September 28, 2021

Waggy Inc.

Attn: **Ms. Tasha Mazza**

Re: **Phase One Environmental Site Assessment Summary Letter: 2294 & 2300 Queensway Drive, Burlington, ON**

Hallex Environmental Ltd. (Hallex) was retained by Waggy Inc. c/o Ms. Tasha Mazza to conduct a Phase One Environmental Site Assessment (ESA) Update of the study site located at 2294 & 2300 Queensway Drive, Burlington, ON. A Phase One ESA and Phase Two ESA reports (July 2019) were given to Hallex. Given that the initial reports are greater than 18 months (the industry accepted timeline for a report to be considered valid), a Phase One ESA Update was completed with the focus being on any changes to the study site and sites within the study area dating from 2019 to current.

SCOPE OF INVESTIGATION

The objectives of the Phase One ESA were an investigation of the subject property and adjacent lands conducted in accordance with O. Reg. 153/04 as amended, and under the supervision of a Qualified Person in order to determine the likelihood that one or more contaminants may have affected any land and/or water on, in or under the property. Potentially Contaminating Activities (PCAs), and contaminants or materials of potential concern, if revealed on-site, or at properties located within a 250 m radius of the site, were evaluated as to whether they generated 'Areas of Potential Environmental Concern' (APECs). PCAs are itemized in Schedule D Table 2 of O. Reg 511/09. APECs, if identified, were individually evaluated whether they were triggers for additional investigation via a Phase Two ESA. Additionally, building materials were documented regarding the potential need for a Designated Substance and Hazardous materials Survey.

RECORDS REVIEW

Review of historic records including aerial images indicated previous land use as agricultural dating from 1934 prior to site development for residential purposes in the circa 1950s. Residential use has continued until present day with one (1) dwelling demolished between 2019-2021. Site location and adjacent land uses are shown in Figures 1 and 2.

Aerial Photographs

A review of the aerial photographs from 1934, 1950, 1965, 1974, 1986, 1992, 2005, 2016 and 2021 revealed that the study site was developed for agricultural purposes as early as 1934 and eventually was redeveloped as two residential dwellings (2294 & 2300 Queensway Drive) circa 1950s. The surrounding land uses included residential dwellings to the south, east and west of the Study Site and a rural highway north of the Study Site, which eventually developed into the Queen Elizabeth Highway. One (1) of the dwellings, located on the northwestern corner of the Study Site as well as a personal garage, were dismantled between 2019 and 2021. Fill material of unknown quality may have been placed in the former basement area of the historic dwelling, therefore creates a PCA that results in an on-site APEC.

Environmental Databases

The following agencies and documents were reviewed for the study site from, focusing on 2016 – 2020:

- *National Pollutant Release Inventory;*
- *Ministry of Natural Resources MNR;*
- *Waste Disposal Site Inventory;*
- *Environmental Registry of Ontario; and*
- *Coal Gasification Sites Inventory;*
- *PCB Waste Storage Inventory;*

No sites within 250 m of the study site were found to contain any of the above-mentioned activities. Additionally, the study site was not listed on the MNR or NPCA maps as having areas of natural significance.

Previous Reports

Phase One ESA – 2294 & 2300 Queensway Drive, Burlington, ON; MTE Consultants Inc., July 2019

The 2019 Phase One ESA identified two (2) residential dwellings that were historically heated by furnace oil stored in above-ground storage tanks (ASTs) located in the basement of each dwelling. The heating oil was converted to natural gas in 1984. Also noted that historically the site was a fruit orchard in 1934, noting that pesticides may have been applied. Both of these PCAs were identified as on-site APECs, therefore required a Phase Two ESA.

Phase One ESA – 2294 & 2300 Queensway Drive, Burlington, ON; MTE Consultants Inc., July 2019

The Phase Two ESA advanced thirteen (13) boreholes to a depth of 2.7 mbgs. Four (4) boreholes surrounding the AST APEC were sampled between 0-0.6mbgs for PHC/BTEX. Nine (9) boreholes were throughout the properties in the Pesticide APEC. Only one (1) borehole (BH111-19) at depth range of 0-0.6mbgs exceeded for Metals: Lead 140 vs 120 ug/g. All other samples met applicable MECP Site Condition Standards (2011) Table 6: residential land use in a Potable Groundwater Situation, coarse textured soil. The soil analytical results did not suggest the potential for groundwater contamination, therefore monitoring wells were not installed.

Soil remediation was conducted in the area with the lead exceedance, approximately 23.7 tonnes of soil was removed and transported to an MECP approved waste management facility. Four (4) walls, one (1) floor and one borehole sample were obtained as verification samples. All samples met applicable MECP Site Condition Standards (2011) Table 6: residential land use in a Potable Groundwater Situation, coarse textured soil. The soil analytical results did not suggest the potential for groundwater contamination.

Site Reconnaissance

A site visit was conducted on September 15th, 2021 by Craig Colbourne, Senior Environmental Technician, to investigate the current condition of the Study Site and surrounding properties. One (1) residential building was noted along the northeastern corner of the Site (2300 Queensway Drive) and one (1) empty lot was observed northwest of the Site (2294 Queensway Drive). The ground cover consisted of mostly grass with a shared asphalt driveway that extends east towards the back of both properties. A natural gas meter was identified on the southwest side of the remaining structure. A one-storey personal garage was located in the southern portion of the Study Site and could be accessed via a man door and an overhead door. The site reconnaissance did not extend inside the residence as per COVID-19 regulations and restrictions. Photos taken from site reconnaissance are shown in Appendix A and Site Layout shown in Figure 3.

Given the age of the residential building on-site (pre-1950's), the potential for the presence of lead-based paint and asbestos containing materials was documented. Asbestos is classified as a Designated Substance under the Occupational Health and Safety Act, and regulated under O. Reg. 490/09. Lead is classified as a Designated Substance under O. Reg. 843 of the Occupational Health and Safety Act.

SUMMARY

Analysis of the historical research, and information gathered during site reconnaissance, were used to determine if there were any PCAs, current or historic, found on-site and/or within the study area that may have resulted in creating an on-site Areas of Potential Environmental Concern (APEC). Figure 4 illustrates the PCAs resulting in on-site APECs. The following two (2) on-site PCA's were found on-site, creating two (2) APEC's at the Study Site:

- ***PCA-1/APEC-1 #28 Gasoline and Associated Products Storage in Fixed Tanks*** – As identified in the previous Phase One ESA completed by MTE Consultants, the residence of 2300 Queensway Drive, Burlington, ON, located on the Study Site was historically heated by furnace oil. This is considered a

PCA that results in an APEC at the Study Site, with the potential to have impacted soil and groundwater with the potential for target contaminants Polycyclic Aromatic Hydrocarbons (PAHs) to have impacted the soil and PAHs, Petroleum Hydrocarbons (PHCs), and Benzene, Toluene, Ethylbenzene, Xylene (BTEX) to have impacted the groundwater. MTE Consultants verified that there were no soil exceedances for PHCs and BTEX however PAHs were not sampled and groundwater should be investigated for RSC purposes.

- ***PCA-2/APEC-2 #28 Gasoline and Associated Products Storage in Fixed Tanks*** – As identified in the previous Phase One ESA completed by MTE Consultants, the residence of 2294 Queensway Drive, Burlington, ON, located on the Study Site was historically heated by furnace oil. This is considered a PCA that results in an APEC at the Study Site, with the potential to have impacted soil and groundwater with the potential for target contaminants PAHs to have impacted the soil and PAHs, PHCs, and BTEX to have impacted the groundwater. MTE Consultants verified that there were no soil exceedances for PHCs and BTEX however PAHs were not sampled and groundwater should be investigated for RSC purposes.
- ***PCA-3/APEC-3 #30 Importation of Fill Material of Unknown Quality*** – As identified through aerial photographs, previous on-site building structures have been demolished within the southwest and northeastern corners area of the site. Fill material of unknown quality may have been placed within the locations of previous structures. Fill is considered a PCA that results in an APEC at the Study Site with the potential for target contaminants Metals (by ICP), PHCs, BTEX, PAHs, and pH to have impacted the soil.
- ***PCA-4 #40 Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-scale Applications-*** As identified in the aerial photographs, the site was historically a fruit orchard. The application of herbicides to the trees can result in accumulated levels of contaminants within the soil. MTE Consultants verified no soil exceedances within the APEC are for the target contaminants, therefore this PCA does not require further environmental work.

No additional PCAs were noted within 250 m of the study site.

RECOMMENDATIONS

Based on the above noted findings Hallex therefore recommends:

- **A designated substance and hazardous material survey to identify and quantify potential asbestos containing material, and lead-based paint within the building structure located on-site prior to any renovation/demolition; and**
- **A Phase Two Environmental Site Assessment to determine the presence/absence of potential contaminants of concern in the soil and/or groundwater resulting from unknown fill material and groundwater sampling to further investigate the historic heating oil at each dwelling.**

We trust the above information satisfies your requirements. Please contact the undersigned with any questions.

Sincerely,
Hallex Environmental Ltd.





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Principal Geoscientist
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FIGURES

Figure 1: Site Location

Figure 2: Adjacent Land Uses

Figure 3: Site Layout

Figure 4: Potentially Contaminating Activities/ Areas of Potential Environmental Concern



0 m 250 m 500 m

Legend

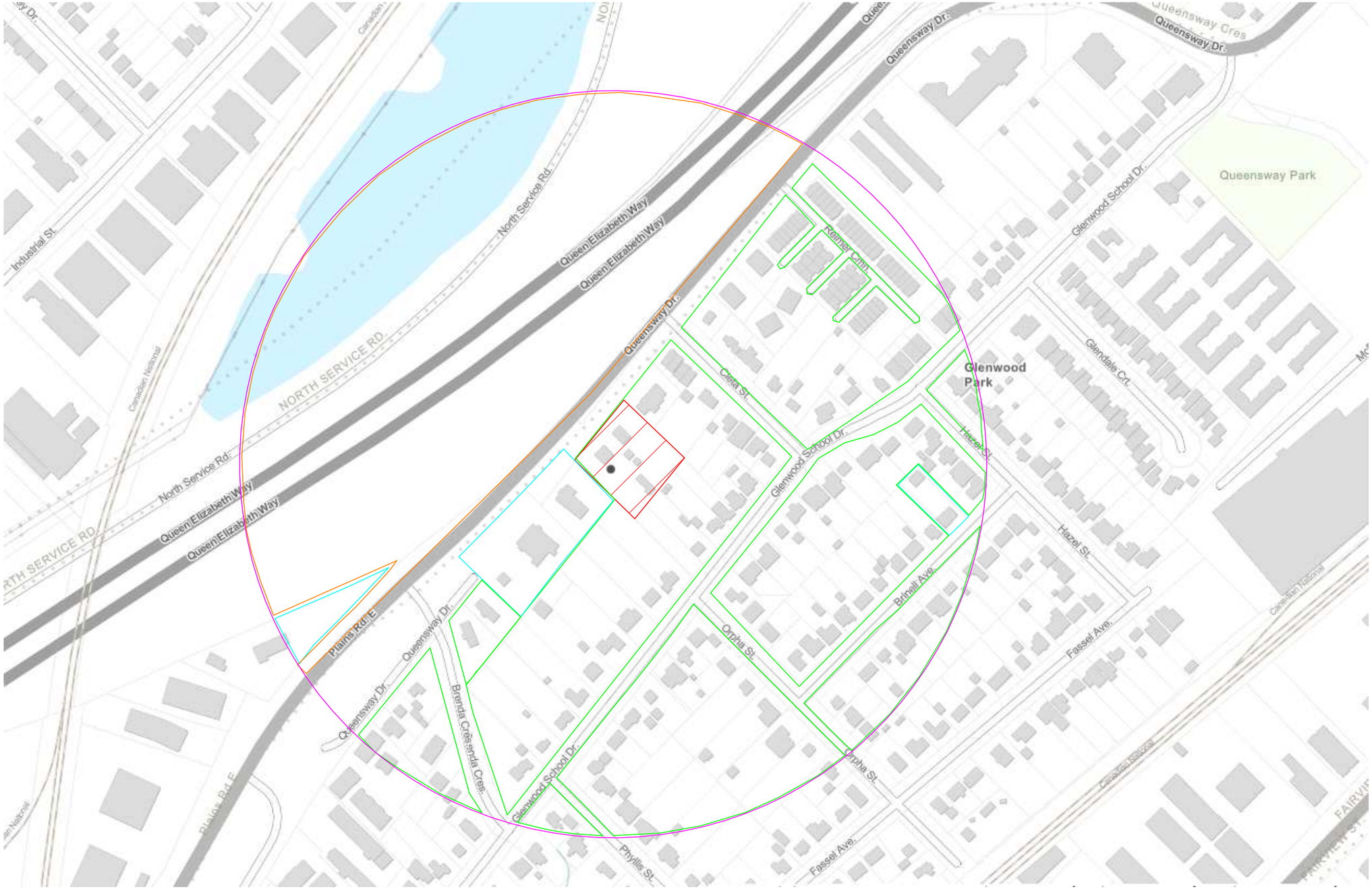
Study Site

Client
Ms. Tasha Mazza

Project
Phase One ESA
2294 & 2300 Queensway Drive, Burlington, ON

Figure Name
Site Location

Project E-21-50-1	Figure 1
Date September 2021	
Drafted: JC Reviewed: KC	



Legend

- Phase One Property
- Study Area
- Residential Use
- Commercial Use
- Community Use

Client
Ms. Tasha Mazza

Project
Phase One ESA
Update 2294 & 2300
Queensway Drive,
Burlington, ON

Figure Name
Site Layout and Adjacent Land Use

Project E-21-50-1	Figure 2
Date September 2021	
Drafted:JC Reviewed: KC	



Legend

- Phase One Property
- # Photo Log Reference

Arrow point indicates direction of photo taken

Client

Ms. Tasha Mazza

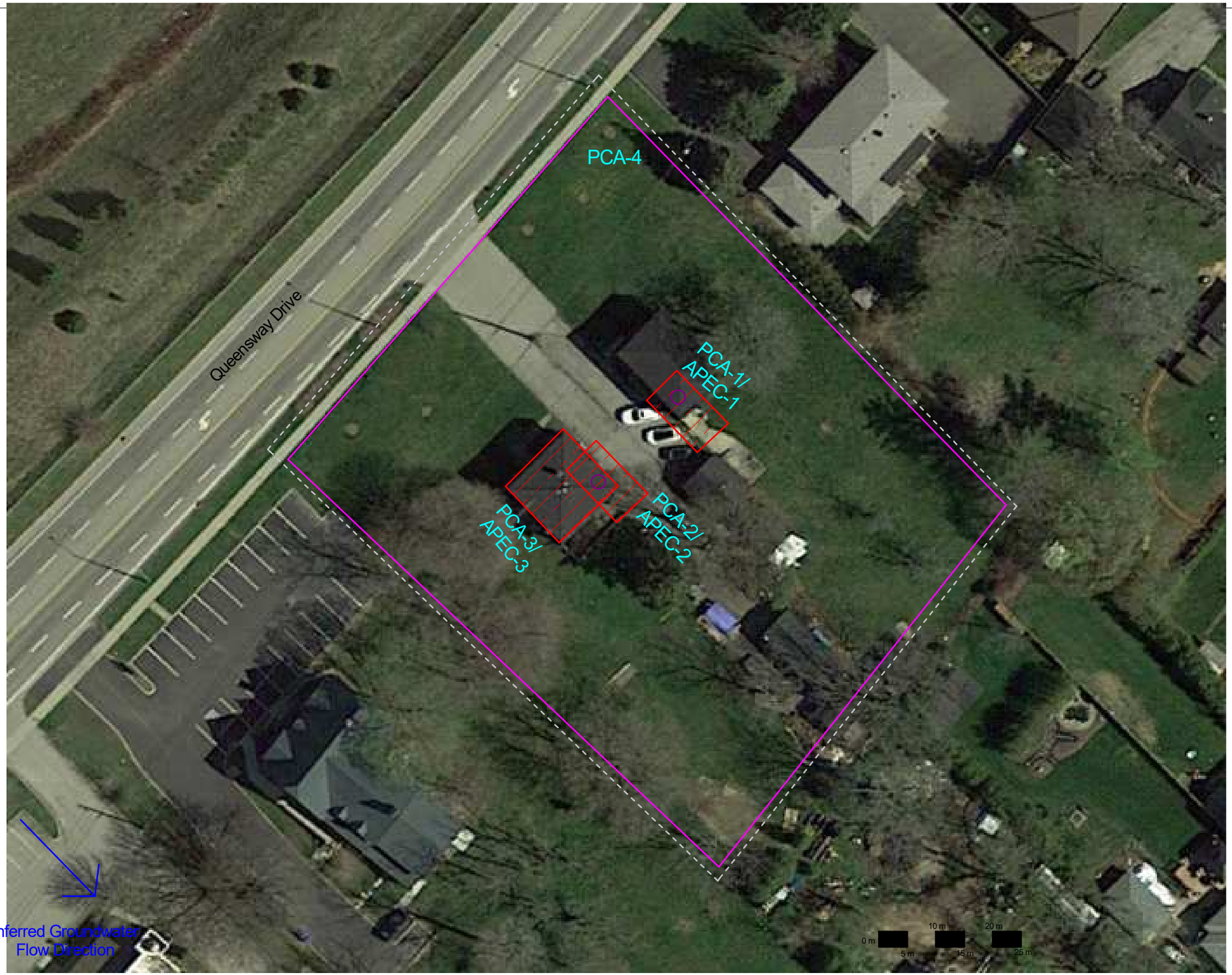
Project

Phase One ESA Update 2294 & 2300 Queensway Drive, Burlington, ON

Figure Name

Site Layout

Project E-21-50-1	Figure 3
Date September 2021	
Drafted: JC Reviewed: KC	



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HALLEX ENVIRONMENTAL LTD.

Legend

Phase One Property

PCA-#

PCA-1 Gasoline and Associated Products Storage in Fixed Tanks
PCA-2 Gasoline and Associated Products Storage in Fixed Tank
PCA-3: Historic Fill Material
PCA-4: Pesticides

APEC-#

APEC-1 Gasoline and Associated Products Storage in Fixed Tanks
APEC-2 Gasoline and Associated Products Storage in Fixed Tanks
APEC-3: Historic Fill Material

Historic AST

Client
Tasha Mazza & Waggy Inc.

Project
Phase One ESA
2294 & 2300 Queensway Drive, Burlington, ON

Figure Name
Potential Contaminating Area/ Areas of Potential Environmnetal Concern

Project E-21-50-1	Figure 4
Date September 2021	
Drafted: JC Reviewed: KC	

Appendix A:

Site Photo Log

Photo #	Study Site – Exterior	Description
1		Residential dwelling with one (1) garage on-site, photo facing east.
2		Southeast side of residential dwelling, photo facing northwest.
3		Photo of utilities; gas meter located on the south side of dwelling, photo facing northeast.

Photo #	Study Site – Exterior	Description
4		Rear view of the residential dwelling and view of the highway north of the study site, photo taken facing north.
5		Southwest portion of the Study Site with the garage and vacant lot, photo facing south.

Photo #	Adjacent Properties	Description
6		East adjacent residential property, photo facing northeast.
7		West adjacent commercial property (Greenhawk Equestrian sports shop and Pet Store), photo facing southwest.