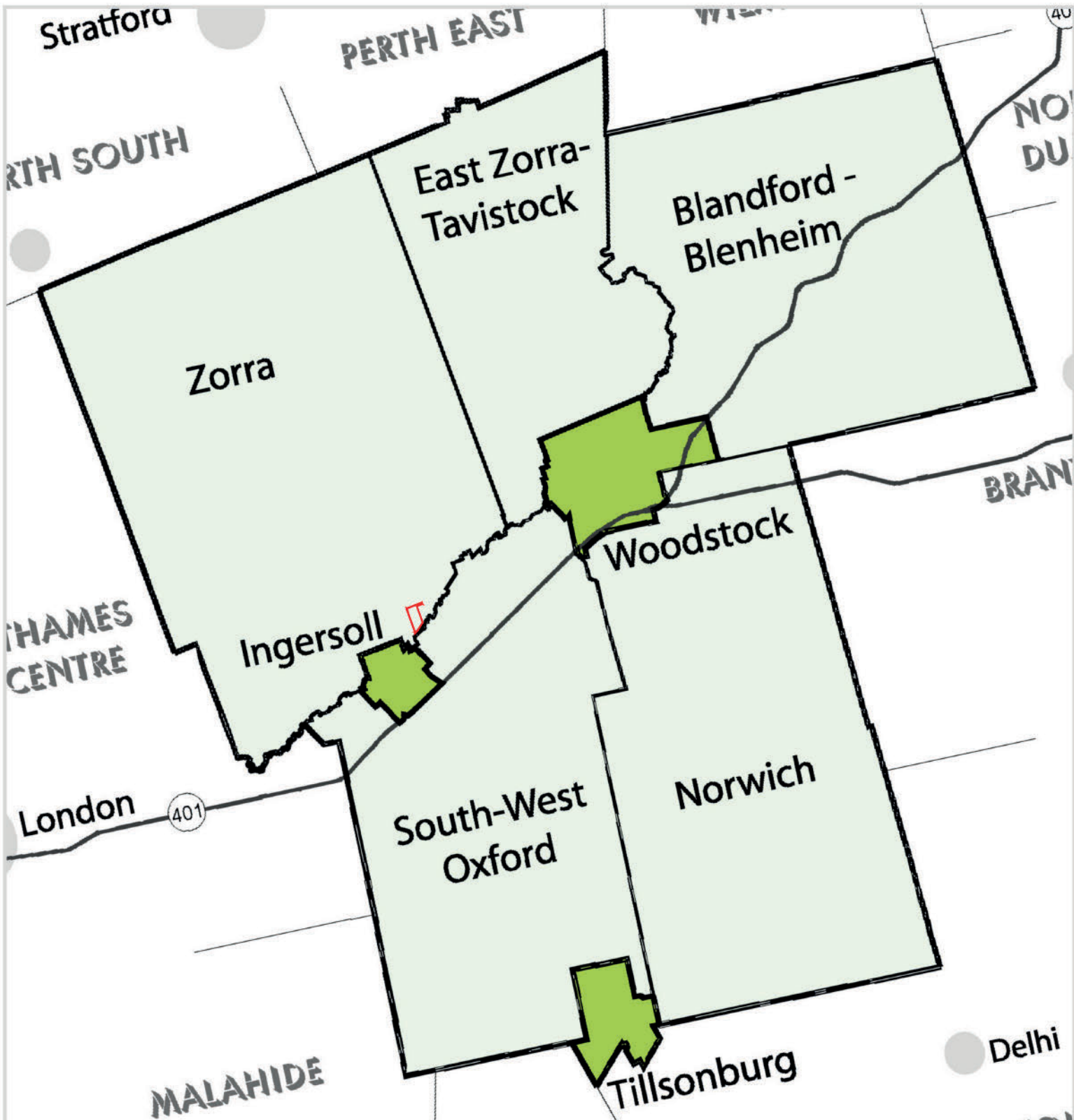




Figure: 1

**Context Map**  
County of Oxford  
Official Plan

Walker Environmental Group  
Township of Zorra  
County of Oxford

**LEGEND**

-  Subject Lands
-  Municipal Boundary

Source: County of Oxford Official Plan

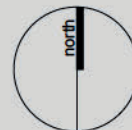


DATE: February 2017

SCALE N.T.S

FILE: 9811AE

DRN: NZ



K:\9811AE\WALKER BROTHERS SOUTHWESTERN LANDFILL\RPT\017\CAD\FIGURE 1 - CONTEXT MAP - FEB14,2017.DWG

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Figure: 2

## Study Area Context Map

Walker Environmental Group  
Township of Zorra  
County of Oxford

### LEGEND

-  Subject Lands
-  Municipal Boundary
-  1km Study Area
-  4km Study Area

Source: Oxford County Mapping Services

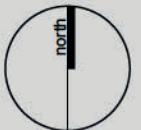


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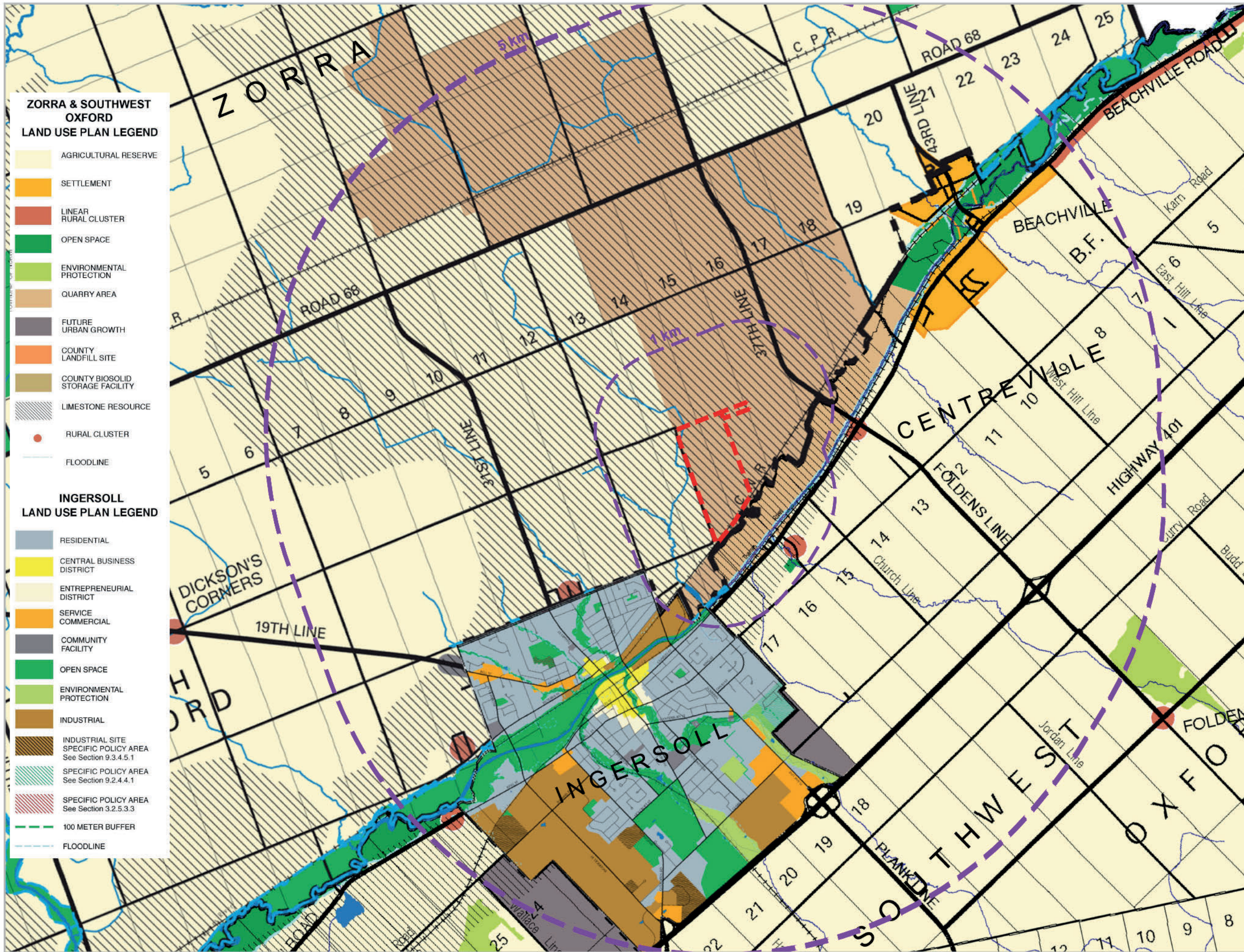
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K:\9811AE\WALKER BROTHERS SOUTHWESTERN LANDFILL\REPORT\FIGURE 2 - SEPT 2010 - STUDY AREA CONTEXT.DWG

