

7 December 2022 Project No. 22524317

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ONTARIO REGULATION 153/04 PHASE ONE ENVIRONMENTAL SITE ASSESSMENT UPDATE FOR 864 LADY ELLEN PLACE, OTTAWA, ONTARIO

Mr. Abrantes

Golder Associates Ltd. (Golder) was retained by Access Property Developments (the "Client") to conduct a Phase One Environmental Site Assessment Update (Phase One ESA Update) for the property located at 864 Lady Ellen Place in Ottawa, Ontario (the "Site" and the "Phase One Property"). The location, surroundings, and layout of the Site are shown on Figure 1 – Key Plan.

The Site is an irregular shaped parcel that covers an area of approximately 1.35 hectares (3.35 acres) that is located immediately south of Trans-Canada Highway (ON 417). The Site consists of a commercial office building, occupied by J.L. Richards and Associates Limited, Consulting Engineers, Planners and Architects, on the western portion (the "Site Building"), and paved parking areas on the north and central portions of the Site. The eastern portion of the Site consists of gravel covered area used as parking lot and snow storage. Based on the earliest available aerial image from 1928, the Site was undeveloped until at least 1958 before construction of the Site Building in 1959.

SCOPE OF WORK

A Phase One ESA is a preliminary qualitative assessment of the environmental condition of a property, based on a review of current activities and historical information for the Site and a review of relevant and readily available environmental information for the surrounding properties located within a 250 metre (m) radius of the boundary of the Site (collectively referred to as the "Phase One Study Area"). The boundary of the Phase One Study Area along with details of the Site are provided in Figure 1.

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

- A review of the previous reports (listed below) associated with the Site were provided:
 - "Phase I Environmental Site Assessment, 864 Lady Ellen Place, Ottawa, Ontario" prepared by Golder for J.L. Richards & Associates Ltd., dated May 2013 ("2013 Phase I ESA")
 - "Phase II Environmental Site Assessment, 864 Lady Ellen Place, Ottawa, Ontario" prepared by Golder for J.L. Richards & Associates Ltd., dated September 2013 ("2013 Phase II ESA")

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- "Phase One Environmental Site Assessment, 864 Lady Ellen Place, Ottawa, Ontario" prepared by Golder for J.L. Richards & Associates Ltd., dated May 2019 ("2019 Phase One ESA")
- "Phase Two Environmental Site Assessment, 864 Lady Ellen Place, Ottawa, Ontario" prepared by Golder for J.L. Richards & Associates Ltd., dated December 2019 ("2019 Phase Two ESA")
- "Clarification of Findings Phase Two Environmental Site Assessment, 864 Lady Ellen Place, Ottawa, Ontario" prepared by Golder for J.L. Richards & Associates Ltd., dated February 2020 ("2020 Phase Two ESA Clarification")
- A Site visit in order to review issues of potential environmental concern identified in the previous environmental reports and update changes compared to previous the Site investigations
 - A review of relevant historical records. Only historical records that show important changes to the Site between May 2022 and the 2019 Phase One are considered relevant and will be reviewed
- An interview with the Site Representative
- Completion of this Phase One ESA Update letter report.

The objective of the Phase One ESA Update was to identify and document any material environmental changes to the Site since the prior ESAs were conducted.

REVIEW OF PREVIOUS REPORTS

Overview Of The 2013 Phase I ESA

A Phase I ESA in accordance with Canadian Standards Association ("CSA") Standard Z768-00 (R2012) was conducted for 864 Lady Ellen Place in May of 2013. The noteworthy findings are summarised below:

- Based on the information obtained during the Phase I ESA, the following on-Site issues were noted:
 - Three electrical transformers and fluorescent light ballasts, potentially containing PCBs, are present at the Site; and,
 - Asbestos-containing materials, lead, mercury and silica are designated substances that are present and/or likely present in the building materials at the Site.
- Based on the information obtained during the Phase I ESA, the following off-Site issues were noted:
 - Two USTs were located at 885 Churchill Avenue (approximately 250 m west of the Site) at Taggart Service Ltd. in 1967.
 - Several Ontario Regulation 347 registered waste generators are located within 250 m of the Site. Wastes generated include waste oils and sludges, photo processing wastes and paint/pigment/coating residues;
 - Various auto repair shops and a gasoline service station were listed at 1500 Carling Avenue (approximately 250 m east of the Site) between 1957 and 2010 as well as a record of one (1) active UST;
 - 925 McBride Street (approximately 230 m south of the Site) has record of four (4) expired USTs;
 - Various commercial activities including auto and electric motor repair shops are located between 884 895 Churchill Avenue (approximately 250 m west of the Site) between 1957 and 2010; and,

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- Several commercial and light industrial businesses have been located within 250 m of the Site between
 1966 and 2010 including commercial printers, sign and display industries and metal fabricating.
- Phase II subsurface investigation was recommended if further risk reduction was required.

Overview Of The 2013 Phase II ESA

A Phase II ESA, in general accordance with Canadian Standards Association ("CSA") Standard Z769-00 (R2000), conducted for 864 Lady Ellen Place in September of 2013 to address the APECs identified as part of the 2013 Phase I ESA. This Phase II was completed for environmental due diligence required for financing. Noteworthy information from review of this technical memorandum is discussed below.

- A sampling program was completed with three boreholes and three monitoring well installations. Soil and groundwater samples were analyzed for potential impact to the Site from former presence of USTs, presence of auto service garage, commercial printers, sign and display industries, metal fabricating, and characterization of fill materials
- The stratigraphy of the Site consisted of fill materials overlying sand and gravel till. No evidence of hydrocarbon impacts based on visual and olfactory observations were indicated during field program.
- Three soil samples, primarily consisting of silty clay, were collected, and analyzed for petroleum hydrocarbons fraction 1 to fraction 4 ("PHCs F1-F4"), volatile organic compounds ("VOCs"), metals and inorganics, and/or polycyclic aromatic hydrocarbons ("PAHs").
- Concentrations of all metals were below the Table 3 standards, PHCs F1 and F2 were not detected, PHCs F3 and F4 were detected at concentrations below the Table 3 standards, BTEX parameters were not detected, PAHs were not detected, and VOCs were not detected.
- Four groundwater samples, including a duplicate, were collected and analyzed for PHCs F1-F4, VOCs, metals (including mercury and chromium VI), and/or PAHs.
- Concentrations of all metals were below the Ontario Regulation (O.Reg) 153/04, as amended Table 3: Full Depth Generic Site Conditions Standards in a Non-Potable Ground Water Condition (Table 3 standards), PHCs F1 through F4 were not detected, BTEX parameters were not detected, and PAHs were not detected.
- All VOCs were either not detected or detected at concentrations below the Table 3 standards, with the exception of the following:
 - MW13-1: The concentration of 1,1-dichloroethylene was 2.1 ug/L, which is above the Table 3 standard of 1.6 ug/L.
 - MW13-3: The concentration of trichloroethylene was 3.5 ug/L, which is above the Table 3 standard of 1.6 ug/L.
- There are multiple potential off-Site sources of 1,1-dichloroethylene and trichloroethylene in groundwater that may be causing impacts to the Site, including current and historical commercial printers to the south, which are upgradient of the Site.

