

**PHASE I ENVIRONMENTAL SITE ASSESSMENT**

**224 HIGHWAY 214 (PID 45147998)**

**ELMSDALE, MUNICIPALITY OF EAST HANTS**

**NOVA SCOTIA**

***FINAL REPORT***

**MARCH 2019**

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**224 HIGHWAY 214 (PID 45147998)**

**ELMSDALE, MUNICIPALITY OF EAST HANTS**

**NOVA SCOTIA**

<b>Report prepared for:</b>	Municipality of East Hants Box 230, Suite 170 15 Commerce Court Elmsdale, NS B2S 3K5
<b>Prepared by:</b>	OCL Services Ltd. 41 Alben Lane Wellington, NS B2T 1A2

***FINAL REPORT***

**MARCH 2019**



5158-R  
14 March 2019

Municipality of East Hants  
Box 230, Suite 170  
15 Commerce Court  
Elmsdale, NS  
B2S 3K5

**RE: 224 HIGHWAY 214 (PID 45147998), ELMSDALE, MUNICIPALITY OF EAST HANTS,  
NOVA SCOTIA**

To whom it may concern:

As reported herein, between 28 November 2018 and 14 March 2019, **OCL Services Ltd.** conducted a Phase I Environmental Site Assessment of a Subject Property, consisting of one land parcel and one institutional building, located at the above-noted civic address. As a Phase I Assessment, the 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.

On 13 February, *OCL Services Ltd.* issued a DRAFT REPORT based on existing information. In spite of further detailed file review by both Chignecto-Central Regional Centre for Education (former Regional School Board) and Nova Scotia Environment, there are no files pertaining to the former spill or site remediation. The enclosed Report provides the final commentary on the Assessment and provides recommendations to conduct a Phase II Environmental Site Assessment to provide necessary confirmation of absence of petroleum contamination.

The Phase I Environmental Site 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 us if you require additional information or clarification.

Yours truly,

**OCL SERVICES LTD.**

A handwritten signature in blue ink, appearing to read 'MacKnight', is written over a light blue diagonal band.

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

41 Alben Lane, Wellington, Nova Scotia, Canada B2T 1A2

Tel: 1-902-463-0114 • Fax: 1-902-466-5743  
Email: [info@oclgroup.com](mailto:info@oclgroup.com) • [www.oclgroup.com](http://www.oclgroup.com)

## 1. SUMMARY

The purpose of the study was to conduct a Phase I Environmental Site Assessment of a Subject Property consisting of one land parcel and one institutional building, identified as civic address 224 Highway 214, Elmsdale, Municipality of East Hants, Nova Scotia and more fully described by PID 45147998. The Subject Property has a registered area of +/- 33,993 sq m (+/- 365,904 sq ft or 8.4 acres) with +/- 120 m (+/- 394 ft) frontage on Highway 214. A portion of the land parcel is subject to a deeded right-of-way in favour of the East Hants Development Commission for the purpose of "laying down and constructing water and sewer lines in, under and upon the said lands, and of keeping and maintaining them at all times in good condition and repair".

The Subject Building is a one-storey concrete block/brick structure on a concrete pad, currently known as the Chignecto-Central Adult High School (Elmsdale) and formerly known as the Elmsdale Elementary School. The centre section was the "original" School, constructed circa 1961; with a north wing (complete with a gymnasium, additional classrooms and service rooms) added, circa 1967; and, a south wing added, circa 1998. In 1998 part of the north wing was demolished to facilitate remediation of an oil spill with construction of replacement rooms, a new north entrance and a replacement multi-use room in 1999. Shifts in population demographics resulted in students being shifted to other, newer elementary schools and the Building being repurposed; much of the north and centre sections being occupied by offices/staff of the Municipality of East Hants. In 2018, the Regional Centre for Education declared the Subject Property to be "surplus" and transferred the asset back to the Municipality of East Hants.

Reference to the Municipality of East Hants By-Law map indicates the Subject Property is zoned "IU" (Institutional Use). Properties to the north and south are single-family residential; properties to the east, across Highway 214 are single-family residential; properties to the west are undeveloped and adjacent to Highway 102. The nearest retail gasoline facility is located about 0.15 km north at civic address 248 Highway 214.

The area of the Subject Property not encompassed by the Subject Building currently consists of a gravel/asphalt paved circular driveway with associated parking; grassed area along the western front and grassed playing fields to the north and east. The Subject Property is not a Registered Heritage Property, is not located on, or adjacent to, aboriginal lands, is not located in an area identified for protection, and is not located in the "high risk flood plain" zones of Nine Mile River to the east and southeast; or of the Shubenacadie River.

The Subject Property is connected to municipal potable water and sanitary sewage systems. When first constructed, the Subject Building was served by an on-site septic system and potable water well. It is assumed these former systems were abandoned and are still located within the Subject Property.

The Subject Building is heated by a standard perimeter hot-water system supplied from two *Weil-McLain* oil-fired boilers located in the Mechanical Room (north rear of the Building). It was noted the Equipment licenses, issued pursuant to the Boiler and Pressure Equipment Regulation, had expired 8 June 2018. It is recommended the licenses be renewed. The fuel to the two furnaces is



supplied from one, 4,457 L, Registered (2013-085167-001), steel, double-wall fuel storage tank (dated 1998) and situated within a locked chain link compound to the west of the Mechanical Room. The feeder lines are located underground within plastic piping extending from the fuel tank enclosure to the Mechanical Room and are not protected (coated) within the Mechanical Room. There was no evidence of fuel spills around the tank or the furnaces. *Note: The tank was originally identified as 98-8540-01 and assumed to have replaced previous fuel tank/s.*

The exterior aboveground fuel oil tank poses a potential low to moderate environmental liability to the Subject Property based on the age of the tank, unprotected feeder lines and the actual presence of a liquid fuel oil system, mitigated by the tank being a double-wall construction.

The Elmsdale Elementary School is reported to have had a fuel oil leak in 1998 with resultant contamination in the soils at the north end of the then north wing which impacted soils under a portion of the original gymnasium, several class rooms and the caretaker's room. It is understood the current tank replaced one or more original tanks. The former fuel lines (unprotected) are visible in front of the two furnaces. Information received from Nova Scotia Environment pursuant to *Freedom of Information and Protection of Privacy* requests and confirmed by a District Manager, as well as requests to the Chignecto Central Regional Centre for Education indicated there is no record of previous tanks nor any records of fuel spills and remedial activities. Based on the lack of documentation, it is recommended a Phase II Environmental Site Assessment be conducted to confirm site conditions meet the current Tier I Environmental Quality Standards for the Subject Property.

Reference to summaries of Asbestos Containing Material surveys (2008, 2011) and a 2019 Hazardous Materials Survey, indicated numerous and different types of materials (e.g., exposed piping; texture coating; pipe elbows; vinyl tile; caulking (interior and exterior); transite board; cementitious board (interior and exterior); expansion joint caulking material) contain concentrations of asbestos ranging from 1% to 65%, as chrysotile. These concentrations exceed both the Nova Scotia Labour construction guidelines and Nova Scotia Environment Asbestos Waste Material disposal guidelines. The presence of readily visible friable asbestos is considered a high environmental liability. It is recommended readily-visible asbestos-containing materials and/or deteriorated other asbestos containing materials be removed by an approved contractor under controlled conditions and appropriately disposed. Not-readily visible areas containing asbestos (e.g., ceilings, wall cavities) should be isolated. An Asbestos Management Plan should be prepared, so that any future workers/contractors, can be made aware of the presence of asbestos in work areas (e.g., repair of heating pipes; installation of new electrical or communications lines).

Based on the age of the Building, there was a potential for some paints and finishes to be classed as "lead containing paints"; i.e., containing more than 0.1% or 1,000 mg/kg lead. Reference to the 2019 Hazardous Materials Survey indicated four samples of paint were tested for "leachable lead". Concentrations in three samples were less than the detection limit; 49 mg/kg in one sample, which was much less than the Guideline of 1,000 mg/kg. The presence of lead-based paints poses a negligible environmental liability. Should older materials be encountered during renovation, materials should be tested and if found to be lead-containing be appropriately removed and disposed.

The lighting was a combination of incandescent, compact fluorescent and numerous tube fluorescent fixtures. Ten tube fluorescent light fixtures were examined during the 2019 Hazardous Materials Survey. The ballasts were determined to be non-PCB-containing ballast. However, when the Building is demolished or light fixtures changed to LED format, light ballasts should be cross-referenced against the Environment Canada EPS 2/CC/2 document, Identification of Lamp Ballasts Containing PCBs. Any ballasts considered to be PCB containing will require appropriate disposal. The presence of *potential* in-use PCB containing light ballasts poses a low to negligible environmental liability to the Subject Property. The Subject Property has never been registered as a site for PCB-contaminated materials nor ever used for the storage of PCB-contaminated materials.

Units considered to contain an ozone depleting substance consist of standard refrigerators and numerous wall/window-mount air-conditioners. The equipment is assumed to be to be charged with a permitted refrigerant (regulated ozone-depleting substance) such as R-22. Servicing or removal of the regulated refrigerant must be conducted by a certified contractor. There is no environmental liability related to ozone-depleting substances, as currently constituted.

There was no evidence of urea-formaldehyde insulation (UFFI) or hazardous materials (e.g., cleaning supplies and paints) associated with the Subject Building. A few ceiling tiles were noted to have water stains and a ceiling-mount heat pump had a water drain from a hallway ceiling. Mould contamination, associated with water staining poses a negligible environmental liability, as currently constituted.

The underlying bedrock is identified as the Lower Windsor Group consisting of the White Quarry, Stewiacke, Carrols Corner, Macumber and Gays River formations. The bedrock consists of anhydrite, salt, marine dolostone and Limestone. These materials are not acid-producing and therefore the excavation and off-site disposal of such materials is not regulated, pursuant to the Sulphide Bearing Materials Disposal Regulations.

Reference to the Map Showing Potential for Radon in Indoor Air indicates 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 entry is considered a negligible to low environmental liability to the Subject Property.

Neighbouring residential properties pose potential low to negligible environmental risks based on the location of their fuel storage tanks relative to the Subject Property. There are no immediately neighbouring bulk fuel facilities or dry-cleaning facilities. The nearest gasoline retail facility is located about 0.15 km north (*Irving Circle K*). This facility is a relatively new installation with monitored underground tanks. Based on proximity, this facility poses a potential low environmental risk to the Subject Property. Other retail gasoline facilities (*ESSO, Petro Canada*) are located further north and pose potential negligible environmental risks.

*Determination:*

*As currently constituted, the lack of documentation regarding the 1998 fuel spill, partial building demolition and subsequent site remediation pose an undefinable environmental liability to the Subject Property. It is recommended a Phase II Environmental Site Assessment be conducted to provide appropriate documentation defining the status of the Property with respect to Tier I Environmental Quality Standards for potential future residential and/or commercial uses.*

*Based on current information, there is one significant environmental liability associated with the Subject Property:*

- ❑ *The presence of numerous sites throughout the Building of readily-visible friable asbestos is considered a high environmental liability. It is recommended readily visible asbestos friable materials and “deteriorated” other asbestos containing materials be removed by an approved contractor under controlled conditions and appropriately disposed. Hidden areas containing asbestos (e.g., ceilings, wall cavities) should be isolated. An Asbestos Management Plan should be prepared following Nova Scotia Labour guidelines and any workers/contractors etc. be advised of the locations of asbestos.*

*The exterior aboveground fuel oil tank poses a potential low to moderate environmental liability to the Subject Property based on the age of the tank, unprotected feeder lines and the actual presence of a liquid fuel oil system, mitigated by the tank being a double-wall construction.*

*Issues of PCB-containing light ballasts, lead-based paints, miscellaneous cleaning supplies as hazardous materials, radon entry and mould contaminated materials pose negligible to low environmental liabilities, as currently constituted.*

*Neighbouring residential properties pose potential low to negligible environmental risks based on the location of their fuel storage tanks relative to the Subject Property. There are no immediately neighbouring bulk fuel facilities or dry-cleaning facilities. The nearest gasoline retail facility is located about 0.15 km north (Irving Circle K). This facility is a relatively new installation with monitored underground tanks. Based on proximity, this facility poses a potential low environmental risk to the Subject Property. Other retail gasoline facilities (Shell, ESSO, Petro Canada) are located sufficiently distant and pose potential negligible environmental risks.*

## 2. INTRODUCTION

As reported herein, between 28 November 2018 and 14 March 2019, *OCL Services Ltd.* conducted a Phase I Environmental Site Assessment of a Subject Property, consisting of one land parcel and one institutional building identified as civic address 224 Highway 214, Elmsdale, Municipality of East Hants, Nova Scotia and more fully described by PID 45147998 (see Figures 1 and 2). The Subject Property has a registered area of +/- 33,993 sq m (+/- 365,904 sq ft or 8.4 acres) with +/- 120 m (+/- 394 ft) frontage on Highway 214.

