

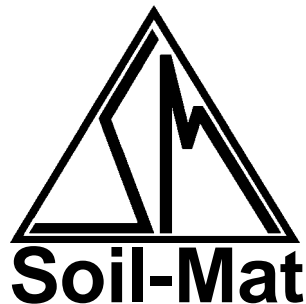
**PROJECT NO.: SM 134975-E**

**MARCH 19, 2013**

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
UPPER GLEN ABBEY: PHASE VI LANDS  
2327 KHALSA GATE  
OAKVILLE, ONTARIO**

**PREPARED FOR:**

**CRYSTAL HOMES**



**BY**

**SOIL-MAT ENGINEERS & CONSULTANTS LTD.  
130 LANCING DRIVE  
HAMILTON, ONTARIO  
L8W 3A1**



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# SOIL-MAT ENGINEERS & CONSULTANTS LTD.

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PROJECT No.: SM 134975-E

MARCH 19, 2013

CRYSTAL HOMES  
161 Rebecca Street  
Hamilton, Ontario  
L8R 1B9

Attention: Ms. Kelly Legace,

**PHASE I ENVIRONMENTAL SITE ASSESSMENT  
UPPER GLEN ABBEY: PHASE VI LANDS  
2327 KHALSA GATE, OAKVILLE, ONTARIO**

Dear Ms. Legace,

Further to your recent authorisation, we have completed the Phase I Environmental Site Assessment ["ESA"] for the above noted property.

The Phase I ESA conducted for this Site consisted of a historical records review, interviews and a site reconnaissance of the Phase I ESA lands and generally follows the protocol of Ontario Regulation 153/04 [as amended]. Based on the information gathered during the Phase I ESA Report, SOIL-MAT ENGINEERS has the following comments to offer:

At the time of this Report, the Site was vacant with a mobile sales office in the southwest corner of the Site and two mobile construction trailers in the southeast corner of the Site. The research undertaken during this Phase I ESA did not reveal any readily available records that indicate any past operations having occurred on the Site or neighbouring lands that are considered a significant environmental liability to the Site at this time. The lands in the general vicinity of the Site are comprised primarily of vacant land and residential properties that based on the information currently available to SOIL-MAT ENGINEERS are not anticipated to have an adverse environmental impact on the Site.

Based on the findings of the Phase I Environmental Site Assessment, SOIL-MAT ENGINEERS & CONSULTANTS LTD. find the potential of Site contamination to be considered **LOW** and therefore recommend that additional investigations **ARE NOT** required at this time, pending the results of the Ministry of the Environment database search which will be forwarded to DAVID FAYE & ASSOCIATES INC. under a separate cover once they are received in our Office.

Although not considered a significant environmental liability to the Site, it is noted that the Site has historically been utilised as agricultural lands and although the Site reconnaissance did not reveal the presence of any recent excavations or obvious *fill* material on the Site [with the exception of the three areas of stockpiles of fill material



observed on the Site] there is a possibility that *fill* material has been placed across the Site in the past or that previous owners have buried unwanted debris on the Site. If any unusually stained soil, odours or buried debris is revealed during construction activities, SOIL-MAT ENGINEERS should be contacted to assess the suitability of the material as backfill material on a residential property and undertake laboratory analyses on the soil if deemed necessary. In addition, it would be prudent to secure representative soil samples from the three stockpiles unless the origin of the piles can be determined to assess the environmental characteristics of the soil and determine the suitability of the material for re-use on a residential property.

In addition to the above, this Office should be contacted if a suspected groundwater well is encountered during future construction activities to make arrangements for the water well to be abandoned as per *Ontario Regulation 903 – Water Wells*.

We trust that this Phase I Environmental Site Assessment is satisfactory for your purposes.

Our Phase I Environmental Site Assessment findings are presented herein.

## 1.0 INTRODUCTION

CRYSTAL HOMES retained SOIL-MAT ENGINEERS & CONSULTANTS LTD. [“SOIL-MAT ENGINEERS”] to conduct a Phase I Environmental Site Assessment [“ESA”] of the property located at 2327 Khalsa Gate in the Town of Oakville, Ontario, hereinafter referred to as the ‘Site’.

### 1.1 PROJECT SCOPE

The Phase I ESA generally follows the protocol outlined in *Ontario Regulation 153/04* [as amended], which suggests a four-step approach to Phase I Environmental Site Assessments, including the following;

1. RECORDS REVIEW: including aerial photographs, property use records, title search, previous Phase I ESA reports, regulatory agency documentation, company records, Site specific geotechnical reports and any other relevant material;
2. SITE VISITATION: including a visual reconnaissance of the Site, suspect adjacent properties, and the different land uses within a roughly 250 metre radius of the Site;
3. INTERVIEWS: including persons that may have pertinent information with regard to the Site, including contacts from the Town of Oakville, Ministry of Environment [“MOE”], and current / previous land owners, etc.;
4. EVALUATIONS: Based on the information gathered, a professional evaluation of the property is presented in a final Phase I ESA Report.

*Ontario Regulation 153/04* [as amended] lists fifty-nine [59] potentially contaminating activities [“PCAs”] that require intrusive assessment activities, i.e. a Phase II ESA, to determine if an adverse environmental impact is present on the Site if a PCA is found to have occurred on the Phase I ESA Site. In some circumstances a Phase II ESA may be required if a PCA has occurred on a neighbouring or nearby property within the Phase I ESA study area if deemed necessary by the Qualified Person [“QP”] overseeing the Phase I ESA. However, it is noted that under *Ontario Regulation 153/04* [as amended] the mandatory Phase II ESA activities apply only to properties that are subject to a Record of Site Condition. It is our understanding that this Phase I ESA report is required for the development of the property as residential lands and that a Record of Site Condition is not required for the Site.

## 2.0 SITE DESCRIPTION

The Site is comprised of a rectangular shaped parcel of land on the east side of Khalsa Gate south of Pine Glen Road before it dead ends in the Town of Oakville, Ontario. Khalsa Gate was formerly Bronte Road which was rerouted to the west. At the time of this Report the Site was bound to the north by residential and religious properties, to the east by vacant lands and residential properties, to the south by a natural gas pipeline, and to the west by Khalsa Gate. For descriptive purposes, Khalsa Gate has been defined as having a north-south alignment. At the time of this Report the site was vacant with two construction trailers toward the southeast corner of the Site, a sales office toward the southwest corner of the Site serviced with an adjoining gravel parking area and a gravel roadway with an east-west alignment in the northern portion of the Site. There were three areas of stockpiled soil observed on the Site, including one smaller stockpile in the northwest corner, multiple smaller stockpiles in the northeast corner and a large stockpile to the east and northeast of the sales office on the Site. It is SOIL-MAT ENGINEERS understanding, based on discussion with Ms Kelly Legace of Crystal Homes, that the fill piles are excess topsoil from previous phases of the neighbouring residential development. However the stockpiles were covered with snow at the time of this report and as such the composition of the stockpiles could not be visually confirmed.

The legal description of the Site is “Part of Lot 30, Concession 1, Trafalgar South of Dundas Street, Parts 1 to 5 of plan 20R13962, except 20M814, 20M871, 20M955 & 20M1024, Oakville.” The geographic coordinates of the Site using a hand held global positioning unit are [NAD 83] 17T 599350E/ 4809520N. A survey of the Phase I ESA property, signed and sealed by an Ontario land surveyor is available in Appendix ‘A’ of this Report for reference.

A general site location drawing and overview of the Phase I ESA study area are included in Appendix ‘A’ for reference.

A summary of Site and on-site structures, is presented below:

Site Feature	Description
Area of Site	~1.8 hectares
Number of on-site Buildings	A single building constructed of two mobile trailers.
Approximate Area of Building	Approximately 80m <sup>2</sup>
Approximate Date of Construction	No inside access
Floor Surfaces	No inside access
Ceiling Surfaces	No inside access
Interior Walls	No inside access
Exterior Walls	Stucco with decorative stone frontage
Heating/ Cooling	Electric
Landscaped Areas	None
Asphalt Covered Areas	None
Granular Covered Areas	There is a gravel roadway that runs east-west in the northern portion of the Site, as well as the parking area in front of the sales office at the southwest corner of the Site.
Other Structures	There are two construction trailers towards the southeast corner of the Site.

## 2.1 PHASE I ESA STUDY AREA

The Phase I ESA Study Area consists of the lands generally in a 250-metre radius from the limits of the Phase I ESA property.

These lands include a mixture of vacant lands and residential lands. The research undertaken during this Phase I ESA revealed no information that suggests there is a potential contaminating activity ["PCA"] on a property located in the Phase I ESA Study Area that may result in an adverse environmental impact to the Phase I ESA property.

## 2.2 SERVICES AND UTILITIES

The following services are available in the general vicinity of the Site:

- Natural Gas
- Electrical
- Municipal Water Supply
- Storm Water Sewers
- Sanitary Sewers

## 2.3 GEOLOGIC SETTING

A review of the Ministry of Northern Development and Mine's "Quaternary Geology of the Hamilton Area, Southern Ontario Sheet Map M2509" and the "Paleozoic Geology of the Hamilton Area, Southern Ontario Sheet Map M2336", revealed the Site to be underlain predominantly by Halton Till, in turn, underlain by Upper Ordovician Queenston Shale Formation bedrock. This has been borne out by SOIL-MAT ENGINEERS' geotechnical experience on the Site and in the general vicinity of the Site.