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**ZORRA & SOUTHWEST OXFORD  
LAND USE PLAN LEGEND**

- AGRICULTURAL RESERVE
- SETTLEMENT
- LINEAR RURAL CLUSTER
- OPEN SPACE
- ENVIRONMENTAL PROTECTION
- QUARRY AREA
- FUTURE URBAN GROWTH
- COUNTY LANDFILL SITE
- COUNTY BIOSOLID STORAGE FACILITY
- LIMESTONE RESOURCE
- RURAL CLUSTER
- FLOODLINE

**INGERSOLL  
LAND USE PLAN LEGEND**

- RESIDENTIAL
- CENTRAL BUSINESS DISTRICT
- ENTREPRENEURIAL DISTRICT
- SERVICE COMMERCIAL
- COMMUNITY FACILITY
- OPEN SPACE
- ENVIRONMENTAL PROTECTION
- INDUSTRIAL
- INDUSTRIAL SITE SPECIFIC POLICY AREA See Section 9.3.4.5.1
- SPECIFIC POLICY AREA See Section 9.2.4.4.1
- SPECIFIC POLICY AREA See Section 3.2.5.3.3
- 100 METER BUFFER
- FLOODLINE

Figure 3

**Land Use Plan**  
County of Oxford Official Plan  
Walker Environmental Group  
Township of Zorra,  
County of Oxford

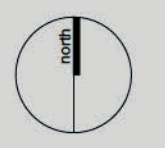


**LEGEND**

- Subject Lands
- Municipal Boundary
- 1 km & 5 km Study Area

Source: Township of Zorra Official Plan, Schedule Z-1 Land Use Plan  
Town of Ingersoll Official Plan, Schedule I-2 Residential Density Plan  
Township of Southwest Oxford Official Plan, Schedule S-1 Land Use Plan

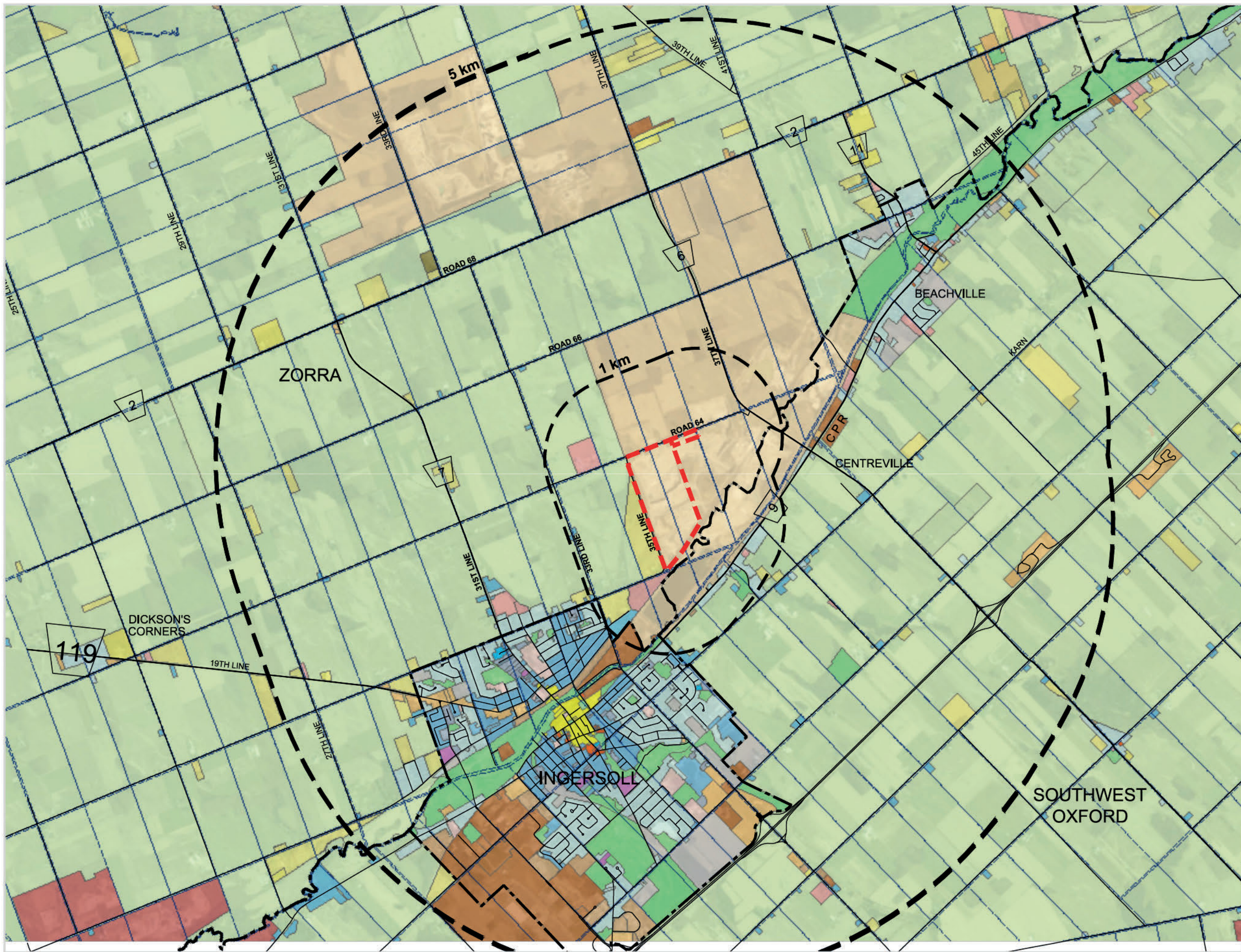
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**Figure 4**  
**Surrounding Zoning**  
 within 5 kilometres

Walker Environmental Group  
 Township of Zorra,  
 County of Oxford



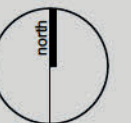
**LEGEND**

- Subject Lands
- Municipal Boundary
- 5 km & 1 km Study Area

	Residential Zones
	Commercial Zones
	Industrial Zones
	Institutional Zones
	Open Space / Environmental Zones
	Agriculture Zones
	Development Zones
	Village

Source: County of Oxford Online Mapping, 2010 Airphoto

**DATE:** February 2017  
**SCALE:** N.T.S.  
**JOB:** 9811AE  
**DRN:** NZ



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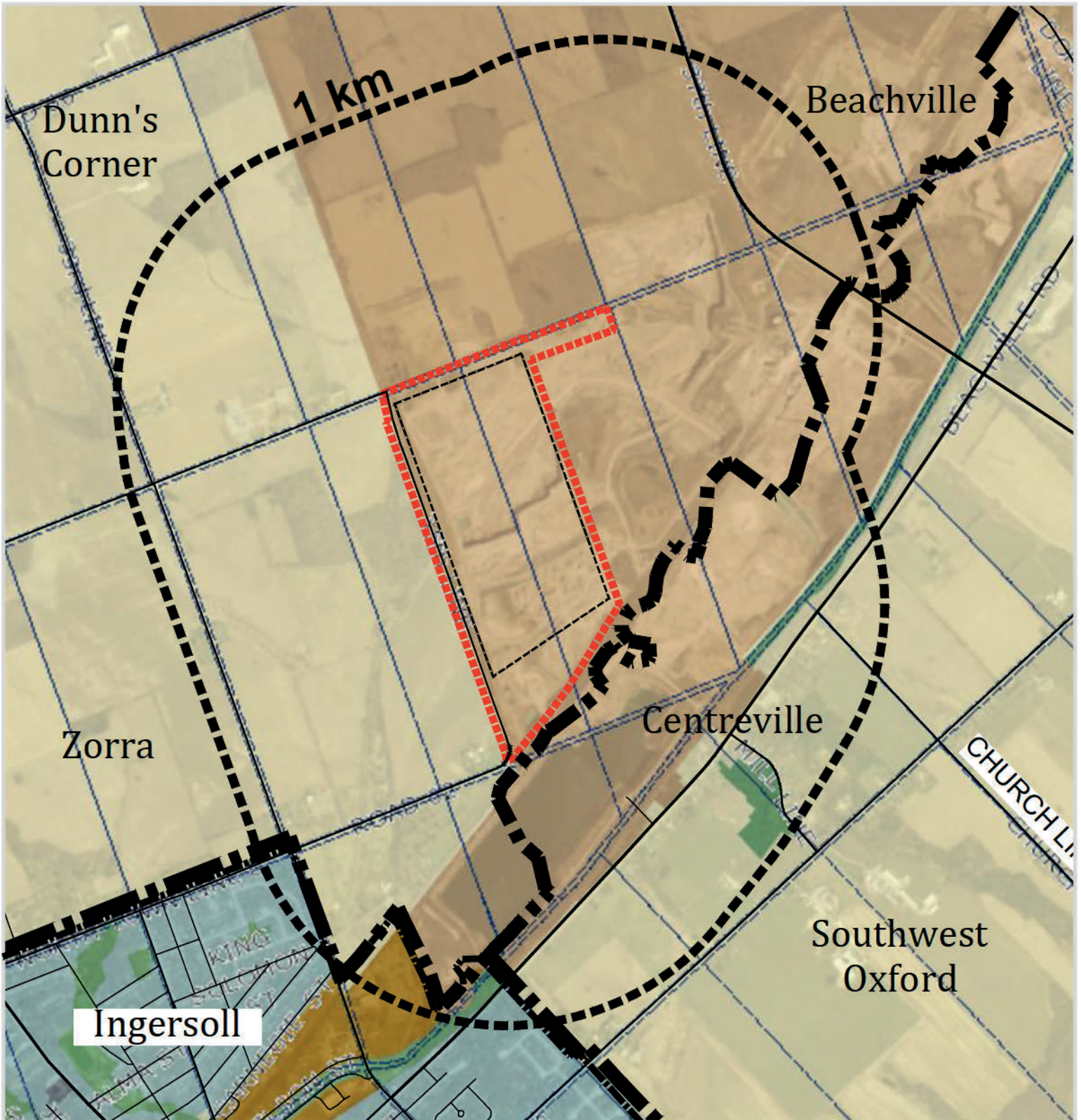