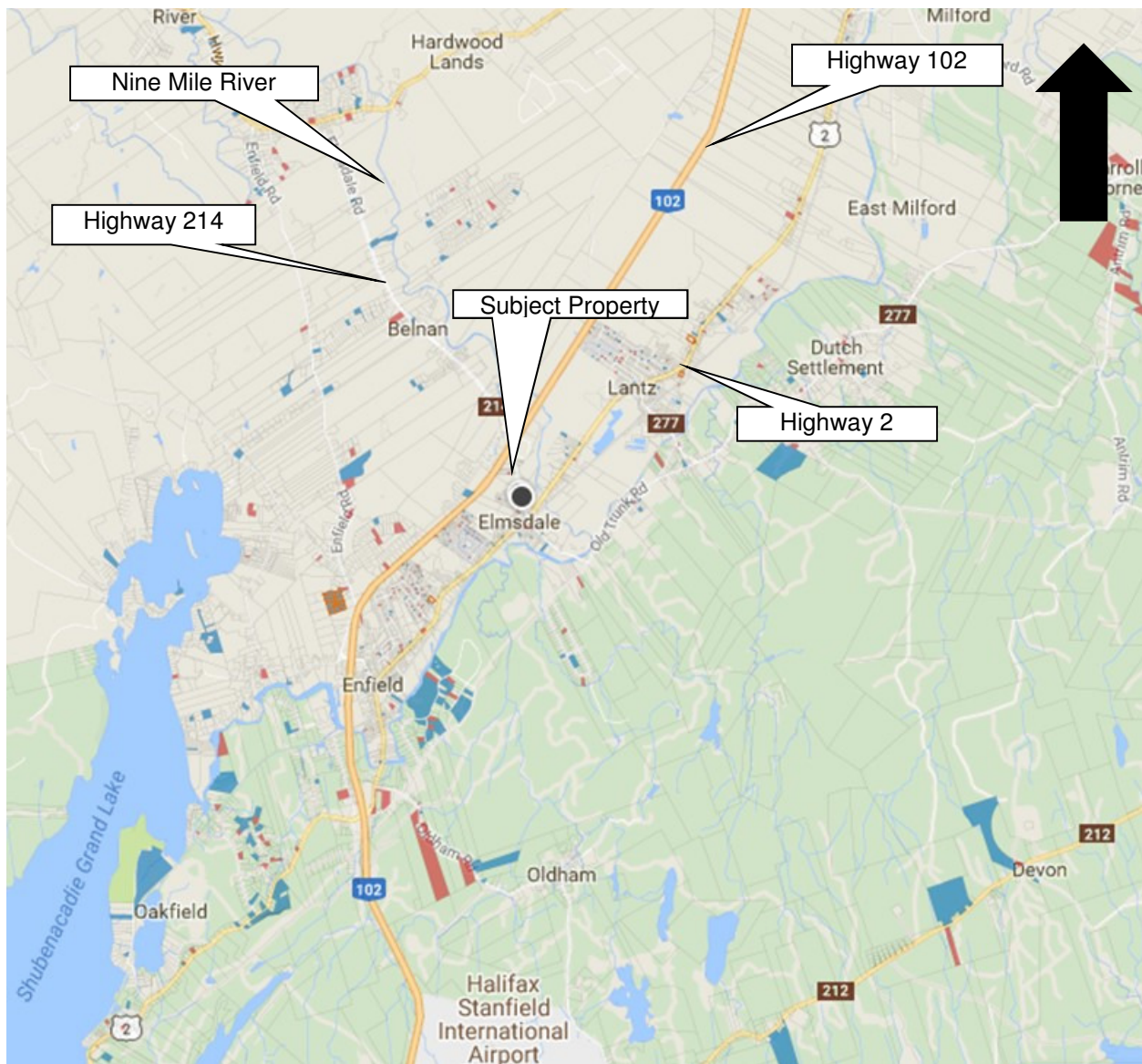
The Subject Building is currently known as the Chignecto-Central Adult High School (Elmsdale) and formerly known as the Elmsdale Elementary School. The centre section was the “original” School, constructed circa 1961; with a north wing (complete with a gymnasium, additional classrooms and service rooms) added, circa 1967; and, a south wing added, circa 1998. In 1998 part of the north wing was demolished to facilitate remediation of an oil spill with construction of replacement rooms, a new north entrance and a replacement multi-use room in 1999. Shifts in population demographics resulted in students being shifted to other, newer elementary schools and the Building being re-purposed; much of the north and centre sections being occupied by offices/staff of the Municipality of East Hants. In 2018, the Regional Centre for Education declared the Subject Property to be “surplus” and transferred the asset back to the Municipality of East Hants.

On 13 February 2019, *OCL Services Ltd.* issued a DRAFT REPORT based on existing information. In spite of further detailed file review by both Chignecto-Central Regional Centre for Education (former Regional School Board) and Nova Scotia Environment, there are no files pertaining to the former spill or site remediation. The enclosed Report provides the final commentary on the Assessment and provides recommendations to conduct a Phase II Environmental Site Assessment to provide necessary confirmation of absence of petroleum contamination.

- ❑ The 1 March 1961 Plan of the Proposed School Site; the Colchester District East Hants School Board grant of right to enter the property to the East Hants Development Commission; and the Schedule “A” Property description of the lands granted for access are provided in Appendix A.
- ❑ Views of the Subject Property are provided in Appendix B (photographs taken 28 November 2018).
- ❑ Documentation received from the Nova Scotia Department of Environment, pursuant to a *Freedom of Information and Protection of Privacy (FOIPOP)* request, is provided in Appendix C.
- ❑ Assessor qualifications are provided in Appendix D.



**Figure 1: General Area of the Subject Property**  
(taken from <http://www.viewpoint.ca>)



**Figure 2:** 13 August 2017 aerial photograph of Subject Property and environs.  
(from Google Earth)



### 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 2018 to March 2019.

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. This complies with Canadian Standards Association standard CAN/CSA Z768-01<sup>1</sup>.

Relevant information was provided by the Municipality of East Hants; Chignecto Central Regional Centre of Education (former Regional School Board); Nova Scotia Land Information Registry; Nova Scotia Registry of Deeds; and Nova Scotia Environment.

Reference was made to:

- ❑ Plan Showing Parcel “A” Proposed School Site Divided from Lands of Allan Roulston at Elmsdale; completed by Orrill A. Clark, of Clark Surveying Service dated 16 February 1961; approved 7 March 1961.

There are no other known environmental site assessments of the Subject Property.

Also referenced were:

- ❑ Stantech Consulting Ltd. 2011. Summary: Chignecto-Central Regional School Board Asbestos Re-Assessment, Elmsdale District Elementary School.
- ❑ CBCL Ltd. February, 2019. Hazardous Building Materials Survey. Draft Report. Chignecto-Central Adult High School (CCAHS – Elmsdale), 224 Highway 214, Elmsdale, NS. Prepared for Municipality of East Hants.

There were no limitations to the site Inspection conducted by Cynthia Gillis and Scott MacKnight (OCL Services Ltd.) on 28 November 2018 and which included access to the exterior land area and all of the interior areas of the Subject Building.

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

- ❑ Pursuant to a *Freedom of Information and Protection of Privacy* request there was no information pertaining to the Subject Property with the exception of one registered aboveground fuel oil tank registered in 1998.
- ❑ The registered aboveground fuel oil tank replaced a former underground fuel oil tank or tanks (un-registered).
- ❑ It is reported leakage from the underground tank in September 1998 resulted in remedial activities which included demolition of a portion of the original gymnasium, several classrooms and the caretakers’ room. A new smaller addition was constructed with a new entrance.

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<sup>1</sup> 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.
- ❑ The Subject Property is connected to municipal potable water and sanitary sewage systems. When first constructed the school had a domestic water well and on-site septic field.

## 4. PROPERTY DESCRIPTION

*Please see the Property Schedule "A" provided in Appendix A and site visit photographs provided in Appendix B.*

### 4.1 Property

The Subject Property is identified as civic address 224 Highway 214, Elmsdale, Municipality of East Hants, Nova Scotia and more fully described by PID 45147998. The Subject Property has a registered area of +/- 33,993 sq m (+/- 365,904 sq ft or 8.4 acres), with +/- 120 m (+/- 394 ft) frontage on Highway 214. A portion of the land parcel is subject to a deeded right-of-way in favour of the East Hants Development Commission for the purpose of "laying down and constructing water and sewer lines in, under and upon the said lands, and of keeping and maintaining them at all times in good condition and repair" (see parcel description Appendix A).

Reference to the Municipality of East Hants By-Law map<sup>2</sup> indicates the Subject Property is zoned "IU" (Institutional Use).

Properties to the north and south are single-family residential; properties to the east, across Highway 214, are single-family residential; properties to the west are undeveloped and adjacent to Highway 102. The nearest gasoline retail facility is located at civic address 248 Highway 214.

The area of the Subject Property not encompassed by the Subject Building currently consists of paved/graveled entry drives with parking, extensive grassed fields and a treed buffer zone between the rear yard and the Highway 102 Right-of-Way.

The Subject Property is not a Registered Heritage Property; is not located on, or adjacent to, aboriginal lands; is not located in an area identified for ecological protection; and, is not located in the "high risk flood plain" zones of Nine Mile River or the Shubenacadie River.

The Subject Property is connected to municipal potable water and sanitary sewage systems. When first constructed the Building was served by a domestic water well and on-site septic field. It is assumed the on-site septic field was abandoned and not excavated.

### 4.2 Building

The Subject Building was constructed circa 1961 as a purpose-built elementary school (Elmsdale District Elementary). The Subject Property was previously undeveloped. The Building is a one-storey structure with brick/masonry exterior with corrugated metal trim, except for the new gymnasium which has corrugated metal and vinyl siding as exterior materials. Due to increasing population in the Enfield/Elmsdale area, a north wing was constructed, circa 1967, to provide a full gymnasium, additional classrooms and various service rooms. The south wing was added, circa 1998, to provide additional classrooms and administrative area. In 1998, oil contamination under part of the north wing necessitated demolition of the gymnasium and several classrooms to provide access for site remediation. The replacement included new classrooms, new north

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<sup>2</sup> Municipality of East Hants Official Community Plan – Land Use By-Law Map, By-Law 500 as amended to July 2016.

entry and a new multi-use room (rather than a replacement gymnasium). In the early 2000's, several of the classrooms within the north wing were converted into offices for the Municipality of East Hants. Each of the converted classrooms was sub-divided into a cluster of four offices including installation of new windows, new interior walls/doors, and new wall-mount air conditioning units. Subsequently municipal staff were shifted to an addition to the Lloyd Matheson Centre, resulting in most of the north and central sections being unused.

Figure 3 provides a schematic of the Building.

Exterior materials include but are not limited to:

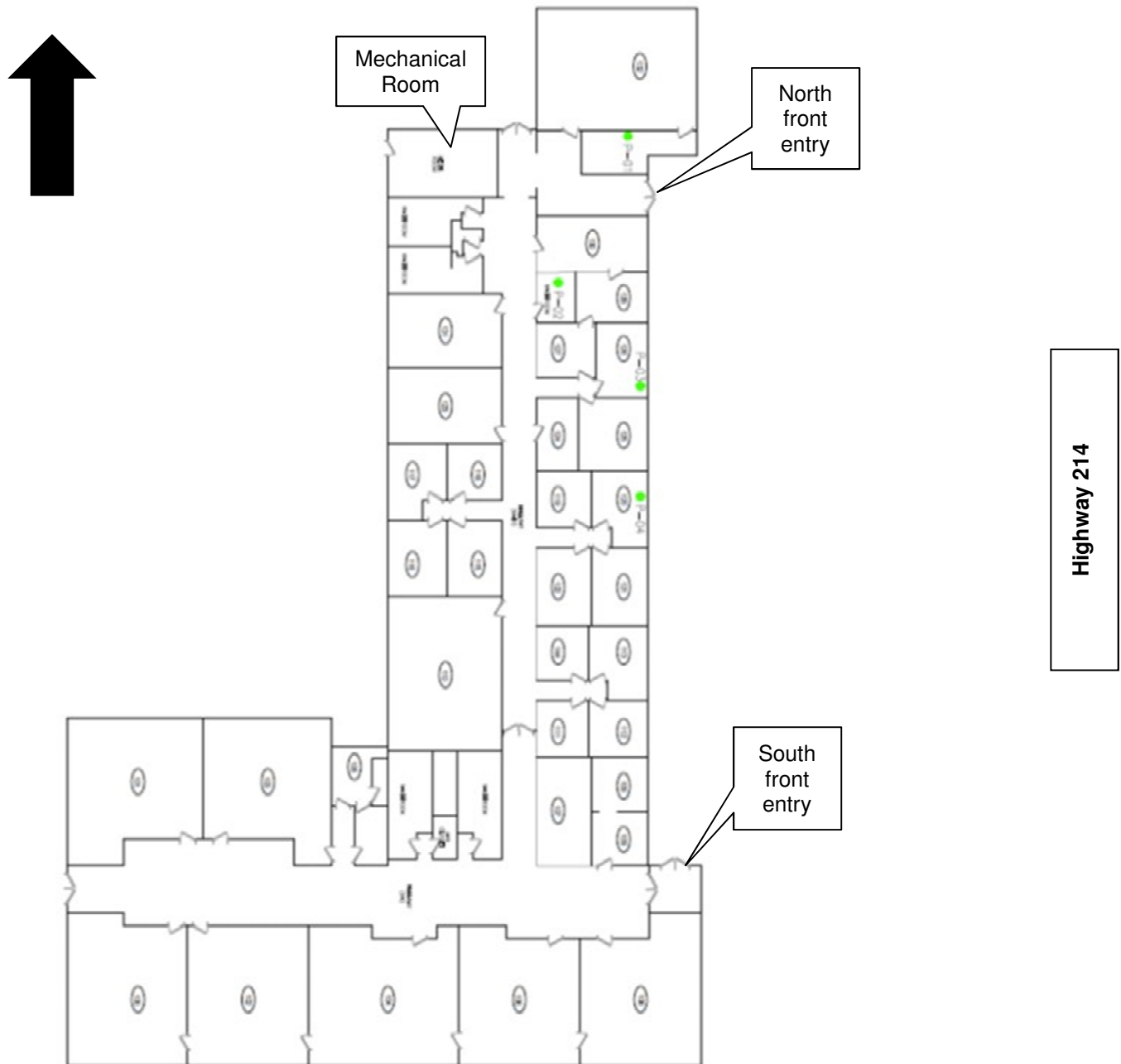
- ❑ Siding: brick; corrugated metal sections; vinyl; parge over concrete.
- ❑ Roof: asphalt shingle; rolled bitumen.
- ❑ Trim: metal
- ❑ Soffits: metal; vinyl.
- ❑ Windows: vinyl-framed; metal-framed.
- ❑ Doors: steel; steel/glass.
- ❑ Rain control: metal eavestroughs and downspouts.
- ❑ Chimney: brick.
- ❑ Painted pressure-treated wood stairs and ramp at North Entrance.
- ❑ Wood support posts.

