



# Phase One Environmental Site Assessment

City of Orillia Waterfront Property  
Centennial Drive, Orillia, Ontario

The Corporation of the City of Orillia



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# 1. Executive Summary

GHD was retained by The Corporation of the City of Orillia (City) to conduct a Phase One Environmental Site Assessment (ESA) of a City-owned waterfront property located on Centennial Drive in Orillia, Ontario (hereinafter referred to as the Site or Property). The Phase One ESA was conducted in accordance with the requirements of Ontario Regulation 153/04, as amended (O. Reg. 153/04).

The purpose of the Phase One ESA was to identify, through a non-intrusive investigation, the existence of any Potentially Contaminating Activities (PCAs) and Areas of Potential Environmental Concern (APECs) associated with the Site. PCAs and APECs are defined in O. Reg. 153/04.

The Site is irregular in shape, approximately 2.14 hectares (5.3 acres) in size and is located in an area of Orillia that was first developed for residential, commercial, and industrial purposes in the late 1890s/early 1900s. The Site is comprised of several parcels of land located between the eastern boundary of 70 Front Street North and Centennial Drive, and between Mississaga Street East and Tecumseth Street including 139 Tecumseh Street and 210 Mississaga Street East. The western portion of the Property is currently vegetated with grass and some tree cover, and the eastern portion of the Property is gravel covered and currently used for parking for Centennial Park and an unofficial snowmobile trail in the winter.

Based on the results of the Phase One ESA, including the Site inspection, information provided by Site representatives, documents reviewed, the review of Site history, and pending receipt and review of information that has been requested from regulatory agencies (MOECC) the following APECs were identified to be associated with the Site.

1. **APEC #1 – Infilling of Lake Couchiching:** Based on the historical documentation reviewed, portions of the Site were historically part of Lake Couchiching. Infilling of Lake Couchiching was reportedly undertaken in the late 19<sup>th</sup>/early 20<sup>th</sup> century and significant quantities of fill, of unknown quality, were placed on Site and on the surrounding adjacent lands. The importation of fill of unknown quality was identified as a PCA (#30 - Importation of Fill Material of Unknown Quality) as defined in O. Reg. 153/04 and the entire Site was identified as **APEC #1**.
2. **APEC #2 – Former Use of Coal & Demolition Wastes:** Based on the historical documentation reviewed, the Site was developed for industrial use dating back to the late 19<sup>th</sup>/early 20<sup>th</sup> century. The Orillia Flour Mill historically occupied the extreme northern portion of the Site and a saw mill operated by Canada Wood Speciality Co. Ltd. occupied the northwestern portion of the Site, east of Laclie Street and north of Neywash Street. Secondary buildings associated with Canada Wood Speciality Co. Ltd. also occupied the western portion of the Site, between Neywash Street and Coldwater Street East. Coal use was identified on Site on the 1913 (revised 1921) and 1928 (revised 1941) FIPs. The mill building on the northwestern portion of the Site, north of Neywash Street, was demolished between 1921 and 1928. The mill building on the extreme northwestern portion of the Site was demolished in the 1980s. No information was obtained regarding the ultimate disposal location of waste ash and clinker from the burning of coal, and the demolition wastes associated with the former on-Site buildings. The disposal of ash and clinker and demolition wastes was identified as a PCA (#58 - *Waste Disposal and*



*Waste Management*) as defined in O. Reg. 153/04 and the entire Site was identified as **APEC #2**.

3. **APEC #3 – Former Railway and Spur Lines:** Based on the historical documentation reviewed, an interconnected series of railway tracks formerly operated by the Midland Rail Road Company, Canadian National (CN) Railway, and Canadian Pacific (CP) Railway, and various spur lines traversed the Site and the adjacent properties to the west and south of the Site. Portions of the Site were owned by The Midland Rail Road Company and The Georgian Bay Seaboard Railway Company (later known as the Canadian National Railway Company) dating back to the late 19<sup>th</sup> century up until the late 1980s/1990s. The operation of railway tracks and spurs on Site and on the adjacent lands to the south and west was identified as a PCA (#46 – *Rail Yards, Tracks, and Spurs*) as defined in O. Reg. 153/04 and the entire Site was identified as **APEC #3**.
4. **APEC #4 – Former Service Station/Autobody Shop (88/92 Laclie Street):** Based on the historical documentation reviewed, a portion of the Site was formerly part of the property now municipally known as 88/92 Laclie Street. A service station, that operated underground storage tanks (USTs) was historically operated on the 88 Laclie Street property. Based on a review of the 1928 (1941) FIP, three USTs were located off Site, on the western portion of the 88 Laclie Street property. A 1940 lease to Sun Oil Company was identified in the title search records. An autobody shop/garage was also historically operated at 92 Laclie Street. Based on a review of the information provided by the City, petroleum hydrocarbon (PHC) impacted soil was identified on the 88/92 Laclie Street property during re-surfacing of the asphalt parking lot in 2015. This property was historically serviced by a septic system, tile bed, and a dry well located east of the building. The following PCAs, as defined by O. Reg. 153/04, were identified to be associated with the portion of the Site located east of 88/92 Laclie Street and identified as **APEC #4 (a and b)**.
  - a) PCA #10 – *Commercial Autobody Shops*, was identified to be associated with the operation of a service centre on 88/92 Laclie Street (**APEC #4a**).
  - b) PCA #28 – *Gasoline and Associated Products Storage in Fixed Tanks*, was identified to be associated with the operation of USTs on 88/92 Laclie Street (**APEC #4b**).
5. **APEC #5 – USTs (Former Boat Livery):** Based on a review of the 1928 (1941) FIP, a boat livery (including 2 USTs) was operated adjacent to the southeastern portion of the Site. The operation of USTs off Site on the adjacent property to the southeast of the Site was identified as a PCA (#28 - *Gasoline and Associated Products Storage in Fixed Tanks*) and the southeastern portion of the Site was identified as **APEC #5**.
6. **APEC #6 – Historical Off-Site Operations:** The direction of groundwater flow in the vicinity of the Site has been inferred to be in a south to southeasterly direction towards Lake Couchiching, located directly east of the Site. Based on a review of the historical documentation, the following (historical) off-Site operations and associated PCAs as defined in O. Reg. 153/04 were identified as having the potential to contribute to an APEC on Site and the area along the western and southern boundary of the Site was identified as **APEC #6**:



- a) **Former Service Stations/USTs** – Based on a review of the historical documentation, service stations (including USTs) were formerly operated on the following properties.
- i. 91 Laclie Street - approximately 70 metres west of the Site.
  - ii. 16/18 Front Street North – approximately 40 metres west of the Site.
  - iii. 28 Front Street North (now part of 70 Front Street North) - approximately 40 metres west of the Site.
  - iv. 59 Front Street North – approximately 140 metres west of the Site.
  - v. 64 Front Street North - approximately 95 metres west of the Site.
  - vi. 9 Front Street South – approximately 140 metres southwest of the Site.
  - vii. 188 Mississauga Street East - approximately 140 metres west and upgradient of the Site.
  - viii. 20 Front Street South – approximately 60 metres south of the Site.

The operation of service centres (with USTs) and autobody shops are defined in O. Reg. 153/04 as PCAs (#10 - *Commercial Autobody Shops* and #28 - *Gasoline and Associated Products Storage in Fixed Tanks*) and may contribute to an APEC at the Site.

- b) **2 Front Street South (Former Champlain Cleaners)** – Based on the historical documentation reviewed and that provided by the City, a dry cleaners was historically operated at 2 Front Street South, located approximately 80 metres southwest of the Site. A 1,000 litre aboveground storage tank of tetrachloroethylene was reportedly operated on this property. Based on the findings of the ERIS database report, Champlain Cleaners was identified as a generator of halogenated solvents. The operation of a dry cleaners on a surrounding property in close proximity to the Site was identified as a PCA (#37 – *Operation of Dry Cleaning Equipment*) and may contribute to an APEC at the Site.
- c) **20 Front Street South (Former Salvage Yard)** – Based on a review of the historical documentation, a former salvage yard was operated on the property municipally known as 20 Front Street South, approximately 60 metres south of the Site. Due to its proximity, the historical operations on the 20 Front Street South property were identified as a PCA (#49 – *Salvage Yard, including automobile wrecking*) and may contribute to an APEC at the Site.
7. **APEC #7 – Groundwater Impacts (70 Front Street North)**: Based on a review of the previous environmental reports for 70 Front Street North, located directly west of the Site, impacted groundwater has been identified on this property. More specifically, groundwater impacted with some metals and inorganics and chlorinated volatile organic compounds (VOCs) has been found on Site. The VOC impacts have been found in both the shallow and deeper water bearing units on the 70 Front Street North property. High concentrations of VOCs in groundwater have been found in close proximity to the western boundary of the Site, north of the Coldwater Street East extension. The source(s) of the impacts is not fully known and the extent of impact has not



fully been defined. The presence of groundwater contamination on the adjacent property directly west and upgradient of the Site represents an environmental concern and the area along the western boundary of the Site was identified as **APEC #7**.

8. **APEC #8 – Utility Corridor (Neywash Street):** Based on a review of information provided by the City, oil and grease was reportedly entering the storm sewer from 88/92 and 91 Laclie Street (occupied by Master Lube/Rust Check) in the late 1990s. The storm sewer historically traversed the northern portion of the Site, directly east of Neywash Street, and discharged on Site to an open drainage swale and ultimately to Lake Couchiching, further east of the Site. A sanitary sewer lateral also bisects the Site, east of Neywash Street. In 2010, the storm water and sanitary sewer services along Neywash Street were upgraded. A stormwater treatment system (Vortechs System) was installed on Site. In 2014, in support of the Neywash Street Extension project from Laclie Street to Centennial Drive, limited soil sampling was undertaken within the Neywash Street extension lands (inferred to be on Site). Several metals, inorganic, polycyclic aromatic hydrocarbon (PAH), petroleum hydrocarbon (PHC) parameters and trichloroethylene (TCE) were detected in the surficial soils at concentrations above the 2011 MOECC Table 2 standards for residential/parkland/institutional use. The presence of impacted soils within the Neywash Street extension lands represents an environmental concern, and the area was identified as **APEC #8**.
9. **APEC #9 – Train Derailment/Fuel Spill:** Based on a review of information provided by the City, a minor train derailment occurred on Site between Tecumseth Street and Neywash Street in the 1970s. A fuel tank was reportedly ruptured during the derailment. No further information was available on the size of the release, spill response, and/or clean-up activities. The train derailment/fuel spill was identified as a PCA (#28 - *Gasoline and Associated Products Storage in Fixed Tanks*), and the area between Tecumseth Street and Neywash Street, was identified as **APEC #9**.
10. **APEC #10 – Former Use of Fuel Oil:** Based on the age of the former mill building on the northwestern portion of the Site, fuel oil was likely used to heat the on-Site building. No information was available pertaining to the use of fuel oil on Site. The mill building was first constructed on Site prior to 1913 and was demolished in the 1980s. The likely use of fuel oil on Site was identified as a PCA (#28 - *Gasoline and Associated Products Storage in Fixed Tanks*), and the area on the northwestern portion of the Site was identified as **APEC #10**.
11. **APEC #11 – Transformer Use:** A pad mounted transformer is located on the southern portion of the Site. The operation of a transformer on Site was identified as a PCA (#55 – *Transformer Manufacturing, Processing, and Use*) and the area in the immediate vicinity of the transformer was identified as **APEC #11**.

Based on the information obtained in completing this Phase One ESA, a Phase Two ESA is required before a Record of Site Condition (RSC) can be filed with the Ministry of the Environment and Climate Change (MOECC). The Phase Two ESA should evaluate the presence or absence of soil and/or groundwater impact to the Site within all identified APECs.



## 2. Introduction

### 2.1 Phase One ESA Property Information

GHD was retained by The Corporation of the City of Orillia (City) to conduct a Phase One Environmental Site Assessment (ESA) of a City-owned waterfront property located on Centennial Drive in Orillia, Ontario (hereinafter referred to as the Site or Property). A Site Location Map is provided on **Figure 1**.

A Site plan showing surrounding land use is provided on **Figure 2**. A Site plan and detailed Site plan are provided on **Figure 3** and **Figure 4**, respectively.

The Site is currently owned by the City. The legal description for the Site is as follows:

#### **PIN 58663-0062 (LT)**

PCL 13-2 LACLIE-1 SEC 51-8; PT LT 13 E/S LACLIE ST PL 8 ORILLIA; PT LT 14 E/S LACLIE ST PL 8 ORILLIA; WATER LOT ABUTTING LOTS 13 & 14 E/S OF LACLIE ST PLAN 8 ORILLIA; PT LT 16 S/S TECUMSETH PL 8 ORILLIA; PT LT 17 S/S TECUMSETH PL 8 ORILLIA; PT LT 18 S/S TECUMSETH PL 8 ORILLIA; PT LT 19 S/S TECUMSETH PL 8 ORILLIA; WATER LOT ABUTTING LT 17 S/S TECUMSETH ST PL 8 ORILLIA; WATER LOT ABUTTING LT 18 S/S TECUMSETH ST PL 8 ORILLIA PARTS 1 TO 11, 51R14205 S/T PARTS 8 & 9, 51r14205 AS IN ORI31161; ORILLIA

#### **PIN 58663-0030 (LT)**

WATER LT 28 E/S BAY ST PL8 ORILLIA; WATER LT IN FRONT OF LOTS 28 & 29 E/S BAY ST PL8 ORILLIA; WATER LT 27 E/S COWEN ST, 26 E/S COWEN ST, 25 E/S COWEN ST, 24 E/S COWEN ST, 23 COWEN ST PL 8 ORILLIA; LT 23 S/S JARVIS ST, 24 S/S JARVIS ST, 25 S/S JARVIS ST, 23 N/S BRANT ST, 24 N/S BRANT ST, 25 N/S BRANT ST, 22 S/S BRANT ST, 24 S/S BRANT ST, 25 S/S BRANT ST, 15 S/S MARKET ST, 16 S/S MARKET ST 17 S/S MARKET ST, 18 S/S MARKET ST, 19 S/S MARKET ST, 20 S/S MARKET ST, 21 S/S MARKET ST, 22 S/S MARKET ST PL 8 ORILLIA; (WATER LT IN FRONT OF LT 18 S/S TECUMSETH ST PL 8 ORILLIA) WATER LT IN FRONT OF LT 19 S/S TECUMSETH ST PL 8 ORILLIA; (PT WATER LOTS IN FRONT OF LOTS 7, 8 & 9 CON 5 SOUTH ORILLIA)(PT LT 18 S/S TECUMSETH ST, 19 S/S TECUMSETH ST) 22 S/S JARVIS ST, 21 N/S BRANT ST, 22 N/S BRANT ST, 21 S/S BRANT ST PL 8 ORILLIA; PT JARVIS ST, COWEN ST, BRANT ST, MARKET ST PL 8 ORILLIA CLOSED BY ORI22942, OR22904 & RO392402, AS IN RO1400923, RO1384482, RO1248350, RO1087840, (RO1030941), RO645620, RO562655, ORI8967 & ORI6263;; CITY OF ORILLIA

A survey of the Site is included in **Appendix A**.

The purpose of the Phase One ESA was to identify, through a non-intrusive investigation, the existence of any Potentially Contaminating Activities (PCAs) and Areas of Potential Environmental Concern (APECs) associated with the Site. PCAs and APECs are defined in O. Reg. 153/04.

The Phase One ESA was conducted in accordance with the requirements of Ontario Regulation 153/04, as amended (O. Reg. 153/04). The Phase One ESA was undertaken as part of the environmental due diligence activities being undertaken by the City in support of its' planning, design, and divestment strategy related to the redevelopment of the Site. The works are part of a larger initiative being undertaken by the City to revitalize the downtown area and improve access to the existing waterfront. It is our understanding that a Record of Site Condition (RSC) may be filed for the Site in the future.