Aside from the soil piles, the project area is generally flat and level with surface water runoff directed to the west toward a drainage ditch running north-south along Khalsa Gate.

Regional groundwater flow is expected to the southeast toward Lake Ontario.

Surface water was not encountered on the Site during SOIL-MAT ENGINEERS' Site visits. In addition, there are no known surface water bodies present in the Phase I ESA Study Area.

## 2.4 DESCRIPTION OF ADJACENT LAND USE

The adjacent properties are comprised primarily of vacant land, and residential properties.

A description of the adjacent properties, based on visual observations made from the Site, is presented below:

	North	East	South	West
Adjoining Property/ Operation	Residential [2385 Khalsa Gate]	Residential Development	Natural Gas Pipeline	Khalsa Gate
Potential Hazardous Materials	None observed	None observed	None observed	None observed
Potential Storage Tanks	None observed	None observed	None observed	None observed
Direction with respect to the inferred ground water flow	Up-gradient	Trans-gradient	Down-gradient	Trans-gradient
General Vicinity	Vacant land / residential	Residential	Residential	Vacant land / Bronte Road / residential

The visual observations of the adjoining lands did not reveal any existing operation that is considered a PCA.



### 3.0 HISTORICAL RECORDS REVIEW

#### 3.1 SITE INTERVIEWS AND RECORDS REVIEW

The Site was unoccupied at the time of this Report and as such there were no on-site personnel to interview during the Site reconnaissance. The Site was last utilised as agricultural lands.

#### 3.2 AERIAL PHOTOGRAPHS

Aerial photographs from 1954, 1960, 1978, 1988, 2004, and 2009 were reviewed by SOIL-MAT ENGINEERS.

A summary of information obtained from the photographs is presented below:

Aerial Photo	Site Description	Description of Adjacent Lands
1954 [1:8350]	The Site is comprised of vacant agricultural land.	The surrounding lands are comprised of primarily vacant agricultural lands with some residential along Bronte Road and Dundas Street West. It also appears that the natural gas pipeline adjacent to the south has been recently installed.
1960 [1:9700]	There are no significant changes to the Site.	There are no significant changes to the surrounding lands.
1978 [1:4850]	There are no significant changes to the Site.	Aside from a golf course to the south of the Site, there are no significant changes to the surrounding lands.
1988 [1:7800]	There are no significant changes to the Site.	There are no significant changes to the surrounding lands.
2004 [1:12,100]	There are no significant changes to the Site.	The golf course no longer exists and there is residential development to the west, east and south of the Site.
2009 [1:2950]	There is a sales office towards the southwest corner of the Site and there is a gravel roadway that runs east-west on the northern portion of the Site. The large soil stockpile is visible to the northeast of the sales office.	There is further residential development to the northeast.

The review of the noted aerial photographs did not reveal any information that would suggest there is a potential environmental liability on the Site.

The aerial photographs are included in Appendix 'B' for reference.

#### 3.3 TOPOGRAPHIC MAPS

Readily available topographic maps for the Site and Phase I ESA study area were reviewed as part of this Phase I ESA and revealed the following information:

Map Year [Scale]	Site Description	Description of Surrounding Lands
1909 [1:63,360]	There are no buildings illustrated on the Site.	The Phase I ESA Study Area is comprised of undeveloped lands with a small cluster of dwellings illustrated near the intersection of Bronte Road and Dundas Street.
1938 [1:63,360]	There are no buildings illustrated on the Site.	There are sparse dwellings illustrated throughout the study area along Bronte Road and Dundas Street.
1968 [1:50,000]	There are no buildings illustrated on the Site.	There are sparse dwellings illustrated throughout the study area along Bronte Road and Dundas Street.
1999 [1:50,000]	There are no buildings illustrated on the Site.	There are sparse dwellings illustrated throughout the study area along Bronte Road and Dundas Street.

The review of the topographic maps did not reveal any PCAs that would suggest there is a potential environmental liability on the Site.

A copy of the topographic maps and each source information is included in Appendix 'C' for reference.

### 3.4 HISTORICAL SITE USE AND CONDITIONS/ PAST LAND USES

The Criss-Cross City Directory series were reviewed dating back to 1971, the earliest readily available directory for the site and surrounding lands, to establish the general historical land use on and in the immediate vicinity of the Site.

A summary of SOIL-MAT ENGINEERS' findings for the Site is provided below:

Site	
Occupant	Years Occupied
Site Not Listed	30+ years [Before 1971 – 2001]

The directories do not list any current or past occupant of the Site that should be considered a potential environmental liability to the Site.

A summary of the historical occupants of the adjoining properties is listed below:

Location	Property	Occupant	Years Occupied
2451 Bronte Rd. [Located ~460 metres northwest of the Site]	Institutional	St. Joseph's Roman Catholic Church	27+ years [1986 – present]
2403 Khalsa Gate [Located ~320 metres northwest of the Site]	Institutional	Oakville Sikh Cultural Association	12+ years [2001 – present]
3005 Dundas St. W. [Located ~500 metres north-northeast of the Site]	Commercial	Palermo Shell Service Station	26+ years [Before 1971 – 1997]

The directories do not list any current or past occupant of the adjacent lands that should be considered a potential environmental liability to the Site.

### 3.5 TITLE SEARCH

A representative of SOIL-MAT ENGINEERS undertook a title search of the Site at the Land Registry Office in Milton, Ontario.

The title search of the Site did not reveal any past owners of the Site that may suggest there is a potential environmental liability on the Site.

The Site was owned by Bronte Community Developments Corporation at the time of the title search.

The chain of previous ownership is presented below:

Owner	Occupied
Bronte Community Developments Corporation	February 28, 2001 – present
Bronte-Upper Middle Rd. Partnership Ltd.	May 27, 1999 – February 28, 2001
Oakwind Investments, by its partners Andrew Paving + Engineering Ltd., Bytosco Investments Ltd., Ainsworth Motors Ltd., Barry A. Percival	May 10, 1979 – May 27, 1999
Oakwind Investments, by its partners Andrew Paving + Engineering Ltd., Bytosco Investments Ltd., Tamworth Investments Ltd., David R. Clark	April 22, 1974 – May 10, 1979
Geo-Emporium Ltd.	April 4, 1973 – April 22, 1974
225507 Investments Ltd., John + Bernice Smola, Joseph + Lydia Hess, John + Lista Menko, Ernest + Bernice Baum, Chester + Frances Kuriata, Henry Schmidt, Water + Anna Holdenmayer	November 12, 1969 – April 4, 1973
Mary Monica Abele + Alex Mylchenko	July 30, 1969 – November 12, 1969
Olive M. Martin Ltd.	December 20, 1968 – July 30, 1969
Jan Rolin Construction Ltd., Baro Construction Ltd., Max Stern Investments Ltd., J. Rapoport Investments Ltd., Jeredi Investments Ltd., Henry + Helen Smialy	March 1, 1968 – December 20, 1968
Stanley Inglehart	March 23, 1920 – March 1, 1968
William Albert Inglehart	April 26, 1911 – March 23, 1920
George W. Cullingham	April 6, 1909 – April 26, 1911
Jonathan Hager	August 10, 1875 – April 6, 1909
William Pitt Moore + James Gage Davis	April 22, 1873 – August 10, 1875
William Tutzel	July 16, 1852 – April 22, 1873
Charles Tutzel	February 22, 1812 – July 16, 1852
Bildad Simons	October 18, 1808 – February 22, 1812
Crown	Up to October 18, 1808

A copy of the title search is included in Appendix 'D' for reference.

### 3.6 FIRST DEVELOPED USE OF SITE

Based on the available information compiled during the completion of this Report, the Site has not previously been developed.

### 3.7 PREVIOUS PHASE I REPORTS

SOIL-MAT ENGINEERS contacted Mr. George Trenkler, a Technical Review Coordinator with the Town of Oakville's Planning Department, to request a copy of previous environmental reports for the Site that may be on file with the Town. However, no reports were available for viewing and according to Mr. Trenkler, there are none on file with the Town.

In addition, a search of the MOE's *Brownfields Environmental Site Registry* did not reveal a previous Phase I ESA that may have been undertaken on the Site.

### 3.8 LANDFILL SITE DIRECTORY

A review of the Ministry of Environment and Energy's "Waste Disposal Site Inventory", June 1991, indicates no inactive or active landfill sites within a 2km radius of the Site.

It is noted that not all of the inactive and active landfill sites are listed in the document.

In addition, no Municipal Coal Gasification Plants or Coal Tar Distillation Plants were in operation in the area.

### 3.9 FIRE INSURANCE MAPPING [UNDERWRITER'S BUREAU LIMITED]

The Underwriter's Survey Bureau Limited "Fire Insurance Plans" were reviewed for the purpose of identifying structures, building materials and/ or underground storage tanks that may have been present on/ or near the Site. However, the Fire Insurance Plans [to date] do not include the vicinity of the Site.

### 3.10 REVIEW OF MINISTRY OF ENVIRONMENT AND ENERGY DATABASE

The Ministry of Environment's Freedom of Information and Protection of Privacy Office was contacted to determine if any spills have been reported in the area of the Site, if any buried tanks are recorded to be on-site, or if there are any orders and/or notices on file outstanding against the Owner of the Site. The results of the Ministry Search were not available during the completion of this Report.

However, the MOE results will be sent under a separate cover as soon as they are received in our Office [typically 1 to 2 months].

