Phase One Environmental Site Assessment

3850 Cambrian Road
Ottawa, Ontario

Choice Properties Limited Partnership

The Weston Centre
700-22 St. Clair Avenue East
Toronto, ON M4T 2S5

Prepared by:

SLR Consulting (Canada) Ltd.

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Guelph, ON N1G 5L3

SLR Project No:

209.013940.00001

January 31, 2023

CONFIDENTIAL

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1.0 Executive Summary

SLR Consulting (Canada) Ltd. (SLR) was retained by the Choice Properties Limited Partnership (Choice), hereinafter also referred to as the "Client", to carry out a Phase One Environmental Site Assessment (ESA) of an undeveloped/vacant land parcel, located at 3850 Cambrian Road in Ottawa (Nepean), Ontario (hereinafter referred to as the "Site" or "Phase One Property"). SLR understands that the Client requires this Phase One ESA for their site plan application submission to The City of Ottawa as part of the proposed development of the Phase One Property.

This Phase One ESA was performed in accordance with the requirements of Ontario Regulation (O.Reg.) 153/04 (last amendment: 214/21 on March 19, 2021) under *Part XV.1 of the Environmental Protection Act* (hereinafter referred to as "O. Reg. 153/04 (as amended)" or "the Regulation").

The objective of the Phase One ESA is to identify, to the extent feasible pursuant to the scope of work detailed below, areas of potential environmental concern (APECs) on, in or under the Phase One Property as a result of potentially contaminating activities (PCAs) identified on the Phase One Property or on surrounding properties within the Phase One Study Area (i.e., the area within approximately 250 metres from the nearest boundary of the Phase One Property) that may have had an adverse effect on the Site.

The Site is located on the north side of Cambrian Road, southwest of Seeley's Bay Street. Cambrian Road runs southwest to northeast. Phase One Property information is presented in the following table:

Municipal Address	Property Identification Numbers (PINs)	Approximate Total Land Area	Legal Description
3850 Cambrian Road, Ottawa, Ontario	04595-2078 and 04595-2080	1.36 hectares (3.37 acres, (13,626 m^2)	Part Of Lot 11, Concession 3 (Rideau Front) Nepean, Part 1 and Part 3 Plan 4R31049; City of Ottawa

The geographic coordinates of the Phase One Property, ownership details and contact information of the Client (who has engaged SLR to proceed with this Phase One ESA) are presented in the following table:

Information	Details/Description
Geographical References (UTM Coordinate system)	Datum: NAD 83 Zone: 18 Easting: 441,217, Northing: 5,010,847
Client	Choice Properties Limited Partnership (Choice)
Contact Name of the Client	Ms. Madeleine Barber (Coordinator, Planning & Development of Choice Properties Limited Partnership)
Contact Address of the Client	The Weston Centre, 700-22 St. Clair Avenue East, Toronto, ON M4T 2S5
Phase One Property Owner(s)	CP REIT Ontario Properties Limited - It was reported that there are no beneficial owners to the Phase One Property
Contact Name of the Owners	Stefania S. Sottile (Director, Environmental and Occupational Health & Safety Choice Properties Limited Partnership on behalf of CP REIT Ontario Properties Limited)

Information	Details/Description
Contact Address of the Owners	The Weston Centre, 700-22 St. Clair Avenue East, Toronto, ON M4T 2S5

The Phase One Property consisted of an undeveloped/vacant land parcel with no buildings or structures at the time of the Site reconnaissance on November 2, 2022. The majority of the site was secured by a wire fence, with fencing present along the eastern property boundary and within close proximity of the western and southern property boundaries. Surface cover across the Site consisted of soil (gravel to silty sand with clay) and vegetation (grass, shrubs, common burdock, cattails and cat tail grasses). The Site had an uneven ground surface at the time of the site visit and a significant slope was observed at the east portion of the Site, trending north to south and sloping to the west.

The Phase One Property was bounded to the north and west by residential properties and to the south (across Cambrian Road) by undeveloped/vacant land parcels as well as a Mattamy Homes Sales Centre (temporary commercial property). Adjacent to the east of the Site is a temporary roadway used for the construction of the new developments to the north and east of the Site which is to be developed as a permanent roadway in the future (future Greenbank Road as part of the proposed roadway realignment).

Based on SLR discussions with the Client, it is understood that the proposed future property use of the Phase One Property will be commercial and will consist of four (4) buildings, two located at the north portion of the Site and two located at the south portions of the Site. Asphalt covered parking areas will primarily be located at the central and west portions of the Phase One Property. Based on the above, SLR infers that the applicable environmental regulations do not mandate the filing of a Record of Site Condition (RSC) with the Ontario Ministry of the Environment, Conservation and Parks (MECP).

Based on a review of the available historical records including aerial photographs, city directories and the chain of title, the Phase One Property had historically been used as agricultural or other property use (largely undeveloped forested land) with a cultivated field on the eastern portion of the Site from at least 1946 (based on a review of the 1946 aerial photograph) to the late 2000s. No building or structure appears to have ever been present at the Site based on available information to date. In 2008, the Site was cleared, stripped of topsoil and peat, prepped for commercial use through grading including the construction of a gravel roadway (evidence of significant earthworks and construction activities) based on the 2008 aerial photograph and available historical records. As noted in the Chain of Title, previous ownership records suggest that the central and south and north portions of the Site were privately owned by various individuals prior to 1989 and 2004, respectively.

Based on the Phase One ESA, SLR presents the following pertinent findings:

- Gravel roadways were constructed across the Site between 2008 and 2020 and subsequently removed or reworked during re-grading of the Site. In addition, the Site was used as a laydown area and an asphalt parking area was constructed and subsequently removed or buried at the south portion of the Site. A review of air photos between 2008 and 2020 identified commercial truck movement and storage at the Site which included vehicles and heavy equipment (i.e., trucks, trailers, loaders and excavators) parking on suspected fill material; and,
- Based on our records review, the Site underwent earthworks and construction activities between 2008 and 2020 including cutting of trees, topsoil and peat stripping, aggregate processing, segregation and piling, diversion of the West Clarke Drain watercourse and temporary roadway construction for access to the then under construction residential subdivision to the north, east and west likely using reworked and imported fill materials. A review of air photos during this time

period shows various fill stockpiles across the Site which appear to be reworked, re-piled or removed from the Site and replaced with no clear systemic approach. During the watercourse diversion, The West Clarke Drain appears to have been backfilled during grading and reworking of surface material at the Site. Material used to fill the watercourse is of unknown source and quality. Small fill piles and other areas of debris and domestic waste were observed on Site at the time of the Site visit.

Based on the results of the Phase One ESA, two (2) PCAs were identified on the Site which would contribute to APECs on the Phase One Property, while two (2) other PCAs identified in the Phase One Study Area, as detailed within the Phase One ESA, would not contribute to an APEC on the Phase One Property.

APECs, which have been identified within the Phase One study area are listed in the table below:

Area of Potential Environmental Concern (APEC)[1]	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity[2]	Location of PCA (On-site or Off-site)	Contaminants of Potential Concern[3]	Media Potentially Impacted (Ground water, soil and/or sediment)
APEC 1	Phase One Property (entirety)	PCA 11 – Commercial Trucking and Container Terminals	On-site	BTEX; PHCs; PAHs; Metals (including copper, lead and zinc); As, Sb, Se; Cr(VI); Hg;	Soil and Groundwater
APEC 2	Phase One Property (entirety)	PCA 30 – Importation of Fill Material of Unknown Quality	On-site	VOCs; BTEX; PHCs; PAHs; Metals (including copper, lead and zinc); As, Sb, Se; Cr(VI); B-HWS; Hg; low or high pH;	Soil and Groundwater

1 - APECs means the area on, in or under the Phase One Property where one or more contaminants are potentially present, as determined through the Phase One ESA, including through:

(a) identification of past or present uses on, in or under the Phase One Property, and

(b) identification of PCAs.

2 - PCA obtained from Column A of Table 2 of Schedule D of O. Reg. 153/04 (as amended)

3 - Using the Method Groups as identified in the Protocol for in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011

- BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes; PHCs: Petroleum Hydrocarbons; VOCs: Volatile Organic Compound; PAHs: Polycyclic Aromatic Hydrocarbons

- As, Sb, Se: Arsenic, Antimony, Selenium; Cr(VI): Hexavalent Chromium; B-HWS: Boron, Hot Water Soluble; Hg: Mercury

SLR recommends that a Phase Two ESA be completed at the Site to investigate the APECs noted above, assess the environmental soil and groundwater conditions on the Phase One Property and determine the location and concentration (if any) of one or more of the contaminants of potential concern identified above.

At the time of issuance of this report, a complete response had not been received from the City of Ottawa's Planning, Real Estate and Economic Development Department regarding a search of the Historic Land Use Inventory (HLUI). In addition, SLR contacted the City of Ottawa's Access to Information and Privacy Office and no response has been received at this time. When responses are received, the Client will be informed and report updated if the information alters the conclusions of the report.

This Executive Summary is intended to be read with the remainder of the report and is subject to the Statement of Limitation described in **Section 10.0.**

2.0 Introduction

SLR Consulting (Canada) Ltd. (SLR) was retained by the Choice Properties Limited Partnership (Choice), hereinafter also referred to as the "Client", to carry out a Phase One Environmental Site Assessment (ESA) of an undeveloped/vacant land parcel, located at 3850 Cambrian Road in Ottawa (Nepean), Ontario (hereinafter referred to as the "Site" or "Phase One Property").

Authorization to proceed with this Phase One ESA was awarded by Ms. Madeleine Barber (Coordinator, Planning & Development) of the Choice on October 7, 2022. SLR understands that the Client requires this Phase One ESA for their site plan application submission to The City of Ottawa as part of the proposed development of the Phase One Property.

2.1 (a) Phase One Property Information

The Site is located on the north side of Cambrian Road, southwest of Seeley's Bay Street. Cambrian Road runs southwest to northeast. Phase One Property information is presented in the following table:

Table A: Phase One Property Information

Municipal Address	Property Identification Numbers (PINs)	Approximate Total Land Area	Legal Description
3850 Cambrian Road, Ottawa, Ontario	04595-2078 and 04595-2080	1.36 hectares (3.37 acres, (13,626 m^2)	Part Of Lot 11, Concession 3 (Rideau Front) Nepean, Part 1 and Part 3 Plan 4R31049; City of Ottawa

The geographic coordinates of the Phase One Property, ownership details and contact information of the Client (who has engaged SLR to proceed with this Phase One ESA) are presented in the following table:

Table B: Additional Phase One Property Information

Information	Details/Description
Geographical References (UTM Coordinate system)	Datum: NAD 83 Zone: 18 Easting: 441,217, Northing: 5,010,847
Client	Choice Properties Limited Partnership (Choice)
Contact Name of the Client	Ms. Madeleine Barber (Coordinator, Planning & Development of Choice Properties Limited Partnership)
Contact Address of the Client	The Weston Centre, 700-22 St. Clair Avenue East, Toronto, ON M4T 2S5
Phase One Property Owner(s)	CP REIT Ontario Properties Limited - It was reported that there are no beneficial owners to the Phase One Property
Contact Name of the Owners	Stefania S. Sottile (Director, Environmental and Occupational Health & Safety Choice Properties Limited Partnership on behalf of CP REIT Ontario Properties Limited)

Information	Details/Description
Contact Address of the Owners	The Weston Centre, 700-22 St. Clair Avenue East, Toronto, ON M4T 2S5

The Phase One Property consisted of an undeveloped/vacant land parcel with no buildings or structures at the time of the Site reconnaissance on November 2, 2022. The majority of the site was secured by a wire fence, with fencing present along the eastern property boundary and within close proximity of the western and southern property boundaries. Surface cover across the Site consisted of soil (gravel to silty sand with clay) and vegetation (grass, shrubs, common burdock, cattails and cat tail grasses). The Site had an uneven ground surface at the time of the site visit and a slope was observed at the east portion of the Site, trending north to south and sloping to the west.

The Phase One Property was bounded to the north and west by residential properties and to the south (across Cambrian Road) by undeveloped/vacant land parcels as well as a Mattamy Homes Sales Centre (temporary commercial property). Adjacent to the east of the Site is a temporary roadway used for the construction of the new developments to the north and east of the Site which is to be converted to a permanent roadway in the future (future Greenbank Road as part of the proposed roadway realignment).

Based on discussions with the Client, it is understood that the proposed future property use of the Phase One Property will be commercial and will consist of four (4) buildings, two located at the north portion of the Site and two located at the south portions of the Site. Asphalt covered parking areas will primarily be located at the central and west portions of the Phase One Property.

As the intended future use of the Site is not considered to be a more sensitive property use than the current property use as defined under Ontario Regulation (O.Reg.) 153/04 (last amendment: 214/21 on March 19, 2021) under *Part XV.1 of the Environmental Protection Act* (hereinafter referred to as "O. Reg. 153/04 (as amended)" or "the Regulation"), SLR concludes that the filing of a Record of Site Condition (RSC) with the Ontario Ministry of the Environment, Conservation and Parks (MECP) is not mandated under the Regulation.

A Site Location and Surrounding Land Use plan, including a depiction of the Phase One Study Area (defined as an area, including the Site, within approximately 250 metres from the nearest boundary of the Phase One Property as discussed in Section 4.1.1), is presented as **Figure 1** in **Appendix A**. A plan of survey showing the Phase One Property and draft concept plan (as of October 28, 2022) for the Phase One Property is included in **Appendix B**.

3.0 Scope of Investigation

This Phase One ESA was performed in accordance with the requirements of O.Reg. 153/04 (as amended), however, as no filing of an RSC with the MECP is mandated, this report was not divided into the report sections as specified in Table 1 of Schedule D of O. Reg. 153/04 (as amended).

The objective of the Phase One ESA is to identify, to the extent feasible pursuant to the scope of work detailed below, areas of potential environmental concern (APECs) on, in or under the Phase One Property as a result of potentially contaminating activities (PCAs) identified on the Phase One Property or on surrounding properties within the Phase One Study Area (discussed in Section 4.1.1) that may have had an adverse effect on the Site.

As detailed in Schedule D (Section 18) of O. Reg. 153/04 (as amended), the specific objectives of a Phase One ESA report are:

- To document the potential presence of APECs;
- To provide a record of a Phase One ESA of a Phase One Property that clearly demonstrates in a way that can be assessed and reconstructed, how the Phase One ESA was carried out, to document:
    - how the general and specific objectives of a Phase One ESA were achieved and how each of the minimum requirements for such objectives were met;
    - whether further investigation is required in order to submit a record of site condition (RSC) for filing;
    - that there exists an adequate basis for further investigation that may be needed; and,
    - that there is a basis for any required certifications.

A Phase One ESA does not include intrusive testing and/or laboratory analysis of site conditions, and no intrusive testing and/or laboratory analysis of site conditions was authorized under this Phase One ESA scope of work.

The scope of work for this Phase One ESA consisted of the following:

- A review of historical records (where available) for the Site and surrounding properties including fire insurance plans (FIPs), previous environmental reports (provided by the Client), Property Use Directories (i.e., city directories) and aerial photographs (1 every decade as available) to evaluate the current environmental condition at the Site;
- A review of a historical title search for the Site (back to at least the date of the first developed use of the Phase One Property);
- Review of an Environmental Risk Information Services Ltd. (ERIS) Database Report for the Site and surrounding properties (within the Phase One Study Area);
- Review of available inspection reports (i.e., Property Underwriters Reports) and Property Underwriters Site Plans and any other available records from Opta Information Intelligence (Opta) for the Site;
- Assess the physical setting of the Site and surroundings using available topographic maps, and geological and hydrogeological information;

- Contacting municipal and provincial agencies to determine the existence of any records for the Site regarding environmental concerns (i.e., permits, orders or violations of environmental regulation);
- Complete a site visit to assess the current environmental condition of the Site and to observe the surrounding properties (where visible from publicly accessible areas);
- Conducting interviews with personnel familiar with the Site and its history; and,
- Complete a Phase One ESA report that presents the details of the Phase One ESA investigation.

The above noted resources were consulted up to the maximum extent of the Phase One Study Area. (as discussed in Section 4.1.1).

It is understood that the intended future use of the Site is not considered to be a more sensitive property use than the current property use as defined under O.Reg. 153/04 (as amended), and therefore, the filing of an RSC with the MECP is not mandated under the Regulation.

The conclusions presented in this report are professional opinions based on data described herein, subject to the **Statement of Limitations** provided in **Section 10.0.**

4.0 Records Review

4.1 (a) General

A historical records review was completed to identify PCAs in the Phase One Study Area from prior use of the Site and surrounding properties and associated APECs on the Phase One Property.

SLR conducted a review of records and files including:

- Available previous environmental reports; historical title search (chain of title); city directories; FIPs; and aerial photographs;
- Available Property Underwriters Reports and Property Underwriters Site Plans and any other available records from Opta; and
- An ERIS Database Report.

SLR also contacted the Technical Standards & Safety Authority (TSSA), City of Ottawa's Planning, Real Estate and Economic Development Department, City of Ottawa's Access to Information and Privacy Office, and the Ontario Ministry of the Environment, Conservation and Parks (MECP) Freedom of Information and Privacy Office in order to review any available records, including those available in the City of Ottawa's Historic Land Use Inventory (HLUI), pertaining to environmental regulatory non-compliance, incident reports, inspection records, spills or environmental impacts at the Site and/or surrounding properties.

The findings of the historical records review are presented in the following sections.

4.1.1 (i) Phase One Study Area Determination

The Phase One Study Area consisted of the Phase One Property and surrounding properties located within a radius of approximately 250 m from the nearest point on the Phase One Property boundary. The Phase One Study Area was noted to include the following adjacent and surrounding properties to the Site at the time of the site visit:

Table C: Adjacent and Surrounding Properties to the Site

North	• The Phase One Property is bound to the north by a residential development along Watercolours Way and private roadways within the residential development (Zenith Private and Lyrid Private) and includes the residential property at 2290 Watercolours Way
East	• The Phase One Property is bound to the east by a temporary roadway (community use) for the construction of the new developments to the north and east of the Site which is to be developed as a permanent roadway (future Greenbank Road as part of the proposed roadway realignment) in the future. Across this temporary roadway is an undeveloped/vacant land parcel (with a municipal address of 3840 Cambrian Road) and further east are residential properties including 2019 Seeley's Bay St.
South	• The Phase One Property is bound to the south by Cambrian Road followed by undeveloped properties along Cambrian Road including 3845 Cambrian Road and 3853 Cambrian Road (which includes a temporary structure for commercial purposes, Mattamy Homes Sales Centre).
West	• The Phase One Property is bound to the west by residential properties along Aphelion Crescent including 331 Aphelion Crescent, and 345 Aphelion Crescent followed by parkland and additional residential properties.

SLR has determined that the extents of the Phase One Study Area (250 m from the nearest point on the Phase One Property boundary) is adequate for this Phase One ESA as the assessment did not identify properties with known environmental impact or large industrial properties with a high potential to impact the Site from a distance greater than 250 m. It is our opinion that other properties beyond the Phase One Study Area would not result in APECs on the Phase One Property.

A Site Location and Surrounding Land Use Plan including the Phase One Study Area is illustrated on **Figure 1** in **Appendix A**.

4.1.2 (ii) First Developed Use Determination

Based on a review of the available historical records including aerial photographs, city directories and the chain of title, the Phase One Property had historically been used as agricultural or other property use (largely undeveloped forested land) with a cultivated field on the eastern portion of the Site from at least 1946 (based on a review of the 1946 aerial photograph) to the late 2000s. No building or structure appears to have ever been present at the Site based on available information to date. In 2008, the Site was cleared, stripped of topsoil and peat, prepped for grading including the construction of a gravel roadway (evidence of significant earthworks and construction activities) based on the 2008 aerial photograph and available historical records. The above is the first potentially contaminating use or activity on the Phase One Property and thus the presumed first developed use. As noted below in the Chain of Title, previous ownership records suggest that the central and south portions of the Site were privately owned by various individuals prior to 1989 and the north portion of the Site prior to 2004.

4.1.3 (iii) Fire Insurance Plans

A search for Fire Insurance Plans (FIPs) in the Phase One Study Area, was conducted by Opta Information Intelligence (Opta) as detailed in Section *4.29 Opta Records*.

No FIPs for the Phase One Property or Phase One Study Area were reportedly available for review.

A copy of the Opta search results indicating no records found is included in **Appendix C**.

4.1.4 (iv) Chain of Title

A chain of title search, back beyond the date of the first developed use of the Phase One Property, was completed by Mr. Stewart Davey of Meridian Land and Title on October 25, 2022, through the Ottawa-Carleton Land Registry Office (LRO No. 4). In addition, a Property Index Maps for the Phase One Property were obtained through the Ontario Land Registry Access (ONLAND) database online on October 24, 2022, by SLR.

The Phase One Property is comprised of two PINs 04595-2078 and 04595-2080. A summary of the pertinent findings in the chain of title and title records for the Phase One Property is provided in the following tables (one for each PIN):

Table D: Summary of Chronological Chain of Title Based on a Search of the Title (PIN 04595-2078)

Name(s) of the Owner(s)	Date(s) of Ownership/Pertinent Details
The Crown	• January 30, 1801
According to the search of title, two (2) chains which included portions of the Phase One Property were created when the title was transferred to Archibald Crast on January 30, 1801 as detailed below.	
• *Chain No.1 Details*	
Archibald Crast	• January 30, 1801 to September 15, 1855
Archibald Fraser	• September 15, 1855 to February 4, 1856
James Burke	• February 4, 1856 to May 21, 1856
"Matheson"	• May 21, 1856 to June 22, 1869
William Clarke and Helena Clarke	• June 22, 1869 to April 13,1923
Cornelius Clarke	• April 13, 1923 to April 25, 1940
• *Chain No.2 Details*	
Archibald Crast	• January 30, 1801 to September 15, 1855
Archibald Fraser	• September 15, 1855 to February 4, 1856
James Burke	• February 4, 1856 to May 21, 1856
"Matheson"	• May 21, 1856 to March 2, 1870
Michael Clarke	• March 2, 1870 to April 22, 1922
Cornelius Clarke	• April 22, 1922 to April 25, 1940
The two (2) chains appear to have been merged when Cornelius Clarke transferred title of the two chains to Thomas Clarke on April 25, 1940	
Thomas Clarke	• April 25, 1940 to November 9, 1946
Alice Clarke	• November 9, 1946 to December 18, 1946
Mildred Mary Clarke and Thomas Clarke	• December 18, 1946 to April 25, 1988
Walter Joseph Cornelius Neil Clarke	• April 25, 1988 to July 18, 1989
836411 Ontario Inc.	• July 18, 1989 to August 11, 2004

Name(s) of the Owner(s)	Date(s) of Ownership/Pertinent Details
1150274 Ontario Inc.[1]	• August 11, 2004 to June 18, 2008
Mattamy (Half Moon Bay) Limited	• June 18, 2008 to May 28, 2018
Her majesty the Queen in right of Canada Transport Canada	• July 16, 2010
CP REIT Ontario Properties Limited	• Present owners since May 28, 2018

Table E: Summary of Chronological Chain of Title based on a Search of the Title (PIN 04595-2080)

Name(s) of the Owner(s)	Date(s) of Ownership/Pertinent Details
The Crown	• January 30, 1801
According to the search of title, two (2) chains which included portions of the Phase One Property were created when the title was transferred to Archibald Crast on January 30, 1801 as detailed below.	
• *Chain No.1 Details*	
Archibald Crast	• January 30, 1801 to September 15, 1855
Archibald Fraser	• September 15, 1855 to February 4, 1856
James Burke	• February 4, 1856 to May 21, 1856
"Matheson"	• May 21, 1856 to June 22, 1869
William Clarke and Helena Clarke	• June 22, 1869 to April 13,1923
Cornelius Clarke	• April 13, 1923 to April 25, 1940
• *Chain No.2 Details*	
Archibald Crast	• January 30, 1801 to September 15, 1855
Archibald Fraser	• September 15, 1855 to February 4, 1856
James Burke	• February 4, 1856 to May 21, 1856
"Matheson"	• May 21, 1856 to March 2, 1870
Michael Clarke	• March 2, 1870 to April 22, 1922
Cornelius Clarke	• April 22, 1922 to April 25, 1940
The two (2) chains appear to have been merged when Cornelius Clarke transferred title of the two chains to Thomas Clarke on April 25, 1940	
Thomas Clarke	• April 25, 1940 to November 9, 1946
Alice Clarke	• November 9, 1946 to March 25, 1965

[1] 1150274 Ontario Inc. became 1734224 Ontario Limited and changed the name to Mattamy (Francis/Boyce) Limited on November 29, 2007.

Name(s) of the Owner(s)	Date(s) of Ownership/Pertinent Details
Joseph Cornelius Clarke and James Clarke	• March 25, 1965 to March 20, 1980
Joseph Cornelius Clarke	• March 20, 1980 to June 25, 2004
1527423 Ontario LTD.	• June 25, 2004 to June 18, 2008
Mattamy (Half Moon Bay) Limited	• June 18, 2008 to May 29, 2018
CP REIT Ontario Properties Limited	• Present owners since May 29, 2018

Both PINs (i.e., the Site) was wholly owned by Mattamy (Half Moon Bay) Limited by June 18, 2008, and sold to CP REIT Ontario Properties Limited (the present owner) as of May 29, 2018. On July 16, 2010, Her Majesty the Queen in Right of Canada - Transport Canada enacted the airport zoning regulations on the Site (both PINs).

A copy of the chain of title for the Site, including parcel registry, Property Index Maps for each PIN and all other individual owners not listed above, is included in **Appendix C**. Ownership details are also provided in the Table of current and past uses of the Phase One Property located in Section 7.1.

4.1.5 (v) Environmental Reports

No environmental reports for the Phase One Property were provided by the Client or available for SLR to review.

4.2 (b) Environmental Source Information

Additional environmental databases or publications and investigations were reviewed for this Phase One ESA as follows.

4.2.1 Supporting Documentation

The following supporting documentation was available through the City of Ottawa and were reviewed to obtain pertinent information that would assist in evaluating the current environmental condition of the Phase One Property:

- "*Environmental Impact Statement, Barrhaven Ward, Ottawa, Ontario" report,* prepared by Kilgour & Associates Ltd. (KAL) for Mattamy Homes, dated February 28, 2019;
- "*Functional Servicing and Stormwater Management Report" report,* prepared by David Schaeffer Engineering Ltd. (DSEL) for Mattamy Homes, dated March 8, 2019; and,
- "*Geotechnical Investigation, Proposed Residential Development – Half Moon Bay West Greenbank Road at Cambrian Road, Ottawa, Ontario" report,* prepared by Paterson Group Inc. for Mattamy Homes, dated April 19, 2021 (2021 Paterson Geotechnical Investigation report)

While SLR has reviewed the above noted reports and/or documentation, only data, analysis and findings relevant to the Phase One ESA have been reproduced here.

2019 KAL Environmental Impact Statement:

Kilgour & Associates Ltd. (KAL) was retained by Mattamy Homes to complete an Environmental Impact Statement (EIS) for the proposed development within the Half Moon Bay area which encompassed the

Site and included the lands to the north, west and south (across Cambrian Road) of the Site. The report included an overview of the West Clarke Drain/West Clarke Municipal Drain (a tributary to the Jock River located to the north of the Site and outside the Phase One Study Area) which was a highly channelized watercourse originally sourced from groundwater discharge from former wooded areas further south of the Half Moon Bay area. A portion of the West Clarke Drain was located on the north and east portions of the Site. In January 2017, much of the West Clark Drain was temporarily realigned approximately 150 m to the west of the Site and the portions of the West Clark Drain on the Site were decommissioned and filled in (no details regarding the source or quality of this fill material was provided within the report). This temporary realignment was approved by the Fisheries and Oceans Canada or DFO (Fisheries Authorization: 05-HCAA-CA4-01840), the Ontario MECP (based on Environmental Compliance Approval [ECA]: 1153-ACHP3E) and by the Rideau Valley Conservation Authority (RVCA, Permit to Alter a Waterway: RV5-23/16T) for the purposes of future drainage into the then under construction Clark Stormwater Management Pond now located to the northwest of the Site. It was reported that the West Clark Drain had received base flow from nearby agricultural drains, which had since been decommissioned (date unknown). The substrate of the West Clarke Drain consisted of a thick layer of muck and peat in the upper reaches and of sand and clay in the lower reaches. Before disturbances of the West Clarke Drain sources, it frequently went dry in the summer months.

2019 DSEL Functional Servicing and Stormwater Management Report:

David Schaeffer Engineering Ltd. (DSEL) was retained by Mattamy Homes to complete a functional servicing and stormwater management report (FSR) for the proposed development within the Half Moon Bay area which encompassed the Site and included the lands to the north, west and south (across Cambrian Road) of the Site. The FSR identified the West Clarke Drain as a fish habitat, which at the time of the report had been redirected and infilled according to the Authorization developed between the Barrhaven South Landowners Group (BSLO) and the DFO.

2021 Paterson Group Inc. Geotechnical Investigation:

Paterson Group Inc. (Paterson) was retained by Mattamy Homes to complete a geotechnical investigation of the Half Moon Bay area which encompassed the Site and included the lands to the north, west and south (across Cambrian Road) of the Site. The report includes a description about the geotechnical soil characteristics identified through the drilling of 106 boreholes across the Half Moon Bay area.

Based on the data collected, the report outlines geotechnical assessment, site grading and preparation, foundation design, design of earthquake, basement slab, pavement structure, and excavations.

Based on a review of this report two boreholes were completed at the Site and one borehole was completed immediately adjacent to the southeast of the Site. The three (3) boreholes were completed as monitoring wells for assessment of the groundwater levels.

One of the boreholes, located at the northeast portion of the Site, extended to a maximum depth of 14.78 metres (48.5 ft) below ground surface (mbgs). The borehole located at the southwest portion of the Site was extended to a maximum depth of 12.65 mbgs. The borehole located immediately adjacent to the southeast of the Site extended to a maximum depth of 15.70 mbgs (51.5 ft). The borehole logs indicated that the material encountered generally consisted of silty sand and silty clay until the maximum termination. Bedrock was not encountered in the boreholes nor was it identified in the other boreholes investigated within the Half Moon Bay area (maximum termination depth of 21.95 mbgs [72 ft]). It should be noted that fill materials including peat and topsoil was identified to a depth of 3.20 mbgs in the borehole drilled at the southwest portion of the Site. No fill materials were identified at the northeast portion of the Site in the borehole drilled. At the time of investigation, the groundwater level in the

monitoring well located at the southwest portion of the Site was measured at a depth of 4.43 meters and noted to be 350 mm above grade in the monitoring well located at the northeast portion of the Site.

4.2.2 ERIS Database Report

The ERIS Database Report consists of environmental information compiled from various federal, provincial, and private environmental agencies (including federal, provincial and private databases and source records). The ERIS Database Report includes but is not limited to records pertaining to the National Pollutant Release Inventory, polychlorinated biphenyl (PCB) information maintained by the Ministry, environmental compliance approvals [formerly Certificates of Approval], permits to take water or similar instruments, inventory of coal gasification plants, records concerning environmental incidents, orders, offences, spills, discharges of contaminants or inspections, waste management records pursuant to Regulation 347 of the Revised Regulations of Ontario, 1990 (General — Waste Management), retail fuel storage tanks information maintained by the TSSA, notices and instruments, including records of site condition and landfill information. The extent of environmental information varies with each available database and current information is determined by what is available to ERIS at the time of their report preparation. The databases, search parameters, and search distances were selected based on the standard Canadian databases available. The searches were requested specifically for Phase One Study Area and conducted through a series of matching parameters (e.g., address, city, postal code) and a search radius of 250 m from the boundaries of the Phase One Property.

The ERIS Database Report (dated October 26, 2022), including a brief description of each of the databases searched for the Phase One ESA, an executive summary/report summary detailing the available records per database and results of the search (including unplottable records which may be within the Phase One Study Area) is included in **Appendix C**.

SLR reviewed the ERIS Database Report and a summary of the pertinent information associated with the Phase One Property and surrounding properties is provided below.

Phase One Property:

There were no database entries for the Phase One Property identified in the ERIS Database Report which included searches that pertain to; the National Pollutant Release Inventory, PCB Information (National PCB Inventory and Inventory of PCB Storage Sites databases), permits to take water, inventory of coal gasification plants, environmental incidents, orders, offences, spills, discharges of contaminants or inspections, waste management records, information maintained by the TSSA regarding retail fuel storage tanks, records of site condition, certificate of property use and landfills.

Surrounding Properties:

Relevant database entries identified in the ERIS Database Report for the adjacent/neighbouring properties located within the Phase One Study Area are described in the following table along with the associated separation distances from the boundaries of the Phase One Property as calculated by SLR:

Table F: Summary of Relevant ERIS Database Records within the Phase One Study Area

Property Address (separation distance)	Database Name (ERIS Database)	Details
510 & 512 Chimney Corner Terrace (approximately 230 m to the north of the Site)	Pipeline Incidents (PINC)	• One (1) record for TSSA Incidents with the incident number 2447598 reported on November 23, 2018, for pipeline damage. No other details provided.

Table G: Summary of Relevant Unplottable ERIS Database Records Reported

Reported Reference Location	Database Name (ERIS Database)	Details
Part of Lot 11, Concession 3, Ottawa (Rideau), Ontario	Landfill Inventory Management Ontario (LIMO))	• One (1) record for Pierces Corners Landfill with ECA/Instrument number A461201 and reported closed operation. Noted in the Township of Rideau, which is located to the southwest of the Site and outside the Phase One Study Area
Lots 8,9,10,11,12, Concession 3 Ottawa, Ontario	Permit to Take Water (PTTW)	• Three (3) permits registered to Mattamy (Half Moon Bay) Limited, two (2) in 2009 and (1) in 2016
Lot 10 Concession 3 Ottawa (Nepean), Ontario	Abandoned Aggregate Inventory (AAGR)	• One (1) record for an aggregate pit, located approximately 500 m south of the Site
Lot 10 Concession 3 Ottawa (Cumberland), Ontario	Lot 10 Concession 3 Ottawa, Ontario	• One (1) record for a historic and closed landfill (MECP No. X9015, located in historic township of Cumberland to the northeast of the Site and outside the Phase One Study Area)

For the databases reviewed above, no other pertinent records were identified within the Phase One Study Area.

No records were identified in the databases searched for properties within the Phase One Study Area that pertain to; the National Pollutant Release Inventory, PCB Information (National PCB Inventory and Inventory of PCB Storage Sites databases), inventory of coal gasification plants, records of site condition and certificate of property use.

As part of the ERIS database report review SLR also reviewed the City of Ottawa "*Old Landfill Management Strategy, Phase I - Identification of Sites, City of Ottawa, Ontario"* document, prepared by Golder Associates, dated October, 2004, City of Ottawa *"Old Landfill Management Strategy – Active, Recently Closed, Old or Private Waste Disposal Sites which were not part of the Study Completed by Golder Associates*" memo, prepared by Golder Associates, dated January 21, 2003 and the City of Ottawa, OpenData Former Landfills Interactive map application.

Based on available information the aggregate pit and landfills noted above and associated with Lot 10 Concession 3, Ottawa, Ontario and Part of Lot 11, Concession 3 Ottawa, Ontario were located beyond the Phase One Study Area and would not lead to a PCA in the Phase One Study Area or the existence of an APEC at the Phase One Property.

The three (3) permits to take water for Mattamy (Half Moon Bay) Limited, between 2009 and 2016 are presumed to be associated with the Half Moon Bay area which encompassed the Site and included the lands to the north, west and south (across Cambrian Road) of the Site at that time. No other details were provided and it is unknown if the permits are still active.

No other relevant records were identified in the databases searched for properties within the Phase One Study Area that pertain to environmental incidents, orders, offences, spills, discharges of contaminants or inspections that would lead to a PCA in the Phase One Study Area or the existence of an APEC at the Phase One Property.

The pipeline incident record above at Chimney Corner Terrace is located a significant distance (230 m to the north) from the Site in a down/cross-gradient location such that it would not lead to a PCA in the Phase One Study Area or the existence of an APEC at the Phase One Property.

4.2.3 Areas of Natural Significance

SLR reviewed the Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMNRF) Natural Heritage Area map and Land Information Ontario Area of Natural & Scientific Interest (ANSI) map and did not identify any areas of natural significance in the Phase One Study Area.

In addition, ERIS obtained information pertaining to areas of natural significance located within the Phase One Study Area, sourced from the Ontario Ministry of Natural Resources ANSI map included in **Appendix C**. No Areas of Natural & Scientific Interest were identified by ERIS in the Phase One Study Area.

4.2.4 Technical Standards and Safety Authority

SLR contacted the TSSA regarding the Phase One Property and selected surrounding properties on October 26, 2022, to inquire about records of registered fuel tanks, which may include compliance orders, incident reports, inspection records, spills or records of contamination or specifications of the registered fuel tanks.

A response from the TSSA, dated October 26, 2022, indicated that no records were found on the Phase One Property, or the surrounding properties searched.

4.2.5 Ontario Ministry of the Environment, Conservation and Parks

SLR contacted the MECP Freedom of Information and Privacy Office regarding the Phase One Property on November 7, 2022. The MECP response is strictly limited to a search of available records including environmental concerns (general correspondence, occurrence reports or abatement), orders, historical spills and investigations/prosecutions. A response from the MECP, dated January 20, 2023, indicated that several records including incident reports and Permit to Take Water Inspection Reports were found for the Half Moon Bay area which encompassed the Site and included the lands to the north, west and south (across Cambrian Road) of the Site. The reports, dated between 2008 and 2016, detail the construction dewatering activities that were occurring within the Half Moon Bay area during development of the area for the residential subdivision. Based on a review of the Permit to Take Water (Number 8167-7K7RQV),

the permit expired on March 31, 2016, and no further permitting to take water was authorized or detailed within.

A copy of the MECP response is included in **Appendix C.**

4.2.6 City of Ottawa's Planning, Real Estate and Economic Development Department

SLR contacted the City of Ottawa's Planning, Real Estate and Economic Development Department for a search of the Historic Land Use Inventory (HLUI) for records associated the Phase One Property on November 11, 2022. The response is strictly limited to a search of available environmental records related to the Phase One Property with respect to its usage and environmental matters such as: contaminant discharge, orders and spills, waste disposal sites, storm sewer use, by-law infractions and abatement.

A response from the City of Ottawa, dated December 23, 2022, was provided to SLR for review and appeared incomplete as the referenced area, point and line features associated with findings from the HLUI were not included. The referenced map provided did not have any records associated with the area provided. SLR requested clarification from the City of Ottawa's Planning, Real Estate and Economic Development Department, however, no response has been received at this time. The provided letter indicated that environmental records for the Site and/or surrounding properties within the Phase One Study Area were available through the City of Ottawa's Environmental Remediation Unit.

A copy of the correspondence with the City of Ottawa's Planning, Real Estate and Economic Development Department with respect to the HLUI records search is included as **Appendix C.**

4.2.7 City of Ottawa's Access to Information and Privacy Office

SLR contacted the City of Ottawa's Access to Information and Privacy Office regarding the Phase One Property on January 25, 2023, and requested a search of all available environmental records within. the Phase One Study Area including a search of records within the City of Ottawa's Environmental Remediation Unit. At the time of writing this report no response had been received.

A copy of the City of Ottawa's Access to Information and Privacy Office acknowledgement letter is included in **Appendix C.**

4.2.8 City Directories

City directories were obtained from ERIS and reviewed by SLR. The city directory information source was the Vernon's Ottawa, Ontario City Directory and occupant details for the Site and surrounding properties within the Phase One Study Area was provided by ERIS in approximately 4 year intervals between 1992 and 2011. A summary of the directory listings is below:

- The Phase One Property was not listed in the city directories reviewed; and,
- There were no relevant findings within the city directories reviewed.

A copy of the city directories obtained from ERIS is included in **Appendix C.**

4.2.9 Opta Records

SLR initiated a search with Opta for insurance reports and insurance plans (i.e., property underwriters' reports and property underwriters' Site plans) for the Site and any FIPs within the Phase One Study Area (see Section *4.1.3 Fire Insurance Plans*).

None of the records noted above were found by Opta.

A copy of the Opta search results and report indicating no records found is included in **Appendix C.**

4.3 (c) Physical Setting Sources

4.3.1 (i) Aerial Photographs

SLR reviewed aerial photographs and Satellite photos covering the Phase One Study Area between 1946 and 2021 (generally one every decade). Aerial imagery for the years of 1946 and 1963 were obtained from ERIS (originally sourced from the National Air Photo Library) and for the years between 1976 to 2021 were obtained through the City of Ottawa's GeoOttawa website or Google Earth.

A summary of the aerial photography and satellite imagery review is provided in the table below:

Table H: Summary of Aerial Photographs

Year	Site	Adjacent and Surrounding Properties
1946	• The Site appears to be an undeveloped (forested) land.	• The surrounding properties appear to be used as rural agricultural properties with cultivated fields to the north and east of the Site. To the south of the Site there is a road in similar location to current day Cambrian Road followed by undeveloped woodlands. The properties to the west of the site appear to be undeveloped woodlands.
1963	• A channelized watercourse (presumed West Clark Drain) appears along the north and east portions of the Site.	• The surrounding properties appear to be similar to the 1946 aerial photograph.
1976	• The eastern portion of the Site appears to be used as an agricultural property (portion of a cultivated field).	• The surrounding properties appear to be similar to the 1963 aerial photograph.
1991	• The Site appears similar to what was observed in the 1976 aerial photograph.	• The surrounding properties appear to be similar to the 1976 aerial photograph.
1999	• The Site appears similar to what was observed in the 1991 aerial photograph.	• The surrounding properties appear to be similar to the 1991 aerial photograph.
2002	• The Site appears similar to what was observed in the 1999 aerial photograph.	• The surrounding properties appear to be similar to the 1999 aerial photograph.
2004	• The Site appears similar to what was observed in the 2002 aerial photograph.	• The surrounding properties appear to be similar to the 2002 aerial photograph.
2005	• The Site appears similar to what was observed in the 2004 aerial photograph.	• The surrounding properties appear to be similar to the 2004 aerial photograph.

Year	Site	Adjacent and Surrounding Properties
2008	• Earthworks including the presumed removal of topsoil and grading of the Site. Topsoil stockpiles or excavated areas filled with water are present at the central and west portions of the Site due to stripping and presumed excavation activities. Fill piles are present across the Site. The West Clark Drain is more prominent along the north and east portions of the Site.	• Earthworks and soil movement activities occurred in advance of construction on the nearby residential subdivisions and vacant land to the north, east, south and west. • Mounded stockpiled soil can be seen on the properties adjacent to the east and north of the site. Trees have been cut down on the property located to the south of the Site.
2009	• The Site appears to be used as parking for trucks and an access roadway for construction vehicles (temporary road) traversing from the southeast to the northwest ad in use for the development of the adjacent properties. • Fill materials (presumed gravel and stone) from development within the Phase One Study Area can be seen on the west, central and south portions of the Site.	• To the east Seeley's Bay Street, residential properties are under construction along Seeley's Bay Street and several residential properties have been constructed along Cambrian Road. • Adjacent properties to the north, east and west of the site have been graded. Mounded piled soil and ponds filled with water can be seen on the properties adjacent to the south of the Site.
2011	• Soil and gravel stockpiles can be seen on the eastern portion of the Site. The parking and access roadways appear removed	• Properties adjacent to the west and south have undergone re-grading. The land of the property adjacent to the east of the Site has been graded and construction materials is present at the southeast portion of the property.
2012	• The Site appears similar to what was observed in the 2011 aerial photograph.	• Earthworks and soil movement has occurred in advance of construction on the nearby residential subdivision to the north and west and further to the east (beyond Seeley's Bay Street. • To the east of the Site, residential properties have been constructed along Seeley's Bay Street.
2013	• A road has been constructed on the eastern portion of the Site (east of the West Clark Drain). • Mounded stockpiled soil and gravel can be seen on Site at the central and west portions of the Site.	• Mounded stockpiled soil and gravel can be seen on the property adjacent to the south of the Site. • A road has been constructed adjacent to the east of the Site traversing to the north and south.
2014	• The Site appears similar to what was observed in the 2013 aerial photograph.	• The surrounding properties appear to be similar to the 2013 aerial photograph.
2015	• The Site appears similar to what was observed in the 2014 aerial photograph.	• The property adjacent to the south of the Site appears to have undergone re-grading.

Year	Site	Adjacent and Surrounding Properties
2016	• The Site appears similar to what was observed in the 2015 aerial photograph.	• To the west of the Site a road has been constructed in similar location to current day Aphelion Crescent. • Mounded stockpiled soil and gravel can be seen on a property to the northeast of the Site.
2017	• The Site has undergone re-grading. A stockpile of soil and gravel can be seen in the centre of the Site and an asphalt pad (presumed parking pad) is located at the southeast portion of the Site.	• The properties adjacent to the south and west of the Site appears to have undergone re-grading. • Gravel fill stockpiles can be seen on the property to the southeast of the Site. • A stormwater drainage pond can be seen to the northwest of the property. • Portions of the West Clark Drain have been realigned and are located west of the Site connecting to the north portion of the channel onsite.
2018	• The Site has undergone re-grading. Piles of soil and gravel can be seen in the centre and north portions of the Site. • The portions of the West Clark Drain on the Site appear to have been filled with soil.	• The adjacent properties have undergone further re-grading and earthworks movement.
2019	• The Site has undergone re-grading. No evidence of the West Clarke Drain is observed on the Site.	• Properties adjacent to the west of the Site are developed with residential buildings and parkland is present. • The West Clark Drain has been delivered approximately 150 m to the west of the Site. • There has been residential development of the lands to the west, northwest, and northeast of the Site. • A commercial building (Mattamy homes sales centre) can be observed to the south of the Site along with several shipping containers.
2020	• The Site have undergone levelling and no fill piles are clearly evident on the Site. The road located on the eastern portion of the Site has been removed.	• Properties adjacent to the north of the Site have gone under construction of residential buildings. • A temporary roadway (for development access) is present adjacent to the east of the Site) • Several Residential buildings have been constructed to the north of the Site.

Year	Site	Adjacent and Surrounding Properties
2021	• The Site appears similar to what was observed in the 2020 aerial photograph.	• Residential properties have been constructed adjacent to the north of the Site. • The remaining surrounding properties appear similar to what was observed in the 2020 aerial photograph.

In summary, a review of historical aerial photography corresponds with the information received during Site reconnaissance and records review. Historically, the Site was forested land and part of an agricultural property from at least the mid-1940s to 2008. The surrounding properties were generally used for agricultural purposes with cultivated fields or forested land. Residential development occurred to the north and west of the Site in the late 2010s.

The Site remains relatively unchanged throughout its history based on the aerial photographs, with the exception of earthworks in support of construction of the nearby residential development which began in 2008. The surrounding properties adjacent to the north and west and further to the east across a temporary roadway and vacant land are developed with residential properties starting in 2010.

The aerial photographs provided by ERIS and National Air Photo Library are included in **Appendix D.**

4.3.2 (ii) Topography, Hydrology, Geology

4.3.2.1 Regional and Site Topography

In general, the Site has a gentle slope to the southwest, however, on the east portion of the Site a slope was observed to be trending north to south and sloping to the west. Regionally, the Phase One Study Area gently sloped to the north towards the Jock River identified approximately 730 m north of the Site. According to the Plan of Survey provided by the Client (**Appendix B**), completed by Annis O'Sullivan Vollebekk Ltd. dated October 21, 2022, elevations at the Site ranged from approximately 94.63 m at the northeast portion of the Site to approximately 92.29 m at the southwest portion of the Site as referenced to the geodetic datum derived from control monument No. 019680071 having an elevation of 99.74 metres.

According to ERIS Ontario Base Mapping (OBM) Data – Physiography of Southern Ontario Map in **Appendix C,** the Site is located in a physiographic region consisting of Clay plains.

