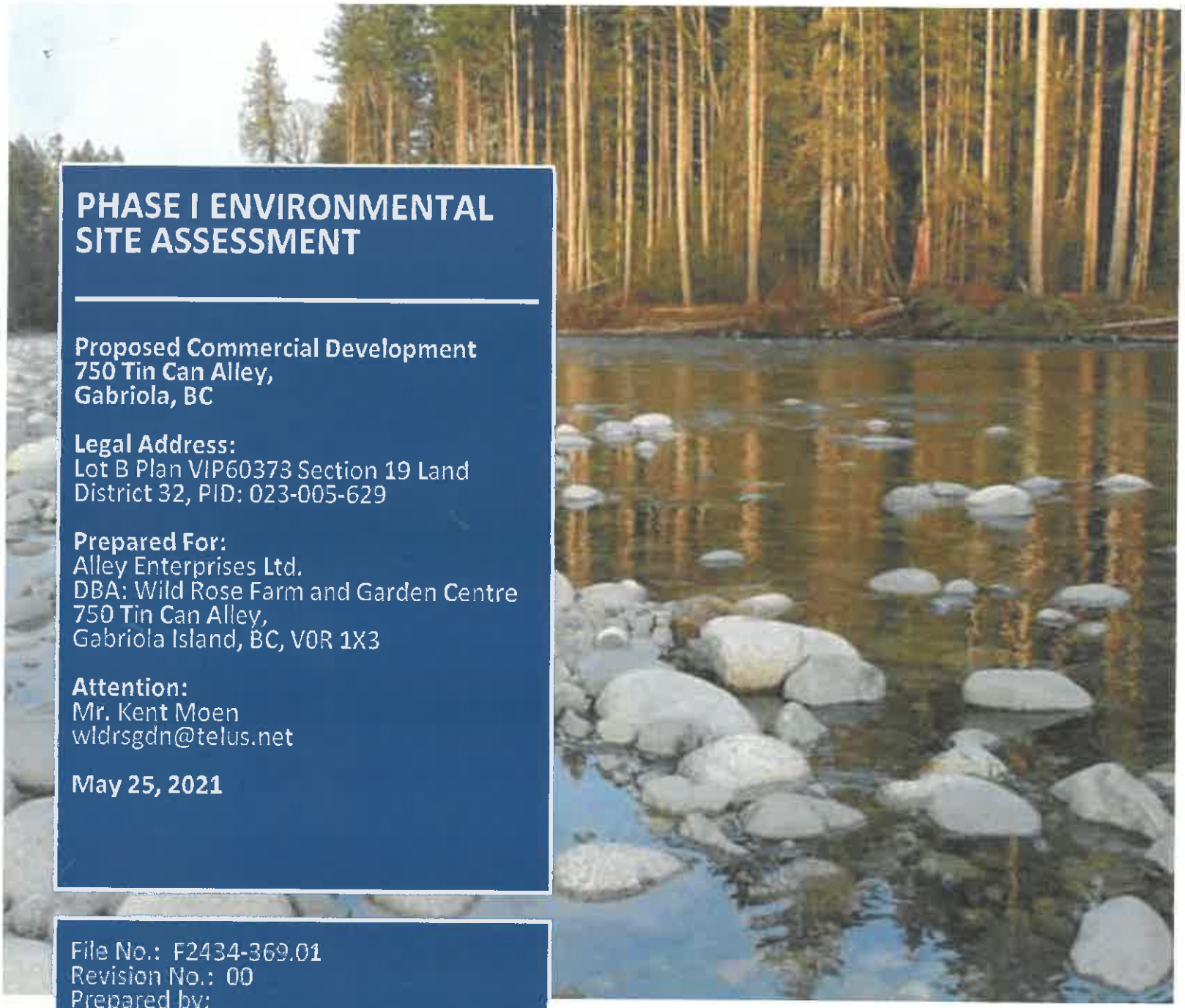

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Proposed Commercial Development
750 Tin Can Alley,
Gabriola, BC

Legal Address:
Lot B Plan VIP60373 Section 19 Land District 32, PID: 023-005-629

Prepared For:
Alley Enterprises Ltd.
DBA: Wild Rose Farm and Garden Centre
750 Tin Can Alley,
Gabriola Island, BC, V0R 1X3

Attention:
Mr. Kent Moen
wldrsgdn@telus.net

May 25, 2021

File No.: F2434-369.01
Revision No.: 00
Prepared by:
Evan Hessels, BSc.
Tabitha Zoche, BSc., ATAg, CTech, EPt.