Figure 5

**Surrounding Official Plan Designation within 1 kilometre**

Walker Environmental Group  
Township of Zorra  
County of Oxford

**LEGEND**

-  Subject Lands
-  Limit of Waste Fill Area
-  Municipal Boundary
-  1 km Study Area
-  Quarry Area
-  Agriculture
-  Low Density Residential
-  Industrial
-  Open Space

Source: County of Oxford Online Mapping, 2016 Airphoto

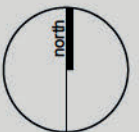


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DRN: NZ



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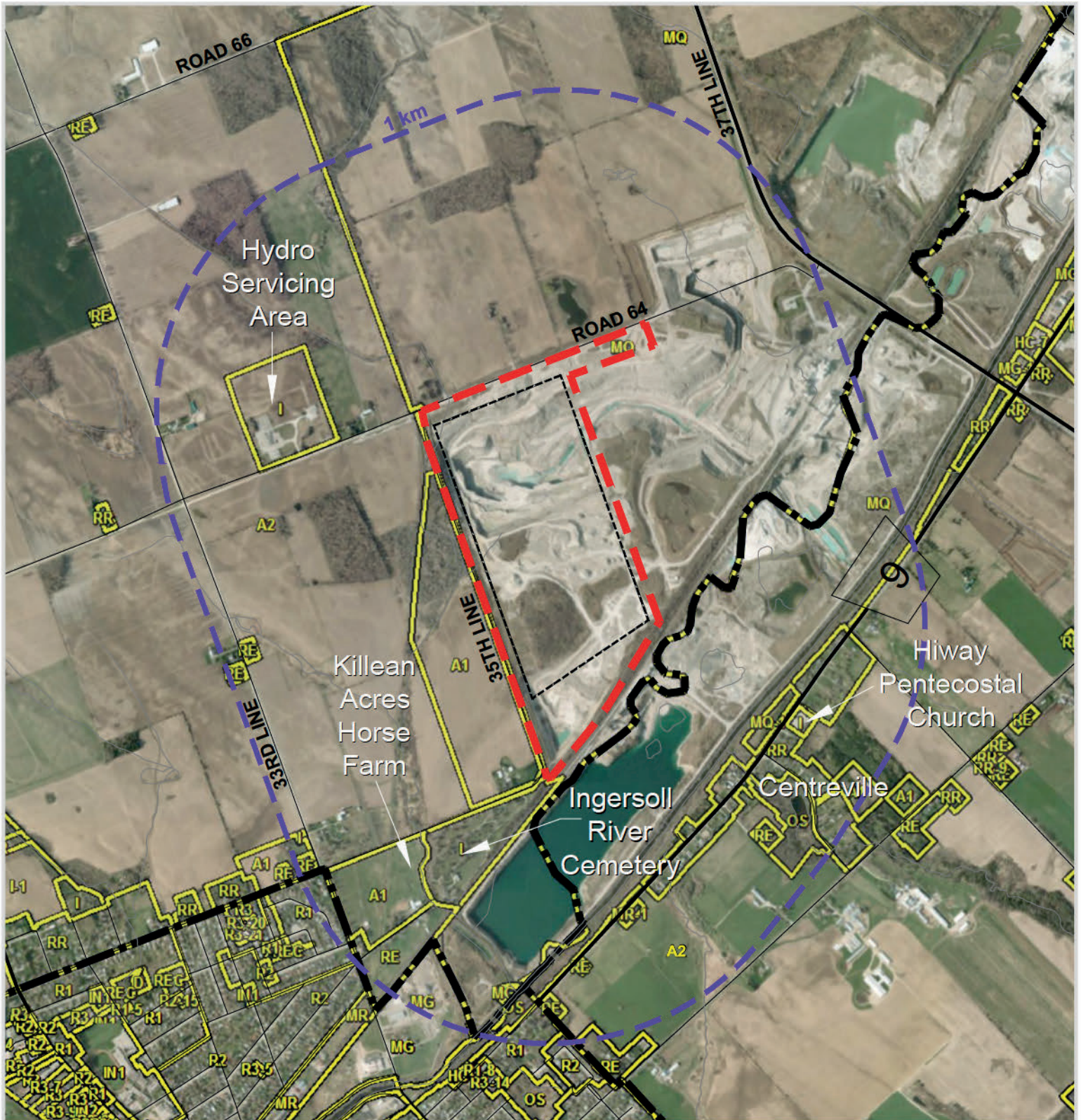


Figure 6

## Surrounding Zoning within 1 kilometre



**walker**  
Industries

Walker Environmental Group  
Township of Zorra  
County of Oxford

### LEGEND

-  Subject Lands
-  Limit of Waste Fill Area
-  Municipal Boundary
-  1 km Study Area

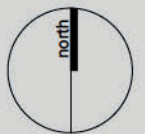
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DRN: NZ



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# Oxford County Limestone Quarries Baseline Conditions

FIG. 7

## LEGEND

- Licensed Boundary
- Additional Lands Owned or Controlled by Licensees, Lafarge, Carmeuse & FWC
- Municipal Boundary
- Railroad Line
- Oil Pipeline
- Active Quarry with approximate active face locations
- Inactive Reserves/Undisturbed Areas
- Non Extraction Areas within Licensed Boundary, may include overburden stockpiles, plant facilities, etc.
- Rehabilitated/Backfilled Areas (green = land, blue = water)
- Quarry Sump
- Processing Plants see insert table on map for descriptions
- Entrance Exit main operational access to public roads
- Main External Haul Route public roads

Source: Ontario Basic Mapping, www.geographynetwork.ca/website/obm

DATE: September 2017

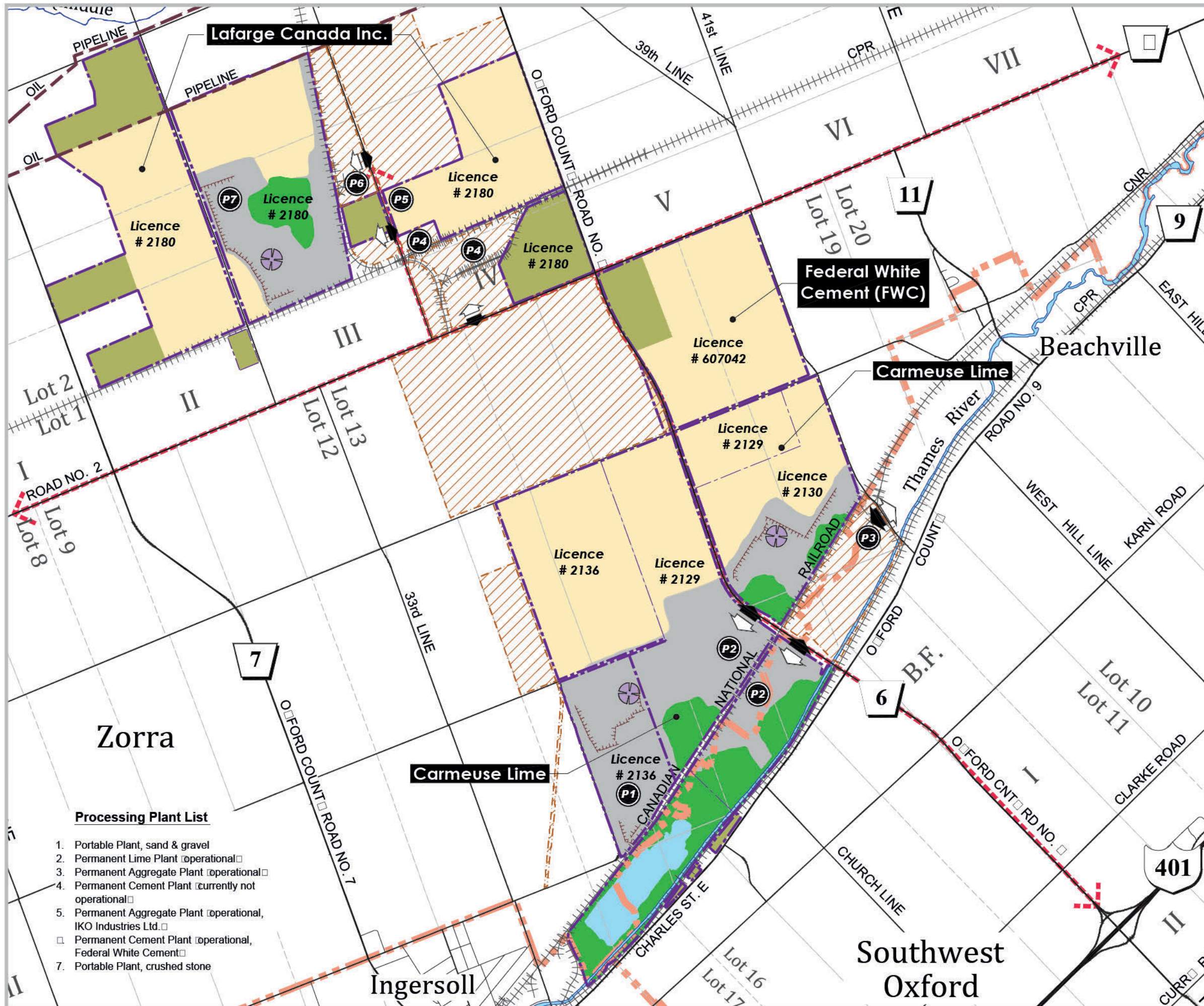
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### Processing Plant List

