Phase Two Environmental Site Assessment

150 King Street

Town of The Blue Mountains, Ontario

Prepared for:
2706499 Ontario Limited

Prepared by:
Azimuth Environmental
Consulting, Inc.

May 2022

AEC 19-089

AZIMUTH ENVIRONMENTAL CONSULTING, INC.

Environmental Assessments & Approvals

May 26, 2022 AEC 19-089

2706499 Ontario Limited
12 Totten Drive
Brampton ON
L6R 0P8

Attention: Mr. Charanjit Aneja, CPA, CA, CPA (IL), CFF
Project Manager

Re: Phase Two Environmental Site Assessment
150 King Street, Town of The Blue Mountains, ON

Dear Mr. Aneja:

Azimuth Environmental Consulting, Inc. (Azimuth) is pleased to provide you (the "Client") with the following report documenting the Phase Two Environmental Site Assessment (ESA) conducted at 150 King Street within the Town of The Blue Mountains, Ontario (the "RSC Property" or the "Site").

This assessment was conducted to evaluate two (2) *areas of potential environmental concern* (APECs) on the RSC Property associated with the importation of fill of an unknown quality and a former railway corridor immediately north of the Site boundary. This work was conducted for the purpose of obtaining a *Record of Site Condition* (RSC) as part of a Site redevelopment project.

The most recent Phase Two ESA program completed to date consisted of *Soil Sampling Program* completed in May of 2021. Based on the analytical results of the Phase Two ESA, there are no exceedances above the applicable O.Reg. 153/04 *Table 2 Full Depth Generic Site Condition Standards in a Potable Ground Water Condition* [SCS]) for a future residential land use in coarse textured soils at the RSC Property. As such, the data confirm that there is no soil impacts related to the identified APECs and therefore, no further investigation is required. Based on the above results, the Phase Two ESA is sufficient for the RSC submission to the Ministry of the Environment, Conservation and Parks (MECP).

We trust this report is sufficient for your current requirements. Please do not hesitate to contact the undersigned if you have any questions.

Yours truly,
AZIMUTH ENVIRONMENTAL CONSULTING, INC.

DRAFT

David Ketcheson, M.A.Sc., P.Eng., QP_{ESA}
Senior Environmental Engineer

DRK:bp

Attach:

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EXECUTIVE SUMMARY

A *Phase Two Environmental Site Assessment* (ESA) was conducted at 150 King Street East[1] in the Village of Thornbury, Ontario (the "*Record of Site Condition* [RSC] Property" or the "Site"). The RSC Property is oddly rectangular in shape and is 8,451 m^2 or 0.8 hectares (ha) in size (Figure 2). The RSC Property is bound by King Street East to the south, Elgin Street North to the west, 160 King Street East to the east, and the Georgian Trail to the north, (Figures 1 and 2). The RSC Property consists of Parts 7 through 10 of the Registered Plan 16R-11658.

The property identification number (PIN) and the legal description of the RSC Property is provided in Table A (below):

Table A: Description of RSC Property

Property	Identification Number (PIN)	Legal Description
150 King Street East	37141-XXXX (LT)	Part of Lots 10 to 14 and Part of Wellington Street, north east side of King Street, Town Plot of Thornbury, being Parts 7, 8, 9 and 10 of Registered Plan 16R-11658; Town of The Blue Mountains

The RSC Property is found at an elevation of 190 *metres above mean sea level* (masl). The parcel gently slopes from south to north, toward Georgian Bay (Figure 3). Given the granular sediments, precipitation would percolate into the underlying soils at the Site. If excess water existed then it would either be directed to the roadside swale or the ditching along the former railway corridor. The shallow soils beneath the RSC Property consist of sandy silt to silty sand material and overlie a shale bedrock.

Information obtained through the current assessment suggests that the RSC Property has not historically been used (*i.e.* no structure has been developed upon the Site). The *Canadian National Railway* (CNR) line immediately north of the RSC Property previously utilized an easement on the original land parcel; however no structures were noted as part of the current assessment. The RSC Property has remained undeveloped based on aerial images dating back to 1938.

The soils at the RSC Property are classified as Brighton sand (Hoffman *et al*, 1962). This soil is a well sorted sandy outwash material with good drainage. Brighton sand is

[1] For the purposes of this report King Street will be assumed to be oriented on an east-west alignment, although it actually lies on a southeast to northwest direction

classified within hydrologic soil group "A". Group A soils have low runoff potential and high infiltration rates even when thoroughly wet, and consist of deep, well to excessively drained sand or gravel. According to Barnett *et al* (1991) the surficial material at the RSC Property consists of glaciolacustrine deposits composed of sand, gravelly sand, and gravel associated with near shore and beach deposits.

The RSC Property is located within the Beaver Valley Physiographic Region of Ontario (Chapman & Putnam, 1984). The Beaver Valley is a small but well defined area between Griersville Rock to the west and the Blue Mountains Peaks to the east. The area was eroded by a pre-glacial river into Georgian Bay, which carved a deep valley into the subsurface.

The underlying bedrock geology has been described by the Ontario Geologic Survey (OGS) as being composed of shale and minor limestone of the Blue Mountain Formation (OGS, 2016). The nearest bedrock well (WWR No.: 25-02573) is located approximately 55 m south. According to this well record, the bedrock contact occurs at about 27.4 *m below ground surface* (mbgs).

Two (2) *Areas of Potential Environmental Concern* (APECs) were identified to occur on, in or under the RSC Property. APEC 1 (on-Site) is related to the importation of fill material of unknown quality. APEC 2 (off-site) is related to historical use of CNR corridor along the northern boundary of the RSC Property, now converted to a walking trail. As per the recommendations of the Phase One ESA, a Phase Two ESA must be conducted before an RSC can be filed.

Other off-Site PCAs were assessed and not considered to be sources of APECs to the RSC Property given their distance to the RSC Property, the inferred ground water direction, and the subsurface conditions (Azimuth, 2021).

The most recent shallow soil sampling program was completed in proximity to the northern boundary, adjacent to the former railway in May 2021. In addition, shallow soil samples were collected from locations where piled soils existed in 1988. The soil samples were analyzed for the *contaminants of potential concern* (COPC) identified, as detailed in the *sampling and analysis plan* (SAP). According to the results, all parameters were reported to be below the *Ministry of the Environment, Conservation and Parks* (MECP) *Table 2 Full Depth Generic Site Condition Standards in a Potable Ground Water Condition (SCS)* and therefore, meet the requirements of O.Reg. 153/04 (as amended). Therefore, there are no related impacts that would be of any environmental significance, and as such, no further investigation is required.

1.0 INTRODUCTION

1.1 Site Description

Azimuth Environmental Consulting, Inc. (Azimuth) has been retained by 2706499 Ontario Limited to conduct a Phase Two Environmental Site Assessment (ESA) at 150 King Street East in the Town of Blue Mountains, Ontario (the "RSC Property" or the "Site") (Figure 1 and Figure 2).

The 150 King Street parcel is rectangular in shape, is 8,451 m^2 (or approximately 0.8 ha) in size. This parcel is bound by King Street East to the south, Elgin Street North to the west, and the Georgian Trail to the north and 160 King Street East to the east.

The *property identification number* (PIN) and legal description of the RSC Property is provided in Table A (above). The RSC Property is currently undeveloped meadow. According to the Town of The Blue Mountains Draft Zoning By-Law #2018-65, the RSC Property is zoned C1 – Village Commercial.

The RSC Property is currently managed by Aneja Professional Corporation (the "Agent"). The directive of this assessment is to evaluate potential environmental concerns associated with the identified *potential contaminating activities* (PCAs) and *areas of potential environmental concern* (APECs) related to current and historical agricultural field activities.

1.2 Property Ownership

The representative for the current owner of the RSC Property is Charanjit Aneja of Aneja Professional Corporation. Contact information for Mr. Aneja is provided below:

2706499 Ontario Limited
12 Totten Drive
Brampton, ON
L6R 0P8

Email: Charanjit@aneja.ca
Phone: (905) 564-9100

1.3 Current and Proposed Future Use

The RSC Property is currently vacant with no permanent structures. Reportedly, the Site is an unused strip of land which has never been developed. As such and for the purposes of this assessment it would be classified as vacant or undeveloped land which implicitly is considered the most sensitive land use. A voluntary RSC is being pursued for these

lands. It is understood that the RSC Property is currently zoned commercial. The proposed land use is a combination of commercial and residential.

1.4 Applicable Site Condition Standard

According to the available *Ministry of Natural Resource and Forestry* (MNRF) background information for the Phase Two Study Area, the following applies:

- no Provincial Parks or Conservation Reserves have been identified;
- no Areas of Natural and Scientific Interest were identified;
- no provincially significant wetland was identified;
- no municipally designated area of environmental significance was identified on or in the vicinity of the RSC Property;
- the RSC Property is not located within the Niagara Escarpment Plan Area;
- the RSC Property is not located within Oak Ridges Moraine Plan Area;
- the RSC Property has no known threatened or endangered species present on or about the Site and is not known to be habitat of threatened or endangered species; and
- no wilderness areas have been identified.

As such, no area of natural significance was identified for the RSC Property. It was also determined that the conditions outlined in O.Reg. 153/04 s.43.1 do not apply to the RSC Property. Specifically:

- the RSC Property is not within 30 m of a surface water body; and
- bedrock across the RSC Property is located at a depth greater than 2 m.

Similarly it was determined that the conditions outlined in O.Reg. 153/04 s.41 do not apply to the RSC Property. Specifically:

- the pH of the soil measured at the RSC Property were within the acceptable range of 5 to 9 for surface soils and 5 to 11 for subsurface (deeper than 1.5 m) soil; and
- the RSC Property is not within or adjacent to an area of natural significance nor is it within 30 m of such an area.

Grain size analyses of soils collected by EXP (2020) at the RSC Property would indicate the need to use Site Condition Standards (SCS) for coarse textured soils. Finally, a non-potable request under O.Reg. 153/04 s.35 has not been pursued or approved and is not applicable to the RSC Property. A potable water standard will be used for the evaluation of the RSC Property. Specifically, neither a full depth generic non-potable ground water condition nor a stratified site condition standard for a non-potable ground water condition is to be pursued as per O.Reg. 153/04 s.35.(1). The following conditions exist:

- it is presumed that the municipally serviced community does not have at least one property located within 250 m of the boundaries of the RSC Property which uses a private water well supply;
- it is recognized that the RSC is not for an agricultural or other use site condition;
- it is reported that the RSC Property is not in a wellhead protection area or other designation identified by the municipality for the protection of ground water;
- the municipality has given no written consent to use the non-potable standard; and
- no request for this consent has been requested by the Owner or their agent(s).

Based on this assessment, it is our opinion that the RSC Property does represent a sensitive land use. As such, it would be prudent for all soil sampling to be compared to *Table 2: Full Depth Generic Site Condition Standards (SCS) in a Potable Ground Water Condition for coarse textured residential land use* (MECP, 2011 [as amended]).

It is understood that the proposed Site use will be mix as commercial/ residential, and as such, the above referenced SCS is suitable.

2.0 BACKGROUND INFORMATION

2.1 Physical Setting

The RSC Property is located within the Beaver Valley Physiographic Region of Ontario. The Beaver Valley is a small but well defined area between Griersville Rock to the west and the Blue Mountains Peaks to the east. The area was eroded by a pre-glacial river into Georgian Bay, which carved a deep valley into the subsurface.

The topography of the RSC Property is generally flat, with a surface elevation of approximately 190 masl. The topography within the Phase One Study Area generally slopes to the north, towards Georgian Bay, located approximately 230 m north of the RSC Property. Based on a review of the EXP (2020) report, the depth to the "perched" ground water in the vicinity of the RSC Property is ~2 mbgs. This tends to correlate with the detection of the underlying sandy silt till horizon.

The Site is situated within a beaches and sand plains physiographic region. The surficial geology in the vicinity of the Site is described as “coarse-textured lacustrine deposits consisting of sand, gravel, minor silt and clay.” The soils at the RSC Property are classified as Brighton sand (Hoffman *et al*, 1962). This soil is a well sorted sandy outwash material with good drainage. Brighton sand is classified within hydrologic soil

group “A”. Group A soils have low runoff potential and high infiltration rates even when thoroughly wet, and consist of deep, well to excessively drained sand or gravel.

The underlying bedrock geology has been described by the *Ontario Geologic Survey* (OGS) as being composed of shale and minor limestone of the Blue Mountain Formation (OGS, 2016). The Blue Mountain Formation is Upper Ordovician in age. The bedrock is found at a depth of approximately 15 to 30 mbgs. The nearest bedrock well (WWR No.: 25-02573) is located approximately 90 m west. According to this well record, the bedrock contact occurs at about 27.4 mbgs.

2.2 Hydrogeologic Setting

The MECP Water Well Records were referenced for any recorded well information within the vicinity (~250 m) of the centre of the RSC Property (Table B). The Phase One Study Area is currently serviced with municipal water. *Water Well Records* (WWR) can be used to gain subsurface information which can provide insight into geological formations within the area.

Table B: Water Well Database Summary[1]

WWR ID	Direction from Phase I Property	Distance from centre of RSC Property (m)	Elevation (masl)	Date Drilled	Static Water Level (mbgs)	Total Depth (m)	Well Type	Primary Use
25-02573	W	86	189	01-Dec-61	-	27.4	Bedrock	Abandoned
72-62531	NW	145	188	26-Apr-16	-	-	-	-
25-02574	SSW	248	196	20-Dec-67	-	34.1	Bedrock	Domestic
73-68603	SW	40	189	04-Sep-20	-	6.1	Overburden	Monitoring
73-68604	SW	40	189	04-Sep-20	-	6.1	Overburden	Monitoring
73-68605	SW	40	189	04-Sep-20	-	6.1	Overburden	Monitoring
73-79462	W	90	189	03-Dec-20	-	-	-	-
73-79463	W	90	189	03-Dec-20	-	-	-	-
72-79464	W	90	189	03-Dec-20	-	-	-	-

Notes: [1] - values rounded for presentation purposes

Only nine wells were located within 250 m of the RSC Property. At two locations there were a cluster of three monitoring wells. One of the wells was drilled for a domestic supply and one of the wells was abandoned due to lack of water supply. A few records did not contain information related to the well use or construction. However, the recent construction in 2016 and 2020 is anticipated to be for exploration work (*i.e.,* test/ monitoring wells). The two well records with information were 27.4 and 34.1 m deep, (both bedrock wells); and encountered shale bedrock at a depth of 16.7 and 28.9 mbgs. Both well records indicated the presence of sandy clay at the surface. Beneath the clay, one record encountered sand over the shale. The second record encountered various layers of diamicton, gravel, and additional clay over the shale bedrock.

The hydrostratigraphic units that occur within the Phase One Study Area (and beyond), which consist of the following deposits/ formations: generally consist of coarse textured glaciolacustrine deposits of sand and gravel with minor silt and clay which are foreshore and basinal deposits. Modern alluvial deposits containing clay, silt, sand and gravel which may contain organic remains, are present along the Beaver River and its tributaries and Indian Brook Creek. These deposits consist of generally unconsolidated, loose clay, sand, silt and gravel soils which have been eroded over time from the river currents and would be present in the flood plains of these water bodies. The west end of Thornbury also contains scattered areas of fine textured glaciolacustrine deposits of massive to well laminated silt and clay with minor amounts of sand and gravel.

At the Site, the EXP (2000) report documented a sandy silt till existing below the upper desiccated horizon. It is presumed this may have been scoured to a certain degree as one approaches the Beaver River.

2.3 Subsurface Structure or Utilities

It is understood that there are no services at the RSC Property. According to information from the Interview Section in Phase One Report (Azimuth, 2021) natural gas, water, and sewer services are available in the Phase One Study Area; but these lines do not enter the RSC Property.

Public utility locates were not obtained for this assessment, although, it is known that municipal servicing (*i.e.,* water/ sewer) does not extend to the RSC Property. Overhead hydro lines are noted along the North side of King Street East, in addition to markers for natural gas and pedestals for telephone and cable servicing. There were no buried services noted along the roadway (*i.e.,* storm or sanitary sewers). Storm water would be conveyed through shallow ditching along the roadside; but it is presumed that most precipitation infiltrates and therefore defined ditching is absent in the Village. As such, runoff from the RSC Property (and upgradient lands) would occur as sheet flow if it occurs at all.

In general, the service utility corridors along the King Street East do not correspond with the PCA / APEC identified at the RSC Property. The locations and depths would not intercept potential contaminant pathways at the RSC Property. The conclusion reached is that these potential contaminant pathways are not influential at the RSC Property.

2.4 Past Investigations

There are a few existing environmental reports related to the RSC Property and Phase One Study Area. Only those reports considered to be relevant to this investigation were reviewed in the Phase One ESA. Overall, the past ESA investigations completed by Azimuth provide essentially background information related to the RSC Property (and Phase One Study Area) and are reliable. The reports are thorough and are adequate for due diligence purposes they served. Overall, the reports confirm the RSC Property has not been used despite ownership by construction and developers in recent years. For specific information related to each of the reports reviewed, the reader is directed to the Phase One ESA (Azimuth 2021) prepared by Azimuth under a separate cover.

2.5 Potentially Contaminating Activity

2.5.1 On-Site Activities

Table C represents the identified PCA on, in, or under the RSC Property, which is shown on Figure 4. It is acknowledged that other items beyond those listed in O.Reg. 153/04 (Schedule D –Table 2) could be identified for the on-site PCAs.

The Phase One ESA (Azimuth, 2021) identified the following on-Site APEC at the RSC Property:

Table C: Potentially Contaminating Activities – RSC Property

	Potentially Contaminating Activity (O.Reg. 153/04 – Schedule D – Table 2)		Description of Activity	Information Source(s) (Section No.)[1]
On-Site				
1	30	Importation of Fill Material of Unknown Quality	Imported fill material of unknown quality was brought to the RSC Property at the time of the train station's decommissioning. Small fill piles are noted on the 1988 aerial photograph	• Aerial Photography (Section 3.6.1) • Site Reconnaissance (Section 6.0)

Notes: 1 - section numbers refer to the Phase One ESA report

The RSC Property is currently composed of undeveloped grass and shrub land. In the 1988 aerial image, small fill piles and / or areas of disturbed ground were noted, particularly in the southeast half of the parcel. The transfer of excess soils is considered a PCA (No.: 30) when the quality of the material is unknown. This is due to the potential that the excess soil was contaminated in its original location, and this contamination

could then be spread to the RSC Property after placement. During the Site visit, no elevated mounds of material were visible. As noted above, boulders were noted along the northeast parcel boundary along the Georgian Trail; however, these are not considered "fill" as part of the current assessment. The ground area of the RSC Property did not contain significant vegetation growth; but, this was determined to be due to the season (early spring) and the gravelly nature of the upper most soil. Historic images of the parcel captured through Google Street View for 2011, 2012, 2015, and 2018 display grass, shrub, or tree vegetation.

The evaluation completed by Azimuth in 2019 and 2021, had test pits advanced throughout the 150 and 160 King Street East parcels, with soil samples submitted to an accredited laboratory, *Caduceon Environmental Laboratories* (Caduceon) for analysis. This exercise was completed for due diligence purposes to evaluate any potential contamination at the RSC Property. The evaluation did not identify detections of metals or PHCs of any parameters above the Table 2 SCS[2].

Based on the above discussion, the imported excess soil piles of unknown origin represent a significant PCA identified for the RSC Property

2.5.2 Off-Site Activities

Table D represents the identified the PCA on, in, or under the Phase Two Study Area. It is acknowledged that other items beyond those listed in O.Reg. 153/04 (Schedule D – Table 2) could be identified for the off-Site PCAs.