Lewkowich Engineering Associates Ltd.
1900 Boxwood Road
Nanaimo, BC, V9S 5Y2
250-756-0355 (Office)
250-756-3831 (Fax)
www.lewkowich.com
geotech@lewkowich.com

Lewkowich Engineering Associates Ltd.

EXECUTIVE SUMMARY

1. The following is a brief synopsis of the property, assessment methods, and findings presented in the Report. The reader should review the Report in its entirety, and not rely solely on the information provided in this summary.

2. The subject property, 750 Tin Can Alley, Gabriola Island BC, from this point forward referred to as "the Property," is located on the east coast of Vancouver Island within the jurisdictional boundaries of the Regional District of Nanaimo, located on Gabriola Island. Based on available records, the Site was forested until the 1950's when it was developed as a rural residential property. Redevelopment of the site into the current commercial garden centre occurred circa 1996. There were no visual evidence of leaks or spills and none were reported by the current property owner.

3. Based on the results of the Phase I ESA, no Areas of Potential Environmental Concern (APECs) were identified for the Site or adjacent properties. *No further environmental investigation is recommended at this time.*

List of Abbreviations and Acronyms Used in the Report

Abbreviation	Title	Abbreviation	Title
ESA	Environmental Site Assessment	PCB	Polychlorinated Biphenyls
CSA	Canadian Standards Association	ACM	Asbestos Containing Building Material
APEC	Area of Environmental Concern	LBP	Lead-Based Paint
MOE	BC Ministry of Environment	ODS	Ozone Depleting Substances
LEA	Lewkowich Engineering Associates Ltd.	UFFI	Urea Foam Formaldehyde Insulation
LTSA	Land Title and Survey Authority of British Columbia	PCOC	Potential Contaminants of Concern
PID	Parcel Identifier	AST	Aboveground Storage Tank
ASL	Above Sea Level	UST	Underground Storage Tank

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1.0 INTRODUCTION

Lewkowich Engineering Associates Ltd. (LEA) was retained by Wild Rose Farm and Garden Centre to conduct a Phase I Environmental Site Assessment (ESA) on the property located at 750 Tin Can Alley, Gabriola Island, British Columbia (the "Property" or "Site"). LEA understands that the purpose of this report is for due diligence prior to the potential rezoning and redevelopment of the Site.

The primary objective of this Phase I ESA is to identify areas of actual or potential contamination resulting from current or historical activities on the Site or on surrounding properties.

This report describes current and historical land uses on the site and area, discusses areas of potential environmental concern (if any), and outlines our conclusions based on the observed conditions during the site visit.

2.0 SCOPE OF WORK

The scope of research for this report included the following:

- Review of available records respecting the historical use of the site and surrounding area;
- Review of available environmental and geotechnical reports, if any;
- Review of historical aerial photographs of the site and area;
- Examination of property use records including fire insurance plans and city directories (where available);
- A search of the B.C. Ministry of Environment Site Registry;
- Examination of municipal and provincial records and maps;
- Interviews with individuals familiar with the site;
- Visual reconnaissance of the site; and
- Evaluation of information and preparation of this report.

The Scope of Work specifically excluded the use of intrusive sampling to investigate subsurface conditions. The protocol used to conduct this report generally conformed to the Canadian Standards Association (CSA) Standard Z768-01.

3.0 SITE CONDITIONS

3.1 Site Description

The subject site is comprised of a single lot located on the east side of Tin Can Alley, beginning at its intersection with North Road, on Gabriola Island, B.C. Property details that were observed or on record as of the date of the site visit are summarized in the table below. A site plan is included in Appendix A and selected site photographs are included in Appendix B.

Table 3.1.1 – Summary of Site Information

Information	Description
Civic Address	750 Tin Can Alley, Gabriola Island, British Columbia
Legal Description	Lot B Plan VIP60373 Section 19 Land District 32
Parcel ID (PID)	023-005-629
Area	1.03 hectare
Geographical Coordinates	49° 10' 35.14" N, 123° 49' 53.89" W (NAD83, approx. centre of Site)
Zoning	LC3: Local Commercial 3: Garden Centres
Current Land Use	Commercial Retail

3.2 Tax Assessment Rolls

Tax assessment information was provided by BC Assessment via the e-valueBC online service. This service was used to gather information on existing buildings in the area, including estimated construction dates. According to BC Assessment, the subject building was constructed in 1996.

3.3 Topography

According to the online mapping tool provided by Google Earth, the site elevation changes from a high of approximately 109 metres above sea level (ASL) in the north to a low of approximately 98 metres in the south, with total relief across the site estimated to be in the order of 11 metres. Topography in the area generally consists of a moderate slope towards the Strait of Georgia in the northeast.