Overview Of The 2019 Phase One ESA

A Phase One ESA in accordance with O.Reg 153/04 as amended, was completed in May 2019. This assessment was undertaken for City of Ottawa site plan application and was not completed in support of a Record of Site Condition. The noteworthy findings are summarised below:

- Based on the information obtained as part of this Phase One ESA, twenty (20) Potentially Contaminating Activities (PCAs) were identified in the Phase One Study Area, none of which were on the Phase One Property, including issues with the following PCAs:
- PCA 8 Chemical Manufacturing, Processing and Bulk Storage: Former industrial chemical industry
- PCA 10 Commercial Autobody Shops: Current and former autobody shops
- PCA 11 Commercial Trucking and Container Terminals: Former truck transport industry
- PCA 13 Cosmetics Manufacturing: Former cosmetics manufacturer
- PCA 28 Gasoline and Associated Products: Several Former USTs and ASTs and historic gasoline stations
- PCA 31 Ink Manufacturing, Processing and Bulk Storage: Former and current commercial printing shops
- PCA 33 Metal Treatment, Coating, Plating and Finishing: Former manufacturing plant
- PCA 34 Metal Fabrication: Former fabricated structural metals
- PCE 37 Operation of Dry-Cleaning Equipment (where chemicals are used): Former dry cleaners
- Based on site characteristics and the locations of the off-Site PCAs, a total of nine (9) Areas of Potential Environmental Concern (APECs) were identified for the Phase One Property.
- The 2013 Phase II ESA identified concentrations of 1,1-dichloroethylene and trichloroethylene in groundwater above the applicable site condition standards. The current report has identified multiple potential off-Site sources of 1,1-dichloroethylene and trichloroethylene in groundwater that may be causing impacts to the Site.
- A Phase Two ESA would be required to confirm the presence and extent of impacts related to the identified APECs, as well as identify changes compared to previous findings from the 2013 Phase II ESA.

Overview Of 2019 Phase Two ESA

A 2019 Phase Two ESA in accordance with O. Reg. 153/04 as amended, was completed in December 2019. This investigation was completed to assess the absence or presence of the contaminants of concern in relation to the potential environmental concerns identified in the 2019 Phase One ESA.

The noteworthy findings from the 2019 Phase Two ESA are summarised below:

- A sampling program was completed with drilling three new boreholes and monitoring well installations at each borehole. Two existing monitoring wells were also sampled for groundwater quality. Soil and groundwater samples were analyzed for potential impact to the Site from the APECs identified in the 2019 Phase One ESA and characterisation of fill materials.
- Refusal on bedrock was reached before the water table at 19-3, and as such no groundwater sample could be collected.

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- The stratigraphy of the Site consisted of fill materials overlying sand and gravel till. Combustible gas vapour readings ranged from non-detect to 4000 ppm (highest reading measured at 19-02 between 3.96 to 4.57 mbgs) and organic vapour measurements ranged from non-detect to 5 ppm (highest reading measured at 19-01 between 1.88 and 2.51 mbgs). No evidence of hydrocarbon impacts based on visual and olfactory observations were observed in the groundwater samples.
- Seven soil samples, including a duplicate sample, were collected and analyzed for PHCs F1-F4, VOCs, metals and inorganics, including Sodium Absorption Ratio (SAR) and Electrical Conductivity (EC).
- The soil satisfied the applicable site condition standard with the exception of SAR in soil at borehole 19-01 (1.88 2.51 mbgs). This exceedance is likely due to the application salt to the Site and surrounding roadways.
- Five groundwater samples, including a duplicate, were collected and analyzed for PHCs F1-F4, VOCs, metals and inorganics.
- Concentrations of all metals were below the Table 3 standards, PHCs F1 through F4 were not detected, BTEX parameters were not detected, and PAHs were not detected.
- All VOCs were not detected with the exception of the following:
 - 19-02: The concentration of cis-1,2-dichloroethylene was 4.5 ug/L, which is above the Table 3 standard of 1.6 ug/L. The concentration of trichloroethylene was 38, which is above the Table 3 standard of 1.6 ug/L.
 - 18-03: The concentration of trichloroethylene was 0.88, which is above the reported detection limit, but below the Table 3 standard.
- The trichloroethylene and cis-1,2-dischloroethylene exceedances at 19-02 are likely associated with PCA and APEC associated with former off-site commercial printing activities, and/or former off-site cosmetics manufacturing, located adjacent to the south and the east of the Site.
- Additional subsurface investigations would be required to define the vertical and horizontal extent of VOC impacts in the southeastern portion of the Site.
- There are no exceedances associated with any of the other APECs investigated.

Overview Of The 2020 Phase Two ESA Clarification

A letter clarifying the findings of the 2019 Phase Two ESA was completed in February of 2020. Noteworthy information from review of this letter is summarised below.

- Exceedances of select volatile organic compound (VOC) parameters including cis-1,2-dichloroethylene and trichloroethylene were observed in groundwater at monitoring well 19-02 that is located in the southeast corner of the subject property.
- These exceedances are likely associated with potentially contaminating activities associated with former offsite commercial printing activities and/or former off-site cosmetic manufacturing, located adjacent to the south and east of the Site. This use no longer exists at this location; therefore, the exceedances may be expected to reduce over time assuming that the off-site source has been properly mitigated.
- All other groundwater samples satisfied the applicable site condition standard in 2019.

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The VOC impacts identified in the southeastern corner of the property do not appear to be widespread across the site

The future building was reportedly understood to not to have a basement and that dewatering activities were not expected during construction. As such, it is expected that construction activities will not be affected by the identified impacts in the southeast corner of the property.

HISTORICAL RECORDS REVIEW

Ministry of the Environment, Conservations and Parks (MECP):

As a part of the previous reports, a response from the MECP in 2013 and 2019 indicated there were no issues of environmental concern.

Access Environment, the Ontario Ministry of Environment, Conversation and Parks (MECP) tool used to search for registrations on the Environmental Activity and Sector Registry, Renewable Energy Approvals and Environmental Compliance Approvals was used to search for information for the Site as well as surrounding properties within a 250-metre radius of the boundary of the Site. The information found is shown below.

- Permit To Take Water under Section 34 of the Ontario Water Resources Act (OWRA);
- Certificate of Approval in accordance with Section 139 of the Environmental Protection Act (EPA);
- Certificate of Approval under Section 53 of the OWRA;
- Certificate of Approval in accordance with Section 9 of EPA;
- Confirmation of Registration in accordance with Section 20.21(1)(a) of the EPA
- Registration for dewater a construction site, under Section 20.21(1)(a) of the Environmental Protection Act (EPA); and
- Certificate of Approval under section 9 of the EPA; and
- Environmental Compliance Approval under section 20.2 of Part II.1 of the EPA.

The review of the MECP environmental database did not identify any issues of potential environmental concern for the Site.

ERIS Report

As a part of the previous reports, an ERIS report was drafted to show environmental information on the Site and Study Area. Given the most recent report was dated 2019, a new ERIS report was not ordered. Previous ERIS reports did identify several current and historic activities within the Phase One Study Area that qualify as Potentially Contaminating Activities. In the opinion of the QP(ESA), the results of an updated records review are not expected to change that conclusion.

City of Ottawa

As a part of the previous reports, Golder completed a review of the City of Ottawa HLUI (Historical Land Use Inventory) for the Site and surrounding area. Given the most recent report was dated 2019, a new HLUI was not reviewed. Previous HLUIs showed several current and historic activities within the Phase One Study Area that qualify as Potentially Contaminating Activities. In the opinion of the QP(ESA), the results of an updated records review are not expected to change that conclusion.

Technical Standard & Safety Authority

As a part of the previous reports, Golder contacted the TSSA to identify whether any active, decommissioned, or in-service storage tanks were present on the Site, and to search for outstanding instructions, incident reports, spills, or contamination record. Given the most information from the TSSA was dated 2019, the TSSA were not contacted. The TSSA identified several current and historic activities within the Phase One Study Area that qualify as Potentially Contaminating Activities. In the opinion of the QP(ESA), the results of an updated records review are not expected to change that conclusion.

