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Phase I - Environmental Site Assessment

Future Commercial Development Hazeldean Road at Huntmar Drive Ottawa, Ontario

Prepared For

North American (Goulbourn) Corporation

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Report: PE2142-1

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EXECUTIVE SUMMARY

Assessment

A Phase I - Environmental Site Assessment was carried out for the property located at 5653-5703 Hazeldean Road and 21 Huntmar Drive, in the City of Ottawa, Ontario. The purpose of this environmental assessment was to research the past and current uses of the site and adjacent properties and identify any environmental concerns with the potential to have impacted the subject property.

The historical research indicated that the subject site was vacant and used for agricultural purposes from at least 1945 to 1987. In 1988 the easternmost portion of the site was developed with a commercial landscaping establishment. The remainder of the site was vacant until 2006/2007 when Huntmar Drive was constructed north of Hazledean Road, transecting the site in a northwest-southeast direction. The landscaping establishment was no longer present on site in 2008. Construction for the commercial redevelopment of the land east of Huntmar Drive, began in 2011.

Previous engineering reports prepared for the subject site were reviewed as part of this Phase I-ESA. The reports confirm that the subject property was not significantly impacted by the past operation of a landscape business on site.

The surrounding land was primarily used for agricultural purposes with residential farmsteads, from at least 1945 until the 1980's, when Iber Road and commercial/light industrial properties were constructed south of the site across Hazeldean Road. The historical uses of the neighbouring lands are not considered to pose a risk to the subject property.

Following the historical review, a site visit was conducted. No significant concerns were noted with the current condition of the subject site or use of the adjacent lands.

Conclusion

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



1.0 INTRODUCTION

At the request of North American (Goulbourn) Corporation, Paterson Group conducted a Phase I - Environmental Site Assessment (ESA) of the property located at Hazeldean Road and Huntmar Drive, in the City of Ottawa, Ontario. The parcels of land comprising the subject site will have a variety of addresses once developed. For the purposes of this report, the parcels will be referred to as 5653-5705 Hazeldean Road and 21 Huntmar Drive (as per the City of Ottawa's electronic map).

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.

2.0 <u>SITE INFORMATION</u>

Address: 5653-5705 Hazeldean Road and 21 Huntmar Drive, City of

Ottawa, Ontario.

Location: 5653-5703 Hazeldean Road is located at the northeast

corner of the intersection of Hazeldean and Huntmar Drives. 21 Huntmar Drive is located on the west side of Huntmar Drive, approximately 100 m north of Hazledean Road, in the City of Ottawa, Ontario. Refer to Figure 1 -

Key Plan in the appendix for the site location.

Owner: North American (Goulbourn) Corporation

Site Description:

Configuration: 5653-5705 Hazledean Road - Rectangular (approximate)

21 Huntmar Drive - Rectangular

Area: 11 hectares (total approximate area)

Legal Description: Plan 4M 1432, Blocks 1, 2 and 3, City of Ottawa

Current Use: The Huntmar Drive property is currently vacant.

undeveloped land scheduled for future commercial development. The Hazeldean Road property is currently

under construction for commercial purposes.

Services: The subject site is located in a municipally serviced area.



3.0 SCOPE OF WORK

The scope of work for this Phase I - Environmental Site Assessment was as follows:			
	Investigate the existing conditions present at the subject site by carrying out a field study and historical review in general accordance with CSA Z768-01.		
	Present the results of our findings in a comprehensive report.		
۵	Provide a preliminary environmental site evaluation based on our findings.		
	Provide preliminary remediation recommendations and further investigative work if contamination is encountered or suspected.		



4.0 METHOD OF INVESTIGATION

4.1 <u>Historical Research</u>

The methodology for the Phase I - Environmental Site Assessment program was carried out in two segments. The first consisted of a historical review which included a brief research of the past use of the site. This portion of the program was carried out by Paterson personnel from the Environmental Division. The following is a list of the key information sources reviewed by our firm.