A depiction of topographic information is presented on the Site Location and Surrounding Land Use plan in **Figure 1** in **Appendix A.** In addition, the Atlas of Canada (Natural Resources Canada) topographic map (031G04) and a topographic map provided by ERIS are included in **Appendix E.**

4.3.2.2 Regional Geology

Regional surficial and bedrock geology information was obtained from ERIS which was sourced from the Ontario Geological Survey (OGS).

The OGS map provided by ERIS (see **Appendix C**) indicates that surficial soils at the northeast portion of the Site consisted of offshore marine deposits (comprised of clay, silty clay and silt with minor sand). The remaining portion of the Site comprised of organic deposits (peat, muck, fens, swamps).

The regional bedrock geology, as indicated on the OGS map provided by ERIS (see **Appendix C**), is of Beekmantown Group from the Ordovician period characterized by dolostone and sandstone.

Based on a review of borehole logs for boreholes completed within the Phase One Study Area and Half Moon Bay area, provided within the 2021 Paterson Geotechnical Investigation report, subsurface material encountered generally consisted of silty sand to approximately 4.5 mbgs followed by silty clay until the maximum termination depth of 14.78 mbgs on the Site and a depth of 21.95 mbgs within a borehole located approximately 550 m to the west of the Site. A borehole located immediately adjacent to the southeast of the Site had silty clay which extended to a maximum depth of 15.70 mbgs. Bedrock was not encountered in these boreholes nor was it identified in the other boreholes investigated within the Half Moon Bay area as part of the 2021 Paterson Geotechnical Investigation. Based on the above it would be anticipated that bedrock within the Phase One Study Area would be encountered at a depth of more than 15.70 mbgs.

4.3.2.3 Regional Hydrogeology

No water bodies were identified within the Phase One Study Area. The nearest water body is the Jock River which is located approximately 730 m north of the Site. The Jock River flows east before discharging into the Rideau River. Based on the above, the regional groundwater is inferred to flow north towards the Jock River. The inferred groundwater flow direction is presented on Figures presented in **Appendix A.**

Based on a review of the 2021 Paterson Geotechnical Investigation report, the groundwater level in a monitoring well located at the southwest portion of the Site was measured at 4.43 m on April 9, 2008 and measured to be 350 mm above grade in the monitoring well located at the northeast portion of the Site on February 5, 2007. These monitoring wells appear to have been removed from the Site.

4.3.3 (iii) Fill Materials

Fill material was likely used on the Site for grading purposes and infilling of the former West Clarke Drain located at the north and eastern portion of the Site. A review of air photos between 2008 and 2020 show various fill piles across the Site which appear to be reworked, re-piled or removed and replaced at the Site with no clear systemic approach. Based on a review of the 2021 Paterson Geotechnical Investigation report, fill materials including peat and topsoil was identified to a depth of 3.20 mbgs in the borehole drilled at the southwest portion of the Site.

At the time of the site visit (see Section 6.0), the ground surface of the Phase One Property was notably uneven and mounds of suspected fill materials (soil and rock) were present across the Site.

4.3.4 (iv) Water Bodies, Areas of Natural Significance & Ground Water Information

4.3.4.1 Water Bodies

No water bodies were observed on the Phase One Property or within the Phase One Study Area. The nearest water body is the Jock River which is located approximately 730 m to the north of the Site and flows to the east, eventually discharging into the Rideau River (located approximately 3.4 Km east of the Site outside the Phase One Study Area).

Several low-lying areas, with mudcracked surface soils and cattails (a type of aquatic to semi-aquatic perennial plant), were present within the western and southwestern portions of the Site at the time of the site visit (see Section 6.0). The low-lying areas did not contain standing water at the time of the site visit, but based on the observations made (i.e., mudcracked soils and cattails), these areas are anticipated to collect and contain water occasionally and temporarily, based on seasonal fluctuations.

4.3.4.2 Areas of Natural Significance

As previously discussed, SLR reviewed the MNDMNRF Natural Heritage Area map and Land Information Ontario ANSI map and did not identify areas of natural significance in the Phase One Study Area.

In addition, ERIS obtained information pertaining to areas of natural significance located within the Phase One Study Area, sourced from the Ontario Ministry of Natural Resources ANSI map included in **Appendix C**. No Areas of Natural & Scientific Interest were identified by ERIS in the Phase One Study Area.

4.3.4.3 Groundwater Information

The Site and select surrounding properties were undeveloped with no buildings or structures and are not municipally serviced at this time. At surrounding properties where development has been completed, a municipal service connection is reportedly present. Wells were not required to supply potable water to the Site or properties within the Phase One Study Area. No potable water wells were observed on the Phase One Property or neighbouring properties at the time of the site visit (see Section 4.3.5 for additional details); however, one water well (presumed monitoring well) was observed at the Phase One Property during the site visit at the north-central portion of the Site. The well was housed in a monument casing affixed with a well tag (identification number 251203). No construction or registration details were available for this well based on a review of the Water Well Information System database within the ERIS Database Report or the MECP Well Records database. Based on observations it is considered unlikely that this observed well supplies water used for human consumption or an agricultural use.

No well-head protection areas were identified within the Phase One Study Area based on the information reviewed including the City of Ottawa Official Plan.

4.3.5 (v) Well Records

According to the ERIS Database Report, approximately one (1) well record for a well with no reported specific use was identified within the Phase One Study Area and located approximately 240 m to the south of the Site. Additional detail regarding the well locations and construction, stratigraphy of the overburden, from ground surface to bedrock (if present), depth to the water table (if found) and the wells purpose is included in the ERIS Database Report in **Appendix C**.

As noted above, no potable water wells were observed on the Phase One Property or neighbouring properties at the time of the site visit (see Section 6.2); however, one water well (presumed monitoring well) was observed at the Phase One Property during the site visit at the north-central portion of the Site. The well was housed in a monument casing affixed with a well tag (identification number 251203). No construction or registration details were available for this well based on a review of the Water Well Information System database within the ERIS Database Report or the MECP Well Records database. Based on observations it is considered unlikely that this observed well supplies water used for human consumption or an agricultural use.

Available well records within the Phase One Study Area did not include details regarding stratigraphy, depth to bedrock or depth to the approximate water table.

Wells identified in the ERIS Database report and the monitoring well observed during the site visit are depicted on **Figure 2** in **Appendix A**.

4.4 (d) Site Operating Records

The Phase One Property is an undeveloped/vacant land parcel. No building or structure appears to have ever been present at the Site based on available information to date. The Site has never operated as a garage, a bulk liquid dispensing facility, including a gasoline outlet, or for the operation of dry cleaning equipment. In addition, based on the records review, the Site has never been used in whole or in part for industrial use. Based on the above, the Phase One Property is not considered an enhanced investigation property as defined under O.Reg. 153/04 (as amended). As such, no site operating records/documents were reviewed as part of this Phase One ESA.

5.0 Interviews

Email correspondence with Phase One Property ownership representatives (Ms. Tracy Mills, Senior Director, Retail Property & Asset Management at Choice) regarding past and present environmental issues at the Phase One Property on November 14, 2022, following the Site reconnaissance did not identify potentially contaminating activities in the Phase One Study Area or areas of potential environmental concern at the Site.

In addition, a telecommunication interview, to discuss past and present environmental issues at the Phase One Property via a telephone conversation, was conducted with Mr. Patrick McNamara, EPt (Environmental Health & Safety Specialist) of Choice (Phase One Property ownership representative) on January 16, 2023. This interview did not identify potentially contaminating activities in the Phase One Study Area or areas of potential environmental concern at the Site.

Phase One Property ownership representatives did not have any records pertaining to environmental issues at the Site. Information obtained from the above noted interview is considered valid as the contacted representatives are authorized representatives of the current Site ownership.

6.0 Site Reconnaissance

6.1 (a) General Requirements

The site reconnaissance at the Phase One Property was completed on November 2, 2022 (from approximately 09:00 to 11:00 Eastern Standard Time). The weather was generally clear and sunny with an approximate ambient air temperature between 10 degrees Celsius (°C) and 15°C. Ms. Rebecca Hardie, P.Geo., QP(ESA) of SLR conduced the site visit and was provided full access to the Phase One Property. SLR was unaccompanied during the site visit.

The Phase One Property consisted of undeveloped/vacant land and was generally covered with vegetation. There were no buildings or structures on the Phase One Property at the time of the site visit and as such there were no facility operations. The Site is not considered an enhanced investigation property as defined under O.Reg. 153/04 (as amended) as previously discussed in Section 4.4.

Additional observations and site features noted during the site reconnaissance are described in further detail in the following sections. Photographs of the Phase One Property and surrounding areas taken during the site reconnaissance, along with detailed descriptions of the photographs are provided in **Appendix F.** Site plans are presented in the **Figures** in **Appendix A.**

6.2 (b) Specific Observations at the Phase One Property

Building and Structure Details, Surface Features and Other Observations

There were no buildings or structures on the Phase One Property at the time of the site visit. The majority of the site was secured by a wire fence, with fencing present along the eastern property boundary and in the vicinity of the western and southern property boundaries.

Ground surface cover at the Phase One Property consisted of soil (gravel to silty sand with clay) and vegetation (grass, shrubs, common burdock, cattails and cat tail grasses) across the site. In areas where gravel content was higher in the surface soil, stressed vegetation was present (presumed stockpiling of fill materials).

The Phase One Property had an uneven ground surface at the time of the site visit and a slope was observed centrally on site, trending north to south and sloping to the west, in the area of the former Clarke Drain.

A storm drain and sanitary manhole were observed on the Phase One Property, located at the south-central portion of the Site. Both were raised above the surface grade at the time of the site visit.

The Site is accessed off Cambrian Road via a gravel access path at the southeast portion of the Site.

No evidence of spills or stained areas, potable water sources, railway lines or spurs were identified at the Phase One Property at the time of the site visit. In addition, no unidentified substances were observed at the Phase One Property during the site visit or reported by the Site representatives.

Other Below or Underground Structures

Other than the storm drain and sanitary manhole mentioned above, no below ground structures, drains, pits, or sumps were observed on the Phase One Property at the time of the site visit.

Above Ground Storage Tanks

No above ground storage tanks (ASTs) were observed on the Phase One Property at the time of the site visit.

Underground Storage Tanks

No underground storage tanks (USTs) were observed on the Phase One Property at the time of the site visit.

Fill Materials and Debris

At the time of the site visit, the ground surface of the Phase One Property was notably uneven and mounds of suspected fill materials (soil and rock) were present across the Site and are likely evidence of fill material. Fill material was likely used on the Site for grading purposes and infilling of the former West Clarke Drain located at the north and east portions of the Site. Debris and domestic waste were observed on Site at the time of the Site visit.

Wells

No potable water wells were observed in the accessed areas of the Phase One Property at the time of the site visit. One water well (presumed monitoring well) was observed at the Phase One Property during the site visit at the north-central portion of the Site. The well was housed in a monument casing affixed with a well tag (identification number 251203). Based on observations it is considered unlikely that this

observed well supplies water which would be used for human consumption or an agricultural use. The location of the monitoring well observed during the site visit is depicted on **Figure 2** in **Appendix A**.

Underground Utilities and Service Corridors

Other than the storm drain and sanitary manhole mentioned above, no other underground utilities or service corridors were observed on the Phase One Property at the time of the site visit or reported by the Site representatives.

Chemical Storage Areas

No chemical storage areas were observed on the Phase One Property at the time of the site visit.

Hazardous Waste

No hazardous waste was observed on the Phase One Property at the time of the site visit.

Solid (Non-Hazardous) Waste

The Site is not anticipated to generate solid non-hazardous waste as it is currently undeveloped.

Some domestic refuse was observed on the Phase One Property at the time of the site visit, including plastic and glass bottles, wood, metal and plastic debris.

Several landscaping boulders of various sizes were also observed on the Phase One Property at the time of the site visit.

Water, Wastewater and Storm Water

A storm drain and sanitary manhole were observed on the Phase One Property, located along the southern fence line. Both were raised above the surface grade at the time of the site visit.

No potable water sources were observed at the time of the site visit.

Pits, Ponds, or Lagoons

No pits, ponds, lagoons or other surface water features were observed at the Site during the site reconnaissance, however, several low-lying areas, with mudcracked surface soils and cattails (a type of aquatic to semi-aquatic perennial plant), were present within the western and southwestern portions of the Site at the time of the site visit. The low-lying areas did not contain standing water at the time of the site visit, but based on the observations made (i.e., mudcracked soils and cattails), these areas are anticipated to collect and contain water occasionally and on a temporary basis, based on seasonal fluctuations.

Air Emissions

No sources of air emissions were identified at the Phase One Property at the time of the site visit.

Pesticides

The use of pesticides may have occurred at the Site, based on the historical agricultural use of the east portion of the Phase One Property, however no information or observations of pesticide storage, use, registration or releases were documented or reported. Pesticides when applied to surfaces tends to remain in surface soils and would be relatively insoluble in water/groundwater. The potential for environmental concern to the Site from pesticide use during agricultural property use of the Site is considered unlikely due to the earthworks and suspected removal of surficial soils at the Site. Residual

pesticides expected to remain in the surface soils would have been removed/displaced during the above processes at the Site.

Designated Substances and Other Hazardous Materials

There were no buildings or structures on the Phase One Property at the time of the site visit; therefore, no designated substances or other hazardous materials (i.e., asbestos-containing materials [ACMs], lead containing materials, polychlorinated biphenyls [PCBs], mercury, Urea Formaldehyde Foam Insulation [UFFI], ozone-depleting substances or halocarbon alternatives or mould) were identified at the Phase One Property at the time of the site visit. Radon is not expected to accumulate at the Phase One Property as there are no buildings or structures present.

Potentially Contaminating Activities

The quality of fill material imported to the Site for grading and leveling purposes, temporary road construction and to backfill the West Clark Drain is unknown and is a PCA on the Site as detailed further below.

No other potentially contaminating activities (including a garage, service stations or dry-cleaning operations) were observed on the Phase One Property at the time of the site visit.

6.2.1 (i) Enhanced Investigation Property

There is no indication in the current or historical records of the Phase One Property that it had ever been used; for any industrial activities/uses, as a garage (automobile or other vehicle servicing), as a bulk liquid dispensing facility (gasoline station/service station or retail fuel outlet [RFO]) or for the operation of dry-cleaning equipment.

Based on the above, the Phase One Property is not considered an enhanced investigation property as defined under O.Reg. 153/04 (as amended).

6.3 (c) Written Description of Investigation

This Phase One ESA was conducted and/or supervised by a Qualified Person for Environmental Site Assessments and pursuant to Sections 13 and 14 of Schedule D of O. Reg. 153/04 included investigations of the Phase One Property and Phase One Study Area as described above and further below.

The main objective of these investigations was to identify, to the extent feasible pursuant to the scope of work previously discussed (see Section 3.0), APECs on, in or under the Phase One Property as a result of PCAs identified on the Phase One Property or on surrounding properties within the Phase One Study Area that may have had an adverse effect on the Site.

The Phase One ESA included a historical records review that included but was not limited to previous environmental reports, an ERIS Database Report, chain of title search and aerial photographs as previously detailed. A site reconnaissance was completed at the Phase One Property following a review of the historical records and included an observation of adjacent and neighbouring properties where visible from publicly accessible areas to identify current land uses any potentially contaminated activities. Interviews were completed with persons knowledgeable about the current and historical uses of the Phase One Property.

6.3.1 Observations within the Phase One Study Area

At the time of the Site reconnaissance the Phase One Property was bounded to the north and west by residential properties and to the south (across Cambrian Road) by undeveloped/vacant land parcels as well as a Mattamy Homes Sales Centre (temporary commercial property). Adjacent to the east of the Site is a temporary roadway used for the construction of the new developments to the north and east of the Site which is to be converted to a permanent roadway in the future (future Greenbank Road as part of the proposed roadway realignment).

The following pertinent observations were made at the time of the site visit:

- A Mattamy Homes Sales Centre, along with a sales building, office trailer and several shipping containers (presumed for storage), were observed to be located approximately 25 m to the southwest of the Phase One Property (across Cambrian Road). The vacant land to the south and southwest of the Mattamy Homes Sales Centre was undeveloped and contained several soil piles (presumed fill materials);
- Undeveloped land was located approximately 25 m to the southeast of the Phase One Property (across Cambrian Road). A large soil pile was observed to be present on the otherwise vacant property. The soil pile was located approximately 50 m to the southeast of the Phase One Property;
- A concrete pad-mounted transformer was observed to the west of the Site at the time of the site visit and was located on the adjacent property to the west of the Site along the boulevard of Aphelion Crescent. No oil staining was observed on the concrete pad associated with this transformer at the time of the site visit;
- An irregular patch of asphalt pavement was observed at the time of the site visit, located to the immediate south of the Phase One Property, located within the assumed easement between the Phase One Property and Cambrian Road;
- No relevant chemical storage areas, significant hazardous waste storage areas, USTs or other tanks were observed on the adjacent and neighbouring properties in the Phase One Study Area from publicly accessible areas.

Selected photographs of the activities on surrounding properties are provided in **Appendix F.**

Water Bodies

No water bodies were observed within the Phase One Study Area at the time of the site visit.

A stormwater management pond was observed within the Phase One Study Area, located approximately 200 m to the northwest of the Phase One Property.

Wells

No potable drinking water wells were identified within the Phase One Study Area at the time of the site visit.

Areas of Natural Significance

As previously discussed, SLR reviewed the MNDMNRF Natural Heritage Area map and Land Information Ontario ANSI map and did not identify areas of natural significance in the Phase One Study Area.

In addition, ERIS obtained information pertaining to areas of natural significance located within the Phase One Study Area, sourced from the Ontario Ministry of Natural Resources ANSI map included in **Appendix C**. No Areas of Natural & Scientific Interest were identified by ERIS in the Phase One Study Area.

Furthermore, according to the City of Ottawa Official Plan there were no areas of natural significance or environmentally sensitive areas within the Phase One Study Area.

Potentially Contaminating Activities

Further to the details provided above, the findings that are relevant to the existent of a PCA in the Phase One Study Area and associated APEC (if any) are described in the following section.

6.3.2 Deviations, Limitations and Uncertainties

There were no deviations from the scope of work or limitations that would alter the conclusions of the Phase One ESA.

Aerial photographs provide a snapshot of potentially contaminating land uses or features present on the Phase One Property and within the Phase One Study Area. There are uncertainties related to the use of the aerial photographs as the quality of some aerial photographs may also allow some features to be clearly identified. Professional judgment was used to relate the historical features identified in the aerial photographs to present day locations. The aerial photographs were generally used to assist in determining major renovations and building decommissioning.

There are uncertainties related to the historical reports/records as it is possible that the authors did not identify potential environmental concerns or land use that was present during their site reconnaissance. Nonetheless, the historical reports and operating records were beneficial in identifying potential environmental concerns that may have not been possible to identify through other means.

Municipal addresses are known to change, and historical addresses may not necessarily have been in the same location as a property today with the same address. Best judgment was used to link historical municipal addresses from the city directories to areas within the Phase One Property and Phase One Study Area; however, the accuracy of all addresses has not been confirmed. Maps and information provided in historical reports, as well as aerial photographs, were used in an effort to verify the current day location of historical addresses.

The individuals interviewed as part of the Phase One ESA were selected based on their knowledge of the current and past activities at the Phase One Property and Phase One Study Area, and their availability. There is uncertainty related to the information provided by these individuals, as some information could be based on personal opinion. Professional judgment was employed, and information provided in the interviews was corroborated with documented sources, where possible. Previous interview information included in historical reports was used as appropriate and available.

SLR conducted the site visit and were provided full access to the Phase One ESA Property. There is little uncertainty related to the site reconnaissance, as the observations were made directly by SLR personnel. Photographs and detailed notes were taken during the site reconnaissance to document the current conditions of the Phase One Property and Phase One Study Area. The records review was completed before the site reconnaissance to allow identified uncertainties related to the historical information to be verified in the field (where possible).

Determination of groundwater flow direction was based a review of topographical and hydrological features at the Phase One Property or within the Phase One Study Area. It is anticipated that the

groundwater flows in an inferred north direction towards the Jock River which is located approximately 730 m to the north of the Site, which flows to the east before eventually discharging into the Rideau River (located approximately 3.4 Km east of the Site outside the Phase One Study Area). Foundations, buried utilities/services, subsurface drainage (including septic) systems and zones of local, natural high permeability soils (sand seams/lenses and fissures), fractured bedrock and zones of buried rubble (concrete and building stone, metal) may significantly alter groundwater movement. It is expected that groundwater levels would seasonally fluctuate, and groundwater levels may be different, if monitored at different points in time.

At the time of issuance of this report, a complete response had not been received from the City of Ottawa's Planning, Real Estate and Economic Development Department regarding a search of the Historic Land Use Inventory (HLUI). In addition, SLR contacted the City of Ottawa's Access to Information and Privacy Office and no response has been received at this time. When responses are received, the Client will be informed and report updated if the information alters the conclusions of the report.

7.0 Review and Evaluation of Information

7.1 (i) Current and Past Uses

The current and past uses of the Phase One Property are outlined in the following table:

Table I: "Table of current and past uses of the Phase One Property" (Refer to clause 16(2)(b), Schedule D, O. Reg. 153/04) (PIN 04595-2080)

Year	Name of Owner	Description of Property Use	Property Use[1]	Other observations from aerial photographs, fire insurance plans, etc.
Prior to 1801	The Crown	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title
1801 - 1855	Archibald Crast	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title
1855 – 1856	Archibald Fraser	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title
1856 - 1856	James Burke	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title
1856 - 1870	"Matheson"	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title.
1869 – 1923	William Clarke, Helena Clarke	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title
1870 – 1922	Michael Clarke	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title
1922 - 1940	Cornelius Clarke	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title

Year	Name of Owner	Description of Property Use	Property Use[1]	Other observations from aerial photographs, fire insurance plans, etc.
1940 – 1946	Thomas Clarke	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title and aerial photographs
1946 – 1965	Alice Clarke	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title and aerial photographs
1965 – 1980	Joseph Cornelius Clarke, James Clarke	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title and aerial photographs
1980 – 2004	Joseph Cornelius Clarke	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title and aerial photographs
2004 – 2008	1527423 Ontario LTD.	Under development, prepped for commercial use	Commercial use	Information from Chain of title and aerial photographs
2008 - 2018	Mattamy (Half Moon Bay) Limited	Under development, prepped for commercial use	Commercial use	Information from Chain of title and aerial photographs
2018 to present	CP REIT Ontario Properties Limited	Under development, prepped for commercial use	Commercial use	Information from Chain of title, aerial photographs and site reconnaissance

1 – For Each owner, specify one of the following types of property use (as defined in O. Reg. 153/04) that applies:
Agriculture or other use; Commercial use; Community use; Industrial use, Institutional use, Parkland use, Residential use

Table J: "Table of current and past uses of the Phase One Property" (Refer to clause 16(2)(b), Schedule D, O. Reg. 153/04) (PIN 04595-2078)

Year	Name of Owner	Description of Property Use	Property Use[1]	Other observations from aerial photographs, fire insurance plans, etc.
Prior to 1801	The Crown	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title
1801 - 1855	Archibald Crast	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title
1855 – 1856	Archibald Fraser	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title
1856 - 1856	James Burke	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title
1856 - 1870	“Matheson”	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title.

Year	Name of Owner	Description of Property Use	Property Use[1]	Other observations from aerial photographs, fire insurance plans, etc.
1869 – 1923	William Clarke, Helena Clarke	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title
1870 – 1922	Michael Clarke	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title
1922 - 1940	Cornelius Clarke	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title
1940 – 1946	Thomas Clarke	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title
1946 – 1946	Alice Clarke	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title and aerial photographs
1946 – 1988	Mildred Mary Clarke, Thomas Clarke	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title and aerial photographs
1988 – 1989	Walter Joseph Cornelius Neil Clarke	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title and aerial photographs
1989 – 2004	836411 Ontario LTD.	Undeveloped and agricultural land	Agriculture or other use	Information from Chain of title and aerial photographs
2004 - 2019	Mattamy (Half Moon Bay) Limited[2]	Under development, prepped for commercial use	Commercial use	Information from Chain of title and aerial photographs
2019 to present	CP REIT Ontario Properties Limited	Under development, prepped for commercial use	Commercial use	Information from Chain of title, aerial photographs and site reconnaissance

1 – For Each owner, specify one of the following types of property use (as defined in O. Reg. 153/04) that applies:
Agriculture or other use; Commercial use; Community use; Industrial use, Institutional use, Parkland use, Residential use

The Phase One Property has two active PINs. The summary of current and past uses of the Phase One Property were presented in two separate tables. The Site wholly owned by Mattamy (Half Moon Bay) Limited by June 18, 2008, and sold to CP REIT Ontario Properties Limited (the present owner) as of May 29, 2018. On July 16, 2010, Her Majesty the Queen in Right of Canada - Transport Canada enacted the airport zoning regulations on the Site (both PINs).

Based on a review of the available historical records including aerial photographs, city directories and the chain of title, the Phase One Property had historically been used as agricultural or other property use (largely undeveloped forested land) with a cultivated field on the eastern portion of the Site from at least

[2] Following ownership of the Site by 1150274 Ontario Inc., name of the corporation changed to 1734224 Ontario Inc., Mattamy (Francis/Boyce) Limited, and Mattamy (Half Moon Bay) Limited starting on August 11, 2004 to May 28, 2019.

1946 (based on a review of the 1946 aerial photograph) to the late 2000s. No building or structure appears to have ever been present at the Site based on available information to date. In 2008, the Site's topsoil and peat was removed, prepped for commercial use through grading including the construction of a gravel roadway (evidence of significant earthworks and construction activities) based on the 2008 aerial photograph and available historical records. As noted in the Chain of Title, previous ownership records suggest that the central and south and north portions of the Site were privately owned by various individuals prior to 1989 and 2004, respectively.

Based on available information, the widespread use of pesticides during the agricultural property use of the Site is considered unlikely. The majority of the Site appears to have always been heavily treed such that agricultural activities requiring the use of pesticides were unlikely to have occurred at this portion of the Site. The use of pesticides may have occurred based on the historical agricultural use of the east portion of the Phase One Property, however no information or observations of pesticide storage, use, registration or releases were documented or reported. Pesticides when applied to surfaces tends to remain in surface soils and would be relatively insoluble in water/groundwater. The potential for environmental concern to the Site from pesticide use during agricultural property use of the Site is considered low due to the earthworks and suspected removal of surficial soils at the Site. Residual pesticides expected to remain in the surface soils would have been removed/displaced during the above processes at the Site.

7.2 (ii) Potentially Contaminating Activity

The MECP provides a list of Potentially Contaminating Activities (PCAs) in Schedule D, O.Reg. 153/04.

PCAs, which have been identified at the Site (On-Site) and within the Phase One Study Area (Off-Site) are listed in the table below:

Table K: Potentially Contaminating Activity (PCA)

Potentially Contaminating Activity (PCA)[1]	Location of PCA (on-site or off-site)	Description
PCA 11 – Commercial Trucking and Container Terminals	On-site	Gravel roadways were constructed across the Site between 2008 and 2020 and subsequently removed or reworked during re-grading of the Site. In addition, the Site was used as a laydown area and an asphalt parking area was constructed and subsequently removed or buried at the south portion of the Site. A review of air photos between 2008 and 2020 identified commercial truck movement and storage at the Site which included vehicles and heavy equipment (i.e., trucks, trailers, loaders and excavators) parking on suspected fill material.

Potentially Contaminating Activity (PCA)[1]	Location of PCA (on-site or off-site)	Description
PCA 30 – Importation of Fill Material of Unknown Quality	On-site	Based on our records review the Site underwent significant earthworks and construction activities between 2008 and 2020 for future commercial use including clear cutting of trees, topsoil and peat stripping, aggregate processing, segregation and piling, diversion of the West Clarke Drain watercourse and temporary roadway construction for access to the then under construction residential subdivision to the north, east and west likely using reworked and imported fill materials. A review of air photos during this time period shows various fill piles across the Site which appear to be reworked, re-piled or removed from the Site and replaced with no clear systemic approach. During the watercourse diversion, The West Clarke Drain appears to have been backfilled during grading and reworking of surface material at the Site. Material used to fill the watercourse is of unknown source and quality. Minor fill piles and other areas of debris and domestic waste were observed on Site at the time of the Site visit.
PCA 30 – Importation of Fill Material of Unknown Quality	Off-site	Based on our records review, the surrounding properties to the north, south, east and west of the Site underwent earthworks and construction activities between 2008 and 2020. Fill stockpiles were observed on these properties to the south and east of the Site.
PCA 55 – Transformer Manufacturing, Processing and Use	Off-site	A concrete pad-mounted transformer was observed to the west of the Site at the time of the site visit and was located on the adjacent property to the west of the Site along the boulevard of Aphelion Crescent.

1 - PCA obtained from Table 2, Schedule D of O.Reg. 153/04 (as amended)

A review of air photos between 2008 and 2020 identified commercial truck movement and storage at the Site which included vehicles and heavy equipment (i.e., trucks, trailers, loaders and excavators) parking on the suspected fill material (see PCA 11 noted above for the Site). Based on the above information the PCAs associated with the Phase One Property would result in an APEC at the Phase One Property.

The quality of fill material imported to the Site as detailed above is unknown (see PCA 30 noted above for the Site). Based on the above information this PCA associated with the Site would result in an APEC at the Phase One Property.

The presence of imported fill of unknown quality at the surrounding properties to the north, east, south and west (see PCA 30 noted above for the off-site location) is unlikely to contribute to an APEC on the Phase One Property based on the distances from the Site and redevelopment that has occurred on these surrounding properties.

A concrete pad-mounted transformer was observed to the west of the Site at the time of the site visit and was located on the adjacent property to the west of the Site along the boulevard of Aphelion Crescent (see PCA 55 noted above for the off-site location). No oil staining was observed on the concrete pad associated with this transformer at the time of the site visit and no spills were reported in the records

review. Based on the above information and distance from the Site the PCA associated with this transformer would not contribute to an APEC on the Phase One Property.

The location of the PCAs are shown on **Figure 2** in **Appendix A.**

7.3 (iii) Areas of Potential Environmental Concern

Based on the details provided in Section 7.2, two of the potentially contaminating activities identified in the Phase One Study Area (both identified on the Site) would contribute to an APEC on the Phase One Property.

APECs, which have been identified within the Phase One study area are listed in the table below:

Table L: Areas of Potential Environmental Concern (APECs)

Area of Potential Environmental Concern (APEC)[1]	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity[2]	Location of PCA (On-site or Off-site)	Contaminants of Potential Concern[3]	Media Potentially Impacted (Ground water, soil and/or sediment)
APEC 1	Phase One Property (entirety)	PCA 11 – Commercial Trucking and Container Terminals	On-site	BTEX; PHCs; PAHs; Metals (including copper, lead and zinc); As, Sb, Se; Cr(VI); Hg;	Soil and Groundwater
APEC 2	Phase One Property (entirety)	PCA 30 – Importation of Fill Material of Unknown Quality	On-site	VOCs; BTEX; PHCs; PAHs; Metals (including copper, lead and zinc); As, Sb, Se; Cr(VI); B-HWS; Hg; low or high pH;	Soil and Groundwater

Area of Potential Environmental Concern (APEC)[1]	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity[2]	Location of PCA (On-site or Off-site)	Contaminants of Potential Concern[3]	Media Potentially Impacted (Ground water, soil and/or sediment)

1 - APECs means the area on, in or under the Phase One Property where one or more contaminants are potentially present, as determined through the Phase One ESA, including through:

(a) identification of past or present uses on, in or under the Phase One Property, and

(b) identification of PCAs.

2 - PCA obtained from Column A of Table 2 of Schedule D of O. Reg. 153/04 (as amended)

3 - Using the Method Groups as identified in the Protocol for in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011

- BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes; PHCs: Petroleum Hydrocarbons; VOCs: Volatile Organic Compound; PAHs: Polycyclic Aromatic Hydrocarbons

- As, Sb, Se: Arsenic, Antimony, Selenium; Cr(VI): Hexavalent Chromium; B-HWS: Boron, Hot Water Soluble; Hg: Mercury

Any uncertainties or absences of information obtained in each of the components of the Phase One ESA that could affect the conclusions are discussed in Section 6.3.2 above.

The location of the APECs are shown on **Figure 3** in **Appendix A.**

7.4 (iv) Phase One Conceptual Site Model

The Phase One Conceptual Site Model (CSM) is comprised of **Figure 1, Figure 2, and Figure 3** in **Appendix A** and the written description further below.

The Phase One CSM provides a summary of the Phase One ESA including features, geology/hydrogeology of the Site, PCAs and associated APECs (if any), contaminants of potential concern and potential exposure and migration pathways (where applicable).

The appended figures in **Appendix A**, depicts (where present) the following within the Phase One Study Area, as outlined in Table 1 of Schedule D of O. Reg. 153/04 (as amended):

i. Existing buildings and structures (none present, Figures 1, 2 and 3);
ii. Water bodies located in whole or in part on the Phase One Study Area (none present, see Figures 1 and 2);
iii. Areas of natural significance located in whole or in part on the Phase One Study Area (none present, see Figures 1 and 2);
iv. Drinking water wells at the Phase One Property (none present at the Phase One Property, other wells presented on Figures 2 and 3);
v. Roads, including names, within the Phase One Study Area (Figures 1 and 2);
vi. Uses of properties adjacent to the Site (Figures 1);
vii. Areas where any potentially contaminating activity has occurred (Figure 2 and Figure 3); and,
viii. Any areas of potential environmental concern (Figure 3).

The Site is located on the north side of Cambrian Road, southwest of Seeley's Bay Street. Cambrian Road runs southwest to northeast. The Phase One Property comprised a total area of approximately 1.36 hectares (3.37 acres).

The Phase One Property consisted of an undeveloped/vacant land parcel with no buildings or structures at the time of the Site reconnaissance on November 2, 2022. The majority of the site was secured by a wire fence, with fencing present along the eastern property boundary and within close proximity of the western and southern property boundaries. Surface cover across the Site consisted of soil (gravel to silty sand with clay) and vegetation (grass, shrubs, common burdock, cattails and cat tail grasses). The Site had an uneven ground surface at the time of the site visit and a slope was observed at the east portion of the Site, trending north to south and sloping to the west.

The Phase One Property was bounded to the north and west by residential properties and to the south (across Cambrian Road) by undeveloped/vacant land parcels as well as a Mattamy Homes Sales Centre (temporary commercial property). Adjacent to the east of the Site is a temporary roadway used for the construction of the new developments to the north and east of the Site which is to be developed as a permanent roadway in the future (future Greenbank Road as part of the proposed roadway realignment).

Based on a review of the available historical records including aerial photographs, city directories and the chain of title, the Phase One Property had historically been used as agricultural or other property use (largely undeveloped forested land) with a cultivated field on the eastern portion of the Site from at least 1946 (based on a review of the 1946 aerial photograph) to the late 2000s. No building or structure appears to have ever been present at the Site based on available information to date. In 2008, the Site's topsoil and peat was removed, prepped for commercial use through grading including the construction of a gravel roadway (evidence of significant earthworks and construction activities) based on the 2008 aerial photograph and available historical records. As noted in the Chain of Title, previous ownership records suggest that the central and south and north portions of the Site were privately owned by various individuals prior to 1989 and 2004, respectively.

There is no indication in the current or historical records of the Phase One Property that it had ever been used for; industrial activities/uses, as a garage (automobile or other vehicle servicing), as a bulk liquid dispensing facility (gasoline station/service station or retail fuel outlet [RFO]) or for the operation of dry-cleaning equipment and this the Phase One Property would not be classified as an enhanced investigation property as defined under O.Reg. 153/04 (as amended).

Water Bodies, Areas of Natural Significance & Ground Water Information

No water bodies or areas of natural significance were observed on the Phase One Property or within the Phase One Study Area.

The Site and select surrounding properties were undeveloped with no buildings or structures and are not municipally serviced at this time. At surrounding properties where development has been completed, a municipal service connection is reportedly present. Wells were not required to supply potable water to the Site or properties within the Phase One Study Area. No potable water wells were observed on the Phase One Property or neighbouring properties at the time of the site visit. A water well (presumed monitoring well) was observed at the Phase One Property during the site visit at the north-central portion of the Site. The well was housed in a monument casing affixed with a well tag (identification number 251203). No construction or registration details were available for this well based on a review of the Water Well Information System database within the ERIS Database Report or the MECP Well Records database. Based on observations it is considered unlikely that this observed well supplies water used for human consumption or an agricultural use.

According to the ERIS Database Report, approximately one (1) well record for a well with no reported specific use was identified within the Phase One Study Area and located approximately 240 m to the south of the Site.

No well-head protection areas were identified within the Phase One Study Area based on the information reviewed including the City of Ottawa Official Plan.

Geological and Hydrogeological Information

In general, the Site has a gentle slope to the southwest, however, on the east portion of the Site a significant slope was observed to be trending north to south and sloping to the west. Regionally, the Phase One Study Area gently sloped to the north towards the Jock River identified approximately 730 m north of the Site. According to the Plan of Survey provided by the Client (**Appendix B**), completed by Annis O'Sullivan Vollebekk Ltd. dated October 21, 2022, elevations at the Site ranged from approximately 94.63 m at the northeast portion of the Site to approximately 92.29 m at the southwest portion of the Site.

A depiction of topographic information is presented on the Site Location and Surrounding Land Use plan in **Figure 1** in **Appendix A.** In addition, the Atlas of Canada (Natural Resources Canada) topographic map (031G04) and a topographic map provided by ERIS are included in **Appendix E.**

Based on OGS maps provided by ERIS, the Site is located in a physiographic region consisting of Clay plains. Surficial soils at the northeast portion of the Site consisted of offshore marine deposits (comprised of clay, silty clay and silt with minor sand). The remaining portion of the Site comprised of organic deposits (peat, muck, fens, swamps). The regional bedrock geology is of the Beekmantown Group from the Ordovician period characterized by dolostone and sandstone.

Available well records within the Phase One Study Area did not include details regarding stratigraphy, depth to bedrock or depth to the approximate water table. Based on a review of borehole logs for boreholes completed within the Phase One Study Area and Half Moon Bay area, provided within the 2021 Paterson Geotechnical Investigation report, subsurface material encountered generally consisted of silty sand to approximately 4.5 mbgs followed by silty clay until the maximum termination depth of 14.78 mbgs on the Site and a depth of 21.95 mbgs within a borehole located approximately 550 m to the west of the Site. A borehole located immediately adjacent to the southeast of the Site had silty clay which extended to a maximum depth of 15.70 mbgs. Bedrock was not encountered in any of these boreholes nor was it identified in any of the other boreholes investigated within the Half Moon Bay area as part of the 2021 Paterson Geotechnical Investigation. Based on the above it would be anticipated that bedrock within the Phase One Study Area would be encountered at a depth of greater than 15.70 mbgs.

Based on a review of the 2021 Paterson Geotechnical Investigation report, the groundwater level in a monitoring well located at the southwest portion of the Site was measured at 4.43 m on April 9, 2008 and measured to be 350 mm above grade in the monitoring well located at the northeast portion of the Site on February 5, 2007. These monitoring wells appear to have been removed from the Site.

The nearest water body is the Jock River which is located approximately 730 m north of the Site. The Jock River flows east before discharging into the Rideau River. Based on the above, the regional groundwater is inferred to flow north towards the Jock River. The inferred groundwater flow direction is presented on Figures presented in **Appendix A.**

Underground Utilities and Contamination Distribution and Transport

There are no underground utilities on the Phase One Property with the exception of a storm drain and sanitary manhole located at the south-central portion of the Site which traverse further south and off-site. Both were raised above the surface grade at the time of the site visit. Based on the information above the potential for the underground utilities to affect contaminant distribution and transport is considered unlikely at this time.

Potentially Contaminating Activity and Contaminants of Potential Concern

Based on the results of the Phase One ESA, two of the potentially contaminating activities identified in the Phase One Study Area (both identified on the Site) would contribute to an APEC on the Phase One Property. The PCAs which are considered to contribute to APECs on, in or under the Phase One Property, the rationale and contaminants of potential concern are summarized in the table below:

Table M: PCAs affecting the Phase One Property and Contaminants of Potential Concern

Location of Area of Potential Environmental Concern on Phase One Property and Rationale	Potentially Contaminating Activity[1]	Contaminants of Potential Concern[2]	Media Potentially Impacted (Ground water, soil and/or sediment)
Gravel roadways were constructed across the Site between 2008 and 2020 and subsequently removed or reworked during re-grading of the Site. In addition, the Site was used as a laydown area and an asphalt parking area was constructed and subsequently removed or buried at the south portion of the Site. A review of air photos between 2008 and 2020 identified commercial truck movement and storage at the Site which included vehicles and heavy equipment (i.e., trucks, trailers, loaders and excavators) parking on suspected fill material. This PCA is on-site and the APEC is located across the entire Phase One Property.	PCA 11 – Commercial Trucking and Container Terminals	BTEX; PHCs; PAHs; Metals (including copper, lead and zinc); As, Sb, Se; Cr(VI); Hg;	Soil and Groundwater

Location of Area of Potential Environmental Concern on Phase One Property and Rationale	Potentially Contaminating Activity[1]	Contaminants of Potential Concern[2]	Media Potentially Impacted (Ground water, soil and/or sediment)
Based on our records review the Site underwent earthworks and construction activities between 2008 and 2020 for future commercial use including clear cutting of trees, topsoil and peat stripping, aggregate processing, segregation and piling, diversion of the West Clarke Drain watercourse and temporary roadway construction for access to the then under construction residential subdivision to the north, east and west likely using reworked and imported fill materials. A review of air photos during this time period shows various fill piles across the Site which appear to be reworked, re-piled or removed from the Site and replaced with no clear systemic approach. During the watercourse diversion, The West Clarke Drain appears to have been backfilled during grading and reworking of surface material at the Site. Material used to fill the watercourse is of unknown source and quality. Minor fill piles and other areas of debris and domestic waste were observed on Site at the time of the Site visit. This PCA is on-site and the APEC is located across the entire Phase One Property.	PCA 30 – Importation of Fill Material of Unknown Quality	VOCs; BTEX; PHCs; PAHs; Metals (including copper, lead and zinc); As, Sb, Se; Cr(VI); B-HWS; Hg; low or high pH;	Soil and Groundwater

1 - PCA obtained from Column A of Table 2 of Schedule D of O. Reg. 153/04 (as amended)

2 - Using the Method Groups as identified in the Protocol for in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011

- BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes; PHCs: Petroleum Hydrocarbons; PAHs: Polycyclic Aromatic Hydrocarbons

- As, Sb, Se: Arsenic, Antimony, Selenium; Cr(VI): Hexavalent Chromium; B-HWS: Boron, Hot Water Soluble; Hg: Mercury

The location of the PCAs that contribute to APECs on the Site are shown on **Figure 2** and **Figure 3** in **Appendix A**. The location of the APECs and the corresponding contaminants of potential concern are shown on **Figure 3** in **Appendix A.**

Uncertainty or Absence of Information

SLR notes that the historical records review completed as part of this Phase One ESA included a search of Federal and Provincial environmental record databases, the inclusion of a detailed review of past environmental reports and records for the Site, interviews with individuals knowledgeable of the Site operations and other historical record reviews. See Section 6.3.2 for a discussion on deviations,

limitations and uncertainties or absences of information obtained in each of the components of the Phase One ESA that could affect the conclusions. In our opinion, the noted uncertainties are unlikely to affect the validity of the Phase One Conceptual Site Mode.

8.0 Conclusions and Recommendations

This Phase One ESA was conducted and/or supervised by a Qualified Person for Environmental Site Assessments and pursuant to Schedule D of O. Reg. 153/04 included investigations of the Phase One Property and Phase One Study Area. The objective of the Phase One ESA was to identify, to the extent feasible pursuant to the scope of work described in this report, areas of potential environmental concern (APECs) on, in or under the Phase One Property as a result of potentially contaminating activities (PCAs) identified on the Phase One Property or on surrounding properties within the Phase One Study Area that may have had an adverse effect on the Site.

Based on the results of the Phase One ESA, two (2) PCAs were identified on the Site which would contribute to APECs on the Phase One Property, while two (2) other PCAs were identified in the Phase One Study Area, as detailed within the Phase One ESA, would not contribute to an APEC on the Phase One Property based on the rationale explained within (i.e., based on the proximity to the Site, inferred groundwater flow direction, nature and duration of operations and associated, chemicals/wastes and available soil and groundwater analytical results).

Further work is recommended at this time including a Phase Two ESA to investigate the APECs, assess the environmental soil and groundwater conditions on the Phase One Property and determine the location and concentration (if any) of one or more of the contaminants of potential concern identified during this Phase One ESA.

9.0 Closure

The Phase One ESA was prepared by Mr. Pierre D'Angelo, P.Eng., QP_{ESA}, who is an Environmental Engineer, Project Manager and Qualified Person for Environmental Site Assessments with over 14 years' experience in the assessment and remediation of contaminated sites and has completed several complex projects including Phase One and Two ESAs; in support of real estate, financial due diligence, property risk management and property redevelopment (including the submission of Record of Site Conditions in Ontario).

The report was reviewed by Mr. Tim Whalen, M.A.Sc. who is a Senior Environmental Project Manager with over 27 years' experience in the assessment and remediation of contaminated sites. Mr. Whalen has conducted and/or reviewed Phase I ESAs on over 500 sites from properties in urban settings to remote and challenging access locations.

The findings and conclusion of this report have been supervised and reviewed by the undersigned Qualified Person(s). SLR confirms the carrying out of the Phase One ESA and the findings and conclusions of this report.

Sincerely,

SLR Consulting (Canada) Ltd.

Pierre D'Angelo, P.Eng., QP_{ESA}
Environmental Engineer, Project Manager

Tim Whalen, M.A.Sc.
Managing Principal, Built Environment Sector Leader

Distribution: 1 electronic copy – Choice Properties Limited Partnership

1 electronic copy – SLR Consulting (Canada) Ltd.

10.0 Statement of Limitations

This report has been prepared and the work referred to in this report has been undertaken by SLR Consulting (Canada) Ltd. (SLR) for Choice Properties Limited Partnership, hereafter referred to as the "Client". It is intended for the sole and exclusive use of Choice Properties Limited Partnership. Other than by the Client and as set out herein, copying or distribution of this report or use of or reliance on the information contained herein, in whole or in part, is not permitted unless payment for the work has been made in full and express written permission has been obtained from SLR.

Any conclusions or recommendations made in this report reflect SLR's professional opinion based on limited investigations including: visual site inspection(s) on the date(s) set out in this report; examination of public records and interviews with individuals having information about the site. While efforts have been made to substantiate information provided by third parties, SLR makes no representation or warranty as to its completeness or accuracy.

This report has been prepared for specific application to this site and conditions existing at the time work for the report was completed. Unless otherwise stated, the findings cannot be extended to previous or future site conditions and portions of the site which were unavailable for direct investigation. Unless otherwise stated in the report, surface and/or subsurface soil, groundwater, vapour; chemical parameters; or materials were not investigated directly; or chemical parameters, materials or analysis were not addressed. Substances other than those addressed by the investigation described in this report may exist within the site; and substances addressed by the investigation may exist in areas of the site not investigated or in quantities not ascertained.

Nothing in this report is intended to constitute or provide a legal opinion. SLR makes no representation as to the requirements of or compliance with environmental laws, rules, regulations or policies established by federal, provincial or local government bodies. Revisions to the regulatory standards referred to in this report may be expected over time. As a result, modifications to the findings, conclusions and recommendations in this report may be necessary.

The Client may submit this report to the Ontario Ministry of the Environment, Conservation and Parks (MECP) and/or related Ontario environmental regulatory authorities or persons for review and comment purposes.

11.0 References

Ontario Regulation (O. Reg.) 153/04 – Records of Site Condition – Part XV.1 of the Act; last amendment: O. Reg. 214/21 on March 19, 2021.

"Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", MECP, dated April 15, 2011.

"Guide for Completing Phase One Environmental Site Assessments under Ontario Regulation 153/04", Queen's Printer of Ontario. June 2011.