Contact information for the Property owner's agent representative is listed below:

Ms. Renee Recoskie  
Environmental Services and Operations Department  
The Corporation of the City of Orillia  
50 Andrew Street South  
Orillia, Ontario  
L3V 7T5  
RRecoskie@orillia.ca

The Site is comprised of several parcels of land between the eastern boundary of 70 Front Street North and Centennial Drive, and between Mississaga Street East and Tecumseth Street including 139 Tecumseh Street and 210 Mississaga Street East. The Site is irregular in shape, approximately 2.14 hectares (5.3 acres) in size and is located in an area of Orillia that was first developed for residential, commercial and industrial purposes in the late 1890s/early 1900s.

The Site is located in the heart of the City's downtown waterfront (Lake Couchiching) and has a history of industrial and commercial uses dating back to at least the late 1890s/early 1900s. Infilling of Lake Couchiching (including portions of the Site) was undertaken in the late 19<sup>th</sup>/early 20<sup>th</sup> century. An interconnected series of railway tracks formerly traversed the Site and serviced the various lumber mills, grain mills, and associated warehouses that were located on and in close proximity to the Site. The western portion of the Property is currently vegetated with grass and some tree cover, and the eastern portion of the Property is gravel covered and currently used for parking for Centennial Park and an unofficial snowmobile trail in the winter. The railway tracks have been removed, although the railway ballast is reportedly still present on Site. Residential and commercial land uses surround the Site.

### 3. Scope of Investigation

The Phase One ESA was conducted in accordance with the requirements of O. Reg. 153/04. The Phase One ESA was conducted by Ms. Julia Serink and Mr. Nick Bauer and was reviewed by Mr. Greg Brooks, all of GHD. The qualifications of Ms. Serink, Mr. Bauer, and Mr. Brooks are presented in **Appendix B**. Ms. Serink and Mr. Brooks are both Qualified Persons as defined with O. Reg. 153/04. The following tasks were conducted as part of the Phase One ESA:

- Review of an electronic environmental database search of federal, provincial, and private source databases.
- Review of Property title records.
- Review of available historical records including fire insurance plans, aerial photographs of the Site and surrounding area, regional geological information and previous environmental reports.
- Review of past and current Property usage and adjacent property occupancy.
- Inspection of the facilities, equipment, utility services, operations, and associated records for the Site.
- Observations of any conditions that represented potential environmental concerns.



- Review of chemical use and storage and spill/release incidents.
- Review of aboveground and underground storage tank records.
- Review of waste handling, accumulation, storage, and disposal practices.
- Review of air emissions and wastewater discharges.
- Review of equipment that potentially contains chlorofluorocarbons.
- Review of equipment that potentially contains polychlorinated biphenyls.
- Observations of potential lead-based paint.
- Observations of potential asbestos-containing materials.
- Inquiries with regulatory agencies and interviews with persons knowledgeable of the Site and Site operations.

In completing the Phase One ESA, GHD relied on information received from all parties as being accurate unless contradicted by written documentation or field observations.

The following report summarizes the information gathered by GHD during the Phase One ESA and identifies any PCAs and APECs associated with the Site. PCAs and APECs are defined in O. Reg. 153/04.

This Phase One ESA report has been prepared for the use of the City and may not be relied upon by others without the written consent of GHD and the City.

## 4. Records Review

### 4.1 General

#### 4.1.1 Phase One ESA Study Area Determination

The Phase One ESA study area included all properties located wholly or partially within 250 metres of the boundary of the Site, as required by O. Reg. 153/04. This area has been determined by GHD to be a sufficient study area since PCAs and/or APECs located beyond 250 metres from the Site will not likely adversely impact the Property.

The properties adjacent to the Site were visually inspected, without accessing the properties, for evidence of existing or potential environmental concerns related to the Phase One ESA. GHD also visually inspected all of the Properties within the Phase One Study area that were visible from the Site or surrounding streets. The following buildings or features were located on the properties surrounding the Site:

**North:** The Site is bounded to the north by Tecumseth Street and further to the north by residential dwellings.

**West:** The Site is bounded to the west by residential and commercial buildings (including 88/92 and 91 Laclie Street), Laclie Street, and a commercial plaza (70 Front Street North) and further to the west by Front Street North and residential and commercial buildings beyond.



*South:* The Site is bounded to the south by Centennial Drive, Mississaga Street East, commercial buildings and the Royal Canadian Legion Branch 34. Further to the south is vacant land, residential and commercial buildings.

*East:* The Site is bounded to the east by Centennial Drive, parkland and the Port of Orillia and further to the east by Lake Couchiching.

Based on a review of topographic and elevation mapping, regional groundwater flow in the Phase One Study Area is anticipated to be flowing to the south/southeast towards Lake Couchiching, which is approximately 50 metres to the east of the Site.

Based on the records reviewed as part of the Phase One ESA and discussions with Site representatives, areas of potential environmental concern (APECs) were identified to be associated with the adjacent and surrounding properties as presented in the following sections. At the time of the Site inspection, with the exception of monitoring wells identified on the 70 Front Street North property, no visual evidence of environmental impact to the Site from the surrounding land uses was observed by GHD.

#### 4.1.2 First Developed Use Determination

Based on a review of historical documentation, the Site was first developed for mixed commercial/industrial land use in the late 1890s/early 1900s.

#### 4.1.3 Fire Insurance Plans

Fire insurance plans (FIP) assist in the identification of historical land use and commonly indicate the existence and location of aboveground and underground storage tanks, structures, improvements, and facility operations. GHD contracted Opta Information Intelligence (Opta) to search for available fire insurance information for the Site. Opta identified fire insurance plans (FIPs) dated 1913 (revised 1921) and 1928 (revised 1941) for the Site.

**1913 (Revised 1921) Fire Insurance Plan:** Review of the 1913 (revised 1921) FIP indicates that the Site was developed and occupied by several buildings. The Orillia Flour Mill and Canada Wood Specialty Co. Ltd. sawmill, with boiler, were located on the northern and northwestern portions of the Site, respectively. Secondary buildings associated with Canada Wood Specialty Co. Ltd. also occupied the western portion of the Site between Neywash Street and Coldwater Street East. Railway tracks associated with The Canadian Pacific and Midland Railway Grand Trunk Railways were located on the central portion of the Site, oriented north to south. Several spur lines were located directly west and to the south of the Site. A Canadian Pacific Railway station was located southeast of the Site at that time. Lumber storage was identified on several portions of the Site. The adjacent lands to the west of the Site were developed for industrial/commercial land use. Canada Wood Specialty Company Co Ltd. was also located west of the Site. The shoreline for Lake Couchiching was located on the eastern boundary of the Site at that time and various bathhouses and boathouses were located along the shoreline adjacent to the east of the Site. An inlet for Lake Couchiching was located on the northern portion of the Site, directly south of the sawmill, east of Neywash Street. A boat livery was located southeast of the Site.



**1928 (Revised 1941) Fire Insurance Plan:** Review of the 1928 (revised 1941) FIP indicates that the Site was occupied by several buildings. A grain mill (identified as Orillia Cereal Company – former Orillia Flour Mill) was located on the extreme northern portion of the Site (directly south of Tecumseth Street). The sawmill previously identified on the 1913 (revised 1921) FIP at the eastern end of Neywash Street was no longer present. A service station (with USTs), associated with 88/92 Laclie Street was located directly west of the Site. The Canada Wood Specialty Company was still in operation to the west of the Site. Two USTs, associated with a boat livery, were located southeast of the Site. Several service stations (with USTs) and automotive garages were also identified within the Phase One ESA study area. The service stations and/or USTs identified as having the potential to contribute to an APEC on Site are further discussed below.

A Chinese laundry was also located at 181 Mississauga Street East, approximately 145 metres to the southwest of the Site. Imperial Oil Limited, located at 130 Colborne Street East, approximately 80 metres south of the Site, was identified as a bulk oil fuel depot with four aboveground oil tanks and an oil storage building. Development in the area of the Site appeared to be mixed residential, community and commercial/industrial.

Based on the historical documentation reviewed, portions of the Site were historically part of Lake Couchiching. Infilling of Lake Couchiching was undertaken in the late 19<sup>th</sup>/early 20<sup>th</sup> century and significant quantities of fill, of unknown quality, were placed on Site and on the surrounding adjacent lands. The importation of fill of unknown quality was identified as a PCA (#30 - *Importation of Fill Material of Unknown Quality*) as defined in O. Reg. 153/04 and the entire Site was identified as **APEC #1**.

Based on the historical documentation reviewed, the Site was developed for industrial use dating back to the late 19<sup>th</sup>/early 20<sup>th</sup> century. The Orillia Flour Mill (later the Orillia Cereal Company) historically occupied the extreme northern portion of the Site and a saw mill operated by Canada Wood Speciality Co. Ltd. occupied the northwestern portion of the Site, east of Laclie Street and north of Neywash Street. Secondary buildings associated with Canada Wood Speciality Co. Ltd. also occupied the western portion of the Site, between Neywash Street and Coldwater Street East. Coal use was identified on Site on the 1913 (revised 1921) and 1928 (revised 1941) FIPs. The mill on the northwestern portion of the Site was demolished between 1921 and 1928. The mill on the extreme northern portion of the Site was demolished in the 1980s. No information was obtained regarding the ultimate disposal location of waste ash and clinker from the burning of coal, and the demolition wastes associated with the former on-Site buildings. The disposal of ash and clinker and demolition wastes was identified as a PCA (#58 - *Waste Disposal and Waste Management*) as defined in O. Reg. 153/04 and the entire Site was identified as **APEC #2**.

Based on the historical documentation reviewed, an interconnected series of railway tracks formerly operated by the Midland Rail Road Company, Canadian National (CN) Railway, and Canadian Pacific (CP) Railway, and various spur lines traversed the Site and the adjacent properties to the west and south of the Site. Portions of the Site were owned by The Midland Rail Road Company and The Georgian Bay Seaboard Railway Company (later known as the Canadian National Railway Company) dating back to the late 19<sup>th</sup> century up until the late 1980s/1990s. The operation of railway tracks and spurs on Site and on the adjacent lands to the south and west was identified as a PCA (#46 – *Rail Yards, Tracks, and Spurs*) as defined in O. Reg. 153/04 and the entire Site was identified as **APEC #3**.



Based on the historical documentation reviewed, a portion of the Site was formerly part of the property now municipally known as 88/92 Laclie Street. A service station (including USTs) and garage was historically operated on the 88/92 Laclie Street property. Based on a review of the 1928 (revised 1941) FIP, three USTs were located off Site, on the western portion of the 88/92 Laclie Street property. The following PCAs, as defined by O. Reg. 153/04, were identified to be associated with the portion of the Site located east of 88/92 Laclie Street and identified as **APEC #4 (a and b)**.

- a) PCAs #10 – *Commercial Autobody Shops*, was identified to be associated with the operation of a service centre on 88/92 Laclie Street (**APEC #4a**).
- b) PCA #28 – *Gasoline and Associated Products Storage in Fixed Tanks*, was identified to be associated with the operation of USTs on 88/92 Laclie Street (**APEC #4b**).

Based on a review of the 1928 (revised 1941) FIP, a boat livery (including 2 USTs) was operated adjacent to the southeastern portion of the Site. The operation of USTs off Site on the adjacent property to the southeast of the Site was identified as a PCA (#28 - *Gasoline and Associated Products Storage in Fixed Tanks*) and the southeastern portion of the Site was identified as **APEC #5**.

The direction of groundwater flow in the vicinity of the Site has been inferred to be in a south to southeasterly direction towards Lake Couchiching, located directly east of the Site. Based on a review of the historical documentation, the following (historical) off-Site operations and associated PCAs as defined in O. Reg. 153/04 were identified as having the potential to contribute to an APEC on Site and the area along the western and southern boundary of the Site was identified as **APEC #6**:

Based on a review of the historical documentation, service stations (including USTs) were formerly operated on the following properties. The operation of service centres, USTs, and/or autobody shops are defined in O. Reg. 153/04 as PCAs (#10 - *Commercial Autobody Shops* and #28 - *Gasoline and Associated Products Storage in Fixed Tanks*) and may contribute to an APEC at the Site.

- i. 91 Laclie Street - approximately 70 metres west of the Site.
- ii. 16/18 Front Street North – approximately 40 metres west of the Site.
- iii. 59 Front Street North – approximately 140 metres west of the Site.
- iv. 64 Front Street North - approximately 95 metres west of the Site.
- v. 9 Front Street South – approximately 140 metres southwest of the Site.
- vi. 188 Mississauga Street East - approximately 140 metres west and upgradient of the Site.
- vii. 20 Front Street South – approximately 60 metres south of the Site

A service station (with USTs) and a bulk fuel oil depot operated by Imperial Oil were formerly located at 189 Mississauga Street East and 130 Colborne Street East, respectively. RSCs were filed on the Environmental Site Registry for the aforementioned properties in 2013 and 2016. Based on a review of the RSCs (publically available through the Environmental Site Registry), the historical operations on these properties are not considered to contribute an APEC to the Site.



Through a review of the RSC for 130 Colborne Street East (RSC No. 222267), the property located at 20 Front Street South (approximately 60 metres south of the Site) was identified as a salvage/wrecking yard. The historical operations on the 20 Front Street South property were identified as an off Site PCA (#49 – *Salvage Yard, including automobile wrecking*) and may contribute to an APEC at the Site (**APEC #6**).

A copy of the documentation received from Opta is presented in **Appendix C**.

#### 4.1.4 Chain of Title

GHD contracted Mr. Stewart Davey, a property title searcher located in Ajax, Ontario to conduct a search of Property title records and other documents (lease agreements, easements, environmental liens, etc.) dated from the early 1900s to the present, associated with ownership or occupation of the Site.

The Site is comprised of several parcels of land identified by Parcel Identifier Number (PIN) 58663-0062 and PIN 58663-0030. The legal description for the Site is as follows:

##### **PIN 58663-0062 (LT)**

PCL 13-2 LACLIE-1 SEC 51-8; PT LT 13 E/S LACLIE ST PL 8 ORILLIA; PT LT 14 E/S LACLIE ST PL 8 ORILLIA; WATER LOT ABUTTING LOTS 13 & 14 E/S OF LACLIE ST PLAN 8 ORILLIA; PT LT 16 S/S TECUMSETH PL 8 ORILLIA; PT LT 17 S/S TECUMSETH PL 8 ORILLIA; PT LT 18 S/S TECUMSETH PL 8 ORILLIA; PT LT 19 S/S TECUMSETH PL 8 ORILLIA; WATER LOT ABUTTING LT 17 S/S TECUMSETH ST PL 8 ORILLIA; WATER LOT ABUTTING LT 18 S/S TECUMSETH ST PL 8 ORILLIA PARTS 1 TO 11, 51R14205 S/T PARTS 8 & 9, 51r14205 AS IN ORI31161; ORILLIA

##### **PIN 58663-0030 (LT)**

WATER LT 28 E/S BAY ST PL8 ORILLIA; WATER LT IN FRONT OF LOTS 28 & 29 E/S BAY ST PL8 ORILLIA; WATER LT 27 E/S COWEN ST, 26 E/S COWEN ST, 25 E/S COWEN ST, 24 E/S COWEN ST, 23 COWEN ST PL 8 ORILLIA; LT 23 S/S JARVIS ST, 24 S/S JARVIS ST, 25 S/S JARVIS ST, 23 N/S BRANT ST, 24 N/S BRANT ST, 25 N/S BRANT ST, 22 S/S BRANT ST, 24 S/S BRANT ST, 25 S/S BRANT ST, 15 S/S MARKET ST, 16 S/S MARKET ST 17 S/S MARKET ST, 18 S/S MARKET ST, 19 S/S MARKET ST, 20 S/S MARKET ST, 21 S/S MARKET ST, 22 S/S MARKET ST PL 8 ORILLIA; (WATER LT IN FRONT OF LT 18 S/S TECUMSETH ST PL 8 ORILLIA) WATER LT IN FRONT OF LT 19 S/S TECUMSETH ST PL 8 ORILLIA; (PT WATER LOTS IN FRONT OF LOTS 7, 8 & 9 CON 5 SOUTH ORILLIA)(PT LT 18 S/S TECUMSETH ST, 19 S/S TECUMSETH ST) 22 S/S JARVIS ST, 21 N/S BRANT ST, 22 N/S BRANT ST, 21 S/S BRANT ST PL 8 ORILLIA; PT JARVIS ST, COWEN ST, BRANT ST, MARKET ST PL 8 ORILLIA CLOSED BY ORI22942, OR22904 & RO392402, AS IN RO1400923, RO1384482, RO1248350, RO1087840, (RO1030941), RO645620, RO562655, ORI8967 & ORI6263;; CITY OF ORILLIA

A survey of the Site is included in **Appendix A**.