Federal Records

	Maps and photographs (Geological Survey of Canada surficial and subsurface mapping).
0	Air photos at the Energy Mines and Resources Air Photo Library. National Archives.
	PCB Waste Storage Site Inventory.
Provi	ncial Records
0000	MOE document titled "Waste Disposal Site Inventory in Ontario". MOE Brownfields Environmental Site Registry. MOE Freedom of Information and Privacy Office. Office of Technical Standards and Safety Authority, Fuels Safety Branch.
Munic	cipal Records
0	The Corporation of the City of Ottawa City of Ottawa document entitled "Old Landfill Management Strategy; Phase 1 - Identification of Sites, City of Ottawa, Ontario"; finalised October 2004
Local	Information Sources
	Previous engineering projects.



4.2 Field Assessment

The second segment of the Phase I - ESA consisted of a site visit which included a cursory assessment of the environmental conditions of the subject property. The field assessment was carried out on April 30, 2012, by personnel from the Environmental Division.

As part of the field assessment, the site was inspected for signs of the following:

u	Evidence of previous or existing fuel storage tanks.
	On-site use or storage of hazardous materials.
	On-site handling or disposal of liquid or solid waste materials.
	Above-ground piping systems, including pumps, valves and joints.
	Truck or rail loading or unloading areas.
	Electrical conduits, abandoned pipelines or pumping stations.
	Remnants of old buildings.
	Signs of surficial contamination (ie. staining, distressed vegetation).
	Unnaturally discoloured, ponded or flowing waters.
	Surficial drainage, wetlands, natural waterways or watercourses through the properties (i.e. ditches, creeks, ponds, poor drainage).
	Any evidence of potable water supply wells or groundwater monitoring wells (such as leak detection monitoring wells for underground storage tank systems, or abandoned systems).
	Any abnormal odours associated with the site, whether from on-site or off-site sources.
	The presence of any recent soil disturbances such as soil removal, filling, tilling, grading, etc.
	Asbestos containing materials (ACMs).
	Urea formaldehyde foam insulation (UFFI).
	PCB containing products.
	Ozone depleting substances (ODS).
	Lead-containing materials.
	Current use of neighbouring properties.

5.0 FINDINGS OF THE ENVIRONMENTAL ASSESSMENT

5.1 Historical Review

Air Photo Research

Historical air photos from the National Air Photo Library were reviewed. Based on the review, the following observations have been made:

The subject property is vacant and used for agricultural purposes. A laneway crosses the site in an approximate north-south direction and leads to a residential property further north of the site. What appears to be a ditch or ravine extending in a northeast-southwest direction crosses the very southeast corner of the subject property. The adjacent lands are used for residential and/or agricultural purposes. A creek is present further north of the subject site. Hazeldean Road is present immediately to the south.

No apparent changes have been made to the subject site or to the adjacent properties.

No significant changes appear to have been made to the subject property. The very southeast corner of the site and the adjacent site to the east are currently tree-covered. Iber Road is present south of the western portion of the site, extending south from Hazeldean Road. Commercial properties have been developed along the east side of Iber Road. No other significant changes have been made to the adjacent properties.

A small area on the eastern portion of the site appears to be under development. The western portion of the site remains vacant and used for agricultural purposes. No significant changes appear to have been made to the adjacent properties.

The eastern portion of the site has been developed and it is clear that a commercial business is present on site. What appears to be a structure, is present closer to Hazeldean Road, while stockpiles of soil or other materials appear to be present along the northern property boundary. An L-shaped section of the land along the northern property boundary appears to have been stripped of topsoil. No apparent changes have been made to the adjacent properties.



2002

Changes appear to have been made to the commercial establishment on the eastern portion of the subject site. The location of the structure appears to have changed and materials appear to be stored on the southern portion of the site. No other significant changes appear to have been made to the subject site or the adjacent properties.