1. Portable Plant, sand & gravel
2. Permanent Lime Plant (operational)
3. Permanent Aggregate Plant (operational)
4. Permanent Cement Plant (currently not operational)
5. Permanent Aggregate Plant (operational, IKO Industries Ltd.)
6. Permanent Cement Plant (operational, Federal White Cement)
7. Portable Plant, crushed stone





**LEGEND**

- Licensed Boundary
- Additional Lands Owned or Controlled by Licensees, Lafarge, Carmeuse or FWC
- Municipal Boundary
- Railroad Line
- Oil Pipeline
- Active Quarry with approximate active face locations
- Inactive Reserves/Undisturbed Areas
- Non Extraction Areas within Licensed Boundary, may include overburden stockpiles, plant facilities, etc.
- Rehabilitated/Backfilled Areas (green land, blue water)
- Quarry Sump
- Processing Plants see insert table on map for descriptions
- Entrance Exit (main operational access to public roads)
- Main External Haul Route (public roads)

Source: Ontario Basic Mapping, www.ontario.ca/infrastructure/transportation/transportation-network

DATE: September 2017

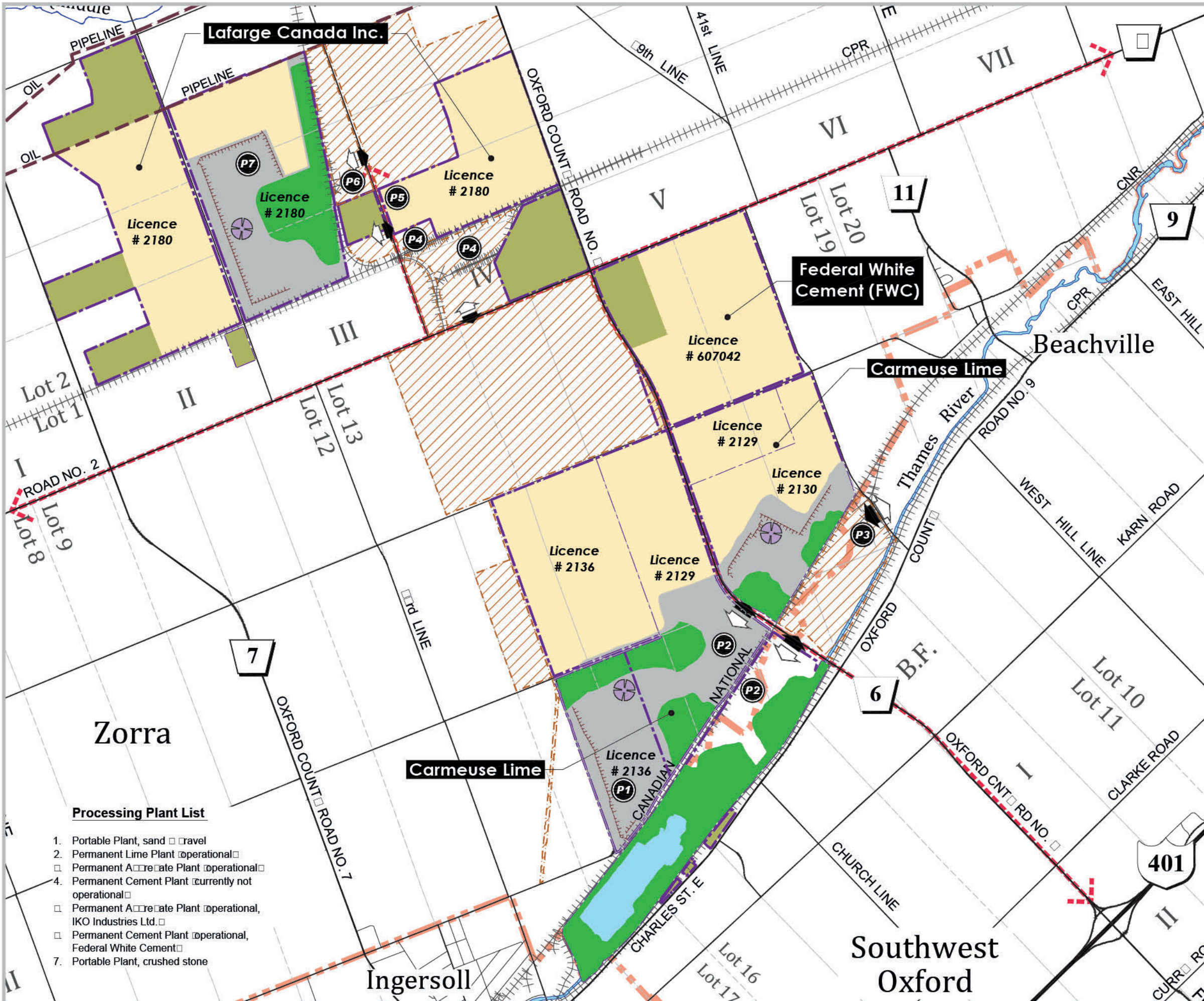
SCALE: 1:10,000

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**Processing Plant List**

1. Portable Plant, sand/gravel
2. Permanent Lime Plant (operational)
3. Permanent Aggregate Plant (operational)
4. Permanent Cement Plant (currently not operational)
5. Permanent Aggregate Plant (operational, IKO Industries Ltd.)
6. Permanent Cement Plant (operational, Federal White Cement)
7. Portable Plant, crushed stone





**LEGEND**

- Licensed Boundary
- Additional Lands Owned or Controlled by Licensees, Lafarge, Carmeuse, FWC
- Municipal Boundary
- Railroad Line
- Oil Pipeline
- Active Quarry with approximate active face locations
- Inactive Reserves/Undisturbed Areas
- Non Extraction Areas (within Licensed Boundary, may include overburden stockpiles, plant facilities, etc.)
- Rehabilitated/Backfilled Areas (green = land, blue = water)
- Quarry Sump
- Processing Plants see insert table on map for descriptions
- Entrance/Exit (main operational access to public roads)
- Main External Haul Route (public roads)

Source: Ontario Basic Mapping, www.ontario.ca/infrastructure/transportation/transportation-network