Aerial Photos

As a part of the previous reports, aerial photographs of the Site and vicinity were obtained from the City of Ottawa geo-map for 1928, 1958, 2005, 2014 and 2017 (http://maps.ottawa.ca/geoOttawa/) were reviewed on-line. The most current photo available for the year 2019 was reviewed as a part of this investigation. While no changes were observed between 2017 to 2019, previous reports identified some historic activities within the Phase One Study Area that qualify as Potentially Contaminating Activities.

MAY 2022 SITE RECONNAISSANCE

Ms. Claire Woodfield completed the Site visit on May 9, 2022, which consisted of a visual assessment and walk-through of the interior and exterior portions of the Site. In addition, properties adjacent to the Site were observed from publicly accessible areas (refer to photographs in Attachment A).

The Site representative also sent relevant information as a part of the Site visit.

Noteworthy findings from the Site visit are discussed below:

- At the time of the site visit, the Site consisted of an irregular shaped property located immediately south of the Trans-Canada Highway (ON 417). The Site consists of a commercial office building, occupied by J.L. Richards, on the western portion, and asphalt paved parking areas on the north and central portions of the Site. The eastern portion of the Site consists of gravel covered area used as parking lot. The surrounding properties within the Phase One Study Area include commercial and light industrial land uses.
- Based on the Site and area reconnaissance, the site visit supports the information previously obtained to identify off-site PCAs. No additional information was obtained relevant to PCA and/or APECs on-Site.
- Two storage drums from a former drilling program (likely purge water and/or soil cuttings) were observed. No obvious staining or odours were observed, however these drums should be appropriately removed and disposed of.
- Areas surrounding the Site within the Phase One Study include primarily commercial land uses and some residential homes. The Site Assessor made the following observations of neighbouring properties:
- West (inferred to be hydraulically up/cross-gradient of the Site): Commercial land uses including office buildings, restaurants and warehouses. Auto service garages at 1551 Laperriere Avenue, 891 Bellevue Avenue, and 890 Churchill Avenue South (located approximately 80 m, 235 m and 240 m from the Site).
- North (inferred down/cross-gradient): Bounded by ON 417 at a higher elevation followed by commercial land uses including office and storage warehouse buildings. A portion of land immediately northwest of the Site consists of a Hydro One Easement for high-voltage overhead cables.

- South (inferred up/cross-gradient): Commercial land uses including office buildings and printing businesses along Lady Ellen Place. Across Laperriere Avenue, several auto service garages were located at 920 McBride Street and 1548 Woodward Avenue (located approximately 200m and 250 m from the Site).
- East (inferred down/cross-gradient): Large government office building followed by residential homes and an auto service garage at 1411 Coldrey Avenue (located approximately 100 m from the Site).

REVIEW AND EVALUATION OF INFORMATION CURRENT AND PAST USES OF THE SITE

The following summarise the current and past uses of the Phase One Property.

Year(s)	Owner's Name	Description of Property Use	Property Use	Other Observations from Aerial Photographs, Fire Insurance Plans, Etc.
Prior to 1959	Donald David Johannsen	II Indeveloned	Agriculture or other sure	According to the earliest available aerial image from 1928, the Site was undeveloped and likely used for agricultural purposes. No buildings or structures were present on-Site
1959 to Present	J.L. Richards	Office building and parking	Commercial use	The Site Representative stated that the land was purchased in 1955 by J.L. Richards to develop their office building. The 1958 aerial photo shows the land to be undeveloped, while the 1961 aerial photo shows the office building.

POTENTIALLY CONTAMINATING ACTIVITY

Any Potentially Contaminating Activity (PCA) on the Phase One Property or in the Phase One Study Area may require the identification of an area of potential environmental concern ("APEC") and trigger the need for a Phase Two ESA to support the filing of a Record of Site Condition. Based on the review of previous reports, and the update records review, the following PCAs were identified on the Phase One Property or in the Phase One Study Area, also shown on Figure 2A:

PCA ID	Location	PCA	Rationale for Potential Contribution of the PCA to an APEC
1.1	1575, 1593, and 1599 Carling Avenue, approximately 235 m northwest of the Site	28. Gasoline and Associated Products Storage in Fixed Tanks;	Based on the distance from the Site and the location down-gradient from the Site, this PCA is not considered as an APEC for the Site.
1.2	1575, 1593, and 1599 Carling Avenue, approximately 235 m northwest of the Site	10. Commercial Autobody Shops – Former gasoline service station and auto service garage	Based on the distance from the Site and the location down-gradient from the Site, this PCA is not considered as an APEC for the Site.
2.1	1525 Carling Avenue, approximately 185 m north of the Site	28. Gasoline and Associated Products Storage in Fixed Tanks;	Based on the distance from the Site and the location down-gradient from the Site, this PCA is not considered as an APEC for the Site.

PCA ID	Location	PCA	Rationale for Potential Contribution of the PCA to an APEC
2.2	approximately 185 m	10. Commercial Autobody Shops – Former auto service garage with associated USTs.	Based on the distance from the Site and the location down-gradient from the Site, this PCA is not considered as an APEC for the Site.
3	ISPARCOIMSTAIN 7111 m	28. Gasoline and Associated Products Storage in Fixed Tanks.	Based on the distance from the Site and the location down-gradient from the Site, this PCA is not considered as an APEC for the Site.
4.1	100 m northwest of the	10. Commercial Autobody Shops – Former gasoline service station and auto service garage	Based on the distance from the Site and the location down-gradient from the Site, this PCA is not considered as an APEC for the Site.
4.2	1596 and 1604 Carling Avenue, approximately 100 m northwest of the Site	28. Gasoline and Associated Products Storage in Fixed Tanks	Based on the distance from the Site and the location down-gradient from the Site, this PCA is not considered as an APEC for the Site.
5	approximately 110 m	37. Operation of Dry-Cleaning Equipment (where chemicals are used) – Presence of historical dry cleaners.	Based on the distance from the Site and the location down-gradient from the Site, this PCA is not considered as an APEC for the Site.
6.1	ISPARCAIMSTEIN 11111 M	28. Gasoline and Associated Products Storage in Fixed Tanks	Based on the distance from the Site and the location down-gradient from the Site, this PCA is not considered as an APEC for the Site.
6.2	approximately 100 m	10. Commercial Autobody Shops – Former gasoline service station and auto service garage	Based on the distance from the Site and the location down-gradient from the Site, this PCA is not considered as an APEC for the Site.
7.1	Solith approximately	28. Gasoline and Associated Products Storage in Fixed Tanks	Based on the distance from Site, and the roadway located between this PCA and the Site, this PCA is not considered as an APEC for the Site.
7.2	South, approximately	10. Commercial Autobody Shops – Former gasoline service station and auto service garage with associated ASTs and USTs.	Based on the distance from Site, and the roadway located between this PCA and the Site, this PCA is not considered as an APEC for the Site.
8	890 - 900 Churchill Avenue South, approximately 245 m southwest of the Site	10. Commercial Autobody Shops – Current auto service garage.	Based on the distance from Site, and the roadway located between this PCA and the Site, this PCA is not considered as an APEC for the Site.
9	891 Bellevue Avenue, approximately 240 m southwest of the Site	10. Commercial Autobody Shops – Current auto service garage.	Based on the distance from Site, and the roadway located between this PCA and the Site, this PCA is not considered as an APEC for the Site.