2007

(City of Ottawa) The western portion of the site is no longer used for agricultural purposes. Huntmar Drive has been developed north of Hazledean Road and now transects this portion of the site in a northwest-south east direction. The land east and west of Huntmar Drive appears to have been stripped and stockpiles of soil can been seen on the site. These soil disturbances are considered to be associated with the recent construction of Huntmar Drive. The residential dwelling previously situated further north of the subject site is no longer present. The lands north of the site and east of Huntmar Drive have also been stripped of topsoil. Further commercial development is underway along the west side of lber Road, further south of the subject site. No other significant changes have been made to the adjacent properties.

2011

(City of Ottawa) The commercial establishment previously seen on the easternmost portion of the subject site is no longer present. The property east of Huntmar Drive is currently under construction for commercial purposes. Granular material can been seen along Huntmar Drive and Hazeldean Road. The portion of the subject property situated west of Huntmar Drive remains vacant (grassed) land.

The adjacent property to the west remains vacant and treed. Gravel has been placed on the southern portion of the vacant lot south of the Huntmar Drive property. A stormwater channel has been constructed on the municipal parcel of land south of the eastern portion of the site, north of Hazeldean Road. The adjacent land to the north of the site, east of Huntmar Drive, is a residential development under construction. The adjacent land to the north of the site and west of Huntmar Drive, remains vacant with the exception of a small portion that has been stripped and covered with gravel. The adjacent land to the east of the subject site remains unchanged with the exception of a storm water retention pond that has been constructed along Hazeldean Road.

Laser copies of some of the aerial photographs reviewed are included in the Appendix.



National Archives

Fire insurance plans (FIPs) and city directories are not available for the general area of the subject site.

PCB Inventory

A search of national PCB waste storage sites was conducted. There are no PCB waste storage sites within 1 km of the subject property.

Technical Standards and Safety Authority (TSSA)

The TSSA, Fuels Safety Branch in Toronto, was contacted on April 24, 2012, via email, to inquire about current and former underground storage tanks, spills and incidents for the subject site and neighbouring properties. No incident reports, or records of underground storage tanks, were identified by the TSSA for the subject property and neighbouring sites.

Natural Resources Canada (NRCAN)

The Geological Survey of Canada website on the Urban Geology of the National Capital Area was consulted as part of this assessment. Based on the information from NRCAN, bedrock in the area of the site consists of interbedded Limestone and Dolomite of the Gull River Formation. Based on the maps, the thickness of overburden ranges from 3-10 m and consists of clay and silt.

Ontario Ministry of Environment (MOE)

The Ontario Ministry of Environment document entitled "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 active or closed waste disposal sites or former industrial sites were identified in the vicinity of the subject site.

A search of the MOE Brownfields environmental site registry was conducted as part of this assessment. No records of site condition (RSC) were listed for the subject site. One (1) RSC was listed in the data base for the neighbouring properties within a 5 km radius of the subject site. An RSC was identified for the property addressed as 5831 Hazeldean Road, which is located approximately 300 m west/northwest of the subject property. Based on the distance of the property from the subject site, the RSC property is not considered to have had the potential to impact the subject property.



City of Ottawa Landfill Document

The document entitled "Old Landfill Management Strategy, Phase I - Identification of Sites, City of Ottawa", was reviewed. According to this document, there are no former landfill sites located within 1 km of the subject property.

Previous Engineering Reports

The following reports were provided to Paterson Group for review:

"Phase I Environmental Site Assessment, Hazeldean Road and Iber Road, Ottawa, Ontario", prepared by Jacques Whitford Environment Limited (JWEL) and dated June 24, 2004;
 "Fill Quality Assessment - Proposed Commercial Development, Hazeldean Road and Iber Road, Ottawa, Ontario", prepared by JWEL and dated June 28, 2004;
 "Confirmatory Soil Sampling and Analysis, Hazeldean Road an Iber Road, Ottawa, Ontario", prepared by JWEL and dated December 21, 2004; and
 "Phase I Environmental Site Assessment Update, 5649 Hazledean Road, Ottawa, ON", prepared by JWEL and dated January 30, 2007.