SOIL-MAT ENGINEERS' MOE database search request is attached in Appendix 'E' for reference.



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### 3.11 SITE SPECIFIC GEOTECHNICAL REPORTS

No site specific geotechnical reports were available to SOIL-MAT ENGINEERS during the completion of this Phase I ESA.

### 3.12 EcoLOG ERIS REPORT

An EcoLog ERIS Report has not been ordered as a Record of Site Condition is not required for this Site.

#### **4.0 SITE RECONNAISSANCE**

A site reconnaissance was carried out on February 14, 2013 by a representative of this Office.

A summary of the reconnaissance is provided below.

#### **4.1 FLAMMABLE LIQUIDS**

There was no visual evidence of flammable liquids maintained on-site during the Site visit.

Based on our visual observations during the reconnaissance, flammable liquids are not considered an issue at this time.

#### **4.2 POLYCHLORINATED BIPHENYLS [PCBs]**

The use of PCBs in electrical equipment, such as hydroelectric transformers, fluorescent lamp ballast and capacitors, was phased out circa 1980.

There was no visual evidence of PCBs maintained on-site during the Site visit.

Based on our visual observations during the reconnaissance, PCBs are not considered an issue at this time.

#### **4.3 ASBESTOS CONTAINING MATERIALS [ACMS]**

ACMs are typically found in construction materials used in buildings constructed prior to 1985.

Friable asbestos is described as ACMs that can be crumbled, crushed or broken into a powder with little force [such as hand pressure]. Friable asbestos is typically found in boiler and pipe insulation and spray fireproofing materials in buildings constructed prior to 1985.

Non-friable asbestos is described as ACMs that cannot be crumbled, crushed or broken with little force. Non-friable asbestos is typically found in construction materials such as vinyl floor tiles, roofing tars, ceiling tiles, and asbestos cement, etc.

There was no visual evidence of ACMs maintained on-site during the Site visit.

Based on our visual observations during the reconnaissance, ACMs are not considered an issue at this time.

#### **4.4 UREA-FORMALDEHYDE FOAM INSULATION [UFFI]**

UFFI was historically used as an insulating agent in residential and commercial buildings constructed prior to the early 1980's.

There was no visual evidence of urea-formaldehyde foam insulation maintained on-site during the Site visit.

Based on our visual observations during the reconnaissance, UFFI is not considered an issue at this time.

#### **4.5 OZONE-DEPLETING SUBSTANCES [ODSS]**

The production and use of Chlorofluorocarbons ["CFCs"] in Canada ceased circa 1993, however, their use in existing equipment is still permitted provided that the equipment is serviced by a licensed contractor and that the equipment is sealed and does not allow the release of CFCs into the environment during operation or servicing.

There was no visual evidence of ozone-depleting substances maintained on-site during the Site visit.

Based on our visual observations during the reconnaissance, ODSs are not considered an issue at this time.

#### **4.6 LEAD-BASED PAINTS**

The use of lead based paints on interior and exterior surfaces susceptible to deterioration and paint flaking was phased out circa 1976, however, some paint that manufactured between 1976 and 1980 has been found to contain trace levels of lead.

There was no visual evidence of lead-based paints maintained on-site during the Site visit.

Based on our visual observations during the reconnaissance, lead-based paints are not considered an issue at this time.

Various industrial paints may still contain concentrations of lead.

#### **4.7 FUEL STORAGE TANKS**

The reconnaissance of the Site revealed an aboveground fuel storage tank towards the southeast corner of the Site adjacent to the two construction trailers that are also at the southeast corner of the Site. There were no visible signs of leaks in the tank and no evidence of staining on the ground in the vicinity of the tank. This tank is associated with the future construction activities on the Site and based on our visual observations during the reconnaissance, is not an issue at this time.

The reconnaissance of the Site did not reveal any other obvious visual evidence of a suspected underground or aboveground fuel storage tank on the Site.

#### **4.8 GROUND WATER WELLS OR CISTERN**

The reconnaissance of the Site did not reveal any obvious visual evidence of possible ground water wells or cisterns.

#### **4.9 SUSPECTED FILL MATERIAL**

The reconnaissance of the Site revealed three soil stockpiles throughout the Site. There is a small pile at the northwest corner, an area with several piles in the northeast corner, and a large pile to the east and northeast of the sales centre.

As previously discussed, these fills piles are reported stockpiles of excess topsoil from previous phases of the neighbouring residential lands and should not be considered a significant environmental concern at this time.

#### **4.10 SURFACE STAINING**

The reconnaissance of the Site did not reveal any areas that exhibited significant surface staining.

#### **4.11 UNUSUAL ODOURS**

The reconnaissance of the Site did not reveal any areas that exhibited unusual odours.

#### **4.12 UNHEALTHY OR DAMAGED VEGETATION**

The reconnaissance of the Site did not reveal any areas of apparent unhealthy or damaged vegetation.

#### **4.13 SURFACE WATER**

Surface water was not encountered during the Site reconnaissance.

#### **4.14 WASTE GENERATION, STORAGE AND DISPOSAL**

The reconnaissance of the Site did not reveal any waste generation, storage and/or disposal.

#### **4.15 UNIDENTIFIED SUBSTANCES**

The reconnaissance of the Site did not reveal any unidentified substances.

#### **4.16 ADJACENT PROPERTIES**

The adjacent properties are comprised primarily of residential properties and vacant land.

The visual observations of the adjacent properties did not reveal the presence of typical items of concern, including but not limited to:

- aboveground fuel storage tanks;
- vent/ fill pipes associated with underground storage tanks;
- chemical storage in aboveground tanks, drums, containers, etc.;
- sheens on surface/ ponded water, and;





- areas exhibiting significant surface stains or unusual odours.

All observations were made from select portions of the Site that presented views of the neighbouring lands. It was not possible to have a complete view of all the neighbouring lands due to visual obstructions caused by existing structures, trees, fence lines etc.

## 5.0 INTERVIEWS

A representative of SOIL-MAT ENGINEERS contacted a number of regulatory agencies and other persons having a direct knowledge of the Site.

The findings of each interview are presented below.

### 5.1 THE MINISTRY OF THE ENVIRONMENT [MOE]

The Ministry of the Environment [MOE] was contacted to gather information with regard to the Site. SOIL-MAT ENGINEERS had not received the pertinent information from the MOE at the time of this Report. However, the results will be sent under a separate cover as soon as they are received in this Office.

### 5.2 THE TOWN OF OAKVILLE – PLANNING DEPARTMENT

SOIL-MAT ENGINEERS contacted Mr. George Trenkler, a Technical Review Coordinator with the Town of Oakville's Planning Department, to request a copy of previous environmental reports for the Site that may be on file with the Town. However, no reports were available for viewing and according to Mr. Trenkler, there are none on file with the Town.

### 5.3 TECHNICAL STANDARDS AND SAFETY AUTHORITY [FUELS SAFETY BRANCH]

SOIL-MAT ENGINEERS contacted Mr. Prem Lal of the T.S.S.A. to undertake a search of the Site and neighbouring properties for the registered presence of any underground storage tanks. The T.S.S.A. does not have records on file of any underground storage tanks located on the Site or neighbouring properties. It is however noted that the T.S.S.A. does not have records of USTs installed prior 1987. In addition, "private use" USTs were not registered with the agency until 1990, and even then many owners of "private use" USTs do not register the tanks with T.S.S.A.

## 6.0 SUMMARY & RECOMMENDATIONS

The Phase I Environmental Site Assessment conducted for this Site consisted of a historical records review, interviews and a site reconnaissance.

At the time of this Report, the Site was vacant with a mobile sales office in the southwest corner of the Site and two mobile construction trailers in the southeast corner of the Site. The research undertaken during this Phase I ESA did not reveal any readily available records that indicate any past operations having occurred on the Site or neighbouring lands that are considered a significant environmental liability to the Site at this time. The lands in the general vicinity of the Site are comprised primarily of vacant land and residential properties that based on the information currently available to SOIL-MAT ENGINEERS are not anticipated to have an adverse environmental impact on the Site.

Based on the findings of the Phase I Environmental Site Assessment, SOIL-MAT ENGINEERS & CONSULTANTS LTD. find the potential of Site contamination to be considered **LOW** and therefore recommend that additional investigations **ARE NOT** required at this time, pending the results of the Ministry of the Environment database search which will be forwarded to DAVID FAYE & ASSOCIATES INC. under a separate cover once they are received in our Office.

Although not considered a significant environmental liability to the Site, it is noted that the Site has historically been utilised as agricultural lands and although the Site reconnaissance did not reveal the presence of any recent excavations or obvious *fill* material on the Site [with the exception of the three areas of stockpiles of fill material observed on the Site] there is a possibility that *fill* material has been placed across the Site in the past or that previous owners have buried unwanted debris on the Site. If any unusually stained soil, odours or buried debris is revealed during construction activities, SOIL-MAT ENGINEERS should be contacted to assess the suitability of the material as backfill material on a residential property and undertake laboratory analyses on the soil if deemed necessary. In addition, it would be prudent to secure representative soil samples from the three stockpiles unless the origin of the piles can be determined to assess the environmental characteristics of the soil and determine the suitability of the material for re-use on a residential property.

In addition to the above, this Office should be contacted if a suspected groundwater well is encountered during future construction activities to make arrangements for the water well to be abandoned as per Ontario Regulation 903 – Water Wells.