Interior materials include but are not limited to:

- ❑ Ceilings: open insulated (gymnasium); suspended ceiling tiles (several types); unfinished exposed structure.
- ❑ Walls: concrete block; brick; drywall; ceramic tile.
- ❑ Floors: concrete; 12-inch vinyl tile; sheet vinyl.
- ❑ Trim: metal; wood.
- ❑ Piping: copper; ABS.
- ❑ Lighting: tube fluorescent; incandescent; compact fluorescent.
- ❑ Insulation: fiberglass.
- ❑ Steel posts.

The exterior storage shed is a wood-frame structure with wood walls, wood floor, asphalt shingle roof. There is no electricity to the building and no heating system.

**Figure 3: Schematic of Subject Building**  
(from CBCL 2019)



## 5. ASSESSMENT INFORMATION

### 5.1 Previous structures and Remnants of Structures

The history of Elmsdale<sup>3</sup>, like the neighbouring communities of Enfield and Lantz owed its settlement and growth to the Shubenacadie Canal and the construction of the Inter-Colonial Railroad. Until the demand for workers on these projects brought new families into the district, there were only isolated farms along the river.

Elmsdale was one of several small villages along Highway 2, then the primary route between Halifax and Truro (thence to northern and eastern Nova Scotia), as well as being a rail station of the *Inter-Colonial Railway* (later *CN Rail*) linking Halifax and Montreal. In the early 1960's, a new Halifax International Airport was constructed to the southeast of Enfield, leading to the construction of a new Highway 102 from Halifax through the Waverly-Fall River area to the Airport and thence connecting to Highway 2 at Enfield, about six kilometers south of the Subject Property. Highway 102 was later extended to Truro and then widened to the current divided four-lane highway. The new highway diverted much of the through-traffic, particularly transport trucks. However, traffic volume of commuter traffic has returned to Highway 2, Highway 214/Elmsdale Road, as the result of considerable "in-fill" of residential housing in Elmsdale and the neighbouring villages of Enfield, Lantz and Milford, with residents commuting to work at the Airport, Burnside Business Park and city centre. The development of these "bedroom" communities promoted the development of several commercial retail centres around Interchange 8 (Highway 214 with Highway 102), about 0.5 kilometer north of the Subject Property.

The Subject Property was deeded to the Municipality by Alan Roulston in March 1961. The East Hants Elementary School was subsequently built circa 1961 on the previously undeveloped land. Subsequently a wing was added to the north end in 1967 and an additional wing added to the south end side in 1998. A portion of the north wing was demolished to facilitate remedial activities due to an oil spill in 1998. Subsequently a small portion of the gym was closed in, classrooms built and a new north entry added.

Figure 4 (1966 aerial photograph), Figure 5 (1981 aerial photograph), Figure 6 (1992 aerial photograph), Figure 7 (2003 aerial photograph), Figure 8 (2003 aerial photograph), Figure 9 (August 2011 aerial photograph) and Figure 2 (August 2017 aerial photograph) illustrate changes to the general neighbourhood over the past 50+ years.

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<sup>3</sup> <https://www.easthants.ca/visitors/history-east-hants/villages-of-east-hants/elmsdale-history/>

## 5.2 Fuel or Chemical Storage/Delivery Systems

The Subject Building is heated by two *Weil-McLain (Canada) Limited* oil-fired boilers located in the Mechanical Room at the north end of the Building. It was noted the licenses issued pursuant to the *Boiler and Pressure Equipment Regulation* expired 8 June 2018. It is recommended the licenses be renewed. The two boilers are supplied from one, 4,457 L Registered (2013-085167-001), steel, double-wall fuel storage tank (dated 1998) and situated within a locked chain link compound to the west of the mechanical room. (*Note: The tank was originally identified as 98854001*). The feeder lines are located within a buried plastic pipe and are not the protected (coated) format in the sections within the furnace room. There was no evidence of fuel spills around the tank or the furnaces.

The existing fuel oil tank and delivery system is considered a potential low to moderate environmental liability to the Subject Property based on the age of the tank, the unprotected/partially buried feeder lines and the actual presence of a liquid fuel oil system, mitigated by the tank being a double-wall format.

There are no other fuel or chemical storage or delivery systems within the Subject Property.

Anecdotal information indicates a former fuel storage system is reported to have leaked in 1997-1998, with resultant contamination of soils around and under a portion of the original gymnasium, several classrooms and the caretakers' room. It is believed the current tank replaced one or more original tanks. Normally, all of the information related to the spill and subsequent remediation would have been registered with Nova Scotia Environment. The information can then be accessed, pursuant to a standard *Freedom of Information and Protection of Privacy Act (FOIPOP)* request. However, between September 2018 and January 2019, *OCL Services Ltd.* submitted three *FOIPOP* requests for the Subject Property and each time the Department has indicated they have no records of previous tanks nor any documentation regarding fuel spills and remedial activities. This was confirmed by a District Manager, Nova Scotia Environment. Further, inquiries to Chignecto Central Regional Centre for Education (former Regional School Board) indicated they also had no documentation regarding a spill or subsequent remediation. Therefore, to define and describe the environmental status of the Subject Property, it is recommended a Phase II Environmental Site Assessment be conducted, with particular focus on the area of the Subject Property adjacent to the northern end of the Subject Building.

## 5.3 Water and Sewage

The Subject Property is connected to municipal potable water and sanitary sewage systems of the Municipality of East Hants. When first constructed the Subject Building was served by an on-site potable water well and septic system. It is assumed the former septic field is still located within the Subject Property and may require removal of meet future property uses.

The East Hants Water Facility was constructed in 1977 and upgraded in 1991 and 2007. The source water is the Shubenacadie River and the Grand Lake Watershed. The treatment facility consists of dissolved air flotation and sedimentation in Train Technology, multimedia filtration, fluoridation, disinfection and corrosion control.

The Lantz Wastewater Treatment Plant (aerated lagoon), constructed in 1990, serves the communities of Enfield, Elmsdale and Lantz. After treatment, the treated disinfected water is discharged to the Shubenacadie River.

#### **5.4 Waste Handling**

Solid wastes in the Municipality of East Hants are required to be source-separated, in accordance with the Nova Scotia Solid Waste Resource Management Regulations<sup>4</sup> and the East Hants Solid Waste Resource Collection and Disposal By-Law (By-Law No. 4-6, as amended to 4 July 2012). 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.

Solid wastes are appropriately sorted and separated into various containers. Wastes are collected by a commercial service (currently *Miller Waste*) and transported to the East Hants Management Centre (former Georgefield Landfill), which is owned and operated by the Municipality. There is no environmental liability associated with the current solid waste handling and disposal.

#### **5.5 Heating/Ventilation/Air Conditioning Systems**

The Subject Building is heated by a perimeter radiator system supplied from two *Wiel-McLain* oil-fired boilers located in the Mechanical Services Room at the north end of the Subject Building. There are supplemental electric baseboard heaters and ceiling mount heaters in the portion of the former gym located on the east end. Domestic hot-water is provided by electric hot-water tanks.

Ventilation is by a combination of formats: operable windows, ceiling plenum forced air ventilation and wall mount individual air conditioning units. As most of the Building is currently not in use, the ceiling plenum and wall mount air-conditioning units are not in use.

Units considered to contain an ozone depleting substance consist of refrigerators and numerous wall-mount air-conditioners. The equipment is assumed to be to be charged with a permitted refrigerant<sup>5</sup> (regulated ozone-depleting substance) such as R-22. Regulation requirements include but are not limited to:

- no person shall release or permit the release into the atmosphere of an ozone-depleting substance
- no person shall dispose of equipment or fire extinguishing equipment that contains an ozone-depleting substance without first ensuring that the ozone-depleting substance is recovered

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<sup>4</sup> Solid Waste-Resource Management Regulations, 61/2007, *Environment Act*, S.N.S. 1994-95, c. 1 O.I.C. 96-79 (February 6, 1996), N.S. Reg. 25/96 as amended up to O.I.C. 2007-102 (February 22, 2007).

<sup>5</sup> Ozone Layer Protection Regulations, Section 112, *Environment Act* S.N.S. 1994-95, c.1 Order in Council 95-293 (April 11, 1995), N.S. Reg. 54/95.



- no person shall (a) service, install or dismantle equipment or a component of equipment that is in contact with or controls the containment of an ozone-depleting substance; or (b) reclaim, recover, recycle or reuse an ozone-depleting substance, unless that person has successfully completed an approved environmental awareness course or is working under the direct supervision of a person who has successfully completed an approved environmental awareness course.

There is no environmental liability related to ozone-depleting substances, as currently constituted. However, servicing or removal of the regulated refrigerant must be conducted by a certified contractor.

## 5.6 Fire Extinguishing and Alarm Systems

The Subject Building is not equipped with a sprinkler system. The Subject Building is equipped with a *Mircom FA-3000* series fire alarm, fire extinguishers, smoke detectors and emergency lights.

There are fire hydrants located along Highway 214, with the closest hydrant located in front of the Subject Property. The Subject Property is served by the Elmsdale (Volunteer) Fire and Emergencies Station located at 720 Highway 2, with mutual aid agreements with surrounding volunteer fire departments including, Lantz, Nine Mile River, Dutch Settlement, Shubenacadie, Stewiacke and Enfield.

## 5.7 Polychlorinated Biphenyls (PCB)

PCB were commonly used in electrical equipment manufactured prior to 1979. Since then all manufacture and sale of such equipment has been prohibited. Use, handling and disposal of PCB containing equipment is regulated<sup>6</sup>. Provided any PCB containing equipment is still in active service, special management procedures are not required. When any PCB-containing 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.

The lighting was a combination of incandescent, compact fluorescent and numerous tube fluorescent fixtures. As a representative sample, ten tube fluorescent light fixtures were examined as part of the CBCL Hazardous Materials Survey. The examined fixtures were found to not be equipped with PCB-containing ballasts. In the event an older unit is removed or replaced the light ballasts should be identified and cross referenced against the Environment Canada EPS 2/CC/2 document, Identification of Lamp Ballasts Containing PCBs. Any ballasts considered to be PCB containing will require appropriate disposal. The presence of *potential* in-use PCB containing light ballasts poses a low to negligible environmental liability to the Subject Property and will arise as

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<sup>6</sup> PCB Management Regulations, Section 84, *Environment Act*, S.N.S. 1994-95, c. 1 O.I.C. 95-291 (April 11, 1995), NS Reg. 52/95 as amended by O.I.C. 97-747 (December 2, 1997), N.S. Reg. 163/97.

a potential liability only when a fixture is removed (e.g., Building demolition; change to LED fixtures; etc.).

The Subject Property has never been registered as a site for PCB-contaminated materials nor ever used for the storage of PCB-contaminated materials.

## **5.8 Waste Materials**

The Subject Property has never been used as a garbage dump. There was no evidence of improperly dumped or disposed material associated with the Subject Property.

## **5.9 Electrical System**

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

There is no on-site transformer (exterior or interior). Power is provided by overhead lines from overhead lines and poles along Highway 214.

## **5.10 Disposed Materials**

There was no evidence of disposed materials on the Subject Property.

## **5.11 Hazardous Materials (Other than Petroleum Products)**

The Subject Property was never registered for the transfer, processing or storage of hazardous products or hazardous wastes.

With the exception of limited amounts of un-regulated cleaning materials, paints etc., there are no hazardous materials stored in the Subject Building or on the Subject Property. Hazardous materials (other than asbestos-containing materials) and wastes do not pose environmental liabilities to the Subject Property.

## **5.12 Geological Materials**

Reference to the Provincial regional bedrock geology map<sup>7</sup> (see Figure 10) indicates the underlying bedrock is identified as the Lower Windsor Group consisting of the White Quarry, Stewiacke, Carrols Corner, Macumber and Gays River formations. The bedrock consists of anhydrite, salt, marine dolostone and limestone. These materials are not acid-producing when exposed to air and therefore the excavation and off-disposal of such materials is not regulated pursuant to the Sulphide Bearing Materials Disposal Regulations<sup>8</sup>.

During the natural decay of uranium, the formation of radon gas can occur and collect in low areas, such as basements, before dispersing into a building. Reference to the Map Showing

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<sup>7</sup> Geological Map of The Province of Nova Scotia. Department of Natural Resources (with amendments to 27 July 2012).

