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Civil • Geotechnical •
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REPORT ON

**PHASE I
ENVIRONMENTAL SITE ASSESSMENT
1344 BARFIELD ROAD
OSGOODE WARD, GREELY
CITY OF OTTAWA
ONTARIO**

Submitted to:

Wicked Garage Inc.
2760 Carousel Crescent - Apt 1104
Ottawa, Ontario K1T 2N4

DATE August 31, 2010

DISTRIBUTION

6 copies Wicked Garage Inc.
2 copies Kollaard Associates Inc.

100667



**Professional Engineers
Ontario**

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August 31, 2010

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EXECUTIVE SUMMARY

This Phase I Environmental Site Assessment was carried out by Kollaard Associates Inc. for Wicked Garage Inc. of Ottawa, Ontario. The subject site for this assessment consists of a rectangular shaped parcel of land some 0.2 hectares (0.64 acres) in plan area located on the west side of Barfield Road, Greely, in the City of Ottawa, Ontario.

The purpose of the Phase I Environmental Site Assessment was to identify, if possible, through non-intrusive investigation the existence of any significant, actual or potential environmental liabilities associates with the property. The Phase I Environmental Site Assessment has been prepared in general conformity with our interpretation of the requirements of CSAZ768 for conducting environmental site assessments.

The Phase I Environmental Site Assessment was based on a site reconnaissance visit, a review of available geological, topographical and historical information for the site including a review of the surficial and bedrock geology maps, a review of air photographs, title search documentation and zoning information obtained from the City of Ottawa.

The results of this Phase I ESA indicate that the most significant environmentally related issues identified at the site are the potential for subsurface contamination to exist from off site contaminant sources including fill material and parked vehicles north of the site. However, the risk of impacts at the site from that property is considered negligible given the relatively short time that the adjacent property north of the site has been in use (since 2008). Another potential source of contamination is from the metal shop east of the site. However, the risk of impacts at the site from that property is considered low as metals or other subsurface contamination from that property are more likely to migrate to the south and the metal shop is cross gradient of the indicated groundwater flow direction at the subject site.

Based on the results of this study no major issues of environmental concern were identified with respect to soil and/or groundwater quality and no further investigation is considered warranted at this time.





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1.0 INTRODUCTION

The subject site for this assessment consists of about a 0.2 hectare (0.64 acre), rectangular shaped parcel of land located on the west side of Barfield Road, Greely, in the City of Ottawa, Ontario (see Key Plan, Figure 1 and Site Plan, Figure 2).

For the purpose of this assessment, "project north" will be considered to lie in a direction perpendicular to Parkway Road south of the site (see Key Plan, Figure 1).

The site is located within an industrial park. The site is bordered on the south and west sides by vacant, undeveloped land, on the north by a property occupied by a gravel surfaced parking area with several parked vehicles and equipment and on the east by Barfield Road followed by industrial development. Currently, the site consists of vacant, undeveloped land.

The primary objective of this Phase I ESA is to document the site conditions on the day of a walk-through site reconnaissance and, if possible, to identify former operations or practices that may present potential environmental risks. The study is based on current and historical information and observations of site conditions during a site reconnaissance visit conducted on July 28, 2010.

The scope of the Phase I ESA is sufficient to identify existing and/or potential environmental liabilities that are obvious from visual examination of surface features and from available sources of information. This level of work is a method of risk reduction, not risk elimination. No building materials, soil, water, liquid, gas, or chemical product sampling and/or testing on or in the vicinity of the subject site were carried out as part of this assessment. This assessment included only a cursory overview of the present neighbouring land uses and does not constitute a complete assessment of the adjacent facilities.

Sections 2.0 and 3.0 of this report provide details of the site and information review. Section 4.0 outlines the site reconnaissance findings. Section 5.0 outlines issues of potential environmental concerns that were identified. Sections 6.0 and 7.0 present a summary of the assessment and limitations of the report, respectively.





2.0 SITE DESCRIPTION

2.1 Location and Legal Description

The site consists of about a 0.2 hectare (0.64 acre), rectangular shaped parcel of land located on the west side of Barfield Road, within the Greely Industrial Park, in the City of Ottawa, Ontario (see Key Plan, Figure 1 and Site Plan, Figure 2).

