

PHASE I ENVIRONMENTAL SITE ASSESSMENT

**1157 NO 2 HIGHWAY (PID 45148111)
AND
1175 HIGHWAY 2 (PID 45088614)**

**LANTZ
MUNICIPALITY OF EAST HANTS**

NOVA SCOTIA

DECEMBER 2020

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AND
1175 HIGHWAY 2 (PID 45088614)**

**LANTZ
MUNICIPALITY OF EAST HANTS**

NOVA SCOTIA

Report prepared for:	Municipality of East Hants Lloyd E. Matheson Centre Elmsdale, NS B2S 3K5
Prepared by:	OCL Services Ltd. 41 Alben Lane Wellington NS B2T 1A2

DECEMBER 2020



4806-R
20 December 2020

Municipality of East Hants
Lloyd E. Matheson Centre
Elmsdale, N.S.
B2S 3K5

**RE: 1157 NO 2 HIGHWAY (PID 45148111) AND 1175 HIGHWAY 2 (PID 45088614), LANTZ,
MUNICIPALITY OF EAST HANTS, NOVA SCOTIA**

To whom it may concern:

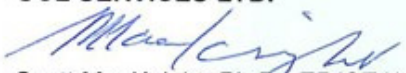
As reported herein, between 8 November and 20 December 2020, **OCL Services Ltd.** undertook a Phase I Environmental Site Assessment (ESA) of the two adjacent vacant properties, located at the above-noted civic addresses. As a Phase I ESA, the assessment procedure consisted of a review of historical information and a site review. No active sampling or testing was undertaken. This complies with Canadian Standards Association standard CAN/CSA Z768-01.

The Phase I Environmental Assessment is to be used in its entirety. Any references to survey measurements, laws and regulations or the proposed undertaking were made to assist in interpretation of data and are not to be used, in and of themselves, for any other purpose nor used as the basis of any other interpretations.

Please contact me if you require additional information or clarification.

Yours truly,

OCL SERVICES LTD.


Scott MacKnight, Ph.D., EP(CEA)
President
Encl.

1. SUMMARY

The purpose of the study was to conduct a Phase I Environmental Site Assessment of a Subject Property consisting of two adjacent vacant land parcels, located in the Community of Lantz, Municipality of East Hants, Nova Scotia:

- ❑ Civic address 1157 Highway 2 consists of one +/- 15,398 sq m (+/- 165,746 sq ft or 3.805 acre) land parcel, with +/- 46.09 m (+/- 151.23 ft) frontage on Highway 277 and +/- 119.8 m (+/- 392.96 ft) frontage on Highway 2; and
- ❑ Civic address 1175 Highway 2 consists of one +/- 6,070.2 sq m (+/- 65,340 sq ft or 1.5 acres) land parcel, with +/- 47.8 m (+/- 157 ft) frontage on Highway 2. The Component is subject to a +/- 9.14 m (30 ft) wide easement located on the east side of the land parcel in favour of civic address 1181 Highway 2.

Overall Property

The overall Subject Property area is +/- 21,468.2 sq m (+/- 5.305 acres), with +/- 167.6 m (+/- 440.76 ft) frontage on Highway 2 and +/- 46.06 m (+/- 151.23 ft) frontage on Highway 277. This area includes one +/- 9.14 m (30 ft) wide easement located on the east side in favour of civic address 1181 Highway 2.

The Subject Property is zoned “VC” (Village Core), pursuant to the Municipality of East Hants Land Use By-law. The Subject is not mapped as in a High Risk Flood Plain (HF); watercourse Greenbelt or located as aboriginal lands IR-14 Sipekne’katik.

There are no structures or buildings within the Subject Property. As currently constituted, there are no environmental liabilities associated with liquid fuel tanks; asbestos-containing materials; lead-based paints; UFF insulation; PCB-containing electrical equipment; hazardous materials and wastes; mould contamination; or ozone-depleting substances.

The underlying bedrock is identified as Windsor Group (White Quarry, Stewiacke, Carols Corner, Macumber and Gays River Formations). This bedrock consists of anhydrite, salt, marine dolostone and lime. The excavation and off-site disposal of this bedrock is not regulated pursuant to the Sulphide Bearing Material Disposal Regulations. This type of bedrock does not pose an environmental liability to the Subject Property.

The Subject Property is mapped in an area considered “low risk” for radon; i.e., 5% of buildings tested were found to exceed the Health Canada guideline of 200 Bq/cu m. The potential for radon is not considered an environmental risk, as currently constituted.

The Subject Property had been previously been served by potable water wells and on-site sewage systems. The Subject Property is not currently connected to the municipal sanitary sewer and water systems.

There are no water courses, water bodies or mapped Habitats of Concern immediately on, or immediately adjacent, to the Subject Property. The nearest area identified as having a “Species at Risk” is the stream tributary across Highway 277 and transecting the properties identified as civic address 1147 No 2 Highway and civic address 13 Church Street. The 1175 Highway 2 Component contains an un-delineated wetland.

There are no neighbouring retail fuel facilities, bulk fuel facilities or dry-cleaning facilities within the neighbourhood. There are two residential properties semi-dividing the Subject Property. Civic address 1169 Highway 2 is served by one 909 L fiberglass fuel tank on the exterior east side. Based on land gradient to the southeast and the presence of the wetland, this tank poses a potential medium environmental risk to the Subject Property. Neighbouring buildings to the south and east are sufficiently distant as to not pose environmental risks to the Subject Property.

1157 No. 2 Highway Component

The north-front section of this Component was formerly occupied by the Lantz Elementary School. The former school consisted of two sections, the “original” school constructed circa 1939 and an addition, constructed circa 1963. The combined structure was demolished circa 2000, with construction of a new elementary school.

The Component is relatively flat with a marginal gradient (24 m above sea level) down to the south southwest (21 m above sea level). The land parcel can be divided into three sections: a rear forested section separating the Component from residential houses fronting on Lloyd Drive; a centre section now covered in natural vegetation and some small bushes; and a front-north section containing residual asphalt pavement across the front and the back-stop for a former baseball diamond. The Component Property had previously been served by a potable water well and an on-site sewage system. It is not known if the system/s have been removed. The Component is not currently connected to the municipal sewer and water systems.

The heating system for the former combined school was served by a Registered underground fuel storage tank, located on the south side of the building. The tank, when removed, was reported as “perforated” resulting in +/-99.2 tonnes of petroleum hydrocarbon contaminated soil also being removed. At the time of removal there was no record of testing to confirm residual conditions met the then criteria for petroleum hydrocarbons in soils.

In April 2008 *OCL Services Ltd* was retained to conduct a limited Phase II Environmental Site Assessment, focused on the site of the former underground fuel storage tank, with the objective of confirming the absence of residual contamination. Five soil samples, representative of the four walls and the bottom of the original tank excavation were retrieved and analyzed for petroleum hydrocarbons, using the Atlantic PIRI-RBCA protocols. There were no detectable concentrations of Modified Total Petroleum Hydrocarbons and no detectable concentrations of BTEX (benzene, toluene, ethyl benzene and xylenes) components. Comparison of the 2008 data to the current Tier I Environmental Quality Standards for Soil at a Non-Potable Site with residential use indicates the concentrations are much less than the current criteria. The former underground fuel oil tank is not considered an environmental liability to the Subject Property.

The “bottom” soil sample was also analyzed for a set of trace metals and a set of polycyclic aromatic hydrocarbons. Results of the analyses indicated concentrations of all parameters were less than the then residential property criteria. Comparison of the 2008 data to the current Tier I Environmental Quality Standards for Soil at a Non-Potable Site criteria indicates the concentrations are less than the current criteria, with the exception of iron. Concentrations of iron in soils are typically naturally elevated and do not reflect anthropogenic contamination.

In addition, a test pit was excavated south and downgradient from the main excavation to permit visual/olfactory inspection of downgradient conditions. No evidence of impacts due to petroleum hydrocarbons or former excavation/s was noted.

1175 No. 2 Highway Component.

This Component was formerly occupied by a single-family residential building which has been demolished; associated demolition debris was disposed off-site. There was no evidence of the basement or of residual building materials, with the exception of some speed tiles, rock etc.

The Component Property had previously been served by a potable water well and an on-site sewage system. It is not known if the systems have been removed. The Subject Property is not currently connected to the municipal sewer and water systems.

The Component is relatively flat with a marginal gradient (24 m above sea level) down to the south southwest (22 m above sea level). The land parcel can be divided into three sections: the south-rear is undeveloped woods, bordering single-family residential properties fronting on Lloyd Drive; the centre section is mostly a large wetland with a drain flowing east under the right-of-way driveway; and, a northern-front section which is currently grassed with some mature trees and represents the location of the former house. It is recommended the boundaries of the wetland be delineated and the role of the drain/culvert under the east-boundary right-of-way be confirmed.

DETERMINATION: *As currently constituted, there are no significant environmental liabilities associated with the Subject Property. No further environmental site assessment is recommended. The 1175 Highway 2 Component contains a large un-delineated wetland. It is recommended this wetland be properly delineated, including the nominal drain/culvert under the right-of-way driveway on the east side.*

There are no structures or buildings within Subject Property, as currently constituted. Therefore, there are no environmental liabilities associated with liquid fuel tanks; asbestos-containing materials; lead-based paints; UFF insulation; PCB-containing electrical equipment; hazardous materials and wastes; mould contamination; or ozone-depleting substances.

There are no neighbouring retail fuel facilities, bulk fuel facilities or dry-cleaning facilities within the neighbourhood. There are two residential properties semi-dividing the Subject Property. Civic address 1169 Highway 2 is served by one 909 L fiberglass fuel tank on the exterior east side. Based on land gradient to the southeast and the presence of the wetland, this tank poses a potential medium environmental risk to the Subject Property. Neighbouring buildings to the south and east are sufficiently distant as to not pose environmental risks to the Subject Property.

2. INTRODUCTION

As reported herein, between 8 November and 20 December, 2020, *OCL Services Ltd.* conducted a Phase I Environmental Site Assessment of a Subject Property, consisting of two adjacent vacant land parcels within the Community of Lantz, Municipality of East Hants, Nova Scotia:

- ❑ Civic address 1157 Highway 2 consists of one +/- 15,398 sq m (+/- 165,746 sq ft or 3.805 acre) land parcel, with +/- 46.09 m (+/- 151.23 ft) frontage on Highway 277 and +/- 119.8 m (+/- 392.96 ft) frontage on Highway 2; and
- ❑ Civic address 1175 Highway 2 consists of one +/- 6,070.2 sq m (+/- 65,340 sq ft or 1.5 acres) land parcel, with +/- 47.8 m (+/- 157 ft) frontage on Highway 2. The Component is subject to a +/- 9.14 m (30 ft) wide easement located on the east side of the land parcel in favour of civic address 1181 Highway 2.

The overall Subject Property area is +/- 21,468.2 sq m (+/- 5.305 acres), with +/- 167.6 m (+/- 440.76 ft) frontage on Highway 2 and +/- 46.06 m (+/- 151.23 ft) frontage on Highway 277. This area includes one +/- 9.14 m (30 ft) wide easement located on the east side in favour of civic address 1181 Highway 2.

- ❑ The Parcel Description, Schedule "A" property description and October 2008 Plan of Subdivision of civic address 1157 Highway 2 and the Schedule "A" Property Description of civic address 1175 Highway 2 are provided in Appendix A;
- ❑ Views of the Subject Property are provided in Appendix B (photographs taken 8 November 2020).
- ❑ Documentation from Nova Scotia Environment, pursuant to an *Environmental Registry* request, is provided in Appendix C.
- ❑ Assessor qualifications are provided in Appendix D.

Figure 1: General Location of Subject Property
(from <https://nsgi.novascotia.ca/civic-address-finder/>)

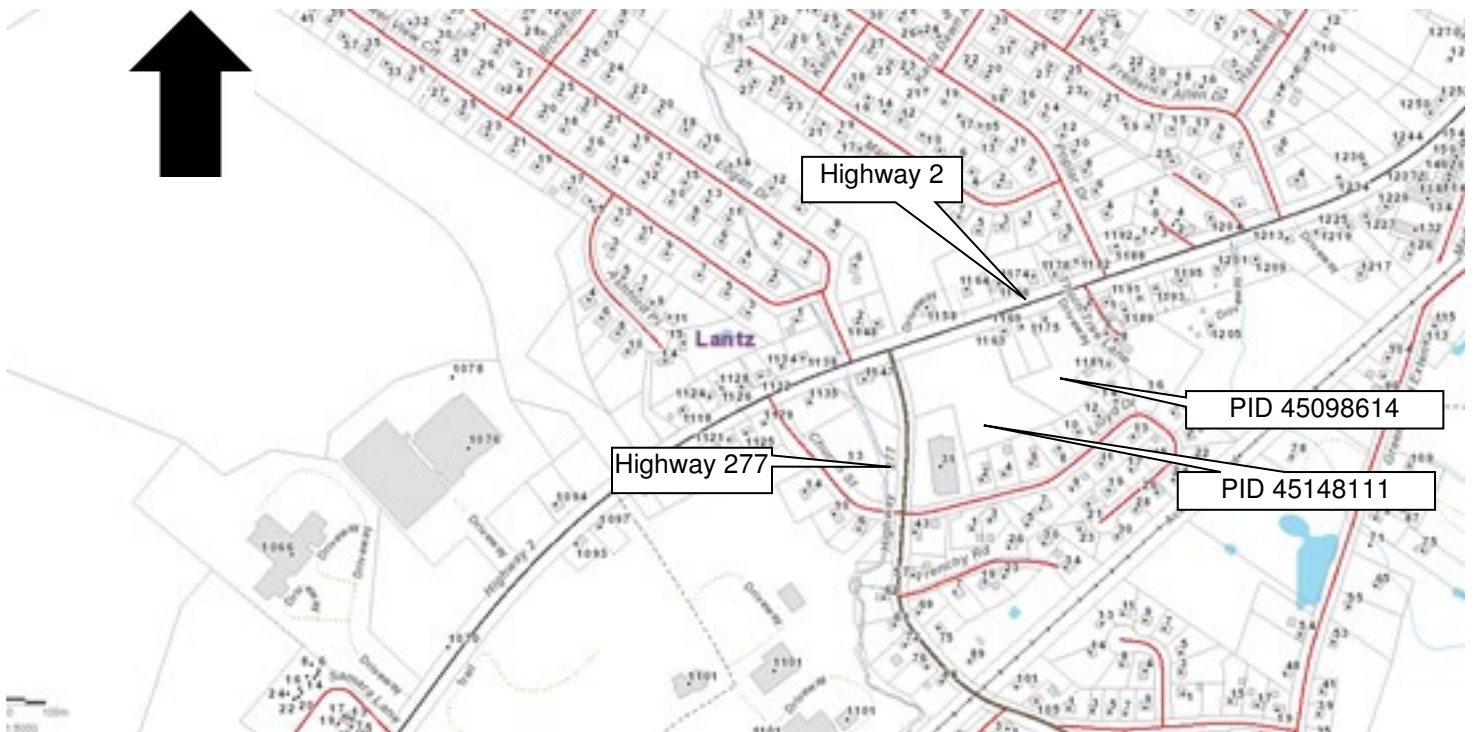


Figure 2: 17 March 2019 aerial photograph of general location of Subject Property
(from Google Earth Pro)



3. METHODOLOGY

The study findings and conclusions are based on the laws and regulations as set out by Nova Scotia Environment and Environment Canada and in force in November-December 2020.

As a Phase I Assessment, the procedures consisted of a review of historical information and a site review. No active sampling or testing was undertaken. The evaluation protocol complies with Canadian Standards Association standard CAN/CSA Z768-01¹.

