# Phase Two Environmental Site Assessment

Part of Lots 18 & 19, Concession 3

Caledon, Ontario

## Prepared For:

12101 Creditview Developments Ltd.

C/O Fieldgate Land Developments Ltd.

5400 Yonge Street

Toronto, Ontario

M2N 5R5

**DS Project No :** 23-267-100

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DS CONSULTANTS LTD.
6221 Highway 7, Unit 16
Vaughan, Ontario, L4H 0K8
Telephone: (905) 264-9393
www.dsconsultants.ca

# Executive Summary

DS Consultants Ltd. (DS) was retained by 12101 Creditview Developments Ltd. (the "Client") to conduct a Phase Two Environmental Site Assessment (ESA) of the Property located at Part of Lots 18 & 19, Concession 3, Caledon, Ontario, herein referred to as the "Phase Two Property" or "Site". DS understands that this Phase One ESA was requested for due diligence purposes associated with the proposed redevelopment of the Site for residential purposes. It is further understood that the proposed development will consist of a low-rise subdivision.

It is understood that the intended future residential property use is not considered to be a more sensitive property use as defined under O.Reg. 153/04 (as amended); therefore the filing of a Record of Site Condition (RSC) with the Ontario Ministry of Environment, Conservation and Parks (MECP) is not mandated under O.Reg. 153/04.

The Phase Two ESA was completed to satisfy the intent of the requirements, methodology and practices for a Phase Two ESA as described in Ontario Regulation 153/04 (as amended). The objective of this Phase Two ESA is to confirm whether contaminants are present, and at what concentration are they present on the Phase Two Property, as related to the Areas of Potential Environmental Concern (APEC) identified in the Phase One ESA.

The Phase Two Property is a 59.97-hectare (148.19 acres) parcel of land situated within a rural neighbourhood in the Town of Caledon, Ontario. The Phase Two Property is located approximately 390 m northwest of the intersection of Creditview Road and Mayfield Road and was occupied by agricultural fields at the time of this investigation.

The Phase One ESA completed in September 2023 indicated that the Phase Two Property has not developed and has been used for agricultural purposes since the 1860s. Two (2) orchards were depicted on the central portion of the Property and another on the south corner of the Property in the 1880 County Atlas, however they appear to have been removed by 1946. It is possible that environmentally persistent pesticides were applied to the former orchards. The Phase One Property is currently occupied by agricultural fields, and is used for agricultural purposes. A total of nine (9) Potentially Contaminating Activities (PCAs) were identified in the Phase One ESA, which were considered to be contributing to four (4) APECs on the Phase Two Property. A summary of the APECs, associated PCAs, and contaminants of potential concern (copc) identified is presented in the table below:

**Table E-1: Summary of APECs**

| Area of Potential Environmental Concern | Location of Area of Potential Environmental Concern on Phase One Property | Potentially Contaminating Activity | Location of PCA (on-site or off-site) | Contaminants of Potential Concern | Media Potentially Impacted (Ground water, soil and/or sediment) |
|---|---|---|---|---|---|
| APEC-1 | Central portion of the Site | #40 – Pesticides Manufacturing, Processing, Bulk Storage and Large-Scale Applications | On Site **PCA-3** | OCPs, Metals, As, Sb, Se, CN- | Soil |
| APEC-2 | Entire Site | #40 – Pesticides Manufacturing, Processing, Bulk Storage and Large-Scale Applications | On Site **PCA-6** | OCPs, Metals, As, Sb, Se, CN- | Soil |
| APEC-3A | West portion of the Site | #N/S – Seasonal De-Icing Activities[1] | Off Site **PCA-5** **PCA-10** **PCA-11** | EC, SAR | Soil |
| APEC-3B | Southwest portion of the Site | | | | |
| APEC-3C | Southeast portion of the Site | | | | |
| APEC-4 | South corner of the Site | #40 – Pesticides Manufacturing, Processing, Bulk Storage and Large-Scale Applications | On Site **PCA-8** | OCPs, Metals, As, Sb, Se, CN- | Soil |

N/S - not specified in Table 2, Schedule D, of O.Reg. 153/04

1 - The area is subject to application of de-icing salts for road safety purposes. Per Section 49.1 (1) of O.Reg. 407/19, published December 4, 2019 "*If an applicable site condition standard is exceeded at a property solely because of one of the following reasons, the applicable site condition standard is deemed not to be exceeded for the purpose of Part XV.1 of the Act*": "*…that a substance has been applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both*". Any potential impacts associated with EC and/or SAR in soil, and sodium and/or chloride in groundwater will be deemed not to exceed the MECP Site Conditions Standards for the area identified in APEC-3A, APEC-3B, and APEC-3C

Based on the findings of the Phase One ESA it was concluded that a Phase Two ESA is warranted in order to assess the soil and groundwater conditions on the Phase Two Property.

The Phase Two ESA involved the advancement of 13 boreholes, which were completed between August 9, 2023 and August 14, 2023 in conjunction with the geotechnical investigation. The boreholes were advanced to a maximum depth of 8.2 metres below ground surface (mbgs) under the supervision of DS personnel. Groundwater monitoring wells were installed in five (5) of the boreholes to assess the groundwater flow direction. The borehole locations were determined based on the findings of the Phase One ESA. Soil

samples were collected and submitted for analysis of all PCOCs, including: Metals, As, Sb, Se, CN-, pH, and OCPs.

The soil analytical results were compared to the "Table 8: Generic Site Condition Standards in a Potable Groundwater Condition for Use within 30 m of a Water Body for Residential/Parkland/Institutional use" provided in the MECP document entitled, "*Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*" dated April 15, 2011 *(*Table 8 Standards*)* and residential/parkland/ institutional property use.

Based on the findings of the Phase Two ESA, DS presents the following findings:

- A surficial layer of topsoil approximately 200 to 400 mm in thickness was encountered in all of the boreholes advanced. Reworked clayey silt material with trace amounts of organics and sand was encountered below the topsoil. The reworked material was generally heterogeneous and ranged in thickness from 0.5 to 1.9 metres. BH23-511 encountered silty sand below the reworked material with a thickness of 2.2 mbgs. The native overburden material encountered consisted of clayey silt till, with trace amounts of sand and gravel. The clayey silt till unit extended to a maximum depth of 6.7 mbgs and ranged in thickness from 2.3-5.9 m. Silty sand till was encountered below the clayey silt till in BH23-501, BH23-506 to BH23-513 to borehole termination at 6.7 to 8.2 mbgs;
- The depth to groundwater was measured in five (5) monitoring wells installed during the course of this investigation. The groundwater levels were found to range between 0.70 to 1.80 mbgs, with corresponding elevations of 255.49 to 161.78 metres above sea level (masl) on August 29, 2023. Based on the groundwater elevations recorded, the groundwater flow direction appears to be southeasterly towards Fletcher's Creek. It is possible that the groundwater levels may vary seasonally. The groundwater levels may also be impacted by other factors such as historical infilling activities, subsurface utility trenches, and similar subsurface anomalies. The groundwater flow direction can only be confirmed through long term monitoring.
- Soil samples were collected from the boreholes advanced on the Phase Two Property and submitted for analysis of Metals and OCPs. The results of the chemical analyses conducted indicated that all samples analyzed met the applicable Site Condition Standards.

Based on a review of the findings of this Phase Two ESA, DS presents the following conclusions and recommendations:

- The results of the chemical analyses conducted on soil samples indicate that the applicable Site Condition Standards have been met;
- Based on the findings of this Phase Two ESA, it is the opinion of DS that a Record of Site Condition may be filed for the Phase Two Property (if requested). No further investigation is recommended at this time.
- All monitoring wells should be decommissioned in accordance with O.Reg. 903 when no longer required.

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# 1.0 Introduction

DS Consultants Ltd. (DS) was retained by 12101 Creditview Developments Ltd. to complete a Phase Two Environmental Site Assessment (ESA) of the Property located at Part of Lots 18 & 19, Concession 3, Caledon, Ontario, herein referred to as the "Phase Two Property" or "Site". It is DS's understanding that this Phase Two ESA has been requested for due diligence purposes in association with the proposed redevelopment of the Property. DS understands that this Phase Two ESA may be used to support the filing of a Record of Site Condition (RSC) as part of the proposed redevelopment of the Site for residential purposes. It is further understood that the proposed development will consist of low-rise buildings.

It is understood that the intended future property use (residential) is not considered to be a more sensitive property use as defined under O.Reg. 153/04 (as amended); therefore the filing of a Record of Site Condition (RSC) with the Ontario Ministry of Environment, Conservation and Parks (MECP) is not mandated under O.Reg. 153/04.

The Phase Two ESA was completed to satisfy the intent of the requirements, methodology and practices for a Phase One ESA as described in Ontario Regulation 153/04 (as amended). The objective of this Phase Two ESA is to confirm whether contaminants are present, and at what concentration are they present on the Phase Two Property, as related to the Areas of Potential Environmental Concern (APEC) identified in the Phase One ESA.

## 1.1 Site Description

The Phase Two Property is an irregular shaped 59.97-hectare (148.19 acres) parcel of land situated within a rural neighbourhood in the Town of Caledon, Ontario. The Phase Two Property is located approximately 390 m northwest of the intersection of Creditview Road and Mayfield Road and was occupied by agricultural fields at the time of this investigation. A Site Location Plan is provided in Figure 1.

For the purposes of this report, Creditview Road is assumed to be aligned in a southeast-northwest orientation, and Mayfield Road in a northeast-southwest orientation. A Plan of Survey for the Phase Two Property was not provided at this time.

The Property contains agricultural fields with no structures. A Site Plan depicting the Site is provided in Figure 2.

Additional details regarding the Phase Two Property are provided in the table below.

**Table 1-1: Phase Two Property Information**

| Criteria | Information | Source |
|---|---|---|
| Legal Description | PT LT 19 CON 3 WHS CHING PTS 1&2, 43R37043; S/T CH27915; T/W ROW OVER PT LT 19 CON 3 WHS DES PT 1 PL 43R-28656, AS IN PR573970; PT LT 18 CON 3 WHS CHING AS IN CH23379; SAVE AND EXCEPT PTS 1 TO 6 PL 43R-12497, PTS 1 TO 4 PL 43R17369, CH15879, CH30500; SUBJECT TO AN EASEMENT IN GROSS OVER PART LOT 18 CON 3 PARTS 1 AND 2 43R38092 AS IN PR331264; TOWN OF CALEDON | Land Registry Office |
| Property Identification Number (PIN) | 14252-0940 | Land Registry Office |
| Current Site Occupants | Farming Tenant | Client |
| Site Area | 59.97-hectare (148.19 acres) | Land Registry Office |

## 1.2 Property Ownership

The ownership details for the Phase Two Property are provided in the table below.

**Table 1-2: Phase Two Property Ownership**

| Property Owner | Address | Contact |
|---|---|---|
| 12101 Creditview Developments Ltd. | 5400 Yonge Street<br>Toronto, ON, M2N 5R5 | Maria Herrera<br>Phone: 416-227-9005 x333<br>Email: mariah@fieldgatedevelopments.com |

## 1.3 Current and Proposed Future Use

The Phase Two Property is currently occupied by agricultural fields which is considered to be Agricultural Property Use under O.Reg. 153/04 (as amended). It is DS's understanding that the Client intends to redevelop the Site for residential use.

## 1.4 Applicable Site Condition Standards

The applicable Site Condition Standards (SCS) for the Phase Two Property are considered by the Qualified Person (QP) to be the Table 8 SCS: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition for Residential/Parkland/Institutional Use as contained in the April 15, 2011 Ontario Ministry of Environment, Conservation and Parks (MECP) document entitled "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", herein referred to as the "Table 8 SCS".

The selection of the Table 8 SCS is considered appropriate based on the following rationale:

- The Town of Caledon relies on groundwater as a potable water source;
- The Site is not considered to be environmentally sensitive, as defined under O.Reg. 153/04 (as amended);
- The proposed future use of the Phase Two Property will be residential;
- The Site is located within 30 m of a water body as a creek traverses the west boundary and north corner of the Site;
- The pH of the soils analyzed during this Phase Two ESA are within the accepted range specified under O.Reg. 153/04 (as amended); and
- Bedrock was not encountered within 2 metres of the ground surface.

# 2.0 Background Information

## 2.1 Physical Setting

### 2.1.1 Water Bodies and Areas of Natural Significance

A creek traverses the west boundary of the Phase Two Property.

The Natural Heritage Areas database published by the Ministry of Natural Resources (MNR) was reviewed in order to identify the presence/absence of areas of natural significance including provincial parks, conservation reserves, areas of natural and scientific interest, wetlands, environmentally significant areas, habitats of threatened or endangered species, and wilderness areas. The regional and municipal Official Plans (Town of Caledon and Region of Peel Official Plans) were also reviewed as part of this assessment.

According to the NHIC records and review of these records, the Bobolink bird species is listed as threatened within 1km of the Phase One Property.

According to the MNRF, Bobolink is medium sized songbird commonly found in grasslands and hayfields. As the agricultural field at the Phase One Property is located within an agricultural area with small stands of trees, there is potential for viable habitat for these species.

If required, an environmental specialist could be retained to undertake a Site-specific ecological assessment, however at this time further assessment is not warranted.

### 2.1.2 Topography and Surface Water Draining Features

The Phase Two Property is located in a rural setting, at an elevation of 263 metres above sea level (masl) in the central portion of the Site, and 259 masl at the east and west boundaries

of the Site. The topography of the Phase Two Property is generally flat, with a slope to the southeast. The neighbouring property are generally at similar elevations, and the topography in the vicinity of the Phase Two Property generally slopes to the southeast. There are drainage features (e.g. ditches, swales, etc.) present on-Site. Surface water flow associated with precipitation events is anticipated to run overland and drain into the ditches along the roadways and to the creek traversing the west portion of the Site.

## 2.2 Past Investigations

### 2.2.1 Previous Report Summary

The following environmental and geotechnical reports were provided for DS to review:

- "*Phase One Environmental Site Assessment, 12101 Creditview Road, Caledon, Ontario"*, dated September 26, 2023, prepared for 12101 Creditview Developments Ltd., prepared by DS Consultants (DS 2023 Phase One ESA).

A summary of the details pertinent to this investigation is provided below.

DS 2023 Phase One ESA

The DS 2023 Phase One ESA report was completed in accordance with O.Reg 153/04 (as amended). The purpose of the Phase One ESA was to identify contaminating activities on or around the Phase One Property. The investigation included a compilation and review of records available, interviews, and site reconnaissance. The following information was noted by DS from the Phase One ESA:

- The Site is used for agricultural purposes and has been since the 1860s;
- Two (2) historical orchards on the central portion of the Site;
- The site may be subject to pesticide applications on the agricultural fields;
- The Site may be subject to de-icing activities on the adjacent roadways; and
- A creek traverses the west boundary of the Site.

The report recommended a Phase Two ESA be completed to investigate the PCA's identified.

# 3.0 Scope of the Investigation

The scope of the Phase Two ESA was designed to investigate the portions of the Site determined in the Phase One ESA to be Areas of Potential Environmental Concern. This Phase Two ESA was conducted in general accordance with O.Reg. 153/04 (as amended). The

scope of the investigation including the subsurface investigation, sampling, and laboratory analysis was based on the findings of the Phase One ESA and was limited to the portions of the Site which were accessible.

## 3.1 Overview of Site Investigation

The following tasks were completed as part of the Phase Two ESA:

- Preparation of a Health and Safety Plan to ensure that all work was executed safely;
- Clearance of public private underground utility services prior to commencement of subsurface investigative operations;
- Preparation of a Sampling and Analysis Plan (SAP);
- Retained a MECP licenced driller to advance a total of 13 boreholes on the Phase Two Property, to depths ranging between 6.2 to 8.2 mbgs. Five (5) of the boreholes were instrumented with groundwater monitoring wells upon completion. The soil lithology was logged during drilling, and representative soil samples were collected at regular intervals. The soil samples were screened for organic vapours using a RKI Eagle 2 MultiGas Detector, and examined for visual and olfactory indications of soil impacts;
- Submitted "worst case" soil samples collected from the boreholes for laboratory analysis of relevant contaminants of potential concern (COPCs) as identified in the Phase One ESA;
- Conducted groundwater level measurements in the monitoring wells in order to determine the groundwater elevation, and to establish the local groundwater flow direction;
- Surveyed all monitoring wells to a geodetic benchmark;
- Compared all soil analytical data to the applicable MECP SCS; and
- Prepared a Phase Two ESA Report in general accordance with O.Reg. 153/04 (as amended).

## 3.2 Media Investigated

### 3.2.1 Rationale for Inclusion or Exclusion of Media

**Table 3-1: Rationale of Sampling Media**

| Media | Included or Excluded | Rationale |
|---|---|---|
| Soil | Included | Soil was identified as a media of potential impact in the Phase One ESA, based on the historical operations conducted on-Site. |

| Media | Included or Excluded | Rationale |
|---|---|---|
| Groundwater | Excluded | Groundwater was not identified as a media of potential impact in the Phase One ESA at this time. |
| Sediment | Excluded | Sediment is not present on the Phase Two Property. |
| Surface Water | Excluded | Surface water is not present on the Phase Two Property. |

### 3.2.2 Overview of Field Investigation of Media

**Table 3-2: Field Investigation of Media**

| Media | Methodology of Investigation |
|---|---|
| Soil | A total of 13 boreholes were advanced on the Phase Two Property, to a maximum depth of 8.2 mbgs. Soil samples were collected and submitted for analysis of all relevant PCOCs. |

## 3.3 Phase One Conceptual Site Model

A Conceptual Site Model was developed for the Phase One Property, located at Part of Lots 18 & 19, Concession 3, Caledon, Ontario. The Phase One Conceptual Site Model is presented in Figures 2, 3, 4, and 5 and visually depict the following:

- Any existing buildings and structures
- Water bodies located in whole, or in part, on the Phase One Study Area
- Areas of natural significance located in whole, or in part, on the Phase One Study Area
- Water wells at the Phase One Property or within the Phase One Study Area
- Roads, including names, within the Phase One Study Area
- Uses of properties adjacent to the Phase One Property
- Areas where any PCAs have occurred, including location of any tanks
- Areas of Potential Environmental Concern

### 3.3.1 Potentially Contaminating Activity Affecting the Phase One Property

All PCAs identified within the Phase One Study Area are presented on Figure 4. The PCAs which are considered to contribute to APECs on, in or under the Phase One Property are summarized in the table below:

**Table 3-3: Summary of PCAs Contributing to APECs**

| PCA Item. | PCA Description (Per. Table 2, Schedule D of O.Reg. 153/04) | Description | Rationale |
|---|---|---|---|
| PCA-3 | #40 – Pesticides Manufacturing, Processing, Bulk Storage and Large-Scale Applications | The Peel County Atlas shows two (2) orchards on the central portion of the Site. | Yes – APEC-1 |

| PCA Item. | PCA Description (Per. Table 2, Schedule D of O.Reg. 153/04) | Description | Rationale |
|---|---|---|---|
| PCA-6 | #40 – Pesticides Manufacturing, Processing, Bulk Storage and Large-Scale Applications | Pesticides may be used on the agricultural fields on Site. | Yes – APEC-2 |
| PCA-5 | #N/S – Seasonal De-Icing Activities | The west portion of the adjacent roadway (Creditview Road) may be subject to de-icing activities. | Yes – APEC-3A |
| PCA-8 | #40 – Pesticides Manufacturing, Processing, Bulk Storage and Large-Scale Applications | The Peel County Atlas shows an orchard on the south corner of the Site. | Yes – APEC-4 |
| PCA-10 | #N/S – Seasonal De-Icing Activities | The southeast portion of the adjacent roadway (Creditview Road) may be subject to de-icing activities. | Yes – APEC-3B |
| PCA-11 | #N/S – Seasonal De-Icing Activities | The east adjacent roadway (Mayfield Road) may be subject to de-icing activities. | Yes – APEC-3C |

N/S - not specified in Table 2, Schedule D, of O.Reg. 153/04

### 3.3.2 Contaminants of Potential Concern

A summary of the contaminants of potential concern identified for each respective APEC is presented in the Phase One ESA. The following contaminants of potential concern were identified for the Phase One Property: metals, As, Sb, Se, CN-, pH, electrical conductivity, SAR, and OCPs.

### 3.3.3 Underground Utilities and Contaminant Distribution and Transport

Underground utilities can affect contaminant distribution and transport. Trenches excavated to install utility services, and the associated granular backfill may provide preferential pathways for horizontal contaminant migration in the shallow subsurface.

The Site has not been developed, therefore it is unlikely that utility corridors may act as preferential pathways for contaminant distribution and transport in the event that shallow subsurface contaminants exist at the Phase One Property.

### 3.3.4 Geological and Hydrogeological Information

The topography of the Phase One Property is generally rolling, with a surface elevation of 263 metres above sea level (masl) in the central portion of the Site, and 259 masl at the east and west boundaries of the Site. The topography within the Phase One Study Area generally slopes to the southeast. The groundwater flow direction within the Phase One Study Area is inferred to the south towards Fletcher's Creek, located approximately 130 m from the Site.

Based on a review of the MECP well records, the depth to groundwater is approximately 0.6 – 1.5 mbgs.

The Site is situated within a drumlinized till plains physiographic region. The surficial geology within the majority of the Phase One Property is described as "clay to silt-textured till derived from glaciolacustrine deposits or shale" and as "Fine-textured glaciolacustrine deposits consisting of silt and clay, minor sand and gravel Interbedded silt and clay and gritty, pebbly flow till and rainout deposit" along the water bodies intersecting across the Property. The bedrock is described as "Shale, limestone, dolostone, siltstone and Queenston Formation". Based on a review of "Bedrock Topography and Overburden Thickness Mapping, Southern Ontario, prepared by Ontario Geological Survey, published 2006," the bedrock in the vicinity of the Site is anticipated to be encountered at a depth of approximately 20 to 25 metres below ground surface (mbgs).

### 3.3.5 Uncertainty and Absence of Information

DS has relied upon information obtained from federal, provincial, municipal, and private databases, in addition to records and summaries provided by ERIS. All information obtained was reviewed and assessed for consistency, however the conclusions drawn by DS are subject to the nature and accuracy of the records reviewed.

All reasonable inquiries were made to obtain reasonably accessible information, as mandated by O.Reg.153/04 (as amended). All responses to database requests were received prior to completion of this report. This report reflects the best judgement of DS based on the information available at the time of the investigation.

Information used in this report was evaluated based on proximity to the Phase One Property, anticipated direction of local groundwater flow, and the potential environmental impact on the Phase One Property as a result of potentially contaminating activities.

The QP has determined that the uncertainty does not affect the validity of the Phase One ESA Conceptual Site Model or the conclusions of this report.

## 3.4 Deviations from Sampling and Analysis Plan

The Phase Two ESA was completed in accordance with the SAP.

## 3.5 Impediments

DS was granted complete access to the Phase Two Property throughout the course of the investigation. No impediments were encountered.

# 4.0 Investigation Method

## 4.1 General

The Phase Two ESA followed the methodology outlined in the following documents:

- Ontario Ministry of the Environment "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario" (December 1996);
- Ontario Ministry of the Environment "Guide for Completing Phase Two Environmental Site Assessments under Ontario regulation 153/04" (June 2011);
- Ontario Ministry of the Environment "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act" (July 2011) (Analytical Protocol);

The methods used in the Phase Two ESA investigation did not differ from the associated standard operating procedures.

## 4.2 Drilling and Excavating

A Site visit was conducted prior to drilling in order to identify the borehole locations based on the APECs identified in the Phase One ESA. The selected borehole locations are presented on Figure 5. The borehole locations were cleared of underground public and private utility services prior to commencement of drilling. A summary of the drilling activities is provided in the table below.

**Table 4-1: Summary of Drilling Activities**

| Parameter | Details |
|---|---|
| Drilling Contractor | Young Drilling |
| Drilling Dates | August 9 – 14, 2023 |
| Drilling Equipment Used | Track-mounted CME 55 |
| Measures taken to minimize the potential for cross contamination | ◆ Soil sampling was conducted using a 50 mm stainless steel split spoon sampler. The split spoon sampler was brushed clean of soil, washed in municipal water containing phosphate free detergent, rinsed in municipal water, and then rinsed with distilled water for each sampling interval in order to reduce the potential for cross contamination; |

| Parameter | Details |
|---|---|
| | ◆ Soil samples were extracted from the interior of the sampler rather than from areas in contact with the sampler sidewalls;<br>◆ Use of dedicated and disposable nitrile gloves for the handling of soil samples. A new set of gloves was used for each sample. |
| Sample collection frequency | Samples were collected at a frequency of every 0.6 m per 0.8 m from the ground surface to 3.1 mbgs, followed by one sample per 1.5 m to borehole termination depth. |

## 4.3 Soil Sampling

Soil samples were collected using solid stem augers and split spoon samplers. Discrete soil samples were collected from the split-spoon samplers by DS personnel using dedicated nitrile gloves.

A portion of each sample was placed in a resealable plastic bag for field screening, and the remaining portion was placed into laboratory supplied glass sampling jars. Samples intended for VOC and the F1 fraction of petroleum hydrocarbons analysis were collected using a laboratory-supplied soil core sampler, placed into the vials containing methanol for preservation purposes and sealed using Teflon lined septa lids. All sample jars were stored in dedicated coolers with ice for storage, pending transport to the analytical laboratory. A formal chain of custody was maintained for all samples submitted to the laboratory.

The subsurface soil conditions were logged by DS personnel at the time of drilling, and recorded on field borehole logs. The borehole logs are presented under Appendix C. Additional detail regarding the lithology encountered in the boreholes is presented under Section 6.1.

## 4.4 Field Screening Measurements

All retrieved soil samples were screened in the field for visual and olfactory observations. No obvious visual or olfactory evidence of potential contamination were noted. No aesthetic impacts (e.g. cinders, slag, hydrocarbon odours) were encountered during this investigation. The soil sample headspace vapour concentrations for all soil samples recovered during the investigation were screened using portable organic vapour testing equipment in accordance with the procedure outlined in the MECP's '*Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario'.*

The soil samples were inspected and examined to assess soil type, ground water conditions, and possible chemical contamination by visual and olfactory observations or by organic vapour screening. Samples submitted for chemical analysis were collected from locations judged by the assessor to be most likely to exhibit the highest concentrations of contaminants based on several factors including (i) visual or olfactory observations, (ii) sample location, depth, and soil type (iii) ground water conditions and headspace reading. A summary of the equipment used for field screening is provided below:

**Table 4-2: Field Screening Equipment**

| Parameter | Details |
|---|---|
| Make and Model of Field Screening Instrument | RKI Eagle 2, Model 5101-P2<br>Serial Number: E2G721 |
| Chemicals the equipment can detect and associated detection limits | VOCs with dynamic range of 0 parts per million (ppm) to 2,000 ppm PHCs with range of 0 to 50, 000 ppm |
| Precision of the measurements | 3 significant figures |
| Accuracy of the measurements | VOCs: ± 10% display reading + one digit<br>Hydrocarbons: ± 5% display reading + one digit |
| Calibration reference standards | PID: Isobutylene<br>CGD: Hexane |
| Procedures for checking calibration of equipment | In-field re-calibration of the CGI was conducted (using the gas standard in accordance with the operator's manual instructions) if the calibration check indicated that the calibration had drifted by more than +/- 10%. |

A summary of the soil headspace measurements are provided in the borehole logs, provided under Appendix C.

## 4.5 Groundwater Monitoring Well Installation

Monitoring wells were installed upon completion of five (5) the boreholes advanced on the Phase Two Property. The monitoring wells were constructed of 51-millimetre (2-inch) inner diameter (ID) flush-threaded schedule 40 polyvinyl chloride (PVC) risers, equipped with a 3.1 m length of No. 10 slot PVC screen. The well screens were sealed at the bottom using a threaded cap and at the top with a lockable J-plug.

Silica sand was placed around and up to 0.6m above the well screen to act as a filter pack. Bentonite was placed from the ground surface to the top of the sand pack. The wells were completed with protective aboveground monument casings.

Details regarding the monitoring well construction can be found in Table 1, and on the borehole logs provided in Appendix C.

Disposable nitrile gloves were used to minimize the potential for cross-contamination during well installation. Dedicated equipment was used for well development and sampling for further minimize the risk of cross contamination.

## 4.6 Groundwater Sampling

Groundwater sampling was not conducted as groundwater was not identified as a media of concern at the time of this investigation.

## 4.7 Sediment Sampling

No sediment as defined under O.Reg. 153/04 (as amended) was present on the Phase Two Property at the time of this investigation. Sediment sampling was not conducted as a result.

## 4.8 Analytical Testing

The soil and groundwater samples collected were submitted to Bureau Veritas (BV) under chain of custody protocols. BV is an independent laboratory accredited by the Canadian Association for Laboratory Accreditation. BV conducted the analyses in accordance with the MECP document "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act" dated March 9, 2004 (revised on July 1, 2011).

## 4.9 Residue Management Procedures

### 4.9.1 Soil Cuttings From Drilling and Excavations

The soil cuttings generated by the borehole drilling program were stored in 205 L drums, and left on-Site for disposal by a MECP approved waste-hauler for disposal at a MECP-approved waste management facility.

### 4.9.2 Fluids from Equipment Cleaning

Excess equipment cleaning fluids were stored in 20-L sealed plastic pails and temporarily stored on Site for disposal by a MECP approved waste-hauler for disposal at a MECP-approved waste management facility.

## 4.10 Elevation Surveying

The ground surface elevations of the boreholes/monitoring wells were surveyed using a Sokkia GCX-2 GNSS RTK receiver, based on global positioning systems satellites.

The ground surface elevations can be found on the borehole logs presented in Appendix C.

## 4.11 Quality Assurance and Quality Control Measures

### 4.11.1 Sample containers, preservation, labelling, handling and custody for samples submitted for laboratory analysis, including any deviations from the SAP

All soil and groundwater samples were stored in laboratory-supplied sample containers in accordance with the MECP Analytical Protocol. A summary of the preservatives supplied by the laboratory is provided in the table below.

**Table 4-3: Summary of Sample Bottle Preservatives**

| Media | Parameter | Sample Container |
|---|---|---|
| Soil | PHCs F1<br>VOCs | 40 mL methanol preserved glass vial with septum lid. |
| | PHCs F2-F4<br>metals and ORPs<br>PAHs | 120 mL or 250 mL unpreserved glass jar with Teflon™-lined lid. |

Groundwater samples were collected using dedicated equipment for each well. Groundwater samples collected for analysis of dissolved metals, mercury and hexavalent chromium were filtered in the field using a dedicated 0.45-micron in-line filter. Each sample container was labelled with a unique sample identification, the project number, and the sampling date. All samples were placed in an ice-filled cooler upon completion of sampling, and kept under refrigerated conditions until the time of delivery to the analytical laboratory. A formal chain of custody was maintained for all samples submitted to the laboratory.

### 4.11.2 Description of equipment cleaning procedures followed during all sampling

Dedicated, disposable nitrile gloves were used for each sampling event to reduce the potential for cross-contamination.

The split spoon sampler was brushed clean of soil, washed in municipal water containing phosphate free detergent, rinsed in municipal water, and then rinsed with distilled water for each sampling interval in order to reduce the potential for cross contamination.

