



PATERSON GROUP

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Geotechnical Engineering
Environmental Engineering
Hydrogeology
Materials Testing
Building Science
Rural Development Design
Retaining Wall Design
Noise and Vibration Studies

December 19, 2025
File: PE4690-LET.08

Avenue 31 Capital Inc.
401-222 Somerset Street West
Ottawa, Ontario
K2P 2G3

Attention: **Mr. Hugo Lalonde**

Subject: **Phase I - Environmental Site Assessment Update
Part of 4055 Russell Road
Ottawa, Ontario**

patersongroup.ca

Dear Sir,

Further to your request and authorization, Paterson Group (Paterson) carried out a Phase I – Environmental Site Assessment (Phase I ESA) Update for the aforementioned site (Phase I Property). This report updates a previous Phase I ESA completed by Paterson in October 2019, as well as a previous Phase I ESA Update completed by Paterson in October 2021.

This letter report is intended to meet the requirements for an updated Phase I ESA, as per Ontario Regulation 153/04, and is to be read in conjunction with the previous Phase I ESA reports.

1.0 Site Information

The Phase I Property for this assessment is comprised of two parcels of land, approximately 13 hectares and 2.5 hectares in size respectively, which occupy part of the greater property addressed 4055 Russell Road, in the City of Ottawa, Ontario. The Phase I Property is currently vacant of any buildings or structures and is situated within an urban setting consisting of commercial and light industrial properties.

2.0 Previous Engineering Reports

The following reports were reviewed prior to conducting this assessment:



- ❑ *“Phase I - Environmental Site Assessment, 4055 & 4120 Russell Road, Ottawa, Ontario”*, prepared by Paterson Group and dated October 7, 2019.
- ❑ *“Phase II - Environmental Site Assessment, 4055 & 4120 Russell Road, Ottawa, Ontario”*, prepared by Paterson Group and dated November 28, 2019.
- ❑ *“Phase I - Environmental Site Assessment Update, 4055 Russell Road, Ottawa, Ontario”*, prepared by Paterson Group and dated October 12, 2021.

It should be noted that these reports were completed for a larger parcel of land, part of which encompasses the current Phase I Property.

According to the findings of the 2019 Phase I ESA, three potentially contaminating activities (PCAs), resulting in areas of potential environmental concern (APECs), were identified on the property addressed 4055 Russell Road:

- ❑ A former auto service garage, located in the southeastern portion of 4055 Russell Road.
- ❑ A minor diesel fuel spill originating from a former above ground fuel storage tank, located in the central portion of the 4055 Russell Road.
- ❑ The potential for the importation of fill material as a result of the demolition of a former farmhouse in the northwestern portion of 4055 Russell Road.

Several other off-site PCAs were also identified by the Phase I ESA, however, based on their significant distances, recent date of construction, or their cross-gradient or downgradient orientation with respect to anticipated groundwater flow, the use of these properties were not considered to pose an environmental concern to the property.

Based on these findings, a Phase II ESA was completed to investigate the above noted APECs. A total of 11 boreholes were drilled across 4055 Russell Road, with 6 soil samples and 4 groundwater samples submitted for laboratory analysis.

Based on the analytical test results, all soil and groundwater samples complied with the selected MECP Table 9 standards and federal CCME commercial standards, with one exception. The concentration of barium in BH1, located in the southern portion of the property, was in excess of the MECP Table 9 standards. Based on the native origins of the soil sample, as well as the analytical results of previous subsurface investigations, this exceedance was considered to be a naturally occurring elevated level and thus did not present a contaminant issue to the subject property. As a result, no further investigative work was deemed to be required.



The 2021 Phase I ESA Update found that no significant changes had been made to the Phase I Property since the previous 2019 investigation. As a result, no further work was deemed to be required.

3.0 Historical Records Review

Phase I ESA Study Area Determination

A radius of approximately 250 m was deemed appropriate for defining the study area for this assignment (Phase I Study Area). Properties located outside of the Phase I Study Area are not considered to have had the potential to impact the Phase I Property, based on their significant distances away from the site.

First Developed Use Determination

Based on a review of available historical information, the Phase I Property was first developed with a farmhouse sometime prior to 1918.