Table D: Potentially Contaminating Activities – Phase One Study Area

	Potentially Contaminating Activity (O.Reg. 153/04 – Schedule D – Table 2)		Description of Activity	Information Source(s) (Section No.[1])
2	30.	Importation of Fill Material of Unknown Quality	Small excess soil piles are noted at 35 Elgin Street in the 1988 aerial photograph	• Aerial Photographs (Section 4.7.1)
3	34.	Metal Fabrication	Metal fabricator with environmental monitors located at 14 Elgin Street North	• Site Reconnaissance (Section 6.0)
4	46.	Rail Yards, Tracks and Spurs	The Georgian Trail was historically the Canadian National Railway since the 1800s	• Aerial Photographs (Section 4.7.1)

Notes: 1 - section numbers refer to the Phase One ESA report

[2] O.Reg. 153/04 MECP Table 2 Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Residential/ Parkland/ Institutional Property Use for coarse textured soils

Table D: Potentially Contaminating Activities – Phase One Study Area

	Potentially Contaminating Activity (O.Reg. 153/04 – Schedule D – Table 2)		Description of Activity	Information Source(s) (Section No.[1])
5	NA	Equipment Manufacturer	Rock breaking equipment manufacturing historically located at 35 Elgin Street North	• Site Reconnaissance (Section 6.0)
6	NA	Historic and current use of 90 King Street East	Historic use as apple processing plant since 1880s and current use for cider production	• Site Reconnaissance (Section 6.0)
7	NA	Diesel fuel spill	A spill of 400 L of diesel fuel at 99 King Street East in 2005	• Environmental Source Information (Section 4.2)
8	NA	Demolition waste storage at 90 King Street East	A demolition company was historically located at 90 King Street East	• Environmental Source Information (Section 4.2)
9	NA	Road salting practices along King Street East (Ontario Highway 26)	Road salt impacts consideration due to proximity	• Site Reconnaissance (Section 6.0)

Notes: 1 - section numbers refer to the Phase One ESA report

Breaker Technology Ltd. was established in 1961. Excess soils were noted at 35 Elgin Street property in the 1988 aerial image. As noted above, excess soils can potentially introduce contamination to a Site, depending on its source zone land use. This parcel is also currently used for equipment manufacturing, and has been developed for use since circa 1961. This type of land activity has the potential to utilize bulk chemical products (gasoline, hydraulic oil, *etc*.). Information obtained through the EcoLog ERIS indicates that the company lists various waste classes including waste oils & lubricants, PCBs, petroleum distillates, and solvents since 1986[3]. This land use is also listed as a former *National Pollutant Release Inventory* (NPRI) site in the EcoLog ERIS records; however, it was not present in the active NPRI database.

The southern extent of the manufacturing plant is ~35 m north of the RSC Property boundary and the excess soil stockpiling denoted in 1988 is estimated to be offset ~25 m north of the Site boundary. Although the excess soils and land use has the potential to introduce contamination into the area, there is no evidence of significant contamination at the Site (*i.e.,* vegetation impacts, *etc.*). In addition, the parcel is located down gradient from the RSC Property, and therefore any contamination would presumably migrate away from the Site, toward Georgian Bay. Based on this assessment it was considered that the manufacturing operations have not adversely influenced the RSC Property.

3 MECP Waste Generator records extend back to 1986.

The CNR line was historically located immediately north of the RSC Property within PIN: 37141-0085. This line was originally completed in 1872 and was formerly abandoned in 1984. Railways are typically considered an environmental concern due to potential transport of bulk liquids, the soil sterilants historically sprayed along the rail corridor, and the chemical preservatives used to treat the wood used in rail construction (*i.e.,* rail ties). The Georgian Trail opened in 1989 and has been used for recreational purposes since this time. The adjacent historic CNR line is considered an APEC and an environmental concern to the RSC Property.

The 14 Elgin Street parcel has been developed for use since sometime prior to 1973. This business was reportedly established in the 1960s and has been located at this location since its inception. Information obtained through the Site Reconnaissance work (Section 6.0 - Azimuth, 2021) indicates that bulk chemical products (*i.e.* solvents) have not been used in the past 12 years of operation. No bulk chemicals were noted during the Site Reconnaissance investigation (Azimuth, 2021); however, two (2) ground water environmental monitors were identified along the north property boundary. The presence of a metal fabrication shop if involved in milling operations or similar has the potential to contaminate the soil and ground water with cutting fluids. The presence of environmental monitors suggests there could be a potential environmental concern related to past operations. No MECP spill records were identified for this property based on an EcoLog ERIS search. The property is located ~70 m upgradient of the RSC Property. It is felt that a significant release would be required to extend to the RSC Property and there was no evidence of such an event, therefore it is not considered significant environmental concern to the RSC Property.

The structure located at 90 King Street East was originally built in the 1880s and has historically been used as an apple processing facility; however, the structure was reportedly re-built in 1932 after a fire. It is understood that this facility was historically used to produce Mitchell's apple juice, apple cider and apple sauce and it eventually closed circa 1958. It is currently the home of the Thornbury Village Cidery. Information obtained through the EcoLog ERIS indicates that the Thornbury Village Cidery has generated waste oil and lubricants at this location since 2007. It is anticipated that this waste is generated by the equipment used in apple processing and cider packaging. An EcoLog ERIS record also lists this parcel as the location of San-Mar Environmental Group Ltd, a demolition company. This company generated wrecking and demolition waste between 1997 and 2001. Although the presence of this historical structure and current waste oil production has the potential to contaminate the soil and ground water, there is no evidence that any significant product release has occurred. Any significant

contamination would also flow tangential to the RSC Property, toward Georgian Bay. This land use is therefore not considered a significant environmental concern to the RSC Property.

Information obtained from the EcoLog ERIS report indicates that a 400 L diesel spill occurred at 99 King Street East in 2005. The fuel reportedly came from a transport truck, likely within the shopping plaza parking lot. The quantity of fuel released into the environment is significant; however, the record listed the environmental impact as "not anticipated". Although the quantity of material exposed to the environment is significant, any PHC contamination has likely degraded in the ~15 years since the incident. The location of the spill is also located tangential to the RSC Property, so any migration or transport to the RSC Property is considered low. This record is therefore not considered a significant environmental concern to the RSC Property.

Road salting practices along King Street East (Ontario Highway 26) suggest the likelihood of salt impacts at the RSC Property. These anticipated impacts are not sourced directly from the Site and are present from the interest in preserving public safety. Therefore, salt impacts from road salting practices along King Street East (Ontario Highway 26) are not considered to be an APEC to the RSC Property.

Based on the above discussion, none of the off-Site PCAs are considered a significant environmental concern to the RSC Property, barring the CNR corridor.

3.0 SCOPE OF THE INVESTIGATION

3.1 Overview of the Site Investigation

A soil sampling program was developed for the RSC Property to address concerns with the two (2) APECs identified in the Phase One ESA (Azimuth, 2021). The COPCs associated with the APECs are: *petroleum hydrocarbons* (PHC), *volatile organic compounds* (VOC), heavy metals, semi-VOCs (sVOCs), and *organochlorine pesticides* (OCPs). Table E (overleaf) summarizes the sampling plan and rationale.

In total four (4) test holes were advanced at the Site, using hand held auger, discrete soil samples at varying depths were obtained. Soils were characterized using the field identification and procedures outlined in the *Unified Soil Classification System* (USCS). Discrete samples were screened in the field using visual and olfactory indicators, as well as an *organic vapour analyzer* (OVA) for detecting flammable organic vapours. In the absence of any discernible concerns, samples were collected in the upper 0.3 m where

residual evidence of past contaminants was considered to be more favourable owing to a higher organic content.

Table E: Sample Analysis Plan

Borehole/ Well ID	Location	Rationale
TH1	Eastern extent of Site in location showing an excess soil pile from 1988 aerial photograph in order to assess APEC 1	Assess impacts from importation of excess soil in 1988 • shallow soil sampling for COPCs in the upper desiccated soil horizon to evaluate for residual evidence of potential contamination (PHCs, VOCs and metals); • excavate test hole to greater than 1.5 m in order to assess subsurface soil pH
TH2	Northern extent of RSC Property at midpoint of eastern portion of Site to assess APEC 2	Assess potential impacts from historic railway corridor adjacent to the northern RSC Property boundary • shallow soil sampling for COPCs in the upper desiccated soil horizon to evaluate for residual evidence of potential contamination due to washoff (PHCs, VOCs, OCPs, sVOCs and metals);
TH3	Middle of Site in location showing an excess soil pile from 1988 aerial photograph in order to assess APEC 1	Assess impacts from importation of excess soil in 1988 • shallow soil sampling for COPCs in the upper desiccated soil horizon to evaluate for residual evidence of potential contamination (PHCs, VOCs and metals);
TH4	Northern extent of RSC Property at midpoint of western portion of Site to assess APEC 2	Assess potential impacts from historic railway corridor adjacent to the northern RSC Property boundary • shallow soil sampling for COPCs in the upper desiccated soil horizon to evaluate for residual evidence of potential contamination due to washoff (PHCs, VOCs, OCPs, sVOCs and metals); • collect duplicate sample for quality control purposes;

Notes: sVOC includes PAH, ABN and CP

Select samples were jarred and submitted to an accredited laboratory for analysis of:

- TPH (F_1 - F_4);
- VOCs including BTEX;
- Metals including hydride forming constituents;

- Other regulated parameters including *mercury* (Hg), *free cyanide* (CN^-), SAR and *electrical conductivity* (EC);
- Semi-VOCs including *polycyclic aromatic hydrocarbons* (PAHs), *acid/base/neutral compounds* (ABN), *chlorophenols* (CP); and
- OCPs.

In addition soil pH samples were collected at surface and at depth. The collection of sVOC and OCP soil samples were limited to those locations evaluating the rail corridor PCA (*i.e.,* APEC 2). The locations of the test holes are shown on Figure 5.

3.1.1 Soil Quality

All of the initial soil samples were submitted to *Caduceon Environmental Laboratories* (Caduceon) in Barrie, Ontario for the specified analyses in the SAP. Caduceon is accredited by the *Canadian Association of Laboratory Accreditation* (CALA). The unabbreviated laboratory analytical reports are presented in Appendix D.

The results of the laboratory soil quality analyses are presented in a tabular summary inserted on the figures (Appendix A). No detection of any COPCs above applicable Provincial standards was reported in the analytical results.

Moreover, specific soil samples were screened for OCPs and sVOCs due to the proximity of the former CNR liner along the northern limit of the RSC Property. No detection of any parameter was reported in the analytical results above the applicable Provincial standards. Based on these results no further work is warranted.

3.2 Media Investigated

As previously discussed, the underlying soils at the RSC Property consists of a discontinuous/ thin (<0.1 m) layer of topsoil. Below about 0.7 to 1.6 m depth is a sandy silt till horizon. Above the till sequence is a desiccated sandy silt unit. The sandy silt till contained cobbles and boulders and extended to the deepest borehole drilled on the Site (*i.e.,* 6.5 mbgs).

3.2.1 Soil Sampling Plan

For all the test holes excavated, the field screening activities would include assessing the soil vapour profile with an OVA, as well as a visual and olfactory inspection. For OVA analyses, soil samples were collected by hand and stored in sealed plastic bags. The

OVA was used to measure air in headspace of the bags, in order to test for the presence of flammable organic vapours.

If it was determined that the potential existed for soil impacts then soil samples were collected in the appropriate laboratory provided containers. The sampling at each location would be based on a professional assessment of the COPCs. The soil sampling program targeted the upper soil profile where a more organic rich soil was anticipated and potentially would sorb the COPCs washed from the railway lands or from the imported excess soils. Surface soil samples were also collected for a pH measurement to assist in Site sensitivity classification. At least one soil pH sample was collected below 1.5 m depth in order to evaluate the subsurface soil quality. Grain size samples were obtained from the geotechnical program (EXP, 2020). Duplicate soil samples were collected for each sample parameter group submitted for the respective geochemical analysis.

3.3 Phase One Conceptual Site Model

The Phase One *Conceptual Site Model* (CSM) presented in the Phase One ESA (Azimuth, 2021) is as follows:

"… Currently the RSC Property is devoid of any structure and consists of undeveloped meadow and successional forest land. The historical aerial photography confirms the undeveloped nature of the RSC Property over time dating back to the 1938 images when the entire local area was undeveloped, barring the rail corridor.

The adjacent land uses appear to have remained principally agricultural in the distant past with residential redevelopment over time. The former CNR line immediately north of the RSC Property dates back to the 1870s. The rail corridor was formally abandoned in 1984; but had not been used in decades. CNR had previously acquired an easement on the RSC Property; but it would appear that the easement was never used.

Over time, the King Street East corridor in the Site vicinity has been urbanized. The King Street East corridor has also been commercialized. According to the Town of The Blue Mountains Draft Zoning By-Law #2018-65, the RSC Property is zoned C1 – Village Commercial like the surrounding lands. The RSC Property lies within a mixed urban land use consisting of industrial, commercial, and residential property uses within the Village of Thornbury.

The RSC Property is bound by King Street East to the south, Elgin Street North to the west, the Georgian Trail to the north and municipally owned lands to the east and just west of Grey Street North. There are no access roads/ driveways onto the RSC Property.

According to local topographic mapping, the RSC Property is found at an approximate elevation of 187 m above mean sea level (masl). The parcel is gently sloped from south to north, toward Georgian Bay, located approximately 200 m north of the RSC Property. Given the granular sediments, precipitation would percolate into the underlying soils at the Site. If excess water existed then it would either be directed to the roadside swale or the ditching along the former railway corridor. The shallow soils beneath the RSC Property consist of sandy to silty material. Within a metre or two of the ground surface, the soils transition into a sandy silt till which may exist to the shale bedrock contact.

The surficial soils at the RSC Property are classified as Brighton sand (Hoffman et al, 1962). This soil is a well sorted sandy outwash material with good drainage. Brighton sand is classified within hydrologic soil group "A". Group A soils have low runoff potential and high infiltration rates even when thoroughly wet, and consist of deep, well to excessively drained sand or gravel.

The RSC Property is located within the Beaver Valley Physiographic Region of Ontario (Chapman & Putnam, 1984). The Beaver Valley is a small but well defined area between Griersville Rock to the west and the Blue Mountains Peaks to the east. The area was eroded by a pre-glacial river into Georgian Bay, which carved a deep valley into the subsurface. According to Barnett et al (1991) the surficial material at the RSC Property consists of glaciolacustrine deposits composed of sand, gravelly sand, and gravel associated with near shore and beach deposits, minor tills and includes esker, kame, end moraine, ice-marginal delta and subaqueous fan deposits.

Based on a review of the MECP well records, the depth to ground water in the vicinity of the Phase One Property varies from 1.5 to 4.5 mbgs. On-Site monitoring wells measured a static water level between 1.5 and 2.7 mbgs. The variation in the ground water level may be due in part to subtleties in the ground surface. Depositional variations were apparent and lower permeability seams may locally "perch" water entering the shallow overburden sediments.

The shallow ground water flow direction within the Phase One Study Area is inferred to be north towards Georgian Bay. The Site is situated within a beaches

and sand plains physiographic region. The surficial geology in the vicinity of the Site is described as "coarse-textured" lacustrine deposits consisting of sand, gravel, minor silt and clay.

The underlying bedrock within the area is reported to be shale. The depth to bedrock is significantly deeper than that seen away from the Beaver Valley. Bedrock along Highway 26 from Thornbury to Collingwood is generally considered to be <10 m depth. The increased depth to the bedrock is considered part of the Beaver Valley genesis being a pre-glacial river erosion event which carved a deep valley into the subsurface. The erosion is anticipated to have included the underlying bedrock. As noted in the water well records, the depth to bedrock in wells within the Phase One Study Area is 27 to 34 mbgs. The nearest bedrock well (WWR No.: 25-02573) is located approximately 55 m south. According to this well record, the bedrock contact occurs at about 27.4 mbgs.

The underlying bedrock geology has been described by the Ontario Geologic Survey (OGS) as the Blue Mountain Formation. The Georgian Bay Formation overlies the Blue Mountain Formation; but is reported to exist south of Highway 26, (Armstrong and Dodge, 2007). The Blue Mountain Formation is Upper Ordovician in age and is described as a shale with minor limestone present.

One PCA has been identified on, in the RSC Property. Other PCAs have been identified in the Phase One Study Area. Two PCAs identified are considered to be APECs.

The nine (9) PCAs have been identified on, in the RSC Property (Table C) and in the Phase One Study Area (Table D). The PCAs identified are considered to be APECs (Table F - below).

Table F: Areas of Potential Environmental Concern[1]

Area of Potential Environmental Concern[2]		Location of Area of Potential Environmental Concern on RSC Property	Potentially Contaminating Activity[3]	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Ground water, soil and/or sediment)
1	Importation of Fill Material of Unknown Quality	Small fill piles may have been placed on the RSC Property	30 – Importation of Fill Material of Unknown Quality	On-Site	PHCs, VOCs, metals including: Sb, Se, As, Hg, CN^-, SAR and EC	Shallow Soils

Table F: Areas of Potential Environmental Concern[1]

Area of Potential Environmental Concern[2]		Location of Area of Potential Environmental Concern on RSC Property	Potentially Contaminating Activity[3]	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Ground water, soil and/or sediment)
2	Former CNR corridor	Adjacent lands along the former CNR line	46 – Rail Yards, Tracks and Spurs	Off-Site	PHCs, VOCs, OCPs, PAHs, ABN & CPs, metals including: Sb, Se, As, Hg, CN^-, SAR and EC	Shallow Soils

Notes: 1 Refer to clause 16(2)(a), Schedule D, O.Reg. 153/04
2 Area of Potential Environmental Concern means the area on, in or under a RSC Property when one or more contaminants are potentially present, as determined through the phase one environmental site assessment, including through,
(a) identification of past or present uses on, in or under the RSC Property, and
(b) identification of potentially contaminating activity.
3 Potentially Contaminating Activity means a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in a phase one study area

Information acquired as part of the Phase Two ESA was in general agreement with the Phase One CSM.

3.4 Deviations from Sampling and Analysis Plan

No deviations to the field program were noted. In order to obtain the required soil volume for analyses, it was necessary to excavate deeper into the profile in some locations; especially when a duplicate sample was being collected.

3.5 Impediments

No access issues were encountered during the Phase Two ESA field program.

4.0 INVESTIGATION METHOD

4.1 General

The evaluation of the RSC Property was conducted through a shallow soil sampling program. A total of four (4) shallow soil samples (plus one [1] duplicate as part of the *quality assurance/ quality control* [QAQC] program) were collected from two areas on-Site. Sampling adjacent to the former CNR line was conducted along the northern Site boundary at two locations. *Global positioning system* (GPS) co-ordinates were calculated from the 1988 historical aerial photograph where excess soil piles appeared on images. These co-ordinates were then used to locate the two sampling locations in the central portion of the Site (Figure 5).

The COPCs from the former CNR line were rationalized to be wash-off from the rail corridor over time. The down gradient ground water flow direction is to the north and away from the RSC Property. Thus, it was reasoned that the shallow soils along the northern Site boundary would provide the best opportunity to potentially detect the COPCs. The COPCs for rail corridors tend to be less mobile constituents (*ex.,* PAHs). The rationale was that if the contaminants had been washed onto the RSC Property that they would tend to be at or near surface; especially where the organic content was present (*i.e.,* shallow root zone).

Similarly, imported excess soils placed onto the property would likely be spread in the immediate vicinity of the identified piles. The intent was to determine whether the surficial soils appeared different than the underlying shallow soil profile. As it turned out there was no discernible difference which was interpreted to potentially represent a local excess soil source. Thus, collection of samples high in the soil profile was considered to be the optimum way to potentially capture these imported materials at the pile locations.

All soil samples were collected using standard operating procedures. Samples were jarred in new laboratory prepared containers for submission to Caduceon in Barrie, Ontario. The standard operating procedures for the various components of the Phase Two ESA (as stipulated in O.Reg. 153/04 Schedule E, Part Two, s.3(5)) are presented in Appendix B.

Of these four (4) sampling locations, most locations along the northern Site boundary were situated in low lying areas adjacent the former rail corridor on the RSC Property. These low lying locations where transported materials could accumulate were obvious sampling locations for both the former rail corridor assessment and the imported excess soils of unknown quality.

4.2 Soil: Sampling

The shallow soil sampling program for the APECs was conducted on June 3, 2021 via hand auger probes up to 1.7 m in depth. The samples were collected using a stainless-steel hand auger probe. The soil was then examined by field staff, logged, and field screened for visual and olfactory indicators. Representative samples were collected according to the SAP (Table F). Figure 6 shows the shallow soil sample locations.

Measures followed during the soil sampling to minimize the potential for cross contamination included:

- washing and rinsing the hand auger probe after each use;
- using new nitrile gloves during the collection of all soil samples; and
- collecting all soil samples in new, laboratory provided containers.

The finalized field logs, which are presented in Appendix C, provide a description of the soil encountered at each sampling location. In all cases the soil was consistent (*i.e.,* appeared to be from the same source) and was comprised of a sandy silt.

4.3 Field Screening Measurements

Field screening consisted of a visual and olfactory inspection of the soil profile, as well as testing using a portable gas detector. The gas detector used at the RSC Property for all the soil sampling was a RKI Instruments Eagle OVA, in methane elimination mode. The technical details for the RKI Eagle, including gases detected, measuring range and accuracy of the measurements are provided in Appendix C. The OVA was calibrated with a 15% *Lower Explosive Limit* (LEL) using 1,650 *parts per million by volume* (ppmv) hexane standard immediately prior to beginning each soil sampling program.