Dedicated equipment was used for well development and sampling for further minimize the risk of cross contamination. Non-dedicated equipment (i.e. interface probe) was cleaned before initial use and between all measurement points with a solution of Alconox™ and distilled water. The Alconox™ solution was rinsed off using distilled water.

#### 4.11.3 Description of how the field quality control measures referred to in subsection 3 (3) were carried out

Field duplicate samples were collected at the time of sampling. In accordance with O.Reg. 153/04, one duplicate sample was analyzed per ten samples submitted for analysis. A laboratory prepared trip blank accompanied the groundwater samples during each sampling event and was submitted for laboratory analysis of VOCs.

All field screening devices (i.e. RKI Eagle 2) were calibrated prior to use by the supplier. Calibration checks were completed, and re-calibrations were conducted as required.

#### 4.11.4 Description of, and rational for, any deviations from the procedures set out in the quality assurance and quality control program set out in the SAP

There were no deviations from the QA/QC program described in the SAP.

# 5.0 Review and Evaluation

## 5.1 Geology

A summary of the subsurface conditions is presented below. Additional details may be found in the borehole logs appended in Appendix C. The boundaries of soil indicated on the borehole logs and described below are intended to reflect transition zones for the purpose of environmental assessment and should not be interpreted as exact planes of geological change.

A surficial layer of topsoil approximately 200 to 400 mm in thickness was encountered in all of the boreholes advanced. Reworked clayey silt material with trace amounts of organics and sand was encountered below the topsoil. The reworked material was generally heterogeneous and ranged in thickness from 0.5 to 1.9 metres. BH23-511 encountered silty sand below the reworked material with a thickness of 2.2 mbgs. The native overburden material encountered consisted of clayey silt till, with trace amounts of sand and gravel. The clayey silt till unit extended to a maximum depth of 6.7 mbgs and ranged in thickness from 2.3-5.9 m. Silty sand till was encountered below the clayey silt till in BH23-501, BH23-506 to BH23-513 to borehole termination at 6.7 to 8.2 mbgs.

## 5.2 Ground Water Elevations and Flow Direction

### 5.2.1 Rationale for Monitoring Well Location and Well Screen Intervals

A total of five (5) monitoring wells were installed on the Phase Two Property in order to assess the groundwater flow direction. The monitoring wells were screened to intersect the

first water bearing formation encountered. The monitoring wells were screened within the clayey silt till unit encountered at an approximate depth of 0.2 to 6.7 mbgs. This unit is inferred to be a semi-confined aquifer.

### 5.2.2 Results of Interface Probe Measurements

A summary of the groundwater level measurements is provided in Table 1. The groundwater level measurements were collected using a Solinst interface probe (model 122). The depth to groundwater was found to range between 0.70 to 1.80 mbgs on August 29, 2023. There was no indication of DNAPL or LNAPL in the monitoring wells at this time.

### 5.2.3 Product Thickness and Free Flowing Product

No evidence of product was observed in the monitoring wells at the time of the investigation.

### 5.2.4 Groundwater Elevation

The groundwater elevation was calculated by subtracting the depth to groundwater from the surface elevation determined by the surface elevation survey conducted as part of this investigation. A summary of the groundwater elevations calculated is presented in Table 1. Generally the groundwater elevation was found to range from 255.49 to 261.78 masl on August 29, 2023 in the upper aquifer investigated.

### 5.2.5 Groundwater Flow Direction

The groundwater flow direction was interpreted using the groundwater elevations calculated for the monitoring wells installed on the Phase Two Property. Based on the groundwater elevations calculated, the groundwater flow direction is interpreted to be southeasterly towards Fletcher's Creek. The groundwater elevation contours and flow direction are presented on Figure 6.

### 5.2.6 Assessment of Potential for Temporal Variability in Groundwater Flow Direction

The shallow aquifer investigated is inferred to be an unconfined aquifer, based on the soil stratigraphy observed in the boreholes advanced on the Phase Two Property. It is possible that temporal variations in groundwater elevations may occur on the Phase Two Property in response to seasonal weather patterns.

Temporal variability in groundwater level has the ability to influence the groundwater flow direction. The degree of variation in groundwater levels on the Phase Two Property can only be confirmed with long-term monitoring.

### 5.2.7 Evaluation of Potential Interaction Between Buried Utilities and the Water Table

The Phase Two Property is currently undeveloped, no buried services are present.

## 5.3 Ground Water Hydraulic Gradients

### 5.3.1 Horizontal Hydraulic Gradient

The horizontal hydraulic gradient was calculated based on the groundwater levels recorded on August 29. 2023.

**Table 5-1: Summary of Horizontal Hydraulic Gradient Calculations**

| Hydrogeological Unit | Calculated Horizontal Hydraulic Gradient |
|---|---|
| Overburden – clayey silt till | Minimum: 0.00582<br>Average: 0.00064<br>Maximum: 0.00847 |

### 5.3.2 Vertical Hydraulic Gradient

The vertical hydraulic gradient was not calculated, as no groundwater impacts were identified on the Phase Two Property.

## 5.4 Fine-Medium Soil Texture

Not Applicable – the MECP Table 8 SCS applies to medium-fine and coarse textured soils.

## 5.5 Soil Field Screening

Soil vapour headspace readings were collected at the time of sample collection, the results of which are presented on the borehole logs (Appendix C). The soil vapour headspace readings were collected using a PID and CGD in methane elimination mode. The PID readings ranged between 0 and 1 ppm. The CGD readings ranged between 0 and 60 ppm.

The soil samples were also screened for visual and olfactory indicators of impacts (e.g. staining, odours). No visual or olfactory impacts were observed.

## 5.6 Soil Quality

The results of the chemical analyses conducted are presented in Tables 4 and 5. A visual summary of the location of the sample locations is provided in Figures 7A and 7B. The laboratory certificates of analysis have been provided under Appendix D.

### 5.6.1 Metals and ORPs

A total of 10 samples, including one (1) field duplicate for QA/QC purposes were submitted for analysis of metals. An additional two (2) samples were submitted for pH. The results of the analyses are tabulated in Table 4, and presented on Figure 7A. The results of the chemical analyses conducted indicated that all samples analyzed met the MECP Table 8 SCS.

### 5.6.2 Organochlorinated Pesticides

A total of 10 samples, including one (1) field duplicate for QA/QC purposes were submitted for analysis of OCPs. The results of the analyses are tabulated in Table 5, and presented on Figure 7B. The results of the chemical analyses conducted indicated that all samples analyzed met the MECP Table 8 SCS.

### 5.6.3 Commentary on Soil Quality

The soil samples were found to satisfy the applicable site condition standards.

## 5.7 Ground Water Quality

Groundwater was not identified as a media of concern at the time of this investigation.

## 5.8 Sediment Quality

No sediment was present on the Phase Two Property at the time of the investigation.

## 5.9 Quality Assurance and Quality Control Results

Collection of soil and groundwater samples was conducted in general accordance with the MECP *Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario*. As described in Section 5.12, dedicated equipment was used where possible, and all non-dedicated equipment was decontaminated before and between sampling events. All soil and groundwater samples were transferred directly into laboratory-supplied containers. The laboratory containers were prepared by the laboratory with suitable preservative, as required. All samples were stored and transported under refrigerated conditions. Chain of custody protocols were maintained from the time of sampling to delivery to the analytical laboratory.

The field QA/QC program involved the collection of field duplicate soil and groundwater samples, and the use of a trip blank for each groundwater sampling event (when suitable). In addition to the controls listed above, the analytical laboratory employed method blanks, internal laboratory duplicates, surrogate spike samples, matrix spike samples, and standard reference materials.

A summary of the field duplicate samples analyzed and an interpretation of the efficacy of the QA/QC program is provided in the table below.

**Table 5-2: Summary of QA/QC Results**

| Sample ID | QA/QC duplicate | Medium | Parameter Analyzed | QA/QC Result |
|---|---|---|---|---|
| DUP-1 | S5 | Soil | Metals, OCPs | All results were within the analytical protocol criteria for RPD. |

Based on the interpretation of the laboratory results and the QA/QC program, it is the opinion of the QP that the laboratory analytical data can be relied upon.

All samples were handled in accordance with the MECP Analytical Protocol regarding sample holding time, preservation methods, storage requirements, and type of container.

BV routinely conducts internal QA/QC analyses in order to satisfy regulatory QA/QC requirements. The results of the BV QA/QC analyses for the submitted soil samples are summarized in the laboratory Certificates of Analyses provided in Appendix D.

The following comments were provided by BV on the laboratory Certificates of Analysis. Commentary on the comments has been provided below:

- Laboratory Certificate C3P2467 – The matrix spike for lead exceeded acceptance limits for the metals analysis. Sample inhomogeneity is suspected. The overall QA/QC analysis met acceptable laboratory criteria. As such, DS does not consider this to be an issue of significant concern and it has no impact on the overall interpretation of the analytical data;
- Laboratory Certificate C3P2467 – The recovery or RPD for lead is outside of control limits. BV noted that the overall QA/QC analysis met acceptable laboratory criteria. As such, DS does not consider this to be an issue of significant concern and it has no impact on the overall interpretation of the analytical data;
- Laboratory Certificate C3P2467 – Aroclor 1254 was detected in the method blank at a level marginally above the detection limit. BV noted that this may represent a high bias in some results, however this has no impact on results that were non-detect. The overall QA/QC analysis met acceptable laboratory criteria. As such, DS does not consider this to be an issue of significant concern and it has no impact on the overall interpretation of the analytical data;
- Laboratory Certificate C3P2467 – The recovery for DDT was above the upper control limit. BV noted that this may represent a high bias in some results, however this has

no impact on results that were non-detect. The overall QA/QC analysis met acceptable laboratory criteria. As such, DS does not consider this to be an issue of significant concern and it has no impact on the overall interpretation of the analytical data;

With respect to subsection 47(3) of O.Reg 153/04 (as amended), all certificates of analysis or analytical reports pursuant to clause 47(2) (b) of the regulation comply with subsection 47(3). A certificate of analysis has been received for each sample submitted for analysis and have been provided (in full) in Appendix D.

A review of the QA/QC sample results indicated that no issues were identified with respect to both the field collection methodology and the laboratory reporting. It is the opinion of the QP that the analytical data obtained are representative of the soil and groundwater conditions at the Phase Two Property for the purpose of assessing whether the soil and groundwater at the Phase Property meets the applicable MECP SCS.

### 5.10 Phase Two Conceptual Site Model

The Phase Two Conceptual Site Model is presented under Appendix E.

## 6.0 Conclusions

This Phase Two ESA involved that advancement of 13 boreholes, the installation of five (5) monitoring wells on the Phase Two Property, and the collection of soil samples for analysis of the potential contaminants of concern, including: Metals, As, Sb, Se, CN-, pH and OCPs.

Based on the results of the information gathered through the course of the investigation, DS presents the following conclusions:

- A surficial layer of topsoil approximately 200 to 400 mm in thickness was encountered in all of the boreholes advanced. Reworked clayey silt material with trace amounts of organics and sand was encountered below the topsoil. The reworked material was generally heterogeneous and ranged in thickness from 0.5 to 1.9 metres. BH23-511 encountered silty sand below the reworked material with a thickness of 2.2 mbgs. The native overburden material encountered consisted of clayey silt till, with trace amounts of sand and gravel. The clayey silt till unit extended to a maximum depth of 6.7 mbgs and ranged in thickness from 2.3-5.9 m. Silty sand till was encountered below the clayey silt till in BH23-501, BH23-506 to BH23-513 to borehole termination at 6.7 to 8.2 mbgs. The wells were screened in the clayey silt till unit encountered.

- The groundwater flow direction was interpreted to be southeasterly towards Fletchers Creek.
- All soil samples analyzed met the MECP Table 8 Site Condition Standards.
- All monitoring wells should be decommissioned in accordance with O.Reg. 903 when no longer required.

It is the opinion of the $QP_{ESA}$ that the applicable SCS for the soil and groundwater at the Phase Two Property have been met as of the Certification Date of August 30, 2023. No further sub-surface investigation is recommended at this time regarding the environmental quality of the soil and groundwater at the Phase Two Property.

## 6.1 Qualifications of the Assessors

**Megan Bender, B.E.S, EPt**

Ms. Bender is an Environmental Specialist with DS Consultants Ltd. Megan holds a Bachelor's degree in Environmental Studies, specializing in environmental assessments, a minor in geography from the University of Waterloo and a Post Graduate Certificate in Environmental Engineering Applications from Conestoga College. Megan is registered as an Environmental Professional in training (EPt) with ECO Canada. Megan has been involved with Phase One and Phase Two Environmental Site Assessments, data interpretation and reporting, and geotechnical projects.

**Efuange Khumbah, M.Sc., P.Eng, $QP_{ESA}$**

Efuange is a Senior Project Manager, providing environmental services at DS Consultants Ltd. He is the line of communication between clients, customers, and businesses to get projects done. With over 12 years working for the public and private sectors, Efuange has experience serving clients in constructional, financial institutions, insurance companies, legal firms, manufacturing industries, oil/gas/petrochemical as well as municipal, provincial and federal agencies. In Canada he has managed projects in British Columbia, Alberta, Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island, and Newfound land. His area of expertise includes, environmental site assessment, soil and groundwater remediation, litigation support, excess soil management, senior review of environmental reports, and air quality monitoring. Reports prepared by Efuange have been published by the Town of Newmarket, City of Mississauga, and the Ontario Ministry of Environment Conservation and Parks. Efuange hold a M.Sc. degree in Environmental Science and Resource management.

**Mr. Patrick (Rick) Fioravanti, B.Sc., P.Geo., $QP_{ESA}$**

Mr. Patrick (Rick) Fioravanti is an Environmental Geoscientist specializing in Environmental Site Assessments, Brownfields Remediation Projects and Excess Soil Management. He holds an Honours Bachelor of Science with distinction in Toxicology from the University of Guelph and is a practicing member of the Association of Professional Geoscientists of Ontario (APGO). Rick is the Manager of Environmental Services with DS, responsible for the supervision and management of Phase One and Two Environmental Site Assessments, assessment of soil/fill management for import/export of soils, soil vapour and indoor air quality assessments, and remediation.

Rick has over ten years of environmental consulting experience and has conducted and/or managed hundreds of projects in his professional experience. Rick has extensive experience conducting Phase One and Phase Two Environmental Site Assessments in support of brownfields redevelopment in urban settings, and been involved in numerous remediation and risk assessments projects. Rick specializes in utilizing emerging technologies such as high-resolution site characterization and contaminant forensics to help Clients achieve their development objectives. Rick is a Qualified Person (QP) to conduct Environmental Site Assessments as defined by Ontario Regulation 153/04 (as amended) and Ontario Regulation 406/19 and has successfully filed numerous Records of Site Condition with the Ministry of Environment, Conservation and Parks.

## 6.2 Signatures

This Phase Two ESA was conducted under the supervision of Patrick Fioravanti, B.Sc., P.Geo., $QP_{ESA}$, in accordance with the requirements of O.Reg. 153/04 (as amended). The findings and conclusions presented have been determined based on the information obtained at the time of the investigation, and on an assessment of the conditions of the Site at this time.

We trust this report meets with your requirements. Should you have any questions regarding the information presented, please do not hesitate to contact our office.

Yours truly,

**DS Consultants Ltd**

Prepared By:

Megan Bender, B.E.S., EPt
Environmental Specialist

Reviewed By:

Efuange Khumbah, M.Sc., P.Eng., $QP_{ESA}$
Senior Project Manager-Environmental Services

Patrick Fioravanti, B.Sc., P.Geo., $QP_{ESA}$
Manager – Environmental Services

## 6.3 Limitations

This report was prepared for the sole use of 12101 Creditview Developments Ltd. and is intended to provide an assessment of the environmental condition on the property located at Part of Lots 18 & 19, Concession 3, Caledon, Ontario. The information presented in this report is based on information collected during the completion of the Phase Two Environmental Site Assessment by DS Consultants Ltd. The material in this report reflects DS' judgment in light of the information available at the time of report preparation. This report may not be relied upon by any other person or entity without the written authorization of DS Consultants Ltd. The scope of services performed in the execution of this investigation may not be appropriate to satisfy the needs of other users, and any use or reuse of this documents or findings, conclusions and recommendations represented herein, is at the sole risk of said users.

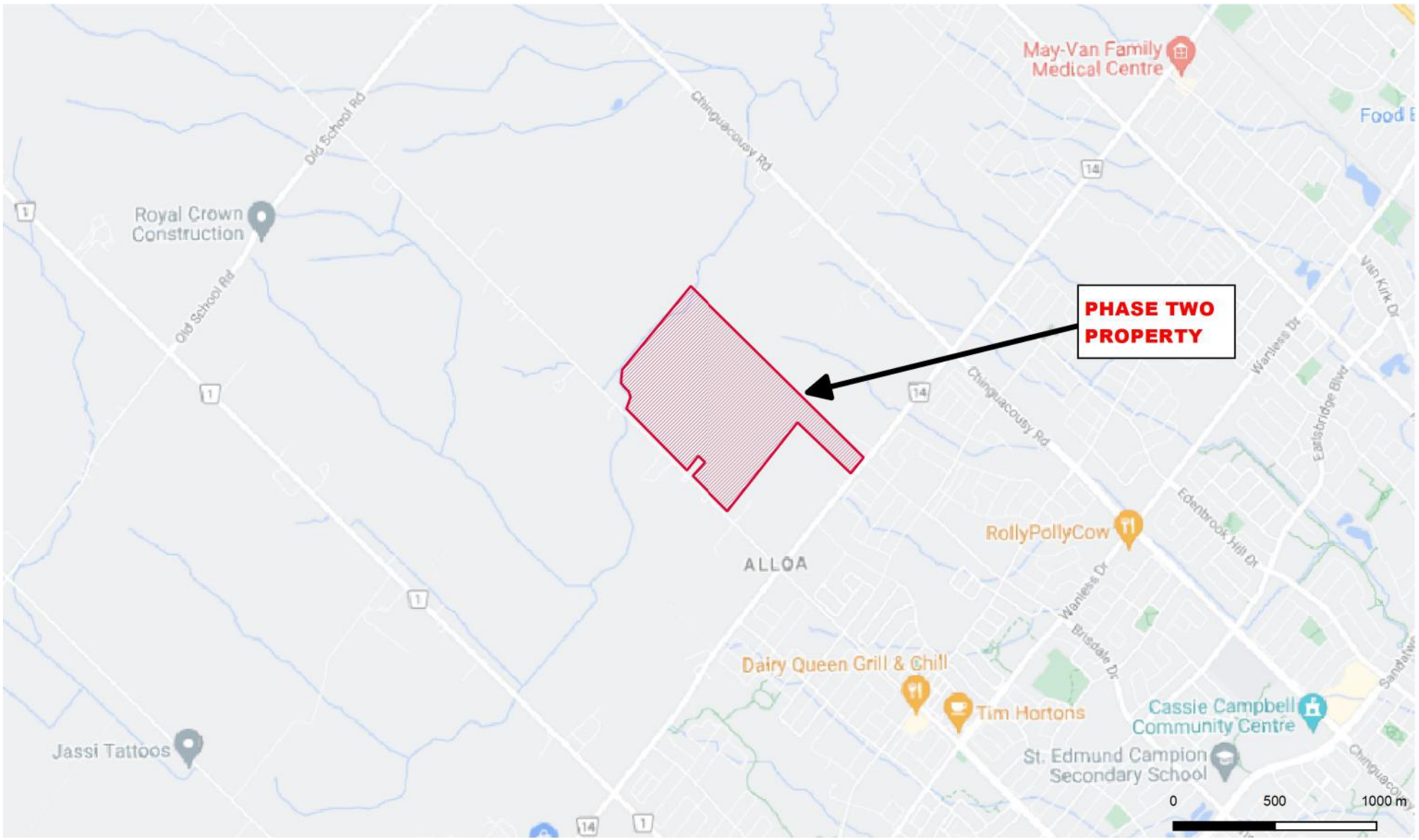
The conclusions drawn from the Phase Two ESA were based on information at selected observation and sampling locations. Conditions between and beyond these locations may become apparent during future investigations or on-Site work, which could not be detected or anticipated at the time of this investigation. The sampling locations were chosen based upon a cursory historical search, visual observations and limited information provided by persons knowledgeable about past and current activities on this Site during the Phase Two ESA activities. As such, DS Consultants Ltd. cannot be held responsible for environmental conditions at the Site that was not apparent from the available information.

# 7.0 References


- Armstrong, D.K. and Dodge, J.E.P. *Paleozoic Geology Map of Southern Ontario*. Ontario Geological Survey, Miscellaneous Release--Data 219.
- Chapman, L.J. and Putnam, D.F. 2007. *The Physiography of Southern Ontario*. Ontario Geological Survey, Miscellaneous Release--Data 228.
- Freeze, R. Allen and Cherry, John A., 1979. *Ground water*. Page 29.
- Ontario Ministry of the Environment, December 1996. *Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario.*
- Ontario Ministry of Environment, 15 April 2011. *Soil, Ground Water and Sediment Standards for use under part XV.1of the Environmental Protection Act.*
- Ontario Ministry of the Environment, June 2011. *Guide for Completing Phase Two Environmental Site Assessments under Ontario regulation 153/04.*
- Ontario Ministry of the Environment, July 2011. *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.*
- The Ontario Geological Survey. 2003. *Surficial Geology of Southern Ontario*.
- "*Phase One Environmental Site Assessment, 12101 Creditview Road, Caledon, Ontario"*, dated September 26, 2023, prepared for 12101 Creditview Developments Ltd., prepared by DS Consultants (DS 2023 Phase One ESA).

# Figures

J:\-GIS\2023 PROJECTS\23-267-100 - 12101 Creditview Road, Caledon, ON\1-QGIS\Phase Two\Figure 1 - Site Location Plan.qgs Sep-08 09:03




Legend

Property Boundary


DS CONSULTANTS LTD.
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Vaughan, Ontario L4H 0K8
Telephone: (905) 264-9393
www.dsconsultants.ca


Project: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
Part of Lots 18 & 19 Concession 3, Caledon, Ontario

Title: **SITE LOCATION PLAN**

N

Client: 12101 CREDITVIEW DEVELOPMENTS LTD.

| Size: | Approved By: | Drawn By: | Date: |
|---|---|---|---|
| 8.5 x 11 | R.F | P.P | September 2023 |
| Rev: 0 | Scale: As Shown | Project No.: 23-267-100 | Figure No.: 1 |

Image/Map Source: *Google Streetmap Image*

J:\-GIS\2023 PROJECTS\23-267-100 - 12101 Creditview Road, Caledon, ON\1-QGIS\Phase Two\Figure 2 - Phase One Property Site Plan.qgs Sep-08 09:05


Legend

Property Boundary

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Title: **PHASE ONE PROPERTY SITE PLAN**

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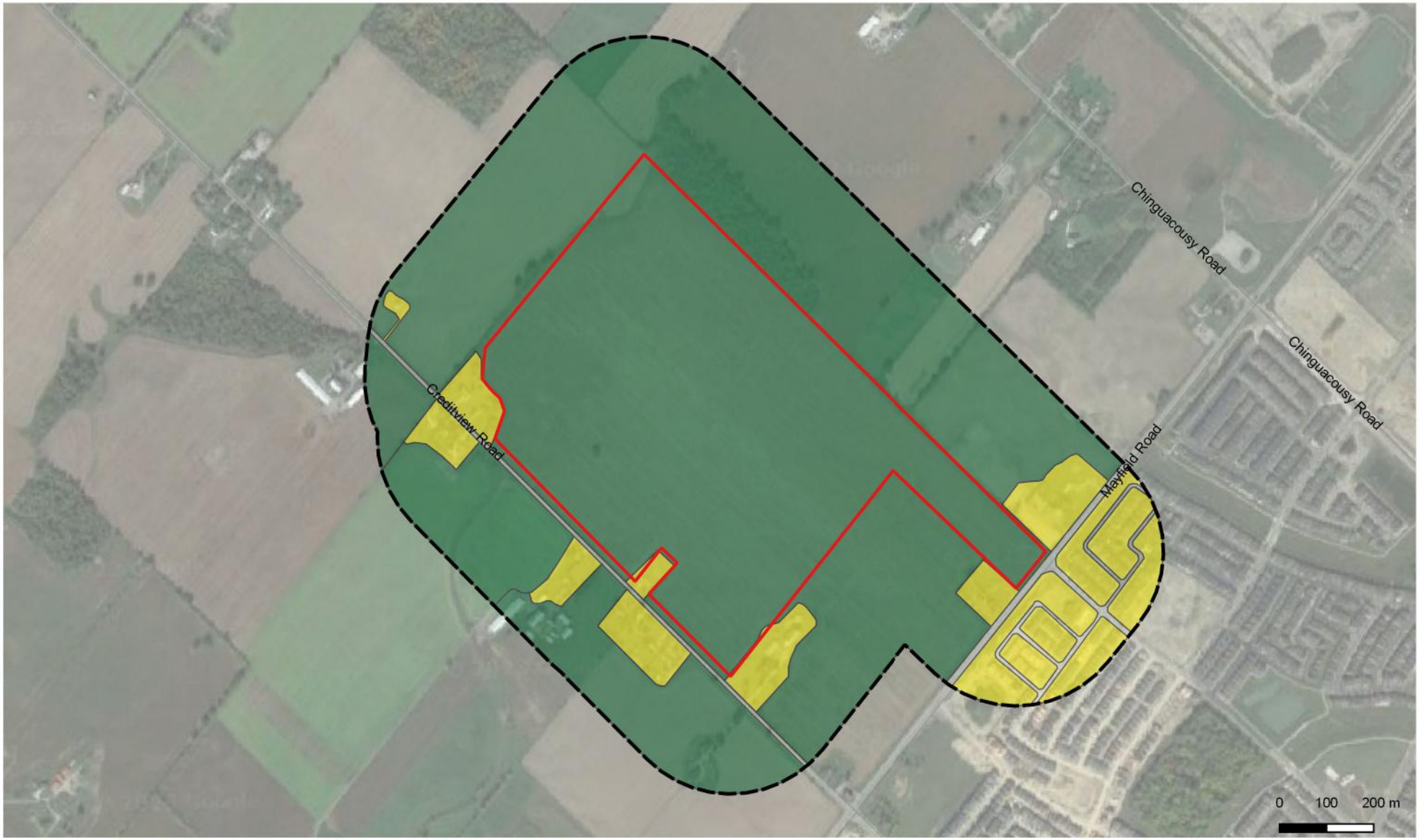
| Size: | Approved By: | Drawn By: | Date: |
|---|---|---|---|
| 8.5 x 11 | R.F | P.P | September 2023 |
| Rev: 0 | Scale: As Shown | Project No.: 23-267-100 | Figure No.: 2 |

Image/Map Source: *Google Satellite Image*

J:\-GIS\2023 PROJECTS\23-267-100 - 12101 Creditview Road, Caledon, ON\1-QGIS\Phase Two\Figure 3 - Phase One Study Area.qgs Sep-08 09:06




Legend

- Property Boundary
- 250m Buffer
- Agricultural Use
- Residential Use

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Title: **PHASE ONE STUDY AREA**

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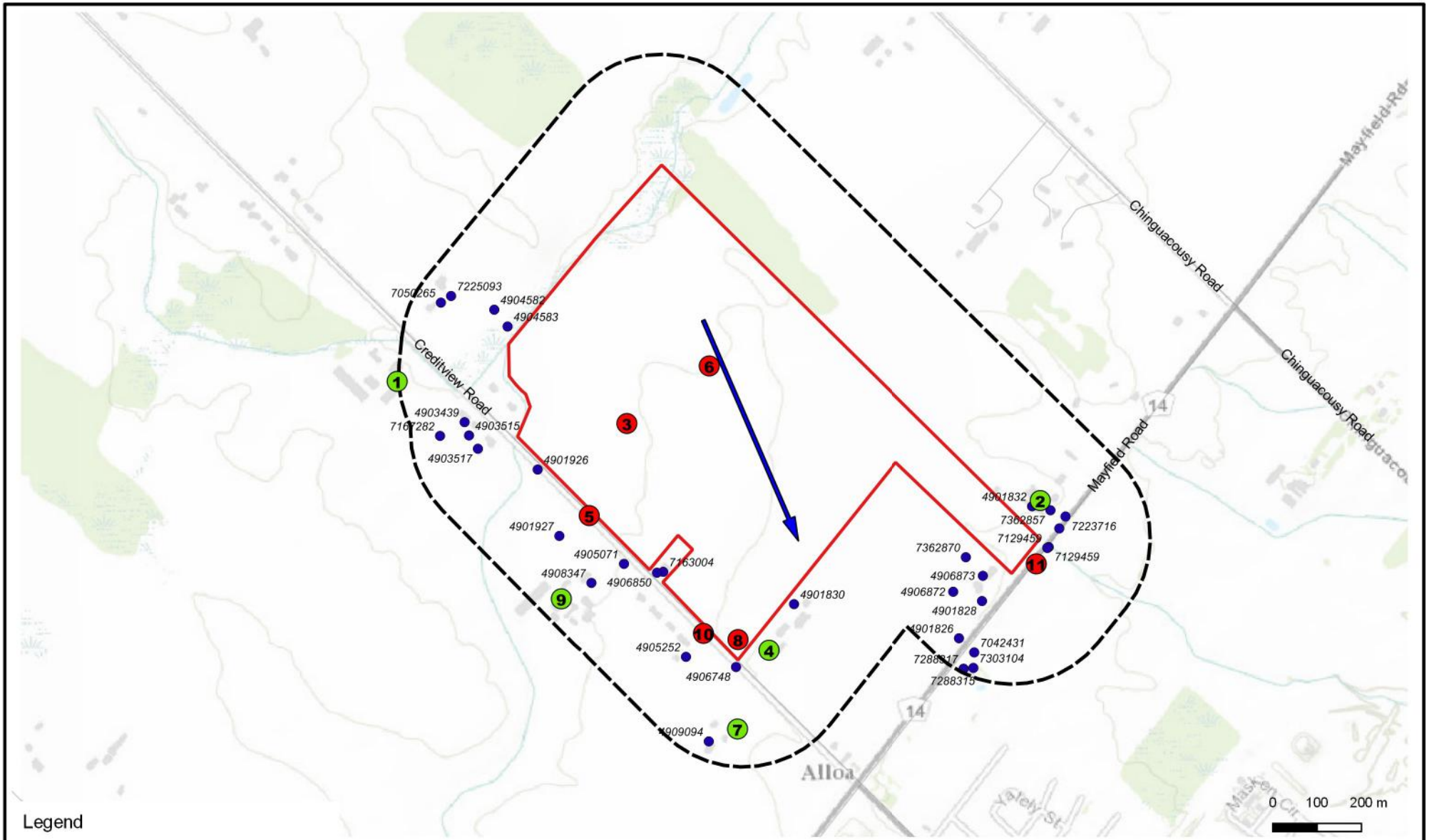
|---|---|---|---|
| 8.5 x 11 | R.F | P.P | September 2023 |
| Rev: 0 | Scale: As Shown | Project No.: 23-267-100 | Figure No.: 3 |

Image/Map Source: *Google Satellite Image*

J:\-GIS\2023 PROJECTS\23-267-100 - 12101 Creditview Road, Caledon, ON\1-QGIS\Phase Two\Figure 4 - PCAs within Phase One Study Area.qgs Sep-26 08:42




Legend

- Property Boundary
- 250m Buffer
- PCA not contributing to APEC
- PCA contributing to APEC
- Registered Water Well (MECP WWR)
- Groundwater Flow Direction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Part of Lots 18 & 19 Concession 3, Caledon, Ontario

Title: **PCAs WITHIN PHASE ONE STUDY AREA**

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Client: 12101 CREDITVIEW DEVELOPMENTS LTD.