MECP Instruments

As part of the 2021 Phase I ESA Update, a request was submitted to the MECP Freedom of Information office for information with respect to certificates of approval, permits to take water, certificates of property use, or any other similar MECP issued instruments for the Phase I Property. The response from the MECP indicated that no relevant records were identified pertaining to the Phase I Property.

MECP Submissions

As part of the 2021 Phase I ESA Update, a request was submitted to the MECP Freedom of Information office for information with respect to reports related to environmental conditions for the Phase I Property. The response from the MECP indicated that no relevant records were identified pertaining to the Phase I Property.

MECP Waste Management Records

As part of the 2021 Phase I ESA Update, a request was submitted to the MECP Freedom of Information office for information with respect to waste management records for the Phase I Property. The response from the MECP indicated that no relevant records were identified pertaining to the Phase I Property.



MECP Incident Reports

As part of the 2021 Phase I ESA Update, a request was submitted to the MECP Freedom of Information office for information with respect to records concerning environmental incidents, orders, offences, spills, discharges of contaminants, or inspections maintained by the MECP for the Phase I Property or any of the neighbouring properties. The response from the MECP indicated that no relevant records were identified pertaining to the Phase I Property.

MECP Brownfields Environmental Site Registry

A search of the MECP Brownfields Environmental Site Registry was conducted as part of this assessment. This database contains publicly available information on Records of Site Condition (RSCs) filed in the Province of Ontario since 2004.

A review of the registry did not identify any Records of Site Condition (RSCs) filed for the Phase I Property or for any properties situated within the Phase I Study Area.

OMNRF Areas of Natural and Scientific Interest

A search for areas of natural and scientific interest situated within the Phase I Study Area was conducted electronically via the Ontario Ministry of Natural Resources and Forestry (OMNRF) website. The search did not identify any natural features or areas of natural significance within the Phase I Study Area.

Technical Standards and Safety Authority (TSSA)

The TSSA Fuels Safety Branch in Toronto was contacted electronically, as part of this assessment, to inquire about current and former fuel storage tanks, spills, and historical incidents for the Phase I Property as well as the neighbouring properties.

The response from the TSSA indicated that no relevant records were identified pertaining to the Phase I Property or any of the neighbouring properties within the Phase I Study Area. A copy of the correspondence with the TSSA has been appended to this letter.

City of Ottawa Historical Land Use Inventory (HLUI) Database

As part of the 2021 Phase I ESA Update, a requisition form was submitted to the City of Ottawa to request information from the City's Historical Land Use Inventory (HLUI) database for any environmental records pertaining to the Phase I Property as well as any properties situated within the Phase I Study Area.

The response from the City indicated that no relevant records were identified pertaining to the Phase I Property.



City of Ottawa Old Landfill Document

The City of Ottawa's online mapping tool for former landfill sites was reviewed as part of this assessment. Developed under the City of Ottawa's *Old Landfill Management Strategy (OLMS, 2004)*, the tool identifies 123 former landfill sites within the City's boundaries. The tool also provides detailed information on the location, ownership, operational periods, and waste types for 82 landfill sites that were formerly owned or operated, either wholly or in part, by the municipalities and townships that now form the City of Ottawa. The mapping tool is updated periodically to reflect new or revised information.

A review of this mapping data identified one former landfill site located at 4000 Russell Road, approximately 30 m to the southwest of the Phase I Property. According to the data, this site was listed as an illegal waste dump and contains no official records of what types of waste materials were disposed here, dates of operation, or waste quantities. A note is on file for this site stating that City of Ottawa By-Law enacted for clean-up of the site.

A review of aerial photographs from 1999 to 2007 shows what appear to be solid, non-hazardous materials, such as scrap metal, vehicles, fill material, building materials, and other miscellaneous debris, stockpiled in the western portion of the property. No activity was observed on this land prior to this time period. A 2008 aerial photograph indicates that the site had been cleared of debris and waste materials. By 2015, the site appears to be occupied as a contractor equipment storage yard, which is shown to have expanded in size in a 2021 aerial photograph. Based on the info available, this site is not considered to be a landfill in the traditional sense, but rather a contractor's yard which was used for the placement of excess soil and derelict vehicles. Therefore, many of the common concerns related to domestic waste disposal sites do not apply to this property.