The results of the field screening measurements were identified for use as a guide for soil sample selection and laboratory submission. Higher readings on the RKI Eagle suggest the presence of flammable organic vapours, and would indicate potential soil sampling locations. The RKI Eagle does not analyze specific parameter concentrations therefore the relative concentrations between readings formed the basis for comparison. As a general rule of thumb, readings above about 50 ppmv on the RKI Eagle instrument are taken to be indicative of the potential presence of organic contamination. OVA readings at the RSC Property ranged between 0 and 10 ppmv (Appendix C), and samples were collected and submitted according to the SAP.

4.4 Analytical Testing

All of the initial program soil samples were submitted to Caduceon in Barrie, Ontario. As noted above, Caduceon is an accredited laboratory by CALA. All samples were stored in a cooler with ice (temperature around 4 C°) during transit and that the samples were submitted for analysis within the specific hold times to Caduceon. All samples were analysed for the specified analyses in the SAP.

The Analytical Protocol established Acceptance Limits for use when assessing the reliability of data reported by analytical laboratories including maximum holding times for the storage of samples/ sample extracts between collection and analysis, analytical methods, field and/ or laboratory quality assistance samples, recovery ranges for spiked samples and surrogates, *Reporting Detection Limits* (RDLs, mandatory maximum method detection limit) and precision required when analyzing laboratory replicate and spiked samples. The review of the data in the Certificate of Analysis indicates:

- the RDLs were met for the tested parameters.
- the result of the laboratory duplicate samples is similar to the results for the original sample, and *relative percent differences* (RPDs) for the detectable tested parameters are within the acceptable range

The unabbreviated laboratory analytical reports are presented in Appendix D.

4.5 Residue Management Procedures

Minimal soil cuttings were created in conducting a manual auguring program into the shallow soil regime. All soil cuttings produced during the manual program were moved about a metre away from the sampling location on the RSC Property and left on the grassy lands. No further actions were required after analytical testing had shown that no detectable concentrations above the applicable site condition standards were found in these materials.

4.6 Quality Assurance and Quality Control Measures

Azimuth uses numerous QA/QC procedures, some of which have been previously discussed. An overview of these measures is highlighted below.

4.6.1 Field Evaluation Protocols

Standard operating procedures (SOPs) for aspects of the Phase Two ESA are presented in Appendix B. In brief, the intrusive RSC Property investigation used several quality control measures. Some of the contaminant types are being evaluated for their persistence in the environment (*ex.,* metals, PAHs). Some of these compounds are known to volatilize and therefore soil gas screening techniques were used to identify potential contaminant sampling locations.

Visual and olfactory screening techniques are also possible for PHCs. Soil staining is typical for PHC detection in soil profiles. During the sampling, visual and olfactory

observations of the soil profile was unable to confirm the presence/ absence of PHC in the soils. Soil vapour field screening was conducted on all soil sample locations.

4.6.2 Sample Collection Protocols

As indicated in the SAP, one (1) blind duplicate sample was collected for every ten (10) samples submitted for each parameter analysis. Therefore, one (1) sample was submitted for the evaluation of the COPCs. The duplicate analysis was used to assess the integrity/ quality of analytical data from the laboratory and the sampling technique; the laboratory was not informed of either duplication prior to submitting the samples.

All containers for the soil samples were provided by Caduceon and were specific to the individual types of analysis required. Sample preservation methods (if any) were followed as specified by the laboratory. All sample containers were labelled by field staff with the date, project number, sampler's initials, and unique sample identifier. Upon collection, each sample was placed in an ice filled cooler for temporary storage prior to delivery to laboratory.

For the field programs, all samples were collected at the RSC Property, stored as indicated above, and transported directly to the laboratory within 24 hours. Laboratory provided chain of custody forms were prepared which documented all the samples and sampling information and provide a record of the sample handling between collection and delivery to the Laboratory. The chain of custody form is included with the analytical testing results (see Appendix D). All equipment cleaning procedures used by Azimuth are presented in Appendix B.

4.6.3 Analytical Data Review

The purpose of this effort is to ensure the representativeness of the analytical data. As per the Regulation, the data quality objectives are to ensure that the dataset produced from the investigation is robust and accurate, which provides a representative and complete picture of the Site conditions of the RSC Property. The validity of the analytical data is completed under the laboratory standard procedures, which may include a number of QA/QC procedures, such as: matrix spikes, matrix spike duplicates, relative percent difference (RPD), and data qualifiers.

In addition to the analytical QA/QC procedures undertaken at the laboratory, the applicable duplicate analyses are compared to their corresponding sample and the RPD is calculated. Typically, the RPD should not differ by greater than 20%, and if this occurs it may indicate inaccuracies with the sampling technique. Variance greater than 20% may not necessarily represent data that is incorrect; however, it may highlight the inherent

variability with the sampling procedure, which in some instances may be unavoidable (*i.e.,* limited sample recovery, heterogeneous soil matrices, *etc*.).

Analytical precision declines as results approach the *method detection limit* (MDL) also called the *limit of quantification* (LOQ). The ability to precisely measure concentrations at the limit of quantification of the measuring equipment is a recognized constraint. In general, results within five times the MDL are afforded additional consideration owing to these analytical limitations. Small differences in analytical results at the limit of quantification can result in RPD results which differ by more than 20%. However, the same results when compared to SCS can be inconsequential and therefore are not deemed to be significant.

Further discussion related to the analytical data is provided in Section 5.5. Raw unabbreviated quality assurance data for the Phase Two ESA is presented in Appendix D.

4.6.4 Laboratory Quality Assurance and Quality Control Procedures

All of the soil analytical samples were submitted to Caduceon in Barrie, ON. Each submission is entered and tracked through the *Laboratory Information Management System* (LIMS). Each submission is subjected to a variety of internal QA/QC measures, which include, but are not limited, the following analyses:

- laboratory control standards;
- blind duplicates;
- relative percent difference;
- matrix spikes; and
- lab blanks.

The Quality Assurance Reports provided by Caduceon have been provided in Appendix D.

5.0 REVIEW AND EVALUATION

5.1 Ground Water Elevation and Flow Direction

Ground water monitoring was not completed by Azimuth as part of the Site development programs. According to the Oak Ridges Moraine Groundwater Program (and other hydrogeological reporting), the regional ground water flow direction occurs in a northerly direction towards the Georgian Bay. According to the EXP (2020) report, the shallow water table is about 1.8 mbgs.

5.2 Soil Texture

Based on the sampling results, the native soils were reported to be coarse-grained soils. As such, the laboratory analytical results for the COPC evaluation were compared to the coarse textured soil standards.

5.3 Soil: Field Screening

According to the soil sampling program, the OVA readings for the samples collected as part of the drilling program were below the rule-of-thumb value of 50 ppmv. Visual and olfactory field screening in this area was in agreement with the OVA results. As noted in Section 4.3, OVA measurements were below 10 ppmv throughout the soil profile.

5.4 Soil Quality

All raw laboratory analytical data reports are included in Appendix D. No detection of contaminants above the applicable Provincial standards were reported. It is also noted that no detection above the detection limits occurred for sVOCs, VOCs and OCPs parameters for all analyses.

Metal species were detected, albeit at natural or background levels (*i.e.,* less than Table 1 SCS). Similarly, PHCs were detected at background levels (*i.e.,* less than Table 1 SCS); but, a consistent trace detection did occur for all soils samples. This would appear to represent an air borne deposition given the consistency observed across the RSC Property and beyond.

5.5 Quality Assurance and Quality Control Results

The *Certificates of Analysis* (CoA) for all the samples submitted for laboratory analyses are presented in full in the Phase Two ESA, along with the laboratories Quality Assurance Reports. All of the CoAs comply with Section 47(3) of O.Reg. 153/04. The CoAs provide a list of comments pertaining to each sample submitted for analysis, including where the laboratory qualified any of the analytical results. No qualifications are noted for any of the samples submitted as part of the current program.

As part of the field program, duplicate soil samples were submitted for each of the analyzed parameters. The results are summarized and the RPD calculated for the applicable duplicate soil samples. The lack of any detection in the sVOC, VOC and OCP samples prevent any meaningful comparison of the blind duplicate samples.

The RPD value for the one TPH F_3 parameter was within the "5 times LOQ" and reported 20 & 28 µg/g which is well below the 240 µg/g limit for Table 1 SCS. This variability

was not considered to be significant. The same was true for beryllium which varied by 0.1 µg/g; but, resulted in a difference slightly greater than 20%. This variation was considered to be inconsequential. The SAR measurements also reported a result of 1.5 & 0.9; which was variable; but well below the Table 1 SCS of 2.4 and also considered to be inconsequential. All other detected metal parameters are less than the 20% threshold prescribed in the Regulation. It is recognized that some minor variance does inherently exist within the samples; however, this is somewhat expected based on the well graded nature of the soils (*i.e.,* greater heterogeneity). This variability is considered minor and the data are considered to be representative, which is also confirmed by the laboratory QA/QC results.

5.6 Phase Two Conceptual Site Model

The Phase One ESA (Azimuth, 2021) identified the following APECs at the RSC Property and Phase One Study Area:

Table G: Areas of Potential Environmental Concern – RSC Property

Potentially Contaminating Activity (O.Reg. 153/04 – Schedule D – Table 2)		Description of Activity	Information Source(s) (Section No.)
On-Site			
30	Importation of Fill Material of Unknown Quality	Imported excess soil of an unknown quality was brought to the RSC Property at the time of the train station's decommissioning.	• Aerial Photography (Section 3.6.1) • Site Reconnaissance (Section 6.0)
Off-Site			
46	Rail Yards, Tracks and Spurs	Historic CNR Line is present directly north of the RSC Property	• Environmental Source Information (Section 4.2) • Aerial Photography (Section 3.6.1) • Site Reconnaissance (Section 6.0)

The RSC Property is oddly rectangular in shape and is 8,451 m^2 or 0.8 hectares (ha) in size. The PIN for RSC Property is 37141-0090 (LT). The RSC Property is currently undeveloped meadow and forest land. According to the Town of The Blue Mountains Draft Zoning By-Law #2018-65, the RSC Property is zoned C-1 – Village Commercial. Azimuth conducted a Phase Two ESA for the property located at 150 King Street East in the Town of Blue Mountains, Ontario.

According to local topographic mapping, the RSC Property is found at an approximate elevation of 190 masl. The parcel is gently sloped from south to north, toward Georgian

Bay. The coarse-grained soils are expected to infiltrate any precipitation. If excess water existed then it would either be directed to the roadside swale or the ditching along the former railway corridor. The shallow soils beneath the RSC Property consist of sandy silt to silty sand material and overlie a shale bedrock. The nearest bedrock well (WWR No.: 25-02573) is located approximately 90 m west. According to this well record, the bedrock contact occurs at about 27.4 mbgs.

The surface soils at the RSC Property are classified as Brighton sand (Hoffman *et al*,, 1962). This soil is a well sorted sandy outwash material with good drainage. Brighton sand is classified within hydrologic soil group "A". Group A soils have low runoff potential and high infiltration rates even when thoroughly wet, and consist of deep, well to excessively drained sand or gravel.

The RSC Property is located within the Beaver Valley Physiographic Region of Ontario (Chapman & Putnam, 1984). The Beaver Valley is a small but well defined area between Griersville Rock to the west and the Blue Mountains Peaks to the east. The area was eroded by a pre-glacial river into Georgian Bay, which carved a deep valley into the subsurface.

Two (2) APECs were previously identified to occur on, in or under the RSC Property. The first APEC is related to the importation of excess soil of unknown quality and the second APEC is related to the former rail tracks located immediately north of the RSC Property.

Four (4) shallow soil samples were collected from the on-Site for an assessment of PHCs, VOCs, sVOCs, OCPs, metals including Sb, Se, As, Hg, free cyanide, and inorganic parameters (pH, SAR and EC). As presented in Figures 6 through 23, the analytical results are below the Table 2 SCS, again confirming that there is no soil impact associated with the APECs.

Based on the findings presented herein, the sampling efforts meet the requirements of O.Reg. 153/04 (as amended). Therefore, there are no related impacts that would be of any environmental significance, and as such, no further investigation is required.

6.0 CONCLUSIONS

The Phase One ESA identified two (2) APECs in, on or under the RSC Property, related to the importation of excess soils of unknown quality. The other off-Site PCA (*i.e.,* historical use of CNR corridor along northern boundary) was assessed and considered to be an APEC at the RSC Property given its immediate proximity to the Site (Azimuth,

2021). Thus, a shallow soil sampling program was instigated to address the most probable contaminant pathway being a shallow soil deposition owing to "wash off" from the rail corridor surface and/or the surface placement of excess soils and there grading into the surface soils.

The soil analytical results collected during the investigation indicate no exceedances above the applicable Site Condition Standards for either APEC evaluated. Based on these findings, there are no soil impacts that would be of environmental significance, and as such, no further investigation is required.

6.1 Signatures

The signature and statements required as part of O.Reg. 153/04, Schedule E, Table 1, are provided in the transmittal letter at the front of this report.

7.0 LIMITATIONS AND USE OF THIS REPORT

This report has been prepared for the sole benefit of 2706499 Ontario Limited (the 'Client'). Azimuth Environmental Consulting, Inc. (the 'Consultant') understands that this report may be provided to and relied upon by others. Any other person or entity without the express written consent of the Consultant and the Client may not rely upon the report. Any use that a party makes of this report, or any reliance on decisions made based on it, is the responsibility of such parties. The Consultant accepts no responsibility for damages, if any, suffered by any party as a result of decisions made or actions based on this report.

The information and conclusions contained in this report are based upon work undertaken by trained professional and technical staff in accordance with generally accepted engineering and scientific practices current at the time the work was performed. This report should in no way be construed as a definitive representation of any or all environmental impacts on the site resulting from past or current practices. The information contained within this report should be evaluated, interpreted, and implemented only in light of this assignment.

The Consultant makes no other representation whatsoever, including those concerning the legal significance of its findings, or as to the other legal matters addressed incidentally in this report, including but not limited to the application of any law to the facts set forth herein. With respect to regulatory compliance issues, regulatory statutes are subject to interpretation. These interpretations may change over time, thus the Client should review such issues with appropriate legal counsel.

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APPENDICES

Appendix A:	**Figures**
Appendix B:	**Standard Operating Procedures**
Appendix C:	**Finalized Field Logs, Grain Size Assessment and Field Equipment Information**
Appendix D:	**Laboratory Analytical Reports**
Appendix E:	**RSC Property Survey**

APPENDIX A

Figures

APPENDIX B

Standard Operating Procedures

Standard Operating Procedure
Ground Water Quality Field Measurements

This standard operating procedure (SOP) outlines the procedures to be followed when collecting ground water quality field measurements. For the purposes of this SOP, ground water quality field measurements refers to parameters including electrical conductivity (EC), pH, temperature, and oxidation potential (redox).

Preparation Works

- Prior to the travel to the field site ensure ground water quality field equipment is in good working order and has been calibrated according to the manufacturer's instructions. The pH meter must be calibrated using at least a two point calibration curve (i.e. two standard solutions).
- Record the results of the calibration process in the log book along with the calibration date and staff initials.
- Review the proposed Sampling and Analyses Plan for the designated site with the project manager to ensure understanding regarding the specific requirements of the field program.

Site Works

- Prior to any operations, inspect the ground water monitor for signs of tampering and/or structural faultiness and record results in field log. Photograph any obvious signs of tampering/failure.
- Don any required personal protection equipment (e.g. gloves).
- Collect a ground water level measurement according to the requirements of the Sampling and Analysis Plan (and the ground water sampling SOP). In the event that a non-aqueous liquid phase is present in the well, either on top of the ground water surface or at the well bottom, no ground water quality field measurements are to be collected.
- Purge the monitoring well(s) as required in the sampling and analysis plan (and according to the applicable SOP). Ground water quality measurements should be collected at each well as soon as practicable during or following the purging process.
- At each individual well flush the ground water quality field measurement collection container using an aliquot of the sampled ground water, and then dispose of the flushing water a suitable distance from the monitoring well location. This water can be used to acclimatize the quality field equipment prior to measurement, if appropriate.

- Refill the collection container with a new aliquot of freshly collected ground water and submerge the measurement probes to the depth required in the manufacturer's directions.
- Allow sufficient time for each individual field measurement devices to stabilize, noting the initial readings and the rate and direction of change in readings over time. When sampling more than one monitoring well try to ensure that each meter/probe is allowed to stabilize for the generally the same amount of time at each monitoring well in order to ensure uniformity between the readings.
- Record the final readings in the field notes. Where possible, compare the final readings to historical readings from the same wells.
- Prior to further use, clean field equipment after collecting the sample an appropriate distance away from monitoring well. At a minimum, the equipment should be thoroughly rinsed with distilled water. If significant contamination is suspected is may be necessary to clean the equipment more vigorously prior to further use.

The following points apply to specific measurement devices:

- pH meter/probe: ensure that the ground water pH readings fall between the points of the calibration curve. For instance, if a two-point calibration was conducted using pH solutions with values of 7 and 10, the ground water pH readings should lie between 7 and 10. Should the readings fall outside the calibration curve, recalibrate the unit using the appropriate calibration solutions.
- Temperature meter/probe: depending on the ambient temperature, the temperature readings will likely initially drift toward the solution temperature, then begin to change as the solution temperature starts to match the ambient temperature. For this reason, the early temperature readings likely reflect the ground water temperature.
- EC meter/probe: ensure that the correct value range (e.g., mS/cm, µS/cm) is being used to collect the EC readings, in order to ensure an appropriate number of significant digits in the reading.

Standard Operating Procedure
Ground Water Quality Sampling

This standard operating procedure (SOP) outlines the steps involved in ground water quality sampling. This SOP assumes that the monitoring well(s) have been appropriately developed.

Suitable well sampling devices include check valve fitted bailers (either disposable or dedicated), inertial sampling pumps (i.e. Waterra pumps), or downhole pumps. In each case the material in contact with the well annulus and water should be composed of a suitable non-absorbant material (i.e., Teflon, polyethylene). Clean (i.e. new and unused) equipment (e.g. rope, bailers, tubing, gloves) should be used for sampling any individual well.

Preparation Works

- Arrange for the delivery of all necessary sampling containers, quality control samples and field coolers from the analytical laboratory.
- Prior to the travel to the field site ensure ground water quality sampling equipment (and all other associated field equipment) is in good working order and any necessary calibrations have been performed has been properly calibrated.
- Review the proposed Sampling and Analyses Plan for the designated site with the project manager to ensure understanding regarding the specific requirements of the field program. Ensure that the proposed analytical sampling technique to be requested is appropriate for the required work program.

Site Works

- Prior to beginning sampling inspect the monitoring well for signs of tampering and/or structural defects and record results in field log. Photograph any obvious signs of tampering and or damage.
- Don any required personal protection equipment (i.e., gloves, etc.) prior to beginning the sampling process.
- Upon opening the monitoring well, measure the depth to ground water using an electronic water level tape. Where the presence of non-aqueous phase fluids are suspected or possible a multi-phase water level tape should be used to collect ground water levels. The water level tape (multi-phase or otherwise) should also be used to confirm the total depth of the monitoring well. The water level tape should be cleaned in between use at different wells.

- Calculate the volume of water within the well annulus based on the following formula:

  where

  V = wellbore volume (L);
  r_p = the monitoring pipe internal radius (m); and
  h = the height of water in the monitoring well (m)
  (i.e., water level minus the bottom hole depth).