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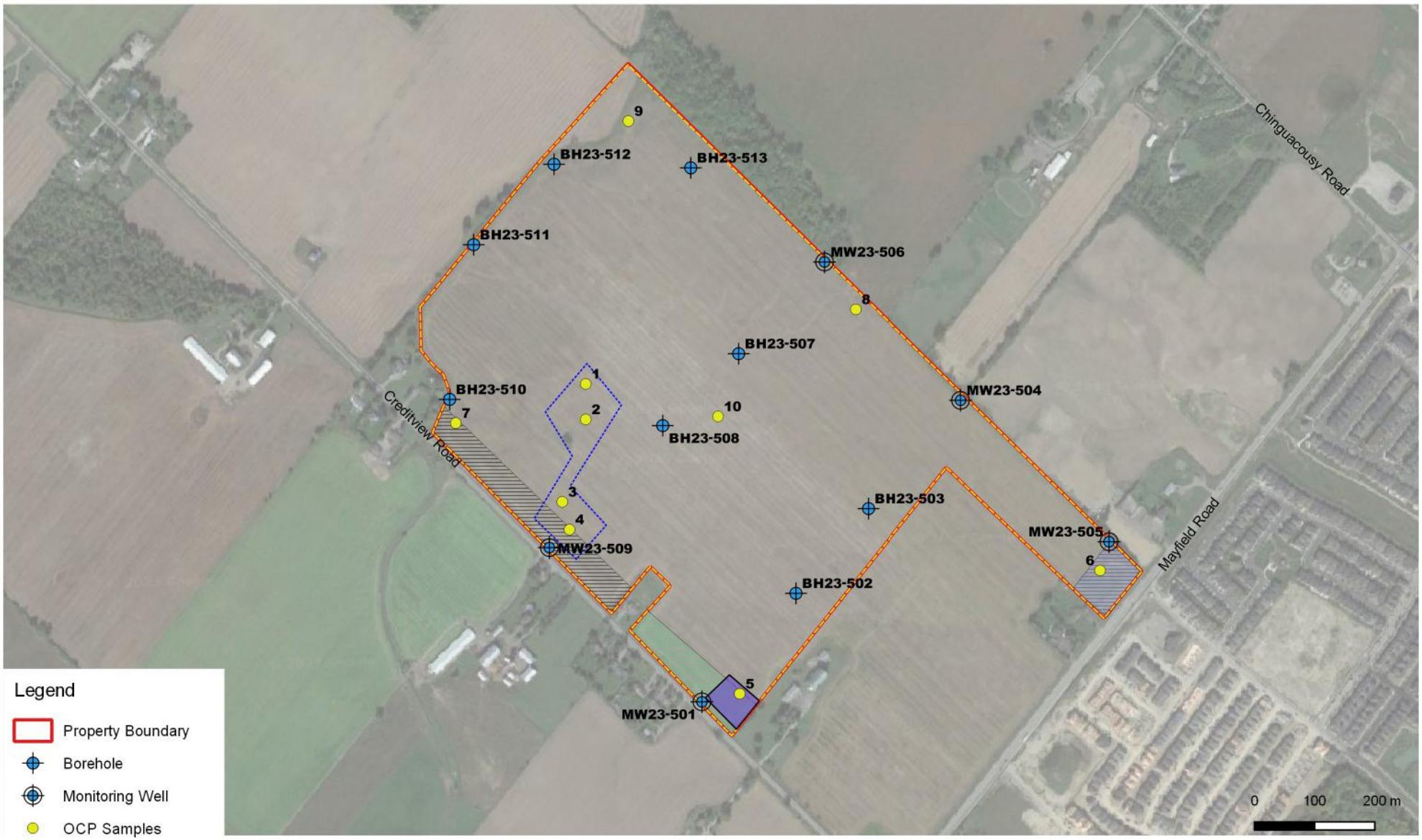
|---|---|---|---|
| 8.5 x 11 | R.F | P.P | September 2023 |
| Rev: 0 | Scale: As Shown | Project No.: 23-267-100 | Figure No.: 4 |

Image/Map Source: *Esri Topo Image*

J:\-GIS\2023 PROJECTS\23-267-100 - 12101 Creditview Road, Caledon, ON\1-QGIS\Phase Two\Figure 5 - Borehole-Monitoring Well Location Plan with APECs.qgs Sep-26 08:44




Legend

- Property Boundary
- Borehole
- Monitoring Well
- OCP Samples
- APEC-1 (orchards)
- APEC-2
- APEC-3A (west)
- APEC-3B (southwest)
- APEC-3C (southeast)
- APEC-4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Project: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
Part of Lots 18 & 19 Concession 3, Caledon, Ontario

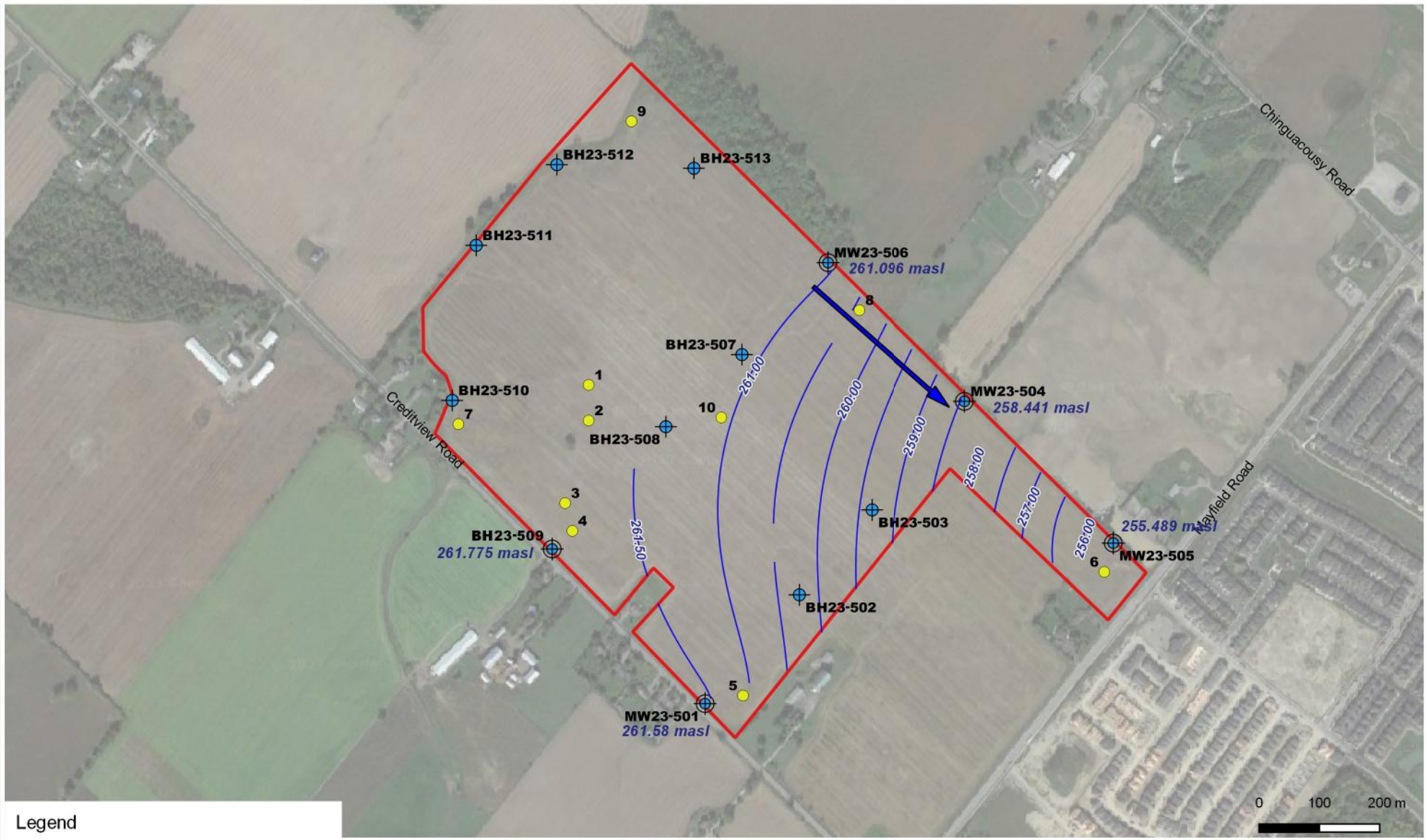
Title: **BOREHOLE/MONITORING WELL LOCATION PLAN WITH APECs**

N

| Size: | Approved By: | Drawn By: | Date: |
|---|---|---|---|
| 8.5 x 11 | R.F | P.P | September 2023 |
| Rev: 0 | Scale: As Shown | Project No.: 23-267-100 | Figure No.: 5 |

Image/Map Source: *Google Satellite Image*

J:\-GIS\2023 PROJECTS\23-267-100 - 12101 Creditview Road, Caledon, ON\1-QGIS\Phase Two\Figure 6 - Groundwater Elevation Contours and Flow Direction.qgs Sep-26 08:45




Legend

- Property Boundary
- Borehole
- Monitoring Well
- OCP Samples
- Groundwater Elevation Contours
- Interpreted Groundwater Flow Direction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Part of Lots 18 & 19 Concession 3, Caledon, Ontario

Title: **GROUNDWATER ELEVATION CONTOURS AND FLOW DIRECTION**

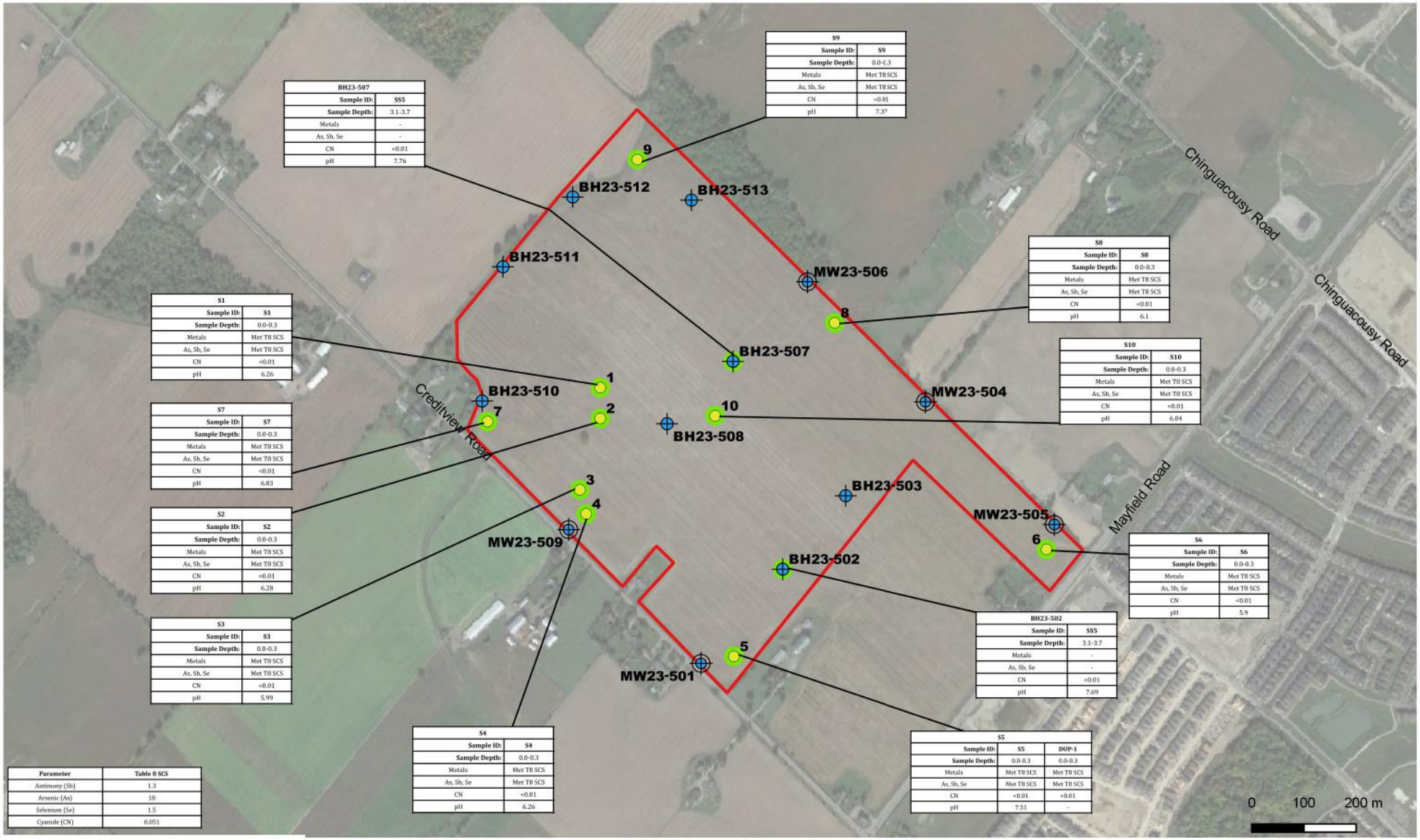
N

Client: 12101 CREDITVIEW DEVELOPMENTS LTD.

| Size: | Approved By: | Drawn By: | Date: |
|---|---|---|---|
| 8.5 x 11 | R.F | P.P | September 2023 |
| Rev: 0 | Scale: As Shown | Project No.: 23-267-100 | Figure No.: 6 |

Image/Map Source: *Google Satellite Image*

J:\-GIS\2023 PROJECTS\23-267-100 - 12101 Creditview Road, Caledon, ON\1-QGIS\Phase Two\Figure 7A - Soil Characterization - Metals and ORPs.qgs Oct-19 11:58




Legend

- Property Boundary
- Borehole
- Monitoring Well
- OCP Samples
- Sample Met Applicable Standards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Part of Lots 18 & 19 Concession 3, Caledon, Ontario

Title: **SOIL CHARACTERIZATION - METALS AND ORPs**

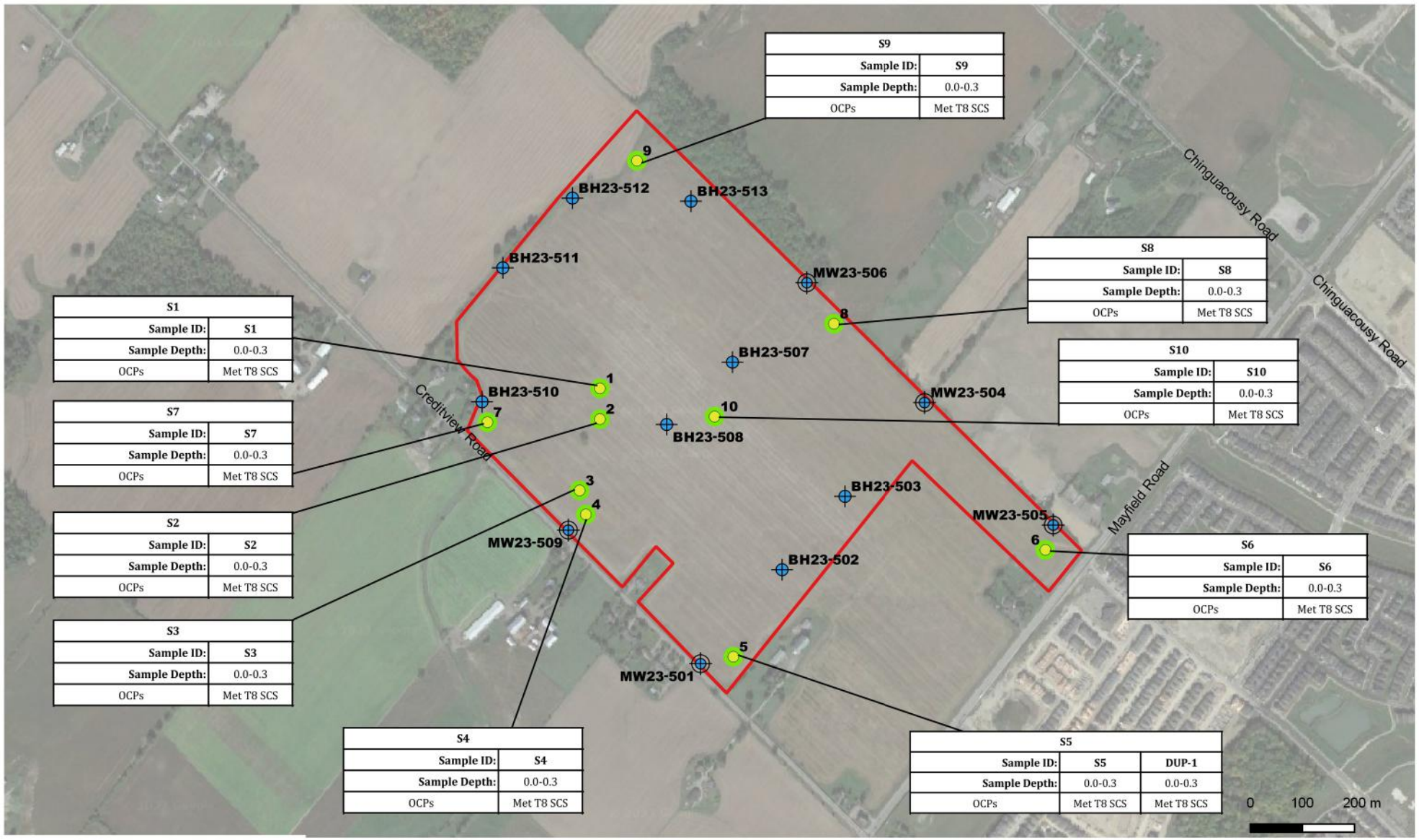
N

Client: 12101 CREDITVIEW DEVELOPMENTS LTD.

| Size: | Approved By: | Drawn By: | Date: |
|---|---|---|---|
| 8.5 x 11 | R.F | P.P | October 2023 |
| Rev: 0 | Scale: As Shown | Project No.: 23-267-100 | Figure No.: **7A** |

Image/Map Source: *Google Satellite Image*

J:\-GIS\2023 PROJECTS\23-267-100 - 12101 Creditview Road, Caledon, ON\1-QGIS\Phase Two\Figure 7B - Soil Characterization - OCPs.qgs Sep-26 08:48




| S9 | |
|---|---|
| Sample ID: | S9 |
| Sample Depth: | 0.0-0.3 |
| OCPs | Met T8 SCS |

| S8 | |
|---|---|
| Sample ID: | S8 |
| Sample Depth: | 0.0-0.3 |
| OCPs | Met T8 SCS |

| S10 | |
|---|---|
| Sample ID: | S10 |
| Sample Depth: | 0.0-0.3 |
| OCPs | Met T8 SCS |

| S1 | |
|---|---|
| Sample ID: | S1 |
| Sample Depth: | 0.0-0.3 |
| OCPs | Met T8 SCS |

| S7 | |
|---|---|
| Sample ID: | S7 |
| Sample Depth: | 0.0-0.3 |
| OCPs | Met T8 SCS |

| S2 | |
|---|---|
| Sample ID: | S2 |
| Sample Depth: | 0.0-0.3 |
| OCPs | Met T8 SCS |

| S3 | |
|---|---|
| Sample ID: | S3 |
| Sample Depth: | 0.0-0.3 |
| OCPs | Met T8 SCS |

| S6 | |
|---|---|
| Sample ID: | S6 |
| Sample Depth: | 0.0-0.3 |
| OCPs | Met T8 SCS |

| S4 | |
|---|---|
| Sample ID: | S4 |
| Sample Depth: | 0.0-0.3 |
| OCPs | Met T8 SCS |

| S5 | | |
|---|---|---|
| Sample ID: | S5 | DUP-1 |
| Sample Depth: | 0.0-0.3 | 0.0-0.3 |
| OCPs | Met T8 SCS | Met T8 SCS |

Legend

- Property Boundary
- Borehole
- Monitoring Well
- OCP Samples
- Sample Met Applicable Standards


DS CONSULTANTS LTD.
6221 Highway 7, UNIT 16
Vaughan, Ontario L4H 0K8
Telephone: (905) 264-9393
www.dsconsultants.ca


Project: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
Part of Lots 18 & 19 Concession 3, Caledon, Ontario

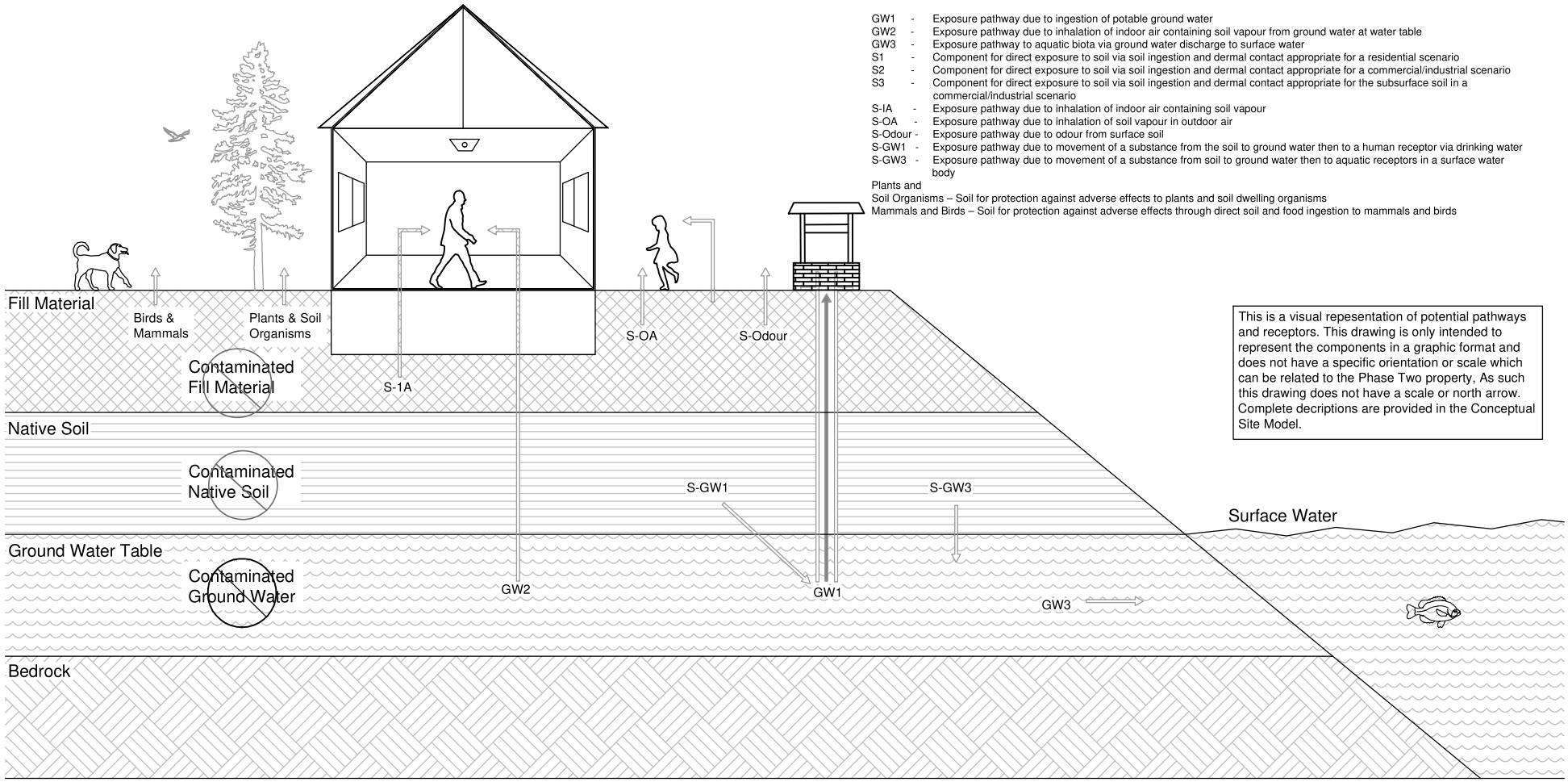
Title: **SOIL CHARACTERIZATION - OCPs**

N

Client: 12101 CREDITVIEW DEVELOPMENTS LTD.

| Size: | Approved By: | Drawn By: | Date: |
|---|---|---|---|
| 8.5 x 11 | R.F | P.P | September 2023 |
| Rev: 0 | Scale: As Shown | Project No.: 23-267-100 | Figure No.: **7B** |

Image/Map Source: *Google Satellite Image*




Not Identified

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Telephone: (905) 264-9393
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Project: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
12101 Creditview Road, Caledon, ON

Title: **CONTAMINANT TRANSPORT DIAGRAM**

| Client: | Size: | Approved By: | Drawn By: | Date: |
|---|---|---|---|---|
| 12101 Creditview Developments Ltd. | 8.5 x 11 | R.F | M.B | September 2023 |
| | Rev. | Scale: N.T.S | Project No: 23-267-100 | Figure No. 8 |

# Tables

**Table 1: Summary of Monitoring Well Installation and Groundwater Data**

| Well ID | | | BH/MW23-501 | BH/MW23-504 | BH/MW23-505 | BH/MW23-506 | BH/MW23-509 |
|---|---|---|---|---|---|---|---|
| Installed By: | | | DS | DS | DS | DS | DS |
| Installation Date: | | | 11-Aug-23 | 10-Aug-23 | 10-Aug-23 | 10-Aug-23 | 11-Aug-23 |
| Well Status: | | | Active | Active | Active | Active | Active |
| EastUTM17 | | | 591782.141 | 592213.156 | 592459.861 | 591985.985 | 591528.513 |
| NorthUTM17 | | | 4840022.555 | 4840523.816 | 4840288.718 | 4840753.781 | 4840278.95 |
| Inner Diameter | | (mm) | 50 | 50 | 50 | 50 | 50 |
| Surface Elevation | | (masl) | 263.21 | 259.81 | 257.29 | 262.34 | 262.48 |
| Bottom of Concrete Seal/Top of Bentonite Seal | | mbgs | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 |
| | | masl | 262.91 | 259.51 | 256.99 | 262.04 | 262.18 |
| Bottom of Bentonite Seal/Top of Sand Pack | | mbgs | 2.50 | 2.50 | 2.50 | 0.91 | 2.50 |
| | | masl | 260.71 | 257.31 | 254.79 | 261.43 | 259.98 |
| Top of Well Screen | | mbgs | 3.10 | 3.10 | 3.10 | 1.55 | 3.10 |
| | | masl | 260.11 | 256.71 | 254.19 | 260.79 | 259.38 |
| Well Screen Length | | m | 3.00 | 3.00 | 3.00 | 1.50 | 3.00 |
| Bottom of Well Screen | | mbgs | 6.10 | 6.10 | 6.10 | 3.05 | 6.10 |
| | | masl | 257.11 | 253.71 | 251.19 | 259.29 | 256.38 |
| **GW Monitoring** | | | | | | | |
| 18-Aug-23 | Depth to GW | mbgs | 1.35 | NM | NM | 0.79 | 0.67 |
| | GW Elevation | masl | 261.86 | | | 261.55 | 261.81 |
| 29-Aug-23 | Depth to GW | mbgs | 1.63 | 1.37 | 1.80 | 1.24 | 0.70 |
| | GW Elevation | masl | 261.58 | 258.44 | 255.49 | 261.10 | 261.78 |

For Table Notes see **Notes for Soil and Groundwater Summary Tables,** included at the end of this Section.

**Table 2: Summary of Soil Samples Submitted for Chemical Analysis**

| Borehole ID | Sample No. | Sample Depth (mbgs) | Soil Description | Parameter Analyzed | APEC Investigated |
|---|---|---|---|---|---|
| BH23-502 | SS5 | 3.1-3.7 | Clayey Silt Till | pH | APEC-2 |
| BH23-507 | SS5 | 3.1-3.7 | Clayey Silt Till | pH | |
| S1 | S1 | 0.0-0.3 | Topsoil | Metals, OCPs | APEC-1, APEC-2 |
| S2 | S2 | 0.0-0.3 | Topsoil | Metals, OCPs | |
| S3 | S3 | 0.0-0.3 | Topsoil | Metals, OCPs | |
| S4 | S4 | 0.0-0.3 | Topsoil | Metals, OCPs | |
| S5 | S5 | 0.0-0.3 | Topsoil | Metals, OCPs | APEC-2, APEC-4 |
| | DUP-1 | | | | APEC-2 |
| S6 | S6 | 0.0-0.3 | Topsoil | Metals, OCPs | |
| S7 | S7 | 0.0-0.3 | Topsoil | Metals, OCPs | |
| S8 | S8 | 0.0-0.3 | Topsoil | Metals, OCPs | |
| S9 | S9 | 0.0-0.3 | Topsoil | Metals, OCPs | |
| S10 | S10 | 0.0-0.3 | Topsoil | Metals, OCPs | |

For Table Notes see **Notes for Soil and Groundwater Summary Tables,** included at the end of this Section.

**Table 3: Summary of APECs Investigated**

| APEC | Description | PCOCs | Media | Boreholes Within APEC | Samples Analysed | Parameter Analyzed |
|---|---|---|---|---|---|---|
| APEC-1 | The 1880 County Atlas indicated two (2) historical orchards on the central portion of the Site. | Metals, As, Sb, Se, CN-, OCPs | Soil | S1 | S1 | Metals, OCPs |
| | | | | S2 | S2 | Metals, OCPs |
| | | | | S3 | S3 | Metals, OCPs |
| | | | | S4 | S4 | Metals, OCPs |
| APEC-2 | Pesticides may be used on the agricultural fields across the entire Site. | Metals, As, Sb, Se, CN-, OCPs | Soil | BH23-502 | SS5 | pH |
| | | | | BH23-507 | SS5 | pH |
| | | | | S1 | S1 | Metals, OCPs |
| | | | | S2 | S2 | Metals, OCPs |
| | | | | S3 | S3 | Metals, OCPs |
| | | | | S4 | S4 | Metals, OCPs |
| | | | | S5 | S5 | Metals, OCPs |
| | | | | | DUP-1 | |
| | | | | S6 | S6 | Metals, OCPs |
| | | | | S7 | S7 | Metals, OCPs |
| | | | | S8 | S8 | Metals, OCPs |
| | | | | S9 | S9 | Metals, OCPs |
| | | | | S10 | S10 | Metals, OCPs |
| APEC-4 | The 1880 County Atlas indicated a historical orchard on the south corner of the Site. | Metals, As, Sb, Se, CN-, OCPs | Soil | S5 | S5 | Metals, OCPs |
| | | | | | DUP-1 | |

For Table Notes see **Notes for Soil and Groundwater Summary Tables,** included at the end of this Section

**Table 4: Summary of Metals and ORPs in Soil**

| Parameter | MECP Table 8 SCS | BH23-502 SS5 | BH23-507 SS5 | S1 | S2 | S3 | S4 | S5 |
|---|---|---|---|---|---|---|---|---|
| Date of Collection | | 11-Aug-23 | 11-Aug-23 | 18-Aug-23 | 18-Aug-23 | 18-Aug-23 | 18-Aug-23 | 18-Aug-23 |
| Date Reported | | 23-Aug-23 | 23-Aug-23 | 30-Aug-23 | 30-Aug-23 | 30-Aug-23 | 30-Aug-23 | 30-Aug-23 |
| Sampling Depth (mbgs) | | 3.1-3.7 | 3.1-3.7 | 0.0-0.3 | 0.0-0.3 | 0.0-0.3 | 0.0-0.3 | 0.0-0.3 |
| Analytical Report Reference No. | | C3P0415 | C3P0415 | C3P2467 | C3P2467 | C3P2467 | C3P2467 | C3P2467 |
| Antimony | 1.3 | - | - | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Arsenic | 18 | - | - | 3.5 | 4.1 | 4.4 | 4.2 | 3.5 |
| Barium | 220 | - | - | 73 | 84 | 100 | 97 | 65 |
| Beryllium | 2.5 | - | - | 0.76 | 0.8 | 0.99 | 0.91 | 0.67 |
| Boron | 36 | - | - | <5.0 | <5.0 | 5.6 | 5.1 | 5.1 |
| Boron (Hot Water Soluble) | 1.5 | - | - | - | - | - | - | - |
| Cadmium | 1.2 | - | - | 0.24 | 0.21 | 0.28 | 0.18 | 0.2 |
| Chromium | 70 | - | - | 22 | 23 | 29 | 27 | 21 |
| Chromium VI | 0.66 | - | - | - | - | - | - | - |
| Cobalt | 22 | - | - | 11 | 12 | 14 | 13 | 8.8 |
| Copper | 92 | - | - | 17 | 17 | 19 | 17 | 19 |
| Cyanide | 0.051 | - | - | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Lead | 120 | - | - | 14 | 16 | 17 | 17 | 16 |
| Mercury | 0.27 | - | - | - | - | - | - | - |
| Molybdenum | 2 | - | - | <0.50 | <0.50 | 0.63 | <0.50 | <0.50 |
| Nickel | 82 | - | - | 19 | 21 | 24 | 23 | 18 |
| Selenium | 1.5 | - | - | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| Silver | 0.5 | - | - | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Thallium | 1 | - | - | 0.12 | 0.14 | 0.17 | 0.16 | 0.13 |
| Uranium | 2.5 | - | - | 0.75 | 0.78 | 1 | 0.83 | 0.57 |
| Vanadium | 86 | - | - | 32 | 35 | 43 | 39 | 29 |
| Zinc | 290 | - | - | 79 | 74 | 84 | 71 | 81 |
| Electrical Conductivity (2:1) | 0.7 | - | - | - | - | - | - | - |
| Sodium Adsorption Ratio | 5 | - | - | - | - | - | - | - |
| pH, 2:1 CaCl2 Extraction | NV | 7.69 | 7.76 | 6.26 | 6.28 | 5.99 | 6.26 | 7.51 |

For Table Notes see **Notes for Soil and Groundwater Summary Tables,** included at the end of this Section

**Table 4: Summary of Metals and ORPs in Soil**

| Parameter | MECP Table 8 SCS | DUP-1 (S5) | S6 | S7 | S8 | S9 | S10 |
|---|---|---|---|---|---|---|---|
| Date of Collection | | 18-Aug-23 | 18-Aug-23 | 18-Aug-23 | 18-Aug-23 | 18-Aug-23 | 18-Aug-23 |
| Date Reported | | 30-Aug-23 | 30-Aug-23 | 30-Aug-23 | 30-Aug-23 | 30-Aug-23 | 30-Aug-23 |
| Sampling Depth (mbgs) | | 0.0-0.3 | 0.0-0.3 | 0.0-0.3 | 0.0-0.3 | 0.0-0.3 | 0.0-0.3 |
| Analytical Report Reference No. | | C3P2467 | C3P2467 | C3P2467 | C3P2467 | C3P2467 | C3P2467 |
| Antimony | 1.3 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Arsenic | 18 | 3.6 | 3.4 | 3.4 | 3.9 | 4.7 | 3.5 |
| Barium | 220 | 68 | 59 | 96 | 68 | 78 | 63 |
| Beryllium | 2.5 | 0.7 | 0.6 | 0.77 | 0.66 | 0.67 | 0.64 |
| Boron | 36 | 5 | <5.0 | 7 | <5.0 | 5.5 | <5.0 |
| Boron (Hot Water Soluble) | 1.5 | - | - | - | - | - | - |
| Cadmium | 1.2 | 0.22 | 0.21 | 0.33 | 0.2 | 0.27 | 0.16 |
| Chromium | 70 | 22 | 17 | 23 | 21 | 20 | 21 |
| Chromium VI | 0.66 | - | - | - | - | - | - |
| Cobalt | 22 | 9.1 | 8.9 | 9.4 | 8.7 | 9.1 | 8.9 |
| Copper | 92 | 20 | 12 | 27 | 14 | 20 | 12 |
| Cyanide | 0.051 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Lead | 120 | 16 | 15 | 17 | 16 | 13 | 14 |
| Mercury | 0.27 | - | - | - | - | - | - |
| Molybdenum | 2 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | 0.51 |
| Nickel | 82 | 19 | 14 | 22 | 17 | 18 | 16 |
| Selenium | 1.5 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| Silver | 0.5 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Thallium | 1 | 0.13 | 0.11 | 0.14 | 0.13 | 0.12 | 0.13 |
| Uranium | 2.5 | 0.57 | 0.72 | 1.5 | 0.73 | 0.75 | 0.73 |
| Vanadium | 86 | 30 | 27 | 32 | 32 | 29 | 32 |
| Zinc | 290 | 83 | 62 | 92 | 68 | 79 | 60 |
| Electrical Conductivity (2:1) | 0.7 | - | - | - | - | - | - |
| Sodium Adsorption Ratio | 5 | - | - | - | - | - | - |
| pH, 2:1 CaCl2 Extraction | NV | - | 5.9 | 6.83 | 6.1 | 7.37 | 6.04 |

For Table Notes see **Notes for Soil and Groundwate**

**Table 5: Summary of OCPs in Soil**

| Parameter | MECP Table 8 SCS | S1 | S2 | S3 | S4 | S5 | DUP-1 (S5) | S6 | S7 |
|---|---|---|---|---|---|---|---|---|---|
| Date of Collection | | 18-Aug-23 | 18-Aug-23 | 18-Aug-23 | 18-Aug-23 | 18-Aug-23 | 18-Aug-23 | 18-Aug-23 | 18-Aug-23 |
| Date Reported | | 30-Aug-23 | 30-Aug-23 | 30-Aug-23 | 30-Aug-23 | 30-Aug-23 | 30-Aug-23 | 30-Aug-23 | 30-Aug-23 |
| Screen Interval (mbgs) | | 0.0-0.3 | 0.0-0.3 | 0.0-0.3 | 0.0-0.3 | 0.0-0.3 | 0.0-0.3 | 0.0-0.3 | 0.0-0.3 |
| Analytical Report Reference No. | | C3P2467 | C3P2467 | C3P2467 | C3P2467 | C3P2467 | C3P2467 | C3P2467 | C3P2467 |
| Aldrin | 0.05 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 |
| Chlordane | 0.05 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 |
| DDD | 0.05 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 |
| DDE | 0.05 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 |
| DDT | 1.4 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 |
| Dieldrin | 0.05 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 |
| Endosulfan | 0.04 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 |
| Endrin | 0.04 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 |
| Hexachlorocyclohexane Gamma- | 0.01 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 |
| Heptachlor | 0.05 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 |
| Heptachlor Epoxide | 0.05 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 |
| Hexachlorobenzene | 0.02 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 |
| Hexachlorobutadiene | 0.01 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 |
| Hexachloroethane | 0.01 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 |
| Methoxychlor | 0.05 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |
| PCBs | 0.3 | <0.015 | <0.015 | <0.015 | <0.015 | <0.015 | <0.015 | <0.015 | <0.015 |

For Table Notes see **Notes for Soil and Groundwater Summary Tables,** included at the end of this Section.

**Table 5: Summary of OCPs in Soil**

| Parameter | MECP Table 8 SCS | S8 | S9 | S10 |
|---|---|---|---|---|
| **Date of Collection** | | 18-Aug-23 | 18-Aug-23 | 18-Aug-23 |
| **Date Reported** | | 30-Aug-23 | 30-Aug-23 | 30-Aug-23 |
| **Screen Interval (mbgs)** | | 0.0-0.3 | 0.0-0.3 | 0.0-0.3 |
| **Analytical Report Reference No.** | | C3P2467 | C3P2467 | C3P2467 |
| Aldrin | 0.05 | <0.0020 | <0.0020 | <0.0020 |
| Chlordane | 0.05 | <0.0020 | <0.0020 | <0.0020 |
| DDD | 0.05 | <0.0020 | <0.0020 | <0.0020 |
| DDE | 0.05 | <0.0020 | <0.0020 | <0.0020 |
| DDT | 1.4 | <0.0020 | <0.0020 | <0.0020 |
| Dieldrin | 0.05 | <0.0020 | <0.0020 | <0.0020 |
| Endosulfan | 0.04 | <0.0020 | <0.0020 | <0.0020 |
| Endrin | 0.04 | <0.0020 | <0.0020 | <0.0020 |
| Hexachlorocyclohexane Gamma- | 0.01 | <0.0020 | <0.0020 | <0.0020 |
| Heptachlor | 0.05 | <0.0020 | <0.0020 | <0.0020 |
| Heptachlor Epoxide | 0.05 | <0.0020 | <0.0020 | <0.0020 |
| Hexachlorobenzene | 0.02 | <0.0020 | <0.0020 | <0.0020 |
| Hexachlorobutadiene | 0.01 | <0.0020 | <0.0020 | <0.0020 |
| Hexachloroethane | 0.01 | <0.0020 | <0.0020 | <0.0020 |
| Methoxychlor | 0.05 | <0.0050 | <0.0050 | <0.0050 |
| PCBs | 0.3 | <0.015 | <0.015 | <0.015 |

For Table Notes see **Notes for Soil and Groundwat**

**Table 6: Summary of Maximum Concentrations in Soil**

| | Parameter | Standard | Maximum Concentration | Location |
|---|---|---|---|---|
| Metals and ORPs | Antimony | 1.3 | - | All Samples |
| | Arsenic | 18 | 4.7 | S9 |
| | Barium | 220 | 100 | S3 |
| | Beryllium | 2.5 | 0.99 | S3 |
| | Boron | 36 | 7 | S7 |
| | Boron (Hot Water Soluble) | 1.5 | - | All Samples |
| | Cadmium | 1.2 | 0.33 | S7 |
| | Chromium | 70 | 29 | S3 |
| | Chromium VI | 0.66 | - | All Samples |
| | Cobalt | 22 | 14 | S3 |
| | Copper | 92 | 27 | S7 |
| | Cyanide | 0.051 | - | All Samples |
| | Lead | 120 | 17 | S3 |
| | Mercury | 0.27 | - | All Samples |
| | Molybdenum | 2 | 0.63 | S3 |
| | Nickel | 82 | 24 | S3 |
| | Selenium | 1.5 | - | All Samples |
| | Silver | 0.5 | - | All Samples |
| | Thallium | 1 | 0.17 | S3 |
| | Uranium | 2.5 | 1.5 | S7 |
| | Vanadium | 86 | 43 | S3 |
| | Zinc | 290 | 92 | S7 |
| | Electrical Conductivity (2:1) | 0.7 | - | All Samples |
| | Sodium Adsorption Ratio | 5 | - | All Samples |
| | pH, 2:1 CaCl2 Extraction | NV | 7.76 | BH23-507 SS5 |
| OCPs | Aldrin | 0.05 | <0.0020 | All Samples |
| | Chlordane | 0.05 | <0.0020 | All Samples |
| | DDD | 0.05 | <0.0020 | All Samples |
| | DDE | 0.05 | <0.0020 | All Samples |
| | DDT | 1.4 | <0.0020 | All Samples |
| | Dieldrin | 0.05 | <0.0020 | All Samples |
| | Endosulfan | 0.04 | <0.0020 | All Samples |
| | Endrin | 0.04 | <0.0020 | All Samples |
| | Hexachlorocyclohexane Gamma- | 0.01 | <0.0020 | All Samples |
| | Heptachlor | 0.05 | <0.0020 | All Samples |
| | Heptachlor Epoxide | 0.05 | <0.0020 | All Samples |
| | Hexachlorobenzene | 0.02 | <0.0020 | All Samples |
| | Hexachlorobutadiene | 0.01 | <0.0020 | All Samples |
| | Hexachloroethane | 0.01 | <0.0020 | All Samples |
| | Methoxychlor | 0.05 | <0.0050 | All Samples |
| | PCBs | 0.3 | <0.015 | All Samples |

For Table Notes see **Notes for Soil and Groundwater Summary Tables,** included at the end of this Section.

**Notes for Soil and Groundwater Summary Tables**

| | |
|---|---|
| | For soil and groundwater analytical results, concentration exceeds the applicable Standards. |
| | For soil and groundwater analytical results, laboratory detection limits exceed the applicable Standards. |
| BTEX | Benzene, Toluene, Ethylbenzene, Xylene |
| masl | Meters above sea level |
| **MECP Table 8 SCS** | Generic Condition Standards in a Potable Groundwater Condition for Use within 30 m of a Water Body as contained in Table 8 of the "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", published by the MECP on April 15, 2011. |
| mbgs | Meters below ground surface |
| NM | Not Monitored |
| NA | Not Available |
| OCPs | Organochlorine Pesticides |
| ORPs | Other Regulated Parameters |
| **Units** | Units for all soil analyses are in µg/g (ppm) unless otherwise indicated |

# Appendix A

**A Survey Plan was not provided during the investigation.**

PROPERTY DESCRIPTION: PT LT 19 CON 3 WHS CHING PTS 1 & 2, 43R37043; S/T CH27915; T/W ROW OVER PT LT 19 CON 3 WHS DES PT 1 PL 43R-28656, AS IN PR573970; PT LT 18 CON 3 WHS CHING AS IN CH23379; SAVE AND EXCEPT PTS 1 TO 6 PL 43R-12497, PTS 1 TO4 PL 43R-17369, CH15879, CH30500; SUBJECT TO AN EASEMENT IN GROSS OVER PART LOT 18 CON 3 PARTS 1 AND 2 43R38092 AS IN PR3331264; TOWN OF CALEDON

PROPERTY REMARKS:

ESTATE/QUALIFIER:
FEE SIMPLE
LT CONVERSION QUALIFIED

RECENTLY:
DIVISION FROM 14252-0938

PIN CREATION DATE:
2005/11/10

OWNERS' NAMES
12101 CREDITVIEW DEVELOPMENTS LIMITED

CAPACITY SHARE

| REG. NUM. | DATE | INSTRUMENT TYPE | AMOUNT | PARTIES FROM | PARTIES TO | CERT/ CHKD |
|---|---|---|---|---|---|---|
| ** PRINTOUT INCLUDES ALL DOCUMENT TYPES (DELETED INSTRUMENTS NOT INCLUDED) ** | | | | | | |
| **SUBJECT, ON FIRST REGISTRATION UNDER THE LAND TITLES ACT, TO: | | | | | | |
| ** SUBSECTION 44(1) OF THE LAND TITLES ACT, EXCEPT PARAGRAPH 11, PARAGRAPH 14, PROVINCIAL SUCCESSION DUTIES * | | | | | | |
| ** AND ESCHEATS OR FORFEITURE TO THE CROWN. | | | | | | |
| ** THE RIGHTS OF ANY PERSON WHO WOULD, BUT FOR THE LAND TITLES ACT, BE ENTITLED TO THE LAND OR ANY PART OF | | | | | | |
| ** IT THROUGH LENGTH OF ADVERSE POSSESSION, PRESCRIPTION, MISDESCRIPTION OR BOUNDARIES SETTLED BY | | | | | | |
| ** CONVENTION. | | | | | | |
| ** ANY LEASE TO WHICH THE SUBSECTION 70(2) OF THE REGISTRY ACT APPLIES. | | | | | | |
| **DATE OF CONVERSION TO LAND TITLES: 1999/03/26 ** | | | | | | |
| CH27915 | 1960/08/30 | TRANSFER EASEMENT | | | THE BELL TELEPHONE COMPANY OF CANADA | C |
| 43R28656 | 2003/11/04 | PLAN REFERENCE | | | | C |
| 43R37043 | 2016/03/08 | PLAN REFERENCE | | | | C |
| PR2926536 | 2016/06/07 | TRANS PARTNERSHIP | $22,168,500 | DOLSON, MARY JEAN<br>DOLSON, STEPHEN JAMES<br>DOLSON, THOMAS EDWARD<br>FRADOL FAMILY FARM GP.<br>FRADOL FARMS LIMITED | 2278339 ONTARIO INC. | C |
| REMARKS: PLANNING ACT STATEMENTS. | | | | | | |
| 43R38092 | 2018/03/07 | PLAN REFERENCE | | | | C |
| PR3331264 | 2018/06/04 | TRANSFER EASEMENT | $2 | 2278339 ONTARIO INC. | THE REGIONAL MUNICIPALITY OF PEEL | C |

| REG. NUM. | DATE | INSTRUMENT TYPE | AMOUNT | PARTIES FROM | PARTIES TO | CERT/ CHKD |
|---|---|---|---|---|---|---|
| PR3331265 | 2018/06/04 | POSTPONEMENT | | DOLSON, STEPHEN JAMES<br>DOLSON, THOMAS EDWARD<br>DOLSON, MARY JEAN<br>FRADOL FARMS LIMITED<br>FRADOL FAMILY FARM GP | THE REGIONAL MUNICIPALITY OF PEEL | C |
| | *REMARKS: PR2926537 TO PR3331264 - PTS 1 & 2 43R38092* | | | | | |
| PR3490753 | 2019/06/11 | APL CH NAME OWNER | | 2278339 ONTARIO INC. | 12101 CREDITVIEW DEVELOPMENTS LIMITED | C |
| 43R40787 | 2023/03/20 | PLAN REFERENCE | | | | C |

# Appendix B

**23-267-100** **July 25, 2023**

**12101 Creditview Developments Ltd. c/o Fieldgate Land Development Ltd.**
**5400 Yonge Street**
**Toronto, Ontario**
**M2N 5R5**
**via email: justin@argoland.com**

**Attention: Justin Marr**

**Re: Sampling and Analysis Plan – Phase Two Environmental Site Assessment**
**Part of Lots 18 & 19 Concession 3, Caledon, Ontario**

## 1. Introduction

DS Consultants Limited (DS) is pleased to present the Sampling and Analysis Plan (SAP) for the proposed Phase Two Environmental Site Assessment of Part of Lots 18 & 19 Concession 3, Caledon, Ontario , (the Site). The purpose of the proposed Phase Two ESA program is to assess the current subsurface environmental conditions in support of the proposed redevelopment of the Site.

The Phase Two ESA will involve intrusive investigation in the areas determined in the Site visit to be Areas of Potential Environmental Concern (APECs), and will be completed in general accordance with O.Reg 153/04. Based on the findings of the field and laboratory analyses, a Phase Two ESA report will be prepared.

## 2. Background

Based on the Phase One Environmental Site Assessment completed by DS in September 2023, it is DS's understanding that the Site is a 59.97-hectare (148.19 acres) parcel of land which is currently used for agricultural purposes. The first developed use of the Site is interpreted to be Agricultural based on the findings of the Phase One ESA. A total of four (4) potentially contaminating activities were identified on the Phase One Property or on neighbouring properties within the Phase One Study Area which are considered to be contributing to Areas of Potential Environmental Concern (APECs) on the Phase Two Property. A summary of the APECs identified, the potential contaminants of concern, and the media potentially impacted is presented in Table 1 below:

**Table 1: Areas of Potential Environmental Concern**

| Area of Potential Environmental Concern | Location of Area of Potential Environmental Concern on Phase One Property | Potentially Contaminating Activity | Location of PCA (on-site or off-site) | Contaminants of Potential Concern | Media Potentially Impacted (Ground water, soil and/or sediment) |
|---|---|---|---|---|---|
| APEC-1 | Central portion of the Site | #40 – Pesticides Manufacturing, Processing, Bulk Storage and Large-Scale Applications | On Site **PCA-3** | OCPs, Metals, As, Sb, Se, CN- | Soil |
| APEC-2 | Southeast portion of the Site | #40 – Pesticides Manufacturing, Processing, Bulk Storage and Large-Scale Applications | On Site **PCA-6** | OCPs, Metals, As, Sb, Se, CN- | Soil |
| APEC-3 | South and east portions of the Site | #N/S – Seasonal De-Icing Activities[1] | Off Site **PCA-5** | EC, SAR | Soil |
| APEC-4 | South corner of the Site | #40 – Pesticides Manufacturing, Processing, Bulk Storage and Large-Scale Applications | On Site **PCA-8** | OCPs, Metals, As, Sb, Se, CN- | Soil |

Notes:
1. N/S - not specified in Table 2, Schedule D, of O.Reg. 153/04
2. PHC (F1-F4) = Petroleum Hydrocarbons in the F1-F4 fraction ranges
3. VOCs = Volatile Organic Compounds
4. PAHs = Polycyclic Aromatic Hydrocarbons
5. PCBs = Polychlorinated Biphenyls

## 3. Site Investigation Program

The proposed field investigation will involve the advancement of boreholes, the installation of monitoring wells, and periodic monitoring of the installed wells. A total of 13 borehole locations have been identified. Details regarding the proposed boreholes/monitoring wells are provided in the following table:

**Table 3-1: Summary of Proposed Investigation Program**

| ID | Proposed Depth | Well Installation (Y/N) | Well Install Depth | Purpose |
|---|---|---|---|---|
| MW23-501 | 6 m | Y | 6m | Groundwater flow |
| MW23-502 | 6 m | N | N/A | Near barns |
| BH23-503 | 6 m | N | N/A | Geotechnical |
| MW23-504 | 6 m | Y | 6m | Groundwater flow |
| BH23-505 | 6 m | Y | 6m | Groundwater flow |
| BH23-506 | 6 m | Y | 6m | Groundwater flow |
| BH23-507 | 6 m | N | N/A | Geotechnical |
| BH23-508 | 6 m | N | N/A | Geotechnical |
| BH23-509 | 6 m | Y | 6m | Groundwater flow |
| BH23-510 | 6 m | N | N/A | Geotechnical |
| MW23-511 | 6 m | N | N/A | Geotechnical |
| BH23-512 | 6 m | N | N/A | Geotechnical |

| ID | Proposed Depth | Well Installation (Y/N) | Well Install Depth | Purpose |
|---|---|---|---|---|
| BH23-513 | 6 m | N | N/A | Geotechnical |

Prior to mobilizing a drilling rig, we will lay out the proposed borehole and clear the buried utilities and services by using Ontario One Call System in addition to private utility locates.

The borings will be advanced to the indicated depths using a track mounted continuous flight auger machine. Samples will be retrieved by means of a 50 mm O.D. split-spoon barrel sampler at 0.75 metre intervals in the upper 3 metres and at 1.5 metres intervals below this level. The monitoring wells will be constructed using 50 mm I.D. PVC pipe, equipped with 3.1 m slotted screens and finished at the ground surface with monument well casings. A geodetic benchmark will be used to establish the elevation of each borehole. Drilling and sampling will conform to standard practice.

The Phase Two ESA involves the following principal tasks:

- Retain the services of public and private utility locaters to identify the locations of buried and overhead utility services prior to any excavation or demolition activities;
    - Certain underground utilities (such as those constructed or encased in plastic, fibreglass, clay, concrete pipe, untraceable cast iron, steel, and/or repaired services) cannot be traced by standard locating practices. DS will review all available Site Plans and/or "As Built" figures in an attempt to identify the locations of potential untraceable services. DS will not be held responsible for any damages to utility services that are not on the figures provided or cannot be located by standard utility locating practices;
- Advancement of boreholes as specified in Table 3-1. The proposed boreholes will be used to facilitate the collection of representative soil and groundwater samples, and to provide information regarding the Site-specific geological and hydrogeological conditions;
- All soil samples recovered during the proposed drilling activities will be field screened for visual and olfactory evidence of deleterious impacts and for the presence of petroleum hydrocarbon (PHC) and volatile organic compound (VOC) derived vapours using either a combustible gas detector (CGD) calibrated to hexane or a photo-ionization detector (PID) calibrated to isobutylene or equivalent;
- Measure the depth to groundwater levels in the monitoring wells installed, and monitor the wells for the presence/absence of non-aqueous phase liquid using an interface probe;
- Survey each of the monitoring wells to a geodetic datum;
- Submit soil samples from the newly advanced boreholes as follows:

**Table 3-2: Summary of proposed soil chemical analyses**

| Borehole | Sample No | Sample Depth (mbgs) | Lab Analysis | Purpose |
|---|---|---|---|---|
| MW23-502 | SS5 | 3.1-3.7 | pH | pH analysis |
| MW23-507 | SS5 | 3.1-3.7 | pH | pH analysis |
| S1 | S1 | 0.0-0.3 | Metals, OCPs | Assess soil conditions (APEC-1, APEC-2) |
| S2 | S2 | 0.0-0.3 | Metals, OCPs | Assess soil conditions (APEC-1, APEC-2) |
| S3 | S3 | 0.0-0.3 | Metals, OCPs | Assess soil conditions (APEC-1, APEC-2) |
| S4 | S4 | 0.0-0.3 | Metals, OCPs | Assess soil conditions (APEC-1, APEC-2) |
| S5 | S5 | 0.0-0.3 | Metals, OCPs | Assess soil conditions (APEC-1, APEC-2, APEC-4) |
| S6 | S6 | 0.0-0.3 | Metals, OCPs | Assess soil conditions (APEC-1, APEC-2) |
| S7 | S7 | 0.0-0.3 | Metals, OCPs | Assess soil conditions (APEC-1, APEC-2) |
| S8 | S8 | 0.0-0.3 | Metals, OCPs | Assess soil conditions (APEC-1, APEC-2) |
| S9 | S9 | 0.0-0.3 | Metals, OCPs | Assess soil conditions (APEC-1, APEC-2) |
| S10 | S10 | 0.0-0.3 | Metals, OCPs | Assess soil conditions (APEC-1, APEC-2) |

A summary of the proposed soil and groundwater analytical program is presented in the following table:

**Table 3-3: Summary of Soil and Groundwater Analytical Program**

| Soil |
|---|
| • 10 Samples for analysis of metals and inorganics<br>• 10 Samples for analysis of OC Pesticides<br>• 2 Subsurface soil samples for pH analysis<br>• 4 Duplicate samples |

- A Quality Assurance and Quality Control (QAQC) program will be implemented, involving the collection and analysis of duplicate soil and groundwater samples and trip blanks at the frequency specified under O.Reg. 153/04 (as amended);
- A Phase Two ESA Report will be prepared upon receipt of all analytical results and groundwater monitoring data. The Phase Two ESA Report will be completed in general accordance with O.Reg. 153/04 (as amended).

It should be noted that drilling activities may result in some disturbance to the ground surface at the site. Precautions will be taken by the drilling contractor to minimize any damage. The Client will be notified should there be cause to extend the borehole termination depth based on field observations. It is assumed that the site can be accessed at our convenience, during regular business hours. Prior notice will be sent to the client and site representative

It is noted that if the Phase Two ESA reveals parameter concentrations greater than the applicable standards set out in *Ontario Regulation 153/04,* then additional work (i.e., supplemental delineation, additional drilling, sampling, analysis, and/or site remediation activities) will be deemed necessary prior to RSC filing, should an RSC be required. The costs for any additional work, if necessary, are beyond the current scope of work.

The SAP was created based on the request to complete a Phase Two ESA in support of the proposed redevelopment of the Site. The SAP was compiled to collect data to provide information on soil and/or groundwater quality in each APEC.

Additional delineation may be required following the implementation of this SAP to meet the requirements of O.Reg. 153/04 which requires delineation of all areas where concentrations are above the applicable SCS such as in the following conditions:

- Unexpected contamination not previously discovered, or not related to identified APECs, is discovered which will require further delineation to identify source(s); and
- If the sampling results indicate that the soil and/or groundwater impacts are deeper than initially expected.

## 4. Closure

We trust that this Sampling and Analysis Plan meets the objectives of the Client. If further assistance is required on this matter please do not hesitate to contact the undersigned.