DATE: September 2017

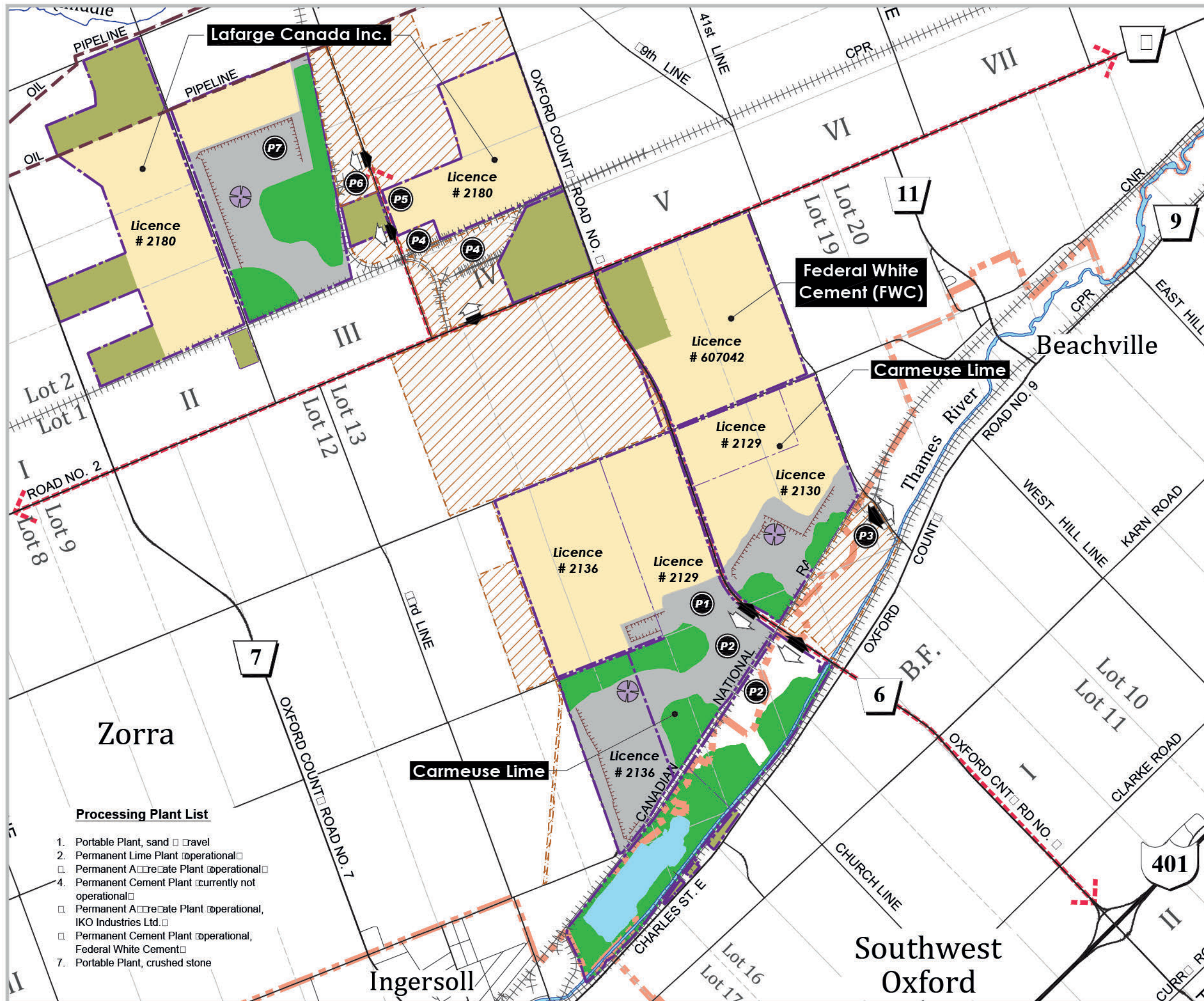
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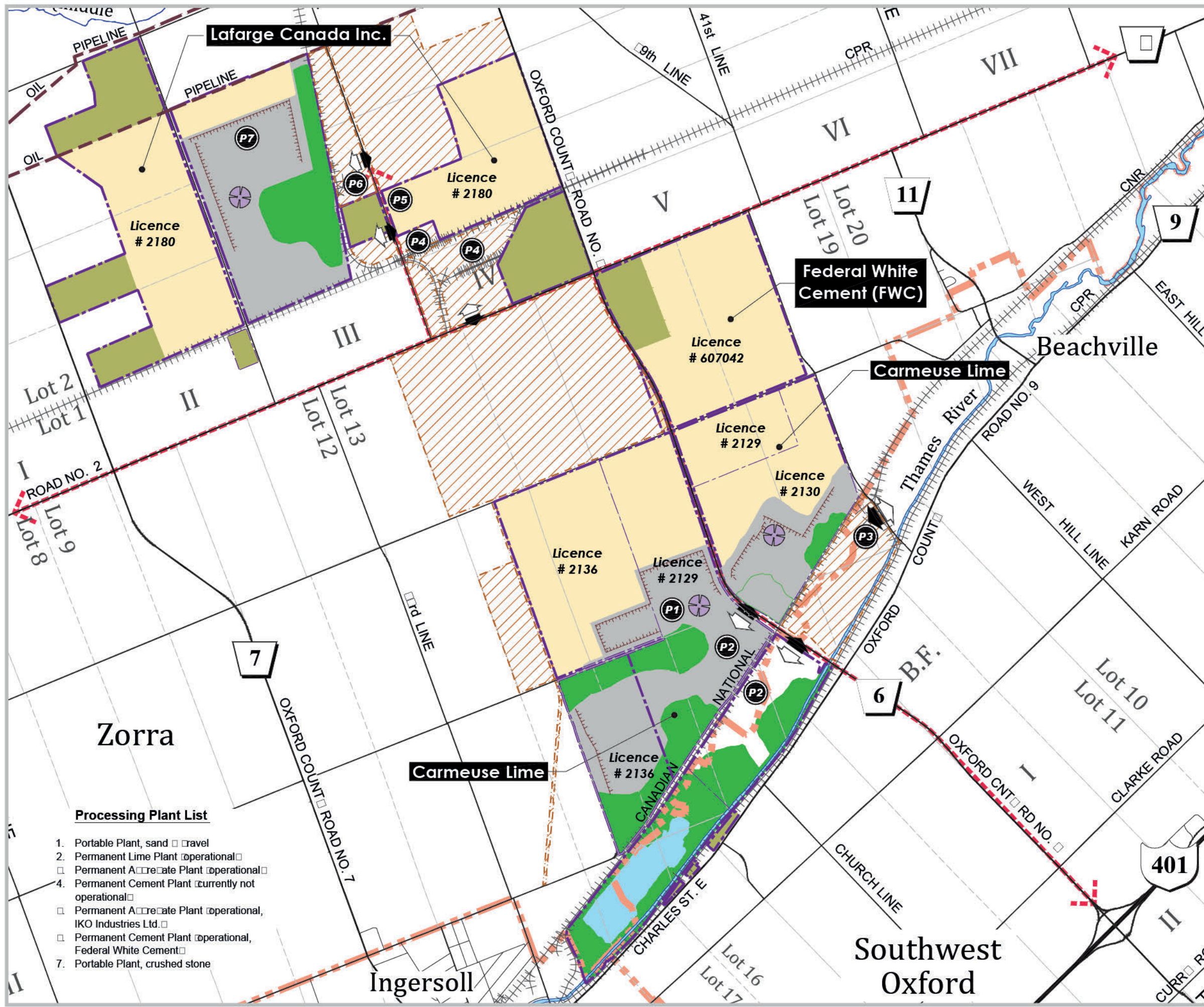


**Processing Plant List**

1. Portable Plant, sand & gravel
2. Permanent Lime Plant (operational)
3. Permanent Aggregate Plant (operational)
4. Permanent Cement Plant (currently not operational)
5. Permanent Aggregate Plant (operational, IKO Industries Ltd.)
6. Permanent Cement Plant (operational, Federal White Cement)
7. Portable Plant, crushed stone







LEGEND

- Licensed Boundary
- Additional Lands Owned or Controlled by Licensees, Lafarge, Carmeuse or FWC
- Municipal Boundary
- Railroad Line
- Oil Pipeline
- Active Quarry with approximate active face locations
- Inactive Reserves/Undisturbed Areas
- Non Extraction Areas within Licensed Boundary, may include overburden stockpiles, plant facilities, etc.
- Rehabilitated/Backfilled Areas green land, blue water
- Quarry Sump
- Processing Plants see insert table on map for descriptions
- Entrance/Exit main operational access to public roads
- Main External Haul Route public roads

Processing Plant List

1. Portable Plant, sand gravel
2. Permanent Lime Plant operational
3. Permanent Aggregate Plant operational
4. Permanent Cement Plant currently not operational
5. Permanent Aggregate Plant operational, IKO Industries Ltd.
6. Permanent Cement Plant operational, Federal White Cement
7. Portable Plant, crushed stone

