

September 12, 2018 Project No. 1543767

Cavanagh Developments

9490 Cavanagh Road Ashton, Ontario K0A 1B0

ONTARIO REGULATION 153/04 PHASE ONE ENVIRONMENTAL SITE ASSESSMENT UPDATE 2596 CARP ROAD OTTAWA, ONTARIO

Dear Mr. Houle

Further to the request from Cavanagh Developments (Cavanagh), Golder Associates Ltd. (Golder) is pleased to provide this Phase One Environmental Site Assessment (ESA) Update for the property located at 2596 Carp Road in Ottawa, Ontario (the "Site"). The Site currently consists of approximately 29 hectares of irregularly shaped, undeveloped land. The Site currently includes a residence and a Cover-All structure located along the northern Site boundary, as well as some commercial/industrial activity encroaching on the southwestern part of the Site at the time of the Site visit, with the storage of some heavy equipment (namely drilling equipment) and recycled rubber. Fill placement and fill storage was also noted on the southern part of the Site.

Activities carried out in association with this Phase One ESA Update consisted of the following:

- A review of the previous Ontario Regulation 153/04 Phase One ESA completed in 2016;
- A site visit in order to update the site conditions since the last report in 2016; and,
- Completion of this Phase One ESA Update letter memo.

The purpose of the work is to provide an update of the Phase One ESA conducted previously at the Site, in support of the City of Ottawa Site Plan Application process for the development of the property for industrial uses. This report should be read in conjunction with the 2016 Phase One ESA report.

1.0 OVERVIEW OF THE 2016 PHASE I ESA

An Ontario Regulation 153/04 Phase One ESA was conducted at the site in May 2016 by Golder. The findings and recommendations of the 2016 Phase One ESA (Golder Project #1543767) were documented in a report entitled "Phase One Environmental Site Assessment, Part of Lot 6, Concession 2, Township of Huntley, Ottawa, Ontario" prepared by Golder for Cavanagh Developments Limited and dated May 2016. The Phase One ESA was completed for five municipal addresses in Ottawa, Ontario: 2596 Carp Road, 2115 Richardson Side Road, 2135 Richardson Side Road, 2149 Richardson Side Road, and 117 Westhunt Drive.

At the time of the Site reconnaissance, conducted on April 25, 2016, the Site consisted of an approximately 38 hectare irregularly shaped parcel of land (which includes the M-Con property). The Site includes land that is proposed for future development and currently has a residence and a Cover-All structure located on the Site. There are also temporary structures located on Site, including old trailers in the vicinity of the residence and Cover-All structure, possibly associated with former operations at the Site. Buildings currently located on the Site are expected to be residential and formerly industrial/commercial in nature. There is was also some commercial/industrial activity encroaching on the western part of the Site at the time of the Site visit, with the storage of some heavy equipment and recycled rubber stored on the Site. Fill placement and fill storage was also noted on the southern part of the Site.

At the time of the 2016 Phase One ESA, it was understood that the Phase One Property was to be redeveloped with industrial and/or commercial properties. The Site is owned by Cavanaugh (northern block) and M-Con (southern block). Based on the review of available information, the Phase One Property appears to have been primarily vacant land since at least 1945. There was equipment stored on the Site between 2004 and 2014, which may be associated with the commercial or industrial works on adjacent properties along Carp Road and Richardson Side Road. A residence was constructed on the property around 2004 (approximately) and a cover-all structure was constructed at similar time. A smaller structure was also constructed southwest of the residence prior to 2014. Pathways/roadways were constructed across the northwest portion of the Site prior to 1999. Areas of fill placement and/or storage have been noted on the Site between 2008 and 2014.

The following is a list of PCAs that were identified in the 2016 Phase One ESA:

- Importation of Fill Material of Unknown Quality Piles of unknown material were noted to be on the Site in aerial images reviewed between 2008 and 2013, specifically in the area of 2135 Richardson Side Road;
- Industrial Land Use The Site appears to have been used as a commercial or industrial property (heavy construction equipment stored on-Site, fill materials/supplies stored on Site, metal bins and/or trailers stored on Site, hydrocarbon staining);
- Commercial Autobody Shops west of the Site there are the following commercial shops within the Study Area: uHaul (with drive in bays, possibly for repair), former Nortrax property (heavy equipment sales and service) and Riviera Automobiles;
- Industrial Land Use There is a concrete product manufacturing facility located within the Study Area (MCon), south of Richardson Side Road;
- Waste Disposal and Waste Management The properties at 107 and 111 Westhunt Road is a waste management site (recycling facility) and there is also a recycling facility at 2173 Richardson Side Road.



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Based on the information obtained and reviewed as part of this Phase One ESA, the following PCAs resulted in APECs on 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 (Groundwater, soil and/or Sediment)
1. Potential for soil and groundwater impacts due to the reported presence of fill on the Site.	See Figure 1	Fill is reportedly present across the Site.	On-Site	Metals, PAHs	Soil and Groundwater
2. Potential for soil and groundwater impacts due to the possible former industrial land use of the Site as well as off-Site industrial land uses encroaching on the Site	See Figure 1	The Site appears to have been used as a commercial or industrial property (heavy construction equipment stored on-Site, fill materials/supplies stored on Site, metal bins and/or trailers stored on Site, hydrocarbon staining, at least one AST in service at some point on the Site, with staining). West of the Site there are the following commercial shops within the Study Area: uHaul (with drive in bays, possibly for repair), former Nortrax property (heavy equipment sales and service) and Riviera Automobiles. The properties at 107 and 111 Westhunt Road are a waste management site (recycling facility) and there is also a recycling facility at 2173 Richardson Side Road.	On-Site and off- Site	PHCs/BTEX, VOCs, PAHs, metals	Soil and Groundwater



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For the purposes of the Phase One ESA Update and for additional clarity, PCA/APECs have been renumbered as discussed in Section 4.2.

The Phase One ESA was completed in accordance with O.Reg. 153/04 and included a review of available current and historical information on the Site and surrounding properties, a Site walkover, interviews, evaluation of readily available information, Phase One Conceptual Site Model and reporting, subject to the limitations outlined in Section 10.0 of the report.

Based on the findings of the Phase One ESA a Phase Two ESA was recommended for the Site. Existing monitoring wells on the Site, as identified during the 2016 Site Reconnaissance, may be of use during the Phase Two ESA in order to evaluate potential groundwater impacts related to some of the APECs.

2.0 AUGUST 2018 SITE RECONNAISSANCE

The 2018 Phase One ESA Update and Site visit was completed exclusively for the property located at the municipal address of 2596 Carp Road, Ottawa, Ontario. Mr. Erik Lalonde, Environmental Consultant with Golder, completed the site visit on August 10, 2018 and interviewed Mr. Ben Houle of Cavanagh Developments (the "Site Representative"). The Site visit conducted by Golder was accompanied by Mr. Ben Houle of Cavanagh Developments and consisted of a visual assessment of the Site exterior during a walk around, as well as viewing of adjacent properties from publicly accessible areas (refer to photographs in Attachment A). Noteworthy findings from the site visit and interview, as well as noted changes from the site condition at the time of the 2016 Phase I ESA are discussed below:

- The onsite AST/Generator Storage and Equipment Storage Areas identified in the 2016 Phase One ESA consisted of a storage yard for two tenants, notably M-Roc Ltd and Gal Power Systems Ottawa Ltd according to the site representative.
- The onsite storage yard leased by Gal Power Systems Ottawa Ltd (herein referred to as the AST/Generator Storage area) featured storage of five (5) new generators, five (5) new/used ASTs, and shipping containers. The piping of the generators and ASTs were not connected, and the equipment was not operational during the site visit. The equipment appeared to be stored onsite for later shipment to another location. No staining or evidence of contamination was noted during the Site visit.
- The onsite storage yard leased by M-Roc Ltd. featured storage of drilling/heavy equipment and stockpiling of scrap rubber tires (herein referred to as the Equipment Storage Area). A maintenance garage along with oils and fluids (namely rock drill oil and hydraulic oil) used for operating and maintaining the drilling equipment was also observed in this location during the Site visit. The fluids were stored in appropriately labelled steel and plastic drums. Three (3) ASTs were identified in the Equipment Storage Area used by M-Rock Ltd (referred to as APEC 2A, 2B and 2C in Figure 1); two (2) out of the three (3) ASTs (APEC 2A and APEC 2C in Figure 1) exhibited staining on the ground immediately adjacent to the tanks. The ASTs appear to be actively used for fueling the drilling equipment stored onsite. The location of the ASTs is shown on Figure 1.
- Areas of imported fill were observed immediately northeast of the AST/Generator Storage Area, as outlined by areas of topographic highs containing coarse granular material (identified as APEC 1E in Figure 1). Areal photographs from 2004 showed evidence of fill placement in this area. Roof shingles and stockpiled lumber were also identified during the 2018 site visit.



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- The area of the property that features a residence appears to have remained unchanged from the 2016 Phase One ESA.
- The AST connected to the west wall of the Cover-All Structure in the 2016 Phase One ESA that featured staining (herein referred to as the Former AST or APEC 2D) was not observed during the 2018 site visit. The Former AST, along with the exterior piping located outside of the Cover-All Structure, appeared to be removed, however the ground featured noticeable staining. The location of the Former AST is shown on Figure 1. The other two (2) ASTs identified in the 2016 Phase One ESA located along the northern site boundary were also not observed during the 2018 site visit.
- According to the Site Representative, the Cover-All Structure was leased to a tenant that operated a fuel oil tank installation and removal business. The tenant vacated the property in 2017 and removed the three (3) ASTs along with the rest of his equipment from the Site. The temporary "Site Trailer", the forklift, and the piece of heavy equipment identified in the 2016 Phase One ESA were also not observed during the 2018 Site visit and were likely removed during the vacating process.
- The two (2) concrete foundations located to the northeast of the Cover-All Structure were observed during the 2018 site visit and appeared to have remained unchanged from the 2016 Phase One ESA.
- The surrounding properties remain largely unchanged from the 2016 Phase One ESA.

3.0 RECORDS REVIEW

Updated regulatory requests were completed as part of this Phase One ESA update letter.

3.1 Ministry of Environment, Conservation and Parks

A request for information was submitted to the MOECP by Golder to determine if the MOECP has information on historical spills, orders, investigations or prosecutions, waste generation and Certificates of Approval with respect to the Site. The request was submitted August 21, 2018.

At the time of writing this report, no response had been received. If a response is received within 12 months of request submittal, Golder will review the response and advise of any noteworthy findings.

3.2 Ministry of Natural Resources and Forestry

Ontario's Ministry of Natural Resources and Forestry ("MNRF") was asked to search their records for the following:

- Information about areas of natural significance in the vicinity of the Site; and,
- Any other environmental concerns related to the Site and surrounding area.

At the time of writing this report, no response had been received. If a response is received within 12 months of request submittal, Golder will review the response and advise of any noteworthy findings.

3.3 Technical Standards and Safety Authority (TSSA), Fuels Safety Division

The TSSA maintains records related to registered underground storage tanks ("USTs") for petroleum-related products. The TSSA was contacted on August 21, 2018 to establish the status of the Site and to identify outstanding instructions, incident reports, fuel oil spills or contamination records.



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On August 22, 2018, TSSA reported via e-mail that the following records were identified for the Study Area:

■ 2300 Carp Road, Lot 20, Concession 7, Carp, located approximately 1.6 km south east of Site, has a record of 7 expired aboveground storage tanks (ASTs).

3.4 Historical Land Use Inventory (HLUI)

Golder conducted a search within the City of Ottawa's Historical Land Use Inventory (HLUI) and environmental (i.e., violations, sewer-use infractions, spills or leaks, waste disposal sites, etc.) databases for information concerning the Site and surrounding area.

The City of Ottawa HLUI did not identify any new records for the Study Area from those identified in the 2016 Phase One ESA.

4.0 SUMMARY OF FINDINGS

Relevant information regarding the environmental conditions of the Site, based on the Phase One ESA Update, is summarized below

4.1 Potentially Contaminating Activities

The following table summarizes the PCAs for the Site. Figure 1 indicates the location of identified PCAs.

Potentially Contaminating Activity	Location of PCA in Relation to the Site (See Figure 1)	Potentially Contaminating Activity (PCA) and Description of the Activity	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (groundwater, soil and/or sediment)
PCA A1	Southwest of the Site, hydraulically upgradient, greater than 150 metres away	#10 Commercial Autobody Shops (uHaul, former Nortrax property, heavy equipment sales and service)	Off-site	PHC/BTEX, Metals, PAHs, VOCs, Metals	Groundwater
PCA A2	Southwest of the Site, hydraulically upgradient	#10 Commercial Autobody Shops (Riviera Automobiles).	Off-site	PHC/BTEX, Metals, PAHs, VOCs, Metals	Groundwater



Potentially Contaminating Activity	Location of PCA in Relation to the Site (See Figure 1)	Potentially Contaminating Activity (PCA) and Description of the Activity	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (groundwater, soil and/or sediment)
PCA B1 to B5	PCA B1 – Diesel / Gasoline AST in Equipment Storage Area	#28 Gasoline and Associated Products Storage in Fixed Tanks Diesel / gasoline / waste oil tanks are/were used in specific locations on the Site. Newly constructed, unused generator ASTs are also stored onsite.	Onsite	PHC/BTEX, PAHs, VOCs	Soil and Groundwater
	PCA B2 - Diesel / Gasoline AST in Equipment Storage Area				
	PCA B3 - Diesel / Gasoline AST in Equipment Storage Area				
	PCA B4 – Former AST adjacent to the Cover-All Structure				
	PCA B5 – New / Used generators ASTs and new generators (not connected and functioning) in the AST / Generator Storage Area				
PCA C – Waste Management / Sorting Facility for dry construction materials	PCA C – Southeast of Site, hydraulically cross-gradient	#58 Waste Disposal and Waste Management The properties at 107 and 111 Westhunt Road are waste transfer / sorting management facilities owned by Tomlinson for recycling purposes.	Offsite	PHC/BTEX, Metals, PAHs,	Soil and Groundwater



Potentially Contaminating Activity	Location of PCA in Relation to the Site (See Figure 1)	Potentially Contaminating Activity (PCA) and Description of the Activity	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (groundwater, soil and/or sediment)
PCA D1 to D6	PCA D1 – Northeast of the Cover-All Structure	#30 Importation of Fill of Unknown Quality Potential importation of fill of unknown quality is present at certain locations on the Site	Onsite	PHC/BTEX, PAHs, Metals	Soil and Groundwater
	PCA D2 – Northeast of the Cover-All Structure				
	PCA D3 – Near the Residence				
	PCA D4 – Near the Cover-All Structure				
	PCA D5 – Northeast of the Equipment Storage Area				
	PCA D6 – At the Equipment Storage and AST / Generator Storage Area				

4.2 Areas of Potential Environmental Concern

The following table summarizes the APECs for the Site. Figure 1 indicates the location of identified APECs.

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property (See Figure 1)	Potentially Contaminating Activity (PCA) and Description of the Activity	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (groundwater, soil and/or sediment)
APEC #1A to APEC #1F Importation of Fill of Unknown Quality	APEC 1A – Northeast of the Cover-All Structure APEC 1B – Northeast of the Cover-All Structure APEC 1C – Near the Residence APEC 1D – Near the Cover-All Structure APEC 1E – Northeast of the Equipment Storage Area APEC 1F – At the Equipment Storage and AST / Generator Storage Area	Fill of Unknown Quality Potential importation of fill of unknown quality is present at certain locations on the Site	Onsite	PHC/BTEX, PAHs, Metals	Soil and Groundwater
APEC #2A to #2E	APEC 2A - Currently used AST in the Equipment Storage Area APEC 2B - Currently used AST in the Equipment Storage Area APEC 2C - Currently used AST in the Equipment Storage Area APEC 2C - Currently used AST in the Equipment Storage Area APEC 2D - Former AST adjacent to the Cover-All Structure APEC 2E - New/used generator ASTs and new generators (not connected and functioning) in the AST/Generator Storage Area	#28 Gasoline and Associated Products Storage in Fixed Tanks Diesel and gasoline tanks are/were used in specific locations on the Site. Newly constructed, unused generator ASTs are also stored onsite.	Onsite	PHC/BTEX, PAHs, VOCs	Soil and Groundwater
APEC #3	APEC 3 – South east portion of Site	#10 Commercial Autobody Shops (Riviera Automobiles)	Off-Site	PHC/BTEX, PAHs, VOCs	Groundwater



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PCA A1 was not interpreted to represent an APEC for the Site due to the distance from the Site. PCA C was not interpreted to represent an APEC given that the waste management/sorting facility is inferred to be located cross-gradient from the Phase One Property based on local topography, PCA C contained largely stockpiled lumber and other dry construction materials with absence of liquid waste and absence of field indications of potential impact to the Site during the 2016 and 2018 Site visits.

5.0 CONCLUSIONS

This Phase One ESA Update has identified no new APECs for the Site. Based on the presence of APECs as described above, a Phase Two ESA is required to support a Site Plan Application.

6.0 STUDY LIMITATIONS

This report was prepared for the exclusive use of Cavanagh Developments and is intended to provide an assessment of the current environmental conditions for the property located at 2596 Carp Road in Ottawa, Ontario. Any use which another party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of the other parties. Should additional parties require reliance on this report, written authorization from Golder Associates Ltd. will be required. No assurance is made regarding the accuracy and completeness of the data obtained from other parties. Golder Associates Ltd. disclaims responsibility for consequential financial effects on transactions or property values, or requirements for follow-up actions and costs.

The report is based on data and information collected during the Phase One ESA Update visit of the site conducted by Golder Associates Ltd. It is based solely on conditions of the site encountered at the time of the site visit on August 10, 2018, supplemented by a review of historical information and data obtained by Golder Associates Ltd. as described in this report. No soil, water, liquid, gas, mould, product or chemical sampling and analytical testing at or in the vicinity of the site were conducted as part of this assessment.

In evaluating the site, Golder Associates Ltd. has relied in good faith on information provided by others noted in this report. We have assumed that the information provided is factual and accurate. We accept no responsibility for any deficiency, misstatement or inaccuracy contained in this report as a result of omissions, misinterpretations or fraudulent acts of persons contacted.

If new information is discovered during future work, including but not limited to, site assessment, excavations, borings or other studies, Golder Associates Ltd. should be requested to re-evaluate the conclusions presented in this report and to provide amendments as required.



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CLOSURE

We trust the above meets with your current requirements. Should you have any comments, questions, or require additional information, please do not hesitate to contact this office.

Yours truly,

Golder Associates Ltd.

Erik Lalonde, M.Sc, P.Geo

Hydrogeologist

Paul Hurst, M.A.Sc., P.Eng, QPESA

P. A. HUR

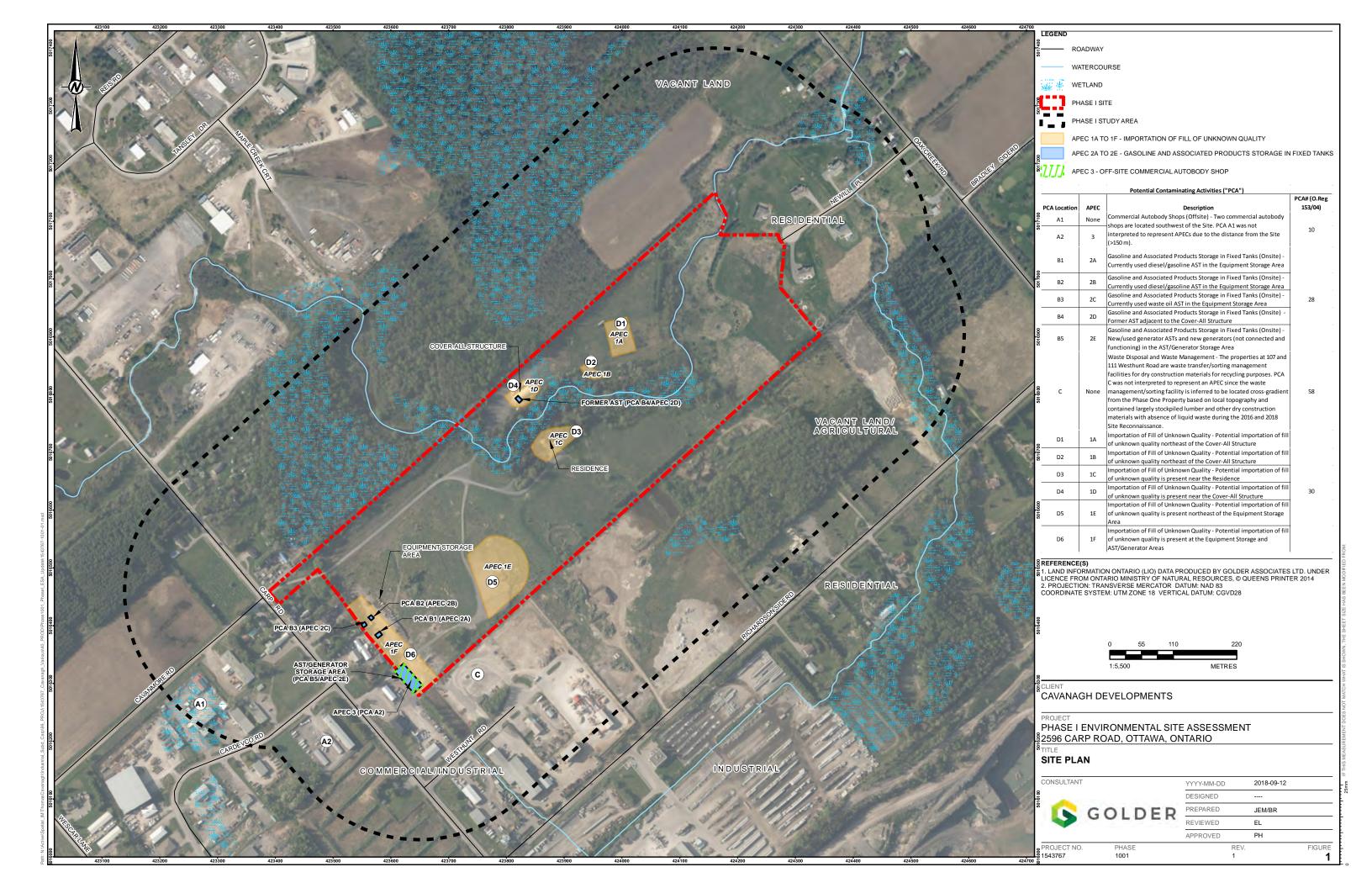
Associate - Senior Project Manager

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Attachments: Figure 1 – Site Plan

Attachment A - Site Photographs



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Site Photographs





Photo 1: View of the AST/Generator Storage Area occupied by Gal Power Systems Ottawa. Facing southwest.



Photo 2: View of the AST/Generator Storage Area occupied by Gal Power Systems Ottawa. No staining/odour observed. Facing southwest.



Photo 3: View of new generators in the AST/Generator Storage Area occupied by Gal Power Systems Ottawa. Facing southwest.



Photo 4: View of used ASTs in the AST/Generator Storage Area occupied by Gal Power Systems Ottawa. No staining/odour observed. Facing southwest.



Photo 5: View of new/used ASTs in the AST/Generator Storage Area occupied by Gal Power Systems Ottawa. No staining/odour observed. Facing southwest.



Photo 6: View of the maintenance garage and drilling equipment in the Equipment Storage Area occupied by M-Roc Ltd. Facing southwest.



Photo 7: View of stockpiled scrap rubber tires and drilling equipment on the Equipment Storage Area occupied by M-Roc Ltd. Facing northeast.



Photo 8: View of an actively used diesel AST (APEC 2A) on the Equipment Storage Area occupied by M-Roc Ltd. Facing south.



Photo 9: View of an actively used diesel AST (APEC 2A) and slight ground staining on the Equipment Storage Area occupied by M-Roc Ltd. Facing north.



Photo 10: View of an actively used AST (APEC 2B) on the Equipment Storage Area occupied by M-Roc Ltd. No staining/odour observed. Facing southwest.



Photo 11: View of an actively used AST (APEC 2B) on the Equipment Storage Area occupied by M-Roc Ltd. No staining/odour observed. Facing northeast.



Photo 12: View of an actively used AST (APEC 2C) on the Equipment Storage Area occupied by M-Roc Ltd. Slight staining and odour observed. Facing northeast.



Photo 13: View of an actively used AST (APEC 2C) on the Equipment Storage Area occupied by M-Roc Ltd. Slight staining and odour observed. Facing northeast.



Photo 14: View of hydraulic oil drums on the Equipment Storage Area occupied by M-Roc Ltd. No evidence of contamination. Facing southeast.



Photo 15: View of imported fill area immediately northeast of the Equipment Storage Area (APEC 1E). The area consists of coarse granular material. Facing southeast.



Photo 16: View of imported fill area immediately northeast of the Equipment Storage Area. The area consists of coarse granular material. Facing southeast.



Photo 17: View of the onsite residence, which appears to have remained unchanged from the 2016 Phase One ESA. Facing north.



Photo 18: View of the west wall of Cover-All Structure, where the out-of-service AST (Former AST) was located in the April 2016 site visit. Visible staining was observed. Facing northeast.



Photo 19: View of the west wall of Cover-All Structure, where the out-of-service AST (Former AST) was located in the April 2016 site visit. Visible staining was observed. Facing northeast.



Photo 20: View of concrete foundation with wood debris identified in the 2016 Phase One ESA.