3.4 Regional Geology

Based on geological mapping of the Nanaimo area, surficial geology is expected to consist of areas of bedrock outcrop and outcrop with thin patches of overburden in addition to varied stony, loamy and clayey marine veneer, underlain by areas of bedrock outcrop and outcrop with thin patches of overburden.

3.5 Aquifers

Information on registered aquifers was provided by the B.C. Ministry of Environment via the iMapBC interactive mapping tool. This revealed that the subject site overlies a registered aquifer. Aquifer No. 709 (Gabriola) is a bedrock aquifer with high vulnerability, moderate demand and low productivity.

Based on the area topography, the inferred direction of groundwater flow is to the northeast, towards the Strait of Georgia.

3.6 Water Wells

According to iMapBC, there are 42 registered water wells located within 500 metres of the site, including 2 on the site itself. Research into water uses and quality are beyond the scope of reporting at this phase of investigation. The records for the on-site well are appended.

3.7 Surface Water Bodies

According to iMapBC, the nearest down-gradient surface water receptor is Goodhue Creek. This is a fish-bearing freshwater receptor located 200± metres to the south.

3.8 Floodplains

iMapBC identifies the Property as lying outside any mapped floodplain.

3.9 Precipitation

Based on Environment Canada data, the 30-year average annual precipitation for the closest climate station is 957.5mm, ranging from 24.5 mm in July to 156.9mm in November.

4.0 RECORDS REVIEW

4.1 Historical Reports

No previous environmental or geotechnical reports were made available for review.

4.2 Historical Ownership

A search of land titles available electronically from the Land Title and Survey Authority of British Columbia (LTSA) was undertaken. The results are summarized in the tables below. A full title search back to the Crown grant was not undertaken as aerial photographs showed that the area was historically undeveloped.

Table 4.2.1 – Summary of Historical Ownership

(Lot B Plan VIP60373 Section 19 Land District 32, PID: 023-005-629)

Date Range	Title Number	Owner in Fee - Simple
2008 – Present	FB144876	Alley Enterprises Ltd., Inc.No. 0701871
2005 – 2008	EX18332	Alley Enterprises Ltd., Inc.No. 0701871
1995 – 2005	EH163104	Mervyn Edward O'Donnell-Sweeney, Publican Annette Marie O'Donnell-Sweeney, Businesswoman

Table 4.2.2 – Summary of Historical Ownership

(Lot 1, Section 19, Gabriola Island, Nanaimo District, Plan 50424, PID: 016-016-122)

Date Range	Title Number	Owner in Fee - Simple
1990 – 1995	ED104328	Mervyn Edward O'Donnell-Sweeney, Publican Annette Marie O'Donnell-Sweeney, Businesswoman
1990 – 1990	ED56484	Mervyn Edward O'Donnell-Sweeney, Publican Eugene Bouliane, Businessman Annette Marie O'Donnell-Sweeney, Businesswoman Simone Therese Marie Halpin, Union Representative

Table 4.2.1 – Summary of Historical Ownership

(Lot 1, Section 19, Gabriola Island, Nanaimo District, Plan 32851, PID: 000-198-145)

Date Range	Title Number	Owner in Fee - Simple
1988 – 1990	EB36899	Mervyn Edward O'Donnell-Sweeney, Publican
	EB34464	Eugene Bouliane, Businessman Annette Marie O'Donnell-Sweeney, Businesswoman Simone Therese Marie Halpin, Union Representative
1987 – 1988	S95495	Mervyn Edward O'Donnell-Sweeney, Publican Ernest Owen Rushworth, Businessman
1979 – 1987	H56476	George Carr, Farmer

4.3 Historical Subdivision

Historical subdivision plans were previewed using the Land Title and Survey Authority of British Columbia (LTSA) website. Plans are summarized in the table below:

Table 4.3.1 – Summary of Historical Subdivision Plans

Year	Plan Number	Description
1972	VIP32851	Plan of Subdivision of part of the Southeast ¼ of Section 19, Gabriola Island, Nanaimo District. Subject site consists of the southern 2/3 of the western portion Lot 1.
1990	VIP50424	Plan of Subdivision of Lot 1, Plan 32851, Section 19, Gabriola Island, Nanaimo District. Lot 1 appears to have been subdivided into seven new lots. The subject site consists of the bottom 2/3 of the western portion of the new Lot 1.
1993	VIP57324	Explanatory Plan of Covenant of Part of Lot 1, Plan 50424, Section 19, Gabriola Island, Nanaimo District. Subject site consist of the "Covenant Area" indicated within lot 1.
1994	VIP60373	Plan of Subdivision of Lot 1, Plan 50424, Section 19, Gabriola Island, Nanaimo District. It appears lot 1 has been subdivided into three lots, similar to present day configuration. The subject site consists of lot B.