Source: Ontario Basic Mapping, www.geographynetwork.ca/website/obm

DATE: September 2017

SCALE: 1:10,000



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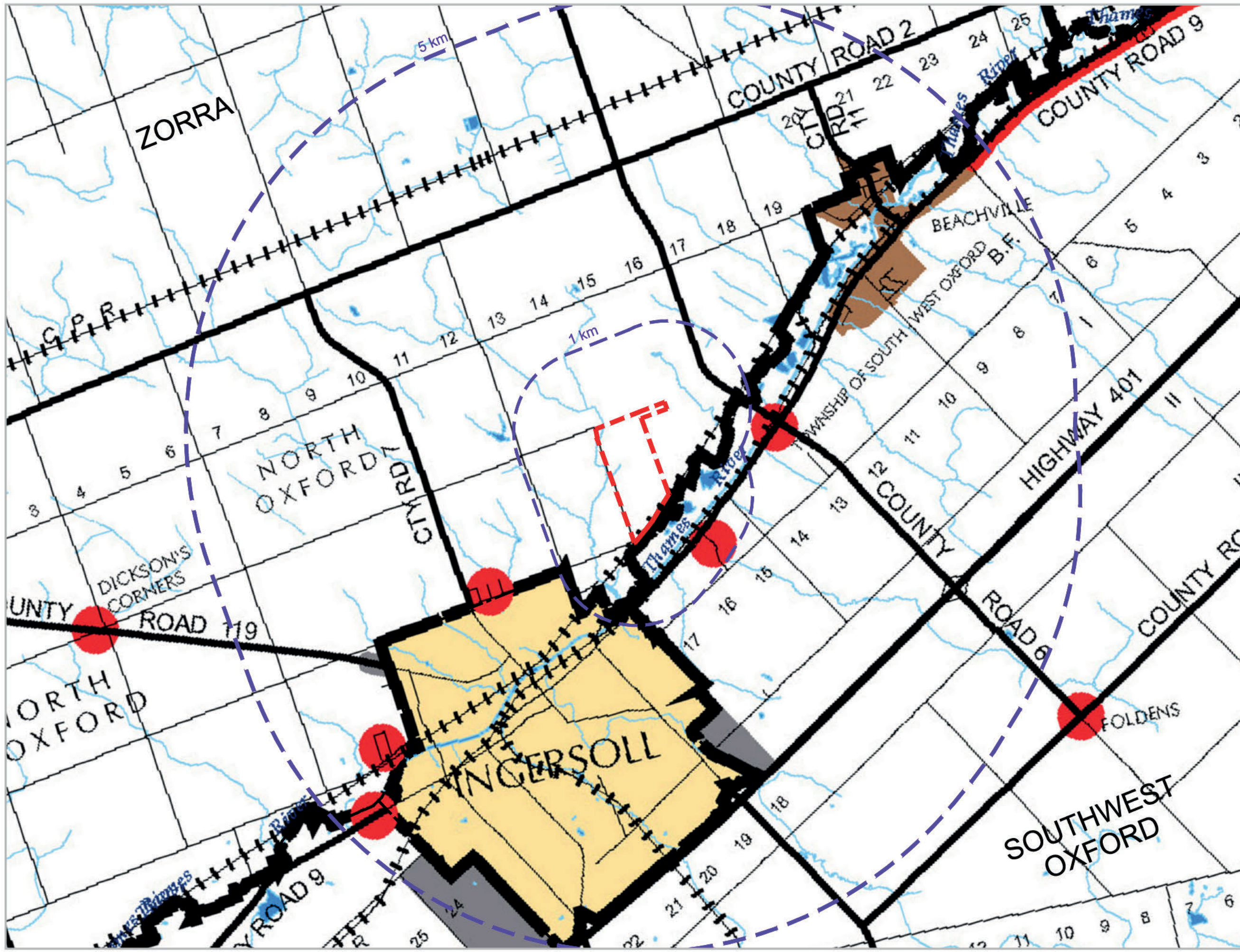


Figure: 11  
**Settlement Strategy Plan**

County of Oxford Official Plan  
 Schedule C-3

Walker Environmental Group  
 Township of Zorra,  
 County of Oxford



**LEGEND**

- Subject Property
- Municipal Boundary
- 1 km & 5 km Study Area

- VILLAGES
- SERVICED VILLAGES
- LARGE URBAN CENTRES
- FUTURE URBAN GROWTH
- RURAL CLUSTERS

**BASE MAP LEGEND**

- MUNICIPAL BOUNDARY
- MAJOR ROADS
- OTHER ROADS
- RAILWAY
- WATERCOURSE

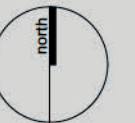
Source: County of Oxford Official Plan, Schedule C-3,  
 Settlement Strategy Plan

DATE: February 2017

SCALE: N.T.S.

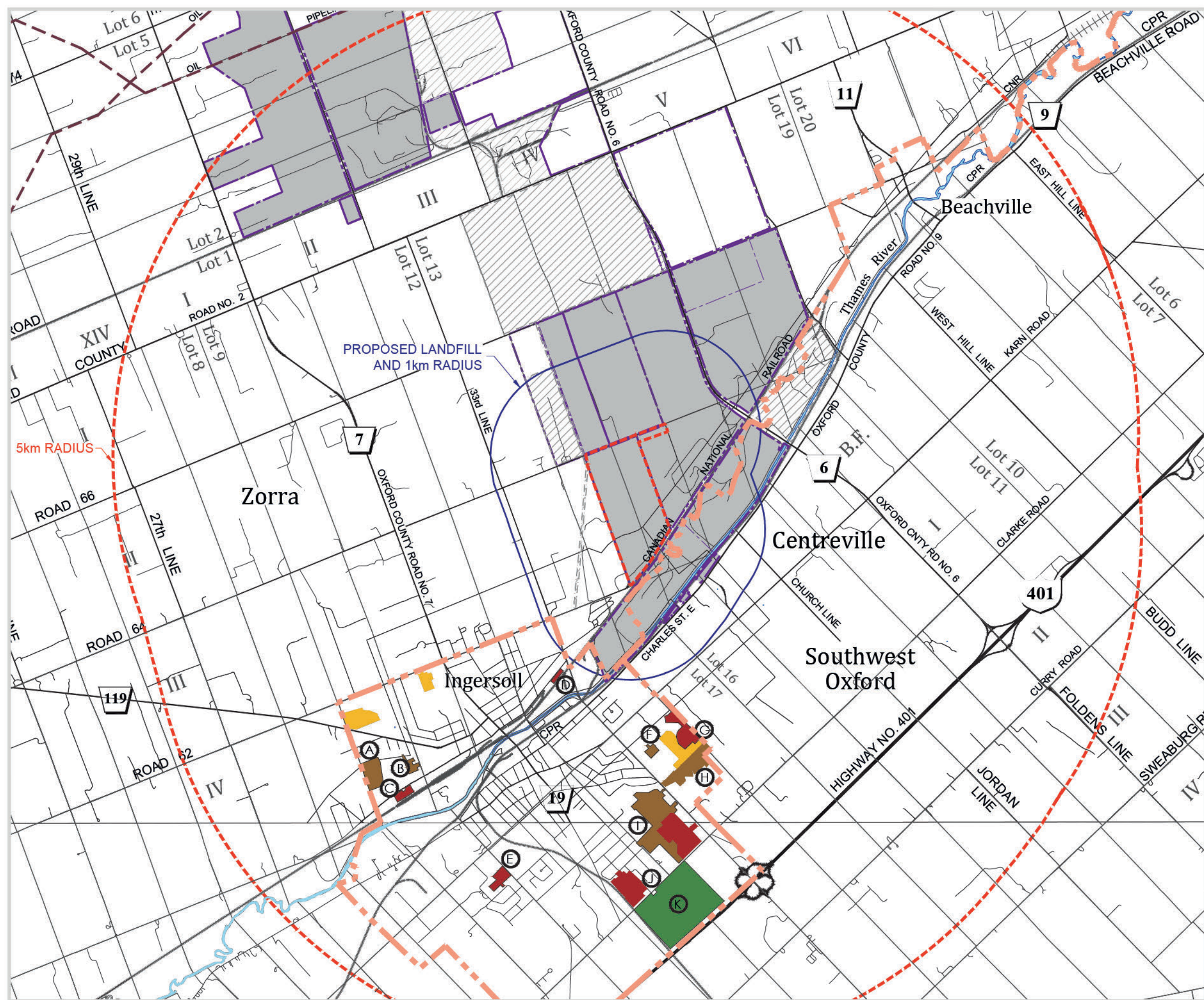
JOB: 9811AE

DRN: DBG



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**LEGEND**

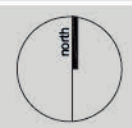
- Subject Lands
- Licensed Boundary
- Additional Lands Owned or Controlled by Licensees, (Lafarge, Carmeuse & FWC)
- Municipal Boundary
- Railroad Line
- Oil Pipeline
- Circulated and Submitted
- Draft Approved Plan
- Registered Plan
- Built or Nearly Built

- (A) 1648317 Ont. Ltd
- (B) Reeves Realty Ltd
- (C) Janet McHugh
- (D) County Contracting of Wheatly Inc.
- (E) ATSA Corp.
- (F) Cam-Don Properties
- (G) Oak Country Homes Ltd.
- (H) 1658110 Ontario Ltd.
- (I) Sifton Properties Ltd.
- (J) Schout Group Inc.
- (K) Town of Ingersoll