- Using the sampling device remove (i.e. purge) three well volumes from the well annulus (if possible), or until dryness as dictated in the Sampling and Analyses Plan. Suitable sampling devices include inertial manual pumps (i.e. Waterra pumps), bailers, and electric pumps. In all cases, the sampling devices must be composed a material (e.g. Teflon, polycarbonate) which does not tend to absorb dissolved species, or otherwise react/interact with the water column.
- The purged ground water should be contained until it can be established that it poses no environmental hazard, at which point the water can be disposed of in manner prescribed in the "Sampling and Analysis Plan" (if applicable). In the event that discharge to the current property is acceptable, the water should be disposed of at least 10 m from the monitoring well in the down gradient direction of ground water flow.
- Record the final water level in the monitoring well once three well volumes have been removed.
- The well should be allowed to recover to approximately 80% of the pre-development water level prior to collecting ground water samples. In the event that there is a delay between the well purging and sampling events, the ground water level should be measured prior to sampling and the level recorded.
  - Prior to collecting the ground water samples at any given well location all required laboratory provided sample containers should be labeled according to the sampling and analysis plan. The sequence of bottles to be filled should be noted in the field records.
  - Remove the required ground water volumes using the dedicated sampling device, and if practicable fill the laboratory provided sampling containers directly from the sampling device. Do not allow the sampling equipment to touch the sample bottles. Follow any laboratory requirements regarding sampling container conditions or handling procedures. This may include:

- Zero headspace: for volatile compounds it is commonly required that the sample bottles be completely filled, with no headspace or air bubble between the sample and the lid. In these instances, fill the sample vial until the meniscus is above the top of the rim of the container. Gently screw on the sample container lid. Once the lid is secure, invert the vial and tap the side, checking to see if any bubbles are evident in the container. If air bubbles are noted, dispose the container and collect another sample.
- Preservatives: many analyses require preservatives, which are commonly added to the containers by the laboratory prior to shipping. When collecting samples in such containers do not overfill the containers, or rinse the containers prior to sampling. Discard any overfilled sample bottle and collect a replacement sample using a new bottle.
- Volatile compounds: when sampling volatile compounds, every precaution should be made to ensure that the sampled ground water is agitated as little as possible, and is exposed to the atmosphere for as short a time as possible. This may include (where possible) avoiding the use of peristaltic or pressure pumps, and collecting the samples using laminar flow devices (i.e. when using bailers).
- Exotic analyses: many less common analyses (e.g. hydrogen sulphide, hydrogen gas) have unusual containment or preservative requirements. All these requirements should be followed according the laboratory and/or regulatory guidelines.

- Immediately transfer filled sample bottles to a temporary storage container, which is kept at the laboratory required temperature.
- Clean field equipment a suitable distance from any monitoring well, prior to use at another location. At a minimum, the equipment should be thoroughly rinsed with distilled water to prevent cross contamination. Contaminated sites will likely require cleansing prior to the final distilled water rinse.

Standard Operating Procedure
Monitoring Well Installation

This standard operating procedure (SOP) outlines the steps involved in ground water monitoring well installation, when using either hollow-stem or solid stem augers in the soil borehole/well drilling process. This SOP is intended to conform with the Ontario Water Resource Act, Ontario Regulation 903 at a minimum.

Preparation Works

- In advance of the proposed drilling program; arrange for a suitable water well contractor/drilling crew. It may also be necessary to arrange for monitor construction and / or sampling supplies (i.e., monitor tubing, monitor screens, grout, filter pack materials, key-alike locks, bailers, in-line filters, etc.).
- Review the proposed Sampling and Analyses Plan for the designated site with the project manager to ensure understanding regarding the specific requirements of the field program. At a minimum, the regional geologic profile should be reviewed so there is a sound understanding of the strategic profile to be encountered at each designated drilling location.
- It may be necessary to arrange for the temporary storage of drilling liquids and cuttings.
- Ensue all required field equipment is available and in good working order (i.e., field notes, field logs, photographic equipment, PPE, etc.).

Hollow-stem Auger Drilling

- Advance the borehole to the depth intended for the monitoring well installation, conducting soil sampling and soil profile logging as required by the Sampling and Analysis Plan. The drilling program should record the field measurements and observations required to create the subsequent borehole logs.
- Upon reaching the desired depth, remove the drill bit/central plug, and measure the total depth of the borehole.
- Record the borehole depth, and calculate the intended depth to the top of the screened interval.
- Depending on the nature of the geology, the interior of the hollow-stem augers may be full or empty:
    - If the geologic profile consists of relatively competent material (e.g. heavy clay), such that the borehole is expected to remain open upon removal of the augers, the auger annulus can be left empty.

- If the geologic profile consists of loose material (e.g. wet silt, coarse sand), the auger annulus should be filled with clean potable water (if possible) prior to moving the auger flights.

- Prior to beginning the installation process the necessary well material (PVC well casing segments, sand, bentonite, etc.) should be calculated (based on the borehole depth and completion method) and placed close to the borehole location.
- The diameter of the monitoring well pipe MUST conform to the required separation (as indicated in O.Reg. 903) between the exterior of the well pipe and wellbore diameter.
- While wearing new, clean nitrile gloves assemble the PVC well casing and gradually lower it down the borehole. The well should be constructed using new, clean PVC (both screened and blank sections), which had been stored in individually wrapped plastic sleeves. The PVC sections must be threaded with rubber o-rings around the threaded ends, with no glue or chemical adhesives used to hold the sections together. The bottom of the well should be closed using a threaded end cap (male or female) rather than a slip cap that has been cut or drilled so that the monitoring well will drain completely.
- Once the entire well assembly is in the borehole, measure the stickup and confirm the borehole/well depth. After careful measurement, cut the PVC casing to the desired final height and record the length of any pipe section cut from the top of the monitoring well. Slot the pipe at the top in at least three places to facilitate removal of the top cap.
- Gradually pour silica well sand down the auger annulus, around the PVC casing. While pouring the sand, continually check the depth of the sand using a weighted drop tape to ensure it is rising. When the level of the sand rises to the bottom of the auger bit, stop pouring and raise the augers flights by approximately half of one flight. If the sand level stops rising during the pouring process, stop pouring and check the annulus for bridging.
- Confirm the depth to the sand, and continue alternating adding sand and lifting the auger flights. Continue adding sand until the top of the sand is about 0.3 m above the top of the screened interval.
- After completing the sand pack, either bentonite grout or granular bentonite (in the case of temporary monitoring wells) is to be used to fill the remaining annular space. In the case of bentonite grout, a tremmie pipe should be used to pump the grout into the annulus. The tremmie pipe should be placed no closer than 0.5 m to the top of the sand pack, and the pump set on the lowest setting to inject the grout. Continue injecting the grout, filling from the bottom of the open annulus, until the grout returns reach the surface. In the case of bentonite chips or pellets, while pouring the bentonite continually check the depth of the material using a weighted

drop tape to ensure it is rising. If the bentonite level stops rising during the pouring process, stop pouring and check the annulus for bridging.

- Once the final auger flight is removed, bentonite should be added to the depth indicated by the intended completion method.
  - For an above ground completion, the final level of the sealant should be immediately below the ground surface.
  - For a flush mount completion, the final level of the sealant level should be just below the bottom of the flush mount casing and should be sufficient to prevent entry of surface water and other foreign materials into the well.
- For the well completion:
  - Above ground completion: install the lockable, protective steel well casing while the sealant is still below the top of the borehole annulus. Once the borehole annulus is backfilled, pour bentonite into the steel casing until it is immediately below the opening of the casing. Using a hammer, strike the outside of the steel casing to compact the bentonite chips. Add sand on top of the bentonite, ensuring that the sand level is at least about 0.1 m below the top of the opening of the PVC casing.
  - Flush mount completion: place a thin layer of sand on top of the sealant in the well annulus, and insert the flush mount casing. Cement the outside of the flush mount casing in place, ensuring that the top of the casing is slightly below ground surface (i.e. countersunk).
  - The area around the flush mount casing should be slightly raised to deflect surface run off and help prevent the accumulation of water within the casing.
  - The well tag should be affixed permanently to the outside of the casing or to a permanent structure associated with the well, at a point where the well tag will be visible and will not be obstructed by the well cap, by other components of the well or by equipment associated with the well.

Standard Operating Procedure
Soil Field Screening

This standard operating procedure (SOP) outlines the procedures to be followed when conducting field screening as part of any soil sampling programs. This SOP does not address the collection of soil samples for laboratory analysis. This SOP only describes the methods for field screening for volatile (i.e. flammable) organic compounds. Methods for field screening for any other parameters (beyond visual or olfactory indicators) should be developed as part of the Sampling and Analysis Plan.

PREPARATION WORKS

- Review the proposed Sampling and Analyses Plan for the designated site with the project manager to ensure understanding regarding the specific requirements of the field program.
- Field screening for volatile organic compounds (VOCs) will involve use of some form of organic vapour analyzer (OVA). The OVA manual should be consulted prior to beginning the field program to ensure that the instrument is capable of detecting the contaminants of concern, and to determine the appropriate setup and calibration procedures, and to ensure familiarity with the appropriate field handling and measurement procedures.
- Prior to use, the OVA should be calibrated according to the manufacturer's directions, and according to the in-house calibration schedule. Any calibration data or results should be recorded in the official field notes.
- The decision of which areas to sample in the soil profile should be based on both the professional judgment of the field personnel, and the intentions of the Sampling and Analysis Plan. At a minimum, soil samples should be collected for field screening from the areas of "worst" impact.
- Soil samples intended for field screening purposes should be collected in medium to large re-sealable plastic bags, which have been labeled with the sample name, date, and project number. Air should be left in the bag as it is sealed (i.e. do not evacuate the bag as part of the sampling process). The volume of soil collected will depend on the amount available and the remaining sampling requirements, but should not be more than about one-third the volume of the bag.
- Once the soil sample is sealed in the bag, the soil should be broken up (particularly for dense or clay-rich soil) to encourage volatilization of any target compounds.

- The sealed sample bags should be left for a set period of time, which is consistent between samples and boreholes. The time period may vary depending on the requirements of the overall field program (time restraints, space limitations, etc.).
- Turn on the OVA and allow time, as specified by the manufacturer, for the equipment to reach full operational capacity. Perform any necessary pre-reading tests (e.g. zero the instrument).
- Open one corner of the seal on the plastic bag, leaving a hole only big enough to permit entry of the OVA sampling port.
- Insert the OVA sampling port/tube and position the tip in close proximity to the soil sample. Do not touch the soil with the tip of the tube, or allow moisture that may be inside the bag to enter the tube. Also ensure that the plastic bag does not seal off the tip of the sampling probe. During the analysis period the soil in the bag can be gently agitated to encourage volatilization.
- Observe the OVA readout, and track the readings. Once the values have stabilized, or begun to decline after a period of increasing values, record the highest noted value. Following removal of the OVA sampling tube, ensure that the readout returns to the zero value after a period of time.
- The soil sample can then be discarded, or kept for other purposes.

Standard Operating Procedure
Soil Sampling

This standard operating procedure (SOP) outlines the procedures to be followed when collected soil samples as part of a hollow-stem borehole drilling program, which uses a split spoon (SS) sampling device to collect soil cores, or soil test pitting program. This SOP does not address the collection of soil samples as part of other types of field programs (e.g., stockpile sampling, hand sampling). Site specific operating procedures should be developed in circumstances where this SOP is not applicable.

This document presumes that the drilling or testing pitting program is being conducted under the supervision of qualified personnel, and that all necessary procedures required as part of the drilling or digging program preparation (e.g. line locating, service clearances, access permission, safety measures) are being followed.

PREPARATION WORKS

- Prior to the travel to the field site necessary field equipment is in good working order and has been properly calibrated.
- Review the proposed Sampling and Analyses Plan for the designated site with the project manager to ensure understanding regarding the specific requirements of the field program.

BOREHOLE DRILLING

- During the drilling process, a clean SS sampling device should be used to collect all soil samples. Following the sample collection, the SS should be cleaned prior to re-use.
- The SS sampler must always be advanced ahead of the hollow-stem drill bit to ensure that an undisturbed soil sample is being collected.
- The SS sampling device should be placed on a clean sampling station upon removal from the borehole. When opening the SS, care should be taken to ensure that collected soil remains within the SS device. Soil falling out of the SS should not be considered for sampling purposes.
- An assessment of the soil profile should be taken from the split spoon core and recorded in the official field notes. A clean sampling device (e.g. knife, hand tool) can be used to expose the soil for profiling.
- Upon completing the soil profile logging, soil samples should be collected from the soil core using the same sampling device. The collected soil should be

transferred directly into the appropriate sample container. Care should be taken to ensure that non-soil material or objects (e.g. the sampling device, tools) do not come into contact with the interior of the sample containers.

- Soil samples should be collected in accordance with the requirements of the sampling and analysis plan. This includes collecting samples for field screening purposes and quality assurance/quality control, if necessary.\
- Upon collection, all samples intended for laboratory analysis should be properly sealed and stored at a temperature of about 4 °C. Samples must be submitted to the laboratory for analysis with the holding times specified by the individual laboratory.

APPENDIX C

Finalized Field Logs, Grain Size Assessment and Field Equipment Information

AZIMUTH ENVIRONMENTAL CONSULTING, INC.

Environmental Assessments & Approvals

TEST PIT LOG

Project Name/ Project Client	Phase Two ESA Confirmatory Soil Sampling Program	**Project Address**	150 King Street East Thornbury, ON	**Date**	3-Jun-21
Test Pit Number	TH-1	**Contractor**		**Datum**	Ground Surface
Equipment	Shovel & Augur	**Test Pit Size**		**UTM/Elevation**	544217 E 4934033 N
Temperature	27 °C	**Weather**	Sunny, some clouds	**Sample Type**	Soil

Depth		**Soil description**	**Samples**		**Headspace Combustible Vapour Concentration (ppm)**	**Remarks / Chemical Analysis**
From (m)	**To (m)**		**No.**	**Depth (mbgs)**		
0.0	0.10	Dark brown, gravelly sand with stone, dry, very loose	1	0.1	20	PHC, VOC, Metals/Inorganics
0.10	0.40	Brown, gravelly sand with stones, dry, very loose	2	0.3	5	
0.40	1.65	Fine sand with some clays, dry, compact, brown & grey mottled	3	1.5	10	pH sample & duplicate
		End of Hole at 1.65 m below ground surface				

Comments	***Water Conditions in Test Pit***	
Test pit backfilled upon completion.	☐ Wet upon completion ☑ Dry upon completion	

JOB No.	19-089
TEST PIT No.	TH-1
FIELD STAFF	I. Acheson

AZIMUTH ENVIRONMENTAL CONSULTING, INC.

Environmental Assessments & Approvals

TEST PIT LOG

Project Name/ Project Client	Phase Two ESA Confirmatory Soil Sampling Program	**Project Address**	150 King Street EastThornbury, ON	**Date**	3-Jun-21
Test Pit Number	TH-2	**Contractor**		**Datum**	Ground Surface
Equipment	Shovel & Augur	**Test Pit Size**		**UTM/Elevation**	544197 E 4934067 N
Temperature	27 °C	**Weather**	Sunny, some clouds	**Sample Type**	Soil

Depth		**Soil description**	**Samples**		**Headspace Combustible Vapour Concentration (ppm)**	**Remarks / Chemical Analysis**
From (m)	**To (m)**		**No.**	**Depth (mbgs)**		
0.0	0.10	Dark brown, gravelly sand with stone, dry, very loose	1	0.1	5	PHC, VOC, Metals, PAH/OCP
0.10	0.60	Brown, gravelly sand with stones, dry, very loose	2	0.35	5	SVOC, Inorganics
		Hole Stopped at 0.6 m below ground surface due to stuffing condtions				

Comments	***Water Conditions in Test Pit***	
Test pit backfilled upon completion.	☐ Wet upon completion ☑ Dry upon completion	

JOB No.	19-089
TEST PIT No.	TH-2
FIELD STAFF	I. Acheson

AZIMUTH ENVIRONMENTAL CONSULTING, INC.

Environmental Assessments & Approvals

TEST PIT LOG

Project Name/ Project Client	Phase Two ESA Confirmatory Soil Sampling Program	**Project Address**	150 King Street EastThornbury, ON	**Date**	3-Jun-21
Test Pit Number	TH-3	**Contractor**		**Datum**	Ground Surface
Equipment	Shovel & Augur	**Test Pit Size**		**UTM/Elevation**	544163 E 4934066 N
Temperature	27 °C	**Weather**	Sunny, some clouds	**Sample Type**	Soil

Depth		**Soil description**	**Samples**		**Headspace Combustible Vapour Concentration (ppm)**	**Remarks / Chemical Analysis**
From (m)	**To (m)**		**No.**	**Depth (mbgs)**		
0.0	0.90	Brown coarse gravelly snad, dry, very loose	1	0.45	5	PHC, VOC, Metals/Inorganics
		Test Hole terminated at 0.9 m below ground surface due to slumping				

Comments	***Water Conditions in Test Pit***	
Test pit backfilled upon completion.	☐ Wet upon completion ☑ Dry upon completion	

JOB No.	19-089
TEST PIT No.	TH-3
FIELD STAFF	I. Acheson

AZIMUTH ENVIRONMENTAL CONSULTING, INC.

Environmental Assessments & Approvals

TEST PIT LOG

Project Name/ Project Client	Phase Two ESA Confirmatory Soil Sampling Program	**Project Address**	150 King Street EastThornbury, ON	**Date**	3-Jun-21
Test Pit Number	TH-4	**Contractor**		**Datum**	Ground Surface
Equipment	Shovel & Augur	**Test Pit Size**		**UTM/Elevation**	544125 E 4934123 N
Temperature	27 °C	**Weather**	Sunny, some clouds	**Sample Type**	Soil

Depth		**Soil description**	**Samples**		**Headspace Combustible Vapour Concentration (ppm)**	**Remarks / Chemical Analysis**
From (m)	**To (m)**		**No.**	**Depth (mbgs)**		
0.0	0.40	Black, sandy topsoil with stones, dry, compact	1	0.2	5	PHC, VOC, Metals, PAH/OCP, Dup "4-1-1"
0.40	1.25	Silty fine sand, compact, dry, brown + grey mottled	2	0.8	0	SVOC, Inorganics Dup "4-2-1"
		Test Hole terminated at 1.25 m below ground surface				

Comments	***Water Conditions in Test Pit***
Test pit backfilled upon completion.	☐ Wet upon completion ☑ Dry upon completion

JOB No.	19-089
TEST PIT No.	TH-4
FIELD STAFF	I. Acheson

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Grain Size Analysis Report

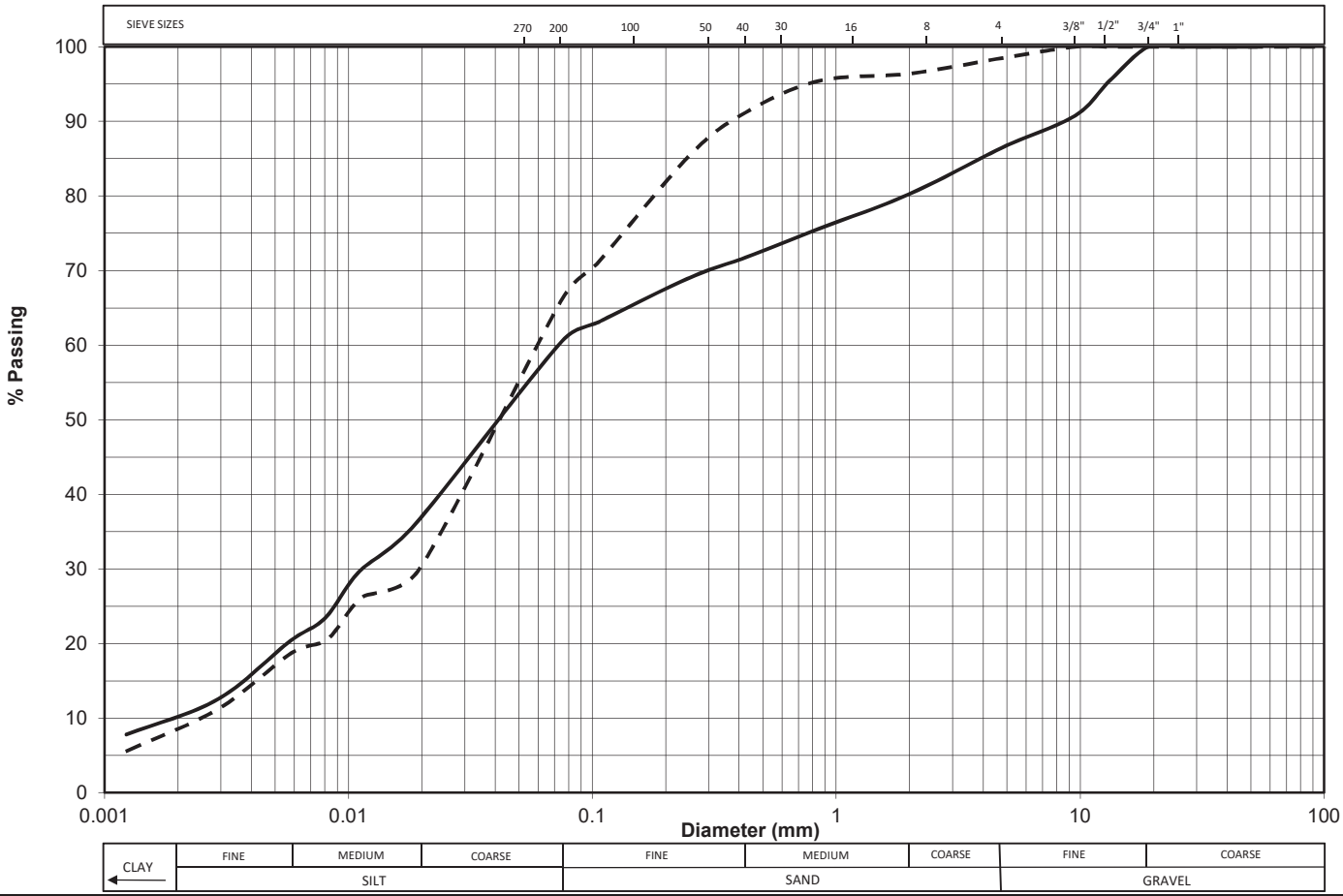
Project Name: Proposed Three-Storey Hotel
Project No.: BAR-00258217-A0
Client: 2706499 Ontario Limited

Figure No.: 10
Date Tested: March 27, 2020
Date Sampled: March 24, 2020

SAMPLE INFORMATION

Material	Borehole No. and Sample No.	Sample Depth	Material Description	Graph Line Type
1	BH1 SS3	1.5 - 1.7	TILL: Sandy Silt, Some Gravel, Trace Clay	———
2	BH7 SS1	0.0 - 0.6	Sandy Silt, Trace Clay	- - - - -

Sieve Analysis



DISTRIBUTION:
2706499 Ontario Limited

Prepared By:
Ethan Hunter, B.A.Sc.