The following entities were reported to be associated with the ownership of the Site:



***East Side of Laclie Street (south of Tecumseth Street)***

***Registered Owner(s) – Portion of Lot 13***

Crown  
Arthur George  
Eliza  
Adam Olivier  
Joseph Dudd & Reuben Jones  
Reuben Jones  
Patrick Madden  
Edward O'Brien, Wesley Orr & Britton Orlan  
Andrew Tait  
Patrick Madden

*William Thomson*  
*The Longford Lumber Company*  
*The Standard Lumber & Stone*  
*James Tudhope*  
*The Canada Wood Specialty Company*

*William Thomson*  
*The Canada Wood Specialty Company*

John Mulligan  
George Mulligan  
Ernest Collinson Sr.  
Ernest Collinson Jr.  
Henry Nichols  
Orillia Farmers Corporation  
Supreme Court of Ontario  
United Co-Operative of Ontario  
The Corporation of the City of Orillia

***Registered Owner(s) – Lot 14***

Crown  
Quentton St. George  
Adam Olivier  
Joseph Dudd & Reuben Jones  
Reuben Jones  
Patrick Madden  
William Thomson  
The Longford Lumber Company  
Standard Lumber & Stone Company Limited  
James Tudhope

***Ownership Period***

Prior to May 1852  
May 1852 – April 1857  
April 1857 – March 1872  
March 1872 – April 1872  
April 1872 – 1874  
1874 – July 1875  
July 1875 – October 1880  
October 1880 – January 1883  
January 1883 – November 1886  
November 1886

*November 1886 – January 1888*  
*January 1888 – March 1901*  
*March 1901 – July 1907*  
*July 1907 – June 1913*  
*June 1913 – March 1920*

*November 1886 – March 1910*  
*March 1910 – March 1920*

March 1920 – April 1921  
April 1921 – April 1924  
April 1924 – March 1937  
March 1937 – August 1945  
August 1945 – September 1949  
September 1949 – November 1984  
November 1984  
November 1984 – February 1986  
February 1986 – present

***Ownership Period***

Prior to May 1852  
May 1852 – August 1870  
August 1870 – April 1872  
April 1872 – April 1874  
April 1874 – July 1875  
July 1875 – September 1885  
September 1885 – June 1888  
June 1888 – March 1901  
March 1901 – July 1907  
July 1907 – January 1913



The Canada Wood Specialty Company Limited  
John Mulligan  
George Mulligan  
Ernest Collinson Sr.

January 1913 – March 1920  
March 1920 – April 1921  
April 1921 – April 1924  
April 1924 – March 1937

*Ernest Collinson Jr.  
George & Irene French  
Orillia Farmers Co-Operative Corporation*

*March 1937 – March 1944  
March 1944 – September 1949  
February 1952 – November 1984*

*Ernest Collinson Jr.  
Harold & Mary McCarthy  
Orillia Farmers Co-Operative Corporation*

*March 1937 – August 1948  
August 1948 – September 1949  
September 1949 – November 1984*

*Ernest Collinson Jr.  
George & Irene French  
Orillia Farmers Co-Operative Corporation*

*March 1937 – March 1944  
March 1944 – February 1952  
September 1949 – November 1984*

Supreme Court Ontario  
United Co-Operatives of Orillia  
The Corporation of the City of Orillia

November 1984  
November 1984 – February 1986  
February 1986 – present

**Registered Owner(s) – Lot 16**

Crown  
Quentton St. George  
Isaac Gilmore  
William & Robert Pyper  
Angus Morrison  
Adam Olivier  
Joseph Budd & Reuben Jones  
Reuben Jones  
Patrick Madden  
Reuben Jones  
William Morse  
George Vick  
Robert Vick  
James & Eliza Vick  
Supreme Court of Ontario  
United Co-Operatives of Ontario  
The Corporation of the City of Orillia

**Ownership Period**

Prior to May 1852  
May 1852 – February 1858  
February 1858 – April 1862  
April 1862 – August 1865  
August 1865 – February 1870  
February 1870 – April 1872  
April 1872 – April 1874  
April 1874 – July 1875  
July 1875 – October 1878  
October 1878 – June 1879  
June 1879 – August 1879  
August 1879 – 1910  
1910 – March 1935  
March 1935 – November 1984  
November 1984  
November 1984 – February 1986  
February 1986 – present

**Registered Owner(s) – Lot 17**

Crown  
Quentton St. George  
Isaac Gilmore  
William & Robert Pyper

**Ownership Period**

Prior to May 1852  
May 1852 – February 1858  
February 1858 – April 1862  
April 1862 – August 1865



Angus Morrison	August 1865 – February 1870
Adam Olivier	February 1870 – April 1872
Joseph Budd & Reuben Jones	April 1872 – April 1874
Reuben Jones	April 1874 – July 1875
Patrick Madden	July 1875 – October 1878
Reuben Jones	October 1878 – June 1879
William Morse	June 1879 – August 1879
George Vick	August 1879 – 1910
Robert Vick	1910 – 1927
Crown	1927
Duncan Thomson	March 1927 – April 1935
Eliza Vick	April 1935 – September 1935
James Vick	September 1935 – July 1938
Edward Moir	July 1938 – July 1947
Hayhoe Brothers	July 1947 – June 1948
Orillia Farmer Co-Operatives Association	June 1948 – August 1967
United Co-Operatives of Ontario	August 1967 – February 1986
The Corporation of the City of Orillia	February 1986 – present

***South Side of Tecumseth Street***

***Registered Owner(s) – Water Lots 18 and 19***

Crown  
The Family of George Vick  
The Corporation of the Town of Orillia  
The Georgian Bay Seaboard Railway Company  
The Corporation of the City of Orillia

***Ownership Period***

Prior to June 1880  
June 1880 – January 1901  
January 1901 – December 1909  
December 1909 – November 1988  
November 1988 – present

***Registered Owner(s) – Lots 18 and 19***

Crown  
Quentton St. George  
Charles McInnis  
James Bolton  
Charles McInnis  
Midland Rail Road Company  
The Corporation of the City of Orillia

***Ownership Period***

Prior to May 1852  
May 1852 – September 1870  
September 1870 – May 1872  
May 1872 – November 1872  
November 1872 – December 1872  
December 1872 – December 1998  
December 1998 – present

***Registered Owner(s) – Water Lot 8***

Crown  
Midland Railway Company of Canada  
The Corporation of the City of Orillia

***Ownership Period***

Prior to March 1888  
March 1888 – December 1998  
December 1998 – present



**Between Tecumseth Street and Mississaga Street**

**Registered Owner(s) – Water Lot 8**

Crown  
The Corporation of the City of Orillia

**Ownership Period**

Prior to March 1905  
March 1905 – present

The Site is currently owned by The Corporation of the City of Orillia. Based on the review of the Property title records, the Corporation of the City of Orillia acquired the lands associated with PINs 586630062 and 586630030 between 1905 and 1998.

Lease agreements with Sun Oil Co. Ltd. were registered on title in 1940 on Lots 13 and 14 of Concession 8 (lands associated with 88/92 Laclie Street) (**APEC #4**).

A copy of the title search documents is included as **Appendix D**.

4.1.5 Historical City Directories

Historical city directories generally document the occupants of municipal addresses on a yearly basis. GHD reviewed historical city directories at the Toronto Reference Library for the Site and surrounding area for the years 1968 to 1994. The municipal addresses associated with the Site, located at 139 Tecumseth Street and 210 Mississaga Street East in Orillia, Ontario were not listed in any of the directories.

A historical city directories search was conducted as part of a previous Phase I ESA completed in 2015 (EXP) for the 70 Front Street North property, located directly adjacent to the west of the Site. Based on the findings of the previous Phase I ESA, the pertinent records for the surrounding properties as they relate to the Site are provided below:

Address	Date	Occupant
16 Front Street North (approximately 40 metres west of the Site)	1961	Hanna Motor Sales Orillia Ltd.
	1963 - 1969	Firestone Tire & Rubber Co.
18 Front Street North (approximately 40 metres west of the Site)	1961 – 1982	Chalmers Bros Auto Body
	1988 – 1998/99	Warners Collision Centre Ltd.
28 Front Street North (approximately 40 metres west of the Site)	1988 - 1992	Front Street Sunoco
59 Front Street North (approximately 140 metres west of the Site)	1961-1963	Hughes JA Service Station
	1969	Lambert's Shell Service Station
	1978 - 1982	Grigg's Shell Service
	1988 - 1992	Valle's Service Centre/Lakefront Auto Service
	1998/1999	Valle Shell
64 Front Street North (approximately 95 metres west of the Site)	1969	Miller Motors
	1961 - 1963	Ennis Service Station



Address	Date	Occupant
91 Laclie Street (approximately 70 metres west of the Site)	1969	Glen's Service Station
	1988, 1992, 1998/1999	Master Lube
92 Laclie Street (adjacent to the west of the Site)	1978	Biscoe's Sunoco
	1982, 1988, 1992, 1998/1999	Biscoe Motors
88 Laclie Street (adjacent to the west of the Site)	1961, 1963, 1969	Royal Oak Service Station
188 Mississauga Street East (approximately 140 metres west and upgradient of the Site)	1961	Kelly's BP Service
189 Mississauga Street East (approximately 140 metres west and upgradient of the Site)	1961, 1963	Leatherdale Tire Service

The operations on the above mentioned properties (with the exception of 189 Mississauga Street East) were previously identified as having the potential to contribute to an APEC on the Site (**APEC #6**). As previously discussed, an RSC (No. 206468) was recently filed in 2013 for 189 Mississauga Street East and based on a review of the RSC, the operations on the 189 Mississauga Street East are not considered to have the potential to contribute to an APEC on the Site.

#### 4.1.6 Environmental Reports

GHD was provided with the following previous environmental reports prepared on behalf of the City for the adjacent property to the west of the Site (70 Front Street North):

- Phase II Environmental Site Assessment, 28 & 70 Front Street North, Orillia, Ontario, prepared by Aims Environmental, prepared for 70 Front Street North, dated March 2011.
- Phase I Environmental Site Assessment, 70 Front Street North, Orillia, Ontario, prepared by exp Services Inc., prepared for the City of Orillia (Contract Number ES-15-2), dated August 7, 2015.
- Phase II Environmental Site Assessment, 70 Front Street North, Orillia, Ontario, prepared by exp Services Inc., prepared for the City of Orillia, dated August 10, 2015.
- Supplemental Phase II Environmental Site Assessment, 70 Front Street North, Orillia, Ontario, prepared by exp Services Inc., prepared for the City of Orillia, dated October 13, 2015.
- Vertical Delineation, 70 Front Street North, Orillia, Ontario, prepared by exp Services Inc., prepared for the City of Orillia, dated February 10, 2017.
- Screening Level Risk Evaluation, 70 Front Street North, Orillia, Ontario, prepared by exp Services Inc., prepared for the City of Orillia, dated December 15, 2017.



Based on a review of the above-mentioned reports, the salient findings related to the Site, are summarized below.

- The western adjacent property (municipally known as 70 Front Street North) was first developed prior to 1920s by Canada Wood Specialty Co. Ltd. Portions of the 70 Front Street North property have also been utilized as a service centre and autobody shop (**APEC #6**).
- The west adjacent property is currently improved with an irregular shaped slab-on-grade building (constructed in 1978) that is approximately 7,075 square metres (m<sup>2</sup>) in area, of which the majority is occupied by a grocery store. Other units in the building are occupied by various light commercial businesses (including a photo printing business). The remaining portions of the Site are comprised of asphalt paved parking areas and driveways.
- The stratigraphy has been found to consist of a layer of mixed fill comprised of sand and gravel, sand, silty sand and sandy silt to a maximum depth of approximately 4 metres below ground surface (mBGS). The fill is underlain by native sandy silt and silty sand deposits which are further underlain by sand deposits. The water table has been found at depths ranging from approximately 1.3 to 3.08 mBGS. Groundwater flow has been found to be in a south to southeasterly direction toward Lake Couchiching, located east of the Site.
- Based on the findings of previous investigative activities undertaken on the 70 Front Street North property by others, impacts to soil (metals/inorganics and PAHs) have been identified on the west adjacent property.
- Groundwater impacted with metals, inorganic, and chlorinated volatile organic compound (VOC) parameters has also been identified on the 70 Front Street North property. Based on the findings of the more recent investigations undertaken in 2015 and 2016, chlorinated VOC impacts to groundwater have been identified in both the shallow and deeper water bearing units on Site. Specifically, trichloroethylene (TCE) and tetrachloroethylene (PCE), and their degradation byproducts have been identified. The source(s) of the impacts is not fully known and the extent of impact has not fully been defined. The impacts extend up to a depth of 13.7 mBGS and may extend beyond. High concentrations of VOCs in groundwater have been found in close proximity to the western boundary of the Site, north of the Coldwater Street East extension. The presence of groundwater contamination on the adjacent property directly west and upgradient of the Site represents an environmental concern and the area along the western boundary of the Site was identified as **APEC #7**.

## 4.2 Environmental Source Information

### 4.2.1 Regulatory Review

No concerns, complaints, notices of violation, or directives of an environmental nature issued against the Site by federal, provincial, or municipal environmental regulatory agencies have been disclosed to GHD.

The Ministry of the Environment and Climate Change (MOECC) was contacted by GHD to provide information regarding any past complaints, violations, and/or MOECC directives concerning addresses associated with the Site (210 Mississauga Street East, 50 Centennial Drive and



139 Tecumseth Street). To date, no records were identified to be associated with 139 Tecumseth Street and 210 Mississauga Street East. Four records were identified to be associated with the 50 Centennial Drive property. Based on information provided by the MOECC to date pertaining to the Freedom of Information request completed no salient records were identified to be associated with the Site.

The Technical Standards and Safety Authority (TSSA) was contacted by GHD and asked to provide information concerning licensed (retail fuel outlets) or registered (private fuel outlets) USTs located at the Site. Based on the response by the TSSA on April 2, 2018, one active cylinder exchange facility was identified to be associated with the 70 Front Street North property adjacent to the west of the Site. No other records were identified to be associated with the Site or adjacent properties.