Given the non-hazardous nature of the materials temporarily disposed of on-site, its short duration, its recent clean up as ordered by By-Law, as well as its separation distance, this reported former illegal waste dump site is not considered to pose an environmental concern to the Phase I Property.

Aerial Photographs

The most recent aerial photograph reviewed in the 2021 Phase I ESA Update report was taken in 2019. For this update, a more recent aerial photograph, taken in 2024, was reviewed as part of this assessment.

In the 2024 aerial photograph, no significant changes were apparent with respect to the Phase I Property since the time of the previous 2019 aerial photograph, though much of the land has been stripped in preparation for future development. The neighbouring lands to the north and east have since been developed with commercial warehouse buildings.



The Phase I Property and the surrounding lands appear in this photograph as they exist today. A copy of the 2024 aerial photograph has been appended to this letter.

MECP Water Well Records

A search of the MECP Well Records website was conducted as part of this assessment. This database provides information for all recorded water wells installed within the Province of Ontario.

A search of the database identified 34 well records situated within the Phase I Study Area. The records pertain to wells installed between 1949 and 2021 and used for either domestic household or agricultural water supply or groundwater observation purposes. Given the presence of municipal services, no potable water wells are anticipated to remain in use within the Phase I Study Area.

According to the well records, the overburden stratigraphy in the general area of the Phase I Property consists of sand and gravel, underlain by silty clay. Bedrock, consisting of limestone and shale, was typically encountered at depths ranging from approximately 4 m to 5 m below ground surface.

Personal Interview

Mr. Hugo Lalonde, a representative of Avenue 31 Capital Inc., was contacted via telephone to respond to questions regarding the history of the Phase I Property. According to Mr. Lalonde, no significant changes have been made to the Phase I Property since the time of the previous 2021 Phase I ESA Update report. Mr. Lalonde stated that he was unaware of any potential environmental concerns associated with the historical or current use of the Phase I Property.

4.0 Site Reconnaissance

The site inspection was conducted on December 10, 2025, between 12:00 PM and 1:00 PM, by personnel from Paterson's environmental department.

In addition to the Phase I Property, the present-day uses of the neighbouring properties within the Phase I Study Area were also assessed at the time of the site inspection.



Exterior Assessment

Site Description

At the time of the site inspection, the Phase I Property was observed to be vacant and consisted of tall grass, light brush, and occasional mature trees. Some stockpiles of soil material were observed on the Phase I Property, though this is considered to be reworked native soil generated from the on-going developments on 4055 Russell Road and is therefore not considered to be an environmental concern to the Phase I Property.

The Phase I Property is considered to be at grade with respect to the adjacent roads and properties. The site topography is relatively flat, whereas the regional topography slopes very gently down towards the east.

Water drainage on the subject site occurs primarily via infiltration throughout the property, as well as via surface run-off towards a drainage ditch present along Russell Road. A small watercourse is present in the southern portion of 4055 Russell Road, in between the two parcels which comprise the Phase I Property. No ponded water, stressed vegetation, or any other indications of potential sub-surface contamination were observed on-site at the time of the site inspection.

A depiction of the Phase I Property is presented on Drawing PE4690-1R2 – Site Plan, in the Figures section of this report.

Buildings and Structures

No buildings or structures are currently present on the Phase I Property.

Potential Environmental Concerns

☐ **Fuels and Chemical Storage**

At the time of the site inspection, no chemical storage areas, aboveground fuel storage tanks, or underground fuel storage tanks were observed to be present on the Phase I Property.

☐ **Hazardous Materials and Unidentified Substances**

At the time of the site inspection, no hazardous materials, unidentified substances, spills, surficial staining, abnormal odours, stressed vegetation, or any other indications of potential sub-surface contamination were observed on the exterior of the Phase I Property.



☐ **Polychlorinated Biphenyls (PCBs) and Transformer Oil**

At the time of the site inspection, no electrical transformers or other potential sources of PCBs were observed on the Phase I Property.

☐ **Waste Management**

At the time of the site inspection, no waste materials were observed to be generated on the Phase I Property.