4.4 Fire Insurance Plans

According to the Catalogue of Canadian Fire Insurance Plans – 1875-1975 (2002), fire insurance plans do not exist for Gabriola Island, BC.

4.5 City Directories

Relevant city directories were not available as the immediate area was historically undeveloped.

4.6 Municipal Records

The City of Nanaimo was contacted on May 12, 2021 to request permit information for the subject address. As of May 25, 2021, no response has been received.

4.7 Fire Department Records

Based on communication with the Gabriola Volunteer Fire Department, the fire department does not have records of fuel tanks or spills associated with the subject site.

4.8 Aerial Photographs

Aerial photographs of the subject area were obtained from the University of British Columbia Geographic Information Centre. Observations are summarized below.

Table 4.8.1 – Summary of Aerial Imagery Observations

Year	Image Identifier	Observations	
1932	A4540H: 93	On-site	The east side of the property appears cleared of vegetation and undeveloped. The west side appears to be forested and undeveloped.
		Off-site	North road, Horseshoe road, and Georgia Strait are visible as landmarks in area. It appears the surrounding areas to the north and east are undeveloped and covered in vegetation. The adjacent areas to the east and south appear to be undeveloped and cleared of vegetation, with some evidence of agricultural activities to the south.
1952	BC1499: 3-4	On-site	Poor quality photograph, however the subject site appears to be similar to the previous photograph.
		Off-site	Poor quality photograph, however the surrounding area appears to be similar to the previous photograph with the exception of possible vegetation regrowth to the southwest.
1957	BC2244: 88-89	On-site	The subject site has been developed with multiple structures.
		Off-site	Similar to previous photograph.
1962	BC5046: 22-23	On-site	Similar to previous photograph.
		Off-site	Similar to previous photograph.
1967	BC5261: 95-96	On-site	Similar to previous photograph.
		Off-site	Similar to previous photograph.
1972	BC7409: 140-141	On-site	Similar to previous photograph.
		Off-site	A structure is apparent on the east adjacent property. An area further to the west appears to have been cleared of vegetation and developed with a single building.
1975	BC7754: 295-296	On-site	Similar to previous photograph.
		Off-site	It appears the area to the west has been cleared of vegetation and developed with a building.
1980	30BCC249: 208-209	On-site	Similar to previous photograph.
		Off-site	The area to the south has been developed with multiple buildings.

Table 4.8.1 – Summary of Aerial Imagery Observations Continued

Year	Image Identifier	Observations	
1985	15BC85007: 71-72	On-site	Similar to previous photograph.
		Off-site	Similar to previous photograph.
1991	15BCB91021: 145-146	On-site	The structure on the subjects site has been cleared.
		Off-site	Tin Can Alley has been developed alongside the subject site. A building appears to have been developed north of the subject site. Further property development appears to be occurring to the west and southwest.
2006	ME066460C: 394-395	On-site	Subject site has been cleared of vegetation and developed with multiple buildings, in a similar configuration to present day.
		Off-site	The north property has been redeveloped with a larger building. The south adjacent property has been developed with a residential property. A large building appears to have been developed to the west. Development to the south and southwest appears to have continued.
2010	Google Earth	On-site	Similar to previous photograph.
		Off-site	Similar to previous photograph.
2017	Google Earth	On-site	Similar to previous photograph.
		Off-site	Similar to previous photograph.

In summary, aerial photos suggest that the Property was previously undeveloped before being developed with structures in the mid 1950's. The subject site appears to have been redeveloped circa 2006 into a similar configuration to present day. The immediately surrounding area appears to have been undeveloped, with development beginning in the early 1970's, and continuing to present day.

4.9 Historical Uses of Adjacent Properties

Based on available records, adjacent properties were historically undeveloped. Residential development of the immediate area began in the early 1970s and continues to this day. Historical land uses on adjacent properties are detailed in the table below.