The City of Orillia was contacted by GHD to provide information regarding any environmental records concerning the Site and adjacent/surrounding properties to the Site. A copy of the records received from the City is provided in **Appendix E**. A summary of the salient findings from the records review is provided below:

- A portion of the Site was formerly part of the property now municipally known as 88/92 Laclie Street, which was historically occupied by a service station (including USTs) and a garage. Based on a review of the information provided by the City, petroleum hydrocarbon (PHC) impacted soil was identified on the 88/92 Laclie Street property during re-surfacing of the asphalt parking lot in 2015. The 88/92 Laclie Street property was historically serviced by a septic system, tile bed, and a dry well located east of the building. The portion of the Site located east of 88/92 Laclie Street was previously identified as **APEC #4**.
- Various service centres (including USTs) and automotive garages have operated on adjacent and surrounding properties to the Site including 88/92 Laclie Street, 91 Laclie Street, 18 Front Street North, 28 Front Street North, 59 Front Street North, and 64 Front Street North. The operations on these properties were previously identified as having the potential to contribute to an APEC on the Site (**APEC #6**).
- A dry cleaners was historically operated at 2 Front Street South, located approximately 80 metres southwest of the Site. A 1,000 litre aboveground storage tank of tetrachloroethylene was reportedly operated on this property. Based on the findings of the ERIS database report (see below), Champlain Cleaners was identified as a generator of halogenated solvents. The operation of a dry cleaners on a surrounding property in close proximity to the Site was identified as a PCA (#37 – *Operation of Dry Cleaning Equipment*) and may contribute to an APEC at the Site (**APEC #6**).
- Oil and grease was reportedly entering the storm sewer from 88/92 and 91 Laclie Street (occupied by Master Lube/Rust Check) in the late 1990s. The storm sewer historically traversed the northern portion of the Site, directly east of Neywash Street, and discharged on Site to an open drainage swale and ultimately to Lake Couchiching, further east of the Site. A sanitary sewer lateral also bisects the Site, east of Neywash Street. In 2010, the storm water and sanitary sewer services along Neywash Street were upgraded. A stormwater treatment system (Vortechs System) was installed on Site. In 2014, in support of the Neywash Street Extension



project from Laclie Street to Centennial Drive, limited soil sampling<sup>1</sup> was undertaken within the Neywash Street extension lands (inferred to be on Site). Several metals, inorganic, polycyclic aromatic hydrocarbon (PAH), petroleum hydrocarbon (PHC) parameters and trichloroethylene (TCE) were detected in the surficial soils at concentrations above the 2011 MOECC Table 2 standards for residential/parkland/institutional use. The presence of contamination within the Neywash Street extension lands represents an environmental concern, and the area was identified as **APEC #8**.

- A minor train derailment occurred on Site between Tecumseth Street and Neywash Street in the 1970s. A fuel tank was reportedly ruptured during the derailment. No further information was available on the size of the release, spill response, and/or clean-up activities. The train derailment/fuel spill was identified as a PCA (#28 - *Gasoline and Associated Products Storage in Fixed Tanks*), and the area between Tecumseth Street and Neywash Street, was identified as **APEC #9**.

A copy of the correspondence received from the City is included in **Appendix E**.

#### 4.2.2 Environmental Database Search

GHD contracted EcoLog Environmental Risk Information Services Ltd. (ERIS) to conduct a search of available federal, provincial, and private environmental databases. Based on the address of the Site, the database searches were completed to assist in the identification of environmental conditions at the Site and on adjacent properties. A summary of the pertinent findings from the database search is provided below. The number of records identified for the Site and for properties located within the Study Area (a 0.30 kilometre radius of the Site) are identified in the following table. The complete database search report, which also identifies limitations associated with this information, is included in **Appendix F**.

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<sup>1</sup> Preliminary Environmental Evaluation of Soil Test Pit Investigation Conducted by City of Orillia, Railbed, Neywash Street, City of Orillia, County of Simcoe, Ontario, letter dated September 2, 2014, prepared by Terraprobe, prepared for the City of Orillia.



Database	Number of Records	
	Site	Distance from the Site
		0–.30 km
<b>Federal Databases</b>		
Environmental Effects Monitoring ( <b>EEM</b> )	None	0
Environmental Issues Inventory System ( <b>EIIS</b> )	None	0
Federal Convictions ( <b>FCON</b> )	None	0
Federal Contaminated Sites ( <b>FCS</b> )	None	2
No records were identified in the FCS database to be associated with the Site.		
Two (2) records were identified in the FCS database to be associated with properties located within 300 metres of the Site. One (1) record was associated with a waterlot located east of the Site, which was identified as having PAH and metal contamination. One (1) record was associated with Orillia Park which was mapped approximately 290 metres northeast of the Site, which was identified as having no contamination.		
Fisheries & Oceans Fuel Tanks ( <b>FOFT</b> )	None	0
Indian & Northern Affairs Fuel Tanks ( <b>IAFT</b> )	None	0
National Analysis of Trends in Emergencies System ( <b>NATES</b> )	None	0
National Defence & Canadian Forces Fuel Tanks ( <b>NDFT</b> )	None	0
National Defence & Canadian Forces Spills ( <b>NDSP</b> )	None	0
National Defence & Canadian Forces Waste Disposal Sites ( <b>NDWD</b> )	None	0
National Energy Board Pipeline Incidents ( <b>NEBI</b> )	None	0
National Environmental Board Wells ( <b>NEBW</b> )	None	0
National Environmental Emergencies System ( <b>NEES</b> )	None	0
National PCB Inventory ( <b>NPCB</b> )	None	0
National Pollutant Release Inventory ( <b>NPRI</b> )	None	1
No records were identified in the NPRI database to be associated with the Site.		
One (1) record was identified in the NPRI database to be associated with The Great Atlantic & Pacific Company of Canada located at 70 Front Street North, west of the Site. Nitrogen oxides, carbon monoxide, carbon dioxide, methane, hydrofluorocarbon, nitrous oxide, volatile organic compounds, Sulphur dioxide, total particulate matter, particulate matter less than or equal to 10 microns, and particulate matter less than or equal to 2.5 microns were released to the atmosphere in 2004.		
Parks Canada Fuel Storage Tanks ( <b>PCFT</b> )	None	0
Transport Canada Fuel Storage Tanks ( <b>TCFT</b> )	None	0
<b>PROVINCIAL DATABASES</b>		
Abandoned Aggregate Inventory ( <b>AAGR</b> )	None	0
Aggregate Inventory ( <b>AGR</b> )	None	0
Abandoned Mines Information System ( <b>AMIS</b> )	None	0
Borehole ( <b>BORE</b> )	None	0
Certificates of Approval ( <b>CA</b> )	None	7
No records were identified in the CA database for the Site.		
Seven (7) records were identified in the CA database to be associated with properties located within 300 metres of the Site and were generally associated with municipal and private sewage, and municipal water approvals granted to the City of Orillia.		
Commercial Fuel Oil Tanks ( <b>CFOT</b> )	None	0
Compressed Natural Gas Stations ( <b>CNG</b> )	None	0



Database	Number of Records	
	Site	Distance from the Site
		0–.30 km
Coal Gasification Plants ( <b>COAL</b> )	None	0
Compliance and Convictions ( <b>CONV</b> )	None	0
Certificates of Property Use ( <b>CPU</b> )	None	0
Drill Holes ( <b>DRL</b> )	None	0
Environmental Activity and Sector Registry ( <b>EASR</b> )	None	0
Environmental Registry ( <b>EBR</b> )	None	1
<p>No records were identified in the EBR database for the Site.</p> <p>One (1) record was identified in the EBR database for 16 Centennial Drive mapped approximately 10 metres east of the Site. The record was associated with McGill Environmental Services Ltd. and indicates that an application for a waste disposal site was submitted in 1995. Based on GHD's review of the record on the Environmental Registry, the application was later withdrawn.</p>		
Environmental Compliance Approval ( <b>ECA</b> )	None	4
<p>No records were identified in the ECA database for the Site.</p> <p>Four (4) records were identified in the ECA database for a property within 300 metres of the Site. The records were generally related to Environmental Compliance Approvals (ECA) for municipal and private sewage works (including a sanitary trunk sewer at 215 Mississauga Street East), and municipal drinking water systems granted to the City of Orillia.</p>		
Emergency Management Historical Event ( <b>EMHE</b> )	None	0
List of TSSA Expired Facilities ( <b>EXP</b> )	None	14
<p>No records were identified in the EXP database for the Site.</p> <p>Fourteen (14) records were identified in the EXP database to be associated with properties located within 300 metres of the Site. Thirteen (13) of the records were associated with Suncor Energy Products Inc. located at 28 Front Street North, located approximately 40 metres west of the Site. The records were associated with liquid fuel tanks, piping and a facility that were all identified as having expired. One (1) record was associated with Valle Service Centre located at 59 Front Street North, approximately 140 metres west of the Site. The record was associated with a facility that was identified as having expired.</p>		
Fuel Storage Tank ( <b>FST</b> )	None	4
<p>No records were identified in the FST database to be associated with the Site.</p> <p>Four (4) records were identified in the FST database to be associated with Valle Service Centre, located at 59 Front Street North, approximately 140 metres west of the Site. The records were related to two active 22,700 litre liquid fuel single wall underground (gasoline) storage tanks, one active 22,700 litre liquid fuel single wall underground (diesel) storage tank, and one active 45,400 litre liquid fuel single wall underground (gasoline) storage tank.</p>		
Fuel Storage Tank – Historic ( <b>FSTH</b> )	None	1
<p>No records were identified in the FSTH database to be associated with the Site.</p> <p>One (1) record was identified in the FST database to be associated with Valle Service Centre, located at 59 Front Street North, approximately 140 metres west of the Site. The record was associated with a licensed gasoline retail fuel outlet in 2008.</p>		
Ontario Regulation 347 Waste Generators Summary ( <b>GEN</b> )	None	41
<p>No records were identified in the GEN database to be associated with the Site.</p> <p>Forty-one (41) records were identified in the GEN database to be associated with properties located within 300 metres of the Site for the generation of various wastes. Based on a review of the records, the following properties were identified as generators of halogenated solvents (MOECC Waste Class 241): Champlain Cleaners Ltd., located at 2 Front Street South (approximately 80 metres southwest of the</p>		



Database	Number of Records	
	Site	Distance from the Site
		0–.30 km
Site); Lindsay Cleaners & Dryers Ltd., located at 36 Front Street South, approximately 130 metres southwest of the Site; and exp Services Inc., located at 70 Front Street North, adjacent to the west of the Site.		
Greenhouse Gas Emissions from Large Facilities ( <b>GHG</b> )	None	0
TSSA Historic Incidents ( <b>HINC</b> )	None	2
No records were identified in the HINC database to be associated with the Site. Two (2) records were identified in the HINC database to be associated with properties located within 300 metres of the Site. One (1) record was associated with a liquid petroleum (gasoline) spill at a retail fuel station in 2008 at 59 Front Street North, located approximately 140 metres west of the Site. The other record was associated with a carbon monoxide release at a private dwelling located at 52 Matchedash Street North in 2006.		
TSSA Incidents ( <b>INC</b> )	None	0
Landfill Inventory Management Ontario ( <b>LIMO</b> )	None	0
Mineral Occurrences ( <b>MNR</b> )	None	0
Non-Compliance Reports ( <b>NCPL</b> )	None	0
Ontario Inventory of PCB Storage Sites ( <b>OPCB</b> )	None	0
Ontario Oil and Gas Wells ( <b>OOGW</b> )	None	0
Orders ( <b>ORD</b> )	None	0
Pesticide Register ( <b>PES</b> )	None	10
No records were identified in the PES database to be associated with Site. Ten (10) records were identified in the PES database to be associated with properties located within 300 metres of the Site.		
TSSA Pipeline Incidents ( <b>PINC</b> )	None	0
Private and Retail Fuel Storage Tanks ( <b>PRT</b> )	None	2
No records were identified in the PRT database to be associated with the Site. Two (2) records were identified in the PRT database to be associated with 28 Front Street North, located approximately 40 metres west of the Site and 59 Front Street North, located approximately 140 metres west of the Site. The records were associated with retail storage tanks.		
Permit to Take Water ( <b>PTTW</b> )	None	0
Ontario Regulation 347 Waste Receivers Summary ( <b>REC</b> )	None	0
Record of Site Condition ( <b>RSC</b> )	None	4
No records were identified in the RSC database to be associated with the Site. Four (4) records were identified for properties within 300 metres of the Site including 130 Colborne Street East, 189 Mississaga Street East, 57 and 59 Front Street North, and 21 Matchedash Street South.		
Ontario Spills ( <b>SPL</b> )	5	44



Database	Number of Records	
	Site	Distance from the Site
		0–.30 km

Five records were identified in the SPL database to be associated with the Site. Upon review of the records, one of the records was related to the Site. In 1994, a release of an unknown amount of oil to gravel occurred at the Old Canadian Pacific Railway right of way near Centennial and Mississauga Street at the old Canadian Pacific railway right-of-way. The record identified the area of the spill as being cleaned up and no impact to the environment anticipated. No further information was provided in the record. The other records were related to the releases at the Port of Orillia property (owned by the City of Orillia) to the east of the Site and included release of oil from pleasure crafts into the lake in 2006, releases related to a fire at the Port of Orillia Marina building in 2014, and a release of coolant on the parking lot.

Thirty-nine (39) records were identified in the SPL database to be associated with properties located within 300 metres of the Site. Upon review of the records, none of the records were identified as having the potential to contribute to an APEC on the Site.

Wastewater Discharger Registration Database ( <b>SRDS</b> )	None	0
TSSA Variances for Abandonment of Underground Storage Tanks ( <b>VAR</b> )	None	0
Waste Disposal Sites – MOE CA Inventory ( <b>WDS</b> )	None	0
Waste Disposal Sites – MOE 1991 Historical Approval Inventory ( <b>WDSH</b> )	None	0
Water Well Information System ( <b>WWIS</b> )	None	29

No records were identified in the WWIS database to be associated with the Site.

Twenty-nine (29) records were identified in the WWIS database to be associated with properties located within 300 metres of the Site. The records were generally associated with observation wells that were installed between 2004 and 2016.

#### PRIVATE DATABASES

Anderson's Waste Disposal Inventory ( <b>ANDR</b> )	None	0
Automobile Wrecking & Supplies ( <b>AUWR</b> )	None	1

No records were identified in the AUWR database for the Site. One record was identified for EBL Automotive Recyclers located at 67 Neywash Street, located approximately 280 metres west of the Site.

Chemical Register ( <b>CHEM</b> )	None	0
ERIS Historical Searches ( <b>EHS</b> )	None	18
Canadian Mine Locations ( <b>MINE</b> )	None	0
Oil and Gas Wells ( <b>OGW</b> )	None	0
Canadian Pulp and Paper ( <b>PAP</b> )	None	0
Retail Fuel Storage Tanks ( <b>RST</b> )	None	6

No records were identified in the RST database to be associated with the Site.

Six (6) records were identified in the RST database to be associated with Master Lubes, located approximately 70 metres west of the Site at 91 Laclie Street. Master Lubes was identified as an oil change and lubrication service centre, and a service station.

Scott's Manufacturing Directory ( <b>SCT</b> )	None	7
Anderson's Storage Tanks ( <b>TANK</b> )	None	0



### 4.3 Physical Setting

The Site is located in an area of Orillia that was developed for residential, commercial and industrial use in the late 1890s/early 1900s. The Site was first developed for industrial/commercial use in the late 1890s/early 1900s for use as grain and lumber mills and a railway corridor (with tracks and various spur lines).

The western portion of the Property is currently vegetated with grass and some tree cover, and the eastern portion of the Property is gravel covered and currently used for parking for Centennial Park and an unofficial snowmobile trail in the winter. The railway tracks have been removed, although the railway ballast is reportedly still present on the western portion of the Site, in the area of the former westernmost railway. Residential and commercial land uses surround the Site.

#### 4.3.1 Aerial Photographs

Aerial photographs were reviewed to generally document the development of the Site and properties in the vicinity of the Site and to identify the existence of any significant actual or potential areas of environmental impairment at the Site. Aerial photographs of the Site and surrounding area were obtained by GHD from the National Air Photo Library for the years 1930, 1945, 1967, 1989, 2002, 2008, 2012, and 2016. Aerial photographs for the years 1971 and 1978, available in the 2015 exp Phase I ESA, were also reviewed by GHD.

Based on the history of the Site and the quantity and quality of the aerial imagery available for review, the selected time period between aerial photographs of approximately 10 years was determined to be suitable for the purposes of this Phase One ESA. The earliest available aerial photograph identified for the Site was dated 1930.