The legal description for the site is Parcel 5-10, section 4M-351, Part of Block 5, Plan 4M-351, being Parts 62, 63 and 64 on Plan 4R-5427, Geographic Township of Osgoode, in the City of Ottawa, Ontario.

2.2 Site and Area Characteristics

The attached Key Plan, Figure 1, Site Plan, Figure 2 and air photographs (Attachment B) show the relative location of the subject site with respect to the surrounding land and the existing roadway network. The site is located within an area of industrial development. Currently, the site consists of vacant, undeveloped land.

The ground surface across the site is relatively flat lying. A ditch exists along the east side of the site adjacent to Barfield Road.

Based on a review of topographical maps for the site area, it is expected that the upper groundwater flow at the site is towards Shields Creek that exists about 270 metres south of the site.

2.3 Sewage Disposal

No sewage disposal exists at the site. Existing industrial development in the site area are serviced by private sewage disposal systems.



2.4 Water Supply

No water supply exists at the site. Existing industrial development in the site area are serviced by private wells.

2.5 Past and Present Property Uses and Activities

A chain of title for this site (see Attachment A) was provided by Wentzell Titles Ltd. Based on a review of information obtained from a title search, the property is indicated to have been owned by individuals and companies. The companies consist of Ken Gordon Excavating Ltd. and Willis McKeown Ltd. (as joint owners), Gordon and McKeown Developments Ltd. and the current owner, Wicked Garage Inc. In addition, an easement was provided to Trans Northern Pipe Line Co. in 1953.

3.0 HISTORICAL INFORMATION REVIEW

In order to assess some of the historical conditions at the property, a preliminary review of information from the following sources was conducted:

- Topographic and geological maps
- National Air Photo Library - Energy Mines and Resources, Ottawa, Ontario
- Ministry of Environment (MOE), Ottawa, Ontario
- City of Ottawa Website for Zoning
- Old Landfill Management Strategy Phase 1 – Identification of Sites, City of Ottawa, Ontario, December 2003, Reference Number 021-2785 by Golder Associates Ltd.
- Shields Creek Subwatershed Study, City of Ottawa, Ontario, June 2004, by Totten Sims Hubicki

3.1 Geological, Topographical and Hydrogeological Setting

Based on a review of the surficial geology map for the site area, it is expected that the site is underlain by sand. A review of the bedrock geology map indicates that the bedrock underlying the



site consists of dolomite and limestone of the Oxford Formation. Based on a review of the topographical map for the site area, it is expected that the upper groundwater flow at the site is towards Shields Creek that exists about 270 metres south of the site.

3.2 Air Photograph Review

A review of air photographs for the site for the years 1969, 1975, 1989, 1997, 2002, 2005 and 2008 was carried out as part of this Phase I ESA (see Attachment B). An auto wrecker yard and an oil pipeline, located west of the site, and a hydro corridor, located east of the site, are visible in all of the air photographs. The 1969, 1975 and 1989 air photographs indicate the site and most of the surrounding area in use for agriculture, with progressive residential development visible east and west of the site. The 1989 air photograph indicates roadways have been constructed for the industrial park. The 1997, 2002, 2005 and 2008 air photograph indicates development has occurred within the industrial park, however, the subject site has remained vacant and has become partially tree covered. The 2002 air photograph indicates some tree clearing and/or possible fill placement near the south property line at the site, possibly on the adjacent property.

3.3 Ministry of the Environment (MOE) Records

The MOE office in Ottawa, Ontario, was contacted to determine if the Ministry has maintained a file with respect to the subject property. Specifically, the MOE was asked to respond (in writing) with information concerning any historical or existing incidents at or in the vicinity of the subject site. The MOE responded that no active orders or approvals have been issued for the subject site (see Attachment C).

3.4 City of Ottawa

Information from the City of Ottawa website was obtained regarding the current zoning of the site. Currently, the site is zoned RC-rural commercial.

A review of "Old Landfill Management Strategy Phase 1 – Identification of Sites, City of Ottawa, Ontario, by Golder Associates Ltd., Reference Number 021-2785, dated December 2003" concerning landfill sites indicates that no former landfill sites are located within at least five hundred



metres of the subject site.

A review of "Shields Creek Subwatershed Study - City of Ottawa, Ontario, June 2004 by Totten Sims Hubicki" indicates that the upper groundwater flow at the site and surrounding area is to the south. The report also indicates that the bedrock aquifer flow direction is to the south/southeast.