Relevant information was obtained from the Nova Scotia Registry of Deeds; Nova Scotia Environment; Nova Scotia Natural Resources; and, the Municipality of East Hants.

Reference was made to:

- ❑ Maritime Testing (1985) Ltd.; 28 September 2000. Hazardous Material Survey, Old Lantz School, Lantz, N.S.; prepared for the Municipality of East Hants.
- ❑ 27 October 2000. Municipality of East Hants Tender Document for Lantz School Demolition, Addendum No. 1.
- ❑ OCL Services Limited; 14 March 2008. Phase 1 Environmental Site Assessment 1157 No. 2 Highway (PID 45148111) and PID 45088135. Report prepared for The Municipality of East Hants.
- ❑ OCL Services Limited. 11 April 2008. Phase II Environmental Site Assessment (Letter Report). Report prepared for The Municipality of East Hants.

Reference was also made to:

- ❑ 14 October 2008. Plan of Subdivision Showing Lot 08-1A1: Consolidation of Lot 08-1, lands of the Municipality of the District of East Hants & Lot A1, Lands of the Shaw Group Limited; completed by E. C. Keen, N.S.L.S. of E. C. Keen Land Surveying Ltd.

There were no limitations to the site Inspection conducted by Scott MacKnight and Cynthia Gillis (*OCL Services Ltd.*) on 8 November 2020.

On the basis of the interviews and document review, the following conditions were noted:

- ❑ The Subject Property previously consisted of three land parcels: civic address 1157 Highway 2 (PID 45148111), PID 45088135 (lands of The Shaw Group) with consolidation on 14 October 2008); and civic address 1175 Highway 2 (PID 45088614) purchased by the Municipality on 10 June 2015.
- ❑ There are no current Registered aboveground or underground fuel oil tanks or systems. The former underground fuel tank serving the former Lantz Elementary School within the 1157 Highway 2 Component was removed circa 2000, along with approximately 100 tonnes of contaminated soil.
- ❑ Testing in 2008 confirmed there was no residual contamination. Based on the 2008 data, conditions also met the current Tier I Environmental Quality Standards for a non-potable site and residential use.

¹ Canadian Standards Association, CAN/CSA Z768-01. Guidelines for Phase I Environmental Site Assessment. (2001).

- ❑ The Subject Property has never been used for the handling, processing, storage or transfer of petroleum or other chemical substances on a wholesale or retail basis.
- ❑ There are no impoundments, waste transfer or holding facilities or other sources of contamination within the Subject Property.

4. PROPERTY DESCRIPTION

Please reference the property information provided in Appendix A and the site inspection photographs provided in Appendix B.

4.1 Property

The Subject Property consists of two adjacent vacant land parcels, located in the Community of Lantz, Municipality of East Hants, Nova Scotia:

- ❑ Civic address 1157 Highway 2 consists of one +/- 15,398 sq m (+/- 165,746 sq ft or 3.805 acre) land parcel, with +/- 46.09 m (+/- 151.23 ft) frontage on Highway 277 and +/- 119.8 m (+/- 392.96 ft) frontage on Highway 2; and
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The overall Subject Property area is +/- 21,468.2 sq m (+/- 5.305 acres), with +/- 167.6 m (+/- 440.76 ft) frontage on Highway 2 and +/- 46.06 m (+/- 151.23 ft) frontage on Highway 277. This area includes one +/- 9.14 m (30 ft) wide easement located on the east side in favour of civic address 1181 Highway 2.

The Subject Property is zoned “VC” (Village Core), pursuant to the Municipality of East Hants Land Use By-law. The Subject Property is not mapped as in a High Risk Flood Plain (HF); watercourse Greenbelt or located on aboriginal lands (IR-14 Sipekne’katik).

The surface topography generally slopes to the south. Surface water and groundwater is expected to follow a southerly direction.

The Subject Property had been previously been served by potable water wells and on-site sewage systems. The Subject Property is not currently connected to the sewer and water systems.

4.2 Buildings

There are currently no Buildings or structures within the Subject Property.

The former Lantz Elementary School was located to the north-front of the 1157 Highway 2 Component, originally identified as PID 45148111 (before consolidation with the land parcel then identified as PID 45088135). The Building consisted of two sections: the “original” school, constructed circa 1939 and an addition, constructed circa 1963.

The land parcel identified as civic address 1175 Highway 2 (PID 45088614) was occupied by a single-family home. The Municipality acquired the land parcel in 2015 and the building was subsequently demolished.

4.3 Environmental Status

1157 No. 2 Highway Component

Pursuant to an *Environmental Registry* request to Nova Scotia Environment, the Department indicated there was no information within Departmental files pertaining to the Component Property.

Information previously received from Nova Scotia Environment and the Chignecto - Central Regional School Board indicated the former Lantz Elementary School was most recently served by two 250-gallon steel aboveground fuel oil tanks installed in 1996 and removed before the demolition of the School in 2000. Documentation provided by the Municipality indicated the Chignecto-Central Regional School Board had requested the tanks be removed with other recoverable equipment in May 2000. The two aboveground tanks had been installed on a concrete pad, which was also removed during the demolition.

The two, aboveground fuel oil tanks replaced a former Registered underground fuel oil tank located on the south side of the “Original” section of the former Building. Information obtained from Nova Scotia Environment and the Chignecto-Central Regional School Board - Property Services Department indicated the former underground storage tank was installed in 1980 and removed in 1996. The 4,454 L, tank was assigned Registration # 5125 and the location recorded as Lantz District Elementary School, 1155 Hwy 2, Lantz (note the difference in civic address).

When the former underground tank was removed in 1996, it was reported as “perforated”. Petroleum contamination was identified in the area of the former tank and +/-99.2 tonnes of petroleum hydrocarbon contaminated soil were removed. At the time of removal, no samples were analyzed to confirm the land parcel met the then criteria for petroleum contamination.

In April 2008, to address this absence of documentation, *OCL Services Ltd* was retained to conduct a limited Phase II Environmental Site Assessment limited of the area of the former underground tank and confirm the absence of residual contamination associated with the earlier removal of contaminated soils.

Five soil samples, representative of the four walls and the bottom of the original tank excavation were retrieved and analyzed for petroleum hydrocarbons, using the Atlantic PIRI-RBCA protocols. There were no detectable concentrations of Modified Total Petroleum Hydrocarbons and no detectable concentrations of BTEX (benzene, toluene, ethyl benzene and xylenes) components. Comparison of the 2008 data to the current Tier I Environmental Quality Standards for Soil at a Non-Potable Site with residential use (see Table 1) indicates the concentrations are much less than the current criteria. The former underground fuel oil tank is not considered an environmental liability to the Subject Property. In addition, the “bottom” soil sample was analyzed for a set of trace metals and a set of polycyclic aromatic hydrocarbons. Results of the analyses indicated that all parameters were less than the residential criteria. Comparison of the 2008 data to the current Tier I Environmental Quality Standards for Soil at a Non-Potable Site – Residential indicates the concentrations are less than the current criteria (Tables 2 and 3).

In addition, a test-pit was excavated south and downgradient from the main excavation to permit visual/olfactory inspection of downgradient conditions. No evidence of impacts due to petroleum hydrocarbons or former excavation/s was noted.

Table 1: Petroleum hydrocarbons in soils, 1157 Highway 2, Lantz, Nova Scotia
2 April 2008 (concentrations in mg/kg)
Exceedances of criteria are noted in bold followed by (R)

	Min. Rept. Limits	1 (north)	2 (east)	3 (west)	4 (south)	5 (bottom)	Tier I EQS Residential
Benzene	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.099
Toluene	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	77
Ethyl benzene	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	30
Xylenes	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	8.8
TPH (C ₆ -C ₁₀ , less BTEX)	2.5	<2.5	<2.5	<2.5	<2.5	<2.5	74
TPH (>C ₁₀ -C ₂₁)	15	<15	<15	<15	<15	<15	270
TPH (>C ₂₁ -C ₃₂)	15	<15	<15	<15	<15	<15	1,100
Modified TPH Tier 1	21	<21	<21	<21	<21	<21	270

Table 2: Analysis of trace metals in soils, 1157 Highway 2, Lantz, Nova Scotia
 2 April 2008 (concentrations in mg/kg)
Exceedances of criteria are noted in bold followed by (R)

Trace Metal	5 (Bottom)	Tier I Environmental Quality Standards - Residential
Aluminum	11,400	15,400
Antimony	<0.1	7.5
Arsenic	6	31
Barium	128	10,000
Beryllium	0.7	38
Boron	7	4,300
Cadmium	0.1	14
Chromium	17	160
Cobalt	9.7	22
Copper	53	1,100
Iron	22,200 (R)	11,000
Lead	24.3	140
Manganese	1270	--
Molybdenum	0.5	110
Nickel	20	330
Selenium	<1	80
Silver	<0.1	77
Thallium	0.1	1
Tin	<1	9,400
Uranium	0.8	23
Vanadium	23	39
Zinc	51	5,600

Table 3: Polycyclic Aromatic Hydrocarbons in soils, 1157 Highway 2, Lantz, Nova Scotia
 2 April 2008 (concentrations in mg/kg)
Exceedances of criteria are noted in bold followed by (R)

Analyte	Min. Det. Limits	Factors	5 (bottom)	Residential Tier I EQS
Naphthalene	0.01		<0.01	2.2
Acenaphthylene	0.01		<0.01	4.5
Acenaphthene	0.01		<0.01	3,900
Fluorene	0.01		<0.01	2,700
Phenanthrene	0.01		<0.01	--
Anthracene	0.01		<0.01	24,000
Fluoranthene	0.01		<0.01	3,500
Pyrene	0.01		<0.01	2,100
			<0.01	
Benz[a]anthracene	0.01	0.1[x]	<0.01	Sum of factored concentrations to be less than 5.3 mg/kg
Chrysene/Triphenylene	0.01	0.01[x]	<0.01	
Benzo[b+]fluoranthene	0.01	0.001[x]	<0.01	
Benzo[k]fluoranthene	0.01	0.1[x]	<0.01	
Benzo[a]pyrene	0.01	[x]	<0.01	
Indeno[1,2,3-c,d]pyrene	0.01	0.1[x]	<0.01	
Benzo[g,h,i]perylene	0.01	0.01[x]	<0.01	
Dibenz[a,h]anthracene	0.01	[x]	<0.01	
Sum of 2 nd set of 8 PAH			<0.01	

5. ASSESSMENT INFORMATION

5.1 Previous structures and Remnants of Structures

1157 No 2 Highway Component

The front-north section of this component contained the former Lantz Elementary School. The “Original School” was constructed circa 1939 as a two-storey building over a basement with a reported footprint of +/- 345 sq m (+/- 3,713 sq ft). The “School Addition” was constructed circa 1963, as a one-storey building over a basement with a reported footprint of +/- 344.2 sq m (+/- 3,705 sq ft). The combined building was demolished in 2000. The Municipality of East Hants tender document² indicated the contractor was to remove and dispose of the “original school” foundation and ancillary structures to two feet below grade. In addition, the foundation and ancillary structures were to be backfilled with permitted demolition debris (brick, broken concrete) to one foot below grade and the final fill materials to consist of eight inches of rock and four inches of gravel. The “School Addition” floor and foundation was to remain.

There was no visible evidence of the “Original” or “Addition” of the school. The northern portion of the land parcel has two asphalt-paved entry drives, asphalt parking area, grassed areas and remnant posts near the former sports area.

There was a reported abandoned dug well on the then south (rear) portion of the land parcel and an abandoned septic tank reported to be close to the former school. Reference to the Location Certificate provided by the contractor in December 2000 (see Appendix A) does not indicate the location of the septic tank or field.

1175 Hwy 2 Component

The Component Property was formerly occupied by a residential house. There was no evidence of former fuel storage tanks, however there was evidence of the former asphalt walkway accessed from the No. 2 Highway and minor demolition debris (chimney bricks, asphalt shingles, speed tile, and concrete).

This former residential property was occupied by a single-family house. After tax-sale purchase by the Municipality in 2015, the house was demolished. There is a remnant original front walkway from Highway 2 (which has been ditched). Entry to the Component Property is currently made via a remnant driveway or the easement/driveway deeded to the neighbouring civic address 1181 Highway 2.

Figures 3 to 9 and Figure 2 illustrate the limited changes in the neighbourhood over the past 50+ years.

A review of the information available at the Nova Scotia Registry of Deeds is provided in Table 4.

² Municipality of East Hants Tender Document for Lantz School Demolition, Addendum No. 1, October 27, 2000

Table 4A: Partial listing of property owners		
Date	Grantor	Grantee
<i>1157 Highway 2 (PID 45148111)</i>		
3 Dec. 2009	The Municipality of the District of East Hants	The Municipality of the District of East Hants
19 Feb. 1971	The Municipality of East Hants	Colchester East Hants Amalgamated School Board
12 May 1962	Sisters of Charity	Municipality of East Hants

Table 4B: Partial listing of property owners		
<i>1175 Highway 2 (PID 45088614)</i>		
Date	Grantor	Grantee
10 Jun. 2015	Tax Deed Sale, Municipality of East Hants	The Municipality of the District of East Hants
6 Jan. 1951	Richard Hines	Ralph Nieforth
31 Dec. 1949	Part of land of Mrs. Annie Miller	Richard Hines

5.2 Fuel or Chemical Storage/Delivery Systems

1157 No 2 Highway Component

As of the date of this Report, there are no fuel or chemical storage or delivery systems within this Component. As currently constituted, liquid fuel tanks do not pose an environmental liability.

Pursuant to an *Environmental Registry* request to Nova Scotia Environment indicated there was no information within Departmental files pertaining to the Component Property (see Appendix C).

Reference to information previously received from Nova Scotia Environment and the then Chignecto - Central Regional School Board indicated the former Lantz Elementary School was most recently served by two 250-gallon steel aboveground fuel oil tanks installed in 1996 and removed before building demolition in 2000. The two aboveground tanks had been installed on a concrete pad, which was also removed during the building demolition.

The two aboveground fuel oil tanks had replaced a former underground fuel oil tank located on the south side of the "Original School". Previous information obtained from Nova Scotia Environment and the then Chignecto-Central Regional School Board - Property Services Department indicated the former underground storage tank had been installed in 1980 and was removed in 1996. The 4,454 L, tank was assigned Registration # 5125 and the location recorded as Lantz District Elementary School, 1155 Hwy 2, Lantz (note the difference in civic address). It is not known what type of heating system or supply fuel was used by the School before 1980.

When the former underground tank was removed, it was reported as "perforated". At that time, +/-99.2 tonnes of petroleum hydrocarbon contaminated soil were removed. However, no testing was conducted to confirm of removal there was no record of sampling and laboratory analyses to

indicate the status of the remaining soil after the remediation. As discussed in detail in Section 4.3, comparison of the 2008 data to the current Tier I Environmental Quality Standards for Soil at a Non-Potable Site criteria indicates the concentrations are less than the current criteria.

In addition, a test-pit was excavated south and downgradient from the main excavation to permit visual/olfactory inspection of downgradient conditions. No evidence of impacts due to petroleum hydrocarbons or former excavation/s was noted.

The former presence of the underground fuel oil tank is not considered an environmental liability or risk to the Subject Property.

1175 Highway 2 Component

The Component Property was formerly occupied by a residential house. Pursuant to an *Environmental Registry* request, Nova Scotia Environment indicated there was no information within Departmental files pertaining to the Component Property (see Appendix C).

There was no evidence of former fuel storage tanks. As currently constituted, liquid fuel tanks do not pose an environmental liability to the Subject Property.

5.3 Water and Sewage

The East Hants water utility serves the communities of Enfield, Elmsdale and Lantz. The water source is the Shubenacadie River and the Grand Lake Watershed (an engineered Spring to pump water into the Shubenacadie River).