**1930 Aerial Photograph (Scale 1:5,000):** Review of the 1930 aerial photograph indicates that the Site was developed with railway lines, occupying the majority of the Site, traversing across the Site in a north to south direction. Several spur lines were also visible to the west of the Site. A large building (inferred to be the grain mill) was present on the northern portion of the Site, directly south of Tecumseth Street. The properties to the north, south and west of the Site were also developed and improved with various residential, commercial and/or industrial buildings. Tecumseth Street was located at the northern Site boundary and Mississauga Street East was located adjacent to the southwestern corner of the Site. ASTs were visible on the Imperial Oil property, located further south of the Site along Colborne Street. Lake Couchiching was located directly east of the Site, with the shoreline representing the approximate eastern Site boundary. Large boat houses and bath houses were present on the eastern shoreline adjacent to the east of the Site. A large industrial complex (inferred to be the Canada Wood Specialty Company facility), with multiple large buildings, was located adjacent to the west of the Site at that time.

**1945 Aerial Photograph (Scale 1:5,000):** Review of the 1945 aerial photograph indicates that there had been no significant changes in land use on the Site or on the surrounding adjacent properties since 1930.

**1967 Aerial Photograph (Scale 1:5,000):** Review of the 1967 aerial photograph indicates that the railway and spur lines that were previously located on the Site, were no longer visible. The mill building located on the northern portion of the Site, south of Tecumseth Street was still visible.



Significant infilling of the Lake Couchiching shoreline had occurred to the east of the Site since 1945. The former boat and bath houses were no longer present and the infilled area to the east of the Site appeared to be vacant at that time. There had been no other significant changes on the surrounding properties since 1945.

**1971 Aerial Photograph (Scale 1:5,000):** Review of the 1971 aerial photograph indicates that Centennial Drive was under construction to the east of the Site. No other significant changes in land use had occurred on the Site or surrounding adjacent properties since 1967.

**1978 Aerial Photograph (Scale 1:5,000):** Review of the 1978 aerial photograph indicates that the southern portion of the Site appeared to be disturbed. The adjacent property to the east of the City was being utilized as a port and parkland. Some of the buildings on the west adjacent property (70 Front Street North) had been demolished. No other significant changes on the Site or surrounding properties had occurred since 1971.

**1989 Aerial Photograph (Scale 1:5,000):** Review of the 1989 aerial photograph indicates that the building on the northern portion of the Site had been demolished. The majority of the Site appeared to be vacant open space at the time. The northwestern portion of the Site appeared to have been used as a roadway, connecting Tecumseth Street to Neywash Street. A train engine and a number of railcars (inferred to be the Ossawippi Express Restaurant and Patio) were present on the southern portion of the Site since 1978. The surrounding properties to the north, west and south were no longer utilized for industrial purposes and appeared to be predominantly residential and commercial property uses at that time. The buildings on the adjacent property to the west had been demolished and the property had been redeveloped as a commercial plaza with asphalt surface parking. The adjacent infilled lands to the east were developed as parkland, complete with a boat harbour and a port building (Port of Orillia) with surface parking. The Imperial Oil property to the south of the Site appeared to be vacant, with the former buildings demolished and the ASTs no longer present.

**2002 Aerial Photograph (Scale 1:5,000):** Review of the 2002 aerial photograph indicates that there had been no significant changes in land use on the Site since 1989. The property to the south and southwest (20 Front Street South) of the Site appeared to have been used as a salvage yard at that time. There had been no other significant changes on the surrounding properties since 1989.

**2008 Aerial Photograph (Scale 1:5,000):** Review of the 2008 aerial photograph indicates that there had been no significant changes in land use on the Site or on the surrounding adjacent properties since 2002.

**2012 Aerial Photograph (Scale 1:5,000):** Review of the 2012 aerial photograph indicates that there had been no significant changes in land use on the Site since 2008. The Port of Orillia property adjacent to the east of the Site appeared to have been under redevelopment at the time, with the former boat docks having been removed. There had been no other significant changes on the surrounding properties since 2008.

**2016 Aerial Photograph (Scale 1:5,000):** Review of the 2016 aerial photograph indicates that there had been no significant changes in land use on the Site since 2012. The Port of Orillia property adjacent to the east of the Site appeared to be under redevelopment at the time, with the presence of new boat docks. The building on the property appeared to have been demolished and



trailers were present within the former parking area adjacent to Centennial Drive. The former salvage yard to the south and southwest of the Site was no longer in use, as the buildings were demolished and the property was vacant at that time. There had been no other significant changes on the surrounding properties since 2012.

Copies of the aerial photographs are included in **Appendix G**.

#### 4.3.2 Topography, Hydrology, Geology

The regional topography consists of generally flat surfaces. The Site is located in the broad physiographic region known as the Simcoe Lowlands<sup>2</sup>. A review of Quaternary geology for the Site indicates glaciolacustrine deposits, which consist predominantly of sand, gravelly sand and gravel; nearshore and beach deposits<sup>3</sup>. The overburden is underlain by shale, limestone, dolostone, arkose and sandstone bedrock of the Simcoe Group<sup>4</sup>.

The Site topography is relatively flat with gentle slopes towards the eastern and western property boundaries. The elevation on the Site is approximately 223 metres above sea level (mAMSL)<sup>5</sup>. Regional topography slopes to the southeast. The nearest surface water body to the Site is Lake Couchiching, located approximately 50 metres to the east of the Site. There is no natural surface water body located on the Property. Regional groundwater flow is in a south to southeasterly direction.

#### 4.3.3 Fill Materials

At the time of the Site inspection, no areas of disturbed soil or fill material stockpiles were observed at the Property. However, as previously discussed, based on the historical documentation reviewed portions of the Site were historically part of Lake Couchiching. Infilling of Lake Couchiching was undertaken in the late 19<sup>th</sup>/early 20<sup>th</sup> century and significant quantities of fill, of unknown quality, were placed on Site and on the surrounding adjacent lands. The importation of fill of unknown quality was previously identified as a PCA (#30 - *Importation of Fill Material of Unknown Quality*) as defined in O. Reg. 153/04 and the entire Site was identified as **APEC #1**.

#### 4.3.4 Water Bodies and Areas of Natural Significance

There are no water bodies or water courses located on the Site. The nearest surface water body to the Site is Lake Couchiching, located approximately 50 metres to the east of the Site.

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<sup>2</sup> Chapman, L. J., and D. F., Putnam (1984), *"The Physiography of Southern Ontario"*, Ontario Geological Survey.

<sup>3</sup> Ontario Geological Survey (1980), Map P. 2204, Quaternary Geology, Toronto and Surrounding Area, Scale 1:100,000.

<sup>4</sup> "Bedrock Geology of Ontario" [map]. Scale 1:250, 000. OGS Earth Geoscience Data [computer files]. Sudbury, Ontario: Ontario Geological Survey & Ministry of Northern Development and Mines, 2010.

<sup>5</sup> Natural Resources Canada [map]. "The Atlas of Canada - Toporama", governed by version 2.3 of the Open Government License - Canada. June 14, 2016. < <http://atlas.nrcan.gc.ca/toporama/en/index.html>>.



In accordance with O. Reg. 153/04, an “area of natural significance” is defined as any of the following:

1. An area reserved or set apart as a provincial park or conservation reserve under the Provincial Parks and Conservation Reserves Act, 2006.
2. An area of natural and scientific interest (life science or earth science) identified by the Ministry of Natural Resources as having provincial significance.
3. A wetland identified by the Ministry of Natural Resources as having provincial significance.
4. An area designated by a in its official plan as environmentally significant, however expressed, including designations of areas as environmentally sensitive, as being of environmental concern and as being ecologically significant.
5. An area designated as an escarpment natural area or an escarpment protection area by the Niagara Escarpment Plan under the Niagara Escarpment Planning and Development Act.
6. An area identified by the Ministry of Natural Resources as significant habitat of a threatened or endangered species.
7. An area which is habitat of a species that is classified under Section 7 of the Endangered Species Act, 2007 as a threatened or endangered species.
8. Property within an area designated as a natural core area or natural linkage area within the area to which the Oak Ridges Moraine Conservation Plan under the Oak Ridges Moraine Conservation Act, 2001 applies.
9. An area set apart as a wilderness area under the Wilderness Areas Act.

A summary of GHD’s review is provided below:

1. The Site is not an area reserved or set apart as a provincial park or conservation reserve under the Provincial Parks and Conservation Reserves Act, 2006.
2. The Site is not an area of natural and scientific interest (life science or earth science) identified by the Ministry of Natural Resources and Forestry as having provincial significance. GHD reviewed the Ontario Ministry of Natural Resources and Forestry - “Natural Heritage Information Centre” database to identify areas registered as Areas of Natural or Scientific Interest (ANSI). There were no ANSI's identified within a 1-km radius of the Site.
3. The Site is not a wetland identified by the Ministry of Natural Resources and Forestry as having provincial significance.
4. The Site is not in an area designated by the City of Orillia in its official plan as environmentally significant.
5. The Site is not an area designated as an escarpment natural area or an escarpment protection area by the Niagara Escarpment Plan under the Niagara Escarpment Planning and Development Act.
6. The Site is not an area identified by the Ministry of Natural Resources and Forestry as significant habitat of a threatened or endangered species. GHD conducted a search to determine if threatened or endangered species are present within or adjacent to the Site.



According to the Committee on the Status of Endangered Wildlife in Canada (COSWIC), Species at Risk in Ontario (SARO), and the Ontario Ministry of Natural Resources and Forestry (MNR), no species were listed as threatened and/or endangered within the Phase One ESA study area.

7. The Site is not an area which is habitat of a species that is classified under Section 7 of the Endangered Species Act, 2007 as a threatened or endangered species.
8. The Site is not a property within an area designated as a natural core area or natural linkage area within the area to which the Oak Ridges Moraine Conservation Plan under the Oak Ridges Moraine Conservation Act, 2001 applies.
9. The Site is not an area set apart as a wilderness area under the Wilderness Areas Act.

Based on the above information and the definition of area of natural significance provided in O. Reg. 153/04, the Site would not be considered an area of natural significance.

#### 4.3.5 Well Records

A search of the MOECC Water Well Information System (WWIS) database was conducted as a component of the Ecolog ERIS database search outlined in Section 4.2.2. Based on the findings of the ERIS database search, no records were identified in the WWIS database to be associated with the Site.

#### 4.3.6 Site Operating Records

The Property is currently utilized unofficially as a public trail and parking area for Centennial Park, located east of the Site. As the Site is not being used, in whole or in part, for industrial purposes, a review of Site operating records was not required as part of the Phase One ESA.

## 5. Interviews

On February 28, 2018, Mr. Nick Bauer interviewed Mr. Stan Cleaveley of the City of Orillia. Mr. Cleaveley was the Supervisor of Parks for the City at the time and had been familiar with the Site since 2016.

On March 5, 2018, Mr. Nick Bauer interviewed Mr. Brent Burgin of the City of Orillia. Mr. Burgin was the Superintendent of Water Resources for the City at the time and had been familiar with the Site since approximately 1988.

The information given to GHD by those interviewed was compared to other information sources that were reviewed by GHD, and no contradictory information was identified.

Relevant information provided to GHD by those interviewed has been summarized in the following sections.



## 6. Site Reconnaissance

### 6.1 General Requirements

On February 28, 2018, Mr. Nick Bauer of GHD completed an inspection of the Property located on Centennial Drive in Orillia. Weather conditions during the Site visit were partly cloudy with an ambient air temperature of approximately 1 degree Celsius. The inspection of the Property and Phase One Study Area was conducted over a period of approximately 2 hours. The Site was partially snow covered at the time of the Site inspection. Photographs of the Site are included in **Appendix H**.

### 6.2 Specific Observations at Phase One ESA Property

#### 6.2.1 Buildings and Property

The Site is irregular in shape, approximately 2.14 hectares (5.3 acres) in size. At the time of the Site inspection, the eastern portion of the Site, in the area of the former railway tracks, consisted of a raised gravel trail, which is utilized as an unofficial trail by the public. Gravel covered areas are also located on the eastern portion of the Site and are utilized for vehicle and boat trailer parking for Centennial Park. The western portion of the Site, in the area of the former railway tracks was predominantly grass-covered, with some trees and shrubs along the central and western portions of the Site. The Site can be accessed from the northern and southern Site boundaries off of Tecumseth Street and Mississauga Street East, respectively. The Site can also be accessed via Centennial Drive at the southeastern site boundary, directly across from the Port of Orillia, and from the west from Neywash Street.

Two small portable snack concessions (Stingers Fry Hive and Sweet Dreams Ice Cream) were located on the central portion of the Site, on the gravel-covered portion of the Site. The snack concession buildings were not accessible at the time of the Site inspection. The cooking equipment associated with the concessions are fueled with propane. Portable propane tanks are located adjacent to each of the concessions. One of the concessions (Sweet Dreams Ice Cream) appeared to be connected to the municipal water distribution system and serviced with electricity via an overhead electrical line.

A dirt and gravel roadway, oriented in a north to south direction, bisects the northwestern portion of the Site, connecting Neywash Street to Tecumseth Street. A gravel parking area, used by the residential houses fronting onto Laclie Street, is located west of the roadway on the northern portion of the Site.

#### 6.2.2 Current Site Operations

Based on discussions with Site personnel, the Site had been used as an unofficial public recreational trail and vehicle/boat trailer parking area for Centennial Park, located to the east of the Site, since the late 1980s. Two small snack concessions are located on the central portion of the Site.



### 6.2.3 Historical Site Operations

Based on the historical documentation reviewed, a portion of the Site was historically part of Lake Couchiching. Infilling of Lake Couchiching was undertaken in the late 19<sup>th</sup>/early 20<sup>th</sup> century and significant quantities of fill, of unknown quality, were placed on Site and on the surrounding adjacent lands. The entire Site was previously identified as **APEC #1**.

The Site was first developed for industrial/commercial use dating back to the late 19<sup>th</sup>/early 20<sup>th</sup> century. The Orillia Flour Mill (and later the Orillia Cereal Company) historically occupied the extreme northern portion of the Site and a saw mill operated by Canada Wood Speciality occupied the northwestern portion of the Site, east of Laclie Street and north of Neywash Street. Secondary buildings associated with Canada Wood Speciality Co. Ltd. also occupied the western portion of the Site, between Neywash Street and Coldwater Street East. The mill located on the northern portion of the Site, north of Neywash Street was demolished between 1921 and 1928. The mill located on the extreme northern portion of the Site was demolished on Site in the 1980s. Coal use was identified on Site on the FIPs. No information was obtained regarding the ultimate disposal location of waste ash and clinker from the burning of coal, and the demolition wastes associated with the former on-Site buildings. The entire Site was previously identified as **APEC #2**.

An interconnected series of railway tracks formerly operated by the Midland Rail Road Company, Canadian National (CN) Railway, and Canadian Pacific (CP) Railway, and various spur lines traversed the Site and the adjacent properties to the west and south of the Site. Portions of the Site were owned by The Midland Rail Road Company and The Georgian Bay Seaboard Railway Company (later known as the Canadian National Railway Company) dating back to the late 19<sup>th</sup> century up until the late 1980s/1990s. The entire Site was previously identified as **APEC #3**.

A portion of the Site was formerly part of the property now municipally known as 88/92 Laclie Street. A service station (including USTs) and garage was historically operated on the 88/92 Laclie Street property. The northwestern portion of the Site was previously identified as **APEC #4**.

A restaurant and patio (known as the Ossawipi Express Restaurant and Patio) was formerly located on the southern portion of the Site. The restaurant, consisting of eight former railcars, opened for business in 1972 and operated until 2010, at which point the railcars were relocated to Port McNicoll.

