

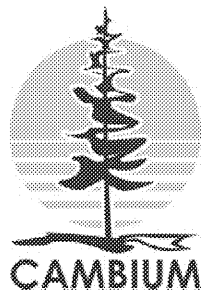


Phase I Environmental Site Assessment - 380 Lockhart Road, Barrie, Ontario

Cambium Reference No.: 9121-002

2019-06-06

Prepared for: Kingslea Developments Ltd.



Cambium Inc.

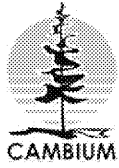
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Executive Summary

Kingslea Development Ltd. retained Cambium Inc. to complete a Phase I Environmental Site Assessment of the property at 380 Lockhart Road in Barrie, Ontario.

The 1.37 ha site is undeveloped woodlands with valley lands bordering the east property boundary.

The Phase I Environmental Site Assessment was undertaken to identify potential and actual environmental concerns associated with current and historical activities at the Site and surrounding properties.

The Phase I Environmental Site Assessment was conducted consistent with the standard practices established in Canadian Standards Association Standard Z768-01 (Reaffirmed 2016).

Based on the findings of the records review and site visit, a potential on-site source of environmental concern was identified related to the potential use of organochlorine pesticides in the 1950s and 1960s.

No actual and/or potential off-site sources of environmental concern were identified related to historical and current uses of neighbouring properties.

Based on the information obtained for this Phase I Environmental Site Assessment, there is evidence to suggest a potential for environmental concern associated with the Site; therefore, Cambium recommends the completion of a Phase II ESA to investigate soil quality at the Site. As the potential concern occurred approximately 50 years ago, the timing of the investigation may be deferred and undertaken prior to future development works with no increased risk to the Site.

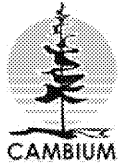
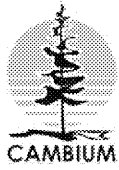
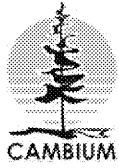


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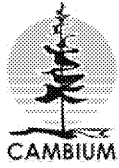


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1.0 Introduction

Kingslea Development Ltd. (Client) retained Cambium Inc. (Cambium) to complete a Phase I Environmental Site Assessment (ESA) of the property at 380 Lockhart Road in Barrie, Ontario (the Site). The assessment was completed as a matter of due diligence to identify actual and potential environmental concerns associated with current and historical activities at the Site and surrounding properties, in advance of a proposed development.

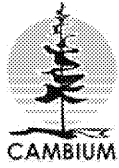
This Phase I ESA was conducted consistent with the standard practices for Phase I ESAs established in the Canadian Standards Association (CSA) Standard Z768-01 (CSA, 2016). This report describes the methods used to investigate actual and/or potential environmental concerns affecting the Site at the time of the assessment.

1.1 Scope of Work

The Phase I ESA consisted of the following:

- A review of pertinent background and historical information including documents such as aerial photographs, city directories, and topographic maps (as available)
- A review and summary of available environmental records obtained from the Site and/or public and private sources
- A site visit and observation of the surrounding properties from publicly accessible areas
- Interview(s) with person(s) knowledgeable of the history of the Site
- Preparation of this report documenting the findings of the Phase I ESA and recommendations for further work, if any, required to ascertain the environmental condition of the Site

No intrusive sampling was completed as part of this Phase I ESA. While the report considers potential environmental concerns, both past and present, it is limited by the availability of information obtained at the time of the assessment.



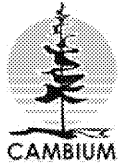
2.0 Site Description

The Site is a 1.37 ha (3.39 acre) parcel on the northeast corner of Lockhart Road and Huronia Road, in the City of Barrie, Ontario. The Universal Transverse Mercator (UTM) coordinates for the centre of the Site are Zone 17T 606952 E 4909298 N. The site location is shown on Figure 1.

The Site is undeveloped and consists of woodlands with valley lands bordering the east property boundary. The Site is bound by undeveloped woodlands and valley lands to the north, Lover's Creek Wetland to the east, Lockhart Road to the south with a commercial golf course beyond, and Huronia Road to the west with industrial properties beyond.

The Site generally slopes down to the east, with the east portion of the Site sloping more steeply down to Lover's Creek.

The Site and surrounding land uses are shown on Figure 2. Photographs of the Site are included in Appendix A.