The original Phase I ESA covered the current subject property with the exception of the easternmost portion where a commercial landscaping business was previously located. The report indicated that the subject site was undeveloped agricultural land from at least 1945, until the time of the site visit in 2004. No concerns were identified with the past or current use of the subject or adjacent lands, with the exception of potential impacts to the subject site from the use of pesticides and/or herbicides. It was recommended that soil sampling and analysis be conducted to assess potential disposal options for excess construction-related soil as soil containing pesticide/herbicide concentrations exceeding MOE Table F background concentrations would require disposal at a registered waste disposal facility.

During the Fill Quality Assessment conducted in June of 2004, two (2) composite samples were collected, within 0.2 m of the ground surface, from both the eastern and western portions of the site. The samples were submitted for analysis of organochlorine pesticides and phenoxy acid herbicides. Concentrations of these parameters were not detected in either sample and were therefore in compliance with the MOE Table F standards applicable at the time. It was concluded that the soil could remain onsite or be disposed offsite without restriction. No further work was recommended.



A Limited Phase II ESA was conducted on the eastern portion of the subject site, at the location of the former commercial landscaping establishment) in November of 2004. The purpose of the Limited Phase II was to assess soil conditions with respect to environmental concerns identified during a previous Phase I ESA. Soil samples collected from an area of surficial staining in the vicinity of an aboveground storage tank (AST) contained concentrations of benzene, ethylbenzene, toluene and xylenes (BTEX) exceeding the MOE Table F background criteria. The soil also contained petroleum hydrocarbons (PHC) exceeding the MOE Table A commercial land use criteria. Soil samples collected from the area of three (3) fill piles also contained PHC concentrations exceeding the MOE background criteria.

The purpose of the subsequent confirmatory soil sampling program carried out in December of 2004, was to confirm that the property owner had removed the fill piles and stained soil in the vicinity of the aboveground storage tank, and to collect confirmatory soil samples. Three (3) soil samples were collected from the base of the former stained area and stockpiles and submitted for analytical testing of BTEX and PHC parameters. The results of the analytical testing identified BTEX and PHC concentrations below the MOE Table 2 standards applicable at the time.

The Phase I ESA update conducted in January of 2007 covered the easternmost portion of the site and the land to the north. No significant changes were noted since the previous Phase I. Based on the results of the Phase I ESA no further work was recommended.

5.2 Exterior Assessment

The site inspection was conducted on April 30, 2012.

Buildings

The subject property is currently under construction. Two (2) of the several proposed commercial structures, have recently been constructed on the eastern portion of the subject site, near the southeast corner of the property (east of Huntmar Drive). The exteriors of the buildings have not yet been finished. The proposed structure near the northeast corner of the site was under construction; structural building materials were being unloaded at this location at the time of the site visit. A fourth building was also under construction, near the northwest corner of the property (east of Huntmar Drive). Excavation activities were observed at this location at the time of the site visit. The buildings on site are not currently heated, however it is expected that they will be heated with natural gas fired equipment upon completion.



Buildings are not present on the parcel of land situated west of Huntmar Drive, further north of Hazeldean Road.

Site

5653-5703 Hazeldean Road

As discussed above, the existing buildings/building foundations, occupy the northwest, northeast and southwest corners of the subject parcel of land located east of Huntmar Drive. Several site trailers as well as storage bins, building materials and heavy equipment were located across the site in the vicinity of the buildings under construction. Granular material has been placed along the western and southern portions of the site, along Huntmar and Hazeldean Roads, where future parking lots will exist. Concrete sidewalks and islands are also in place or are under construction on these portions of the site. The remainder of the western portion of the site is currently covered with gravel access lanes. The central and eastern portions of the site have been stripped of topsoil. A large windrow of toposoil/clean fill material is located on the central portion of the site and situated in a north-south direction. Several other small piles of stripped topsoil/clean fill and gravel are present on the eastern portion of the site. Granular material is present at the northeast corner of the site where a building is under construction.