### 6.2.4 Utility Services

Electricity for the Site is supplied underground by Orillia Power Corporation to the street lighting on the southeastern portion of the Site. Electricity is also supplied overhead to one of the snack concessions (Sweet Dreams Ice Cream) located on the central portion of the Site. The two snack concessions located on the Site are reportedly not heated.

One snack concession (Sweet Dreams Ice Cream) is serviced with potable water through the municipal water distribution system. A fire hydrant, located on the east boundary of the central portion of the Site, is also connected to the municipal water distribution system. Potable water for the City of Orillia is obtained from Lake Couchiching and groundwater supply wells.



Underground municipal storm and sanitary sewer services traverse the Site. The sanitary sewer bisects the Site, entering the Site at the northern boundary and directing water flow southward to the southern boundary of the Site and beyond. There are multiple storm sewers that traverse west to east across the Site directly east of Neywash Street and Coldwater Street East, respectively. Based on a review of the utility drawings provided by the City and Site observations, a stormwater treatment system (Vortechs System), which was installed in 2010, is located on Site directly east of Neywash Street. The system is located in the area of the former inlet of Lake Couchiching that was historically located on Site.

Stormwater generated on the Site flows overland toward the east and west Property boundaries. Grading on the Site also directs stormwater toward the centre of the Site at some locations, between the east and west former railway lines, where it infiltrates the ground surface. Catchbasins, located at the south and central portions of the Site, direct stormwater to municipal storm sewers that direct water eastward to Lake Couchiching.

As previously discussed in Section 4.2.1, a stormwater treatment system was installed by the City on Site directly east of Neywash Street in 2010 in response to oil and grease reportedly entering the storm sewer from 88/92 and 91 Laclie Street (occupied by Master Lube/Rust Check) in the late 1990s (**APEC #8**).

Based on the age of the former mill building located on the northern portion of the Site, south of Tecumseth Street, it is likely that fuel oil was used to heat the building. The potential use of fuel oil on the northern portion of the Site was identified as a PCA (#28 – *Gasoline and Associated Products Storage in Fixed Tanks*) and the area on the northern portion of the Site was identified as **APEC #10**.

#### 6.2.5 Underground Storage Tanks (USTs)

Based on discussions with Site personnel, there are no USTs present at the Site to their knowledge, and no USTs have been operated at the Site in the past to their knowledge. At the time of the Site inspection, no physical evidence suggesting the presence of USTs (e.g., vent pipes, fill pipes, etc.) was observed by GHD during the Site inspection.

Based on the historical documentation reviewed, a portion of the Site was formerly part of the property now municipally known as 88 Laclie Street. A service station (including USTs) was historically operated on the 88 Laclie Street property. Based on a review of the 1928 (revised 1941) FIP, three USTs were located off Site, on the western portion of the 88 Laclie Street property. The portion of the Site associated with 88 Laclie Street was previously identified as **APEC #4b**.

#### 6.2.6 Aboveground Storage Tanks (ASTs)

Based on discussions with Site personnel, there are no ASTs present at the Site to their knowledge, and no ASTs have been operated at the Site in the past to their knowledge. At the time of the Site inspection, ASTs observed were limited to large propane tanks associated with the on-Site snack shops. No other physical evidence suggesting the presence of ASTs was observed by GHD.



#### 6.2.7 Floor Drains, Pits, and Sumps

Based on discussions with Site personnel, there are no floor drains, pits or sumps present at the Site to their knowledge. No physical evidence suggesting the presence of floor drains, pits or sumps was observed by GHD.

#### 6.2.8 Water Wells

Based on discussions with Site personnel and GHD's site observations, no observation wells are located on Site. Based on the findings of the ERIS database search, no records were identified in the WWIS database to be associated with the Site.

No active drinking water wells are known to be present on the Site.

#### 6.2.9 Wastewater/Sewers

As discussed previously in Section 6.2.4, a sanitary sewer line bisects the Site, entering the Site at the northern boundary and directing water flow southward to the southern boundary of the Site and beyond. According to Site personnel, and based on observations made by GHD, no wastewater is generated at the Site.

#### 6.2.10 Stormwater/Surface Water

Stormwater generated on the Site flows overland toward the east and west Property boundaries. Grading on the Site also directs stormwater toward the centre of the Site at some locations, between the east and west former railway lines, where it infiltrates the ground surface. Catchbasins, located at the south and central portions of the Site, direct stormwater to municipal storm sewers that direct water eastward to Lake Couchiching.

As previously discussed in Section 4.2.1, a stormwater treatment system was installed by the City on Site directly east of Neywash Street in 2010 in response to oil and grease reportedly entering the storm sewer from 88/92 and 91 Laclie Street (occupied by Master Lube/Rust Check) in the late 1990s (**APEC #8**). Historically, the municipal stormwater sewer along Neywash Street discharged to an open ditch located on Site, directly east of Neywash Street.

At the time of the Site inspection, no sources of adverse impact to stormwater generated at the Site were observed by GHD. At the time of the Site inspection, no visual evidence of impact from potential surface water run-on from the adjacent properties was observed by GHD.

#### 6.2.11 Enhanced Investigation Property

The Phase One ESA property is considered to be an enhanced investigation property if it is currently used or has ever been used in whole or in part for industrial use, or commercial uses including a garage, a bulk liquid dispensing facility such as a gas station, or for the operation of dry cleaning equipment. Based on information obtained as part of the Phase One ESA, various industrial/commercial operations (including railway, flour mill, sawmill and service station) were conducted on Site in the past. The Site is therefore considered an enhanced investigation property.



All reasonable inquiries were made to obtain and review the following material with respect to the former use of the Site:

- Regulatory permits and records related to areas of potential environmental concern (documented in Section 4.2.1).
- Material safety data sheets (not available).
- Underground utility drawings.
- Inventories of chemicals, chemical usage and chemical storage areas (not available).
- Inventory of USTs and ASTs (not available).
- Environmental monitoring data.
- Waste management records (not available).
- Process, production and maintenance documents (not available).
- Records of spills and discharges of contaminants.
- Emergency response and contingency plans (not available).
- Environmental audit reports (not available).
- Site plans of the former facilities (not available).

GHD was also provided with previous reports and documentation for properties within the Phase One ESA study area as discussed in Sections 4.1.6 and 4.2.1.

Where available, GHD has documented the information required in O. Reg. 153/04 for enhanced investigation properties. The information has been included throughout the report, as identified above.

### 6.3 Written Description of Investigation

The Site reconnaissance included a walk-through of the Site to confirm the current Site conditions and identify any current land uses, which may have or may cause actual and/or potential environmental impacts to the Site. Adjoining and neighbouring properties were observed from the Site and public access ways.

#### 6.3.1 Asbestos-Containing Materials (ACM)

The presence of ACM at the Site was investigated during the Phase One ESA through discussions with Site personnel and visual observations made by GHD. No intrusive investigations were conducted. Based on Site observations, ACM maybe associated with the two portable snack concessions located on Site. The snack concessions were not accessible at the time of the Site inspection.

#### 6.3.2 Polychlorinated Biphenyls (PCBs)

Site personnel were not aware of any PCB-containing equipment being used, stored, or handled at the Site. At the time of the Site inspection, PCB-containing equipment observed on Site included the



pad-mounted transformer located on the southern portion of the Site. At the time of the Phase One ESA, no information was available concerning the transformer.

#### 6.3.3 Solid Waste/Recyclable Materials

At the time of the Site inspection, limited amounts of wood (pallets) and plastic debris was observed within a treed area of the southern portion of the Site. No visual evidence of potential impact associated with the solid waste was observed. No other visual evidence of on-Site solid waste disposal was observed by GHD.

#### 6.3.4 Chemical and Raw Material Use and Storage

At the time of the Site inspection, no chemical or raw material storage was observed on Site.

#### 6.3.5 Subject Waste/Hazardous Waste

No evidence of on-Site Subject or Hazardous Waste disposal was observed by GHD at the time of the Site inspection. Based on a review of the ERIS Report, the Site has not been identified as a generator of subject/hazardous waste.

#### 6.3.6 Chemical Spills/Releases

According to the ERIS Report discussed in Section 4.2.2, one record was identified in the SPL database to be associated with the Site. The record was related to a release in 1994 of an unknown amount of oil to the gravel surface on the old Canadian Pacific Railway right of way near Centennial and Mississaga Street in Orillia. The record identified the area of the spill as being cleaned up and no impact to the environment was anticipated.

Based on a review of information provided by the City, a minor train derailment occurred on Site between Tecumseth Street and Neywash Street in the 1970s. A fuel tank was reportedly ruptured during the derailment. No further information was available on the size of the release, spill response, and/or clean-up activities. The train derailment/fuel spill was identified as an area of potential environmental concern and the area between Tecumseth Street and Neywash Street, was previously identified as **APEC #9**.

According to Site personnel, no additional spills or releases have occurred at the Site. GHD did not observe any evidence of spills or releases at the Site.

#### 6.3.7 Air Emissions

According to facility personnel, and based on GHD's observations, at the time of the Site inspection there were no air emission sources at the Site and no visual evidence of impact to the Site from the air emissions sources was observed by GHD.

#### 6.3.8 Lead-Based Paint

The amount of lead in interior and exterior paint has been regulated since 1976 through Health Canada's Hazardous Products Act. Lead-based paint maybe associated with the two portable snack concessions located on the Site.



#### 6.3.9 Chlorofluorocarbons

Based on observations made by GHD during the Site inspections, equipment potentially containing chlorofluorocarbons (CFCs) may be located in the two portable snack concessions located on the Site.

#### 6.3.10 Ionizing Radiation

Facility personnel reported that they were not aware of any use or storage of commercial sources of ionizing radiation (e.g., fill level controllers) at the Site. At the time of the Site inspections, no sources of ionizing radiation were observed by GHD at the Site. Site personnel also reported that to their knowledge, a radon gas survey has not been conducted at the Site.

## 7. Review and Evaluation of Information

### 7.1 Current and Past Uses

A summary of the current and past uses of the Site is provided below.



**Table of Current and Past Uses of the Phase One Property  
Phase One Environmental Site Assessment  
Orillia Waterfront Property  
Centennial Drive, Orillia, Ontario  
(Refer to clause 16(2)(b), Schedule D, O.Reg. 153/04)**

Year	Name of Owner	Description of Property Use	Property Use	Other Observations from Aerial Photographs, Fire Insurance Plans, etc.
<b>PIN 58663-0062 (East of Laclie Street: Lot 13)</b>				
Prior to 1852	Crown	Unknown	Other	
1852 to 1888	Arthur George, Eliza, Adam Oliver, Joseph Dudd, Reuben Jones, Patrick Madden, Edward O'Brien, Wesley Orr & Britton Orlan, Andrew Tait, William Thomson	Unknown	Other	
1888 to 1920	The Longford Lumber Company, The Standard Lumber & Stone Co. Ltd., James Tudhope and The Canada Wood Specialty Company.	Commercial/Industrial	Commercial/Industrial	Based on a review of the 1913 (1921) and 1928 (1941) FIPs and review of the Property title search documents, this portion of the Property was occupied by a lumber mill.
1920 to 1949	John Mulligan, George Mulligan, Ernest Collinson Sr., Ernest Collinson Jr., Henry Nichols	Commercial/Industrial	Commercial/Industrial	The lumber mill on the northwestern portion of the Property, north of Neywash Street, was demolished in between 1921 and 1928. A portion of the Site was leased to Sun Oil Co. Ltd in 1940 and was historically associated with 88/92 Laclie Street.
1949 to 1984	Orillia Farmers Corporation	Commercial	Commercial	The northwest portion of the property was associated with the mill operations on the northern portion of the Site.
1984 to 1986	Supreme Court of Ontario	Vacant	Commercial	
1986 to Present	The Corporation of the City of Orillia	Open Space, unofficial road way	Parkland/Commercial	Based on a review of the 1989, 2002, 2008, 2012 and 2016 aerial photographs, this portion of the property was comprised of open space. An unofficial roadway connecting Tecumseth Street to Neywash Street was located on the northwestern portion of the Site.
<b>PIN 58663-0062 (East of Laclie Street: Lot 14)</b>				
Prior to 1852	Crown	Unknown	Other	
1852 to 1888	Quentton St. George, Adam Oliver, Joseph Dudd, Reuben Jones, Patrick Madden, William Thomson	Unknown	Other	



**Table of Current and Past Uses of the Phase One Property**  
**Phase One Environmental Site Assessment**  
**Orillia Waterfront Property**  
**Centennial Drive, Orillia, Ontario**  
**(Refer to clause 16(2)(b), Schedule D, O.Reg. 153/04)**

Year	Name of Owner	Description of Property Use	Property Use	Other Observations from Aerial Photographs, Fire Insurance Plans, etc.
1888 to 1920	The Longford Lumber Company, The Standard Lumber & Stone Co. Ltd., James Tudhope, The Canada Wood Specialty Company,	Commercial/Industrial	Commercial/Industrial	Based on a review of the 1913 (1921) and 1928 (1941) FIPs and review of the Property title search documents, this portion of the Property was occupied by a grain mill and lumber mill.
1920 to 1949	John Mulligan, George Mulligan, Ernest Collinson Sr., Ernest Collinson Jr., George & Irene French, Harold & Mary McCarthy	Commercial/Industrial	Commercial/Industrial	The lumber mill on the northwestern portion of the Property, north of Neywash Street, was demolished in between 1921 and 1928.  A portion of the Site was leased to Sun Oil Co. Ltd in 1940 and was historically associated with 88/92 Laclie Street.
1949 to 1984	Orillia Farmers Corporation	Commercial	Commercial	The northwest portion of the property was associated with the mill operations on the northern portion of the Site.
1984 to 1986	Supreme Court of Ontario	Vacant	Commercial	
1986 to Present	The Corporation of the City of Orillia	Open Space, unofficial road way	Parkland/Commercial	Based on a review of the 1989, 2002, 2008, 2012 and 2016 aerial photographs, this portion of the property was comprised of open space. An unofficial roadway connecting Tecumseth Street to Neywash Street was located on the northwestern portion of the Site.
<b>PIN 58663-0062 (East of Laclie Street: Lot 16)</b>				
Prior to 1852	Crown	Unknown	Other	
1852 to 1879	Quentton St. George, Isaac Gilmore, William & Robert Pyper, Angus Morrison, Adam Oliver, Joseph Dudd, Reuben Jones, Patrick Madden, William Morse	Unknown	Other	
1879 to 1984	George Vick, Robert Vick, James & Elisa Vick (Orillia Flour Mill – George Vick & Son)	Commercial/Industrial	Commercial/Industrial	Based on a review of the 1913 (1921) and 1928 (1941) FIPs and review of the property title search documents, this portion of the Property was associated with the flour/grain mill operation on the northern portion of the Site.
1984	Supreme Court of Ontario	Community	Community	



**Table of Current and Past Uses of the Phase One Property**  
**Phase One Environmental Site Assessment**  
**Orillia Waterfront Property**  
**Centennial Drive, Orillia, Ontario**  
**(Refer to clause 16(2)(b), Schedule D, O.Reg. 153/04)**

Year	Name of Owner	Description of Property Use	Property Use	Other Observations from Aerial Photographs, Fire Insurance Plans, etc.
1984 to 1986	United Co-Operatives of Ontario	Commercial, Community	Commercial, Community	
1986 to Present	The Corporation of the City of Orillia	Open Space, unofficial road way	Parkland/ Commercial	Based on a review of the 1989, 2002, 2008, 2012 and 2016 aerial photographs, this portion of the property was comprised of open space. An unofficial roadway connecting Tecumseth Street to Neywash Street was located on the northwestern portion of the Site.
<b>PIN 58663-0062 (East of Laclie Street: Lot 17)</b>				
Prior to 1852	Crown	Unknown	Other	
1852 to 1879	Quentton St. George, Isaac Gilmore, William & Robert Pyper, Angus Morrison, Adam Oliver, Joseph Dudd, Reuben Jones, Patrick Madden, William Morse	Unknown	Other	
1879 to 1927	George Vick, Robert Vick, James & Elisa Vick (Orillia Flour Mill – George Vick & Son)	Commercial/Industrial	Commercial/ Industrial	Based on a review of the 1913 (1921) and 1928 (1941) FIPs and review of the property title search documents, this portion of the Property was associated with the flour/grain mill operation on the northern portion of the Site. The mill building was located on the northern portion of the Site and was demolished in the 1980s.
1927	Crown	Commercial/Industrial	Commercial/ Industrial	
1927 to 1948	Duncan Thomson, Eliza Vick, James Vick (Orillia Flour Mill – George Vick & Son), Edward Moir, Hayhoe Brothers (Orillia Cereal Co.)	Commercial/Industrial	Commercial/ Industrial	
1948 to 1986	Orillia Farmer Co-Operatives Association, United Co-Operatives of Ontario	Commercial/Industrial	Commercial/ Industrial	
1986 to Present	The Corporation of the City of Orillia	Open Space, unofficial road way	Parkland/ Commercial	Based on a review of the 1989, 2002, 2008, 2012 and 2016 aerial photographs, this portion of the property was comprised of open space. An unofficial roadway connecting Tecumseth Street to Neywash Street was located on the northwestern portion of the Site.