Source: Ontario Basic Mapping, www.geographynetwork.ca/website/obm

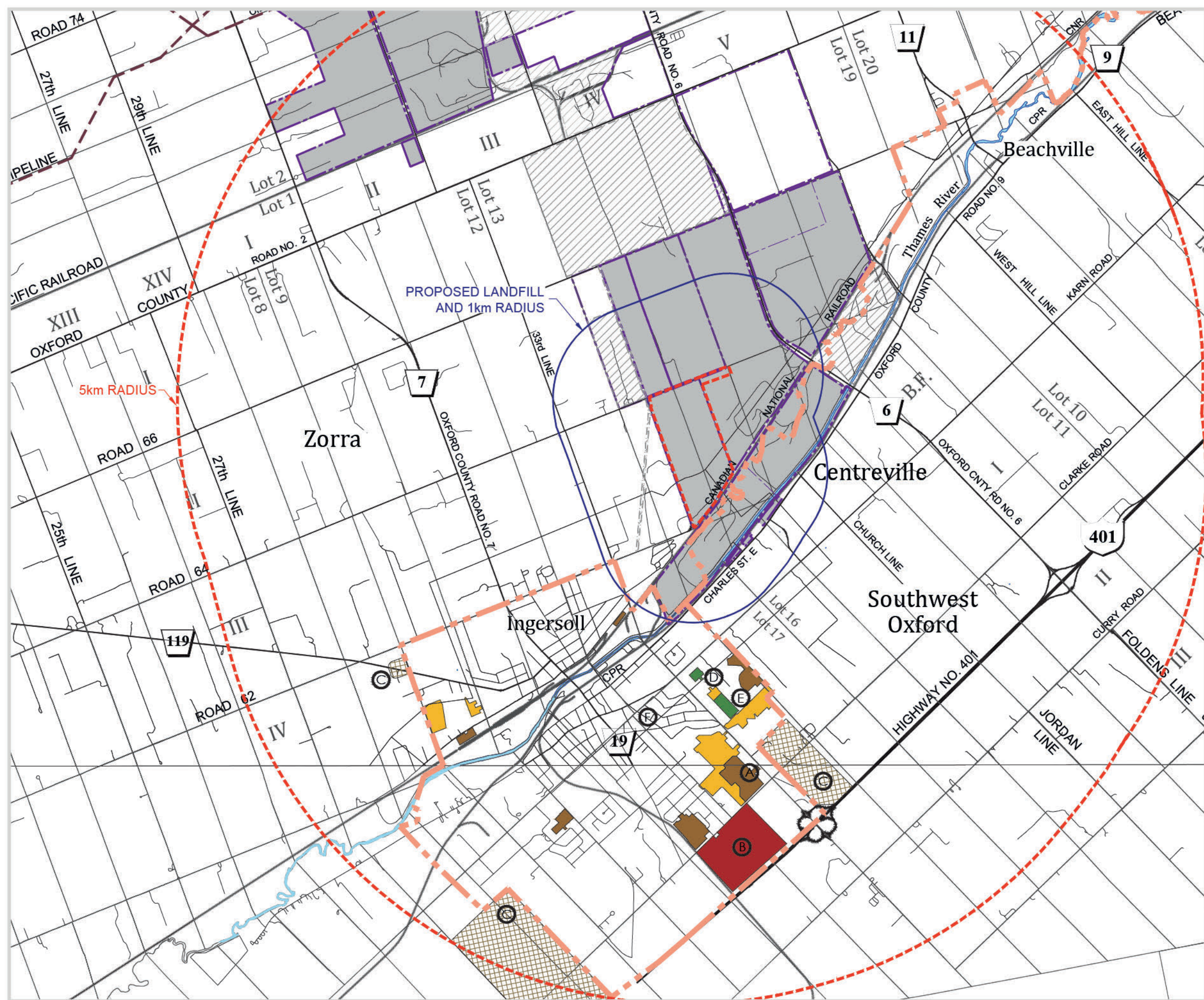
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**LEGEND**

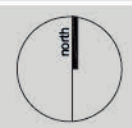
- Subject Lands
- Licensed Boundary
- Additional Lands Owned or Controlled by Licensees, (Lafarge, Carmeuse & FWC)
- Municipal Boundary
- Railroad Line
- Oil Pipeline
- Circulated and Submitted
- Draft Approved Plan
- Registered Plan
- Built or Nearly Built
- (FUG) Future Urban Growth Area

- (A) Sifton Properties
- (B) Town of Ingersoll
- (C) Designated Future Urban Growth (FUG)
- (D) Vacant, Residential Designation
- (E) Vacant, Residential Designation
- (F) Vacant, Residential Designation

Source: Ontario Basic Mapping, [www.geographynetwork.ca/website/obm](http://www.geographynetwork.ca/website/obm)

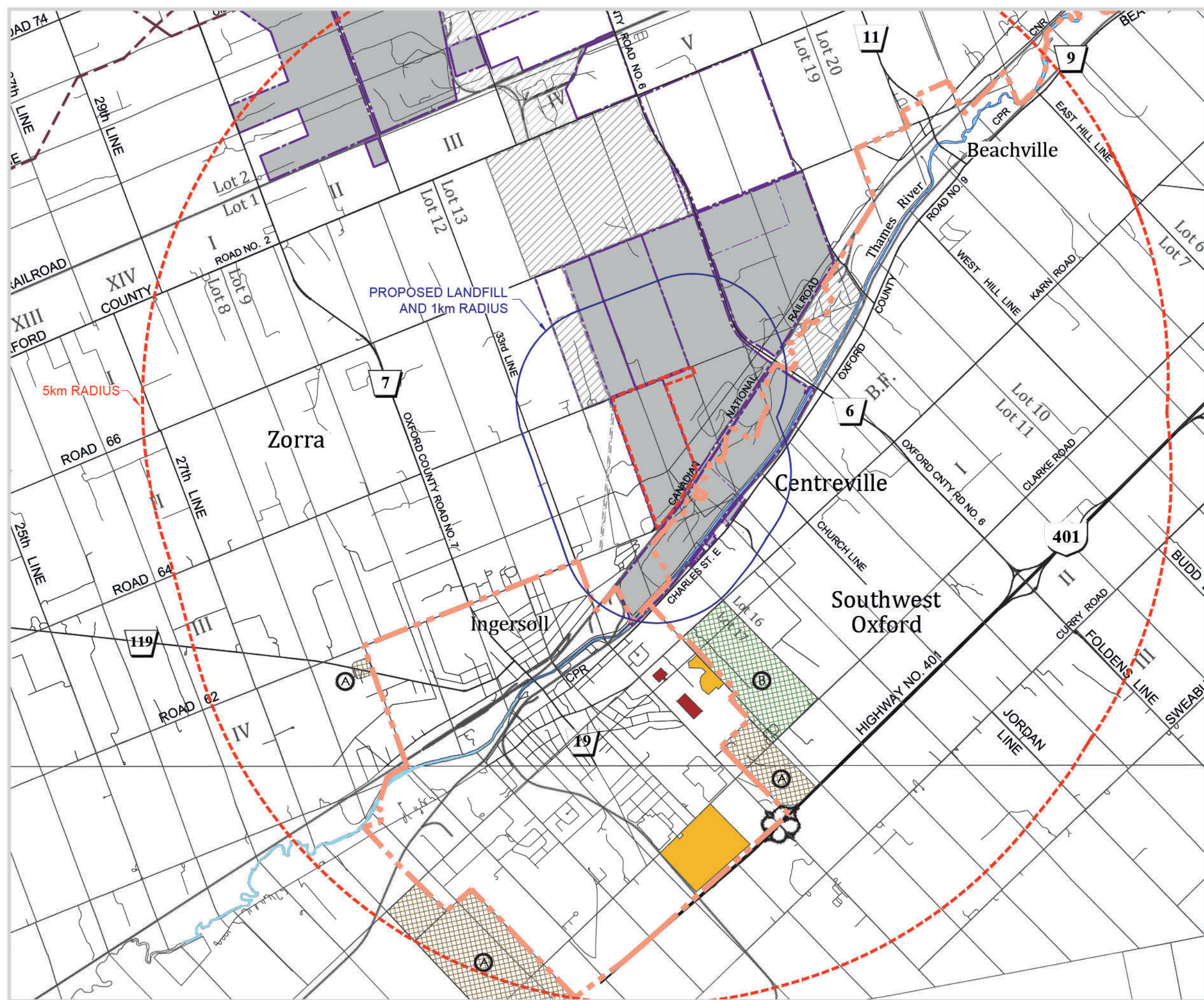
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**LEGEND**

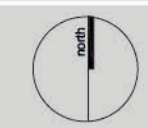
- Subject Lands
- Licensed Boundary
- Additional Lands Owned or Controlled by Licensees, (Lafarge, Carmeuse & FWC)
- Municipal Boundary
- Railroad Line
- Oil Pipeline
- Circulated and Submitted
- Draft Approved Plan
- Registered Plan
- Built or Nearly Built
- (FUG) Future Urban Growth Area
- Proposed Residential (FUG) Area

- (A) Designated Future Urban Growth (FUG)
- (B) Residential FUG Area

Source: Ontario Basic Mapping, [www.geographynetwork.ca/website/obm](http://www.geographynetwork.ca/website/obm)

DATE: February 2017

SCALE: 1:40,000



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**Appendix C**  
**Curriculum vitae**

DRAFT



# CURRICULUMVITAE

## Dan Currie, MA, MCIP, RPP

### 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

Dan Currie, a Partner with MHBC, 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 policy and development work. Dan has experience in a number of areas including strategic planning, growth plan policy, secondary plans, watershed plans, housing studies and downtown revitalization plans. Dan is also MHBC's Managing Director of Cultural Heritage and oversees all of the company's Cultural Heritage work including heritage master plans, heritage impact assessments, heritage conservation district plans, cultural heritage landscape plans and other projects.