"Guide for Completing Phase Two Environmental Site Assessments under Ontario Regulation 153/04", Queen's Printer of Ontario. June 2011.

"Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act", MECP, dated June 2011.

"Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario", MECP, dated December 1996.

"Guideline for Use at Contaminated Sites in Ontario", MECP, dated February 1997.

"ERIS Database Report" prepared by Environmental Risk Information Services (ERIS), a division of Glacier Media Inc., dated October 26, 2022, including Ontario Base Mapping (OBM) data and Ontario Geological Survey (OGS) maps (physiography of southern Ontario, surficial geology of southern Ontario, bedrock geology etc.)

City Directories provided by ERIS, dated November 2, 2022 and obtained via Vernon's Ottawa City Directory

Opta Information Intelligence (Opta) Search Request for the Site and report dated November 15, 2022

Title search was complied by Mr. Stewart Davey of Meridian Land and Title on October 24, 2022.

Plan of Survey completed by Annis O'Sullivan Vollebekk Ltd., dated October 21, 2022.

The Atlas of Canada interactive topographic maps from Natural Resources Canada obtained from http://atlas.nrcan.gc.ca/toporama/en/index.html.

City of Ottawa Official Plan

City of Ottawa, GeoOttawa Interactive map application: https://maps.ottawa.ca/geoottawa/.

City of Ottawa *"Old Landfill Management Strategy, Phase I - Identification of Sites, City of Ottawa, Ontario"* document, prepared by Golder Associates, dated October, 2004.

City of Ottawa *"Old Landfill Management Strategy – Active, Recently Closed, Old or Private Waste Disposal Sites which were not part of the Study Completed by Golder Associates"* memo, prepared by Golder Associates, dated January 21, 2003.

City of Ottawa, OpenData Former Landfills Interactive map application: https://open.ottawa.ca/datasets/8a6f5f176b484f2e83142e0008904e82_0/explore?location=45.352241%2C-75.679545%2C2.08.

City of Ottawa Historical Land Use Inventory (HLUI) Database (result pending).

City of Ottawa's Access to Information and Privacy Office (result pending).

Ontario Ministry of the Environment, Conservation and Parks (MECP) Freedom of Information and Privacy Office

The Ontario Ministry of Natural Resources online Natural Heritage Map.

Land Information Ontario Area of Natural & Scientific Interest (ANSI) map.

Technical Standards and Safety Authority – Fuel Safety Division inquiry (October 26, 2022)

The MECP well records map.

Google Earth.

"*Environmental Impact Statement, Barrhaven Ward, Ottawa, Ontario" report,* prepared by Kilgour & Associates Ltd. (KAL) for Mattamy Homes, dated February 28, 2019;

"*Functional Servicing and Stormwater Management Report" report,* prepared by David Schaeffer Engineering Ltd. (DSEL) for Mattamy Homes, dated March 8, 2019;

"*Geotechnical Investigation, Proposed Residential Development – Half Moon Bay West Greenbank Road at Cambrian Road, Ottawa, Ontario" report,* prepared by Paterson Group Inc. for Mattamy Homes, dated April 19, 2021 (2021 Paterson Geotechnical Investigation report)

Aerial imagery for the years of 1946 and 1963 were obtained from ERIS and originally sourced from the National Air Photo Library. Aerial photos for the years between 1976 to 2021 were obtained through the GeoOttawa's website and Google Earth including:

Source	Year												
GeoOttawa	1976	1991	1999	2002	2005	2008	2009	2011	2014	2015	2017	2019	2021
Google Earth	2004	2012	2013	2016	2018	2020							
NAPL via ERIS	1946	1963											

Draft Concept Plan completed by Turner Fleischer Architects Inc., dated October 26, 2022, revised October 28, 2022.

Appendix A Figures

Phase One Environmental Site Assessment

3850 Cambrian Road
Ottawa, Ontario

Choice Properties Limited Partnership

SLR Project No. 209.013940.00001

January 31, 2023

NOTES:

NOT A LEGAL SURVEY. DO NOT USE FOR CONSTRUCTION.

REFERENCED FROM: TOPOGRAPHY PLAN FROM ONTARIO LAND SURVEYORS ANNIS, O'SULLIVAN, VOLLEBEKK LTD. JOB NO. 23350-22 AND SITE RECONNAISSANCE INFORMATION.
IMAGERY: MAXAR (IMAGE DATE: 2021)

LEGAL DESCRIPTION:
PART 1 PIN 04595 - 2079 AND PART 3 PIN 04595 - 2080
OTTAWA, ONTARIO

BASEDATA:
ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

LEGEND:

- PROPERTY BOUNDARY
- SITE BOUNDARY
- PHASE ONE STUDY AREA
- INFERRED GROUNDWATER FLOW DIRECTION

CHOICE PROPERTIES LIMITED PARTNERSHIP
3850 CAMBRIAN ROAD
OTTAWA, ONTARIO

PHASE ONE ENVIRONMENTAL SITE ASSESSMENT

SITE LOCATION AND SURROUNDING LAND USE

FIGURE NO: **1**

DATE: January 9, 2023

PROJECT NO: 209.13940.00001

Cadfile name: S_209-13940-00001-A1.dwg

Potentially Contaminating Activity (PCA)[1]	Location of PCA (on-site or off-site)	Description
PCAs contributing to an APEC at the Site		
PCA 30 – Importation of Fill Material of Unknown Quality	On-site	Based on our records review the Site underwent significant earthworks and construction activities between 2008 and 2020 including clear cutting of trees, topsoil and peat stripping, aggregate processing, segregation and piling, diversion of the West Clarke Drain watercourse and temporary roadway construction for access to the then under construction residential subdivision to the north, east and west likely using reworked and imported fill materials. A review of air photos during this time period shows various fill piles across the Site which appear to be reworked, re-piled or removed from the Site and replaced with no clear systemic approach. During the watercourse diversion, The West Clarke Drain appears to have been backfilled during grading and reworking of surface material at the Site. Material used to fill the watercourse is of unknown source and quality. Minor fill piles and other areas of debris and domestic waste were observed on Site at the time of the Site visit.
PCA 11 – Commercial Trucking and Container Terminals	On-site	Gravel roadways were constructed across the Site between 2008 and 2020 and subsequently removed or reworked during re-grading of the Site. In addition, the Site was used as a laydown area and an asphalt parking area was constructed and subsequently removed or buried at the south portion of the Site. A review of air photos between 2008 and 2020 identified commercial truck movement and storage at the Site which included vehicles and heavy equipment (i.e., trucks, trailers, loaders and excavators) parking on suspected fill material.
PCAs not contributing to an APEC[2] at the Site		
PCA 30 – Importation of Fill Material of Unknown Quality	Off-site	Based on our records review the surrounding properties to the north, south, east and west of the Site underwent significant earthworks and construction activities between 2008 and 2020
PCA 55 – Transformer Manufacturing, Processing and Use	Off-site	A concrete pad-mounted transformer was observed to the west of the Site.

1 - PCA obtained from Column A of Table 2 of Schedule D of O. Reg. 153/04 (as amended)
2 - In brief, these PCAs were not considered to contribute to an APEC on the Phase One Property based on the proximity to the Site, inferred groundwater flow direction, nature and duration of operations and associated chemicals/wastes and available soil and groundwater analytical results (as detailed further in the text of the Phase One ESA report).

NOTES:
- PCAs: Potentially Contaminating Activities
- APEC: Area of Potential Environmental Concern
- MECP: Ministry of the Environment, Conservation and Park (MECP)

LEGEND:

- PROPERTY BOUNDARY
- SITE BOUNDARY
- PHASE ONE STUDY AREA
- INFERRED GROUNDWATER FLOW DIRECTION
- # PCA NUMBER DOES NOT CONTRIBUTE TO AN APEC
- # PCA NUMBER CONTRIBUTES TO AN APEC
- MECP REGISTERED WATER WELL
- WATER WELL OBSERVED DURING SITE VISIT

NOTES:
NOT A LEGAL SURVEY. DO NOT USE FOR CONSTRUCTION.

REFERENCED FROM: TOPOGRAPHY PLAN FROM ONTARIO LAND SURVEYORS ANNIS, O'SULLIVAN, VOLLEBEKK LTD. JOB NO. 23350-22 AND SITE RECONNAISSANCE INFORMATION.
IMAGERY: MAXAR (IMAGE DATE: 2021)

LEGAL DESCRIPTION:
PART 1 PIN 04595 - 2079 AND PART 3 PIN 04595 - 2080
OTTAWA, ONTARIO

0 25 50 100 150 m
SCALE 1:3,000
WHEN PLOTTED CORRECTLY ON A 11 x 17 PAGE LAYOUT
NAD 1983 UTM Zone 18 N

CHOICE PROPERTIES LIMITED PARTNERSHIP
3850 CAMBRIAN ROAD
OTTAWA, ONTARIO

PHASE ONE ENVIRONMENTAL SITE ASSESSMENT

SITE PLAN AND POTENTIALLY CONTAMINANTING ACTIVITIES (PCAs)

SLR

FIGURE NO:
2

DATE: January 9, 2023
PROJECT NO: 209.13940.00001

Cadfile name: S_209-13940-00001-A1.dwg

Area of Potential Environmental Concern (APEC)[1]	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity (PCA)[2]	Location of PCA (On-site or Off-site)	Contaminants of Potential Concern[3]	Media Potentially Impacted (Ground water, soil and/or sediment)
APEC 1	Entire Phase One Property	PCA 11 – Commercial Trucking and Container Terminals	On-site	BTEX; PHCs; PAHs; Metals (including copper, lead and zinc); As, Sb, Se; Cr(VI); Hg;	Soil and Groundwater
APEC 2	Entire Phase One Property	PCA 30 – Importation of Fill Material of Unknown Quality	On-site	VOCs; BTEX; PHCs; PAHs; Metals (including copper, lead and zinc); As, Sb, Se; Cr(VI); B-HWS; Hg; low or high pH;	Soil and Groundwater

1 - APECs means the area on, in or under the Phase One Property where one or more contaminants are potentially present, as determined through the Phase One ESA, including through:
(a) identification of past or present uses on, in or under the Phase One Property, and
(b) identification of PCAs.
2 - PCA obtained from Column A of Table 2 of Schedule D of O. Reg. 153/04 (as amended)
3 - Using the Method Groups as identified in the *Protocol for in the Assessment of Properties under Part XV.1* of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011

NOTES:
- MECP: Ministry of the Environment, Conservation and Park (MECP)
- PCAs: Potentially Contaminating Activities
- APEC: Area of Potential Environmental Concern
- VOCs: Volitile Organic Compounds; BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes; PHCs: Petroleum Hydrocarbons; PAHs: Polycyclic Aromatic Hydrocarbons
- As, Sb, Se: Arsenic, Antimony, Selenium; Cr(VI): Hexavalent Chromium; B-HWS: Boron, Hot Water Soluble; Hg: Mercury
- CN-: Cyanide; SAR: Sodium Adsorption Ratio

LEGEND:

- PROPERTY BOUNDARY
- SITE BOUNDARY
- PHASE ONE STUDY AREA
- INFERRED GROUNDWATER FLOW DIRECTION
- # PCA NUMBER CONTRIBUTES TO AN APEC
- AREA OF POTENTIAL ENVIRONMENTAL CONCERN (APEC)
- MECP REGISTERED WATER WELL
- WATER WELL OBSERVED DURING SITE VISIT

NOTES:
NOT A LEGAL SURVEY. DO NOT USE FOR CONSTRUCTION.

REFERENCED FROM: TOPOGRAPHY PLAN FROM ONTARIO LAND SURVEYORS ANNIS, O'SULLIVAN, VOLLEBEKK LTD. JOB NO. 23350-22 AND SITE RECONNAISSANCE INFORMATION.
IMAGERY: MAXAR (IMAGE DATE: 2021)

LEGAL DESCRIPTION:
PART 1 PIN 04595 - 2079 AND PART 3 PIN 04595 - 2080
OTTAWA, ONTARIO

0 25 50 100 150 m
SCALE 1:3,000
WHEN PLOTTED CORRECTLY ON A 11 x 17 PAGE LAYOUT
NAD 1983 UTM Zone 18 N

CHOICE PROPERTIES LIMITED PARTNERSHIP
3850 CAMBRIAN ROAD
OTTAWA, ONTARIO

PHASE ONE ENVIRONMENTAL SITE ASSESSMENT

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

SLR

FIGURE NO: **3**

DATE: January 9, 2023

PROJECT NO: 209.13940.00001

Cadfile name: S_209-13940-00001-A1.dwg

Appendix B Plan of Survey and Draft Concept Plan

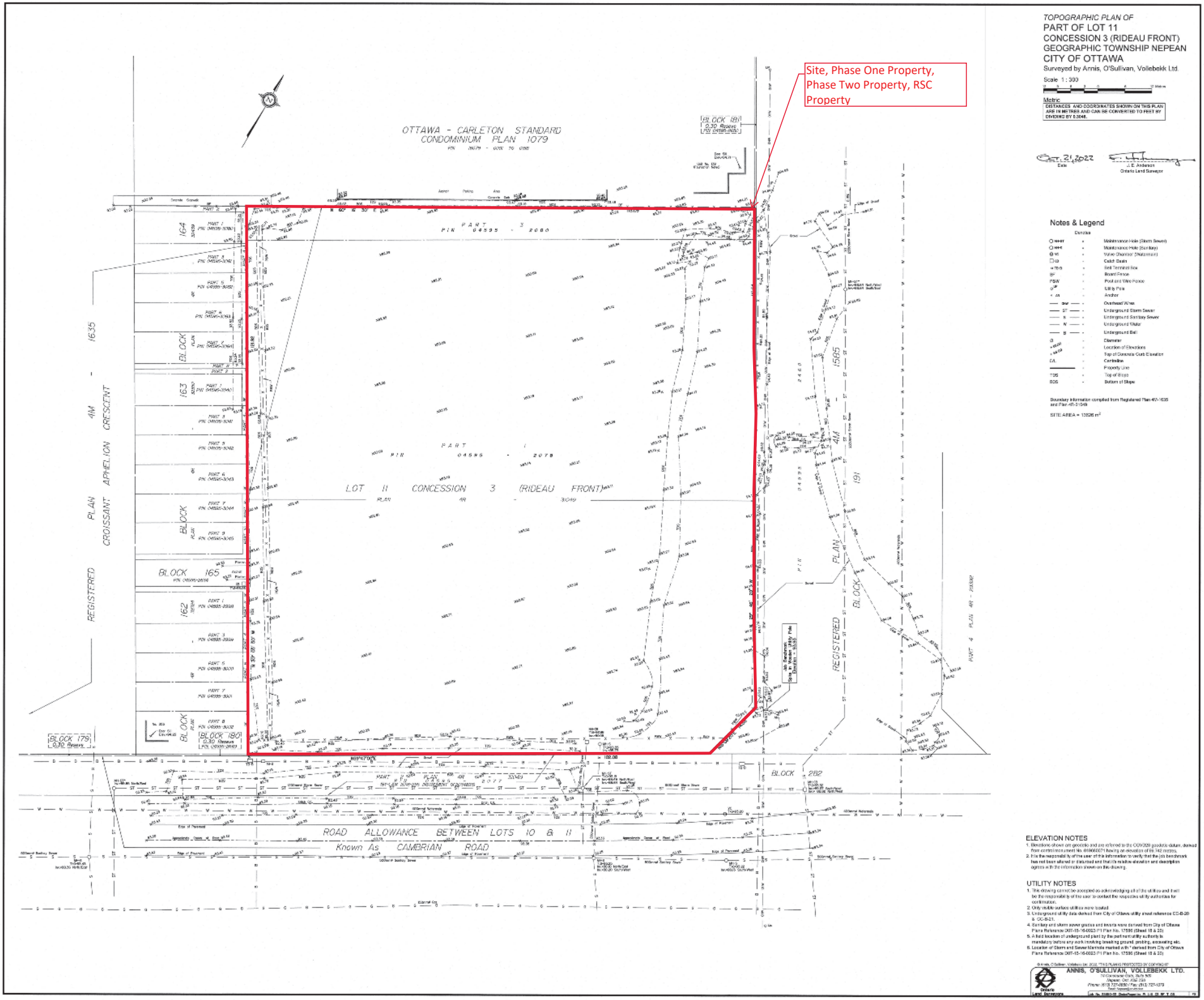
Phase One Environmental Site Assessment

3850 Cambrian Road
Ottawa, Ontario

Choice Properties Limited Partnership

SLR Project No. 209.013940.00001

January 31, 2023



TOPOGRAPHIC PLAN OF
PART OF LOT 11
CONCESSION 3 (RIDEAU FRONT)
GEOGRAPHIC TOWNSHIP NEPEAN
CITY OF OTTAWA
Surveyed by Annis, O'Sullivan, Vollebekk Ltd.

Scale 1 : 300

Metric
DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

Oct. 21, 2022
Date

J. E. Anderson
Ontario Land Surveyor

Notes & Legend

Denotes

○ MH-ST	=	Maintenance Hole (Storm Sewer)
○ MH-S	=	Maintenance Hole (Sanitary)
⊖ VC	=	Valve Chamber (Watermain)
□ CB	=	Catch Basin
⌖ TBR	=	Rail Terminal Box
BP	=	Board Fence
PBW	=	Post and Wire Fence
○ UP	=	Utility Pole
⌖ AN	=	Anchor
— OHW —	=	Overhead Wires
— ST —	=	Underground Storm Sewer
— S —	=	Underground Sanitary Sewer
— W —	=	Underground Water
— B —	=	Underground Bell
Ø	=	Diameter
+ 99.00	=	Location of Elevations
+ 99.00	=	Top of Concrete Curb Elevation
C/L	=	Centreline
	=	Property Line
TOS	=	Top of Slope
BOS	=	Bottom of Slope

Boundary information compiled from Registered Plan 4M-1635 and Plan 4R-31049

SITE AREA = 13595 m²

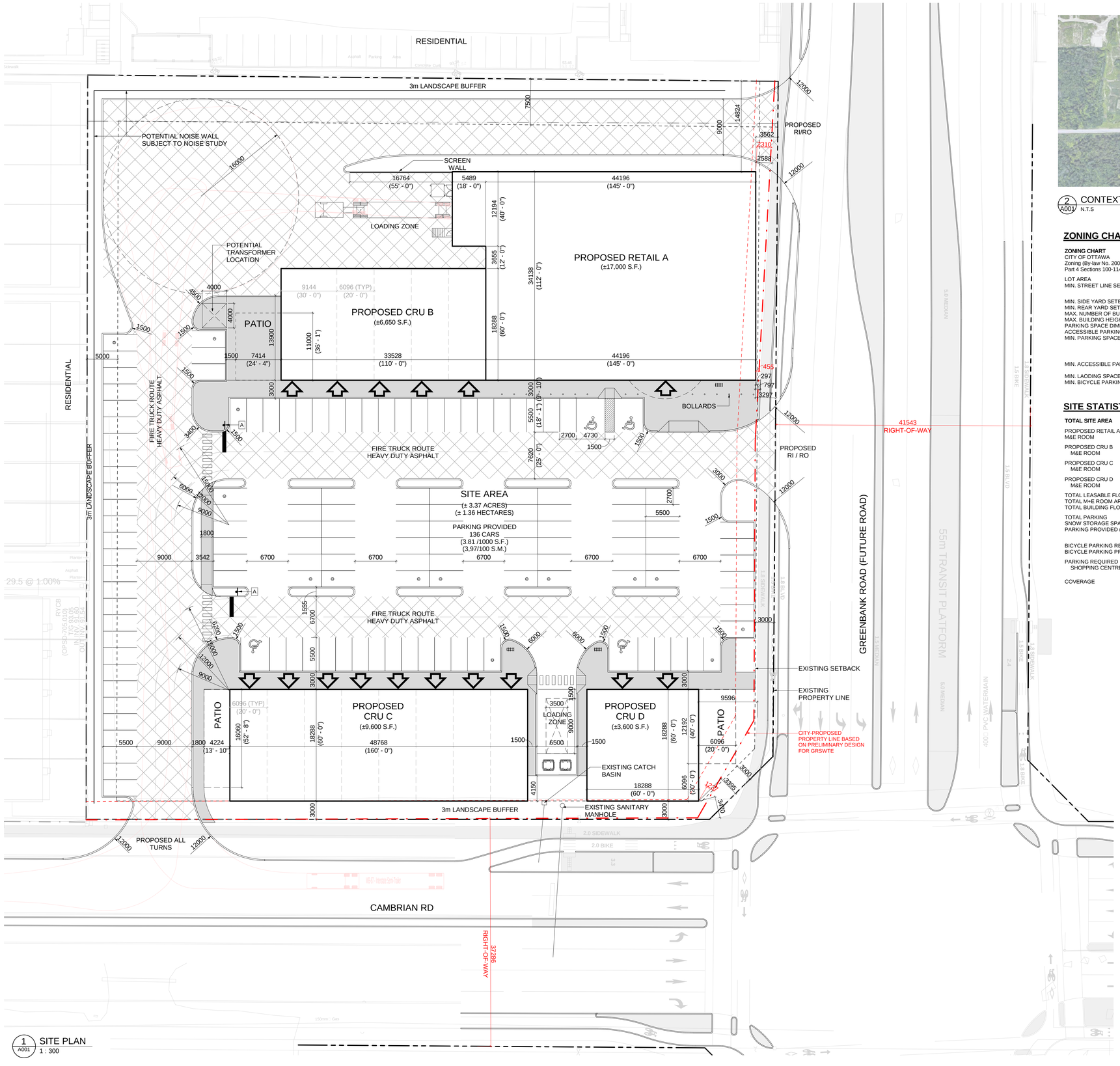
ELEVATION NOTES

1. Elevations shown are geodetic and are referred to the CGVD28 geodetic datum, derived from control monument No. 010666071 having an elevation of 69.742 metres.
2. It is the responsibility of the user of this information to verify that the job benchmark has not been utilized or disturbed and that its relative elevation and description agrees with the information shown on this drawing.

UTILITY NOTES

1. This drawing cannot be accepted as acknowledging all of the utilities and it will be the responsibility of the user to contact the respective utility authorities for confirmation.
2. Only visible surface utilities were located.
3. Underground utility data derived from City of Ottawa utility sheet reference CD-B-20 & OC-B-21.
4. Sanitary and storm sewer grades and inverts were derived from City of Ottawa Plans Reference D07-15-16-0003 (Y) Plan No. 17595 (Sheet 18 & 22)
5. A field location of underground plant by the pertinent utility authority is mandatory before any work involving breaking ground, probing, excavating etc.
6. Location of Storm and Sewer Manhole marked with ° derived from City of Ottawa Plans Reference D07-15-16-0003 (Y) Plan No. 17595 (Sheet 18 & 22)

ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
Ontario Land Surveyors



1 A001 SITE PLAN
1 : 300

2 A001 CONTEXT PLAN
N.T.S

ZONING CHART

ZONING CHART CITY OF OTTAWA Zoning (By-law No. 2008-250) Part 4 Sections 100-114	REQUIRED	PROPOSED * indicates non-compliance
LOT AREA	N/A	13,637.9 S.M.
MIN. STREET LINE SETBACK	3.0M	3.0M (ALONG CAMBRIAN ROAD) 0.7* (ALONG RE-ALIGNED GREENBANK ROAD)
MIN. SIDE YARD SETBACK	3.0M	9.0M (NORTHERLY SIDE)
MIN. REAR YARD SETBACK	7.5M	7.5M
MAX. NUMBER OF BUILDINGS ON A LOT	MORE THAN ONE (1) MAIN BUILDING PERMITTED	3 BUILDINGS
MAX. BUILDING HEIGHT	12.5M AND XX STOREYS	6.7M
PARKING SPACE DIMENSIONS	2.6M (MIN) 3.1M (MAX) WIDE x 5.2M LONG	2.7M x 5.5M
ACCESSIBLE PARKING DIMENSIONS	3.66M	
MIN. PARKING SPACES	99 CARS SHOPPING CENTRE: 99 CARS 3.6 CARS (PER) 100 S.M. OF BUILDING FLOOR AREA	139 CARS
MIN. ACCESSIBLE PARKING SPACE	2 CARS RANGING FROM 100-199 AS PER PART C TABLE SECTION 111	6 SPACES
MIN. LAODING SPACES	1 (3.5M X 9M)	2
MIN. BICYCLE PARKING SPACES	13 SPACES	

SITE STATISTICS

TOTAL SITE AREA	±3.37 ACRES	±1.36 HA.
PROPOSED RETAIL A AREA	±17,000 S.F.	±1,579 S.M.
M&E ROOM	±0 S.F.	±0 S.M.
PROPOSED CRU B	±6,650 S.F.	±618 S.M.
M&E ROOM	±0 S.F.	±0 S.M.
PROPOSED CRU C	±9,600 S.F.	±892 S.M.
M&E ROOM	±0 S.F.	±0 S.M.
PROPOSED CRU D	±3,600 S.F.	±334 S.M.
M&E ROOM	±0 S.F.	±0 S.M.
TOTAL LEASABLE FLOOR AREA	±36,850 S.F.	±3,423 S.M.
TOTAL M+E ROOM AREA	±0 S.F.	±0 S.M.
TOTAL BUILDING FLOOR AREA	±36,850 S.F.	±3,423 S.M.
TOTAL PARKING		136 CARS
SNOW STORAGE SPACES		0 CARS
PARKING PROVIDED (N.I.C SNOW STORAGE)		136 CARS
	3.69/1,000 S.F	3.97/100 S.M
BICYCLE PARKING REQUIRED		13 BIKES
BICYCLE PARKING PROVIDED		18 BIKES
PARKING REQUIRED		103 CARS
SHOPPING CENTRE 3.6/100 S.M.		103 CARS
COVERAGE		25.1%

LEGEND

- PROPOSED ENTRANCE ARROW
- PROPOSED EXIT ARROW
- PROPOSED FIRE HYDRANT
- PROPOSED SIAMESE CONNECTION
- PROPOSED SIGN
- PROPOSED FIRE & TRUCK ROUTE (HEAVY DUTY ASPHALT)
- PROPOSED CONCRETE SIDEWALK

TURNER FLEISCHER

Turner Fleischer Architects Inc.

67 Lesmill Road
Toronto, ON, M3B 2T8
T 416 425 2222
turnerfleischer.com

#	DATE	DESCRIPTION	BY
2	2022-10-28	ISSUED FOR COORDINATION	NFP
1	2022-10-26	ISSUED FOR REVIEW	NFP

Choice Properties REIT

PROJECT
CAMBRIAN RD (N. PARCEL)

BARRHAVEN, ONTARIO

DRAWING
SITE PLAN

PROJECT NO.	21.327SD
PROJECT DATE	2022-08-19
DRAWN BY	NFP
CHECKED BY	DEM
SCALE	As indicated

DRAWING NO. A001 REV. 2

2022-11-01 1:29:14 PM

Appendix C Records Review Information

Phase One Environmental Site Assessment

3850 Cambrian Road
Ottawa, Ontario

Choice Properties Limited Partnership

SLR Project No. 209.013940.00001

January 31, 2023

opta
INFORMATION INTELLIGENCE

enviroscan



An SCM Company

175 Commerce Valley Drive W
Markham, Ontario L3T 7Z3

T: 905-882-6300
W: www.optaintel.ca

Report Completed By:

Stephanie

Site Address:

3850 Cambrian Road Nepean ON

Project No:

22102400251

Opta Order ID:

118897

Requested by:

Eleanor Goolab
Ecolog Eris

Date Completed:

11/15/2022 3:32:04 PM

Project Name: Cambrian Road

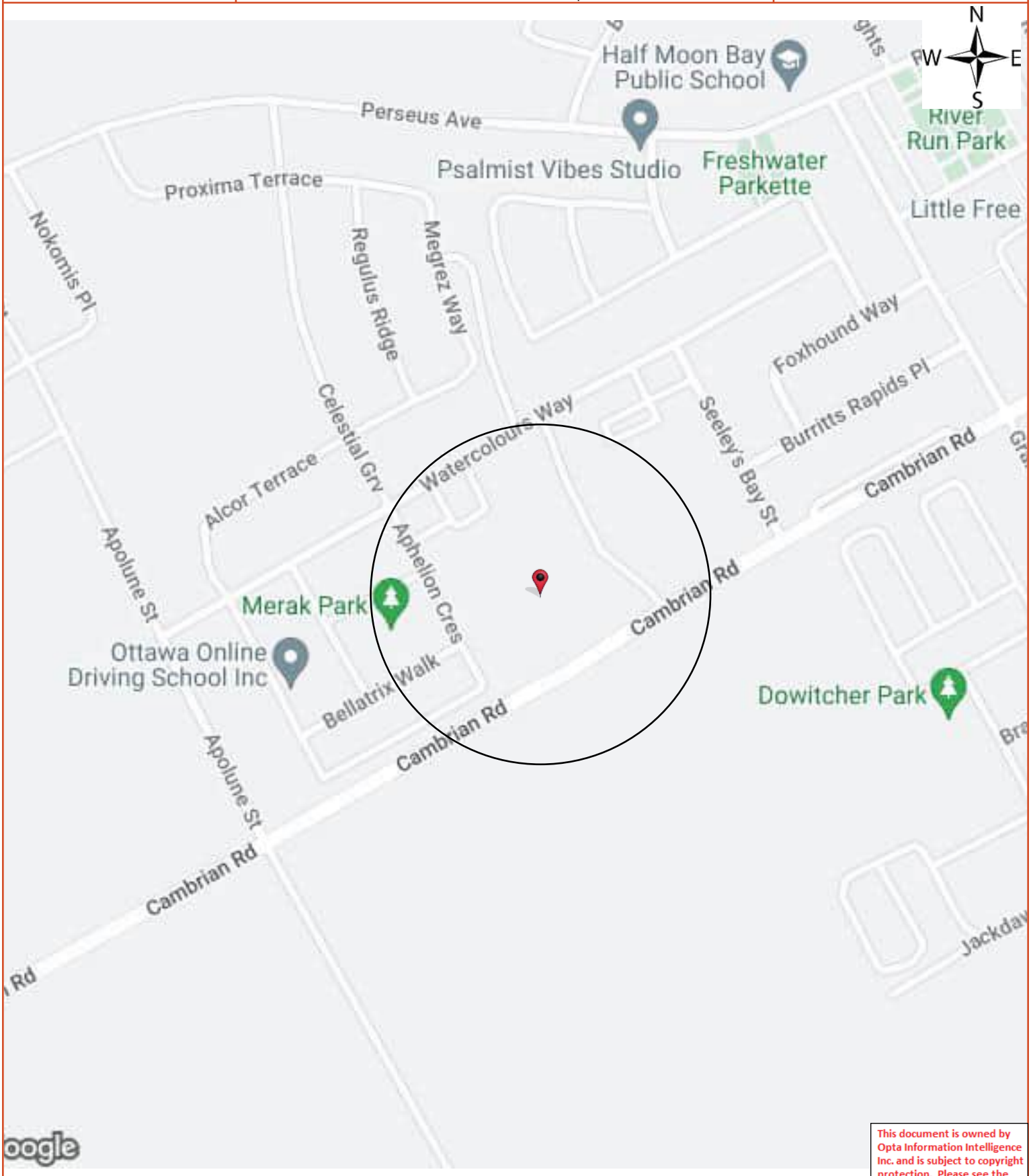
Project #: 22102400251
P.O. #: C00.13940.000PP

ENVIROSCAN Report

Search Area: 3850 Cambrian Road Nepean ON

Requested by:
Eleanor Goolab
Date Completed: 11/15/2022 15:32:04

enviroscan
OPTA INFORMATION INTELLIGENCE



Opta Historical Environmental Services Enviroscan™ Terms and Conditions

Report

The documents (hereinafter referred to as the "Documents") to be released as part of the report (hereinafter referred to as the "Report") to be delivered to the purchaser as set out above are documents in Opta's records relating to the described property (hereinafter referred to as the "Property"). Opta makes no representations or warranties respecting the Documents whatsoever, including, without limitation, with respect to the completeness, accuracy or usefulness of the Documents, and does not represent or warrant that these are the only plans and reports prepared in association with the Property or in Opta's possession at the time of Report delivery to the purchaser. The Documents are current as of the date(s) indicated on them. Interpretation of the Documents, if any, is by inference based upon the information which is apparent and obvious on the face of the Documents only. Opta does not represent, warrant or guarantee that interpretations other than those referred to do not exist from other sources. The Report will be prepared for use by the purchaser of the services as shown above hereof only.

Disclaimer

Opta disclaims responsibility for any losses or damages of any kind whatsoever, whether consequential or other, however caused, incurred or suffered, arising directly or indirectly as a result of the services (which services include, but are not limited to, the preparation of the Report provided hereunder), including but not limited to, any losses or damages arising directly or indirectly from any breach of contract, fundamental or otherwise, from reliance on Opta Reports or from any tortious acts or omissions of Opta's agents, employees or representatives.

Entire Agreement

The parties hereto acknowledge and agree to be bound by the terms and conditions hereof. The request form constitutes the entire agreement between the parties pertaining to the subject matter hereof and supersedes all prior and contemporaneous agreements, negotiations and discussions, whether oral or written, and there are no representations or warranties, or other agreements between the parties in connection with the subject matter hereof except as specifically set forth herein. No supplement, modification, waiver, or termination of the request shall be binding, unless confirmed in writing by the parties hereto.

Governing Document

In the event of any conflicts or inconsistencies between the provisions hereof and the Reports, the rights and obligations of the parties shall be deemed to be governed by the request form, which shall be the paramount document.

Law

This agreement shall be governed by and construed in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein.

ENVIROSCAN Report

No Records Found

Requested by:
Eleanor Goolab
Date Completed: 11/15/2022 15:32:04

OPTA INFORMATION INTELLIGENCE

No Records Found

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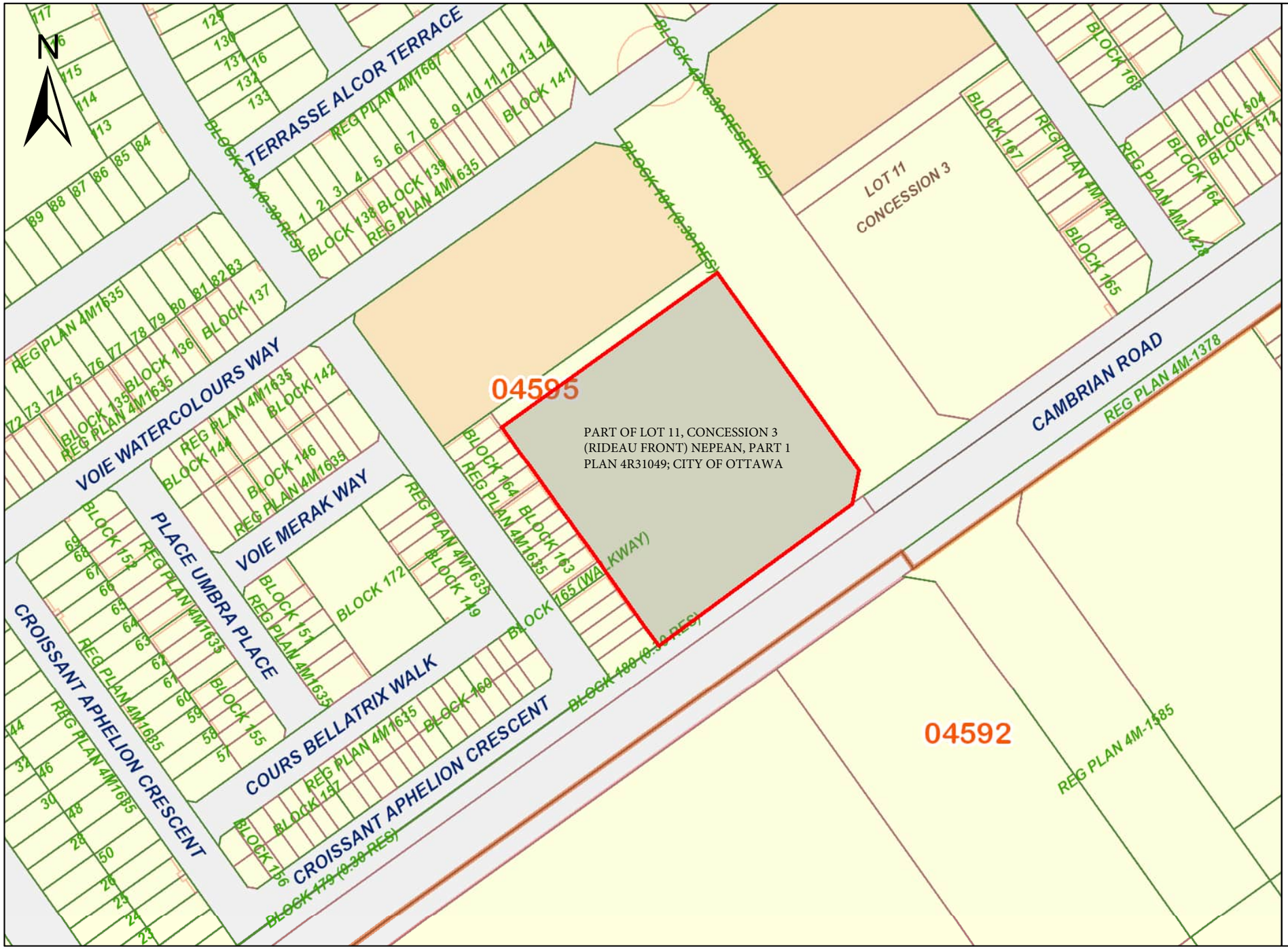

ServiceOntario

PRINTED ON 24 OCT, 2022 AT 23:51:25
FOR SLR

SCALE

0 30 60 90 meters

PROPERTY INDEX MAP

OTTAWA-CARLETON(No. 04)

LEGEND

FREEHOLD PROPERTY	
LEASEHOLD PROPERTY	
LIMITED INTEREST PROPERTY	
CONDOMINIUM PROPERTY	
RETIRED PIN (MAP UPDATE PENDING)	
PROPERTY NUMBER	*0449*
BLOCK NUMBER	**08050**
GEOGRAPHIC FABRIC	——
EASEMENT	- - - -

THIS IS NOT A PLAN OF SURVEY

NOTES

REVIEW THE TITLE RECORDS FOR COMPLETE PROPERTY INFORMATION AS THIS MAP MAY NOT REFLECT RECENT REGISTRATIONS

THIS MAP WAS COMPILED FROM PLANS AND DOCUMENTS RECORDED IN THE LAND REGISTRATION SYSTEM AND HAS BEEN PREPARED FOR PROPERTY INDEXING PURPOSES ONLY

FOR DIMENSIONS OF PROPERTIES BOUNDARIES SEE RECORDED PLANS AND DOCUMENTS

ONLY MAJOR EASEMENTS ARE SHOWN

REFERENCE PLANS UNDERLYING MORE RECENT REFERENCE PLANS ARE NOT ILLUSTRATED

Ontario

* CERTIFIED IN ACCORDANCE WITH THE LAND TITLES ACT * SUBJECT TO RESERVATIONS IN CROWN GRANT *

PROPERTY DESCRIPTION: PART OF LOT 11, CONCESSION 3 (RIDEAU FRONT) NEPEAN, PART 1 PLAN 4R31049; CITY OF OTTAWA

PROPERTY REMARKS: FOR THE PURPOSE OF THE QUALIFIER THE DATE OF REGISTRATION OF ABSOLUTE TITLE IS 2008/03/05. PLANNING ACT CONSENT IN DOCUMENT OC1997206.

ESTATE/QUALIFIER:
FEE SIMPLE
LT ABSOLUTE PLUS

RECENTLY:
DIVISION FROM 04595-1755

PIN CREATION DATE:
2018/05/31

OWNERS' NAMES — CAPACITY — SHARE

CP REIT ONTARIO PROPERTIES LIMITED

REG. NUM.	DATE	INSTRUMENT TYPE	AMOUNT	PARTIES FROM	PARTIES TO	CERT/ CHKD
** PRINTOUT INCLUDES ALL DOCUMENT TYPES AND DELETED INSTRUMENTS SINCE 2018/05/31 **						
**SUBJECT TO SUBSECTION 44(1) OF THE LAND TITLES ACT, EXCEPT PARAGRAPHS 3 AND 14 AND *						
** PROVINCIAL SUCCESSION DUTIES AND EXCEPT PARAGRAPH 11 AND ESCHEATS OR FORFEITURE **						
** TO THE CROWN UP TO THE DATE OF REGISTRATION WITH AN ABSOLUTE TITLE. **						
OC1135995	2010/07/16	NOTICE		HER MAJESTY THE QUEEN IN RIGHT OF CANADA		C
REMARKS: AIRPORT ZONING REGULATION						
4R31049	2018/04/24	PLAN REFERENCE				C
REMARKS: PRE-APPROVED BY APRIL SARKANY (LRO 62) 4R2018E-2184						
OC1997206	2018/05/29	TRANSFER	$2,024,100	MATTAMY (HALF MOON BAY) LIMITED	CP REIT ONTARIO PROPERTIES LIMITED	C
REMARKS: PLANNING ACT STATEMENTS.						

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.

SLR PROJECT # 209.013940.00001

#3850 CAMBRIAN ROAD

PIN 04595-2078

PARTS OF LOT 11
CONCESSION 3
(RIDEAU FRONT)

TOWNSHIP OF NEPEAN

being
PART 1 on 4R-31049

CITY OF OTTAWA

REGIONAL MUNICIPALITY OF OTTAWA-CARLETON

PIN 04595-2078
PART 1 on 4R31049

PIN	OWNERSHIP	DATES
04595-2078 045951748 04595-1755 04595-1425 04595-0340 04595-0143 04595-0072	**CP REIT ONTARIO PROPERTIES LIMITED**	**MAY 29 2018 TO PRESENT** **AS OF OCTOBER 25 2022**
AIRPORT ZONING REGULATIONS	HER MAJESTY THE QUEEN IN RIGHT OF CANADA TRANSPORT CANADA	JULY 16 2010
	MATTAMY (HALF MOON BAY) LIMITED	JUNE 18 2008 TO MAY 29 2018
NAME CHANGE	1734224 ONTARIO LIMITED **became** MATTAMY (FRANCIS/BOYCE) LIMITED	NOVEMBER 29 2007
NAME CHANGE	1150274 ONTARIO INC. **became** 1734224 ONTARIO LIMITED	NOVEMBER 29 2007
	1150274 ONTARIO INC.	AUGUST 11 2004 TO JUNE 18 2008
	836411 ONTARIO INC.	JULY 18 1989 TO AUGUST 11 2004
	WALTER JOSEPH CORNELIUS NEIL CLARKE	APRIL 25 1988 TO JULY 18 1989

	MILDRED MARY CLARKE THOMAS CLARKE	DECEMBER 18 1946 TO APRIL 25 1988
	ALICE CLARKE	NOVEMBER 9 1946 TO DECEMBER 18 1946
MERGE OF CHAINS	THOMAS CLARKE	APRIL 25 1940 TO NOVEMBER 9 1946
	CHAIN #1	
	CORNELIUS CLARKE	APRIL 13 1923 TO APRIL 25 1940
	WILLIAM CLARKE HELENA CLARKE	JUNE 22 1869 TO APRIL 13 1923
	?? MATHESON **ESTATE OF** ARCHIBALD FRASER	MAY 21 1856 TO JUNE 22 1869
	JAMES BURKE	FEBRUARY 4 1856 TO MAY 21 1856
	ARCHIBALD FRASER	SEPTEMBER 15 1855 TO FEBRUARY 4 1856
CROWN PATENT	ARCHIBALD CRAST	JANUARY 30 1801 TO SEPTEMBER 15 1855
	CHAIN #2	
	CORNELIUS CLARKE	APRIL 22 1922 TO APRIL 25 1940
	MICHAEL CLARKE	MARCH 2 1870 TO APRIL 22 1922
	?? MATHESON **ESTATE OF** ARCHIBALD FRASER	MAY 21 1856 TO MARCH 2 1870
	JAMES BURKE	FEBRUARY 4 1856 TO MAY 21 1856

	ARCHIBALD FRASER	SEPTEMBER 15 1855 TO FEBRUARY 4 1856
CROWN PATENT	ARCHIBALD CRAST	JANUARY 30 1801 TO SEPTEMBER 15 1855

CROWN PATENT: JANUARY 30 1801

LOT 11 ; CONCESSION 3 (RIDEAU FRONT)

GEOGRAPHIC TOWNSHIP OF NEPEAN

ServiceOntario

PRINTED ON 24 OCT, 2022 AT 23:51:44
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SCALE

0 30 60 90 meters

PROPERTY INDEX MAP

OTTAWA-CARLETON(No. 04)

LEGEND

FREEHOLD PROPERTY	
LEASEHOLD PROPERTY	
LIMITED INTEREST PROPERTY	
CONDOMINIUM PROPERTY	
RETIRED PIN (MAP UPDATE PENDING)	
PROPERTY NUMBER	*0449*
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GEOGRAPHIC FABRIC	
EASEMENT	

THIS IS NOT A PLAN OF SURVEY

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ONLY MAJOR EASEMENTS ARE SHOWN

REFERENCE PLANS UNDERLYING MORE RECENT REFERENCE PLANS ARE NOT ILLUSTRATED

Ontario

* CERTIFIED IN ACCORDANCE WITH THE LAND TITLES ACT * SUBJECT TO RESERVATIONS IN CROWN GRANT *

PROPERTY DESCRIPTION: PART OF LOT 11, CONCESSION 3 (RIDEAU FRONT) NEPEAN, PART 3 PLAN 4R31049; CITY OF OTTAWA

PROPERTY REMARKS: FOR THE PURPOSE OF THE QUALIFIER THE DATE OF REGISTRATION OF ABSOLUTE TITLE IS 2008/03/31. PLANNING ACT CONSENT IN DOCUMENT OC1997206.

ESTATE/QUALIFIER:
FEE SIMPLE
LT ABSOLUTE PLUS

RECENTLY:
DIVISION FROM 04595-1757

PIN CREATION DATE:
2018/05/31

OWNERS' NAMES — CAPACITY — SHARE
CP REIT ONTARIO PROPERTIES LIMITED

REG. NUM.	DATE	INSTRUMENT TYPE	AMOUNT	PARTIES FROM	PARTIES TO	CERT/ CHKD
** PRINTOUT INCLUDES ALL DOCUMENT TYPES AND DELETED INSTRUMENTS SINCE 2018/05/31 **						
**SUBJECT TO SUBSECTION 44(1) OF THE LAND TITLES ACT, EXCEPT PARAGRAPHS 3 AND 14 AND *						
** PROVINCIAL SUCCESSION DUTIES AND EXCEPT PARAGRAPH 11 AND ESCHEATS OR FORFEITURE **						
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OC1135995	2010/07/16	NOTICE		HER MAJESTY THE QUEEN IN RIGHT OF CANADA		C
REMARKS: AIRPORT ZONING REGULATION						
4R31049	2018/04/24	PLAN REFERENCE				C
REMARKS: PRE-APPROVED BY APRIL SARKANY (LRO 62) 4R2018E-2184						
OC1997206	2018/05/29	TRANSFER	$2,024,100	MATTAMY (HALF MOON BAY) LIMITED	CP REIT ONTARIO PROPERTIES LIMITED	C
REMARKS: PLANNING ACT STATEMENTS.						