Checked By:
Richard Blair, P. Eng.

Gas	Measuring Range	Accuracy * Which ever is greater
Standard Confined Space Gases		
Hydrocarbons (CH4, std)	0 - 100% LEL	± 5% of reading or ± 2% LEL (*)
	0 - 50,000 ppm	± 50 ppm or ± 10% of reading (*)
Oxygen (O2)	0 - 40% Vol.	± 0.5% O2
Carbon Monoxide (CO)	0 - 500 ppm	± 5% of reading or ± 5 ppm CO (*)
Hydrogen Sulfide (H2S)	0 - 100 ppm	± 5% of reading or ± 2 ppm H2S (*)
Super Toxics and Other Gases		
Ammonia (NH3)	0 - 75 ppm	± 10% of reading or ± 5% of full scale (*)
Arsine (AsH3)	0 - 1 ppm 0 - 200 ppb	
Chlorine (Cl2)	0 - 3 ppm	
Chlorine Dioxide (ClO2)	0 - 1 ppm	
Fluorine (F2)	0 - 5 ppm	
Hydrogen Fluoride (HF)	0 - 9 ppm	
Hydrogen Chloride (HCl)	0 - 15 ppm	
Hydrogen Cyanide (HCN)	0 - 30 ppm	
Hydrogen Selenide (H2Se)	0 - 0.2 ppm	
Hydrogen Sulfide (H2S)	0 - 1 ppm 0 - 30 ppm	
Nitrogen Dioxide (NO2)	0 - 15 ppm	
Ozone (O3)	0 - 1 ppm	
Nitric Oxide (NO)	0 - 100 ppm	
Phosphine (PH3)	0 - 1 ppm	
Silane (SiH4)	0 - 15 ppm	

Sulfur Dioxide (SO2)	0 - 6 ppm	
IR Sensors		
Carbon Dioxide (CO2) (IR Sensor)	0 - 5,000 ppm 0 - 10,000 ppm 0 - 5% Vol. 0 - 20% Vol. 0 - 60% Vol.	± 5% of reading or ± 2% of full scale (*)
Methane (CH4) (IR Sensor)	0 - 100% LEL 0 - 100% Vol.	
Isobutane (iC4H10) (IR Sensor)	0 - 100% LEL 0 - 30% Vol.	

Notes On Sample Descriptions

1. All sample descriptions included in this report follow the Unified Soil Classification System (USCS) as outlined by the Ministry of Transportation. Different classification systems may be used by others; one such system is the International Society for Soil Mechanics and Foundation Engineering (ISSMFE), as outlined in the Canadian Foundation Engineering Manual. Please note that, with the exception of those samples where a grain size analysis has been made, all samples are classified visually. Visual classification is not sufficiently accurate to provide exact grain sizing or precise differentiation between size classification systems.

UNIFIED SOIL CLASSIFICATION

CLAY (PLASTIC) TO	FINE	MEDIUM	CRS.	FINE	COARSE
SILT (NONPLASTIC)	SAND			GRAVEL	

0.002	0.006	0.02	0.06	0.2	0.6	2.0	6.0	20	60	200

EQUIVALENT GRAIN DIAMETER IN MILLIMETRES

ISSMFE SOIL CLASSIFICATION

CLAY	SILT			SAND			GRAVEL			COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE		

2. Fill: Where fill is designated on the borehole log it is defined as indicated by the sample recovered during the boring process. The reader is cautioned that fills are heterogeneous in nature and variable in density or degree of compaction. The borehole description may therefore not be applicable as a general description of site fill materials. All fills should be expected to contain obstruction such as wood, large concrete pieces or subsurface basements, floors, tanks, etc., none of these may have been encountered in the boreholes. Since boreholes cannot accurately define the contents of the fill, test pits are recommended to provide supplementary information. Despite the use of test pits, the heterogeneous nature of fill will leave some ambiguity as to the exact composition of the fill. Most fills contain pockets, seams, or layers of organically contaminated soil. This organic material can result in the generation of methane gas and/or significant ongoing and future settlements. Fill at this site may have been monitored for the presence of methane gas and, if so, the results are given on the borehole logs. The monitoring process does not indicate the volume of gas that can be potentially generated nor does it pinpoint the source of the gas. These readings are to advise of the presence of gas only, and a detailed study is recommended for sites where any explosive gas/methane is detected. Some fill material may be contaminated by toxic/hazardous waste that renders it unacceptable for deposition in any but designated land fill sites; unless specifically stated the fill on this site has not been tested for contaminants that may be considered toxic or hazardous. This testing and a potential hazard study can be undertaken if requested. In most residential/commercial areas undergoing reconstruction, buried oil tanks are common and are generally not detected in a conventional geotechnical site investigation.

3. Till: The term till on the borehole logs indicates that the material originates from a geological process associated with glaciation. Because of this geological process the till must be considered heterogeneous in composition and as such may contain pockets and/or seams of material such as sand, gravel, silt or clay. Till often contains cobbles (75 to 200 mm) or boulders (over 200 mm). Contractors may therefore encounter cobbles and boulders during excavation, even if they are not indicated by the borings. It should be appreciated that normal sampling equipment cannot differentiate the size or type of any obstruction. Because of the horizontal and vertical variability of till, the sample description may be applicable to a very limited zone; caution is therefore essential when dealing with sensitive excavations or dewatering programs in till materials.

Notes On Sample Descriptions

4. The following table gives a description of the soil based on particle sizes. With the exception of those samples where grain size analyses have been performed, all samples are classified visually. The accuracy of visual examination is not sufficient to differentiate between this classification system or exact grain size.

Soil Classification		Terminology	Proportion
Clay and Silt	<0.075 mm		
Sand	0.075 to 4.75 mm	“trace” (e.g. Trace sand)	0% to 10%
Gravel	4.75 to 75 mm	“some” (e.g. Some sand)	10% to 20%
Cobbles	75 to 200 mm	with (e.g. with sand)	20% to 35%
Boulders	>200 mm	and (e.g. and sand)	35% to 50%

For a given material listed as an adjective (e.g. silty sand) means the predominant grain size is sand sized with 30 to 40% silt sized particles.

The compactness of Cohesionless soils and the consistency of the cohesive soils are defined by the following:

Cohesionless Soil		Cohesive Soil		
Compactness	**Standard Penetration Resistance “N” value Blows/ 0.3 m**	**Consistency**	**Undrained Shear Strength (kPa)**	**‘N’ Values**
Very Loose	0 to 4	Very soft	<12	<2
Loose	4 to 10	Soft	12 to 25	2 to 4
Compact	10 to 30	Firm	25 to 50	4 to 8
Dense	30 to 50	Stiff	50 to 100	8 to 15
Very Dense	Over 50	Very Stiff	100 to 200	15 to 30
		Hard	>200	>30

5. **ROCK CORING**

Where rock drilling was carried out, the term RQD (Rock Quality Designation) is used. The RQD is an indirect measure of the number of fractures and soundless of the rock mass. It is obtained from the rock cores by summing the length of the core covered, counting only those pieces of sound core that are 100 mm or more length. The RQD value is expressed as a percentage and is the ratio of the summed core lengths to the total length of core run. The classification based on the RQD value is given below.

RQD Classification	RQD (%)
Very Poor Quality	<25
Poor Quality	25 to 50
Fair Quality	50 to 75
Good Quality	75 to 90
Excellent Quality	90 to 100

Recovery Designation: $$\% \text{ Recovery} = \frac{\text{Length of Core Per Run}}{\text{Total Length of Run}} \times 100$$

Log of Borehole 1

Project No. BAR-00258217-A0 | Figure No. 2

Project: Proposed Three-Storey Hotel | Sheet No. 1 of 1

City/ Municipality: Thornbury, ON

Location: 17T 4934130 544071

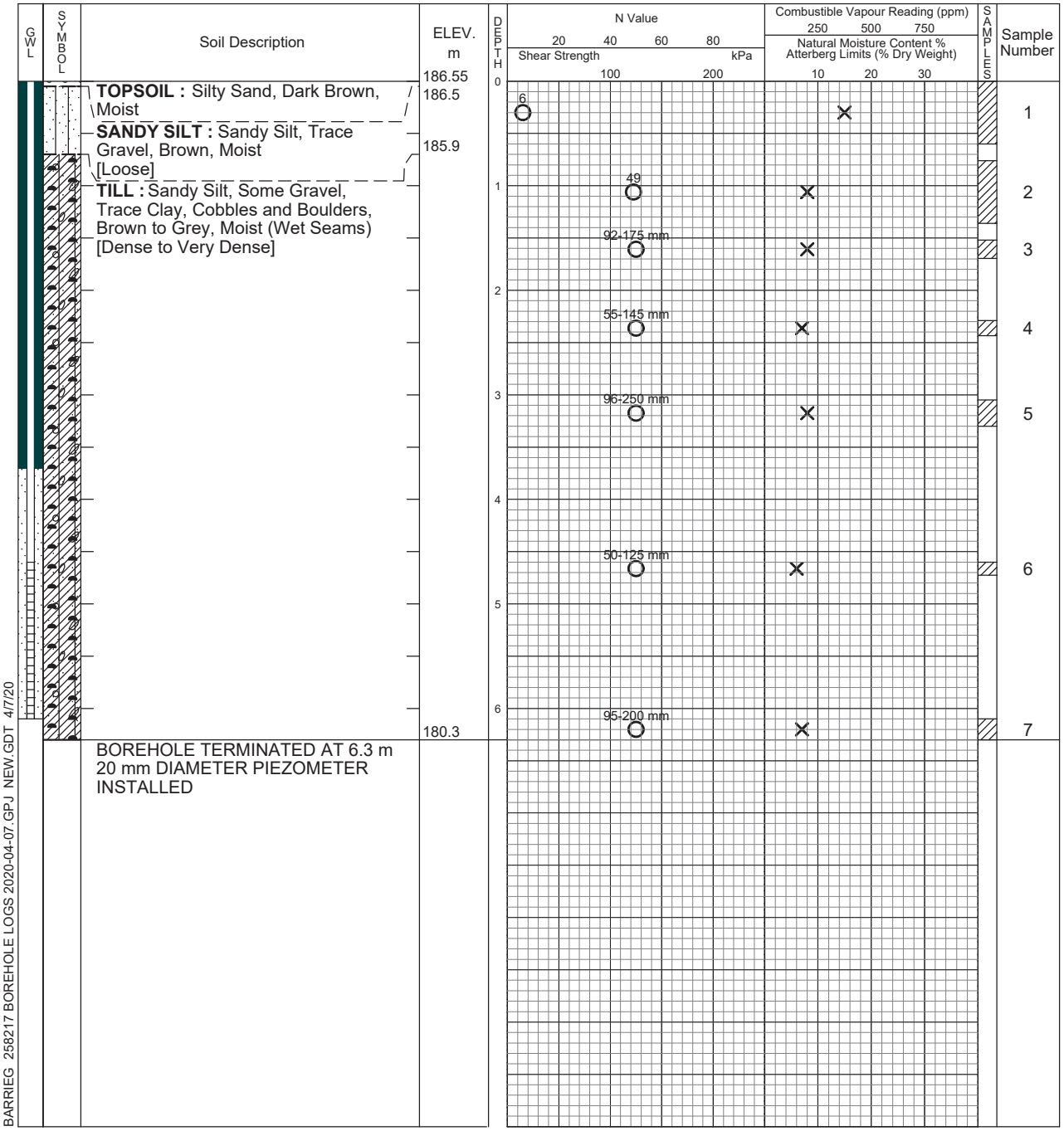
Date Drilled: March 24, 2020

Drill Type: Solid Stem Augers

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer



BARRIEG 258217 BOREHOLE LOGS 2020-04-07.GPJ NEW.GDT 4/7/20

EXP Services Inc.
14 Cedar Pointe Drive
Barrie, ON L4N 5R7
t: +1.705.719.1100
f: +1.705.719.1109

Borehole data requires interpretation assistance from EXP before use by others.

See Figures 1A and 1B for Notes on Sample Descriptions.

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	5.8	Open
March 31, 2020	2.6	-

Log of Borehole 2

Project No. BAR-00258217-A0 | Figure No. 3

Project: Proposed Three-Storey Hotel | Sheet No. 1 of 1

City/ Municipality: Thornbury, ON

Location: 17T 4934090 544124

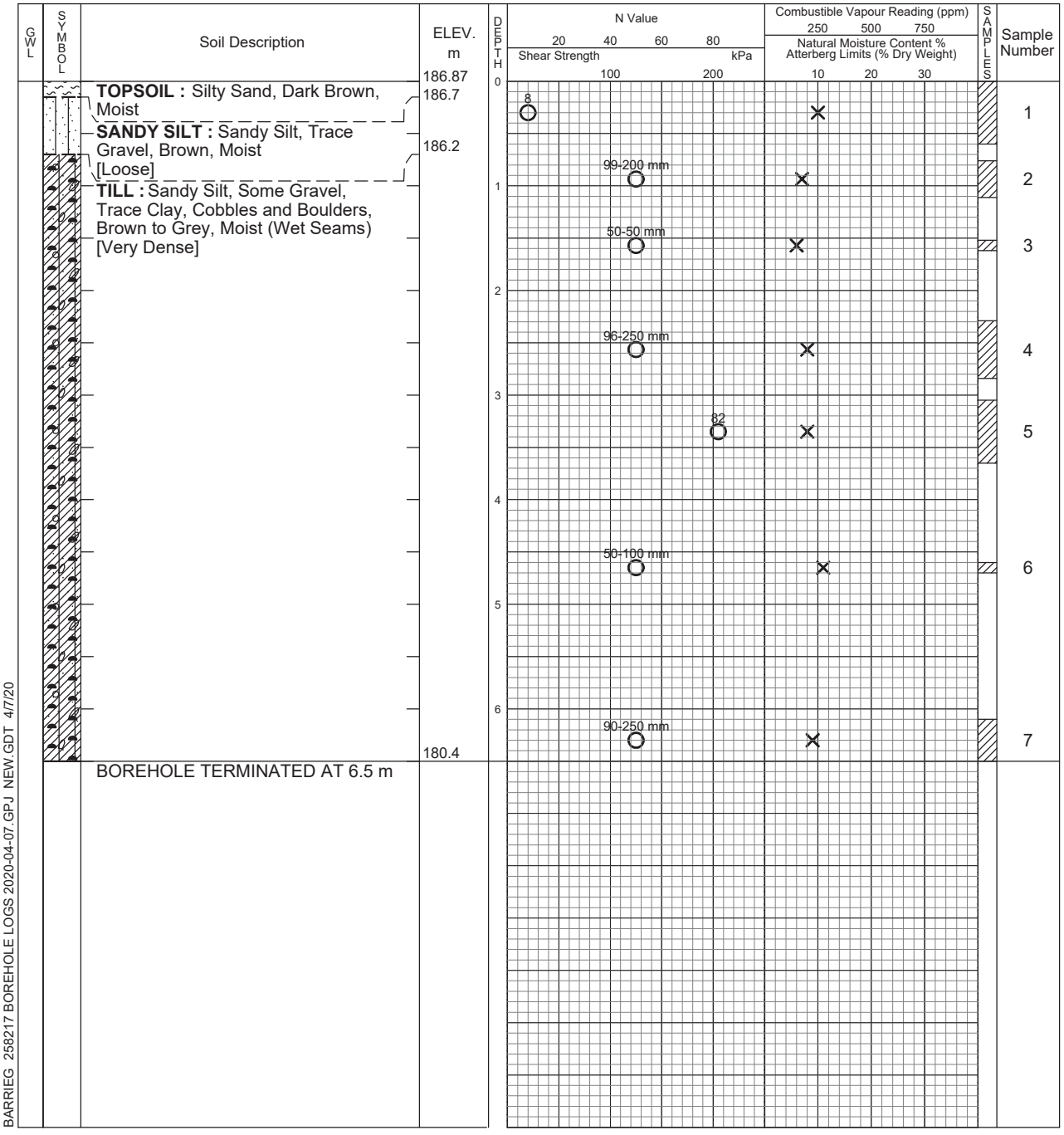
Date Drilled: March 24, 2020

Drill Type: Solid Stem Augers

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer



BARRIEG 258217 BOREHOLE LOGS 2020-04-07.GPJ NEW.GDT 4/7/20

EXP Services Inc.
14 Cedar Pointe Drive
Barrie, ON L4N 5R7
t: +1.705.719.1100
f: +1.705.719.1109

Borehole data requires interpretation assistance from EXP before use by others.

See Figures 1A and 1B for Notes on Sample Descriptions.

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	No Water	Open

Log of Borehole 3

Project No. BAR-00258217-A0 | Figure No. 4

Project: Proposed Three-Storey Hotel | Sheet No. 1 of 1

City/ Municipality: Thornbury, ON

Location: 17T 4934034 544198

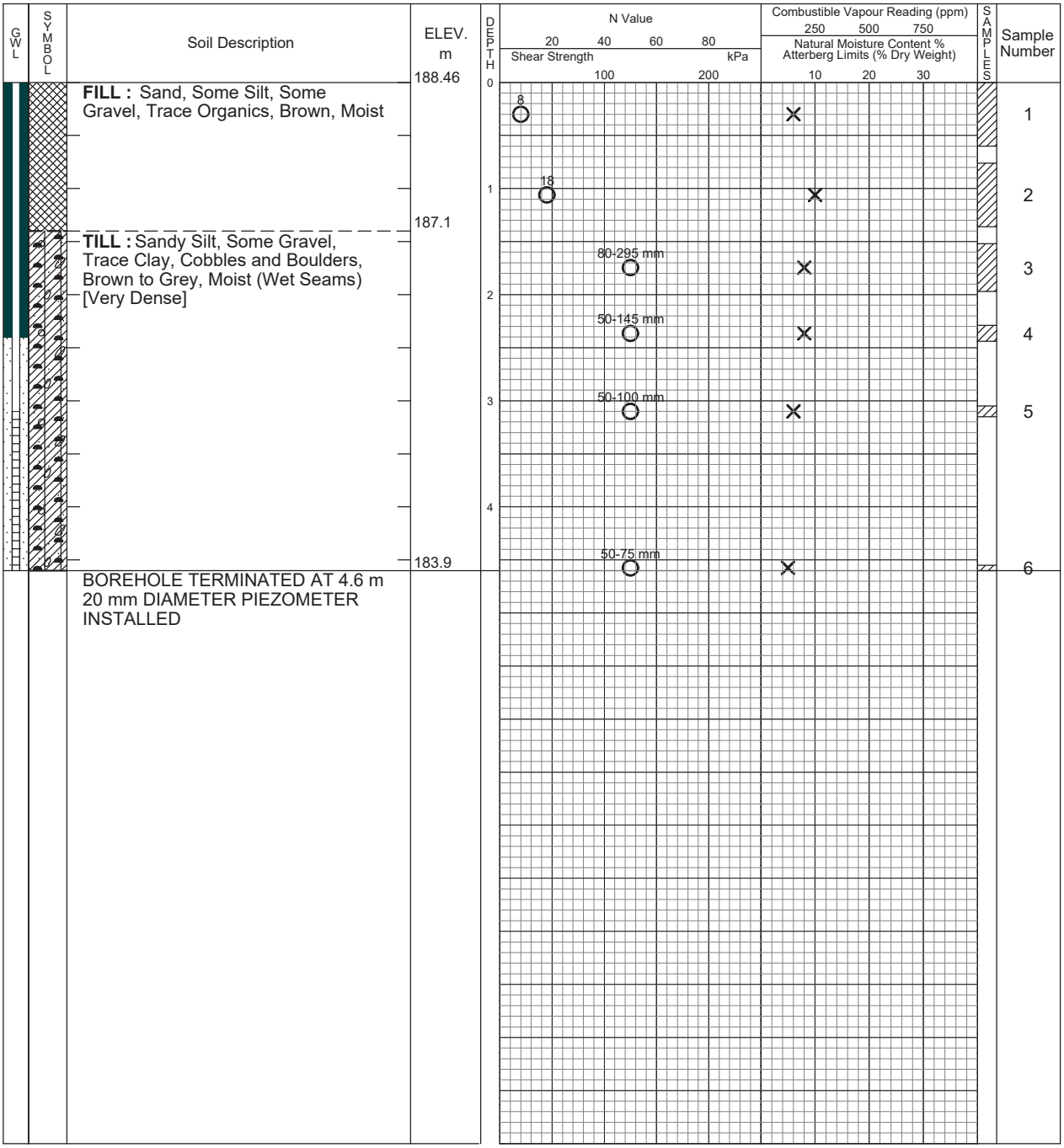
Date Drilled: March 24, 2020

Drill Type: Solid Stem Augers

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer



BARRIEG 258217 BOREHOLE LOGS 2020-04-07.GPJ NEW.GDT 4/7/20

EXP Services Inc.
14 Cedar Pointe Drive
Barrie, ON L4N 5R7
t: +1.705.719.1100
f: +1.705.719.1109

Borehole data requires interpretation assistance from EXP before use by others.