Site drainage consists of surficial infiltration as well as sheet drainage to catch basins located on the subject site and surrounding roadways. A ditch located south of the easternmost portion of the site, north of Hazeldean Road, and leading to the stormwater management pond east of the site, may also collect runoff from the subject property. In general, the site and surrounding lands are relatively flat, with a slight slope down to the east, and are at a similar grade to the surrounding land and roadways.

21 Huntmar Drive

The property addressed as 21 Huntmar Drive is a vacant parcel of land covered with grass and brush. Site drainage mainly consists of surficial infiltration. The land is relatively flat and at a slightly lower grade than Huntmar Drive. The City of Ottawa's topographic mapping indicates that the regional topography is also relatively flat with a slight slope down to the northeast.



Potential Environmental Concerns

☐ Fuels and Chemical Storage

No pipes indicating the presence or former presence of USTs or ASTs or other fuels or chemicals were observed onsite at the time of the assessment. A very small area of minor surficial staining was noted on the eastern portion of the site. The staining is considered to be the result of a minor leak from heavy equipment onsite and is not considered to pose a significant concern to the subject property.

□ Waste Management

Domestic waste is not currently generated on site. Waste materials observed on the Hazeldean Road property at the time of the site inspection include miscellaneous construction debris including concrete, metal and wooden scaffolding.

□ Polychlorinated Biphenyls (PCBs)

A pad mounted transformer and other Hydro Ottawa equipment were observed near the southeast corner of the Hazeldean Road property. Based on the recent installation of the equipment, it is not considered to contain PCBs. A pole-mounted transformer was also observed near the northeast corner of the Hazeldean Road and Huntmar Drive property. No signs of leakage or staining were observed on or around the transformer and it is therefore not considered to pose a concern to the subject site. No other potential sources of PCBs were noted at the time of the site assessment.

☐ Fill Material

A large windrow of clean fill material was situated (in a north-south) direction, on the central portion of the site. The material appears to consist of topsoil stripped from the site. Other smaller piles of topsoil and gravel were also observed.



5.3 <u>Interior Assessment</u>

The interiors of the subject structures were not finished at the time of the site inspection. The structure near the southwest corner of the Hazeldean property had a concrete floor, walls covered with fibreglass insulation and a corrugated metal ceiling. The building to the east consisted of only a steel-frame structure at the time of the site inspection.

Potentially Hazardous Building Products

Potentially hazardous building products including asbestos containing materials (ACMs), lead-based paint, PCBs, and urea formaldehyde foam insulation (UFFI) and vermiculite are not present within the subject structures and will not be present in the subject structures upon completion as these building products have not been in use since at least the 1980's.

Other Potential Environmental Concerns

	Fuels	and	Chemical	Storage
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No aboveground storage tanks (ASTs) or signs of underground storage tanks (USTs) or other fuels, chemicals or signs of staining, were observed on the interior of the subject structures at the time of the site assessment.

□ Wastewater Discharges

Wastewater is not currently generated on site.

5.4 Adjacent Properties

Land use adjacent to the subject site is as follows:

North -	Residential development under construction;
East -	Vacant, treed land and a stormwater retention pond followed by
	a commercial retail development;
South -	Vacant land (scheduled for development), a stormwater channel
	and Hazeldean Road followed by vacant commercial/light
	industrial land, Iber Road and residential/agricultural land;
West -	Vacant treed land followed by residential



Monitoring wells were observed on the vacant property south of the subject land along Huntmar Drive. Two (2) wells were situated along Hazeldean Road and two (2) wells were situated along the western property boundary. Based on the historical review, there is no reason to believe that the wells have been installed for environmental purposes. The property has recently been surveyed and it is likely to be developed in the near future. The monitoring wells are considered to have been installed for the purposes of a geotechnical and/or baseline study for the proposed development.