3.0 Phase I ESA Investigation Methodology

3.1 Records Review

Cambium made all appropriate inquiries to obtain the following information and documents as was reasonably ascertainable and pertained to the Site:

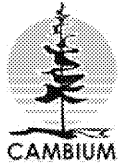
- Topographic maps
- Aerial photographs
- City directories
- Property use records (industrial use directories, contaminated site registries, etc.)
- Land parcel register (i.e., Land Titles)
- Site plans, building plans, etc.

Information obtained from the Records Review is discussed in Section 4.1.

3.1.1 Miscellaneous Document Review

The following documents were available for review and were used to develop the information database for this report:

- Ontario Base Mapping accessed through Land Information Ontario
- The Physiography of Southern Ontario map through the Ontario Geological Survey (Chapman & Putnam, 1984)
- 1954, 1975, 1989, 1997, 2008, and 2016 aerial imagery available from the National Air Photo Library or County of Simcoe online GIS (Figure 3 to Figure 8)
- A Freedom of Information (FOI) request was submitted to the Ministry of the Environment, Conservation and Parks (Ministry). A copy of the FOI request is included in Appendix B.
- A request was submitted to the Technical Standards and Safety Authority (TSSA) for available records regarding underground or aboveground storage tanks (USTs or ASTs) at

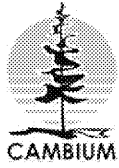


the Site and select neighbouring properties. A copy of the TSSA response is included in Appendix B.

- A search of city directories for the Site and surrounding properties was completed for the Site by Environmental Risk Information Services Ltd. (ERIS). A copy of the ERIS search is included in Appendix C.
- A Property Registry search was completed for the Site by ERIS. A copy of the Property Registry is included in Appendix D.
- A request was submitted to Opta Information Intelligence (Opta) for available Fire Insurance Plans (FIPs), Insurance Inspection Reports, and Site Plans pertaining to the Site. A copy of the Opta report is included in Appendix E.
- The *Waste Disposal Site Inventory* (MOE, 1991) was reviewed to identify waste disposal sites within 1,000 m of the Site.
- The *Inventory of Industrial Facilities Producing or Using Coal Tar or Related Tars in Ontario* (MOE, 1988a) was reviewed to identify facilities that produced or used coal or related tars within 1,000 m of the Site.
- The *Inventory of Coal Gasification Plant Waste Sites in Ontario* (MOE, 1988b) was reviewed to identify coal gasification plant waste sites within 1,000 m of the Site.
- Previous environmental reports pertaining to the Site were requested from the Client.

3.1.2 Regulatory Records Review

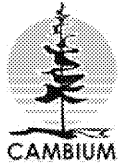
Cambium contracted ERIS to provide a Database Report for the Site (ERIS, 2019), a copy of which was received on May 3, 2019. ERIS is a private environmental database and information service company. The ERIS report summarizes the findings of a search of various federal, provincial, and private source databases for the Site and properties within a search radius of 250 m from the centre of the Site. This search radius was chosen to ensure that all parts of the adjacent properties were included in the database search. The ERIS report is provided in Appendix F.



3.1.3 Site Visit

A site visit was conducted on May 9, 2019 to observe the Site and adjacent properties (from the Site as well as nearby publicly accessible areas) to identify potential on-site and off-site sources of environmental contamination. The site visit was used to identify the following, if present:

- Areas of surface staining or stressed vegetation
- Areas with fill and/or debris
- The location, contents, construction details, and volumes of ASTs and USTs, and drums, totes, bins, or other containers
- Potable or non-potable water sources, including current and/or historical water sources
- Current and historical sewage works, including locations
- Waste water discharge points
- Water bodies and intermittent ditches
- Ground cover and surface materials
- Below ground access points (e.g., manholes)
- Location of current or historical railway lines or spurs
- Unidentified substances, staining, or corrosion observed at the Site, including within buildings and/or structures
- Existing structures to obtain a general description of the structures, including the number, age, and height of all buildings
- Improvements to the building(s) and/or structures at the Site
- Entries and exits to the buildings and structures
- Heating and cooling systems of each building and/or structure
- Drains, pits, and sumps, including documenting the purpose and use

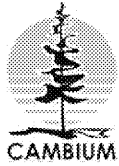


Additionally, the following aspects were discussed and identified, if applicable:

- Hazardous materials currently and historically stored at the Site
- By-products and/or wastes of the current or historical operations at the Site
- Raw materials currently or historically stored/handled at the Site
- Oil/water separators and/or hydraulic lift equipment (e.g., elevators, in-ground hoists, and loading docks), if any, at the Site
- Vehicle or equipment maintenance areas
- Spills or releases of materials, including dates, locations, materials involved, and volumes

3.1.4 Site Interviews

In an effort to obtain further information regarding the site use, occupancy history, and environmental conditions of the Site, interviews are conducted with persons knowledgeable of the Site. This may include current occupants and/or owners of the Site, or an individual with control of the Site or authority to act on behalf of the owner; previous owners and/or occupants; and/or, where the owner/occupant is not available, at least one owner or occupant of an adjacent property and one provincial or municipal government official, both of whom should be familiar with the Site.



4.0 Phase I ESA Findings

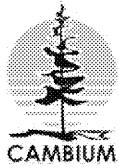
4.1 Records Review

Information obtained from the documents summarized in Section 3.1 is discussed below.

4.1.1 Miscellaneous Document Review

The following information was obtained from the documents collected as part of the records review:

- A topographic map (MNR, 2019) of the study area provided information regarding the regional topography, inferred groundwater flow direction, and general development in the area surrounding the Site.
 - The ground surface at the Site slopes down toward the east.
 - Lover's Creek Wetland, a provincially significant wetland (PSW), is immediately east of (adjacent to) the Site.
 - Based on the topography of the Site and proximity to Lover's Creek, the inferred shallow groundwater flow is easterly.
- Physiography of Southern Ontario mapping (Chapman & Putnam, 1984) indicates that the Site is within the Drumlinized Till Plains physiographic region, characterized by drumlins and glacial till soils.
- In the 1954 and 1975 aerial photographs, the Site appears to be an agricultural field. By 1989, the Site appears to be densely vegetated. In 1954, neighbouring properties appear to consist of an agricultural field to the north, and densely vegetated areas to the east, south beyond Lockhart Road, and west beyond Huronia Road. By 1997, development has begun on surrounding properties. A detailed review of aerial imagery is presented in Appendix G.
- There were no listings for the Site (380 Lockhart Road) in the city directories. There were no significant listings for surrounding properties.



- The Parcel Register indicates that the most recent transfer of ownership was from The Corporation of the City of Barrie to D.G. Pratt Construction Limited in September 2005.
- No FIPs were available for the Site.
- Review of the *Waste Disposal Site Inventory* (MOE, 1991) did not identify waste disposal sites within 1,000 m of the Site.
- Review of the *Inventory of Industrial Facilities Producing or Using Coal Tar or Related Tars in Ontario* (MOE, 1988a) did not identify industrial facilities that produced or used coal tar or related tars within 1,000 m of the Site.
- Review of the *Inventory of Coal Gasification Plant Waste Sites in Ontario* (MOE, 1988b) did not identify coal gasification plant waste sites within 1,000 m of the Site.

4.1.2 Regulatory Records Review

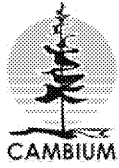
Responses to FOI requests to regulatory bodies are summarized below. Copies of the FOI requests and responses are included in Appendix B.

A response received from the Ministry stated that no records were located in the Ministry's Barrie District Office, Investigations and Enforcement Branch, Environmental Monitoring and Reporting Branch, Sector Compliance Branch, and Safe Drinking Water Branch.

A response received from the TSSA stated that there were no records of fuel storage tanks at the Site or select neighbouring properties.

The ERIS report contained no pertinent listings for the Site and neighbouring properties.

The ERIS report contained listings in the Certificates of Approval, Environmental Compliance Approval, ERIS Historical Searches, Ontario Regulation 347 Waste Generators Summary, TSSA Historic Incidents, Permit to Take Water, and Water Well Information Systems databases, for properties within a 250 m radius. Review of these listings indicated the data was for properties not in close proximity to the Site or was not environmentally significant.



Additional unplottable listings were identified in the ERIS report. A review of these listings did not identify additional potential environmental concerns for the Site. A copy of the ERIS report is provided in Appendix F.

4.2 Site Visit

Mr. Matthew Cunningham, TAg., conducted a site visit on May 9, 2019. The weather during the site visit was clear and cool. Visual observations of ground surface at the Site were unobstructed and access was provided to all areas of the Site. A photographic record of the site visit is presented in Appendix A. The site visit findings are described below.

4.2.1 Buildings and Site Usage

The Site is an undeveloped reforested tree lot, fronting on Lockhart Road and Huronia Road. Lover's Creek borders the east side of the Site.