The potable water is subject to a treatment process which includes Dissolved Air Flotation and Sedimentation Train Technology with Multimedia Filtration, Fluoridation, Disinfection, and Corrosion Control. The Subject Property is not currently connected to the central system.

Sanitary sewage is collected and piped to Lantz for lagoon treatment before discharge into the Shubenacadie River.

1157 No 2 Highway Component

As of the date of this Report, there are no on-site or supplied municipal services for water and sewage.

Before demolition in 2000, the former Lantz Elementary School was served by municipal water and sewer.

The demolition contractor was responsible for the removal of ancillary structures associated with the "Original School" to two feet below grade which included an eight-foot diameter brick well with concrete cap. The Municipality was responsible for the disconnection of water service. In addition, there was a former concrete well located on the south side of the property.

The demolition contractor was also responsible for the capping of the sewer lateral at the property line and for the removal ancillary structures associated with the "Original School" to two feet below grade. Without confirming information, it is assumed a ten-foot diameter concrete septic tank and the former septic field remain in place on the land parcel.

1175 Highway 2 Component

As of the date of this Report, there are no on-site or supplied municipal services for water and sewage.

This former residential property was served by the municipal water and sewer systems. It is assumed the Component property was served by an on-site well and septic field. It is assumed the former septic field remains in place on the land parcel.

5.4 Waste Handling

Wastes in the Municipality of East Hants are required to be source-separated, in accordance with the Nova Scotia Solid Waste Resource Management Regulations³ and the East Hants Solid Waste Resource Collection and Disposal By-Law (By-Law No. 10-400-1 as amended to 24 April 2019). Requirements of the By-Law include, but are not limited to, provision of regulation containers for the storing and collection of mixed waste, recyclable materials, and organic materials and source-separate all collectible waste generated from eligible premises at the point of generation so as to comply with the provincial disposal bans and to facilitate their recycling, composting or disposal in accordance with the Municipality's waste resource management system.

Overall Property

As of the date of this Report, there are no wastes produced from either land parcel.

5.5 Heating/Ventilation/Air Conditioning Systems

1157 No 2 Highway (PID 45148111) & 1175 Highway 2 (PID 45088614)

There are currently no heating, ventilation or air conditioning systems associated with either land parcel.

5.6 Fire Extinguishing and Alarm Systems

Overall Property

As of the date of this Report, there are no fire extinguishing or alarm systems associated with either land parcel.

The Subject Property is served by the Lantz (Volunteer) Fire Department, located on Church Street less than 0.2 km southwest of the site.

³ Solid Waste-Resource Management Regulations, Section 102, *Environment Act* S.N.S. 1994-95, c. 10.I.C. 96-79 (effective February 6, 1996), N.S. Reg. 25/1996; Amended to O.I.C. 2019-29 (effective February 6, 2019), N.S. Reg. 26/2019).

5.7 Polychlorinated Biphenyls (PCB)

PCB were commonly used in electrical equipment (e.g., transformer, fluorescent light fixtures) manufactured prior to 1979. Since then all manufacture and sale of such equipment has been prohibited⁴. Provided any PCB containing equipment is still in active service, special management procedures are not required. However, if the equipment is withdrawn from service (e.g., renovations or deconstruction activities), it must be handled, stored and disposed under specified conditions. By regulatory definition, *"PCB equipment", means any manufactured item that contains a PCB liquid, a PCB solid, or a PCB substance, and includes transformers and capacitors; and "PCB waste" includes a PCB liquid, a PCB solid, a PCB substance, and PCB equipment that has been taken out of service for the purpose of disposal.*

Overall Property

There are currently no sources of PCB materials on either land parcel. The land parcels have never been registered as a site for PCB-contaminated materials nor ever used for the storage of PCB-contaminated materials.

1157 No. 2 Highway Component

The former Lantz Elementary School was reported to have fluorescent light fixtures which, based on the age of the Building, may have had PCB-containing light ballasts. The demolition contractor was responsible for segregation and appropriate disposal of any designated light ballasts.

5.8 Waste Materials

1157 No. 2 Highway Component

The basement area of the "Original School" was backfilled with compacted demolition debris consisting of brick and broken concrete to one foot below grade. The final foot of compacted backfill was to consist of eight inches of rock fill and four inches of Type 1 gravel.

There was no evidence of waste materials or litter.

1175 Highway 2 Component

There was limited evidence of some residual building materials, front concrete walkway, etc. Materials do not pose an environmental liability.

5.9 Electrical System

Overall Property

As of the date of this Report, there are no electrical services to the Subject Property.

There are no major electrical system transmission lines over or adjacent to the Subject Property.

⁴ PCB Management Regulations, Section 84, *Environment Act* S.N.S. 1994-95, c. 1 O.I.C. 95-291 (April 11, 1995), N.S. Reg. 52/95 as amended by O.I.C. 97-747 (December 2, 1997), N.S. Reg. 163/97.

5.10 Disposed Materials

Overall Property

As of the date of this Report, there is no evidence of improperly disposed materials on either land parcel.

5.11 Hazardous Materials (Other than Petroleum Products)

Overall Property

As of the date of this Report, there is no evidence of disposed hazardous wastes. The Subject Property has not been used for temporary or permanent storage of hazardous materials.

5.12 Geological Materials

Overall Property

Reference to the Provincial regional bedrock geology map⁵ indicates the underlying bedrock is identified as Windsor Group (White Quarry, Stewiacke, Carols Corner, Macumber and Gays River Formations) (see Figure 10). This bedrock consists of anhydrite, salt, marine dolostone and lime. The excavation and off-site disposal of this bedrock is not regulated pursuant to the Sulphide Bearing Material Disposal Regulations⁶. This type of bedrock does not pose an environmental liability to the Subject Property.

During the natural decay of uranium, the formation of radon gas can occur and collect in low areas, such as basements before dispersing through a building. Reference to the Map Showing Potential for Radon in Indoor Air⁷ (see Figure 11) indicates the area of the Subject Property is mapped in an area considered “low risk”; i.e., 5% of buildings tested were found to exceed the Health Canada guideline of 200 Bq/cu m. As currently constituted, radon entry does not pose an environmental liability.

Potable water use is not dependent on site groundwater and therefore issues of groundwater quality are not relevant.

5.13 Worker Protection/Occupational Health

This was a Phase I Environmental Site Assessment and not a Safety Audit.

⁵ Geological Map of The Province of Nova Scotia. Department of Natural Resources (with amendments to 27 July 2012).

⁶ Sulphide Bearing Material Disposal Regulations, Section 66, *Environment Act* S.N.S. 1994-95, c. 1 O.I.C. 95-296 (April 11, 1995), N.S. Reg. 57/95.

⁷ Nova Scotia Department of Natural Resources, Mineral Resources Branch. Open File Map ME 2013-028 and <https://fletcher.novascotia.ca/DNRViewer/?viewer=Radon>).

5.14 Cultural/Historical Issues

Overall Property

The land parcels are not Registered Heritage Properties (provincial or municipal).

The Subject Property is not mapped as in a High Risk Flood Plain (HF); watercourse Greenbelt or located on aboriginal lands (IR-14 Sipekne'katik).

5.15 Wetlands and Water Courses

Overall Property

Reference to the Nova Scotia Natural Resources Significant Habitats of Nova Scotia Map⁸ indicates there are no mapped Habitats of Concern immediately on, or immediately adjacent, to the Subject Property. The nearest area identified as having a "Species at Risk" is the stream tributary across the Highway 277 and transecting the properties identified as civic address 1147 No 2 Highway and civic address 13 Church Street (see Figure 12).

1175 Highway 2 Component

There is a large un-delineated wetland occupying the nominal centre of this Component. It is recommended the wetland be properly delineated, pursuant to Nova Scotia Environment policy on wetlands. The delineation can only be undertaken between May and 30 October. The delineation should also include a determination of water flow via the broken drainage culvert within the driveway – right-of-way along the east boundary.

5.16 Municipal Ordinances

Overall Property

The land parcels are not currently subject to infraction of Municipal Ordinances.

The Subject Property is zoned "VC" (Village Core), pursuant to the municipal land-use By-law (see Figure 13).

The Subject Property is not mapped as in a High Risk Flood Plain (HF) or watercourse Greenbelt.

5.17 Provincial Orders

1157 No 2 Highway Component (and the former PID 45088135)

Pursuant to an Environmental Registry request, Nova Scotia Environment indicated there was no information files within Departmental files (see Appendix C.)

Information previously obtained from the then Nova Scotia Department of Environment & Labour indicated the known information was limited to the underground fuel storage tank which previously served the Lantz Elementary School. The former underground fuel oil tank is discussed in Section 4.3 Environmental Status. The original application to Department was submitted with the address associated with the then land parcel; i.e., 1157 Highway 2. However, information provided by the

⁸ Nova Scotia Natural Resources Significant Habitat of Nova Scotia (significant habitats updated to 11 April 2012 and wetlands and vegetation updated to 12 June 2012).

Chignecto-Central School Board referred to the land parcel as civic address 1155 Highway 2. A supplementary environmental search in 2008 was initiated based on the “original” address. Both letters and the remaining documentation are provided in Appendix C.

1175 Highway 2 Component

Pursuant to an Environmental Registry request, Nova Scotia Environment indicated there was no information within Departmental files (see Appendix C.)

Neighbouring Properties

An Environmental Registry request was also submitted for the neighbouring properties identified as: 31 Highway 277, 2 Lloyd Drive, 4 Lloyd Drive, 6 Lloyd Drive, 8 Lloyd Drive, 10 Lloyd Drive, 12 Lloyd Drive, 1163 Highway 2, 1169 Highway 1 and 1181 Highway 2. There was no information within Departmental files pertaining to these properties (see Appendix C).

Note: Record searches, as instituted by the Nova Scotia Environment include, but are not limited to, approvals, certificates of variance, orders, appeals, decisions and hearings, designations, charges, permits, convictions and penalties, tank registries and any other information considered appropriate by the Minister.

5.18 Asbestos-containing Materials (ACM)

By regulatory definition, ACM is any material containing greater than 1% asbestos by weight (irrespective of the type of material or type of asbestos fibre). Asbestos containing material and asbestos containing waste are regulated under the Asbestos Waste Management Regulations⁹. For the purposes of material removal and handling within a Building (renovation or demolition), Nova Scotia Labour has defined “asbestos containing materials”¹⁰ as any material identified by an appropriate laboratory analytical method (e.g. US EPA 600/R-93/116, US NIOSH 9000, or US NIOSH 9002) to contain at least 0.5% of any type of asbestos, and vermiculite insulation identified to contain any amount of asbestos using EPA method 600/R-04/004 if other analytical methods do not identify the presence of asbestos.

Overall Property

Neither land parcel was used as an asbestos disposal site. There are currently no known sources of asbestos containing materials associated with the Subject Property. As currently constituted, asbestos-containing materials do not pose an environmental liability to the Subject Property.

1157 No 2 Highway Component

The Hazardous Material Survey conducted on the Lantz Elementary School in September 2000, identified several areas and materials to be considered asbestos-containing (e.g., heating system pipe elbows, tiles etc.). The demolition contractor was responsible for the removal of all asbestos-containing materials under appropriate removal criteria (Type III enclosure and wet removal methods). The asbestos-containing materials were disposed of at the Municipal Landfill (Georgefield).

⁹ Asbestos Waste Management Regulations, Section 84, *Environment Act* S.N.S. 1994-95, c. 1 Order in Council 95-292 (April 11, 1995), N.S. Reg. 53/95

¹⁰ Asbestos In The Workplace: A Guide to Assessment & Management of Asbestos in the Workplace. Issued by Nova Scotia Dept. of Labour and Advanced Education, 21 November 2013.

1175 Highway 2 Component

Given the age of the former residential house, it is suspected some materials may have been considered asbestos containing (i.e., floor tiles, drywall compound, paper under hardwood etc.) It is assumed all construction debris was appropriately disposed.

5.19 Parking

1157 No 2 Highway Component

There is an extensive area of remnant asphalt-paved parking associated with the former Lantz Elementary School. The space is accessible from both Highway 277 and Highway 2.

1175 Highway 2 Component

This land parcel is currently un-occupied and parking issues are not applicable.

5.20 Urea-Formaldehyde Foam Insulation (UFFI)

UFFI is a thermal insulation that was sold from early 1970's until 1980 when Environment Canada banned the material under the *Hazardous Products Act*.

Overall Property

Not applicable. As of the date of this Report, all construction debris has been appropriately disposed.

5.21 Air Quality

Overall Property

Air Quality. The ambient air quality is good and reflects a mostly light commercial use within the general area and a low, mostly residential use of surrounding areas.

Fungi (moulds, mushrooms and yeasts) are ubiquitous in the environment and play a key role through their decomposition of organic materials. Fungi require three key components to establish colonies and grow: water, nutrients (primarily wood and cellulose) and growing conditions. Except for water or high humidity, such conditions readily occur in interior environments. Therefore, failure to control water and humidity (e.g., water ingress, broken water pipes, condensation of excessive humidity) typically results in establishment and amplification of fungi (moulds, yeasts and mushrooms) in interior environments, thereby contributing to decay and damage to interior materials, finishes, furniture, etc., as well as posing a health hazard to occupants.

Not applicable. The Subject Property does not contain any structures.

Radon. Reference to the Map Showing Potential for Radon in Indoor Air (see Figure 11) indicates the area of the Subject Property is mapped in an area considered "low risk"; i.e., 5% of buildings tested were found to exceed the Health Canada guideline of 200 Bq/cu m. The potential for radon is not considered an environmental liability to the Subject Property, as currently constituted.

5.22 Traffic

Overall Property

The Subject Property has frontage on Highway 2, a provincially owned and maintained two-lane roadway. Highway 2 was the former main route between Halifax and Truro, but much of the intra-provincial traffic now uses the parallel Highway 102, completed in the late 1970's and subsequently expanded to a four-lane all-weather highway. With increased residential and light commercial development within the Communities of Enfield, Elmsdale, Lantz and Milford, traffic using Highway 2 has steadily increased, particularly around the intersection of Highway 2 and Highway 214. Highway 277 has a low-volume of mostly community traffic.

5.23 Lead

Before 1975, many oil paints, particularly enamels and exterior paints, contained elevated concentrations of lead. Beginning in the 1970's, Environment Canada required the phasing out of lead in many consumer products, including gasoline motor fuels and paints. The objective was to reduce health impacts due to exposure to lead-containing paint during demolition and renovation activities: (1) demolition worker exposure; (2) spread of lead containing dust during removal activities; and (3) appropriate disposal of demolition materials. Nova Scotia Environment currently defines "lead-containing paints" as containing concentrations of lead higher than 0.1% or 1,000 mg/kg. According to Nova Scotia Environment guidelines, lead-containing paints/substrates that have a total lead concentration less than 1,000 mg/kg may be disposed of as "construction and demolition debris" in an approved landfill. If paints contain more than 1,000 mg/kg and are leachable, the paints have to be handled as hazardous materials.

Overall Property

There have been no activities on the land parcels and adjacent properties, which could be expected to have resulted in lead contamination.

1157 No 2 Highway Component

The demolition contractor was responsible for the removal of all materials which may have contained lead-based paints. Demolition wastes were disposed of at the Municipal Landfill (Georgefield).

5.24 Drains, Easements and Pipelines

1157 No 2 Highway Component

It is assumed the former municipal sewer and water laterals were cut off at the property boundary. It is assumed the laterals for the old well and the septic field remain in place.

There are no buried laterals or overhead lines serving other properties.

There are no easements or rights-of-way associated with this Component.

1175 Highway 2 Component

It is assumed the former municipal sewer and water laterals were cut off at the property boundary.

