



Geotechnical
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Phase I Environmental Site Assessment

Vacant Land
3317 Navan Road
Ottawa, Ontario

Prepared For

Manor Park Management

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Report: PE4245-1

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EXECUTIVE SUMMARY

Assessment

Paterson Group was retained by Manor Park Management to conduct a Phase I Environmental Site Assessment (ESA) of 3317 Navan Road, in the City of Ottawa, Ontario. The purpose of this Phase I-ESA was to research the past and current use of the site and study area and to identify any environmental concerns with the potential to have impacted the subject property.

According to the historical research, the subject site was developed as early as 1945 with a residential dwelling. Based on aerial photographs, the residential dwelling located on the subject site was demolished between 1965 and 1976 and the site has remained vacant and tree covered since. No environmental concerns have been identified with the historical use of the site.

Adjacent properties were occupied by residential dwellings and/or were used for agriculture until the development of residential dwellings along Renaud Road and Navan Road and commercial properties along Navan Road in the 1960s and 1970s. In the 1970s, the Navan Landfill was developed south of the subject site, however, it is not considered to represent an APEC on the subject site. Additional residential neighbourhoods were developed north of the site in 2011. No concerns were identified during the historical search.

Following the historical research, a site inspection was conducted of the subject site and the Phase I-ESA study area. The subject site is currently undeveloped forested land. Neighbouring properties to the north, west and east were mainly residential dwellings. Most of properties south of the subject site were occupied by residential dwellings. One (1) commercial property, located 80m south of the subject site was identified as potentially contaminating activity (PCA) based on the presence of aboveground storage tanks. A portion of the Navan Landfill is located south of the subject site and is considered a PCA. None of the PCAs are considered to represent areas of potential environmental concern on the subject site. No other environmental concerns were identified on the subject or neighbouring sites

Conclusion

Based on the results of the assessment, **in our opinion, a Phase II Environmental Site Assessment is not required for the property.**

1.0 INTRODUCTION

At the request of Manor Park Management, Paterson Group (Paterson) conducted a Phase I Environmental Site Assessment (Phase I ESA) of an undeveloped parcel of land addressed 3317 Navan Road, in the City of Ottawa, Ontario. The purpose of this Phase I ESA was to research the past and current use of the site and study area and to identify any environmental concerns with the potential to have impacted the subject property.

Paterson was engaged to conduct this Phase I ESA by Mr. Anand Aggarwal of Manor Park Management whose office is located at 231 Brittany Drive, Suite D, Ottawa, Ontario. Mr. Aggarwal can be reached by telephone at (613) 746-1647.

This report has been prepared specifically and solely for the above noted project which is described herein. It contains all of our findings and results of the environmental conditions at this site.

This Phase I-ESA report has been prepared in general accordance with Ontario Regulation 153/04 as amended by O.Reg. 269/11 (Environmental Protection Act), and also complies with the requirements of CSA Z768-01. The conclusions presented herein are based on information gathered from a limited historical review and field inspection program. The findings of the Phase I - ESA 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. The historical research relies on information supplied by others, such as, local, provincial and federal agencies and was limited within the scope-of-work, time and budget of the project herein.

2.0 PHASE I PROPERTY INFORMATION

Address:	3317 Navan Road.
Legal Description:	Part of Lot 4, Concession 4, Township of Gloucester, now in the City of Ottawa.
Property Identification Number:	04352-0292.
Location:	The subject site is bordered by Navan Road to the south and is located south of Birkhill Place in the City of Ottawa, Ontario. The subject site is shown on Figure 1 - Key Plan following the body of this report.
Latitude and Longitude:	45° 25' 43.46" N, 75° 30' 33.13" W.
Site Description:	
Configuration:	Irregular.
Site Area:	3.0 hectares (approximate).
Zoning:	DR – Development Reserved Zone.
Current Use:	Vacant and forested land.
Services:	The subject site is located in an area that is undergoing significant development, all of which is municipally serviced, however, many sites with older buildings in the vicinity may still utilize private water wells and septic systems.

3.0 SCOPE OF INVESTIGATION

The scope of work for this Phase I – Environmental Site Assessment was as follows:

- Determine the historical activities on the subject site and study area by conducting a review of readily available records, reports, photographs, plans, mapping, databases and regulatory agencies;
- Investigate the existing conditions present at the subject site and study area by conducting site reconnaissance;
- Conduct interviews with persons knowledgeable of current and historic operations on the subject property, and if warranted, neighbouring properties;
- Present the results of our findings in a comprehensive report in general accordance with the requirements of Ontario Regulation 269/11 amending O.Reg. 153/04 made under the Environmental Protection Act and in compliance with the requirements of CSA Z768-01;
- Provide a preliminary environmental site evaluation based on our findings;
- Provide preliminary remediation recommendations and further investigative work if contamination is suspected or encountered.

4.0 RECORDS REVIEW

4.1 General

Phase I-ESA Study Area Determination

A radius of approximately 250m was determined to be appropriate as a Phase I ESA study area for this assignment. Properties outside the 250m radius are not considered to have impacted the subject land, based on their significant distance from the site.

First Developed Use Determination

According to the aerial photographs and documents reviewed, the subject site was developed as early as 1945 with a residential dwelling. Between 1965 and 1976, the structure was demolished and the site has since remained vacant.

Fire Insurance Plans

Fire Insurance Plans (FIPs) are not available for the area of the subject site.

City of Ottawa Street Directories

City of Ottawa and Gloucester directories from 1980 to 2011 at the National Archives were reviewed in approximate 5-year intervals for the subject site and properties located within the Phase I ESA study area.

The subject site has never been listed in the City directories. Neighbouring properties within the Phase I study area were listed primarily as residential dwellings. A neighbouring property south of the subject site, addressed 3354 Navan Road, was listed as Waste Services Inc. and Huneault Waste Management from 2000 to 2010. 3354 Navan Road is considered to be the former address of the Navan Landfill and is considered a potentially contaminating activity (PCA). Based on the separation distance of 330m and the down-gradient location with respect to the subject site, the landfill is not considered an area of potential environmental concern on the subject site.

No other environmental concerns were identified for neighbouring properties.

Previous Engineering Reports

Based on a review of environmental projects in the area of the subject site completed by Paterson Group, this firm did not identify any issues considered to pose a risk to the subject land.

4.2 Environmental Source Information

Environment Canada

A search of the National Pollutant Release Inventory (NPRI) was conducted electronically on February 28, 2018. The subject site was not listed in the NPRI database.

The most recent information from the database identified records of pollutant release for the Navan landfill, addressed 3342 Navan Road and located within the Phase I study area. Carbon monoxide (879,317 tonnes), particulate matter below ten (10) microns (143,618 tonnes) and particulate matter below two and a half (2.5) microns (54,589 tonnes) were released to their air in 2015.

The NPRI records also identified 290.7 tonnes of friable asbestos disposed in the landfill in 2015.

Based on the separation distance between the waste disposal area of the landfill and the subject site, the above mentioned NPRI records are not considered to pose a concern to the subject site.

PCB Inventory

A search of national PCB waste storage sites was conducted. No PCB waste storage sites are located within the Phase I study area.

Ontario Ministry of Environment (MOECC) Instruments

A request was submitted to the MOECC Freedom of Information office for information with respect to certificates of approval, permits to take water, certificates of property use or any other similar MOECC issued instruments for the site. At the time of issuance of this report, a response had not been received. A copy of the response will be forwarded to the client, should it contain any pertinent information.

MOECC Coal Gasification Plant Inventory

The Ontario Ministry of Environment document titled "Municipal Coal Gasification Plant Site Inventory, 1991" was reviewed to reference the locations of former plants with respect to the site. No coal gasification plants were identified within the Phase I study area.

MOECC Incident Reports

A request was submitted to the MOECC Freedom of Information office for information with respect to records concerning environmental incidents, orders, offences, spills, discharges of contaminants or inspections maintained by the MOECC for the site or adjacent properties. At the time of issuance of this report, a response had not been received. A copy of the response will be forwarded to the client, should it contain any pertinent information.

MOECC Waste Management Records

A request was submitted to the MOECC Freedom of Information office for information with respect to waste management records. At the time of issuance of this report, a response had not been received. A copy of the response will be forwarded to the client, should it contain any pertinent information.

MOECC Submissions

A request was submitted to the MOECC Freedom of Information office for information with respect to reports related to environmental conditions have been submitted to the MOECC. At the time of issuance of this report, a response had not been received. A copy of the response will be forwarded to the client, should it contain any pertinent information.

MOECC Brownfields Environmental Site Registry

A search of the MOECC Brownfields Environmental Site Registry was conducted as part of this assessment for the site, neighbouring properties and the general area of the site. One (1) Record of Site Condition (RSC) was found for the subject site and another for a property along Navan Road within the Phase I study area.

An RSC was filed on May 7, 2009, for the adjacent property to the east. Information within the RSC indicates that no environmental concerns were identified, as such, no groundwater or soil analytical testing was required. The neighbouring property have been developed with residential dwellings.

Paterson Group filed an RSC for a neighbouring property, located approximately 100m southwest of the subject site, on March 24, 2017. Based on information provided in the RSC report, soil and groundwater met the applicable MOECC standards. The neighbouring property is not considered to pose a risk to the subject site.