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PCA ID	Location	PCA	Rationale for Potential Contribution of the PCA to an APEC
10	895 Churchill Avenue South, approximately 200 m southwest of the Site	10. Commercial Autobody Shops – Former auto service garage.	Based on the up- to cross-gradient location of this PCA to the Site, and the nature of impacts associated with this PCA which may migrate through groundwater, the presence of this PCA may impact the Phase One Property.
11.1	1551 Laperriere Ave, approximately 90 m southwest of the Site	28. Gasoline and Associated Products Storage in Fixed Tanks	Based on the up- to cross-gradient location of this PCA to the Site, and the nature of impacts associated with this PCA which may migrate through groundwater, the presence of this PCA may impact the Phase One Property.
11.2	1551 Laperriere Ave, approximately 90 m southwest of the Site	10. Commercial Autobody Shops – Former gasoline service station and auto service garage with associated ASTs and USTs.	Based on the up- to cross-gradient location of this PCA to the Site, and the nature of impacts associated with this PCA which may migrate through groundwater, the presence of this PCA may impact the Phase One Property.
12.1	920 McBride Street, approximately 180 m southwest of the Site	28. Gasoline and Associated Products Storage in Fixed Tanks	Based on the up-gradient location of this PCA to the Site, and the nature of impacts associated with this PCA which may migrate through groundwater, the presence of this PCA may impact the Phase One Property.
12.2	920 McBride Street, approximately 180 m southwest of the Site	10. Commercial Autobody Shops – Former gasoline service station and auto service garage with associated ASTs and USTs.	Based on the up-gradient location of this PCA to the Site, and the nature of impacts associated with this PCA which may migrate through groundwater, the presence of this PCA may impact the Phase One Property.
13.1	889 Lady Ellen Place, approximately 75 m southeast from the Site	28. Gasoline and Associated Products Storage in Fixed Tanks	While this PCA is located cross- gradient, given its proximity to the Site, as well as reported VOC impacts to groundwater on Site, this PCA is considered to contribute to an APEC on Site.
13.2	889 Lady Ellen Place, approximately 75 m southeast from the Site	31. Ink Manufacturing, Processing and Bulk Storage – Former heating oil tank, and former commercial printing.	While this PCA is located cross- gradient, given its proximity to the Site, as well as reported VOC impacts to groundwater on Site, this PCA is considered to contribute to an APEC on Site.



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PCA ID	Location	PCA	Rationale for Potential Contribution of the PCA to an APEC
14.1	1550 Carling Avenue, adjacent to the site to the east	13. Cosmetics Manufacturing	While this PCA is located down- gradient, given its proximity to the Site, as well as reported VOC impacts to groundwater on Site, this PCA is considered to contribute to an APEC on Site.
14.2	1550 Carling Avenue, adjacent to the site to the east	28.Gasoline and Associated Products Storage in Fixed Tanks.	While this PCA is located down- gradient, given its proximity to the Site, as well as reported VOC impacts to groundwater on Site, this PCA is considered to contribute to an APEC on Site.
14.3	1550 Carling Avenue, adjacent to the site to the east	31. Ink Manufacturing, Processing and Bulk Storage – Various former activities including cosmetics manufacturing, commercial printing, and an industrial diesel-powered backup generator.	While this PCA is located down- gradient, given its proximity to the Site, as well as reported VOC impacts to groundwater on Site, this PCA is considered to contribute to an APEC on Site.
15.1	1500 Carling Avenue, approximately 110 m northeast of the Site	10. Commercial Autobody Shops – Former gasoline service station and auto service garage with associated ASTs and USTs.	Based on the distance from the Site and the location down-gradient from the Site, this PCA is not considered as an APEC for the Site.
15.2	1500 Carling Avenue, approximately 110 m northeast of the Site	28. Gasoline and Associated Products Storage in Fixed Tanks	Based on the distance from the Site and the location down-gradient from the Site, this PCA is not considered as an APEC for the Site.
16	Avenue, approximately	33. Metal Treatment, Coating, Plating and Finishing – Former manufacturing, including a spray booth, welding, and lead furnaces.	Based on the up- to cross-gradient location of this PCA to the Site, and its proximity to Site, the presence of this PCA may impact the Phase One Property.
17.1	888 Lady Ellen Place, approximately 45m south of the Site	31. Ink Manufacturing, Processing and Bulk Storage – Former warehouse with truck storage at the rear of the building, and former commercial printing.	While this PCA is located cross- gradient, given its proximity to the Site, as well as reported VOC impacts to groundwater on Site, this PCA is considered to contribute to an APEC on Site.
17.2	888 Lady Ellen Place, approximately 45m south of the Site	28. Gasoline and Associated Products Storage in Fixed Tanks	While this PCA is located cross- gradient, given its proximity to the Site, as well as reported VOC impacts to groundwater on Site, this PCA is considered to contribute to an APEC on Site.



PCA ID	Location	PCA	Rationale for Potential Contribution of the PCA to an APEC
18	881 Lady Ellen Place	31. Ink Manufacturing, Processing and Bulk Storage – Former commercial printing and equipment sale, located adjacent to the south of the Site	While this PCA is located cross- gradient, given its proximity to the Site, as well as reported VOC impacts to groundwater on Site, this PCA is considered to contribute to an APEC on Site.
19	1550 Laperriere Avenue	fabricated structural metals products industry located approximately 230m	
20.1	1519 Laperriere Avenue	Container Terminals – Former truck transport industry and industrial chemical industry located adjacent to	Based on the up- to cross-gradient location of this PCA to the Site, and its proximity to Site, the presence of this PCA may impact the Phase One Property.
20.2	1519 Laperriere Avenue	Chemical Manufacturing, Processing and Bulk Storage	Based on the up- to cross-gradient location of this PCA to the Site, and its proximity to Site, the presence of this PCA may impact the Phase One Property.

AREA OF POTENTIAL ENVIRONMENTAL CONCERN

A summary of the Areas of Potential Environmental Concern (APECs) identified at the Phase One Property is provided in the following table. The APEC locations are presented in Figure 2B.

Area of Potential Environmental Concern	Location of APEC on Phase One Property	Potentially Contaminating Activity	Contaminants of Potential Concern	Media Potentially Impacted
APEC 1: PCA ID #10 - Former auto service garage located approximately 200m southwest of the Site.	Western portion of the Site	PCA 10: Commercial Autobody Shops	PHC, BTEX, VOC	Groundwater
APEC 2: PCA ID #11.1 – F ormer and current auto service garage with associated ASTs and USTs located approximately 90m southwest of the Site.	Western portion of the Site	PCA 28: Gasoline and Associated Products Storage in Fixed Tanks	PHC, BTEX, VOC	Groundwater
APEC 3: PCA ID #11.2 – F ormer and current auto service garage with associated ASTs and USTs located approximately 90m southwest of the Site.	Western portion of the Site	PCA 10: Commercial Autobody Shops PCA	PHC, BTEX, VOC	Groundwater



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Area of Potential Environmental Concern	Location of APEC on Phase One Property	Potentially Contaminating Activity	Contaminants of Potential Concern	Media Potentially Impacted
APEC 4: PCA ID #12.1 - Former and current auto service garage with associated ASTs located approximately 180m southwest of the Site.	Western portion of the Site	PCA 28: Gasoline and Associated Products Storage in Fixed Tanks	PHC, BTEX, VOC	Groundwater
APEC 5: PCA ID #12.2 - Former and current auto service garage with associated ASTs located approximately 180m southwest of the Site.	Western portion of the Site	PCA 10: Commercial Autobody Shops	PHC, BTEX, VOC	Groundwater
APEC 6: PCA ID #13.1 - Former heating oil tank located approximately 75m southeast from the Site.	Southeastern portion of the Site	PCA 28: Gasoline and Associated Products Storage in Fixed Tanks	VOC	Groundwater
APEC 7: PCA ID #13.2 - Former commercial printing located approximately 75m southeast from the Site.	Southeastern portion of the Site	PCA 31: Ink Manufacturing, Processing and Bulk Storage	VOC	Groundwater
APEC 8: PCA ID #14.1 – Various former activities including cosmetics manufacturing, located adjacent to the site to the east.	Eastern portion of the Site	PCA 13: Cosmetics Manufacturing, Processing and Bulk Storage	VOC	Groundwater
APEC 9: PCA ID #14.2 – Various former activities including an industrial diesel-powered backup generator, located adjacent to the site to the east.	Eastern portion of the Site	PCA 28: Gasoline and Associated Products Storage in Fixed Tanks	voc	Groundwater
APEC 10: PCA ID #14.3 – Various former activities including commercial printing located adjacent to the site to the east.	Eastern portion of the Site	PCA 31: Ink Manufacturing, Processing and Bulk Storage	VOC	Groundwater
APEC 11: PCA ID #16 - Former manufacturing, including a spray booth, welding, and lead furnaces, located approximately 100m southwest of the Site.	Western portion of the Site	PCA 33: Metal Treatment, Coating, Plating and Finishing	Metals, VOC	Groundwater



Access Property Development

Mr. Frank Abrantes Project No. 22524317

Area of Potential Environmental Concern	Location of APEC on Phase One Property	Potentially Contaminating Activity	Contaminants of Potential Concern	Media Potentially Impacted
APEC 12: PCA ID #17.1 - Former commercial printing located approximately 45 m south of the Site.	Western portion of the Site	31. Ink Manufacturing, Processing and Bulk Storage	PHC, BTEX, VOC	Groundwater
APEC 13: PCA ID #17.2 - Former warehouse with truck storage at the rear of the building located approximately 45 m south of the Site.	Western portion of the Site	PCA 28: Gasoline and Associated Products Storage in Fixed Tank	PHC, BTEX, VOC	Groundwater
APEC 14: PCA ID #18 – Former commercial printing and equipment sale, located adjacent to the south of the Site.	Southeastern portion of the Site	PCA 31: Ink Manufacturing, Processing and Bulk Storage	VOC	Groundwater
APEC 15: PCA ID #20 - Former truck transport industry located adjacent to the west of the Site.	Western portion of the Site	PCA 11: Commercial Trucking and Container Terminals	VOC, PHC, BTEX	Groundwater
APEC 16: PCA ID #20 - Former industrial chemical industry located adjacent to the west of the Site.	Western portion of the Site	PCA 8: Chemical Manufacturing, Processing and Bulk Storage	VOC, PHC, BTEX	Groundwater

PHASE ONE ESA CONCEPTUAL SITE MODEL

A Conceptual Site Model of the Phase One Study Area (as required by O.Reg. 153/04) is presented in a series of Figures 1 to 3 (Figure 1: Key Plan, Figure 2A: Potentially Contaminating Activities Figure 2B: Areas of Potential Environmental Concern, Figure 3: Topographic Map and Areas of Natural Significance). The combined set of figures shows:

- Existing buildings and structures
- Water bodies and Areas of Natural Significance (if present) located in the Phase One Study Area
- Drinking water wells on the Phase One Property
- Roads (including names) within the Phase One Study Area
- Uses of properties adjacent to the Phase One Property.

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7 December 2022

The following describes the Phase One ESA Conception Site Model (CSM) for the Site based on the information obtained and reviewed as part of this Phase One ESA:

- The Site is an irregular shaped parcel that covers an area of approximately 1.35 hectares (3.35 acres) that is located immediately south of the Trans-Canada Highway (ON 417). The Site consists of a commercial office building, occupied by J.L. Richards, on the western portion (the "Site Building"), and paved parking areas on the north and central portions of the Site. The eastern portion of the Site consists of gravel covered area used as parking lot and snow storage. Based on the earliest available aerial image from 1928, the Site was undeveloped until at least 1958 before construction of the Site Building in 1959.
 - There are records of six monitoring wells installed on Site between 2013 –2019. Three of the six wells were observed at the time of the Site visit. None of these wells are used for water supply and potable water is provided to the Site and Study Area by the City of Ottawa.
- The nearest permanent watercourse is the Ottawa River located approximately 2km north of the Site.
- No areas of natural and scientific interest (ANSI) are known to be located on the Site or on the Phase One Study Area.
- At the time of the Phase One ESA, the surrounding properties within the Phase One Study Area included:
 - West: Commercial land uses including office buildings, restaurants and warehouses.
 - North: Bounded by ON 417 at a higher elevation followed by commercial land uses including office buildings and storage warehouse buildings. A portion of land immediately northwest of the Site consists of a Hydro One Easement for high-voltage overhead cables.
 - South: Commercial land uses including office buildings and printing businesses.
 - East: Large government office building followed by residential homes and an auto service garage.
- Thirty-four (34) Potentially Contaminating Activities (PCAs) were identified at twenty (20) different locations in the Phase One Study Area, none of which were on the Phase One Property, as shown on Figure 2A. Based on site characteristics and the locations of the off-Site PCAs, a total of sixteen (16) Areas of Potential Environmental Concern (APECs) were identified for the Phase One Property as shown on Figure 2B.
- Utility connections to the building include water, sewer, electrical, natural gas, cable and telephone. Storm sewers were observed during the site reconnaissance in the parking areas.
- Soil at the Site consists primarily of till plain deposits of silt and clay; and limestone bedrock. The physiography of the soils is till plains. Borehole records for the Site from previous environmental studies indicate the overburden is primarily fill materials overlying sand and gravel till. Fill materials were interpreted to consist of re-worked native soils, therefore the depth of transition between fill and native materials was difficult to determine. Fill materials were interpreted to extend to, at the very deepest, 3.05 mbgs. The top of bedrock was encountered at a depth of approximately 3.2 5 m on Site and is limestone with dolostone beds part of the Gull River formation.
- Local groundwater is anticipated to flow towards the northeast based on previously completed subsurface investigations that evaluated groundwater flow direction based on water levels measured in groundwater monitoring wells. Regional groundwater is anticipated to flow in a northwest direction towards the Ottawa River.

CONCLUSIONS

Based on the information obtained as part of this Phase One ESA Update, no new APECs were identified for the Site. Based on the 2019 Phase One ESA, a total of sixteen (16) Areas of Potential Environmental Concern (APECs) were identified for the Phase One Property.

The 2013 and 2019 Phase Two ESAs identified concentrations of 1,1-dichloroethylene and trichloroethylene in groundwater above the applicable site condition standards. Consistent with previous ESAs, the current report has identified multiple potential off-Site sources of 1,1-dichloroethylene and trichloroethylene in groundwater that may be causing impacts to the Site.

A Phase Two ESA would be required to confirm the presence and extent of impacts related to the identified APECs, as well as identify changes compared to previous findings from the 2013 and 2019 Phase II ESAs.

STUDY LIMITATIONS

This report was prepared for the exclusive use of Access Property Developments and is intended to provide an assessment of the current environmental conditions for 864 Lady Ellen Place 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 I 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 May 9, 2022, 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.

7 December 2022

7 December 2022

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.

Paul Hurst, MSc, PEng

Principal Environmental Engineer

E. D. WILSON STANDARD

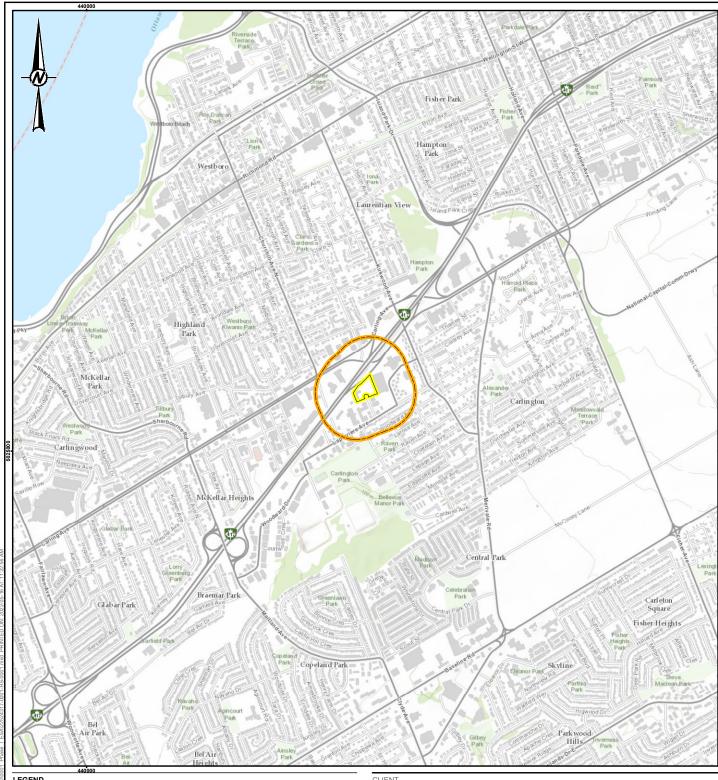
Eric Wilson, PEng, PMP Senior Environmental Engineer

CW/EDW/ca/ha

https://golderassociates.sharepoint.com/sites/162763/project files/6 deliverables/phase one update/22524317 rev 0 phase one update letter_dec2022.docx

Attachments: Figures 1-3

Attachment A - Site Photographs



LEGEND

PHASE ONE PROPERTY BOUNDARY

PHASE ONE STUDY AREA (250 M RADIUS)



1. PHASE ONE PROPERTY CENTROID COORDINATES = 441843.38 E, 5025406.73 N. 2. PHASE ONE PROPERTY BOUNDARY AREA = 1.45 HECTARES.

REFERENCE(S)

1. BASE MAP SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NI., ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY 2. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 1983 COORDINATE SYSTEM: UTM ZONE 18N.

J.L.RICHARDS & ASSOCIATES LTD.

PROJECT

PHASE ONE ENVIRONMENTAL SITE ASSESSMENT, 864 LADY ELLEN PLACE, OTTAWA, ON

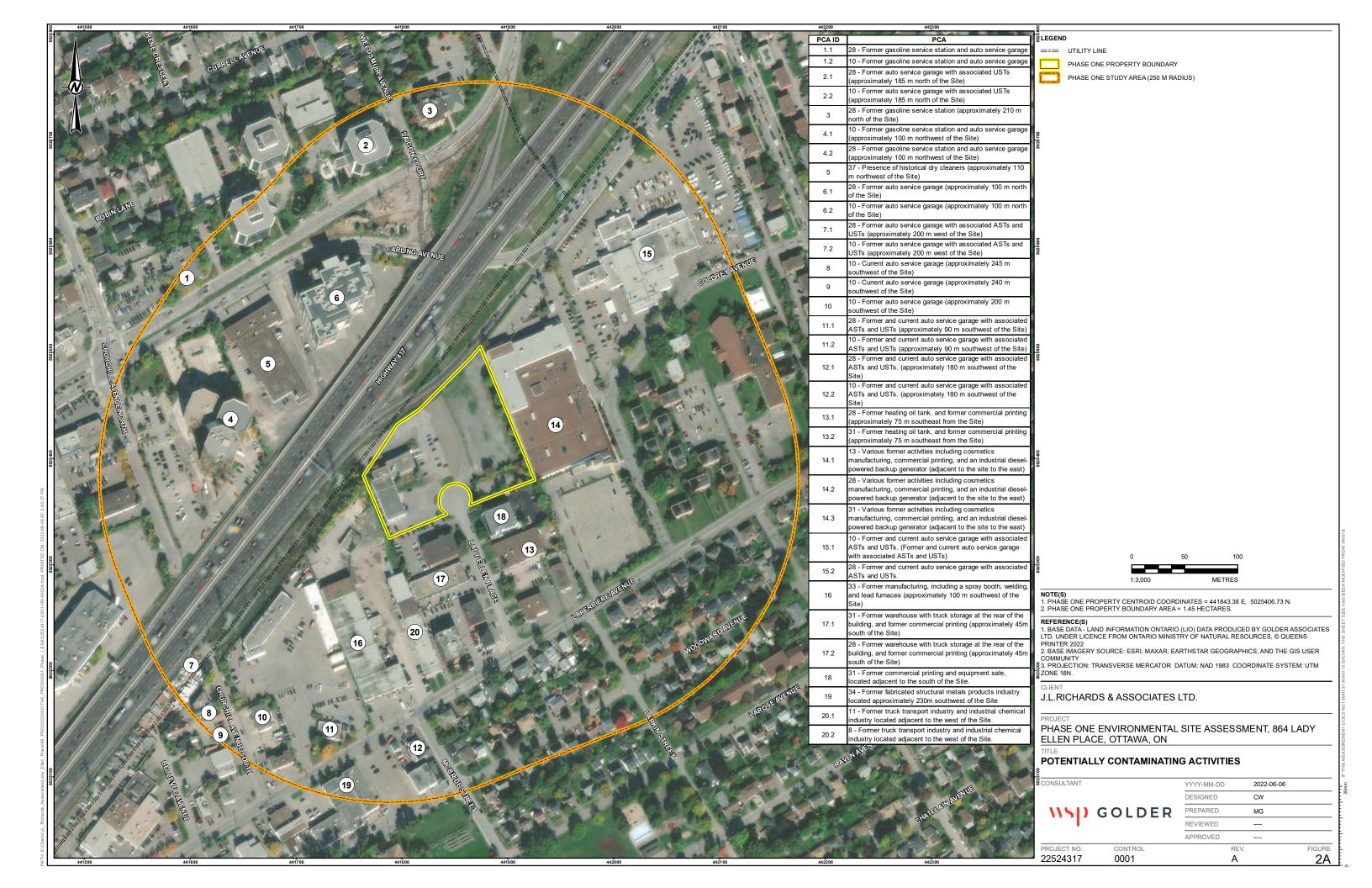
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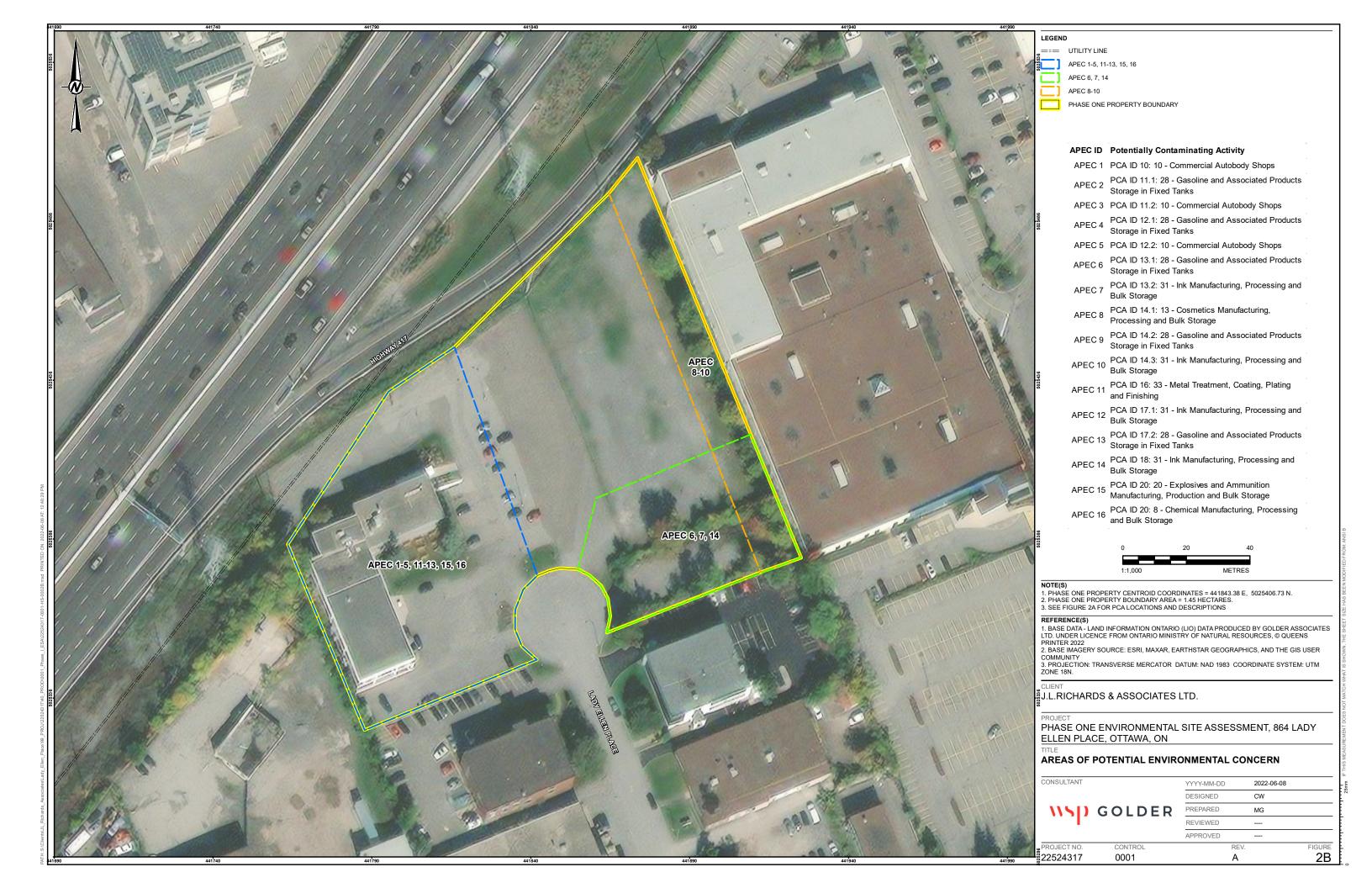
CONSULTANT

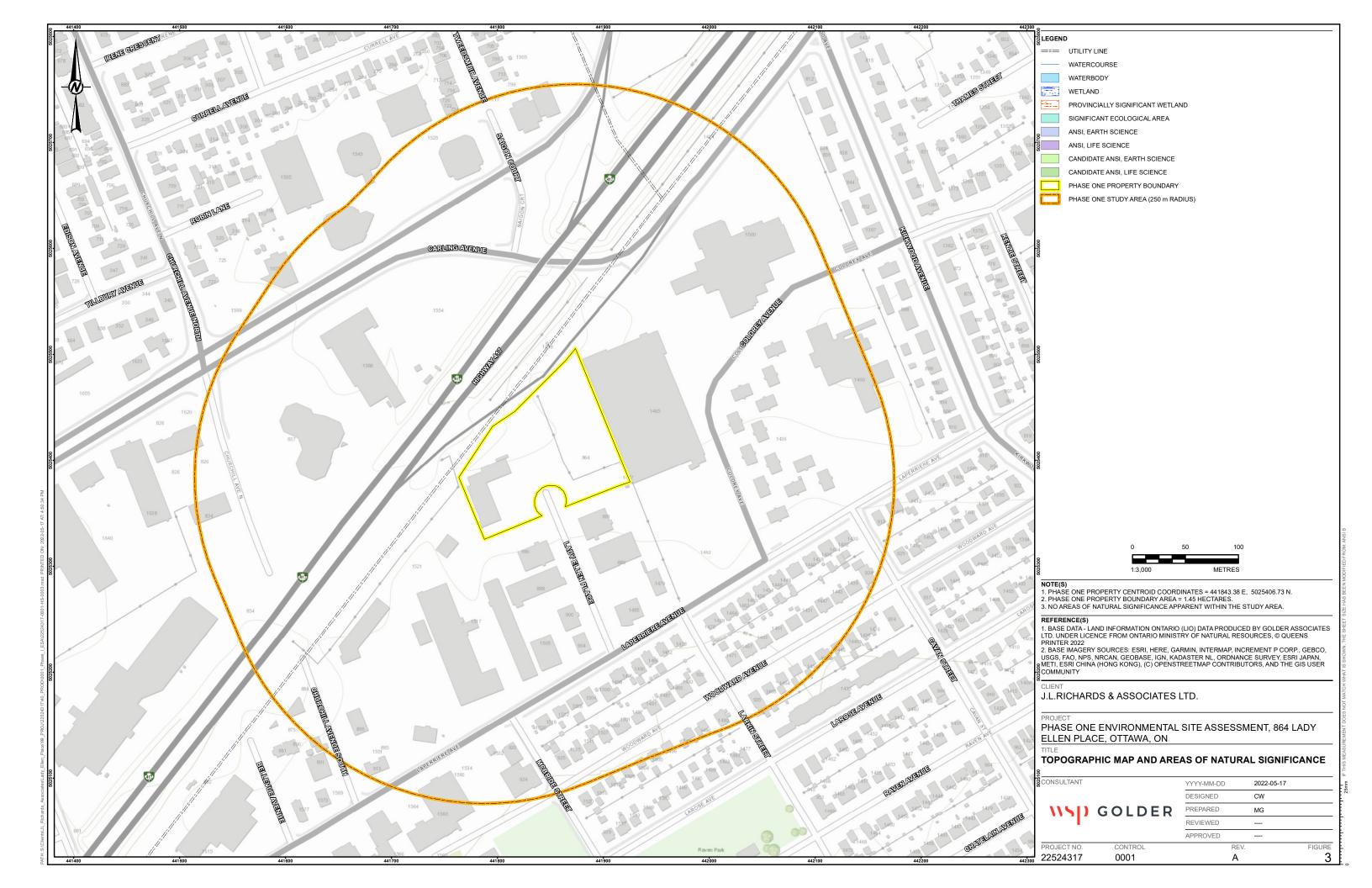
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YYYY-MM-DD	2022-05-16
DESIGNED	CW
PREPARED	MG
REVIEWED	
APPROVED	

PROJECT NO. CONTROL REV. FIGURE 22524317 0001 Α







Mr. Frank Abrantes Project No. 22524317
Access Property Development 7 December 2022