**Table of Current and Past Uses of the Phase One Property**  
**Phase One Environmental Site Assessment**  
**Orillia Waterfront Property**  
**Centennial Drive, Orillia, Ontario**  
**(Refer to clause 16(2)(b), Schedule D, O.Reg. 153/04)**

Year	Name of Owner	Description of Property Use	Property Use	Other Observations from Aerial Photographs, Fire Insurance Plans, etc.
<b>PIN 58663-0030 (South of Tecumseth Street: Water Lots 18 and 19)</b>				
Prior to 1880	Crown	Unknown	Other	
1880 to 1901	The Estate of George Vick	Water Lots	Other	
1901 to 1909	The Corporation of the Town of Orillia (The City of Orillia)	Unknown	Other	This portion of the property was historically part of Lake Couchiching and was later infilled to form part of the Site.
1909 to 1988	The Canadian Pacific Railway (formerly The Georgian Bay Seaboard Railway Company)	Industrial	Industrial	Based on a review of the 1913 (1921) and 1928 (1941) FIPs and historical aerial photographs, this portion of the Site was utilized as a railway corridor with several railway tracks and spur lines.
1988 to Present	The Corporation of the City of Orillia	Open Space	Parkland	Based on a review of the 1989, 2002, 2008, 2012 and 2016 aerial photographs, this portion of the Site has been comprised of open space since the 1980s. Portions of the Site are utilized as an unofficial recreational trail by the public.
<b>PIN 58663-0030 (South of Tecumseth Street: Lots 18 and 19)</b>				
Prior to 1852	Crown	Unknown	Other	
1852 to 1872	Quentton St. George, Charles McInnis, James Bolton, Charles McInnis	Unknown	Other	This portion of the property was historically part of Lake Couchiching and was later infilled to form part of the Site.
1872 to 1998	The Canadian National Railway (formerly The Midland Railway Company of Canada)	Industrial	Industrial	Based on a review of the 1913 (1921) and 1928 (1941) FIPs and historical aerial photographs, this portion of the Site was utilized as a railway corridor with several railway tracks and spur lines.
1998 to Present	The Corporation of the City of Orillia	Open Space	Parkland	Based on a review of the 1989, 2002, 2008, 2012 and 2016 aerial photographs, this portion of the Site has been comprised of open space since the 1980s. Portions of the Site are utilized as an unofficial recreational trail by the public.



**Table of Current and Past Uses of the Phase One Property**  
**Phase One Environmental Site Assessment**  
**Orillia Waterfront Property**  
**Centennial Drive, Orillia, Ontario**  
**(Refer to clause 16(2)(b), Schedule D, O.Reg. 153/04)**

Year	Name of Owner	Description of Property Use	Property Use	Other Observations from Aerial Photographs, Fire Insurance Plans, etc.
<b>PIN 58663-0030 (South of Tecumseth Street: Water Lot 8)</b>				
Prior to 1888	Crown	Unknown	Other	This portion of the property was historically part of Lake Couchiching and was later infilled to form part of the Site.
1888 to 1998	The Canadian National Railway (formerly The Midland Railway Company of Canada)	Industrial	Industrial	Based on a review of the 1913 (1921) and 1928 (1941) FIPs and historical aerial photographs, this portion of the Site was utilized as a railway corridor with several railway tracks and spur lines.
1998 to Present	The Corporation of the City of Orillia	Open Space	Parkland	Based on a review of the 1989, 2002, 2008, 2012 and 2016 aerial photographs, this portion of the Site has been comprised of open space since the 1980s. Portions of the Site are utilized for gravel parking and an unofficial recreational trail by the public.
<b>PIN 58663-0030 (Between Tecumseth Street and Mississauga Street: Water Lot 8)</b>				
Prior to 1905	Crown	Unknown	Other	
1905 to Present	The Corporation of the City of Orillia	Industrial	Industrial	Based on a review of the 1913 (1921) and 1928 (1941) FIPs and historical aerial photographs, this portion of the Site was part of a railway corridor with several railway tracks and spur lines up until the mid 1980s. Since the late 1980s, this portion of the Site has been comprised of open space and utilized as an unofficial public space and trail by the public.



## 7.2 Potentially Contaminating Activity

The MOECC provides a list of PCAs in Schedule D of O. Reg. 153/04 under the Environmental Protection Act. The following PCAs have been identified to be on, in, or under the Phase One Property, or located within the Phase One Study Area and having the potential to contribute to an APEC.

Location and Description	Potentially Contaminating Activity
Entire Site – Infilling of Lake Couchiching both on and off Site	# 30. Importation of Fill Material of Unknown Quality
Entire Site - Former Use of Coal/Demolition Wastes on Site	# 58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners
Entire Site - Former Railway & Spur Lines both on and off Site	# 46 – Rail Yards, Tracks and Spurs
Northwestern Portion of the Site (adjacent to 88/92 Laclie Street) – Former Service Station (USTs) & Autobody Shop off Site	# 28. Gasoline and Associated Products Storage in Fixed Tanks # 10. Commercial Autobody Shops
Southeastern portion of the Site – USTs (Former Boat Livery) off Site	# 28. Gasoline and Associated Products Storage in Fixed Tanks
Western and southwestern Site boundary – Historical Off-Site Operations <ul style="list-style-type: none"> <li>- Former Service Stations</li> <li>- Former Autobody Shops</li> <li>- Former Drycleaners</li> <li>- Former Salvage Yard</li> </ul>	# 10. Commercial Autobody Shops # 28. Gasoline and Associated Products Storage in Fixed Tanks # 37. Operation of Dry Cleaning Equipment # 49. Salvage Yard, including automobile wrecking
Western Portion of the Site - Groundwater Impacts on adjacent property to the west 70 Front Street North	Not applicable
Northern Portion of the Site (Neywash Street Extension Lands)	Not applicable
Northern Portion of the Site – Train Derailment/Fuel Spill	# 28. Gasoline and Associated Products Storage in Fixed Tanks
Northern Portion of the Site – Former use of Fuel Oil	# 28. Gasoline and Associated Products Storage in Fixed Tanks
Southern Portion of the Site – Pad-Mounted Transformer	# 55. Transformer Manufacturing, Processing and Use

Several PCAs were also identified off Site on properties within the Phase One ESA study area. However, based on the findings of the Phase One ESA, only the PCAs associated with properties adjacent to the boundary of the Site and those upgradient of the Site or in close proximity to the Site as shown on **Figure 5a** were identified as having the potential to contribute to an APEC on Site as presented below in Section 7.3. The locations of the off-Site PCAs that are not considered to contribute to an APEC on Site have also been presented on **Figure 5a**.



### 7.3 Areas of Potential Environmental Concern (APEC)

The following areas of actual or potential environmental concern have been identified by the Phase One ESA site reconnaissance and records review and are summarized in the table below. This table is used to list and describe each potentially contaminating activity at the Property and each potentially contaminating activity in the Phase One study area that may be contributing to an APEC at the Property.



**Table of Areas of Potential Environmental Concern  
Phase One Conceptual Site Model  
Orillia Waterfront Property  
Centennial Drive, Orillia, Ontario  
(Refer to clause 16(2)(a), Schedule D, O. Reg. 153/04)**

Area of Potential Environmental Concern <sup>1</sup>	Location of Area of Potential Environmental Concern on Property	Potentially Contaminating Activity <sup>2</sup>	Location of PCA (on-site or off-site)	Contaminants of Potential Concern <sup>3</sup>	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
APEC #1 – Infilling of Lake Couchiching	Site-Wide	PCA #30 - Importation of Fill Material of Unknown Quality	On-Site/Off-Site	Metals and Inorganics, VOCs, PAHs, PHCs	Soil & Groundwater
APEC #2 – Former Use of Coal/Demolition Wastes	Site-Wide	PCA #58 – Waste Disposal & Waste Management	On-Site	Metals and Inorganics, PAHs, PHCs	Soil & Groundwater
APEC #3 – Former Railway & Spur Lines	Site-Wide	PCA #46 – Rail Yards, Tracks and Spurs	On-Site	Metals and Inorganics, VOCs, PAHs, PHCs [pesticides?]	Soil & Groundwater
APEC #4 (a & b) – Former Service Station (88/92 Laclie Street)	Northwestern portion of the Site	PCA #10 – Commercial Autobody Shops	Off-Site	Metals/inorganics, PHCs, VOCs	Soil & Groundwater
		PCA #28 – Gasoline and Associated Products Storage in Fixed Tanks			
APEC #5 – USTs (Former Boat Livery)	Southern portion of the Site	PCA #28 – Gasoline and Associated Products Storage in Fixed Tanks	Off-Site	PHCs/BTEX	Groundwater



**Table of Areas of Potential Environmental Concern  
Phase One Conceptual Site Model  
Orillia Waterfront Property  
Centennial Drive, Orillia, Ontario  
(Refer to clause 16(2)(a), Schedule D, O. Reg. 153/04)**

Area of Potential Environmental Concern <sup>1</sup>	Location of Area of Potential Environmental Concern on Property	Potentially Contaminating Activity <sup>2</sup>	Location of PCA (on-site or off-site)	Contaminants of Potential Concern <sup>3</sup>	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
APEC #6 – Historical Off-Site Operations	Western portion of the Site	PCA #10 – Commercial Autobody Shops; PCA #28 – Gasoline and Associated Products Storage in Fixed Tanks; PCA #37 – Operation of Dry Cleaning Equipment; PCA #46 – Rail Yards, Tracks and Spurs; PCA #49 - Salvage Yard, including automobile wrecking	Off-Site	Metals/inorganics, VOCs, PAHs, PHCs	Groundwater
APEC #7 – Groundwater Impacts (70 Front Street North)	Western portion of the Site	PCA NA	Off-Site	Metals/inorganics & VOCs	Groundwater
APEC #8 – Utility Corridor (Neywash Street Extension Lands)	Northern portion of the Site	PCA NA	On-Site/Off-Site	Metals/inorganics, VOCs, PAHs, PHCs	Soil & Groundwater



**Table of Areas of Potential Environmental Concern  
Phase One Conceptual Site Model  
Orillia Waterfront Property  
Centennial Drive, Orillia, Ontario  
(Refer to clause 16(2)(a), Schedule D, O. Reg. 153/04)**

Area of Potential Environmental Concern <sup>1</sup>	Location of Area of Potential Environmental Concern on Property	Potentially Contaminating Activity <sup>2</sup>	Location of PCA (on-site or off-site)	Contaminants of Potential Concern <sup>3</sup>	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
APEC #9 – Train Derailment/Fuel Spill	Northwestern portion of the Site (between Tecumseth Street & Neywash Street)	PCA #28 - Gasoline and Associated Products in Fixed Tanks	On-Site	PHCs/BTEX	Soil & Groundwater
APEC 10 – Former Use of Fuel Oil	Northwestern portion of the Site (between Tecumseth Street & Neywash Street)	PCA #28 - Gasoline and Associated Products in Fixed Tanks	On-Site	PHCs/BTEX	Soil & Groundwater
APEC #11 – Transformer Use	Southern portion of the Site (south property boundary adjacent to Mississaga Street East)	PCA #55 - Transformer Manufacturing, Processing and Use	On-Site	PHCs, PCBs	Soil



**Table of Areas of Potential Environmental Concern  
Phase One Conceptual Site Model  
Orillia Waterfront Property  
Centennial Drive, Orillia, Ontario  
(Refer to clause 16(2)(a), Schedule D, O. Reg. 153/04)**

Notes:

N/A – Not Applicable

- 1 Area of Potential Environmental Concern means the area on, in or under a phase one property where one or more contaminants are potentially present, as determined through the phase one environmental site assessment, including through:
  - (a) Identification of past or present uses on, in or under the phase one property.
  - (b) Identification of potentially contaminating activity.
- 2 Potentially Contaminating Activity means a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in a phase one study area.
- 3 When completing this column, identify all contaminants of potential concern using the Method Groups as identified in the "Protocol for Analytical Methods in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011, as specified below:

ABNs	PCBs	Metals	Electrical Conductivity	SAR	Cl	OCs
CPs	PAHs	As, Sb, Se	Cr (VI)	High pH	CN <sup>-</sup>	PHCs
1,4-Dioxane	THMs	Na	Hg	Low pH	BTEX	
Dioxins/Furans, PCDDs/PCDFs	VOCs	B-HWS	Methyl Mercury		Ca, Mg	



Where GHD identified significant uncertainty, or a lack of information regarding the potential for a PCA to contribute to an APEC at the Site, GHD conservatively assumed that an APEC may be present, and included the APEC in this report.

## 7.4 Phase One Conceptual Site Model

The Site is a City-owned waterfront property that is comprised of several parcels of land between the eastern boundary of 70 Front Street North and Centennial Drive, and between Mississauga Street East and Tecumseth Street including 139 Tecumseh Street and 210 Mississauga Street East (hereinafter referred to as the Site or Property). A Site Location Map is presented on **Figure 1**. A Site plan showing surrounding land use is provided on **Figure 2**. A Site plan and detailed Site plan are provided on **Figure 3** and **Figure 4**, respectively.

The Site is irregular in shape, approximately 2.14 hectares (5.3 acres) in size and is located in an area of Orillia that was first developed for residential, commercial and industrial purposes in the late 1890s/early 1900s.

The Site is located in the heart of the City's downtown waterfront (Lake Couchiching) and has a history of industrial and commercial uses dating back to at least the late 1890s/early 1900s. Infilling of Lake Couchiching (including portions of the Site) was undertaken in the late 19<sup>th</sup> and early 20<sup>th</sup> century. An interconnected series of railway tracks formerly traversed the Site and serviced the various lumber mills, grain mills, and associated warehouses that were located on and in close proximity to the Site.

At the time of the Site inspection, the eastern portion of the Site, in the area of the former railway tracks, consisted of a raised gravel trail, which is utilized as an unofficial trail by the public. Gravel covered areas are also located on the eastern portion of the Site and are utilized for vehicle and boat trailer parking for Centennial Park. The western portion of the Site, in the area of the former railway tracks was predominantly grass-covered, with some trees and shrubs along the central and western portions of the Site. Two small portable snack concessions (Stingers Fry Hive and Sweet Dreams Ice Cream) were located on the central portion of the Site, on the gravel-covered portion of the Site. A dirt and gravel roadway, oriented in a north to south direction, bisects the northwestern portion of the Site, connecting Neywash Street to Tecumseth Street. A gravel parking area, used by the residential houses fronting onto Laclie Street, is located west of the roadway on the northern portion of the Site.