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SLR PROJECT # 209.013940.00001

#3850 CAMBRIAN ROAD

PIN 04595-2080

PARTS OF LOT 11
CONCESSION 3
(RIDEAU FRONT)

TOWNSHIP OF NEPEAN

being
PART 3 on 4R-31049

CITY OF OTTAWA

REGIONAL MUNICIPALITY OF OTTAWA-CARLETON

PIN 04595-2080
PART 3 on 4R31049

PIN	OWNERSHIP	DATES
04595-2080 04595-1757 04595-1750 04595-1433 04595-1422 04595-0345 04595-0144 04595-0071	**CP REIT ONTARIO PROPERTIES LIMITED**	**MAY 29 2018 TO PRESENT** **AS OF OCTOBER 25 2022**
	MATTAMY (HALF MOON BAY) LIMITED	JUNE 18 2008 TO MAY 29 2018
AIRPORT ZONING REGULATIONS	HER MAJESTY THE QUEEN IN RIGHT OF CANADA TRANSPORT CANADA	JULY 16 2010
	1527423 ONTARIO LTD.	JUNE 25 2004 TO JUNE 18 2008
COURT ORDER	JOSEPH CORNELIUS CLARKE	MARCH 20 1980 TO JUNE 25 2004
	JOSEPH CORNELIUS CLARKE JAMES CLARKE	MARCH 25 1965 TO MARCH 20 1980
	ALICE CLARKE	NOVEMBER 9 1946 TO MARCH 25 1965
MERGE OF CHAINS	THOMAS CLARKE	APRIL 25 1940 TO NOVEMBER 9 1946
	CHAIN #1	
	CORNELIUS CLARKE	APRIL 13 1923 TO APRIL 25 1940

	WILLIAM CLARKE HELENA CLARKE	JUNE 22 1869 TO APRIL 13 1923
	?? MATHESON **ESTATE OF** ARCHIBALD FRASER	MAY 21 1856 TO JUNE 22 1869
	JAMES BURKE	FEBRUARY 4 1856 TO MAY 21 1856
	ARCHIBALD FRASER	SEPTEMBER 15 1855 TO FEBRUARY 4 1856
CROWN PATENT	ARCHIBALD CRAST	JANUARY 30 1801 TO SEPTEMBER 15 1855
	CHAIN #2	
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	ARCHIBALD FRASER	SEPTEMBER 15 1855 TO FEBRUARY 4 1856
CROWN PATENT	ARCHIBALD CRAST	JANUARY 30 1801 TO SEPTEMBER 15 1855

CROWN PATENT: JANUARY 30 1801

LOT 11 ; CONCESSION 3 (RIDEAU FRONT)

GEOGRAPHIC TOWNSHIP OF NEPEAN

DATABASE REPORT

Project Property:	*Cambrian Road* *3850 Cambrian Road* *Nepean ON K2J 0T2*
Project No:	*C00.13940.000PP*
Report Type:	*RSC Report (Urban)*
Order No:	*22102400251*
Requested by:	*SLR Consulting (Canada) Ltd.*
Date Completed:	*October 26, 2022*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

Table of Contents

Executive Summary

Property Information:

Project Property:	*Cambrian Road* *3850 Cambrian Road Nepean ON K2J 0T2*
Project No:	*C00.13940.000PP*

Order Information:

Order No:	*22102400251*
Date Requested:	*October 24, 2022*
Requested by:	*SLR Consulting (Canada) Ltd.*
Report Type:	*RSC Report (Urban)*

Historical/Products:

Aerial Photographs	*Aerials - National Collection*
City Directory Search	*CD - Subject Site plus 250m Radius*
ERIS Xplorer	*ERIS Xplorer*
Insurance Products	*Fire Insurance Maps/Inspection Reports/Site Plans*
Topographic Map	*RSC Maps*

Executive Summary: Report Summary

Database	Name	Searched	Project Property	Boundary to 0.30km	Total
AAGR	Abandoned Aggregate Inventory	Y	0	0	0
AGR	Aggregate Inventory	Y	0	0	0
AMIS	Abandoned Mine Information System	Y	0	0	0
ANDR	Anderson's Waste Disposal Sites	Y	0	0	0
AST	Aboveground Storage Tanks	Y	0	0	0
AUWR	Automobile Wrecking & Supplies	Y	0	0	0
BORE	Borehole	Y	0	0	0
CA	Certificates of Approval	Y	0	0	0
CDRY	Dry Cleaning Facilities	Y	0	0	0
CFOT	Commercial Fuel Oil Tanks	Y	0	0	0
CHEM	Chemical Manufacturers and Distributors	Y	0	0	0
CHM	Chemical Register	Y	0	0	0
CNG	Compressed Natural Gas Stations	Y	0	0	0
COAL	Inventory of Coal Gasification Plants and Coal Tar Sites	Y	0	0	0
CONV	Compliance and Convictions	Y	0	0	0
CPU	Certificates of Property Use	Y	0	0	0
DRL	Drill Hole Database	Y	0	0	0
DTNK	Delisted Fuel Tanks	Y	0	0	0
EASR	Environmental Activity and Sector Registry	Y	0	0	0
EBR	Environmental Registry	Y	0	0	0
ECA	Environmental Compliance Approval	Y	0	20	20
EEM	Environmental Effects Monitoring	Y	0	0	0
EHS	ERIS Historical Searches	Y	0	3	3
EIIS	Environmental Issues Inventory System	Y	0	0	0
EMHE	Emergency Management Historical Event	Y	0	0	0
EPAR	Environmental Penalty Annual Report	Y	0	0	0
EXP	List of Expired Fuels Safety Facilities	Y	0	0	0
FCON	Federal Convictions	Y	0	0	0
FCS	Contaminated Sites on Federal Land	Y	0	0	0
FOFT	Fisheries & Oceans Fuel Tanks	Y	0	0	0
FRST	Federal Identification Registry for Storage Tank Systems (FIRSTS)	Y	0	0	0
FST	Fuel Storage Tank	Y	0	0	0
FSTH	Fuel Storage Tank - Historic	Y	0	0	0
GEN	Ontario Regulation 347 Waste Generators Summary	Y	0	0	0
GHG	Greenhouse Gas Emissions from Large Facilities	Y	0	0	0
HINC	TSSA Historic Incidents	Y	0	0	0

Database	Name	Searched	Project Property	Boundary to 0.30km	Total
IAFT	Indian & Northern Affairs Fuel Tanks	Y	0	0	0
INC	Fuel Oil Spills and Leaks	Y	0	0	0
LIMO	Landfill Inventory Management Ontario	Y	0	0	0
MINE	Canadian Mine Locations	Y	0	0	0
MNR	Mineral Occurrences	Y	0	0	0
NATE	National Analysis of Trends in Emergencies System (NATES)	Y	0	0	0
NCPL	Non-Compliance Reports	Y	0	0	0
NDFT	National Defense & Canadian Forces Fuel Tanks	Y	0	0	0
NDSP	National Defense & Canadian Forces Spills	Y	0	0	0
NDWD	National Defence & Canadian Forces Waste Disposal Sites	Y	0	0	0
NEBI	National Energy Board Pipeline Incidents	Y	0	0	0
NEBP	National Energy Board Wells	Y	0	0	0
NEES	National Environmental Emergencies System (NEES)	Y	0	0	0
NPCB	National PCB Inventory	Y	0	0	0
NPRI	National Pollutant Release Inventory	Y	0	0	0
OGWE	Oil and Gas Wells	Y	0	0	0
OOGW	Ontario Oil and Gas Wells	Y	0	0	0
OPCB	Inventory of PCB Storage Sites	Y	0	0	0
ORD	Orders	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
PINC	Pipeline Incidents	Y	0	1	1
PRT	Private and Retail Fuel Storage Tanks	Y	0	0	0
PTTW	Permit to Take Water	Y	0	0	0
REC	Ontario Regulation 347 Waste Receivers Summary	Y	0	0	0
RSC	Record of Site Condition	Y	0	0	0
RST	Retail Fuel Storage Tanks	Y	0	0	0
SCT	Scott's Manufacturing Directory	Y	0	0	0
SPL	Ontario Spills	Y	0	0	0
SRDS	Wastewater Discharger Registration Database	Y	0	0	0
TANK	Anderson's Storage Tanks	Y	0	0	0
TCFT	Transport Canada Fuel Storage Tanks	Y	0	0	0
VAR	Variances for Abandonment of Underground Storage Tanks	Y	0	0	0
WDS	Waste Disposal Sites - MOE CA Inventory	Y	0	0	0
WDSH	Waste Disposal Sites - MOE 1991 Historical Approval Inventory	Y	0	0	0
WWIS	Water Well Information System	Y	0	1	1
	Total:		0	25	25

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev diff (m)	Page Number

No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
1	EHS		3853 and 3900 Cambrian Road, and 3508 Greenbank Road Ottawa ON K2J 0E9	SE/37.7	-0.32	16
2	EHS		3853 Cambrian Road Ottawa ON	S/61.3	-0.50	16
3	ECA	Mattamy (Half Moon Bay) Limited	Ottawa ON K2S 1B9	N/78.9	-0.26	16
3	ECA	Mattamy (Barrhaven) Limited.	Ottawa ON K2S 1B9	N/78.9	-0.26	16
3	ECA	Mattamy (Half Moon Bay) Limited	Ottawa ON K2S 1B9	N/78.9	-0.26	17
4	EHS		Cambrian Road Ottawa ON	E/92.8	-0.25	17
5	WWIS		ON ***Well ID:*** 7223434	SSE/220.7	0.16	17
6	ECA	Minto Communities Inc.	Lot 10, Concession 3 Part 1, Ref.4R-23178 Ottawa ON K1P 0B6	SE/230.9	0.12	18
6	ECA	Minto Communities Inc.	Ottawa ON K1P 0B6	SE/230.9	0.12	19
6	ECA	Mattamy (Half Moon Bay) Limited	Half Moon Bay West Ottawa ON	SE/230.9	0.12	19
6	ECA	Mattamy (Half Moon Bay) Limited	Half Moon Bay West Ottawa ON K2K 2M5	SE/230.9	0.12	19
6	ECA	Mattamy (Half Moon Bay) Limited	Half Moon Bay West Ottawa ON K2K 2M5	SE/230.9	0.12	19

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
6	ECA	Mattamy (Half Moon Bay) Limited	Ottawa ON K2K 2M5	SE/230.9	0.12	20
6	ECA	Mattamy (Half Moon Bay) Limited	Ottawa ON K2K 2M5	SE/230.9	0.12	20
6	ECA	Mattamy (Half Moon Bay) Limited	Half Moon Bay West Ottawa ON K2K 2M5	SE/230.9	0.12	20
6	ECA	Mattamy (Half Moon Bay) Limited	Geo. Twp. of Nepean Ottawa ON K2S 1B9	SE/230.9	0.12	21
6	ECA	Minto Communities Inc.	Ottawa ON K1P 0B6	SE/230.9	0.12	21
6	ECA	McNeil Farm Limited	Ottawa ON K2P 1P9	SE/230.9	0.12	21
6	ECA	Mattamy (Half Moon Bay) Limited	Geo. Twp. of Nepean Ottawa ON K2S 1B9	SE/230.9	0.12	22
6	ECA	Mattamy (Half Moon Bay) Limited	Geo. Twp. of Nepean Ottawa ON K2S 1B9	SE/230.9	0.12	22
6	ECA	McNeil Farm Limited	Ottawa ON K2P 1P9	SE/230.9	0.12	22
6	ECA	Mattamy (Half Moon Bay) Limited	Half Moon Bay West Ottawa ON K2K 2M5	SE/230.9	0.12	22
6	ECA	Mattamy (Half Moon Bay) Limited	Ottawa ON K2K 2M5	SE/230.9	0.12	23
6	ECA	Mattamy (Half Moon Bay 3) Limited	Half Moon Bay West Ottawa ON K2K 2M5	SE/230.9	0.12	23
7	PINC	TSSA INCIDENTS	510 & 512 CHIMNEY CORNER TERR,, NEPEAN,ON,K2J 6L1,CA ON	N/246.4	-1.27	23

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number

Executive Summary: Summary By Data Source

ECA - Environmental Compliance Approval

A search of the ECA database, dated Oct 2011- Aug 31, 2022 has found that there are 20 ECA site(s) within approximately 0.30 kilometers of the project property.

Site	Address	Distance (m)	Map Key
Mattamy (Half Moon Bay) Limited	Ottawa ON K2S 1B9	78.9	3
Mattamy (Barrhaven) Limited.	Ottawa ON K2S 1B9	78.9	3
Mattamy (Half Moon Bay) Limited	Ottawa ON K2S 1B9	78.9	3
Mattamy (Half Moon Bay) Limited	Ottawa ON K2K 2M5	230.9	6
Mattamy (Half Moon Bay 3) Limited	Half Moon Bay West Ottawa ON K2K 2M5	230.9	6
Mattamy (Half Moon Bay) Limited	Ottawa ON K2K 2M5	230.9	6
Mattamy (Half Moon Bay) Limited	Half Moon Bay West Ottawa ON K2K 2M5	230.9	6
McNeil Farm Limited	Ottawa ON K2P 1P9	230.9	6
Minto Communities Inc.	Lot 10, Concession 3 Part 1, Ref.4R-23178 Ottawa ON K1P 0B6	230.9	6

Site	Address	Distance (m)	Map Key
Minto Communities Inc.	Ottawa ON K1P 0B6	230.9	6
Mattamy (Half Moon Bay) Limited	Half Moon Bay West Ottawa ON	230.9	6
Mattamy (Half Moon Bay) Limited	Half Moon Bay West Ottawa ON K2K 2M5	230.9	6
Mattamy (Half Moon Bay) Limited	Half Moon Bay West Ottawa ON K2K 2M5	230.9	6
Mattamy (Half Moon Bay) Limited	Ottawa ON K2K 2M5	230.9	6
Mattamy (Half Moon Bay) Limited	Half Moon Bay West Ottawa ON K2K 2M5	230.9	6
Mattamy (Half Moon Bay) Limited	Geo. Twp. of Nepean Ottawa ON K2S 1B9	230.9	6
Minto Communities Inc.	Ottawa ON K1P 0B6	230.9	6
McNeil Farm Limited	Ottawa ON K2P 1P9	230.9	6
Mattamy (Half Moon Bay) Limited	Geo. Twp. of Nepean Ottawa ON K2S 1B9	230.9	6
Mattamy (Half Moon Bay) Limited	Geo. Twp. of Nepean Ottawa ON K2S 1B9	230.9	6

EHS - ERIS Historical Searches

A search of the EHS database, dated 1999-Jul 31, 2022 has found that there are 3 EHS site(s) within approximately 0.30 kilometers of the project property.

Site	Address	Distance (m)	Map Key
	3853 and 3900 Cambrian Road, and 3508 Greenbank Road Ottawa ON K2J 0E9	37.7	1
	3853 Cambrian Road Ottawa ON	61.3	2
	Cambrian Road Ottawa ON	92.8	4

PINC - Pipeline Incidents

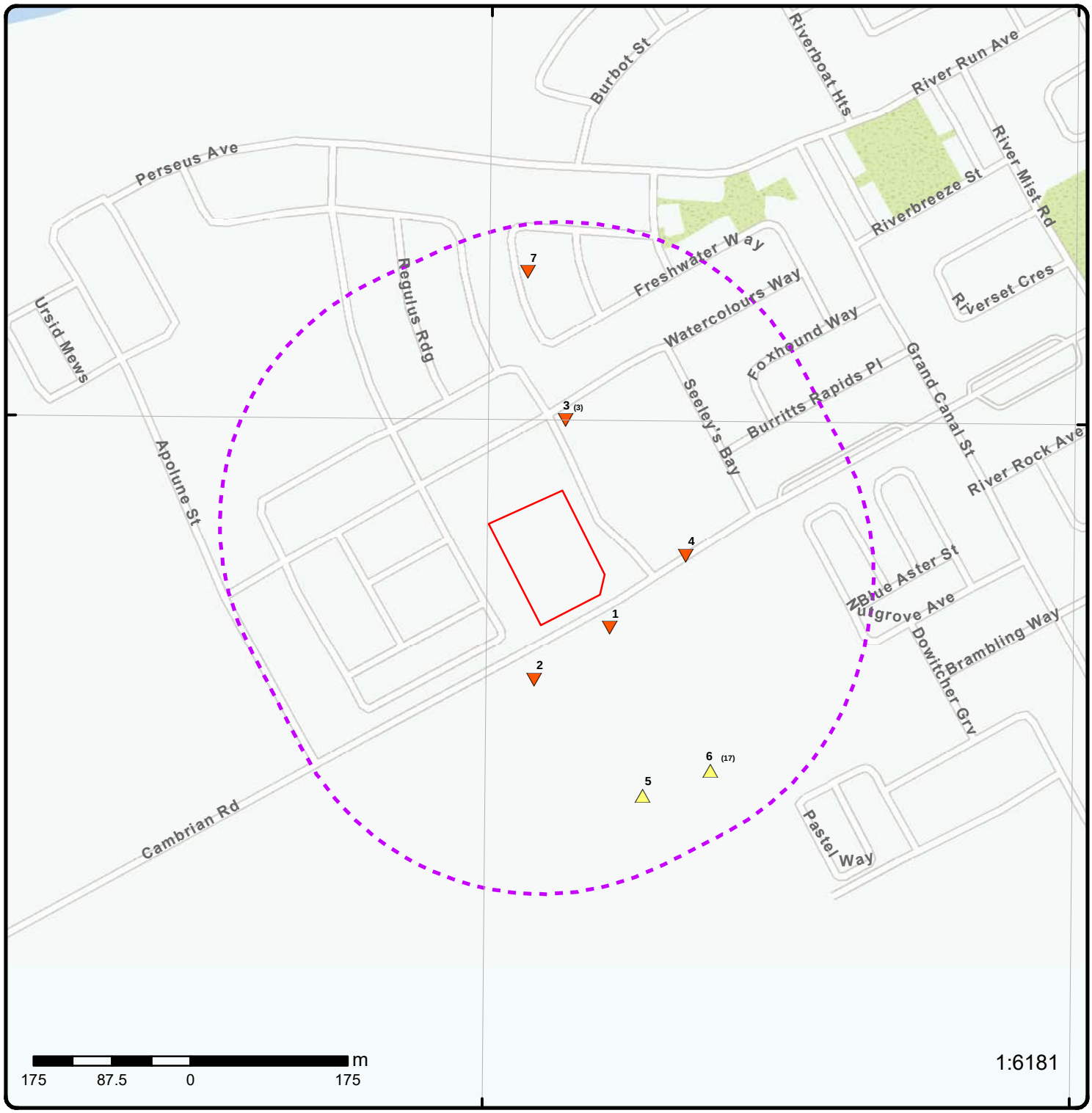
A search of the PINC database, dated Feb 28, 2021 has found that there are 1 PINC site(s) within approximately 0.30 kilometers of the project property.

Site	Address	Distance (m)	Map Key
TSSA INCIDENTS	510 & 512 CHIMNEY CORNER TERR,, NEPEAN,ON,K2J 6L1,CA ON	246.4	7

WWIS - Water Well Information System

A search of the WWIS database, dated Jun 30 2022 has found that there are 1 WWIS site(s) within approximately 0.30 kilometers of the project property.

Site	Address	Distance (m)	Map Key
	ON ***Well ID:*** 7223434	220.7	5



Map: 0.3 Kilometer Radius

Order Number: 22102400251

Address: 3850 Cambrian Road, Nepean, ON

- Project Property
- Buffer Outline
- Eris Sites with Higher Elevation
- Eris Sites with Same Elevation
- Eris Sites with Lower Elevation
- Eris Sites with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major Arterial; Minor Arterial
- Local Road
- Service Road; Traffic Circle; Ramp
- Rail
- Beach
- Airport
- Industrial Area
- Military Base
- Aircraft Roads
- Native Reservation
- Hospital
- Shopping & Sports Area
- University/College
- Cemetery; Golf Course
- Parkt (National)
- Park (City/County)

75°45'W

45°15'N

45°15'N

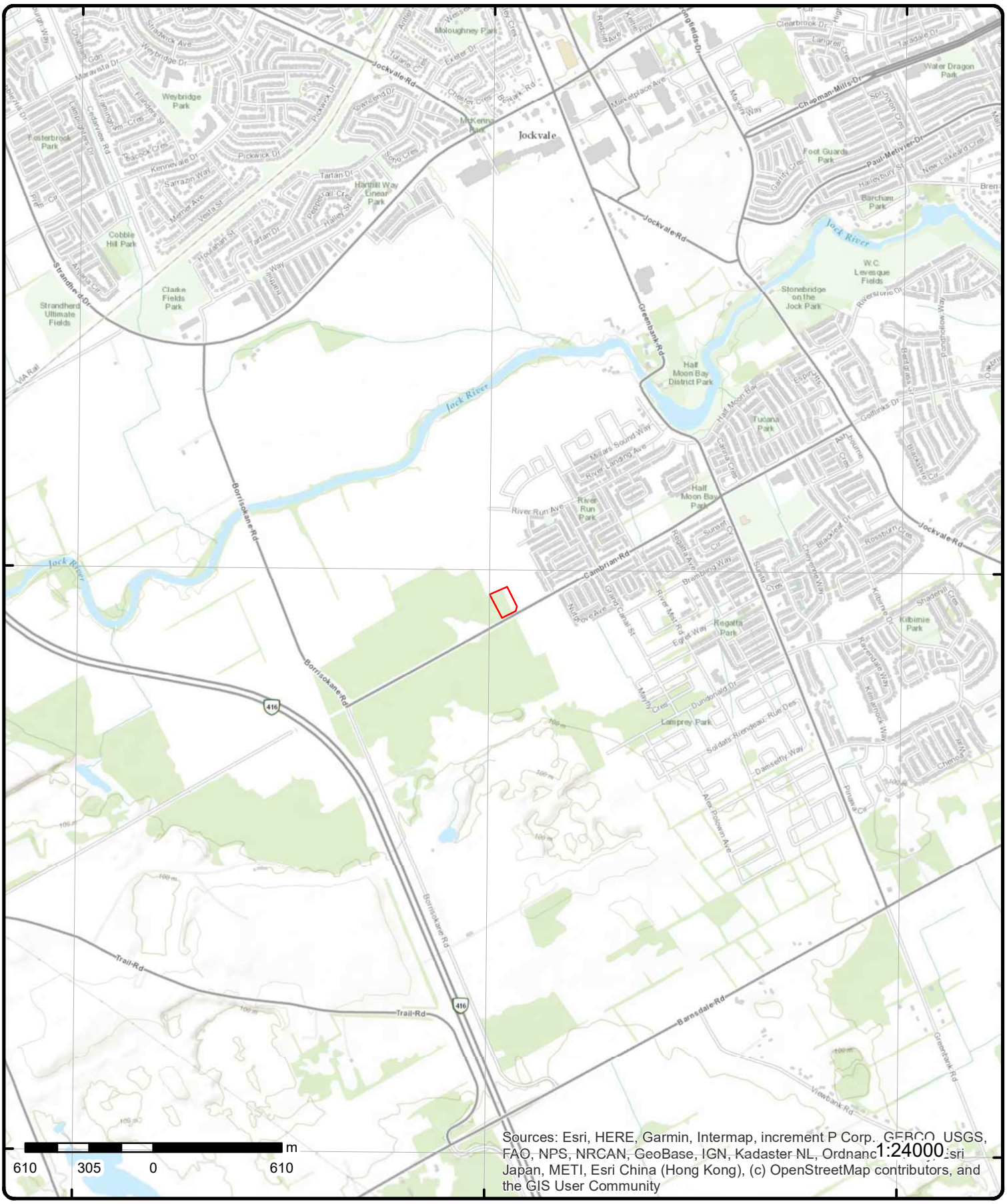
Aerial

Year: 2022

Order Number: 22102400251

Address: 3850 Cambrian Road, Nepean, ON

Source: ESRI World Imagery



Topographic Map

Address: 3850 Cambrian Road, ON

Source: ESRI World Topographic Map

Order Number: 22102400251

ERIS

Detail Report

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
1	1 of 1	SE/37.7	93.6 / -0.32	3853 and 3900 Cambrian Road, and 3508 Greenbank Road Ottawa ON K2J 0E9	EHS

Order No:	22080801094	**Nearest Intersection:**	
Status:	C	**Municipality:**	
Report Type:	Standard Report	**Client Prov/State:**	ON
Report Date:	11-AUG-22	**Search Radius (km):**	.25
Date Received:	08-AUG-22	**X:**	-75.7482511
Previous Site Name:		**Y:**	45.2479168
Lot/Building Size:			
Additional Info Ordered:			

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
2	1 of 1	S/61.3	93.4 / -0.50	3853 Cambrian Road Ottawa ON	EHS

Order No:	20091026033	**Nearest Intersection:**	Cambrian Road and Cedarview Road
Status:	C	**Municipality:**	
Report Type:	Custom Report	**Client Prov/State:**	ON
Report Date:	11/4/2009	**Search Radius (km):**	0.25
Date Received:	10/26/2009	**X:**	-75.754342
Previous Site Name:		**Y:**	45.247
Lot/Building Size:			
Additional Info Ordered:			

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	1 of 3	N/78.9	93.7 / -0.26	Mattamy (Half Moon Bay) Limited Ottawa ON K2S 1B9	ECA

Approval No:	0804-89QHMU	**MOE District:**	Ottawa
Approval Date:	2010-10-04	**City:**	
Status:	Approved	**Longitude:**	-75.7489
Record Type:	ECA	**Latitude:**	45.25
Link Source:	IDS	**Geometry X:**	
SWP Area Name:	Rideau Valley	**Geometry Y:**	
Approval Type:	ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS		
Project Type:	MUNICIPAL AND PRIVATE SEWAGE WORKS		
Business Name:	Mattamy (Half Moon Bay) Limited		
Address:			
Full Address:			
Full PDF Link:	https://www.accessenvironment.ene.gov.on.ca/instruments/3810-89HPQ3-14.pdf		
PDF Site Location:			

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	2 of 3	N/78.9	93.7 / -0.26	Mattamy (Barrhaven) Limited. Ottawa ON K2S 1B9	ECA

Approval No:	4801-88XHM4	**MOE District:**	Ottawa
Approval Date:	2010-09-03	**City:**	
Status:	Approved	**Longitude:**	-75.7489
Record Type:	ECA	**Latitude:**	45.25

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Link Source: IDS
SWP Area Name: Rideau Valley
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Mattamy (Barrhaven) Limited.
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/8313-88PQVT-14.pdf
PDF Site Location:
Geometry X:
Geometry Y:

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3 | **3 of 3** | **N/78.9** | **93.7 / -0.26** | **Mattamy (Half Moon Bay) Limited**
Ottawa ON K2S 1B9 | **ECA**

Approval No: 9696-8ASHGQ
Approval Date: 2010-11-12
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name: Rideau Valley
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Mattamy (Half Moon Bay) Limited
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/9733-8APGYU-14.pdf
PDF Site Location:
MOE District: Ottawa
City:
Longitude: -75.7489
Latitude: 45.25
Geometry X:
Geometry Y:

---

4 | **1 of 1** | **E/92.8** | **93.7 / -0.25** | **Cambrian Road**
Ottawa ON | **EHS**

Order No: 20180405002
Status: C
Report Type: Standard Report
Report Date: 11-APR-18
Date Received: 05-APR-18
Previous Site Name:
Lot/Building Size:
Additional Info Ordered:
Nearest Intersection:
Municipality:
Client Prov/State: ON
Search Radius (km): .25
X: -75.747179
Y: 45.24865

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5 | **1 of 1** | **SSE/220.7** | **94.1 / 0.16**
ON | **WWIS**

Well ID: 7223434
Construction Date:
Use 1st:
Use 2nd:
Final Well Status:
Water Type:
Casing Material:
Audit No: C19501
Tag: A122943
Constructn Method:
Elevation (m):
Elevatn Reliabilty:
Depth to Bedrock:
Well Depth:
Overburden/Bedrock:
Pump Rate:
Static Water Level:
Flowing (Y/N):
Flow Rate:
Data Entry Status: Yes
Data Src:
Date Received: 09-Jul-2014 00:00:00
Selected Flag: TRUE
Abandonment Rec:
Contractor: 7328
Form Version: 8
Owner:
County: OTTAWA-CARLETON
Lot:
Concession:
Concession Name:
Easting NAD83:
Northing NAD83:
Zone:

Clear/Cloudy: ***UTM Reliability:***
Municipality: NEPEAN TOWNSHIP
Site Info:

PDF URL (Map):

Additional Detail(s) (Map)

Well Completed Date: 2012/02/27
Year Completed: 2012
Depth (m):
Latitude: 45.2462393351815
Longitude: -75.7477608407118
Path:

Bore Hole Information

Bore Hole ID:	1004911661	***Elevation:***	
DP2BR:		***Elevrc:***	
Spatial Status:		***Zone:***	18
Code OB:		***East83:***	441318.00
Code OB Desc:		***North83:***	5010577.00
Open Hole:		***Org CS:***	UTM83
Cluster Kind:		***UTMRC:***	4
Date Completed:	27-Feb-2012 00:00:00	***UTMRC Desc:***	margin of error : 30 m - 100 m
Remarks:		***Location Method:***	wwr

Loc Method Desc: on Water Well Record
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Links

Bore Hole ID:	1004911661	***Tag No:***	A122943
Depth M:		***Contractor:***	7328
Year Completed:	2012	***Path:***	
Well Completed Dt:	2012/02/27	***Latitude:***	45.2462393351815
Audit No:	C19501	***Longitude:***	-75.7477608407118

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6 ***1 of 17*** ***SE/230.9*** ***94.0 / 0.12*** ***Minto Communities Inc.***
Lot 10, Concession 3 Part 1, Ref.4R-23178
Ottawa ON K1P 0B6 ***ECA***

Approval No:	5675-8QZMJ3	***MOE District:***	Ottawa
Approval Date:	2012-02-17	***City:***	
Status:	Approved	***Longitude:***	-75.7468
Record Type:	ECA	***Latitude:***	45.2465
Link Source:	IDS	***Geometry X:***	
SWP Area Name:	Rideau Valley	***Geometry Y:***	

Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Minto Communities Inc.
Address: Lot 10, Concession 3 Part 1, Ref.4R-23178
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/4095-8QNS5H-14.pdf
PDF Site Location:

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
6	2 of 17	SE/230.9	94.0 / 0.12	Minto Communities Inc. Ottawa ON K1P 0B6	ECA

Approval No:	3275-8XLRU3	**MOE District:**	Ottawa
Approval Date:	2012-11-13	**City:**	
Status:	Approved	**Longitude:**	-75.7468
Record Type:	ECA	**Latitude:**	45.2465
Link Source:	IDS	**Geometry X:**	
SWP Area Name:	Rideau Valley	**Geometry Y:**	
Approval Type:	ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS		
Project Type:	MUNICIPAL AND PRIVATE SEWAGE WORKS		
Business Name:	Minto Communities Inc.		
Address:			
Full Address:			
Full PDF Link:	https://www.accessenvironment.ene.gov.on.ca/instruments/2304-8QNT74-14.pdf		
PDF Site Location:			

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
6	3 of 17	SE/230.9	94.0 / 0.12	Mattamy (Half Moon Bay) Limited Half Moon Bay West Ottawa ON	ECA

Approval No:	4315-95LRDH	**MOE District:**	Ottawa
Approval Date:	2013-03-08	**City:**	
Status:	Revoked and/or Replaced	**Longitude:**	-75.7468
Record Type:	ECA	**Latitude:**	45.2465
Link Source:	IDS	**Geometry X:**	
SWP Area Name:	Rideau Valley	**Geometry Y:**	
Approval Type:	ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS		
Project Type:	MUNICIPAL AND PRIVATE SEWAGE WORKS		
Business Name:	Mattamy (Half Moon Bay) Limited		
Address:	Half Moon Bay West		
Full Address:			
Full PDF Link:	https://www.accessenvironment.ene.gov.on.ca/instruments/5155-92RQ4Y-14.pdf		
PDF Site Location:			

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
6	4 of 17	SE/230.9	94.0 / 0.12	Mattamy (Half Moon Bay) Limited Half Moon Bay West Ottawa ON K2K 2M5	ECA

Approval No:	2429-9KJKRK	**MOE District:**	Ottawa
Approval Date:	2014-06-12	**City:**	
Status:	Revoked and/or Replaced	**Longitude:**	-75.7468
Record Type:	ECA	**Latitude:**	45.2465
Link Source:	IDS	**Geometry X:**	
SWP Area Name:	Rideau Valley	**Geometry Y:**	
Approval Type:	ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS		
Project Type:	MUNICIPAL AND PRIVATE SEWAGE WORKS		
Business Name:	Mattamy (Half Moon Bay) Limited		
Address:	Half Moon Bay West		
Full Address:			
Full PDF Link:	https://www.accessenvironment.ene.gov.on.ca/instruments/0309-9GRS3H-14.pdf		
PDF Site Location:			

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
6	5 of 17	SE/230.9	94.0 / 0.12	Mattamy (Half Moon Bay) Limited Half Moon Bay West Ottawa ON K2K 2M5	ECA

Approval No:	9983-A44ME4	**MOE District:**	Ottawa
Approval Date:	2015-11-19	**City:**	
Status:	Approved	**Longitude:**	-75.7468

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Record Type: ECA
Link Source: IDS
SWP Area Name: Rideau Valley
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Mattamy (Half Moon Bay) Limited
Address: Half Moon Bay West
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/8745-9WFL3U-14.pdf
PDF Site Location:
Latitude: 45.2465
Geometry X:
Geometry Y:

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6 | **6 of 17** | **SE/230.9** | **94.0 / 0.12** | **Mattamy (Half Moon Bay) Limited** | **ECA**

Ottawa ON K2K 2M5

Approval No: 3029-ACNJPT
Approval Date: 2016-08-12
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name: Rideau Valley
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Mattamy (Half Moon Bay) Limited
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/8935-ACJQFG-14.pdf
PDF Site Location:
MOE District: Ottawa
City:
Longitude: -75.7468
Latitude: 45.2465
Geometry X:
Geometry Y:

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6 | **7 of 17** | **SE/230.9** | **94.0 / 0.12** | **Mattamy (Half Moon Bay) Limited** | **ECA**

Ottawa ON K2K 2M5

Approval No: 1648-ADBLF9
Approval Date: 2016-09-19
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name: Rideau Valley
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Mattamy (Half Moon Bay) Limited
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/5677-ACMJCN-14.pdf
PDF Site Location:
MOE District: Ottawa
City:
Longitude: -75.7468
Latitude: 45.2465
Geometry X:
Geometry Y:

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6 | **8 of 17** | **SE/230.9** | **94.0 / 0.12** | **Mattamy (Half Moon Bay) Limited** | **ECA**

Half Moon Bay West
Ottawa ON K2K 2M5

Approval No: 1153-ACHP3E
Approval Date: 2016-08-17
Status: Revoked and/or Replaced
Record Type: ECA
Link Source: IDS
SWP Area Name: Rideau Valley
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Mattamy (Half Moon Bay) Limited
MOE District: Ottawa
City:
Longitude: -75.7468
Latitude: 45.2465
Geometry X:
Geometry Y:

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Address: Half Moon Bay West
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/1266-AASJFN-14.pdf
PDF Site Location:

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6 | **9 of 17** | **SE/230.9** | **94.0 / 0.12** | **Mattamy (Half Moon Bay) Limited**
Geo. Twp. of Nepean
Ottawa ON K2S 1B9 | **ECA**

Approval No: 8279-7XBM9P
Approval Date: 2009-11-09
Status: Revoked and/or Replaced
Record Type: ECA
Link Source: IDS
SWP Area Name: Rideau Valley
MOE District: Ottawa
City:
Longitude: -75.7468
Latitude: 45.2465
Geometry X:
Geometry Y:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Mattamy (Half Moon Bay) Limited
Address: Geo. Twp. of Nepean
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/6252-7T3KE3-14.pdf
PDF Site Location:

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6 | **10 of 17** | **SE/230.9** | **94.0 / 0.12** | **Minto Communities Inc.**

Ottawa ON K1P 0B6 | **ECA**

Approval No: 3635-975KJ5
Approval Date: 2013-04-30
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name: Rideau Valley
MOE District: Ottawa
City:
Longitude: -75.7468
Latitude: 45.2465
Geometry X:
Geometry Y:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Minto Communities Inc.
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/6385-8ZVH2V-14.pdf
PDF Site Location:

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6 | **11 of 17** | **SE/230.9** | **94.0 / 0.12** | **McNeil Farm Limited**

Ottawa ON K2P 1P9 | **ECA**

Approval No: 5053-7EWPXU
Approval Date: 2008-05-27
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name: Rideau Valley
MOE District: Ottawa
City:
Longitude: -75.7468
Latitude: 45.2465
Geometry X:
Geometry Y:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: McNeil Farm Limited
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/5035-7ETP68-14.pdf
PDF Site Location:

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
6	12 of 17	SE/230.9	94.0 / 0.12	Mattamy (Half Moon Bay) Limited Geo. Twp. of Nepean Ottawa ON K2S 1B9	ECA

Approval No: 7789-7T4L5U
Approval Date: 2009-06-17
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name: Rideau Valley
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Mattamy (Half Moon Bay) Limited
Address: Geo. Twp. of Nepean
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/4764-7T3K6J-14.pdf
PDF Site Location:
MOE District: Ottawa
City:
Longitude: -75.7468
Latitude: 45.2465
Geometry X:
Geometry Y:

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
6	13 of 17	SE/230.9	94.0 / 0.12	Mattamy (Half Moon Bay) Limited Geo. Twp. of Nepean Ottawa ON K2S 1B9	ECA

Approval No: 9042-7T4KXA
Approval Date: 2009-06-17
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name: Rideau Valley
Approval Type: ECA-Municipal Drinking Water Systems
Project Type: Municipal Drinking Water Systems
Business Name: Mattamy (Half Moon Bay) Limited
Address: Geo. Twp. of Nepean
Full Address:
Full PDF Link:
PDF Site Location:
MOE District: Ottawa
City:
Longitude: -75.74680000000001
Latitude: 45.246500000000005
Geometry X:
Geometry Y:

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
6	14 of 17	SE/230.9	94.0 / 0.12	McNeil Farm Limited Ottawa ON K2P 1P9	ECA

Approval No: 9411-7EZHU6
Approval Date: 2008-05-27
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name: Rideau Valley
Approval Type: ECA-Municipal Drinking Water Systems
Project Type: Municipal Drinking Water Systems
Business Name: McNeil Farm Limited
Address:
Full Address:
Full PDF Link:
PDF Site Location:
MOE District: Ottawa
City:
Longitude: -75.74680000000001
Latitude: 45.246500000000005
Geometry X:
Geometry Y:

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
6	15 of 17	SE/230.9	94.0 / 0.12	Mattamy (Half Moon Bay) Limited Half Moon Bay West Ottawa ON K2K 2M5	ECA

Approval No: 6068-AWUPL5
Approval Date: 2018-04-11
Status: Approved
MOE District: Ottawa
City:
Longitude: -75.7468

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Record Type:	ECA	**Latitude:**	45.2465
Link Source:	IDS	**Geometry X:**	
SWP Area Name:	Rideau Valley	**Geometry Y:**	
Approval Type:	ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS		
Project Type:	MUNICIPAL AND PRIVATE SEWAGE WORKS		
Business Name:	Mattamy (Half Moon Bay) Limited		
Address:	Half Moon Bay West		
Full Address:			
Full PDF Link:	https://www.accessenvironment.ene.gov.on.ca/instruments/9793-AW2MR8-14.pdf		
PDF Site Location:			

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6 | ***16 of 17*** | ***SE/230.9*** | ***94.0 / 0.12*** | ***Mattamy (Half Moon Bay) Limited*** | ***ECA***

Ottawa ON K2K 2M5

Approval No:	2725-B5VKYF	**MOE District:**	Ottawa
Approval Date:	2018-10-30	**City:**	
Status:	Approved	**Longitude:**	-75.7468
Record Type:	ECA	**Latitude:**	45.2465
Link Source:	IDS	**Geometry X:**	
SWP Area Name:	Rideau Valley	**Geometry Y:**	
Approval Type:	ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS		
Project Type:	MUNICIPAL AND PRIVATE SEWAGE WORKS		
Business Name:	Mattamy (Half Moon Bay) Limited		
Address:			
Full Address:			
Full PDF Link:	https://www.accessenvironment.ene.gov.on.ca/instruments/2889-B5GHBE-14.pdf		
PDF Site Location:			

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6 | ***17 of 17*** | ***SE/230.9*** | ***94.0 / 0.12*** | ***Mattamy (Half Moon Bay 3) Limited*** | ***ECA***

Half Moon Bay West

Ottawa ON K2K 2M5

Approval No:	1923-BZGMLG	**MOE District:**	Ottawa
Approval Date:	2021-04-08	**City:**	
Status:	Approved	**Longitude:**	-75.7468
Record Type:	ECA	**Latitude:**	45.2465
Link Source:	IDS	**Geometry X:**	-8432095.2052
SWP Area Name:	Rideau Valley	**Geometry Y:**	5660411.703799999
Approval Type:	ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS		
Project Type:	MUNICIPAL AND PRIVATE SEWAGE WORKS		
Business Name:	Mattamy (Half Moon Bay 3) Limited		
Address:	Half Moon Bay West		
Full Address:			
Full PDF Link:	https://www.accessenvironment.ene.gov.on.ca/instruments/7216-BY2S7G-14.pdf		
PDF Site Location:			

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7 | ***1 of 1*** | ***N/246.4*** | ***92.7 / -1.27*** | ***TSSA INCIDENTS*** | ***PINC***

510 & 512 CHIMNEY CORNER TERR,,NEPEAN, ON,K2J 6L1,CA

ON

Incident Id:		**Pipe Material:**	
Incident No:	2447598	**Fuel Category:**	
Incident Reported Dt:	11/23/2018	**Health Impact:**	
Type:	FS-Pipeline Incident	**Environment Impact:**	
Status Code:		**Property Damage:**	
Tank Status:	Pipeline Damage Reason Est	**Service Interrupt:**	
Task No:		**Enforce Policy:**	
Spills Action Centre:		**Public Relation:**	

Fuel Type:		***Pipeline System:***	
Fuel Occurrence Tp:		***PSIG:***	
Date of Occurrence:		***Attribute Category:***	
Occurrence Start Dt:		***Regulator Location:***	
Depth:		***Method Details:***	
Customer Acct Name:	TSSA INCIDENTS		
Incident Address:	510 & 512 CHIMNEY CORNER TERR,,NEPEAN,ON,K2J 6L1,CA		
Operation Type:			
Pipeline Type:			
Regulator Type:			
Summary:			
Reported By:			
Affiliation:			
Occurrence Desc:			
Damage Reason:			
Notes:			

Unplottable Summary

Total: 67 Unplottable sites

DB	Company Name/Site Name	Address	City	Postal
AAGR		Lot 10 Con 3	Nepean ON	
CA	Mattamy (Half Moon Bay) Limited		Ottawa ON	
CA	McNeil Farm Limited		Ottawa ON	
CA	McNeil Farm Limited		Ottawa ON	
CA	Mattamy (Half Moon Bay) Limited	Geo. Twp. of Nepean	Ottawa ON	
CA	Mattamy (Half Moon Bay) Limited	Geo. Twp. of Nepean	Ottawa ON	
CA	McNeil Farm Limited		Ottawa ON	
CA	McNeil Farm Limited		Ottawa ON	
CA	Mattamy (Barrhaven) Limited.		Ottawa ON	
CA	Mattamy (Half Moon Bay) Limited		Ottawa ON	
CA	Minto Communities Inc.		Ottawa ON	
CA	Mattamy (Half Moon Bay) Limited		Ottawa ON	
CA	Mattamy (Half Moon Bay) Limited		Ottawa ON	
CA	Mattamy (Half Moon Bay) Limited		Ottawa ON	
CA	Mattamy (Half Moon Bay 3) Limited		Ottawa ON	
CA	Morgan's Grant Subdivision Phase 9	Lot 10, Concession 3	Ottawa ON	
CA	Morgan's Grant Subdivision Phase 6, 7 & 8	Lot 10, Concession 3	Ottawa ON	

CA	Morgan's Grant Subdivision Phase 9	Lot 10, Concession 3	Ottawa ON	
CA	Morgan's Grant Subdivision Phase 6, 7 & 8	Lot 10, Concession 3	Ottawa ON	
CA	Morgan's Grant	Part of Lot 11, Concession 3	Ottawa ON	
CONV	Mattamy (Half Moon Bay) Limited		Ottawa ON	
EBR	Minto Communities		ON	
EBR	Minto Communities Inc.	Ottawa, Ontario CITY OF OTTAWA	ON	
ECA	Mattamy (Half Moon Bay 3) Limited		Ottawa ON	K2S 1B9
ECA	Minto Communities Inc.		Ottawa ON	K1P 0B6
ECA	Mattamy (Half Moon Bay) Limited		Ottawa ON	K2K 2M5
ECA	Mattamy (Half Moon Bay) Limited		Ottawa ON	K2K 2M5
ECA	Minto Communities Inc.		Ottawa ON	K1P 0B6
ECA	Mattamy (Half Moon Bay) Limited	Part of Lot 11 and 12, Concession 3 (Rideau Front)	Ottawa ON	K2K 2M5
ECA	Minto Communities Inc.		Ottawa ON	K1P 0B6
ECA	Mattamy (Half Moon Bay) Limited	Part of Lot 11 and 12, Concession 3 (Rideau Front)	Ottawa ON	K2K 2M5
ECA	Minto Communities Inc.		Ottawa ON	K1P 0B6
ECA	Minto Communities Inc.		Ottawa ON	K1P 0B6
ECA	Minto Communities Inc.		Ottawa ON	K1P 0B6
ECA	Mattamy (Half Moon Bay 3) Limited	West of Greenbank Rd 500 m South of Cambrian Road	Ottawa ON	K2K 2M5
ECA	Mattamy (Half Moon Bay) Limited	Rideau Front, Geographic Township of Nepean	Ottawa ON	K2S 1B9
ECA	Minto Communities Inc.		Ottawa ON	K1P 0B6
ECA	Mattamy (Half Moon Bay 3) Limited	West of Greenbank Rd 500 m south of Cambrian Road	Ottawa ON	K2K 2M5
ECA	Mattamy (Half Moon Bay) Limited		Ottawa ON	K2S 1B9
ECA	Minto Communities Inc.		Ottawa ON	K1P 0B6

ECA	Mattamy (Half Moon Bay) Limited	Rideau Front, Geographic Township of Nepean	Ottawa ON	K2S 1B9
ECA	Mattamy (Half Moon Bay) Limited		Ottawa ON	K2S 1B9
ECA	Minto Communities Inc.		Ottawa ON	K1P 0B6
ECA	Minto Communities Inc.		Ottawa ON	K1P 0B6
ECA	Mattamy (Half Moon Bay 3) Limited	Greenbank Rd West of, 500m South of Cambrian Road	Ottawa ON	K2K 2M5
ECA	Minto Communities Inc.		Ottawa ON	K1P 0B6
ECA	Minto Communities Inc.		Ottawa ON	K1P 0B6
ECA	Minto Communities Inc.		Ottawa ON	K1P 0B6
ECA	Minto Communities Inc.		Ottawa ON	K1P 0B6
ECA	Minto Communities Inc.		Ottawa ON	K1P 0B6
ECA	Mattamy (Half Moon Bay 3) Limited	West of Greenbank Road, South of Cambrian Road	Ottawa ON	K2K 2M5
ECA	Minto Communities Inc.		Ottawa ON	K1P 0B6
ECA	Minto Communities Inc.		Ottawa ON	K1P 0B6
LIMO	Pierces Corners Landfill The Corporation of the Township of Rideau City of	Ottawa Part of Lot 11, Concession 3 Ottawa	ON	
LIMO		Lot 10 Concession 3 Ottawa	ON	
PTTW	Mattamy (Half Moon Bay) Limited	Lot 11, 12, Concession 3, Ottawa, City CITY OF OTTAWA	ON	
PTTW	Minto Communities Inc.		ON	
PTTW	Mattamy (Half Moon Bay) Limited	Lot: 10-12, Concession: 3, Original Geographic Township of Nepean, City of Ottawa Lot 8-9 and Concession 3, Original Geographic Township of Nepean, City	of Ottawa CITY OF OTTAWA Nepean ON	
PTTW	Minto Communities Inc.		ON	
PTTW	Mattamy (Half Moon Bay) Limited	Lots 8,9,10,11,12, Concession 3 Ottawa, Ontario CITY OF OTTAWA Nepean	ON	
SPL	Tomlinson Environmental Services Ltd	End of Cambrian Rd.	Ottawa ON	