## 7.0 REPORT LIMITATIONS

Achieving the objectives that are stated in this report has required SOIL-MAT ENGINEERS to derive conclusions based upon the best and most recent information currently available to SOIL-MAT ENGINEERS. No investigative method can completely eliminate the possibility of obtaining partially imprecise information. SOIL-MAT ENGINEERS has expressed professional judgement in gathering and analysing the information obtained and in the formulation of its conclusions.

Information in this report was obtained from sources deemed to be reliable, however, no representation or warranty is made as to the accuracy of this information. To the best of SOIL-MAT ENGINEERS' knowledge, the information gathered from outside sources contained in this report on which SOIL-MAT ENGINEERS has formulated its opinions and conclusions, are both true and correct. SOIL-MAT ENGINEERS assumes no responsibility for any misrepresentation of facts gathered from outside sources.

This report was prepared to assess and document evidence of potential environmental contamination, and not to judge the acceptability of the risks associated with such environmental contamination. Much of the information gathered for this report is only accurate at the time of collection and a change in the Site conditions may alter the interpretation of SOIL-MAT ENGINEERS' findings. Furthermore, the reader should note that the Site reconnaissance described in this report was an environmental assessment of the Site, not a regulatory compliance or an environmental audit of the Site.

SOIL-MAT ENGINEERS & CONSULTANTS LTD. prepared this Report for the account of the CRYSTAL HOMES. The material in it reflects SOIL-MAT ENGINEERS' best judgement in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. SOIL-MAT ENGINEERS accepts no responsibility for damages, if any suffered by any third party as a result of decisions made or actions based on this report.

We trust that this Phase I Environmental Site Assessment is satisfactory for your purposes. Please feel free to contact the undersigned if you have any questions.

Sincerely,  
SOIL-MAT ENGINEERS & CONSULTANTS LTD.



Keith Gleadall, B. A., EA Dipl.  
Environmental Manager



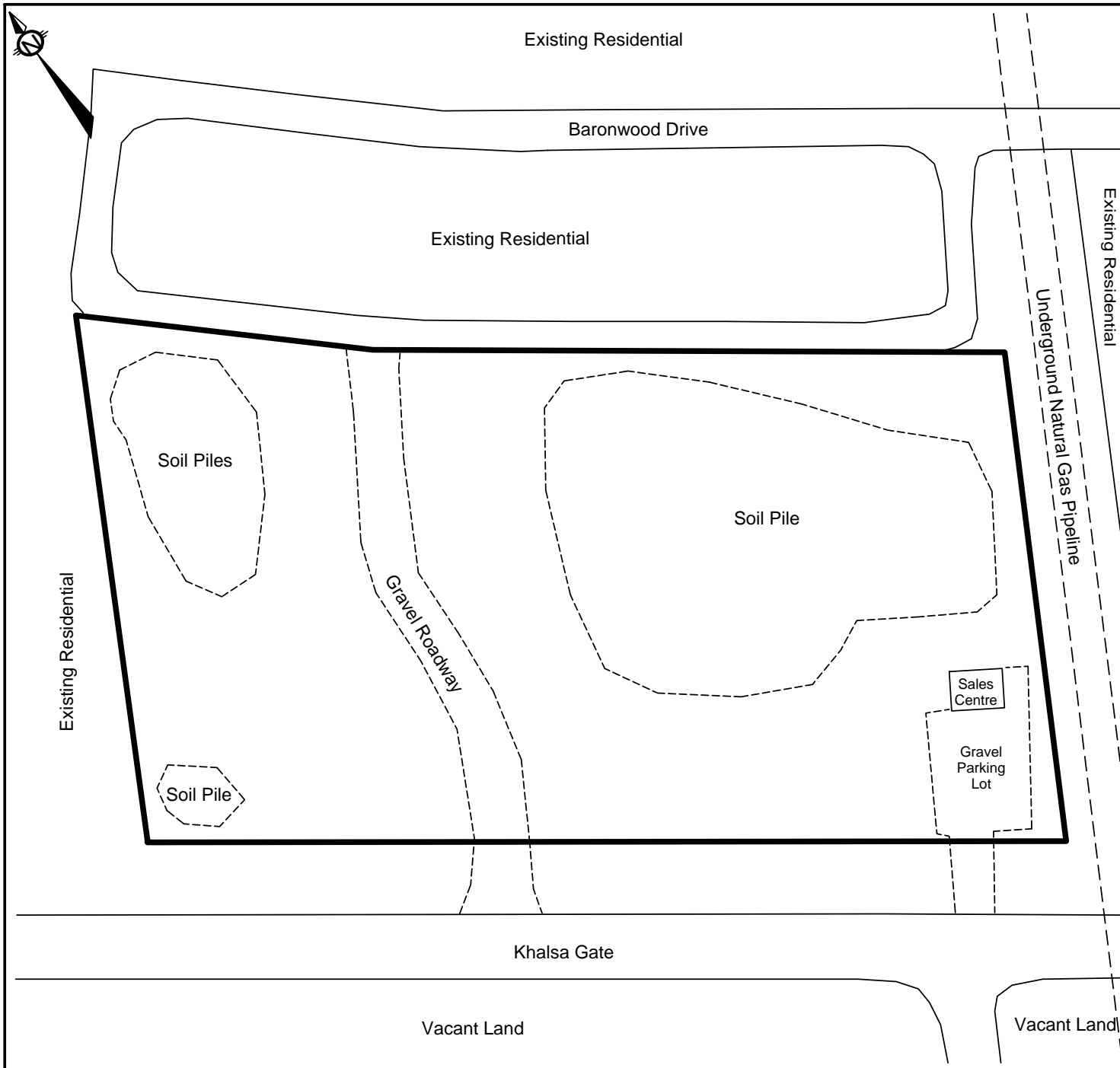
John Monkman, P.Eng.  
Review Engineer

Distribution: CRYSTAL HOMES [2]

Enclosures: Appendix 'A' Conceptual Site Plan and General Site Drawings;  
Appendix 'B' Aerial Photographs  
Appendix 'C' Topographic Maps  
Appendix 'D' Chain of Title  
Appendix 'E' MOE Database Search Request  
Appendix 'F' Qualifications of Assessors

**Appendix 'A'**

1. Drawing 1.: Phase I ESA Property Site Plan
2. Drawing 2.: Phase I ESA Study Area
3. Phase I ESA Site Location Plan



<b>LEGEND</b>	
	= Site Boundaries
<b>NOTES:</b>	
1. This drawing should be read in conjunction with Soil-Mat Engineers & Consultants Ltd. Report No.: SM 134975-E.	
<b>Soil-Mat</b> <i>Engineers &amp; Consultants Ltd.</i>	
<b>CLIENT</b>	
<b>Crystal Homes</b>	
<b>PROJECT TITLE</b>	
Phase I Environmental Site Assessment Upper Glen Abbey - Phase 6 Oakville, Ontario	
<b>DRAWING TITLE</b>	
<b>Site Plan</b>	
<b>PROJECT No.</b>	SM 134975-E
<b>SCALE</b>	1:1150
<b>DATE</b>	February 2013
<b>CHECKED</b>	KG
<b>DRAWN</b>	PM
<b>FILENAME</b>	134975 Site Plan.kcw
<b>DRAWING No. 1</b>	



**LEGEND**

 = Site Boundaries

**NOTES:**

1. This drawing should be read in conjunction with Soil-Mat Engineers & Consultants Ltd. Report No.: SM 135975-E.
2. Base map provided by "Image ©2013 Digital Globe"