Yours Very Truly,

**DS Consultants Ltd.**

Patrick Fioravanti, B.Sc., P.Geo., $QP_{ESA}$
Manager – Environmental Services
647-234-5131
rfioravanti@dsconsultants.ca

# Appendix C

DS CONSULTANTS LTD.
Geotechnical ◆ Environmental ◆ Materials ◆ Hydrogeology

# LOG OF BOREHOLE BH23-501



PROJECT: Phase Two Environmental Site Assessment
CLIENT: 12101 Creditview Developments Limited
PROJECT LOCATION: Part of Lots 18 & 19 Concession 3, Caledon, ON
DATUM: Geodetic
BH LOCATION: Refer to Figure 5 N 4840022.56 E 591782.14

**DRILLING DATA**
Method: Solid Stem Auger
Diameter: 150mm
Date: Aug-11-2023

REF. NO.: 23-267-100
ENCL NO.: 2

| (m) ELEV / DEPTH | DESCRIPTION | STRATA PLOT | SAMPLES: NUMBER | TYPE | BLOWS 0.3 m "N" | GROUND WATER CONDITIONS | ELEVATION | Soil Head Space Vapors: PID (ppm) | CGD (ppm) | PLASTIC LIMIT / NATURAL MOISTURE CONTENT / LIQUID LIMIT ($w_P$ w $w_L$) WATER CONTENT (%) | POCKET PEN. (Cu) (kPa) | NATURAL UNIT WT (kN/m³) | REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 263.2 | | | | | | | | | | | | | |
| 0.0 / 263.0 | **TOPSOIL:** 200mm | | | | | | | | | | | | |
| 0.2 / 262.4 | **FILL:** clayey silt, trace organics, brown, moist, soft | | 1 | SS | 3 | | 263 | | | | | | |
| 0.8 | **CLAYEY SILT TO SILTY CLAY TILL:** some sand to sandy, trace gravel, brown, moist, stiff to hard | | 2 | SS | 16 | | 262 | | | | | | |
| | | | 3 | SS | 21 | W. L. 261.9 masl Aug 18, 2023 W. L. 261.6 masl Aug 29, 2023 | | | | | | | |
| | | | 4 | SS | 35 | | 261 | | | | | | |
| | grey below 3.1m | | 5 | SS | 27 | | 260 | | | | | | 6 17 46 31 |
| | | | 6 | SS | 12 | | 259 | | | | | | |
| 6.1 / 257.1 | **SANDY SILT TILL:** some clay to clayey, trace gravel, grey, moist, dense | | 7 | SS | 32 | | 258 | | | | | | |
| 6.7 / 256.5 | **END OF BOREHOLE:** | | | | | | 257 | | | | | | 8 33 41 18 |

Notes:
1) 50mm dia. monitoring well installed upon completion.
2) Water Level Readings:

| Date: | Water Level(mbgs): |
|---|---|
| Aug 18, 2023 | 1.35 |
| Aug. 29, 2023 | 1.63 |

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES: +3, ×3: Numbers refer to Sensitivity; ○ ε=3% Strain at Failure

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# LOG OF BOREHOLE BH23-502



PROJECT: Phase Two Environmental Site Assessment
CLIENT: 12101 Creditview Developments Limited
PROJECT LOCATION: Part of Lots 18 & 19 Concession 3, Caledon, ON
DATUM: Geodetic
BH LOCATION: Refer to Figure 5 N 4840202.96 E 591938.49

**DRILLING DATA**
Method: Solid Stem Auger
Diameter: 150mm
Date: Aug-11-2023

REF. NO.: 23-267-100
ENCL NO.: 3

| ELEV / DEPTH (m) | DESCRIPTION | STRATA PLOT | SAMPLES NUMBER | SAMPLES TYPE | SAMPLES "N" BLOWS 0.3 m | GROUND WATER CONDITIONS | ELEVATION | Soil Head Space Vapors PID (ppm) | Soil Head Space Vapors CGD (ppm) | PLASTIC LIMIT / NATURAL MOISTURE CONTENT / LIQUID LIMIT ($w_P$ w $w_L$) WATER CONTENT (%) | POCKET PEN. (Cu) (kPa) | NATURAL UNIT WT (kN/m³) | REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 262.4 / 0.0 | **TOPSOIL:** 200mm | | | | | | | | | | | | |
| 262.2 / 0.2 | **REWORKED:** clayey silt, trace organics, dark brown to brown, moist, firm (weathered/disturbed) | | 1 | SS | 7 | | 262 | | | | | | |
| 261.7 / 0.7 | **CLAYEY SILT TO SILTY CLAY TILL:** some sand to sandy, trace gravel, brown, moist, stiff to hard | | 2 | SS | 22 | | 261 | | | | | | |
| | | | 3 | SS | 17 | | | | | | | | |
| | | | 4 | SS | 33 | | 260 | | | | | | |
| | | | 5 | SS | 22 | | 259 | | | | | | pH |
| | grey below 4.6m | | 6 | SS | 9 | | 258 | | | | | | |
| | silty sand layer at 6.1m | | 7 | SS | 50/ 130mm | | 257 | | | | | | |
| 255.8 / 6.6 | **END OF BOREHOLE:** Notes: 1) Water encountered at 6.1m during drilling. | | | | | | 256 | | | | | | |

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES
+3, ×3: Numbers refer to Sensitivity
○ ε=3% Strain at Failure

DS ENVIRO 0~50 PPM-2021 23-267-100ENV.GPJ DS.GDT 23-9-14

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# LOG OF BOREHOLE BH23-503



PROJECT: Phase Two Environmental Site Assessment
CLIENT: 12101 Creditview Developments Limited
PROJECT LOCATION: Part of Lots 18 & 19 Concession 3, Caledon, ON
DATUM: Geodetic
BH LOCATION: Refer to Figure 5 N 4840343.78 E 592059.16

**DRILLING DATA**
Method: Solid Stem Auger
Diameter: 150mm
Date: Aug-11-2023

REF. NO.: 23-267-100
ENCL NO.: 4

| (m) ELEV / DEPTH | DESCRIPTION | STRATA PLOT | NUMBER | TYPE | BLOWS 0.3 m "N" | GROUND WATER CONDITIONS | ELEVATION | Soil Head Space Vapors PID (ppm) 10 20 30 40 | Soil Head Space Vapors CGD (ppm) 10 20 30 40 | PLASTIC LIMIT $W_P$ / NATURAL MOISTURE CONTENT $W$ / LIQUID LIMIT $W_L$ WATER CONTENT (%) 10 20 30 | POCKET PEN. (Cu) (kPa) | NATURAL UNIT WT (kN/m³) | REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 260.9 | | | | | | | | | | | | | |
| 0.0 / 260.7 | **TOPSOIL:** 250mm | | | | | | | | | | | | |
| 0.3 / 260.1 | **REWORKED:** clayey silt, trace organics, dark brown to brown, moist, firm (weathered/disturbed) | | 1 | SS | 8 | | | | | | | | |
| 0.8 | **CLAYEY SILT TO SILTY CLAY TILL:** some sand to sandy, trace gravel, brown, moist, stiff to hard | | 2 | SS | 24 | | 260 | | | | | | |
| | | | 3 | SS | 25 | | 259 | | | | | | |
| | | | 4 | SS | 31 | | 258 | | | | | | |
| | grey below 3.1m | | 5 | SS | 20 | | 257 | | | | | | |
| | | | 6 | SS | 10 | | 256 | | | | | | |
| | | | 7 | SS | 19 | | 255 | | | | | | |
| 254.2 | | | | | | | | | | | | | |
| 6.7 | **END OF BOREHOLE:** Notes: 1) Borehole wet at the bottom upon completion. | | | | | | | | | | | | |

DS ENVIRO 0~50 PPM-2021 23-267-100ENV.GPJ DS.GDT 23-9-14

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES
+3, ×3: Numbers refer to Sensitivity
○ ε=3% Strain at Failure

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# LOG OF BOREHOLE BH23-504



PROJECT: Phase Two Environmental Site Assessment
CLIENT: 12101 Creditview Developments Limited
PROJECT LOCATION: Part of Lots 18 & 19 Concession 3, Caledon, ON
DATUM: Geodetic
BH LOCATION: Refer to Figure 5 N 4840523.82 E 592213.16

**DRILLING DATA**
Method: Solid Stem Auger
Diameter: 150mm
Date: Aug-10-2023

REF. NO.: 23-267-100
ENCL NO.: 5

| (m) ELEV / DEPTH | DESCRIPTION | STRATA PLOT | NUMBER | TYPE | BLOWS 0.3 m "N" | GROUND WATER CONDITIONS | ELEVATION | Soil Head Space Vapors PID (ppm) | Soil Head Space Vapors CGD (ppm) | PLASTIC LIMIT / NATURAL MOISTURE CONTENT / LIQUID LIMIT; WATER CONTENT (%) | POCKET PEN. (Cu) (kPa) | NATURAL UNIT WT (kN/m³) | REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 259.8 | | | | | | | | | | | | | |
| 0.0 / 259.6 | **TOPSOIL:** 200mm | | | | | | | | | | | | |
| 0.2 / 258.9 | **REWORKED:** clayey silt, trace organics, brown, moist, firm (weathered/disturbed) | | 1 | SS | 6 | | 259 | | | | | | |
| 0.9 | **CLAYEY SILT TO SILTY CLAY TILL:** some sand to sandy, trace gravel, brown, moist, stiff to very stiff | | 2 | SS | 18 | | | | | | | | |
| | | | 3 | SS | 17 | W. L. 258.4 masl Aug 29, 2023 | 258 | | | | | | |
| | grey below 3.1m | | 4 | SS | 27 | | 257 | | | | | | |
| | | | 5 | SS | 18 | | 256 | | | | | | |
| | | | 6 | SS | 11 | | 255 | | | | | | |
| | | | 7 | SS | 12 | | 254 | | | | | | 2 13 44 41 |
| 253.1 / 6.7 | **END OF BOREHOLE:** Notes: 1) 50mm dia. monitoring well installed upon completion. 2) Water Level Readings: Date: Water Level(mbgs): Aug. 29, 2023 1.37 | | | | | | | | | | | | |

DS ENVIRO 0~50 PPM-2021 23-267-100ENV.GPJ DS.GDT 23-9-14

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES: +3, ×3: Numbers refer to Sensitivity; ○ ε=3% Strain at Failure

DS CONSULTANTS LTD.
Geotechnical ◆ Environmental ◆ Materials ◆ Hydrogeology

# LOG OF BOREHOLE BH23-505



PROJECT: Phase Two Environmental Site Assessment
CLIENT: 12101 Creditview Developments Limited
PROJECT LOCATION: Part of Lots 18 & 19 Concession 3, Caledon, ON
DATUM: Geodetic
BH LOCATION: Refer to Figure 5 N 4840288.72 E 592459.86

**DRILLING DATA**
Method: Solid Stem Auger
Diameter: 150mm
Date: Aug-10-2023

REF. NO.: 23-267-100
ENCL NO.: 6

| (m) ELEV / DEPTH | DESCRIPTION | STRATA PLOT | SAMPLES: NUMBER | TYPE | BLOWS 0.3 m "N" | GROUND WATER CONDITIONS | ELEVATION | Soil Head Space Vapors: PID (ppm) | CGD (ppm) | PLASTIC LIMIT / NATURAL MOISTURE CONTENT / LIQUID LIMIT ($w_P$ w $w_L$) WATER CONTENT (%) | POCKET PEN. (Cu) (kPa) | NATURAL UNIT WT (kN/m³) | REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 257.3 | | | | | | | | 10 20 30 40 | 10 20 30 40 | 10 20 30 | | | |
| 0.0 / 257.0 | **TOPSOIL:** 280mm | | | | | | | | | | | | |
| 0.3 / 256.5 | **FILL:** clayey silt, trace organics, brown, moist, stiff | | 1 | SS | 9 | | 257 | | | | | | |
| 0.8 | **CLAYEY SILT TO SILTY CLAY TILL:** some sand to sandy, trace gravel, brown, moist, stiff to very stiff | | 2 | SS | 21 | | 256 | | | | | | |
| | | | 3 | SS | 24 | ▼ | | | | | | | |
| | | | | | | | | | | | | | |
| | | | 4 | SS | 30 | | 255 | | | | | | |
| | greyish brown to brown below 3.1m | | 5 | SS | 19 | | 254 | | | | | | |
| | | | | | | | 253 | | | | | | |
| | | | 6 | SS | 8 | | | | | | | | 4 20 45 31 |
| | wet silty sand layer at 6.1m | | | | | | 252 | | | | | | |
| | | | 7 | SS | 20 | | 251 | | | | | | |
| 250.6 | | | | | | | | | | | | | |
| 6.7 | **END OF BOREHOLE:** | | | | | | | | | | | | |

Notes:
1) 50mm dia. monitoring well installed upon completion.
2) Water Level Readings:

| Date: | Water Level(mbgs): |
|---|---|
| Aug. 29, 2023 | 1.8 |

W. L. 255.5 masl Aug 29, 2023

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES: +³, ×³: Numbers refer to Sensitivity; ○ ε=3% Strain at Failure

DS ENVIRO 0~50 PPM-2021 23-267-100ENV.GPJ DS.GDT 23-9-14

DS CONSULTANTS LTD.
Geotechnical ◆ Environmental ◆ Materials ◆ Hydrogeology

# LOG OF BOREHOLE BH23-506



PROJECT: Phase Two Environmental Site Assessment
CLIENT: 12101 Creditview Developments Limited
PROJECT LOCATION: Part of Lots 18 & 19 Concession 3, Caledon, ON
DATUM: Geodetic
BH LOCATION: Refer to Figure 5 N 4840753.78 E 591985.99

**DRILLING DATA**
Method: Solid Stem Auger
Diameter: 150mm
Date: Aug-10-2023

REF. NO.: 23-267-100
ENCL NO.: 7

| (m) ELEV / DEPTH | DESCRIPTION | NUMBER | TYPE | BLOWS 0.3 m "N" | GROUND WATER CONDITIONS | ELEVATION | PID (ppm) | CGD (ppm) | WATER CONTENT (%) | POCKET PEN. (Cu) (kPa) | NATURAL UNIT WT (kN/m³) | REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 262.3 | | | | | | | | | | | | |
| 0.0 / 262.1 | **TOPSOIL:** 200mm | | | | | | | | | | | |
| 0.2 / 261.6 | **REWORKED:** clayey silt, trace organics, dark brown to brown, moist, firm (weathered/disturbed) | 1 | SS | 4 | | 262 | | | | | | |
| 0.7 | **CLAYEY SILT TO SILTY CLAY TILL:** some sand to sandy, trace gravel, brown, moist, stiff to very stiff | 2 | SS | 20 | ▽ W. L. 261.6 masl Aug 18, 2023 | | | | | | | |
| | | 3 | SS | 21 | ▽ W. L. 261.1 masl Aug 29, 2023 | | | | | | | 2 16 46 36 |
| | | 4 | SS | 29 | | 260 | | | | | | |
| | | 5 | SS | 17 | | 259 | | | | | | |
| | grey, firm at 4.6m | 6 | SS | 8 | | 258 | | | | | | |
| 256.2 | | | | | | 257 | | | | | | |
| 6.1 | **SANDY SILT TILL:** some clay to clayey, trace gravel, grey, wet, compact to dense | 7 | SS | 10 | | 256 | | | | | | 1 31 56 12 |
| | | 8 | SS | 30 | | 255 | | | | | | |
| 254.1 | | | | | | | | | | | | |
| 8.2 | **END OF BOREHOLE:** | | | | | | | | | | | |

Notes:
1) 50mm dia. monitoring well installed upon completion.
2) Water Level Readings:

| Date: | Water Level(mbgs): |
|---|---|
| Aug 18, 2023 | 0.79 |
| Aug. 29, 2023 | 1.24 |

GROUNDWATER ELEVATIONS
Measurement 1st ▽ 2nd ▼ 3rd ▼ 4th ▼

GRAPH NOTES: + 3, × 3: Numbers refer to Sensitivity; ○ ε=3% Strain at Failure

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Geotechnical ◆ Environmental ◆ Materials ◆ Hydrogeology

# LOG OF BOREHOLE BH23-507



PROJECT: Phase Two Environmental Site Assessment
CLIENT: 12101 Creditview Developments Limited
PROJECT LOCATION: Part of Lots 18 & 19 Concession 3, Caledon, ON
DATUM: Geodetic
BH LOCATION: Refer to Figure 5 N 4840601.26 E 591843.27

**DRILLING DATA**
Method: Solid Stem Auger
Diameter: 150mm
Date: Aug-14-2023

REF. NO.: 23-267-100
ENCL NO.: 8

| (m) ELEV / DEPTH | DESCRIPTION | STRATA PLOT | NUMBER | TYPE | BLOWS / 0.3 m "N" | GROUND WATER CONDITIONS | ELEVATION | Soil Head Space Vapors PID (ppm) | Soil Head Space Vapors CGD (ppm) | PLASTIC LIMIT / NATURAL MOISTURE CONTENT / LIQUID LIMIT ($w_P$ w $w_L$) WATER CONTENT (%) | POCKET PEN. (Cu) (kPa) | NATURAL UNIT WT (kN/m³) | REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 263.7 | | | | | | | | | | | | | |
| 0.0 / 263.5 | **TOPSOIL:** 200mm | | | | | | | | | | | | |
| 0.2 / 262.8 | **REWORKED:** clayey silt, trace organics, dark brown to brown, moist, firm (weathered/disturbed) | | 1 | SS | 6 | | 263 | | | | | | |
| 0.9 | **CLAYEY SILT TO SILTY CLAY TILL:** some sand to sandy, trace gravel, brown, moist, stiff to hard | | 2 | SS | 22 | | | | | | | | |
| | | | 3 | SS | 22 | | 262 | | | | | | |
| | | | 4 | SS | 32 | | | | | | | | |
| | grey at 3.1m | | 5 | SS | 25 | | 261 | | | | | | pH |
| | | | 6 | SS | 8 | | 260 | | | | | | |
| 257.5 | | | | | | | 259 | | | | | | |
| 6.2 / 257.0 | **SANDY SILT TO SILTY SAND TILL:** some clay, trace gravel, greyish brown, moist to wet, compact | | 7 | SS | 16 | | 258 | | | | | | |
| 6.7 | **END OF BOREHOLE:** Notes: 1) Ground water encountered at 6.2m during drilling. | | | | | | 257 | | | | | | |

PID (ppm) scale: 10 20 30 40
CGD (ppm) scale: 10 20 30 40
WATER CONTENT (%) scale: 10 20 30

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES
+ 3, × 3: Numbers refer to Sensitivity
○ ε=3% Strain at Failure

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# LOG OF BOREHOLE BH23-508



PROJECT: Phase Two Environmental Site Assessment
CLIENT: 12101 Creditview Developments Limited
PROJECT LOCATION: Part of Lots 18 & 19 Concession 3, Caledon, ON
DATUM: Geodetic
BH LOCATION: Refer to Figure 5 N 4840481.71 E 591717.03

**DRILLING DATA**
Method: Solid Stem Auger
Diameter: 150mm
Date: Aug-11-2023

REF. NO.: 23-267-100
ENCL NO.: 9

| (m) ELEV / DEPTH | DESCRIPTION | STRATA PLOT | SAMPLES: NUMBER | TYPE | "N" BLOWS / 0.3 m | GROUND WATER CONDITIONS | ELEVATION | Soil Head Space Vapors: PID (ppm) | CGD (ppm) | PLASTIC LIMIT / NATURAL MOISTURE CONTENT / LIQUID LIMIT; WATER CONTENT (%) | POCKET PEN. (Cu) (kPa) | NATURAL UNIT WT (kN/m³) | REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 264.4 | | | | | | | | | | | | | |
| 0.0 / 264.2 | **TOPSOIL:** 200mm | | | | | | | | | | | | |
| 0.2 / 263.6 | **REWORKED:** clayey silt, trace organics, dark brown to brown, moist, firm (weathered/disturbed) | | 1 | SS | 6 | | 264 | | | | | | |
| 0.8 | **CLAYEY SILT TO SILTY CLAY TILL:** some sand to sandy, trace gravel, brown, moist, very stiff | | 2 | SS | 17 | | 263 | | | | | | |
| | greyish brown to grey at 1.5m | | 3 | SS | 24 | | 262 | | | | | | |
| | | | 4 | SS | 26 | | | | | | | | |
| 259.8 | | | 5 | SS | 23 | | 261 | | | | | | |
| 4.6 / 258.2 | **SANDY SILT TO SILTY SAND TILL:** trace to some clay, some gravel, brown, moist, very dense | | 6 | SS | 50/ 75mm | | 260 | | | | | | |
| 6.2 | **END OF BOREHOLE:** Notes: 1) Water encountered at 4.6m during drilling. | | 7 | SS | 50/ 75mm | | 259 | | | | | | |

PID (ppm) scale: 10 20 30 40
CGD (ppm) scale: 10 20 30 40
WATER CONTENT (%) scale: 10 20 30

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES
+ 3, × 3: Numbers refer to Sensitivity
○ ε=3% Strain at Failure

DS ENVIRO 0~50 PPM-2021 23-267-100ENV.GPJ DS.GDT 23-9-14

DS CONSULTANTS LTD.
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# LOG OF BOREHOLE BH23-509



PROJECT: Phase Two Environmental Site Assessment
CLIENT: 12101 Creditview Developments Limited
PROJECT LOCATION: Part of Lots 18 & 19 Concession 3, Caledon, ON
DATUM: Geodetic
BH LOCATION: Refer to Figure 5 N 4840278.95 E 591528.51

**DRILLING DATA**
Method: Solid Stem Auger
Diameter: 150mm
Date: Aug-11-2023

REF. NO.: 23-267-100
ENCL NO.: 10

| (m) ELEV / DEPTH | DESCRIPTION | STRATA PLOT | SAMPLES NUMBER | TYPE | "N" BLOWS / 0.3 m | GROUND WATER CONDITIONS | ELEVATION | Soil Head Space Vapors PID (ppm) | CGD (ppm) | PLASTIC LIMIT / NATURAL MOISTURE CONTENT / LIQUID LIMIT; WATER CONTENT (%) | POCKET PEN. (Cu) (kPa) | NATURAL UNIT WT (kN/m³) | REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 262.5 | | | | | | | | 10 20 30 40 | 10 20 30 40 | 10 20 30 | | | |
| 0.0 / 262.3 | **TOPSOIL:** 200mm | | | | | | | | | | | | |
| 0.2 / 261.7 | **FILL:** clayey silt, trace organics, dark brown to brown, moist, firm | | 1 | SS | 3 | | 262 | | | | | | |
| 0.8 | **CLAYEY SILT TO SILTY CLAY TILL:** some sand to sandy, trace gravel, brown, moist, stiff to hard | | 2 | SS | 18 | | W. L. 261.8 masl Aug 18, 2023 | | | | | | |
| | | | 3 | SS | 34 | | 261 | | | | | | |
| | | | 4 | SS | 25 | | 260 | | | | | | |
| | grey at 3.1m | | 5 | SS | 14 | | 259 | | | | | | |
| 257.9 | | | | | | | 258 | | | | | | |
| 4.6 | **SANDY SILT TILL:** some clay to clayey, trace gravel, brown, moist, very dense | | 6 | SS | 50/ 130mm | | | | | | | | 6 38 44 12 |
| | | | 7 | SS | 42 | | 257 | | | | | | |
| 255.8 | | | | | | | 256 | | | | | | |
| 6.7 | **END OF BOREHOLE:** | | | | | | | | | | | | |

Notes:
1) 50mm dia. monitoring well installed upon completion.
2) Water Level Readings:

| Date: | Water Level(mbgs): |
|---|---|
| Aug 18, 2023 | 0.67 |
| Aug. 29, 2023 | 0.7 |

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES: +³, ×³: Numbers refer to Sensitivity; ○ ε=3% Strain at Failure

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# LOG OF BOREHOLE BH23-510



PROJECT: Phase Two Environmental Site Assessment
CLIENT: 12101 Creditview Developments Limited
PROJECT LOCATION: Part of Lots 18 & 19 Concession 3, Caledon, ON
DATUM: Geodetic
BH LOCATION: Refer to Figure 5 N 4840525.3 E 591362.84

**DRILLING DATA**
Method: Solid Stem Auger
Diameter: 150mm
Date: Aug-09-2023

REF. NO.: 23-267-100
ENCL NO.: 11

| ELEV / DEPTH (m) | DESCRIPTION | NUMBER | TYPE | BLOWS 0.3 m "N" | REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL |
|---|---|---|---|---|---|
| 259.6 | | | | | |
| 0.0 / 259.2 | **TOPSOIL:** 380mm | 1 | SS | 3 | |
| 0.4 | **FILL:** clayey silt, trace organics, dark brown to brown, moist, soft to firm | 2 | SS | 4 | |
| 1 / 258.1 | | | | | |
| 1.5 | **CLAYEY SILT TO SILTY CLAY TILL:** some sand to sandy, trace gravel, brown to grey, moist, hard | 3 | SS | 40 | |
| 2 | grey below 2.3m | 4 | SS | 50/100mm | 4 19 58 19 |
| 3 | | 5 | SS | 66 | |
| 4 | | | | | |
| 5 | | 6 | SS | 41 | |
| 6 / 253.5 | | | | | |
| 6.1 / 252.9 | **SANDY SILT TO SILTY SAND TILL:** trace clay, trace gravel, brown, very moist, very dense | 7 | SS | 72 | |
| 6.7 | **END OF BOREHOLE:** Notes: 1) Groundwater encountered at 2.1m during drilling. | | | | |

GROUND WATER CONDITIONS

ELEVATION: 259, 258, 257, 256, 255, 254, 253

Soil Head Space Vapors
PID (ppm): 10 20 30 40
CGD (ppm): 10 20 30 40

PLASTIC LIMIT $W_P$ — NATURAL MOISTURE CONTENT $W$ — LIQUID LIMIT $W_L$
WATER CONTENT (%): 10 20 30

POCKET PEN. (Cu) (kPa)

NATURAL UNIT WT (kN/m³)

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES
+ 3, × 3: Numbers refer to Sensitivity
○ 8=3% Strain at Failure

DS ENVIRO 0~50 PPM-2021 23-267-100ENV.GPJ DS.GDT 23-9-14

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# LOG OF BOREHOLE BH23-511



PROJECT: Phase Two Environmental Site Assessment
CLIENT: 12101 Creditview Developments Limited
PROJECT LOCATION: Part of Lots 18 & 19 Concession 3, Caledon, ON
DATUM: Geodetic
BH LOCATION: Refer to Figure 5 N 4840782.43 E 591402.72

**DRILLING DATA**
Method: Solid Stem Auger
Diameter: 150mm
Date: Aug-09-2023

REF. NO.: 23-267-100
ENCL NO.: 12

| (m) ELEV / DEPTH | DESCRIPTION | STRATA PLOT | NUMBER | TYPE | BLOWS 0.3 m "N" | GROUND WATER CONDITIONS | ELEVATION | Soil Head Space Vapors PID (ppm) 10 20 30 40 | Soil Head Space Vapors CGD (ppm) 10 20 30 40 | PLASTIC LIMIT / NATURAL MOISTURE CONTENT / LIQUID LIMIT $W_P$ W $W_L$ WATER CONTENT (%) 10 20 30 | POCKET PEN. (Cu) (kPa) | NATURAL UNIT WT (kN/m³) | REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 259.9 | | | | | | | | | | | | | |
| 0.0 / 259.7 | **TOPSOIL:** 250mm | | | | | | | | | | | | |
| 0.3 / 259.0 | **REWORKED:** clayey silt, trace organics, dark brown to brown, moist, firm (weathered/disturbed) | | 1 | SS | 4 | | | | | | | | |
| 1 0.9 | **SANDY SILT:** trace to some clay, trace gravel, grey, wet, compact | | 2 | SS | 16 | | 259 | | | | | | |
| 2 | | | 3 | SS | 17 | | 258 | | | | | | |
| | clayey silt layer at 2.6m | | 4 | SS | 13 | | | | | | | | |
| 3 256.8 | | | | | | | 257 | | | | | | |
| 3.1 | **CLAYEY SILT TO SILTY CLAY TILL:** some sand to sandy, trace gravel, grey, moist to very moist, stiff to very stiff | | 5 | SS | 13 | | | | | | | | |
| 4 | | | | | | | 256 | | | | | | |
| 5 | | | 6 | SS | 20 | | 255 | | | | | | |
| 6 253.8 | | | | | | | 254 | | | | | | |
| 6.1 / 253.2 | **SANDY SILT TO SILTY SAND TILL:** trace to some clay, trace gravel, brown, moist to wet, dense | | 7 | SS | 46 | | | | | | | | |
| 6.7 | **END OF BOREHOLE:** Notes: 1) Water encountered at 0.8m during drilling. | | | | | | | | | | | | |

DS ENVIRO 0~50 PPM-2021 23-267-100ENV.GPJ DS.GDT 23-9-14

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES: + 3, × 3: Numbers refer to Sensitivity; ○ ε=3% Strain at Failure

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# LOG OF BOREHOLE BH23-512



PROJECT: Phase Two Environmental Site Assessment
CLIENT: 12101 Creditview Developments Limited
PROJECT LOCATION: Part of Lots 18 & 19 Concession 3, Caledon, ON
DATUM: Geodetic
BH LOCATION: Refer to Figure 5 N 4840916.22 E 591536.29

**DRILLING DATA**
Method: Solid Stem Auger
Diameter: 150mm
Date: Aug-10-2023

REF. NO.: 23-267-100
ENCL NO.: 13

| (m) ELEV / DEPTH | DESCRIPTION | STRATA PLOT | SAMPLES NUMBER | SAMPLES TYPE | SAMPLES "N" BLOWS/0.3 m | GROUND WATER CONDITIONS | ELEVATION |
|---|---|---|---|---|---|---|---|
| 259.2 | | | | | | | |
| 0.0 / 258.8 | **TOPSOIL:** 400mm | | 1 | SS | 4 | | 259 |
| 0.4 | **FILL:** clayey silt, sandy, trace to some organics, dark brown to brown, moist to wet, firm | | 2 | SS | 5 | | 258 |
| | grey at 1.5m | | 3 | SS | 5 | | 257 |
| 256.9 | | | | | | | |
| 2.3 | **CLAYEY SILT TO SILTY CLAY TILL:** sandy, trace to some gravel, brown, moist, hard | | 4 | SS | 41 | | 256 |
| | | | 5 | SS | 34 | | 255 |
| 254.6 | | | | | | | |
| 4.6 | **SANDY SILT TO SILT:** trace clay, brown to grey, wet, compact to very dense | | 6 | SS | 17 | | 254 |
| 253.2 | | | | | | | |
| 6.0 | **SANDY SILT TO SILTY SAND TILL:** trace to some clay, trace gravel, brown to grey, moist, very dense | | 7 | SS | 62 | | 253 |
| 252.5 | | | | | | | |
| 6.7 | **END OF BOREHOLE:** Notes: 1) Water encountered at 1.2m during drilling. | | | | | | |

Soil Head Space Vapors: PID (ppm) 10 20 30 40; CGD (ppm) 10 20 30 40

PLASTIC LIMIT $W_P$ — NATURAL MOISTURE CONTENT $W$ — LIQUID LIMIT $W_L$; WATER CONTENT (%) 10 20 30

POCKET PEN. (Cu) (kPa)

NATURAL UNIT WT (kN/m³)

REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES: + 3, × 3: Numbers refer to Sensitivity; ○ ε=3% Strain at Failure

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# LOG OF BOREHOLE BH23-513



PROJECT: Phase Two Environmental Site Assessment
CLIENT: 12101 Creditview Developments Limited
PROJECT LOCATION: Part of Lots 18 & 19 Concession 3, Caledon, ON
DATUM: Geodetic
BH LOCATION: Refer to Figure 5 N 4840910.25 E 591763.62

**DRILLING DATA**
Method: Solid Stem Auger
Diameter: 150mm
Date: Aug-10-2023

REF. NO.: 23-267-100
ENCL NO.: 14

| (m) ELEV / DEPTH | DESCRIPTION | STRATA PLOT | NUMBER | TYPE | "N" BLOWS / 0.3 m | GROUND WATER CONDITIONS | ELEVATION |
|---|---|---|---|---|---|---|---|
| 262.0 / 0.0 | **TOPSOIL:** 200mm | | | | | | |
| 261.8 / 0.2 | **FILL:** clayey silt, trace organics, dark brown to brown, moist, firm to very stiff | | 1 | SS | 6 | | |
| 261.0 / 1.0 | **CLAYEY SILT TO SILTY CLAY TILL:** some sand to sandy, trace gravel, brown, moist, very stiff to hard | | 2 | SS | 18 | | 261 |
| | | | 3 | SS | 20 | | 260 |
| | | | 4 | SS | 31 | | |
| | grey at 3.1m | | 5 | SS | 17 | | 259 |
| | | | 6 | SS | 26 | | 258 |
| 256.0 / 6.0 | **SANDY SILT TO SILTY SAND TILL:** trace to some clay, trace gravel, grey, very moist, very dense | | 7 | SS | 73 | | 257 |
| 255.3 / 6.7 | **END OF BOREHOLE:** Notes: 1) Water at depth of 6.1m during drilling. | | | | | | 256 |

Soil Head Space Vapors: PID (ppm) 10 20 30 40; CGD (ppm) 10 20 30 40

PLASTIC LIMIT $w_P$ | NATURAL MOISTURE CONTENT $w$ | LIQUID LIMIT $w_L$
WATER CONTENT (%) 10 20 30

POCKET PEN. (Cu) (kPa)
NATURAL UNIT WT (kN/m³)

REMARKS AND GRAIN SIZE DISTRIBUTION (%)
GR SA SI CL

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES
+ 3, × 3: Numbers refer to Sensitivity
○ ε=3% Strain at Failure

DS ENVIRO 0~50 PPM-2021 23-267-100ENV.GPJ DS.GDT 23-9-14

# Appendix D

Your Project #: 23-267-100
Site Location: 12101 CERDITVIEW RD.
Your C.O.C. #: n/a

**Attention: Megan Bender**

DS Consultants Limited
6221 Highway 7, Unit 16
Vaughan, ON
CANADA L4H 0K8

**Report Date: 2023/08/23**
Report #: R7778073
Version: 1 - Final

# CERTIFICATE OF ANALYSIS

**BUREAU VERITAS JOB #: C3P0415**
**Received: 2023/08/17, 15:14**

Sample Matrix: Soil
# Samples Received: 2

| Analyses | Quantity | Date Extracted | Date Analyzed | Laboratory Method | Analytical Method |
|---|---|---|---|---|---|
| pH CaCl2 EXTRACT | 2 | 2023/08/22 | 2023/08/22 | CAM SOP-00413 | EPA 9045 D m |

**Remarks:**

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCCFP, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Your Project #: 23-267-100
Site Location: 12101 CERDITVIEW RD.
Your C.O.C. #: n/a

**Attention: Megan Bender**

DS Consultants Limited
6221 Highway 7, Unit 16
Vaughan, ON
CANADA L4H 0K8

**Report Date: 2023/08/23**
Report #: R7778073
Version: 1 - Final

# CERTIFICATE OF ANALYSIS

**BUREAU VERITAS JOB #: C3P0415**
**Received: 2023/08/17, 15:14**

Encryption Key


Bureau Veritas
23 Aug 2023 15:39:25

Please direct all questions regarding this Certificate of Analysis to:
Ashton Gibson, Project Manager
Email: Ashton.Gibson@bureauveritas.com
Phone# (905)817-5765

==========

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Bureau Veritas Job #: C3P0415
Report Date: 2023/08/23

DS Consultants Limited
Client Project #: 23-267-100
Site Location: 12101 CERDITVIEW RD.
Sampler Initials: MB

## RESULTS OF ANALYSES OF SOIL

| Bureau Veritas ID | | WSM826 | WSM826 | WSM827 | |
|---|---|---|---|---|---|
| Sampling Date | | 2023/08/11 | 2023/08/11 | 2023/08/14 | |
| COC Number | | n/a | n/a | n/a | |
| | UNITS | BH23-502 SS5 | BH23-502 SS5 Lab-Dup | BH23-507 SS5 | QC Batch |
| **Inorganics** | | | | | |
| Available (CaCl2) pH | pH | 7.69 | 7.69 | 7.76 | 8868526 |

QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate



Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Bureau Veritas Job #: C3P0415
Report Date: 2023/08/23

DS Consultants Limited
Client Project #: 23-267-100
Site Location: 12101 CERDITVIEW RD.
Sampler Initials: MB

## TEST SUMMARY

**Bureau Veritas ID:** WSM826
**Sample ID:** BH23-502 SS5
**Matrix:** Soil

**Collected:** 2023/08/11
**Shipped:**
**Received:** 2023/08/17

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| pH CaCl2 EXTRACT | AT | 8868526 | 2023/08/22 | 2023/08/22 | Gurparteek KAUR |

**Bureau Veritas ID:** WSM826 Dup
**Sample ID:** BH23-502 SS5
**Matrix:** Soil

**Collected:** 2023/08/11
**Shipped:**
**Received:** 2023/08/17

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| pH CaCl2 EXTRACT | AT | 8868526 | 2023/08/22 | 2023/08/22 | Gurparteek KAUR |

**Bureau Veritas ID:** WSM827
**Sample ID:** BH23-507 SS5
**Matrix:** Soil

**Collected:** 2023/08/14
**Shipped:**
**Received:** 2023/08/17

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| pH CaCl2 EXTRACT | AT | 8868526 | 2023/08/22 | 2023/08/22 | Gurparteek KAUR |



Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Bureau Veritas Job #: C3P0415
Report Date: 2023/08/23

DS Consultants Limited
Client Project #: 23-267-100
Site Location: 12101 CERDITVIEW RD.
Sampler Initials: MB

## GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

| | |
|---|---|
| Package 1 | 7.0°C |

**Results relate only to the items tested.**



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Bureau Veritas Job #: C3P0415
Report Date: 2023/08/23

## QUALITY ASSURANCE REPORT

DS Consultants Limited
Client Project #: 23-267-100
Site Location: 12101 CERDITVIEW RD.
Sampler Initials: MB

| | | | SPIKED BLANK | | RPD | |
|---|---|---|---|---|---|---|
| **QC Batch** | **Parameter** | **Date** | **% Recovery** | **QC Limits** | **Value (%)** | **QC Limits** |
| 8868526 | Available (CaCl2) pH | 2023/08/22 | 100 | 97 - 103 | 0.018 | N/A |

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.



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Bureau Veritas Job #: C3P0415
Report Date: 2023/08/23

DS Consultants Limited
Client Project #: 23-267-100
Site Location: 12101 CERDITVIEW RD.
Sampler Initials: MB

## VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Cristina Carriere

Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



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Phone: 905-817-5700 Fax: 905-817-5779 Toll Free: 800-563-6266

# CHAIN OF CUSTODY RECORD

ENV COC - 00014v2



17-Aug-23 15:14
Ashton Gibson
C3P0415
DLK ENV 1545

| Invoice Information | | Invoice to (requires report) ☐ | Report Information (if differs from invoice) | | Project Information | |
|---|---|---|---|---|---|---|
| Company : | DS Consultants Ltd. | | Company: | DS Consultants Ltd | Quotation #: | |
| Contact Name: | Bindu Goel | | Contact Name: | Megan Bender | P.O. #/ AFE#: | |
| Street Address: | 6221 Hwy 7, Unit 16 | | Street Address: | 6221 Hwy 7, Unit 16 | Project #: | 23-267-100 |
| City: | Vaughan | Prov: ON Postal Code: L4H0K8 | City: | Vaughan | Prov: ON Postal Code: L4H0K8 | Site #: | 12101 Creditview Rd |
| Phone: | 905-264-9393 | | Phone: | 905-264-9393 | | Site Location: | |
| Email: | accounting@dsconsultants.ca | | Email: | | | Site Location Province: | Ontario |
| Copies: | | | Copies: | mbender@dsconsultants.ca | | Sampled By: | Megan ~~Omer~~ |

**Regulatory Criteria**

REG 153: ☐ Table 1 ☐ Table 2 ☐ Table 3 ☑ Table S ☑ Res/Park ☐ Ind/Comm ☐ Agri/other ☐ Med/Fine ☐ Course ☐ For RSC

OTHER: ☐ CCME ☐ Reg 558* *min 3 day TAT ☐ MISA ☐ PWQO ☐ Reg 406, Table: ☐ Sanitary Sewer Bylaw ☐ Storm Sewer Bylaw Municipality ☐ Other:

Include Criteria on Certificate of Analysis (check if yes): ☑

SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

| | Sample Identification | Date Sampled YY | MM | DD | Time (24hr) HH | MM | Matrix | 1 FIELD FILTERED | 2 FIELD PRESERVED | 3 LAB FILTRATION REQUIRED | 4 BTEX/ F1 | 5 F2 - F4 | 6 VOCs | 7 Reg 153 metals and inorganics | 8 Reg 153 ICPMS metals | 9 Reg 153 metals (dis. Cr VI, ICPMS metals, HWS - B) | 10 PAHs | 11 OCPs | 12 SPLP Metals and Hydrides | 13 PCBs | 14 pH | 15 | 16 | 17 | 18 | 19 | 20 | 21 # OF CONTAINERS SUBMITTED | 22 HOLD - DO NOT ANALYZE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | BH23-502 SS5 | 23 | 08 | 11 | A | M | S | | | | | | | | | | | | | | ✓ | | | | | | | 1 | ~~✓~~ |
| 2 | BH23-507 SS5 | 23 | 08 | 14 | A | M | S | | | | | | | | | | | | | | ✓ | | | | | | | 1 | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

**Regular Turnaround Time (TAT)**
☑ 5 to 7 Day ☐ 10 Day

**Rush Turnaround Time (TAT) Surcharges apply**
☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 4 Day

Date Required: YY MM DD

Comments

*UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS OR BY CALLING THE LABORATORY LISTED ABOVE TO OBTAIN A COPY

| LAB USE ONLY | Yes | No | °C | 1 | 2 | 3 | Temperature reading by: |
|---|---|---|---|---|---|---|---|
| Seal present | = | | > | 4 | 10 | | |
| Seal intact | = | | | | | | |
| Cooling media present | | | | | | | |

| LAB USE ONLY | Yes | No | °C | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
| Seal present | | | | | | |
| Seal intact | | | | | | |
| Cooling media present | | | | | | |

| LAB USE ONLY | Yes | No | °C | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
| Seal present | | | | | | |
| Seal intact | | | | | | |
| Cooling media present | | | | | | |

| | Relinquished by: (Signature/ Print) | Date YY | MM | DD | Time HH | MM | Received by: (Signature/ Print) | Date YY | MM | DD | Time HH | MM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ~~Omer A~~ | | | | | | | | | | | |
| 2 | Megan Bender | 23 | 08 | 17 | | | | | 08 | 17 | 15 | 14 |

Special instructions

Your Project #: 23-267-100
Site Location: 12101 CREDITVIEW RD.
Your C.O.C. #: n/a

**Attention: Megan Bender**

DS Consultants Limited
6221 Highway 7, Unit 16
Vaughan, ON
CANADA L4H 0K8

**Report Date: 2023/08/30**
Report #: R7789772
Version: 1 - Final

# CERTIFICATE OF ANALYSIS

**BUREAU VERITAS JOB #: C3P2467**
**Received: 2023/08/18, 16:26**

Sample Matrix: Soil
# Samples Received: 11

| Analyses | Quantity | Date Extracted | Date Analyzed | Laboratory Method | Analytical Method |
|---|---|---|---|---|---|
| Free (WAD) Cyanide | 4 | 2023/08/22 | 2023/08/23 | CAM SOP-00457 | OMOE E3015 m |
| Free (WAD) Cyanide | 7 | 2023/08/23 | 2023/08/23 | CAM SOP-00457 | OMOE E3015 m |
| Acid Extractable Metals by ICPMS | 11 | 2023/08/23 | 2023/08/28 | CAM SOP-00447 | EPA 6020B m |
| Moisture | 11 | N/A | 2023/08/23 | CAM SOP-00445 | Carter 2nd ed 51.2 m |
| OC Pesticides (Selected) & PCB (1) | 9 | 2023/08/25 | 2023/08/26 | CAM SOP-00307 | EPA 8081B/ 8082A |
| OC Pesticides (Selected) & PCB (1) | 2 | 2023/08/27 | 2023/08/29 | CAM SOP-00307 | EPA 8081B/ 8082A |
| OC Pesticides Summed Parameters | 11 | N/A | 2023/08/24 | CAM SOP-00307 | EPA 8081B/ 8082A |
| pH CaCl2 EXTRACT | 10 | 2023/08/24 | 2023/08/24 | CAM SOP-00413 | EPA 9045 D m |

**Remarks:**

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCCFP, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Chlordane ( Total) = Alpha Chlordane + Gamma Chlordane

Your Project #: 23-267-100
Site Location: 12101 CREDITVIEW RD.
Your C.O.C. #: n/a

**Attention: Megan Bender**

DS Consultants Limited
6221 Highway 7, Unit 16
Vaughan, ON
CANADA L4H 0K8

**Report Date: 2023/08/30**
Report #: R7789772
Version: 1 - Final

# CERTIFICATE OF ANALYSIS

**BUREAU VERITAS JOB #: C3P2467**
**Received: 2023/08/18, 16:26**

Encryption Key


Bureau Veritas
30 Aug 2023 17:20:02

Please direct all questions regarding this Certificate of Analysis to:
Ashton Gibson, Project Manager
Email: Ashton.Gibson@bureauveritas.com
Phone# (905)817-5765

==========

This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

Bureau Veritas Job #: C3P2467
Report Date: 2023/08/30

DS Consultants Limited
Client Project #: 23-267-100
Site Location: 12101 CREDITVIEW RD.
Sampler Initials: MEG

## O.REG 153 ICPMS METALS (SOIL)

| Bureau Veritas ID | | | WSX059 | | WSX060 | | WSX061 | WSX062 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | | 2023/08/18 | | 2023/08/18 | | 2023/08/18 | 2023/08/18 | | |
| COC Number | | | n/a | | n/a | | n/a | n/a | | |
| | UNITS | Criteria | S1 | QC Batch | S2 | QC Batch | S3 | S4 | RDL | QC Batch |
| **Metals** | | | | | | | | | | |
| Acid Extractable Antimony (Sb) | ug/g | 1.3 | <0.20 | 8871067 | <0.20 | 8871255 | <0.20 | <0.20 | 0.20 | 8871067 |
| Acid Extractable Arsenic (As) | ug/g | 18 | 3.5 | 8871067 | 4.1 | 8871255 | 4.4 | 4.2 | 1.0 | 8871067 |
| Acid Extractable Barium (Ba) | ug/g | 220 | 73 | 8871067 | 84 | 8871255 | 100 | 97 | 0.50 | 8871067 |
| Acid Extractable Beryllium (Be) | ug/g | 2.5 | 0.76 | 8871067 | 0.80 | 8871255 | 0.99 | 0.91 | 0.20 | 8871067 |
| Acid Extractable Boron (B) | ug/g | 36 | <5.0 | 8871067 | <5.0 | 8871255 | 5.6 | 5.1 | 5.0 | 8871067 |
| Acid Extractable Cadmium (Cd) | ug/g | 1.2 | 0.24 | 8871067 | 0.21 | 8871255 | 0.28 | 0.18 | 0.10 | 8871067 |
| Acid Extractable Chromium (Cr) | ug/g | 70 | 22 | 8871067 | 23 | 8871255 | 29 | 27 | 1.0 | 8871067 |
| Acid Extractable Cobalt (Co) | ug/g | 22 | 11 | 8871067 | 12 | 8871255 | 14 | 13 | 0.10 | 8871067 |
| Acid Extractable Copper (Cu) | ug/g | 92 | 17 | 8871067 | 17 | 8871255 | 19 | 17 | 0.50 | 8871067 |
| Acid Extractable Lead (Pb) | ug/g | 120 | 14 | 8871067 | 16 | 8871255 | 17 | 17 | 1.0 | 8871067 |
| Acid Extractable Molybdenum (Mo) | ug/g | 2 | <0.50 | 8871067 | <0.50 | 8871255 | 0.63 | <0.50 | 0.50 | 8871067 |
| Acid Extractable Nickel (Ni) | ug/g | 82 | 19 | 8871067 | 21 | 8871255 | 24 | 23 | 0.50 | 8871067 |
| Acid Extractable Selenium (Se) | ug/g | 1.5 | <0.50 | 8871067 | <0.50 | 8871255 | <0.50 | <0.50 | 0.50 | 8871067 |
| Acid Extractable Silver (Ag) | ug/g | 0.5 | <0.20 | 8871067 | <0.20 | 8871255 | <0.20 | <0.20 | 0.20 | 8871067 |
| Acid Extractable Thallium (Tl) | ug/g | 1 | 0.12 | 8871067 | 0.14 | 8871255 | 0.17 | 0.16 | 0.050 | 8871067 |
| Acid Extractable Uranium (U) | ug/g | 2.5 | 0.75 | 8871067 | 0.78 | 8871255 | 1.0 | 0.83 | 0.050 | 8871067 |
| Acid Extractable Vanadium (V) | ug/g | 86 | 32 | 8871067 | 35 | 8871255 | 43 | 39 | 5.0 | 8871067 |
| Acid Extractable Zinc (Zn) | ug/g | 290 | 79 | 8871067 | 74 | 8871255 | 84 | 71 | 5.0 | 8871067 |

| | |
|---|---|
| No Fill | No Exceedance |
| Grey | Exceeds 1 criteria policy/level |
| Black | Exceeds both criteria/levels |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition
Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use



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Bureau Veritas Job #: C3P2467
Report Date: 2023/08/30

DS Consultants Limited
Client Project #: 23-267-100
Site Location: 12101 CREDITVIEW RD.
Sampler Initials: MEG

## O.REG 153 ICPMS METALS (SOIL)

| Bureau Veritas ID | | | WSX063 | | WSX064 | WSX065 | WSX066 | | |
|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | | 2023/08/18 | | 2023/08/18 | 2023/08/18 | 2023/08/18 | | |
| COC Number | | | n/a | | n/a | n/a | n/a | | |
| | UNITS | Criteria | S5 | QC Batch | S6 | S7 | S8 | RDL | QC Batch |
| **Metals** | | | | | | | | | |
| Acid Extractable Antimony (Sb) | ug/g | 1.3 | <0.20 | 8871255 | <0.20 | <0.20 | <0.20 | 0.20 | 8871067 |
| Acid Extractable Arsenic (As) | ug/g | 18 | 3.5 | 8871255 | 3.4 | 3.4 | 3.9 | 1.0 | 8871067 |
| Acid Extractable Barium (Ba) | ug/g | 220 | 65 | 8871255 | 59 | 96 | 68 | 0.50 | 8871067 |
| Acid Extractable Beryllium (Be) | ug/g | 2.5 | 0.67 | 8871255 | 0.60 | 0.77 | 0.66 | 0.20 | 8871067 |
| Acid Extractable Boron (B) | ug/g | 36 | 5.1 | 8871255 | <5.0 | 7.0 | <5.0 | 5.0 | 8871067 |
| Acid Extractable Cadmium (Cd) | ug/g | 1.2 | 0.20 | 8871255 | 0.21 | 0.33 | 0.20 | 0.10 | 8871067 |
| Acid Extractable Chromium (Cr) | ug/g | 70 | 21 | 8871255 | 17 | 23 | 21 | 1.0 | 8871067 |
| Acid Extractable Cobalt (Co) | ug/g | 22 | 8.8 | 8871255 | 8.9 | 9.4 | 8.7 | 0.10 | 8871067 |
| Acid Extractable Copper (Cu) | ug/g | 92 | 19 | 8871255 | 12 | 27 | 14 | 0.50 | 8871067 |
| Acid Extractable Lead (Pb) | ug/g | 120 | 16 | 8871255 | 15 | 17 | 16 | 1.0 | 8871067 |
| Acid Extractable Molybdenum (Mo) | ug/g | 2 | <0.50 | 8871255 | <0.50 | <0.50 | <0.50 | 0.50 | 8871067 |
| Acid Extractable Nickel (Ni) | ug/g | 82 | 18 | 8871255 | 14 | 22 | 17 | 0.50 | 8871067 |
| Acid Extractable Selenium (Se) | ug/g | 1.5 | <0.50 | 8871255 | <0.50 | <0.50 | <0.50 | 0.50 | 8871067 |
| Acid Extractable Silver (Ag) | ug/g | 0.5 | <0.20 | 8871255 | <0.20 | <0.20 | <0.20 | 0.20 | 8871067 |
| Acid Extractable Thallium (Tl) | ug/g | 1 | 0.13 | 8871255 | 0.11 | 0.14 | 0.13 | 0.050 | 8871067 |
| Acid Extractable Uranium (U) | ug/g | 2.5 | 0.57 | 8871255 | 0.72 | 1.5 | 0.73 | 0.050 | 8871067 |
| Acid Extractable Vanadium (V) | ug/g | 86 | 29 | 8871255 | 27 | 32 | 32 | 5.0 | 8871067 |
| Acid Extractable Zinc (Zn) | ug/g | 290 | 81 | 8871255 | 62 | 92 | 68 | 5.0 | 8871067 |

| | |
|---|---|
| No Fill | No Exceedance |
| Grey | Exceeds 1 criteria policy/level |
| Black | Exceeds both criteria/levels |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition
Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use



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Bureau Veritas Job #: C3P2467
Report Date: 2023/08/30

DS Consultants Limited
Client Project #: 23-267-100
Site Location: 12101 CREDITVIEW RD.
Sampler Initials: MEG

## O.REG 153 ICPMS METALS (SOIL)

| Bureau Veritas ID | | | WSX067 | WSX067 | | WSX068 | WSX069 | | |
|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | | 2023/08/18 | 2023/08/18 | | 2023/08/18 | 2023/08/18 | | |
| COC Number | | | n/a | n/a | | n/a | n/a | | |
| | UNITS | Criteria | S9 | S9 Lab-Dup | QC Batch | S10 | DUP-1 | RDL | QC Batch |
| **Metals** | | | | | | | | | |
| Acid Extractable Antimony (Sb) | ug/g | 1.3 | <0.20 | <0.20 | 8871255 | <0.20 | <0.20 | 0.20 | 8871067 |
| Acid Extractable Arsenic (As) | ug/g | 18 | 4.7 | 4.6 | 8871255 | 3.5 | 3.6 | 1.0 | 8871067 |
| Acid Extractable Barium (Ba) | ug/g | 220 | 78 | 76 | 8871255 | 63 | 68 | 0.50 | 8871067 |
| Acid Extractable Beryllium (Be) | ug/g | 2.5 | 0.67 | 0.63 | 8871255 | 0.64 | 0.70 | 0.20 | 8871067 |
| Acid Extractable Boron (B) | ug/g | 36 | 5.5 | 5.3 | 8871255 | <5.0 | 5.0 | 5.0 | 8871067 |
| Acid Extractable Cadmium (Cd) | ug/g | 1.2 | 0.27 | 0.25 | 8871255 | 0.16 | 0.22 | 0.10 | 8871067 |
| Acid Extractable Chromium (Cr) | ug/g | 70 | 20 | 20 | 8871255 | 21 | 22 | 1.0 | 8871067 |
| Acid Extractable Cobalt (Co) | ug/g | 22 | 9.1 | 8.9 | 8871255 | 8.9 | 9.1 | 0.10 | 8871067 |
| Acid Extractable Copper (Cu) | ug/g | 92 | 20 | 20 | 8871255 | 12 | 20 | 0.50 | 8871067 |
| Acid Extractable Lead (Pb) | ug/g | 120 | 13 | 13 | 8871255 | 14 | 16 | 1.0 | 8871067 |
| Acid Extractable Molybdenum (Mo) | ug/g | 2 | <0.50 | <0.50 | 8871255 | 0.51 | <0.50 | 0.50 | 8871067 |
| Acid Extractable Nickel (Ni) | ug/g | 82 | 18 | 18 | 8871255 | 16 | 19 | 0.50 | 8871067 |
| Acid Extractable Selenium (Se) | ug/g | 1.5 | <0.50 | <0.50 | 8871255 | <0.50 | <0.50 | 0.50 | 8871067 |
| Acid Extractable Silver (Ag) | ug/g | 0.5 | <0.20 | <0.20 | 8871255 | <0.20 | <0.20 | 0.20 | 8871067 |
| Acid Extractable Thallium (Tl) | ug/g | 1 | 0.12 | 0.12 | 8871255 | 0.13 | 0.13 | 0.050 | 8871067 |
| Acid Extractable Uranium (U) | ug/g | 2.5 | 0.75 | 0.74 | 8871255 | 0.73 | 0.57 | 0.050 | 8871067 |
| Acid Extractable Vanadium (V) | ug/g | 86 | 29 | 29 | 8871255 | 32 | 30 | 5.0 | 8871067 |
| Acid Extractable Zinc (Zn) | ug/g | 290 | 79 | 76 | 8871255 | 60 | 83 | 5.0 | 8871067 |

| | |
|---|---|
| No Fill | No Exceedance |
| Grey | Exceeds 1 criteria policy/level |
| Black | Exceeds both criteria/levels |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition
Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use



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## O.REG 153 OC PESTICIDES (SOIL)

| Bureau Veritas ID | | | WSX059 | WSX060 | | | WSX060 | | |
|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | | 2023/08/18 | 2023/08/18 | | | 2023/08/18 | | |
| COC Number | | | n/a | n/a | | | n/a | | |
| | UNITS | Criteria | S1 | S2 | RDL | QC Batch | S2 Lab-Dup | RDL | QC Batch |
| **Calculated Parameters** | | | | | | | | | |
| Chlordane (Total) | ug/g | 0.05 | <0.0020 | <0.0020 | 0.0020 | 8865584 | | | |
| o,p-DDD + p,p-DDD | ug/g | 0.05 | <0.0020 | <0.0020 | 0.0020 | 8865584 | | | |
| o,p-DDE + p,p-DDE | ug/g | 0.05 | <0.0020 | <0.0020 | 0.0020 | 8865584 | | | |
| o,p-DDT + p,p-DDT | ug/g | 1.4 | <0.0020 | <0.0020 | 0.0020 | 8865584 | | | |
| Total Endosulfan | ug/g | 0.04 | <0.0020 | <0.0020 | 0.0020 | 8865584 | | | |
| Total PCB | ug/g | 0.3 | <0.015 | <0.015 | 0.015 | 8865584 | | | |
| **Pesticides & Herbicides** | | | | | | | | | |
| Aldrin | ug/g | 0.05 | <0.0020 | <0.0020 | 0.0020 | 8877937 | <0.0020 | 0.0020 | 8877937 |
| a-Chlordane | ug/g | 0.05 | <0.0020 | <0.0020 | 0.0020 | 8877937 | <0.0020 | 0.0020 | 8877937 |
| g-Chlordane | ug/g | 0.05 | <0.0020 | <0.0020 | 0.0020 | 8877937 | <0.0020 | 0.0020 | 8877937 |
| o,p-DDD | ug/g | 0.05 | <0.0020 | <0.0020 | 0.0020 | 8877937 | <0.0020 | 0.0020 | 8877937 |
| p,p-DDD | ug/g | 0.05 | <0.0020 | <0.0020 | 0.0020 | 8877937 | <0.0020 | 0.0020 | 8877937 |
| o,p-DDE | ug/g | 0.05 | <0.0020 | <0.0020 | 0.0020 | 8877937 | <0.0020 | 0.0020 | 8877937 |
| p,p-DDE | ug/g | 0.05 | <0.0020 | <0.0020 | 0.0020 | 8877937 | <0.0020 | 0.0020 | 8877937 |
| o,p-DDT | ug/g | 1.4 | <0.0020 | <0.0020 | 0.0020 | 8877937 | <0.0020 | 0.0020 | 8877937 |
| p,p-DDT | ug/g | 1.4 | <0.0020 | <0.0020 | 0.0020 | 8877937 | <0.0020 | 0.0020 | 8877937 |
| Dieldrin | ug/g | 0.05 | <0.0020 | <0.0020 | 0.0020 | 8877937 | <0.0020 | 0.0020 | 8877937 |
| Lindane | ug/g | 0.01 | <0.0020 | <0.0020 | 0.0020 | 8877937 | <0.0020 | 0.0020 | 8877937 |
| Endosulfan I (alpha) | ug/g | 0.04 | <0.0020 | <0.0020 | 0.0020 | 8877937 | <0.0020 | 0.0020 | 8877937 |
| Endosulfan II (beta) | ug/g | 0.04 | <0.0020 | <0.0020 | 0.0020 | 8877937 | <0.0020 | 0.0020 | 8877937 |
| Endrin | ug/g | 0.04 | <0.0020 | <0.0020 | 0.0020 | 8877937 | <0.0020 | 0.0020 | 8877937 |
| Heptachlor | ug/g | 0.05 | <0.0020 | <0.0020 | 0.0020 | 8877937 | <0.0020 | 0.0020 | 8877937 |
| Heptachlor epoxide | ug/g | 0.05 | <0.0020 | <0.0020 | 0.0020 | 8877937 | <0.0020 | 0.0020 | 8877937 |
| Hexachlorobenzene | ug/g | 0.02 | <0.0020 | <0.0020 | 0.0020 | 8877937 | <0.0020 | 0.0020 | 8877937 |
| Hexachlorobutadiene | ug/g | 0.01 | <0.0020 | <0.0020 | 0.0020 | 8877937 | <0.0020 | 0.0020 | 8877937 |
| Hexachloroethane | ug/g | 0.01 | <0.0020 | <0.0020 | 0.0020 | 8877937 | <0.0020 | 0.0020 | 8877937 |
| Methoxychlor | ug/g | 0.05 | <0.0050 | <0.0050 | 0.0050 | 8877937 | <0.0050 | 0.0050 | 8877937 |

| | |
|---|---|
| No Fill | No Exceedance |
| Grey | Exceeds 1 criteria policy/level |
| Black | Exceeds both criteria/levels |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition
Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use



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## O.REG 153 OC PESTICIDES (SOIL)

| Bureau Veritas ID | | | WSX059 | WSX060 | | | WSX060 | | |
|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | | 2023/08/18 | 2023/08/18 | | | 2023/08/18 | | |
| COC Number | | | n/a | n/a | | | n/a | | |
| | UNITS | Criteria | S1 | S2 | RDL | QC Batch | S2 Lab-Dup | RDL | QC Batch |
| Aroclor 1242 | ug/g | - | <0.015 | <0.015 | 0.015 | 8877937 | <0.015 | 0.015 | 8877937 |
| Aroclor 1248 | ug/g | - | <0.015 | <0.015 | 0.015 | 8877937 | <0.015 | 0.015 | 8877937 |
| Aroclor 1254 | ug/g | - | <0.015 | <0.015 | 0.015 | 8877937 | <0.015 | 0.015 | 8877937 |
| Aroclor 1260 | ug/g | - | <0.015 | <0.015 | 0.015 | 8877937 | <0.015 | 0.015 | 8877937 |
| **Surrogate Recovery (%)** | | | | | | | | | |
| 2,4,5,6-Tetrachloro-m-xylene | % | - | 90 | 94 | | 8877937 | 90 | | 8877937 |
| Decachlorobiphenyl | % | - | 127 | 128 | | 8877937 | 122 | | 8877937 |

| | |
|---|---|
| No Fill | No Exceedance |
| Grey | Exceeds 1 criteria policy/level |
| Black | Exceeds both criteria/levels |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition
Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use