MOECC Waste Disposal Site Inventory

The Ontario Ministry of Environment document titled "Waste Disposal Site Inventory in Ontario, 1991" was reviewed as part of the historical research. This document includes all recorded active and closed waste disposal sites, industrial manufactured gas plants and coal tar distillation plants in the Province of Ontario. No former waste disposal sites were identified within the Phase I study area.

As previously mentioned, the Navan Landfill is located south of the subject site. Based on the separation distance and the inferred down-gradient location with respect to the subject site, the landfill is not considered to represent an area of potential environmental concern on the subject site.

Technical Standards and Safety Authority (TSSA)

The TSSA, Fuels Safety Branch in Toronto was contacted electronically on February 20, 2018 to inquire about current and former underground storage tanks, spills and incidents for the site and neighbouring properties. At the time of issuance of this report, a response had not been received. A copy of the response will be forwarded to the client, should it contain any pertinent information.

City of Ottawa Historical Land Use Inventory (HLUI)

A request for information from the City's Historical Land Use Inventory (HLUI 2005) database for the subject property was sent on March 2, 2018, to the City of Ottawa. At the time of issuance of this report, a response had not been received. A copy of the response will be forwarded to the client, should it contain any pertinent information.

City of Ottawa Landfill Document

The document entitled “Old Landfill Management Strategy, Phase I – Identification of Sites, City of Ottawa”, was reviewed. As previously mentioned, the Navan landfill was identified within the Phase I study area. Based on the separation distance of the waste disposal area (330m) and the down-gradient location relative to the subject site, the landfill is not considered to represent an area of potential environmental concern on the subject site.

4.3 Physical Setting Sources

Aerial Photographs

Historical air photos from the National Air Photo Library were reviewed in approximate ten (10) year intervals. The review period dates back to the first available air photos for the site. Based on the review, the following observations have been made:

- | | |
|------|--|
| 1945 | The subject site appears to be occupied by a residential dwelling and used for agricultural purposes. Agricultural lands and farmsteads surround the subject site to the east, west and south while treed lands are visible to the north. |
| 1953 | No significant changes have been made to the subject site or surrounding properties. |
| 1965 | (City of Ottawa website) No significant changes have been made to the subject site. Residential dwellings have been developed on neighbouring properties to the north along Renaud Road. |
| 1976 | (City of Ottawa website) The dwelling on the subject site appears to have been demolished and the site is vacant. The Navan landfill appears to be under development southeast of the subject site. |
| 1985 | (City of Ottawa website) No significant changes have been made to the subject site. Residential dwellings have been developed north of the subject site, along Renaud Road. The André Taillefer aggregate and soil sales site has been developed south of the subject site at 3252 Navan Road. |

- 1991 (City of Ottawa website) No significant changes have been made to the subject site. Green house structures have been constructed on residential/farmstead properties southeast of the subject site. The Navan landfill has been expanded to the west.
- 2005 (City of Ottawa website) No significant changes have been made to the subject site. North of the subject site, trees have been cleared likely for residential development.
- 2017 (City of Ottawa website) The subject site appears as it does today. Residential dwellings have been constructed north and northwest of the subject site. A water management pond has been constructed south of the subject site on the Navan landfill property.

Laser copies of selected aerial photographs reviewed are included in Appendix 1.

Topographic Maps

Topographic maps were obtained from Natural Resources Canada – The Atlas of Canada website and from the City of Ottawa website. The topographic maps indicate that the regional topography in the general area of the site slopes downward towards the southwest. According to the maps, the nearest water body is Mud Creek located approximately 70m north of the subject site. An illustration of the referenced topographic map is presented on Figure 2 – Topographic Map, appended to this report.

Physiographic Maps

A Physiographic Map was reviewed from the Natural Resources Canada – The Atlas of Canada website. According to this physiographic map, the site is located in the St. Lawrence Lowlands. According to the mapping description provided: “The lowlands are plain-like areas that were all affected by the Pleistocene glaciations and are therefore covered by surficial deposits and other features associated with the ice sheets.” The subject site is located in the Central St. Lawrence Lowland, which is generally less than 150 m above sea level.

Geological Maps

The Geological Survey of Canada website on the Urban Geology of the National Capital Area was consulted as part of this assessment. Based on this information, bedrock in the area of the site consists of Paleozoic shale of the Billings Formation. Overburden soils are shown as nearshore sediments, with a drift thickness on the order of 25 to 50 m.

Water Well Records

A search of the MOECC's online water well records database was completed on February 22, 2018, for all drilled wells within 250 m of the subject site. A total of three well records were retrieved from the database. No records were found on the subject site. No monitoring well records were identified in the database.

Three (3) records were reviewed for private water wells, drilled on neighbouring properties in 1962, 1966 and 2015 domestic use. Surrounding properties that have been recently developed are currently serviced by the City of Ottawa water system, however, private water wells may still be used by residential dwellings or farmsteads located along Renaud Road and Navan Road that have not been identified on the MOECC website.

Copies of the drinking water wells have been included in Appendix 2.

Water Bodies and Areas of Natural Significance

Based on aerial photographs and observations made during the site visit, a small ditch/stream runs from the northeast to the southwest portion of the property. According to data from the Ministry of Natural Resources, an unevaluated wetland is located on the northern portion of the site. No areas of natural significance are known to exist within the Phase I study area, however, the Mer Bleu Bog, considered an Area of Natural and Scientific Interest (ANSI) is located approximately 700m south of the subject site. The City of Ottawa online maps show Mud Creek located approximately 450m north of the subject site.

5.0 INTERVIEWS

Purchaser

Mr. Anand Aggarwal, of Manor Park Management, was contacted via email in February of 2018, to inquire about the subject property. Mr. Aggarwal told Paterson that the current owner of the site is Mrs. Roushan Shaheen. Paterson was given a survey plan by Mr. Aggarwal. Mr. Aggarwal informed Paterson that he had very limited information regarding the site and that he was going to purchase it from Mr. and Mrs. Shaheen.

Owner

Mr. Wali Shaheen, the current property owner, was contacted via email on March 2, 2018, to inquire about the subject property. Mr. Shaheen informed Paterson that he and his wife bought the property from Valmont Gagnon and Roger Lanthier in 1987. Mr. Shaheen told Paterson that he was not aware of any previous environmental or geotechnical reports for the subject site. Paterson was informed by Mr. Shaheen that the property was purchased vacant and undeveloped and has remained so throughout his ownership. Mr. Shaheen told Paterson that he was not aware of any environmental concerns with the subject site.

6.0 SITE RECONNAISSANCE

6.1 General Requirements

A site assessment was conducted on February 27, 2018, as part this environmental site assessment. Weather conditions were cloudy with a temperature of approximately -1° C. Marek Moroz from the Environmental Department of Paterson Group conducted the site visit. It should be noted that the subject site was largely snow covered at the time of the assessment. In addition to the site, the uses of neighbouring properties within the Phase I study area were also assessed at the time of the site assessment.

6.2 Specific Observations at Phase I Property

Buildings and Structures

There are no buildings or structures located on the subject site as it is currently undeveloped.

Storage Tanks

No evidence of underground storage tanks (USTs) or chemical storage was observed on the subject site during the site assessment.

Water Source

Surrounding properties that have been recently developed are currently serviced by the City of Ottawa water system. Private water wells may still be used by residential dwellings or farmsteads located along Navan Road and Renaud Road.

Unidentified Substances or Fill Material

No evidence for fill material was observed on the subject land, however, as previously mentioned, the subject site was snow covered at the time of the assessment.

Groundwater Monitoring Wells

A search of the MOECC's online water well records database was completed on February 28, 2018, for all drilled wells within 250 m of the subject site. No monitoring well records were identified in the database.

Sewage Works

There are no sewage systems on the subject site. Surrounding properties that have been recently developed are currently serviced by the City of Ottawa sewer system. Private sewage systems may still be used by residential dwellings or farmsteads located along Navan Road and Renaud Road.

Waste Storage and Disposal

The site does not currently generate any waste.

Railway Lines

There are no railway lines within the Phase I study area.

Ozone Depleting Substances (ODSs)

There were no potential sources of ODSs observed on site during the assessment.

Polychlorinated Biphenyls (PCBs) and Transformer Oil

Several pole-mounted transformers were observed south of the subject site, along Navan Road. A cellphone tower and electrical equipment were observed south of the subject site, on the south side of Navan Road. No signs of leaks or staining were observed on around the electrical equipment, the transformer units or poles at the time of the site visit. No concerns were identified with respect to PCBs or transformer oil on the exterior of the subject site.

Site Features

The site was snow covered at the time of the site visit. The subject site has a relatively flat topography. The site is primarily tree and brush covered. Drainage consists of infiltration or runoff to the ditch located on the site. The regional topography slopes downwards to the south, towards the Mer Bleu Bog.

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 subject site was as follows:

- North - Residential dwellings followed by Birkhill Place and Glenlivet Avenue;
- South - Navan Road followed by the André Taillefer Ltd. soil and aggregate sales center, a residential dwelling and an undeveloped parcel of the Navan Landfill;
- East - Vacant residential dwellings and undeveloped forested land;
- West - Residential dwellings.

The André Taillefer Ltd construction contractor facility, addressed 3252 Navan Road, was identified as a property with a potentially contaminating activity. Two (2) aboveground fuel storage tanks (ASTs) were observed on the André Taillefer Ltd. site, located approximately 75m from the subject site. **Based on the down-gradient location with respect to the subject site, the two (2) ASTs are not considered to represent an area of potential environmental concern (APECs) on the subject site.**

The Navan Landfill waste disposal area is located approximately 320m southeast of the subject site. Based on aerial photographs, several ASTs are located approximately 220m southeast of the subject site. As previously mentioned, based on the separation distance and the downgradient location with respect to the subject site, the landfill and associated ASTs are not considered to represent APECs on the subject site.

No other PCAs were identified in the Phase I study area. Property use within the Phase I study area is shown on Drawing PE4245-2 - Surrounding Land Use Plan.

7.0 REVIEW AND EVALUATION OF INFORMATION

7.1 Land Use History

The following table indicates the current and past uses of the site as well as any associated potentially contaminating activities dating back to the first developed use of the site (if present).

Table 1 - Land Use History – Vacant Land – 3317 Navan Road			
Time Period	Land Use	Potentially Contaminating Activities	Potential Environmental Concerns
1945 (earliest air photo reviewed) – 1970s	Residential Dwelling	None	None
1970s - Present	Vacant (Undeveloped)	None	None

Potentially Contaminating Activities (PCAs)

The following Potentially Contaminating Activities were identified within the Phase I study area:

- ❑ Item 28, Table 2, O.Reg. 153/04 as amended by O.Reg. 269/11: “Gasoline and Associated Products Storage in Fixed Tanks” - this PCA was identified based on the active aboveground fuel tanks located at 3252 Navan Road (**André Taillefer Ltd. soil and aggregate sales center**); 75m south of the subject site and the active aboveground fuel tanks located at 3342 Navan Road (Navan landfill); 220m southeast of the subject site.
- ❑ Item 59, Table 2, O.Reg. 153/04 as amended by O.Reg. 269/11: “Waste Disposal and Waste Management.” - this PCA was identified based on the presence of the Navan Landfill located at 3342 Navan Road; the waste storage area is approximately 330m southeast of the subject site.

As previously mentioned, based on the separation distance and the down-gradient location with respect to the subject, the André Taillefer Ltd. site and the Navan Landfill are not considered to represent an area of potential environmental concern (APECs) on the subject site.

No other PCAs were identified in the Phase I study area.

Areas of Potential Environmental Concern (APECs)

Three (3) Potentially Contaminating Activities (PCAs) were identified off-site, however, as discussed above, these PCAs are not considered to represent APECs. As a result, there are no areas of potential environmental concern associated with the subject property.

Contaminants of Potential Concern

No Contaminants of Potential Concern (CPCs) were identified, since no APEC's were identified on the Phase I site.

7.2 Conceptual Site Model

Geological and Hydrogeological Setting

Based on information from the Geological Survey of Canada, drift thickness in the area of the subject site is estimated to be on the order of 25 to 50m. Overburden soils are shown as near-shore marine sediments.

Contaminants of Potential Concern

As per Section 7.1 of this report, no Contaminants of Potential Concern (CPCs) were identified on the subject site.

Existing Buildings and Structures

There are no structures on the subject property.

Water Bodies

Based on aerial photographs and observations made during the site visit, a small ditch/stream runs from the northeast to the southwest portion of the property. According to data from the Ministry of Natural Resources, an unevaluated wetland is located on the northern portion of the site. The City of Ottawa online maps show Mud Creek located approximately 450m north of the subject site

Areas of Natural Significance

According to data from the Ministry of Natural Resources, an unevaluated wetland is present on the subject property. The Mer Bleu Bog, considered an Area of Natural and Scientific Interest (ANSI), is located approximately 700m south of the subject site.

Drinking Water Wells

A search of the MOECC's online water well records database was completed on February 22, 2018, for all drilled wells within 250 m of the subject site. A total of three well records were retrieved from the database. No records were found on the subject site. No monitoring well records were identified in the database.

Three (3) records were reviewed for private water wells, drilled on neighbouring properties in 1962, 1966 and 2015 domestic use. Surrounding properties that have been recently developed are currently serviced by the City of Ottawa water system, however, private water wells may still be used by residential dwellings or farmsteads located along Renaud Road and Navan Road that have not been identified on the MOECC website.

Copies of the drinking water wells have been included in Appendix 2

Neighbouring Land Use

Neighbouring land use in the Phase I study area is mainly residential or vacant/undeveloped with a commercial property and the Navan landfill located south of the subject site along Navan Road. As previously mentioned, **the André Taillefer Ltd. construction contactor facility was identified as a PCA which is not considered to represent an area of potential environmental concern (APECs) on the subject site. The Navan landfill was identified as a PCA but does not represent an APEC on the subject site.** No additional concerns were identified with the current neighbouring land use.

Potentially Contaminating Activities and Areas of Potential Environmental Concern

As per Section 7.1 of this report, the identified Potentially Contaminating Activities within the Phase I study area are not considered Areas of Potential Environmental Concern.

Assessment of Uncertainty and/or Absence of Information

The information available for review as part of the preparation of this Phase I ESA is considered to be sufficient to conclude that there are no APECs associated with the subject site. The presence of the PCAs within the Phase I study area was confirmed by a variety of independent sources consulted as part of this assessment, and as such, the conclusions of this report are not affected by uncertainty which may be present with respect to the individual sources.

8.0 CONCLUSIONS

Assessment

Paterson Group was retained by Manor Park Management to conduct a Phase I Environmental Site Assessment (ESA) of 3317 Navan Road, in the City of Ottawa, Ontario. The purpose of this Phase I-ESA was to research the past and current use of the site and study area and to identify any environmental concerns with the potential to have impacted the subject property.

According to the historical research, the subject site was developed as early as 1945 with a residential dwelling. Based on aerial photographs, the residential dwelling located on the subject site was demolished between 1965 and 1976 and the site has remained vacant and tree covered since. No environmental concerns have been identified with the historical use of the site.

Adjacent properties were occupied by residential dwellings and/or were used for agriculture until the development of residential dwellings along Renaud Road and Navan Road and commercial properties along Navan Road in the 1960s and 1970s. In the 1970s, the Navan Landfill was developed south of the subject site, however, it is not considered to represent an APEC on the subject site. Additional residential neighbourhoods were developed north of the site in 2011. No concerns were identified during the historical search.

Following the historical research, a site inspection was conducted of the subject site and the Phase I-ESA study area. The subject site is currently undeveloped forested land. Neighbouring properties to the north, west and east were mainly residential dwellings. Most of properties south of the subject site were occupied by residential dwellings. One (1) commercial property, located 80m south of the subject site was identified as potentially contaminating activity (PCA) based on the presence of aboveground storage tanks. A portion of the Navan Landfill is located south of the subject site and is considered a PCA. None of the PCAs are considered to represent areas of potential environmental concern on the subject site. No other environmental concerns were identified on the subject or neighbouring sites

Conclusion

Based on the results of the assessment, **in our opinion, a Phase II Environmental Site Assessment is not required for the property.**

9.0 STATEMENT OF LIMITATIONS

This Phase I - Environmental Site Assessment report has been prepared in general accordance with O.Reg. 153/04 as amended by O.Reg. 269/11, and meets the requirements of CSA Z768-01. The conclusions presented herein are based on information gathered from a limited historical review and field inspection program. The findings of the Phase I - ESA 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. The historical research relies on information supplied by others, such as, local, provincial and federal agencies and was limited within the scope-of-work, time and budget of the project herein.

Should any conditions be encountered at the subject site 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 Manor Park Management. Permission and notification from Manor Park Management and Paterson will be required to release this report to any other party.

Paterson Group Inc.



Marek Moroz, P.Geo.



Mark S. D'Arcy, P.Eng.



Report Distribution:

- Manor Park Management (6 copies)
- Paterson Group (1 copy)

10.0 REFERENCES

Federal Records

Air photos at the Energy Mines and Resources Air Photo Library.
National Archives.
Maps and photographs (Geological Survey of Canada surficial and subsurface mapping).
Natural Resources Canada – The Atlas of Canada.
Environment Canada, National Pollutant Release Inventory.
PCB Waste Storage Site Inventory.

Provincial Records

MOECC Freedom of Information and Privacy Office.
MOECC Municipal Coal Gasification Plant Site Inventory, 1991.
MOECC document titled “Waste Disposal Site Inventory in Ontario”.
MOECC Brownfields Environmental Site Registry.
Office of Technical Standards and Safety Authority, Fuels Safety Branch.
MNR Areas of Natural Significance.
MOECC Water Well Inventory.
Chapman, L.J., and Putnam, D.F., 1984: ‘The Physiography of Southern Ontario, Third Edition’, Ontario Geological Survey Special Volume 2.

Municipal Records

City of Ottawa Document “Old Landfill Management Strategy, Phase I - Identification of Sites.”, prepared by Golder Associates, 2004.
Intera Technologies Limited Report “Mapping and Assessment of Former Industrial Sites, City of Ottawa”, 1988.
The City of Ottawa eMap website.
City of Ottawa Historical Land Use Inventory (HLUI) Database

Local Information Sources

Proposed Grading Master Plan
Personal Interviews.

Public Information Sources

Google Earth.
Google Maps/Street View.