WWIS	lot 10	ON
WWIS	lot 10	ON
WWIS	lot 11	ON
WWIS	lot 10	ON
WWIS	lot 10	ON
WWIS	lot 10	ON

Unplottable Report

Site:
Lot 10 Con 3 Nepean ON

Database: ***AAGR***

Type:	Pit
Region/County:	Ottawa-Carleton
Township:	Nepean
Concession:	3
Lot:	10
Size (ha):	11
Landuse:	
Comments:	

Site: ***Mattamy (Half Moon Bay) Limited***
Ottawa ON

Database: ***CA***

Certificate #:	9531-7EZK5S
Application Year:	2008
Issue Date:	6/5/2008
Approval Type:	Municipal and Private Sewage Works
Status:	Approved
Application Type:	
Client Name:	
Client Address:	
Client City:	
Client Postal Code:	
Project Description:	
Contaminants:	
Emission Control:	

Site: ***McNeil Farm Limited***
Ottawa ON

Database: ***CA***

Certificate #:	8807-7K3QG3
Application Year:	2008
Issue Date:	10/10/2008
Approval Type:	Municipal and Private Sewage Works
Status:	Revoked and/or Replaced
Application Type:	
Client Name:	
Client Address:	
Client City:	
Client Postal Code:	
Project Description:	
Contaminants:	
Emission Control:	

Site: ***McNeil Farm Limited***
Ottawa ON

Database: ***CA***

Certificate #:	8775-7LJH2S
Application Year:	2008
Issue Date:	11/19/2008
Approval Type:	Municipal and Private Sewage Works
Status:	Approved
Application Type:	

Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: ***Mattamy (Half Moon Bay) Limited***
Geo. Twp. of Nepean Ottawa ON

Database: ***CA***

Certificate #: 8279-7XBM9P
Application Year: 2009
Issue Date: 11/9/2009
Approval Type: Municipal and Private Sewage Works
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: ***Mattamy (Half Moon Bay) Limited***
Geo. Twp. of Nepean Ottawa ON

Database: ***CA***

Certificate #: 7789-7T4L5U
Application Year: 2009
Issue Date: 6/17/2009
Approval Type: Municipal and Private Sewage Works
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: ***McNeil Farm Limited***
Ottawa ON

Database: ***CA***

Certificate #: 6612-7WMSC3
Application Year: 2009
Issue Date: 10/9/2009
Approval Type: Municipal and Private Sewage Works
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: ***McNeil Farm Limited***
Ottawa ON

Database: ***CA***

Certificate #: 5053-7EWPXU
Application Year: 2008
Issue Date: 5/27/2008
Approval Type: Municipal and Private Sewage Works
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: ***Mattamy (Barrhaven) Limited.***
Ottawa ON

Database: ***CA***

Certificate #: 4801-88XHM4
Application Year: 2010
Issue Date: 9/3/2010
Approval Type: Municipal and Private Sewage Works
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: ***Mattamy (Half Moon Bay) Limited***
Ottawa ON

Database: ***CA***

Certificate #: 4308-7GZQPE
Application Year: 2008
Issue Date: 8/21/2008
Approval Type: Municipal and Private Sewage Works
Status: Revoked and/or Replaced
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: ***Minto Communities Inc.***
Ottawa ON

Database: ***CA***

Certificate #: 3058-7JZKTF
Application Year: 2008
Issue Date: 10/7/2008
Approval Type: Municipal and Private Sewage Works
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: ***Mattamy (Half Moon Bay) Limited***
Ottawa ON

Database: ***CA***

Certificate #: 2758-7X2KYB
Application Year: 2009
Issue Date: 10/22/2009
Approval Type: Municipal and Private Sewage Works
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: ***Mattamy (Half Moon Bay) Limited***
Ottawa ON

Database: ***CA***

Certificate #: 0804-89QHMU
Application Year: 2010
Issue Date: 10/4/2010
Approval Type: Municipal and Private Sewage Works
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: ***Mattamy (Half Moon Bay) Limited***
Ottawa ON

Database: ***CA***

Certificate #: 9696-8ASHGQ
Application Year: 2010
Issue Date: 11/12/2010
Approval Type: Municipal and Private Sewage Works
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: ***Mattamy (Half Moon Bay 3) Limited***
Ottawa ON

Database: ***CA***

Certificate #: 2539-8KRPBJ
Application Year: 2011
Issue Date: 8/18/2011
Approval Type: Municipal and Private Sewage Works
Status: Approved
Application Type:
Client Name:

Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: ***Morgan's Grant Subdivision Phase 9***
Lot 10, Concession 3 Ottawa ON

Database: ***CA***

Certificate #: 0828-4UMQX6
Application Year: 01
Issue Date: 3/10/01
Approval Type: Municipal & Private sewage
Status: Approved
Application Type: New Certificate of Approval
Client Name: Minto Developments Inc.
Client Address: 427 Laurier Avenue West, Suite 300
Client City: Ottawa
Client Postal Code: K1R 7Y2
Project Description: Installation of storm and sanitary sewers in Morgan's Grant Subdivision Phase 9, on Klondike Road, Piekoff Crescent, Wallsend Avenue and Rayburn Street.
Contaminants:
Emission Control:

Site: ***Morgan's Grant Subdivision Phase 6, 7 & 8***
Lot 10, Concession 3 Ottawa ON

Database: ***CA***

Certificate #: 8761-53CPYZ
Application Year: 01
Issue Date: 10/11/01
Approval Type: Municipal & Private sewage
Status: Approved
Application Type: New Certificate of Approval
Client Name: Minto Developments Inc.
Client Address: 427 Laurier Avenue West, Suite 300
Client City: Ottawa
Client Postal Code: K1R 7Y2
Project Description: Construction of Storm and Sanitary Sewers for Residential Development Morgan's Grant Subdivision Phase 6, 7, & 8
Contaminants:
Emission Control:

Site: ***Morgan's Grant Subdivision Phase 9***
Lot 10, Concession 3 Ottawa ON

Database: ***CA***

Certificate #: 1411-4UMSZM
Application Year: 01
Issue Date: 3/10/01
Approval Type: Municipal & Private water
Status: Approved
Application Type: New Certificate of Approval
Client Name: Minto Developments Inc.
Client Address: 427 Laurier Avenue West, Suite 300
Client City: Ottawa
Client Postal Code: K1R 7Y2
Project Description: Installation of watermains on Klondike Road, Piekoff Crescent, Wallsend Avenue and Rayburn Street.
Contaminants:
Emission Control:

Site: ***Morgan's Grant Subdivision Phase 6, 7 & 8***
Lot 10, Concession 3 Ottawa ON

Database: ***CA***

Certificate #: 8414-53CPMC
Application Year: 01
Issue Date: 10/11/01
Approval Type: Municipal & Private water
Status: Approved
Application Type: New Certificate of Approval
Client Name: Minto Developments Inc.
Client Address: 427 Laurier Avenue West, Suite 300
Client City: Ottawa
Client Postal Code: K1R 7Y2
Project Description: Construction of Watermains for Residential Development in Morgan's Grant Subdivision Phase 6, 7 & 8.
Contaminants:
Emission Control:

Site: ***Morgan's Grant***
Part of Lot 11, Concession 3 Ottawa ON

Database: ***CA***

Certificate #: 8692-54QSUG
Application Year: 01
Issue Date: 12/21/01
Approval Type: Municipal & Private sewage
Status: Approved
Application Type: New Certificate of Approval
Client Name: Minto Developments Inc.
Client Address: 427 Laurier Avenue West, Suite 300
Client City: Ottawa
Client Postal Code: K1R 7Y2
Project Description: Stormwater management facility providing water quantity and quality control.
Contaminants:
Emission Control:

Site: ***Mattamy (Half Moon Bay) Limited***
Ottawa ON

Database: ***CONV***

File No: 073001
Crown Brief No:
Court Location:
Publication City:
Publication Title:
Act:
Act(s):
First Matter:
Second Matter:
Investigation 1:
Investigation 2:
Penalty Imposed:
Location:
Region:
Ministry District:
Description: On June 24, 2010, Mattamy (Half Moon Bay) Limited was convicted of two violations for operating a waste disposal site without a Certificate of Approval and failing to conduct a waste audit covering the waste. The Court heard that the company is developing a residential housing subdivision known as Half Moon Bay in the City of Ottawa. On March 21, 2009, ministry staff conducted an inspection of the housing development and observed an employee burning wood waste in an open fire pit. The employee indicated it was the company's practice to burn leftover wood materials at the construction site. No approval had been issued by the ministry. In April 2009, ministry staff followed up with the company and inquired whether it had completed a waste audit and learned that it had not. The company completed and provided a final waste audit to the ministry on May 7, 2009. The company was charged following an investigation by the ministry's Investigations and Enforcement Branch. The company was fined $24,000 plus a victim fine surcharge and given 60 days to pay the fine.
Background:
URL:

Additional Details

Publication Date:
Count: 2
Act:
Regulation:

Section:
Act/Regulation/Section:
Date of Offence:
Date of Conviction:
Date Charged: June 24, 2010
Charge Disposition: fine, victim fine surcharge
Fine: $24,000
Synopsis:

Site: ***Minto Communities***
ON

Database: ***EBR***

EBR Registry No: 019-2808
Ministry Ref No: KV-C-001-19
Notice Type: Instrument
Notice Stage: Decision
Notice Date:
Proposal Date: December 4, 2020
Year: 2020
Decision Posted: February 26, 2021
Exception Posted:
Section: Section 17 (2) (c)
Act 1: Endangered Species Act , R.S.O. 2007
Act 2: Endangered Species Act, 2007
Site Location Map:

Instrument Type: Permit for activities to achieve an overall benefit to a species
Off Instrument Name: Permit for activities with conditions to achieve overall benefit to the species (ESA s.17(2) (c))
Posted By: Ministry of the Environment, Conservation and Parks
Company Name:
Site Address:
Location Other:
Proponent Name: Minto Communities
Proponent Address: Minto Communities 180 Kent Street Unit 200 Ottawa, ON K1P 0B6 Canada
Comment Period: December 4, 2020 - January 3, 2021 (30 days) Closed
URL: https://ero.ontario.ca/notice/019-2808

Site Location Details:

Part of Lot 12, Concession 4, Township of March, Ottawa

Site: ***Minto Communities Inc.***
Ottawa, Ontario CITY OF OTTAWA ON

Database: ***EBR***

EBR Registry No: 013-0315
Ministry Ref No: MNRF INST 30/17
Notice Type: Instrument Decision
Notice Stage:
Notice Date: September 28, 2017
Proposal Date: April 10, 2017
Year: 2017
Decision Posted:
Exception Posted:
Section:
Act 1:
Act 2:
Site Location Map:

Instrument Type: (ESA s.17(2) (c)) - Permit for activities with conditions to achieve overall benefit to the species
Off Instrument Name:
Posted By:
Company Name: Minto Communities Inc.
Site Address:
Location Other:
Proponent Name:
Proponent Address: 180 Kent Street , Suite 200, Ottawa Ontario, Canada K1P 0B6, Minto Communities Inc., 180 Kent Street , Suite 200, Ottawa Ontario, Canada K1P 0B6
Comment Period:
URL:

Site Location Details:

Ottawa, Ontario CITY OF OTTAWA

Site: ***Mattamy (Half Moon Bay 3) Limited***
Ottawa ON K2S 1B9

Database: ***ECA***

Approval No: 2539-8KRPBJ
Approval Date: 2011-08-18
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name:
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Mattamy (Half Moon Bay 3) Limited
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/2386-8KKHNH-14.pdf
PDF Site Location:

Site: ***Minto Communities Inc.***
Ottawa ON K1P 0B6

Database: ***ECA***

Approval No: 6432-CA6MRC
Approval Date: January 18, 2022
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name: South Nation
MOE District: Ottawa
City:
Longitude:
Latitude:
Geometry X: -8402261.5817000009
Geometry Y: 5691103.7277999958
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Minto Communities Inc.
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/2726-C9PS46-14.pdf
PDF Site Location: Avalon South Stormwater Management Facility Expansion
Neighbourhood 4
Lot 4, Concession 10
City of Ottawa, Ontario

Site: ***Mattamy (Half Moon Bay) Limited***
Ottawa ON K2K 2M5

Database: ***ECA***

Approval No: 3263-BKWJW9
Approval Date: 2020-01-28
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name:
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Mattamy (Half Moon Bay) Limited
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/7762-BKGSBE-14.pdf
PDF Site Location:

Site: ***Mattamy (Half Moon Bay) Limited***
Ottawa ON K2K 2M5

Database: ***ECA***

Approval No: 3997-BF2GWX
Approval Date: 2019-08-16
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name:
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Mattamy (Half Moon Bay) Limited
Address:

Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/7167-BEKRBP-14.pdf
PDF Site Location:

Site: ***Minto Communities Inc.***
Ottawa ON K1P 0B6

Database: ***ECA***

Approval No: 6142-BEJHCE
Approval Date: 2019-08-01
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name:
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Minto Communities Inc.
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/0892-BDSKVQ-14.pdf
PDF Site Location:

Site: ***Mattamy (Half Moon Bay) Limited***
Part of Lot 11 and 12, Concession 3 (Rideau Front) Ottawa ON K2K 2M5

Database: ***ECA***

Approval No: 2335-B5VJMM
Approval Date: 2018-10-30
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name:
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Mattamy (Half Moon Bay) Limited
Address: Part of Lot 11 and 12, Concession 3 (Rideau Front)
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/3780-B5EM6Y-14.pdf
PDF Site Location:

Site: ***Minto Communities Inc.***
Ottawa ON K1P 0B6

Database: ***ECA***

Approval No: 8605-AYUHJG
Approval Date: 2018-05-30
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name:
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Minto Communities Inc.
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/7723-AYKNXD-14.pdf
PDF Site Location:

Site: ***Mattamy (Half Moon Bay) Limited***
Part of Lot 11 and 12, Concession 3 (Rideau Front) Ottawa ON K2K 2M5

Database: ***ECA***

Approval No: 8294-AWMJGE
Approval Date: 2018-03-09
Status: Revoked and/or Replaced
Record Type: ECA
MOE District:
City:
Longitude:
Latitude:

Link Source: IDS
SWP Area Name:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Mattamy (Half Moon Bay) Limited
Address: Part of Lot 11 and 12, Concession 3 (Rideau Front)
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/0576-AW2MCL-14.pdf
PDF Site Location:
Geometry X:
Geometry Y:

Site: ***Minto Communities Inc.***
Ottawa ON K1P 0B6

Database: ***ECA***

Approval No: 3128-AQGJ6T
Approval Date: 2017-08-23
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Minto Communities Inc.
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/4569-AQCRKJ-14.pdf
PDF Site Location:
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:

Site: ***Minto Communities Inc.***
Ottawa ON K1P 0B6

Database: ***ECA***

Approval No: 1720-AKJGKQ
Approval Date: 2017-03-24
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Minto Communities Inc.
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/1769-AKEQQZ-14.pdf
PDF Site Location:
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:

Site: ***Minto Communities Inc.***
Ottawa ON K1P 0B6

Database: ***ECA***

Approval No: 7598-94TRX3
Approval Date: 2013-02-26
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Minto Communities Inc.
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/2553-8VDQUF-14.pdf
PDF Site Location:
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:

Site: ***Mattamy (Half Moon Bay 3) Limited***

Database: ***ECA***

West of Greenbank Rd 500 m South of Cambrian Road Ottawa ON K2K 2M5

Approval No:	9789-9XEJEL	***MOE District:***	
Approval Date:	2015-06-12	***City:***	
Status:	Approved	***Longitude:***	
Record Type:	ECA	***Latitude:***	
Link Source:	IDS	***Geometry X:***	
SWP Area Name:		***Geometry Y:***	
Approval Type:	ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS		
Project Type:	MUNICIPAL AND PRIVATE SEWAGE WORKS		
Business Name:	Mattamy (Half Moon Bay 3) Limited		
Address:	West of Greenbank Rd 500 m South of Cambrian Road		
Full Address:			
Full PDF Link:	https://www.accessenvironment.ene.gov.on.ca/instruments/1906-9WJHV5-14.pdf		
PDF Site Location:			

Site: ***Mattamy (Half Moon Bay) Limited***
Rideau Front, Geographic Township of Nepean Ottawa ON K2S 1B9

Database: ***ECA***

Approval No:	6638-7FQSS8	***MOE District:***	
Approval Date:	2008-07-11	***City:***	
Status:	Revoked and/or Replaced	***Longitude:***	
Record Type:	ECA	***Latitude:***	
Link Source:	IDS	***Geometry X:***	
SWP Area Name:		***Geometry Y:***	
Approval Type:	ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS		
Project Type:	MUNICIPAL AND PRIVATE SEWAGE WORKS		
Business Name:	Mattamy (Half Moon Bay) Limited		
Address:	Rideau Front, Geographic Township of Nepean		
Full Address:			
Full PDF Link:	https://www.accessenvironment.ene.gov.on.ca/instruments/0913-7FQQC5-14.pdf		
PDF Site Location:			

Site: ***Minto Communities Inc.***
Ottawa ON K1P 0B6

Database: ***ECA***

Approval No:	8813-9WYQ2J	***MOE District:***	
Approval Date:	2015-06-08	***City:***	
Status:	Approved	***Longitude:***	
Record Type:	ECA	***Latitude:***	
Link Source:	IDS	***Geometry X:***	
SWP Area Name:		***Geometry Y:***	
Approval Type:	ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS		
Project Type:	MUNICIPAL AND PRIVATE SEWAGE WORKS		
Business Name:	Minto Communities Inc.		
Address:			
Full Address:			
Full PDF Link:	https://www.accessenvironment.ene.gov.on.ca/instruments/4625-9WXRTA-14.pdf		
PDF Site Location:			

Site: ***Mattamy (Half Moon Bay 3) Limited***
West of Greenbank Rd 500 m south of Cambrian Road Ottawa ON K2K 2M5

Database: ***ECA***

Approval No:	9081-9NEH6Y	***MOE District:***	
Approval Date:	2014-08-29	***City:***	
Status:	Approved	***Longitude:***	
Record Type:	ECA	***Latitude:***	
Link Source:	IDS	***Geometry X:***	
SWP Area Name:		***Geometry Y:***	
Approval Type:	ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS		
Project Type:	MUNICIPAL AND PRIVATE SEWAGE WORKS		
Business Name:	Mattamy (Half Moon Bay 3) Limited		
Address:	West of Greenbank Rd 500 m south of Cambrian Road		
Full Address:			

Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/0883-9N5RWD-14.pdf
PDF Site Location:

Site: ***Mattamy (Half Moon Bay) Limited***
Ottawa ON K2S 1B9

Database: ***ECA***

Approval No: 6310-7EVLSJ
Approval Date: 2008-05-23
Status: Revoked and/or Replaced
Record Type: ECA
Link Source: IDS
SWP Area Name:
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:
Approval Type: ECA-Municipal Drinking Water Systems
Project Type: Municipal Drinking Water Systems
Business Name: Mattamy (Half Moon Bay) Limited
Address:
Full Address:
Full PDF Link:
PDF Site Location:

Site: ***Minto Communities Inc.***
Ottawa ON K1P 0B6

Database: ***ECA***

Approval No: 2268-9WYR3F
Approval Date: 2015-06-08
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name:
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Minto Communities Inc.
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/3873-9WWLDY-14.pdf
PDF Site Location:

Site: ***Mattamy (Half Moon Bay) Limited***
Rideau Front, Geographic Township of Nepean Ottawa ON K2S 1B9

Database: ***ECA***

Approval No: 4522-7FBRPC
Approval Date: 2008-06-13
Status: Revoked and/or Replaced
Record Type: ECA
Link Source: IDS
SWP Area Name:
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Mattamy (Half Moon Bay) Limited
Address: Rideau Front, Geographic Township of Nepean
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/0088-7F4LRQ-14.pdf
PDF Site Location:

Site: ***Mattamy (Half Moon Bay) Limited***
Ottawa ON K2S 1B9

Database: ***ECA***

Approval No: 9531-7EZK5S
Approval Date: 2008-06-05
Status: Approved
Record Type: ECA
Link Source: IDS
MOE District:
City:
Longitude:
Latitude:
Geometry X:

SWP Area Name: ***Geometry Y:***
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Mattamy (Half Moon Bay) Limited
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/9564-7EPREX-14.pdf
PDF Site Location:

Site: ***Minto Communities Inc.*** ***Database:***
Ottawa ON K1P 0B6 ***ECA***

Approval No: 0606-AHXJCH ***MOE District:***
Approval Date: 2017-02-02 ***City:***
Status: Approved ***Longitude:***
Record Type: ECA ***Latitude:***
Link Source: IDS ***Geometry X:***
SWP Area Name: ***Geometry Y:***
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Minto Communities Inc.
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/4552-AHSJ74-14.pdf
PDF Site Location:

Site: ***Minto Communities Inc.*** ***Database:***
Ottawa ON K1P 0B6 ***ECA***

Approval No: 7661-ABCKQL ***MOE District:***
Approval Date: 2016-06-30 ***City:***
Status: Approved ***Longitude:***
Record Type: ECA ***Latitude:***
Link Source: IDS ***Geometry X:***
SWP Area Name: ***Geometry Y:***
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Minto Communities Inc.
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/5664-AB4KGV-14.pdf
PDF Site Location:

Site: ***Mattamy (Half Moon Bay 3) Limited*** ***Database:***
Greenbank Rd West of, 500m South of Cambrian Road Ottawa ON K2K 2M5 ***ECA***

Approval No: 4191-A2WP9Y ***MOE District:***
Approval Date: 2015-10-09 ***City:***
Status: Approved ***Longitude:***
Record Type: ECA ***Latitude:***
Link Source: IDS ***Geometry X:***
SWP Area Name: ***Geometry Y:***
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Mattamy (Half Moon Bay 3) Limited
Address: Greenbank Rd West of, 500m South of Cambrian Road
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/5535-A2GQTG-14.pdf
PDF Site Location:

Site: ***Minto Communities Inc.*** ***Database:***
Ottawa ON K1P 0B6 ***ECA***

Approval No: 8270-A3ZLU2
Approval Date: 2015-11-10
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name:
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Minto Communities Inc.
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/8185-A3PRB5-14.pdf
PDF Site Location:

Site: ***Minto Communities Inc.***
Ottawa ON K1P 0B6

Database: ***ECA***

Approval No: 7971-9EAST8
Approval Date: 2014-01-10
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name:
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Minto Communities Inc.
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/7322-9E4LGN-14.pdf
PDF Site Location:

Site: ***Minto Communities Inc.***
Ottawa ON K1P 0B6

Database: ***ECA***

Approval No: 7202-97BLB4
Approval Date: 2013-05-23
Status: Revoked and/or Replaced
Record Type: ECA
Link Source: IDS
SWP Area Name:
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Minto Communities Inc.
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/4553-95ZKWJ-14.pdf
PDF Site Location:

Site: ***Minto Communities Inc.***
Ottawa ON K1P 0B6

Database: ***ECA***

Approval No: 0195-95LSVA
Approval Date: 2013-03-22
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name:
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Minto Communities Inc.
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/1964-8XNJA4-14.pdf

PDF Site Location:

Site: ***Minto Communities Inc.***
Ottawa ON K1P 0B6

Database: ***ECA***

Approval No: 3053-8YJNWU
Approval Date: 2012-10-01
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name:
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Minto Communities Inc.
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/1397-8XNJGH-14.pdf
PDF Site Location:

Site: ***Mattamy (Half Moon Bay 3) Limited***
West of Greenbank Road, South of Cambrian Road Ottawa ON K2K 2M5

Database: ***ECA***

Approval No: 1400-8Y3RNK
Approval Date: 2012-09-18
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name:
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Mattamy (Half Moon Bay 3) Limited
Address: West of Greenbank Road, South of Cambrian Road
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/0312-8XLQPD-14.pdf
PDF Site Location:

Site: ***Minto Communities Inc.***
Ottawa ON K1P 0B6

Database: ***ECA***

Approval No: 1554-8Y2HZ6
Approval Date: 2012-09-14
Status: Revoked and/or Replaced
Record Type: ECA
Link Source: IDS
SWP Area Name:
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name: Minto Communities Inc.
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/1100-8WTMSY-14.pdf
PDF Site Location:

Site: ***Minto Communities Inc.***
Ottawa ON K1P 0B6

Database: ***ECA***

Approval No: 3002-8PBSB4
Approval Date: 2012-01-31
Status: Revoked and/or Replaced
Record Type: ECA
Link Source: IDS
SWP Area Name:
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:

Approval Type:	ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type:	MUNICIPAL AND PRIVATE SEWAGE WORKS
Business Name:	Minto Communities Inc.
Address:	
Full Address:	
Full PDF Link:	https://www.accessenvironment.ene.gov.on.ca/instruments/6465-8NETCD-14.pdf
PDF Site Location:	

Site: ***Pierces Corners Landfill The Corporation of the Township of Rideau City of Ottawa Part of Lot 11, Concession 3 Ottawa ON***

Database: ***LIMO***

ECA/Instrument No:	A461201	***Natural Attenuation:***	
Operation Status:	Closed	***Liners:***	
C of A Issue Date:		***Cover Material:***	
C of A Issued to:		***Leachate Off-Site:***	
Lndfl Gas Mgmt (P):		***Leachate On Site:***	
Lndfl Gas Mgmt (F):		***Req Coll Lndfll Gas:***	
Lndfl Gas Mgmt (E):		***Lndfll Gas Coll:***	
Lndfl Gas Mgmt Sys:		***Total Waste Rec:***	
Landfill Gas Mntr:		***TWR Methodology:***	
Leachate Coll Sys:		***TWR Unit:***	
ERC Est Vol (m3):		***Tot Aprv Cap Unit:***	
ERC Volume Unit:		***Financial Assurance:***	
ERC Dt Last Det:		***Last Report Year:***	
Landfill Type:		***Region:***	
Source File Type:		***District Office:***	
Fill Rate:		***Site County:***	
Fill Rate Unit:		***Lot:***	
Tot Fill Area (ha):		***Concession:***	
Tot Site Area (ha):		***Latitude:***	
Footprint:		***Longitude:***	
Tot Apprv Cap (m3):		***Easting:***	
Contam Atten Zone:		***Northing:***	
Grndwtr Mntr:		***UTM Zone:***	
Surf Wtr Mntr:		***Data Source:***	
Air Emis Monitor:			
Approved Waste Type:			
Client Site Name:			
ERC Methodology:			
Site Name:	Pierces Corners Landfill The Corporation of the Township of Rideau City of Ottawa		
Site Location Details:			
Service Area:			
Page URL:			

Site:

Lot 10 Concession 3 Ottawa ON

Database: ***LIMO***

ECA/Instrument No:	X9015	***Natural Attenuation:***	
Operation Status:	Historic	***Liners:***	
C of A Issue Date:		***Cover Material:***	
C of A Issued to:		***Leachate Off-Site:***	
Lndfl Gas Mgmt (P):		***Leachate On Site:***	
Lndfl Gas Mgmt (F):		***Req Coll Lndfll Gas:***	
Lndfl Gas Mgmt (E):		***Lndfll Gas Coll:***	
Lndfl Gas Mgmt Sys:		***Total Waste Rec:***	
Landfill Gas Mntr:		***TWR Methodology:***	
Leachate Coll Sys:		***TWR Unit:***	
ERC Est Vol (m3):		***Tot Aprv Cap Unit:***	
ERC Volume Unit:		***Financial Assurance:***	
ERC Dt Last Det:		***Last Report Year:***	
Landfill Type:		***Region:***	
Source File Type:	Historic and Closed Landfills	***District Office:***	
Fill Rate:		***Site County:***	
Fill Rate Unit:		***Lot:***	

Tot Fill Area (ha):
Tot Site Area (ha):
Footprint:
Tot Apprv Cap (m3):
Contam Atten Zone:
Grndwtr Mntr:
Surf Wtr Mntr:
Air Emis Monitor:
Approved Waste Type:
Client Site Name:
ERC Methodology:
Site Name:
Site Location Details: Lot 10 Concession 3
Ottawa
Service Area:
Page URL:

Concession:
Latitude:
Longitude:
Easting:
Northing:
UTM Zone:
Data Source:

Site: ***Mattamy (Half Moon Bay) Limited***
Lot 11, 12, Concession 3, Ottawa, City CITY OF OTTAWA ON

Database: ***PTTW***

EBR Registry No: 010-5959
Ministry Ref No: 8783-7PCUC4
Notice Type: Instrument Decision
Notice Stage:
Notice Date: June 26, 2009
Proposal Date: February 20, 2009
Year: 2009
Instrument Type: (OWRA s. 34) - Permit to Take Water
Off Instrument Name:
Posted By:
Company Name: Mattamy (Half Moon Bay) Limited
Site Address:
Location Other:
Proponent Name:
Proponent Address: 123 Huntmar Drive, Ottawa Ontario, Canada K2S 1B9
Comment Period:
URL:

Decision Posted:
Exception Posted:
Section:
Act 1:
Act 2:
Site Location Map:

Site Location Details:

Lot 11, 12, Concession 3, Ottawa, City CITY OF OTTAWA

Site: ***Minto Communities Inc.***
ON

Database: ***PTTW***

EBR Registry No: 011-4898
Ministry Ref No: 3046-8MLKW5
Notice Type: Instrument Decision
Notice Stage:
Notice Date: December 17, 2014
Proposal Date: November 04, 2011
Year: 2011
Instrument Type: (OWRA s. 34) - Permit to Take Water
Off Instrument Name:
Posted By:
Company Name: Minto Communities Inc.
Site Address:
Location Other:
Proponent Name:
Proponent Address: 180 Kent Street , Suite 200, Ottawa Ontario, Canada K1P 0B6, Minto Communities Inc., 180 Kent Street , Suite 200, Ottawa Ontario, Canada K1P 0B6
Comment Period:
URL:

Decision Posted:
Exception Posted:
Section:
Act 1:
Act 2:
Site Location Map:

Site Location Details:

Mahogany Community Development Address: Lot: Part of Lots 4 and 5, Concession: A (Broken Front), Ottawa, City District Office: Ottawa GeoReference: Map Datum: NAD83, Zone: 18, Accuracy Estimate: 1-10 metres eg. Good Quality GPS, UTM Easting: 446650, UTM Northing: 5007555, , LIO GeoReference: Zone: , UTM Easting: , UTM Northing: , Latitude: , Longitude: CITY OF OTTAWA

Site: ***Mattamy (Half Moon Bay) Limited*** ***Database:*** ***PTTW***
Lot: 10-12, Concession: 3, Original Geographic Township of Nepean, City of Ottawa Lot 8-9 and Concession 3, Original Geographic Township of Nepean, City of Ottawa CITY OF OTTAWA Nepean ON

EBR Registry No:	012-5618	***Decision Posted:***	
Ministry Ref No:	6071-A3PQPJ	***Exception Posted:***	
Notice Type:	Instrument Decision	***Section:***	
Notice Stage:		***Act 1:***	
Notice Date:	February 01, 2016	***Act 2:***	
Proposal Date:	November 03, 2015	***Site Location Map:***	
Year:	2015		
Instrument Type:	(OWRA s. 34) - Permit to Take Water		
Off Instrument Name:			
Posted By:			
Company Name:	Mattamy (Half Moon Bay) Limited		
Site Address:			
Location Other:			
Proponent Name:			
Proponent Address:	2360 Bristol Circle, Oakville Ontario, Canada L6H 6M5		
Comment Period:			
URL:			

Site Location Details:

Lot: 10-12, Concession: 3, Original Geographic Township of Nepean, City of Ottawa Lot 8-9 and Concession 3, Original Geographic Township of Nepean, City of Ottawa CITY OF OTTAWA Nepean

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Site: ***Minto Communities Inc.*** ***Database:*** ***PTTW***
ON

EBR Registry No:	012-9800	***Decision Posted:***	
Ministry Ref No:	5771-AJEJDR	***Exception Posted:***	
Notice Type:	Instrument Decision	***Section:***	
Notice Stage:		***Act 1:***	
Notice Date:	October 06, 2017	***Act 2:***	
Proposal Date:	February 13, 2017	***Site Location Map:***	
Year:	2017		
Instrument Type:	(OWRA s. 34) - Permit to Take Water		
Off Instrument Name:			
Posted By:			
Company Name:	Minto Communities Inc.		
Site Address:			
Location Other:			
Proponent Name:			
Proponent Address:	180 Kent Street , Suite 200, Ottawa Ontario, Canada K1P 0B6, Minto Communities Inc., 180 Kent Street , Suite 200, Ottawa Ontario, Canada K1P 0B6		
Comment Period:			
URL:			

Site Location Details:

Avalon West Community Address: Lot: 3 & Part of Lot 4, Concession: 11, Geographic Township: CUMBERLAND, Ottawa, City District Office: Ottawa GeoReference: Zone: 18, UTM Easting: 461611, UTM Northing: 5032496, UTM Location Description: S1- Lot 3 Concession 11, Site #: 5712-AJEJLA CITY OF OTTAWA

Site: ***Mattamy (Half Moon Bay) Limited*** ***Database:*** ***PTTW***

Lots 8,9,10,11,12, Concession 3 Ottawa, Ontario CITY OF OTTAWA Nepean ON

EBR Registry No:	010-4784	***Decision Posted:***	
Ministry Ref No:	6623-7JUKMA	***Exception Posted:***	
Notice Type:	Instrument Decision	***Section:***	
Notice Stage:		***Act 1:***	
Notice Date:	April 29, 2009	***Act 2:***	
Proposal Date:	October 08, 2008	***Site Location Map:***	
Year:	2008		
Instrument Type:	(OWRA s. 34) - Permit to Take Water		
Off Instrument Name:			
Posted By:			
Company Name:	Mattamy (Half Moon Bay) Limited		
Site Address:			
Location Other:			
Proponent Name:			
Proponent Address:	123 Huntmar Drive, Ottawa Ontario, Canada K2S 1B9		
Comment Period:			
URL:			

Site Location Details:

Lots 8,9,10,11,12, Concession 3 Ottawa, Ontario CITY OF OTTAWA Nepean

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Site: ***Tomlinson Environmental Services Ltd***
End of Cambrian Rd. Ottawa ON

Database: ***SPL***

Ref No:	0460-BAENYX	***Discharger Report:***	
Site No:	NA	***Material Group:***	
Incident Dt:	3/19/2019	***Health/Env Conseq:***	2 - Minor Environment
Year:		***Client Type:***	Corporation
Incident Cause:		***Sector Type:***	Miscellaneous Industrial
Incident Event:	Leak/Break	***Agency Involved:***	
Contaminant Code:	15	***Nearest Watercourse:***	
Contaminant Name:	HYDRAULIC OIL	***Site Address:***	End of Cambrian Rd.
Contaminant Limit 1:		***Site District Office:***	Ottawa
Contam Limit Freq 1:		***Site Postal Code:***	
Contaminant UN No 1:	n/a	***Site Region:***	Eastern
Environment Impact:		***Site Municipality:***	Ottawa
Nature of Impact:		***Site Lot:***	
Receiving Medium:		***Site Conc:***	
Receiving Env:	Land; Surface Water; Source Water Zone	***Northing:***	5010166.45
MOE Response:	No	***Easting:***	440258.48
Dt MOE Arvl on Scn:		***Site Geo Ref Accu:***	
MOE Reported Dt:	3/19/2019	***Site Map Datum:***	
Dt Document Closed:	3/22/2019	***SAC Action Class:***	Watercourse Spills
Incident Reason:	Material Failure - Poor Design/Substandard Material	***Source Type:***	Valve/Fitting/Piping
Site Name:	Construction Site of Service Road<UNOFFICIAL>		
Site County/District:			
Site Geo Ref Meth:			
Incident Summary:	Tomlinson: 3.8-7.6L Hydraulic Oil to Ground & Drainage Ditch, Contained		
Contaminant Qty:	7.6 L		

Site:
lot 10 ON

Database: ***WWIS***

Well ID:	1521663	***Flowing (Y/N):***	
Construction Date:		***Flow Rate:***	
Use 1st:	Domestic	***Data Entry Status:***	
Use 2nd:		***Data Src:***	1
Final Well Status:	Water Supply	***Date Received:***	14-Aug-1987 00:00:00
Water Type:		***Selected Flag:***	TRUE
Casing Material:		***Abandonment Rec:***	
Audit No:	08597	***Contractor:***	3644

Tag:
Constructn Method:
Elevation (m):
Elevatn Reliabilty:
Depth to Bedrock:
Well Depth:
Overburden/Bedrock:
Pump Rate:
Static Water Level:
Clear/Cloudy:
Municipality: NEPEAN TOWNSHIP
Site Info:

Form Version: 1
Owner:
County: OTTAWA-CARLETON
Lot: 010
Concession:
Concession Name:
Easting NAD83:
Northing NAD83:
Zone:
UTM Reliability:

Bore Hole Information

Bore Hole ID: 10043485
DP2BR:
Spatial Status:
Code OB:
Code OB Desc:
Open Hole:
Cluster Kind:
Date Completed: 28-Jul-1987 00:00:00
Remarks:
Loc Method Desc: Not Applicable i.e. no UTM
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Elevation:
Elevrc:
Zone: 18
East83:
North83:
Org CS:
UTMRC: 9
UTMRC Desc: unknown UTM
Location Method: na

Overburden and Bedrock Materials Interval

Formation ID: 931048777
Layer: 2
Color: 2
General Color: GREY
Mat1: 14
Most Common Material: HARDPAN
Mat2: 12
Mat2 Desc: STONES
Mat3:
Mat3 Desc:
Formation Top Depth: 45.0
Formation End Depth: 59.0
Formation End Depth UOM: ft

Overburden and Bedrock Materials Interval

Formation ID: 931048779
Layer: 4
Color: 1
General Color: WHITE
Mat1: 18
Most Common Material: SANDSTONE
Mat2:
Mat2 Desc:
Mat3:
Mat3 Desc:
Formation Top Depth: 150.0
Formation End Depth: 225.0
Formation End Depth UOM: ft

Overburden and Bedrock Materials Interval

Formation ID:	931048778
Layer:	3
Color:	2
General Color:	GREY
Mat1:	15
Most Common Material:	LIMESTONE
Mat2:	
Mat2 Desc:	
Mat3:	
Mat3 Desc:	
Formation Top Depth:	59.0
Formation End Depth:	150.0
Formation End Depth UOM:	ft

Overburden and Bedrock Materials Interval

Formation ID:	931048776
Layer:	1
Color:	2
General Color:	GREY
Mat1:	05
Most Common Material:	CLAY
Mat2:	
Mat2 Desc:	
Mat3:	
Mat3 Desc:	
Formation Top Depth:	0.0
Formation End Depth:	45.0
Formation End Depth UOM:	ft

Method of Construction & Well Use

Method Construction ID:	961521663
Method Construction Code:	5
Method Construction:	Air Percussion
Other Method Construction:	

Pipe Information

Pipe ID:	10592055
Casing No:	1
Comment:	
Alt Name:	

Construction Record - Casing

Casing ID:	930075979
Layer:	2
Material:	4
Open Hole or Material:	OPEN HOLE
Depth From:	
Depth To:	225.0
Casing Diameter:	6.0
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Construction Record - Casing

Casing ID:	930075978

Layer: 1
Material: 1
Open Hole or Material: STEEL
Depth From:
Depth To: 62.0
Casing Diameter: 6.0
Casing Diameter UOM: inch
Casing Depth UOM: ft

Results of Well Yield Testing

Pumping Test Method Desc: PUMP
Pump Test ID: 991521663
Pump Set At:
Static Level: 50.0
Final Level After Pumping: 220.0
Recommended Pump Depth: 220.0
Pumping Rate: 3.0
Flowing Rate:
Recommended Pump Rate: 5.0
Levels UOM: ft
Rate UOM: GPM
Water State After Test Code: 2
Water State After Test: CLOUDY
Pumping Test Method: 1
Pumping Duration HR: 1
Pumping Duration MIN: 0
Flowing: No

Draw Down & Recovery

Pump Test Detail ID: 934107556
Test Type:
Test Duration: 15
Test Level: 220.0
Test Level UOM: ft

Draw Down & Recovery

Pump Test Detail ID: 934910031
Test Type:
Test Duration: 60
Test Level: 220.0
Test Level UOM: ft

Draw Down & Recovery

Pump Test Detail ID: 934391799
Test Type:
Test Duration: 30
Test Level: 220.0
Test Level UOM: ft

Draw Down & Recovery

Pump Test Detail ID: 934652800
Test Type:
Test Duration: 45
Test Level: 220.0
Test Level UOM: ft

Water Details

Water ID: 933479327

Layer: 1
Kind Code: 1
Kind: FRESH
Water Found Depth: 215.0
Water Found Depth UOM: ft

Site:
lot 10 ON

Database:
WWIS

Well ID: 1524890
Construction Date:
Use 1st: Domestic
Use 2nd:
Final Well Status: Water Supply
Water Type:
Casing Material:
Audit No: 56337
Tag:
Constructn Method:
Elevation (m):
Elevatn Reliabilty:
Depth to Bedrock:
Well Depth:
Overburden/Bedrock:
Pump Rate:
Static Water Level:
Clear/Cloudy:
Municipality: NEPEAN TOWNSHIP
Site Info:

Flowing (Y/N):
Flow Rate:
Data Entry Status:
Data Src: 1
Date Received: 17-Sep-1990 00:00:00
Selected Flag: TRUE
Abandonment Rec:
Contractor: 3644
Form Version: 1
Owner:
County: OTTAWA-CARLETON
Lot: 010
Concession:
Concession Name:
Easting NAD83:
Northing NAD83:
Zone:
UTM Reliability:

Bore Hole Information

Bore Hole ID: 10046633
DP2BR:
Spatial Status:
Code OB:
Code OB Desc:
Open Hole:
Cluster Kind:
Date Completed: 25-Apr-1990 00:00:00
Remarks:
Loc Method Desc: Not Applicable i.e. no UTM
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Elevation:
Elevrc:
Zone: 18
East83:
North83:
Org CS:
UTMRC: 9
UTMRC Desc: unknown UTM
Location Method: na

Overburden and Bedrock Materials Interval

Formation ID: 931059406
Layer: 3
Color: 2
General Color: GREY
Mat1: 14
Most Common Material: HARDPAN
Mat2: 05
Mat2 Desc: CLAY
Mat3:
Mat3 Desc:
Formation Top Depth: 90.0
Formation End Depth: 106.0
Formation End Depth UOM: ft

Overburden and Bedrock Materials Interval

Formation ID: 931059404
Layer: 1
Color: 2
General Color: GREY
Mat1: 05
Most Common Material: CLAY
Mat2:
Mat2 Desc:
Mat3:
Mat3 Desc:
Formation Top Depth: 0.0
Formation End Depth: 10.0
Formation End Depth UOM: ft

Overburden and Bedrock Materials Interval

Formation ID: 931059407
Layer: 4
Color: 2
General Color: GREY
Mat1: 26
Most Common Material: ROCK
Mat2: 71
Mat2 Desc: FRACTURED
Mat3:
Mat3 Desc:
Formation Top Depth: 106.0
Formation End Depth: 108.0
Formation End Depth UOM: ft

Overburden and Bedrock Materials Interval

Formation ID: 931059405
Layer: 2
Color: 3
General Color: BLUE
Mat1: 05
Most Common Material: CLAY
Mat2:
Mat2 Desc:
Mat3:
Mat3 Desc:
Formation Top Depth: 10.0
Formation End Depth: 90.0
Formation End Depth UOM: ft

Method of Construction & Well Use

Method Construction ID: 961524890
Method Construction Code: 5
Method Construction: Air Percussion
Other Method Construction:

Pipe Information

Pipe ID: 10595203
Casing No: 1
Comment:
Alt Name:

Construction Record - Casing

Casing ID:	930081654
Layer:	1
Material:	1
Open Hole or Material:	STEEL
Depth From:	
Depth To:	108.0
Casing Diameter:	6.0
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Results of Well Yield Testing

Pumping Test Method Desc:	PUMP
Pump Test ID:	991524890
Pump Set At:	
Static Level:	0.0
Final Level After Pumping:	60.0
Recommended Pump Depth:	60.0
Pumping Rate:	20.0
Flowing Rate:	
Recommended Pump Rate:	15.0
Levels UOM:	ft
Rate UOM:	GPM
Water State After Test Code:	2
Water State After Test:	CLOUDY
Pumping Test Method:	1
Pumping Duration HR:	1
Pumping Duration MIN:	0
Flowing:	No

Draw Down & Recovery

Pump Test Detail ID:	934655256
Test Type:	
Test Duration:	45
Test Level:	60.0
Test Level UOM:	ft

Draw Down & Recovery

Pump Test Detail ID:	934110488
Test Type:	
Test Duration:	15
Test Level:	60.0
Test Level UOM:	ft

Draw Down & Recovery

Pump Test Detail ID:	934903633
Test Type:	
Test Duration:	60
Test Level:	60.0
Test Level UOM:	ft

Draw Down & Recovery

Pump Test Detail ID:	934385896
Test Type:	
Test Duration:	30
Test Level:	60.0
Test Level UOM:	ft

Water Details

Water ID:	933483660
Layer:	1
Kind Code:	1
Kind:	FRESH
Water Found Depth:	108.0
Water Found Depth UOM:	ft

Site:
lot 11 ON

Database:
WWIS

Well ID:	1534269	***Flowing (Y/N):***	
Construction Date:		***Flow Rate:***	
Use 1st:	Not Used	***Data Entry Status:***	
Use 2nd:		***Data Src:***	1
Final Well Status:	Not A Well	***Date Received:***	17-Nov-2003 00:00:00
Water Type:		***Selected Flag:***	TRUE
Casing Material:		***Abandonment Rec:***	
Audit No:	265848	***Contractor:***	6907
Tag:		***Form Version:***	2
Constructn Method:		***Owner:***	
Elevation (m):		***County:***	OTTAWA-CARLETON
Elevatn Reliabilty:		***Lot:***	011
Depth to Bedrock:		***Concession:***	
Well Depth:		***Concession Name:***	
Overburden/Bedrock:		***Easting NAD83:***	
Pump Rate:		***Northing NAD83:***	
Static Water Level:		***Zone:***	
Clear/Cloudy:		***UTM Reliability:***	
Municipality:	NEPEAN TOWNSHIP		
Site Info:			

Bore Hole Information

Bore Hole ID:	11097321	***Elevation:***	
DP2BR:		***Elevrc:***	
Spatial Status:		***Zone:***	18
Code OB:		***East83:***	
Code OB Desc:		***North83:***	
Open Hole:		***Org CS:***	
Cluster Kind:		***UTMRC:***	9
Date Completed:	26-Sep-2003 00:00:00	***UTMRC Desc:***	unknown UTM
Remarks:		***Location Method:***	na
Loc Method Desc:	Not Applicable i.e. no UTM		
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Method of Construction & Well Use

Method Construction ID:	961534269
Method Construction Code:	B
Method Construction:	Other Method
Other Method Construction:	

Pipe Information

Pipe ID:	11101036
Casing No:	1

Comment:
Alt Name:

Site:
lot 10 ON

Database:
WWIS

Well ID:	1535825	***Flowing (Y/N):***	
Construction Date:		***Flow Rate:***	
Use 1st:		***Data Entry Status:***	
Use 2nd:		***Data Src:***	
Final Well Status:		***Date Received:***	29-Sep-2005 00:00:00
Water Type:		***Selected Flag:***	TRUE
Casing Material:		***Abandonment Rec:***	
Audit No:	Z17653	***Contractor:***	6907
Tag:		***Form Version:***	3
Constructn Method:		***Owner:***	
Elevation (m):		***County:***	OTTAWA-CARLETON
Elevatn Reliabilty:		***Lot:***	010
Depth to Bedrock:		***Concession:***	
Well Depth:		***Concession Name:***	
Overburden/Bedrock:		***Easting NAD83:***	
Pump Rate:		***Northing NAD83:***	
Static Water Level:		***Zone:***	
Clear/Cloudy:		***UTM Reliability:***	
Municipality:	OTTAWA CITY		
Site Info:			