See Figures 1A and 1B for Notes on Sample Descriptions.

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	No Water	Open
March 31, 2020	2.7	-

Log of Borehole 6

Project No. BAR-00258217-A0 | Figure No. 7

Project: Proposed Three-Storey Hotel | Sheet No. 1 of 1

City/ Municipality: Thornbury, ON

Location: 17T 4934128 544109

Date Drilled: March 24, 2020

Drill Type: Solid Stem Augers

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Sample Number
		FILL : Sand and Gravel, Trace Silt, Brown, Wet	186.70	0	20 40 60 80 / 100 200	250 500 750 / 10 20 30		1
		SANDY SILT : Trace Gravel, Trace Clay, Brown, Wet	186.1	1				2
		BOREHOLE TERMINATED AT 1.5 m	185.2					

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f: +1.705.719.1109

Borehole data requires interpretation assistance from EXP before use by others.

See Figures 1A and 1B for Notes on Sample Descriptions.

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	0.3	0.3

Log of Borehole 7

Project No. BAR-00258217-A0

Figure No. 8

Project: Proposed Three-Storey Hotel

Sheet No. 1 of 1

City/ Municipality: Thornbury, ON

Location: 17T 4934092 544157

Date Drilled: March 24, 2020

Drill Type: Solid Stem Augers

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Sample Number
		SANDY SILT : Trace Clay, Brown, Wet	187.25	0	20 40 60 80 / 100 200	250 500 750 / 10 20 30		1
				1				2
		BOREHOLE TERMINATED AT 1.5 m	185.8					

BARRIEG 258217 BOREHOLE LOGS 2020-04-07.GPJ NEW.GDT 4/7/20

EXP Services Inc.
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t: +1.705.719.1100
f: +1.705.719.1109

Borehole data requires interpretation assistance from EXP before use by others.

See Figures 1A and 1B for Notes on Sample Descriptions.

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	1.2	Open

Log of Borehole 8

Project No. BAR-00258217-A0 | Figure No. 9

Project: Proposed Three-Storey Hotel | Sheet No. 1 of 1

City/ Municipality: Thornbury, ON

Location: 17T 4934053 544206

Date Drilled: March 24, 2020

Drill Type: Solid Stem Augers

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test (S)

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value / Shear Strength (kPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Sample Number
		FILL : Sand and Gravel, Trace Silt, Brown, Moist	187.79	0	20 40 60 80 / 100 200	250 500 750 / 10 20 30		1
		SANDY SILT : Trace Gravel, Trace Clay, Brown to Grey, Moist	187.2	1				2
		BOREHOLE TERMINATED AT 1.5 m	186.3					3

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See Figures 1A and 1B for Notes on Sample Descriptions.

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	No Water	Open

APPENDIX D

Laboratory Analytical Reports

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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: ---

REPORT No. B21-16943 (i)

Report To:

Azimuth Environmental
642 Welham Rd,
Barrie ON L4N9A1 Canada
Attention: Ian Acheson

Caduceon Environmental Laboratories
112 Commerce Park Drive
Barrie ON L4N 8W8
Tel: 705-252-5743
Fax: 705-252-5746

DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

Parameter	Qty	Site Analyzed	Analyst Initials	Date Analyzed	Lab Method	Reference Method
Cyanide	10	Kingston	TK	08-Jun-21	A-CN s K	in house
Conductivity	10	Holly Lane	ST	10-Jun-21	A-COND-01 (o)	SM 2510B
pH	14	Richmond Hill	HAZ	10-Jun-21	A-pH-02 (rh)	MOEE3530
Mercury	10	Holly Lane	PBK	10-Jun-21	D-HG-01 (o)	EPA 7471A
Sodium Adsorption Ratio	10	Holly Lane	hmc	10-Jun-21	D-ICP-01 SAR (o)	SM 3120
Metals - ICP-OES	10	Holly Lane	hmc	10-Jun-21	D-ICP-02 (o)	EPA 6010
Metals - ICP-MS	10	Holly Lane	TPR	10-Jun-21	D-ICPMS-01 (o)	EPA 6020

µg/g = micrograms per gram (parts per million) and is equal to mg/Kg
F1 C6-C10 hydrocarbons in µg/g, (F1-btex if requested)
F2 C10-C16 hydrocarbons in µg/g, (F2-napth if requested)
F3 C16-C34 hydrocarbons in µg/g, (F3-pah if requested)
F4 C34-C50 hydrocarbons in µg/g
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
Any deviations from the method are noted and reported for any particular sample.
nC6 and nC10 response factor is within 30% of response factor for toluene:
nC10,nC16 and nC34 response factors within 10% of each other:
C50 response factors within 70% of nC10+nC16+nC34 average:
Linearity is within 15%:
All results expressed on a dry weight basis.
Unless otherwise noted all chromatograms returned to baseline by the retention time of nC50.

Unless otherwise noted all extraction, analysis, QC requirements and limits for holding time were met.
If analyzed for F4 and F4G they are not to be summed but the greater of the two numbers are to be used in application to the CWS PHC
QC will be made available upon request.

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

Christine Burke
Lab Manager

R.L. = Reporting Limit
Test methods may be modified from specified reference method unless indicated by an *
Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

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Tel: 705-252-5743
Fax: 705-252-5746

DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

	Client I.D.		TH1-1	TH1-3	TH1-3-1	TH2-1	O. Reg. 153	
	Sample I.D.		B21-16943-1	B21-16943-2	B21-16943-3	B21-16943-4	Tbl. 2 - RPI	
	Date Collected		03-Jun-21	03-Jun-21	03-Jun-21	03-Jun-21	Soil	
Parameter	**Units**	**R.L.**						
pH @25°C	pH Units		7.71	7.82	7.87			
Conductivity @25°C	mS/cm	0.001	0.125				0.7	
Cyanide (Free)	µg/g	0.05	< 0.05				0.051	
Sodium Adsorption Ratio	units		0.0879				5	
Antimony	µg/g	0.5	< 0.5			< 0.5	7.5	
Arsenic	µg/g	0.5	7.5			8.9	18	
Barium	µg/g	1	54			71	390	
Beryllium	µg/g	0.2	0.5			0.6	4	
Boron	µg/g	0.5	9.1			10.8	120	
Cadmium	µg/g	0.5	< 0.5			< 0.5	1.2	
Chromium	µg/g	1	12			12	160	
Cobalt	µg/g	1	8			8	22	
Copper	µg/g	1	26			26	140	
Lead	µg/g	5	21			28	120	
Mercury	µg/g	0.005	0.056			0.062	0.27	
Molybdenum	µg/g	1	< 1			< 1	6.9	
Nickel	µg/g	1	13			15	100	
Selenium	µg/g	0.5	0.9			1.1	2.4	
Silver	µg/g	0.2	< 0.2			< 0.2	20	
Thallium	µg/g	0.1	< 0.1			< 0.1	1	
Uranium	µg/g	0.1	0.4			0.4	23	
Vanadium	µg/g	1	16			17	86	
Zinc	µg/g	3	75			92	340	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

Christine Burke
Lab Manager

R.L. = Reporting Limit
Test methods may be modified from specified reference method unless indicated by an *
Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

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Caduceon Environmental Laboratories
112 Commerce Park Drive
Barrie ON L4N 8W8
Tel: 705-252-5743
Fax: 705-252-5746

DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

	Client I.D. / Sample I.D. / Date Collected		TH2-2 B21-16943-5 03-Jun-21	TH3-1 B21-16943-6 03-Jun-21	TH4-1 B21-16943-7 03-Jun-21	TH4-1-1 B21-16943-8 03-Jun-21	O. Reg. 153 Tbl. 2 - RPI Soil	
Parameter	**Units**	**R.L.**						
pH @25°C	pH Units		7.91	8.03				
Conductivity @25°C	mS/cm	0.001	0.087	0.083			0.7	
Cyanide (Free)	µg/g	0.05	< 0.05	< 0.05			0.051	
Sodium Adsorption Ratio	units		0.0658	0.0630			5	
Antimony	µg/g	0.5		< 0.5	< 0.5	< 0.5	7.5	
Arsenic	µg/g	0.5		5.1	3.6	3.9	18	
Barium	µg/g	1		28	38	43	390	
Beryllium	µg/g	0.2		0.3	0.4	0.5	4	
Boron	µg/g	0.5		7.9	13.3	15.2	120	
Cadmium	µg/g	0.5		< 0.5	< 0.5	< 0.5	1.2	
Chromium	µg/g	1		8	12	14	160	
Cobalt	µg/g	1		7	6	6	22	
Copper	µg/g	1		16	43	51	140	
Lead	µg/g	5		6	28	33	120	
Mercury	µg/g	0.005		0.037	0.065	0.074	0.27	
Molybdenum	µg/g	1		< 1	< 1	< 1	6.9	
Nickel	µg/g	1		9	13	15	100	
Selenium	µg/g	0.5		0.7	1.3	1.2	2.4	
Silver	µg/g	0.2		< 0.2	< 0.2	< 0.2	20	
Thallium	µg/g	0.1		< 0.1	< 0.1	0.1	1	
Uranium	µg/g	0.1		0.5	0.5	0.5	23	
Vanadium	µg/g	1		11	16	18	86	
Zinc	µg/g	3		47	78	90	340	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

Christine Burke
Lab Manager

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Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

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Tel: 705-252-5743
Fax: 705-252-5746

DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

	Client I.D.		TH4-2	TH4-2-1	TH5-1	TH5-1-1	O. Reg. 153	
	Sample I.D.		B21-16943-9	B21-16943-10	B21-16943-11	B21-16943-12	Tbl. 2 - RPI	
	Date Collected		03-Jun-21	03-Jun-21	03-Jun-21	03-Jun-21	Soil	
Parameter	**Units**	**R.L.**						
pH @25°C	pH Units		7.77	7.88				
Conductivity @25°C	mS/cm	0.001	0.202	0.225			0.7	
Cyanide (Free)	µg/g	0.05	< 0.05	< 0.05			0.051	
Sodium Adsorption Ratio	units		1.54	0.921			5	
Antimony	µg/g	0.5			< 0.5	< 0.5	7.5	
Arsenic	µg/g	0.5			4.0	4.0	18	
Barium	µg/g	1			30	31	390	
Beryllium	µg/g	0.2			0.4	0.5	4	
Boron	µg/g	0.5			9.1	8.7	120	
Cadmium	µg/g	0.5			< 0.5	< 0.5	1.2	
Chromium	µg/g	1			12	13	160	
Cobalt	µg/g	1			7	7	22	
Copper	µg/g	1			14	17	140	
Lead	µg/g	5			14	12	120	
Mercury	µg/g	0.005			0.034	0.035	0.27	
Molybdenum	µg/g	1			< 1	< 1	6.9	
Nickel	µg/g	1			11	12	100	
Selenium	µg/g	0.5			0.7	0.6	2.4	
Silver	µg/g	0.2			< 0.2	< 0.2	20	
Thallium	µg/g	0.1			< 0.1	< 0.1	1	
Uranium	µg/g	0.1			0.4	0.4	23	
Vanadium	µg/g	1			18	18	86	
Zinc	µg/g	3			49	48	340	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

Christine Burke
Lab Manager

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Tel: 705-252-5743
Fax: 705-252-5746

DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

	Client I.D.		TH5-2	TH5-2-1	TH5-3	TH5-3-1	O. Reg. 153	
	Sample I.D.		B21-16943-13	B21-16943-14	B21-16943-15	B21-16943-16	Tbl. 2 - RPI	
	Date Collected		03-Jun-21	03-Jun-21	03-Jun-21	03-Jun-21	Soil	
Parameter	**Units**	**R.L.**						
pH @25°C	pH Units		7.86	7.91	7.99	7.97		
Conductivity @25°C	mS/cm	0.001	0.173	0.173			0.7	
Cyanide (Free)	µg/g	0.05	< 0.05	< 0.05			0.051	
Sodium Adsorption Ratio	units		0.890	1.21			5	
Antimony	µg/g	0.5					7.5	
Arsenic	µg/g	0.5					18	
Barium	µg/g	1					390	
Beryllium	µg/g	0.2					4	
Boron	µg/g	0.5					120	
Cadmium	µg/g	0.5					1.2	
Chromium	µg/g	1					160	
Cobalt	µg/g	1					22	
Copper	µg/g	1					140	
Lead	µg/g	5					120	
Mercury	µg/g	0.005					0.27	
Molybdenum	µg/g	1					6.9	
Nickel	µg/g	1					100	
Selenium	µg/g	0.5					2.4	
Silver	µg/g	0.2					20	
Thallium	µg/g	0.1					1	
Uranium	µg/g	0.1					23	
Vanadium	µg/g	1					86	
Zinc	µg/g	3					340	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

Christine Burke
Lab Manager

R.L. = Reporting Limit
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Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

CADUCEON ENVIRONMENTAL LABORATORIES
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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: ---

REPORT No. B21-16943 (i)

Report To:

Azimuth Environmental
642 Welham Rd,
Barrie ON L4N9A1 Canada
Attention: Ian Acheson

Caduceon Environmental Laboratories
112 Commerce Park Drive
Barrie ON L4N 8W8
Tel: 705-252-5743
Fax: 705-252-5746

DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

	Client I.D.		TH6-1	TH7-2	TH8-2		O. Reg. 153 Tbl. 2 - RPI Soil	
	Sample I.D.		B21-16943-17	B21-16943-19	B21-16943-20			
	Date Collected		03-Jun-21	03-Jun-21	03-Jun-21			
Parameter	**Units**	**R.L.**						
pH @25°C	pH Units		7.54	7.86	7.90			
Conductivity @25°C	mS/cm	0.001	0.535	0.176	0.307		0.7	
Cyanide (Free)	µg/g	0.05	< 0.05	< 0.05	< 0.05		0.051	
Sodium Adsorption Ratio	units		4.11	1.20	1.80		5	
Antimony	µg/g	0.5	< 0.5	< 0.5	< 0.5		7.5	
Arsenic	µg/g	0.5	4.2	2.1	2.0		18	
Barium	µg/g	1	31	22	14		390	
Beryllium	µg/g	0.2	0.4	0.2	< 0.2		4	
Boron	µg/g	0.5	11.2	7.6	6.2		120	
Cadmium	µg/g	0.5	< 0.5	< 0.5	< 0.5		1.2	
Chromium	µg/g	1	12	9	9		160	
Cobalt	µg/g	1	7	5	4		22	
Copper	µg/g	1	20	9	6		140	
Lead	µg/g	5	25	< 5	< 5		120	
Mercury	µg/g	0.005	0.039	0.009	0.008		0.27	
Molybdenum	µg/g	1	< 1	< 1	< 1		6.9	
Nickel	µg/g	1	12	9	6		100	
Selenium	µg/g	0.5	0.7	< 0.5	< 0.5		2.4	
Silver	µg/g	0.2	< 0.2	< 0.2	< 0.2		20	
Thallium	µg/g	0.1	< 0.1	< 0.1	< 0.1		1	
Uranium	µg/g	0.1	0.4	0.6	0.5		23	
Vanadium	µg/g	1	18	11	9		86	
Zinc	µg/g	3	54	16	12		340	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

Christine Burke
Lab Manager

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REPORT No. B21-16943 (i)

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Barrie ON L4N9A1 Canada
Attention: Ian Acheson

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Barrie ON L4N 8W8
Tel: 705-252-5743
Fax: 705-252-5746

DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

Summary of Exceedances

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

Christine Burke
Lab Manager

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DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

Parameter	Qty	Site Analyzed	Analyst Initials	Date Analyzed	Lab Method	Reference Method
% Moisture	10	Richmond Hill	FAL	08-Jun-21	A-% moisture RH	
PHC(F2-F4)	10	Kingston	KPR	09-Jun-21	C-PHC-S-001 (k)	CWS Tier 1
VOC's	10	Richmond Hill	FAL	08-Jun-21	C-VOC-02 (rh)	EPA 8260
PHC(F1)	10	Richmond Hill	FAL	08-Jun-21	C-VPHS-01 (rh)	CWS Tier 1

µg/g = micrograms per gram (parts per million) and is equal to mg/Kg
F1 C6-C10 hydrocarbons in µg/g, (F1-btex if requested)
F2 C10-C16 hydrocarbons in µg/g, (F2-napth if requested)
F3 C16-C34 hydrocarbons in µg/g, (F3-pah if requested)
F4 C34-C50 hydrocarbons in µg/g
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
Any deviations from the method are noted and reported for any particular sample.
nC6 and nC10 response factor is within 30% of response factor for toluene:
nC10,nC16 and nC34 response factors within 10% of each other:
C50 response factors within 70% of nC10+nC16+nC34 average:
Linearity is within 15%:
All results expressed on a dry weight basis.
Unless otherwise noted all chromatograms returned to baseline by the retention time of nC50.

Unless otherwise noted all extraction, analysis, QC requirements and limits for holding time were met.
If analyzed for F4 and F4G they are not to be summed but the greater of the two numbers are to be used in application to the CWS PHC
QC will be made available upon request.