FIGURES

FIGURE 1 – KEY PLAN

FIGURE 2 – TOPOGRAPHIC MAP

DRAWING PE4245-1 – SITE PLAN

DRAWING PE4245-2 – SURROUNDING LAND USE PLAN

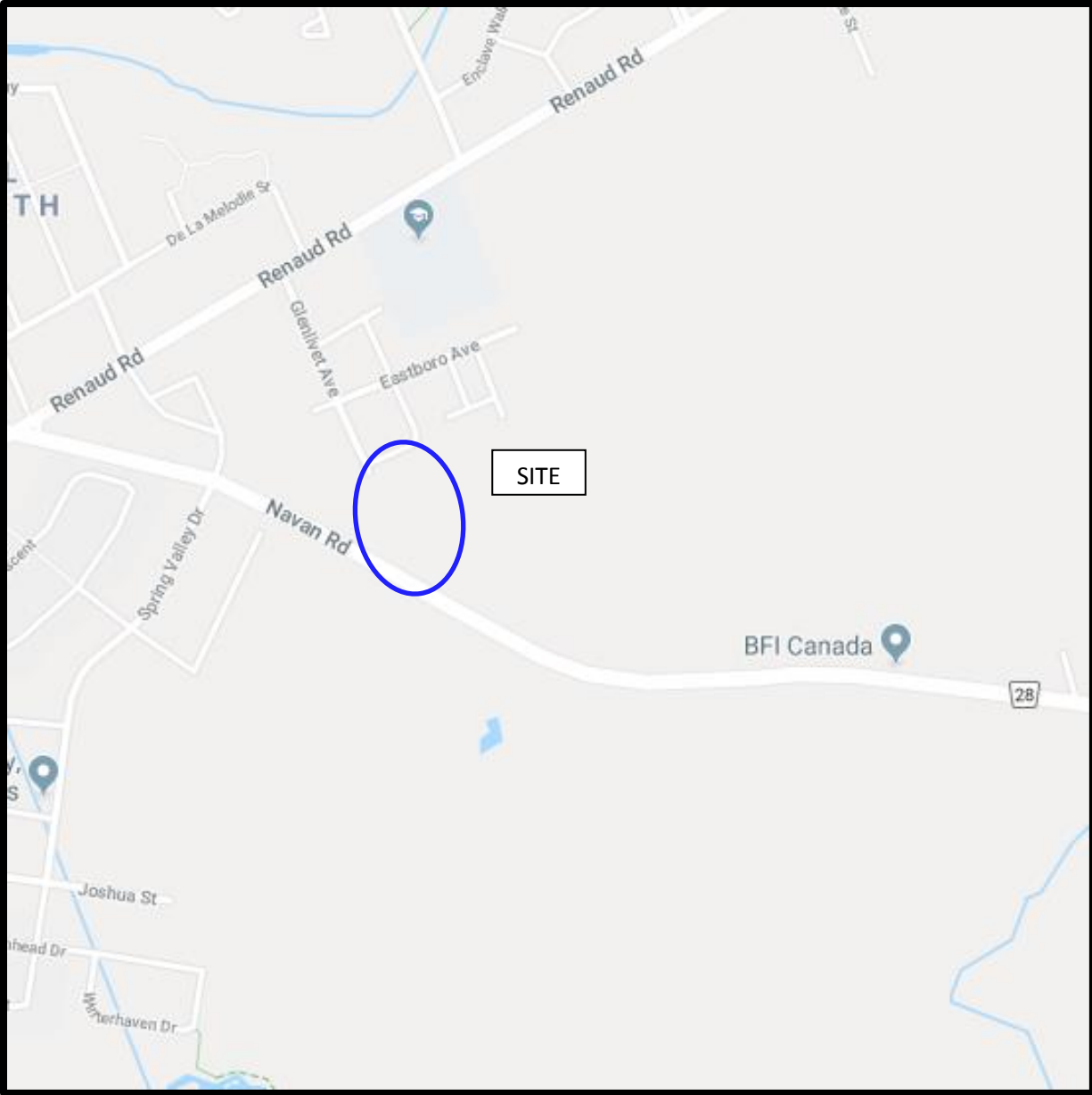


FIGURE 1
KEY PLAN

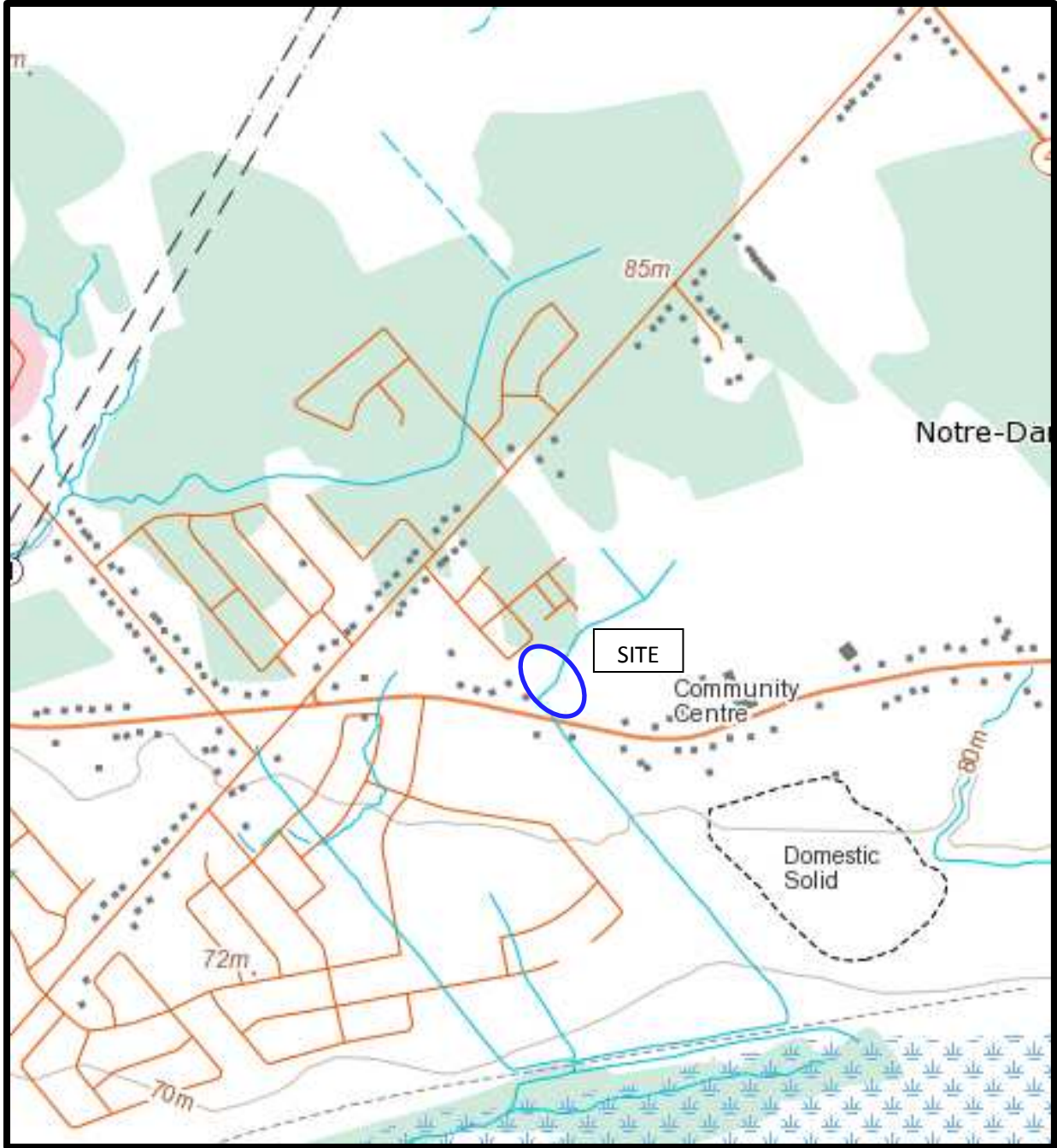
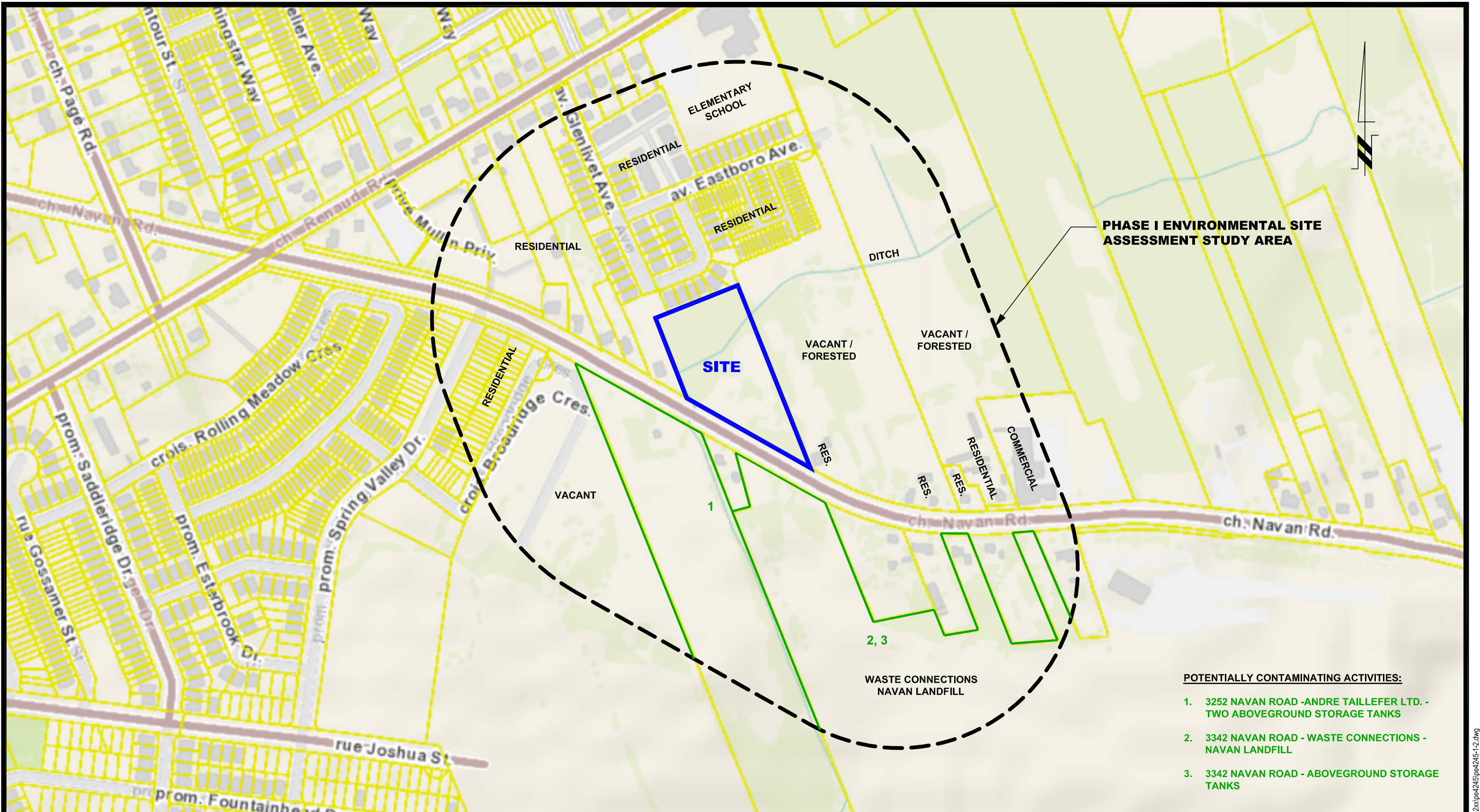