4.0 SITE RECONNAISSANCE

On July 28, 2010, a walk-through site reconnaissance was conducted at the subject property by a member of Kollaard Associates Inc. engineering staff. The site is located within an area of industrial development (Greely Industrial Park).

The site is bordered on the south and west sides by vacant, undeveloped land, on the north by a property occupied by a gravel surfaced parking area with several parked vehicles and equipment and on the east by Barfield Road followed partially by Fortran Steel, a welding and metal fabrication shop and storage yard and partially by a building occupied by a company called Conley with parked heavy equipment (forklifts). A relatively large auto wrecker yard (Spirak Auto Recyclers and General Repairs) exists about 300 metres west/southwest of the site along Parkway Road.

At the time of the site visit, the site was observed to consist of vacant, undeveloped land. The site is vegetated mainly with immature to mature trees and some open field.

4.1 Storage

No storage of hazardous materials was observed. Based on the indicated past usage of the property, past storage of hazardous materials is considered unlikely.

4.2 Storage Tanks

No evidence of above ground or underground storage tanks were observed at the site or are expected based on the indicated past and present use of the site.



4.3 Polychlorinated Biphenyls (PCBs)

No evidence of any PCBs was observed. Based on the indicated past usage of the property, the presence of PCBs is considered unlikely.

4.4 Suspect Asbestos Containing Materials (ACMs)

No ACMs were observed. Based on the indicated past usage of the property, the presence of ACMs is considered unlikely.

4.5 Solid Waste Disposal Practices

No disposal of solid waste was observed at the site.

4.6 Adjacent Properties

The site is located within an area of industrial development (Greely Industrial Park). The site is bordered on the south and west sides by vacant, undeveloped land, on the north by a property occupied by a gravel surfaced parking area with several parked vehicles and equipment. That property is followed by Hiram Drive with Marathon Drilling located at the north side of Hiram Drive. On the east side, the site is bordered by Barfield Road followed partially by Fortran Steel, a welding and metal fabrication shop and storage yard and partially by a building occupied by a company called Conley with parked heavy equipment (forklifts).

A relatively large auto wrecker yard (Spirak Auto Recyclers and General Repairs) exists about 300 metres west/southwest of the site along Parkway Road. Historical air photographs indicate that the auto wrecker yard has been present in the site area from sometime prior to 1969 to the present time. A topographic map for the site area also indicates an oil pipeline (Trans-Northern Pipelines Inc.) close to the west property line at the site and a hydro corridor east of the site.

Based on the indicated groundwater flow directions of the upper aquifer to the south as indicated by the topographical map and in the Shields Creek Subwatershed Study Report (Section 3.4), it is considered unlikely that the auto wrecker yard could cause any impact to the site. Other nearby



potential contaminant sources include, a metal shop located east of the site, and parked vehicles north of the site. The risk of potential subsurface contamination from parked vehicles north of the site is considered to be negligible, given the relatively short time that the site has been in use as indicated in the historical air photographs which show the adjacent property north of the site as vacant undeveloped land. The main building associated with the metal shop is located at the east side of that property and is about 100 metres east of the subject site. Any metals or other subsurface contamination from that property are more likely to migrate to the south and the metal shop is cross gradient of the subject site.

4.7 Noise, Dust and Vibration

There is potential for some vehicular noise, dust and vibrations to exist at the site from the use of Barfield Road and Hiram Drive. There is also a potential for air traffic noise associated with a nearby flight path to the Ottawa International Airport.

4.8 General Storage and Debris (Housekeeping)

At the time of the site reconnaissance, housekeeping at the site is considered to be good.

5.0 ISSUES OF POTENTIAL ENVIRONMENTAL CONCERN

In summary, based on the information gathered during this Phase I ESA, the following issues of potential environmental concern have been identified.

- A potential exists for subsurface contamination to exist at the site from off site contaminant sources including fill material and parked vehicles north of the site. However, the risk of impacts at the site from that property is considered negligible given the relatively short time that the adjacent property north of the site has been in use (since 2008). Another potential source of contamination is from the metal shop east of the site. However, the risk of impacts at the site from that property is considered low as metals or other subsurface contamination from that property are more likely to migrate to the south and the metal shop is cross gradient of the subject site.