**Soil-Mat**  
Engineers & Consultants Ltd.

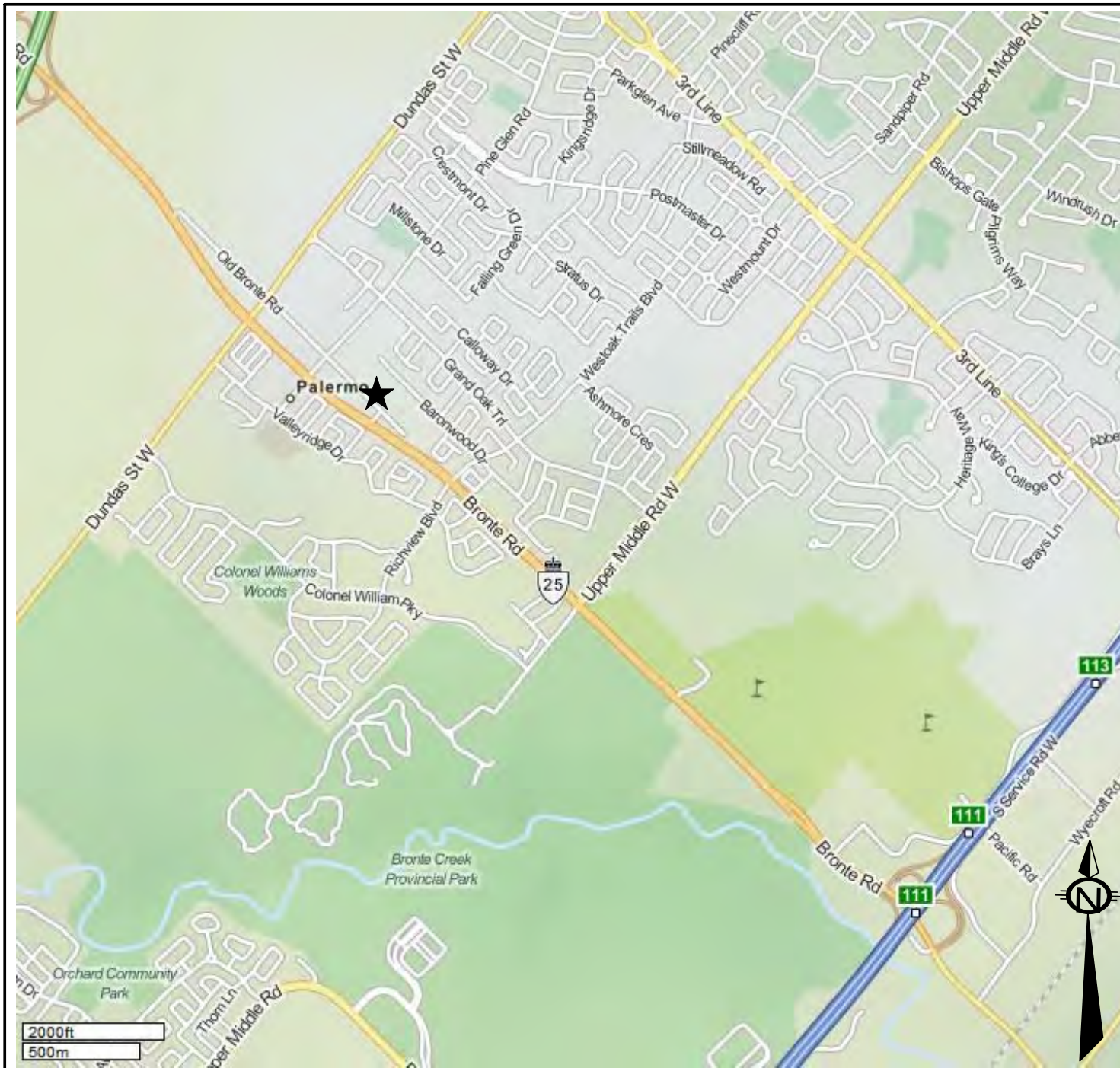
CLIENT  
**Crystal Homes**

PROJECT TITLE  
Phase I Environmental Site Assessment  
Upper Glen Abbey - Phase 6  
Oakville, Ontario

DRAWING TITLE  
**Study Area View**

PROJECT No.	SM 134975-E
DATE	February 2013
CHECKED	KG
DRAWN	PM
FILENAME	134975 Site Plan 2.kcw

**DRAWING No. 2**



**LEGEND**

★ = Site Location

**NOTES:**

1. This drawing should be read in conjunction with Soil-Mat Engineers & Consultants Ltd. Report No.: SM 134975-E.
2. Base map provided by "©2013 MapQuest, Inc."

**Soil-Mat**  
Engineers & Consultants Ltd.

**CLIENT**

Crystal Homes

**PROJECT TITLE**

Phase I Environmental Site Assessment  
Upper Glen Abbey - Phase 6  
Oakville, Ontario

**DRAWING TITLE**

Site Location Plan

<b>PROJECT No.</b>	SM 134975-E
<b>DATE</b>	February 2013
<b>CHECKED</b>	KG
<b>DRAWN</b>	PM
<b>FILENAME</b>	134975 Site Location.kcw