FIGURE 2
TOPOGRAPHIC MAP



PHASE I ENVIRONMENTAL SITE ASSESSMENT STUDY AREA

SITE

- POTENTIALLY CONTAMINATING ACTIVITIES:**
1. 3252 NAVAN ROAD - ANDRE TAILLEFER LTD. - TWO ABOVEGROUND STORAGE TANKS
 2. 3342 NAVAN ROAD - WASTE CONNECTIONS - NAVAN LANDFILL
 3. 3342 NAVAN ROAD - ABOVEGROUND STORAGE TANKS

patersongroup
consulting engineers

154 Colonnade Road South
Ottawa, Ontario K2E 7J5
Tel: (613) 226-7381 Fax: (613) 226-6344

NO.	REVISIONS	DATE	INITIAL
0			

MANOR PARK MANAGEMENT
PHASE I - ENVIRONMENTAL SITE ASSESSMENT
3317 NAVAN ROAD
OTTAWA, ONTARIO

Title: **SURROUNDING LAND USE PLAN**

Scale:	1:4000	Date:	03/2018
Drawn by:	RCG	Report No.:	PE4245-1
Checked by:	MM	Dwg. No.:	PE4245-2
Approved by:	MSD	Revision No.:	0

APPENDIX 1

SURVEY PLAN

AERIAL PHOTOGRAPHS

SITE PHOTOGRAPHS

PART

AREA = 8.21

ABT. BORN
ABT. 50 (DEED)

INST. NO CT 23465A

DIVISION
LINE BECTS
1696-25
INST
NO

N 24° 22' 20" E
153.00

SET I.B.
N 65° 43' 40" E
95.00 (DEED & MEAS)

N 68° 49' 15" E

324.93 (MEAS)
328.70 (DEED)

SET I.B.

PART I

N 21° 14' 12" W
153.00 (DEED & MEAS)

Remains of fence
58.81

E 03° 08' 19" N
153.00

N 30° 00' 22" E
153.00 (DEED & MEAS)

N 72° 00' 00" E
153.00 (DEED & MEAS)

314.10

CYRVILLE - NAVAN ROAD

153.00

N 60° 42' 30" W

(GOVERNING BEARING)
TOWNSHIP ROAD WIDENING BY INST. NO 28

(REGIONAL ROAD NO 28)

520.21

INST. NO 28

2

DEPOSITED UNDER THE REGISTRY ACT.

OCTOBER 20, 1979

J. G. Payette
J. G. PAYETTE
ONTARIO LAND SURVEYOR

PLAN 5 R 413
RECEIVED AND DEPOSITED
NOV. 14
E. J. Montgomery
LAND REGISTRAR FOR THE
REGISTRY DIVISION OF
OTTAWA-CARLETON N° 5

CAUTION THIS PLAN IS NOT A PLAN OF SUBDIVISION WITHIN THE MEANING OF THE PLANNING ACT.

SURVEYOR'S CERTIFICATE

I hereby certify that:

1. This survey and plan are correct and in accordance with the Surveys Act and the Registry Act and the regulations made thereunder.
2. The survey was completed on OCT. 10, 1979.

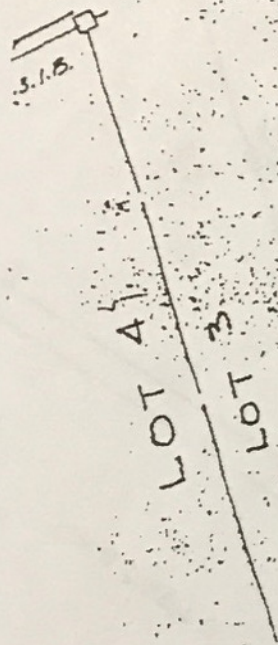
OCT. 10, 1979

J. G. Payette
J. G. PAYETTE
ONTARIO LAND SURVEYOR

LEGEND

- I.B.—DENOTES IRON BAR 1/2" x 1/2" x 24"
- S.I.B.—DENOTES STANDARD IRON BAR 1" x 1" x 4"
- S.S.I.B.—DENOTES SHORT STANDARD IRON BAR 1" x 1" x 2"
- R.I.P.—DENOTES ROUND IRON PIPE
- + C.C.—DENOTES CUT CROSS
- R.B.—DENOTES ROCK BAR
- Fd.—DENOTES FOUND
- x-x- DENOTES FENCE

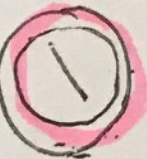
BEARINGS HEREON ARE ASTRONOMIC AND ARE RELATED TO THE NORTHERLY LIMIT OF REGIONAL ROAD N° 28 AS WIDENED BY A PLAN OF SURVEY ATTACHED TO INST. N° GL. 73630 HAVING A BEARING OF N60°41' IN ACCORDANCE WITH INST. N° GL. 73630.