- Possible pesticide and herbicide residue from past agricultural use of the site.
- A potential exists for vehicular traffic noise, dust and vibrations, from the use of Barfield Road and Hiram Drive. There is also a potential for air traffic noise associated with a nearby flight path to the Ottawa International Airport.

6.0 CONCLUSIONS

The results of this Phase I ESA indicate that the potential risks associated with this site are limited to those outlined in Section 5 above. Based on the results of this study no major issues of environmental concern were identified with respect to soil and/or groundwater quality and no further investigation is considered warranted at this time.

7.0 LIMITATIONS AND USE OF REPORT

The results of this Phase I ESA should in no way be construed as a warranty that the subject property is free from any and all contaminants other than those noted in this report, nor that all compliance issues have been addressed.

This report was prepared for the exclusive use of Wicked Garage Inc. and is based on data and information collected during the Phase I ESA of the property conducted by Kollaard Associates Inc. This report may not be relied upon by any other person or entity without the express written consent of Wicked Garage Inc. and Kollaard Associates Inc. In evaluating this site, Kollaard Associates Inc. has relied in good faith on information provided by others. The assessment of environmental conditions and possible site hazards presented have been made using available technical data collected and provided by others. We accept no responsibility for any deficiencies, or inaccuracies in this report as a result of omissions, misinterpretations, or fraudulent acts of others.

The conclusions provided herein represent the best judgement of Kollaard Associates Inc. based on current environmental standards. Due to the nature of the investigation and the limited data available, we cannot warrant against undiscovered environmental liabilities. If new information is discovered during future work, including excavations, borings or other studies, Kollaard Associates



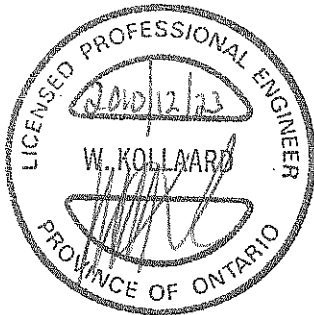
Inc. should be requested to re-evaluate the conclusions presented in this report and provide amendments as required.

We trust that this report is sufficient for your present requirements. If you have any questions concerning this report, please do not hesitate to contact our office.

Yours truly,

Kollaard Associates Inc.