Bore Hole Information

Bore Hole ID:	11316364	***Elevation:***	
DP2BR:		***Elevrc:***	
Spatial Status:		***Zone:***	
Code OB:		***East83:***	
Code OB Desc:		***North83:***	
Open Hole:		***Org CS:***	
Cluster Kind:		***UTMRC:***	
Date Completed:	22-Sep-2005 00:00:00	***UTMRC Desc:***	
Remarks:		***Location Method:***	na
Loc Method Desc:	Not Applicable i.e. no UTM		
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock Materials Interval

Formation ID:	932997254
Layer:	2
Color:	
General Color:	
Mat1:	
Most Common Material:	
Mat2:	
Mat2 Desc:	
Mat3:	
Mat3 Desc:	
Formation Top Depth:	19.0
Formation End Depth:	77.0
Formation End Depth UOM:	ft

Overburden and Bedrock Materials Interval

Formation ID: 932997253
Layer: 1
Color:
General Color:
Mat1:
Most Common Material:
Mat2:
Mat2 Desc:
Mat3:
Mat3 Desc:
Formation Top Depth: 0.0
Formation End Depth: 19.0
Formation End Depth UOM: ft

Method of Construction & Well Use

Method Construction ID: 961535825
Method Construction Code: B
Method Construction: Other Method
Other Method Construction:

Pipe Information

Pipe ID: 11331219
Casing No: 1
Comment:
Alt Name:

Results of Well Yield Testing

Pumping Test Method Desc:
Pump Test ID: 11345704
Pump Set At: 75.0
Static Level:
Final Level After Pumping:
Recommended Pump Depth:
Pumping Rate:
Flowing Rate:
Recommended Pump Rate:
Levels UOM: ft
Rate UOM: LPM
Water State After Test Code:
Water State After Test:
Pumping Test Method:
Pumping Duration HR:
Pumping Duration MIN:
Flowing:

Site:
lot 10 ON

Database: ***WWIS***

Well ID: 1518764
Construction Date:
Use 1st: Domestic
Use 2nd:
Final Well Status: Water Supply
Water Type:
Casing Material:
Audit No:
Tag:
Constructn Method:
Elevation (m):
Elevatn Reliabilty:
Depth to Bedrock:
Well Depth:

Flowing (Y/N):
Flow Rate:
Data Entry Status:
Data Src: 1
Date Received: 10-Jan-1984 00:00:00
Selected Flag: TRUE
Abandonment Rec:
Contractor: 3644
Form Version: 1
Owner:
County: OTTAWA-CARLETON
Lot: 010
Concession:
Concession Name: CON

Overburden/Bedrock:
Pump Rate:
Static Water Level:
Clear/Cloudy:
Municipality: NEPEAN TOWNSHIP
Site Info:

Easting NAD83:
Northing NAD83:
Zone:
UTM Reliability:

Bore Hole Information

Bore Hole ID: 10040634
DP2BR:
Spatial Status:
Code OB:
Code OB Desc:
Open Hole:
Cluster Kind:
Date Completed: 25-Nov-1983 00:00:00
Remarks:
Loc Method Desc: Not Applicable i.e. no UTM
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Elevation:
Elevrc:
Zone: 18
East83:
North83:
Org CS:
UTMRC: 9
UTMRC Desc: unknown UTM
Location Method: na

Overburden and Bedrock Materials Interval

Formation ID: 931039484
Layer: 3
Color: 2
General Color: GREY
Mat1: 15
Most Common Material: LIMESTONE
Mat2: 82
Mat2 Desc: SHALY
Mat3:
Mat3 Desc:
Formation Top Depth: 88.0
Formation End Depth: 105.0
Formation End Depth UOM: ft

Overburden and Bedrock Materials Interval

Formation ID: 931039482
Layer: 1
Color: 2
General Color: GREY
Mat1: 05
Most Common Material: CLAY
Mat2:
Mat2 Desc:
Mat3:
Mat3 Desc:
Formation Top Depth: 0.0
Formation End Depth: 44.0
Formation End Depth UOM: ft

Overburden and Bedrock Materials Interval

Formation ID: 931039483
Layer: 2

Color: 2
General Color: GREY
Mat1: 14
Most Common Material: HARDPAN
Mat2: 11
Mat2 Desc: GRAVEL
Mat3:
Mat3 Desc:
Formation Top Depth: 44.0
Formation End Depth: 88.0
Formation End Depth UOM: ft

Method of Construction & Well Use

Method Construction ID: 961518764
Method Construction Code: 5
Method Construction: Air Percussion
Other Method Construction:

Pipe Information

Pipe ID: 10589204
Casing No: 1
Comment:
Alt Name:

Construction Record - Casing

Casing ID: 930070943
Layer: 2
Material: 4
Open Hole or Material: OPEN HOLE
Depth From:
Depth To: 105.0
Casing Diameter: 6.0
Casing Diameter UOM: inch
Casing Depth UOM: ft

Construction Record - Casing

Casing ID: 930070942
Layer: 1
Material: 1
Open Hole or Material: STEEL
Depth From:
Depth To: 90.0
Casing Diameter: 6.0
Casing Diameter UOM: inch
Casing Depth UOM: ft

Results of Well Yield Testing

Pumping Test Method Desc: PUMP
Pump Test ID: 991518764
Pump Set At:
Static Level: 0.0
Final Level After Pumping: 20.0
Recommended Pump Depth: 20.0
Pumping Rate: 20.0
Flowing Rate:
Recommended Pump Rate: 10.0
Levels UOM: ft
Rate UOM: GPM
Water State After Test Code: 2

Water State After Test: CLOUDY
Pumping Test Method: 1
Pumping Duration HR: 1
Pumping Duration MIN: 0
Flowing: No

Draw Down & Recovery

Pump Test Detail ID: 934380498
Test Type:
Test Duration: 30
Test Level: 20.0
Test Level UOM: ft

Draw Down & Recovery

Pump Test Detail ID: 934650481
Test Type:
Test Duration: 45
Test Level: 20.0
Test Level UOM: ft

Draw Down & Recovery

Pump Test Detail ID: 934900018
Test Type:
Test Duration: 60
Test Level: 20.0
Test Level UOM: ft

Draw Down & Recovery

Pump Test Detail ID: 934103240
Test Type:
Test Duration: 15
Test Level: 20.0
Test Level UOM: ft

Water Details

Water ID: 933475561
Layer: 1
Kind Code: 1
Kind: FRESH
Water Found Depth: 100.0
Water Found Depth UOM: ft

Site:
lot 10 ON

Database:
WWIS

Well ID: 1521190
Construction Date:
Use 1st: Domestic
Use 2nd:
Final Well Status: Water Supply
Water Type:
Casing Material:
Audit No: 02155
Tag:
Constructn Method:
Elevation (m):
Elevatn Reliabilty:
Depth to Bedrock:
Well Depth:

Flowing (Y/N):
Flow Rate:
Data Entry Status:
Data Src: 1
Date Received: 10-Feb-1987 00:00:00
Selected Flag: TRUE
Abandonment Rec:
Contractor: 3644
Form Version: 1
Owner:
County: OTTAWA-CARLETON
Lot: 010
Concession:
Concession Name:

Overburden/Bedrock:
Pump Rate:
Static Water Level:
Clear/Cloudy:
Municipality: NEPEAN TOWNSHIP
Site Info:

Easting NAD83:
Northing NAD83:
Zone:
UTM Reliability:

Bore Hole Information

Bore Hole ID: 10043026
DP2BR:
Spatial Status:
Code OB:
Code OB Desc:
Open Hole:
Cluster Kind:
Date Completed: 28-Nov-1986 00:00:00
Remarks:
Loc Method Desc: Not Applicable i.e. no UTM
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Elevation:
Elevrc:
Zone: 18
East83:
North83:
Org CS:
UTMRC: 9
UTMRC Desc: unknown UTM
Location Method: na

Overburden and Bedrock Materials Interval

Formation ID: 931047134
Layer: 2
Color: 2
General Color: GREY
Mat1: 14
Most Common Material: HARDPAN
Mat2: 11
Mat2 Desc: GRAVEL
Mat3:
Mat3 Desc:
Formation Top Depth: 54.0
Formation End Depth: 80.0
Formation End Depth UOM: ft

Overburden and Bedrock Materials Interval

Formation ID: 931047133
Layer: 1
Color: 2
General Color: GREY
Mat1: 05
Most Common Material: CLAY
Mat2:
Mat2 Desc:
Mat3:
Mat3 Desc:
Formation Top Depth: 0.0
Formation End Depth: 54.0
Formation End Depth UOM: ft

Method of Construction & Well Use

Method Construction ID: 961521190
Method Construction Code: 5

Method Construction: Air Percussion
Other Method Construction:

Pipe Information

Pipe ID: 10591596
Casing No: 1
Comment:
Alt Name:

Construction Record - Casing

Casing ID: 930075107
Layer: 1
Material: 1
Open Hole or Material: STEEL
Depth From:
Depth To: 80.0
Casing Diameter: 6.0
Casing Diameter UOM: inch
Casing Depth UOM: ft

Results of Well Yield Testing

Pumping Test Method Desc: PUMP
Pump Test ID: 991521190
Pump Set At:
Static Level: 2.0
Final Level After Pumping: 30.0
Recommended Pump Depth: 30.0
Pumping Rate: 20.0
Flowing Rate:
Recommended Pump Rate: 8.0
Levels UOM: ft
Rate UOM: GPM
Water State After Test Code: 2
Water State After Test: CLOUDY
Pumping Test Method: 1
Pumping Duration HR: 1
Pumping Duration MIN: 0
Flowing: No

Draw Down & Recovery

Pump Test Detail ID: 934908365
Test Type:
Test Duration: 60
Test Level: 30.0
Test Level UOM: ft

Draw Down & Recovery

Pump Test Detail ID: 934389008
Test Type:
Test Duration: 30
Test Level: 30.0
Test Level UOM: ft

Draw Down & Recovery

Pump Test Detail ID: 934105889
Test Type:
Test Duration: 15
Test Level: 30.0

Test Level UOM: ft

Draw Down & Recovery

Pump Test Detail ID: 934651136
Test Type:
Test Duration: 45
Test Level: 30.0
Test Level UOM: ft

Water Details

Water ID: 933478678
Layer: 1
Kind Code: 1
Kind: FRESH
Water Found Depth: 80.0
Water Found Depth UOM: ft

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) 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 ERIS at the time of update. ***Note:*** *Databases denoted with " * " indicates that the database will no longer be updated. See the individual database description for more information.*

Abandoned Aggregate Inventory: Provincial AAGR

The MAAP Program maintains a database of 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.*

Government Publication Date: Sept 2002*

Aggregate Inventory: Provincial AGR

The Ontario Ministry of Natural Resources maintains a database of all active pits and quarries. The database provides information regarding the registered owner/operator, location name, operation type, approval type, and maximum annual tonnage.

Government Publication Date: Up to Nov 2021

Abandoned Mine Information System: Provincial AMIS

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.

Government Publication Date: 1800-Mar 2022

Anderson's Waste Disposal Sites: Private ANDR

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 authoritative. The information was collected for research purposes only.

Government Publication Date: 1860s-Present

Aboveground Storage Tanks: Provincial AST

Historical listing of aboveground storage tanks made available by the Department of Natural Resources and Forestry. Includes tanks used to hold water or petroleum. This dataset has been retired as of September 25, 2014 and will no longer be updated.

Government Publication Date: May 31, 2014

Automobile Wrecking & Supplies: Private AUWR

This database provides an inventory of 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.

Government Publication Date: 1999-May 31, 2022

Borehole: Provincial BORE

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.

Government Publication Date: 1875-Jul 2018

Certificates of Approval: Provincial CA

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. This database will no longer be updated, as CofA's have been replaced by either Environmental Activity and Sector Registry (EASR) or Environmental Compliance Approval (ECA). Please refer to those individual databases for any information after Oct.31, 2011.

Government Publication Date: 1985-Oct 30, 2011*

Dry Cleaning Facilities: Federal CDRY

List of dry cleaning facilities made available by Environment and Climate Change Canada. Environment and Climate Change Canada's Tetrachloroethylene (Use in Dry Cleaning and Reporting Requirements) Regulations (SOR/2003-79) are intended to reduce releases of tetrachloroethylene to the environment from dry cleaning facilities.

Government Publication Date: Jan 2004-Dec 2020

Commercial Fuel Oil Tanks: Provincial CFOT

Locations of commercial underground fuel oil tanks. This is not a comprehensive or complete inventory of commercial fuel tanks in the province; this listing is a copy of records of registered commercial underground fuel oil tanks obtained under Access to Public Information.
Note that the following types of tanks do not require registration: waste oil tanks in apartments, office buildings, residences, etc.; aboveground gas or diesel tanks. Records are not verified for accuracy or completeness.

Government Publication Date: Feb 28, 2022

Chemical Manufacturers and Distributors: Private CHEM

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.).

Government Publication Date: 1999-Jan 31, 2020

Chemical Register: Private CHM

This database includes a listing of locations of facilities within the Province or Territory that either manufacture and/or distributes chemicals.

Government Publication Date: 1999-May 31, 2022

Compressed Natural Gas Stations: Private CNG

Canada has a network of public access compressed natural gas (CNG) refuelling stations. These stations dispense natural gas in compressed form at 3,000 pounds per square inch (psi), the pressure which is allowed within the current Canadian codes and standards. The majority of natural gas refuelling is located at existing retail gasoline that have a separate refuelling island for natural gas. This list of stations is made available by the Canadian Natural Gas Vehicle Alliance.

Government Publication Date: Dec 2012 -Sep 2022

Inventory of Coal Gasification Plants and Coal Tar Sites: Provincial COAL

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.*

Government Publication Date: Apr 1987 and Nov 1988*

Compliance and Convictions: Provincial CONV

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.

Government Publication Date: 1989-Jun 2022

Certificates of Property Use: Provincial CPU

This is a subset taken from Ontario's Environmental Registry (EBR) database. It will include CPU's on the registry such as (EPA s. 168.6) - Certificate of Property Use.

Government Publication Date: 1994 - Sep 30, 2022

Drill Hole Database: Provincial DRL

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".

Government Publication Date: 1886 - Sep 2020

Delisted Fuel Tanks: Provincial DTNK

List of fuel storage tank sites that were once found in - and have since been removed from - the list of fuel storage tanks made available by the regulatory agency under Access to Public Information.

Government Publication Date: Feb 28, 2022

Environmental Activity and Sector Registry: Provincial EASR

On October 31, 2011, a smarter, faster environmental approvals system came into effect in Ontario. The EASR allows businesses to register certain activities with the ministry, rather than apply for an approval. The registry is available for common systems and processes, to which preset rules of operation can be applied. The EASR is currently available for: heating systems, standby power systems and automotive refinishing. Businesses whose activities aren't subject to the EASR may apply for an ECA (Environmental Compliance Approval), Please see our ECA database.

Government Publication Date: Oct 2011- Aug 31, 2022

Environmental Registry: Provincial EBR

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, license, or certificate of approval to release substances into the air or water; these are notified on the registry. Data includes: Approval for discharge into the natural environment other than water (i.e. Air) - EPA s. 9, Approval for sewage works - OWRA s. 53(1), and EPA s. 27 - Approval for a waste disposal site. For information regarding Permit to Take Water (PTTW), Certificate of Property Use (CPU) and (ORD) Orders please refer to those individual databases.

Government Publication Date: 1994 - Sep 30, 2022

Environmental Compliance Approval: Provincial ECA

On October 31, 2011, a smarter, faster environmental approvals system came into effect in Ontario. In the past, a business had to apply for multiple approvals (known as certificates of approval) for individual processes and pieces of equipment. Today, a business either registers itself, or applies for a single approval, depending on the types of activities it conducts. Businesses whose activities aren't subject to the EASR may apply for an ECA. A single ECA addresses all of a business's emissions, discharges and wastes. Separate approvals for air, noise and waste are no longer required. This database will also include Renewable Energy Approvals. For certificates of approval prior to Nov 1st, 2011, please refer to the CA database. For all Waste Disposal Sites please refer to the WDS database.

Government Publication Date: Oct 2011- Aug 31, 2022

Environmental Effects Monitoring: Federal EEM

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.

Government Publication Date: 1992-2007*

ERIS Historical Searches: Private EHS

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.

Government Publication Date: 1999-Jul 31, 2022

Environmental Issues Inventory System: Federal EIIS

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.

Government Publication Date: 1992-2001*

Emergency Management Historical Event: Provincial EMHE

List of locations of historical occurrences of emergency events, including those assigned to the Ministry of Natural Resources by Order-In-Council (OIC) under the Emergency Management and Civil Protection Act, as well as events where MNR provided requested emergency response assistance. Many of these events will have involved community evacuations, significant structural loss, and/or involvement of MNR emergency response staff. These events fall into one of ten (10) type categories: Dam Failure; Drought / Low Water; Erosion; Flood; Forest Fire; Soil and Bedrock Instability; Petroleum Resource Center Event, EMO Requested Assistance, Continuity of Operations Event, Other Requested Assistance. EMHE record details are reproduced by ERIS under License with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2017.

Government Publication Date: Apr 30, 2022

Environmental Penalty Annual Report: Provincial EPAR

This database contains data from Ontario's annual environmental penalty report published by the Ministry of the Environment and Climate Change. These reports provide information on environmental penalties for land or water violations issued to companies in one of the nine industrial sectors covered by the Municipal Industrial Strategy for Abatement (MISA) regulations.

Government Publication Date: Jan 1, 2011 - Dec 31, 2021

List of Expired Fuels Safety Facilities: Provincial EXP

List of facilities and tanks for which there was once a fuel registration. This is not a comprehensive or complete inventory of expired tanks/tank facilities in the province; this listing is a copy of previously registered tanks and facilities obtained under Access to Public Information. Includes private fuel outlets, bulk plants, fuel oil tanks, gasoline stations, marinas, propane filling stations, liquid fuel tanks, piping systems, etc; includes tanks which have been removed from the ground.
Notes: registration was not required for private fuel underground/aboveground storage tanks prior to January 1990, nor for furnace oil tanks prior to May 1, 2002; registration is not required for waste oil tanks in apartments, office buildings, residences, etc., or aboveground gas or diesel tanks. Records are not verified for accuracy or completeness.

Government Publication Date: Feb 28, 2022

Federal Convictions: Federal FCON

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.

Government Publication Date: 1988-Jun 2007*

Contaminated Sites on Federal Land: Federal FCS

The Federal Contaminated Sites Inventory includes information on known federal contaminated sites under the custodianship of departments, agencies and consolidated Crown corporations as well as those that are being or have been investigated to determine whether they have contamination arising from past use that could pose a risk to human health or the environment. The inventory also includes non-federal contaminated sites for which the Government of Canada has accepted some or all financial responsibility. It does not include sites where contamination has been caused by, and which are under the control of, enterprise Crown corporations, private individuals, firms or other levels of government. Includes fire training sites and sites at which Per- and Polyfluoroalkyl Substances (PFAS) are a concern.

Government Publication Date: Jun 2000-Sep 2022

Fisheries & Oceans Fuel Tanks: Federal FOFT

Fisheries & Oceans Canada maintains an inventory of 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.

Government Publication Date: 1964-Sep 2019

Federal Identification Registry for Storage Tank Systems (FIRSTS): Federal FRST

A list of federally regulated Storage tanks from the Federal Identification Registry for Storage Tank Systems (FIRSTS). FIRSTS is Environment and Climate Change Canada's database of storage tank systems subject to the Storage Tank for Petroleum Products and Allied Petroleum Products Regulations. The main objective of the Regulations is to prevent soil and groundwater contamination from storage tank systems located on federal and aboriginal lands. Storage tank systems that do not have a valid identification number displayed in a readily visible location on or near the storage tank system may be refused product delivery.

Government Publication Date: May 31, 2018

Fuel Storage Tank: Provincial FST

List of registered private and retail fuel storage tanks. This is not a comprehensive or complete inventory of private and retail fuel storage tanks in the province; this listing is a copy of registered private and retail fuel storage tanks, obtained under Access to Public Information.
Notes: registration was not required for private fuel underground/aboveground storage tanks prior to January 1990, nor for furnace oil tanks prior to May 1, 2002; registration is not required for waste oil tanks in apartments, office buildings, residences, etc., or aboveground gas or diesel tanks. Records are not verified for accuracy or completeness.

Government Publication Date: Feb 28, 2022

Fuel Storage Tank - Historic: Provincial FSTH

The Fuels Safety Branch of the Ontario Ministry of Consumer and Commercial Relations maintained a database of all registered private fuel storage tanks. Public records of private fuel storage tanks are only available since the registration became effective in September 1989. This information is now collected by the Technical Standards and Safety Authority.

Government Publication Date: Pre-Jan 2010*

Ontario Regulation 347 Waste Generators Summary: Provincial GEN

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.

Government Publication Date: 1986-Apr 30, 2022

Greenhouse Gas Emissions from Large Facilities: Federal GHG

List of greenhouse gas emissions from large facilities made available by Environment Canada. Greenhouse gas emissions in kilotonnes of carbon dioxide equivalents (kt CO2 eq).

Government Publication Date: 2013-Dec 2019

TSSA Historic Incidents: Provincial HINC

List of historic incidences of spills and leaks of diesel, fuel oil, gasoline, natural gas, propane, and hydrogen recorded by the TSSA in their previous incident tracking system. The TSSA's Fuels Safety Program administers the Technical Standards & Safety Act 2000, providing fuel-related safety services associated with the safe transportation, storage, handling and use of fuels such as gasoline, diesel, propane, natural gas and hydrogen. Under this Act, the TSSA regulates fuel suppliers, storage facilities, transport trucks, pipelines, contractors and equipment or appliances that use fuels. Records are not verified for accuracy or completeness. This is not a comprehensive or complete inventory of historical fuel spills and leaks in the province. This listing is a copy of the data captured at one moment in time and is hence limited by the record date provided here.

Government Publication Date: 2006-June 2009*

Indian & Northern Affairs Fuel Tanks: Federal IAFT

The Department of Indian & Northern Affairs Canada (INAC) maintains an inventory of 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.

Government Publication Date: 1950-Aug 2003*

Fuel Oil Spills and Leaks: Provincial INC

Listing of spills and leaks of diesel, fuel oil, gasoline, natural gas, propane, and hydrogen reported to the Spills Action Centre (SAC). This is not a comprehensive or complete inventory of fuel-related leaks, spills, and incidents in the province; this listing in a copy of incidents reported to the SAC, obtained under Access to Public Information. Includes incidents from fuel-related hazards such as spills, fires, and explosions. Records are not verified for accuracy or completeness.

Government Publication Date: Feb 28, 2022

Landfill Inventory Management Ontario: Provincial LIMO

The Landfill Inventory Management Ontario (LIMO) database is updated every year, as the Ministry of the Environment, Conservation and Parks compiles new and updated information. Includes small and large landfills currently operating as well as those which are closed and historic. Operators of larger landfills provide landfill information for the previous operating year to the ministry for LIMO including: estimated amount of total waste received, landfill capacity, estimated total remaining landfill capacity, fill rates, engineering designs, reporting and monitoring details, size of location, service area, approved waste types, leachate of site treatment, contaminant attenuation zone and more. The small landfills include information such as site owner, site location and certificate of approval # and status.

Government Publication Date: Mar 21, 2022

Canadian Mine Locations: Private MINE

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.

Government Publication Date: 1998-2009*

Mineral Occurrences: Provincial MNR

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 plan metric (X and Y) coordinates of that point with the coordinates of the same point as defined from a source of higher accuracy.

Government Publication Date: 1846-Feb 2022

National Analysis of Trends in Emergencies System (NATES): Federal 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.

Government Publication Date: 1974-1994*

Non-Compliance Reports: Provincial NCPL

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.

Government Publication Date: Dec 31, 2020

National Defense & Canadian Forces Fuel Tanks: Federal NDFT

The Department of National Defense 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.

Government Publication Date: Up to May 2001*

National Defense & Canadian Forces Spills: Federal NDSP

The Department of National Defense 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.

Government Publication Date: Mar 1999-Apr 2018

National Defence & Canadian Forces Waste Disposal Sites: Federal NDWD

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.

Government Publication Date: 2001-Apr 2007*

National Energy Board Pipeline Incidents: Federal NEBI

Locations of pipeline incidents from 2008 to present, made available by the Canada Energy Regulator (CER) - previously the National Energy Board (NEB). Includes incidents reported under the Onshore Pipeline Regulations and the Processing Plant Regulations related to pipelines under federal jurisdiction, does not include incident data related to pipelines under provincial or territorial jurisdiction.

Government Publication Date: 2008-Jun 30, 2021

National Energy Board Wells: Federal NEBP

The NEBW database contains information on onshore & offshore oil and gas wells that are outside provincial jurisdiction(s) and are thereby regulated by the National Energy Board. Data is provided regarding the operator, well name, well ID No./UWI, status, classification, well depth, spud and release date.

Government Publication Date: 1920-Feb 2003*

National Environmental Emergencies System (NEES): Federal NEES

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 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.

Government Publication Date: 1974-2003*

National PCB Inventory: Federal NPCB

Environment Canada's National PCB inventory includes information on in-use PCB containing equipment in Canada including federal, provincial and private facilities. Federal out-of-service PCB containing equipment and 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. Some addresses provided may be Head Office addresses and are not necessarily the location of where the waste is being used or stored.

Government Publication Date: 1988-2008*

National Pollutant Release Inventory: Federal NPRI

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.

Government Publication Date: 1993-May 2017

Oil and Gas Wells: Private OGWE

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 Nickle's database is updated on a daily basis, however, this database is updated on a monthly basis. More information is available at www.nickles.com.

Government Publication Date: 1988-Aug 31, 2022

Ontario Oil and Gas Wells: Provincial OOGW

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, and well cap date, license 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.

Government Publication Date: 1800-Aug 2021

Inventory of PCB Storage Sites: Provincial OPCB

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.

Government Publication Date: 1987-Oct 2004; 2012-Dec 2013

Orders: Provincial ORD

This is a subset taken from Ontario's Environmental Registry (EBR) database. It will include Orders on the registry such as (EPA s. 17) - Order for remedial work, (EPA s. 18) - Order for preventative measures, (EPA s. 43) - Order for removal of waste and restoration of site, (EPA s. 44) - Order for conformity with Act for waste disposal sites, (EPA s. 136) - Order for performance of environmental measures.

Government Publication Date: 1994 - Sep 30, 2022

Canadian Pulp and Paper: Private PAP

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.

Government Publication Date: 1999, 2002, 2004, 2005, 2009-2014

Parks Canada Fuel Storage Tanks: Federal PCFT

Canadian Heritage maintains an inventory of 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.

Government Publication Date: 1920-Jan 2005*

Pesticide Register: Provincial PES

The Ontario Ministry of the Environment and Climate Change maintains a database of licensed operators and vendors of registered pesticides.

Government Publication Date: Oct 2011- Aug 31, 2022

Pipeline Incidents: Provincial PINC

List of pipeline incidents (strikes, leaks, spills). This is not a comprehensive or complete inventory of pipeline incidents in the province; this listing in an historical copy of records previously obtained under Access to Public Information. Records are not verified for accuracy or completeness.

Government Publication Date: Feb 28, 2021

Private and Retail Fuel Storage Tanks: Provincial PRT

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).

Government Publication Date: 1989-1996*

Permit to Take Water: Provincial PTTW

This is a subset taken from Ontario's Environmental Registry (EBR) database. It will include PTTW's on the registry such as OWRA s. 34 - Permit to take water.

Government Publication Date: 1994 - Sep 30, 2022

Ontario Regulation 347 Waste Receivers Summary: Provincial REC

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.

Government Publication Date: 1986-1990, 1992-2019

Record of Site Condition: Provincial RSC

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.
RSCs filed after July 1, 2011 will also be included as part of the new (O.Reg. 511/09).

Government Publication Date: 1997-Sept 2001, Oct 2004-Sep 2022

Retail Fuel Storage Tanks: Private RST

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.

Government Publication Date: 1999-May 31, 2022

Scott's Manufacturing Directory: Private SCT

Scott's Directories is a data bank containing information on over 200,000 manufacturers across Canada. Even though Scott's listings are voluntary, it is the most comprehensive database of Canadian manufacturers available. Information concerning a company's address, plant size, and main products are included in this database.

Government Publication Date: 1992-Mar 2011*

Ontario Spills: Provincial SPL

List of spills and incidents made available the Ministry of the Environment, Conservation and Parks. 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. The Ministry of the Environment, Conservation and Parks cites the coronavirus pandemic as an explanation for delays in releasing data pursuant to requests.

Government Publication Date: 1988-Sep 2020; Dec 2020-Mar 2021

Wastewater Discharger Registration Database: Provincial SRDS

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).

Government Publication Date: 1990-Dec 31, 2020

Anderson's Storage Tanks: Private TANK

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.

Government Publication Date: 1915-1953*

Transport Canada Fuel Storage Tanks: Federal TCFT

List of fuel storage tanks currently or previously owned or operated by Transport Canada. This inventory also includes tanks on The Pickering Lands, which refers to 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, and falls under the Site Management Policy of Transport Canada, but is administered by Public Works and Government Services Canada. This inventory provides information on the site name, location, tank age, capacity and fuel type.

Government Publication Date: 1970 - Dec 2020

Variances for Abandonment of Underground Storage Tanks: Provincial VAR

Listing of variances granted for storage tank abandonment. This is not a comprehensive or complete inventory of tank abandonment variances in the province; this listing is a copy of tank abandonment variance records previously obtained under Access to Public Information. In Ontario, registered underground storage tanks must be removed within two years of disuse; if removal of a tank is not feasible, an application may be sought for a variance from this code requirement.
Records are not verified for accuracy or completeness.

Government Publication Date: Feb 28, 2022

Waste Disposal Sites - MOE CA Inventory: Provincial WDS

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. All new Environmental Compliance Approvals handed out after Oct 31, 2011 for Waste Disposal Sites will still be found in this database.

Government Publication Date: Oct 2011- Aug 31, 2022

Waste Disposal Sites - MOE 1991 Historical Approval Inventory: Provincial WDSH

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.

Government Publication Date: Up to Oct 1990*

Water Well Information System: Provincial WWIS

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.

Government Publication Date: Jun 30 2022

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

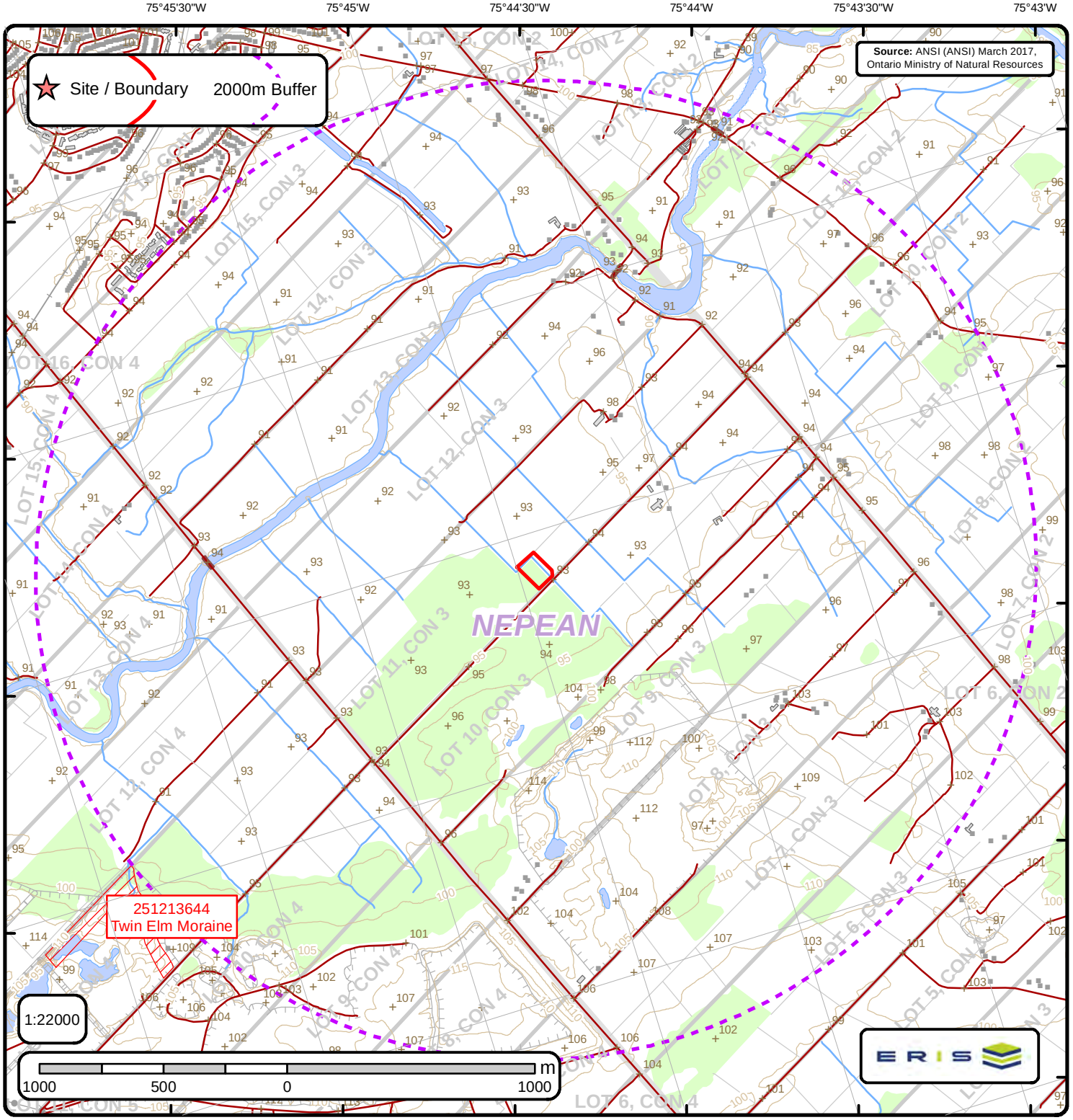
'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.



Area of Natural & Scientific Interest (ANSI) Order No. 22102400251

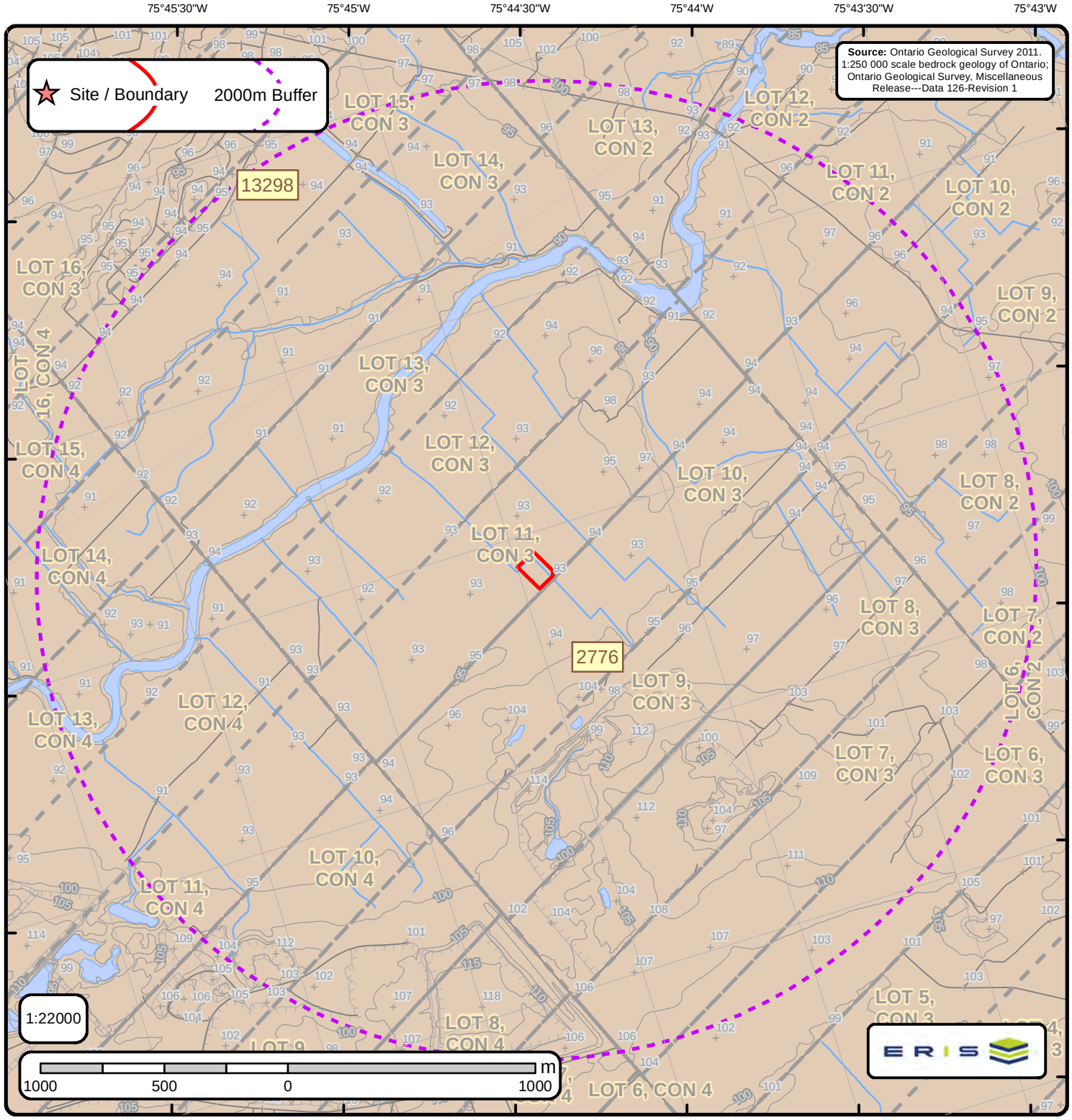
Spot Height	Transportation Structure	Contour Line	Wooded Area
Building Point	Utility Line	Pit or Quarry	Conservation Authority
Towers	Water Structure	Waterbody	Conservation Area
Utility Site Point	Drainage Line Feature	Wetlands	Municipal Park
Misc. Line	River or Stream	Concession	Provincial Park
Railroads	Airports	Lots	National Park
Roads	Tanks	Municipalitiy	Nature Reserve
Trail	Building to Scale	Land Ownership	ANSI Area

ANSI Report

ANSI Units Found within 2000 m of
3850 Cambrian Road

Order No.
22102400251

ANSI Name: Twin Elm Moraine
ID: 251213644 | **Type:** ANSI, Earth Science | **Significance:** Provincial | **Management Plan:** No | **Area (sqm):** 62164.723 | **Comments:**



Bedrock Geology of Ontario

Order No. 22102400251

Spot Height
Roads
Contour Lines
Streams
Railroads
Lots
Pit or Quarry
Airports
Waterbody
Wetlands

Bedrock Geology Lines

- CONTACT, GEOPHYSICAL, TREND, INTERPRETED
- CONTACT, SHARP, TREND, INTERPRETED
- CONTACT, SHARP, TREND, OBSERVED
- FAULT, DEXTRAL HORIZONTAL COMPONENT, TREND, INTERPRETED, UNKNOWN GENERATION
- FAULT, PROJECTED FAULT, INTERPRETED, UNKNOWN GENERATION
- FAULT, SINISTRAL HORIZONTAL COMPONENT, TREND, INTERPRETED, UNKNOWN GENERATION
- FAULT, SINISTRAL HORIZONTAL COMPONENT, TREND, OBSERVED, UNKNOWN GENERATION
- FAULT, UNKNOWN HORIZONTAL COMPONENT, INCLINED-REVERSE, INTERPRETED, UNKNOWN GENERATION
- FAULT, UNKNOWN HORIZONTAL COMPONENT, INCLINED-REVERSE, OBSERVED, UNKNOWN GENERATION
- FAULT, UNKNOWN HORIZONTAL COMPONENT, TREND, INTERPRETED, UNKNOWN GENERATION
- FAULT, UNKNOWN HORIZONTAL COMPONENT, TREND, OBSERVED, UNKNOWN GENERATION
- NEATLINE
- ONTARIO BORDER
- Marble, chert, iron formation, minor metavolcanic rocks

Dikes

- Abitibi mafic dike
- Biscotasing mafic dike
- Empey Lake mafic dike
- Felsic to intermediate intrusive rocks
- Fort Frances mafic dike
- Frontenac mafic dike
- Grenville mafic dike
- Logan and Nipigon mafic sills
- Mackenzie mafic dike
- Mafic dikes of uncertain age
- Mafic sills and dikes
- Marathon mafic dike
- Marathon, Kapuskasing or Biscotasing mafic dike
- Matachewan mafic dike
- Mine Centre mafic dike
- Molson mafic dike
- North Channel mafic dike
- Pickle Crow mafic dike (Molson swarm) normal
- Pickle Crow mafic dike (Molson swarm) reverse
- Rideau mafic dike
- Sudbury mafic dike
- Ultramafic, gabbroic and granophyric intrusions
- Unsubdivided mafic dike
- Unsubdivided mafic dike (Keweenawan age)
- unknown

C Lines

- FOLD, ANTICLINE, INTERPRETED, UNKNOWN GENERATION
- FOLD, ANTICLINE, OBSERVED, UNKNOWN GENERATION
- FOLD, ANTICLINE, SYNFORMAL, INTERPRETED, SECOND GENERATION
- FOLD, ANTIFORM, INTERPRETED, UNKNOWN GENERATION
- FOLD, SYNCLINE, INTERPRETED, UNKNOWN GENERATION
- FOLD, SYNCLINE, OBSERVED, UNKNOWN GENERATION
- FOLD, SYNFORM, INTERPRETED, UNKNOWN GENERATION

Kimberlite

Bedrock Geology Report

Bedrock Geology units found within 2000 m of
3850 Cambrian Road

Order No.
22102400251

ID: 2776 | **Unit Name:** |
Type (All): 53 | **Type (Primary):** 53 | **Type (Secondary):** | **Type (Tertiary):** | **Rock Type (Primary):** Dolostone, sandstone | **Strata (Primary):** Beekmantown Group | **Super Eon (Primary):** | **Eon (Primary):** PHANEROZOIC (Present to 542.0 Ma) | **Era (Primary):** PALEOZOIC (251.0 Ma to 542.0 Ma) | **Period (Primary):** ORDOVICIAN (443.7 Ma to 488.3 Ma) | **Epoch (Primary):** LOWER ORDOVICIAN | **Province (Primary):**

ID: 13298 | **Unit Name:** |
Type (All): 54a | **Type (Primary):** 54a | **Type (Secondary):** | **Type (Tertiary):** | **Rock Type (Primary):** Limestone, dolostone, shale, arkose, sandstone | **Strata (Primary):** Ottawa Group; Simcoe Group; Shadow Lake Formation | **Super Eon (Primary):** | **Eon (Primary):** PHANEROZOIC (Present to 542.0 Ma) | **Era (Primary):** PALEOZOIC (251.0 Ma to 542.0 Ma) | **Period (Primary):** ORDOVICIAN (443.7 Ma to 488.3 Ma) | **Epoch (Primary):** MIDDLE ORDOVICIAN (now considered UPPER DEVONIAN) | **Province (Primary):**

Bedrock Geology Report Metadata

Ontario Geological Survey 2011. 1:250 000 scale bedrock geology of Ontario; Ontario Geological Survey, Miscellaneous Release-Data 126 Revision1

ONTARIO MINISTRY OF NORTHERN DEVELOPMENT, MINES AND FORESTRY

ID - Unit ID **Unit Name** - Generalized geological unit classification

Type (All) - The geological unit number(s) or code(s) for all rock types present in an individual polygon.