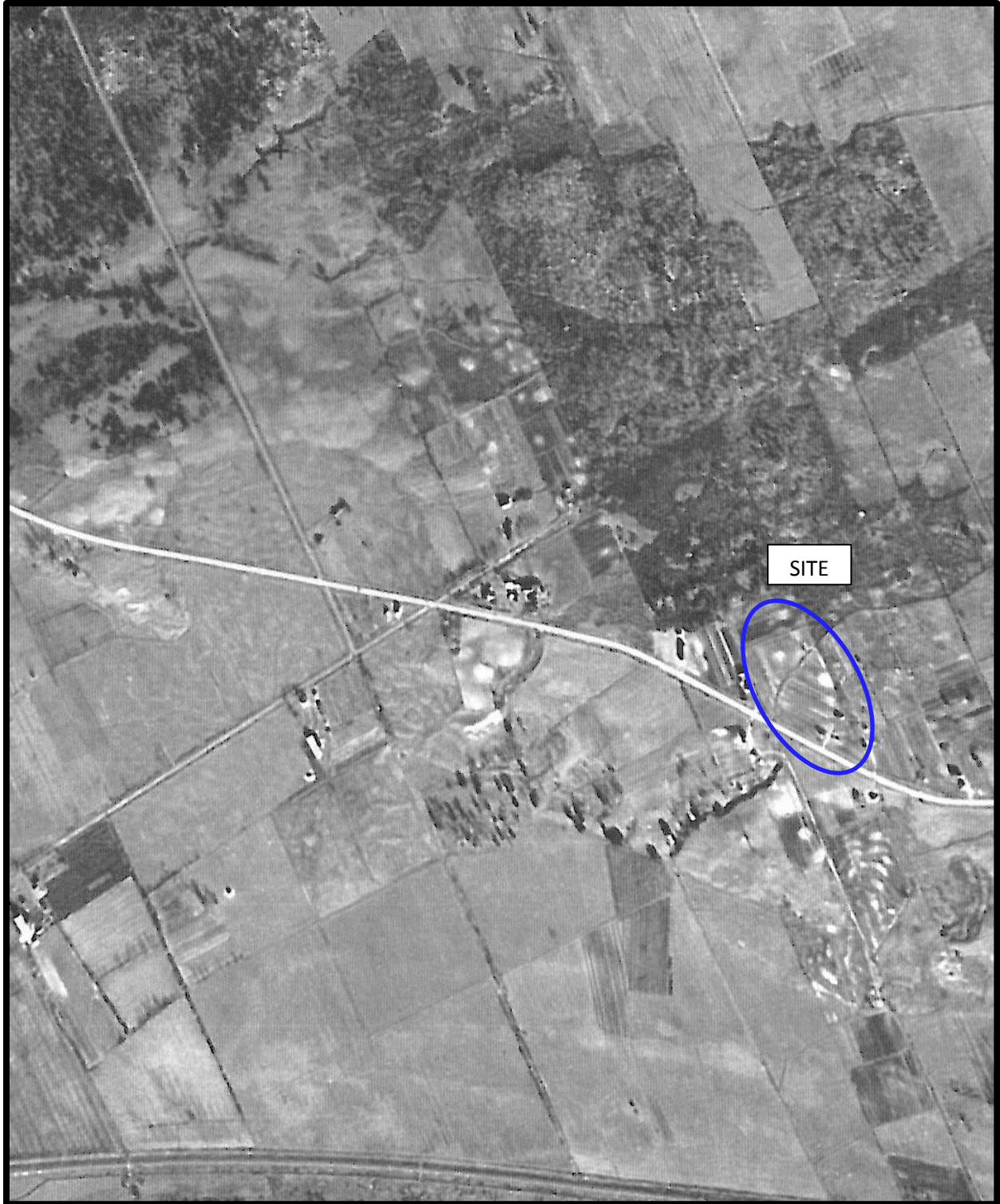


SCHEDULE

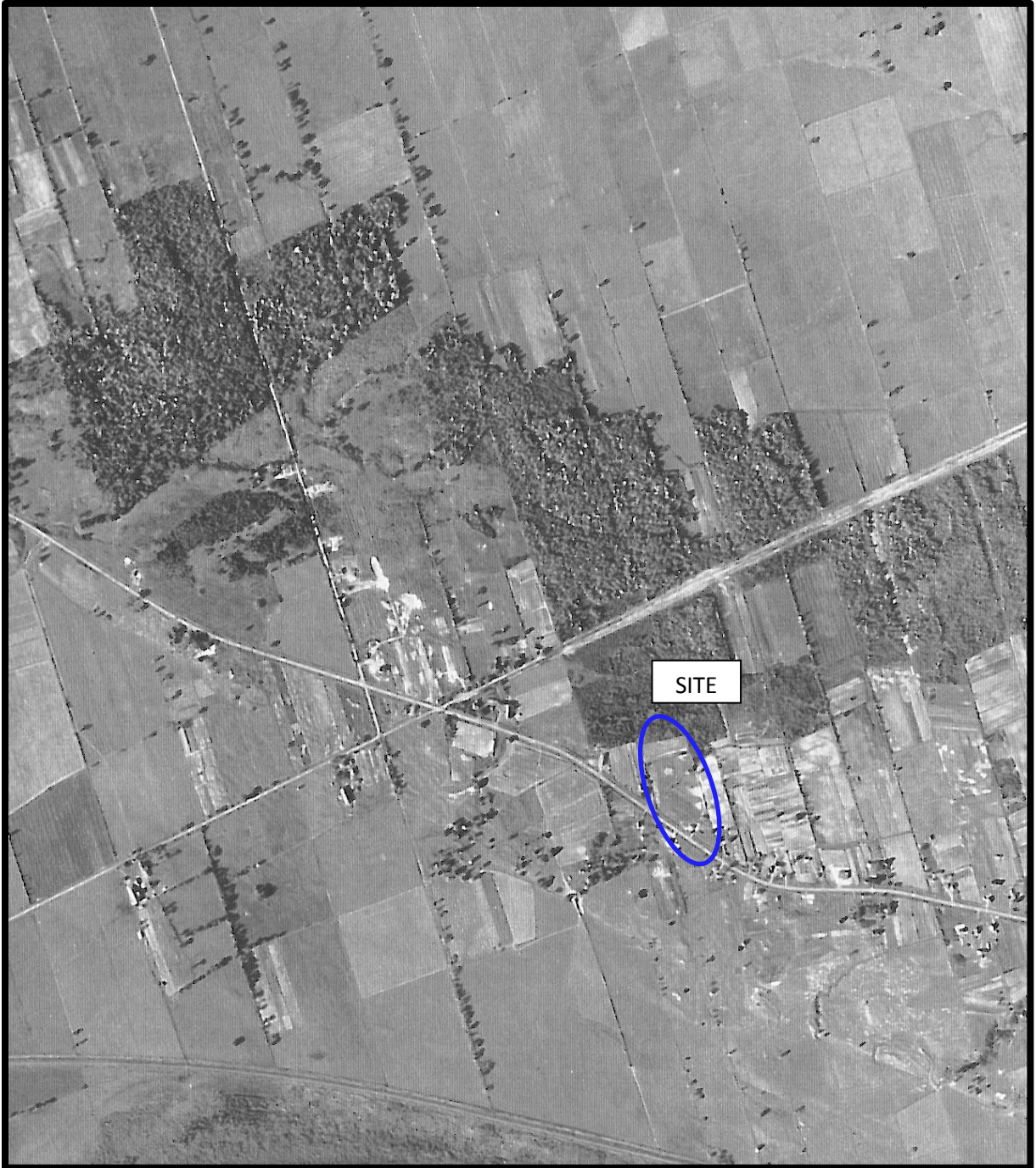
PART	LOT & CONCESSION	INST. N°
1	LOT 4. CONC. 4 (O.F.)	GL. 70734
2	LOT 4. CONC. 4 (O.F.)	CT 234654

PLAN OF SURVEY OF
PART OF WEST 1/2 LOT 4. CONCESSION 4 (O.F.)
TOWNSHIP OF GLOUCESTER
REGIONAL MUNICIPALITY
OF
OTTAWA-CARLETON