There are no buried or overhead transmission lines, storm drains or other laterals under the land parcel.

It is assumed the laterals for the old well and the septic field remain in place.

The Component Property is subject to a +/- 9.14 m (30 ft) wide easement located along the east side of the land parcel in favour of civic address 1181 Highway 2. The right-of-way includes a drainage/culvert draining the centre section wetland.

5.25 Neighbouring Properties (see Figure 14)

Overall Property

There are no dumpsites or specially-designated hazardous wastes or materials facilities within the general neighbourhood. There are no retail fuel facilities, bulk fuel facilities or dry-cleaning facilities within the general neighbourhood.

Neighbours to the immediate north:

- ❑ Immediately adjacent is civic address 1163 No 2 Highway (PID 45088598). This residential property had no visible fuel storage system. Pursuant to an *Environmental Registry* request, Nova Scotia Environment indicated there was no information within Departmental files (see Appendix C). There is no visually apparent fuel storage system and no chimney. It is assumed the building is served by electric heating and therefore does not pose an environmental risk to the Subject Property.
- ❑ Immediately adjacent is civic address 1169 No 2 Highway (PID 45088606). This residential property is served by one +/- 909 L fiberglass, aboveground fuel oil tank located on the east side of the residence. Pursuant to an Environmental Registry request, Nova Scotia Environment indicated there was no information within Departmental files (see Appendix C). Based on land gradient to the southeast and the presence of the wetland, this tank poses a potential medium environmental risk to the Subject Property.

Neighbours to the north:

- ❑ The Subject Property fronts on the Highway 2, a provincially owned and maintained two-lane roadway with ditch drainage and no sidewalks or curb/gutter in this section. Highway 2 was the former main route between Halifax and Truro, but much of the intra-provincial traffic now uses the parallel Highway 102, completed in the late 1970's and subsequently expanded to a four-lane all-weather highway. Highway 2 now primarily serves community traffic.

Across Highway 2, beginning at the corner of Logan Drive and proceeding east:

- ❑ Civic address 2 Logan Drive/corner Highway 2 (PID 45088556). The multi-unit residential property has a chimney, but no visible fuel storage system. The property is nominally downgradient and is not considered an environmental risk to the Subject Property.
- ❑ Civic address 1148 Highway 2 (PID 45088564). This residential property has two chimneys but no visible fuel storage system. The property is not considered an environmental risk to the Subject Property.
- ❑ Civic address 1158 No 2 Highway (PID 45088572). This residential property had a chimney, but no visible fuel storage system. The house is upgradient of the Subject Property and poses a potential (assumed fuel tank) low to medium environmental risk to the Subject Property.

- ❑ Civic address 1164 Highway 2 (PID 45088580). This residential property has a chimney and the adjacent garage has a chimney, but there were no visible fuel storage systems. The house is upgradient of the Subject Property and poses a potential (assumed fuel tank) low to medium environmental risk to the Subject Property.
- ❑ Civic address 1166 Highway 2 (PID 45233921). This residential property has a chimney, but there was no visible fuel storage system. The house is upgradient of the Subject Property and poses a potential (assumed fuel tank) low to medium environmental risk to the Subject Property.
- ❑ Civic address 1174 Highway 2 (PID 45088622). This residential property has a chimney, but there was no visible fuel storage system. The house is upgradient of the Subject Property and poses a potential (assumed fuel tank) low to medium environmental risk to the Subject Property.
- ❑ Civic address 1178 Highway 2 (PID 45088622). This residential property has no visible fuel storage system. The house poses a potential negligible environmental risk to the Subject Property.
- ❑ Civic address 1182 Highway 2 (PID 45152808). This residential property has an interior fuel storage tank (fill/vent pipes on west side). The house is downgradient of the Subject Property and poses a potential negligible environmental risk to the Subject Property.
- ❑ Poplar Drive is a municipally owned and maintained two-lane roadway.
- ❑ Properties further east are sufficiently distant and do not pose environmental risks to the Subject Property.

Neighbours to the west:

- ❑ The Subject Property fronts on the Highway 277. This is a provincially owned and maintained two-lane paved roadway, with no curb/gutter and no sidewalks.

Across Highway 277 and proceeding south from the intersection with Highway 2:

- ❑ Civic address 1147 Highway 2 (PID 45088150). This commercial property (*Leo's Supermarket and Daddy Greens Pizza*) is served by four 454-lb. propane tanks and a heat pump. This commercial property is not considered an environmental risk to the land parcels under assessment.
- ❑ Civic address 13 Church Street (PID 45148046), extending through to and having frontage on Highway 277. This property contains a public swimming pool, is nominally downgradient and is not considered an environmental risk to the Subject Property.
- ❑ Church Street is a municipally owned and maintained two-lane roadway with no sidewalks and no curb/gutter.

Neighbours to the south:

- ❑ Civic address 31 Highway 277 (PID 45088143). This commercial property is currently occupied by a storage facility which is served by an interior fuel oil system with the fill/vent pipes located on the east side of the building. Pursuant to an *Environmental Registry* request, Nova Scotia Environment indicated there was no information within Departmental files (see Appendix C). This property is considered a potential negligible environmental risk the Subject Property based on the actual presence of a liquid fuel oil system and the location of the tank downgradient.
- ❑ Lloyd Drive is a municipally owned and maintained two-lane roadway with no sidewalks and no curb/gutter.

- ❑ Immediately adjacent is civic address 2 Lloyd Drive (PID 45088127). This residential property is served by an interior fuel oil system with the fill pipes located on the west side of the residence. Pursuant to an *Environmental Registry* request, Nova Scotia Environment indicated there was no information within Departmental files (see Appendix C). Based on land gradient to the south, this property is considered a negligible environmental risk the Subject Property.
- ❑ Immediately adjacent is civic address 4 Lloyd Drive (PID 45088119). This residential property is served by an exterior, fiberglass, +/- 909 L, aboveground fuel oil tank located on the east side of the residence. Pursuant to an *Environmental Registry* request to the Nova Scotia Department of Environment, the Department indicated there was no information within Departmental files (see Appendix C). This property is considered a potential negligible to low environmental risk the Subject Property based on the actual presence of a liquid fuel oil system.
- ❑ Immediately adjacent is civic address 6 Lloyd Drive (PID 45088101). This immediately adjacent residential property had one +/- 909 L steel aboveground fuel storage system located on the east side of the residence. Pursuant to an *Environmental Registry* request, Nova Scotia Environment indicated there was no information within Departmental files (see Appendix C). This property is considered a potential negligible environmental risk to the Subject Property.
- ❑ Immediately adjacent is civic address 8 Lloyd Drive (PID 45088093). This residential property is served by one 454-lb. propane tank located on the west side of the residence. Pursuant to an *Environmental Registry* request, Nova Scotia Environment indicated there was no information within Departmental files (see Appendix C). This property is considered a potential negligible environmental risk to the Subject Property.
- ❑ Immediately adjacent is civic address 10 Lloyd Drive (PID 45088085). This residential property had two chimneys, but no readily visible liquid storage system. Pursuant to an *Environmental Registry* request, Nova Scotia Environment indicated there was no information within Departmental files (see Appendix C). This property is considered a negligible environmental risk to the Subject Property.
- ❑ Immediately adjacent is civic address 12 Lloyd Drive (PID 45088077). This immediately adjacent residential property had one +/- 909 L steel aboveground fuel storage system located on the east side of the residence. Pursuant to an *Environmental Registry* request, Nova Scotia Environment indicated there was no information within Departmental files (see Appendix C). This property is considered a potential negligible environmental risk to the Subject Property.
- ❑ Civic address 14 Lloyd Drive (PID 45088069). This residential property is served by one exterior +/- 909 L, steel fuel oil tank. This property is considered a potential negligible environmental risk the Subject Property based on the actual presence of a liquid fuel oil system and a land gradient to the south-southeast.
- ❑ Properties further east/south on Lloyd Drive are at a sufficient distance and are not considered environmental risks to the Subject Property.

Figure 3: 16 May 1964 aerial photograph of Subject Property and environs.
(National Air Photo Library, Photo 18354-245)

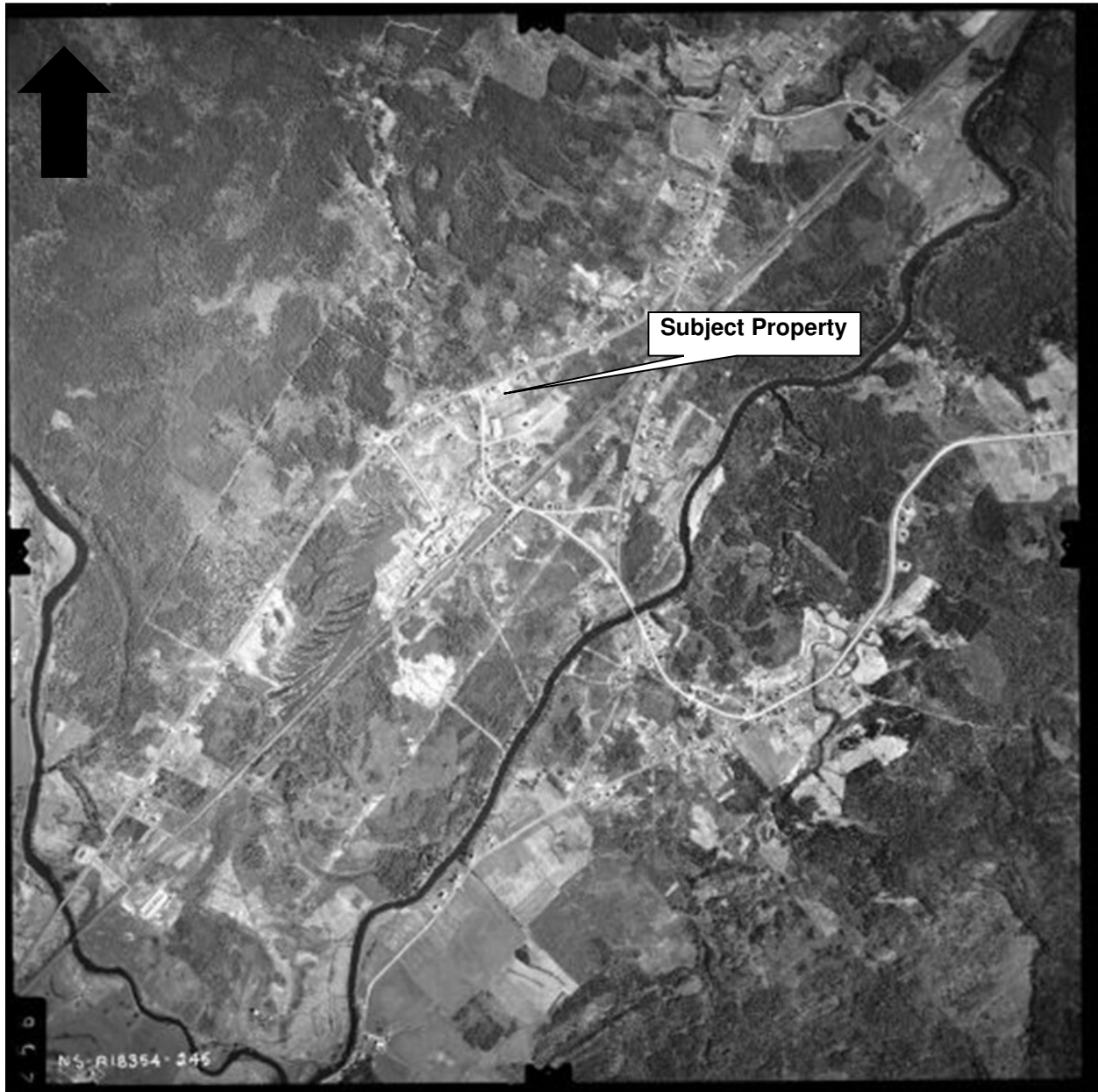


Figure 4: 11 August 1974 aerial photograph of Subject Property and environs.
(National Air Photo Library, Photo 740809-010)

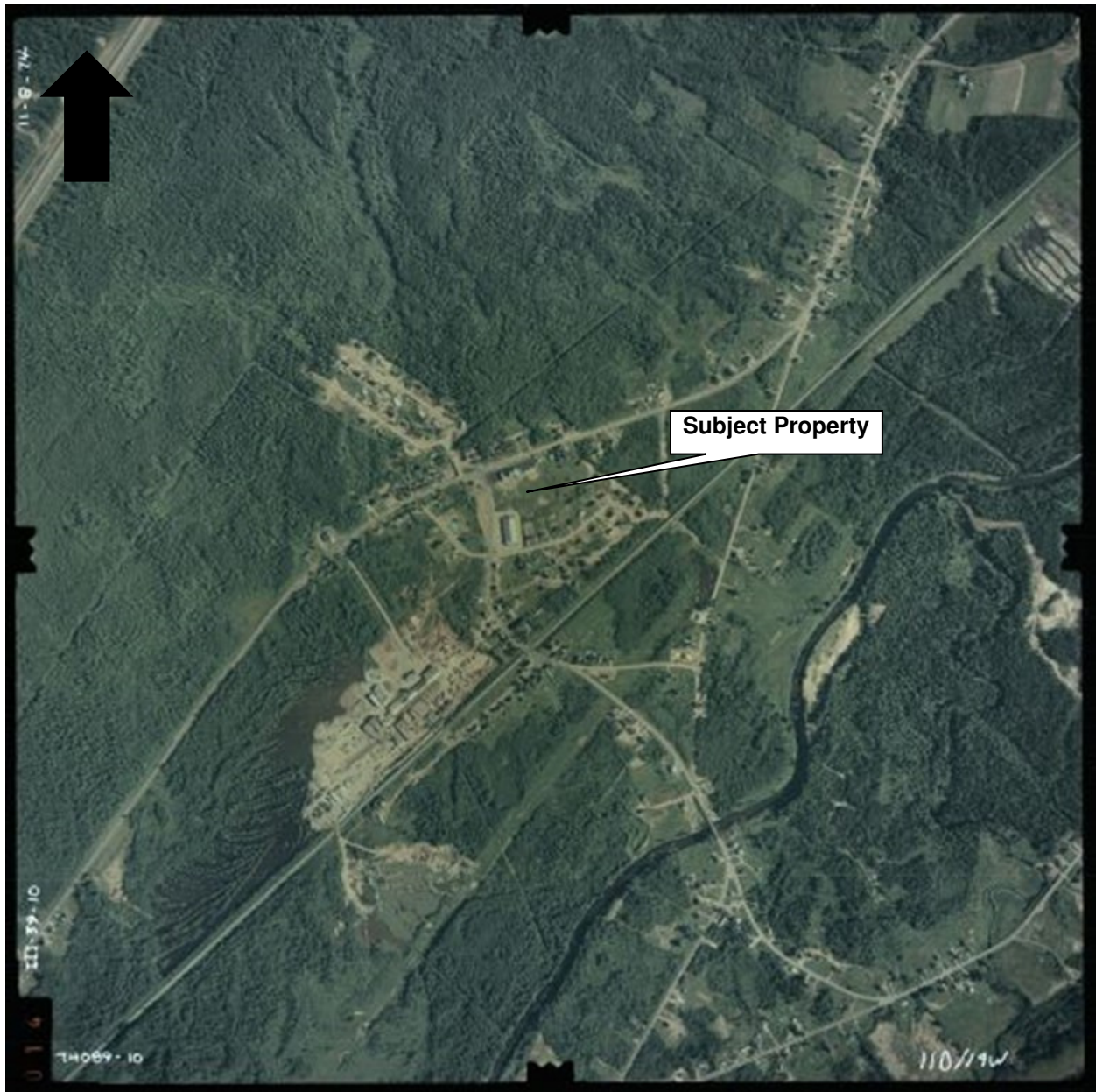


Figure 5: 11 July 1982 aerial photograph of Subject Property and environs.
(National Air Photo Library, Photo 82310-159)