<sup>8</sup> Sulphide Bearing Material Disposal Regulations, Reg. 57/95, *Environment Act* S.N.S. 1994-95, c. 1 O.I.C. 95-296 (April 11, 1995), NS.

Potential for Radon in Indoor Air (see Figure 11) indicates 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 entry is considered a negligible to low environmental liability to the Subject Property. Actual concentrations can only be accurately determined by measurement using the standard 90+ day sampling test.<sup>9</sup>

Potable water use is not dependent on 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.

### **5.14 Cultural/Historical Issues**

The Subject Property is not a Registered Heritage Property (municipal or provincial).

The Subject Property is not located on, or adjacent to, aboriginal lands.

Reference to the Nova Scotia Natural Resources Significant Habitats of Nova Scotia Map<sup>10</sup> indicates the Subject Property is not located in an area identified for protection (see Figures 12 and 13). There are no water bodies, water courses or wetlands within the Subject Property.

### **5.15 Municipal Ordinances**

Reference to the Municipality of East Hants By-Law map indicates the Subject Property is zoned “IU” (Institutional Use (see Figure 13). The Subject Property is not currently subject to infraction of Municipal Ordinances.

The Subject Property<sup>11</sup> is not located in the “high risk flood plain” zones of Nine Mile River (to the east/southeast and discharging to the Shubenacadie River) or of the Shubenacadie River (to the west/southwest) (see Figure 13).

### **5.16 Provincial Orders**

Information obtained pursuant to *Freedom of Information and Protection of Privacy (FOIPOP)* requests to Nova Scotia Environment for the Subject Property indicates there is no information within Departmental files with the exception of the tank registry for the existing aboveground fuel tank (see Appendix C). This was also confirmed by an area inspector and District Manager.

A *Freedom of Information and Protection of Privacy (FOIPOP)* request was also submitted for neighbouring properties identified as civic addresses: 236 Highway 214, 7 Brook Court, 9 Brook

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<sup>9</sup> See additional information at: [www.hc-sc.gc.ca/ewh-semt/radiation/radon/index-eng.php](http://www.hc-sc.gc.ca/ewh-semt/radiation/radon/index-eng.php)

<sup>10</sup> 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).

<sup>11</sup> Municipality of East Hants Official Community Plan – Land Use By-Law Map as amended to 4 September 2013.

Court, 11 Brook Court, 13 Brook Court, 15 Brook Court, 17 Brook Court, 19 Brook Court, 214 Highway 214, 2 Ralston Drive, 4 Ralston Drive and 6 Ralston Drive. There was no information within Departmental files pertaining to these properties.

*Record searches, as instituted by 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.*

### **5.17 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 Regulations<sup>12</sup>. For the purposes of material removal and handling within a Building (renovation or demolition), Nova Scotia Labour has defined “asbestos containing materials”<sup>13</sup> 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.

Reference to historical summaries of testing for asbestos-containing material<sup>14,15</sup> within the Subject Building and the results of the 2019 Hazardous Materials Survey<sup>16</sup> indicated numerous sites were tested (see Figure 14) (e.g., exposed piping; texture coating, pipe elbows, vinyl tile, calking (interior and exterior), transite board, cementitious board (interior and exterior), expansion joint calking material, etc.). Concentrations of asbestos range from 1% to 65%, most as chrysotile. These concentrations exceed both the Nova Scotia Labour guidelines of 0.5% and the Asbestos Waste Management Regulations of 1%.

The presence of readily visible friable asbestos is considered a high environmental liability. It is recommended readily-visible asbestos containing and/or deteriorated other asbestos containing materials be removed by an approved contractor under controlled conditions and appropriately disposed. Not-readily visible areas containing asbestos (e.g., ceilings, wall cavities) should be isolated. An Asbestos Management Plan should be prepared, following Nova Scotia Labour guidelines, so that any future workers/contractors, can be made aware of the presence of asbestos in work areas (e.g., repair of heating pipes; installation of new electrical or communications lines).

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<sup>12</sup> 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

<sup>13</sup> 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.

<sup>14</sup> Maritime Testing (1995) Ltd. 1998 Limited Asbestos Survey, Elmsdale District Elementary School.

<sup>15</sup> Stantec Consulting Ltd. 2011. Chignecto Central Regional School Board, Asbestos Re-assessment, – Elmsdale District Elementary School.

<sup>16</sup> CBCL. February 2019. Hazardous Materials Survey – Draft Report. Chignecto – Central Adult High School (CCAHS) 224 Highway 214, Elmsdale, NS. Prepared for the Municipality of East Hants.

The Subject Property has not been used for the transfer, storage or disposal of asbestos-containing materials.

### 5.18 Parking

There is sufficient parking on site for the current users. The paved parking areas are accessed to and from Highway 214.

### 5.19 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*.

There is no visible evident UFF insulation associated with the Subject Building. CBCL did not observe any UFFI during their recent Hazardous Materials Assessment.

### 5.20 Air Quality

Ambient Air Quality. There are no incinerators or industrial activities in the general area of the Subject Property. Ambient air quality is good and represents a primarily rural residential area.

Moulds. 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, finishings, furniture, etc., as well as posing a health hazard to occupants.

There was visible water damage to ceiling tiles at the North entry to the Subject Building. In addition, there was possible water damage to the hallway ceiling due to a roof vent leak. There was no visible mould. It is recommended any water damage materials be removed and replaced. The potential presence of limited mould is considered a negligible environmental liability to the Subject Property, as currently constituted.

Radon. Reference to the Map Showing Potential for Radon in Indoor Air (see Figure 11) indicates 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 entry is considered a negligible to low environmental liability to the Subject Property. Actual concentrations can only be accurately determined by measurement using the standard 90+ day sampling test.

### 5.21 Traffic

The road from Nine Mile River met the Enfield road near the Elmsdale railway station, then continued over the tracks for about a half mile, crossed the wooden bridge over the Shubenacadie River to join the Post Road running from Halifax to Truro. This T-formation intersection was

changed in 1932 when a new highway (Highway 2), parallel to the railway, was laid from Elmsdale to Lantz. Beginning about 1960, the Province built a new controlled-access Highway 102 to the west. Subsequently, Highway 102 was widened to the current divided four-lane highway. All through truck and vehicle traffic uses Highway 102, resulting in a lower traffic loading on Highway 2 and Highway 214. Some heavy truck traffic traverses Highway 214 to access wood processing and soil/grass sod operations along Highway 2 and in Dutch Settlement. Significant urbanization of Enfield-Elmsdale over the last 20+ years has resulted in increased local traffic on Highway 2 and Highway 214.

Highway 2 intersects with the four-lane divided Highway 102 at Interchange 7 (Enfield) and, via Highway 214, at Interchange 8 (Elmsdale). Highway 102 provides direct access to (the south) Halifax-Dartmouth and the International Airport and to the north to the Trans-Canada Highway (Highway 104).

## **5.22 Lead**

Before 1985, many oil paints, particularly white-coloured paint contained elevated concentrations of lead. Beginning in the late 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.

Based on the age of the Building, there was a potential for some paints and finishes to be classed as "lead containing paints"; i.e., containing more than 0.1% or 1,000 mg/kg lead. Reference to the 2019 Hazardous Materials Survey indicated four samples of paint were tested for "leachable lead" (see Figure 15). Concentrations in three samples were less than the detection limit; 49 mg/kg in one sample, which was much less than the Guideline of 1,000 mg/kg. The presence of lead-based paints poses a negligible environmental liability. Should older materials be encountered during renovation, materials should be tested and if found to be lead-containing be appropriately removed and disposed.

The Subject Property was an empty land parcel before construction of the first portion of the school circa 1961. Immediately adjacent properties have been residential use and site activities would not have resulted in contamination due to lead or other trace metals. The underlying soils typically contain concentrations of trace metals less than the current Tier I Environmental Quality Standards – Residential.

## **5.23 Drains, Easements and Pipelines**

A portion of the land parcel is subject to a deeded right-of-way in favour of the East Hants Development Commission for the purpose of "laying down and constructing water and sewer lines



in, under and upon the said lands, and of keeping and maintaining them at all times in good condition and repair” (see parcel description Appendix A).

There are no known pipelines through the Subject Property to serve other properties. There are water and sewer laterals to municipal services Highway 214.

It is assumed the Subject Property was previously served by an on-site septic system and water well.

There is no natural gas service in this area of the Municipality.

#### **5.24 Neighbouring Properties** (see Figure 16)

Neighbouring residential properties pose potential low to negligible environmental risks based on the location of their fuel storage tanks relative to the Subject Property. There are no immediately neighbouring bulk fuel facilities or dry-cleaning facilities. The nearest gasoline retail facility is located about 0.15 km north (*Irving Circle K*). This facility is a relatively new installation with monitored underground tanks. Based on proximity, this facility poses a potential low environmental risk to the Subject Property. Other retail gasoline facilities - *Shell Oil Canada* (civic address 707 Highway 2); *Wilson's ESSO* (within *Sobey's Elmsdale Plaza* at civic address 269 Highway 214) and *Petro Canada* (civic address 291 Highway 214)) are located sufficiently distant and do not pose environmental risks to the Subject Property.

##### *Neighbours to the north:*

- ❑ Civic address 236 Highway 214 (PID 45364894). Pursuant to a *Freedom of Information and Protection of Privacy* (FOIPOP) request to Nova Scotia Environment, the Department indicated there was no information pertaining to the property within Departmental files. This residential property had no readily visible liquid fuel oil system. This property is considered a negligible environmental risk to the Subject Property.

##### *Beginning at the corner of Brook Court and proceeding west:*

- ❑ Civic address 1 Brook Court (PID 45360930). This residential property had no readily visible liquid fuel oil system. This property is considered a negligible environmental risk to the Subject Property.
- ❑ Civic address 1B Brook Court (PID 45084910). This residential property had no readily visible liquid fuel oil system. This property is considered a negligible environmental risk to the Subject Property.
- ❑ Civic address 3 Brook Court (PID 45084910). This residential property had no readily visible liquid fuel oil system. This property is considered a negligible environmental risk to the Subject Property.
- ❑ Civic address 5 Brook Court (PID 45036506). This residential property has a chimney, but no readily visible liquid fuel oil system. This property is considered a negligible environmental risk to the Subject Property.
- ❑ Civic address 7 Brook Court (PID 45036498). Pursuant to a *Freedom of Information and Protection of Privacy* (FOIPOP) request to Nova Scotia Environment, the Department indicated there was no information pertaining to the property within Departmental files. This residential property has a chimney, but no readily visible liquid fuel oil system. This property is considered a negligible environmental risk to the Subject Property.



- ❑ Civic address 9 Brook Court (PID 45036480). Pursuant to a *Freedom of Information and Protection of Privacy* (FOIPOP) request to Nova Scotia Environment, the Department indicated there was no information pertaining to the property within Departmental files. This residential property has a chimney, but no readily visible liquid fuel oil system. This property is considered a negligible environmental risk to the Subject Property.
- ❑ Civic address 11 Brook Court (PID 45036381). Pursuant to a *Freedom of Information and Protection of Privacy* (FOIPOP) request to Nova Scotia Environment, the Department indicated there was no information pertaining to the property within Departmental files. This residential property had no readily visible liquid fuel oil system. This property is considered a negligible environmental risk to the Subject Property.
- ❑ Civic address 13 Brook Court (PID 45036395). Pursuant to a *Freedom of Information and Protection of Privacy* (FOIPOP) request to Nova Scotia Environment, the Department indicated there was no information pertaining to the property within Departmental files. This residential property had no readily visible liquid fuel oil system. This property is considered a negligible environmental risk to the Subject Property.
- ❑ Civic address 15 Brook Court (PID 45036357). Pursuant to a *Freedom of Information and Protection of Privacy* (FOIPOP) request to Nova Scotia Environment, the Department indicated there was no information pertaining to the property within Departmental files. This residential property had no readily visible liquid fuel oil system. This property is considered a negligible environmental risk to the Subject Property.
- ❑ Civic address 17 Brook Court (PID 45036340). Pursuant to a *Freedom of Information and Protection of Privacy* (FOIPOP) request to Nova Scotia Environment, the Department indicated there was no information pertaining to the property within Departmental files. This residential property had no readily visible liquid fuel oil system. This property is considered a negligible environmental risk to the Subject Property.
- ❑ Civic address 19 Brook Court (PID 45036175). Pursuant to a *Freedom of Information and Protection of Privacy* (FOIPOP) request to Nova Scotia Environment, the Department indicated there was no information pertaining to the property within Departmental files. This residential property had no readily visible liquid fuel oil system. This property is considered a negligible environmental risk to the Subject Property.
- ❑ PID 45085040 is an empty 0.73 acre-parcel of land, associated with the Highway 102 Right-of-Way and is not considered an environmental risk to the Subject Property.
- ❑ Highway 102 is a provincially owned and maintained four lane limited access divided highway.
- ❑ Properties further north are at a sufficient distance and are not considered environmental risks to the Subject Property.

*Neighbours to the south:*

- ❑ Civic address 214 Highway 214 (PID 45084795). Pursuant to a *Freedom of Information and Protection of Privacy* (FOIPOP) request to Nova Scotia Environment, the Department indicated there was no information pertaining to the property within Departmental files. This residential property had no readily visible liquid fuel oil system. This property is considered a negligible environmental risk to the Subject Property.
- ❑ Civic address 2 Roulston Drive (PID 45084803). Pursuant to a *Freedom of Information and Protection of Privacy* (FOIPOP) request to Nova Scotia Environment, the Department indicated there was no information pertaining to the property within Departmental files. This residential property had no readily visible liquid fuel oil system. This property is considered a negligible environmental risk to the Subject Property.