AERIAL PHOTOGRAPH
1945



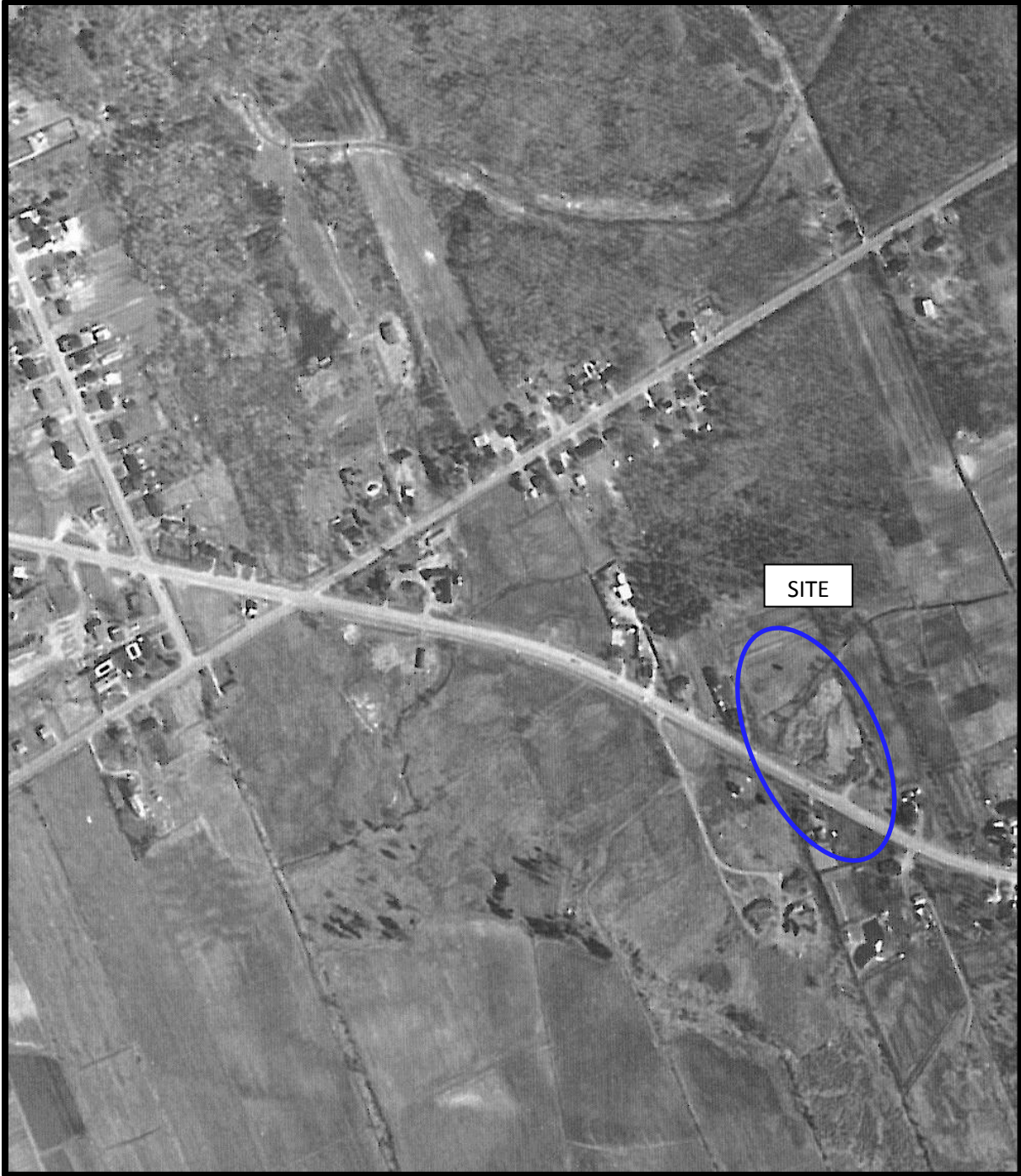
AERIAL PHOTOGRAPH
1953



AERIAL PHOTOGRAPH
1965



AERIAL PHOTOGRAPH
1976



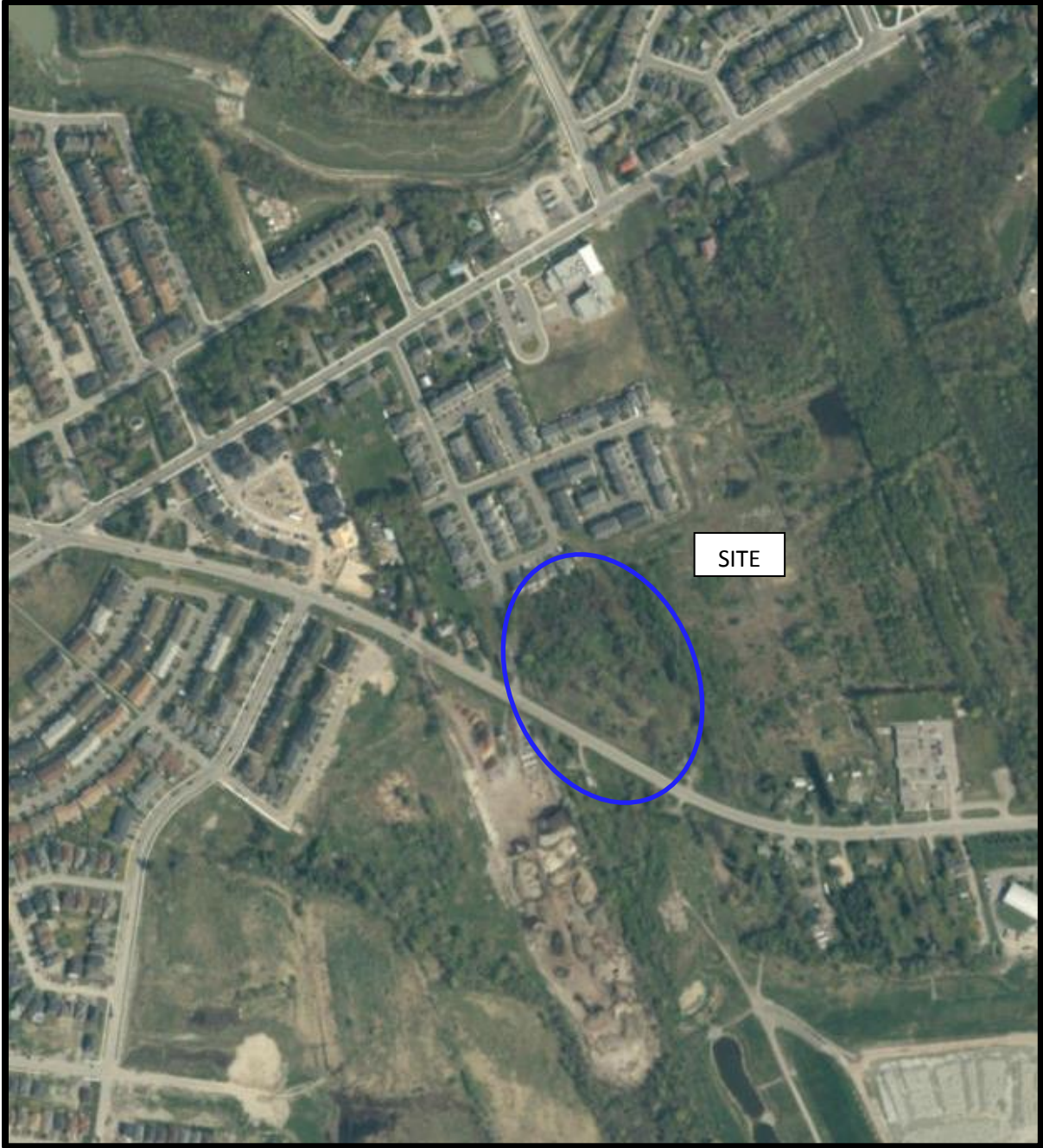
AERIAL PHOTOGRAPH
1985



AERIAL PHOTOGRAPH
1991



AERIAL PHOTOGRAPH
2005



AERIAL PHOTOGRAPH
2017

Site Photographs

PE4245

Vacant Land – 3317 Navan Road

February 27, 2017



Photograph 1: View of the central portion of the site, facing north. Photograph depicts a small ditch/stream.



Photograph 2: View of the central portion of the site, facing west. Photograph depicts the main land cover, brush and trees.

APPENDIX 2

MOECC FREEDOM OF INFORMATION SEARCH

TSSA CORRESPONDENCE

MOECC WELL RECORDS

Ministry of the Environment
and Climate Change

Freedom of Information and
Protection of Privacy Office

12th Floor
40 St. Clair Avenue West
Toronto ON M4V 1M2
Tel: (416) 314-4075
Fax: (416) 314-4285

Ministère de l'Environnement et de
l'Action en matière de changement
climatique

Bureau de l'accès à l'information et
de la protection de la vie privée

12^e étage
40, avenue St. Clair ouest
Toronto ON M4V 1M2
Tél.: (416) 314-4075
Télééc.: (416) 314-4285



February 21, 2018

Marek Moroz
Paterson Group Inc
154 Colonnade Rd
Ottawa, ON K2E 7J5

Dear Marek Moroz:

RE: ***Freedom of Information and Protection of Privacy Act Request***
Our File # A-2018-01181, Your Reference PE4245

The Ministry is in receipt of your request made pursuant to the *Freedom of Information and Protection of Privacy Act* and has received your payment in the amount of \$5.00 (non-refundable application fee), along with your \$30.00 deposit.

The search is being conducted on the following: 3317 Navan Road, Ottawa. If there is any discrepancy please contact us immediately.

You may expect a reply or additional communication as your request is processed. For your information, the Ministry charges for search, copying and preparation time.

If you have any questions regarding this matter, please contact Rebeka Bogdan at Rebeka.Bogdan@ontario.ca.

Yours truly,


Janet Dadufalza
FOI Manager



Marek Moroz

From: Marek Moroz
Sent: February-20-18 4:51 PM
To: 'Public Information Services'
Subject: TSSA Records Search, PE4245 - Ottawa, ON

Good afternoon,

Could you please conduct a search of your records for underground/aboveground storage tanks, historical spills and other incidents/infractions for the following addresses for properties located in Ottawa, Ontario:

**3143, 3225, 3252, 3253, 3270, 3323, 3341, 3342 and 3349 Navan Road;
6280 Renaud Road;**

Thank you very much,

Marek

Marek Moroz P. Geo.

patersongroup
solution oriented engineering
60 years serving our clients

154 Colonnade Road South
Ottawa, Ontario, K2E 7J5
Cell: (613) 229-9822
Tel: (613) 226-7381 Ext. 248
Fax: (613) 226-6344
Email: MMoroz@patersongroup.ca



3165h

GROUND WATER BRANCH
15 No 1526
JUN 1 1962
ONTARIO WATER RESOURCES COMMISSION

UTM 18 2 4519 1870 E

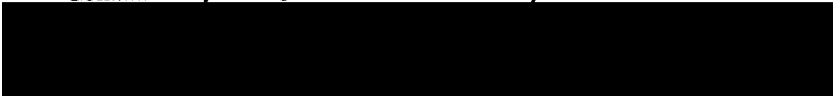
15R 50307610N The Ontario Water Resources Commission Act

Elev. 4R 0280

WATER WELL RECORD

Basin 25 | | | | | County or District ~~Carleton~~ CARLETON Township, Village, Town or City ~~Carleton Place~~ GLOUCESTER

Con. 4 OF Lot 4 Date completed Feb. 27. 1962 (day month year)



Address R. R. # 1, Navan, Ont.

Casing and Screen Record

Inside diameter of casing 2"
Total length of casing 90'
Type of screen
Length of screen
Depth to top of screen
Diameter of finished hole 2"

Pumping Test

Static level 4'
Test-pumping rate 8 G.P.M.
Pumping level 20'
Duration of test pumping 2 hrs.
Water clear or cloudy at end of test clear
Recommended pumping rate 8 G.P.M.
with pump setting of 20 feet below ground surface

Well Log

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
clay	0	80	145	fresh
boulders & sand	80	89		
grey limestone	89	145		

For what purpose(s) is the water to be used? ~~times~~ farm

Is well on upland, in valley, on hillside, upland

Drilling or Boring Firm G. CHARBONNEAU, Diamond Drilling
MODERN HOME BUILDERS
ORLEANS, ONT.