Type (Primary) - The primary geological unit number or code for the primary rock type in an individual polygon

Type (Secondary) - The secondary geological unit number or code for the secondary rock type, if present, in an individual polygon

Type (Tertiary) - The tertiary geological unit number or code for the tertiary rock type, if present, in an individual polygon

Rock Type (Primary) - Rock type or sub-unit description

Status (Primary) - The Stratigraphic unit. Divided into:

```
Supergroup (two or more groups and lone formations)
Group (two or more formations)
Formation (primary unit of lithostratigraphy)
Member (named lithologic subdivision of a formation)
Bed (named distinctive layer in a member or formation)
```

Super Eon (Primary) - A name given to the largest defined unit of geological time, divided into Eons. Unique values which this field may contain (Domains) are:

```
PRECAMBRIAN (0.542 Ga to <3.85 Ga)
```

Eon (Primary) - A name given to a defined unit of geological time, divided into Eras. Unique values which this field may contain (Domains) are:

```
ARCHEAN (2.5 Ga to <3.85 Ga)
PROTEROZOIC (0.542 Ga to 2.50 Ga)
PHANEROZOIC (Present to 542.0 Ma)
```

Era (Primary) - A name given to a defined unit of geological time, divided into Periods. Each era on the scale is separated from the next by a major event or change. Unique values which this field may contain (Domains) are:

```
MESOARCHEAN (2.8 Ga to 3.2 Ga)                MESOPROTEROZOIC (1.0 Ga to 1.6 Ga)
NEO-TO MESOARCHEAN (2.5 Ga to 3.2 Ga)         EARLY PALEOZOIC TO NEOPROTEROZOIC (443.7 Ma to 1.0 Ga)
NEOARCHEAN (2.5 Ga to 2.8 Ga)                 NEO-TO MESOPROTEROZOIC (0.542 Ga to 1.6 Ga)
PALEOPROTEROZOIC (1.6 Ga to 2.5 Ga)           PALEOZOIC (251.0 Ma to 542.0 Ma)
MESO-TO PALEOPROTEROZOIC (1.0 Ga to 2.5 Ga)   MESOZOIC (65.5 Ma to 251.0 Ma)
```

Period (Primary) - A name given to a defined unit of geological time, divided into Epochs. Unique values which this field may contain (Domains) are:

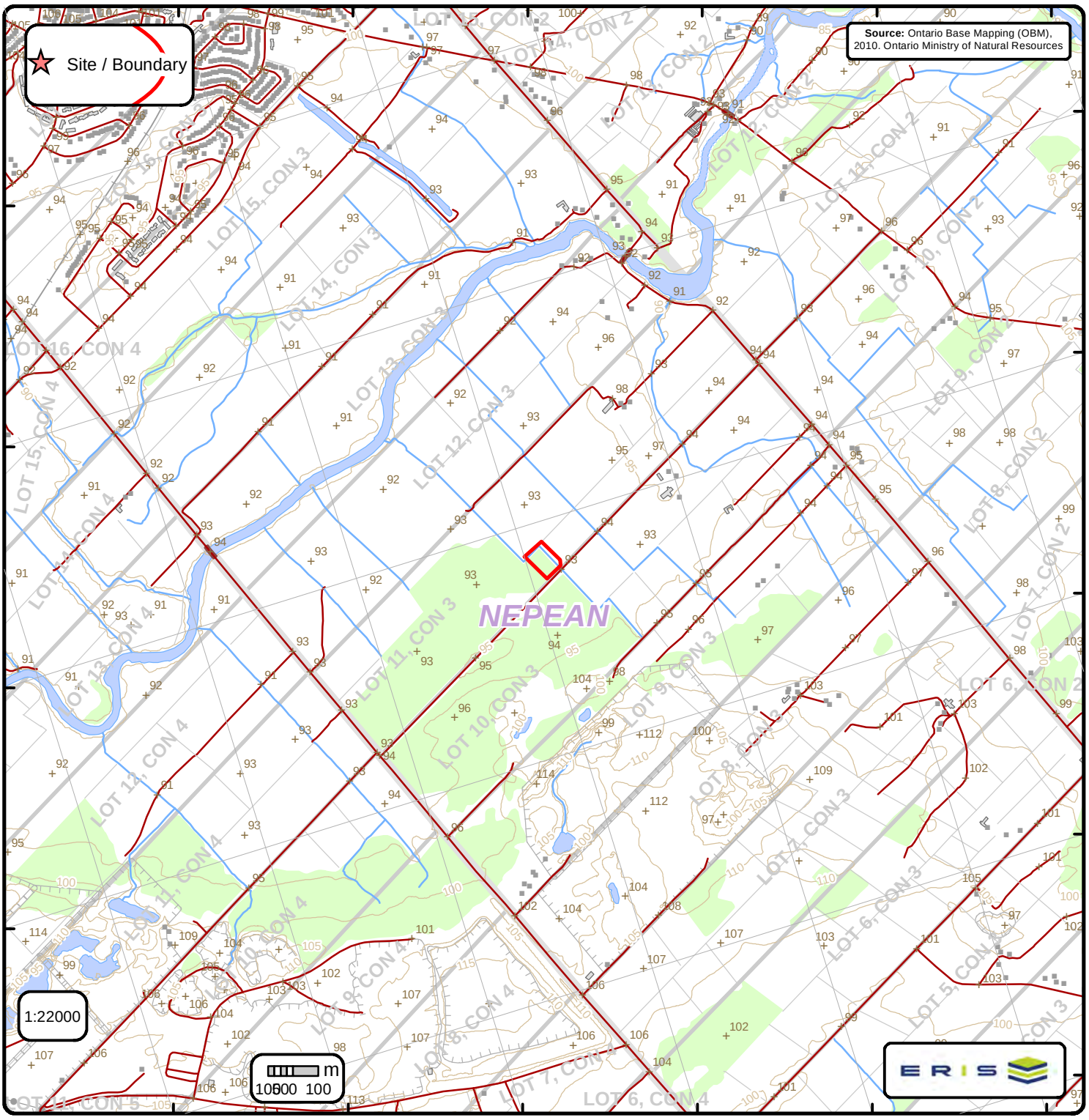
```
CAMBRIAN (488.3 Ma to 542.0 Ma)
ORDOVICIAN (443.7 Ma to 488.3 Ma)
SILURIAN (416.0 Ma to 443.7 Ma)
DEVONIAN (359.2 Ma to 416.0 Ma)
MISSISSIPPIAN TO DEVONIAN (318.1 Ma to 416.0 Ma)
JURASSIC (145.5 Ma to 199.6 Ma)
CRETACEOUS AND JURASSIC (65.5 Ma to 199.6 Ma)
```

Epoch (Primary) - A name given to a defined unit of geological time. Unique values which this field may contain (Domains) are:

```
LOWER ORDOVICIAN                    UPPER SILURIAN
MIDDLE ORDOVICIAN                   LOWER DEVONIAN
UPPER ORDOVICIAN                    MIDDLE DEVONIAN
MIDDLE AND LOWER SILURIAN           UPPER DEVONIAN
UPPER SILURIAN TO LOWER DEVONIAN    LOWER CRETACEOUS AND MIDDLE JURASSIC
```

Province (Primary) - The Geological Province the geological unit is in. Unique values which this field may contain (Domains) are:

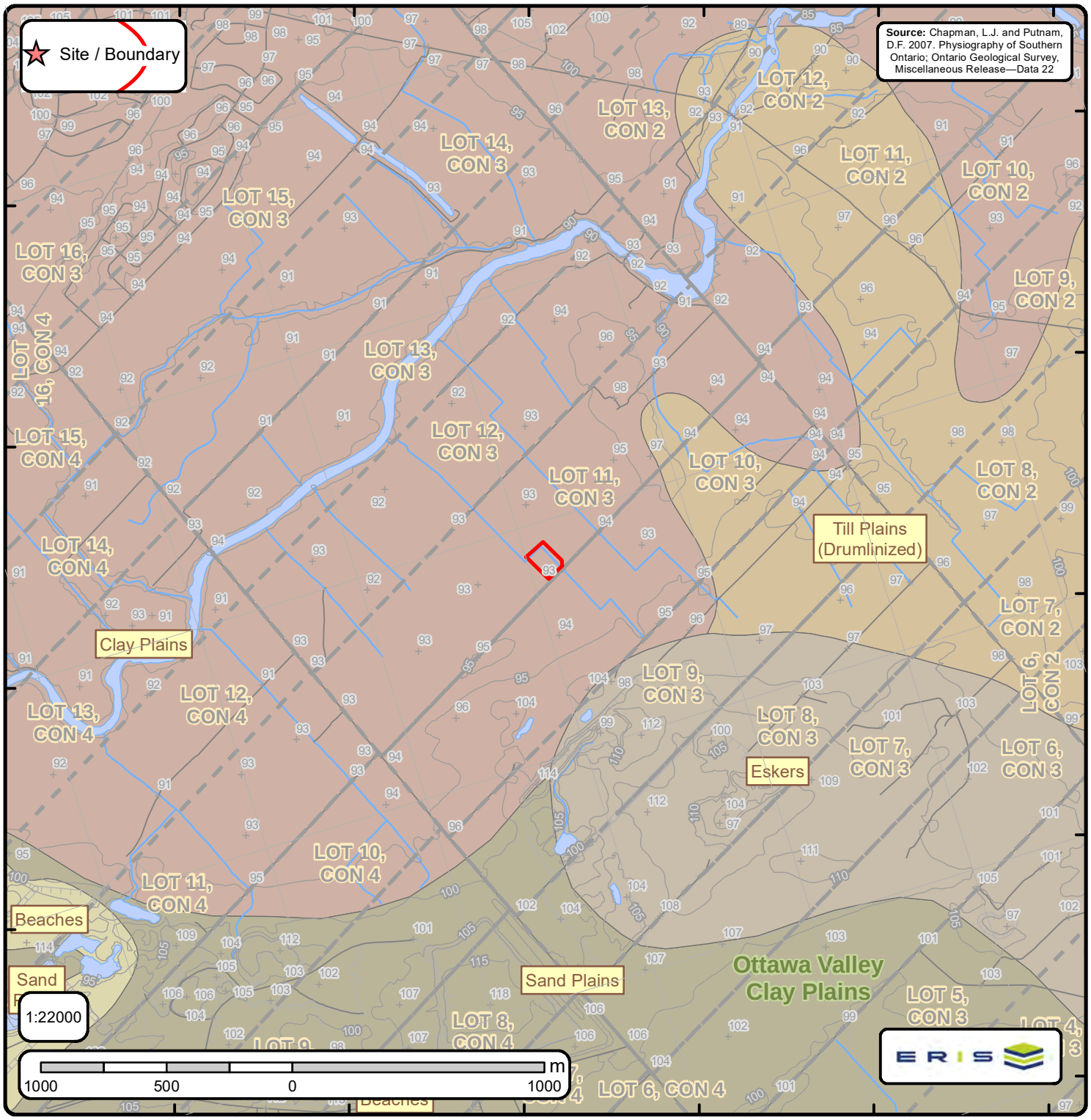
```
SUPERIOR
SOUTHERN
SUPERIOR
GRENVILLE
```



Ontario Base Mapping (OBM) Data

Order No. 22102400251

Spot Height (metre)	Transportation Structure	Contour Line	Wooded Area
Building Point	Utility Line	Pit or Quarry	Conservation Authority
Towers	Water Structure	Waterbody	Conservation Area
Utility Site Point	Drainage Line Feature	Wetlands	Municipal Park
Misc. Line	River or Stream	Concession	Provincial Park
Railroads	Airports	Lots	National Park
Roads	Tanks	Municipalitiy	Nature Reserve
Trail	Building to Scale	Land Ownership	



Physiography of Southern Ontario

Order No. 22102400251

- Spot Height
- Roads
- Railroads
- Contour Lines
- Streams
- Lots
- Pit or Quarry
- Airports
- Wetlands
- Waterbody
- Boulder Pavement
- Dissected Terrain
- Mud Flow Scars
- Sand Dunes
- escarpment
- shorecliff
- shorecliff (weakly developed)
- Physiography Regions
- Bare Rock Ridges And Shallow Till
- Beaches
- Bevelled Till Plains
- Clay Plains
- Drumlins
- Escarpments
- Eskers
- Kame Moraines
- Limestone Plains
- Peat And Muck
- Sand Plains
- Shale Plains
- Shallow Till And Rock Ridges
- Spillways
- Till Moraines
- Till Plains (Drumlinized)
- Till Plains (Undrumlinized)

Detailed Soil Survey (ON Soils)

Order No. 22102400251

- Spot Height
- Railroads
- Roads
- Contour Lines
- Streams
- Lots
- Pit or Quarry
- Airports
- Wetlands
- Waterbody

Soils Report

Soil Map Units Found within 2000 m of
3850 Cambrian Road

Order No.
22102400251

Soil ID: OND401072865
Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONGVI~~~~~A | **Surface Stoniness Class** : Very stony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Presence of surface stones > 15 cm diameter. | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-19 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 59 | **Total Silt(%)** : 30 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 2.3 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 2.565 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 19-35 | **Horizon** : Ap | **Layer No** : 2 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 62 | **Total Silt(%)** : 33 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 1.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 5.087 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 35-55 | **Horizon** : Ae | **Layer No** : 3 | **Very Fine Sand(%)** : 21 | **Total Sand(%)** : 63 | **Total Silt(%)** : 32 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 4.441 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 55-77 | **Horizon** : Bt | **Layer No** : 4 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 56 | **Total Silt(%)** : 26 | **Total Clay(%)** : 18 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.856 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 77-92 | **Horizon** : BC | **Layer No** : 5 | **Very Fine Sand(%)** : 20 | **Total Sand(%)** : 61 | **Total Silt(%)** : 28 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.805 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 92-100 | **Horizon** : Ck | **Layer No** : 6 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 65 | **Total Silt(%)** : 30 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 3.082 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072865
Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONGVI~~~~~A | **Surface Stoniness Class** : Moderately stony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : Presence of surface stones > 15 cm diameter. | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-19 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 59 | **Total Silt(%)** : 30 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 2.3 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 2.565 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 19-35 | **Horizon** : Ap | **Layer No** : 2 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 62 | **Total Silt(%)** : 33 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 1.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 5.087 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 35-55 | **Horizon** : Ae | **Layer No** : 3 | **Very Fine Sand(%)** : 21 | **Total Sand(%)** : 63 | **Total Silt(%)** : 32 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 4.441 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 55-77 | **Horizon** : Bt | **Layer No** : 4 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 56 | **Total Silt(%)** : 26 | **Total Clay(%)** : 18 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.856 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 77-92 | **Horizon** : BC | **Layer No** : 5 | **Very Fine Sand(%)** : 20 | **Total Sand(%)** : 61 | **Total Silt(%)** : 28 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.805 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 92-100 | **Horizon** : Ck | **Layer No** : 6 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 65 | **Total Silt(%)** : 30 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 3.082 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072866
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONNGW~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : silt loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-25 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 43 | **Total Silt(%)** : 41 | **Total Clay(%)** : 16 | **Organic Carbon(%)** : 3.9 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.375 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 25-37 | **Horizon** : Bgj | **Layer No** : 2 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 45 | **Total Silt(%)** : 40 | **Total Clay(%)** : 15 | **Organic Carbon(%)** : 3.3 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.752 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 37-100 | **Horizon** : Cg | **Layer No** : 3 | **Very Fine Sand(%)** : 5 | **Total Sand(%)** : 20 | **Total Silt(%)** : 63 | **Total Clay(%)** : 17 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 0.29 | **Electrical Conductivity(dS/m)** : 0 |

Soils Report

Soil Map Units Found within 2000 m of
3850 Cambrian Road

Soil ID: OND401072861
Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONMTD~~~~~A | **Surface Stoniness Class** : Slightly stony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : No significant limitations in use for Crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-22 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 35 | **Total Sand(%)** : 47 | **Total Silt(%)** : 39 | **Total Clay(%)** : 14 | **Organic Carbon(%)** : 2.1 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.383 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 22-35 | **Horizon** : Bmgj | **Layer No** : 2 | **Very Fine Sand(%)** : 34 | **Total Sand(%)** : 49 | **Total Silt(%)** : 43 | **Total Clay(%)** : 8 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 2.361 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 35-100 | **Horizon** : Ckgj | **Layer No** : 3 | **Very Fine Sand(%)** : 12 | **Total Sand(%)** : 48 | **Total Silt(%)** : 44 | **Total Clay(%)** : 8 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.7 | **Saturated Hydraulic Conductivity(cm/h)** : 1.46 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072861
Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONNGW~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : silt loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-25 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 43 | **Total Silt(%)** : 41 | **Total Clay(%)** : 16 | **Organic Carbon(%)** : 3.9 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.375 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 25-37 | **Horizon** : Bgj | **Layer No** : 2 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 45 | **Total Silt(%)** : 40 | **Total Clay(%)** : 15 | **Organic Carbon(%)** : 3.3 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.752 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 37-100 | **Horizon** : Cg | **Layer No** : 3 | **Very Fine Sand(%)** : 5 | **Total Sand(%)** : 20 | **Total Silt(%)** : 63 | **Total Clay(%)** : 17 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 0.29 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072784
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONZZZ~~~~~N | **Surface Stoniness Class** : Not Applicable | **Slop Steepness(%)** : None | **Slop Length(m)** : -9 | **Drainage** : Not Applicable | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-100 | **Horizon** : -- | **Layer No** : 1 | **Very Fine Sand(%)** : -9 | **Total Sand(%)** : -9 | **Total Silt(%)** : -9 | **Total Clay(%)** : -9 | **Organic Carbon(%)** : None | **pH in Calc Chloride** : None | **Saturated Hydraulic Conductivity(cm/h)** : None | **Electrical Conductivity(dS/m)** : None |

Soils Report

Soil Map Units Found within 2000 m of
3850 Cambrian Road

Soil ID: OND401072901
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONZOR~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Very Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-99 | **Horizon** : Oh | **Layer No** : 1 | **Very Fine Sand(%)** : -9 | **Total Sand(%)** : -9 | **Total Silt(%)** : -9 | **Total Clay(%)** : -9 | **Organic Carbon(%)** : 20.0 | **pH in Calc Chloride** : 5.5 | **Saturated Hydraulic Conductivity(cm/h)** : 3.455 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 99-149 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 23 | **Total Silt(%)** : 17 | **Total Clay(%)** : 60 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 5.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.21 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072869
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONCNB~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : silt loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-21 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 16 | **Total Sand(%)** : 25 | **Total Silt(%)** : 61 | **Total Clay(%)** : 14 | **Organic Carbon(%)** : 2.3 | **pH in Calc Chloride** : 7.0 | **Saturated Hydraulic Conductivity(cm/h)** : 0.687 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 21-50 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 12 | **Total Sand(%)** : 16 | **Total Silt(%)** : 74 | **Total Clay(%)** : 10 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.395 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 50-74 | **Horizon** : Bg | **Layer No** : 3 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 26 | **Total Silt(%)** : 67 | **Total Clay(%)** : 7 | **Organic Carbon(%)** : 1.6 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.047 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 74-100 | **Horizon** : Cg | **Layer No** : 4 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 10 | **Total Silt(%)** : 80 | **Total Clay(%)** : 10 | **Organic Carbon(%)** : 0.9 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.259 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072907
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONGVI~~~~~A | **Surface Stoniness Class** : Moderately stony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : Presence of surface stones > 15 cm diameter. | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-19 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 59 | **Total Silt(%)** : 30 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 2.3 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 2.565 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 19-35 | **Horizon** : Ap | **Layer No** : 2 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 62 | **Total Silt(%)** : 33 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 1.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 5.087 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 35-55 | **Horizon** : Ae | **Layer No** : 3 | **Very Fine Sand(%)** : 21 | **Total Sand(%)** : 63 | **Total Silt(%)** : 32 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 4.441 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 55-77 | **Horizon** : Bt | **Layer No** : 4 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 56 | **Total Silt(%)** : 26 | **Total Clay(%)** : 18 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.856 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 77-92 | **Horizon** : BC | **Layer No** : 5 | **Very Fine Sand(%)** : 20 | **Total Sand(%)** : 61 | **Total Silt(%)** : 28 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.805 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 92-100 | **Horizon** : Ck | **Layer No** : 6 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 65 | **Total Silt(%)** : 30 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 3.082 | **Electrical Conductivity(dS/m)** : 0 |

Soils Report

Soil Map Units Found within 2000 m of
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Soil ID: OND401072909
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONGVI~~~~~A | **Surface Stoniness Class** : Moderately stony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : Presence of surface stones > 15 cm diameter. | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-19 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 59 | **Total Silt(%)** : 30 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 2.3 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 2.565 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 19-35 | **Horizon** : Ap | **Layer No** : 2 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 62 | **Total Silt(%)** : 33 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 1.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 5.087 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 35-55 | **Horizon** : Ae | **Layer No** : 3 | **Very Fine Sand(%)** : 21 | **Total Sand(%)** : 63 | **Total Silt(%)** : 32 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 4.441 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 55-77 | **Horizon** : Bt | **Layer No** : 4 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 56 | **Total Silt(%)** : 26 | **Total Clay(%)** : 18 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.856 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 77-92 | **Horizon** : BC | **Layer No** : 5 | **Very Fine Sand(%)** : 20 | **Total Sand(%)** : 61 | **Total Silt(%)** : 28 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.805 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 92-100 | **Horizon** : Ck | **Layer No** : 6 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 65 | **Total Silt(%)** : 30 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 3.082 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072899
Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONZUN~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Severe limitations on use for crops. | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Soil Name** : UNCLASSIFIED | **Water Table Charateristics** : Unspecified period | **Soil Drainage Class** : Not applicable | **Kind of Surface Material** : Unclassified | **Layer that Restricts Root Growth** : No root restricting layer | **Type of Root Restricting Layer** : n/a | **Parent Material 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Mode of Deposition 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Parent Material Chemical Property 1|2|3** : Not Applicable; Not Applicable; Not Applicable |

Soil ID: OND401072899
Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONMTD~~~~~A | **Surface Stoniness Class** : Slightly stony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : No significant limitations in use for Crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-22 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 35 | **Total Sand(%)** : 47 | **Total Silt(%)** : 39 | **Total Clay(%)** : 14 | **Organic Carbon(%)** : 2.1 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.383 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 22-35 | **Horizon** : Bmgj | **Layer No** : 2 | **Very Fine Sand(%)** : 34 | **Total Sand(%)** : 49 | **Total Silt(%)** : 43 | **Total Clay(%)** : 8 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 2.361 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 35-100 | **Horizon** : Ckgj | **Layer No** : 3 | **Very Fine Sand(%)** : 12 | **Total Sand(%)** : 48 | **Total Silt(%)** : 44 | **Total Clay(%)** : 8 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.7 | **Saturated Hydraulic Conductivity(cm/h)** : 1.46 | **Electrical Conductivity(dS/m)** : 0 |

Soils Report

Soil Map Units Found within 2000 m of
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Soil ID: OND401072329
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONKRS~~~~~A | **Surface Stoniness Class** : Slightly stony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils that have a low runoff potential and high infiltration rate, as the soils typically are sands and gravel. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Severe limitations on use for crops. | **First CLI Limitation Subclass** : Low inherent soil Fertility | **Second CLI Limitation Subclass** : Low inherent Moisture holding capacity | **Depth(cm)** : 0-20 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 10 | **Total Sand(%)** : 63 | **Total Silt(%)** : 31 | **Total Clay(%)** : 6 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 3.537 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 20-32 | **Horizon** : Bmk | **Layer No** : 2 | **Very Fine Sand(%)** : 8 | **Total Sand(%)** : 68 | **Total Silt(%)** : 25 | **Total Clay(%)** : 7 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 3.783 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 32-100 | **Horizon** : Ck | **Layer No** : 3 | **Very Fine Sand(%)** : 2 | **Total Sand(%)** : 92 | **Total Silt(%)** : 7 | **Total Clay(%)** : 1 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.5 | **Saturated Hydraulic Conductivity(cm/h)** : 7.817 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072890
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONGVI~~~~~A | **Surface Stoniness Class** : Moderately stony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : Presence of surface stones > 15 cm diameter. | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-19 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 59 | **Total Silt(%)** : 30 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 2.3 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 2.565 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 19-35 | **Horizon** : Ap | **Layer No** : 2 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 62 | **Total Silt(%)** : 33 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 1.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 5.087 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 35-55 | **Horizon** : Ae | **Layer No** : 3 | **Very Fine Sand(%)** : 21 | **Total Sand(%)** : 63 | **Total Silt(%)** : 32 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 4.441 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 55-77 | **Horizon** : Bt | **Layer No** : 4 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 56 | **Total Silt(%)** : 26 | **Total Clay(%)** : 18 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.856 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 77-92 | **Horizon** : BC | **Layer No** : 5 | **Very Fine Sand(%)** : 20 | **Total Sand(%)** : 61 | **Total Silt(%)** : 28 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.805 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 92-100 | **Horizon** : Ck | **Layer No** : 6 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 65 | **Total Silt(%)** : 30 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 3.082 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072891
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONGVI~~~~~A | **Surface Stoniness Class** : Moderately stony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : Presence of surface stones > 15 cm diameter. | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-19 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 59 | **Total Silt(%)** : 30 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 2.3 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 2.565 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 19-35 | **Horizon** : Ap | **Layer No** : 2 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 62 | **Total Silt(%)** : 33 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 1.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 5.087 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 35-55 | **Horizon** : Ae | **Layer No** : 3 | **Very Fine Sand(%)** : 21 | **Total Sand(%)** : 63 | **Total Silt(%)** : 32 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 4.441 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 55-77 | **Horizon** : Bt | **Layer No** : 4 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 56 | **Total Silt(%)** : 26 | **Total Clay(%)** : 18 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.856 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 77-92 | **Horizon** : BC | **Layer No** : 5 | **Very Fine Sand(%)** : 20 | **Total Sand(%)** : 61 | **Total Silt(%)** : 28 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.805 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 92-100 | **Horizon** : Ck | **Layer No** : 6 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 65 | **Total Silt(%)** : 30 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 3.082 | **Electrical Conductivity(dS/m)** : 0 |

Soils Report

Soil Map Units Found within 2000 m of
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Soil ID: OND401072893
Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONSSMO~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Very severe limitations preclude annual cultivation; improvements feasible. | **First CLI Limitation Subclass** : Low inherent soil Fertility | **Second CLI Limitation Subclass** : None | **Depth(cm)** : -15-0 | **Horizon** : Om | **Layer No** : 1 | **Very Fine Sand(%)** : -9 | **Total Sand(%)** : -9 | **Total Silt(%)** : -9 | **Total Clay(%)** : -9 | **Organic Carbon(%)** : 17.0 | **pH in Calc Chloride** : 6.0 | **Saturated Hydraulic Conductivity(cm/h)** : 3.455 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 0-21 | **Horizon** : Bm | **Layer No** : 2 | **Very Fine Sand(%)** : 29 | **Total Sand(%)** : 75 | **Total Silt(%)** : 16 | **Total Clay(%)** : 9 | **Organic Carbon(%)** : 2.7 | **pH in Calc Chloride** : 5.1 | **Saturated Hydraulic Conductivity(cm/h)** : 4.347 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 21-39 | **Horizon** : Bg | **Layer No** : 3 | **Very Fine Sand(%)** : 27 | **Total Sand(%)** : 91 | **Total Silt(%)** : 7 | **Total Clay(%)** : 2 | **Organic Carbon(%)** : 0.7 | **pH in Calc Chloride** : 5.0 | **Saturated Hydraulic Conductivity(cm/h)** : 7.051 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 39-52 | **Horizon** : Bg | **Layer No** : 4 | **Very Fine Sand(%)** : 20 | **Total Sand(%)** : 97 | **Total Silt(%)** : 2 | **Total Clay(%)** : 1 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 5.2 | **Saturated Hydraulic Conductivity(cm/h)** : 8.134 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 52-69 | **Horizon** : Cg | **Layer No** : 5 | **Very Fine Sand(%)** : 26 | **Total Sand(%)** : 93 | **Total Silt(%)** : 4 | **Total Clay(%)** : 3 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 5.2 | **Saturated Hydraulic Conductivity(cm/h)** : 6.155 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 69-100 | **Horizon** : Cg | **Layer No** : 6 | **Very Fine Sand(%)** : 31 | **Total Sand(%)** : 96 | **Total Silt(%)** : 3 | **Total Clay(%)** : 1 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 4.7 | **Saturated Hydraulic Conductivity(cm/h)** : 7.836 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072893
Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONZUN~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Very severe limitations preclude annual cultivation; improvements feasible. | **First CLI Limitation Subclass** : Low inherent soil Fertility | **Second CLI Limitation Subclass** : None | **Soil Name** : UNCLASSIFIED | **Water Table Charateristics** : Unspecified period | **Soil Drainage Class** : Not applicable | **Kind of Surface Material** : Unclassified | **Layer that Restricts Root Growth** : No root restricting layer | **Type of Root Restricting Layer** : n/a | **Parent Material 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Mode of Deposition 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Parent Material Chemical Property 1|2|3** : Not Applicable; Not Applicable; Not Applicable |

Soil ID: OND401072896
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONCLA~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils that have a low runoff potential and high infiltration rate, as the soils typically are sands and gravel. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Severe limitations on use for crops. | **First CLI Limitation Subclass** : Low inherent soil Fertility | **Second CLI Limitation Subclass** : Low inherent Moisture holding capacity | **Depth(cm)** : 0-15 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 3 | **Total Sand(%)** : 91 | **Total Silt(%)** : 5 | **Total Clay(%)** : 4 | **Organic Carbon(%)** : 1.2 | **pH in Calc Chloride** : 7.0 | **Saturated Hydraulic Conductivity(cm/h)** : 6.934 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 15-25 | **Horizon** : Bm | **Layer No** : 2 | **Very Fine Sand(%)** : 2 | **Total Sand(%)** : 96 | **Total Silt(%)** : 2 | **Total Clay(%)** : 2 | **Organic Carbon(%)** : 1.0 | **pH in Calc Chloride** : 6.6 | **Saturated Hydraulic Conductivity(cm/h)** : 8.209 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 25-66 | **Horizon** : Bm | **Layer No** : 3 | **Very Fine Sand(%)** : 3 | **Total Sand(%)** : 95 | **Total Silt(%)** : 3 | **Total Clay(%)** : 2 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 6.2 | **Saturated Hydraulic Conductivity(cm/h)** : 8.325 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 66-82 | **Horizon** : BC | **Layer No** : 4 | **Very Fine Sand(%)** : 2 | **Total Sand(%)** : 97 | **Total Silt(%)** : 2 | **Total Clay(%)** : 1 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 5.8 | **Saturated Hydraulic Conductivity(cm/h)** : 8.134 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 82-100 | **Horizon** : C | **Layer No** : 5 | **Very Fine Sand(%)** : 4 | **Total Sand(%)** : 96 | **Total Silt(%)** : 2 | **Total Clay(%)** : 2 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 5.8 | **Saturated Hydraulic Conductivity(cm/h)** : 6.96 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072307
Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONOKA~~~~~A | **Surface Stoniness Class** : Very stony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils that have a low runoff potential and high infiltration rate, as the soils typically are sands and gravel. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Severe limitations on use for crops. | **First CLI Limitation Subclass** : Low inherent soil Fertility | **Second CLI Limitation Subclass** : Low inherent Moisture holding capacity | **Depth(cm)** : 0-12 | **Horizon** : Apk | **Layer No** : 1 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 70 | **Total Silt(%)** : 22 | **Total Clay(%)** : 8 | **Organic Carbon(%)** : 4.0 | **pH in Calc Chloride** : 6.9 | **Saturated Hydraulic Conductivity(cm/h)** : 5.409 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 12-30 | **Horizon** : Bmk | **Layer No** : 2 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 71 | **Total Silt(%)** : 20 | **Total Clay(%)** : 9 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 3.079 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 30-100 | **Horizon** : Ck | **Layer No** : 3 | **Very Fine Sand(%)** : 3 | **Total Sand(%)** : 91 | **Total Silt(%)** : 6 | **Total Clay(%)** : 3 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 6.109 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072307
Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONGVI~~~~~A | **Surface Stoniness Class** : Very stony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Presence of surface stones > 15 cm diameter. | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-19 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 59 | **Total Silt(%)** : 30 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 2.3 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 2.565 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 19-35 | **Horizon** : Ap | **Layer No** : 2 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 62 | **Total Silt(%)** : 33 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 1.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 5.087 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 35-55 | **Horizon** : Ae | **Layer No** : 3 | **Very Fine Sand(%)** : 21 | **Total Sand(%)** : 63 | **Total Silt(%)** : 32 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 4.441 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 55-77 | **Horizon** : Bt | **Layer No** : 4 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 56 | **Total Silt(%)** : 26 | **Total Clay(%)** : 18 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.856 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 77-92 | **Horizon** : BC | **Layer No** : 5 | **Very Fine Sand(%)** : 20 | **Total Sand(%)** : 61 | **Total Silt(%)** : 28 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.805 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 92-100 | **Horizon** : Ck | **Layer No** : 6 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 65 | **Total Silt(%)** : 30 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 3.082 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072308
Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONMLP~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils that have a low runoff potential and high infiltration rate, as the soils typically are sands and gravel. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Severe limitations on use for crops. | **First CLI Limitation Subclass** : Low inherent soil Fertility | **Second CLI Limitation Subclass** : Low inherent Moisture holding capacity | **Depth(cm)** : 0-20 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 1 | **Total Sand(%)** : 86 | **Total Silt(%)** : 9 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 1.9 | **pH in Calc Chloride** : 5.5 | **Saturated Hydraulic Conductivity(cm/h)** : 6.662 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 20-45 | **Horizon** : Bm | **Layer No** : 2 | **Very Fine Sand(%)** : 2 | **Total Sand(%)** : 88 | **Total Silt(%)** : 9 | **Total Clay(%)** : 3 | **Organic Carbon(%)** : 0.9 | **pH in Calc Chloride** : 5.0 | **Saturated Hydraulic Conductivity(cm/h)** : 7.125 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 45-65 | **Horizon** : BC | **Layer No** : 3 | **Very Fine Sand(%)** : 3 | **Total Sand(%)** : 92 | **Total Silt(%)** : 6 | **Total Clay(%)** : 2 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 4.8 | **Saturated Hydraulic Conductivity(cm/h)** : 7.099 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 65-100 | **Horizon** : C | **Layer No** : 4 | **Very Fine Sand(%)** : 3 | **Total Sand(%)** : 91 | **Total Silt(%)** : 6 | **Total Clay(%)** : 3 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 5.0 | **Saturated Hydraulic Conductivity(cm/h)** : 6.102 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072308
Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONHBS~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Severe limitations on use for crops. | **First CLI Limitation Subclass** : Low inherent soil Fertility | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-22 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 3 | **Total Sand(%)** : 85 | **Total Silt(%)** : 11 | **Total Clay(%)** : 4 | **Organic Carbon(%)** : 2.9 | **pH in Calc Chloride** : 4.8 | **Saturated Hydraulic Conductivity(cm/h)** : 8.519 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 22-50 | **Horizon** : Bmgj | **Layer No** : 2 | **Very Fine Sand(%)** : 2 | **Total Sand(%)** : 91 | **Total Silt(%)** : 7 | **Total Clay(%)** : 2 | **Organic Carbon(%)** : 1.0 | **pH in Calc Chloride** : 4.8 | **Saturated Hydraulic Conductivity(cm/h)** : 8.106 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 50-65 | **Horizon** : Bmgj | **Layer No** : 3 | **Very Fine Sand(%)** : 1 | **Total Sand(%)** : 96 | **Total Silt(%)** : 2 | **Total Clay(%)** : 2 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 4.7 | **Saturated Hydraulic Conductivity(cm/h)** : 8.355 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 65-100 | **Horizon** : Cgj | **Layer No** : 4 | **Very Fine Sand(%)** : 1 | **Total Sand(%)** : 96 | **Total Silt(%)** : 3 | **Total Clay(%)** : 1 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 4.9 | **Saturated Hydraulic Conductivity(cm/h)** : 7.858 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072832
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONGVI~~~~~A | **Surface Stoniness Class** : Very stony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Presence of surface stones > 15 cm diameter. | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-19 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 59 | **Total Silt(%)** : 30 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 2.3 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 2.565 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 19-35 | **Horizon** : Ap | **Layer No** : 2 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 62 | **Total Silt(%)** : 33 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 1.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 5.087 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 35-55 | **Horizon** : Ae | **Layer No** : 3 | **Very Fine Sand(%)** : 21 | **Total Sand(%)** : 63 | **Total Silt(%)** : 32 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 4.441 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 55-77 | **Horizon** : Bt | **Layer No** : 4 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 56 | **Total Silt(%)** : 26 | **Total Clay(%)** : 18 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.856 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 77-92 | **Horizon** : BC | **Layer No** : 5 | **Very Fine Sand(%)** : 20 | **Total Sand(%)** : 61 | **Total Silt(%)** : 28 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.805 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 92-100 | **Horizon** : Ck | **Layer No** : 6 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 65 | **Total Silt(%)** : 30 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 3.082 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072915
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONKRS~~~~~A | **Surface Stoniness Class** : Slightly stony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils that have a low runoff potential and high infiltration rate, as the soils typically are sands and gravel. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Severe limitations on use for crops. | **First CLI Limitation Subclass** : Low inherent soil Fertility | **Second CLI Limitation Subclass** : Low inherent Moisture holding capacity | **Depth(cm)** : 0-20 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 10 | **Total Sand(%)** : 63 | **Total Silt(%)** : 31 | **Total Clay(%)** : 6 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 3.537 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 20-32 | **Horizon** : Bmk | **Layer No** : 2 | **Very Fine Sand(%)** : 8 | **Total Sand(%)** : 68 | **Total Silt(%)** : 25 | **Total Clay(%)** : 7 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 3.783 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 32-100 | **Horizon** : Ck | **Layer No** : 3 | **Very Fine Sand(%)** : 2 | **Total Sand(%)** : 92 | **Total Silt(%)** : 7 | **Total Clay(%)** : 1 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.5 | **Saturated Hydraulic Conductivity(cm/h)** : 7.817 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072914
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONZUN~~~~~N | **Surface Stoniness Class** : Not Applicable | **Slop Steepness(%)** : None | **Slop Length(m)** : -9 | **Drainage** : Not Applicable | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Soil Name** : UNCLASSIFIED | **Water Table Charateristics** : Unspecified period | **Soil Drainage Class** : Not applicable | **Kind of Surface Material** : Unclassified | **Layer that Restricts Root Growth** : No root restricting layer | **Type of Root Restricting Layer** : n/a | **Parent Material 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Mode of Deposition 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Parent Material Chemical Property 1|2|3** : Not Applicable; Not Applicable; Not Applicable |

Soil ID: OND401072916
Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONGVI~~~~~A | **Surface Stoniness Class** : Very stony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Presence of surface stones > 15 cm diameter. | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-19 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 59 | **Total Silt(%)** : 30 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 2.3 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 2.565 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 19-35 | **Horizon** : Ap | **Layer No** : 2 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 62 | **Total Silt(%)** : 33 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 1.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 5.087 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 35-55 | **Horizon** : Ae | **Layer No** : 3 | **Very Fine Sand(%)** : 21 | **Total Sand(%)** : 63 | **Total Silt(%)** : 32 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 4.441 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 55-77 | **Horizon** : Bt | **Layer No** : 4 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 56 | **Total Silt(%)** : 26 | **Total Clay(%)** : 18 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.856 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 77-92 | **Horizon** : BC | **Layer No** : 5 | **Very Fine Sand(%)** : 20 | **Total Sand(%)** : 61 | **Total Silt(%)** : 28 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.805 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 92-100 | **Horizon** : Ck | **Layer No** : 6 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 65 | **Total Silt(%)** : 30 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 3.082 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072916
Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONMTD~~~~~A | **Surface Stoniness Class** : Very stony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Presence of surface stones > 15 cm diameter. | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-22 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 35 | **Total Sand(%)** : 47 | **Total Silt(%)** : 39 | **Total Clay(%)** : 14 | **Organic Carbon(%)** : 2.1 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.383 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 22-35 | **Horizon** : Bmgj | **Layer No** : 2 | **Very Fine Sand(%)** : 34 | **Total Sand(%)** : 49 | **Total Silt(%)** : 43 | **Total Clay(%)** : 8 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 2.361 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 35-100 | **Horizon** : Ckgj | **Layer No** : 3 | **Very Fine Sand(%)** : 12 | **Total Sand(%)** : 48 | **Total Silt(%)** : 44 | **Total Clay(%)** : 8 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.7 | **Saturated Hydraulic Conductivity(cm/h)** : 1.46 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072912
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONKRS~~~~~A | **Surface Stoniness Class** : Moderately stony | **Slop Steepness(%)** : 7.0 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils that have a low runoff potential and high infiltration rate, as the soils typically are sands and gravel. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Severe limitations on use for crops. | **First CLI Limitation Subclass** : Low inherent soil Fertility | **Second CLI Limitation Subclass** : Low inherent Moisture holding capacity | **Depth(cm)** : 0-20 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 10 | **Total Sand(%)** : 63 | **Total Silt(%)** : 31 | **Total Clay(%)** : 6 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 3.537 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 20-32 | **Horizon** : Bmk | **Layer No** : 2 | **Very Fine Sand(%)** : 8 | **Total Sand(%)** : 68 | **Total Silt(%)** : 25 | **Total Clay(%)** : 7 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 3.783 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 32-100 | **Horizon** : Ck | **Layer No** : 3 | **Very Fine Sand(%)** : 2 | **Total Sand(%)** : 92 | **Total Silt(%)** : 7 | **Total Clay(%)** : 1 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.5 | **Saturated Hydraulic Conductivity(cm/h)** : 7.817 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072872
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONCNB~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : silt loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-21 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 16 | **Total Sand(%)** : 25 | **Total Silt(%)** : 61 | **Total Clay(%)** : 14 | **Organic Carbon(%)** : 2.3 | **pH in Calc Chloride** : 7.0 | **Saturated Hydraulic Conductivity(cm/h)** : 0.687 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 21-50 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 12 | **Total Sand(%)** : 16 | **Total Silt(%)** : 74 | **Total Clay(%)** : 10 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.395 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 50-74 | **Horizon** : Bg | **Layer No** : 3 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 26 | **Total Silt(%)** : 67 | **Total Clay(%)** : 7 | **Organic Carbon(%)** : 1.6 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.047 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 74-100 | **Horizon** : Cg | **Layer No** : 4 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 10 | **Total Silt(%)** : 80 | **Total Clay(%)** : 10 | **Organic Carbon(%)** : 0.9 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.259 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072873
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONGVI~~~~~A | **Surface Stoniness Class** : Moderately stony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : Presence of surface stones > 15 cm diameter. | **Second CLI Limitation Subclass** : Presence of adverse Topography | **Depth(cm)** : 0-19 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 59 | **Total Silt(%)** : 30 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 2.3 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 2.565 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 19-35 | **Horizon** : Ap | **Layer No** : 2 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 62 | **Total Silt(%)** : 33 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 1.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 5.087 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 35-55 | **Horizon** : Ae | **Layer No** : 3 | **Very Fine Sand(%)** : 21 | **Total Sand(%)** : 63 | **Total Silt(%)** : 32 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 4.441 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 55-77 | **Horizon** : Bt | **Layer No** : 4 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 56 | **Total Silt(%)** : 26 | **Total Clay(%)** : 18 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.856 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 77-92 | **Horizon** : BC | **Layer No** : 5 | **Very Fine Sand(%)** : 20 | **Total Sand(%)** : 61 | **Total Silt(%)** : 28 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.805 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 92-100 | **Horizon** : Ck | **Layer No** : 6 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 65 | **Total Silt(%)** : 30 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 3.082 | **Electrical Conductivity(dS/m)** : 0 |

Soils Report

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Soil ID: OND401072856
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONZER~~~~~N | **Surface Stoniness Class** : Slightly stony | **Slop Steepness(%)** : 37.5 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : No capability for agriculture. | **First CLI Limitation Subclass** : Presence of adverse Topography | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-100 | **Horizon** : Ah | **Layer No** : 1 | **Very Fine Sand(%)** : 5 | **Total Sand(%)** : 15 | **Total Silt(%)** : 60 | **Total Clay(%)** : 25 | **Organic Carbon(%)** : 3.9 | **pH in Calc Chloride** : 6.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.589 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072794
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONBDO~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-12 | **Horizon** : Apg | **Layer No** : 1 | **Very Fine Sand(%)** : 11 | **Total Sand(%)** : 14 | **Total Silt(%)** : 52 | **Total Clay(%)** : 34 | **Organic Carbon(%)** : 2.1 | **pH in Calc Chloride** : 5.7 | **Saturated Hydraulic Conductivity(cm/h)** : 0.223 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 12-38 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 7 | **Total Sand(%)** : 11 | **Total Silt(%)** : 46 | **Total Clay(%)** : 43 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.211 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 38-70 | **Horizon** : Bg | **Layer No** : 3 | **Very Fine Sand(%)** : 7 | **Total Sand(%)** : 11 | **Total Silt(%)** : 47 | **Total Clay(%)** : 42 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 6.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.211 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 70-105 | **Horizon** : Cg | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 8 | **Total Silt(%)** : 45 | **Total Clay(%)** : 47 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.197 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072851
Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONCRP~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : clay loam | **Field Crops Capability** : No significant limitations in use for Crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-28 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 28 | **Total Silt(%)** : 46 | **Total Clay(%)** : 26 | **Organic Carbon(%)** : 3.5 | **pH in Calc Chloride** : 5.8 | **Saturated Hydraulic Conductivity(cm/h)** : 0.568 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 28-43 | **Horizon** : Bmgj | **Layer No** : 2 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 21 | **Total Silt(%)** : 48 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 6.3 | **Saturated Hydraulic Conductivity(cm/h)** : 0.288 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 43-70 | **Horizon** : Bmgj | **Layer No** : 3 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 20 | **Total Silt(%)** : 49 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 6.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.287 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 70-95 | **Horizon** : BCg | **Layer No** : 4 | **Very Fine Sand(%)** : 17 | **Total Sand(%)** : 17 | **Total Silt(%)** : 50 | **Total Clay(%)** : 33 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 1.932 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 95-115 | **Horizon** : Cg | **Layer No** : 5 | **Very Fine Sand(%)** : 17 | **Total Sand(%)** : 18 | **Total Silt(%)** : 48 | **Total Clay(%)** : 34 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 6.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.214 | **Electrical Conductivity(dS/m)** : 0 |

Soils Report

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Soil ID: OND401072851
Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONNGW~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : silt loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-25 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 43 | **Total Silt(%)** : 41 | **Total Clay(%)** : 16 | **Organic Carbon(%)** : 3.9 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.375 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 25-37 | **Horizon** : Bgj | **Layer No** : 2 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 45 | **Total Silt(%)** : 40 | **Total Clay(%)** : 15 | **Organic Carbon(%)** : 3.3 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.752 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 37-100 | **Horizon** : Cg | **Layer No** : 3 | **Very Fine Sand(%)** : 5 | **Total Sand(%)** : 20 | **Total Silt(%)** : 63 | **Total Clay(%)** : 17 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 0.29 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072852
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONZER~~~~~N | **Surface Stoniness Class** : Slightly stony | **Slop Steepness(%)** : 37.5 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : No capability for agriculture. | **First CLI Limitation Subclass** : Presence of adverse Topography | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-100 | **Horizon** : Ah | **Layer No** : 1 | **Very Fine Sand(%)** : 5 | **Total Sand(%)** : 15 | **Total Silt(%)** : 60 | **Total Clay(%)** : 25 | **Organic Carbon(%)** : 3.9 | **pH in Calc Chloride** : 6.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.589 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072836
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONNGW~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : silt loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-25 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 43 | **Total Silt(%)** : 41 | **Total Clay(%)** : 16 | **Organic Carbon(%)** : 3.9 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.375 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 25-37 | **Horizon** : Bgj | **Layer No** : 2 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 45 | **Total Silt(%)** : 40 | **Total Clay(%)** : 15 | **Organic Carbon(%)** : 3.3 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.752 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 37-100 | **Horizon** : Cg | **Layer No** : 3 | **Very Fine Sand(%)** : 5 | **Total Sand(%)** : 20 | **Total Silt(%)** : 63 | **Total Clay(%)** : 17 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 0.29 | **Electrical Conductivity(dS/m)** : 0 |

Soils Report

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Soil ID: OND401072889
Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONCNB~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : silt loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-21 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 16 | **Total Sand(%)** : 25 | **Total Silt(%)** : 61 | **Total Clay(%)** : 14 | **Organic Carbon(%)** : 2.3 | **pH in Calc Chloride** : 7.0 | **Saturated Hydraulic Conductivity(cm/h)** : 0.687 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 21-50 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 12 | **Total Sand(%)** : 16 | **Total Silt(%)** : 74 | **Total Clay(%)** : 10 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.395 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 50-74 | **Horizon** : Bg | **Layer No** : 3 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 26 | **Total Silt(%)** : 67 | **Total Clay(%)** : 7 | **Organic Carbon(%)** : 1.6 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.047 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 74-100 | **Horizon** : Cg | **Layer No** : 4 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 10 | **Total Silt(%)** : 80 | **Total Clay(%)** : 10 | **Organic Carbon(%)** : 0.9 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.259 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072889
Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONNGW~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : silt loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-25 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 43 | **Total Silt(%)** : 41 | **Total Clay(%)** : 16 | **Organic Carbon(%)** : 3.9 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.375 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 25-37 | **Horizon** : Bgj | **Layer No** : 2 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 45 | **Total Silt(%)** : 40 | **Total Clay(%)** : 15 | **Organic Carbon(%)** : 3.3 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.752 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 37-100 | **Horizon** : Cg | **Layer No** : 3 | **Very Fine Sand(%)** : 5 | **Total Sand(%)** : 20 | **Total Silt(%)** : 63 | **Total Clay(%)** : 17 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 0.29 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072883
Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONBDO~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-12 | **Horizon** : Apg | **Layer No** : 1 | **Very Fine Sand(%)** : 11 | **Total Sand(%)** : 14 | **Total Silt(%)** : 52 | **Total Clay(%)** : 34 | **Organic Carbon(%)** : 2.1 | **pH in Calc Chloride** : 5.7 | **Saturated Hydraulic Conductivity(cm/h)** : 0.223 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 12-38 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 7 | **Total Sand(%)** : 11 | **Total Silt(%)** : 46 | **Total Clay(%)** : 43 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.211 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 38-70 | **Horizon** : Bg | **Layer No** : 3 | **Very Fine Sand(%)** : 7 | **Total Sand(%)** : 11 | **Total Silt(%)** : 47 | **Total Clay(%)** : 42 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 6.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.211 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 70-105 | **Horizon** : Cg | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 8 | **Total Silt(%)** : 45 | **Total Clay(%)** : 47 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.197 | **Electrical Conductivity(dS/m)** : 0 |