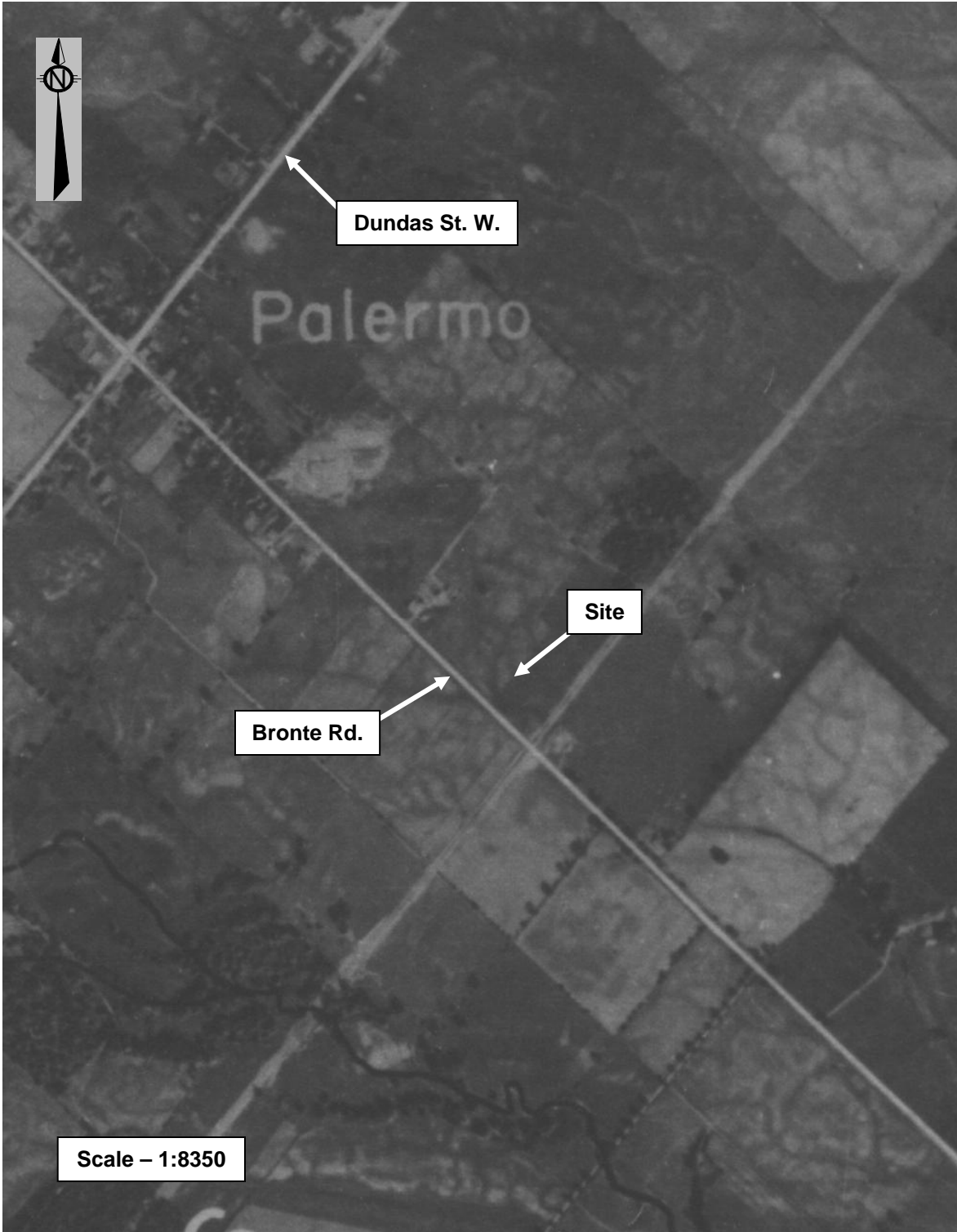
**DRAWING No. 3**



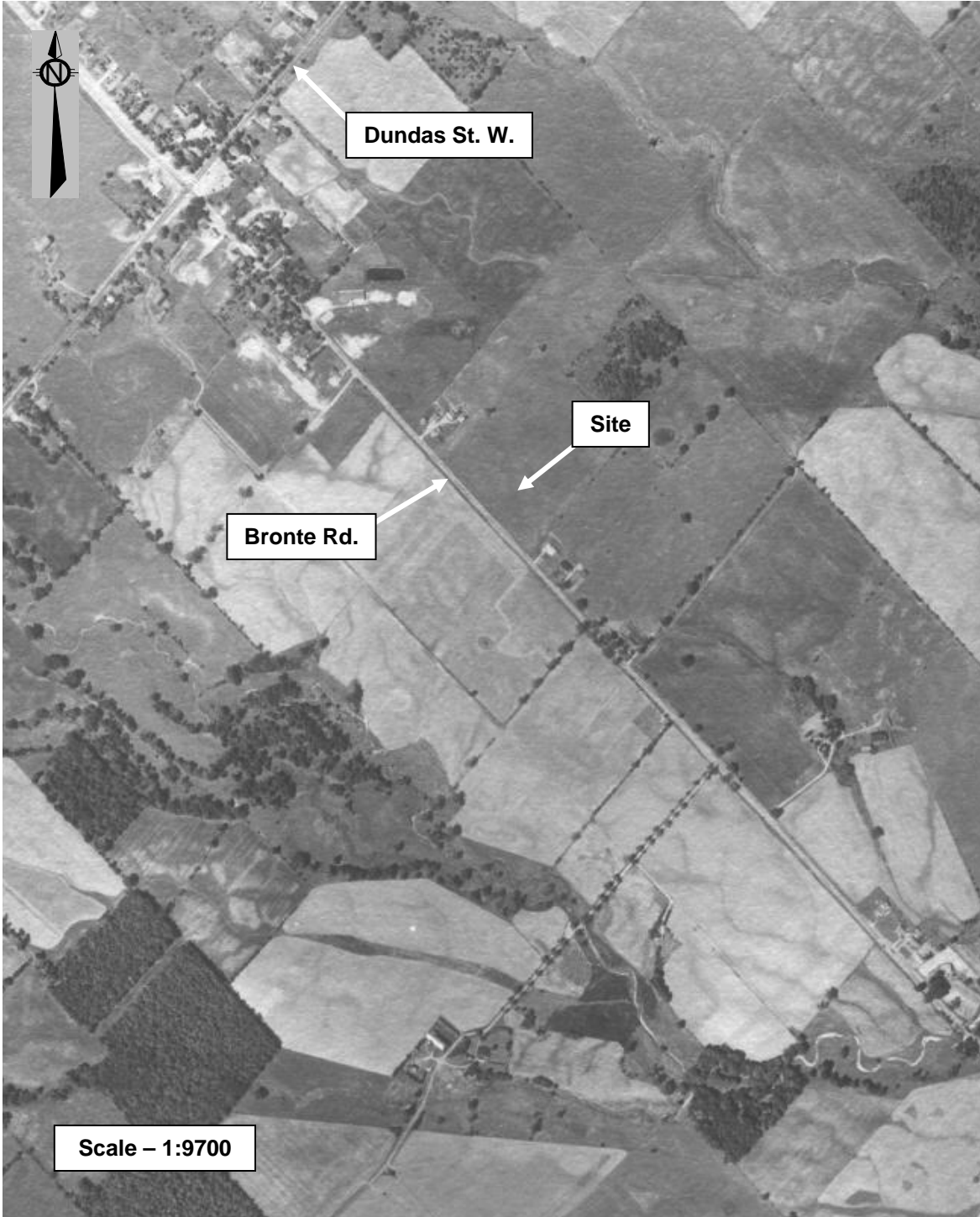
### **Appendix 'B'**

1. 1954 Aerial Photograph;
2. 1960 Aerial Photograph;
3. 1978 Aerial Photograph;
4. 1988 Aerial Photograph;
5. 2004 Aerial Photograph, and;
6. 2009 Aerial Photograph.

**Aerial Photo – 1954**



**Aerial Photo – 1960**



**Aerial Photo – 1978**



**Aerial Photo – 1988**



**Aerial Photo – 2004**



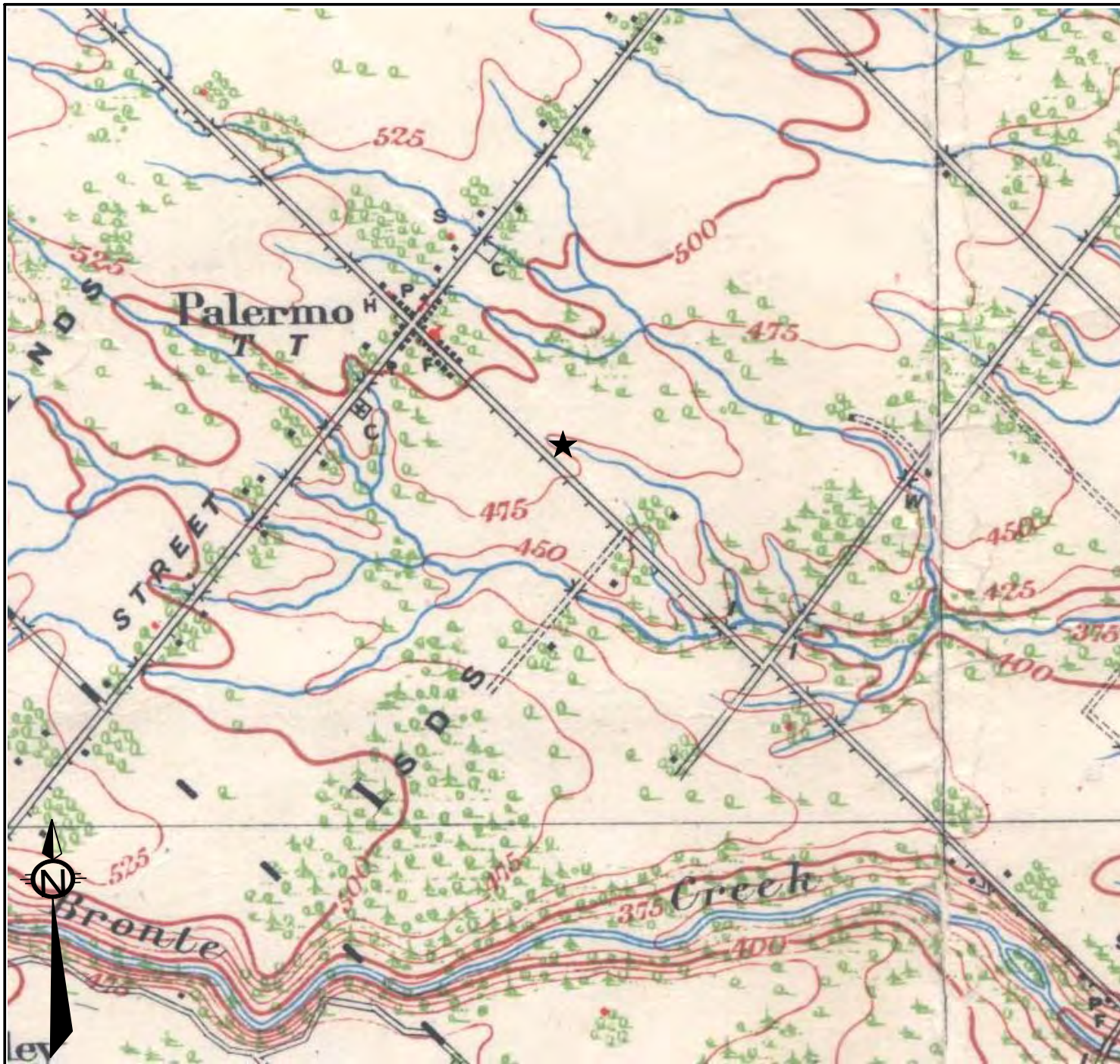
**Aerial Photo – 2009**



**Appendix 'C'**

1. 1909 Topographic Map;
2. 1938 Topographic Map;
3. 1968 Topographic Map, and;
4. 1999 Topographic Map.





## LEGEND

★ = Site Location

## NOTES:

1. This drawing should be read in conjunction with Soil-Mat Engineers & Consultants Ltd. Report No.: SM 134975-E.
2. Topographic Map of Ontario, Hamilton Sheet 33.
3. Base map provided by "Department of Militia and Defense, 1909".

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Crystal Homes

PROJECT TITLE

Phase I Environmental Site Assessment  
Upper Glen Abbey - Phase 6  
Oakville, Ontario