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## O.REG 153 OC PESTICIDES (SOIL)

| Bureau Veritas ID | | | WSX061 | | WSX062 | | WSX063 | | |
|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | | 2023/08/18 | | 2023/08/18 | | 2023/08/18 | | |
| COC Number | | | n/a | | n/a | | n/a | | |
| | UNITS | Criteria | S3 | QC Batch | S4 | QC Batch | S5 | RDL | QC Batch |
| **Calculated Parameters** | | | | | | | | | |
| Chlordane (Total) | ug/g | 0.05 | <0.0020 | 8865584 | <0.0020 | 8865584 | <0.0020 | 0.0020 | 8865584 |
| o,p-DDD + p,p-DDD | ug/g | 0.05 | <0.0020 | 8865584 | <0.0020 | 8865584 | <0.0020 | 0.0020 | 8865584 |
| o,p-DDE + p,p-DDE | ug/g | 0.05 | <0.0020 | 8865584 | <0.0020 | 8865584 | <0.0020 | 0.0020 | 8865584 |
| o,p-DDT + p,p-DDT | ug/g | 1.4 | <0.0020 | 8865584 | <0.0020 | 8865584 | <0.0020 | 0.0020 | 8865584 |
| Total Endosulfan | ug/g | 0.04 | <0.0020 | 8865584 | <0.0020 | 8865584 | <0.0020 | 0.0020 | 8865584 |
| Total PCB | ug/g | 0.3 | <0.015 | 8865584 | <0.015 | 8865584 | <0.015 | 0.015 | 8865584 |
| **Pesticides & Herbicides** | | | | | | | | | |
| Aldrin | ug/g | 0.05 | <0.0020 | 8880217 | <0.0020 | 8877937 | <0.0020 | 0.0020 | 8880217 |
| a-Chlordane | ug/g | 0.05 | <0.0020 | 8880217 | <0.0020 | 8877937 | <0.0020 | 0.0020 | 8880217 |
| g-Chlordane | ug/g | 0.05 | <0.0020 | 8880217 | <0.0020 | 8877937 | <0.0020 | 0.0020 | 8880217 |
| o,p-DDD | ug/g | 0.05 | <0.0020 | 8880217 | <0.0020 | 8877937 | <0.0020 | 0.0020 | 8880217 |
| p,p-DDD | ug/g | 0.05 | <0.0020 | 8880217 | <0.0020 | 8877937 | <0.0020 | 0.0020 | 8880217 |
| o,p-DDE | ug/g | 0.05 | <0.0020 | 8880217 | <0.0020 | 8877937 | <0.0020 | 0.0020 | 8880217 |
| p,p-DDE | ug/g | 0.05 | <0.0020 | 8880217 | <0.0020 | 8877937 | <0.0020 | 0.0020 | 8880217 |
| o,p-DDT | ug/g | 1.4 | <0.0020 | 8880217 | <0.0020 | 8877937 | <0.0020 | 0.0020 | 8880217 |
| p,p-DDT | ug/g | 1.4 | <0.0020 | 8880217 | <0.0020 | 8877937 | <0.0020 | 0.0020 | 8880217 |
| Dieldrin | ug/g | 0.05 | <0.0020 | 8880217 | <0.0020 | 8877937 | <0.0020 | 0.0020 | 8880217 |
| Lindane | ug/g | 0.01 | <0.0020 | 8880217 | <0.0020 | 8877937 | <0.0020 | 0.0020 | 8880217 |
| Endosulfan I (alpha) | ug/g | 0.04 | <0.0020 | 8880217 | <0.0020 | 8877937 | <0.0020 | 0.0020 | 8880217 |
| Endosulfan II (beta) | ug/g | 0.04 | <0.0020 | 8880217 | <0.0020 | 8877937 | <0.0020 | 0.0020 | 8880217 |
| Endrin | ug/g | 0.04 | <0.0020 | 8880217 | <0.0020 | 8877937 | <0.0020 | 0.0020 | 8880217 |
| Heptachlor | ug/g | 0.05 | <0.0020 | 8880217 | <0.0020 | 8877937 | <0.0020 | 0.0020 | 8880217 |
| Heptachlor epoxide | ug/g | 0.05 | <0.0020 | 8880217 | <0.0020 | 8877937 | <0.0020 | 0.0020 | 8880217 |
| Hexachlorobenzene | ug/g | 0.02 | <0.0020 | 8880217 | <0.0020 | 8877937 | <0.0020 | 0.0020 | 8880217 |
| Hexachlorobutadiene | ug/g | 0.01 | <0.0020 | 8880217 | <0.0020 | 8877937 | <0.0020 | 0.0020 | 8880217 |
| Hexachloroethane | ug/g | 0.01 | <0.0020 | 8880217 | <0.0020 | 8877937 | <0.0020 | 0.0020 | 8880217 |
| Methoxychlor | ug/g | 0.05 | <0.0050 | 8880217 | <0.0050 | 8877937 | <0.0050 | 0.0050 | 8880217 |
| Aroclor 1242 | ug/g | - | <0.015 | 8880217 | <0.015 | 8877937 | <0.015 | 0.015 | 8880217 |

| | |
|---|---|
| No Fill | No Exceedance |
| Grey | Exceeds 1 criteria policy/level |
| Black | Exceeds both criteria/levels |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition
Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use



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## O.REG 153 OC PESTICIDES (SOIL)

| Bureau Veritas ID | | | WSX061 | | WSX062 | | WSX063 | | |
|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | | 2023/08/18 | | 2023/08/18 | | 2023/08/18 | | |
| COC Number | | | n/a | | n/a | | n/a | | |
| | UNITS | Criteria | S3 | QC Batch | S4 | QC Batch | S5 | RDL | QC Batch |
| Aroclor 1248 | ug/g | - | <0.015 | 8880217 | <0.015 | 8877937 | <0.015 | 0.015 | 8880217 |
| Aroclor 1254 | ug/g | - | <0.015 | 8880217 | <0.015 | 8877937 | <0.015 | 0.015 | 8880217 |
| Aroclor 1260 | ug/g | - | <0.015 | 8880217 | <0.015 | 8877937 | <0.015 | 0.015 | 8880217 |
| **Surrogate Recovery (%)** | | | | | | | | | |
| 2,4,5,6-Tetrachloro-m-xylene | % | - | 103 | 8880217 | 82 | 8877937 | 98 | | 8880217 |
| Decachlorobiphenyl | % | - | 130 | 8880217 | 110 | 8877937 | 120 | | 8880217 |

| | |
|---|---|
| No Fill | No Exceedance |
| Grey | Exceeds 1 criteria policy/level |
| Black | Exceeds both criteria/levels |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition
Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use



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Bureau Veritas Job #: C3P2467
Report Date: 2023/08/30

DS Consultants Limited
Client Project #: 23-267-100
Site Location: 12101 CREDITVIEW RD.
Sampler Initials: MEG

## O.REG 153 OC PESTICIDES (SOIL)

| Bureau Veritas ID | | | WSX064 | WSX065 | WSX066 | WSX067 | WSX068 | WSX069 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | | 2023/08/18 | 2023/08/18 | 2023/08/18 | 2023/08/18 | 2023/08/18 | 2023/08/18 | | |
| COC Number | | | n/a | n/a | n/a | n/a | n/a | n/a | | |
| | UNITS | Criteria | S6 | S7 | S8 | S9 | S10 | DUP-1 | RDL | QC Batch |
| **Calculated Parameters** | | | | | | | | | | |
| Chlordane (Total) | ug/g | 0.05 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8865584 |
| o,p-DDD + p,p-DDD | ug/g | 0.05 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8865584 |
| o,p-DDE + p,p-DDE | ug/g | 0.05 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8865584 |
| o,p-DDT + p,p-DDT | ug/g | 1.4 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8865584 |
| Total Endosulfan | ug/g | 0.04 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8865584 |
| Total PCB | ug/g | 0.3 | <0.015 | <0.015 | <0.015 | <0.015 | <0.015 | <0.015 | 0.015 | 8865584 |
| **Pesticides & Herbicides** | | | | | | | | | | |
| Aldrin | ug/g | 0.05 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8877937 |
| a-Chlordane | ug/g | 0.05 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8877937 |
| g-Chlordane | ug/g | 0.05 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8877937 |
| o,p-DDD | ug/g | 0.05 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8877937 |
| p,p-DDD | ug/g | 0.05 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8877937 |
| o,p-DDE | ug/g | 0.05 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8877937 |
| p,p-DDE | ug/g | 0.05 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8877937 |
| o,p-DDT | ug/g | 1.4 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8877937 |
| p,p-DDT | ug/g | 1.4 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8877937 |
| Dieldrin | ug/g | 0.05 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8877937 |
| Lindane | ug/g | 0.01 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8877937 |
| Endosulfan I (alpha) | ug/g | 0.04 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8877937 |
| Endosulfan II (beta) | ug/g | 0.04 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8877937 |
| Endrin | ug/g | 0.04 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8877937 |
| Heptachlor | ug/g | 0.05 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8877937 |
| Heptachlor epoxide | ug/g | 0.05 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8877937 |
| Hexachlorobenzene | ug/g | 0.02 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8877937 |
| Hexachlorobutadiene | ug/g | 0.01 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8877937 |
| Hexachloroethane | ug/g | 0.01 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 | 8877937 |
| Methoxychlor | ug/g | 0.05 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 | 8877937 |
| Aroclor 1242 | ug/g | - | <0.015 | <0.015 | <0.015 | <0.015 | <0.015 | <0.015 | 0.015 | 8877937 |
| Aroclor 1248 | ug/g | - | <0.015 | <0.015 | <0.015 | <0.015 | <0.015 | <0.015 | 0.015 | 8877937 |

| | |
|---|---|
| No Fill | No Exceedance |
| Grey | Exceeds 1 criteria policy/level |
| Black | Exceeds both criteria/levels |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition
Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use



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Bureau Veritas Job #: C3P2467
Report Date: 2023/08/30

DS Consultants Limited
Client Project #: 23-267-100
Site Location: 12101 CREDITVIEW RD.
Sampler Initials: MEG

## O.REG 153 OC PESTICIDES (SOIL)

| Bureau Veritas ID | | | WSX064 | WSX065 | WSX066 | WSX067 | WSX068 | WSX069 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | | 2023/08/18 | 2023/08/18 | 2023/08/18 | 2023/08/18 | 2023/08/18 | 2023/08/18 | | |
| COC Number | | | n/a | n/a | n/a | n/a | n/a | n/a | | |
| | UNITS | Criteria | S6 | S7 | S8 | S9 | S10 | DUP-1 | RDL | QC Batch |
| Aroclor 1254 | ug/g | - | <0.015 | <0.015 | <0.015 | <0.015 | <0.015 | <0.015 | 0.015 | 8877937 |
| Aroclor 1260 | ug/g | - | <0.015 | <0.015 | <0.015 | <0.015 | <0.015 | <0.015 | 0.015 | 8877937 |
| **Surrogate Recovery (%)** | | | | | | | | | | |
| 2,4,5,6-Tetrachloro-m-xylene | % | - | 100 | 99 | 107 | 92 | 95 | 94 | | 8877937 |
| Decachlorobiphenyl | % | - | 129 | 121 | 139 (1) | 122 | 128 | 116 | | 8877937 |

| | |
|---|---|
| No Fill | No Exceedance |
| Grey | Exceeds 1 criteria policy/level |
| Black | Exceeds both criteria/levels |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition
Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
(1) Surrogate recovery was above the upper control limit due to matrix interference. This may represent a high bias in some results. For results that were not detected (ND), this potential bias has no impact.


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Bureau Veritas Job #: C3P2467
Report Date: 2023/08/30

DS Consultants Limited
Client Project #: 23-267-100
Site Location: 12101 CREDITVIEW RD.
Sampler Initials: MEG

## RESULTS OF ANALYSES OF SOIL

| Bureau Veritas ID | | | WSX059 | | WSX060 | | WSX061 | | WSX062 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | | 2023/08/18 | | 2023/08/18 | | 2023/08/18 | | 2023/08/18 | | |
| COC Number | | | n/a | | n/a | | n/a | | n/a | | |
| | UNITS | Criteria | S1 | QC Batch | S2 | QC Batch | S3 | QC Batch | S4 | RDL | QC Batch |
| **Inorganics** | | | | | | | | | | | |
| Moisture | % | - | 20 | 8870628 | 19 | 8870628 | 20 | 8870628 | 18 | 1.0 | 8870628 |
| Available (CaCl2) pH | pH | - | 6.26 | 8873477 | 6.28 | 8873459 | 5.99 | 8873459 | 6.26 | | 8873477 |
| WAD Cyanide (Free) | ug/g | 0.051 | <0.01 | 8868881 | <0.01 | 8870571 | <0.01 | 8868881 | <0.01 | 0.01 | 8868881 |

| | |
|---|---|
| No Fill | No Exceedance |
| Grey | Exceeds 1 criteria policy/level |
| Black | Exceeds both criteria/levels |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition
Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

| Bureau Veritas ID | | | WSX063 | | WSX064 | | WSX065 | | WSX066 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | | 2023/08/18 | | 2023/08/18 | | 2023/08/18 | | 2023/08/18 | | |
| COC Number | | | n/a | | n/a | | n/a | | n/a | | |
| | UNITS | Criteria | S5 | QC Batch | S6 | QC Batch | S7 | QC Batch | S8 | RDL | QC Batch |
| **Inorganics** | | | | | | | | | | | |
| Moisture | % | - | 18 | 8870628 | 18 | 8870628 | 25 | 8870628 | 19 | 1.0 | 8870628 |
| Available (CaCl2) pH | pH | - | 7.51 | 8873477 | 5.90 | 8873477 | 6.83 | 8873459 | 6.10 | | 8873477 |
| WAD Cyanide (Free) | ug/g | 0.051 | <0.01 | 8868881 | <0.01 | 8870571 | <0.01 | 8870571 | <0.01 | 0.01 | 8870571 |

| | |
|---|---|
| No Fill | No Exceedance |
| Grey | Exceeds 1 criteria policy/level |
| Black | Exceeds both criteria/levels |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition
Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use


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Bureau Veritas Job #: C3P2467
Report Date: 2023/08/30

DS Consultants Limited
Client Project #: 23-267-100
Site Location: 12101 CREDITVIEW RD.
Sampler Initials: MEG

## RESULTS OF ANALYSES OF SOIL

| Bureau Veritas ID | | | WSX067 | WSX068 | | WSX069 | | |
|---|---|---|---|---|---|---|---|---|
| Sampling Date | | | 2023/08/18 | 2023/08/18 | | 2023/08/18 | | |
| COC Number | | | n/a | n/a | | n/a | | |
| | UNITS | Criteria | S9 | S10 | QC Batch | DUP-1 | RDL | QC Batch |
| **Inorganics** | | | | | | | | |
| Moisture | % | - | 21 | 17 | 8870628 | 19 | 1.0 | 8870628 |
| Available (CaCl2) pH | pH | - | 7.37 | 6.04 | 8873477 | | | |
| WAD Cyanide (Free) | ug/g | 0.051 | <0.01 | <0.01 | 8870571 | <0.01 | 0.01 | 8870571 |

| | |
|---|---|
| No Fill | No Exceedance |
| Grey | Exceeds 1 criteria policy/level |
| Black | Exceeds both criteria/levels |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition
Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use


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## TEST SUMMARY

**Bureau Veritas ID:** WSX059 **Collected:** 2023/08/18
**Sample ID:** S1 **Shipped:**
**Matrix:** Soil **Received:** 2023/08/18

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| Free (WAD) Cyanide | TECH | 8868881 | 2023/08/22 | 2023/08/23 | Prgya Panchal |
| Acid Extractable Metals by ICPMS | ICP/MS | 8871067 | 2023/08/23 | 2023/08/28 | Daniel Teclu |
| Moisture | BAL | 8870628 | N/A | 2023/08/23 | Joe Thomas |
| OC Pesticides (Selected) & PCB | GC/ECD | 8877937 | 2023/08/25 | 2023/08/26 | Mahmudul Khan |
| OC Pesticides Summed Parameters | CALC | 8865584 | N/A | 2023/08/24 | Automated Statchk |
| pH CaCl2 EXTRACT | AT | 8873477 | 2023/08/24 | 2023/08/24 | Gurparteek KAUR |

**Bureau Veritas ID:** WSX060 **Collected:** 2023/08/18
**Sample ID:** S2 **Shipped:**
**Matrix:** Soil **Received:** 2023/08/18

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| Free (WAD) Cyanide | TECH | 8870571 | 2023/08/23 | 2023/08/23 | Jency Sara Johnson |
| Acid Extractable Metals by ICPMS | ICP/MS | 8871255 | 2023/08/23 | 2023/08/28 | Daniel Teclu |
| Moisture | BAL | 8870628 | N/A | 2023/08/23 | Joe Thomas |
| OC Pesticides (Selected) & PCB | GC/ECD | 8877937 | 2023/08/25 | 2023/08/26 | Mahmudul Khan |
| OC Pesticides Summed Parameters | CALC | 8865584 | N/A | 2023/08/24 | Automated Statchk |
| pH CaCl2 EXTRACT | AT | 8873459 | 2023/08/24 | 2023/08/24 | Gurparteek KAUR |

**Bureau Veritas ID:** WSX060 Dup **Collected:** 2023/08/18
**Sample ID:** S2 **Shipped:**
**Matrix:** Soil **Received:** 2023/08/18

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| OC Pesticides (Selected) & PCB | GC/ECD | 8877937 | 2023/08/25 | 2023/08/26 | Mahmudul Khan |

**Bureau Veritas ID:** WSX061 **Collected:** 2023/08/18
**Sample ID:** S3 **Shipped:**
**Matrix:** Soil **Received:** 2023/08/18

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| Free (WAD) Cyanide | TECH | 8868881 | 2023/08/22 | 2023/08/23 | Prgya Panchal |
| Acid Extractable Metals by ICPMS | ICP/MS | 8871067 | 2023/08/23 | 2023/08/28 | Daniel Teclu |
| Moisture | BAL | 8870628 | N/A | 2023/08/23 | Joe Thomas |
| OC Pesticides (Selected) & PCB | GC/ECD | 8880217 | 2023/08/27 | 2023/08/29 | Mahmudul Khan |
| OC Pesticides Summed Parameters | CALC | 8865584 | N/A | 2023/08/24 | Automated Statchk |
| pH CaCl2 EXTRACT | AT | 8873459 | 2023/08/24 | 2023/08/24 | Gurparteek KAUR |

**Bureau Veritas ID:** WSX062 **Collected:** 2023/08/18
**Sample ID:** S4 **Shipped:**
**Matrix:** Soil **Received:** 2023/08/18

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| Free (WAD) Cyanide | TECH | 8868881 | 2023/08/22 | 2023/08/23 | Prgya Panchal |
| Acid Extractable Metals by ICPMS | ICP/MS | 8871067 | 2023/08/23 | 2023/08/28 | Daniel Teclu |



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Bureau Veritas Job #: C3P2467
Report Date: 2023/08/30

DS Consultants Limited
Client Project #: 23-267-100
Site Location: 12101 CREDITVIEW RD.
Sampler Initials: MEG

## TEST SUMMARY

**Bureau Veritas ID:** WSX062
**Sample ID:** S4
**Matrix:** Soil

**Collected:** 2023/08/18
**Shipped:**
**Received:** 2023/08/18

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| Moisture | BAL | 8870628 | N/A | 2023/08/23 | Joe Thomas |
| OC Pesticides (Selected) & PCB | GC/ECD | 8877937 | 2023/08/25 | 2023/08/26 | Mahmudul Khan |
| OC Pesticides Summed Parameters | CALC | 8865584 | N/A | 2023/08/24 | Automated Statchk |
| pH CaCl2 EXTRACT | AT | 8873477 | 2023/08/24 | 2023/08/24 | Gurparteek KAUR |

**Bureau Veritas ID:** WSX063
**Sample ID:** S5
**Matrix:** Soil

**Collected:** 2023/08/18
**Shipped:**
**Received:** 2023/08/18

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| Free (WAD) Cyanide | TECH | 8868881 | 2023/08/22 | 2023/08/23 | Prgya Panchal |
| Acid Extractable Metals by ICPMS | ICP/MS | 8871255 | 2023/08/23 | 2023/08/28 | Daniel Teclu |
| Moisture | BAL | 8870628 | N/A | 2023/08/23 | Joe Thomas |
| OC Pesticides (Selected) & PCB | GC/ECD | 8880217 | 2023/08/27 | 2023/08/29 | Mahmudul Khan |
| OC Pesticides Summed Parameters | CALC | 8865584 | N/A | 2023/08/24 | Automated Statchk |
| pH CaCl2 EXTRACT | AT | 8873477 | 2023/08/24 | 2023/08/24 | Gurparteek KAUR |

**Bureau Veritas ID:** WSX064
**Sample ID:** S6
**Matrix:** Soil

**Collected:** 2023/08/18
**Shipped:**
**Received:** 2023/08/18

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| Free (WAD) Cyanide | TECH | 8870571 | 2023/08/23 | 2023/08/23 | Jency Sara Johnson |
| Acid Extractable Metals by ICPMS | ICP/MS | 8871067 | 2023/08/23 | 2023/08/28 | Daniel Teclu |
| Moisture | BAL | 8870628 | N/A | 2023/08/23 | Joe Thomas |
| OC Pesticides (Selected) & PCB | GC/ECD | 8877937 | 2023/08/25 | 2023/08/26 | Mahmudul Khan |
| OC Pesticides Summed Parameters | CALC | 8865584 | N/A | 2023/08/24 | Automated Statchk |
| pH CaCl2 EXTRACT | AT | 8873477 | 2023/08/24 | 2023/08/24 | Gurparteek KAUR |

**Bureau Veritas ID:** WSX065
**Sample ID:** S7
**Matrix:** Soil

**Collected:** 2023/08/18
**Shipped:**
**Received:** 2023/08/18

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| Free (WAD) Cyanide | TECH | 8870571 | 2023/08/23 | 2023/08/23 | Jency Sara Johnson |
| Acid Extractable Metals by ICPMS | ICP/MS | 8871067 | 2023/08/23 | 2023/08/28 | Daniel Teclu |
| Moisture | BAL | 8870628 | N/A | 2023/08/23 | Joe Thomas |
| OC Pesticides (Selected) & PCB | GC/ECD | 8877937 | 2023/08/25 | 2023/08/26 | Mahmudul Khan |
| OC Pesticides Summed Parameters | CALC | 8865584 | N/A | 2023/08/24 | Automated Statchk |
| pH CaCl2 EXTRACT | AT | 8873459 | 2023/08/24 | 2023/08/24 | Gurparteek KAUR |



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Bureau Veritas Job #: C3P2467
Report Date: 2023/08/30

DS Consultants Limited
Client Project #: 23-267-100
Site Location: 12101 CREDITVIEW RD.
Sampler Initials: MEG

## TEST SUMMARY

**Bureau Veritas ID:** WSX066
**Sample ID:** S8
**Matrix:** Soil

**Collected:** 2023/08/18
**Shipped:**
**Received:** 2023/08/18

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| Free (WAD) Cyanide | TECH | 8870571 | 2023/08/23 | 2023/08/23 | Jency Sara Johnson |
| Acid Extractable Metals by ICPMS | ICP/MS | 8871067 | 2023/08/23 | 2023/08/28 | Daniel Teclu |
| Moisture | BAL | 8870628 | N/A | 2023/08/23 | Joe Thomas |
| OC Pesticides (Selected) & PCB | GC/ECD | 8877937 | 2023/08/25 | 2023/08/26 | Mahmudul Khan |
| OC Pesticides Summed Parameters | CALC | 8865584 | N/A | 2023/08/24 | Automated Statchk |
| pH CaCl2 EXTRACT | AT | 8873477 | 2023/08/24 | 2023/08/24 | Gurparteek KAUR |

**Bureau Veritas ID:** WSX067
**Sample ID:** S9
**Matrix:** Soil

**Collected:** 2023/08/18
**Shipped:**
**Received:** 2023/08/18

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| Free (WAD) Cyanide | TECH | 8870571 | 2023/08/23 | 2023/08/23 | Jency Sara Johnson |
| Acid Extractable Metals by ICPMS | ICP/MS | 8871255 | 2023/08/23 | 2023/08/28 | Daniel Teclu |
| Moisture | BAL | 8870628 | N/A | 2023/08/23 | Joe Thomas |
| OC Pesticides (Selected) & PCB | GC/ECD | 8877937 | 2023/08/25 | 2023/08/26 | Mahmudul Khan |
| OC Pesticides Summed Parameters | CALC | 8865584 | N/A | 2023/08/24 | Automated Statchk |
| pH CaCl2 EXTRACT | AT | 8873477 | 2023/08/24 | 2023/08/24 | Gurparteek KAUR |

**Bureau Veritas ID:** WSX067 Dup
**Sample ID:** S9
**Matrix:** Soil

**Collected:** 2023/08/18
**Shipped:**
**Received:** 2023/08/18

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| Acid Extractable Metals by ICPMS | ICP/MS | 8871255 | 2023/08/23 | 2023/08/28 | Daniel Teclu |

**Bureau Veritas ID:** WSX068
**Sample ID:** S10
**Matrix:** Soil

**Collected:** 2023/08/18
**Shipped:**
**Received:** 2023/08/18

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| Free (WAD) Cyanide | TECH | 8870571 | 2023/08/23 | 2023/08/23 | Jency Sara Johnson |
| Acid Extractable Metals by ICPMS | ICP/MS | 8871067 | 2023/08/23 | 2023/08/28 | Daniel Teclu |
| Moisture | BAL | 8870628 | N/A | 2023/08/23 | Joe Thomas |
| OC Pesticides (Selected) & PCB | GC/ECD | 8877937 | 2023/08/25 | 2023/08/26 | Mahmudul Khan |
| OC Pesticides Summed Parameters | CALC | 8865584 | N/A | 2023/08/24 | Automated Statchk |
| pH CaCl2 EXTRACT | AT | 8873477 | 2023/08/24 | 2023/08/24 | Gurparteek KAUR |

**Bureau Veritas ID:** WSX069
**Sample ID:** DUP-1
**Matrix:** Soil

**Collected:** 2023/08/18
**Shipped:**
**Received:** 2023/08/18

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| Free (WAD) Cyanide | TECH | 8870571 | 2023/08/23 | 2023/08/23 | Jency Sara Johnson |
| Acid Extractable Metals by ICPMS | ICP/MS | 8871067 | 2023/08/23 | 2023/08/28 | Daniel Teclu |



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Bureau Veritas Job #: C3P2467
Report Date: 2023/08/30

DS Consultants Limited
Client Project #: 23-267-100
Site Location: 12101 CREDITVIEW RD.
Sampler Initials: MEG

## TEST SUMMARY

**Bureau Veritas ID:** WSX069
**Sample ID:** DUP-1
**Matrix:** Soil

**Collected:** 2023/08/18
**Shipped:**
**Received:** 2023/08/18

| Test Description | Instrumentation | Batch | Extracted | Date Analyzed | Analyst |
|---|---|---|---|---|---|
| Moisture | BAL | 8870628 | N/A | 2023/08/23 | Joe Thomas |
| OC Pesticides (Selected) & PCB | GC/ECD | 8877937 | 2023/08/25 | 2023/08/26 | Mahmudul Khan |
| OC Pesticides Summed Parameters | CALC | 8865584 | N/A | 2023/08/24 | Automated Statchk |



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## GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