Table 4.9.1 – Summary of Historical Uses of Adjacent Properties

Direction from Site	Address	Description
On-site	750 Tin Can Alley	Air photos and BC assessment indicate that the property was developed in 1996 with a retail building, on land previously developed with structures in the late 1950's
North	700 Tin Can Alley	Air photos indicate that the property is partially cleared and remains undeveloped.
East	810 North Road	BC Assessment and air photos indicate the property has been developed with a one-storey house since circa 1920.
	818 North Road	
South	811 North Road	BC assessment and air photos indicate that the property was developed with a one-storey residential building circa 1979 on previously undeveloped land.
	815 North Road	
West	730 Church Street	Air photos indicate this property was developed a large building circa 1972, on previously undeveloped land.
	790 North Road	BC assessment and air photos indicate that the property was developed with a one-storey house circa 1976, on previously undeveloped land.

4.10 Summary of Historical Records

According to available records, the Property historically consisted of partially cleared undeveloped forest. Aerial photographs indicate that the lot was developed with a structure in the late 1950's. The lot appears to have been cleared and redeveloped into present day configuration circa 1996.

5.0 DATABASE SEARCHES

5.1 B.C. Ministry of Environment Site Registry PID Search

The B.C. Ministry of Environment maintains a database known as the Site Registry to track sites that have entered the assessment and remediation process. The Site Registry is not simply a list of contaminated sites as it includes sites that have not yet been investigated, sites that have been investigated and found to be contaminated, sites that have been investigated and found not to be contaminated, sites that are in the process of being remediated, and sites where remediation has been completed.

The Site Registry was searched for entries associated with the Parcel Identifier (PID) of the subject lot. As of May 25, 2021, the subject lot was not listed.

5.2 B.C. Ministry of Environment Site Registry

A search of the B.C. Ministry of Environment Site Registry respecting property within a 500 metre radius returned one entries as of May 25, 2021. The results are summarized in the table below and are included in Appendix D.

Table 5.2.1 – Summary of Site Registry Search Results

Site ID	Address	Relative Location
6333	680 North Road	640m Down-gradient to the southwest

The listed site is down-gradient and distant from the Property.

In terms of future potential impact from these sources, the Property is not, in our opinion, subject to a significant environmental risk. We also note that any contaminant migration to the surrounding area, including the Property, would be the responsibility of the source site owner(s).

5.3 Current or Historical Schedule 2 Activities

Based on a review of current and historical records no Schedule 2 activities were identified onsite

6.0 INTERVIEWS WITH KNOWLEDGABLE PERSON(S)

Mr. Kent Moen, owner of the Property, was interviewed during the site visit on May 18, 2021. Mr. Moen indicated that the property is on well and septic with electric heating in the main store building and propane heating in the small greenhouse. Soils are deposited onsite for the purpose of resale, with materials sourced from Cinnabar Valley Farms, Earth Bank Resources, MacNutts Enterprises and Van Isle Aggregates.

Mr. Moen indicated that it is his intention to rezone the property and redevelop the site with additional commercial retail space.

Current activities onsite are the commercial sale of garden supplies and plants. Mr. Moen indicated that there is not application of herbicides or pesticides. All fertilizers used are solid time released amendments for the soils.

Mr. Moen was not aware of any historical development, bulk fuel storage, leaks, spills or environmental concerns on the Site or adjacent properties.

7.0 SITE VISIT

On May 18, 2021, LEA representative Tabitha Zoche conducted a reconnaissance of the Site and nearby properties. The purpose of this visit was to:

- note any visual evidence of contamination and possible contaminant sources;
- observe existing land use adjacent to the site and assess potential for migration of possible contaminants to the subject site;
- obtain photo documentation of the site;
- identify areas of potential environmental concern;
- inventory materials stored on site and possible contaminants.

There were no limitations to site access or observations. We note that nearby properties were observed from within the boundaries of the subject property and from publicly accessible vantage points but were not accessed directly.

A site plan is presented in Appendix A and select photographs are presented in Appendix B. Additional documentation is on file with LEA.

7.1 Site Use and General Description

The site is currently developed as a commercial garden supply store and nursery. There are two permanent budlings present on the site, utilized as commercial retail space. The northern most building is utilized to store and sell garden fertilizers and pesticides, while the southern most building is utilized to sell plants. A small greenhouse used to house seedlings was observed in the southern portion of the property.

Evidence of a septic system was observed to the south of the northern-most building. A well house and water cistern was observed along the eastern property boundary, to the south of the soil storage area.

Cement block soil storage cells were observed within the centre of the site, housing various fill materials for commercial retail. Soils are clean-sourced from various soil suppliers, including Cinnabar Valley Farms, Earth Bank Resources, MacNutts Enterprises and Van Isle Aggregates.

The northern portion of the property is primarily undeveloped and covered in vegetation, with the exception of the access road linking with Tin Can Alley. The Client indicated that this portion of the site will be cleared of vegetation and developed to house the commercial soil storage activities onsite.

Housekeeping appears to be good, with no accumulation of rubbish or debris.

Ground cover onsite primarily consists of gravel with some vegetated areas. There were no paved or built out surfaces on the site.

The Property is surrounded by wire fence, and can be accessed from Tin Can Alley to the west.

7.2 Drainage and Surface Water

Topography on the subject lot was observed to be gently sloped to the southwest. Surface water is expected to infiltrate through the gravel surface. Any excess runoff is inferred to flow from northeast to southwest towards the drainage ditch parallel with Tin Can Alley and North Road. The ditch slopes towards the southwest.

Surficial drainage in the surrounding area generally, where not interrupted by municipal storm catchments or ditches, is predominantly to the south. All drainages surrounding the site empty into the Goodhue Creek.

7.3 Buildings and Structures

There are two permanent buildings on the Site as summarized in the table below.

Table 7.3.1 – Summary of Building & Structures On-site

Structure	Area (m^2)	Build Date	Construction
Northern Nursery Building	115	1996	Slab on grade, wood framed, wood siding, asphalt shingles
Southern Retail Building	140	1996	Slab on grade, wood framed, metal siding and roofing

7.4 Utilities & Discharges

Information about utilities and air and water discharges is summarized in the table below.

Table 7.4.1 – Summary of Utilities and Discharges

Utility	Description
Heating systems	Electric heating in the southern most building, propane heating in the greenhouse structure on the southern portion of the site. No heating in the northern most building
Cooling systems	None installed
Potable water supply	No potable water onsite. Waterwells used for irrigation and domestic use. Water is not tested for potability, therefore not used for consumption
Water wells	Two installed onsite
Sanitary sewer	Septic system located near the centre of the property

Table 7.4.1 – Summary of Utilities and Discharges Continued

Utility	Description
Stormwater	Stormwater is expected to infiltrate into the gravel surfaces or flow into the drainage ditches along the western and southern property boundaries
Air emissions	None
Waste Management	No evidence of waste management onsite, it is assumed that this is managed independently by the landowner

7.5 Storage Tanks and Hazardous Materials

The property was visually assessed for signs of potential fuel storage tanks. These may include fill and vent pipes, copper fuel lines, concrete pads, depressions in the ground surface and areas of stressed vegetation. We note that conducting a subsurface scan to check for evidence of underground tanks is beyond the scope of a Phase I ESA.

Observations of potential underground storage tanks (USTs), above-ground storage tanks (ASTs) and storage of petroleum products, chemicals and hazardous materials on the Property are summarized in the table below:

Table 7.5.1 – Summary of Current and Historical Storage tanks and Hazardous Materials

Utility	Description
Current or Historical USTs	Septic tanks present within the central portion of the property
Current or Historical ASTs	Water cistern located adjacent to the well house. Propane tank located to the east of the greenhouse
Hazardous Materials	Fertilizer and Herbicide storage for commercial retail in the northern-most building
Unidentified Substances	None observed

No tanks associated with the storage of heating fuels, with the exception of the propane tank, were observed onsite. Chemical storage of commercial grade herbicides and fertilizers were restricted to the northern building. No evidence of spills or releases associated with these chemicals. It is our opinion that the storage and commercial sale of these chemicals pose low environmental risk to the subject site.

7.6 Summary of Site Observations

The following table summarizes our observations of site conditions as of the date of the site visit.

Table 7.6.1 – Summary of Site Observations

Condition	Observation
Surface Staining	None observed
Stressed Vegetation	None observed
Standing Water/Surface Sheen	None observed
Unusual Odours	None observed
Drains/Sumps/Pits	None observed
Hydraulic Equipment	None observed
Oil/Water Separators	None observed
Monitoring Wells	None observed
Ponds/Lagoons/Surface Water Bodies	None observed
Unregulated Dumping	None observed
Fill Placement, Soil Removal or Relocation	Fill material storage for commercial retail was observed onsite. Materials are sourced from regulated suppliers and are considered "clean" soils.

7.7 Current Uses of Adjacent Properties

The Property is located within a rural mixed use area, with land uses as of the date of the site visit detailed in the table below.

Table 7.7.1 – Current Uses of Adjacent Property

Direction from Site	Current Zoning & Land Use(s)	Additional Land Use(s) within 300± m
North	SSN: (Gabriola Island Recycling Organization)	Undeveloped Property, Gabriola Medical Clinic
East	RR: Rural Residential (Single Family Rural Residential)	Single Family Rural Residential, Undeveloped
South	RR: Rural Residential (Single Family Rural Residential)	Single Family Rural Residential, Home-based Commercial Retail and Hobby Farm Activities
West	SSN: (The Hope House Child Day Care)	Fire Hall, Church, Elementary School

Adjacent properties were viewed from the Site and from publicly accessible areas to check for any visual evidence of potential environmental concerns such as fuel tanks or environmentally sensitive areas such as wetlands.