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

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Lab Manager

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DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

	Client I.D.		TH1-1	TH2-1	TH3-1	TH4-1	O. Reg. 153	
	Sample I.D.		B21-16943-1	B21-16943-4	B21-16943-6	B21-16943-7	Tbl. 2 - RPI	
	Date Collected		03-Jun-21	03-Jun-21	03-Jun-21	03-Jun-21	Soil	
Parameter	**Units**	**R.L.**						
Acetone	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	16	
Benzene	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.21	
Bromodichloromethane	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	1.5	
Bromoform	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.27	
Bromomethane	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	
Carbon Tetrachloride	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	
Monochlorobenzene (Chlorobenzene)	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	2.4	
Chloroform	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.05	
Dibromochloromethane	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	2.3	
Dichlorobenzene,1,2-	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	1.2	
Dichlorobenzene,1,3-	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	4.8	
Dichlorobenzene,1,4-	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.083	
Dichlorodifluoromethane	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	16	
Dichloroethane,1,1-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.47	
Dichloroethane,1,2-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.05	
Dichloroethylene,1,1-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.05	
Dichloroethene, cis-1,2-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	1.9	
Dichloroethene, trans-1,2-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.084	
Dichloropropane,1,2-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.050	
Dichloropropene, cis-1,3-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02		
Dichloropropene, trans-1,3-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02		

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

Christine Burke
Lab Manager

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Final Report

C.O.C.: ---

REPORT No. B21-16943 (ii)

Report To:

Azimuth Environmental
642 Welham Rd,
Barrie ON L4N9A1 Canada
Attention: Ian Acheson

Caduceon Environmental Laboratories
112 Commerce Park Drive
Barrie ON L4N 8W8
Tel: 705-252-5743
Fax: 705-252-5746

DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

	Client I.D.		TH1-1	TH2-1	TH3-1	TH4-1	O. Reg. 153	
	Sample I.D.		B21-16943-1	B21-16943-4	B21-16943-6	B21-16943-7	Tbl. 2 - RPI	
	Date Collected		03-Jun-21	03-Jun-21	03-Jun-21	03-Jun-21	Soil	
Parameter	**Units**	**R.L.**						
Dichloropropene 1,3-cis+trans	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.050	
Ethylbenzene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	1.1	
Dibromoethane,1,2-(Ethylene Dibromide)	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.05	
Hexane	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	2.8	
Methyl Ethyl Ketone	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	16	
Methyl Isobutyl Ketone	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.7	
Methyl-t-butyl Ether	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.75	
Dichloromethane (Methylene Chloride)	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.10	
Styrene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.7	
Tetrachloroethane,1,1,1,2-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.058	
Tetrachloroethane,1,1,2,2-	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	
Tetrachloroethylene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.28	
Toluene	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	2.3	
Trichloroethane,1,1,1-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.38	
Trichloroethane,1,1,2-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.05	
Trichloroethylene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.061	
Trichlorofluoromethane	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	4.0	
Vinyl Chloride	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.020	
Xylene, m,p-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

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SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

	Client I.D.		TH1-1	TH2-1	TH3-1	TH4-1	O. Reg. 153	
	Sample I.D.		B21-16943-1	B21-16943-4	B21-16943-6	B21-16943-7	Tbl. 2 - RPI	
	Date Collected		03-Jun-21	03-Jun-21	03-Jun-21	03-Jun-21	Soil	
Parameter	**Units**	**R.L.**						
Xylene, m,p,o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03	3.1	
PHC F1 (C6-C10)	µg/g	10	< 10	< 10	< 10	< 10	55	
PHC F2 (>C10-C16)	µg/g	5	< 5	< 5	< 5	< 6	98	
PHC F3 (>C16-C34)	µg/g	10	14	18	15	20	300	
PHC F4 (>C34-C50)	µg/g	10	< 10	< 10	< 10	< 10	2800	
% moisture	%		5.9	6.3	4.3	34.5		

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

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	Client I.D.		TH4-1-1	TH5-1	TH5-1-1	TH6-1	O. Reg. 153	
	Sample I.D.		B21-16943-8	B21-16943-11	B21-16943-12	B21-16943-17	Tbl. 2 - RPI	
	Date Collected		03-Jun-21	03-Jun-21	03-Jun-21	03-Jun-21	Soil	
Parameter	**Units**	**R.L.**						
Acetone	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	16	
Benzene	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.21	
Bromodichloromethane	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	1.5	
Bromoform	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.27	
Bromomethane	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	
Carbon Tetrachloride	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	
Monochlorobenzene (Chlorobenzene)	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	2.4	
Chloroform	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.05	
Dibromochloromethane	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	2.3	
Dichlorobenzene,1,2-	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	1.2	
Dichlorobenzene,1,3-	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	4.8	
Dichlorobenzene,1,4-	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.083	
Dichlorodifluoromethane	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	16	
Dichloroethane,1,1-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.47	
Dichloroethane,1,2-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.05	
Dichloroethylene,1,1-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.05	
Dichloroethene, cis-1,2-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	1.9	
Dichloroethene, trans-1,2-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.084	
Dichloropropane,1,2-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.050	
Dichloropropene, cis-1,3-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02		
Dichloropropene, trans-1,3-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02		

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

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DATE RECEIVED: 04-Jun-21
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SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

	Client I.D.		TH4-1-1	TH5-1	TH5-1-1	TH6-1	O. Reg. 153	
	Sample I.D.		B21-16943-8	B21-16943-11	B21-16943-12	B21-16943-17	Tbl. 2 - RPI	
	Date Collected		03-Jun-21	03-Jun-21	03-Jun-21	03-Jun-21	Soil	
Parameter	**Units**	**R.L.**						
Dichloropropene 1,3-cis+trans	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.050	
Ethylbenzene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	1.1	
Dibromoethane,1,2-(Ethylene Dibromide)	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.05	
Hexane	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	2.8	
Methyl Ethyl Ketone	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	16	
Methyl Isobutyl Ketone	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.7	
Methyl-t-butyl Ether	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.75	
Dichloromethane (Methylene Chloride)	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.10	
Styrene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.7	
Tetrachloroethane,1,1,1,2-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.058	
Tetrachloroethane,1,1,2,2-	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	
Tetrachloroethylene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.28	
Toluene	µg/g	0.2	< 0.2	< 0.2	< 0.2	< 0.2	2.3	
Trichloroethane,1,1,1-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.38	
Trichloroethane,1,1,2-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.05	
Trichloroethylene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.061	
Trichlorofluoromethane	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	4.0	
Vinyl Chloride	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.020	
Xylene, m,p-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		
Xylene, o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03		

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

Christine Burke
Lab Manager

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Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: ---

REPORT No. B21-16943 (ii)

Report To:

Azimuth Environmental
642 Welham Rd,
Barrie ON L4N9A1 Canada
Attention: Ian Acheson

Caduceon Environmental Laboratories
112 Commerce Park Drive
Barrie ON L4N 8W8
Tel: 705-252-5743
Fax: 705-252-5746

DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

	Client I.D.		TH4-1-1	TH5-1	TH5-1-1	TH6-1	O. Reg. 153	
	Sample I.D.		B21-16943-8	B21-16943-11	B21-16943-12	B21-16943-17	Tbl. 2 - RPI Soil	
	Date Collected		03-Jun-21	03-Jun-21	03-Jun-21	03-Jun-21		
Parameter	**Units**	**R.L.**						
Xylene, m,p,o-	µg/g	0.03	< 0.03	< 0.03	< 0.03	< 0.03	3.1	
PHC F1 (C6-C10)	µg/g	10	< 10	< 10	< 10	< 10	55	
PHC F2 (>C10-C16)	µg/g	5	< 7	< 5	< 5	< 6	98	
PHC F3 (>C16-C34)	µg/g	10	28	15	18	22	300	
PHC F4 (>C34-C50)	µg/g	10	< 10	< 10	< 10	12	2800	
% moisture	%		35.9	21.9	15.3	38.0		

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

Christine Burke
Lab Manager

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DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

	Client I.D.		TH7-1	TH8-2			O. Reg. 153	
	Sample I.D.		B21-16943-18	B21-16943-20			Tbl. 2 - RPI	
	Date Collected		03-Jun-21	03-Jun-21			Soil	
Parameter	**Units**	**R.L.**						
Acetone	µg/g	0.5	< 0.5	< 0.5			16	
Benzene	µg/g	0.02	< 0.02	< 0.02			0.21	
Bromodichloromethane	µg/g	0.02	< 0.02	< 0.02			1.5	
Bromoform	µg/g	0.02	< 0.02	< 0.02			0.27	
Bromomethane	µg/g	0.05	< 0.05	< 0.05			0.05	
Carbon Tetrachloride	µg/g	0.05	< 0.05	< 0.05			0.05	
Monochlorobenzene (Chlorobenzene)	µg/g	0.02	< 0.02	< 0.02			2.4	
Chloroform	µg/g	0.02	< 0.02	< 0.02			0.05	
Dibromochloromethane	µg/g	0.02	< 0.02	< 0.02			2.3	
Dichlorobenzene,1,2-	µg/g	0.05	< 0.05	< 0.05			1.2	
Dichlorobenzene,1,3-	µg/g	0.05	< 0.05	< 0.05			4.8	
Dichlorobenzene,1,4-	µg/g	0.05	< 0.05	< 0.05			0.083	
Dichlorodifluoromethane	µg/g	0.05	< 0.05	< 0.05			16	
Dichloroethane,1,1-	µg/g	0.02	< 0.02	< 0.02			0.47	
Dichloroethane,1,2-	µg/g	0.02	< 0.02	< 0.02			0.05	
Dichloroethylene,1,1-	µg/g	0.02	< 0.02	< 0.02			0.05	
Dichloroethene, cis-1,2-	µg/g	0.02	< 0.02	< 0.02			1.9	
Dichloroethene, trans-1,2-	µg/g	0.02	< 0.02	< 0.02			0.084	
Dichloropropane,1,2-	µg/g	0.02	< 0.02	< 0.02			0.050	
Dichloropropene, cis-1,3-	µg/g	0.02	< 0.02	< 0.02				
Dichloropropene, trans-1,3-	µg/g	0.02	< 0.02	< 0.02				

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

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Lab Manager

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DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

	Client I.D.		TH7-1	TH8-2			O. Reg. 153	
	Sample I.D.		B21-16943-18	B21-16943-20			Tbl. 2 - RPI	
	Date Collected		03-Jun-21	03-Jun-21			Soil	
Parameter	**Units**	**R.L.**						
Dichloropropene 1,3-cis+trans	µg/g	0.02	< 0.02	< 0.02			0.050	
Ethylbenzene	µg/g	0.05	< 0.05	< 0.05			1.1	
Dibromoethane,1,2-(Ethylene Dibromide)	µg/g	0.02	< 0.02	< 0.02			0.05	
Hexane	µg/g	0.02	< 0.02	< 0.02			2.8	
Methyl Ethyl Ketone	µg/g	0.5	< 0.5	< 0.5			16	
Methyl Isobutyl Ketone	µg/g	0.5	< 0.5	< 0.5			1.7	
Methyl-t-butyl Ether	µg/g	0.05	< 0.05	< 0.05			0.75	
Dichloromethane (Methylene Chloride)	µg/g	0.05	< 0.05	< 0.05			0.10	
Styrene	µg/g	0.05	< 0.05	< 0.05			0.7	
Tetrachloroethane,1,1,1,2-	µg/g	0.02	< 0.02	< 0.02			0.058	
Tetrachloroethane,1,1,2,2-	µg/g	0.05	< 0.05	< 0.05			0.05	
Tetrachloroethylene	µg/g	0.05	< 0.05	< 0.05			0.28	
Toluene	µg/g	0.2	< 0.2	< 0.2			2.3	
Trichloroethane,1,1,1-	µg/g	0.02	< 0.02	< 0.02			0.38	
Trichloroethane,1,1,2-	µg/g	0.02	< 0.02	< 0.02			0.05	
Trichloroethylene	µg/g	0.05	< 0.05	< 0.05			0.061	
Trichlorofluoromethane	µg/g	0.02	< 0.02	< 0.02			4.0	
Vinyl Chloride	µg/g	0.02	< 0.02	< 0.02			0.020	
Xylene, m,p-	µg/g	0.03	< 0.03	< 0.03				
Xylene, o-	µg/g	0.03	< 0.03	< 0.03				

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

Christine Burke
Lab Manager

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DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

	Client I.D.		TH7-1	TH8-2			O. Reg. 153	
	Sample I.D.		B21-16943-18	B21-16943-20			Tbl. 2 - RPI	
	Date Collected		03-Jun-21	03-Jun-21			Soil	
Parameter	**Units**	**R.L.**						
Xylene, m,p,o-	µg/g	0.03	< 0.03	< 0.03			3.1	
PHC F1 (C6-C10)	µg/g	10	< 10	< 10			55	
PHC F2 (>C10-C16)	µg/g	5	< 5	< 5			98	
PHC F3 (>C16-C34)	µg/g	10	19	31			300	
PHC F4 (>C34-C50)	µg/g	10	< 10	< 10			2800	
% moisture	%		18.1	10.9				

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

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SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

Summary of Exceedances

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

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DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

Parameter	Qty	Site Analyzed	Analyst Initials	Date Analyzed	Lab Method	Reference Method
SVOC	6	Kingston	sge	08-Jun-21	C-NAB-S-001 (k)	EPA 8270

µg/g = micrograms per gram (parts per million) and is equal to mg/Kg
F1 C6-C10 hydrocarbons in µg/g, (F1-btex if requested)
F2 C10-C16 hydrocarbons in µg/g, (F2-napth if requested)
F3 C16-C34 hydrocarbons in µg/g, (F3-pah if requested)
F4 C34-C50 hydrocarbons in µg/g
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
Any deviations from the method are noted and reported for any particular sample.
nC6 and nC10 response factor is within 30% of response factor for toluene:
nC10,nC16 and nC34 response factors within 10% of each other:
C50 response factors within 70% of nC10+nC16+nC34 average:
Linearity is within 15%:
All results expressed on a dry weight basis.
Unless otherwise noted all chromatograms returned to baseline by the retention time of nC50.

Unless otherwise noted all extraction, analysis, QC requirements and limits for holding time were met.
If analyzed for F4 and F4G they are not to be summed but the greater of the two numbers are to be used in application to the CWS PHC
QC will be made available upon request.

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

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DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

	Client I.D.		TH2-2	TH4-2	TH4-2-1	TH5-2	O. Reg. 153	
	Sample I.D.		B21-16943-5	B21-16943-9	B21-16943-10	B21-16943-13	Tbl. 2 - RPI	
	Date Collected		03-Jun-21	03-Jun-21	03-Jun-21	03-Jun-21	Soil	
Parameter	**Units**	**R.L.**						
Acenaphthene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	7.9	
Acenaphthylene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.15	
Anthracene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.67	
Benzo(a)anthracene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.50	
Benzo(a)pyrene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.3	
Benzo(b)fluoranthene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.78	
Benzo(k)fluoranthene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.78	
Benzo(g,h,i)perylene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	6.6	
Biphenyl, 1, 1-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.31	
Bis(2-Chloroethyl)ether	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.5	
Bis(2-Chloroisopropyl)ether	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.67	
Bis(2-ethylhexyl) Phthalate	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	5	
Chloroaniline, 4-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.50	
Chlorophenol, 2-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	1.6	
Chrysene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	7.0	
Dibenzo(a,h)anthracene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.1	
Dichlorobenzidine, 3,3'-	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	1	
Dichlorophenol, 2,4-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.19	
Diethyl Phthalate	µg/g	0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.5	
Dimethyl Phthalate	µg/g	0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.5	
Dimethylphenol, 2,4-	µg/g	0.1	< 0.1	< 0.1	< 0.1	< 0.1	38	
Dinitrophenol, 2,4-	µg/g	1	< 1	< 1	< 1	< 1	2.0	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

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Lab Manager

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DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

	Client I.D.		TH2-2	TH4-2	TH4-2-1	TH5-2	O. Reg. 153	
	Sample I.D.		B21-16943-5	B21-16943-9	B21-16943-10	B21-16943-13	Tbl. 2 - RPI	
	Date Collected		03-Jun-21	03-Jun-21	03-Jun-21	03-Jun-21	Soil	
Parameter	**Units**	**R.L.**						
Dinitrotoluene, 2,4-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.5	
Dinitrotoluene, 2,6-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.5	
Fluoranthene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.69	
Fluorene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	62	
Indeno(1,2,3,-cd)pyrene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.38	
Methylnaphthalene,1-	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.99	
Methylnaphthalene,2-	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.99	
Methylnaphthalene 2-(1-)	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.99	
Naphthalene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.60	
Pentachlorophenol	µg/g	0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	
Phenanthrene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	6.2	
Phenol	µg/g	0.01	< 0.01	< 0.01	< 0.01	< 0.01	9.4	
Pyrene	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	78	
Trichlorobenzene,1,2,4-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.36	
Trichlorophenol, 2,4,5-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	4.4	
Trichlorophenol 2,4,6-	µg/g	0.02	< 0.02	< 0.02	< 0.02	< 0.02	2.1	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
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DATE RECEIVED: 04-Jun-21
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SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

	Client I.D.		TH5-2-1	TH7-2			O. Reg. 153 Tbl. 2 - RPI Soil	
	Sample I.D.		B21-16943-14	B21-16943-19				
	Date Collected		03-Jun-21	03-Jun-21				
Parameter	**Units**	**R.L.**						
Acenaphthene	µg/g	0.05	< 0.05	< 0.05			7.9	
Acenaphthylene	µg/g	0.05	< 0.05	< 0.05			0.15	
Anthracene	µg/g	0.05	< 0.05	< 0.05			0.67	
Benzo(a)anthracene	µg/g	0.05	< 0.05	< 0.05			0.50	
Benzo(a)pyrene	µg/g	0.05	< 0.05	< 0.05			0.3	
Benzo(b)fluoranthene	µg/g	0.05	< 0.05	< 0.05			0.78	
Benzo(k)fluoranthene	µg/g	0.05	< 0.05	< 0.05			0.78	
Benzo(g,h,i)perylene	µg/g	0.05	< 0.05	< 0.05			6.6	
Biphenyl, 1, 1-	µg/g	0.02	< 0.02	< 0.02			0.31	
Bis(2-Chloroethyl)ether	µg/g	0.02	< 0.02	< 0.02			0.5	
Bis(2-Chloroisopropyl)ether	µg/g	0.02	< 0.02	< 0.02			0.67	
Bis(2-ethylhexyl) Phthalate	µg/g	0.5	< 0.5	< 0.5			5	
Chloroaniline, 4-	µg/g	0.02	< 0.02	< 0.02			0.50	
Chlorophenol, 2-	µg/g	0.02	< 0.02	< 0.02			1.6	
Chrysene	µg/g	0.05	< 0.05	< 0.05			7.0	
Dibenzo(a,h)anthracene	µg/g	0.05	< 0.05	< 0.05			0.1	
Dichlorobenzidine, 3,3'-	µg/g	0.05	< 0.05	< 0.05			1	
Dichlorophenol, 2,4-	µg/g	0.02	< 0.02	< 0.02			0.19	
Diethyl Phthalate	µg/g	0.1	< 0.1	< 0.1			0.5	
Dimethyl Phthalate	µg/g	0.1	< 0.1	< 0.1			0.5	
Dimethylphenol, 2,4-	µg/g	0.1	< 0.1	< 0.1			38	
Dinitrophenol, 2,4-	µg/g	1	< 1	< 1			2.0	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

Christine Burke
Lab Manager

R.L. = Reporting Limit
Test methods may be modified from specified reference method unless indicated by an *
Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

CADUCEON ENVIRONMENTAL LABORATORIES
Client committed. Quality assured.

CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: ---

REPORT No. B21-16943 (iii)

Report To:

Azimuth Environmental
642 Welham Rd,
Barrie ON L4N9A1 Canada
Attention: Ian Acheson

Caduceon Environmental Laboratories
112 Commerce Park Drive
Barrie ON L4N 8W8
Tel: 705-252-5743
Fax: 705-252-5746

DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

	Client I.D.		TH5-2-1	TH7-2			O. Reg. 153	
	Sample I.D.		B21-16943-14	B21-16943-19			Tbl. 2 - RPI	
	Date Collected		03-Jun-21	03-Jun-21			Soil	
Parameter	**Units**	**R.L.**						
Dinitrotoluene, 2,4-	µg/g	0.02	< 0.02	< 0.02			0.5	
Dinitrotoluene, 2,6-	µg/g	0.02	< 0.02	< 0.02			0.5	
Fluoranthene	µg/g	0.05	< 0.05	< 0.05			0.69	
Fluorene	µg/g	0.05	< 0.05	< 0.05			62	
Indeno(1,2,3,-cd)pyrene	µg/g	0.05	< 0.05	< 0.05			0.38	
Methylnaphthalene,1-	µg/g	0.05	< 0.05	< 0.05			0.99	
Methylnaphthalene,2-	µg/g	0.05	< 0.05	< 0.05			0.99	
Methylnaphthalene 2-(1-)	µg/g	0.05	< 0.05	< 0.05			0.99	
Naphthalene	µg/g	0.05	< 0.05	< 0.05			0.60	
Pentachlorophenol	µg/g	0.1	< 0.1	< 0.1			0.1	
Phenanthrene	µg/g	0.05	< 0.05	< 0.05			6.2	
Phenol	µg/g	0.01	< 0.01	< 0.01			9.4	
Pyrene	µg/g	0.05	< 0.05	< 0.05			78	
Trichlorobenzene,1,2,4-	µg/g	0.02	< 0.02	< 0.02			0.36	
Trichlorophenol, 2,4,5-	µg/g	0.02	< 0.02	< 0.02			4.4	
Trichlorophenol 2,4,6-	µg/g	0.02	< 0.02	< 0.02			2.1	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

Christine Burke
Lab Manager

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DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

Summary of Exceedances

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

Christine Burke
Lab Manager

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DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

Parameter	Qty	Site Analyzed	Analyst Initials	Date Analyzed	Lab Method	Reference Method
Comment	6	Default Site	CS	10-Jun-21	C-Arochlor Comment	-
OC Pesticides	6	Kingston	CS	10-Jun-21	C-PESTCL-01 K	EPA 8080

µg/g = micrograms per gram (parts per million) and is equal to mg/Kg
F1 C6-C10 hydrocarbons in µg/g, (F1-btex if requested)
F2 C10-C16 hydrocarbons in µg/g, (F2-napth if requested)
F3 C16-C34 hydrocarbons in µg/g, (F3-pah if requested)
F4 C34-C50 hydrocarbons in µg/g
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
Any deviations from the method are noted and reported for any particular sample.
nC6 and nC10 response factor is within 30% of response factor for toluene:
nC10,nC16 and nC34 response factors within 10% of each other:
C50 response factors within 70% of nC10+nC16+nC34 average:
Linearity is within 15%:
All results expressed on a dry weight basis.
Unless otherwise noted all chromatograms returned to baseline by the retention time of nC50.