4.2.2 Storage Tanks

There was no evidence of storage tanks observed or reported during the site visit.

4.2.3 Materials and Storage

No chemicals or materials storage were observed or reported during the site visit.

4.2.4 Oil/Water Separators

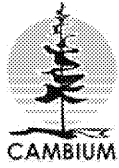
No oil/water separators were observed or reported during the site visit.

4.2.5 Vehicle and Equipment Maintenance

No vehicle or equipment maintenance was observed or reported during the site visit.

4.2.6 Waste – Solid, Liquid, or Hazardous/Industrial

No solid, liquid or hazardous/industrial waste was observed or reported during the site visit.



4.2.7 Sumps, Drains, Pits, and Lagoons

No sumps, drains, pits or lagoons were observed or reported during the site visit.

4.2.8 Spills

No spills were observed or reported during the site visit.

4.2.9 Stains

No significant staining was observed during the site visit.

4.2.10 Fill

No significant amount of fill is expected to have been imported to the Site. The surface elevation at the Site is similar to the surrounding properties. Several soil-cut areas are present on the western and southern site boundaries, which are presumed to be areas where soil was removed for roadway grading and drainage.

4.2.11 Air Emissions

There was no evidence of sources of process-related air emissions at the Site.

4.2.12 Special Attention Items

4.2.12.1 Polychlorinated Biphenyls

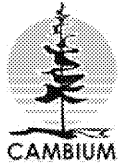
There was no evidence of polychlorinated biphenyls observed or reported during the site visit.

4.2.12.2 Asbestos

There was no evidence of asbestos or asbestos-containing materials observed or reported during the site visit.

4.2.12.3 Lead

There was no evidence of lead or lead-containing materials observed or reported during the site visit.



4.2.12.4 Microbial Contamination and Mould

No evidence of mould (e.g., odour or surficial mould) was observed during the site visit.

4.2.12.5 Ozone Depleting Substances

No evidence of ozone depleting substances was observed at the Site with the exception of refrigerants located in on-site refrigerators, fire extinguishers, and air-conditioning units.

4.2.12.6 Urea Formaldehyde Foam Insulation

No evidence of urea formaldehyde foam insulation was observed during the site visit.

4.2.12.7 Radon, Noise, Electric and Magnetic Fields, and Vibration

There was no evidence to suggest radon gas, electric or magnetic fields, or vibration present at the Site. Additionally, there was no excessive noise observed during the site visit.

4.2.13 Pesticides and Herbicides

No pesticides or insecticides were observed during the site visit.

A review of aerial imagery (Section 4.1.1) suggests the Site was used for agricultural purposes between 1954 and 1975. From about 1945 to 1965, organochlorines (pesticides) were used extensively in all aspects of agriculture and forestry (House of Commons Canada, 2000).

4.2.14 Potable Water Supply

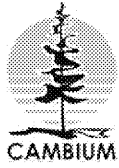
The Site currently has no water supply, but is located within an area of municipally supplied potable water. No evidence of drinking water wells was observed during the site visit.

4.2.15 Septic Fields

There was no evidence of any septic fields observed or reported during the site visit.

4.2.16 Environmental Monitoring

No evidence of previous environmental monitoring (e.g., groundwater monitoring wells) was observed or reported during the site visit.



4.2.17 Stressed Vegetation

There was no evidence of stressed vegetation or differential plant growth observed during the site visit.

4.2.18 Fires

There was no evidence of historical fires observed during the site visit.

4.2.19 Odours

No strong, pungent, or noxious odours were observed during the site visit.

4.2.20 Unidentified Substances

No unidentified substances were observed or reported during the site visit.

4.2.21 Adjacent Land Uses

The properties within 100 m of the Site are generally used for commercial, industrial and residential purposes. No significant environmental concerns are expected associated with the current uses of the adjacent properties.

Adjacent property uses include:

- North: A vacant lot with Am Shalom Congregation Synagogue beyond
- South: Lockhart Road with National Pines Golf Club beyond
- East: Lover's Creek Wetland with residential beyond
- West: Huronia Road with Hercules Sealing Products Canada and a natural gas servicing lot beyond

4.3 Interviews

Mr. Anthony Caravaggio, a representative for Kingslea Developments Ltd., the potential purchaser of the Site, completed a site questionnaire. Information obtained from the interview is incorporated throughout Section 4.0.