Dan holds a Masters degree in Planning from the University of Waterloo, a Bachelors degree (Honours) in Planning from the University of Waterloo and a Bachelor of Arts degree from the University of Saskatchewan. He is a registered Professional Planner and a Member of the Canadian Institute of Planners and a Professional Member of the Canadian Association of Heritage Professionals.

### PROFESSIONAL ASSOCIATIONS

- Full Member, Canadian Institute of Planners
- Full Member, Ontario Professional Planners Institute
- Member, Canadian Association of Heritage Professionals
- Past Board Member, Town and Gown Association of Ontario

### PROFESSIONAL HISTORY

- 2013 – Present Partner,  
MacNaughton Hermsen Britton Clarkson Planning Limited
- 2009 – 2013 Associate  
MacNaughton Hermsen Britton Clarkson Planning Limited
- 2007 - 2009 Director, Policy Planning, City of Cambridge

### CONTACT

540 Bingham Centre Drive,  
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Kitchener, ON N2B 3X9  
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F 519 576 0121  
dcurrie@mhbcplan.com  
www.mhbcplan.com





## CURRICULUMVITAE

### Dan Currie, MA, MCIP, RPP

- 2000 - 2007 Senior Planner, City of Waterloo
- 1999 - 2000 Planner, City of Waterloo
- 1997 - 1998 Research Planner, City of Kitchener

### SELECTED PROJECT EXPERIENCE

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

- Township of West Lincoln, Smithville Northwest Quadrant Secondary Plan
- Township of Tiny Growth Management Strategy
- Niagara-on-the-Lake Mary Street Streetscape Study
- Richmond Hill, Bond Crescent Intensification Strategy
- City of Cambridge Climate Change Adaptation Policy
- Ministry of Infrastructure Pilot Test of Growth Plan Indicators Study
- Cambridge West Master Environmental Servicing Plan
- Township of Tiny Residential Land Use Study
- Township of West Lincoln Settlement Area Expansion Analysis
- 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
- Cambridge GO Train Feasibility Study
- City of Waterloo Height and Density Policy
- City of Waterloo Student Accommodation Study
- Uptown Waterloo Residential Market Study
- City of Waterloo Land Supply Study
- City of Kitchener Inner City Housing Study

### CONTACT

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F 519 576 0121  
dcurrie@mhbcplan.com  
www.mhbcplan.com





## CURRICULUM VITAE

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

### SELECTED PROJECT EXPERIENCE

#### **MUNICIPAL PROJECTS / PROVINCIAL POLICY REVIEW**

Project Planner providing services to the Township of Guelph / Eramosa related to the review of Planning Act applications.

Project planner involved in the Wellington County Groundwater Study.

Assessment of Potential Gravel Pit Acquisition, County of Prince Edward

Review of Provincial Planning activities (Places to Grow, Greenbelt Plan, Bill 51, PPS Review), and preparation of summary information, comments to Provincial Ministries, and policy suggestions for a range of clients.

Review and provide comments related to Official Plan Reviews and Zoning By-law Reviews for a variety of clients (Examples include: Region of Waterloo Official Plan, Haldimand County Official Plan, Brant County Official Plan review, Town of Caledon Official Plan policies, Whitchurch-Stouffville Zoning By-law, Brant County Zoning By-law review).

#### **RESIDENTIAL / MIXED USE / RETAIL / INSTITUTIONAL**

Preparation of planning assessments to identify development potential of properties for a range of clients.

Site Plan approvals for commercial developments.

Registration and planning of residential developments.

Property investigations and planning assessments.

#### Specific Project Examples:

- 1589969 Ontario - Redevelopment of former Lulu's property
- Chalon Estates Limited – Registration of Plan of Subdivision
- Clair Hills Development Inc. – Registration of Plan of Subdivision
- H. Polzl Consulting - Demolition permits and redevelopment options
- Perimeter Institute - Evaluation of expansion potential for existing facility
- Primeland Developments – Huron Woods Subdivision, Part Lot Control Application Renewals, Registration, Redline Revisions to Plan of Subdivision

#### CONTACT

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F 519 576 0121  
nbogaert@mhbcplan.com  
www.mhbcplan.com

## CURRICULUM VITAE

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

- ProjectBuildings.com - Redevelopment of former Bauer property
- Wm. J. Gies Construction - Westfield Drive Subdivision Registration
- Woodford Apartments Limited - Condominium and Site Plan applications

#### RURAL PLANNING AND AGGREGATE RESOURCE DEVELOPMENT

Research, preparation and co-ordination of reports / applications under the *Ontario Planning Act* (Minor Variance, Severance, Zoning By-law Amendment, Official Plan Amendment), *Niagara Escarpment Planning and Development Act* and the *Aggregate Resources Act*.

Planning evaluations and analysis for mineral aggregate development.

Conduct notification and consultation procedures as required under the *Aggregate Resources Act*.

Research and preparation of reports/evidence for hearings before the Ontario Municipal Board / Joint Board.

Population and aggregate production research for a range of clients.

Property investigations and planning assessments.

#### Specific Project Examples:

- Dufferin Aggregates - Milton Quarry Extension
- David Vella - Lot Line adjustment application and related Niagara Escarpment Plan approvals
- Genuine Springs - Proposal for a commercial water supply
- Hard Rock Paving - Law Quarry Extension
- James Dick Construction Limited - Rockfort Quarry proposal, Comprehensive Broader Scale Environmental Study (CBSES), Haldimand County Property Investigation
- Lafarge Canada Inc. - Cambridge Pit Extension, Hagersville Quarry Extension, Manitoulin rezoning and Aggregate Resources Act application, West Paris Pit Extension, tonnage increase applications, site investigations
- Lee Sand and Gravel - Stouffville Pit Fill Importation Protocol
- Mc Cann Construction - West Perth Concrete Plant
- Miller Paving - Analysis of Market Areas
- R.W. Tomlinson - Rideau Road Quarry Extension
- Telephone City Aggregates - Pottruff Road
- Upwells Limited - Severances in the Town of Erin

#### CONTACT

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 F 519 576 0121  
 nbogaert@mhbcplan.com  
 www.mhbcplan.com



## CURRICULUM **VITAE**

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

### **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 6th 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).

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).

### CONTACT

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F 519 576 0121  
nbogaert@mhbcpplan.com  
www.mhbcpplan.com

## CURRICULUM VITAE

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

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).

### 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.                     |

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 nbogaert@mhbcplan.com  
 www.mhbcplan.com



## CURRICULUM VITAE

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

- 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).
- 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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 nbogaert@mhbcpplan.com  
 www.mhbcpplan.com

## CURRICULUMVITAE

Dan Currie, MA, MCIP, RPP

### HERITAGE PLANNING

Town of Cobourg Heritage Master Plan  
Municipality of Chatham-Kent Rondeau Heritage Conservation District Plan  
City of Markham Victoria Square Heritage Conservation District Study  
City of Kingston Barriefield Heritage Conservation District Plan  
Burlington Heights Heritage Lands Management Plan  
Township of Muskoka Lakes, Bala Heritage Conservation District Study and Plan  
Municipality of Meaford, Downtown Meaford Heritage Conservation District Plan  
City of Guelph Brooklyn and College Hill Heritage Conservation District Plan  
Niagara Peninsula Conservation Authority St John's Master Plan  
City of Toronto Garden District Heritage Conservation District Study and Plan  
City of London Western Counties Cultural Heritage Plan  
City of Cambridge Heritage Master Plan  
City of Waterloo Mary-Allen Neighbourhood Heritage District Study  
City of Waterloo Rummelhardt School Heritage Designation  
Other heritage consulting services including:

- Heritage Impact Assessments
- Requests for Designations
- Alterations or new developments within Heritage Conservation Districts

### 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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