Figure 6: 6 August 1992 aerial photograph of Subject Property and environs.
(National Air Photo Library, Photo 92363-141)



Figure 7: 31 July 2003 aerial photograph of Subject Property and environs.
(National Air Photo Library, Photo 03316-076)



Figure 8: 2007 aerial photograph of Subject Property and environs.
(from Google EarthPro)



Figure 9: 25 August 2013 aerial photograph of Subject Property and environs.
(National Air Photo Library, Photo 20130825-0053)



Figure 10: Bedrock geology of Subject Property and general area.
(excerpt from <http://gis4.natr.gov.ns.ca/website/nsgeomap/viewer.htm>)

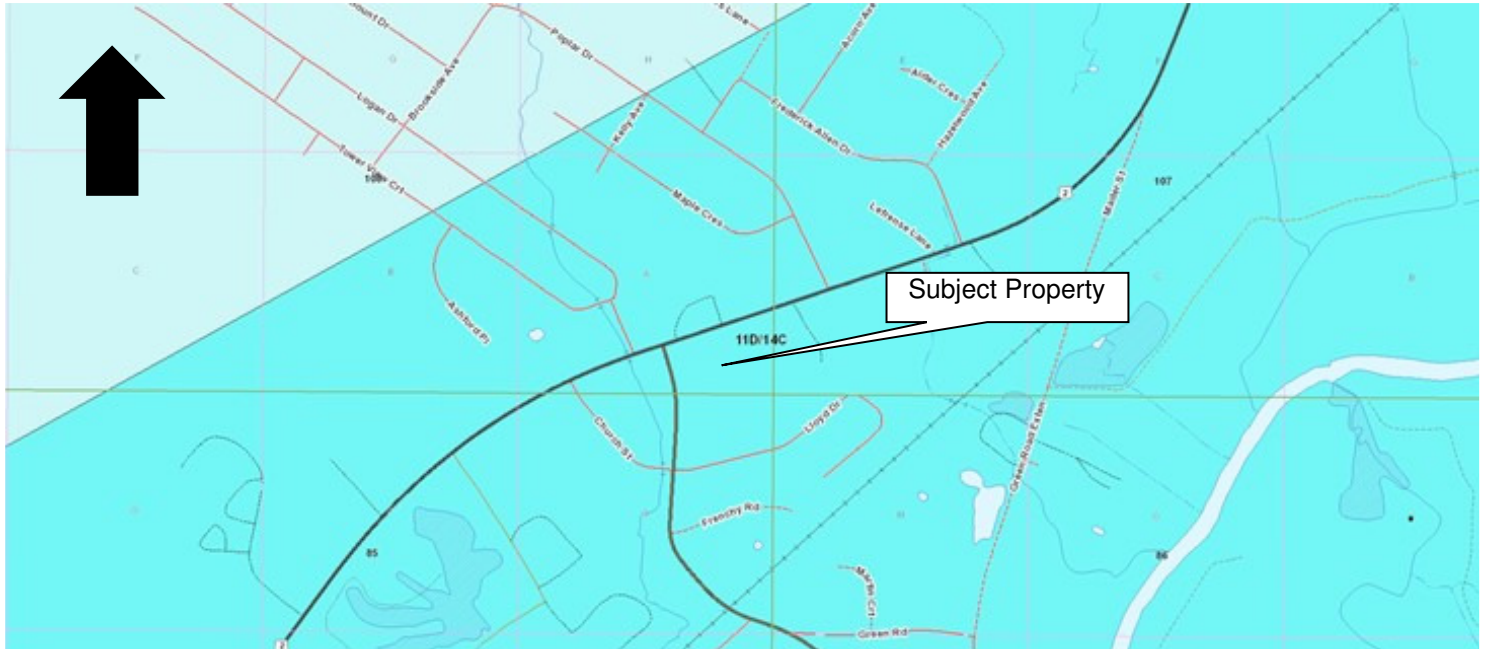


Figure 11: 2015 Map Showing Potential for Radon in Indoor Air in Nova Scotia. 5% of buildings tested within zones denoted by the yellow colour have been found to have radon at concentrations greater than the guideline of 200 Bq/cu m.
(taken from: <https://fletcher.novascotia.ca/DNRViewer/?viewer=Radon>)

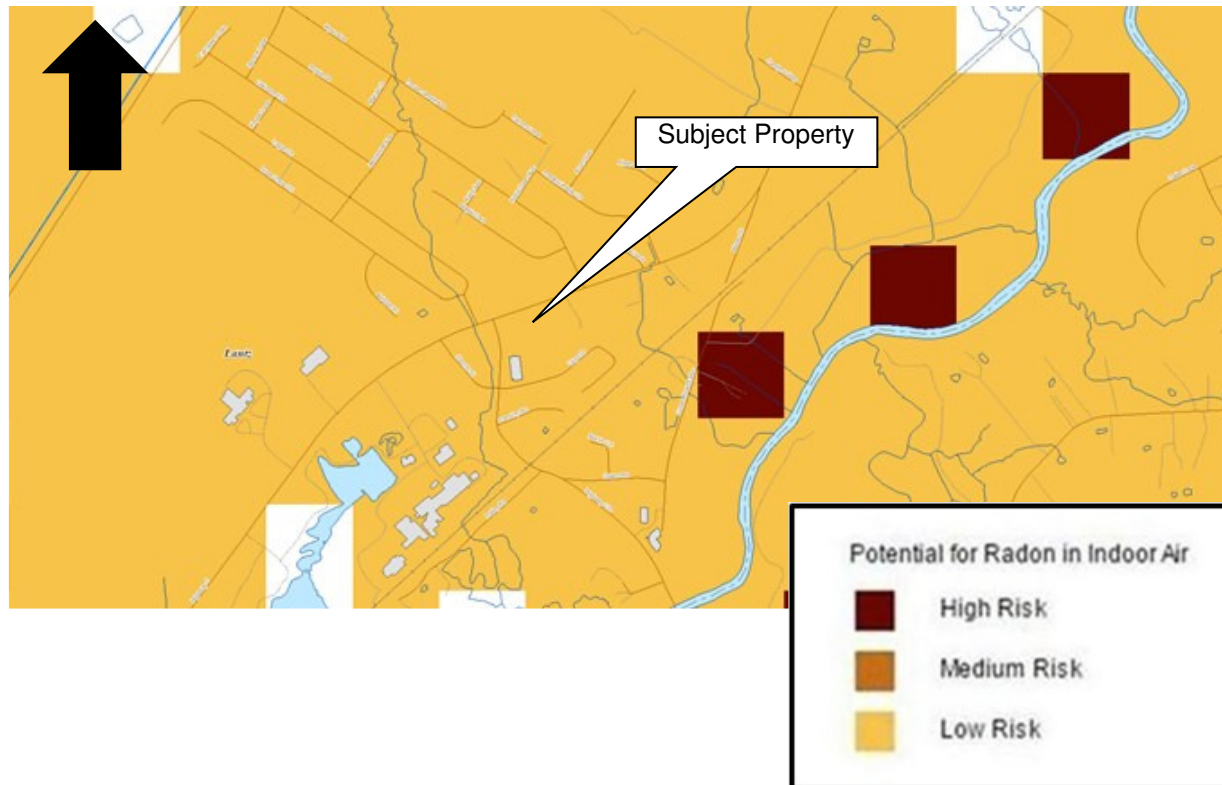


Figure 12: Excerpt from Nova Scotia Department of Natural Resources Habitat Map
(taken from <https://nsgi.novascotia.ca>)

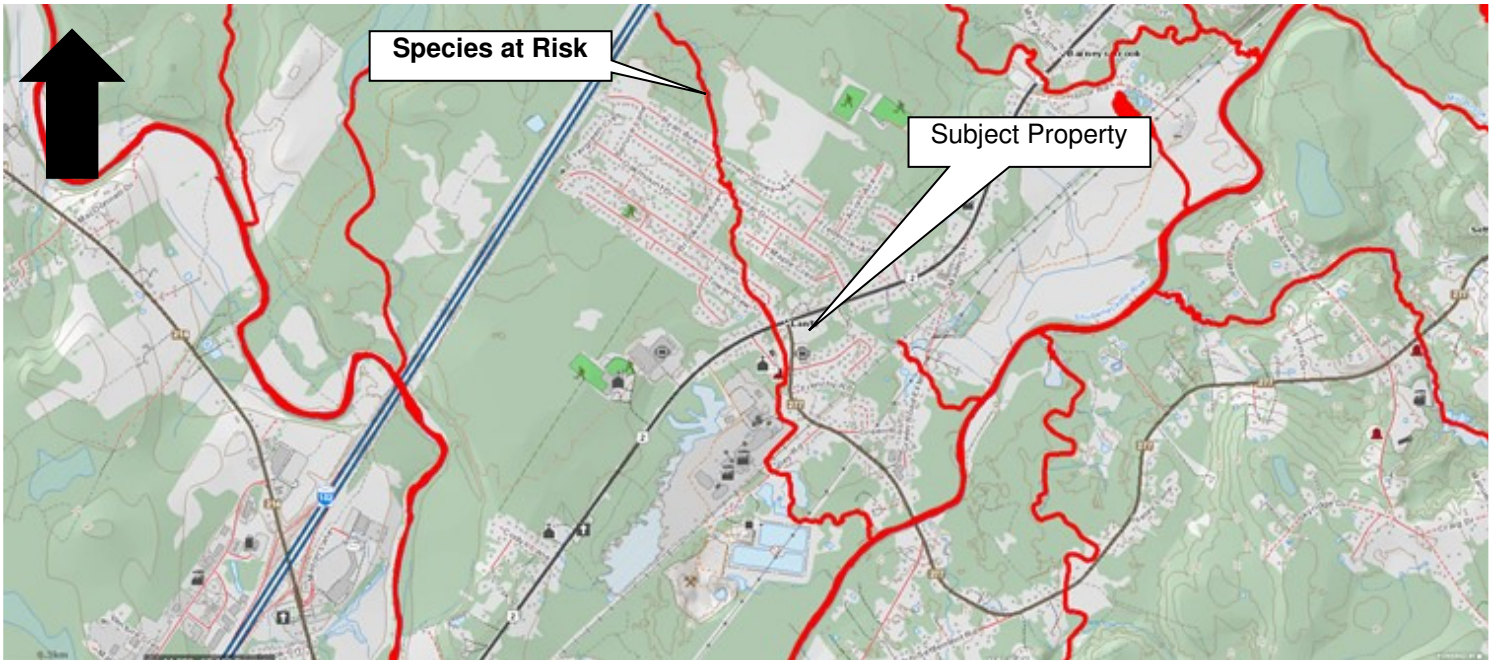


Figure 13: Excerpt from Municipality of East Hants Land Use By-Law
<https://easthants.maps.arcgis.com/apps/webappviewer/index>

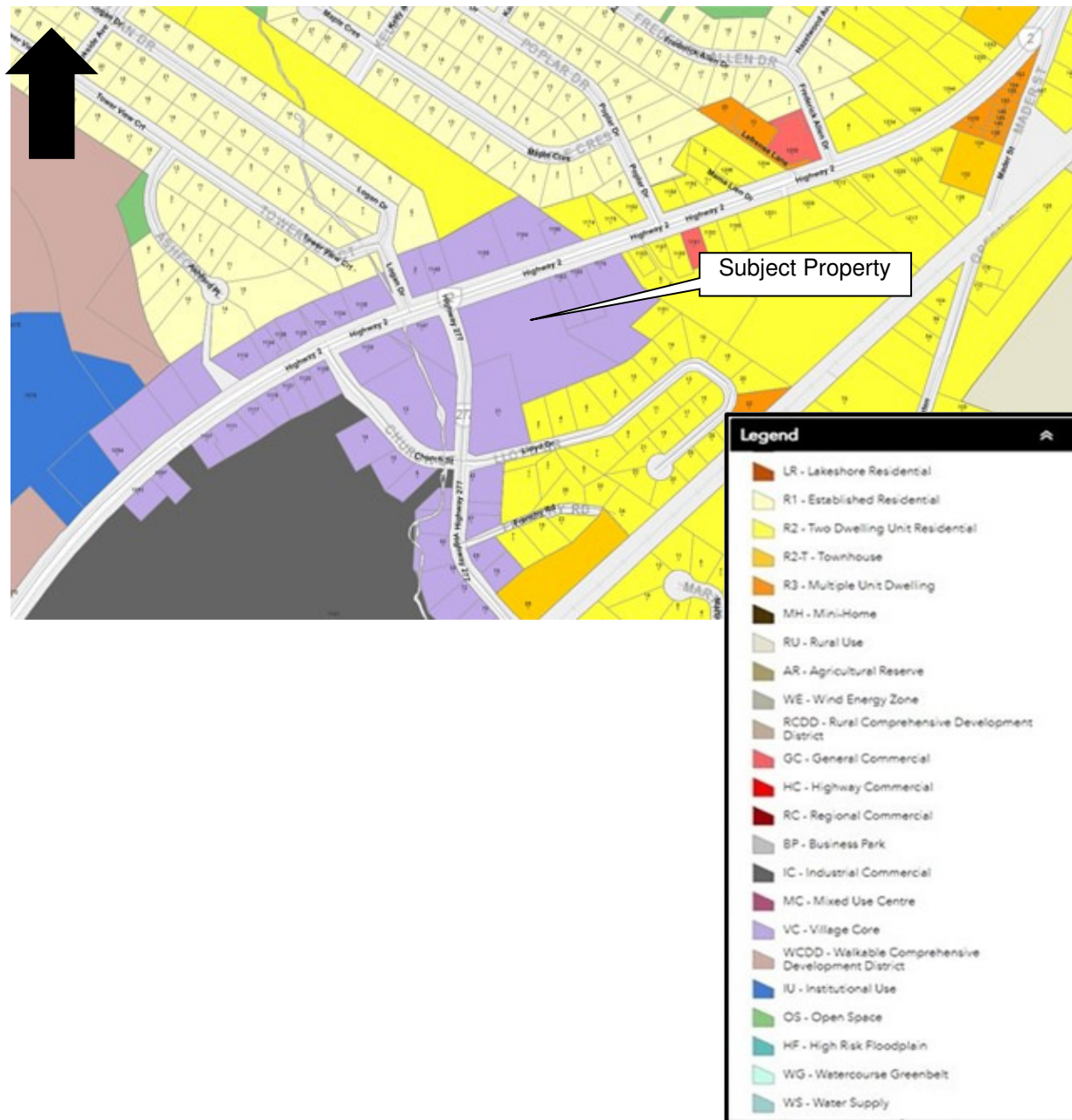
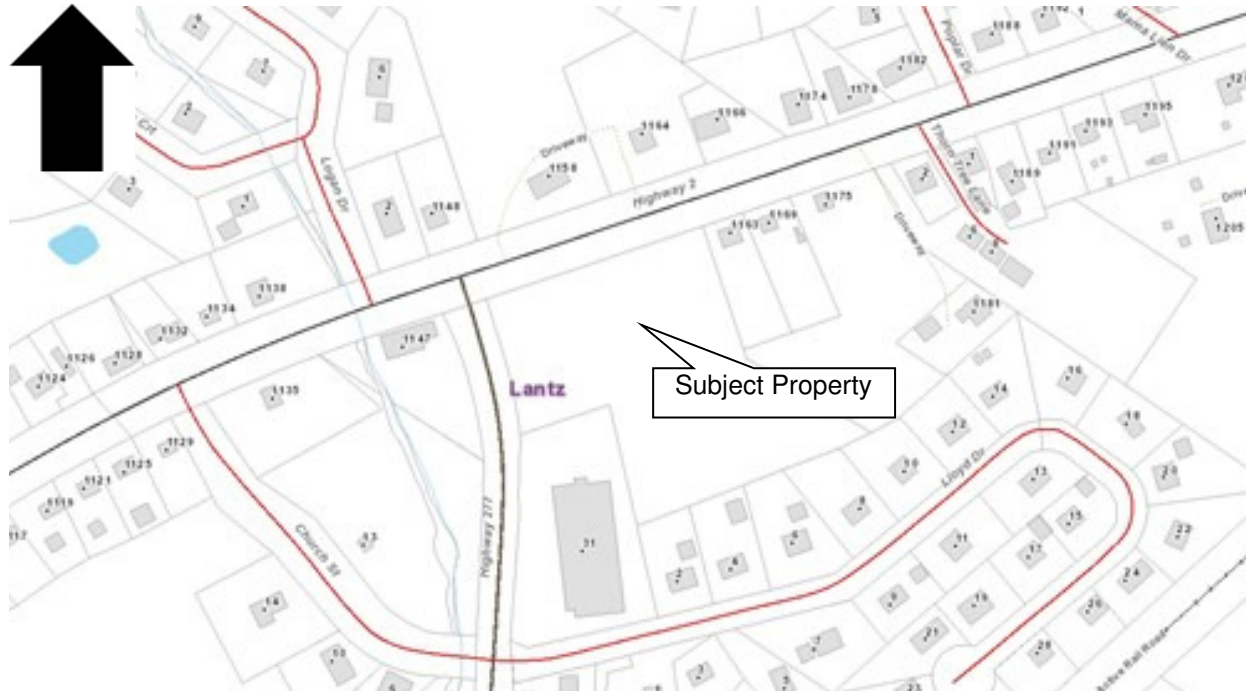