DRAWING TITLE

Topographic Map 1909

PROJECT No. SM 134975-E

SCALE 1:63,360

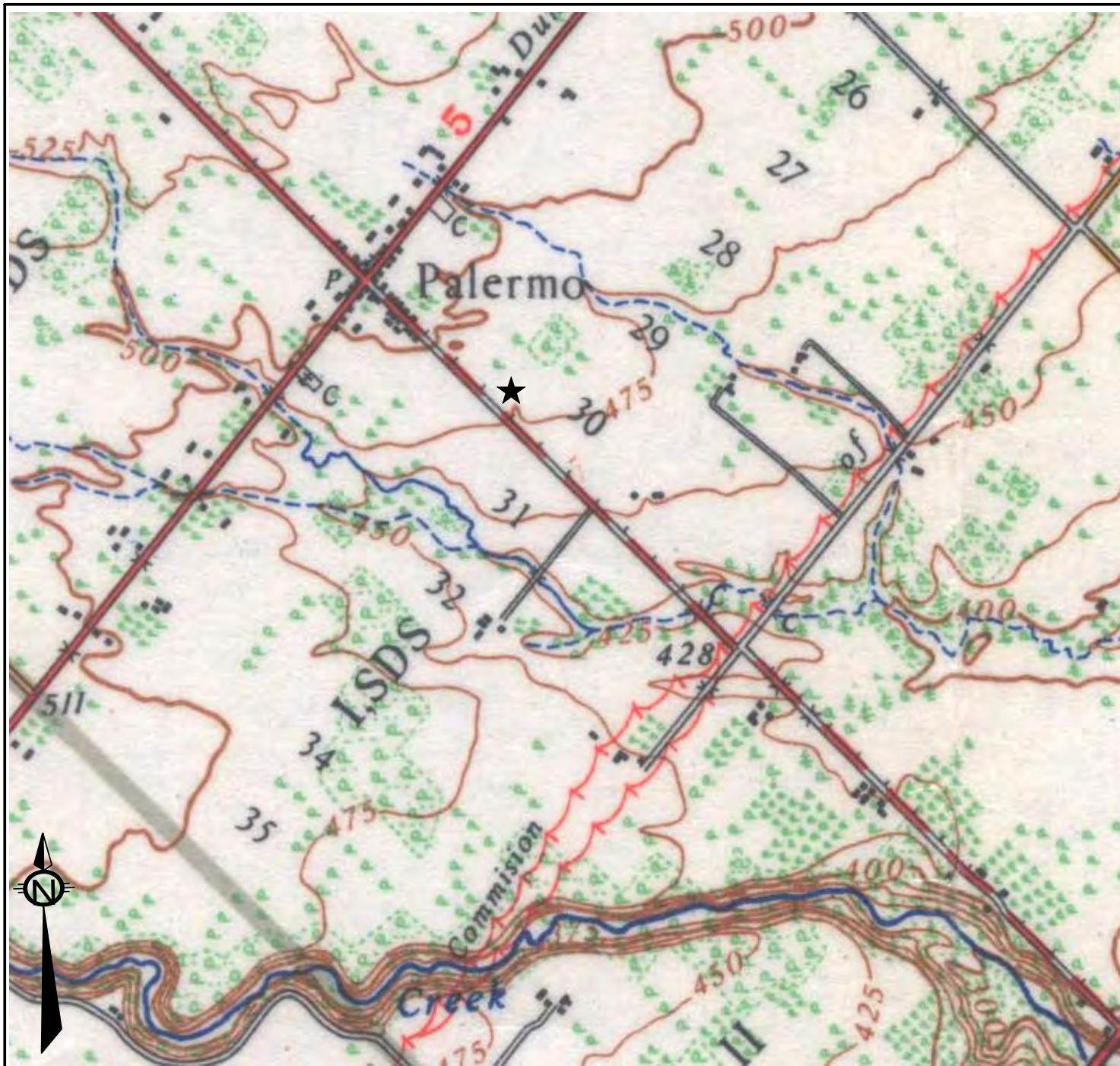
DATE February 2013

CHECKED KG

DRAWN PM

FILENAME 134975 Topo 1909.kcw

DRAWING No. 4a



## LEGEND

★ = Site Location

## NOTES:

1. This drawing should be read in conjunction with Soil-Mat Engineers & Consultants Ltd. Report No.: SM 134975-E.
2. Topographic Map of Ontario, Hamilton Sheet 30 M/5.
3. Base map provided by the "Geographical Section, General Staff; Department of National Defence, 1938".

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## CLIENT

Crystal Homes

## PROJECT TITLE

Phase I Environmental Site Assessment  
Upper Glen Abbey - Phase 6  
Oakville, Ontario

## DRAWING TITLE

Topographic Map 1938

PROJECT No. SM 134975-E

SCALE 1:63,360

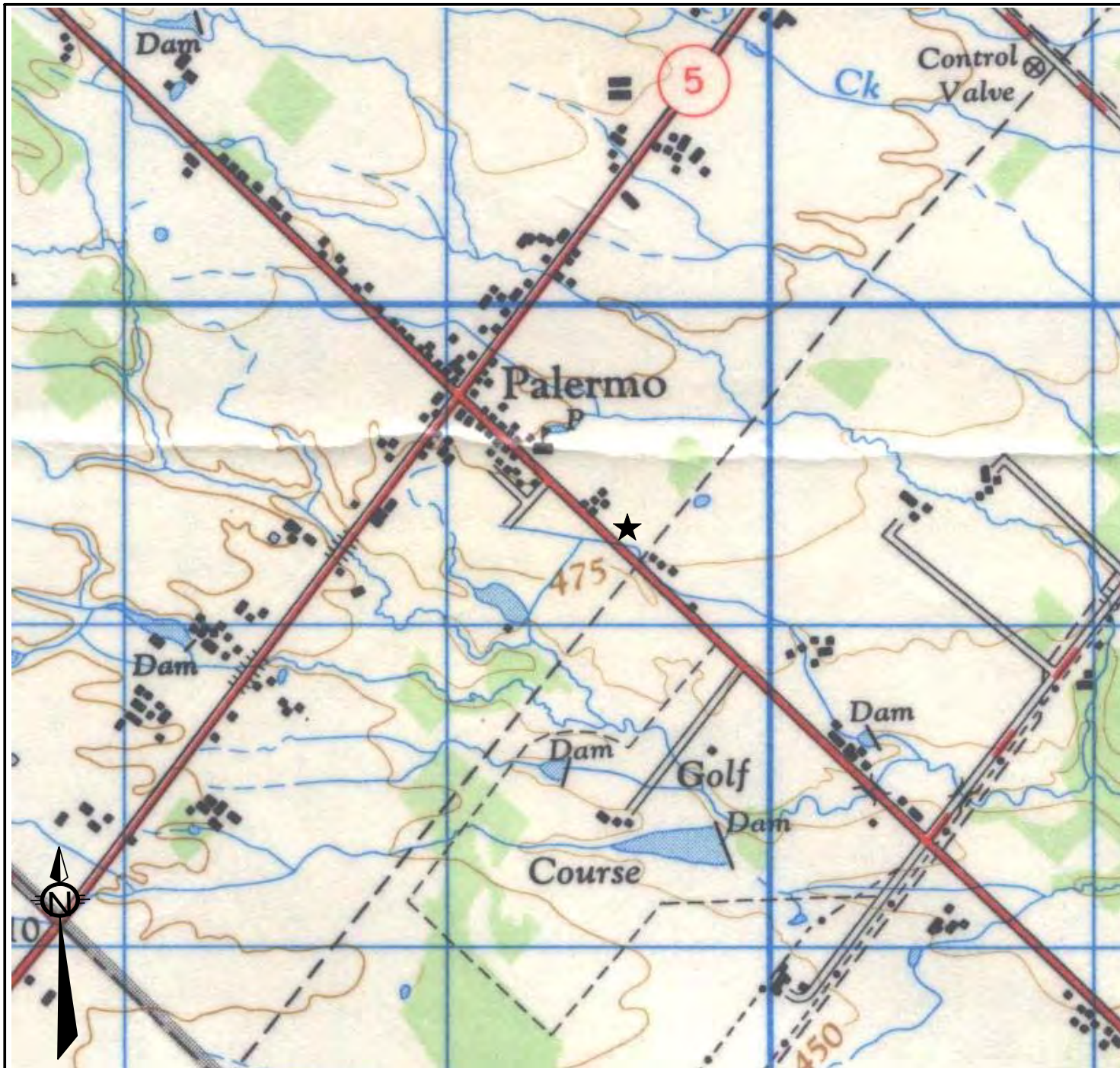
DATE February 2013

CHECKED KG

DRAWN PM

FILENAME 134975 Topo 1938.kcw

**DRAWING No. 4b**



## LEGEND

★ = Site Location

## NOTES:

1. This drawing should be read in conjunction with Soil-Mat Engineers & Consultants Ltd. Report No.: SM 134975-E.
2. Topographic Map of Ontario, Hamilton Sheet 30 M/5 W, Edition 5.
3. Base map provided by the "Mapping and Charting Establishment, Department of National Defence, 1968".

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Engineers & Consultants Ltd.

CLIENT

## Crystal Homes

PROJECT TITLE

Phase I Environmental Site Assessment  
Upper Glen Abbey - Phase 6  
Oakville, Ontario

DRAWING TITLE

## Topographic Map 1968

PROJECT No. SM 134975-E

SCALE 1:50,000

DATE February 2013

CHECKED KG

DRAWN PM

FILENAME 134975 Topo 1968.kcw

## DRAWING No. 4c



**LEGEND**

★ = Site Location

**NOTES:**

1. This drawing should be read in conjunction with Soil-Mat Engineers & Consultants Ltd. Report No.: SM 134975-E.
2. Topographic Map of Ontario, Hamilton - Burlington Sheet 30 M/5, Edition 10.
3. Base map provided by "©1999, Her Majesty The Queen in Right of Canada".

**Soil-Mat**  
*Engineers & Consultants Ltd.*

**CLIENT**

**Crystal Homes**

**PROJECT TITLE**

Phase I Environmental Site Assessment  
Upper Glen Abbey - Phase 6  
Oakville, Ontario

**DRAWING TITLE**

**Topographic Map 1999**

**PROJECT No.** SM 134975-E

**SCALE** 1:50,000

**DATE** February 2013

**CHECKED** KG

**DRAWN** PM

**FILENAME** 134975 Topo 1999.kcw

**DRAWING No. 4d**

## **Appendix 'D'**

### 1. Title Search

PROPERTY DESCRIPTION: PT LT 30, CON 1 TRAF SDS, PARTS 1 TO 5, 20R13962 EXCEPT 20M814, 20M871, 20M955 & 20M1024; OAKVILLE. S/T EASEMENT OVER PT 2, 20R17530 AS IN HR649556.; TOGETHER WITH AN EASEMENT OVER BLK 36, 20M1024 AS IN HR946823

PROPERTY REMARKS:

ESTATE/QUALIFIER:

FEE SIMPLE  
ABSOLUTE

RECENTLY:

DIVISION FROM 25071-0140

PIN CREATION DATE:

2008/01/08

OWNERS' NAMES

BRONTE COMMUNITY DEVELOPMENTS CORPORATION

CAPACITY SHARE

REG. NUM.	DATE	INSTRUMENT TYPE	AMOUNT	PARTIES FROM	PARTIES TO	CERT/CHKD
** PRINTOUT INCLUDES ALL DOCUMENT TYPES AND DELETED INSTRUMENTS SINCE: 2008/01/08 **						
H790718	1999/05/27	CHARGE	\$3,750,730	BRONTE-UPPER MIDDLE RD. PARTNERSHIP LIMITED	ANDREW PAVING & ENGINEERING LIMITED BYTOSCO INVESTMENTS LIMITED AINSWORTH MOTORS, LIMITED PERCIVAL, BARRY A. VAN DUYN. 'CHARGE: OAKWIND	C
CORRECTIONS: 'CHARGE' CHANGED FROM 'PERCIVAL, BARRY A. C.O.B. AS' TO 'PERCIVAL, BARRY A.' ON 2001/01/22 BY DOROTHY VAN DUYN. 'CHARGE: OAKWIND' INVESTMENTS' DELETED ON 2001/01/22 BY DOROTHY VAN DUYN.						
20R13962	2001/02/07	PLAN REFERENCE				C
HR38289	2001/02/28	TRANSFER	\$6,240,000	BRONTE-UPPER MIDDLE RD. PARTNERSHIP LIMITED	BRONTE COMMUNITY DEVELOPMENTS CORPORATION	C
REMARKS: PLANNING ACT STATEMENTS						
HR38290	2001/02/28	CHARGE	\$2,800,000	BRONTE COMMUNITY DEVELOPMENTS CORPORATION	THE EFFORT TRUST COMPANY	C
HR102500	2002/02/21	TRANSFER OF CHARGE		AINSWORTH MOTORS, LIMITED	EFFORT PROPERTY CORPORATION	C
REMARKS: H790718						
HR115327	2002/04/30	TRANSFER OF CHARGE		BYTOSCO INVESTMENTS LIMITED	EFFORT PROPERTY CORPORATION	C
REMARKS: H790718						
HR144609	2002/09/05	TRANSFER OF CHARGE		ANDREW PAVING & ENGINEERING LIMITED	EFFORT PROPERTY CORPORATION	C
REMARKS: H790718						
HR144617	2002/09/05	TRANSFER OF CHARGE		PERCIVAL, BARRY A.	EFFORT PROPERTY CORPORATION	C
REMARKS: H790718						
HR554885	2007/03/27	CHARGE	\$14,500,000	BRONTE COMMUNITY DEVELOPMENTS CORPORATION	ROYAL BANK OF CANADA	C
HR554903	2007/03/27	POSTPONEMENT		THE EFFORT TRUST COMPANY	ROYAL BANK OF CANADA	C
REMARKS: HR38290 TO HR554885						

NOTE: ADJOINING PROPERTIES SHOULD BE INVESTIGATED TO ASCERTAIN DESCRIPTIVE INCONSISTENCIES, IF ANY, WITH DESCRIPTION REPRESENTED FOR THIS PROPERTY.  
NOTE: ENSURE THAT YOUR PRINTOUT STATES THE TOTAL NUMBER OF PAGES AND THAT YOU HAVE PICKED THEM ALL UP.

SUBJECT TO RESERVATIONS IN CROWN GRANT

REG. NUM.	DATE	INSTRUMENT TYPE	AMOUNT	PARTIES FROM	PARTIES TO	CERT/ CHKD
HR554904	2007/03/27	POSTPONEMENT REMARKS: H790718 TO HR554885		EFFORT PROPERTY CORPORATION	ROYAL BANK OF CANADA	C
20R17530	2007/12/06	PLAN REFERENCE				C
HR649556	2008/03/19	TRANSFER EASEMENT	\$1	BRONTE COMMUNITY DEVELOPMENTS CORPORATION	BELL CANADA	C
HR649557	2008/03/19	POSTPONEMENT REMARKS: HR554885 TO HR649556		ROYAL BANK OF CANADA	BELL CANADA	C
HR649558	2008/03/19	POSTPONEMENT REMARKS: HR38290 TO HR649556		THE EFFORT TRUST COMPANY	BELL CANADA	C
HR649559	2008/03/19	POSTPONEMENT REMARKS: HR790718 TO HR649556		EFFORT PROPERTY CORPORATION	BELL CANADA	C

## **Appendix 'E'**

### 1. MOE Database Search Request





# Soil-Mat Engineers & Consultants Ltd.

Geotechnical/Construction Testing/Environmental Engineers

130 Lancing Drive, Hamilton, Ontario L8W 3A1

Tel: (905) 318-7440 Inwats: 1-800-243-1922

Fax: (905) 318-7455

e-mail: info@soil-mat.on.ca

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## Fax Cover Page

<b>To:</b>	Lydia	<b>From:</b>	Peter Markesic
<b>Company:</b>	MOEE	<b>Date:</b>	February 14, 2013
<b>Phone:</b>	(416)314-4097	<b>Pages:</b>	3 (inclusive)
<b>Fax:</b>	(416)314-4285	<b>Our Ref. #:</b>	134975-E

### Comments:

Please undertake a search as per the attached request form.

Please feel free to contact me in our Office if you have any questions.

Sincerely,

Peter Markesic  
Environmental Technician

## Freedom of Information Request

This form is for requesting documents which are in the Ministry's files on environmental concerns related to properties. Please refer to the guide on the completion and use of this form. Our fax no. is (416) 314-4285.

Requester Data			For Ministry Use Only	
Name, Title, Company Name and Mailing Address of Requester  Peter Markesic, B.Sc. Environmental Technician <b>Soil-Mat Engineers &amp; Consultants Ltd.</b> 130 Lancing Drive Hamilton, Ontario L8W 3A1 Email Address: peter.markesic@soil-mat.on.ca			FOI Request No.	FOI Co-ordinator Review date
			Date Request Received	Fee Paid  ACCT-CHQ-VISA-MC-  CASH
			Response Due Date	
Telephone/Fax Nos.  Tel : (905) 318-7440 Fax : (905) 318-7455	Your Project/Reference No.  <b>SM 134975-E</b>	Signature of Requester	<input type="checkbox"/> CNR <input type="checkbox"/> ER <input type="checkbox"/> NOR <input type="checkbox"/> SWR <input type="checkbox"/> WCR <input type="checkbox"/> SAC <input type="checkbox"/> IEB <input type="checkbox"/> EAA <input type="checkbox"/>	
Request Parameters				
Municipal Address / Lot, Concession, Geographic Township ( <b>Municipal address essential for cities, towns or regions</b> )				
<i>2327 Khalsa Gate, Oakville, Ontario</i>				
Present Property Owner(s) and Date(s) of Ownership				
Bronte Community Developments Corporation				
Previous Property Owner(s) and Date(s) of Ownership				
Present/Previous Tenant(s), (if applicable)				
Search Parameters			Specify Year(s) Requested	
Files older than 2 years may require \$60.00 retrieval cost. There is no guarantee that records responsive to your request will be located.				
Environmental concerns (General correspondence, occurrence reports, abatement)			1990-Present	
Orders			1990-Present	
Spills			1990-Present	
Investigations/prosecutions ▶ Owner/tenant information must be provided			1990-Present	
Waste Generator number/classes			1990-Present	
Certificates of Approval ▶ Proponent information must be provided				
1985 and prior records are searched manually. <b>Search fees in excess of \$300.00</b> could be incurred, depending on the types and years to be searched. Specify Certificates of Approval number (s) (if known). <b>If supporting documents are also required, mark SD box</b> and specify type e.g. maps, plans, hydrogeological reports, etc.				
		<b>SD</b>	<b>Specify Year(s) Requested</b>	
air - emissions				
water - mains, treatment, ground level, standpipes & elevated storage, pumping stations (local & booster)				
sewage - sanitary, storm, treatment, stormwater, leachate & leachate treatment & sewage pump stations				
waste water - industrial discharge				
waste sites - disposal, landfill sites, transfer stations, processing sites, incinerator sites				
waste systems	- haulers: sewage, non-hazardous & hazardous waste			
	- mobile waste processing units			
	- PCB destruction			
pesticides - licenses				

## **Appendix 'F'**

### 1. Qualifications of Assessor



## **COMPANY BACKGROUND**

SOIL-MAT ENGINEERS & CONSULTANTS LTD. [SOIL-MAT ENGINEERS] is a Canadian Consulting Engineering firm owned by its senior staff. Over the past thirty years the principals of SOIL-MAT ENGINEERS have undertaken geotechnical investigations in all areas of Hamilton and surrounding area and are familiar with the distinct geology of the area and therefore well-versed with the various soil, bedrock and groundwater conditions. SOIL-MAT ENGINEERS has a staff of over twenty-five engineers and technical staff who specialize in geotechnical assignments, environmental assessments, hydrogeological investigations and construction quality control/assurance projects. The company commenced operation on June 15, 1992 and has undertaken over 5,000 projects since its inception. The firm and all professional staff are in good standing with Professional Engineers Ontario. The company has maintained a current Certificate of Authorisation since it was granted on April 28, 1992. The firm's office and laboratory facilities are located at 130 Lancing Drive in Hamilton, Ontario.

## **REPORT AUTHORS**

John Monkman, P. Eng.,  
President [Principal/Senior Professional]

Mr. Monkman has been the project engineer for over 1,000 geotechnical investigations for buildings, bridges, slope stability assessments, residential and industrial subdivisions, watermain and sewer replacement projects and over 300 Phase I, II or III Environmental Site Assessments over the past twenty-five years. Mr. Monkman is a licensed Engineer with the Professional Engineers of Ontario and a registered Qualified Person with the Ministry of the Environment.

Keith Gleadall, B.A., Env. Assessment Dipl.  
Vice-President [Senior Professional]

Mr. Gleadall has over twelve years of experience in conducting Phase I, II and III Environmental Site Assessments and has successfully completed the requirements of the Associated Environmental Site Assessors of Canada and a Post Graduate Diploma in Environmental Site Assessment from Niagara College. Mr. Gleadall is responsible for undertaking numerous hydrogeological investigations, primarily within the City of Hamilton, associated with the development of residential and commercial subdivision projects, together with Phase I, II and III Environmental Site Assessments. Projects have included the decommissioning of underground and above ground fuel oil storage tanks, the implementation of in-situ and ex-situ remediation programmes, the decommissioning of a former dry cleaning facility and numerous 'dig and dump' remediation projects.