- ❑ Civic address 4 Roulston Drive (PID 45084811). Pursuant to a *Freedom of Information and Protection of Privacy* (FOIPOP) request to Nova Scotia Environment, the Department indicated there was no information pertaining to the property within Departmental files. This residential property had no readily visible liquid fuel oil system. This property is considered a negligible environmental risk to the Subject Property.
- ❑ Civic address 6 Roulston Drive (PID 45083521). Pursuant to a *Freedom of Information and Protection of Privacy* (FOIPOP) request to Nova Scotia Environment, the Department indicated there was no information pertaining to the property within Departmental files. This residential property had no readily visible liquid fuel oil system. This property is considered a negligible environmental risk to the Subject Property.
- ❑ Lot 85-1 Beech Street (PID 45084399). This 21-acre land parcel is unoccupied. As currently constituted, this property is not considered an environmental risk to the Subject Property.
- ❑ Properties further south fronting on Highway 214 are at a sufficient distance and do not pose environmental risks to the Subject Property.

*Neighbours to the east:*

- ❑ The Subject Property fronts on Highway 214, a provincially owned and maintained paved two-lane roadway with no curb/gutter on the eastern side; curb/gutter and sidewalk on the western (Subject Property) side.

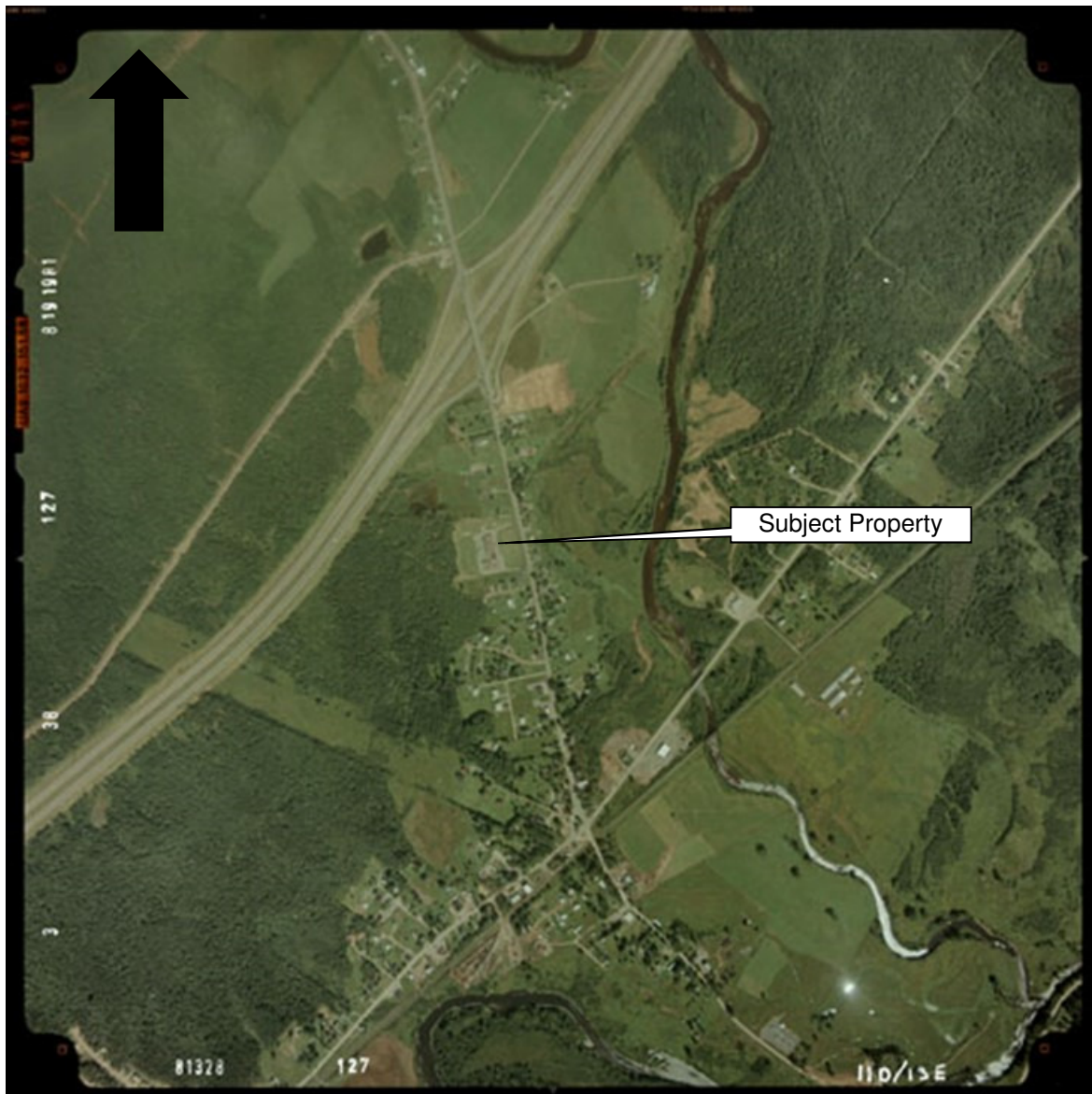
*Across Highway 214 and proceeding south from Brook Street:*

- ❑ Civic address 239 Highway 214 (PID 45084902). This residential property had no readily visible liquid fuel oil system. This property is considered a negligible environmental risk to the Subject Property.
- ❑ Civic address 229 Highway 214 (PID 45084878). This residential property had no readily visible liquid fuel oil system. This property is considered a negligible environmental risk to the Subject Property.
- ❑ Civic address 225 Highway 214 (PID 45084860). This residential property has an interior fuel storage system (fill/vent pipes on north side). This property is considered a potential negligible environmental risk to the Subject Property.
- ❑ Civic address 219 Highway 214 (PID 45084852). This residential property had no readily visible liquid fuel oil system. This property is considered a negligible environmental risk to the Subject Property.
- ❑ Civic address 215 Highway 214 (PID 45084845). This residential property had no readily visible liquid fuel oil system. This property is considered a negligible environmental risk to the Subject Property.
- ❑ Properties further south, fronting on the eastern side of Highway 214, are at a sufficient distance and do not pose environmental risks to the Subject Property.

**Figure 4:** 22 June 1966 aerial photograph of Subject Property and environs.  
(National Air Photo Library, Photo 19412\_086)



**Figure 5:** 19 August 1981 aerial photograph of Subject Property and environs.  
(National Air Photo Library, Photo 81328\_127)





**Figure 6:** 13 September 1992 aerial photograph of Subject Property and environs.  
(National Air Photo Library, Photo 92389\_116)



**Figure 7:** 1 May 2003 aerial photograph of Subject Property and environs.  
*(taken from Google Earth)*





**Figure 8:** 15 August 2003 aerial photograph of Subject Property and environs.  
(National Air Photo Library, Photo 03318\_078)

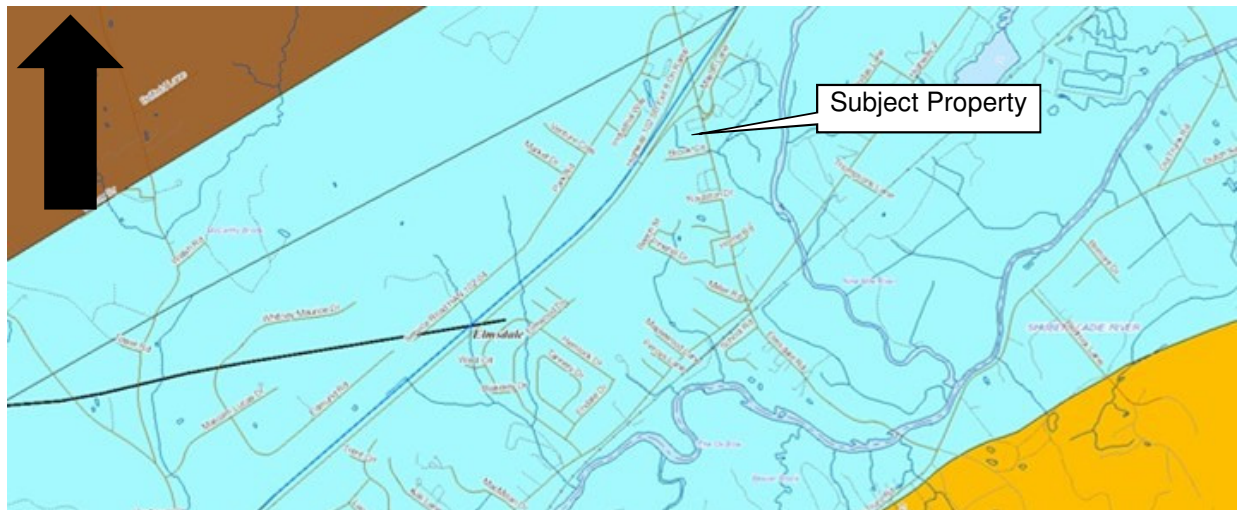




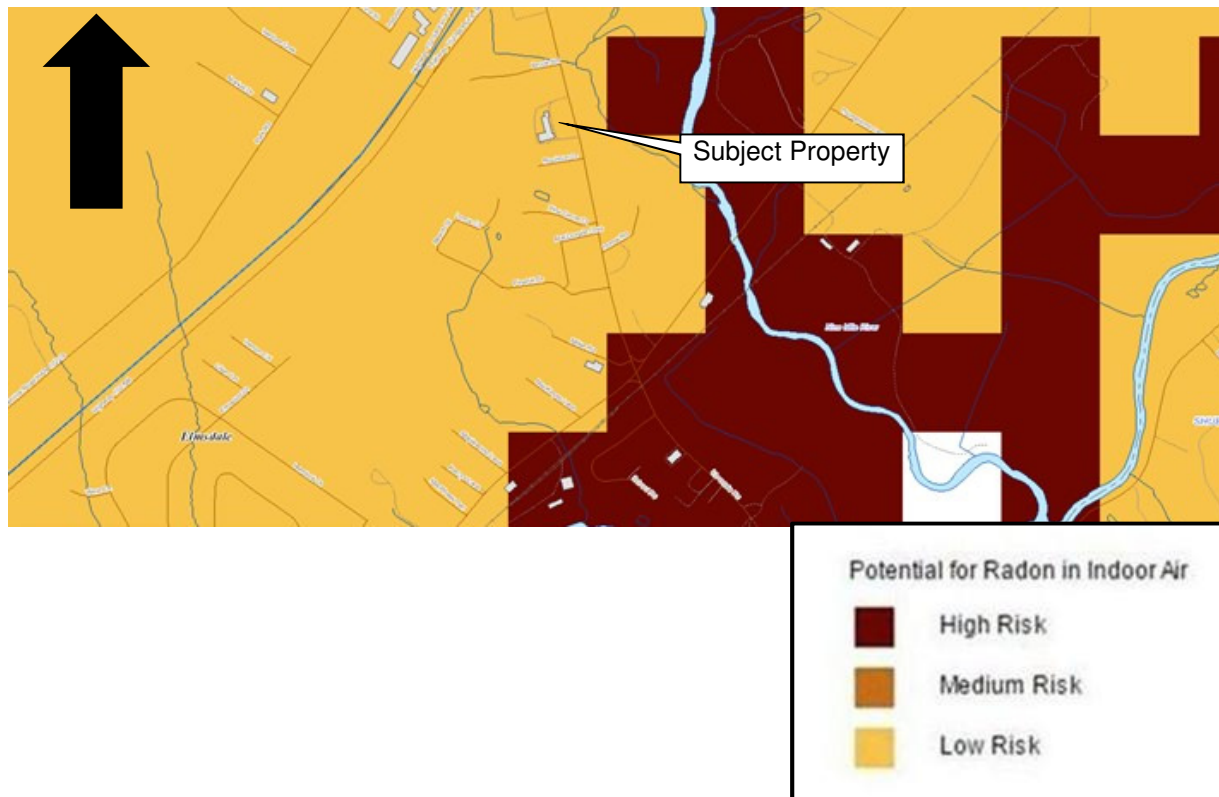
**Figure 9:** 5 August 2011 aerial photograph of Subject Property and environs.  
*(taken from Google Earth)*