The Site is currently owned by the Corporation of the City of Orillia (City). GHD understands that the Phase One ESA was completed as part of the environmental due diligence activities being undertaken by the City in support of its' planning, design, and divestment strategy related to the redevelopment of the Site. The works are part of a larger initiative being undertaken by the City to revitalize the downtown area and improve access to the existing waterfront.

It is GHD's understanding that a Record of Site Condition (RSC) may be filed for the Site in the future.

Electricity for the Site is supplied underground by Orillia Power Corporation to the street lighting on the southeastern portion of the Site. A pad-mounted transformer is located on the southern portion



of the Site. Electricity is also supplied overhead to one of the snack concessions (Sweet Dreams Ice Cream) located on the central portion of the Site. This concession is also serviced with potable water through the municipal water distribution system. A fire hydrant, located on the eastern boundary of the central portion of the Site, is also connected to the municipal water distribution system. Potable water for the City of Orillia is obtained from Lake Couchiching and groundwater supply wells. The Site is located in an area designated by the City as an “intake protection zone” to protect the source water for the municipal system. As such, a potable groundwater situation would apply to the Site.

Underground municipal storm and sanitary sewer services traverse the Site. A municipal sanitary sewer bisects the Site, in a north to south direction. There are also multiple municipal storm and sanitary sewers that traverse across the Site in a west to east direction directly east of Neywash Street and Coldwater Street East, respectively.

Based on historical information provided, a stormwater treatment system (Vortechs System) was installed on Site directly east of Neywash Street in 2010. Prior to the installation of the system, stormwater from the municipal system servicing Neywash Street was discharged to an open drainage swale on the Site. Stormwater generated on the Site flows overland toward the east and west Property boundaries. Grading on the Site also directs stormwater toward the centre of the Site at some locations, between the east and west former railway lines, where it infiltrates to the underlying soils. Catchbasins, located at the south and central portions of the Site, direct stormwater to storm sewers that direct water eastward to Lake Couchiching.

Based on the historical information reviewed, the following subsurface structures and utilities that may affect contaminant distribution and transport on Site include: the presence of municipal storm and sanitary sewer services bisecting and traversing across the Site. In addition to the aforementioned, the Site was historically part of Lake Couchiching and significant infilling occurred in the late 19<sup>th</sup> and early 20<sup>th</sup> century. The presence of large quantities of fill on Site may also affect contaminant distribution and transport on Site.

Based on the information reviewed, off-Site utilities that may affect contaminate migration on Site include the following: underground municipal storm and sanitary sewer services along Neywash Street and Coldwater Street East.

According to the Ontario Ministry of Natural Resources of Quaternary Geology of Southern Ontario, Map 2556, the soils underlying the Site consist predominantly of sand, gravelly sand and gravel; nearshore and beach deposits. Based on the findings of the previous investigations undertaken at the adjacent property to the west (70 Front Street North), sand and gravel is present from ground surface to a maximum depth of 2.3 mBGS. The sand and gravel fill is underlain by sand/silty sand/sandy silt fill to a maximum depth of 4.2 mBGS. According to the Ontario Ministry of Northern Development and Mines Map of Bedrock Geology of Ontario, Map 2544 the bedrock underlying Site soils is composed of shale, limestone, dolostone, arkose and sandstone bedrock of the Simcoe Group.



The Site topography is relatively flat with gentle slopes towards the eastern and western property boundaries. The elevation on the Site is approximately 223 metres above sea level (mAMSL)<sup>6</sup>. Regional topography slopes to the southeast. The nearest surface water body to the Site is Lake Couchiching, located approximately 50 metres to the east of the Site. There is no natural surface water body located on the Property. However, as previously discussed, portions of the Site were historically part of Lake Couchiching. Based on the information reviewed and the definition of area of natural significance provided in O. Reg. 153/04, the Site is not considered an area of natural significance. Regional groundwater flow is in a south to southeasterly direction.

Based on the results of the Phase One ESA, several PCAs were identified to be associated with the Site and historical operations on adjacent and surrounding properties to the north, west and south. A summary of the PCAs, APECs, and the associated potentially contaminated media and contaminants of concern (COCs) are presented in the Table of Areas of Potential Environmental Concern. In summary the potential contaminants of concern were identified as metals, inorganics (including pH, EC, SAR, sodium, chloride), PAHs, PHCs, BTEX, VOCs, and PCBs.

The Phase One ESA CSM was based on the findings of the Phase One ESA. The findings presented herein are based on the Site inspection, information provided by Site representatives and regulatory agencies, documents reviewed, and the review of Site history.

The Phase One ESA Conceptual Site Model is depicted on **Figure 5a** and **5b**.

## 8. Conclusions

Based on the results of the Phase One ESA, including the Site inspection, information provided by Site representatives, documents reviewed, the review of Site history, and pending receipt and review of information that has been requested from regulatory agencies (MOECC) the following APECs were identified to be associated with the Site.

1. **APEC #1 - Infilling of Lake Couchiching:** Based on the historical documentation reviewed, portions of the Site were historically part of Lake Couchiching. Infilling of Lake Couchiching was reportedly undertaken in the late 19<sup>th</sup>/early 20<sup>th</sup> century and significant quantities of fill, of unknown quality, were placed on Site and on the surrounding adjacent lands. The importation of fill of unknown quality was identified as a PCA (#30 - *Importation of Fill Material of Unknown Quality*) as defined in O. Reg. 153/04 and the entire Site was identified as **APEC #1**.
2. **APEC #2 – Former Use of Coal & Demolition Wastes:** Based on the historical documentation reviewed, the Site was developed for industrial use dating back to the late 19<sup>th</sup>/early 20<sup>th</sup> century. The Orillia Flour Mill historically occupied the extreme northern portion of the Site and a saw mill operated by Canada Wood Speciality Co. Ltd. occupied the northwestern portion of the Site, east of Laclie Street and north of Neywash Street. Secondary buildings associated with Canada Wood Speciality Co. Ltd. also occupied the western portion of the Site, between Neywash Street and Coldwater Street East. Coal use was identified on Site on the 1913 (revised 1921) and 1928 (revised 1941) FIPs. The mill building on the northwestern portion of

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<sup>6</sup> Natural Resources Canada [map]. "The Atlas of Canada - Toporama", governed by version 2.3 of the Open Government License - Canada. June 14, 2016. < <http://atlas.nrcan.gc.ca/toporama/en/index.html>>.



the Site, north of Neywash Street, was demolished between 1921 and 1928. The mill building on the extreme northwestern portion of the Site was demolished in the 1980s. No information was obtained regarding the ultimate disposal location of waste ash and clinker from the burning of coal, and the demolition wastes associated with the former on-Site buildings. The disposal of ash and clinker and demolition wastes was identified as a PCA (#58 - *Waste Disposal and Waste Management*) as defined in O. Reg. 153/04 and the entire Site was identified as **APEC #2**.

3. **APEC #3 – Former Railway and Spur Lines:** Based on the historical documentation reviewed, an interconnected series of railway tracks formerly operated by the Midland Rail Road Company, Canadian National (CN) Railway, and Canadian Pacific (CP) Railway, and various spur lines traversed the Site and the adjacent properties to the west and south of the Site. Portions of the Site were owned by The Midland Rail Road Company and The Georgian Bay Seaboard Railway Company (later known as the Canadian National Railway Company) dating back to the late 19<sup>th</sup> century up until the late 1980s/1990s. The operation of railway tracks and spurs on Site and on the adjacent lands to the south and west was identified as a PCA (#46 – *Rail Yards, Tracks, and Spurs*) as defined in O. Reg. 153/04 and the entire Site was identified as **APEC #3**.
4. **APEC #4 – Former Service Station/Autobody Shop (88/92 Laclie Street):** Based on the historical documentation reviewed, a portion of the Site was formerly part of the property now municipally known as 88/92 Laclie Street. A service station that operated underground storage tanks (USTs) was historically operated on the 88 Laclie Street property. Based on a review of the 1928 (1941) FIP, three USTs were located off Site, on the western portion of the 88 Laclie Street property. A 1940 lease to Sun Oil Company was identified in the title search records. An autobody shop/garage was also historically operated at 92 Laclie Street. Based on a review of the information provided by the City, petroleum hydrocarbon (PHC) impacted soil was identified on the 88/92 Laclie Street property during re-surfacing of the asphalt parking lot in 2015. This property was historically serviced by a septic system, tile bed, and a dry well located east of the building. The following PCAs, as defined by O. Reg. 153/04, were identified to be associated with the portion of the Site located east of 88/92 Laclie Street and identified as **APEC #4 (a and b)**.
  - a) PCA #10 – *Commercial Autobody Shops*, was identified to be associated with the operation of a service centre on 88/92 Laclie Street (**APEC #4a**).
  - b) PCA #28 – *Gasoline and Associated Products Storage in Fixed Tanks*, was identified to be associated with the operation of USTs on 88/92 Laclie Street (**APEC #4b**).
5. **APEC #5 – USTs (Former Boat Livery):** Based on a review of the 1928 (1941) FIP, a boat livery (including 2 USTs) was operated adjacent to the southeastern portion of the Site. The operation of USTs off Site on the adjacent property to the southeast of the Site was identified as a PCA (#28 - *Gasoline and Associated Products Storage in Fixed Tanks*) and the southeastern portion of the Site was identified as **APEC #5**.
6. **APEC #6 – Historical Off-Site Operations:** The direction of groundwater flow in the vicinity of the Site has been inferred to be in a south to southeasterly direction towards Lake Couchiching,



located directly east of the Site. Based on a review of the historical documentation, the following (historical) off-Site operations and associated PCAs as defined in O. Reg. 153/04 were identified as having the potential to contribute to an APEC on Site and the area along the western and southern boundary of the Site was identified as **APEC #6**:

- a) **Former Service Stations/USTs** – Based on a review of the historical documentation, service stations (including USTs) were formerly operated on the following properties.
  - i. 91 Laclie Street - approximately 70 metres west of the Site.
  - ii. 16/18 Front Street North – approximately 40 metres west of the Site.
  - iii. 28 Front Street North (now part of 70 Front Street North) - approximately 40 metres west of the Site.
  - iv. 59 Front Street North – approximately 140 metres west of the Site.
  - v. 64 Front Street North - approximately 95 metres west of the Site.
  - vi. 9 Front Street South – approximately 140 metres southwest of the Site.
  - vii. 188 Mississauga Street East - approximately 140 metres west and upgradient of the Site.
  - viii. 20 Front Street South – approximately 60 metres south of the Site.

The operation of service centres (with USTs) and autobody shops are defined in O. Reg. 153/04 as PCAs (#10 - *Commercial Autobody Shops* and #28 - *Gasoline and Associated Products Storage in Fixed Tanks*) and may contribute to an APEC at the Site.

- b) **2 Front Street South (Former Champlain Cleaners)** – Based on the historical documentation reviewed and that provided by the City, a dry cleaners was historically operated at 2 Front Street South, located approximately 80 metres southwest of the Site. A 1,000 litre aboveground storage tank of tetrachloroethylene was reportedly operated on this property. Based on the findings of the ERIS database report, Champlain Cleaners was identified as a generator of halogenated solvents. The operation of a dry cleaners on a surrounding property in close proximity to the Site was identified as a PCA (#37 – *Operation of Dry Cleaning Equipment*) and may contribute to an APEC at the Site.
  - c) **20 Front Street South (Former Salvage Yard)** – Based on a review of the historical documentation, a former salvage yard was operated on the property municipally known as 20 Front Street South, approximately 60 metres south of the Site. Due to its proximity, the historical operations on the 20 Front Street South property were identified as a PCA (#49 – *Salvage Yard, including automobile wrecking*) and may contribute to an APEC at the Site.
7. **APEC #7 – Groundwater Impacts (70 Front Street North)**: Based on a review of the previous environmental reports for 70 Front Street North, located directly west of the Site, impacted groundwater has been identified on this property. More specifically, groundwater impacted with some metals and inorganics and chlorinated volatile organic compounds (VOCs) has been found on Site. The VOC impacts have been found in both the shallow and deeper water bearing units on the 70 Front Street North property. High concentrations of VOCs in groundwater have



been found in close proximity to the western boundary of the Site, north of the Coldwater Street East extension. The source(s) of the impacts is not fully known and the extent of impact has not fully been defined. The presence of groundwater contamination on the adjacent property directly west and upgradient of the Site represents an environmental concern and the area along the western boundary of the Site was identified as **APEC #7**.

8. **APEC #8 – Utility Corridor (Neywash Street):** Based on a review of information provided by the City, oil and grease was reportedly entering the storm sewer from 88/92 and 91 Laclie Street (occupied by Master Lube/Rust Check) in the late 1990s. The storm sewer historically traversed the northern portion of the Site, directly east of Neywash Street, and discharged on Site to an open drainage swale and ultimately to Lake Couchiching, further east of the Site. A sanitary sewer lateral also bisects the Site, east of Neywash Street. In 2010, the storm water and sanitary sewer services along Neywash Street were upgraded. A stormwater treatment system (Vortechs System) was installed on Site. In 2014, in support of the Neywash Street Extension project from Laclie Street to Centennial Drive, limited soil sampling was undertaken within the Neywash Street extension lands (inferred to be on Site). Several metals, inorganic, polycyclic aromatic hydrocarbon (PAH), petroleum hydrocarbon (PHC) parameters and trichloroethylene (TCE) were detected in the surficial soils at concentrations above the 2011 MOECC Table 2 standards for residential/parkland/institutional use. The presence of impacted soils within the Neywash Street extension lands represents an environmental concern, and the area was identified as **APEC #8**.
9. **APEC #9 – Train Derailment/Fuel Spill:** Based on a review of information provided by the City, a minor train derailment occurred on Site between Tecumseth Street and Neywash Street in the 1970s. A fuel tank was reportedly ruptured during the derailment. No further information was available on the size of the release, spill response, and/or clean-up activities. The train derailment/fuel spill was identified as a PCA (#28 - *Gasoline and Associated Products Storage in Fixed Tanks*), and the area between Tecumseth Street and Neywash Street, was identified as **APEC #9**.
10. **APEC #10 – Former Use of Fuel Oil:** Based on the age of the former mill building on the northwestern portion of the Site, fuel oil was likely used to heat the on-Site building. No information was available pertaining to the use of fuel oil on Site. The mill building was first constructed on Site prior to 1913 and was demolished in the 1980s. The likely use of fuel oil on Site was identified as a PCA (#28 - *Gasoline and Associated Products Storage in Fixed Tanks*), and the area on the northwestern portion of the Site was identified as **APEC #10**.
11. **APEC #11 – Transformer Use:** A pad mounted transformer is located on the southern portion of the Site. The operation of a transformer on Site was identified as a PCA (#55 – *Transformer Manufacturing, Processing, and Use*) and the area in the immediate vicinity of the transformer was identified as **APEC #11**.



## 8.1 Requirement for Phase Two ESA Before RSC Can Be Submitted

Based on the information obtained in completing this Phase One ESA, a Phase Two ESA is required before a Record of Site Condition (RSC) can be filed with the MOECC. The Phase Two ESA should evaluate the presence or absence of soil and/or groundwater impact to the Site from all identified APECs.



All of Which is Respectfully Submitted,

GHD

A handwritten signature in blue ink, appearing to read 'Nick Bauer'.

Nick Bauer, B. Eng.

A handwritten signature in blue ink, appearing to read 'Julia Serink'.

Julia Serink, P. Eng.

A handwritten signature in blue ink, appearing to read 'Gregory R. Brooks'.

Gregory R. Brooks, P. Eng.



## 9. References

Chapman, L. J., and D. F., Putnam (1984), *"The Physiography of Southern Ontario"*, Ontario Geological Survey.

Natural Resources Canada [map]. "The Atlas of Canada - Toporama", governed by version 2.3 of the Open Government License - Canada. June 14, 2016. <  
<http://atlas.nrcan.gc.ca/toporama/en/index.html>>.