Neighbouring Properties

An inspection of the neighbouring properties was conducted from publicly accessible roadways at the time of the site inspection. Land use adjacent to the Phase I Property was observed as follows:

- ☐ North: Hydro Ottawa power substation, followed by a railway line and Highway No. 417.
- ☐ East: Highway No. 417, followed by vacant land.
- ☐ South: Russell Road, followed by various light commercial/industrial buildings and contractor storage yards, as well as a small cemetery.
- ☐ West: Russell Road, followed by various light industrial buildings and contractor storage yards as well as a small cemetery.

Based on their relatively recent age of construction as well as their separation distances, the light industrial properties to the west and south are not considered to pose an environmental concern to the Phase I Property.

Current land use within the Phase I Study Area is illustrated on Drawing PE4690-2R2 – Surrounding Land Use Plan, appended to this letter.

5.0 Review and Evaluation of Information

Land Use History

Based on a review of available historical information, the Phase I Property was first developed with a farmhouse sometime prior to 1918. The farmhouse was recently demolished in 2020 and the site has remained vacant ever since.



Potentially Contaminating Activities (PCAs) and Areas of Potential Environmental Concern (APECs)

Based on the findings of this assessment, no potentially contaminating activities (PCAs), resulting in areas of potential environmental concern (APECs), were identified on the Phase I Property.

Contaminants of Potential Concern (CPC)

Based on the findings of this assessment, no contaminants of concern were identified with respect to the Phase I Property.

6.0 Conceptual Site Model

Geological and Hydrogeological Setting

Based on the available geological mapping information, the bedrock within the area of the Phase I Property consists of shale of the Carlsbad Formation, whereas the surficial geology consists of offshore marine sediments (erosional terraces) with an overburden thickness ranging from approximately 3 m to 10 m.

Groundwater is known to be encountered within the overburden at depths ranging from approximately 1 m to 3 m below ground surface.

Existing Buildings and Structures

No buildings or structures currently exist on the Phase I Property.

Water Bodies and Areas of Natural and Scientific Interest

No waterbodies or areas of natural and scientific interest are present on the Phase I Property, though a small watercourse does transect 4055 Russell Road in between the two parcels comprising the Phase I Property.

Drinking Water Wells

Based on the availability of municipal services, no potable groundwater wells are anticipated to be present within the Phase I Study Area.

Neighbouring Land Use

The surrounding lands within the Phase I Study Area consist largely of commercial and light industrial properties. Current land use is depicted on Drawing PE4690-2R2 – Surrounding Land Use Plan, in the Figures section of this report.



Potentially Contaminating Activities (PCAs) and Areas of Potential Environmental Concern (APECs)

Based on the findings of this assessment, no potentially contaminating activities (PCAs), resulting in areas of potential environmental concern (APECs), were identified on the Phase I Property.

Contaminants of Potential Concern (CPC)

Based on the findings of this assessment, no contaminants of concern were identified with respect to the Phase I Property.

Assessment of Uncertainty and/or Absence of Information

The information available for review as part of the preparation of this Phase I ESA Update is considered to be sufficient to conclude that there are no PCAs or APECs associated with the Phase I Property.

The absence of any APECs was confirmed by a variety of independent sources, and as such, the conclusions of this report are not affected by uncertainty which may be present with respect to the individual sources.

7.0 Conclusions and Recommendations

A review of more recent information, in combination with observations made during the site inspection, generally confirmed the findings presented in the 2019 and 2021 Phase I ESA reports. Since that time, no significant changes have been made to the Phase I Property and no new potential environmental concerns were identified.

Based on the findings of this assessment, it is our opinion that **a Phase II ESA is not required for the Phase I Property.**

8.0 Statement of Limitations

This Phase I - Environmental Site Assessment (Phase I ESA) Update report has been prepared in general accordance with Ontario Regulation 153/04, as amended, under the Environmental Protection Act. The conclusions presented herein are based on information gathered from a limited historical review and field inspection program. The findings of this Phase I ESA Update are based on a review of readily available geological, historical, and regulatory information and a cursory review made at the time of the field assessment.



Should any conditions be encountered at the Phase I Property and/or historical information that differ from our findings, we request that we be notified immediately in order to allow for a reassessment.