The Gabriola Island Recycling Organization is located on the property to the north of the site. This site operates as a receiving and sorting facility for recyclable goods. No Schedule 2 activities associated with Section H – 'waste disposal and recycling operations and activities' were observed or reported at this site. As such, it is our opinion that this site does not pose a significant environmental risk to the subject site.

No potential off-site sources of contamination due to current land uses were noted during the site visit. There was no evidence of any significant staining of roadways or ground in the area generally.

8.0 SPECIAL ATTENTION ITEMS – HAZARDOUS BUILDING MATERIALS

CSA standard Z768-01 defines the following as Special Attention Items: polychlorinated biphenyls, asbestos-containing materials, lead, ozone-depleting materials and urea foam formaldehyde insulation. Information about each of these items, as well as a comment on the potential for each item to be present on the Site, is summarized in the following sections. We note that sampling for hazardous building materials is beyond the scope of a Phase I ESA.

8.1 Polychlorinated Biphenyls

Transformers, light ballasts and other electrical equipment manufactured before 1980 may contain polychlorinated biphenyls (PCBs). The federal Environmental Contaminants Act, 1976, prohibited the use of PCBs in heat transfer and electrical apparatus installed after September 1, 1977, and in transformers and capacitors installed after July 1, 1980. In addition, storage and disposal of PCB waste materials is regulated.

- Electrical equipment is not suspected to contain PCBs since the buildings were constructed after the period of concern.

8.2 Asbestos-Containing Materials

WorkSafeBC currently defines asbestos-containing building materials (ACMs) as any material containing at least 0.5% Asbestos, or >0% in the case of vermiculite insulation. These materials may be present in structural or mechanical building components.

The common use of potential friable ACM (able to be crumbled by hand pressure) in construction decreased dramatically in the mid-1980s due to public pressure, although ACM is occasionally found in building materials and equipment installed as late as 1990. The sale and use of products containing Asbestos (except the crocidolite form) remains legal in Canada.

Typical suspect building products include floor and ceiling tiles, plaster or drywall mud, vermiculite insulation and Transite cement board. Typical mechanical products include pipe insulation and Transite cement pipe.

These materials do not typically pose any great hazard except during removal, demolition or work that requires disturbance of the material.

- ACMs were not identified as a concern as no older buildings or building materials are present.

8.3 Lead

Lead content in consumer coatings was unregulated prior to 1976. The federal Hazardous Products Act (HPA) of 1976 limited the lead content of interior paint to <5000 ppm (0.5%) by weight. Exterior paint was not regulated until 2005, when the HPA was amended to limit the lead content in all paint to <600 ppm (0.06%) by weight. In September 2011 the HPA was amended to further limit lead content in all consumer coatings to <90 ppm (0.009%).

Other sources of lead include plumbing solder, brass fittings, old pipes, tile glazing and roof and window flashing. The National Plumbing Code of Canada allowed the use of lead solder in pipes until 1986.

Lead is listed as a 2A and 2B carcinogen (probably and possibly, respectively, carcinogenic to humans) by the International Agency for Research on Cancer (IARC). Lead is an ALARA substance, which means that although the B.C. Occupational Health & Safety Regulation specifies exposure limits for lead, worker exposures to lead in paints and coatings must be kept 'as low as reasonably achievable'.

- Potential lead-based paint (LBP) was not observed on the Site. The utility lines were observed to be plastic; therefore, lead-containing pipes or solder were not identified as potential concerns.

8.4 Ozone-Depleting Materials

Ozone-depleting substances (ODSs) are substances which deplete the Earth's ozone layer. The federal Ozone-Depleting Substances Regulations (1998) amended controls on production and consumption of chlorofluorocarbons, halons, carbon tetrachloride and methylchloroform. These substances are commonly found as refrigerants, aerosol propellants, cleaning solvents and in some polyurethane building products. These regulations were replaced by the Ozone-depleting Substances and Halocarbon Alternatives Regulations in 2016.

- Potential sources of ODSs were not observed on the site.

8.5 Urea Foam Formaldehyde Insulation

Urea Foam Formaldehyde Insulation (UFFI) is a type of insulation that was widely used in the 1970's for insulating and retrofitting industrial, commercial and residential buildings. UFFI is a low-density foam that becomes stiff and self-supporting when it dries. UFFI may be foamed in place in walls or voids, or forced into cavities through small openings.