Figure 14: Map of neighbouring properties
(from <https://nsgi.novascotia.ca/civic-address-finder/>)



6. DETERMINATION

The Subject Property consists of two adjacent vacant land parcels, located in the Community of Lantz, Municipality of East Hants, Nova Scotia:

- ❑ Civic address 1157 Highway 2 consists of one +/- 15,398 sq m (+/- 165,746 sq ft or 3.805 acre) land parcel, with +/- 46.09 m (+/- 151.23 ft) frontage on Highway 277 and +/- 119.8 m (+/- 392.96 ft) frontage on Highway 2; and
- ❑ Civic address 1175 Highway 2 consists of one +/- 6,070.2 sq m (+/- 65,340 sq ft or 1.5 acres) land parcel, with +/- 47.8 m (+/- 157 ft) frontage on Highway 2. The Component is subject to a +/- 9.14 m (30 ft) wide easement located on the east side of the land parcel in favour of civic address 1181 Highway 2.

Overall Property

The overall Subject Property area is +/- 21,468.2 sq m (+/- 5.305 acres), with +/- 167.6 m (+/- 440.76 ft) frontage on Highway 2 and +/- 46.06 m (+/- 151.23 ft) frontage on Highway 277. This area includes one +/- 9.14 m (30 ft) wide easement located on the east side in favour of civic address 1181 Highway 2.

The Subject Property is zoned “VC” (Village Core), pursuant to the Municipality of East Hants Land Use By-law. The Subject is not mapped as in a High Risk Flood Plain (HF); watercourse Greenbelt or located as aboriginal lands IR-14 Sipekne’katik.

There are no structures or buildings within the Subject Property. As currently constituted, there are no environmental liabilities associated with liquid fuel tanks; asbestos-containing materials; lead-based paints; UFF insulation; PCB-containing electrical equipment; hazardous materials and wastes; mould contamination; or ozone-depleting substances.

The underlying bedrock is identified as Windsor Group (White Quarry, Stewiacke, Carols Corner, Macumber and Gays River Formations). This bedrock consists of anhydrite, salt, marine dolostone and lime. The excavation and off-site disposal of this bedrock is not regulated pursuant to the Sulphide Bearing Material Disposal Regulations. This type of bedrock does not pose an environmental liability to the Subject Property.

The Subject Property is mapped in an area considered “low risk” for radon; i.e., 5% of buildings tested were found to exceed the Health Canada guideline of 200 Bq/cu m. The potential for radon is not considered an environmental risk, as currently constituted.

The Subject Property had been previously served by potable water wells and on-site sewage systems. The Subject Property is not currently connected to the municipal sanitary sewer and water systems.

There are no water courses, water bodies or mapped Habitats of Concern immediately on, or immediately adjacent, to the Subject Property. The nearest area identified as having a “Species at Risk” is the stream tributary across Highway 277 and transecting the properties identified as civic address 1147 No 2 Highway and civic address 13 Church Street. The 1175 Highway 2 Component contains an un-delineated wetland.

There are no neighbouring retail fuel facilities, bulk fuel facilities or dry-cleaning facilities within the neighbourhood. There are two residential properties semi-dividing the Subject Property. Civic address 1169 Highway 2 is served by one 909 L fiberglass fuel tank on the exterior east side. Based on land gradient to the southeast and the presence of the wetland, this tank poses a potential medium environmental risk to the Subject Property. Neighbouring buildings to the south and east are sufficiently distant as to not pose environmental risks to the Subject Property.

1157 No. 2 Highway Component

The north-front section of this Component was formerly occupied by the Lantz Elementary School. The former school consisted of two sections, the “original” school constructed circa 1939 and an addition, constructed circa 1963. The combined structure was demolished circa 2000, with construction of a new elementary school.

The Component is relatively flat with a marginal gradient (24 m above sea level) down to the south southwest (21 m above sea level). The land parcel can be divided into three sections: a rear forested section separating the Component from residential houses fronting on Lloyd Drive; a centre section now covered in natural vegetation and some small bushes; and a front-north section containing residual asphalt pavement across the front and the back-stop for a former baseball diamond. The Component Property had previously been served by a potable water well and an on-site sewage system. It is not known if the system/s have been removed. The Component is not currently connected to the municipal sewer and water systems.

The heating system for the former combined school was served by a Registered underground fuel storage tank, located on the south side of the building. The tank, when removed, was reported as “perforated” resulting in +/-99.2 tonnes of petroleum hydrocarbon contaminated soil also being removed. At the time of removal there was no record of testing to confirm residual conditions met the then criteria for petroleum hydrocarbons in soils.

In April 2008 *OCL Services Ltd* was retained to conduct a limited Phase II Environmental Site Assessment, focused on the site of the former underground fuel storage tank, with the objective of confirming the absence of residual contamination. Five soil samples, representative of the four walls and the bottom of the original tank excavation were retrieved and analyzed for petroleum hydrocarbons, using the Atlantic PIRI-RBCA protocols. There were no detectable concentrations of Modified Total Petroleum Hydrocarbons and no detectable concentrations of BTEX (benzene, toluene, ethyl benzene and xylenes) components. Comparison of the 2008 data to the current Tier I Environmental Quality Standards for Soil at a Non-Potable Site with residential use indicates the concentrations are much less than the current criteria. The former underground fuel oil tank is not considered an environmental liability to the Subject Property.

The “bottom” soil sample was also analyzed for a set of trace metals and a set of polycyclic aromatic hydrocarbons. Results of the analyses indicated concentrations of all parameters were less than the then residential property criteria. Comparison of the 2008 data to the current Tier I Environmental Quality Standards for Soil at a Non-Potable Site criteria indicates the concentrations are less than the current criteria, with the exception of iron. Concentrations of iron in soils are typically naturally elevated and do not reflect anthropogenic contamination.

In addition, a test pit was excavated south and downgradient from the main excavation to permit visual/olfactory inspection of downgradient conditions. No evidence of impacts due to petroleum hydrocarbons or former excavation/s was noted.

1175 No. 2 Highway Component.

This Component was formerly occupied by a single-family residential building which has been demolished; associated demolition debris was disposed off-site. There was no evidence of the basement or of residual building materials, with the exception of some speed tiles, rock etc.

The Component Property had previously been served by a potable water well and an on-site sewage system. It is not known if the systems have been removed. The Subject Property is not currently connected to the municipal sewer and water systems.

The Component is relatively flat with a marginal gradient (24 m above sea level) down to the south southwest (22 m above sea level). The land parcel can be divided into three sections: the south-rear is undeveloped woods, bordering single-family residential properties fronting on Lloyd Drive; the centre section is mostly a large wetland with a drain flowing east under the right-of-way driveway; and, a northern-front section which is currently grassed with some mature trees and represents the location of the former house. It is recommended the boundaries of the wetland be delineated and the role of the drain/culvert under the east-boundary right-of-way be confirmed.

DETERMINATION: *As currently constituted, there are no significant environmental liabilities associated with the Subject Property. No further environmental site assessment is recommended. The 1175 Highway 2 Component contains a large un-delineated wetland. It is recommended this wetland be properly delineated, including the nominal drain/culvert under the right-of-way driveway on the east side.*

There are no structures or buildings within Subject Property, as currently constituted. Therefore, there are no environmental liabilities associated with liquid fuel tanks; asbestos-containing materials; lead-based paints; UFF insulation; PCB-containing electrical equipment; hazardous materials and wastes; mould contamination; or ozone-depleting substances.

There are no neighbouring retail fuel facilities, bulk fuel facilities or dry-cleaning facilities within the neighbourhood. There are two residential properties semi-dividing the Subject Property. Civic address 1169 Highway 2 is served by one 909 L fiberglass fuel tank on the exterior east side. Based on land gradient to the southeast and the presence of the wetland, this tank poses a potential medium environmental risk to the Subject Property. Neighbouring buildings to the south and east are sufficiently distant as to not pose environmental risks to the Subject Property.

7. QUALIFICATIONS OF SITE ASSESSOR

The environmental site assessment was conducted by Ms. Cynthia Gillis of *OCL Services Ltd.* Ms. Gillis is an Environmental Professional (Certified Environmental Auditor) and has over 40 years experience in the assessment and evaluation of contaminants in the environment including all phases of environmental site assessments; operational audits; environmental management; waste management and environmental training. She has undertaken projects for private and government clients throughout Canada.

Her resume and relevant corporate information are provided in Appendix D.

8. CONTINGENT AND LIMITING CONDITIONS

1. This report is prepared at the request of the Client to assist in the identification and management of environmental liabilities related to ownership, purchase or sale of lands, building and operations, where the liabilities are defined under municipal, provincial and federal legislation. This Report must be used in its entirety, as parts taken out of context may prove misleading. No person or institution other than the Client indicated in this report to rely upon this Assessment without first obtaining written authorization from the Client indicated in this report. There may be qualifications, assumptions or limiting conditions in addition to those set out below relevant to that person/entity or the intended use. The report has been prepared on the assumption that no other person/entity will rely on it for any other purpose than as a Phase I Environmental Site Assessment (CSA/CAN Z768-01) and that all liability to all such persons/entities is denied.
2. While expert in environmental assessment matters, the authors are not qualified and do not purport to give legal advice. It has been assumed that:
 - ❑ Should a legal description be furnished it is assumed accurate and up to date;
 - ❑ Title to the property is valid as provided;
 - ❑ There are no encroachments, encumbrances, restrictions, liens, legal or special assessments, leases or covenants that would in any way affect the site assessment, except as expressly noted herein;

Because these assumptions have been made, no investigation, legal or otherwise, has been undertaken which would verify these assumptions except as expressly noted herein.

3. The authors are not qualified surveyors. Sketches, drawings, diagrams, photographs, etc. are presented in this report for the sole purpose of illustration and are not to be relied upon in themselves.
4. The authors are not qualified to give engineering advice and no soil tests have been done to evaluate geotechnical or hydrogeological properties or characteristics.
5. Information presented in this report is based on information provided by others and visual observations as identified herein. This type of limited investigation is designed to provide information to support an overall assessment of the current environmental conditions of the subject Properties. Sampling and analysis of building materials, wastes, soils, surface water, air (ambient, fugitive and emissions), groundwater and other materials were not carried out as part of this investigation.

6. Achieving the objectives stated in this report has required us to arrive at conclusions based upon the best information presently known to us. No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information; it can only reduce the possibility to an acceptable level. Professional judgment was exercised in gathering and analyzing the information obtained and in the formulation of the conclusions. Like all professional persons rendering advice, we do not act as absolute insurers of the conclusions we reach, but we commit ourselves to care and competence in reaching those conclusions.
7. It should be noted that current environmental legislation, permits, guidelines and regulations are subject to change, and such changes, when put into effect, could alter the conclusions and recommendations noted throughout this report.
8. The conclusions and recommendations noted throughout this report reflect existing site conditions with respect to the current environmental condition of the subject site at the time of this assessment. Compliance of past owners with applicable environmental regulations was not within the scope of this ESA.
9. This report has been prepared in accordance with accepted practices for a Phase I ESA (CSA/CAN Standard Z768-01). No other warranties, either expressed or implied, are made as to the professional services provided under the terms of the ESA and included in this report.

APPENDIX A:

CIVIC ADDRESS 1157 NO 2 HIGHWAY

- ☐ **PARCEL DESCRIPTION**
- ☐ **SCHEDULE “A” – PROPERTY DESCRIPTION**
- ☐ **LOCATION CERTIFICATE 15 DECEMBER 2000**

CIVIC ADDRESS 1175 HIGHWAY 2

- ☐ **SCHEDULE “A” – PROPERTY DESCRIPTION**

SUBJECT PROPERTY

- ☐ **14 OCTOBER 2008 PLAN OF SUBDIVISION**

Civic Address 1157 Highway 2

No Records Found

Property Description

All that lot of land situate at Lantz, in the County of Hants, Province of Nova Scotia, shown as Lot 08-1A1 on plan entitled Plan of Subdivision Showing Lot 08-1A1, Consolidation of Lot 08-1, Lands of Municipality of the District of East Hants and Lot A1, Lands of The Shaw Group Limited and dated October 14, 2008 by E.C. Keen, N.S.L.S., the said lot of land being more particularly bounded and described as follows:

Beginning at a survey marker set on the eastern boundary of Highway 277 at the northwest corner of Block MR-1, lands of Cavu Ventures Limited, Said survey marker being distant 968.09 feet on a bearing of 355 degrees 23 minutes 54 seconds from Nova Scotia Co-ordinate Monument #9389.

Thence northwesterly an arc distance of 151.23 feet along said highway boundary following a curve to the left, having a radius of 788.19 feet to a point. Said curve having a chord distance of 151.00 feet on a bearing of 346 degrees 59 minutes 17 seconds;

Thence 160 degrees 27 minutes 02 seconds a distance of 240.00 feet along Lot 2, lands of Richard C. Preeper and along lands of Ralph G. Nieforth to a survey marker;

Thence 119 degrees 36 minutes 21 seconds a distance of 249.15 feet along said Nieforth lands to an iron post;

Thence 243 degrees 09 minutes 49 seconds a distance of 63.65 feet along Lot A6, lands of Dennis W. Edgett and Shelley L. Edgett to an iron post;

Thence 248 degrees 10 minutes 59 seconds a distance of 105.60 feet along Lot A5, lands of Robert Trueman Megeney and Patricia Karen Megeney to an iron post;

Thence 247 degrees 34 minutes 24 seconds a distance of 68.69 feet along Lot A4, lands of John Dove and Cecilia Dove to an iron post;

Thence 247 degrees 47 minutes 38 seconds a distance of 100.66 feet along Lot A3, lands of Eileen J. Bowlby to an iron post;

Thence 248 degrees 23 minutes 34 seconds a distance of 95.76 feet along Lot A2, lands of Gerald M. MacDonnell to a survey marker;

Thence 346 degrees 10 minutes 54 seconds a distance of 213.35 feet along aforesaid Block MR-1 to a survey marker;

Thence 250 degrees 27 minutes 02 seconds a distance of 162.50 feet along said Block MR-1 to the point of beginning.