This report was prepared for the sole use of Avenue 31 Capital Inc. Permission and notification from Avenue 31 Capital Inc. and Paterson Group will be required prior to the release of this report to any other party.

Paterson Group Inc.

Nick Sullivan, B.Sc.

Mark D'Arcy, P.Eng., QP_{ESA}



Report Distribution

- ☐ Avenue 31 Capital Inc.
- ☐ Paterson Group Inc.

Attachments

- ☐ Aerial Photograph (2024)
- ☐ TSSA Correspondence
- ☐ Figure 1 – Key Plan
- ☐ Drawing PE4690-1R2 – Site Plan
- ☐ Drawing PE4690-2R2 – Surrounding Land Use Plan





AERIAL PHOTOGRAPH
2024

Nick Sullivan

From: Public Information Services <publicinformationsservices@tssa.org>
Sent: Thursday, December 18, 2025 4:36 PM
To: Nick Sullivan
Subject: RE: Records Search Request (PE4690)

External Email: Do not click on links or open attachments unless you trust the sender.

Hello ,

NO RECORDS FOUND IN CURRENT DATABASE:

- We confirm that there are NO **fuels records** in our database at the subject address(es).

This is not a confirmation that there are no records in the archives. For a further search in our archives, please go to the [TSSA Client Portal](#) to complete an Application for Release of Public Information.

Please refer to [Training \(tssa.org\)](#) for instructions on how to use the portal. Please refer to [How to Submit a Public Information Request \(tssa.org\)](#) for instructions.

The associated fee must be paid via credit card (Visa or MasterCard).

Once all steps have been successfully completed you will receive your payment receipt via email.

TSSA does not make any representations or warranties with respect to the accuracy or completeness of any records released. The requestor assumes all risk in using or relying on the information provided.

If you have any questions or concerns, please do not hesitate to contact our Public Information Release team at publicinformationsservices@tssa.org.

Kind regards,



Slavka Zahrebelny | Public Information & Records Agent

Public Information

345 Carlingview Drive

Toronto, Ontario M9W 6N9

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www.tssa.org



Winner of 2025 5-Star Safety Cultures Award

From: Nick Sullivan <NSullivan@patersongroup.ca>
Sent: December 18, 2025 4:09 PM
To: Public Information Services <publicinformationsservices@tssa.org>
Subject: Records Search Request (PE4690)

[CAUTION]: THIS EMAIL ORIGINATED OUTSIDE THE ORGANISATION.
PLEASE DO NOT CLICK LINKS OR OPEN ATTACHMENTS UNLESS YOU RECOGNISE THE SOURCE OF THIS EMAIL AND KNOW THE CONTENT IS SAFE.

Good day,

Could you please complete a search of your records for **underground/aboveground storage tanks** for the following addresses in Ottawa, Ontario.