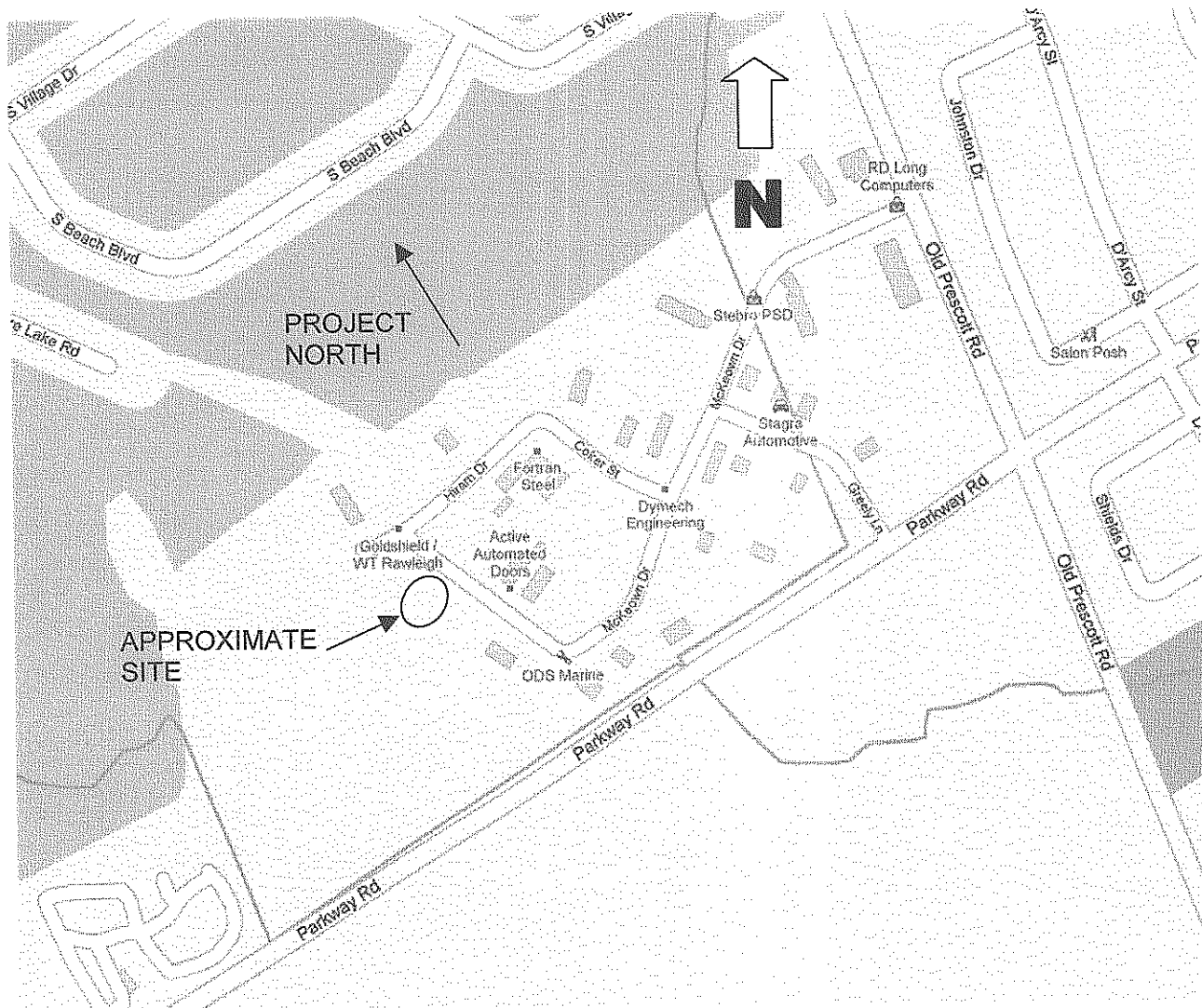
C.E. Vermeersch, B. Eng. (Env.)



William Kollaard, P. Eng.

KEY PLAN

FIGURE 1



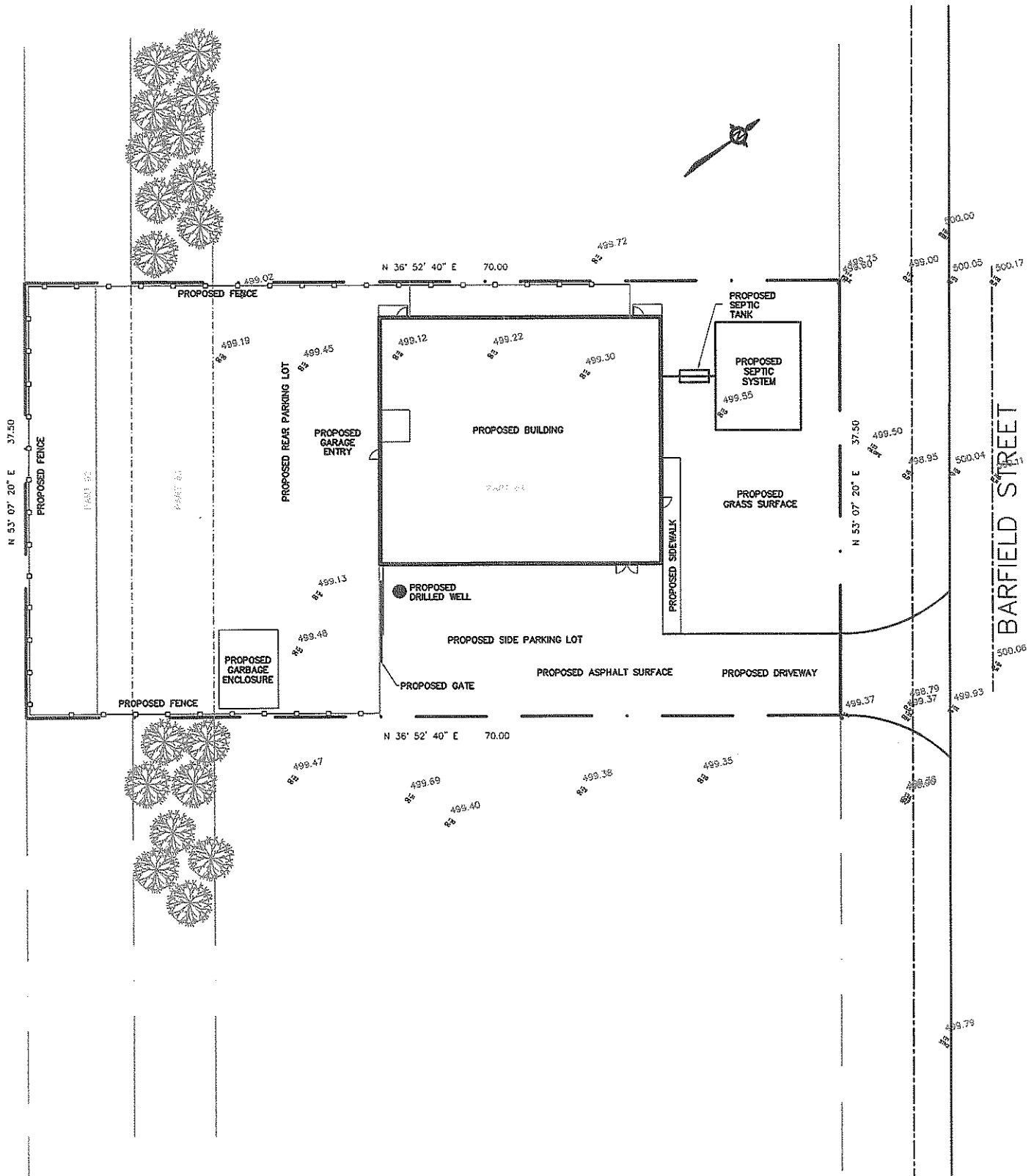
NOT TO SCALE




Kollaard Associates
Engineers

Project No. 100667

Date August 2010



		 Kollaard Associates Engineers BOX 189 210 PRESCOTT STREET KEMPVILLE, ONTARIO K0G 1J0 FACSIMILE (613) 258-0475	DESIGN - CHECKED - DRAWN CV GRADING - APPROVED -	SCALE NOT TO SCALE	PROJECT LOCATION 1344 BARFIELD ROAD, GREELY, OTTAWA, ONTARIO PROJECT NAME PHASE I ENVIRONMENTAL SITE ASSESSMENT DRAWING SITE PLAN	PROJECT No. 100807 DRAWING No. FIGURE 2 DATE AUGUST 2010
1 TO BE READ IN CONJUNCTION WITH ATTACHED REPORT	AUGUST 2010	CV				
No.	NOTE	DATE	BY			



ATTACHMENT A

TITLE SEARCH DOCUMENTATION

0

Exhibit no. 100662

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$\frac{1}{2} \times \frac{1}{2}$	$\frac{1}{2} \times \frac{1}{2}$

[illegible][illegible]

ENVIRONMENTAL SEARCH

INSTRUMENT #	TYPE	DATE	VENDOR	PURCHASER
0519875	Deed	Oct 16 1953	Estate of Thomas P. Ryan	Patrick M. Ryan
C+213196	Deed	July 10 1975	Patrick M. Ryan	Ken Gordon Excavating Limited & Willis McKeown Limited
N535846	Deed	Nov 10 1978	Ken Gordon Excavating Limited & Willis McKeown Limited	Gordon & McKeown Developments Limited
L+600249	Deed	Jan 31 1989	Gordon & McKeown Developments Limited	Kenneth Armond Gordon
OC203978	Deed	May 30 2003	Kenneth Armond Gordon	Rock Raymond Willenreue & Christine Willenreue
OC1119944	Deed	June 15 2010	Rock Raymond Willenreue & Christine Willenreue	Quipped Garage Inc. (Current Owners)
* Legal Description is: Plan 4M-351, being Township of Woodville, City of Ottawa P1N 0Y3 19-0727.				
				July 30/10



ATTACHMENT B

AIR PHOTOGRAPHS

AIR PHOTOGRAPH



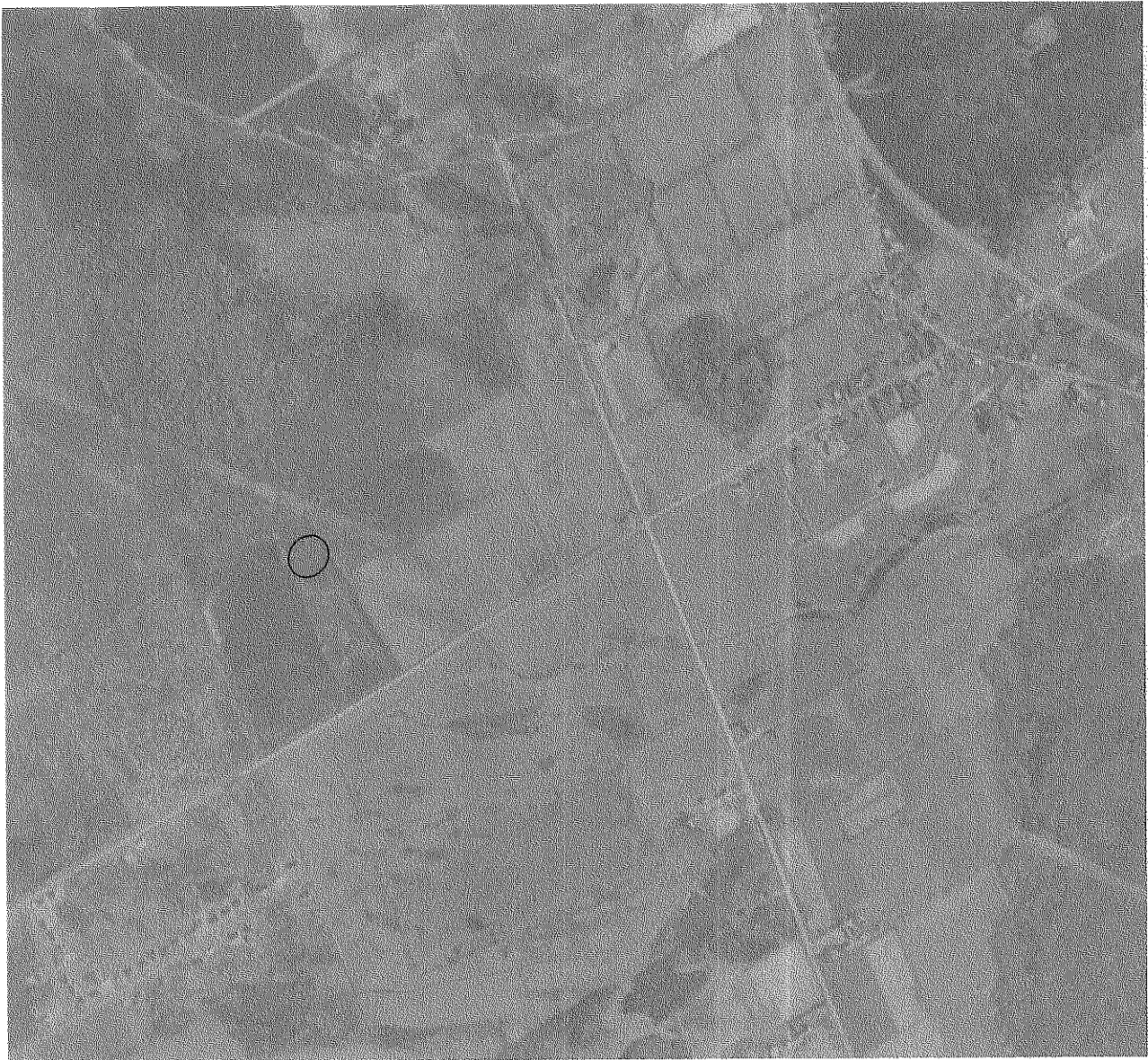
1969



Kollaard Associates
Engineers

Project No. 100667
Date August 2010

AIR PHOTOGRAPH



1975



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Date August 2010

AIR PHOTOGRAPH



1989



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Date August 2010

AIR PHOTOGRAPH



1997



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Date August 2010

AIR PHOTOGRAPH



2002



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Date August 2010

AIR PHOTOGRAPH



2005



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Date August 2010

AIR PHOTOGRAPH



2008



Kollaard Associates
Engineers

Project No. 100667
Date August 2010



ATTACHMENT C

ONTARIO MINISTRY OF THE ENVIRONMENT CORRESPONDENCE



Kollaard Associates

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210 Prescott Street, Unit 1
P.O. Box 189
Kemptville, Ontario K0G 1J0

Civil • Geotechnical •
Structural • Environmental •
Hydrogeology •

(613) 860-0923

FAX: (613) 258-0475

July 27, 2010

100667

Ontario Ministry of the Environment
2430 Don Reid Drive
Ottawa, Ontario
K1H 1E1

Attention: Abatement Officer

Re: 1344 BARFIELD ROAD
PART LOT 5, CONCESSION 4
FORMER TOWNSHIP OF OSGOODE
CITY OF OTTAWA, ONTARIO

Dear Sirs/Madam:

We have been retained by Wicked Garage Inc. to carry out a Phase I ESA for the above noted site. Accordingly, we would be pleased if you would provide us with information concerning any historical or existing incidents at or in the vicinity of the above site on file with the Ontario Ministry of the Environment.

Yours truly,
KOLLAARD ASSOCIATES, INC.

C.E. Vermeersch, B. Eng.

Attachments: Key Plan



Professional Engineers
Ontario

Authorized by the Association of Professional Engineers
of Ontario to offer professional engineering services.

RECEIVED
AUG 24 2010

Ministry of the Environment

2430 Don Reid Drive
Ottawa ON K1H 1E1

Tel: (613) 521-3450
Fax: (613) 521-5437

Ministère de l'Environnement

2430, rue Don Reid
Ottawa ON K1H 1E1

Tél.: (613) 521-3450
Télééc.: (613) 521-5437



OTT File No: 87

INDEX REVIEW REPORT
COMMERCIAL/INDUSTRIAL/AGRICULTURAL

Attention: C. E. Vermeersch Kollaard Associates	Your File: 100667 Date Received: July 28, 2010
--	---

PROPERTY OWNER AND LOCATION

Present Owner:		
Past Owners:		
Location:	Municipality:	Ottawa
	Address:	1344 Barfield Drive
		Lot 5 Concession 4, Twsp Osgoode

INDEX OF NAMES FOR ORDERS

We have searched the <i>Ottawa</i> District Index Record of Active Orders under the Environmental Protection Act (EPA), Ontario Water Resources Act (OWRA) and the Pesticides Act (PA) issued to: and the following information has been found:	
<input checked="" type="checkbox"/>	Check here if no Active Orders are outstanding
Date of Search: August 17, 2010	

INDEX OF NAMES FOR APPROVALS

We have requested a search of the Index Record of names of all persons to whom approvals have been issued, maintained by the Director, Approvals Branch and the Regional Director, *Eastern Region*, and the District Manager, *Ottawa District*, under Section 19 EPA and Section 13 OWRA and the following information has been provided :

<u>Type</u>	<u>Number</u>	<u>Issued To</u>	<u>Issue Date</u>
Section 9 EPA (Air)			
Section 39 EPA (Waste Management)			
Section 52 OWRA (Water)			
Section 53 OWRA (Municipal/Private/ Industrial Sewage)			
Other			

☒ Check here if no Approvals have been issued.

Date of Search: August 3, 2010

Please Note:

- 1) The information provided above is based solely on the name(s) of the present and past owners provided by you.
- 2) The Index Record of Names to whom approvals have been issued, maintained by the Regional Director and District Manager, has been searched back to 1993.
- 3) The Index Record of Names to whom approvals have been issued, maintained by the Director of Environmental Assessment and Approvals, has been searched back to 1985.
- 4) If an inspection of the Orders and/or Approvals identified is required please contact this office.
- 5) A search of our records does NOT indicate whether there are:
 - other uses for which an approval may have been required, nor
 - other uses on the property or in the vicinity that may affect the suitability of the property, for the use proposed to be made of it.

If a comprehensive knowledge of the property and the nearby lands and their environmental condition is required, you must examine them and other relevant records yourself, with the aid of a qualified person, if needed.
- 6) Please advise your colleagues that responses to requests for searches always take some time. As a result MOE may not be able to meet deadlines imposed by other parties on real estate and other transactions.

Signature: 
 Contact Name: Johanne Veilleux
 Title: Administrative Assistant

Address: Ministry of the Environment
 2430 Don Reid Drive
 Ottawa, ON K1H 1E1

Phone: (613) 521-3450 Ext 221

Date: August 17, 2010