Said lot of land containing 3.805 acres and being a portion of lands conveyed to the Municipality of the District of East Hants by Land Registration Document No.8834461 and a portion of land conveyed to The Shaw Group Limited by deed recorded in Book 469, Page 112.

All bearings referable to Grid North, Nova Scotia Co-ordinate System, Zone 5, Central Meridian 64 degrees 30 minutes West, 1979 adjustment.

The herein described Lot 08-1A1 is being created pursuant to the Municipal Government Act, Chapter 18, Part 1X, Section 268(2) e.

Non-Enabling Documents

Civic Address 1157 Highway 2

SCHEDULE "A"

All that lot of land situate at Lantz, in the County of Hants, Province of Nova Scotia, shown as Lot 08-1A1 on plan entitled "Plan of Subdivision Showing Lot 08-1A1: Consolidation of Lot 08-1, Lands of Municipality of The District of East Hants & Lot A1, Lands of The Shaw Group Limited" and dated October 14, 2008 by E.C. Keen, N.S.L.S.; the said lot of land being more particularly bounded and described as follows:

BEGINNING at a survey marker set on the eastern boundary of Highway 277 at the northwest corner of Block MR-1, lands of Cavu Ventures Limited. Said survey marker being distant 968.09 feet on a bearing of 355 degrees 23 minutes 54 seconds from Nova Scotia Co-ordinate Monument #9389;

THENCE northwesterly an arc distance of 151.23 feet along said highway boundary following a curve to the left, having a radius of 788.19 feet to a point. Said curve having a chord distance of 151.00 feet on a bearing of 346 degrees 59 minutes 17 seconds;

THENCE 341 degrees 29 minutes 29 seconds a distance of 89.49 feet along said highway boundary to a survey marker;

THENCE 70 degrees 22 minutes 37 seconds a distance of 392.96 feet along Highway 2 to an iron post;

THENCE 160 degrees 27 minutes 02 seconds a distance of 240.00 feet along Lot 2, lands of Richard C. Preeper and along lands of Ralph G. Nieforth to a survey marker;

THENCE 119 degrees 36 minutes 21 seconds a distance of 249.15 feet along said Nieforth lands to an iron post;

THENCE 243 degrees 09 minutes 49 seconds a distance of 63.65 feet along Lot A6, lands of Dennis W. Edgett and Shelley L. Edgett to an iron post;

THENCE 248 degrees 10 minutes 59 seconds a distance of 105.60 feet along Lot A5, lands of Robert Trueman Megeney and Patricia Karen Megeney to an iron post;

Civic Address 1157 Highway 2

Schedule "A"

THENCE 247 degrees 34 minutes 24 seconds a distance of 68.69 feet along Lot A4, lands of John Dove and Cecilia Dove to an iron post;

THENCE 247 degrees 47 minutes 38 seconds a distance of 100.66 feet along Lot A3, lands of Eileen J. Bowlby to an iron post;

THENCE 248 degrees 23 minutes 34 seconds a distance of 95.76 feet along Lot A2, lands of Gerald M. MacDonnell to a survey marker;

THENCE 346 degrees 10 minutes 54 seconds a distance of 213.35 feet along aforesaid Block MR-1 to a survey marker;

THENCE 250 degrees 27 minutes 02 seconds a distance of 162.50 feet along said Block MR-1 to the point of beginning.

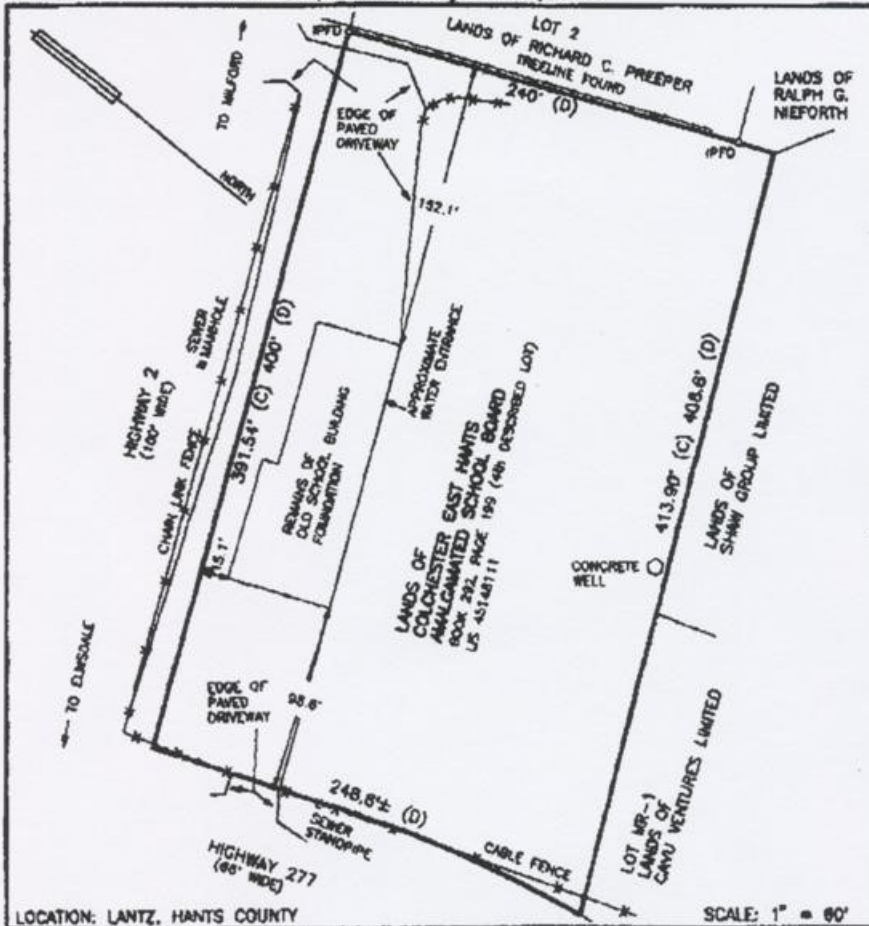
Said lot of land containing 3.805 acres and being a portion of lands conveyed to the Municipality of The District of East Hants by Land Registration Document No. 8834461 and a portion of lands conveyed to The Shaw Group Limited by deed recorded in Book 469, Page 112.

All bearings referable to Grid North, Nova Scotia Co-ordinate System, Zone 5, Central Meridian 64 degrees 30 minutes West, 1979 adjustment.

Civic Address 1157 Highway 2

SURVEYORS LOCATION CERTIFICATE

This Surveyors Location Certificate is not to be used for boundary definition or reference document for the preparation of legal descriptions.



LOCATION: LANTZ, HANTS COUNTY

SCALE: 1" = 60'

CERTIFIED TO MUNICIPALITY OF EAST HANTS
I, EMERSON C. KEEN, N.S.L.S., HEREBY CERTIFY THAT THIS SURVEYORS
LOCATION CERTIFICATE WAS PREPARED UNDER MY SUPERVISION AND IN
ACCORDANCE WITH PART VII OF THE NOVA SCOTIA LAND SURVEYORS
REGULATIONS MADE UNDER SECTION 8 OF THE LAND SURVEYORS ACT.
Dated this 15th day of December, A.D. 2000

Emerson C. Keen, N.S.L.S.

LEGEND

NSL.S.M.	NOVA SCOTIA CO-ORDINATE MONUMENT
SM	STANDARD SURVEY MARKER
IP	IRON POST
+	FENCE
PL	PLACED
FD	FOUND
(D),(P),(C),(M),(S)	DEED, PLAN, CALCULATED, MEASURED, SET
LS 2000000	LAND INFORMATION SERVICE PROPERTY IDENTIFIER NUMBER
O.H.W.M.	ORDINARY HIGH WATER MARK
DWG	DWELLING
GAR	GARAGE
DRY	DRY

DATE OF FIELD SURVEY: DECEMBER 12, 2000

FIELD BOOK 249, PAGE 90



PLAN NO. 3078
SLC NO. 28696

Civic Address 1175 Highway 2

Schedule "A"

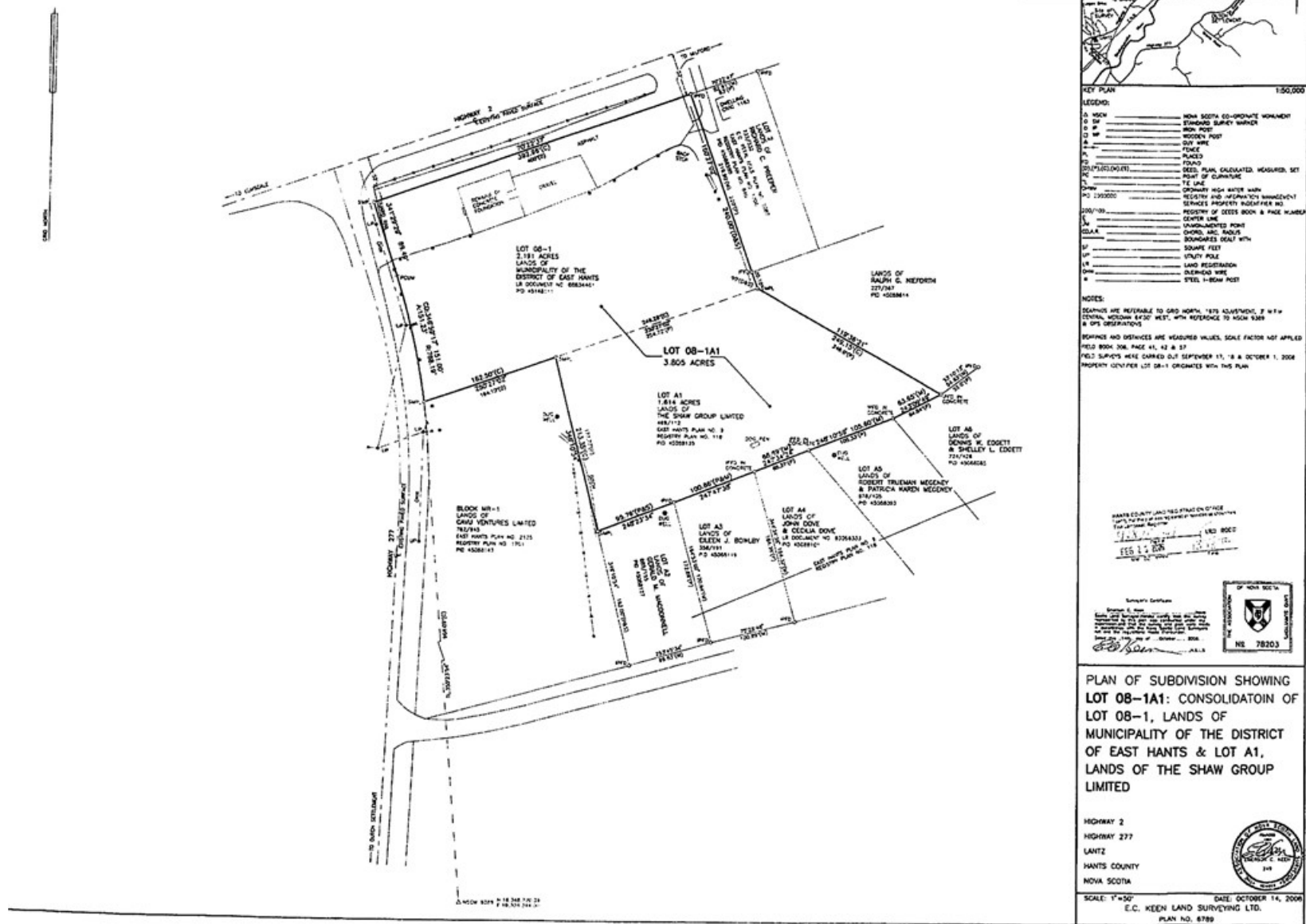
RALPH G NIEF
ATTN: JAMES
AAN # 035283

PID#45088614

ALL that certain lot or parcel of land situate at Lantz Siding in the County of Hants and more particularly described and bounded as follows:
BEGINNING at or near Telegraph Post near the Trackman Tool House by the I.C.R. and running in an Easterly direction along said Railroad Five hundred and sixty six feet to land owned by Mrs. Annie Miller THENCE along said Annie Miller line in a north westerly direction nine hundred and nine feet to boundary of No. 2 Paved Highway thence along the boundary of paved highway in a south westerly direction eighty feet to land now owned by Miss Annie Isenor THENCE along said Annie Isenors line in a south easterly direction two hundred and twenty feet to a post driven in the ground, THENCE at right angle along Annie Isenorseast line one hundred and ninety eight feet to land now owned by Lantz Siding School Board line THENCE in a south easterly direction twenty feet to Lantz Siding School Board Corner THENCE at right angle in a south westerly direction along S.B. line to a post driven in the ground at Lantz Road a distance of two hundred and eighty eight feet THENCE at right angle in a south easterly direction Five hundred and sixty six feet to place of beginning. containing Nine Acres more or Less.

ALSO INCLUDING

ALL of that certain Lot, Piece or Parcel of land situate at Lantz Siding aforesaid, and being more particularly bounded and described as follows:
"THAT IS TO SAY" BEGINNING at the South-eastern boundary of the Main Highway leading from Halifax to Truro, at a point where the said Highway boundary is intersected by the Western boundary of a 30 foot Right-of-Way granted by Richard Hines to L.E. SHAW LTD.: THENCE running Southwardly along the Western boundary of said Right-of-Way 90 feet or until it reaches the North-eastern boundary of land of Ralph Nieforth: THENCE running North-westwardly along the said Nieforth boundary 115 feet or until it reaches the south-eastern boundary of the aforementioned main Highway: THENCE Eastwardly along the said Highway boundary 40 feet to the place of beginning.
The same being a part of lands conveyed by Indenture of Deed from Mrs. Annie Miller to Richard Hines, said Indenture bearing date the 31st day of December A.D. 1949, and registered in the Registry of Deeds office at Windsor, on the 8th day of February A.D. 1950, in Book #185, Page #496.



APPENDIX B:

**SITE VISIT PHOTOGRAPHS
(8 NOVEMBER 2020)**



Figure B-1: View from the northeast corner of the Subject Property east along Highway 2.



Figure B-2: View from the northwest corner of the Subject Property south along Highway 277.



Figure B-3: View from the northwest corner across the 1157 Highway 2 Component.



Figure B-4: View east from the centre of the 1157 Highway 2 Component west boundary (Highway 277).



Figure B-5: View northeast from the southeast corner (Highway 277) of the Subject Property.



Figure B-6: View northeast across the Subject Property from the southeast corner of the Subject Property.



Figure B-7: View north along the eastern boundary of the 1157 Highway 2 Component with neighbouring civic address 1163 Highway 2.



Figure B-8: View east along the front paved area of the 1157 Highway 2 Component. White building is neighbouring civic address 1163 Highway 2.



Figure B-9: View southeast from the entry of the 1175 Highway 2 Component.



Figure B-10: View south along the west boundary of neighbouring civic address 1169 Highway 2 with the 1175 Highway 2 Component.



Figure B-11: View south of the right-of-way entry associated with neighbouring civic address 1181 Highway 2.



Figure B-12: View northwest across the wetland within the 1175 Highway 2 Component.



Figure B-13: View of broken drainage pipe in the driveway right-of-way along the eastern side of the 1175 Highway 2 Component.



Figure B-14: View of former front entry driveway of civic address 1175 Highway 2.



Figure B-15: View of remnant building debris of former civic address 1175 Highway 2.