Unless otherwise noted all extraction, analysis, QC requirements and limits for holding time were met.
If analyzed for F4 and F4G they are not to be summed but the greater of the two numbers are to be used in application to the CWS PHC
QC will be made available upon request.

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

Christine Burke
Lab Manager

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DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

	Client I.D.		TH2-1	TH4-1	TH4-1-1	TH5-1	O. Reg. 153	
	Sample I.D.		B21-16943-4	B21-16943-7	B21-16943-8	B21-16943-11	Tbl. 2 - RPI	
	Date Collected		03-Jun-21	03-Jun-21	03-Jun-21	03-Jun-21	Soil	
Parameter	**Units**	**R.L.**						
Poly-Chlorinated Biphenyls (PCB's)	µg/g	0.3	< 0.3	< 0.3	< 0.3	< 0.3	0.35	
Aroclor	-		-	-	-	-		
Aldrin	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	
Chlordane (alpha)	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05		
Chlordane (Gamma)	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05		
Chlordane Total (alpha+gamma)	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	
DDD, 2,4-	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05		
DDD, 4,4-	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05		
DDD Total	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	3.3	
DDE, 2,4-	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05		
DDE, 4,4-	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05		
DDE Total	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.26	
DDT, 2,4-	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05		
DDT, 4,4-	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05		
DDT Total	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	1.4	
Dieldrin	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	
Lindane (Hexachlorocyclohexane, Gamma)	µg/g	0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.056	
Endosulfan I	µg/g	0.04	< 0.04	< 0.04	< 0.04	< 0.04		
Endosulfan II	µg/g	0.04	< 0.04	< 0.04	< 0.04	< 0.04		
Endosulfan I/II	µg/g	0.04	< 0.04	< 0.04	< 0.04	< 0.04	0.04	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

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Lab Manager

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Tel: 705-252-5743
Fax: 705-252-5746

DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

	Client I.D.		TH2-1	TH4-1	TH4-1-1	TH5-1	O. Reg. 153	
	Sample I.D.		B21-16943-4	B21-16943-7	B21-16943-8	B21-16943-11	Tbl. 2 - RPI Soil	
	Date Collected		03-Jun-21	03-Jun-21	03-Jun-21	03-Jun-21		
Parameter	**Units**	**R.L.**						
Endrin	µg/g	0.04	< 0.04	< 0.04	< 0.04	< 0.04	0.04	
Heptachlor	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.15	
Heptachlor Epoxide	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	
Hexachlorobenzene	µg/g	0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.52	
Hexachlorobutadiene	µg/g	0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.012	
Hexachloroethane	µg/g	0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.089	
Methoxychlor	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.13	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

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DATE RECEIVED: 04-Jun-21
DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

	Client I.D.		TH5-1-1	TH7-1			O. Reg. 153	
	Sample I.D.		B21-16943-12	B21-16943-18			Tbl. 2 - RPI Soil	
	Date Collected		03-Jun-21	03-Jun-21				
Parameter	**Units**	**R.L.**						
Poly-Chlorinated Biphenyls (PCB's)	µg/g	0.3	< 0.3	< 0.3			0.35	
Aroclor	-		-	-				
Aldrin	µg/g	0.05	< 0.05	< 0.05			0.05	
Chlordane (alpha)	µg/g	0.05	< 0.05	< 0.05				
Chlordane (Gamma)	µg/g	0.05	< 0.05	< 0.05				
Chlordane Total (alpha+gamma)	µg/g	0.05	< 0.05	< 0.05			0.05	
DDD, 2,4-	µg/g	0.05	< 0.05	< 0.05				
DDD, 4,4-	µg/g	0.05	< 0.05	< 0.05				
DDD Total	µg/g	0.05	< 0.05	< 0.05			3.3	
DDE, 2,4-	µg/g	0.05	< 0.05	< 0.05				
DDE, 4,4-	µg/g	0.05	< 0.05	< 0.05				
DDE Total	µg/g	0.05	< 0.05	< 0.05			0.26	
DDT, 2,4-	µg/g	0.05	< 0.05	< 0.05				
DDT, 4,4-	µg/g	0.05	< 0.05	< 0.05				
DDT Total	µg/g	0.05	< 0.05	< 0.05			1.4	
Dieldrin	µg/g	0.05	< 0.05	< 0.05			0.05	
Lindane (Hexachlorocyclohexane, Gamma)	µg/g	0.01	< 0.01	< 0.01			0.056	
Endosulfan I	µg/g	0.04	< 0.04	< 0.04				
Endosulfan II	µg/g	0.04	< 0.04	< 0.04				
Endosulfan I/II	µg/g	0.04	< 0.04	< 0.04			0.04	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

Christine Burke
Lab Manager

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DATE REPORTED: 11-Jun-21
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

	Client I.D.		TH5-1-1	TH7-1			O. Reg. 153	
	Sample I.D.		B21-16943-12	B21-16943-18			Tbl. 2 - RPI	
	Date Collected		03-Jun-21	03-Jun-21			Soil	
Parameter	**Units**	**R.L.**						
Endrin	µg/g	0.04	< 0.04	< 0.04			0.04	
Heptachlor	µg/g	0.05	< 0.05	< 0.05			0.15	
Heptachlor Epoxide	µg/g	0.05	< 0.05	< 0.05			0.05	
Hexachlorobenzene	µg/g	0.01	< 0.01	< 0.01			0.52	
Hexachlorobutadiene	µg/g	0.01	< 0.01	< 0.01			0.012	
Hexachloroethane	µg/g	0.01	< 0.01	< 0.01			0.089	
Methoxychlor	µg/g	0.05	< 0.05	< 0.05			0.13	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
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JOB/PROJECT NO.: 150 & 160 King Street, Thornbury
P.O. NUMBER: 19-089
WATERWORKS NO.

Summary of Exceedances

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - RPI Soil - Table 2 - Res./Parkland/Institutional Soil Std

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SAMPLES SUBMITTED TO:		TESTING REQUIREMENTS				REPORT NUMBER (Lab Use)
Kingston		[X] O'Reg 153	[2] Table (1-9)	[Y] Record of Site (Y/N)		B21-16943
Ottawa		[X] RPI	[ ] ICC	[ ] Agricultural		
Richmond Hill		[ ] Medium/Fine	[X] Course	[ ] O'Reg 558 Leachate Analysis		
Barrie	X	[ ] MISA Guidelines		Site:		
London		[ ] Provincial Water Quality Objectives		[ ] Landfill Monitoring		
Windsor		[ ] Other:				

Are any samples to be submitted intended for Human Consumption under any Drinking Water Regulations? [ ] Yes [X] No (If yes, submit all Drinking Water Samples on a Drinking Water Chain of Custody)

Organization: Azimuth Envirnomental Consulting, Inc.	Address: 642 Welham Road, Barrie, ON L4N9A1	Invoicing Address (if different):
Contact: Ian Acheson		
Tel: (705) 331-6677 / Fax:		
Email: iacheson@azimuthenvironmental.com	Quote No:	Project Name/No.: 150 & 160 King Street, Thronbury
Additional Info (email, cell, etc):	P.O. No.:	Additional Info: 19-089

ANALYSES REQUESTED (type text in the boxes)

PHCs & VOCs	Metals Suite #1	Inorganics Suite #2	SVOCs	OCP/PCB	pH	as per list	emails				Suspected Highly Contaminated

TURNAROUND SERVICE REQUESTED (see back page)

[ ]	Platinum	200% Surcharge
[ ]	Gold	100% Surcharge
[ ]	Silver	50% Surcharge
[ ]	Bronze	25% Surcharge
[X]	Standard	5-7 days
[ ]	Specific Date:	

* Sample Matrix Legend: WW=Waste Water, SW=Surface Water, GW=Groundwater, LS=Liquid Sludge, SS=Solid Sludge, S=Soil, Sed=Sediment, PC=Paint Chips, F=Filter, Oil = Oil

Lab No.	Sample Source and/or Sample Identification	S.P.L.	Sample Matrix *	Date Collected (yy-mm-dd)	Time Collected	Indicate Test For Each Sample By Using A Check Mark In The Box Provided											X	Field pH	Field Temp.	# Bottles/ Sample	Field Filtered Y/N
1	TH1-1		S	21/06/03		X	X	X										N/A	N/A	5	N/A
2	TH1-3		S	21/06/03							X							N/A	N/A	1	N/A
3	TH1-3-1		S	21/06/03							X							N/A	N/A	1	N/A
4	TH2-1		S	21/06/03		X	X			X								N/A	N/A	5	N/A
5	TH2-2		S	21/06/03				X	X									N/A	N/A	2	N/A
6	TH3-1		S	21/06/03		X	X	X										N/A	N/A	5	N/A
7	TH4-1		S	21/06/03		X	X			X								N/A	N/A	5	N/A
8	TH4-1-1		S	21/06/03		X	X			X								N/A	N/A	5	N/A
9	TH4-2		S	21/06/03				X	X									N/A	N/A	2	N/A
10	TH4-2-1		S	21/06/03				X	X									N/A	N/A	2	N/A
11	TH5-1		S	21/06/03		X	X			X								N/A	N/A	5	N/A
12	TH5-1-1		S	21/06/03		X	X			X								N/A	N/A	5	N/A

SAMPLE SUBMISSION INFORMATION			SHIPPING INFORMATION			REPORTING / INVOICING	
	Sampled by:	Submitted by:	Courier (Client account)		Invoice	Report by Fax	
Print:	I Acheson	I.Acheson	Courier (Caduceon account)			Report by Email	X
Sign:	I Acheson	I.Acheson	Drop Off	X	# of Pieces	Invoice by Email	X
	21/06/03	21/06/03	Caduceon (Pick-up)		1	Invoice by Mail	
	Date (yy-mm-dd)/Time:	Date (yy-mm-dd)/Time:					

SAMPLE RECEIVING INFORMATION (LABORATORY USE ONLY)

Received By (print):	Ashley m	Signature:	
Date Received (yy-mm-dd):	21-06-04	Time Received:	8:00
Laboratory Prepared Bottles:	[X] Yes	[ ] No	
Sample Temperature °C:	18.2	Labeled by:	NO

Comments:

CADUCEON ENVIRONMENTAL LABORATORIES
Client committed. Quality assured.

SAMPLES SUBMITTED TO:		TESTING REQUIREMENTS						REPORT NUMBER (Lab Use)
Kingston		X	O'Reg 153	2	Table (1-9)	Y	Record of Site (Y/N)	B21-16943
Ottawa		X	RPI		ICC		Agricultural	
Richmond Hill			Medium/Fine	X	Course		O'Reg 558 Leachate Analysis	
Barrie	X		MISA Guidelines				Site:	
London			Provincial Water Quality Objectives				Landfill Monitoring	
Windsor			Other:					

Are any samples to be submitted intended for Human Consumption under any Drinking Water Regulations? [ ] Yes [X] No (If yes, submit all Drinking Water Samples on a Drinking Water Chain of Custody)

Organization:	Azimuth Environmental Consulting, Inc.
Contact:	Ian Acheson
Tel:	(705) 331-6677
Fax:	
Email:	iacheson@azimuthenvironmental.com
Additional Info (email, cell, etc):	
Address:	642 Welham Road, Barrie, ON L4N9A1
Invoicing Address (if different):	
Quote No:	
P.O. No.:	
Project Name/No.:	150 & 160 King Street, Thronbury
Additional Info:	19-089

ANALYSES REQUESTED (type text in the boxes): PHCs & VOCs; Metals Suite #1; Inorganics Suite #2; SVOCs; OCP/~~PAH~~ PCB; pH; as per lab list mod; Suspected Highly Contaminated

TURNAROUND SERVICE REQUESTED (see back page)

	Service	Surcharge
	Platinum	200% Surcharge
	Gold	100% Surcharge
	Silver	50% Surcharge
	Bronze	25% Surcharge
X	Standard	5-7 days
	Specific Date:	

*Sample Matrix Legend: WW=Waste Water, SW=Surface Water, GW=Groundwater, LS=Liquid Sludge, SS=Solid Sludge, S=Soil, Sed=Sediment, PC=Paint Chips, F=Filter, Oil = Oil

Lab No.	Sample Source and/or Sample Identification	S.P.L.	Sample Matrix*	Date Collected (yy-mm-dd)	Time Collected	PHCs & VOCs	Metals Suite #1	Inorganics Suite #2	SVOCs	OCP/PCB	pH	as per lab list mod	Suspected Highly Contaminated	Field pH	Field Temp.	# Bottles/ Sample	Field Filtered Y/N
13	TH5-2		S	21/06/03				X	X					N/A	N/A	2	N/A
14	TH5-2-1		S	21/06/03				X	X					N/A	N/A	2	N/A
15	TH5-3		S	21/06/03							X			N/A	N/A	1	N/A
16	TH5-3-1		S	21/06/03							X			N/A	N/A	1	N/A
17	TH6-1		S	21/06/03		X	X	X						N/A	N/A	5	N/A
18	TH7-1		S	21/06/03		X				X				N/A	N/A	4	N/A
19	TH7-2		S	21/06/03			X	X	X					N/A	N/A	3	N/A
20	TH8-2		S	21/06/03		X	X	X						N/A	N/A	5	N/A

Ottawa - 1, 4-10, 11+12 (x2), 13, 14, 17, 19, 20 Jar
Kingston 1, 4(x2), 5, 6, 7+8(x2), 9, 10, 11+12 (x2), 13+14(pump), 17, 18(x2), 19, 20 Jar.
RH 1-3, 5, 6, 9, 10, 13-17, 19, 20 Jar/pump

SAMPLE SUBMISSION INFORMATION

	Sampled by:	Submitted by:
Print:	I Acheson	I.Acheson
Sign:	I Acheson	I.Acheson
Date (yy-mm-dd)/Time:	21/06/03	21/06/03

SHIPPING INFORMATION

Courier (Client account)		Invoice
Courier (Caduceon account)		
Drop Off AH	X	# of Pieces
Caduceon (Pick-up)		1

REPORTING / INVOICING

Report by Fax	
Report by Email	X
Invoice by Email	X
Invoice by Mail	

SAMPLE RECEIVING INFORMATION (LABORATORY USE ONLY)

Received By (print):	Ashley M
Signature:	[signature]
Date Received (yy-mm-dd):	21-06-04
Time Received:	8:00
Laboratory Prepared Bottles:	[X] Yes [ ] No
Sample Temperature °C:	18.2
Labeled by:	no

Comments: 1, 4, 6, 7, 8, 11, 12, 17, 18, 20 vials → RH

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CofC, May 2019 Revision No: 22

APPENDIX E

RSC Property Survey

SCHEDULE				
PART	LOT	PLAN	PIN	AREA
1	PART OF LOTS 6 AND 7 (NORTH EAST SIDE OF KING STREET)	TOWNPLOT OF THORNBURY	ALL OF 37141-0310	956.7 sq m.
2				105.8 sq.m.
3	PART OF LOTS 7, 8 AND 9 (NORTH EAST SIDE OF KING STREET)			3854.1 sq m.
4				346.7 sq.m.
5	PART OF WELLINGTON STREET (NOT TRAVELLED)		PART OF 37141-0116	366.7 sq m.
6				30.2 sq.m.
7				369.1 sq.m.
8				30.2 sq.m.
9	PART OF LOTS 10, 11, 12, 13 AND 14 (NORTH EAST SIDE OF KING STREET)		ALL OF 37141-0090	7433.6 sq m.
10				618.1 sq.m.

PLAN 16R-11658

Received and deposited

March 4th, 2022

Larissa Arseneau

Representative for the Land Registrar for the Land Titles Division of Grey (No.16)

PLAN OF SURVEY OF

PART OF LOTS 6 TO 14 AND PART OF WELLINGTON STREET

(NORTH EAST SIDE OF KING STREET)

TOWNPLOT OF THORNBURY

FORMERLY TOWN OF THORNBURY

NOW IN THE

TOWN OF THE BLUE MOUNTAINS

COUNTY OF GREY

SCALE 1 : 400

10 0 10 20 30 metres

THE INTENDED PLOT SIZE OF THIS PLAN IS 1500mm IN WIDTH BY 457mm IN HEIGHT WHEN PLOTTED AT A SCALE OF 1:400

METRIC DISTANCES AND/OR COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

NOTES

BEARINGS ARE UTM GRID, DERIVED FROM OBSERVED REFERENCE POINTS A AND B, BY REAL TIME NETWORK (RTN) OBSERVATIONS, UTM ZONE 17, NAD83 (CSRS) (2010.0).

DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.999601.

FOR BEARING COMPARISONS, A ROTATION OF 00°17'10" COUNTER-CLOCKWISE WAS APPLIED TO BEARINGS ON PLAN 16R-3287 AND 16R-9726.
A ROTATION OF 00°37'20" COUNTER-CLOCKWISE WAS APPLIED TO BEARINGS ON PLANS P5 AND D1.

ALL SET SSIB AND PB MONUMENTS WERE USED DUE TO LACK OF OVERBURDEN AND/OR PROXIMITY OF UNDERGROUND UTILITIES IN ACCORDANCE WITH SECTION 11 (4) OF O.REG. 525/91.

LEGEND

■	DENOTES	SURVEY MONUMENT FOUND
□	DENOTES	SURVEY MONUMENT SET
SIB	DENOTES	STANDARD IRON BAR
SSIB	DENOTES	SHORT STANDARD IRON BAR
IB	DENOTES	IRON BAR
UI	DENOTES	UNIDENTIFIABLE
WIT	DENOTES	WITNESS
MEAS	DENOTES	MEASURED
JDB	DENOTES	J.D. BARNES LIMITED
ZUMO	DENOTES	ZUBEK, EMO, PATTEN & THOMSEN LTD.
H&M	DENOTES	HEWETT & MILNE LTD.
1063	DENOTES	R.W. MACKEY, O.L.S.
1188	DENOTES	C.A. SEXTON, O.L.S.
1386	DENOTES	R.G. REYNOLDS, O.L.S.
1855	DENOTES	J. C. MILNE, O.L.S.
P1	DENOTES	THE TOWNPLOT OF THORNBURY
P2	DENOTES	PLAN 16R-3287
P3	DENOTES	PLAN 16R-9726
P4	DENOTES	PLAN 16R-11290
•HP	DENOTES	HYDRO POLE
GW	DENOTES	GUY WIRE

SURVEYOR'S CERTIFICATE

I CERTIFY THAT:

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE LAND TITLES ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON FEBRUARY 24, 2022.

FEBRUARY 25, 2022
DATE

LAURENCE J. KUELLING
ONTARIO LAND SURVEYOR

THIS PLAN OF SURVEY RELATES TO AOLS PLAN SUBMISSION FORM NUMBER 2163357

INTEGRATION DATA

OBSERVED REFERENCE POINTS (ORPs): UTM ZONE 17, NAD83 (CSRS) (2010.0).

COORDINATES TO URBAN ACCURACY PER SECTION 14 (2) OF O.REG 216/10.

POINT ID	EASTING	NORTHING
ORP (A)	544 104.15	4 934 217.88
ORP (B)	544 397.79	4 933 872.33

COORDINATES CANNOT, IN THEMSELVES, BE USED TO RE-ESTABLISH CORNERS OR BOUNDARIES SHOWN ON THIS PLAN.

THE RESULTANT TIE BETWEEN ORP (A) AND ORP (B) IS 453.64 N 40°21'25" E

J. D. BARNES LIMITED
SURVEYING MAPPING GIS
LAND INFORMATION SPECIALISTS
142 COMMERCE PARK DRIVE, UNIT V, BARRIE, ON L4N 8W8
T: (705) 739-6770 F: (705) 739-6771 www.jdbarnes.com

DRAWN BY:	CHECKED BY:	REFERENCE NO.:
LJK	LJK	21-11-907-00
PLOTTED: 3/4/2022		DATED: 02/25/2022

FILE: G:\21-11-907\00\DRAWINGS\21-11-907-00.dgn