The use of a urea formaldehyde-based resin in the manufacture of UFFI can lead to the release of formaldehyde gas during the curing process and afterwards. Formaldehyde emissions do, however, decrease over time. UFFI may also deteriorate when wet, releasing increased amounts of formaldehyde and providing a potential medium for mould growth.

UFFI has been prohibited from installation, sale or importation into Canada under the Hazardous Products Act since December 1980.

- Since there were no buildings on-site during the period of concern, UFFI is not suspected to be present.

8.6 Radon

Radon gas is produced naturally in the environment due to the decay of uranium in rock, soil and groundwater. It is commonly found in bedrock that contains black shale and/or granite. Radon gas can migrate through the ground and enter buildings through porous concrete or gaps, and tends to accumulate in poorly ventilated basements.

Based on information provided by the BC Centre for Disease Control, the subject area is expected to have a low radon potential.

9.0 AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

Based on the findings of this Phase I ESA, no Areas of Potential Environmental Concern (APECs) were identified on the Site or on surrounding properties.

10.0 CONCLUSIONS AND RECOMMENDATIONS

Results of the Phase I Environmental Site Investigation indicate that the Site was historically forested. It was cleared and developed as a rural residence in the 1950's. Demolition and redevelopment of the site into current configuration occurred circa 1996. The Property is currently deceloped as a commercial garden centre.

A review of historical information indicated that the surrounding area was historically forested. Development of the surrounding area into rural residential properties began in the 1970's. Development of the surrounding area into a mix of rural residential and community service properties continues to present day.

No apparent housekeeping issues or Areas of Potential Environmental Concern (APECs) were identified on the Site or on surrounding properties. The Phase I ESA revealed no evidence of actual or potential contamination In connection with the Property. Therefore, no further investigation is recommended at this time.

Prior to demolition or renovation of any buildings, WorkSafeBC requires that a Hazardous Materials Survey of affected structures is carried out prior to, and available during on-site work affecting the buildings.

11.0 LIMITATIONS

The information and opinions expressed in this Report, or any document forming part of the Report, are for the sole benefit of the Client. No other party may use or rely upon the Report or any portion thereof without our written consent and such use shall be on such terms and conditions as we may expressly approve. The contents of the Report remain our copyright property. Any use which a third party makes of the Report is the sole responsibility of the third party. We accept no responsibility for independent conclusions, interpretations, interpolations and/or decisions of the Client, or others who may come into possession of the Report, or any part thereof, which may be based on information contained in the Report, or for damages suffered by any third party resulting from use of the Report without our express written permission.

In preparing this report Lewkowich Engineering Associates Ltd. (LEA) reviewed historical records, conducted interviews with certain private and public officials, and conducted an on-site visual inspection of the property. We examined and relied upon documents referenced in the report and have relied on oral statements made by certain individuals but we have not conducted an independent examination of the facts contained in referenced materials and statements. LEA assumes the genuineness of the documents and that the information provided in documents or statements is true and accurate.

LEA has prepared this report in a professional manner, using that level of skill and care normally exercised for similar projects under similar conditions by reputable and competent consultants and in accordance with our normal terms and conditions. LEA shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time the report was prepared. We also note that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report. Conclusions and recommendations were made within the operative constraints of the scope, budget, and schedule for this project. We believe the conclusions stated herein to be factual, but no guarantee is made or implied.

LEA has not conducted subsurface exploration or testing as related to contamination by hazardous substances.

12.0 CLOSURE

Lewkowich Engineering Associates certifies that the individuals signing this statement have demonstrable relevant experience and are familiar with the work carried out on the site. This report was prepared in accordance with criteria established in CSA Standard Z768-01 (R2016).

Lewkowich Engineering Associates Ltd. appreciates the opportunity to be of service on this project. If you have any comments, or additional requirements at this time, please contact us at your convenience.

Respectfully Submitted,
Lewkowich Engineering Associates Ltd.

Prepared By:

Evan Hessels, BSc.
Email: ehessels@lewkowich.com

Tabitha Zoche, BSc., ATAg., CTech, EPt.
Email: tzoche@lewkowich.com

Reviewed By:

Paul Johnston, D.Tech., RIHT
Email: pjohnston@lewkowich.com

13.0 ATTACHMENTS

Appendix A: Site Plans
Appendix B: Site Photographs
Appendix C: Land Titles
Appendix D: Site Registry Search Results
Appendix E: Historical Records