The current use of the immediately adjacent properties is not considered to pose a concern to the subject site. Current land use adjacent to the subject property is illustrated on Drawing PE2142-1 - Site Plan in the appendix.



6.0 ASSESSMENT AND CONCLUSION

6.1 Assessment

A Phase I - Environmental Site Assessment was carried out for the property located at 5653-5703 Hazeldean Road and 21 Huntmar Drive, in the City of Ottawa, Ontario. The purpose of this environmental assessment was to research the past and current uses of the site and adjacent properties and identify any environmental concerns with the potential to have impacted the subject property.

The historical research indicated that the subject site was vacant and used for agricultural purposes from at least 1945 to 1987. In 1988 the easternmost portion of the site was developed with a commercial landscaping establishment. The remainder of the site was vacant until 2006/2007 when Huntmar Drive was constructed north of Hazledean Road, transecting the site in a northwest-southeast direction. The landscaping establishment was no longer present on site in 2008. Construction for the commercial redevelopment of the land east of Huntmar Drive, began in 2011.

Previous engineering reports prepared for the subject site were reviewed as part of this Phase I-ESA. The reports confirm that the subject property was not significantly impacted by the past operation of a landscape business on site.

The surrounding land was primarily used for agricultural purposes with residential farmsteads, from at least 1945 until the 1980's, when lber Road and commercial/light industrial properties were constructed south of the site across Hazeldean Road. The historical uses of the neighbouring lands are not considered to pose a risk to the subject property.

Following the historical review, a site visit was conducted. No significant concerns were noted with the current condition of the subject site or use of the adjacent lands.

6.2 Conclusion

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



7.0 STATEMENT OF LIMITATIONS

This Phase I - Environmental Site Assessment report has been prepared in general accordance with the agreed scope-of-work and 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 North American (Goulbourn) Corporation. Permission and notification from North American (Goulbourn) Corporation and Paterson will be required to release this report to any other party.

Paterson Group Inc.

Munch

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Report Distribution:

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APPENDIX

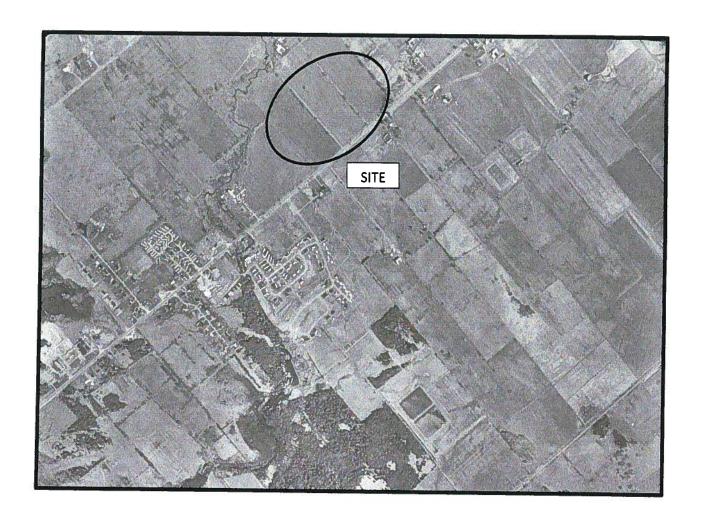
AERIAL PHOTOGRAPHS

FIGURE 1 - KEY PLAN

DRAWING PE2142-1 - SITE PLAN



AERIAL PHOTOGRAPH 1971



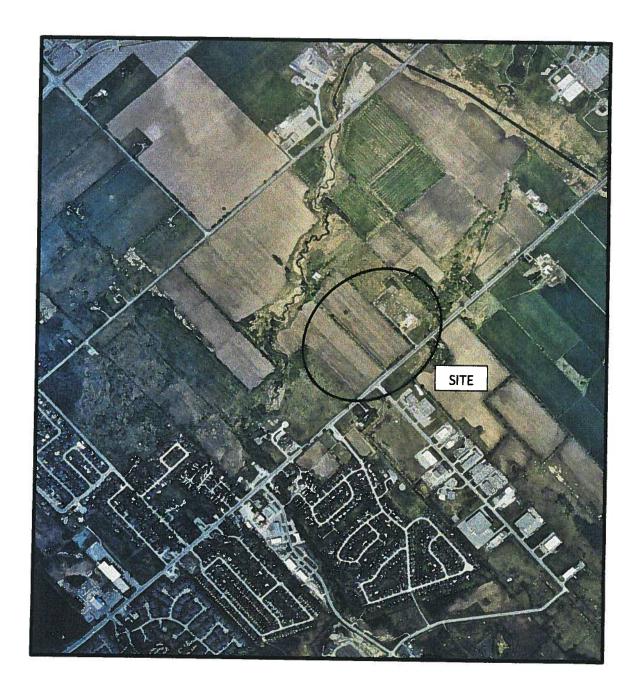
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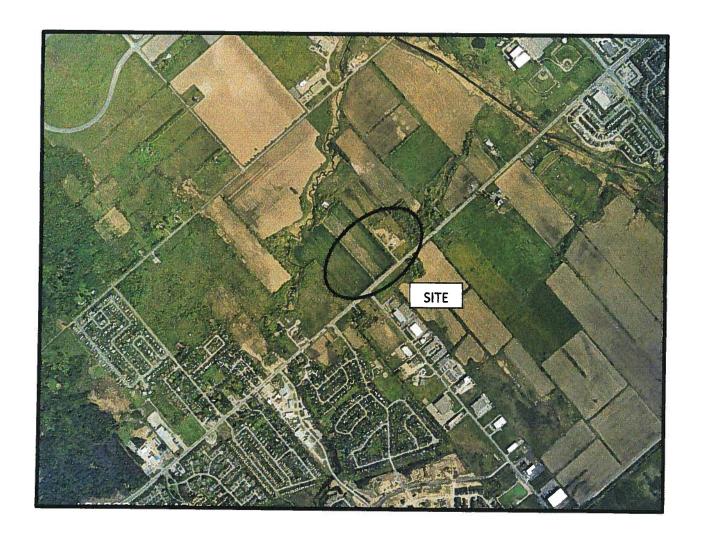
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AERIAL PHOTOGRAPH 1988



AERIAL PHOTOGRAPH 1999



AERIAL PHOTOGRAPH 2002

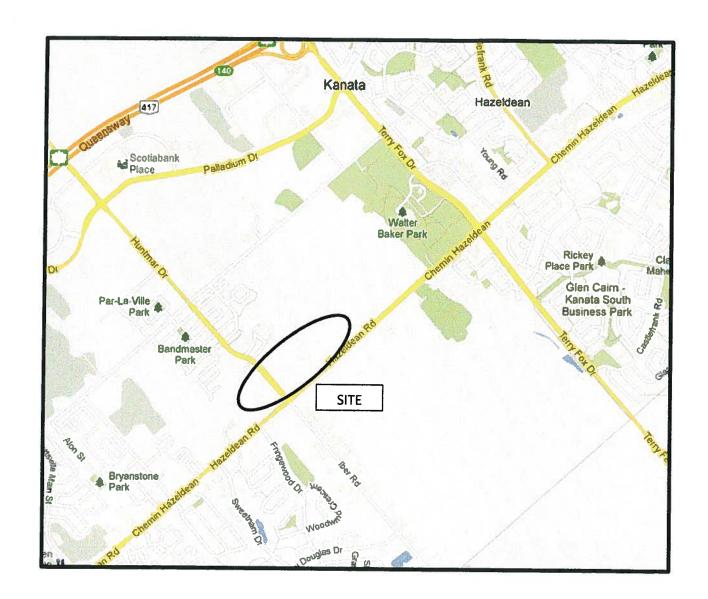


FIGURE 1 KEY PLAN