Russell Road: 3830, 3900, 3968, 4000, 4055, 4120

Belgreen Drive: 4139, 4140

Hydro Road: 2600

Thank you,



Nick Sullivan, B.Sc.
Environmental Technical Specialist

TEL: (613) 226-7381 ext. 208
DIRECT: (613) 913-3608

9 AURIGA DRIVE
OTTAWA, ON, K2E 7T9

nsullivan@patersongroup.ca

EXPLORE THE POSSIBILITIES WITH US AND VISIT OUR REFRESHED WEBSITE TODAY

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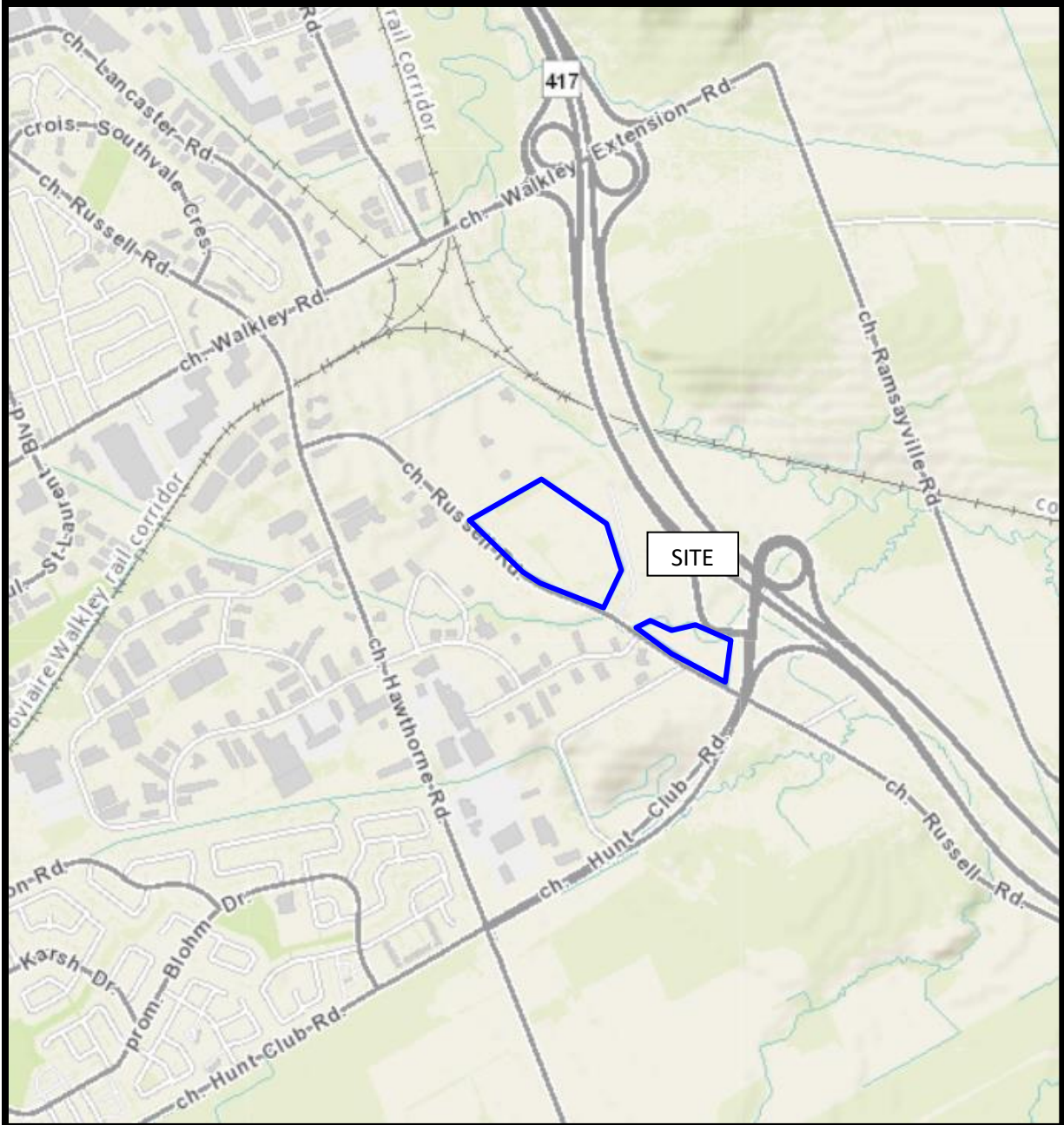
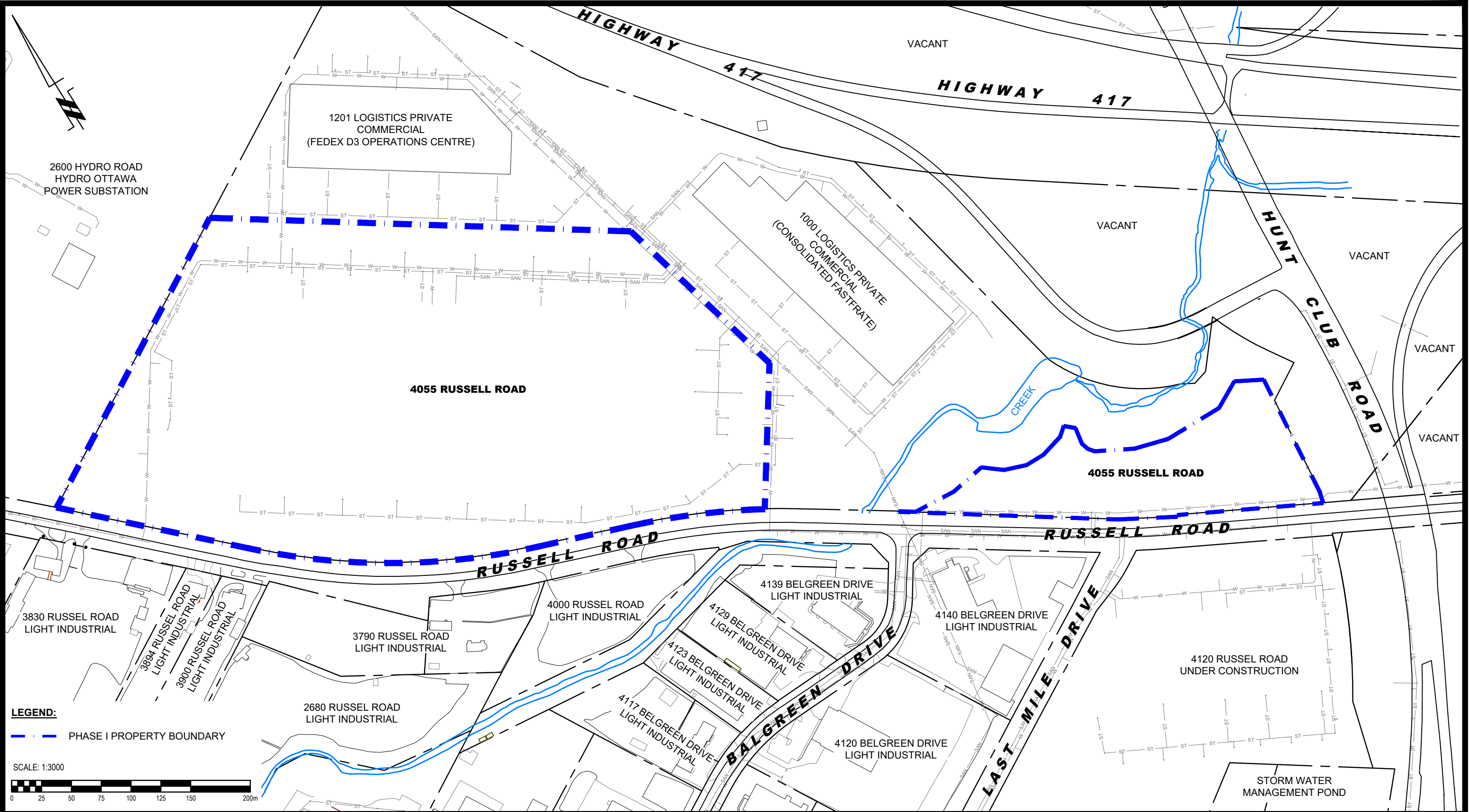