Address R. R. #1, Box 194, Orleans, Ont.

Licence Number 600

Name of Driller or Borer G. Charbonneau

Address R. R. #1, Box 194, Orleans, Ont.

Date Feb. 27, 1962

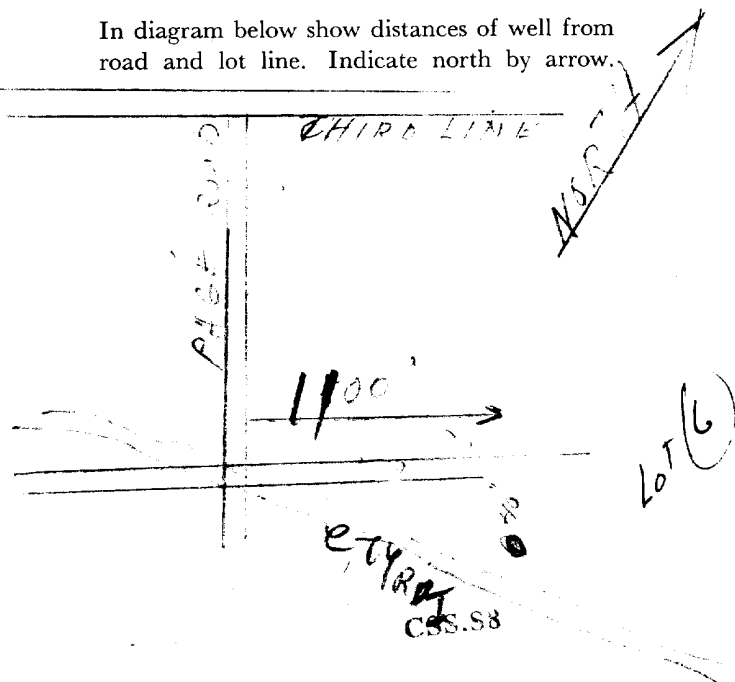
Gervais Charbonneau
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M Sets 60-5930

OWRC COPY

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.





3165h

15 No 1526

UTM 1182 459905 E

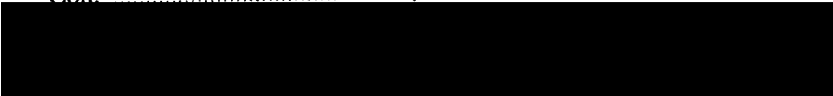
5R 5030780 N The Ontario Water Resources Commission Act

Elev. 4R 0280

WATER WELL RECORD

Basin 25 County or District Carleton Township, Village, Town or City Gloucester

Con. 4 O.F. Lot 4 Date completed 16 August 1966.
(day month year)



Address Orleans, Ont.

Casing and Screen Record

Pumping Test

Inside diameter of casing 2"

Total length of casing 100'

Type of screen

Length of screen

Depth to top of screen

Diameter of finished hole 2"

Static level 30'

Test-pumping rate 8 G.P.M.

Pumping level 60'

Duration of test pumping 2 hrs.

Water clear or cloudy at end of test clear

Recommended pumping rate 6 G.P.M.

with pump setting of 60 feet below ground surface

Well Log

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
blue clay	0	75		<i>sc</i>
grey limestone	75	117	117	shade of sulphur

For what purpose(s) is the water to be used? domestic

Is well on upland, in valley, or on hillside? upland

Drilling or Boring Firm G. Charbonneau, Diamond & Cable Drilling,

Address R.R. 1, Box 194, Orleans, Ont.

Licence Number 2156

Name of Driller or Borer Roland Wolfe

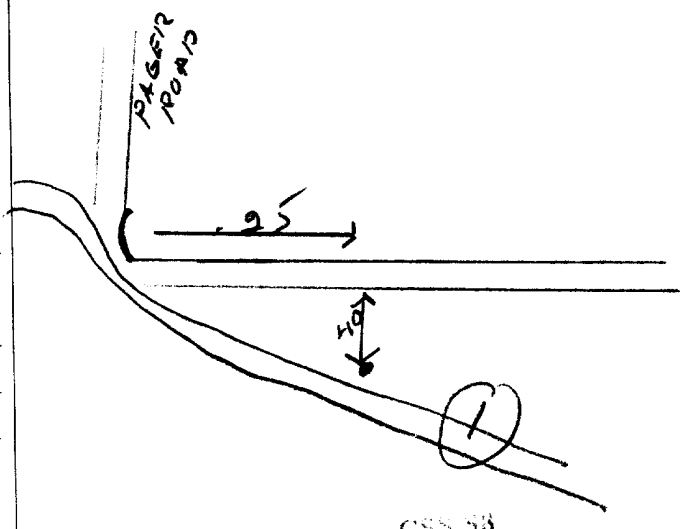
Address Clarence Creek, Ont.

Date 16 August 1966.

Gerald Charbonneau
(Signature of Licensed Drilling or Boring Contractor)

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



Well ID

Well ID Number: 7254951

Well Audit Number: Z220167

Well Tag Number:

This table contains information from the original well record and any subsequent updates.

Well Location

Address of Well Location	3225 NAVAN ROAD
Township	GLOUCESTER TOWNSHIP
Lot	005
Concession	OF 04
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	OTTAWA
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 460025.00 Northing: 5030784.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed
0 m			

Method of Construction & Well Use

Method of Construction	Well Use
	Not Used

Status of Well

Abandoned-Other

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 4875

Results of Well Yield Testing

After test of well yield, water was	
If pumping discontinued, give reason	
Pump intake set at	
Pumping Rate	
Duration of Pumping	
Final water level	
If flowing give rate	
Recommended pump depth	
Recommended pump rate	
Well Production	
Disinfected?	Y

Draw Down & Recovery

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL	11.3 m		
1		1	
2		2	
3		3	
4		4	
5		5	

10	10
15	15
20	20
25	25
30	30
40	40
45	45
50	50
60	60

Water Details

Water Found at Depth	Kind

Hole Diameter

Depth From	Depth To	Diameter
0 m	32.7 m	12.2 cm

Audit Number: Z220167

Date Well Completed: December 09, 2015

Date Well Record Received by MOE: December 29, 2015

APPENDIX 3

QUALIFICATIONS OF ASSESSORS

Geotechnical
Engineering

Environmental
Engineering

Hydrogeology

Geological
Engineering

Materials Testing

Building Science

Archaeological
Services

POSITION

Environmental Consultant

EDUCATION

Algonquin College, Graduate Certificate, 2017
Environmental Management and Assessment

University of Ottawa, B.Sc., 2012
Specialization in Geology with Minor in Spanish

EXPERIENCE

2017 to Present:

Paterson Group Inc.

Consulting Engineers
Geotechnical and Environmental Division
Environmental Consultant

2016 to 2017

Geological Survey of Canada

Federal Research Organization in Earth Sciences
Canada Groundwater Program
Physical Scientist

2012 to 2015

KGHM International

International Mining Company
Geologist and Project Manager

Summer of 2012

Alder Resources Ltd.

Junior Mining Company
Exploration Geologist

SELECT LIST OF PROJECTS

Contaminated Soil and Groundwater Sampling – Various Sites – Eastern Ontario
Surcharge and Settlement Surveys – Ottawa, ON.
Remediation Programs – Various Sites – Ottawa, ON.
Regional Groundwater Assessment and Research – Lake Simcoe Region
Geological Compilation and 3D Modelling – Franke Mine, Chile
Resource Investigation and Mineral Exploration - Rosita, Nicaragua

Geotechnical
Engineering

Environmental
Engineering

Hydrogeology

Geological
Engineering

Materials Testing

Building Science

Archaeological
Services

POSITION

Associate and Supervisor of the Environmental Division
Senior Environmental/Geotechnical Engineer

EDUCATION

Queen's University, B.A.Sc.Eng, 1991
Geotechnical / Geological Engineering

MEMBERSHIPS

Ottawa Geotechnical Group
Professional Engineers of Ontario

EXPERIENCE

1991 to Present

Paterson Group Inc.

Associate and Senior Environmental/Geotechnical Engineer
Environmental and Geotechnical Division
Supervisor of the Environmental Division

SELECT LIST OF PROJECTS

Mary River Exploration Mine Site - Northern Baffin Island
Agricultural Supply Facilities - Eastern Ontario
Laboratory Facility – Edmonton (Alberta)
Ottawa International Airport - Contaminant Migration Study - Ottawa
Richmond Road Reconstruction - Ottawa
Billings Hurdman Interconnect - Ottawa
Bank Street Reconstruction - Ottawa
Environmental Review – Various Laboratories across Canada - CFIA
Dwyer Hill Training Centre – Ottawa
Nortel Networks Environmental Monitoring - Carling Campus – Ottawa
Remediation Program - Block D Lands – Kingston
Investigation of former landfill sites – City of Ottawa
Record of Site Condition for Railway Lands – North Bay
Commercial Properties – Guelph and Brampton
Brownfields Remediation – Alcan Site - Kingston
Montreal Road Reconstruction - Ottawa
Appleford Street Residential Development - Ottawa
Remediation Program - Ottawa Train Yards
Remediation Program - Bayshore and Heron Gate
Gladstone Avenue Reconstruction – Ottawa
Somerset Avenue West Reconstruction - Ottawa