ATTACHMENT A

Site Photographs



Photo 1: View of building from North



Photo 2: View of parking lot and highway



Photo 3: On site commercial waste storage



Photo 4: Storm sewer catch basin

WSD GOLDER 2



Photo 5: Fire hydrant on site



Photo 6: View of Lady Ellen Place looking South from the Site



Photo 7: Stick up wells located in eastern parking lot



Photo 8: 1550 Carling Avenue (backside) - Location of former activities including cosmetics manufacturing, commercial printing, and a diesel generator



Photo 9: Purge water and soil drum on site from previous sampling programs



Photo 10: Hydro Ottawa Vault - no access available



Photo 111: Electrical panels in mechanical room



Photo 112: Electrical panels in air handler room

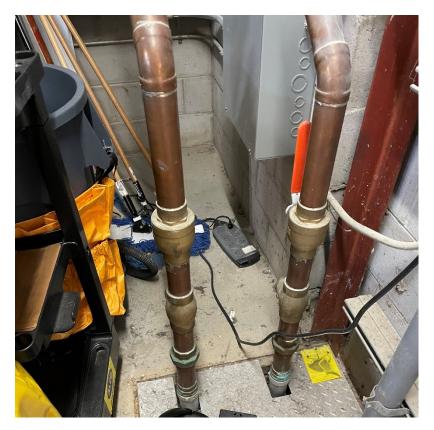


Photo 113: Sump pit with two pumps in air handler room

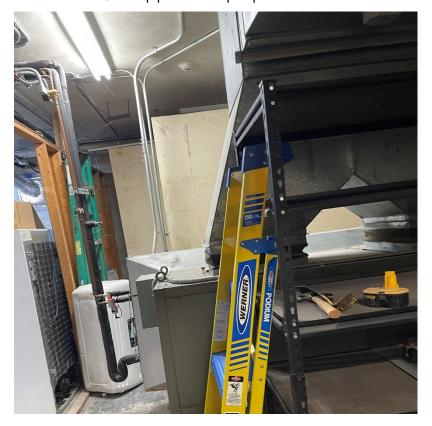


Photo 114: Air Handler

WSD GOLDER 7

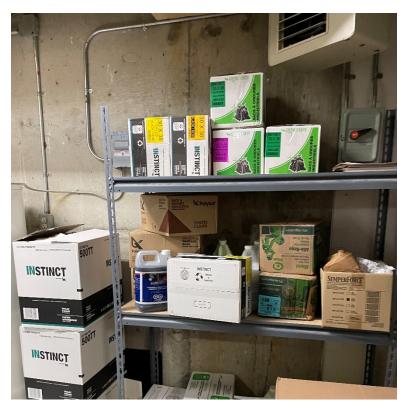


Photo 115: Cleaning supplies in air handler room



Photo 116: Paint storage in air handler room



Photo 117: Office kitchen



Photo 118: Boiler Room

WSD GOLDER 9



Photo 119: Evidence of historic leak in boiler room

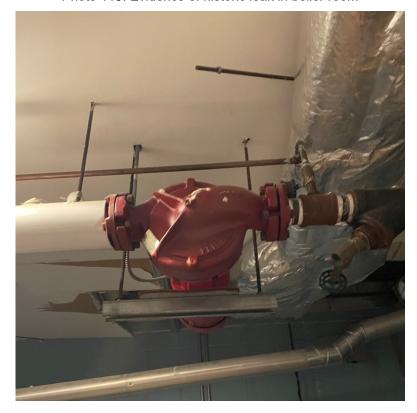


Photo 20: Cause of historic leak in boiler room - has been rectified and no more leaks have been detected

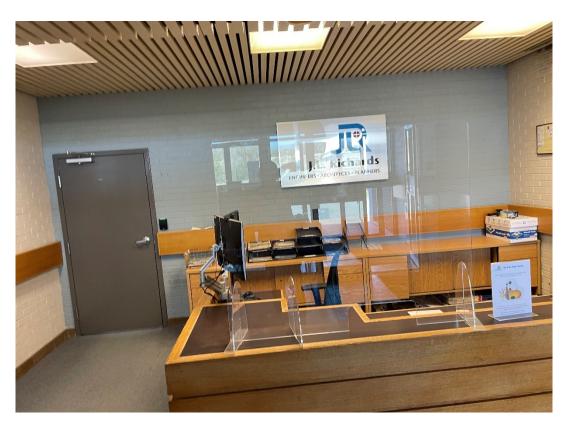


Photo 239: Reception area in the building

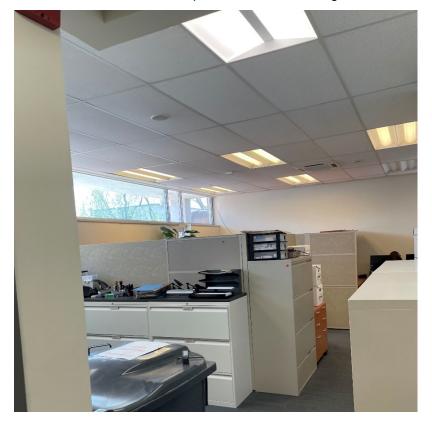


Photo 240: Typical cubical layout in the building



Photo 241: Typical offices in the building



Photo 242: Typical thermostat in the building

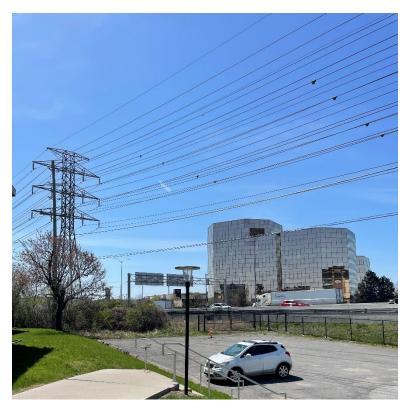


Photo 243: View from north of the building including electrical lines and the highway



Photo 244: Outdoor mechanical equipment including air conditioning unit and the unsured hookup for backup generator



Photo 245: Other outdoor mechanical equipment



Photo 246: 881 Lady Ellen Place - Former commercial printing location

NS) GOLDER 14



Photo 247: 889 Lady Ellen Place - Former commercial printing and oil tank location



Photo 30: 1550 Carling Avenue (frontside) - Location of former activities including cosmetics manufacturing, commercial printing, and a diesel generator



Photo 367: 1500 Carling Ave - Former and current auto service location



Photo 368: Nearby residential locations

WSD GOLDER 16



Photo 369: 1519 Laperriere Ave - Former tucker transport and chemical industry locations



Photo 370: 1529 Laperrier Ave - Former manufacturing location



Photo 371: 920 McBride - Former and current auto service garage

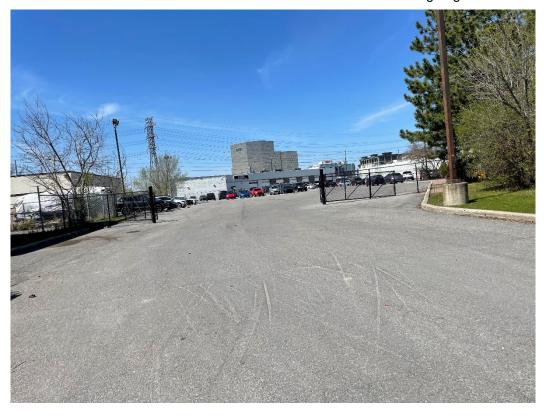


Photo 372: 1551 Laperriere Ave - Former and current auto service garage



Photo 373: 895 Churchill Ave - Former and current auto service garage



Photo 374: 920 McBride St - Former and current auto service garage