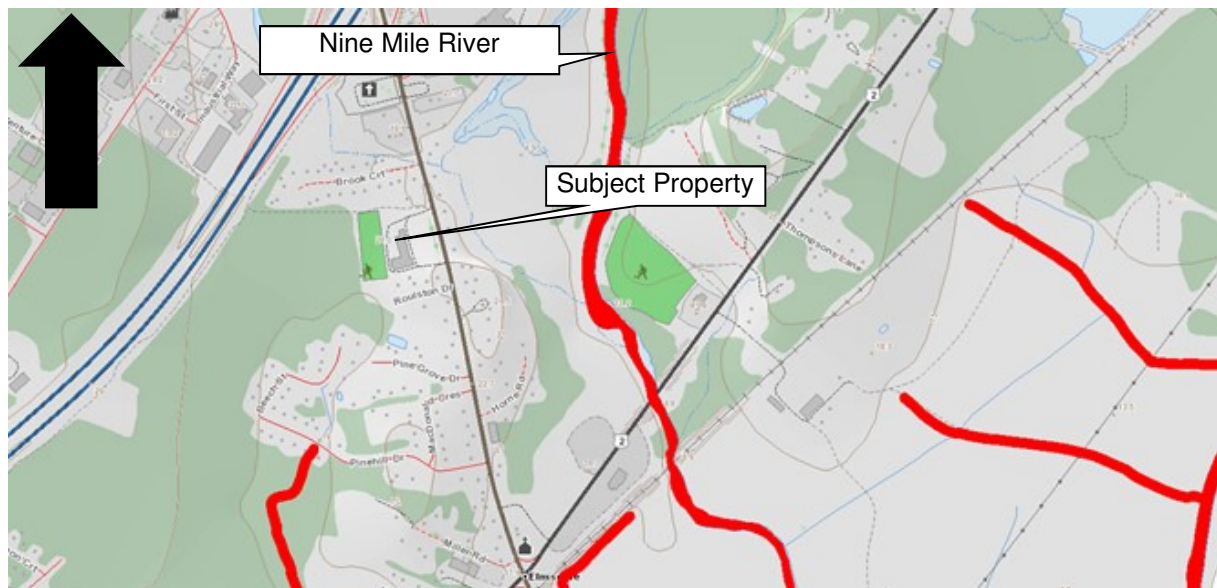
**Figure 10:** Bedrock geology of Subject Property and general area.  
(excerpt from <http://gis4.natr.gov.ns.ca/website/nsgeomap/viewer.htm>)



**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>)

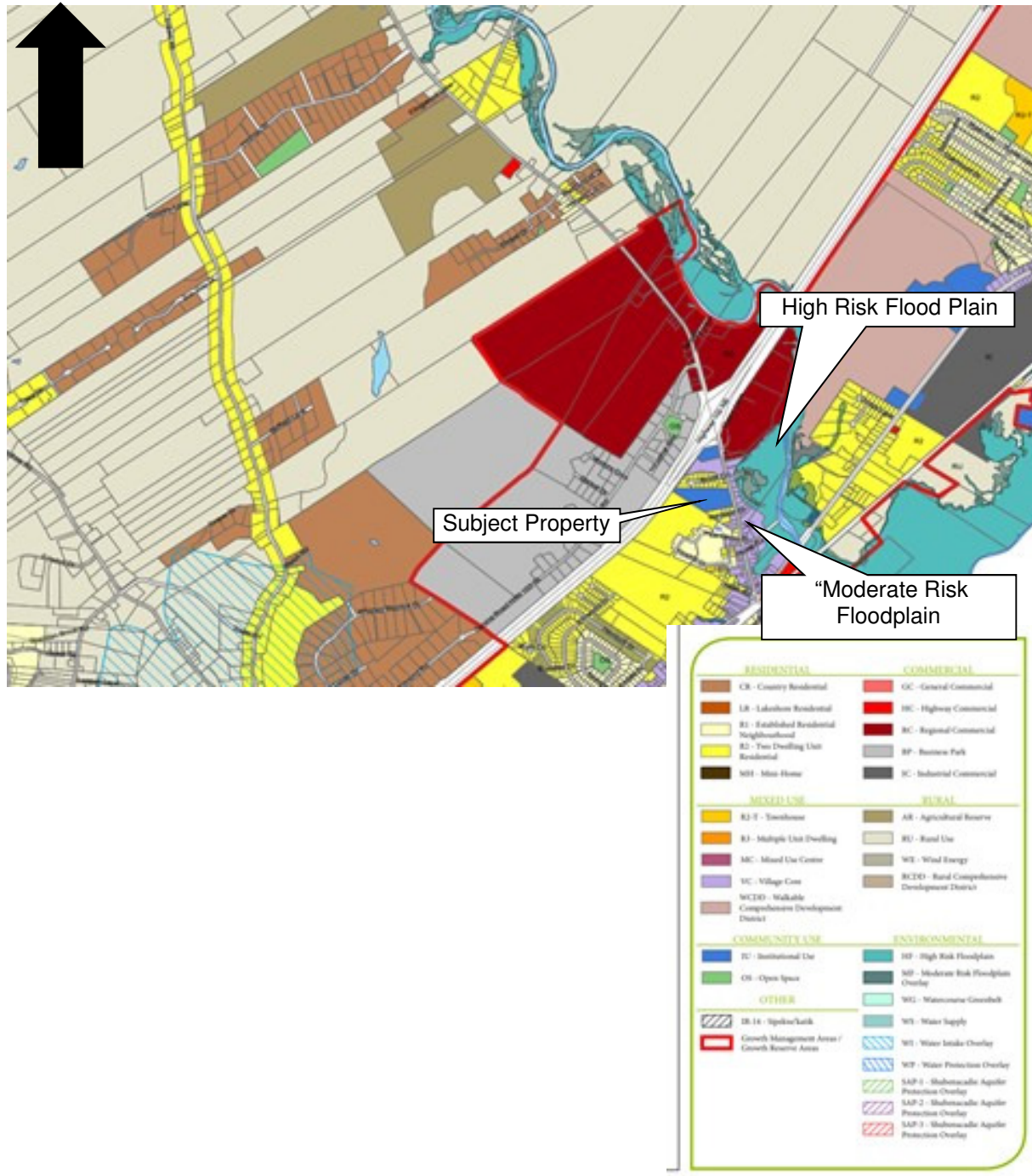


**Figure 12:** Excerpt from Nova Scotia Department of Natural Resources Habitat Map  
(from <https://nsgi.novascotia.ca>)

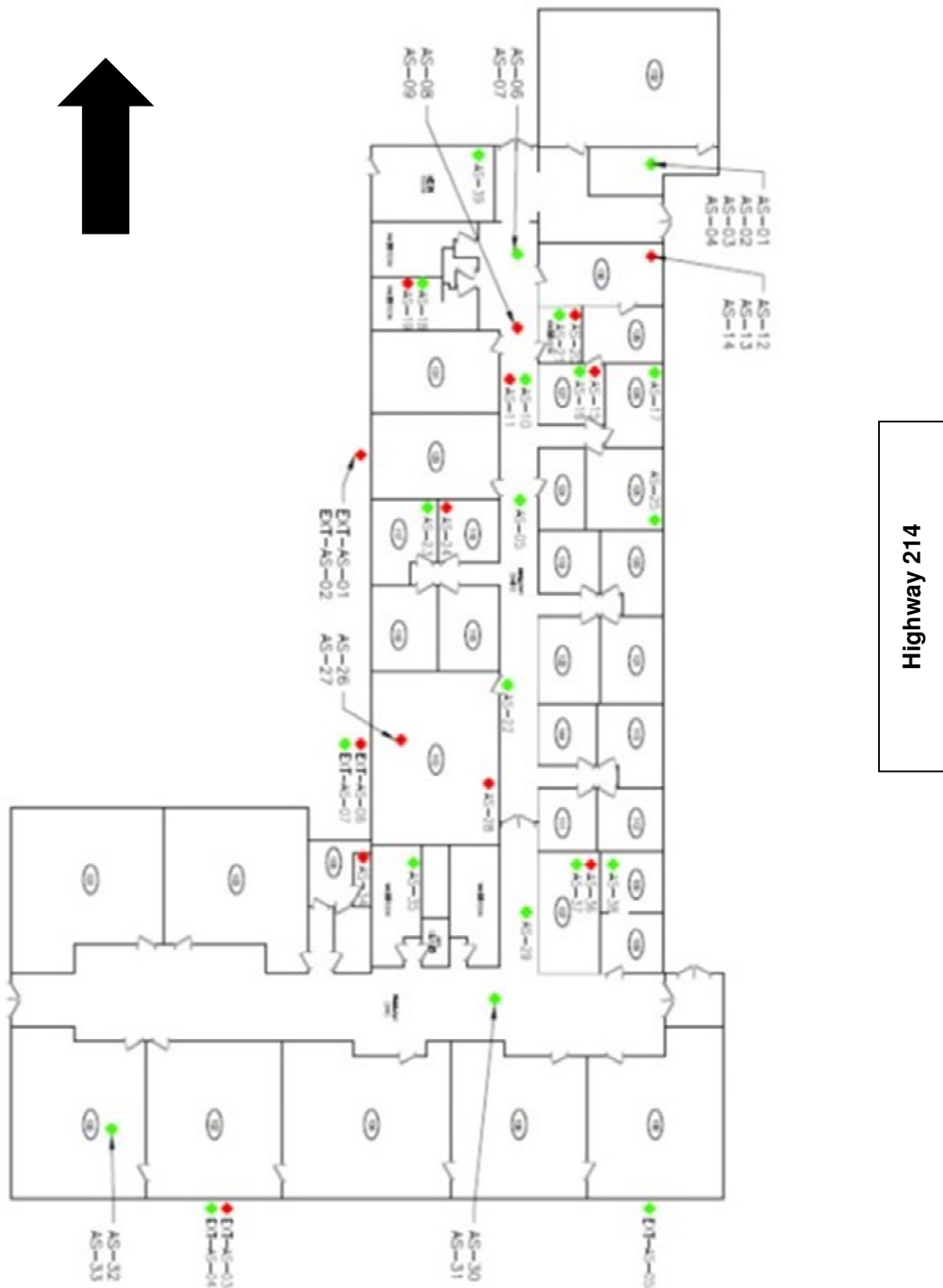




**Figure 13:** Excerpt from Municipality of East Hants  
Land Use By-Law Map 1

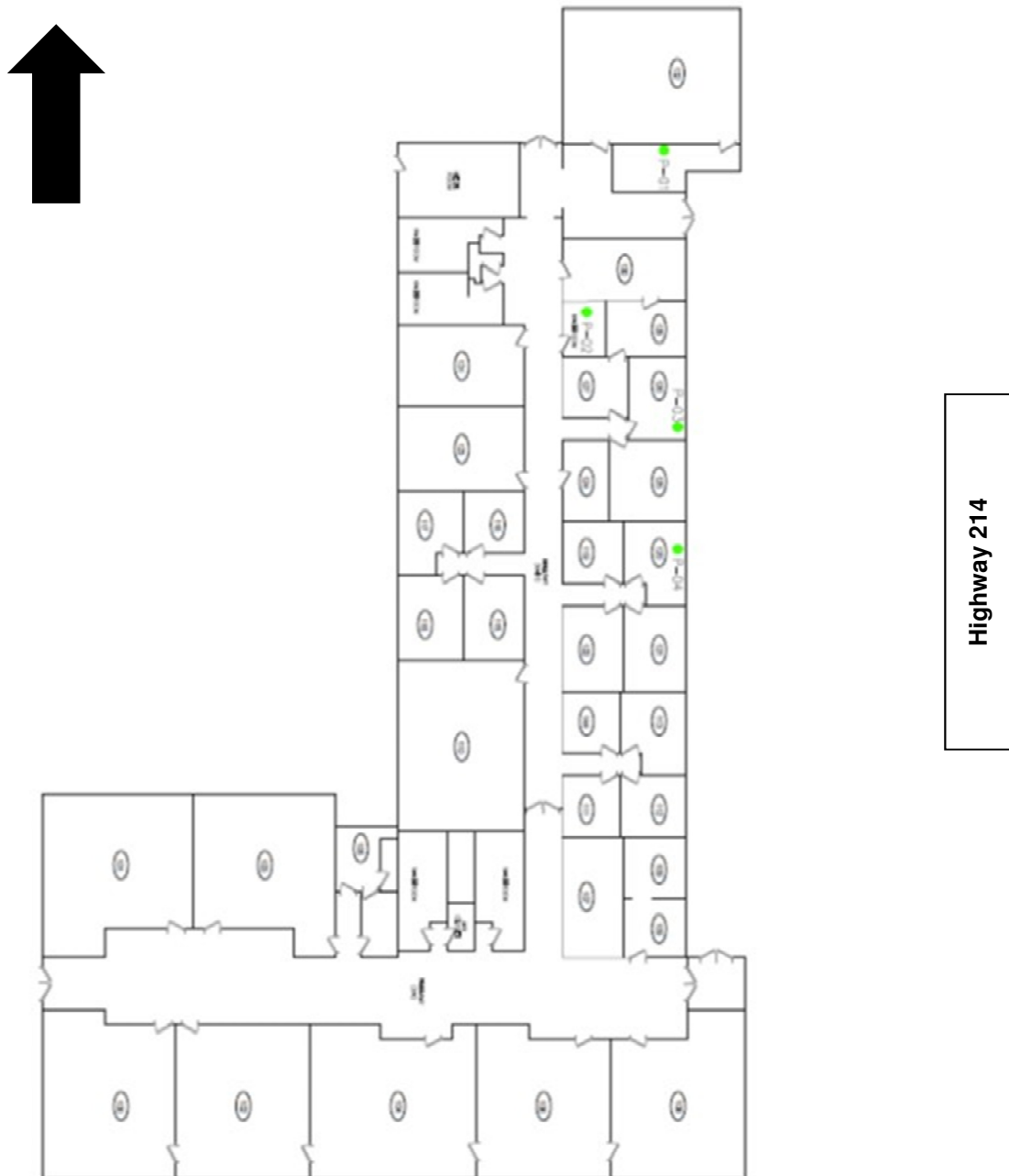


**Figure 14:** View of locations of areas sampled for asbestos-containing materials in 2018-2019.  
(from CBCL, 2019)





**Figure 15:** View of locations of areas sampled for lead-based paints.  
(from CBCL, 2019)



**Figure 16:** Map of neighbouring properties  
(taken from <http://www.viewpoint.ca>)



## 6. DETERMINATION

The Subject Property consists of one land parcel and one institutional building, identified as civic address 224 Highway 214, Elmsdale, Municipality of East Hants, Nova Scotia and more fully described by PID 45147998. The Subject Property has a registered area of +/- 33,993 sq m (+/- 365,904 sq ft or 8.4 acres) with +/- 120 m (+/- 394 ft) frontage on Highway 214. A portion of the land parcel is subject to a deeded right-of-way in favour of the East Hants Development Commission for the purpose of “laying down and constructing water and sewer lines in, under and upon the said lands, and of keeping and maintaining them at all times in good condition and repair”.

The Subject Building is a one-storey concrete block/brick structure on a concrete pad, currently known as the Chignecto-Central Adult High School (Elmsdale) and formerly known as the Elmsdale Elementary School. The centre section was the “original” School, constructed circa 1961; with a north wing (complete with a gymnasium, additional classrooms and service rooms) added, circa 1967; and, a south wing added, circa 1998. In 1998 part of the north wing was demolished to facilitate remediation of an oil spill with construction of replacement rooms, a new north entrance and a replacement multi-use room in 1999. Shifts in population demographics resulted in students being shifted to other, newer elementary schools and the Building being repurposed; much of the north and centre sections being occupied by offices/staff of the Municipality of East Hants. In 2018, the Regional Centre for Education declared the Subject Property to be “surplus” and transferred the asset back to the Municipality of East Hants.

Reference to the Municipality of East Hants By-Law map indicates the Subject Property is zoned “IU” (Institutional Use). Properties to the north and south are single-family residential; properties to the east, across Highway 214 are single-family residential; properties to the west are undeveloped and adjacent to Highway 102. The nearest retail gasoline facility is located about 0.15 km north at civic address 248 Highway 214.

The area of the Subject Property not encompassed by the Subject Building currently consists of a gravel/asphalt paved circular driveway with associated parking; grassed area along the western front and grassed playing fields to the north and east. The Subject Property is not a Registered Heritage Property, is not located on, or adjacent to, aboriginal lands, is not located in an area identified for protection, and is not located in the “high risk flood plain” zones of Nine Mile River to the east and southeast; or of the Shubenacadie River.

The Subject Property is connected to municipal potable water and sanitary sewage systems. When first constructed, the Subject Building was served by an on-site septic system and potable water well. It is assumed these former systems were abandoned and are still located within the Subject Property.

The Subject Building is heated by a standard perimeter hot-water system supplied from two *Weil-McLain* oil-fired boilers located in the Mechanical Room (north rear of the Building). It was noted the Equipment licenses, issued pursuant to the Boiler and Pressure Equipment Regulation, had expired 8 June 2018. It is recommended the licenses be renewed. The fuel to the two furnaces is supplied from one, 4,457 L, Registered (2013-085167-001), steel, double-wall fuel storage tank (dated 1998) and situated within a locked chain link compound to the west of the Mechanical Room. The feeder lines are located underground within plastic piping extending from the fuel tank

enclosure to the Mechanical Room and are not protected (coated) within the Mechanical Room. There was no evidence of fuel spills around the tank or the furnaces. *Note: The tank was originally identified as 98-8540-01 and assumed to have replaced previous fuel tank/s.*

The exterior aboveground fuel oil tank poses a potential low to moderate environmental liability to the Subject Property based on the age of the tank, unprotected feeder lines and the actual presence of a liquid fuel oil system, mitigated by the tank being a double-wall construction.

The Elmsdale Elementary School is reported to have had a fuel oil leak in 1998 with resultant contamination in the soils at the north end of the then north wing which impacted soils under a portion of the original gymnasium, several class rooms and the caretaker's room. It is understood the current tank replaced one or more original tanks. The former fuel lines (unprotected) are visible in front of the two furnaces. Information received from Nova Scotia Environment pursuant to *Freedom of Information and Protection of Privacy* requests and confirmed by a District Manager, as well as requests to the Chignecto Central Regional Centre for Education indicated there is no record of previous tanks nor any records of fuel spills and remedial activities. Based on the lack of documentation, it is recommended a Phase II Environmental Site Assessment be conducted to confirm site conditions meet the current Tier I Environmental Quality Standards for the Subject Property.

Reference to summaries of Asbestos Containing Material surveys (2008, 2011) and a 2019 Hazardous Materials Survey, indicated numerous and different types of materials (e.g., exposed piping; texture coating; pipe elbows; vinyl tile; caulking (interior and exterior); transite board; cementitious board (interior and exterior); expansion joint caulking material) contain concentrations of asbestos ranging from 1% to 65%, as chrysotile. These concentrations exceed both the Nova Scotia Labour construction guidelines and Nova Scotia Environment Asbestos Waste Material disposal guidelines. The presence of readily visible friable asbestos is considered a high environmental liability. It is recommended readily-visible asbestos-containing materials and/or deteriorated other asbestos containing materials be removed by an approved contractor under controlled conditions and appropriately disposed. Not-readily visible areas containing asbestos (e.g., ceilings, wall cavities) should be isolated. An Asbestos Management Plan should be prepared, so that any future workers/contractors, can be made aware of the presence of asbestos in work areas (e.g., repair of heating pipes; installation of new electrical or communications lines).

Based on the age of the Building, there was a potential for some paints and finishes to be classed as "lead containing paints"; i.e., containing more than 0.1% or 1,000 mg/kg lead. Reference to the 2019 Hazardous Materials Survey indicated four samples of paint were tested for "leachable lead". Concentrations in three samples were less than the detection limit; 49 mg/kg in one sample, which was much less than the Guideline of 1,000 mg/kg. The presence of lead-based paints poses a negligible environmental liability. Should older materials be encountered during renovation, materials should be tested and if found to be lead-containing be appropriately removed and disposed.

The lighting was a combination of incandescent, compact fluorescent and numerous tube fluorescent fixtures. Ten tube fluorescent light fixtures were examined during the 2019 Hazardous Materials Survey. The ballasts were determined to be non-PCB-containing ballast. However, when the Building is demolished or light fixtures changed to LED format, light ballasts should be

cross-referenced against the Environment Canada EPS 2/CC/2 document, Identification of Lamp Ballasts Containing PCBs. Any ballasts considered to be PCB containing will require appropriate disposal. The presence of *potential* in-use PCB containing light ballasts poses a low to negligible environmental liability to the Subject Property. The Subject Property has never been registered as a site for PCB-contaminated materials nor ever used for the storage of PCB-contaminated materials.

Units considered to contain an ozone depleting substance consist of standard refrigerators and numerous wall/window-mount air-conditioners. The equipment is assumed to be to be charged with a permitted refrigerant (regulated ozone-depleting substance) such as R-22. Servicing or removal of the regulated refrigerant must be conducted by a certified contractor. There is no environmental liability related to ozone-depleting substances, as currently constituted.

There was no evidence of urea-formaldehyde insulation (UFFI) or hazardous materials (e.g., cleaning supplies and paints) associated with the Subject Building. A few ceiling tiles were noted to have water stains and a ceiling-mount heat pump had a water drain from a hallway ceiling. Mould contamination, associated with water staining poses a negligible environmental liability, as currently constituted.

The underlying bedrock is identified as the Lower Windsor Group consisting of the White Quarry, Stewiacke, Carrols Corner, Macumber and Gays River formations. The bedrock consists of anhydrite, salt, marine dolostone and Limestone. These materials are not acid-producing and therefore the excavation and off-site disposal of such materials is not regulated, pursuant to the Sulphide Bearing Materials Disposal Regulations.

Reference to the Map Showing Potential for Radon in Indoor Air indicates 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 entry is considered a negligible to low environmental liability to the Subject Property.

Neighbouring residential properties pose potential low to negligible environmental risks based on the location of their fuel storage tanks relative to the Subject Property. There are no immediately neighbouring bulk fuel facilities or dry-cleaning facilities. The nearest gasoline retail facility is located about 0.15 km north (*Irving Circle K*). This facility is a relatively new installation with monitored underground tanks. Based on proximity, this facility poses a potential low environmental risk to the Subject Property. Other retail gasoline facilities (*ESSO, Petro Canada*) are located further north and pose potential negligible environmental risks.

#### *Determination:*

*As currently constituted, the lack of documentation regarding the 1998 fuel spill, partial building demolition and subsequent site remediation pose an undefinable environmental liability to the Subject Property. It is recommended a Phase II Environmental Site Assessment be conducted to provide appropriate documentation defining the status of the Property with respect to Tier I Environmental Quality Standards for potential future residential and/or commercial uses.*

*Based on current information, there is one significant environmental liability associated with the Subject Property:*

- *The presence of numerous sites throughout the Building of readily-visible friable asbestos is considered a high environmental liability. It is recommended readily visible asbestos friable materials and “deteriorated” other asbestos containing materials be removed by an approved contractor under controlled conditions and appropriately disposed. Hidden areas containing asbestos (e.g., ceilings, wall cavities) should be isolated. An Asbestos Management Plan should be prepared following Nova Scotia Labour guidelines and any workers/contractors etc. be advised of the locations of asbestos.*

*The exterior aboveground fuel oil tank poses a potential low to moderate environmental liability to the Subject Property based on the age of the tank, unprotected feeder lines and the actual presence of a liquid fuel oil system, mitigated by the tank being a double-wall construction.*

*Issues of PCB-containing light ballasts, lead-based paints, miscellaneous cleaning supplies as hazardous materials, radon entry and mould contaminated materials pose negligible to low environmental liabilities, as currently constituted.*

*Neighbouring residential properties pose potential low to negligible environmental risks based on the location of their fuel storage tanks relative to the Subject Property. There are no immediately neighbouring bulk fuel facilities or dry-cleaning facilities. The nearest gasoline retail facility is located about 0.15 km north (Irving Circle K). This facility is a relatively new installation with monitored underground tanks. Based on proximity, this facility poses a potential low environmental risk to the Subject Property. Other retail gasoline facilities (Shell, ESSO, Petro Canada) are located sufficiently distant and pose potential negligible environmental risks.*



## **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 35 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.

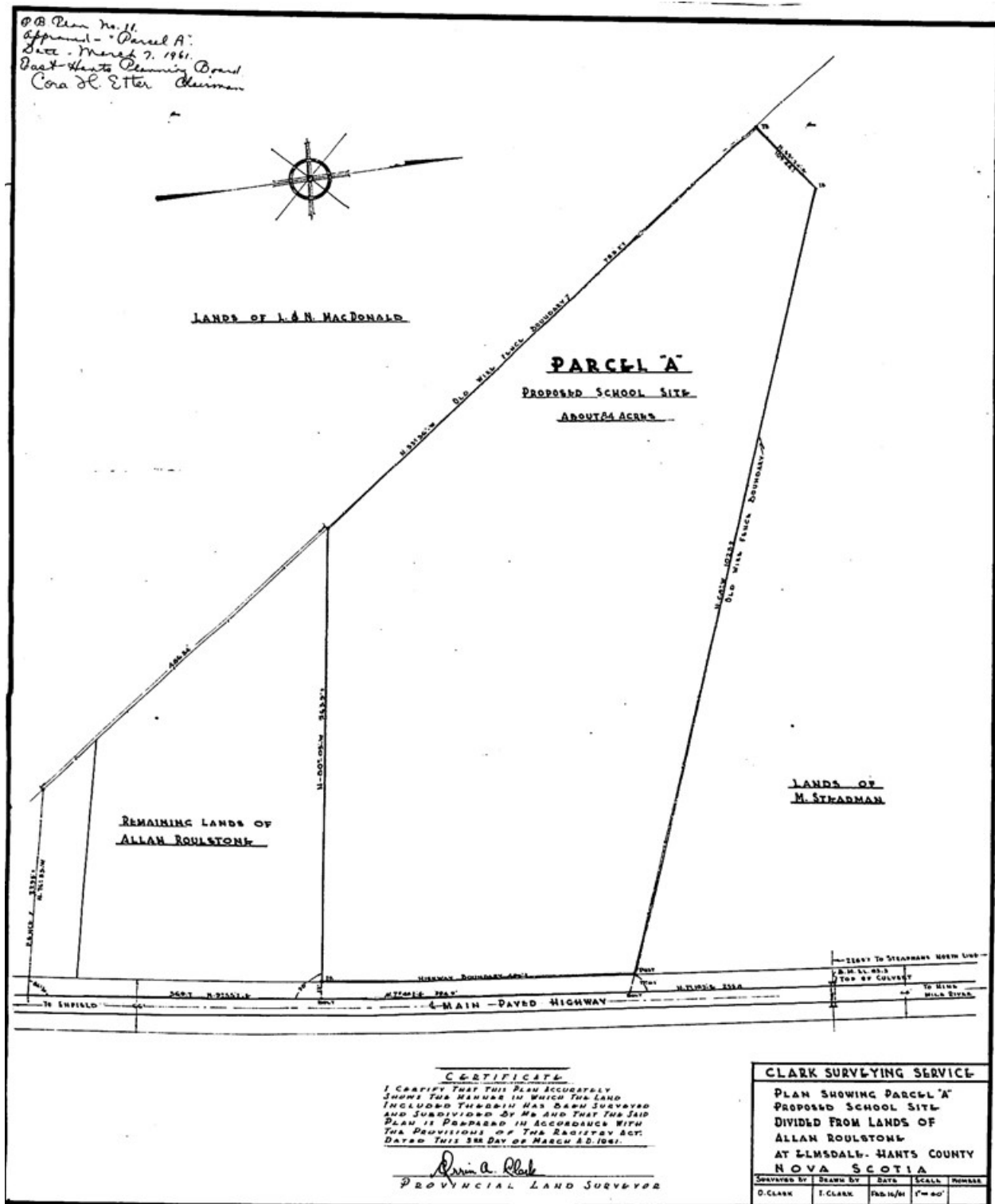
6. Achieving the objectives stated in this report has required us to arrive at conclusions based upon the best information presently known to us. No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information; it can only reduce the possibility 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.

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:**

**16 FEBRUARY 1961 PLAN**

**DESCRIPTION OF EASEMENT**



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NOV 1 1990

THIS INDENTURE made this 10532 day of October, A.D. 1990.

BETWEEN: THE COLCHESTER-EAST HANTS DISTRICT SCHOOL BOARD

Hereinafter called the "Grantor"  
OF THE ONE PART

-and-

THE EAST HANTS DEVELOPMENT COMMISSION  
a body corporate, having its head office  
in Shubenacadie, in the County of Hants  
Province of Nova Scotia

Hereinafter called the "Grantee"  
OF THE SECOND PART

WITNESSETH that in consideration of the sum of

-----ONE DOLLAR-----(\$1.00).

now paid by the Grantee to the Grantor, the receipt of which is hereby acknowledged, the Grantor doth hereby grant and convey unto the Grantee, his successors and assigns, the right, at any time, to enter upon the lands hereinafter described, for the purpose of laying down and constructing water and sewer lines in, under, and upon the said lands, and of keeping and maintaining them at all times in good condition and repair; and for every such purpose the Grantee shall have access to the said lands at all times, by his servants, employees, and workmen, provided, however, that the said lands are returned to the condition in which they were found immediately previous to any work or construction.

The Lands affected by this easement are more particularly described in the attached Schedule "A".

IN WITNESS WHEREOF, the Grantor has signed and sealed these presents on the day and year first above written.

SIGNED, SEALED AND DELIVERED )  
in the presence of )

THE COLCHESTER-EAST HANTS  
DISTRICT SCHOOL BOARD  
Per: A.R. Westlake  
Secretary-Treasurer

*Phyllis Veriott*

I, Neville D. Glover Clerk of  
the Municipality of East Hants do hereby  
certify that no Dead Transfer Tax is  
due and payable on this deed.  
Neville D. Glover Municipal Clerk



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I, A.R. Westlake, of Truro, in the County of Colchester, Province of Nova Scotia, being the Secretary and Treasurer of The Colchester-East Hants District School Board, a body corporate make oath and say:

WHEN I executed the attached instrument the ownership of a share or an interest in a share of the corporation did not entitle the owner thereof to the occupation of dwelling owned by the corporation.

SWORN TO at Truro in the County of Colchester, Province of Nova Scotia, this 11th day of October, 1990 before me

*C.D. Sabean*  
CHESTER D. SABEAN  
A Commissioner of the Supreme Court of Nova Scotia

*A.R. Westlake*  
A.R. Westlake

PROVINCE OF NOVA SCOTIA  
COUNTY OF HANTS

ON THIS 11th day of October, A.D. 1990, -- KATHY VENIOTT ---, a subscribing witness to the foregoing Indenture, who having been by me duly sworn, made oath and said that --A.R. Westlake, Secretary and Treasurer of The Colchester East Hants School Board -- being one of the parties thereto caused the same to be executed in its name and on its behalf and its corporate seal to be thereunto affixed in her presence.

*C.D. Sabean*  
A Barrister or Commissioner of the Supreme Court of Nova Scotia  
CHESTER D. SABEAN  
A Commissioner of the Supreme Court of Nova Scotia

Province of Nova Scotia  
County of Hants

I hereby certify that the within instrument was recorded in the Registry of Deeds Office at Windsor in the County of Hants, N.S., at 9:00 o'clock A.M., on the 7 day of Nov A.D., 1990 in Book No. 637 at Pages 236-238 as Document Number 10532  
*Joe To... Add Deputy*  
Registrar of Deeds for the Registration District of Hants County

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SCHEDULE "A"

ALL AND SINGULAR that certain lot, piece or parcel of land situate, lying and being bounded on the East by the Route 214 Highway, in Elmsdale, in the County of Hants and Province of Nova Scotia, which parcel being shown as Parcel SE-1 on a plan showing a portion of land of the Colchester-East Hants District School Board as prepared by Michael A. Allison, N.S.L.S. and dated the 13 day of September, 1990, said Parcel being more particularly described as follows:

BEGINNING at an iron pipe in the intersection of the South boundary of Lot B, land of Clarence Turple ( Book 248, Page 455 ), and the West boundary of the said Highway;

THENCE South fifteen degrees, thirty-one minutes, twenty-one seconds East ( S 15°31'21" E ), a distance of twenty decimal six seven ( 20.67 ) feet along the West boundary of the said Highway to a point;

THENCE South eighty-nine degrees, zero eight minutes, forty-one seconds West ( S 89°08'41" W ), a distance of two hundred, twenty-three decimal eight zero ( 223.80 ) feet along land of the said School Board to a survey marker;

THENCE South eighty-nine degrees, fifteen minutes, twenty-six seconds West ( S 89°15'26" W ), a distance of eighty-six decimal nine two ( 86.92 ) feet along land of the said School Board to a survey marker;

THENCE South sixty-two degrees, forty-seven minutes, seventeen seconds West ( S 62°47'17" W ), a distance of sixty-seven decimal three one ( 67.31 ) feet along land of the said School Board to a survey marker;

THENCE South eighty-nine degrees, fifteen minutes, twenty-six seconds West ( S 89°15'26" W ), a distance of seven hundred, fourteen decimal four zero ( 714.40 ) feet along land of the said School Board to a survey marker;

THENCE North thirty-two degrees, zero four minutes, fifty seconds East ( N 32°04'50" E ), a distance of twenty-three decimal eight zero ( 23.80 ) feet along the South-East boundary of the No. 102 Highway to a survey marker;

THENCE North eighty-nine degrees, fifteen minutes, twenty-six seconds East ( N 89°15'26" E ), a distance of six hundred, ninety-six decimal eight zero ( 696.80 ) feet along land of the said School Board to a survey marker;

THENCE North sixty-two degrees, forty-seven minutes, seventeen seconds East ( N 62°47'17" E ), a distance of sixty-seven decimal three one ( 67.31 ) feet along land of the said School Board to a survey marker;

THENCE North eighty-nine degrees, fifteen minutes, twenty-six seconds East ( N 89°15'26" E ), a distance of ninety-one decimal three eight ( 91.38 ) feet along the South boundary of Lot 3, Brook Court Subdivision, to a survey marker;

THENCE North eighty-nine degrees, zero eight minutes, forty-one seconds East ( N 89°08'41" E ), a distance of two hundred, eighteen decimal seven five ( 218.75 ) feet along the South boundary of the said Lot B to a survey marker and PLACE OF BEGINNING;

AN AREA containing 21,667 square feet, more or less:

BEING AND INTENDED TO BE a portion of the land as acquired by the Municipality of East Hants by deed dated the 25 day of April, 1961 and as recorded in the Office of the Registrar of Deeds for Hants County in Book 226, at Page 417;

ALL BEARINGS herein are based on the Nova Scotia Co-ordinate System, Zone 5, Central Meridian Longitude 64°30' West.

**APPENDIX B:**  
**SITE VISIT PHOTOGRAPHS**  
**(28 NOVEMBER 2018)**



**Figure B-1:** View of the northern end of the east-front façade of the Subject Building.



**Figure B-2:** View of the southern end of the east-front façade of the Subject Building.



**Figure B-3:** View of the northern end of the west-rear façade of the Subject Building.





**Figure B-4:** View of the southern end of the west-rear façade of the Subject Building.



**Figure B-5:** View of the south façade of the Subject Building.



**Figure B-6:** View of the northwest corner façade of the “new” building. The section with blue and white-coloured siding is the new multi-use room.





**Figure B-7:** View of the aboveground, double wall, steel tank serving the Subject Building.



**Figure B-8:** View of furnace 1 – serving the Subject Building.



**Figure B-9:** View of furnace 2 and the hot-water tank serving the Subject Building.



**Figure B-10:** View of furnace fuel lines and water meter.



**Figure B-11:** View of furnace fuel lines. Red arrow indicates former under floor fuel lines. Note assumed borehole between the two furnaces.



**Figure B-12:** View of assumed former excavation under furnace room slab. Red arrow denotes assumed borehole within the furnace room.





**Figure B-13:** View north of the central hallway as illustration of interior finishes.



**Figure B-14:** Room 107 exposed ceiling, providing illustration of roof construction.



**Figure B-15:** Room 109 water damage associated with moisture condensation on metal window frame.



**Figure B-16:** Former classroom Room 131, as illustration of interior finishes within former Municipality offices.



**Figure B-17:** Former classroom Room 220, as illustration of interior finishes.



**Figure B-17:** Former classroom Room 231, as illustration of interior finishes.



**Figure B-19:** View of “multi-use room which replaced the former gymnasium.



**Figure B-20:** View of water-damaged ceiling tile at the north entry.



**Figure B-21:** View of transite panels (asbestos containing) above the south entry.





**Figure B-22:** View north of front staff parking area.



**Figure B-23:** View southwest of the rear yard.



**Figure B-24:** View of waste containers and shed for grounds maintenance located near the northwest corner.

**APPENDIX C:**  
**NOVA SCOTIA ENVIRONMENT INFORMATION**



**Environment**

Information Access  
and Privacy

PO Box 442  
Halifax, Nova Scotia  
B3J 2P6

ph: (902) 424-3600  
fax: (902) 424-6925

November 22, 2018

Cynthia Gillis  
OCL Services Ltd.  
41 Alben Lane  
Wellington NS B2T1A2

[cynthia@oclgroup.com](mailto:cynthia@oclgroup.com)

Dear Cynthia Gillis:

**Re: We do not have the information you asked for – File # 2018-07774-ENV**

Environment received your application for access to information under the *Freedom of Information and Protection of Privacy Act* on November 1, 2018.

In your application, you requested a copy of the following records:

*"History: Civic address 224 Highway 214, (PID 45084894), Elmsdale, NS. The property was previously occupied by the Elmsdale Elementary School until 1990 and managed under the Colchester East Hants School Board. The property was taken over by the East Hants Municipality. Circa 1997 -1998 the subject Property had oil contamination due to an underground fuel oil tank and which extended under the building. A portion of the building was torn down to facilitate remediation of the fuel oil impacts. The portion of the building was then rebuilt.*

*Requesting any information within environmental files pertaining to the property: Including tank records, spills or leaks, Phase I, Phase II reports, correspondence, Remedial Activity, Final Reports and any other information within Departmental files."*

After a file search, we have located no records responsive to your application. Therefore, it is my understanding, pursuant to clause 7(2)(b) of the *Act*, that the Environment does not have custody or control of (a) record(s) which would respond to your application.

I am unaware of a department or agency which would hold such (a) record(s).

Page 2 of 2

You have the right to ask for a review of this decision by the Information Access and Privacy Commissioner (formerly the Review Officer). You have 60 days from the date of this letter to exercise this right. If you wish to ask for a review, you may do so on Form 7, a copy of which is attached. Send the completed form to the Information Access and Privacy Commissioner, P.O. Box 181, Halifax, Nova Scotia B3J 2M4.

Please contact me at 902-424-6726 or by e-mail at [Ema.Westhaver@novascotia.ca](mailto:Ema.Westhaver@novascotia.ca), if you need further assistance in regards to this application.

Yours truly,



Ema Westhaver  
IAP Administrator

Attch.



**Department of Environment**

**Petroleum Storage Tank Registry  
Certificate of Registration**

Registered Owner:  
Owner Mailing Address:

Chignecto Central Regional School Board  
60 Lorne Street  
Trenton, NS B2N 3K3

Site Operator:  
Site Location:

Nova Family Offices  
224 Highway 214  
Trenton, Nova Scotia

Type of Installation:  
Dyking Details  
Site Registration No.:  
Appl./Appl. No.:

Government  
2013-085167  
2013-085167-004

Site No.	Status of Tank	Type of Tank	Year of Installation	Estimated Capacity	Construction Material	External Protection Details	Secondary Containment Details	Piping Details	Substance Stored	Additional Information
2013-085167-001	Currently In Use	Aboveground	1998	4566 liter	Welded Steel	None/Unknown	Double Wall	Black/Blue Steel	Paid Oil	





**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 (May 2017).
- ❑ Phase II Environmental Site Assessment, Assoc. Environmental Site Assessors of Canada Inc., Halifax, NS (October 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

## 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 hundred 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.

*Clients: private businesses and government*

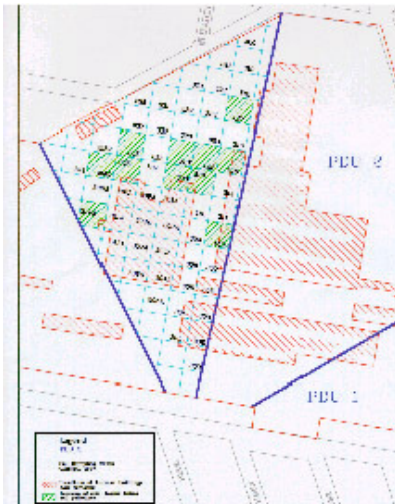




## PHASE II AND III ENVIRONMENTAL SITE ASSESSMENTS



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.