APPENDIX C:
INFORMATION FROM NOVA SCOTIA
ENVIRONMENT



Environment

Information Access
and Privacy

PO Box 442
Halifax, Nova Scotia
B3J 2P8

ph: (902) 424-2549
fax: (902) 424-8925

November 20, 2020

Our file # ENV-2020-3520/3531

Email: cynthia@oclgroup.com

Cynthia Gillis
OCL Group Ltd.
41 Alben Lane
Wellington NS B2T 1V2

Dear Ms. Gillis:

RE: 1157 Highway 2 (PID 45148111); 1175 Highway 2 (PID 45088614); 31 Highway 277 (PID 45088143); 2 Lloyd Dr. (PID 45088127); 4 Lloyd Dr. (PID 45088119); 6 Lloyd Dr. (PID 45088101); 8 Lloyd Dr. (PID 45088093); 10 Lloyd Dr. (PID 45088085); 12 Lloyd Dr. (PID 45088077); 1163 Highway 2 (PID 45088598); 1169 Highway 2 (PID 45088606); and 1181 Highway 2 (PID 45088648), Lantz

I refer to your enquiry of the Environmental Registry received November 6, 2020. We acknowledge receipt of payment for 12 properties.

No information was located through the Environmental Registry with regards to the above referenced properties.

Nova Scotia Environment makes no representations or warranties on the accuracy or completeness of the information provided.

Sincerely,

Tina Skeir

Tina Skeir
Information Access Office

Information provided from Nova Scotia Department of Environment 7 March 2008.



Information Access
and Privacy

PO Box 697
5151 Terminal Rd., 5th floor
Halifax, Nova Scotia
B3J 2T8

ph: (902) 424-8472
fax: (902) 424-6925

March 7, 2008

Our file # RD-08-0454

Fax: 466-5743

Cynthia Gillis
OCL Services Ltd.
47 North Street
Dartmouth,

Dear Ms. Gillis:

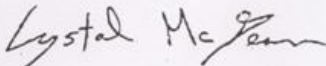
Re: 1155 No. 2 Highway, Lantz Elmsdale (supplemental)

As per your request, a supplemental search for 1155 No 2 Highway Lantz, in place of 1157 No. 2 Highway (as noted on application), was conducted.

Enclosed is the information which was located through the Environmental Registry with regard to 1155 No. 2 Highway, Lantz.

Nova Scotia Environment & Labour makes no representations or warranties on the accuracy or completeness of the information provided.

Yours truly,



For Carla Heggie,
Information Access & Privacy Manager

January 9, 1997

PETROLEUM STORAGE TANK REGISTRATION

REGISTRATION # 5125

OWNER OF TANKS

LOCATION OF TANKS

CHIGNECTO CENTRAL REGIONAL
60 LORNE STREET
TRURO, NS
B2N 3K3
1-800-770-0008

LANTZ DISTRICT ELEMENTARY SCHOOL
1155, HWY 2, LANTZ
HANTS CO., NS
B0N 1R0
883-2211

TYPE OF INSTALLATION: Government

TANK NO. 1

INSTALLATION YEAR	1980
STATUS OF TANK	Removed
TYPE OF TANK	Underground
DYKE NUMBER	
EST. CAPACITY (L)	4545
CONST MATERIAL	Steel
EXTERNAL PROTECTION	Unknown
INTERNAL PROTECTION	Unknown
PIPING	Black/bare steel
SECONDARY CONTAINMENT	
SUBSTANCE STORED	Fuel oil

EST. DATE LAST USED
EST. QUANTITY REMAINING
FILLED WITH INERT MAT

DATE OF REMOVAL	12/10/96
ANY CONTAMINATION	Yes
HOW MUCH	99200 kg
DISPOSAL SITE	

TANK INSTALLER

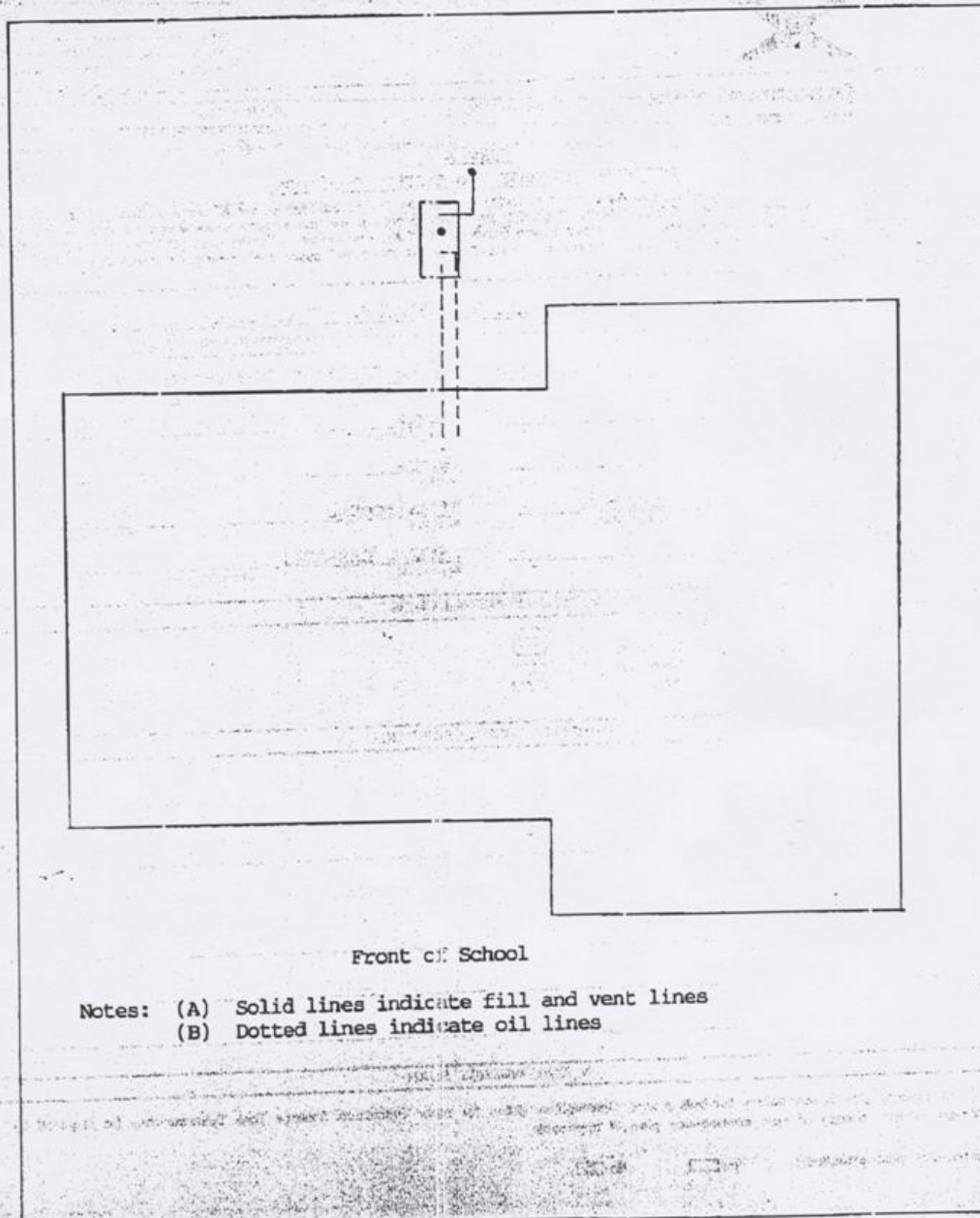
DYKE NUMBER	LENGTH (M)	WIDTH (M)	HEIGHT (M)	CAPACITY (M)	NUMBER DYKED
-------------	------------	-----------	------------	--------------	--------------

04 Mar 2008 12:05PM CCRSB TRUNK OVERFLOW

Page 2

LOCATION OF TANK(S)

Attach an engineering drawing or a neat sketch of the proposed installation, showing tank(s) and piping location, adjacent roads, buildings, wells, water bodies and corrosion protection equipment or dykes, where applicable. Number each tank, including waste oil and furnace oil tanks and identify using these numbers throughout the form.



APPENDIX D:
QUALIFICATIONS OF SITE ASSESSOR

CYNTHIA GILLIS, EP(CEA), EP(EMS LA)

EDUCATION/QUALIFICATION

- ❑ Phase I Environmental Site Assessment, Assoc. Environmental Site Assessors of Canada Inc., Halifax, NS (2017).
- ❑ Phase II Environmental Site Assessment, Assoc. Environmental Site Assessors of Canada Inc., Halifax, NS (2017).
- ❑ Atlantic Risk Based Corrective Action (RBCA) Training Program
- ❑ Nova Scotia Safety Certificate (APENS)
- ❑ 40-hour Contaminated Site Health and Safety Training (HAZWOPER) and renewals, WTI.
- ❑ 40-hour Certified ISO 14000 Lead Auditor Training
- ❑ ISO 14000 EMS Internal Auditor Training, QMI
- ❑ Mastering Environmental Health and Safety, Auditing Skills and Techniques (40-hour course), Arthur D. Little.
- ❑ Environmental Assessment of Contaminated Sites. Technical University of Nova Scotia, Halifax, NS
- ❑ 40-hour Certified ISO 9000 Lead Auditor Training, Technical University of Nova Scotia, Halifax, NS
- ❑ Diploma, Environmental Management, Technical University of Nova Scotia (1995)
- ❑ Environmental Professional (Certified Environmental Auditor) 1997 to 2022.
- ❑ Environmental Professional (Certified Environmental Management System Lead Auditor) (1997 to 2022)
- ❑ Certified Chemical Technologist (University College of Cape Breton, Sydney, NS).

RELATED EXPERIENCE:

- ❑ Conduct approximately 100 Phase I Environmental Site Assessments, annually.
- ❑ Conduct 12-15 Phase II or Phase III Environmental Site Assessments, annually.
- ❑ Environmental Compliance Audit for Department of Fisheries and Oceans (4 sites in Newfoundland and Labrador and 4 sites in Nova Scotia).
- ❑ Enhanced Phase I Environmental Site Assessment, CFB Greenwood, N.S.
- ❑ Environmental Assessment of DWP, HMCS Ville De Quebec/Hlfx Class Generic DWP
- ❑ Hazardous Materials Evaluation and Management; Mercury Survey CFB Gagetown
- ❑ CEAA Assessment for HMCS Nipigon, HMCS Terra Nova, HMCS Gatineau
- ❑ Risk Analyses of HazMat, HMC Halifax Class Ships
- ❑ Quantitative Risk Assessment of Pier 26 & Qualitative Risk Assessment Pier 27 St. John's Newfoundland
- ❑ EMS Gap Analyses and SDS Gap Analyses, 9 Wing Gander, Newfoundland
- ❑ StoraEnso: Audits - EMS; Energy Management, Effluent Management, Training Management, Solid Waste; HazMat; Transportation of Dangerous Goods; Stewardship and Resources Audits
- ❑ Environmental assessment and supervision of Docking Work Periods for HMCS St. John's, HMCS Toronto, HMCS Montreal, HMCS Athabaskan
- ❑ Assessment, development of specifications and terms of reference and PCB remediation of contaminated lagoon, CFS Debert
- ❑ Hazardous Materials/Waste Audit/Inventory, 9 Wing Gander
- ❑ Solid Waste Audit/Inventory, 9 Wing Gander
- ❑ CFNOS & QHM EMS Audit Review/Assist, MARLANT, CFB Halifax
- ❑ Implementation of EMS, Environmental Management System for STORA ENSO
- ❑ Quantitative Risk Assessment and Completion of Additional Site investigations at Site 50, Site 55, Site 57, Site 61 and Site 63 CFB Shearwater - Osborne Head/Hartlen Point;
- ❑ Detailed Site Investigation and Risk Assessment FDS — 9 Wing Gander, Newfoundland;
- ❑ Two Rivers Link Project - EIA, Tracadie — Sheila, New Brunswick
- ❑ Developed and delivered EMS Training, Stora Enso Port Hawkesbury, NS staff (800+ personnel).

PHASE I ENVIRONMENTAL SITE ASSESSMENT



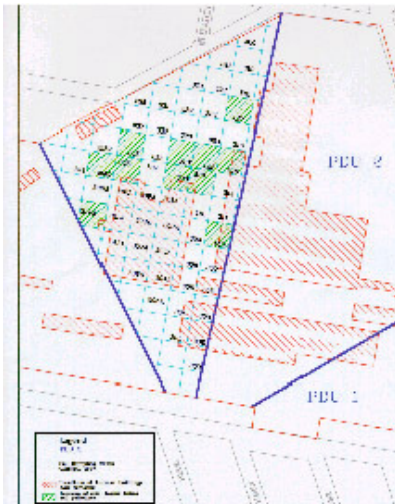
Since its founding in 1982, the **OCL Group** has been retained by private and government clients to evaluate environmental liabilities and risk associated with the buying and selling of property or development of “empty land”. OCL staff have conducted several thousand Phase I Environmental Site Assessments, following the CSA Z768 standard. Our staff are fully certified by the Association of Professional Environmental Auditing, as well as having certificates of training in such aspects as Asbestos-Containing Materials and *HAZWOPER*. The firm has an extensive “errors and omissions” insurance policy, including environmental liability. Our reports are accepted by a wide variety of financial institutions, such as BMO, RBC, ScotiaBank and CIBC. Examples of properties evaluated include: “Waste to Energy” (industrial) facilities, apartment buildings (4 to 150 unit), historic buildings being converted to condominiums, office buildings (1 story multi-tenant format to 20 stories), “empty land” (former industrial or commercial lands and “empty land” (truly undeveloped land). OCL staff also have extensive experience in conducting the other Phases of Environmental Site Assessment and therefore can provide accurate determination of the need to proceed to intrusive sampling or site remediation. We also have provided training to numerous organizations on the topic, including a seminar to the Nova Scotia Real Estate Association.



PHASE II AND III ENVIRONMENTAL SITE ASSESSMENTS



Many environmental liabilities associated with property ownership or purchase are due to chemical contamination. As environmental chemists, **OCL Group**, has been retained since the early 1980's, by private and government clients to evaluate property environmental liabilities. Using Phase 1 determinations as a base, OCL staff have conducted a broad range of Phase II and Phase III (intrusive investigation) Environmental Site Assessments. The procedures follow those described in CSA Standard CSA/CAN Z769-00. The assessments have included evaluation of soil, surface waters, groundwater and indoor air quality. Types of properties have ranged from scrap yards to commercial buildings and from residential properties to industrial sites. Our chemical expertise and familiarity with environmental regulations in several provinces can greatly assist the Client in evaluating the risk to human health and the environment and thus in selecting the best mode for remediation.



PHASE 4, 5 AND 6 ENVIRONMENTAL SITE ASSESSMENTS (REMEDIAL PLAN, SITE REMEDIATION AND CLOSURE SURVEY)



Having identified and delineated contaminated zones within a property, **OCL Group** has been retained by a variety of property developers to prepare Remedial Action Plans (Phase 4 ESA), obtain regulatory approval for the Plans, implement the plans (Phase 5 ESA) and evaluate the remediation as part of a Closure Survey and Record of Site Condition or Certificate of Clearance (Phase 6 ESA).

A key component of the Remedial Action Plan may be the evaluation of risk associated with property contamination. This activity includes the use of both RBCA-Atlantic PIRI and trace metal exposure risk models. We have successfully worked with Clients and regulatory agencies to facilitate the establishment of risk-based corrective actions and the development of inner-city properties. We have also worked closely with Clients under the concept of a Brownfield development, wherein we ensure all environmental constraints are met while still meeting goals of economics and development.

Major examples include: CN Rail Car Shops (280 acre property in Moncton, NB); 5 acre site on McLean St., Halifax, NS; 5 acre site in Dartmouth, NS.