FIGURE 1
KEY PLAN





9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

AVENUE 31 CAPITAL INC.

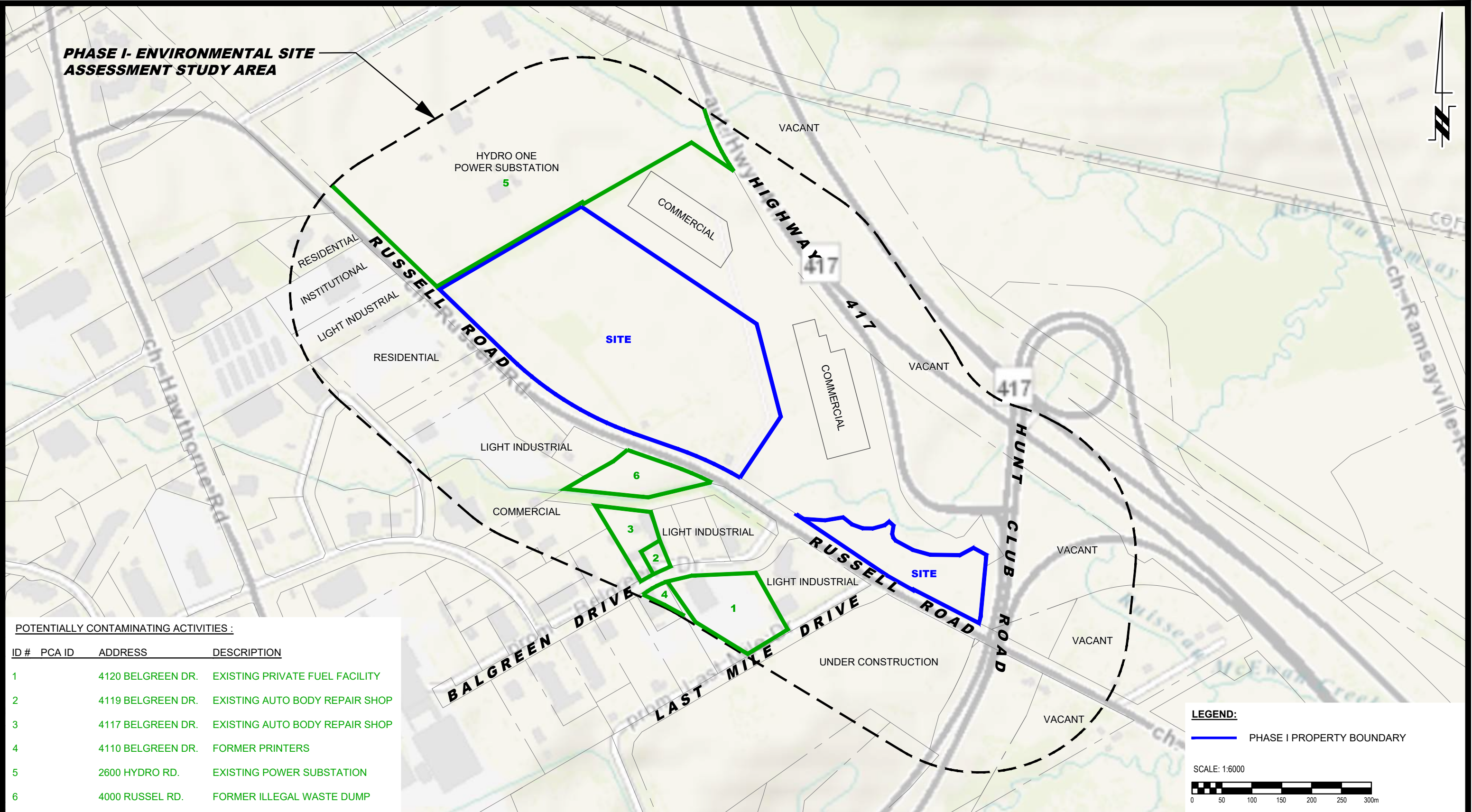
PHASE I – ENVIRONMENTAL SITE ASSESSMENT UPDATE
PART OF 4055 RUSSELL ROAD

OTTAWA,
Title:

ONTARIO

SITE PLAN

Scale:	1:3000	Date:	12/2025
Drawn by:	GK	Report No.:	PE4690-LET.08
Checked by:	NS	Dwg. No.:	PE4690-1R2
Approved by:	NS	Revision No.:	



POTENTIALLY CONTAMINATING ACTIVITIES :

ID #	PCA ID	ADDRESS	DESCRIPTION
1		4120 BELGREEN DR.	EXISTING PRIVATE FUEL FACILITY
2		4119 BELGREEN DR.	EXISTING AUTO BODY REPAIR SHOP
3		4117 BELGREEN DR.	EXISTING AUTO BODY REPAIR SHOP
4		4110 BELGREEN DR.	FORMER PRINTERS
5		2600 HYDRO RD.	EXISTING POWER SUBSTATION
6		4000 RUSSEL RD.	FORMER ILLEGAL WASTE DUMP

LEGEND:

— PHASE I PROPERTY BOUNDARY

SCALE: 1:6000

9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

AVENUE 31 CAPITAL INC.

PHASE I – ENVIRONMENTAL SITE ASSESSMENT UPDATE
PART OF 4055 RUSSELL ROAD

OTTAWA,
Title:

ONTARIO

SITE PLAN

Scale: 1:3000

Drawn by: GK

Checked by: NS

Approved by: NS

Date: 12/2025

Report No.: PE4690-LET.08

Dwg. No.: PE4690-1R2

Revision No.: