



# Phase I Environmental Site Assessment 1334 Fourth Line Part of Lot 7, Concession 4, Trafalgar Town of Milton, Ontario



Prepared for: Mattamy (Brownridge) Ltd. c/o Shad & Associates Inc. 83 Citation Drive Unit 9 Vaughan, Ontario L4K 2Z6

Attention: Mr. Houshang Shad

October 28, 2011

Pinchin File: 70791.001

Copyright © 2011 by Pinchin Environmental Ltd.

# **TABLE OF CONTENTS**

1.0	EXECUTIVE SUMMARY	1
2.0	INTRODUCTION	2
	2.1 Phase One Property Information	2
3.0	SCOPE OF INVESTIGATION	2
4.0	RECORDS REVIEW	2
1.0	4.1 General	
	4.1.1 Phase One Study Area Determination	
	4.1.2 First Developed Use Determination	
	4.1.3 Fire Insurance Plans	
	4.1.4 Chain of Title	
	4.1.5 Previous Environmental Reports	
	4.2 Environmental Source Information	
	4.2.1 Ontario Ministry of the Environment	4
	4.2.2 Technical Standards & Safety Authority	
	4.2.3 EcoLog ERIS	4
	4.2.4 National Pollutant Release Inventory	
	4.2.5 City Directories	5
	4.3 Physical Setting Sources	
	4.3.1 Aerial Photographs	
	4.3.2 Topographic, Geologic and Hydrogeologic Setting	6
	4.3.3 Fill Materials	
	4.3.4 Water Bodies and Areas of Natural Significance	
	4.3.5 Well Records	
	4.4 Site Operating Records	
	4.5 Records Review Summary	8
5.0	INTERVIEWS	8
6.0	SITE VISIT	8
0.0	6.1 Specific Observations at Phase One Property	
	6.1.1 Site Location and Physical Description	
	6.1.2 Site Operations	
	6.2 Written Description of Investigation	
	6.2.1 Hazardous Materials	
	6.2.2 Aboveground Storage Tanks	
	6.2.3 Underground Storage Tanks	
	6.2.4 Water and Wastewater	
	6.2.5 Underground Utilities	10
	6.2.6 Polychlorinated Biphenyls	10
	6.2.7 Staining and Stressed Vegetation	11
	6.2.8 Non-Hazardous Wastes	
	6.2.9 Activities on Adjacent Properties	11
	6.2.10 Non-Ontario Regulation 511/09 Environmental Due Diligence Items	11

7.0	REV	VIEW AND EVALUATION OF INFORMATION	
	7.1	Current and Past Uses	
	7.2	Potentially Contaminating Activity	
		Areas of Potential Environmental Concern	
	7.4	Phase One Conceptual Site Model	
8.0	CON	NCLUSIONS	
9.0	STA	ANDARD LIMITATIONS	
10.0	CLC	DSURE	14
11.0	REF	FERENCES	

# FIGURES

- Figure 1 Key Map
- Figure 2 Site and Surrounding Land Use Plan
- Figure 3 Detail Plan
- Figure 4 Conceptual Site Model

#### **APPENDICES**

- Appendix I Correspondence with Regulatory Agencies
- Appendix II EcoLog ERIS Report
- Appendix III Photographs
- Appendix IV Topographic Map
- Appendix V Legal Survey
- Appendix VI Qualifications of Assessor

Appendix VII Non-Ontario Regulation 511/09 Environmental Due Diligence Items

# **1.0 EXECUTIVE SUMMARY**

Pinchin Environmental Ltd. ("Pinchin") was retained by Mr. Houshang Shad of Shad & Associates Inc. on behalf of Mattamy (Brownridge) Ltd. ("Client") to conduct a Phase I Environmental Site Assessment ("ESA") of the property described as Part of Lot 7, Concession 4, Trafalgar, Town of Milton, Ontario (hereafter referred to as the "Site"). At the time of Pinchin's Site visit, the Site consisted of agricultural land developed with two buildings ("Site Buildings") consisting of a barn ("Site Building A") and a shed ("Site Building B").

Pinchin was advised by the Client that the purpose of the Phase I ESA was to assess potential issues of environmental concern in relation to due diligence requirements for the preparation and submission of a Record of Site Condition ("RSC") with the Ontario Ministry of the Environment ("MOE") in support of the redevelopment of the Site.

The Phase I ESA was completed in accordance with the minimum requirements presented in Schedule D of Ontario Regulation 511/09 (as applicable), including a review of readily available historical records, a review of readily accessible regulatory records, a Site visit, interviews, an evaluation of information and reporting, subject to the limitations outlined in Section 9.0 of this report.

Based on the results of the Phase I ESA completed by Pinchin, nothing was identified that is likely to give rise to potential subsurface impacts in connection with the Site. As such, no subsurface investigation work (Phase II ESA) is recommended at this time.

This Executive Summary is subject to the same standard limitations as contained in the report and must be read in conjunction with the entire report.

## 2.0 INTRODUCTION

## 2.1 Phase One Property Information

Pinchin Environmental Ltd. ("Pinchin") was retained by Mr. Houshang Shad of Shad & Associates Inc. on behalf of Mattamy (Brownridge) Ltd. ("Client") to conduct a Phase I Environmental Site Assessment ("ESA") of the property described as Part of Lot 7, Concession 4, Trafalgar, Town of Milton, Ontario (hereafter referred to as the "Site"). At the time of Pinchin's Site visit, the Site consisted of agricultural land developed with two buildings ("Site Buildings") consisting of a barn ("Site Building A") and a shed ("Site Building B").

Pinchin was advised by the Client that the purpose of the Phase I ESA was to assess potential issues of environmental concern in relation to due diligence requirements for the preparation and submission of a Record of Site Condition ("RSC") with the Ontario Ministry of the Environment ("MOE") in support of the redevelopment of the Site.

# 3.0 SCOPE OF INVESTIGATION

The Phase I ESA was completed in accordance with the minimum requirements presented in Schedule D of Ontario Regulation 511/09 (as applicable), including a review of readily available historical and regulatory records, a Site visit, interviews, an evaluation of information and reporting, all subject to the limitations outlined in Section 9.0 of this report.

The Client indicated that the person most knowledgeable of the Site conditions is Mr. Clarence McCann, associated with the Site for approximately thirty (30) years, and hereafter referred to as the "Site Representative".

In addition, Pinchin reviewed the report entitled "*Phase I Environmental Site Assessment*, *Proposed Residential Housing Development, Part of East Half of Lot 7, Concession 4, New Survey – Trafalgar, Town of Milton, Regional Municipality of Halton*" prepared by AME – Materials Engineering ("AME") for Mattamy Homes, dated February 3, 2003 ("2003 AME Phase I ESA Report"), as provided by the Client.

#### 4.0 **RECORDS REVIEW**

#### 4.1 General

#### 4.1.1 Phase One Study Area Determination

The Phase I ESA study area consists of the Site as well as all properties situated wholly, or partly, within 250 metres ("m") from the nearest point of a boundary of the Site. The rationale for the study area was to ensure that an adequate assessment of those neighbouring properties which, if impacted, could reasonably be considered to have a potential adverse effect on the Site.

The selected study area meets the minimum requirements set forth in Ontario Regulation 511/09. The Phase I ESA study area is presented on Figure 2.

## 4.1.2 First Developed Use Determination

The records reviewed included an investigation into the first developed use of the Site. The rationale for this approach was to ensure that an adequate assessment of all historical Site uses was conducted as part of the records review, and in order to meet the minimum requirements set forth in Ontario Regulation 511/09.

#### 4.1.3 Fire Insurance Plans

As part of the 2003 AME Phase I ESA Report, the Canada Fire Underwriters Association was contacted to obtain copies of Fire Insurance Plans ("FIPs") related to the Site and surrounding area. No FIPs were available for the Site and surrounding area.

# 4.1.4 Chain of Title

Pinchin reviewed the title search information provided in the 2003 AME Phase I ESA Report. A summary of information reviewed with respect to the Site is provided in the following table:

Year(s)	Ownership Listing	
1821	Crown to Robert Oliver	
1831	Robert Oliver to B. Roddy	
1831	B. Roddy to Lawrence Bukiak	
1836	Lawrence Buskiak to Alexander Black	
1844	Alexander Black to John Yorkland and Thomas Sutton	
1847	John Yorkland and Thomas Sutton to Robert Waldbuck	
1848	Robert Waldbuck to John Ford	
1856	John Ford to James Ford	
1860	James Ford to Andrew Ford	
1901	Andrew Ford to David F. Ford	
1944	David F. Ford to Alfred C. Ford	
1966	Alfred C. Ford to Wasyl Zelenenky	
1969	Wasyl Zelenenky to Sagripanti Bros. Concrete – Drains Limited, Central Carpentry Ltd. and Safar Construction Ltd.	
1983	Sagripanti Bros. Concrete – Drains Limited, Central Carpentry Ltd. and Safar Construction Ltd. to Central Carpentry Ltd.	
1987	Central Carpentry Ltd. to John Dinevski	
1993	John Dinevski to Edward Tor, Lucy Tor, Alfred J. Tor and Irene C. Tyndorf	
2003	Edward Tor, Lucy Tor, Alfred J. Tor and Irene C. Tyndorf to Mattamy (Brownridge) Limited	

Based on Pinchin's review of the above-noted title search, nothing was identified that could give rise to potential subsurface impacts in connection with the Site.

# 4.1.5 Previous Environmental Reports

## 2003 AME Phase I ESA Report

The Site consisted of undeveloped agricultural land. A barn and residential dwelling were located on the northeast-central portion of the Site. Construction debris was observed on the Site south of a shed likely from a demolished dwelling. The 1954 aerial photograph indicated that the Site was developed with a dwelling, shed and a barn. A diesel aboveground storage tank ("AST") was located on a wooden platform next to a shed. No staining was observed in the vicinity of the AST. Nothing with the potential to cause subsurface impacts in connection to the Site was identified.

Based on Pinchin's review of the above-referenced report, nothing was identified that is likely to give rise to potential subsurface impacts in connection with the Site.

# 4.2 Environmental Source Information

Pinchin requested copies of permits, approvals and registrations from the Site Representative and was advised that there is no regulatory information with respect to the Site.

# 4.2.1 Ontario Ministry of the Environment

An MOE Freedom of Information request was submitted to the MOE for information on file with respect to the Site. Specifically, the MOE was asked what information it has regarding historical spills, orders, investigations/prosecutions, waste generator numbers/classes and Certificates-of-Approval ("C-of-As"). A response from the MOE dated October 26<sup>th</sup> indicated that no records were found for the Site. A copy of the MOE response is provided in Appendix I of this report.

Pinchin conducted a search of the MOE *Brownfields Environmental Site Registry*. Based on the results of Pinchin's search, a Record of Site Condition ("RSC") has not been filed for the Site or neighbouring properties within a 250 m radius of the Site.

# 4.2.2 Technical Standards & Safety Authority

The Technical Standards & Safety Authority ("TSSA") was contacted to establish the status of the Site with respect to its files, to identify outstanding instructions, incident reports, fuel/oil spills or contamination records associated with the Site. Based on email correspondence with Mr. Prem Lal of the TSSA on October 3, 2011, no information was on file with respect to the Site.

# 4.2.3 EcoLog ERIS

Pinchin submitted a request to EcoLog ERIS for a review of all available databases, as they pertain to the Site and surrounding properties.

A copy of the EcoLog ERIS report is provided in Appendix II. Information obtained from the database review indicated the following:

- The Abandoned Aggregate Inventory indicated that a pit/quarry was formerly located at Lot 8, Concession 4, Milton. The size of the quarry was 0.4 hectares. No additional information was provided in the EcoLog ERIS report. This property is located immediately northwest of the Site and is inferred to be hydraulically transgradient relative to the Site;
- The Certificates of Approval database indicated that nine (9) municipal and private sewage approvals were issued within a 250 m radius of the Site for the construction of sanitary and stormwater sewers, retention ponds and watermains; and
- The Water Well Information System database indicated that seventeen (17) water wells were located within a 250 m radius of the Site. According to the information provided, no wells were located on the Site. However, during Pinchin's Site visit, three monitoring wells were observed on the Site.

Based on Pinchin's review of the above-noted information sources, nothing was identified that is likely to give rise to potential subsurface impacts in connection with the Site.

# 4.2.4 National Pollutant Release Inventory

Pinchin searched the National Pollutant Release Inventory ("NPRI") database, dated as of September 22, 2011. No information was on file related to the Site or neighbouring properties within a 1 km radius of the Site.

#### 4.2.5 *City Directories*

City directories were unavailable for the Site and surrounding properties.

#### 4.3 **Physical Setting Sources**

#### 4.3.1 Aerial Photographs

Pinchin reviewed copies of aerial photographs dated 1954, 1971 and 1978, included in the 2003 AME Phase I ESA Report, and aerial photographs dated 2004 and 2009 from Google Earth<sup>TM</sup> historical imagery. A summary of information obtained with respect to the Site is provided in the following table:

Year of Photograph	Site
1954	The Site appeared to consist of agricultural land with buildings located on the northeast- central portion of the Site. Due to the quality of the aerial photograph, building details could not be determined.
1971	Similar to 1954.
1978	Similar to 1971.
2004	Similar to 1978.
2009	Similar to 2004.

A summary of information obtained with respect to the surrounding area is provided in the following table:

Year of Photograph	Northeast	Southeast	Southwest	Northwest
1954	Fourth Line followed by agricultural land.	Agricultural land with residential dwellings located at the corner of Britannia Road West and Fourth Line.	Undeveloped agricultural land to Thompson Road.	Undeveloped agricultural land.
1971	Similar to 1954.	Similar to 1954.	Similar to 1954.	Similar to 1954.
1978	Similar to 1971.	Similar to 1971.	Similar to 1971.	Similar to 1971.
2004	Similar to 1978.	Similar to 1978.	Similar to 1978.	Agricultural land to Louis St. Laurent Avenue.
2009	Similar to 2004.	Similar to 2004.	Similar to 2004.	Similar to 2004.

Based on Pinchin's review of the above-noted aerial photographs, nothing was identified that is likely to give rise to potential subsurface impacts in connection with the Site.

# 4.3.2 Topographic, Geologic and Hydrogeologic Setting

Торіс	Findings
Topography of Site and Surrounding Area	A topographic map is presented in Appendix IV. Both the Site and the Phase I ESA study area generally slope down to the southeast.
Site Grade Relative to the Adjoining Properties	The Site was at a similar grade to the adjoining properties.
Subsurface Soils	Glaciolacustrine deposits: Massive to laminated silt and clay.
Bedrock Type	Red shale of the Queenston Formation.
Inferred Bedrock Depth	Greater than 8.2 mbgs based on information provided in the well records for the well located on the property immediately northeast of the Site (Section 4.3.5).
Inferred Groundwater Depth	Approximately 1.8 mbgs, based on information provided in well records.
Fill Material	None observed.
Inferred Groundwater Flow Direction	Southwest based on the nearest body of water and the topography of the Phase I ESA study area.

#### 4.3.3 Fill Materials

No fill materials were observed and none reported by the Site Representative.

#### 4.3.4 Water Bodies and Areas of Natural Significance

A drainage ditch was observed along the northeast Site boundary. A stormwater pond was observed in the northeast corner of the Site. Sixteen Mile Creek was located approximately 1.4 km southwest of the Site.

# 4.3.5 Well Records

Pinchin submitted a request to EcoLog ERIS (Section 4.2.4 of this report) for a review of the Water Well Information System, 1955 to March 2011, as it pertains to the Site and surrounding properties.

The Water Well Information System database indicated that seventeen (17) wells were located in the Phase I ESA study area. A summary of information obtained with respect to the wells is provided in the following table:

Well ID	Location	Stratigraphy	Depth to Bedrock (mbgs)	Depth to Groundwater (mbgs)
2806270 (WWIS-1)	Lot 7, Concession 5	Topsoil underlain by clay with gravel from 5.5 to 11.5 mbgs and shale	11.5	4.6
2808158 (WWIS-2)	Lot 7, Concession 5	Shale and limestone to a depth of 14.3 mbgs	Surface	2.7
2806786 (WWIS-3)	Lot 7, Concession 4 (located immediately northeast of the Site)	Topsoil underlain by clay with sand and stones between 3.7 and 8.2 mbgs	> 8.2	1.8
7153810 (WWIS-4)	Not available ("NA")	NA	NA	NA
7150824 (WWIS-5)	NA	NA – abandoned monitoring well	NA	NA
7124820 (WWIS-6)	NA	Topsoil underlain by clay to 3.1 mbgs and then silt/sand to 6.0 mbgs	> 6.0	NA
7102703 (WWIS-7)	Lot 8, Concession 4	NA – abandoned well	NA	NA
7153808 (WWIS-8)	NA	NA	NA	NA
2807428	Lot 6, Concession 4	Sand to 3.1 mbgs underlain by gravel to 37.8 mbgs and then red shale	37.8	15.24
2807469	Lot 7	Clay to 13.2 mbgs underlain by sand/sand and gravel/gravel to 31.7 mbgs	> 31.7	NA
2808958	Lot 7	Clay to 9.5 mbgs underlain by limestone	9.5	2.7
2808962	Lot 6	Clay to 15.2 mbgs underlain by black rock and limestone	16.1	4.0
2808972	Lot 8	Clay to 15.2 mbgs underlain by limestone	15.2	12.2
2809663	Lot 6, Concession 4	Sandy clay to 12.5 mbgs underlain by red shale	12.5	34.7

Well ID	Location	Stratigraphy	Depth to Bedrock (mbgs)	Depth to Groundwater (mbgs)
2809857	Lot 6, Concession 1	Sandy clay/gravelly clay/clay to 24 mbgs underlain by red shale	24	10.3
7042338	Lot 6, Concession 4	NA	NA	NA
7131131	Lot 8, Concession 4	NA	NA	NA

# 4.4 Site Operating Records

In accordance with Ontario Regulation 511/09, if a property is used or has ever been used, in whole or in part for an industrial use or as a bulk liquid dispensing facility, or a as a dry cleaner, reasonable ascertainable Site operating records must reviewed. As indicated in Sections 4.0 and 6.0 of this report, the Site has always consisted of agricultural land. As such, no operating records were reviewed.

#### 4.5 Records Review Summary

Based on the results of the historical review, nothing was identified that is likely to give rise to potential subsurface impacts in connection with the Site.

## 5.0 INTERVIEWS

The Client indicated that the person most knowledgeable of the Site conditions is Mr. Clarence McCann. Ms. Melissa Gallagher of Pinchin conducted a telephone interview with the Site Representative on October 11, 2011.

The Site Representative indicated the following with respect to the historical occupancy and operations at the Site:

- The Site has been used for agricultural purposes since at least the 1800s;
- A farmhouse and barn were constructed in approximately the 1930. The house was demolished approximately 30 years ago; and
- No dry cleaning operations or retail fuel outlets ("RFOs") have ever been located at the Site.

#### 6.0 SITE VISIT

Ms. Melissa Gallagher of Pinchin (see Appendix VI for assessor qualifications) conducted a Site visit on October 11, 2011. The Site visit included a walk-through of accessible areas of the interior of the Site Buildings and exterior areas of the Site. At the time of the Site visit, the ground surface was wet and the weather was cloudy and raining. The Site visit was documented with notes and photographs. The results of the Site visit are discussed below. Photographs of some of the features noted during the Site visit are attached in Appendix III.

#### 6.1 Specific Observations at Phase One Property

#### 6.1.1 Site Location and Physical Description

As indicated on Figure 1 (Key Map), the Site is located on the southwest side of Fourth Line, approximately 650 m northwest of Britannia Road West in Milton, Ontario. The Site is situated in an area that predominantly consists of residential and agricultural land uses. Figures 2 and 3 illustrate the Site and surrounding area.

A summary of the physical description of the Site, including the Site Buildings, is provided below:

Торіс	Findings
Site Area	40.5 hectares (100 acres).
Buildings on-Site	Site Building A: Barn located on the northeast-central portion of the Site. Site Building B: Shed located on the northeast-central portion of the Site, immediately southeast of Site Building A.
Approx. Year of Construction and Significant Additions or Renovations	Site Building A: 1930s. Site Building B: 1930s.
Number of Floors (Including ground level)	Site Building A: Three. Site Building B: One.
Subsurface Levels	None.
Approx. Footprint Area of Buildings	Site Building A: 308 m <sup>2</sup> (3,315 ft <sup>2</sup> ). Site Building B: 108 m <sup>2</sup> (1,162 ft <sup>2</sup> ).
Approx. Total Area of Buildings	Site Building A: 924 m <sup>2</sup> (9,945 ft <sup>2</sup> ). Site Building B: 108 m <sup>2</sup> (1,162 ft <sup>2</sup> ).
Heating / Cooling	None observed.
Elevators	None observed.
Emergency Generators	None observed and none reported by the Site Representative.
Landscaped / Grassed/Bare Ground Areas	The entire Site consisted of plants, grass and trees.
Paved or Other Sealed Surface Materials	None observed.

#### 6.1.2 Site Operations

The Site consisted of agricultural land with a barn and shed on the northeast-central portion. A stormwater pond was located within the north corner of the Site.

#### 6.2 Written Description of Investigation

#### 6.2.1 Hazardous Materials

Торіс	Findings	
Chemicals	None observed.	

Торіс	Findings
Hazardous Waste	None observed.

#### 6.2.2 Aboveground Storage Tanks

No ASTs were observed on-Site, and none were reported by the Site Representative.

#### 6.2.3 Underground Storage Tanks

No evidence of underground storage tanks ("USTs") (i.e., fill/vent pipes) was observed on-Site, and none were reported by the Site Representative.

Торіс	Findings
Water Supply Source	Town of Milton. Water is obtained by the Town from Lake Ontario and potable water wells. Water is not used on Site.
Water Use	Water is not used on Site.
Sanitary/Process Wastewater Receptor	No sanitary or process wastewater is generated on Site.
Pits, Sumps or Lagoons	None observed.
Grease Traps	None observed.
Oil/Water Separators	None observed.
Storm Water Flow and Receptor	Storm water likely flows into the drainage ditch located on Site or percolate through the surficial soil.
Wells	Three (3) groundwater monitoring wells were located on-Site. The Site Representative could not provide additional information with respect to the monitoring wells. A drinking water well (no longer in use) was located northeast of Site Building B. Well records were not available for any of the four wells observed on Site.
Watercourses, Ditches or Standing Water	A drainage ditch was observed along the northeast Site Boundary. A stormwater pond was observed in the northeast corner of the Site.

#### 6.2.5 Underground Utilities

The Site Representative indicated that the Site Buildings were not serviced by any underground utilities.

#### 6.2.6 Polychlorinated Biphenyls

The use of polychlorinated biphenyls ("PCBs") as dielectric fluids in electrical equipment such as transformers, fluorescent lamp ballasts and capacitors was common up to about 1980. The Federal Chlorobiphenyls Regulation, SOR/91-152, prohibits the use of PCBs in the aforementioned electrical equipment installed after July 1, 1980.

No potential PCB-containing equipment was observed on Site.

The Federal Chlorobiphenyls Regulation, SOR/91-152, prohibits the use of PCBs in "closed loop" equipment, such as hydraulic equipment, installed after September 1, 1977.

No hydraulic equipment was observed on-Site and none was reported.

#### 6.2.7 Staining and Stressed Vegetation

No evidence of historical chemical discharges or releases (i.e., staining or stressed vegetation) was observed during the Site visit. The Site Representative was unaware of any historical chemical spills at the Site.

#### 6.2.8 Non-Hazardous Wastes

Торіс	Findings
Non-hazardous Wastes	None observed.
Recyclables	None observed.

#### 6.2.9 Activities on Adjacent Properties

The Site is located in an urban area that is predominantly developed with agricultrual and residential land uses. A description of the adjacent properties is summarized in the following table, based on Pinchin's observations from the Site and publicly accessible locations:

	NORTHEAST	SOUTHEAST	SOUTHWEST	NORTHWEST
OPERATION OR ACTIVITY	Fourth Line followed by agricultural land with dwellings and barns.	Agricultural land with dwellings and barns along Britannia Road West.	Agricultural land to Thompson Road.	A residential dwelling and barn, followed by a school under construction.
DIRECTION WITH RESPECT TO INFERRED GROUNDWATER FLOW	Upgradient	Transgradient	Downgradient	Transgradient
VISIBLE EMISSIONS	None observed.	None observed.	None observed.	None observed.
VISIBLE OUTDOOR STORAGE OF HAZARDOUS MATERIALS	None observed.	None observed.	None observed.	None observed.

Based on Pinchin's observations of the adjacent properties, nothing was observed that is likely to give rise to potential subsurface impacts in connection with the Site.

#### 6.2.10 Non-Ontario Regulation 511/09 Environmental Due Diligence Items

Non-Ontario Regulation 511/09 environmental due diligence items such as asbestos-containing materials, lead containing paints, ozone-depleting substances, radon, mould and air emissions are summarized in Appendix VII of this report.

# 7.0 **REVIEW AND EVALUATION OF INFORMATION**

#### 7.1 Current and Past Uses

The Site is currently owned by Mattamy (Brownridge) Ltd. Currently, a shed and a barn are present on Site. A residential dwelling had been demolished approximately 30 years ago.

#### 7.2 Potentially Contaminating Activity

Based on the results of the Phase I ESA completed by Pinchin, no potentially contaminating activities were identified within a 250 m radius of the Site. As such, no subsurface investigation work (Phase II ESA) is recommended at this time.

#### 7.3 Areas of Potential Environmental Concern

Based on the results of the Phase I ESA completed by Pinchin, no areas of potential environmental concern were identified within a 250 m radius of the Site. As such, no subsurface investigation work (Phase II ESA) is recommended at this time.

#### 7.4 Phase One Conceptual Site Model

A Conceptual Site Model ("CSM") is a three-dimensional representation of a Site that conveys what is known or suspected about the physical and chemical nature of the Site including contaminant sources, and the transport and fate of those contaminants. The CSM provides the basis for understanding contaminant fate and transport issues and assessing potential remedial technologies at the Site. The CSM is derived from available data and accepted principles of groundwater flow and contaminant transport. The following subsections describe the various components of the conceptual model for the Site. The Phase I ESA study area is presented on Figure 2.

The Site is located in South Milton, located within Southern Ontario. Based on information reviewed by Pinchin, the subsurface stratigraphy reportedly consists of silt or clay to a depth of 8.2 mbgs. The bedrock consists of red weathered shale and is greater than 8.2 mbgs.

Based on the information provided in the water well records, the approximate depth to groundwater was 1.8 mbgs. The inferred groundwater flow direction at the Site is anticipated to be towards the southwest based on local topography and local surface water sources.

#### 8.0 CONCLUSIONS

Based on the results of the Phase I ESA completed by Pinchin, nothing was identified that is likely to give rise to potential subsurface impacts in connection with the Site. As such, no subsurface investigation work (Phase II ESA) is recommended at this time.

# 9.0 STANDARD LIMITATIONS

This Phase I ESA was performed in order to identify potential issues of environmental concern associated with the Site legally described as Part of Lot 7, Concession 4, Trafalgar, Town of Milton, Ontario, at the time of the Site visit. This Phase I ESA was performed in general accordance with currently acceptable practices for completing Phase I ESAs, as applicable to this Site. This report was prepared for the sole use of Mattamy (Brownridge) Ltd. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the sole responsibility of the third parties. Pinchin disclaims responsibility of consequential financial effects on transactions or property values, or requirements for follow-up actions and costs. No other warranties are implied or expressed.

No other reliance on this report, in whole or in part, shall be permitted without the written permission of Pinchin, following written authorization from Mattamy (Brownridge) Ltd. c/o Shad & Associates Inc., notwithstanding the foregoing, Pinchin acknowledges that Mattamy (Brownridge) Ltd. and Shad & Associates Inc. shall be entitled to distribute a copy of this report under the request for proposal ("RFP") process in connection with the proposed development of the subject lands.

The information provided in this report is based upon analysis of available documents, records and drawings, and personal interviews. In evaluating the Site, Pinchin has relied in good faith on information provided by other individuals noted in this report. Pinchin has assumed that the information provided is factual and accurate. In addition, the findings in this report are based, to a large degree, upon information provided by the current owner/occupant. Pinchin accepts no responsibility for any deficiency, misstatement or inaccuracy contained in this report as a result of omissions, misinterpretations or fraudulent acts of persons interviewed or contacted, or contained in reports that were reviewed. The scope of work for this Phase I ESA did not include an intrusive investigation for designated substances (i.e., asbestos, mould, etc.) and, therefore, these materials may be present in concealed areas.

Pinchin makes no other representations whatsoever, including those concerning the legal significance of its findings, or as to other legal matters touched on in this report, including, but not limited to, ownership of any property, or the application of any law to the facts set forth herein. With respect to regulatory compliance issues, regulatory statutes are subject to interpretation and these interpretations may change over time.

#### 10.0 CLOSURE

The conclusions and recommendations represent the best judgement of the assessor based on the Site conditions observed on October 11, 2011, and current environmental standards.

We trust that the information provided in this report meets your current requirements. If you have any questions or concerns, please do not hesitate to contact the undersigned.

Yours truly,

# PINCHIN ENVIRONMENTAL LTD.

sif1209 terguso

per: Sarah Ferguson, C. Tech. *Project Manager* Environmental Due Diligence & Remediation <u>sferguson@pinchin.com</u>

SF/AV/db

ntani

per: Andy Vanin, P. Eng., QP<sub>ESA</sub> Manager Environmental Due Diligence & Remediation avanin@pinchin.com

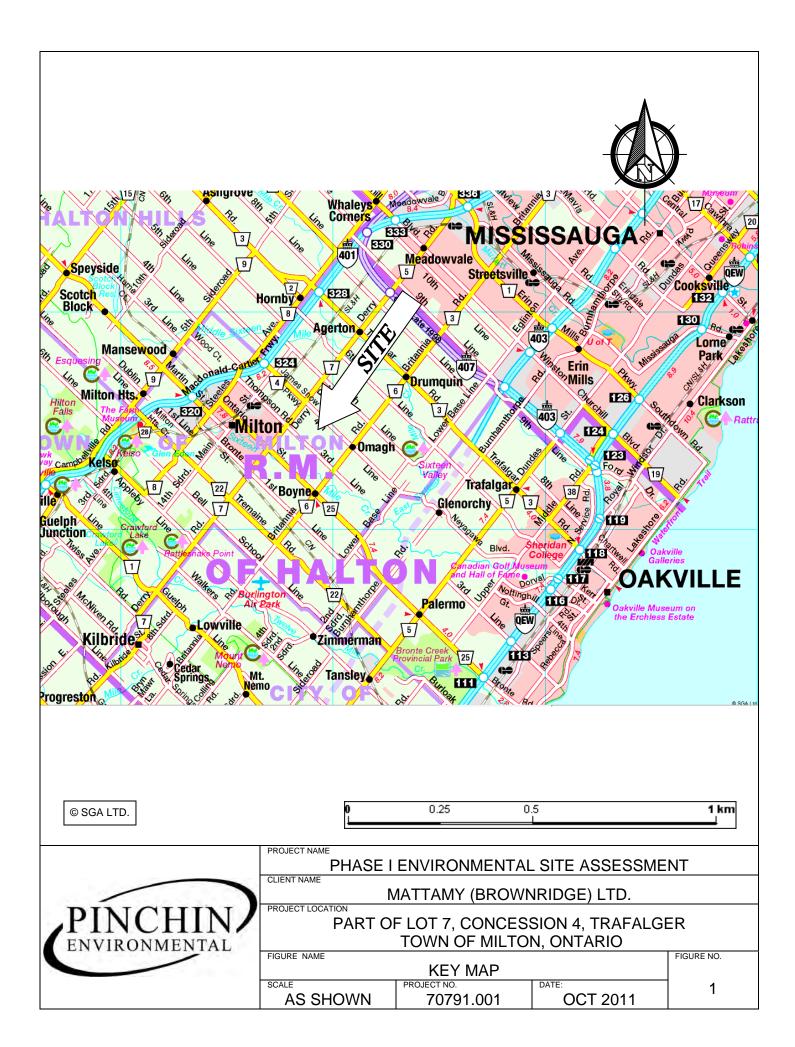
#### **11.0 REFERENCES**

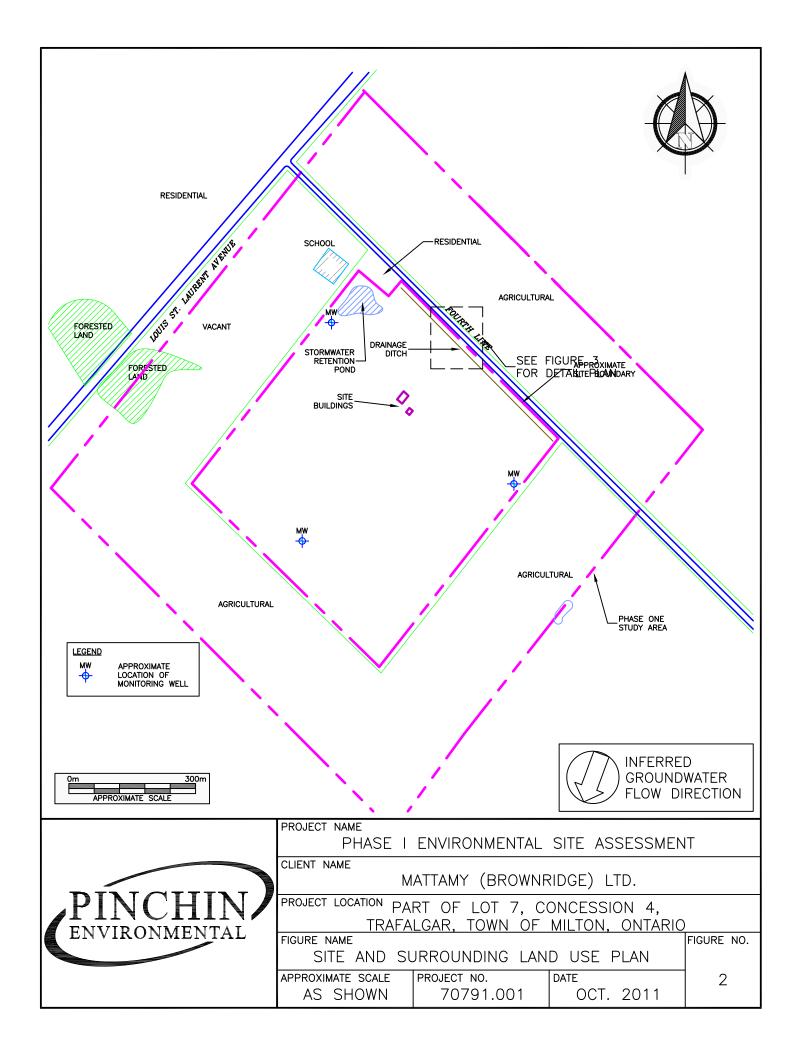
The following documents, persons or organizations provided information used in this report:

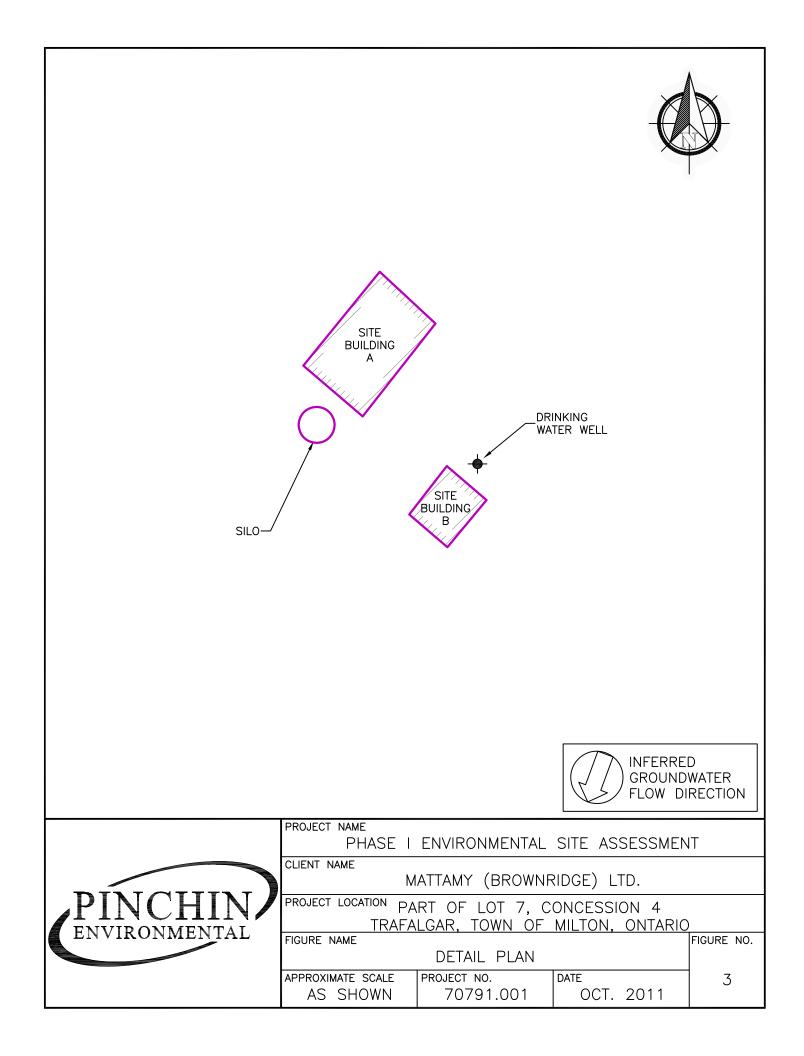
- 1. EcoLog ERIS report entitled "*unknown*, *1334 Fourth Line and 1211 Fourth Line, Milton, ON*" dated October 11, 2011 (ERIS Project # 20111003035).
- 2. Risk Management Services.
- 3. Google Earth.
- 4. Karrow, P. F. And Easton, J. 2005 "Quaternary Geology of the Brampton Area; Ontario Geological Survey, Map 2223". Scale 1:50,000.
- 5. Library and Archives of Canada, Ottawa, Ontario.
- 6. Technical Standards & Safety Authority.
- 7. Ontario Ministry of the Environment.
- 8. MOE Brownfields Environmental Site Registry.
- 9. Natural Resources Canada: http://atlas.nrcan.gc.ca/site/english/index.html
- 10. National Pollutant Release Inventory database: http://www.ec.gc.ca/pdb/websol/querysite/query\_e.cfm
- "Phase I Environmental Site Assessment, Proposed Residential Housing Development, Part of East Half of Lot 7, Concession 4, New Survey – Trafalgar, Town of Milton, Regional Municipality of Halton" prepared by AME – Materials Engineering for Mattamy Homes, dated February 3, 2003.

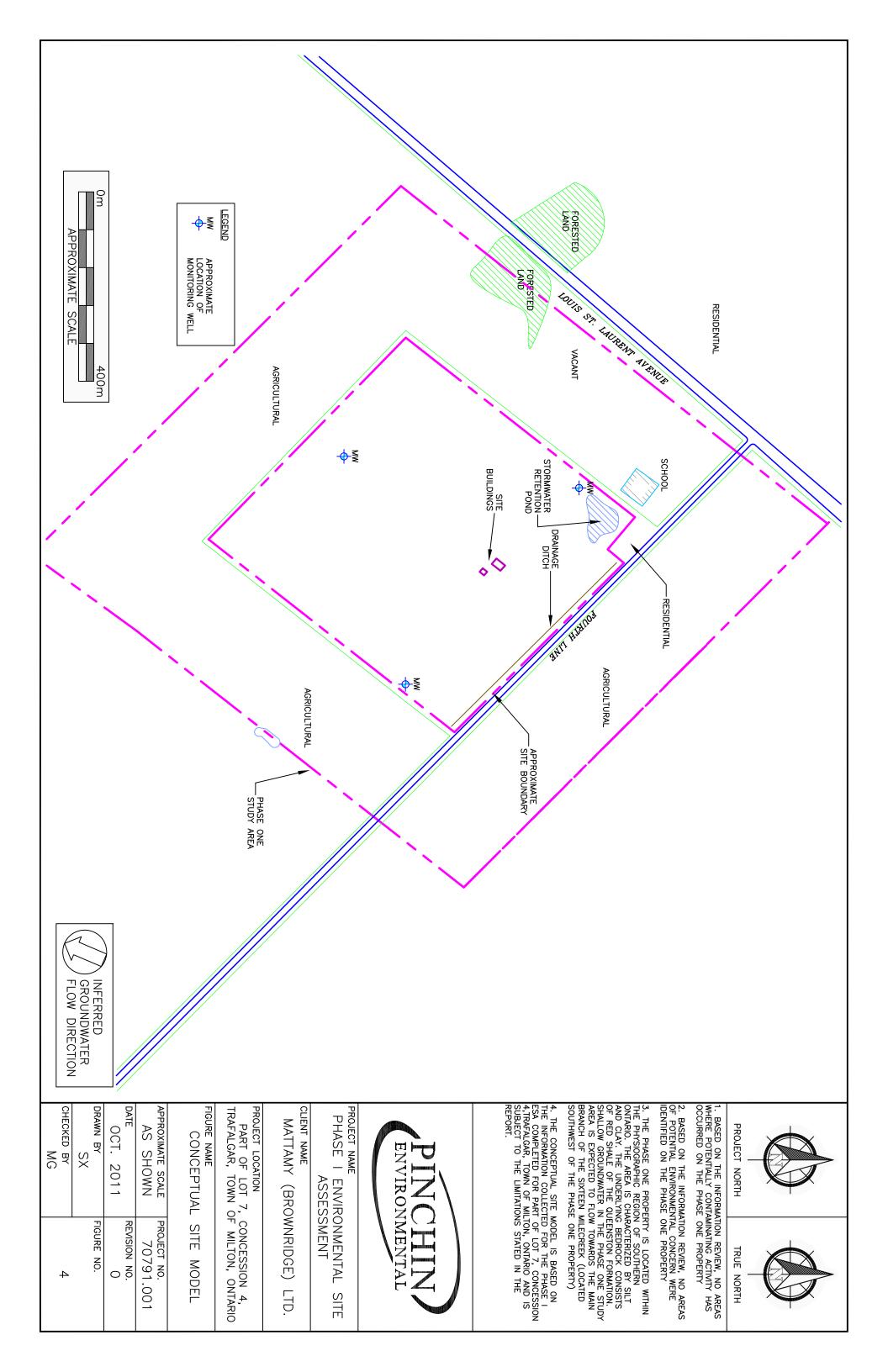
Z:\70000s\70791 Shad portfolio\70791.001 Tor\report\70791.001 Final PHI ESA \_Part of Lot 7, Con 4, Trafalgar, Milton, ON Oct 28 2011.docx

**FIGURES** 









**APPENDIX I** 

CORRESPONDENCE WITH REGULATORY AGENCIES

Ministry of the Environment

Freedom of Information and Protection of Privacy Office

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

Donna Ballentyne Pinchin Environmental Ltd 11 - 875 Main St W Hamilton, ON L8S 4R9

Dear Donna Ballentyne:

#### RE: Freedom of Information and Protection of Privacy Act Request Our File # A-2011-04719, Your Reference 70791.001

This letter is in response to your request made pursuant to the *Freedom of Information and Protection of Privacy Act* relating to 1334 Fourth Line, Milton.

After a thorough search through the files of the Ministry's Halton-Peel District Office, Investigations and Enforcement Branch, Environmental Monitoring and Reporting Branch, Sector Compliance Branch and Safe Drinking Water Branch, no records were located responsive to your request. To provide you with this response and in accordance with Section 57 of the *Freedom of Information and Protection of Privacy Act*, the fee owed is \$30.00 for 1 hour of search time @ \$30.00 per hour. **We have applied the \$30.00 for this request from your initial payment.** 

To conduct a search of the files of the Environmental Assessment and Approvals Branch requires an additional 12.5 hours of search time. If you would like us to search for Certificates of Approval, **please forward to me at the above address payment by cheque (made payable to the Minister of Finance (FOI)) or credit card in the amount of \$375.00.** Please note that there is no guarantee that any records will be located. Please note, a request for records must usually be answered within 30 calendar days, however Section 27 allows for time extensions under certain circumstances. If you choose to have the search conducted at the Environmental Assessment and Approvals Branch, the time for answering your request will be extended for an additional 30 days. When remitting **payment please quote our file number or attach a copy of this letter.** 

If you object to any decision I have made, you may request a review by contacting the Information and Privacy Commissioner/Ontario, 2 Bloor Street East, Suite 1400, Toronto, ON M4W 1A8 (800-387-0073 or 416-326-3333). Please note that there is a \$25.00 fee and you only have 30 days from receipt of this letter to request a review.

If you have any questions regarding this matter, please contact Sarah Lynch at (416) 314-7102.

Yours truly.

Heidi Ritscher FOI Coordinator Freedom of Information and Protection of Privacy Office



12<sup>e</sup> étage 40, avenue St. Clair ouest Toronto ON M4V 1M2 Tél. : (416) 314-4075

Téléc. : (416) 314-4285

October 26, 2011

Ministère de l'Environnement

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

**APPENDIX II** 

ECOLOG ERIS REPORT

# Canada's Primary Environmental Risk Information Service

Project Site:	unknowm 1334 Fourth Line and 1211 Fourth Line Milton, ON
Client:	Donna Ballentyne Pinchin Environmental 875 Main Street West, Unit 11 Hamilton, ON L8S4R9
ERIS Project No:	20111003035
Report Type:	Custom Report25km Search Radius
Prepared By:	Shermin Haider shaider@eris.ca
Date:	October 11, 2011

DISCLAIMER AND COPYRIGHT NOTICE

DATABASE

REPORTS

The information contained in this report has been produced by EcoLog ERIS Ltd. using various sources of information, including information provided by Federal and Provincial government departments. Although EcoLog ERIS Ltd. has endeavoured to present you with information that is accurate, EcoLog ERIS Ltd. disclaims, except as set out below, any and all liability for any errors, omissions, or inaccuracies in such information and data, whether attributable to inadvertence or otherwise, and for any consequences arising therefrom. Liability on the part of EcoLog ERIS Ltd. is limited to the monetary value paid for this report. The report applies only to the address specified on the cover of this report, and any alterations or deviation from this description will require a new report. This report and the data contained herein does not purport to be and does not constitute a guarantee of the accuracy of the information contained herein and does not constitute a legal opinion nor medical advice. This report is solely intended to be used to focus further investigation and is not intended to replace a full Phase 1 Environmental Site Assessment. No page of this report should be used without this cover page, this disclaimer and the project property identifier.

The contents of this Service are protected by copyright. Copyright in the Service is owned by EcoLog ERIS Ltd. Copyright in data obtained from private sources is owned by EcoLog ERIS Ltd. or its licensors. The Service and its contents may not be copied or reproduced in whole or in any substantial part without prior written consent of EcoLog ERIS Ltd.

12 Concorde Place, Suite 800 Toronto, Ontario M3C 4J2 416-510-5204 • Fax: 416-510-5133 Toll Free: 1-866-517-5204 • www.eris.ca • info@eris.ca

# **Table of Contents**

Order Number:	20111003035
Site Name:	unknowm
Site Address:	1334 Fourth Line and 1211 Fourth Line Milton, ON
Report Type:	Custom Report, 0.25 km Search Radius

	Section
Report Summary	i
This outlines the number of records from each database that fall on the site, and within various distances from the site.	
Site Diagram	ii
The records that were found within a specified distance from the project property (the primary search radius) have been plotted on a diagram to provide you with a visual representation of the information available. Sites will be plotted on the diagram if there is sufficient information from the database source to determine accurate geographic coordinates. Each plotted site is marked with an acronym identifying the database in which the record was found (i.e., WDS for Waste Disposal Sites). These are referred to as "Map Keys". A variety of problems are inherent when attempting to associate various government or private source records with locations. EcoLog ERIS has attempted to make the best fit possible between the available data and their positions on the site diagram.	
Site Profile	iii
This table describes the records that relate directly to the property that is being researched.	
Detail Report	iv
This section represents information, by database, for the records found within the primary search radius. Listed at the end of each database are the sites that could not be plotted on the locator diagram because of insufficient address information. These records will not have map keys. They have been included because they may be found to be relevant during a more detailed investigation.	
	Page
Abandoned Aggregate Inventory	1
Certificates of Approval	2
ERIS Historical Searches	5
Water Well Information System	6

Appendix: Database Descriptions

# **Report Summary**

Order Number:	20111003035
Site Name:	unknowm
Site Address:	1334 Fourth Line and 1211 Fourth Line Milton, ON
Report Type:	Custom Report, 0.25 km Search Radius

atabase		Selected	On-site	Within 0.25	0.25km to 0.25km	Tota
AGR	Abandoned Aggregate Inventory	Y	0	0	0	0
AGR	Aggregate Inventory	Y	0	0	0	0
MIS	Abandoned Mine Information System	Y	0	0	0	0
NDR	Anderson's Waste Disposal Sites	Y	0	0	0	0
UWR	Automobile Wrecking & Supplies	Y	0	0	0	0
BORE	Borehole	Y	0	0	0	0
CA	Certificates of Approval	Y	0	0	0	0
CFOT	Commercial Fuel Oil Tanks	Y	0	0	0	0
СНЕМ	Chemical Register	Y	0	0	0	0
COAL	Coal Gasification Plants	Y	0	0	0	0
CONV	Compliance and Convictions	Y	0	0	0	C
DRL	Drill Hole Database	Y	0	0	0	C
BR	Environmental Registry	Y	0	0	0	C
EM	Environmental Effects Monitoring	Y	0	0	0	C
HS	ERIS Historical Searches	Y	0	2	0	2
IIS	Environmental Issues Information System	Y	0	0	0	C
CON	Federal Convictions	Y	0	0	0	(
CS	Contaminated Sites on Federal Land	Y	0	0	0	(
OFT	Fisheries & Oceans Fuel Storage Tanks	Ŷ	0	0	0	(
ST	Fuel Storage Tank	Ŷ	0	0	0	(
GEN	Ontario Regulation 347 Waste Generators Summary	Ŷ	0	0	0	(
AFT	Indian & Northern Affairs Fuel Tanks	Ŷ	0	0	0	(
ЛINE	Canadian Mine Locations	Ŷ	0	0	0	(
/INR	Mineral Occurrences	Ŷ	0	0	0	(
ATE	National Analysis of Trends in Emergencies System (NATES)	Ŷ	0	0	0	(
	Non-Compliance Reports	Y	0	0	0	(
	National Defence & Canadian Forces Fuel Storage Tanks	Ý	0	0	0	(
	National Defence & Canadian Forces Spills	r Y	0	0	0	(
NDWD	National Defence & Canadian Forces Waste Disposal Sites	Y	0	0	0	(
		Y	-	-	-	c
NEES NPCB	National Environmental Emergencies System (NEES)	Y	0	0	0	
	National PCB Inventory National Pollutant Release Inventory		0	0	0	0
	Oil and Gas Wells	Y	0	0	0	(
DGW		Y	0	0	0	
DOGW	Ontario Oil and Gas Wells	Y	0	0	0	(
OPCB	Inventory of PCB Storage Sites	Y	0	0	0	(
PAP	Canadian Pulp and Paper	Y	0	0	0	(
PCFT	Parks Canada Fuel Storage Tanks	Y	0	0	0	(
PES	Pesticide Register	Y	0	0	0	(
PRT	Private and Retail Fuel Storage Tanks	Y	0	0	0	(
REC	Ontario Regulation 347 Waste Receivers Summary	Y	0	0	0	C
RSC	Record of Site Condition	Y	0	0	0	(

# **Report Summary**

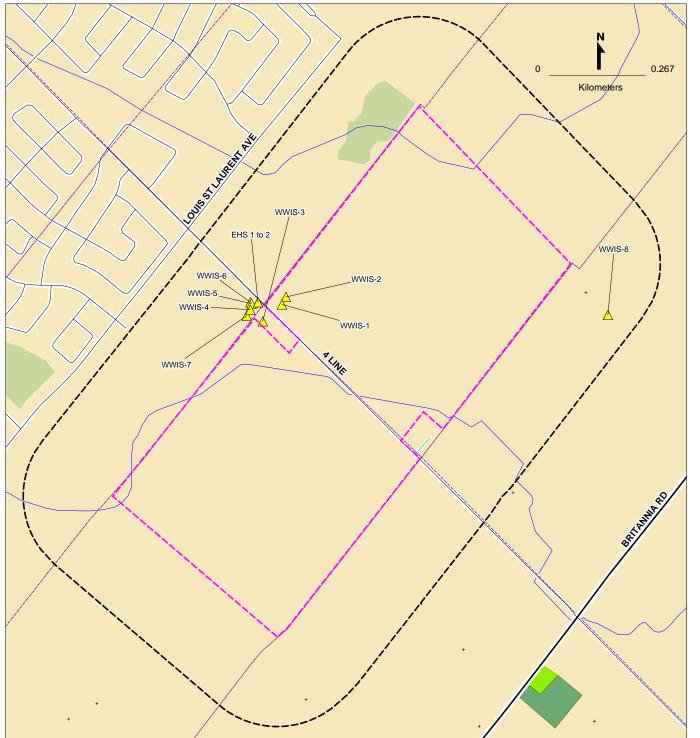
Order Number:20111003035Site Name:unknowmSite Address:1334 Fourth Line and 1211 Fourth Line Milton, ONReport Type:Custom Report, 0.25 km Search Radius

Database		Selected	On-site	Within 0.25	0.25km to 0.25km	Total
SCT	Scott's Manufacturing Directory	Y	0	0	0	0
SPL	Ontario Spills	Y	0	0	0	0
SRDS	Wastewater Discharger Registration Database	Y	0	0	0	0
TANK	Anderson's Storage Tanks	Y	0	0	0	0
TCFT	Transport Canada Fuel Storage Tanks	Y	0	0	0	0
WDS	Waste Disposal Sites - MOE CA Inventory	Y	0	0	0	0
WDSH	Waste Disposal Sites - MOE 1991 Historical Approval Inventory	Y	0	0	0	0
WWIS	Water Well Information System	Y	2	8	0	8
		TOTAL	2	10	0	10

The databases chosen by the client as per the submitted order form are denoted in the 'Selected' column in the above table. Counts have been provided outside the primary buffer area for cursory examination only. These records have not been examined or verified, therefore, they are subject to change.

#### SITE DIAGRAM





- This diagram is to be used solely for relative street location purposes. It may not accurately portray street or site positions.

# Site Report

Order Number:	20111003035
Site Name:	unknowm
Site Address:	1334 Fourth Line and 1211 Fourth Line Milton, ON
Report Type:	Custom Report, 0.25 km Search Radius

FOR COMPLETE INFORMATION, REFER TO DETAIL REPORT

Water Well Info	rmation System			
Мар Кеу	Company Name	Address	City	Postal Code
WWIS-1				
		lot 7 con 5		
WWIS-2				
		lot 7 con 5		

# **Detail Report**

Order Number:20111003035Site Name:unknowmSite Address:1334 Fourth Line and 1211 Fourth Line Milton ONReport Type:Custom Report, 0.25 km Search Radius

#### If information is required for sites located beyond the selected address, please contact your ERIS representative.

Abandoned Aggregate Inventory

Certificates of Approval

**ERIS Historical Searches** 

Water Well Information System

#### Abandoned Aggregate Inventory

Мар Кеу	Company	Address	Туре	Region/	County	Township
n/a		Lot 8 Con 4 Milton	Pit	Halton		Milton
			Concession:		4	
			Lot:		8	
			Size (ha):		0.4	
			Landuse:			
			Comments:		rehabilitated	
n/a		Lot 8 Con 4 Milton	Quarry	Halton		Milton
			Concession:		4	
			Lot:		8	
			Size (ha):		0.4	
			Landuse:			
			Comments:			

#### **Certificates of Approval**

ap Key	Company	Address	Certificate #	Application Year	Issue Date	Approval Type	Status	Application Type	
n/a	JOE SHAW (IN TRUST)	FOURTH LINE MILTON TOWN	7-0103-88-	88	2/10/1988	Municipal water	Approved		
			Client Name: Client Addres Client City: Client Postal Project Descr Contaminants Emission Con	Code: iption: s:					
n/a		Part Lot 8, Concession 4 Milton	4781- 4WHRH6	01	5/14/01	Municipal & Private sewage	Approved	New Certificate of Approval	
			Client Name: Client Address: Client City: Client Postal Code:		anaman Holding 100 Steels Avenu arkham				
			Project Descr Contaminants Emission Con	iption: In: S:	Installation of Sanitary and Storm Sewers				
/a		Part Lot 8, Concession 4 Milton	6124- 4WHR26	01	5/14/01	Municipal & Private water	Approved	New Certificate of Approva	
			Client Name: Client Addres Client City:	s: 31 Ma	Manaman Holdings Inc. 3100 Steels Avenue East Markham				
			Client Postal Project Descr Contaminants Emission Con	iption: In:	Installation of Watermains				
1		Part Lot 8, Concession 4, 24T- 99006/M	8816-4XEJLK	01	6/28/01	Municipal & Private sewage	Approved	New Certificate of Approval	
		Milton		Client Name:       Manaman Holdings Inc.         Client Address:       3100 Steels Avenue East         Client City:       Markham         Client Postal Code:       L3R 8T3         Project Description:       This application is for constru-			istruction of a storm water management facility as part of a nev		
			Contaminants Emission Con	ຣະ	subdivision discharging storm water to the main branch of Sixteen Mile Creek.				

#### **Certificates of Approval**

Мар Кеу	Company	Address	Certificate #	Application Year	Issue Date	Approval Type	Status	Application Type
n/a	Hawthorne Village South - Phase 4	Part of Lot 7, Concession 4 Milton	2711-4ZTGP6	01	11/5/01	Municipal & Private sewage	Approved	New Certificate of Approval
			Client Name: Client Addres Client City: Client Postal Project Descr Contaminants Emission Cor	ss: 236 Oal Code: L6F ription: This s:	tamy (Brownridge 0 Bristol Circle cville 1 6M5 s application is fo	<ul> <li>) Limited</li> <li>r a Certificate of Approval for a</li> </ul>	a stormwater manageme	nt pond
n/a	Hawthorne Village South Phase 3	Part of Lot 8 and 9. Concession 5 Milton	1016-4ZKH2R	01	8/13/01	Municipal & Private sewage	Approved	New Certificate of Approval
			Client Name: Client Addres Client City: Client Postal Project Descr	ss: 236 Oał Code: L6⊦ ription: Cor			ourtenances in Hawthorn	e Village South Phase 3, in the
			Contaminants Emission Cor					
n/a	Hawthorne Village South Phase 3	Part of Lot 8 and 9. Concession 5 Milton	4120-52SLLB	01	10/3/01	Municipal & Private sewage	Approved	New Certificate of Approval
			Client Name: Client Addres Client City: Client Postal Project Descr	s: 236 Oał Code: L6⊦ ription: Sto		nent Facility and appurtenanc	es to be constructed in F	lawthorne Village South, in the
			Contaminants Emission Cor	5:	vn of Milton, Regi	onal Municipality of Halton		
n/a	Hawthorne Village South Phase 3	Part of Lot 8 and 9. Concession 5 Milton	5658- 4ZKGSS	01	8/13/01	Municipal & Private water	Approved	New Certificate of Approval
			Client Name: Client Addres Client City: Client Postal Project Descr	ss: 236 Oał Code: L6⊦ ription: Wa	tamy (Brownridge 0 Bristol Circle cville 1 6M5 termains to be co nicipality of Halto	nstructed in Hawthorne Villag	e South Phase 3 in the T	own of Milton, Regional

Мар Кеу	Company	Address	Certificate #	Application Year	Issue Date	Approval Type	Status	Application Type
n/a	Manor Park (Milton) Homes Inc.	Pt. SW Half Lot 8 and 9, Concession 5 Milton	3063-5YPJZD Client Name: Client Address Client City: Client Postal Project Descr Contaminants Emission Cor	s: Code: iption: s:	5/6/2004	Municipal and Private Sewage Works	Approved	

#### **ERIS Historical Searches**

Map Key Company	Address	Order No.	Report Date	Report Type	Search Radius (km)
EHS-1	1198 Fourth Line Milton	20080123026	2/1/2008	Basic Report	0.25
	L9T 6J3	Addit. Info Ordered:	Fire Insur. Maps And /or	Site Plans	
EHS-2	1198 Fourth Line Milton	20090414031	4/23/2009	Standard Select Report	0.25
	L9T 6J3	Addit. Info Ordered:			

p Key Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
VIS-1	lot 7 con 5	2806270	007	05	NS	HALTON	MILTON TOWN (TRAFALGAR)
		Easting Nad8					
		Northing Nad	<b>183:</b> 481858	8			
		Zone: 17 Utm Reliabili	tv: margin o	f error : 10 - 30 m			
		Construction					
		Primary Wate		estic			
		Secondary W					
		Well Depth: Pump Rate:					
		Static Water					
		Flow Rate:					
		Clear/Cloudy					
		Specific Cap Final Well Sta		Supply			
		Construction					
		Flowing (y/n)		C C			
		Elevation (m)		9			
		Elevation Rel Depth to Bed	•				
		Overburden/l		edrock			
		Water Type:					
		Casing Mater	ial: CONCF	ETE, GALVANIZED	)		
		Thickness	Original Depth	. <u> </u>	Material Colour	Material	
		1 ft	1 ft	E	BROWN	TOPSOIL	
		17 ft	18 ft	E	BROWN	CLAY	
		20 ft	38 ft	E	BROWN	CLAY, GRAVEL, STO	NES
		9 ft	47 ft	-	RED	SHALE, VERY, HARD	

lap Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WIS-2		lot 7 con 5	2808158	007	05	NS	HALTON	MILTON TOWN (TRAFALGAR)
			Easting Nac	<b>183:</b> 595096.1				
				d83: 481860	Э			
			Zone: 17					
					error : 10 - 30 m			
				n Date: 2/25/				
				ter Use: Dom	estic			
			Secondary V Well Depth:					
			Pump Rate:					
				Level: 9 ft				
			Flow Rate:					
			Clear/Cloud	y: CLEAR				
			Specific Ca					
				tatus: Water				
				n Method: Bo	bring			
			Flowing (y/r	n): N n): 195.77656	F			
			Elevation R		5			
			Depth to Be					
			-	/Bedrock: Be	drock			
			Water Type:	FRESH				
			Casing Mate	erial: OPEN H	IOLE			
			Thickness	<u>Original</u> Depth	Ν	laterial Colour	<u>Material</u>	

ey Company	Address	Well Id	Lot	Concession (	Concession Name	County	Municipality
3	lot 7 con 4	2806786	007	04 1	NS	HALTON	MILTON TOWN (TRAFALGAR)
		Easting Nad	<b>B3:</b> 595032.1				. ,
			<b>183:</b> 4818540				
		Zone: 17	ity: margin of erro	r: 10 20 m			
			Date: 8/23/1985				
			er Use: Domestic				
		Secondary V					
		Well Depth: Pump Rate:					
		Static Water					
		Flow Rate:					
		Clear/Cloudy					
		Specific Cap					
			atus: Water Supp Method: Boring				
		Flowing (y/n					
			, ): 196.011947				
		Elevation Re					
		Depth to Bee	<b>lrock:</b> Bedrock: Overbu	rdon			
		Water Type:		liden			
				, GALVANIZED, GA	ALVANIZED		
		Thickness	<u>Original</u> Depth	Mate	rial Colour	<u>Material</u>	
		1 ft	1 ft	BRO	WN	TOPSOIL	
		9 ft	10 ft	BRO	WN	CLAY, PACKED	
		2 ft	12 ft	BRO	WN	CLAY, STONES	
						COARSE SAND, STONE	· C
		8 ft	20 ft	GRE	Ŷ	STONES	.5,

ар Кеу	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WIS-4			7153810				HALTON	MILTON TOWN (TRAFALGAR)
			Easting Nad	<b>83:</b> 594997				
			Northing Nac	d83: 4818572				
			<b>Zone:</b> 17					
			Utm Reliabil	ity: margin of e	rror : 10 - 30 m			
				n Date: 8/25/20	10			
			Primary Wate	er Use:				
			Secondary V					
			Well Depth:					
			Pump Rate:					
			Static Water	Level:				
			Flow Rate:					
			Clear/Cloudy					
			Specific Cap					
			Final Well St Constructior					
			Flowing (y/n					
				): 195.391616				
			Elevation Re					
			Depth to Bec					
			Overburden/					
			Water Type:					
			Casing Mate					
			Thickness	<u>Original</u> Depth	<u>N</u>	laterial Colour	Material	

/lap Key	Company	Address	Well Id Lot	Concession Concession Name	County	Municipality
WIS-5		Milton	7150824		HALTON	MILTON TOWN (MILTON)
			Easting Nad83: 595000			
			Northing Nad83: 4818589			
			<b>Zone:</b> 17			
			Utm Reliability: margin of er			
			Construction Date: 8/13/201			
			Primary Water Use: Monitori	ing		
			Secondary Water Use: Well Depth:			
			Pump Rate:			
			Static Water Level:			
			Flow Rate:			
			Clear/Cloudy:			
			Specific Capacity:			
			Final Well Status: Abandone			
			Construction Method: Borin	g		
			Flowing (y/n):			
			Elevation (m): 195.263214			
			Elevation Reliability: Depth to Bedrock:			
			Overburden/Bedrock:			
			Water Type:			
			Casing Material: PLASTIC			
			Thickness Original	Material Colour	Material	

Key Company	Address	Well Id Lo	ot Concession	Concession Name	County	Municipality
3-6		7124820			HALTON	MILTON TOWN (ESQUESING)
		Construction Da Primary Water U Secondary Wate Well Depth: 20 Pump Rate: Static Water Lev Flow Rate: Clear/Cloudy: Specific Capacit Final Well Status Construction Me Flowing (y/n): Elevation (m): 1 Elevation Reliab Depth to Bedroc Overburden/Bed Water Type:	4818593 margin of error : 10 - 30 m te: 4/16/2009 se: Monitoring r Use: ft rel: y: s: Test Hole tthod: Rotary (Convent.) 195.236389 ility: k:			
		Thickness	<u>Original</u> Depth	Material Colour	<u>Material</u>	
		1 ft	1 ft	BLACK	TOPSOIL, LOOSE	
		9 ft	10 ft	BROWN	CLAY, DENSE	
		10 ft	20 ft	GREY	SILT, SAND, HARD	

ap Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
/WIS-7		lot 8 con 4 MILTON	7102703	008	04		HALTON	MILTON TOWN (MILTON)
			Easting Nada	<b>33:</b> 594987				
			Northing Nac		5			
			<b>Zone:</b> 17					
			Utm Reliabili	ty: margin c	f error : 10 - 30 m			
			Construction					
			Primary Wate	er Use: Not	Used			
			Secondary W	/ater Use:				
			Well Depth:					
			Pump Rate:					
			Static Water	Level:				
			Flow Rate:					
			Clear/Cloudy					
			Specific Cap Final Well St		lanad Othar			
			Construction		ioned-Other			
			Flowing (y/n)					
			Elevation (m		51			
			Elevation Re					
			Depth to Bec					
			Overburden/					
			Water Type:					
			Casing Mate	rial: CONCF	RETE			
			Thickness	<u>Origina</u> Depth	<u>I N</u>	laterial Colour	Material	

ap Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WIS-8			7153808				HALTON	MILTON TOWN (TRAFALGAR)
			Easting Nad	<b>83:</b> 595997				
			Northing Nac	d83: 4818572				
			<b>Zone:</b> 17					
			Utm Reliabil	ity: margin of er	ror : 10 - 30 m			
				n Date: 8/15/201	10			
			Primary Wate					
			Secondary V					
			Well Depth:					
			Pump Rate:					
			Static Water	Level:				
			Flow Rate:					
			Clear/Cloudy					
			Specific Cap					
			Final Well St					
			Construction					
			Flowing (y/n					
				): 193.830459				
			Elevation Re Depth to Bee					
			Overburden/					
			Water Type:					
			Casing Mate					
			-	iiai.				
			Thickness	<u>Original</u> Depth	<u>N</u>	laterial Colour	Material	

Мар Кеу	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
n/a		lot 6 con 4	2807428	006	04	NS	HALTON	MILTON TOWN (NELSON)
			Construction Primary Wate Secondary V Well Depth: Pump Rate: Static Water Flow Rate: Clear/Cloudy Specific Cap Final Well St Construction Flowing (y/n Elevation (m Elevation (m Elevation Re Depth to Bea Overburden/ Water Type: Casing Mate	d83: ity: unknown l n Date: 9/28/1 er Use: Dome Vater Use: 146 ft 10 GPM Level: 50 ft y: CLOUDY bacity: tatus: Water S n Method: Rot ): N ): eliability: drock: 124 Bedrock: Bed FRESH trial: STEEL, C	989 stic Supply tary (Air) trock DPEN HOLE			
			<u>Thickness</u> 10 ft	<u>Original</u> Depth 10 ft		Material Colour	<u>Material</u> SAND	
			114 ft	124 ft		GREY	STONES, GRAVEL, LC	DOSE
			22 ft	146 ft		RED	SHALE	

Key Company	Address	Well Id	Lot Conces	sion Concession Name	County	Municipality
	lot 7	2807469	007		HALTON	MILTON TOWN (TRAFALGAR)
		Easting Nad8				
		Northing Nad8 Zone: 17	33:			
			y: unknown UTM			
			Date: 6/18/1988			
		Primary Water Secondary Wa	<b>Use:</b> Domestic			
		Well Depth:				
		Pump Rate:				
		Static Water L Flow Rate:	.evel:			
		Clear/Cloudy:	CLEAR			
		Specific Capa				
			tus: Water Supply Method: Cable Tool			
		Flowing (y/n):				
		Elevation (m):				
		Elevation Reli Depth to Bedr				
			edrock: Overburden			
		Water Type:				
		Casing Materi				
		<u>Thickness</u>	<u>Original</u> Depth	Material Colour	<u>Material</u>	
		1 ft	1 ft	BROWN	CLAY	
		42 ft	43 ft	GREY	CLAY, SANDY	
		47 ft	90 ft	BROWN	SAND, STONES	
		13 ft	103 ft	BROWN	SAND	
		1 ft	104 ft	BROWN	MEDIUM GRAVEL	

o Key Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality				
	lot 7	2808958	007		CON	HALTON	MILTON TOWN (NASSAGAWEYA)				
		Easting Na									
		Northing Nad83:									
		Zone: 17 Utm Reliability: unknown UTM									
		Construction Date: 8/31/1998									
			ter Use: Do								
		Secondary Water Use:									
		Well Depth: 64 ft									
		Pump Rate: 5 GPM Static Water Level: 9 ft									
		Flow Rate:									
		Clear/Cloudy: CLEAR									
		Specific Capacity:									
		Final Well Status: Water Supply									
		Construction Method: Rotary (Convent.)									
		Flowing (y/n): N									
		Elevation (m): Elevation Reliability:									
		Depth to Bedrock: 31									
			Overburden/Bedrock: Bedrock								
			Water Type: Not stated								
		Casing Mat	erial: STEEI	_, OPEN HOLE							
		Thickness	<u>Origin</u> Depth		Material Colour	Material					
		24 ft	24 ft	E	BROWN	CLAY, STONES					
		7 ft	31 ft	C	GREY	CLAY, STONES					
		33 ft	64 ft			LIMESTONE					

Key Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality			
	lot 6	2808962	006		CON	HALTON	MILTON TOWN (NASSAGAWEYA)			
		Easting Nada								
		Northing Nac Zone: 17	183:							
		Utm Reliabili	ty: unknown	UTM						
		Construction								
		Primary Wate Secondary W		estic						
		Well Depth:								
		Pump Rate: 5 GPM								
		Static Water Flow Rate:	Static Water Level: 13 ft							
		Clear/Cloudy: CLEAR								
		Specific Capacity:								
		Final Well Status: Water Supply Construction Method: Cable Tool								
		Flowing (y/n)		adie 1001						
		Elevation (m)								
		Elevation Re								
		Depth to Bec Overburden/		drock						
		Water Type:								
		Casing Mate	rial: OPEN F	IOLE, STEEL						
		<u>Thickness</u>	<u>Original</u> Depth	Ν	laterial Colour	<u>Material</u>				
		6 ft	6 ft			BOULDERS				
		17 ft	23 ft	F	RED	CLAY, SAND				
		4 ft	27 ft	F	RED	CLAY, GRAVEL				
		23 ft	50 ft	G	BREY	CLAY				
		3 ft	53 ft	E	BLACK	ROCK				

p Key Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality			
	lot 8	2808972	008		CON	HALTON	MILTON TOWN (NASSAGAWEYA)			
		Easting Nac								
		Northing Na								
		Zone: 17								
			lity: unknow on Date: 9/1/							
			ter Use: Do							
		Secondary								
		Well Depth: 98 ft								
		Pump Rate: 5 GPM								
		Static Water Level: 40 ft								
		Flow Rate: Clear/Cloudy: CLEAR								
		Specific Ca								
			status: Wate	r Supply						
				Rotary (Convent.)						
		Flowing (y/n): N								
		Elevation (m):								
		Elevation Reliability:								
		Depth to Bedrock: 50								
		Overburden/Bedrock: Bedrock Water Type: Not stated								
				HOLE, STEEL						
		_								
		Thickness	Origin Donth		Material Colour	Material				
			Depth							
		18 ft	18 ft	F	RED	CLAY				
		32 ft	50 ft	C	GREY	CLAY, STONES				
			98 ft			LIMESTONE				

ap Key Company	Address	Well Id	Lot Con	cession Concession Name	County	Municipality				
3	lot 6 con 4	2809663	006 04	CON	HALTON	MILTON TOWN (ESQUESING)				
		Easting Nad8				( , , , , , , , , , , , , , , , , , , ,				
		Northing Nad Zone: 17	83:							
			Zone: 17 Utm Reliability: unknown UTM							
			Date: 11/12/2002							
			Primary Water Use: Commerical Secondary Water Use:							
			Well Depth: 120 ft							
			Pump Rate: 1 GPM							
		Static Water L Flow Rate:	Static Water Level: 114 ft Flow Rate:							
		Clear/Cloudy:								
		Specific Capa								
			tus: Water Supply Method: Air Precuss	sion						
		Flowing (y/n):								
		Elevation (m)								
			Elevation Reliability: Depth to Bedrock: 41							
			Bedrock: Bedrock							
		Water Type:								
			ial: STEEL, OPEN H							
		Thickness	Original Depth	Material Colour	<u>Material</u>					
		12 ft	12 ft	BROWN	CLAY, SANDY					
		26 ft	38 ft	BROWN	CLAY, SANDY, GR	RAVEL				
		3 ft	41 ft	GREY	CLAY, SANDY, GR	RAVEL				
		79 ft	120 ft	RED	SHALE					

ap Key Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
a	lot 6 con 1	2809857	006	01	NS	HALTON	MILTON TOWN (NELSON)
		Construction Primary Wate Secondary W Well Depth: Pump Rate: Static Water Flow Rate: Clear/Cloudy Specific Cap Final Well St Construction Flowing (y/n) Elevation (m Elevation Re Depth to Bec Overburden/ Water Type:	tty: unknown UT Date: er Use: Domest Vater Use: Domest Vater Use: 25.6 m 4.73 LPM Level: 10.3 m r: CLOUDY acity: atus: Water Su hethod: Cable ): liability: drock: 79 Bedrock: Bedrock: Be	ic pply ∍ Tool			
		Thickness	<u>Original</u> Depth	Ν	laterial Colour	<u>Material</u>	
		7.6 m	7.6 m	E	BROWN	CLAY, SANDY	
		9.1 m	16.7 m	E	BROWN	CLAY, GRAVEL	
		6.3 m	23 m	E	BROWN	CLAY	
		1 m	24 m	E	BROWN	GRAVEL, SAND	
		1.6 m	25.6 m	_	RED	SHALE	

p Key Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality				
l	lot 6 con 4 MILTON	7042338	006	04		HALTON	MILTON TOWN (MILTON)				
		Easting Nada	B3:								
		Northing Nac	:183								
		Zone:									
		Utm Reliabili									
		Construction									
		Primary Wate		nestic							
		Secondary W	Vater Use:								
		Well Depth:									
		Pump Rate: Static Water									
		Flow Rate:	Level.								
		Clear/Cloudy	<i>r</i> :								
		Specific Cap									
			Final Well Status: Water Supply								
			Construction Method:								
		Flowing (y/n)	Flowing (y/n):								
		Elevation (m									
			Elevation Reliability:								
			Depth to Bedrock:								
				o formation data							
		Water Type:									
		Casing Mate	rial: STEEL								
		Thickness	Origina	<u> </u>	Material Colour	Material					
			Depth	_							

o Key Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
	lot 8 con 4 Milton	7131131	008	04	CON	HALTON	MILTON TOWN (ESQUESING)
		Easting Nad8	<b>3:</b> 4818654				
		Northing Nad	<b>83:</b> 595167				
		<b>Zone:</b> 17					
				error : 10 - 30 m			
		Construction		2009			
		Primary Wate					
		Secondary W Well Depth:	ater Use:				
		Pump Rate:					
		Static Water I	evel:				
		Flow Rate:					
		Clear/Cloudy:	:				
		Specific Capa					
		Final Well Sta					
		Construction		gging			
		Flowing (y/n)					
		Elevation (m)					
		Elevation Rel					
		Depth to Bed Overburden/E					
		Water Type:	Searock:				
		Casing Mater	ial·				
		-					
		Thickness	Original	<u>N</u>	laterial Colour	Material	
			Depth				

# **Appendix: Ontario Database Descriptions**

EcoLog Environmental Risk Information Services Ltd can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to EcoLog ERIS at the time of update. Note: Databases denoted with "\*" indicates that the database will no longer be updated. See the individual database descriptions for more information.

#### **Provincial Government Source Databases:**

#### Abandoned Aggregate Inventory Up to Sept 2002

The MAAP Program maintains a database of all abandoned pits and quarries. Please note that the database is only referenced by lot and concession and city/town location. The database provides information regarding the location, type, size, land use, status and general comments.

#### Aggregate Inventory Up to Jun 2010

The Ontario Ministry of Natural Resources maintains a database of all active pits and quarries. Please note that the database is only referenced by lot/concession and city/town location. The database provides information regarding the registered owner/operator, location, status, licence type, and maximum tonnage.

#### Abandoned Mines Information System 1800-2005

The Abandoned Mines Information System contains data on known abandoned and inactive mines located on both Crown and privately held lands. The information was provided by the Ministry of Northern Development and Mines (MNDM), with the following disclaimer: "the database provided has been compiled from various sources, and the Ministry of Northern Development and Mines makes no representation and takes no responsibility that such information is accurate, current or complete". Reported information includes official mine name, status, background information, mine start/end date, primary commodity, mine features, hazards and remediation.

#### Borehole 1875-Aug 2011

A borehole is the generalized term for any narrow shaft drilled in the ground, either vertically or horizontally. The information here includes geotechnical investigations or environmental site assessments, mineral exploration, or as a pilot hole for installing piers or underground utilities. Information is from many sources such as the Ministry of Transportation (MTO) boreholes from engineering reports and projects from the 1950 to 1990's in Southern Ontario. Boreholes from the Ontario Geological Survey (OGS) including The Urban Geology Analysis Information System (UGAIS) and the York Peel Durham Toronto (YPDT) database of the Conservation Authority Moraine Coalition. This database will include fields such as location, stratigraphy, depth, elevation, year drilled, etc.

For all water well data or oil and gas well data for Ontario please refer to WWIS and OOGW.

#### Certificates of Approval 1985-Sept 2011

This database contains the following types of approvals: Air & Noise, Industrial Sewage, Municipal & Private Sewage, Waste Management Systems and Renewable Energy Approvals. The MOE in Ontario states that any facility that releases emissions to the atmosphere, discharges contaminants to ground or surface water, provides potable water supplies, or stores, transports or disposes of waste, must have a Certificate of Approval before it can operate lawfully. Fields include approval number, business name, address, approval date, approval type and status.

#### TSSA Commercial Fuel Oil Tanks 1948-Aug 2011

Since May 2002, Ontario developed a new act where it became mandatory for fuel oil tanks to be registered with Technical Standards & Safety Authority (TSSA). This data would include all commercial underground fuel oil tanks in Ontario with fields such as location, registration number, tank material, age of tank and tank size.

#### BORE

AAGR

AGR

AMIS

#### CFOT

# CA

#### Coal Gasification Plants and Coal Tar Sites April 1987 and November 1988\*

This inventory includes both the "Inventory of Coal Gasification Plant Waste Sites in Ontario-April 1987" and the "Inventory of Industrial Sites Producing or Using Coal Tar and Related Tars in Ontario-November 1988) collected by the MOE. It identifies industrial sites that produced and continue to produce or use coal tar and other related tars. Detailed information is available and includes: facility type, size, land use, information on adjoining properties, soil condition, site operators/occupants, site description, potential environmental impacts and historic maps available. This was a one-time inventory.\*

#### Compliance and Convictions 1989-Aug 2011

This database summarizes the fines and convictions handed down by the Ontario courts beginning in 1989. Companies and individuals named here have been found guilty of environmental offenses in Ontario courts of law.

#### Drill Holes 1886-2005

The Ontario Drill Hole Database contains information on more than 113,000 percussion, overburden, sonic and diamond drill holes from assessment files on record with the department of Mines and Minerals. Please note that limited data is available for southern Ontario, as it was the last area to be completed. The database was created when surveys submitted to the Ministry were converted in the Assessment File Research Image Database (AFRI) project. However, the degree of accuracy (coordinates) as to the exact location of drill holes is dependent upon the source document submitted to the MNDM. Levels of accuracy used to locate holes are: centering on the mining claim; a sketch of the mining claim; a 1:50,000 map; a detailed company map; or from submitted a "Report of Work".

#### Environmental Registry 1994-Aug 2011

The Environmental Registry lists proposals, decisions and exceptions regarding policies, Acts, instruments, or regulations that could significantly affect the environment. Through the Registry, thirteen provincial ministries notify the public of upcoming proposals and invite their comments. For example, if a local business is requesting a permit, licence, or certificate of approval to release substances into the air or water; these are notified on the registry. Data includes things like; Approval for discharge into the natural environment other than water (i.e. Air), Permit to Take Water (PTTW), Certificate of Property Use (CPU), Approval for a waste disposal site, Order for preventative measures. (EPA s. 18), Order for conformity with Act for waste disposal sites.(EPA s. 44), Order for remedial work.(EPA s. 17) and many more.

#### TSSA Fuel Storage Tanks Current to Jun 2011

The Technical Standards & Safety Authority (TSSA), under the Technical Standards & Safety Act of 2000 maintains a database of registered private and retail fuel storage tanks in Ontario with fields such as location, tank status, license date, tank type, tank capacity, fuel type, installation year and facility type.

#### Ontario Regulation 347 Waste Generators Summary 1986-Oct 2010

Regulation 347 of the Ontario EPA defines a waste generation site as any site, equipment and/or operation involved in the production, collection, handling and/or storage of regulated wastes. A generator of regulated waste is required to register the waste generation site and each waste produced, collected, handled, or stored at the site. This database contains the registration number, company name and address of registered generators including the types of hazardous wastes generated. It includes data on waste generating facilities such as: drycleaners, waste treatment and disposal facilities, machine shops, electric power distribution etc. This information is a summary of all years from 1986 including the most currently available data. Some records may contain, within the company name, the phrase "See & Use..." followed by a series of letters and numbers. This occurs when one company is amalgamated with or taken over by another registered company. The number listed as "See & Use", refers to the new ownership and the other identification number refers to the original ownership. This phrase serves as a link between the 2 companies until operations have been fully transferred.

#### COAL

DRL

CONV

# EBR

#### GEN

FST

#### Mineral Occurrences 1846-Nov 2010

In the early 70's, the Ministry of Northern Development and Mines created an inventory of approximately 19,000 mineral occurrences in Ontario, in regard to metallic and industrial minerals, as well as some information on building stones and aggregate deposits. Please note that the "Horizontal Positional Accuracy" is approximately +/- 200 m. Many reference elements for each record were derived from field sketches using pace or chain/tape measurements against claim posts or topographic features in the area. The primary limiting factor for the level of positional accuracy is the scale of the source material. The testing of horizontal accuracy of the source materials was accomplished by comparing the planimetric (X and Y) coordinates of that point with the coordinates of the same point as defined from a source of higher accuracy.

#### Non-Compliance Reports 1992(water only), 1994-2009

The Ministry of the Environment provides information about non-compliant discharges of contaminants to air and water that exceed legal allowable limits, from regulated industrial and municipal facilities. A reported non-compliance failure may be in regard to a Control Order, Certificate of Approval, Sectoral Regulation or specific regulation/act.

#### Ontario Oil and Gas Wells 1800-Jun 2011

In 1998, the MNR handed over to the Ontario Oil, Gas and Salt Resources Corporation, the responsibility of maintaining a database of oil and gas wells drilled in Ontario. The OGSR Library has over 20,000+ wells in their database. Information available for all wells in the ERIS database include well owner/operator, location, permit issue date, well cap date, licence no., status, depth and the primary target (rock unit) of the well being drilled. All geology/stratigraphy table information, plus all water table information is also provide for each well record.

#### Ontario Inventory of PCB Storage Sites 1987-Oct 2004

The Ontario Ministry of Environment, Waste Management Branch, maintains an inventory of PCB storage sites within the province. Ontario Regulation 11/82 (Waste Management - PCB) and Regulation 347 (Generator Waste Management) under the Ontario EPA requires the registration of inactive PCB storage equipment and/or disposal sites of PCB waste with the Ontario Ministry of Environment. This database contains information on: 1) waste quantities; 2) major and minor sites storing liquid or solid waste; and 3) a waste storage inventory.

#### Pesticide Register 1988-Mar 2011

The Ontario Ministry of Environment maintains a database of all manufacturers and vendors of registered pesticides.

#### Private and Retail Fuel Storage Tanks 1989-1996\*

The Fuels Safety Branch of the Ontario Ministry of Consumer and Commercial Relations maintained a database of all registered private fuel storage tanks and licensed retail fuel outlets. This database includes an inventory of locations that have gasoline, oil, waste oil, natural gas and/or propane storage tanks on their property. The MCCR no longer collects this information. This information is now collected by the Technical Standards and Safety Authority (TSSA).

#### Ontario Regulation 347 Waste Receivers Summary 1986-2008

Part V of the Ontario Environmental Protection Act ("EPA") regulates the disposal of regulated waste through an operating waste management system or a waste disposal site operated or used pursuant to the terms and conditions of a Certificate of Approval or a Provisional Certificate of Approval. Regulation 347 of the Ontario EPA defines a waste receiving site as any site or facility to which waste is transferred by a waste carrier. A receiver of regulated waste is required to register the waste receiving facility. This database represents registered receivers of regulated wastes, identified by registration number, company name and address, and includes receivers of waste such as: landfills, incinerators, transfer stations, PCB storage sites, sludge farms and water pollution control plants. This information is a summary of all years from 1986 including the most currently available data.

#### - 3 -

#### MNR

#### NCPL

OOGW

# OPCB

# PES

PRT

# REC

#### Record of Site Condition 1997-Sept 2001, Oct 2004-Aug 2011

The Record of Site Condition (RSC) is part of the Ministry of the Environment's Brownfields Environmental Site Registry. Protection from environmental cleanup orders for property owners is contingent upon documentation known as a record of site condition (RSC) being filed in the Environmental Site Registry. In order to file an RSC, the property must have been properly assessed and shown to meet the soil, sediment and groundwater standards appropriate for the use, such as residential, proposed to take place on the property. The Record of Site Condition Regulation (O. Reg. 153/04) details requirements related to site assessment and clean up. Information available includes Registration Number, Filing Owner, Property Address, Filing Date and Municipality.

#### Ontario Spills 1988-Nov 2010

This database identifies information such as location (approximate), type and quantity of contaminant, date of spill, environmental impact, cause, nature of impact, etc. Information from 1988-2002 was part of the ORIS (Occurrence Reporting Information System). The SAC (Spills Action Centre) handles all spills reported in Ontario. Regulations for spills in Ontario are part of the MOE's Environmental Protection Act, Part X.

#### Wastewater Discharger Registration Database 1990-2009

Information under this heading is combination of the following 2 programs. The Municipal/Industrial Strategy for Abatement (MISA) division of the Ontario Ministry of Environment maintained a database of all direct dischargers of toxic pollutants within nine sectors including: Electric Power Generation; Mining; Petroleum Refining; Organic Chemicals; Inorganic Chemicals; Pulp & Paper; Metal Casting; Iron & Steel; and Quarries. All sampling information is now collected and stored within the Sample Result Data Store (SRDS).

#### Waste Disposal Sites - MOE CA Inventory 1970-Sept 2011

The Ontario Ministry of Environment, Waste Management Branch, maintains an inventory of known open (active or inactive) and closed disposal sites in the Province of Ontario. Active sites maintain a Certificate of Approval, are approved to receive and are receiving waste. Inactive sites maintain Certificate(s) of Approval but are not receiving waste. Closed sites are not receiving waste. The data contained within this database was compiled from the MOE's Certificate of Approval database. Locations of these sites may be cross-referenced to the Anderson database described under ERIS's Private Source Database section, by the CA number. For more current information for Waste Disposal Sites please see the EBR database, which will include information such as 'Approval for a waste disposal site (EPA s.27)' and 'Approval for use of a former waste disposal site (EPA s.46)'.

#### Waste Disposal Sites - MOE 1991 Historical Approval Inventory Up to Oct 1990\*

In June 1991, the Ontario Ministry of Environment, Waste Management Branch, published the "June 1991 Waste Disposal Site Inventory", of all known active and closed waste disposal sites as of October 30st, 1990. For each "active" site as of October 31st 1990, information is provided on site location, site/CA number, waste type, site status and site classification. For each "closed" site as of October 31st 1990, information is provided on site location, site/CA number, closure date and site classification. Locations of these sites may be cross-referenced to the Anderson database described under ERIS's Private Source Database section, by the CA number.

#### Water Well Information System 1955-Mar 2011

This database describes locations and characteristics of water wells found within Ontario in accordance with Regulation 903. It includes such information as coordinates, construction date, well depth, primary and secondary use, pump rate, static water level, well status, etc. Also included are detailed stratigraphy information, approximate depth to bedrock and the approximate depth to the water table.

#### **Federal Government Source Databases:**

#### Environmental Effects Monitoring 1992-2007\*

The Environmental Effects Monitoring program assesses the effects of effluent from industrial or other sources on fish, fish habitat and human usage of fisheries resources. Since 1992, pulp and paper mills have been required to conduct EEM studies under the Pulp and Paper Effluent Regulations. This database provides information on the mill name, geographical location and sub-lethal toxicity data.

# SRDS

WDS

RSC

SPL

#### WDSH

#### WWIS

## **Diagram Identifier:**

# EEM

#### Environmental Issues Inventory System 1992-2001\*

The Environmental Issues Inventory System was developed through the implementation of the Environmental Issues and Remediation Plan. This plan was established to determine the location and severity of contaminated sites on inhabited First Nation reserves, and where necessary, to remediate those that posed a risk to health and safety; and to prevent future environmental problems. The EIIS provides information on the reserve under investigation, inventory number, name of site, environmental issue, site action (Remediation, Site Assessment), and date investigation completed.

#### Federal Convictions 1988-Jun 2007

Environment Canada maintains a database referred to as the "Environmental Registry" that details prosecutions under the Canadian Environmental Protection Act (CEPA) and the Fisheries Act (FA). Information is provided on the company name, location, charge date, offence and penalty.

#### Contaminated Sites on Federal Land June 2000-May 2011

The Treasury Board of Canada Secretariat maintains an inventory of all known contaminated sites held by various Federal departments and agencies. This inventory does not include properties owned by Crown corporations, but does contain nonfederal sites for which the Government of Canada has accepted some or all financial responsibility. All sites have been classified through a system developed by the Canadian Council of Ministers of the Environment. The database provides information on company name, location, site ID #, property use, classification, current status, contaminant type and plan of action for site remediation.

#### Fisheries & Oceans Fuel Tanks 1964-Sept 2003

Fisheries & Oceans Canada maintains an inventory of all aboveground & underground fuel storage tanks located on Fisheries & Oceans property or controlled by DFO. Our inventory provides information on the site name, location, tank owner, tank operator, facility type, storage tank location, tank contents & capacity, and date of tank installation.

#### Indian & Northern Affairs Fuel Tanks 1950-Aug 2003

The Department of Indian & Northern Affairs Canada (INAC) maintains an inventory of all aboveground & underground fuel storage tanks located on both federal and crown land. Our inventory provides information on the reserve name, location, facility type, site/facility name, tank type, material & ID number, tank contents & capacity, and date of tank installation.

#### National Analysis of Trends in Emergencies System (NATES) 1974-1994\* NATE

In 1974 Environment Canada established the National Analysis of Trends in Emergencies System (NATES) database, for the voluntary reporting of significant spill incidents. The data was to be used to assist in directing the work of the emergencies program. NATES ran from 1974 to 1994. Extensive information is available within this database including company names, place where the spill occurred, date of spill, cause, reason and source of spill, damage incurred, and amount, concentration, and volume of materials released.

# National Defence & Canadian Forces Fuel Tanks Up to May 2001\*

The Department of National Defence and the Canadian Forces maintains an inventory of all aboveground & underground fuel storage tanks located on DND lands. Our inventory provides information on the base name, location, tank type & capacity, tank contents, tank class, date of tank installation, date tank last used, and status of tank as of May 2001. This database will no longer be updated due to the new National Security protocols which have prohibited any release of this database.

# National Defence & Canadian Forces Spills Mar 1999-Aug 2010

The Department of National Defence and the Canadian Forces maintains an inventory of spills to land and water. All spill sites have been classified under the "Transportation of Dangerous Goods Act - 1992". Our inventory provides information on the facility name, location, spill ID #, spill date, type of spill, as well as the quantity of substance spilled & recovered.

# FOFT

# IAFT

NDFT

#### NDSP

FCON

FCS

### National Defence & Canadian Forces Waste Disposal Sites 2001-April 2007

The Department of National Defence and the Canadian Forces maintains an inventory of waste disposal sites located on DND lands. Where available, our inventory provides information on the base name, location, type of waste received, area of site, depth of site, year site opened/closed and status.

#### National Environmental Emergencies System (NEES) 1974-2003

In 2000, the Emergencies program implemented NEES, a reporting system for spills of hazardous substances. For the most part, this system only captured data from the Atlantic Provinces, some from Quebec and Ontario and a portion from British Columbia. Data for Alberta, Saskatchewan, Manitoba and the Territories was not captured. However, NEES is also a repository for all previous Environment Canada spill datasets. NEES is composed of the historic datasets – or Trends – which dates from approximately 1974 to present. **NEES Trends** is a compilation of historic databases, which were merged and includes data from NATES (National Analysis of Trends in Emergencies System), ARTS (Atlantic Regional Trends System), and NEES. In 2001, the Emergencies Program determined that variations in reporting regimes and requirements between federal and provincial agencies made national spill reporting and trend analysis difficult to achieve. As a consequence, the department has focused efforts on capturing data on spills of substances which fall under its legislative authority only (CEPA and FA). As such, the NEES database will be decommissioned in December 2004.

#### National PCB Inventory 1988-2008

Environment Canada's National PCB inventory includes information on in-use PCB containing equipment in Canada including federal, provincial and private facilities. All federal out-of-service PCB containing equipment and all PCB waste owned by the federal government or by federally regulated industries such as airlines, railway companies, broadcasting companies, telephone and telecommunications companies, pipeline companies, etc. are also listed. Although it is not Environment Canada's mandate to collect data on non-federal PCB waste, the National PCB inventory includes some information on provincial and private PCB waste and storage sites.

#### National Pollutant Release Inventory 1993-2009

Environment Canada has defined the National Pollutant Release Inventory ("NPRI") as a federal government initiative designed to collect comprehensive national data regarding releases to air, water, or land, and waste transfers for recycling for more than 300 listed substances.

#### Parks Canada Fuel Storage Tanks 1920-Jan 2005

Canadian Heritage maintains an inventory of all known fuel storage tanks operated by Parks Canada, in both National Parks and at National Historic Sites. The database details information on site name, location, tank install/removal date, capacity, fuel type, facility type, tank design and owner/operator.

#### Transport Canada Fuel Storage Tanks 1970-March 2007

With the provinces of BC, MB, NB, NF, ON, PE, and QC; Transport Canada currently owns and operates 90 fuel storage tanks. This inventory will also include The Pickering Lands, which refers to the 7,530 hectares (18,600 acres) of land in Pickering, Markham and Uxbridge - owned by the Government of Canada since 1972. Properties on this land has been leased by the government since 1975, falls under the Site Management Policy of Transport Canada, but administered by Public Works and Government Services Canada. Our inventory provides information on the site name, location, tank age, capacity and fuel type.

#### **Private Source Databases:**

### Anderson's Waste Disposal Sites 1860s-Present

The information provided in this database was collected by examining various historical documents which aimed to characterize the likely position of former waste disposal sites from 1860 to present. The research initiative behind the creation of this database was to identify those sites that are missing from the *Ontario MOE Waste Disposal Site Inventory*, as well as to provide revisions and corrections to the positions and descriptions of sites currently listed in the MOE inventory. In addition to historic waste disposal facilities, the database also identifies certain auto wreckers and scrap yards that have been extrapolated from documentary sources. *Please note that the data is not warranted to be complete, exhaustive or authoritive. The information was collected for research purposes only.* 

# NPCB

#### PCFT

**NPRI** 

#### TCFT

#### ANDR

#### NDWD

#### NEES

#### Automobile Wrecking & Supplies 2001-Jun 2010

This database provides an inventory of all known locations that are involved in the scrap metal, automobile wrecking/recycling, and automobile parts & supplies industry. Information is provided on the company name, location and business type.

#### Chemical Register 1992, 1999-Jun 2010

This database includes information from both a one time study conducted in 1992 and private source and is a listing of facilities that manufacture or distribute chemicals. The production of these chemical substances may involve one or more chemical reactions and/or chemical separation processes (i.e. fractionation, solvent extraction, crystallization, etc.).

#### ERIS Historical Searches 1999-Apr 2011

EcoLog ERIS has compiled a database of all environmental risk reports completed since March 1999. Available fields for this database include: site location, date of report, type of report, and search radius. As per all other databases, the ERIS database can be referenced on both the map and "Statistical Profile" page.

#### Canadian Mine Locations 1998-2009

This information is collected from the Canadian & American Mines Handbook. The Mines database is a national database that provides over 290 listings on mines (listed as public companies) dealing primarily with precious metals and hard rocks. Listed are mines that are currently in operation, closed, suspended, or are still being developed (advanced projects). Their locations are provided as geographic coordinates (x, y and/or longitude, latitude). As of 2002, data pertaining to Canadian smelters and refineries has been appended to this database.

#### Oil and Gas Wells Oct 2001-Jun 2011

The Nickle's Energy Group (publisher of the Daily Oil Bulletin) collects information on drilling activity including operator and well statistics. The well information database includes name, location, class, status and depth. The main Nickles' database is updated on a daily basis, however, this database is updated on a monthly basis. More information is available at www.nickles.com.

#### Canadian Pulp and Paper 1999, 2002, 2004, 2005, 2009

This information is part of the Pulp and Paper Canada Directory. The Directory provides a comprehensive listing of the locations of pulp and paper mills and the products that they produce.

#### Retail Fuel Storage Tanks 2000-Jun 2010

This database includes an inventory of retail fuel outlet locations (including marinas) that have on their property gasoline, oil, waste oil, natural gas and / or propane storage tanks. Information is provided on company name, location and type of business.

#### Scott's Manufacturing Directory 1992-Mar 2011

Scott's Directories is a data bank containing information on over 70,000 manufacturers in Ontario. Even though Scott's listings are voluntary, it is the most comprehensive database of Ontario manufacturers available. Information concerning a company's address, plant size, and main products are included in this database. This database begins with 1992 information and is updated annually.

#### Anderson's Storage Tanks 1915-1953\*

The information provided in this database was collected by examining various historical documents, which identified the location of former storage tanks, containing substances such as fuel, water, gas, oil, and other various types of miscellaneous products. Information is available in regard to business operating at tank site, tank location, permit year, permit & installation type, no. of tanks installed & configuration and tank capacity. *Data contained within this database pertains only to the city of Toronto and is not warranted to be complete, exhaustive or authoritative. The information was collected for research purposes only.* 

#### AUWR

### CHEM

# EHS

MINE

#### OGW

# RST

SCT

PAP

### TANK

APPENDIX III PHOTOGRAPHS



Photo 1 – View of Site Building A.

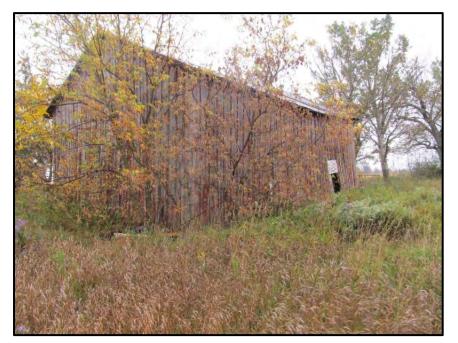


Photo 2 – View of Site Building B.



Photo 3 – View of monitoring well on northeast portion of Site.



Photo 4 – Storm water pond within north corner of Site and adjacent properties to the north.



Photo 5 – Adjacent property to southeast.

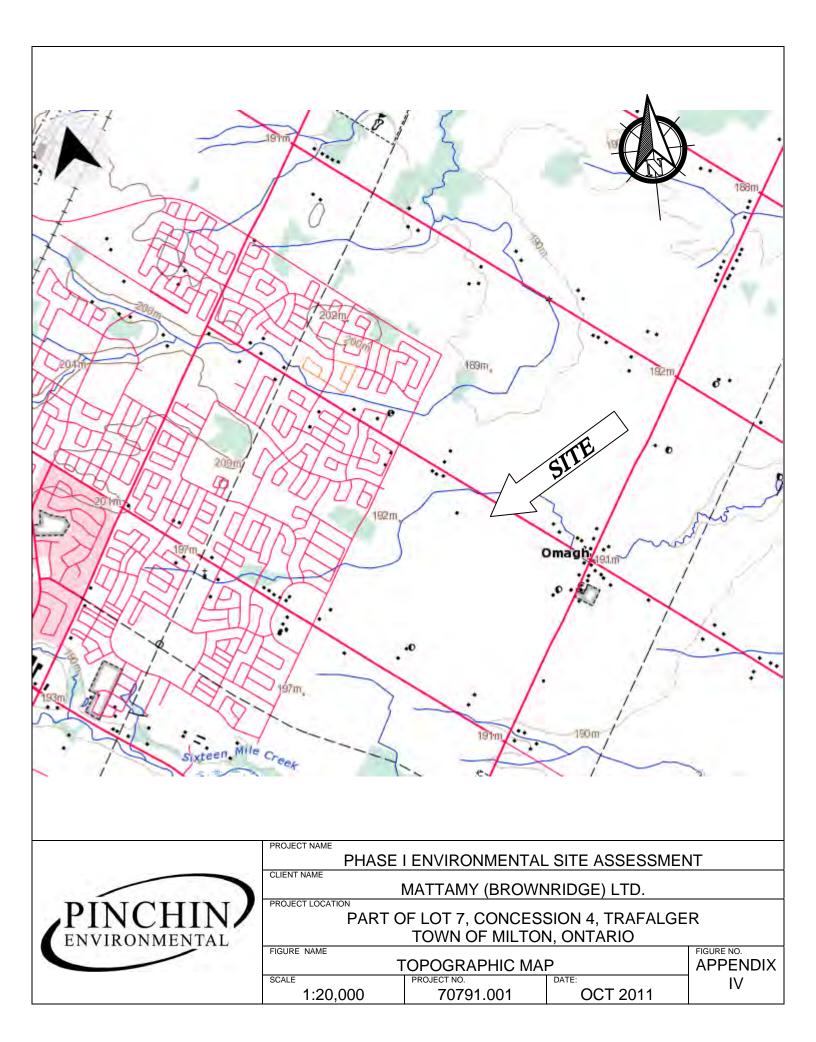


Photo 6 – View of property to northeast.

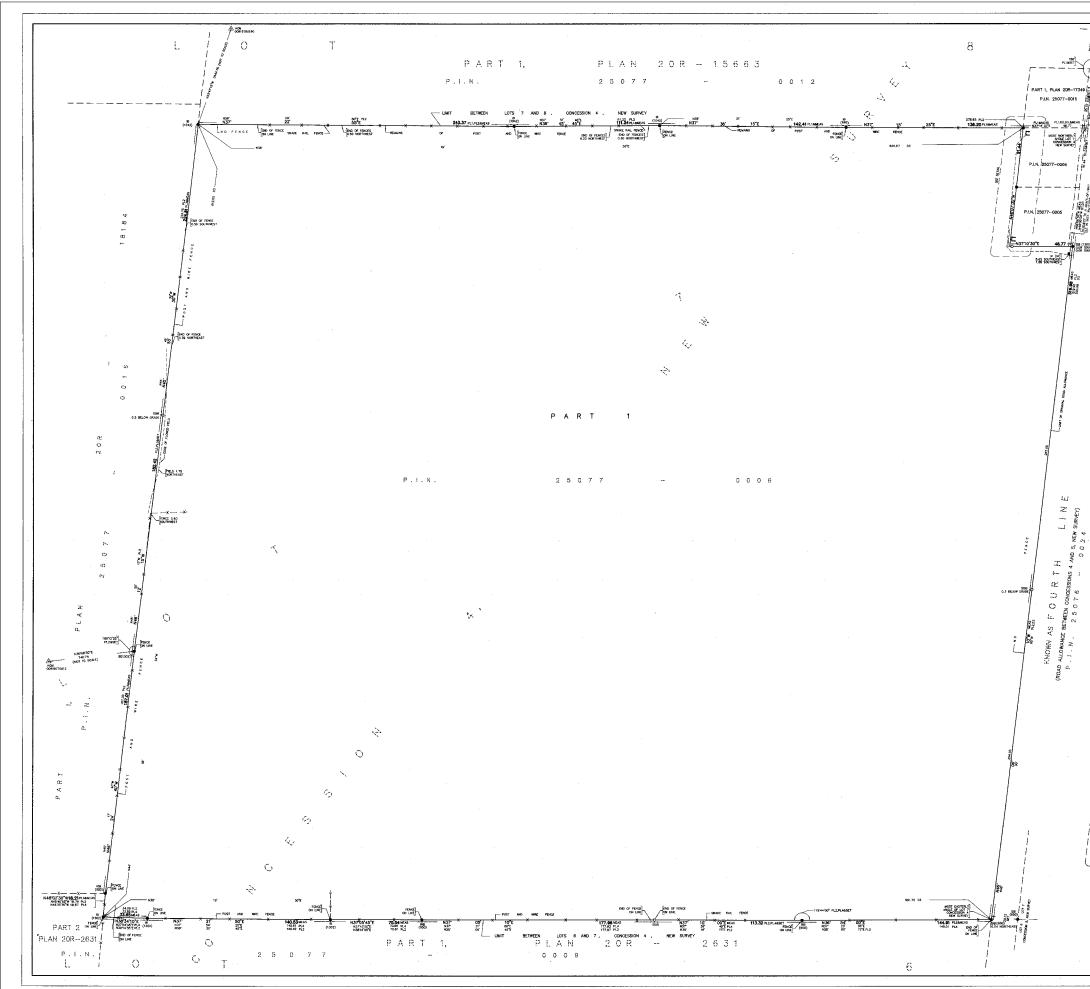


Photo 7 – View of Site facing south.

APPENDIX IV TOPOGRAPHIC MAP



APPENDIX V LEGAL SURVEY



		OLS DURICATE
	I REQUIRE THIS PLAN TO BE DEPOSITED UNDER THE LAND TITLES ACT.	PLAN 20R-18304
	DATE Feb 2 , 2008	RECEIVED AND DEPOSITED
	R. DENBROEDER OLLS.	DATE JULY 9th 2009
349 100 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Lisa NCCreadie
187 <b>7</b>		ASS'T DEP. LAND REGISTRAR FOR THE LAND TITLES DIVISION OF HALTON REGION (No.20) SCHEDULE
s ∰	PA	RT PART OF LOT CONCESSION ALL OF P.I.N. 1 7 4 25077-0006
	AN OF SURVEY C	)F
IF I PA	ART OF LOT 7	
1 2	ONCESSION 4, NEV	
TC	WN OF MILTON	
SCA SCA	GIONAL MUNICIPA 	ALLIY OF HALION
RAD	Y-PENTEK & EDWARD SURVEYING LTD., IRIC	
BE	ances shown on this plan are in i converted to feet by dividing by 0. TES	.3048.
2 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	DENOTES MONUMENT SET DENOTES MONUMENT FOUND DENOTES SMORE STANDARD JROM BAS	
s SMB SMB NB NP P.I.N.	DENOTES STANDARD IRON BAR DENOTES IRON BAR DENOTES ROUND IRON BAR DENOTES ROUND IRON BAR DENOTES IRON PIPE	
PL1 PL2	DENOTES PROPERTY IDENTIFIER NUMBI DENOTES PLAN 20R-15883 DENOTES PLAN OF SURVEY BY A. SK DATED APRIL 30, 1993	ER RANDA SURVEYING LTD., O.L.S.
PL3 PL4 D1	DENOTES PLAN OF SURVEY BY RADY- DATED MAY 13, 2004 DENOTES PLAN 2004–2831 DENOTES INSTRUMENT No.138392	-PENTEK & EDWARD SURVEYING LTD., C.L.S.
D2 D3 D4 (950) (140 (1303	DENOTES INSTRUMENT No.670993 DENOTES INSTRUMENT No.867346 DENOTES INSTRUMENT No.644288 DENOTES F.G. CUNNINGHAM, OLLS.	
(RPE)	<ul> <li>DENOTES AL SKRANDA, OLLS.</li> <li>DENOTES RADY-PENTEK &amp; EDWARD S</li> <li>DENOTES NOT IDENTIFIED</li> </ul>	r BR Ramoa Surveying Ltd., Olls. Peritek & Eddward Surveying Ltd., Olls. Surveying Ltd., Olls.
(%) (MT) HCM	DENOTES NOT IDENTIFIED DENOTES WITNESS DENOTES HORIZONTAL CONTROL NONU ARING NOTE	JMENT
BEAR CONT ODBT	INGS SHOWN HEREON ARE GRID BEARINGS DERIVI ROL MONUMENTS LISTED IN THE FOLLOWING TABLE 9770012 (EAST 594550.517, NORTH 4817133.116) 9780190 (EAST 592701.448, NORTH 4820395.781	ED FROM THE HORIZONTAL .E: ), AND
OO81 AND ZONE	9780190 (EAST 592701.448, NORTH 4820895.781 ARE REFERENCED TO THE CENTRAL MERIDIAN 81 17, ONTARIO COORDINATE SYSTEM, (6' UTM), N.	), 90° WEST LONGITUDE, AD 83
DIST/ USED COME	NCES SHOWN ON THIS PLAN ARE GROUND DISTA TO COMPUTE ORD DISTANCES BY HULTIPLYING INED SCALE FACTOR OF 0.9996.	NCES AND CAN BE THE DISTANCES BY A
SU	RVEYOR'S CERTIFICATE	
ICE 1. TH SU	RTFY THAT: IIS SURVEY AND PLAN ARE CORRECT AND IN ACC IRVEYS ACT, THE SURVEYORS ACT AND THE LAN (GULATIONS MADE UNDER THEM.	CORDANCE WITH THE D TITLES ACT AND THE
	GULATIONS MADE UNDER THEM. We survey was completed on the $30^{43}$ day	
ey -	Feb 2 2009	abuch
°		NBROEDER AND SURVEYOR
(   P.I.N. , N3715'25'E	25077-001 136.2012 AMEAS	17349 NS
C ZREMAINS OF	POST AND WIRE FENCE	
	* <del>*</del>	
1 3.3		
!	SOU IN-46517   9 99 4000   1999	
-		
	1 5 1	
R T		
L K	500	
I d	617 - 0005	
	P. N.	
	88 8 9 00000	
2.3 SOUTHWEST	42,77 14 1.00 (177) 42,77 14 N3710'30"E MEAS 3.62 N38719'30"E DL03 48,03 PL2 48,03 PL2	
UNABLE TO WONLARDINT 		
<u> </u>	DETAIL	
(I)	ion to sonce)	
	FDE RADY-PENT ONTARIO LAN	TEK & EDWARD SURVEYING LTD. D SURVEYORS Rood, Suite 7 Dotario L4L 8A3
	rel.(416)635- Tel.(905)264-	-0881 Fax (905)264-2099
	Website:www.r DRAWN: V.K JOB No. 06-	-pe.co CHECKED: R.D. 126 CAD FILE No.06-128R01
	Jul 08, 20	09 - 12:59:40

APPENDIX VI QUALIFICATIONS OF ASSESSOR

## Sarah Ferguson, Project Manager

Sarah Ferguson is a Project Manager with the Environmental Due Diligence & Remediation Group in the Hamilton Office. Ms. Ferguson obtained a diploma in Environmental Technology from Humber College, Toronto in 2005. Prior to joining Pinchin in 2007, she worked as an Environmental Technologist with other consulting firms since 2004. Ms. Ferguson has experience in conducting Phase I and II Environmental Site Assessments, remediation, field sampling of soil and groundwater, monitoring and preparation of professional reports.

APPENDIX VII NON-ONTARIO REGULATION 511/09 ENVIRONMENTAL DUE DILIGENCE ITEMS

# Asbestos-Containing Materials ("ACMs")

ACMs are commonly found in building construction materials (particularly in older buildings constructed prior to 1985). Friable asbestos (friable is defined as a material that can be crumbled, powdered or pulverized by hand pressure) was widely used in sprayed fireproofing until 1973, and in decorative or finishing plasters, and thermal systems insulation until the early 1980s. Non-friable or manufactured asbestos products were widely used in building construction including in vinyl floor tiles, sheet flooring, ceiling tiles, pipe gaskets, roofing materials, asbestos cement boards, and numerous other products until the mid-1980s. A very limited number of non-friable asbestos products in limited quantities are still in use currently in building construction. The application of friable asbestos was banned by Ontario Regulation 654/85, which came into effect March 1985. On November 1, 2005, this regulation was most recently updated and changed to Ontario Regulation 278/05.

Given the year of construction of the Site Buildings (circa 1930s), there is a potential for friable and non-friable ACMs to be present within the Site Buildings. No potential ACMs were observed at the time of the Site visit. Pinchin did not conduct an asbestos survey as part of this Phase I ESA, nor was any destructive or intrusive sampling or inspection conducted as part of this Phase I ESA.

Prior to any demolition or renovation activities, a designated substance (including asbestos) survey would be required.

# Lead Containing Paints

Although paints containing lead were banned from uses on exterior or interior surfaces of buildings, furniture or household products in the 1970s, various commercial paints (e.g., road paint) are still known to contain lead.

Given the year of construction of the Site Buildings (circa 1930s), there is a potential for paints containing lead to be present on Site, including Site Building interior surfaces. Pinchin did not conduct a survey of lead in painted surfaces as part of this Phase I ESA, and the Site Representative advised Pinchin that no surveys have been previously conducted at the Site. Pinchin observed that painted surfaces throughout Site Building B were in poor condition (i.e. peeling and flaking).

Prior to any demolition or renovation activities, a designated substance (including lead) survey would be required.

# **Ozone-Depleting Substances**

The bulk storage of ozone-depleting substances ("ODSs") was not observed. The Site Representative reported that the bulk storage of ODSs has not been carried out at the Site.

### Radon

The Site Representative reported that no radon surveys have been carried out at the Site. However, considering that air within the Site Buildings was well-circulated and soils in southern Ontario have a low radon gas generating potential, radon is not suspected to be an environmental issue of concern at the Site. Furthermore, the Site Buildings did not have basements.

# Mould or Microbial Contamination

The presence of mould or other microbiological contamination in buildings has become a concern to building tenants and owners due to potential health effects on occupants and users. Provincial Ministries of Labour have recently issued guidelines on enforced regulations to protect the health of construction workers who are exposed to mould in the course of building renovation. The presence of water leaks or high humidity can cause the growth or amplification of mould within building environments.

A comprehensive inspection for mould, which would require intrusive testing, was not performed as part of this Phase I ESA. No suspect mould was observed during the Site visit.

Торіс	Findings
Washroom Vents	None observed.
Kitchen Vents	None observed.
Electricity Emergency Generator On-Site	None observed and none reported by the Site Representative.
Heating / Cooling Systems	None observed.
Process Vents	None observed.
Odours	No strong, pungent or noxious odours were identified.
Permits / Approvals	No permits/approvals for the Site, as related to air emissions or discharges were provided for Pinchin's review.

Air Emissions