| | |
|---|---|
| Package 1 | 18.7°C |

**Results relate only to the items tested.**



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## QUALITY ASSURANCE REPORT



| | | | Matrix Spike | | SPIKED BLANK | | Method Blank | | RPD | |
|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % Recovery | QC Limits | % Recovery | QC Limits | Value | UNITS | Value (%) | QC Limits |
| 8877937 | 2,4,5,6-Tetrachloro-m-xylene | 2023/08/29 | 90 | 50 - 130 | 83 | 50 - 130 | 81 | % | | |
| 8877937 | Decachlorobiphenyl | 2023/08/29 | 114 | 50 - 130 | 108 | 50 - 130 | 114 | % | | |
| 8880217 | 2,4,5,6-Tetrachloro-m-xylene | 2023/08/29 | 108 | 50 - 130 | 98 | 50 - 130 | 94 | % | | |
| 8880217 | Decachlorobiphenyl | 2023/08/29 | 128 | 50 - 130 | 117 | 50 - 130 | 120 | % | | |
| 8868881 | WAD Cyanide (Free) | 2023/08/23 | 78 | 75 - 125 | 94 | 80 - 120 | <0.01 | ug/g | NC | 35 |
| 8870571 | WAD Cyanide (Free) | 2023/08/23 | 83 | 75 - 125 | 95 | 80 - 120 | <0.01 | ug/g | NC | 35 |
| 8870628 | Moisture | 2023/08/23 | | | | | | | 1.8 | 20 |
| 8871067 | Acid Extractable Antimony (Sb) | 2023/08/28 | 104 | 75 - 125 | 100 | 80 - 120 | <0.20 | ug/g | NC | 30 |
| 8871067 | Acid Extractable Arsenic (As) | 2023/08/28 | 104 | 75 - 125 | 102 | 80 - 120 | <1.0 | ug/g | 3.4 | 30 |
| 8871067 | Acid Extractable Barium (Ba) | 2023/08/28 | NC | 75 - 125 | 100 | 80 - 120 | <0.50 | ug/g | 0.76 | 30 |
| 8871067 | Acid Extractable Beryllium (Be) | 2023/08/28 | 104 | 75 - 125 | 96 | 80 - 120 | <0.20 | ug/g | 3.6 | 30 |
| 8871067 | Acid Extractable Boron (B) | 2023/08/28 | 99 | 75 - 125 | 91 | 80 - 120 | <5.0 | ug/g | NC | 30 |
| 8871067 | Acid Extractable Cadmium (Cd) | 2023/08/28 | 106 | 75 - 125 | 99 | 80 - 120 | <0.10 | ug/g | NC | 30 |
| 8871067 | Acid Extractable Chromium (Cr) | 2023/08/28 | 102 | 75 - 125 | 101 | 80 - 120 | <1.0 | ug/g | 8.3 | 30 |
| 8871067 | Acid Extractable Cobalt (Co) | 2023/08/28 | 102 | 75 - 125 | 101 | 80 - 120 | <0.10 | ug/g | 0.45 | 30 |
| 8871067 | Acid Extractable Copper (Cu) | 2023/08/28 | 102 | 75 - 125 | 100 | 80 - 120 | <0.50 | ug/g | 2.9 | 30 |
| 8871067 | Acid Extractable Lead (Pb) | 2023/08/28 | 59 (1) | 75 - 125 | 100 | 80 - 120 | <1.0 | ug/g | 84 (2) | 30 |
| 8871067 | Acid Extractable Molybdenum (Mo) | 2023/08/28 | 106 | 75 - 125 | 98 | 80 - 120 | <0.50 | ug/g | NC | 30 |
| 8871067 | Acid Extractable Nickel (Ni) | 2023/08/28 | 101 | 75 - 125 | 100 | 80 - 120 | <0.50 | ug/g | 1.0 | 30 |
| 8871067 | Acid Extractable Selenium (Se) | 2023/08/28 | 107 | 75 - 125 | 101 | 80 - 120 | <0.50 | ug/g | NC | 30 |
| 8871067 | Acid Extractable Silver (Ag) | 2023/08/28 | 110 | 75 - 125 | 105 | 80 - 120 | <0.20 | ug/g | NC | 30 |
| 8871067 | Acid Extractable Thallium (Tl) | 2023/08/28 | 106 | 75 - 125 | 103 | 80 - 120 | <0.050 | ug/g | 0.67 | 30 |
| 8871067 | Acid Extractable Uranium (U) | 2023/08/28 | 105 | 75 - 125 | 100 | 80 - 120 | <0.050 | ug/g | 1.7 | 30 |
| 8871067 | Acid Extractable Vanadium (V) | 2023/08/28 | 103 | 75 - 125 | 100 | 80 - 120 | <5.0 | ug/g | 0.72 | 30 |
| 8871067 | Acid Extractable Zinc (Zn) | 2023/08/28 | NC | 75 - 125 | 101 | 80 - 120 | <5.0 | ug/g | 6.5 | 30 |
| 8871255 | Acid Extractable Antimony (Sb) | 2023/08/28 | 98 | 75 - 125 | 103 | 80 - 120 | <0.20 | ug/g | NC | 30 |
| 8871255 | Acid Extractable Arsenic (As) | 2023/08/28 | 105 | 75 - 125 | 102 | 80 - 120 | <1.0 | ug/g | 2.7 | 30 |
| 8871255 | Acid Extractable Barium (Ba) | 2023/08/28 | NC | 75 - 125 | 99 | 80 - 120 | <0.50 | ug/g | 2.3 | 30 |
| 8871255 | Acid Extractable Beryllium (Be) | 2023/08/28 | 101 | 75 - 125 | 98 | 80 - 120 | <0.20 | ug/g | 5.5 | 30 |
| 8871255 | Acid Extractable Boron (B) | 2023/08/28 | 90 | 75 - 125 | 91 | 80 - 120 | <5.0 | ug/g | 3.7 | 30 |
| 8871255 | Acid Extractable Cadmium (Cd) | 2023/08/28 | 105 | 75 - 125 | 101 | 80 - 120 | <0.10 | ug/g | 7.2 | 30 |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | SPIKED BLANK | | Method Blank | | RPD | |
|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % Recovery | QC Limits | % Recovery | QC Limits | Value | UNITS | Value (%) | QC Limits |
| 8871255 | Acid Extractable Chromium (Cr) | 2023/08/28 | 104 | 75 - 125 | 99 | 80 - 120 | <1.0 | ug/g | 2.0 | 30 |
| 8871255 | Acid Extractable Cobalt (Co) | 2023/08/28 | 104 | 75 - 125 | 100 | 80 - 120 | <0.10 | ug/g | 2.3 | 30 |
| 8871255 | Acid Extractable Copper (Cu) | 2023/08/28 | 97 | 75 - 125 | 98 | 80 - 120 | <0.50 | ug/g | 3.0 | 30 |
| 8871255 | Acid Extractable Lead (Pb) | 2023/08/28 | 101 | 75 - 125 | 101 | 80 - 120 | <1.0 | ug/g | 3.3 | 30 |
| 8871255 | Acid Extractable Molybdenum (Mo) | 2023/08/28 | 102 | 75 - 125 | 99 | 80 - 120 | <0.50 | ug/g | NC | 30 |
| 8871255 | Acid Extractable Nickel (Ni) | 2023/08/28 | 102 | 75 - 125 | 102 | 80 - 120 | <0.50 | ug/g | 5.0 | 30 |
| 8871255 | Acid Extractable Selenium (Se) | 2023/08/28 | 106 | 75 - 125 | 104 | 80 - 120 | <0.50 | ug/g | NC | 30 |
| 8871255 | Acid Extractable Silver (Ag) | 2023/08/28 | 109 | 75 - 125 | 106 | 80 - 120 | <0.20 | ug/g | NC | 30 |
| 8871255 | Acid Extractable Thallium (Tl) | 2023/08/28 | 105 | 75 - 125 | 104 | 80 - 120 | <0.050 | ug/g | 2.2 | 30 |
| 8871255 | Acid Extractable Uranium (U) | 2023/08/28 | 104 | 75 - 125 | 102 | 80 - 120 | <0.050 | ug/g | 1.7 | 30 |
| 8871255 | Acid Extractable Vanadium (V) | 2023/08/28 | NC | 75 - 125 | 97 | 80 - 120 | <5.0 | ug/g | 2.1 | 30 |
| 8871255 | Acid Extractable Zinc (Zn) | 2023/08/28 | NC | 75 - 125 | 102 | 80 - 120 | <5.0 | ug/g | 3.7 | 30 |
| 8873459 | Available (CaCl2) pH | 2023/08/24 | | | 100 | 97 - 103 | | | 0.71 | N/A |
| 8873477 | Available (CaCl2) pH | 2023/08/24 | | | 101 | 97 - 103 | | | 0.43 | N/A |
| 8877937 | a-Chlordane | 2023/08/26 | 92 | 50 - 130 | 84 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8877937 | Aldrin | 2023/08/26 | 83 | 50 - 130 | 77 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8877937 | Aroclor 1242 | 2023/08/26 | | | | | <0.015 | ug/g | NC | 40 |
| 8877937 | Aroclor 1248 | 2023/08/26 | | | | | <0.015 | ug/g | NC | 40 |
| 8877937 | Aroclor 1254 | 2023/08/26 | | | | | 0.022, RDL=0.015 (3) | ug/g | NC | 40 |
| 8877937 | Aroclor 1260 | 2023/08/26 | | | | | <0.015 | ug/g | NC | 40 |
| 8877937 | Dieldrin | 2023/08/26 | 116 | 50 - 130 | 115 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8877937 | Endosulfan I (alpha) | 2023/08/26 | 96 | 50 - 130 | 114 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8877937 | Endosulfan II (beta) | 2023/08/26 | 113 | 50 - 130 | 106 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8877937 | Endrin | 2023/08/26 | 113 | 50 - 130 | 110 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8877937 | g-Chlordane | 2023/08/26 | 89 | 50 - 130 | 83 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8877937 | Heptachlor epoxide | 2023/08/26 | 98 | 50 - 130 | 104 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8877937 | Heptachlor | 2023/08/26 | 91 | 50 - 130 | 85 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8877937 | Hexachlorobenzene | 2023/08/26 | 89 | 50 - 130 | 71 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8877937 | Hexachlorobutadiene | 2023/08/26 | 88 | 50 - 130 | 90 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8877937 | Hexachloroethane | 2023/08/26 | 66 | 50 - 130 | 70 | 50 - 130 | <0.0020 | ug/g | NC | 40 |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | SPIKED BLANK | | Method Blank | | RPD | |
|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % Recovery | QC Limits | % Recovery | QC Limits | Value | UNITS | Value (%) | QC Limits |
| 8877937 | Lindane | 2023/08/26 | 84 | 50 - 130 | 79 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8877937 | Methoxychlor | 2023/08/26 | 111 | 50 - 130 | 115 | 50 - 130 | <0.0050 | ug/g | NC | 40 |
| 8877937 | o,p-DDD | 2023/08/26 | 108 | 50 - 130 | 103 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8877937 | o,p-DDE | 2023/08/26 | 99 | 50 - 130 | 104 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8877937 | o,p-DDT | 2023/08/26 | 99 | 50 - 130 | 92 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8877937 | p,p-DDD | 2023/08/26 | 108 | 50 - 130 | 110 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8877937 | p,p-DDE | 2023/08/26 | 98 | 50 - 130 | 97 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8877937 | p,p-DDT | 2023/08/26 | 103 | 50 - 130 | 94 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8880217 | a-Chlordane | 2023/08/29 | 118 | 50 - 130 | 97 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8880217 | Aldrin | 2023/08/29 | 94 | 50 - 130 | 91 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8880217 | Aroclor 1242 | 2023/08/29 | | | | | <0.015 | ug/g | NC | 40 |
| 8880217 | Aroclor 1248 | 2023/08/29 | | | | | <0.015 | ug/g | NC | 40 |
| 8880217 | Aroclor 1254 | 2023/08/29 | | | | | <0.015 | ug/g | NC | 40 |
| 8880217 | Aroclor 1260 | 2023/08/29 | | | | | <0.015 | ug/g | NC | 40 |
| 8880217 | Dieldrin | 2023/08/29 | 109 | 50 - 130 | 109 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8880217 | Endosulfan I (alpha) | 2023/08/29 | 116 | 50 - 130 | 105 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8880217 | Endosulfan II (beta) | 2023/08/29 | 107 | 50 - 130 | 99 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8880217 | Endrin | 2023/08/29 | 109 | 50 - 130 | 105 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8880217 | g-Chlordane | 2023/08/29 | 104 | 50 - 130 | 96 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8880217 | Heptachlor epoxide | 2023/08/29 | 91 | 50 - 130 | 99 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8880217 | Heptachlor | 2023/08/29 | 105 | 50 - 130 | 96 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8880217 | Hexachlorobenzene | 2023/08/29 | 106 | 50 - 130 | 102 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8880217 | Hexachlorobutadiene | 2023/08/29 | 112 | 50 - 130 | 113 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8880217 | Hexachloroethane | 2023/08/29 | 78 | 50 - 130 | 85 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8880217 | Lindane | 2023/08/29 | 110 | 50 - 130 | 96 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8880217 | Methoxychlor | 2023/08/29 | 113 | 50 - 130 | 113 | 50 - 130 | <0.0050 | ug/g | NC | 40 |
| 8880217 | o,p-DDD | 2023/08/29 | 116 | 50 - 130 | 112 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8880217 | o,p-DDE | 2023/08/29 | 109 | 50 - 130 | 98 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8880217 | o,p-DDT | 2023/08/29 | 109 | 50 - 130 | 109 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8880217 | p,p-DDD | 2023/08/29 | 107 | 50 - 130 | 108 | 50 - 130 | <0.0020 | ug/g | NC | 40 |
| 8880217 | p,p-DDE | 2023/08/29 | 121 | 50 - 130 | 112 | 50 - 130 | <0.0020 | ug/g | NC | 40 |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | SPIKED BLANK | | Method Blank | | RPD | |
|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % Recovery | QC Limits | % Recovery | QC Limits | Value | UNITS | Value (%) | QC Limits |
| 8880217 | p,p-DDT | 2023/08/29 | 119 | 50 - 130 | 162 (4) | 50 - 130 | <0.0020 | ug/g | NC | 40 |

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Metals Analysis: Matrix Spike exceeds acceptance limits, sample inhomogeneity suspected.

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(3) Analyte was detected in the method blank at a level marginally above the detection limit. This may represent a high bias in some results. For results that were not detected (ND), this potential bias has no impact.

(4) The recovery was above the upper control limit. This may represent a high bias in some results for flagged analytes. For results that were not detected (ND), this potential bias has no impact.



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## VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Brad Newman, B.Sc., C.Chem., Scientific Service Specialist

Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



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Bureau Veritas Job #: C3P2467
Report Date: 2023/08/30

DS Consultants Limited
Client Project #: 23-267-100
Site Location: 12101 CREDITVIEW RD.
Sampler Initials: MEG

## Exceedance Summary Table – Reg153/04 T8-Soil/Res

### Result Exceedances

| Sample ID | Bureau Veritas ID | Parameter | Criteria | Result | DL | UNITS |
|---|---|---|---|---|---|---|
| No Exceedances | | | | | | |

The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.


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Phone: 905-817-5700 Fax: 905-817-5779 Toll Free: 800-563-6266
CAM FCD-01191/6

# CHAIN OF CUSTODY RECORD

Page 1 of 2

| Invoice Information | Report Information (if differs from invoice) | Project Information (where applicable) | Turnaround Time (TAT) Required |
|---|---|---|---|
| Company Name: DS Consultants | Company Name: DS Consultants | Quotation #: | [x] Regular TAT (5-7 days) Most analyses |
| Contact Name: Accounting. | Contact Name: Megan Bender | P.O. #/ AFE#: | PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PRO |
| Address: | Address: | Project #: 23-267-100 | Rush TAT (Surcharges will be applied) |
| Phone: Fax: | Phone: Fax: | Site Location: 12101 Creditview Rd. | [ ] 1 Day [ ] 2 Days [ ] 3-4 Days |
| Email: | Email: mbender@dsconsultants.ca | Site #: | Date Required: |
| | | Site Location Province: | Rush Confirmation #: |
| | | Sampled By: Megan | |

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

| Regulation 153 | Other Regulations |
|---|---|
| [ ] Table 1 [x] Res/Park [ ] Med/ Fine | [ ] CCME [ ] Sanitary Sewer Bylaw |
| [ ] Table 2 [ ] Ind/Comm [ ] Coarse | [ ] MISA [ ] Storm Sewer Bylaw |
| [ ] Table 3 [ ] Agri/ Other | [ ] PWQO Region |
| [x] Table 8 | [ ] Other (Specify) |
| FOR RSC (PLEASE CIRCLE) Y / N | [ ] REG 558 (MIN. 3 DAY TAT REQUIRED) |
| | [ ] REG 406 Table |

Include Criteria on Certificate of Analysis: (Y) / N

SAMPLES MUST BE KEPT COOL ( < 10 °C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

| | SAMPLE IDENTIFICATION | DATE SAMPLED (YYYY/MM/DD) | TIME SAMPLED (HH:MM) | MATRIX | # OF CONTAINERS SUBMITTED | FIELD FILTERED (CIRCLE) Metals / Hg / CrVI | BTEX/ PHC F1 | PHCs F2 - F4 | VOCs | REG 153 METALS & INORGANICS | REG 153 ICPMS METALS | REG 153 METALS (Hg, Cr VI, ICPMS Metals, HWS - B) | PAHs | OCPs | Metals As, Sb, Se, CN | pH | | | | HOLD- DO NOT ANALYZE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | S1 | 2023/08/18 | PM | S | 2 | | | | | | | | | L | L | L | | | | |
| 2 | S2 | | | | 2 | | | | | | | | | L | L | L | | | | |
| 3 | S3 | | | | 2 | | | | | | | | | L | L | L | | | | |
| 4 | S4 | | | | 2 | | | | | | | | | L | L | L | | | | |
| 5 | S5 | | | | 2 | | | | | | | | | L | L | L | | | | |
| 6 | S6 | | | | 2 | | | | | | | | | L | L | L | | | | |
| 7 | S7 | | | | 2 | | | | | | | | | L | L | L | | | | |
| 8 | S8 | | | | 2 | | | | | | | | | L | L | L | | | | |
| 9 | S9 | | | | 2 | | | | | | | | | L | L | L | | | | |
| 10 | S10 | | | | 2 | | | | | | | | | L | L | L | | | | |

LABORATORY USE ONLY

| CUSTODY SEAL Y / N | | COOLER TEMPERATU |
|---|---|---|
| Present | Intact | |
| Y | Y | 18/19/15 |
| | | |
| | | |

COOLING MEDIA PRESENT: (Y) / N

COMMENTS

18-Aug-23 16:26
Ashton Gibson
C3P2467
A1V ENV-1571

| RELINQUISHED BY: (Signature/Print) | DATE: (YYYY/MM/DD) | TIME: (HH:MM) | RECEIVED BY: (Signature/Print) | DATE: (YYYY/MM/DD) | TIME: (HH:MM) |
|---|---|---|---|---|---|
| | 2023/08/18 | | C3P2467 | 2023/08/18 | 16:26 |
| | | | | | |

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Onice

6740 Campobello Road, Mississauga, Ontario L5N 2L8
Phone: 905-817-5700 Fax: 905-817-5779 Toll Free: 800-563-6266
CAM FCD-01191/6

# CHAIN OF CUSTODY RECORD



| Invoice Information | Report Information (if differs from invoice) | Project Information (where applicable) | Turnaround Time (TAT) Required |
|---|---|---|---|
| Company Name: DS Consultants | Company Name: DS Consultants | Quotation #: | [x] Regular TAT (5-7 days) Most analyses |
| Contact Name: Accounting | Contact Name: Megan Bender | P.O. #/ AFE#: | PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PRO |
| Address: | Address: | Project #: 23-267-100 | Rush TAT (Surcharges will be applied) |
| Phone: Fax: | Phone: Fax: | Site Location: 12101 Creditview Rd | [ ] 1 Day [ ] 2 Days [ ] 3-4 Days |
| Email: | Email: mbender@dsconsultants.ca | Site #: | Date Required: |
| | | Site Location Province: | Rush Confirmation #: |
| | | Sampled By: | |

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

| Regulation 153 | Other Regulations |
|---|---|
| [ ] Table 1 [x] Res/Park [ ] Med/ Fine | [ ] CCME [ ] Sanitary Sewer Bylaw |
| [ ] Table 2 [ ] Ind/Comm [ ] Coarse | [ ] MISA [ ] Storm Sewer Bylaw |
| [ ] Table 3 [ ] Agri/ Other | [ ] PWQO Region |
| [x] Table 8 | [ ] Other (Specify) |
| FOR RSC (PLEASE CIRCLE) Y / N | [ ] REG 558 (MIN. 3 DAY TAT REQUIRED) |
| | [ ] REG 406 Table |

Include Criteria on Certificate of Analysis: (Y) / N

**SAMPLES MUST BE KEPT COOL ( < 10 °C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS**

| | SAMPLE IDENTIFICATION | DATE SAMPLED (YYYY/MM/DD) | TIME SAMPLED (HH:MM) | MATRIX | # OF CONTAINERS SUBMITTED | FIELD FILTERED (CIRCLE) Metals / Hg / CrVI | BTEX/ PHC F1 | PHCs F2 - F4 | VOCs | REG 153 METALS & INORGANICS | REG 153 ICPMS METALS | REG 153 METALS (Hg, Cr VI, ICPMS Metals, HWS - B) | PAHs | OCPs Metals, As, Sb, Se, CN- pH | | | | HOLD- DO NOT ANALYZE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | DUP - 1 | 2023/10/18 | | S | 2 | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | |

Analysis Requested

LABORATORY USE ONLY

| CUSTODY SEAL Y / N | | COOLER TEMPERATU |
|---|---|---|
| Present | Intact | |
| | | |
| | | |
| | | |

COOLING MEDIA PRESENT: Y / N

COMMENTS

| RELINQUISHED BY: (Signature/Print) | DATE: (YYYY/MM/DD) | TIME: (HH:MM) | RECEIVED BY: (Signature/Print) | DATE: (YYYY/MM/DD) | TIME: (HH:MM) |
|---|---|---|---|---|---|
| | 2023/10/18 | | All page 1 | | |
| | | | | | |

BV JOB #

# Appendix E

# Phase Two Conceptual Site Model

This Phase Two Conceptual Site Model has been prepared for the property comprised of Part of Lots 18 & 19 Concession 3, Caledon, Ontario, herein referred to as the "Site". This Phase Two CSM was developed through a synthesis of the information obtained through the completion of the Phase One ESA, and the data collected as part of the Phase Two ESA. The Phase Two CSM is comprised of the following Figures and text.

**FIGURES**

Figure 1 – Site Location Plan
Figure 2 – Phase Two Property Site Plan
Figure 3 – Phase One Study Area
Figure 4 – PCA within Phase One Study Area
Figure 5 – Borehole/Monitoring Well location plan with APECs
Figure 6 – Groundwater Contours and Flow Direction
Figure 7A – Soil Characterization – Metals and ORPs
Figure 7B – Soil Characterization – OCPs
Figure 8 – Contaminant Transport Diagram

The Phase Two Property is an irregularly shaped 59.97-hectare (148.19 acres) parcel of land situated within a rural neighbourhood in the Town of Caledon, Ontario. The Phase Two Property is located approximately 390 m northwest of the intersection of Creditview Road and Mayfield Road and was occupied by agricultural fields at the time of this investigation.

The Property contains agricultural fields with no structures. A Site Plan depicting the Site is provided in Figure 2.

A Phase One ESA was completed in September 2023. The results of the Phase One ESA identified four (4) areas of potential environmental concern on the Property associated with the following historical and current uses:

- Two (2) historical orchards on the west-central portion of the Site;
- One (1) historical orchard on the south end of the Site;
- Pesticides may be used on the agricultural fields on Site; and
- The inferred use of de-icing agents on the adjacent roadways.

The environmental soil conditions on the Site were investigated through the completion of 13 boreholes between August 9, 2023 and August 14, 2023. The boreholes were advanced to a maximum depth of 8.2 metres below ground surface (mbgs) under the supervision of DS personnel. Groundwater monitoring wells were installed in five (5) of the boreholes for the assessment of groundwater flow direction. The borehole locations were determined based on the findings of the Phase One ESA. All APECs were investigated with boreholes and/or monitoring wells in accordance with the requirements of O.Reg. 153/04 (as amended). Soil samples were collected and submitted for analysis of all PCOCs, including: Metals, As, Sb, Se, CN-, pH, EC, SAR, and organochlorinated pesticides (OCPs).

The soil analytical results were compared to the "Table 8: Generic Site Condition Standards for a Potable Groundwater Condition within 30 m of a Water Body for Residential/Parkland/Institutional use" provided in the MECP document entitled, "*Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*" dated April 15, 2011 *(*Table 8 Standards*)* for coarse-textured soils and residential/parkland/institutional property use.

Based on the results of the Phase Two ESA, it was concluded that the soil and groundwater quality on the Site met the applicable MECP Table 8 SCS as of the Certification Date of August 30, 2023.

## I. Description and Assessment of:

### A. <u>Areas where potentially contaminating activity has occurred</u>

A total of nine (9) PCAs were identified in the Phase One ESA. A summary of the PCAs considered to be contributing to APECs on the Phase Two Property is provided in the table below.

| PCA Item. | PCA Description (Per. Table 2, Schedule D of O.Reg. 153/04) | Description | Rationale |
|---|---|---|---|
| PCA-3 | #40 – Pesticides Manufacturing, Processing, Bulk Storage and Large-Scale Applications | The Peel County Atlas shows two (2) orchards on the central portion of the Site. | Yes – APEC-1 |
| PCA-6 | #40 – Pesticides Manufacturing, Processing, Bulk Storage and Large-Scale Applications | Pesticides may be used on the agricultural fields on Site. | Yes – APEC-2 |
| PCA-5 | #N/S – Seasonal De-Icing Activities | The west portion of the adjacent roadway | Yes – APEC-3A |

| PCA Item. | PCA Description (Per. Table 2, Schedule D of O.Reg. 153/04) | Description | Rationale |
|---|---|---|---|
| | | (Creditview Road) may be subject to de-icing activities. | |
| PCA-8 | #40 – Pesticides Manufacturing, Processing, Bulk Storage and Large-Scale Applications | The Peel County Atlas shows an orchard on the south corner of the Site. | Yes – APEC-4 |
| PCA-10 | #N/S – Seasonal De-Icing Activities | The southeast portion of the adjacent roadway (Creditview Road) may be subject to de-icing activities. | Yes – APEC-3B |
| PCA-11 | #N/S – Seasonal De-Icing Activities | The east adjacent roadway (Mayfield Road) may be subject to de-icing activities. | Yes – APEC-3C |

N/S - not specified in Table 2, Schedule D, of O.Reg. 153/04

## B. Areas of potential environmental concern

A total of four (4) APECs were identified to be present on the Phase Two Property through the completion of the Phase One ESA. A summary of the APECs identified, and the associated PCOCs is provided in the table below.

| Area of Potential Environmental Concern | Location of Area of Potential Environmental Concern on Phase One Property | Potentially Contaminating Activity | Location of PCA (on-site or off-site) | Contaminants of Potential Concern | Media Potentially Impacted (Ground water, soil and/or sediment) |
|---|---|---|---|---|---|
| APEC-1 | Central portion of the Site | #40 – Pesticides Manufacturing, Processing, Bulk Storage and Large-Scale Applications | On Site **PCA-3** | OCPs, Metals, As, Sb, Se, CN- | Soil |
| APEC-2 | Entire Site | #40 – Pesticides Manufacturing, Processing, Bulk Storage and Large-Scale Applications | On Site **PCA-6** | OCPs, Metals, As, Sb, Se, CN- | Soil |
| APEC-3A | West portion of the Site | #N/S – Seasonal De-Icing Activities[1] | Off Site **PCA-5 PCA-10 PCA-11** | EC, SAR | Soil |
| APEC-3B | Southwest portion of the Site | | | | |
| APEC-3C | Southeast portion of the Site | | | | |

| Area of Potential Environmental Concern | Location of Area of Potential Environmental Concern on Phase One Property | Potentially Contaminating Activity | Location of PCA (on-site or off-site) | Contaminants of Potential Concern | Media Potentially Impacted (Ground water, soil and/or sediment) |
|---|---|---|---|---|---|
| APEC-4 | South corner of the Site | #40 – Pesticides Manufacturing, Processing, Bulk Storage and Large-Scale Applications | On Site **PCA-8** | OCPs, Metals, As, Sb, Se, CN- | Soil |

N/S - not specified in Table 2, Schedule D, of O.Reg. 153/04

**C. <u>Any subsurface structures and utilities on, in or under the Phase Two Property that may affect contaminant distribution and transport</u>**

The groundwater table was encountered at depths ranging from 0.70 to 1.80 mbgs on the Phase Two Property. The Site has not been developed, therefore it is unlikely that utility corridors may act as preferential pathways for contaminant distribution and transport in the event that shallow subsurface contaminants exist at the Phase Two Property.

**Description of, and as appropriate, figures illustrating, the physical setting of the Phase Two Property and any areas under it including:**

**D. <u>Stratigraphy from ground surface to the deepest aquifer or aquitard investigated</u>**

A surficial layer of topsoil approximately 200 to 400 mm in thickness was encountered in all of the boreholes advanced. Reworked clayey silt material with trace amounts of organics and sand was encountered below the topsoil. The reworked material was generally heterogeneous and ranged in thickness from 0.5 to 1.9 metres. BH23-511 encountered silty sand below the reworked material with a thickness of 2.2 mbgs. The native overburden material encountered consisted of clayey silt till, with trace amounts of sand and gravel. The clayey silt till unit extended to a maximum depth of 6.7 mbgs and ranged in thickness from 2.3-5.9 m. Silty sand till was encountered below the clayey silt till in BH23-501, BH23-506 to BH23-513 to borehole termination at 6.7 to 8.2 mbgs.

The borehole locations are depicted on Figure 5.

### E. Hydrogeological Characteristics, including aquifers, aquitards and, in each hydrostratigraphic unit where one or more contaminants is present at concentrations above the applicable site condition standards, lateral and vertical gradients

The groundwater table was encountered in a clayey silt till unit encountered at an approximate depth of 0.2 to 6.7 mbgs, which is considered to be an unconfined aquifer.

Based on the groundwater elevations, the groundwater flow direction is interpreted to be southeasterly towards Fletcher's Creek.

The horizontal hydraulic gradient was calculated based on the groundwater levels recorded on August 29. 2023.

**Table 5-1: Summary of Horizontal Hydraulic Gradient Calculations**

| Hydrogeological Unit | Calculated Horizontal Hydraulic Gradient |
|---|---|
| Overburden – clayey silt till | Minimum: 0.00582<br>Average: 0.00064<br>Maximum: 0.00847 |

The vertical hydraulic gradient was not calculated, as no groundwater impacts were identified on the Phase Two Property.

### F. Depth to bedrock

Bedrock was not encountered in this investigation, however, based on the "Bedrock Topography and Overburden Thickness Mapping, Southern Ontario, prepared by Ontario Geological Survey, published 2006," the bedrock is anticipated to be encountered at a depth of approximately 20 to 25 mbgs.

### G. Approximate depth to water table

The depth to groundwater was found to range between 0.70 to 1.80 mbgs on August 29, 2023.

### H. Any respect in which sections 35, 41 or 43.1 of the regulation applies to the property

Section 35

Section 35 does not apply to the Site as the Town of Caledon relies on groundwater for potable water.

Section 41

The pH values measured for both surface and sub-surface soil samples were within the acceptable limits for non-sensitive sites. There are no areas of natural significance on the Phase Two Property, or within 30 m of the Phase Two Property. As such the Phase Two Property is not considered to be environmentally sensitive as defined by Section 41.

Section 43.1

The Phase Two Property is not considered a shallow soil property, however a creek traverses the west boundary of the Site. Section 43.1 is applicable.

**I. Areas on, in or under the Phase Two Property where excess soil is finally placed**

Based on the review of the obtained documents, there was no indication of fill material of unknown quality being imported to the Site.

**J. Approximate locations, if known, of any proposed buildings and other structures**

It is our understanding that redevelopment of the Site for residential purposes has been proposed, and that the development will feature a low-rise subdivision. It is further understood that the proposed development will occupy the entirety of the Phase Two Property.

**II. Where a contaminant is present on, in or under the Phase Two Property at a concentration greater than the applicable site condition standard, identification of**

**A. Each area where a contaminant is present on, in or under the Phase Two Property at a concentration greater than the applicable SCS**

All of the soil and groundwater samples analyzed met the MECP Table 8 SCS. Plans depicting the sample locations and chemical analyses are provided in Figures 7A and 7B.

**B. The contaminants associated with each of the areas**

All of the soil and groundwater samples met the MECP Table 8 SCS.

**C. Medium that contaminants were identified in**

All of the soil and groundwater samples met the MECP Table 8 SCS.

**D. Description and assessment of what is know about each of the areas**

APEC-1 was identified at the Site relating to the presence of two (2) historical orchards on the central portion of the Site. The soil quality met within APEC-1 met the MECP Table 8 SCS.

APEC-2 was identified on the Site relating to the possible use of pesticides on the agricultural fields across the Site. The soil quality within APEC-2 met the MECP Table 8 SCS.

APEC-3 was identified on the Site relating to the application of de-icing agents on the adjacent roadways. The soil quality within APEC-3 met the MECP Table 8 SCS.

APEC-4 was identified on the Site relating to the presence of a historical orchard on the south corner of the Site. The soil quality met within APEC-4 met the MECP Table 8 SCS.

**E. Distribution in which the areas of each contaminant is present in the area at a concentration greater than the applicable SCS, for each medium in which the contaminant is present, together with figures showing the distribution**

Not applicable – All of the soil and groundwater samples analyzed met the MECP Table 8 SCS.

**F. Anything know about the reason for the discharge of the contaminants present on, in or under the Phase Two Property at a concentrations greater than the applicable SCS**

Not applicable – All of the soil and groundwater samples analyzed met the MECP Table 8 SCS.

**G. Anything known about migration of the contaminants present on, in or under the phase two property at a concentration greater than the applicable SCS away from any area of potential environmental concern, including the identification of any preferential pathways**

Not applicable – Contaminant concentrations were below the MECP Table 8 SCS. Contaminant migration is not considered to be an issue of concern with respect to the soil and groundwater quality at the Site.

**H. <u>Climatic or meteorological conditions that may have influenced distribution and migration of the contaminants, such as temporal fluctuations in groundwater levels</u>**

Soil and groundwater impacts were not identified on the Site, as such, temporal fluctuations in groundwater levels are not considerer to be of concern with respect to contaminant distribution and/or migration of contaminants.

**I. <u>Information concerning soil vapour intrusion of the contaminants into buildings</u>**

No volatile parameters were identified at concentrations greater than the applicable SCS, therefore vapour intrusion is not considered to be an exposure pathway at this time.

**III. Where contaminants on, in or under the Phase Two Property are present at concentrations greater than the applicable SCS, one or more cross-sections showing**

**A. <u>The lateral and vertical distribution of a contaminant in each area where the contaminants are present at concentrations greater than the applicable SCS in soil, groundwater and sediment</u>**

**B. <u>Approximate depth to water table</u>**

**C. <u>Stratigraphy from ground surface to the deepest aquifer or aquitard investigated</u>**

**D. <u>Any subsurface structures and utilities that may affect contaminants distribution and transport</u>**

Contaminants were not identified at levels in excess of the applicable MECP Table 8 SCS.

**IV. For each area where a contaminant is present on, in or under the property at a concentration greater than the applicable SCS for the contaminant, a diagram identifying, with narrative explanatory notes**

**A. The release mechanisms**

B. **Contaminant transport pathway**
C. **The human and ecological receptors located on, in or under the phase two property**
D. **Receptor exposure points**
E. **Routes of exposure**

A visual representation of potential contaminant transport pathways is provided in Figure 8.