Soils Report

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Soil ID: OND401072883
Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONBIV~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-17 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 31 | **Total Sand(%)** : 53 | **Total Silt(%)** : 34 | **Total Clay(%)** : 13 | **Organic Carbon(%)** : 3.1 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 2.052 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 17-33 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 30 | **Total Silt(%)** : 39 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.273 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 33-62 | **Horizon** : Bg | **Layer No** : 3 | **Very Fine Sand(%)** : 40 | **Total Sand(%)** : 52 | **Total Silt(%)** : 28 | **Total Clay(%)** : 20 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.683 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 62-84 | **Horizon** : Ckg | **Layer No** : 4 | **Very Fine Sand(%)** : 45 | **Total Sand(%)** : 62 | **Total Silt(%)** : 26 | **Total Clay(%)** : 12 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 1.597 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 84-100 | **Horizon** : Ckg | **Layer No** : 5 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 4 | **Total Silt(%)** : 54 | **Total Clay(%)** : 42 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.194 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072333
Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONRSL~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Severe limitations on use for crops. | **First CLI Limitation Subclass** : Low inherent soil Fertility | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-20 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 3 | **Total Sand(%)** : 86 | **Total Silt(%)** : 10 | **Total Clay(%)** : 4 | **Organic Carbon(%)** : 1.1 | **pH in Calc Chloride** : 5.5 | **Saturated Hydraulic Conductivity(cm/h)** : 6.641 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 20-31 | **Horizon** : Bmgj | **Layer No** : 2 | **Very Fine Sand(%)** : 5 | **Total Sand(%)** : 93 | **Total Silt(%)** : 6 | **Total Clay(%)** : 1 | **Organic Carbon(%)** : 1.0 | **pH in Calc Chloride** : 4.7 | **Saturated Hydraulic Conductivity(cm/h)** : 9.187 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 31-53 | **Horizon** : BCgj | **Layer No** : 3 | **Very Fine Sand(%)** : 1 | **Total Sand(%)** : 97 | **Total Silt(%)** : 2 | **Total Clay(%)** : 1 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 4.6 | **Saturated Hydraulic Conductivity(cm/h)** : 8.134 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 53-100 | **Horizon** : Cgj | **Layer No** : 4 | **Very Fine Sand(%)** : 1 | **Total Sand(%)** : 98 | **Total Silt(%)** : 1 | **Total Clay(%)** : 1 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 4.8 | **Saturated Hydraulic Conductivity(cm/h)** : 7.845 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072333
Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONSSM~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Very severe limitations preclude annual cultivation; improvements feasible. | **First CLI Limitation Subclass** : Low inherent soil Fertility | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-21 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 29 | **Total Sand(%)** : 75 | **Total Silt(%)** : 16 | **Total Clay(%)** : 9 | **Organic Carbon(%)** : 2.7 | **pH in Calc Chloride** : 5.1 | **Saturated Hydraulic Conductivity(cm/h)** : 4.347 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 21-39 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 27 | **Total Sand(%)** : 91 | **Total Silt(%)** : 7 | **Total Clay(%)** : 2 | **Organic Carbon(%)** : 0.7 | **pH in Calc Chloride** : 5.0 | **Saturated Hydraulic Conductivity(cm/h)** : 7.051 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 39-52 | **Horizon** : Bg | **Layer No** : 3 | **Very Fine Sand(%)** : 20 | **Total Sand(%)** : 97 | **Total Silt(%)** : 2 | **Total Clay(%)** : 1 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 5.2 | **Saturated Hydraulic Conductivity(cm/h)** : 8.134 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 52-69 | **Horizon** : Cg | **Layer No** : 4 | **Very Fine Sand(%)** : 26 | **Total Sand(%)** : 93 | **Total Silt(%)** : 4 | **Total Clay(%)** : 3 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 5.2 | **Saturated Hydraulic Conductivity(cm/h)** : 6.155 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 69-100 | **Horizon** : Cg | **Layer No** : 5 | **Very Fine Sand(%)** : 31 | **Total Sand(%)** : 96 | **Total Silt(%)** : 3 | **Total Clay(%)** : 1 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 4.7 | **Saturated Hydraulic Conductivity(cm/h)** : 7.836 | **Electrical Conductivity(dS/m)** : 0 |

Soils Report

Soil Map Units Found within 2000 m of
3850 Cambrian Road

Soil ID: OND401072332
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONOKA~~~~~A | **Surface Stoniness Class** : Slightly stony | **Slop Steepness(%)** : 7.0 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils that have a low runoff potential and high infiltration rate, as the soils typically are sands and gravel. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Severe limitations on use for crops. | **First CLI Limitation Subclass** : Low inherent soil Fertility | **Second CLI Limitation Subclass** : Low inherent Moisture holding capacity | **Depth(cm)** : 0-12 | **Horizon** : Apk | **Layer No** : 1 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 70 | **Total Silt(%)** : 22 | **Total Clay(%)** : 8 | **Organic Carbon(%)** : 4.0 | **pH in Calc Chloride** : 6.9 | **Saturated Hydraulic Conductivity(cm/h)** : 5.409 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 12-30 | **Horizon** : Bmk | **Layer No** : 2 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 71 | **Total Silt(%)** : 20 | **Total Clay(%)** : 9 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 3.079 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 30-100 | **Horizon** : Ck | **Layer No** : 3 | **Very Fine Sand(%)** : 3 | **Total Sand(%)** : 91 | **Total Silt(%)** : 6 | **Total Clay(%)** : 3 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 6.109 | **Electrical Conductivity(dS/m)** : 0 |

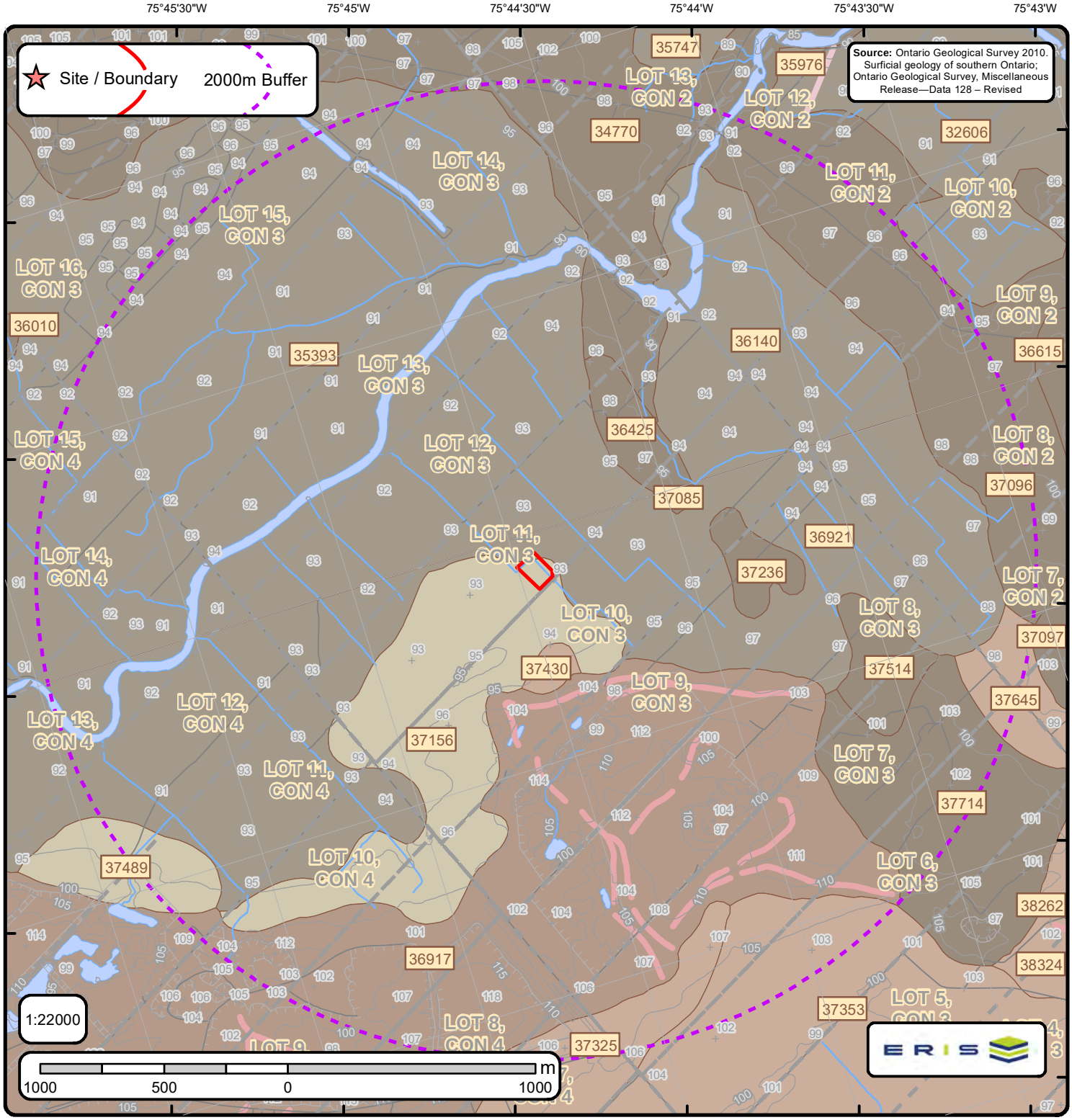
Soil ID: OND401072887
Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONCNB~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : silt loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-21 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 16 | **Total Sand(%)** : 25 | **Total Silt(%)** : 61 | **Total Clay(%)** : 14 | **Organic Carbon(%)** : 2.3 | **pH in Calc Chloride** : 7.0 | **Saturated Hydraulic Conductivity(cm/h)** : 0.687 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 21-50 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 12 | **Total Sand(%)** : 16 | **Total Silt(%)** : 74 | **Total Clay(%)** : 10 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.395 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 50-74 | **Horizon** : Bg | **Layer No** : 3 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 26 | **Total Silt(%)** : 67 | **Total Clay(%)** : 7 | **Organic Carbon(%)** : 1.6 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.047 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 74-100 | **Horizon** : Cg | **Layer No** : 4 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 10 | **Total Silt(%)** : 80 | **Total Clay(%)** : 10 | **Organic Carbon(%)** : 0.9 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.259 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072887
Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONNGW~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : silt loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-25 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 43 | **Total Silt(%)** : 41 | **Total Clay(%)** : 16 | **Organic Carbon(%)** : 3.9 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.375 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 25-37 | **Horizon** : Bgj | **Layer No** : 2 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 45 | **Total Silt(%)** : 40 | **Total Clay(%)** : 15 | **Organic Carbon(%)** : 3.3 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.752 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 37-100 | **Horizon** : Cg | **Layer No** : 3 | **Very Fine Sand(%)** : 5 | **Total Sand(%)** : 20 | **Total Silt(%)** : 63 | **Total Clay(%)** : 17 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 0.29 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072316
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONZUN~~~~~N | **Surface Stoniness Class** : Not Applicable | **Slop Steepness(%)** : None | **Slop Length(m)** : -9 | **Drainage** : Not Applicable | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Soil Name** : UNCLASSIFIED | **Water Table Charateristics** : Unspecified period | **Soil Drainage Class** : Not applicable | **Kind of Surface Material** : Unclassified | **Layer that Restricts Root Growth** : No root restricting layer | **Type of Root Restricting Layer** : n/a | **Parent Material 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Mode of Deposition 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Parent Material Chemical Property 1|2|3** : Not Applicable; Not Applicable; Not Applicable |

Soil ID: OND401072319
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONZUN~~~~~N | **Surface Stoniness Class** : Not Applicable | **Slop Steepness(%)** : None | **Slop Length(m)** : -9 | **Drainage** : Not Applicable | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Soil Name** : UNCLASSIFIED | **Water Table Charateristics** : Unspecified period | **Soil Drainage Class** : Not applicable | **Kind of Surface Material** : Unclassified | **Layer that Restricts Root Growth** : No root restricting layer | **Type of Root Restricting Layer** : n/a | **Parent Material 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Mode of Deposition 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Parent Material Chemical Property 1|2|3** : Not Applicable; Not Applicable; Not Applicable |

Soil ID: OND401072824
Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONBDO~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-12 | **Horizon** : Apg | **Layer No** : 1 | **Very Fine Sand(%)** : 11 | **Total Sand(%)** : 14 | **Total Silt(%)** : 52 | **Total Clay(%)** : 34 | **Organic Carbon(%)** : 2.1 | **pH in Calc Chloride** : 5.7 | **Saturated Hydraulic Conductivity(cm/h)** : 0.223 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 12-38 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 7 | **Total Sand(%)** : 11 | **Total Silt(%)** : 46 | **Total Clay(%)** : 43 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.211 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 38-70 | **Horizon** : Bg | **Layer No** : 3 | **Very Fine Sand(%)** : 7 | **Total Sand(%)** : 11 | **Total Silt(%)** : 47 | **Total Clay(%)** : 42 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 6.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.211 | **Electrical Conductivity(dS/m)** : 0] | **Depth(cm)** : 70-105 | **Horizon** : Cg | **Layer No** : 4 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 8 | **Total Silt(%)** : 45 | **Total Clay(%)** : 47 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.197 | **Electrical Conductivity(dS/m)** : 0 |



The Surficial Geology of Southern Ontario

Order No. 22102400251

Spot Height	Streams	Dune	Beach	Esker	karst	pitsg		
Waterbody	Contour Lines	Lake	Bluff	Esker ND	linfeat	popup		
Wetlands	Roads	Rib	Crevasse	Fluvial DL	megarip	ribl		
Airports	Railroads	Scab	Crest	fluvndl	mfluvdl	slidel		
Pit or Quarry	Morains	Slide	End	iceberg	mfluvndl	slumpb		
Lots		NOF Dune	Escarpment	icslope	moraine	terrace		

Surface Geology Report

Surface Geology units found within 2000 m of
3850 Cambrian Road

Order No.
22102400251

ID: 32606 | **Unit Name:** Offshore marine deposits |
Deposit Type Code: 3 | **Deposit Age:** Quaternary (Champlain Sea) | **Map Number:** of3103 | **Map Name:** Ottawa | **Source Map Scale:** 1:50 000 | **Primary Material:** clay, silt | **Primary Material Modifier:** | **Secondary Material:** sand | **Primary General:** glaciomarine | **Primary General Modifier:** foreshore/basinal | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** Low | **Material Description:** Clay, silty clay and silt, commonly calcareous and fossiliferous; locally overlain by thin sands. Upper parts are generally mottled or laminated reddish brown and bluish grey and may contain lenses and pockets of sand, but at depth the clay is uniform a

ID: 34770 | **Unit Name:** Till |
Deposit Type Code: 1a | **Deposit Age:** Quaternary | **Map Number:** of3103 | **Map Name:** Ottawa | **Source Map Scale:** 1:50 000 | **Primary Material:** diamicton | **Primary Material Modifier:** sandy silt to silty sand | **Secondary Material:** | **Primary General:** glacial | **Primary General Modifier:** | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** N-NE | **Carbon Content:** | **Formation:** Undifferentiated silty-sandy till on Paleozoic terrain | **Permeability:** Low-Medium | **Material Description:** Sandy and silty compact diamicton, grey at depth but brown where oxidized; calcareous where derived from sedimentary rocks and not leached; consists dominantly of lodgment till. In areas that lie below marine limit (198 m a.s.l.) it is overlain by a disc

ID: 35393 | **Unit Name:** Offshore marine deposits |
Deposit Type Code: 3 | **Deposit Age:** Quaternary (Champlain Sea) | **Map Number:** of3103 | **Map Name:** Ottawa | **Source Map Scale:** 1:50 000 | **Primary Material:** clay, silt | **Primary Material Modifier:** | **Secondary Material:** sand | **Primary General:** glaciomarine | **Primary General Modifier:** foreshore/basinal | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** Low | **Material Description:** Clay, silty clay and silt, commonly calcareous and fossiliferous; locally overlain by thin sands. Upper parts are generally mottled or laminated reddish brown and bluish grey and may contain lenses and pockets of sand, but at depth the clay is uniform a

ID: 36140 | **Unit Name:** Offshore marine deposits |
Deposit Type Code: 3 | **Deposit Age:** Quaternary (Champlain Sea) | **Map Number:** of3103 | **Map Name:** Ottawa | **Source Map Scale:** 1:50 000 | **Primary Material:** clay, silt | **Primary Material Modifier:** | **Secondary Material:** sand | **Primary General:** glaciomarine | **Primary General Modifier:** foreshore/basinal | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** Low | **Material Description:** Clay, silty clay and silt, commonly calcareous and fossiliferous; locally overlain by thin sands. Upper parts are generally mottled or laminated reddish brown and bluish grey and may contain lenses and pockets of sand, but at depth the clay is uniform a

ID: 36425 | **Unit Name:** Till |
Deposit Type Code: 1b | **Deposit Age:** Quaternary | **Map Number:** of3103 | **Map Name:** Ottawa | **Source Map Scale:** 1:50 000 | **Primary Material:** diamicton | **Primary Material Modifier:** sandy silt to silty sand | **Secondary Material:** | **Primary General:** glacial | **Primary General Modifier:** | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** N-NE | **Carbon Content:** | **Formation:** Undifferentiated silty-sandy till on Paleozoic terrain | **Permeability:** Low-Medium | **Material Description:** Sandy and silty compact diamicton, grey at depth but brown where oxidized; calcareous where derived from sedimentary rocks and not leached; consists dominantly of lodgment till. In areas that lie below marine limit (approx. 198 m (650 ft) a.s.l.) it is

ID: 36917 | **Unit Name:** Glaciofluvial deposits |
Deposit Type Code: 2 | **Deposit Age:** Quaternary | **Map Number:** of3102 | **Map Name:** Kemptville | **Source Map Scale:** 1:50 000 | **Primary Material:** sand, gravel | **Primary Material Modifier:** | **Secondary Material:** diamicton | **Primary General:** glaciofluvial | **Primary General Modifier:** | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** High | **Material Description:** Glaciofluvial deposits: Gravel and sand, poorly to well sorted and bedded, mainly coarse-to medium-grained with numerous cobbles, boulders and lenses of till

ID: 36921 | **Unit Name:** Offshore marine deposits |
Deposit Type Code: 3 | **Deposit Age:** Quaternary (Champlain Sea) | **Map Number:** of3102 | **Map Name:** Kemptville | **Source Map Scale:** 1:50 000 | **Primary Material:** clay, silt | **Primary Material Modifier:** | **Secondary Material:** sand | **Primary General:** glaciomarine | **Primary General Modifier:** foreshore/basinal | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** Low | **Material Description:** Clay, silty clay and silt, commonly calcareous and fossiliferous; locally overlain by thin sands. Upper parts are generally mottled or laminated reddish brown and bluish grey and may contain lenses and pockets of sand, but at depth the clay is uniform a

ID: 37085 | **Unit Name:** Till |
Deposit Type Code: 1b | **Deposit Age:** Quaternary | **Map Number:** of3102 | **Map Name:** Kemptville | **Source Map Scale:** 1:50 000 | **Primary Material:** diamicton | **Primary Material Modifier:** sandy silt to silty sand | **Secondary Material:** | **Primary General:** glacial | **Primary General Modifier:** | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** N-NE | **Carbon Content:** | **Formation:** Undifferentiated silty-sandy till on Paleozoic terrain | **Permeability:** Low-Medium | **Material Description:** Sandy and silty compact diamicton, grey at depth but brown where oxidized; calcareous where derived from sedimentary rocks and not leached; consists dominantly of lodgment till. In areas that lie below marine limit (198 m a.s.l.) it is overlain by a disc

ID: 37096 | **Unit Name:** Till |
Deposit Type Code: 1a | **Deposit Age:** Quaternary | **Map Number:** of3102 | **Map Name:** Kemptville | **Source Map Scale:** 1:50 000 | **Primary Material:** diamicton | **Primary Material Modifier:** sandy silt to silty sand | **Secondary Material:** | **Primary General:** glacial | **Primary General Modifier:** | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** N-NE | **Carbon Content:** | **Formation:** Undifferentiated silty-sandy till on Paleozoic terrain | **Permeability:** Low-Medium | **Material Description:** Sandy and silty compact diamicton, grey at depth but brown where oxidized; calcareous where derived from sedimentary rocks and not leached; consists dominantly of lodgment till. In areas that lie below marine limit (198 m a.s.l.) it is overlain by a disc

ID: 37156 | **Unit Name:** Organic deposits |
Deposit Type Code: 7 | **Deposit Age:** Recent | **Map Number:** of3102 | **Map Name:** Kemptville | **Source Map Scale:** 1:50 000 | **Primary Material:** organic deposits | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** wetland | **Primary General Modifier:** | **Veneer:** | **Episode:** Hudson | **Sub Episode:** | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** High | **Material Description:** Mainly muck and peat in bogs, fens, swamps and poorly drained areas.

ID: 37236 | **Unit Name:** Till |
Deposit Type Code: 1a | **Deposit Age:** Quaternary | **Map Number:** of3102 | **Map Name:** Kemptville | **Source Map Scale:** 1:50 000 | **Primary Material:** diamicton | **Primary Material Modifier:** sandy silt to silty sand | **Secondary Material:** | **Primary General:** glacial | **Primary General Modifier:** | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** N-NE | **Carbon Content:** | **Formation:** Undifferentiated silty-sandy till on Paleozoic terrain | **Permeability:** Low-Medium | **Material Description:** Sandy and silty compact diamicton, grey at depth but brown where oxidized; calcareous where derived from sedimentary rocks and not leached; consists dominantly of lodgment till. In areas that lie below marine limit (198 m a.s.l.) it is overlain by a disc

ID: 37325 | **Unit Name:** Nearshore sediments |
Deposit Type Code: 5a | **Deposit Age:** Quaternary (Champlain Sea) | **Map Number:** of3102 | **Map Name:** Kemptville | **Source Map Scale:** 1:50 000 | **Primary Material:** sand, gravel | **Primary Material Modifier:** bouldery | **Secondary Material:** | **Primary General:** glaciomarine | **Primary General Modifier:** littoral/foreshore | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** High | **Material Description:** Gravel, sand and boulders; beaches commonly fossiliferous; nature of sediment controlled by underlying material (gravel, sand and boulders where developed from till and glaciofluvial deposits; slabs and shingles where developed from sedimentary bedrock).

ID: 37353 | **Unit Name:** Nearshore sediments |
Deposit Type Code: 5b | **Deposit Age:** Quaternary (Champlain Sea) | **Map Number:** of3102 | **Map Name:** Kemptville | **Source Map Scale:** 1:50 000 | **Primary Material:** sand | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** glaciomarine | **Primary General Modifier:** foreshore/basinal | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** High | **Material Description:** Fine-to medium-grained sand, calcareous and commonly fossiliferous; nearshore sand generally occurs as a sheet or as bars or spits associated with glaciofluvial materials.

ID: 37430 | **Unit Name:** Nearshore sediments |
Deposit Type Code: 5b | **Deposit Age:** Quaternary (Champlain Sea) | **Map Number:** of3102 | **Map Name:** Kemptville | **Source Map Scale:** 1:50 000 | **Primary Material:** sand | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** glaciomarine | **Primary General Modifier:** foreshore/basinal | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** High | **Material Description:** Fine-to medium-grained sand, calcareous and commonly fossiliferous; nearshore sand generally occurs as a sheet or as bars or spits associated with glaciofluvial materials.

ID: 37489 | **Unit Name:** Organic deposits |
Deposit Type Code: 7 | **Deposit Age:** Recent | **Map Number:** of3102 | **Map Name:** Kemptville | **Source Map Scale:** 1:50 000 | **Primary Material:** organic deposits | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** wetland | **Primary General Modifier:** | **Veneer:** | **Episode:** Hudson | **Sub Episode:** | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** High | **Material Description:** Mainly muck and peat in bogs, fens, swamps and poorly drained areas.

ID: 37514 | **Unit Name:** Till |
Deposit Type Code: 1a | **Deposit Age:** Quaternary | **Map Number:** of3102 | **Map Name:** Kemptville | **Source Map Scale:** 1:50 000 | **Primary Material:** diamicton | **Primary Material Modifier:** sandy silt to silty sand | **Secondary Material:** | **Primary General:** glacial | **Primary General Modifier:** | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** N-NE | **Carbon Content:** | **Formation:** Undifferentiated silty-sandy till on Paleozoic terrain | **Permeability:** Low-Medium | **Material Description:** Sandy and silty compact diamicton, grey at depth but brown where oxidized; calcareous where derived from sedimentary rocks and not leached; consists dominantly of lodgment till. In areas that lie below marine limit (198 m a.s.l.) it is overlain by a disc

ID: 37645 | **Unit Name:** Nearshore sediments |
Deposit Type Code: 5b | **Deposit Age:** Quaternary (Champlain Sea) | **Map Number:** of3102 | **Map Name:** Kemptville | **Source Map Scale:** 1:50 000 | **Primary Material:** sand | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** glaciomarine | **Primary General Modifier:** foreshore/basinal | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** High | **Material Description:** Fine-to medium-grained sand, calcareous and commonly fossiliferous; nearshore sand generally occurs as a sheet or as bars or spits associated with glaciofluvial materials.

ID: 37714 | **Unit Name:** Till |
Deposit Type Code: 1c | **Deposit Age:** Quaternary | **Map Number:** of3102 | **Map Name:** Kemptville | **Source Map Scale:** 1:50 000 | **Primary Material:** diamicton | **Primary Material Modifier:** sandy silt to silty sand | **Secondary Material:** | **Primary General:** glacial | **Primary General Modifier:** | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** N-NE | **Carbon Content:** | **Formation:** Undifferentiated silty-sandy till on Paleozoic terrain | **Permeability:** Low-Medium | **Material Description:** Sandy and silty compact diamicton, grey at depth but brown where oxidized; calcareous where derived from sedimentary rocks and not leached; consists dominantly of lodgment till. In areas that lie below marine limit (approx. 198 m (650 ft) a.s.l.) it is

Surface Geology Report Metadata

Ontario Geological Survey 2010. Surficial geology of southern Ontario; Ontario Geological Survey, Miscellaneous Release - Data 128 - Revised.

ONTARIO MINISTRY OF NORTHERN DEVELOPMENT, MINES AND FORESTRY

ID - ID applied to the Unit

Unit Name - Name of deposit

Deposit Type Code - The geological unit number taken from the original map legend.

Deposit Age - to show the age when the sediments were deposited, e.g., Wisconsinan, postglacial or recent.

Map Number - Original map series number, eg., 'M2402' or 'P1973'. Each sgu_point feature is tagged to its original map.

Map Name - Usually NTS area where mapping was completed, e.g., 'Golden Lake'

Source Map Scale - The scale at which the original map was captured, e.g., '1:50 000'

Primary Material - This attribute provides the user with information regarding the most prevalent material present within a given area.

Primary Material Modifier- This attribute provides the user with a more refined description of the lithological classification of the primary material.

Secondary Material - This attribute provides the user with information regarding subordinate materials present within a given area.

Primary General - This attribute provides the user with an interpretation of the depositional environment within which the primary material was deposited.

Primary General Modifier - This attribute provides the user with a refined interpretation of the primary genetic modifier.

Veneer - This attribute provides the user with information regarding the type of material that forms a thin, discontinuous veneer over the primary material.

Sub Episode - A diachronic stratigraphic unit in a lower order than Episode and the proposed sequence-stratigraphic classification, consists in descending order of Michigan, Elgin and Ontario in the eastern and northern Great Lakes area in the Wisconsin Episode (Johnson et al. 1997; Karrow et al. 2000).

Sub Episode - A diachronic stratigraphic unit in a lower order than Episode and the proposed sequence-stratigraphic classification, consists in descending order of Michigan, Elgin and Ontario in the eastern and northern Great Lakes area in the Wisconsin Episode (Johnson et al. 1997; Karrow et al. 2000).

Phase - A diachronic stratigraphic unit in a lower order than Subepisode, and the proposed sequence-stratigraphic classification is listed in the following table in the eastern and northern Great Lakes area (Karrow et al. 2000)

Stratus Modifier - This attribute provides the user information regarding the stratigraphic position of the mapped unit (i.e., whether the unit occurs primarily on the surface or in the subsurface).

Provenance - This attribute provides the user with information regarding the provenance of a particular till unit (i.e. direction or lobe from which the till is derived).

Carbon Content - This attribute provides the user with information regarding the carbonate content of till.

Formation - This attribute provides the user with information regarding the formation to which a given primary material belongs (e.g., Tavistock Till, Port Stanley Till, Scarborough Formation). This attribute is seamless and allows the user to create a map based on formation.

Permeability - This attribute provides the user with basic information about permeability of the sediments in a ranking of high, medium and low.

Material Description - Material or sediment description, e.g., 'sand and silty fine sand', 'silty sand and gravel' and 'silty till with low stone content'.

Ministry of the Environment, Conservation and Parks

Access and Privacy Office

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

Ministère de l'Environnement, de la Protection de la nature et des Parcs

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

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

Ontario

January 20, 2023

Pierre D'Angelo
SLR Consulting (Canada) Ltd.
55 University Avenue
Toronto, Ontario M5J 2H7
pdangelo@slrconsulting.com

Dear Pierre D'Angelo:

RE: MECP FOI A-2022-07911, Your Reference - 209.013940.00001 – Decision Letter

This letter is further to your request made pursuant to the Freedom of Information and Protection of Privacy Act (the Act) relating to 3850 Cambrian Road (Lot 11, Concession 3), Ottawa.

After a thorough search through the files of the ministry's Ottawa District Office, Environmental Assessment and Permissions Division (EAPD), Environmental Monitoring and Reporting Branch (EMRB), Environmental Investigations and Enforcement Branch (EIEB) and Safe Drinking Water Branch (SDW), records were located in response to your request. The final decision has been made to provide partial access to the requested information and a copy of the releasable portion of the record is attached.

Some of the information has been severed or withheld under the following sections of the Act:

> s.17(1) Corporate information supplied to the ministry in confidence for the protection of third-party records that, if disclosed, would provide competitors with an unreasonable advantage.

You may request a review of my decision within 30 days from the date of this letter by contacting the Information and Privacy Commissioner/Ontario at http://www.ipc.on.ca. Please note there may be a fee associated with submitting the appeal.

If you have any questions, please contact Ann Harmsen at 1-613-483-2294 or Ann.Harmsen@Ontario.ca.

Yours truly,

Ann Harmsen
For
Ryan Gunn
Manager (A), Access and Privacy Office
Attachment

Ontario

Ministry of the Environment
Ministère de l'Environnement

Permit To Take Water Inspection Report

Client:	Mattamy (Half Moon Bay) Limited Mailing Address: 123 Huntmar Dr, Ottawa, Ontario, Canada, K2S 1B9 Physical Address: 123 Huntmar Dr, Ottawa, City, Ontario, Canada, K2S 1B9 Telephone: (613)831-4115, FAX: (613)831-9060 Client #: 9982-77GPCB, Client Type: Corporation		
Inspection Site Address:	Mattamy (Half Moon Bay) Phase 4 Address: Lot: 10, 11 & 12, Concession: 3, Geo. Twp. of Nepean, Ottawa, City District Office: Ottawa GeoReference: Map Datum: NAD83, Zone: 18, Accuracy Estimate: 10-30 metres eg. Medium Quality GPS, Method: GPS, UTM Easting: 440060, UTM Northing: 5010081, UTM Location Description: Phase 4 - Area 6,		
Contact Name:	Sean MacFarlane	**Title:**	Construction Manager
Contact Telephone:	(613) 831-3522 **ext**	**Contact Fax:**	(613) 831-9060
Last Inspection Date:	2009/11/23		
Inspection Start Date:	2011/10/27	**Inspection Finish Date:**	2011/10/27
Region:	Eastern		

1.0 INTRODUCTION

The purpose of the inspection at Mattamy's Half Moon Bay development site was to ensure compliance with issued Permit To Take Water Number 1413-8H9LLY (PTTW), Ontario Regulation 387/04, Ontario Water Resources Act and other applicable environmental legislation.

The inspection focused on permits to take water issued to Mattamy Half Moon Bay since the previous inspection on November 23, 2009.

2.0 INSPECTION OBSERVATIONS

Permit Number:

Permit to Take Water No. 1413-8H9LLY issued May 30, 2011 cancels and replaces Permit to Take Water No. 4563-7RMPHR.

Permit to Take Water No. 4563-7RMPHR issued June 5, 2009 cancels and replaces Permit to Take Water No. 8167-7K7RQV.

Permit to Take Water No. 8167-7K7RQV issued January 16, 2009.

Permit To Take Water No. 1413-8H9LLY expires on March 31, 2016.

2.1 PURPOSE OF TAKING

Dewatering
Additional Comments:

The purpose of water takings at the Mattamy Half Moon Bay development site is for temporary dewatering operations for the construction of a new subdivision. The dewatering operations was needed for the takings from surface water and groundwater at the Site.

2.2 SYSTEM DESCRIPTION

Surface water source: Yes

Ground water source: Yes

The Permit Holder shall only take water from the source, during the periods and at the rates and amounts of taking specified in Table A. Water takings are authorized only for the purposes specified in Table A.

Table A

	Source Name / Description:	Source: Type:	Taking Specific Purpose:	Taking Major Category:	Max. Taken per Minute (litres):	Max. Num. of Hrs Taken per Day:	Max. Taken per Day (litres):	Max. Num. of Days Taken per Year:	Zone/ Easting Northing
1	Area 1 - Phase 2 Service	Well Dug	Construction	Dewatering Construction	189	24	272,511	365	18 440680 501057
2	Area 2 - Phase 2 SWMP	Well Dug	Construction	Dewatering Construction	388	24	557,038	365	18 440748 501107
3	Area 3 - Phase 2 Surface Water	Pond Dugout	Construction	Dewatering Construction	6,618	24	9,529,920	365	18 440680 501057
4	Area 4 - HMB Phase 3	Well Dug	Construction	Dewatering Construction	1,290	24	1,857,112	365	18 441565 500985
5	Area 5 - Phase 3 Surface Water	Well Dug	Construction	Dewatering Construction	6,129	24	8,826,000	365	18 441565 500985
6	Area 6 - HMB Phase 4	Well Dug	Construction	Dewatering Construction	268	24	267,457	365	18 440060 501008
7	Area 7 - Phase 4	Well	Construction	Dewatering Construction	9,362	24	13,481,280	365	18 440060

Surface Water	Dug		501008

Total Taking: 34,791,319

2.3 QUANTITY ASSESSMENT

During the inspection process, water taking records were provided to the IO to determine compliance with reporting requirements, record keeping, and permitted daily and total water takings. The water taking records were reported to the MOE's Water Taking Reporting System (WTRS) and are outlined below:

Permit To Take Water No. 8167-7K7RQV:

Note: Water taking records below are reported under previously issued Permit To Take Water No. 8167-7K7RQV and not 4563-7RMPHR due to technical difficulties with the MOE's WTRS

September 2010		**Source:** Area 3 - Phase 2 Surface Water Runoff - PTTW # 4563-7RMPHR					
Date	**Units (L)**	**Date**	**Units (L)**	**Date**	**Units (L)**	**Date**	**Units (L)**
1	0	2	0	3	0	4	0
5	0	6	0	7	0	8	0
9	0	10	0	11	0	12	0
13	0	14	0	15	0	16	0
17	0	18	0	19	0	20	0
21	597,375	22	597,375	23	597,375	24	597,375
25	0	26	0	27	597,375	28	597,375
29	597,375	30	597,375	31	0	**Total:**	**4,779,000**

October 2010		**Source:** Area 3 - Phase 2 Surface Water Runoff - PTTW # 4563-7RMPHR					
Date	**Units (L)**	**Date**	**Units (L)**	**Date**	**Units (L)**	**Date**	**Units (L)**
1	597,375	2	0	3	0	4	464,625
5	398,250	6	265,500	7	835,875	8	111,375
9	0	10	0	11	0	12	297,000
13	0	14	0	15	0	16	0
17	0	18	0	19	0	20	0
21	0	22	0	23	0	24	0
25	0	26	0	27	0	28	0
29	0	30	0	31	0	**Total:**	**2,970,000**

November 2010		**Source:** Area 3 - Phase 2 Surface Water Runoff - PTTW # 4563-7RMPHR					
Date	**Units (L)**	**Date**	**Units (L)**	**Date**	**Units (L)**	**Date**	**Units (L)**
1	0	2	0	3	140,832	4	122,472
5	117,432	6	0	7	0	8	99,144
9	81,540	10	49,680	11	155,520	12	153,360
13	0	14	0	15	0	16	0
17	0	18	0	19	0	20	0
21	0	22	16,362	23	14,724	24	11,988
25	16,380	26	0	27	0	28	0
29	0	30	11,124			**Total:**	**990,558**

December 2010		Source: Area 3 - Phase 2 Surface Water Runoff - PTTW # 4563-7RMPHR					
Date	Units (L)	Date	Units (L)	Date	Units (L)	Date	Units (L)
1	0	2	335,268	3	0	4	0
5	0	6	185,760	7	89,640	8	727,200
9	53,640	10	54,360	11	0	12	0
13	112,680	14	214,560	15	34,200	16	0
17	0	18	0	19	0	20	0
21	0	22	0	23	0	24	0
25	0	26	0	27	0	28	0
29	0	30	0	31	0	**Total:**	**1,807,308**

Permit To Take Water No. 1413-8H9LLY:

June 2011		Source: Area 1 - Phase 2 - Service Excavations - HMB - PTTW # 1413-8HLLY					
Date	Units (L)	Date	Units (L)	Date	Units (L)	Date	Units (L)
1	0	2	0	3	0	4	0
5	0	6	0	7	0	8	0
9	0	10	0	11	0	12	0
13	0	14	0	15	17,640	16	0
17	0	18	0	19	0	20	0
21	0	22	31,968	23	36,288	24	44,064
25	0	26	0	27	0	28	0
29	0	30	0			**Total:**	**129,960**

September 2011		Source: Area 4 - Phase 3 - HMB - PTTW # 1413-8HLLY					
Date	Units (L)	Date	Units (L)	Date	Units (L)	Date	Units (L)
1	0	2	0	3	0	4	0
5	0	6	0	7	256,608	8	67,392
9	118,368	10	150,336	11	190,944	12	149,472
13	62,280	14	0	15	0	16	0
17	0	18	0	19	0	20	0
21	99,360	22	50,112	23	78,624	24	74,304
25	70,848	26	65,664	27	91,584	28	89,856
29	76,032	30	72,576			**Total:**	**1,764,360**

October 2011		Source: Area 4 - Phase 3 - HMB - PTTW # 1413-8HLLY					
Date	Units (L)	Date	Units (L)	Date	Units (L)	Date	Units (L)
1	83,808	2	80,352	3	348,192	4	394,848
5	239,328	6	230,688	7	228,960	8	211,680
9	191,808	10	117,504	11	308,448	12	253,152
13	197,856	14	215,136	15	231,552	16	221,184
17	240,192	18	274,752	19	279,072	20	243,648
21	184,896	22	194,400	23	270,432	24	235,008
25	284,256	26	365,472	27	0	28	0
29	0	30	0	31	0	**Total:**	**6,126,624**

The IO reviewed and compared the water records to the previously and current permit. All water takings are within the limits outlined in Table A of the permits. No exceedances were identified.

The IO was informed that water takings did not occur for the months not listed in the tables above.

2.4 ASSESSMENT OF OTHER PERMIT CONDITIONS

4. Monitoring

4.1 The Permit Holder shall maintain a record of all water takings. This record shall include the dates and times of water takings, and the total measured amounts of water pumped per day for each day that water is taken under the authorization of this Permit. A separate record shall be maintained for each source. The Permit Holder shall keep all required records up to date and available at or near the site of the taking and shall produce the records immediately for inspection by a Provincial Officer upon his or her request.

4.2 The total amounts of water pumped shall be measured using a calibrated flow meter and totalizer.

As stated in the previous inspection, a calibrated flow meter and totalizer was planned to be intalled as required by this permit. After completing a file review it is uncertain whether or not it was installed.
Please see Section 5.0 of this Report.

5.7 The Permit Holder shall sample Locations A, B, C, D, and E for water quality. During periods of continuous discharge, all the locations where discharge occurs are to be sampled every 4 days. During periods of intermittent discharge, all the locations where discharge occurs are to be sampled on the first day that discharge occurs, and every 4 days thereafter. For periods of either continuous or intermittent discharge, the initial water sample is to be anaylzed for the parameters listed in Table 2 of the City of Ottawa Sewer Use Bylaw 2003-514 (Item #1 of Schedule A of the Permit). Subsequent samples are to be analyzed for Total Suspended Solids (TSS) and Total Phosphorous (TP).

After the insepction the Inspecting Officer was in contact with Mattamy Half Moon Bay's consultant to obtain sample results for periods of discharge as a result of dewatering operations. On March 12, 2012 the Inspecting Officer received an email providing an attachment which outlines the sampling activities completed under the PTTW. After reviewing the information it appears the Site has not complied with all the requirements under the PTTW. **Please see Section 5.0 of this Report.**

2.5 ASSESSMENT OF REGULATION 387/04

The Water Taking and Transfer Regulation, O. Reg. 387/04 came into effect on January 1, 2005. It requires that permit holders track the volume of water they take daily and report these volumes to the Ministry the following year.

The permit holder must submit the records to the ministry on or before March 31 in every year.

3.0 REVIEW OF PREVIOUS NON-COMPLIANCE ISSUES

A previous inspection occurred at Mattamy Half Moon Bay on November 23, 2009. During the inspection the following non-compliance issue was identified:

"Company officials must use a calibrated flow meter and totalizer when measuring flows at the Site. The Ministry and Company officials will enter into a Voluntary Abatement Plan to address compliance with PTTW 4563-7RMPHR."

4.0 SUMMARY OF INSPECTION FINDINGS (HEALTH/ENVIRONMENTAL IMPACT)

Was there any indication of a known or anticipated human health impact during the inspection and/or review of relevant material, related to this Ministry's mandate ?
No

Specifics:

Was there any indication of a known or anticipated environmental impact during the inspection and/or review of relevant material ?
No

Specifics:

Was there any indication of a known or suspected violation of a legal requirement during the inspection and/or review of relevant material which could cause a human health impact or environmental impairment ?
Yes

Specifics:

1. Condition 4.2 states the requirements for Mattamy to measure total amounts of water pumped using a calibrated flow meter and totalizer. It is unclear whether the installation of a calibrate flow meter and totalizer was installed.

2. Condition 5.7 states the requirements for Mattamy to sample for the parameters outlined in the PTTW and supporting documentation during periods of continuous and intermittent discharges at the established monitoring stations.

Was there any indication of a potential for environmental impairment during the inspection and/or the review of relevant material ?
No

Specifics:

Was there any indication of minor administrative non-compliance?

No

Specifics:

5.0 ACTION(S) REQUIRED

Non-Compliance Issues:

1. It is unclear whether Mattamy has installed the calibrated flow meter and totalizer as required by Condition 4.2 of the PTTW and the previous insepction report dated November 23, 2009.

2. As per Condition 5.7 of the PTTW, sampling requirements were not completed as required during periods of continuous and intermittent discharges at the established monitoring stations.

1. Provide a written response, by no later than May 16, 2012 to the undersigned officer, regarding the non-compliance issues identified in this inspection report. The written response should address actions to be taken to obtain compliance with the issued permit to take water number 1413-8H9LLY.

6.0 OTHER INSPECTION FINDINGS

None at this time

7.0 INCIDENT REPORT

Applicable
0327-8SUTTB ☐

8.0 ATTACHMENTS

PREPARED BY:	
Environmental Officer:	
Name:	**Kyle Straberger**
District Office:	**Ottawa District Office**
Date:	**2012/03/29**
Signature	
REVIEWED BY:	
District Supervisor:	
Name:	**Tara MacDonald**
District Office:	**Ottawa District Office**
Date:	**2012/03/30**
Signature:	
File Storage Number:	SI OC NE C03 220
Note:	

"This inspection report does not in any way suggest that there is or has been compliance with applicable legislation and regulations as they may apply to this facility. It is, and remains, the responsibility of the owner and/or the operating authority to ensure compliance with all applicable legislative and regulatory requirements"

Mathany Phase 5A Pond →
CofA - MSP sewage
Sampling Program 8647-72PRCW

- implemented for a minimum of 2 yrs
- water quality, water levels, general performance
  ↳ base flow & rain event.
- sample inlet & outlet
- automated composite samples (24-48 hrs)
- outfitted with level gauge trigger
  - 2 small, 2 medium, 3 large
- 5 times event samples per season
- TSS, TP, temp (thermal - sampling equip)
- manual readings during sampling

TSS = PWQO - 10% increase
TP = 10, 20, 30 ug/L
Temp = 10°C difference

PHW # 1842-8HVHXC
- FM - C, D, F, G, (H) (City By-law)
- FM - A, B, E (5, 7, 35, 9)
- Discharge from A, B
  ↳ A, B, P_2, B_3 - samples using standard sampling practices
- continuous discharge - every 4 days
- intermittent - 1st day & every 4 days after
- TSS & Temp.
- P_1 25m upstream of FM-E
- P_2 25m upstream of bridge at Maplegrove
- P_3 10m downstream of Maple grove bridge
- P_1 background for FM-E
- P_2 background for FM-A & B as well as background

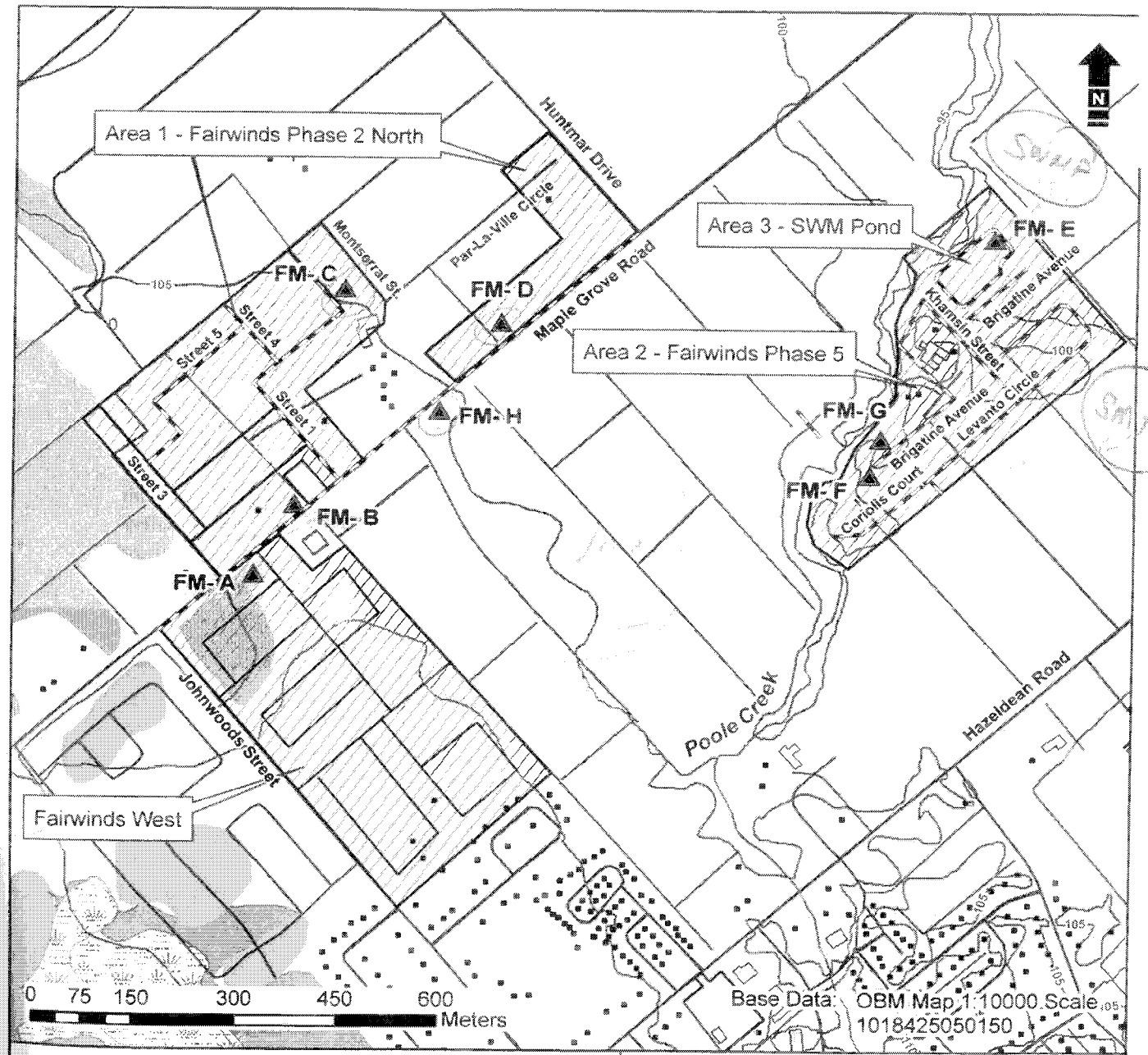
TSS = 25 mg/L not exceed 15 mg/L monthly ave
Temp - no change in receiving environment

Page 10

is not relevant

est non pertinente

Proposed Monitoring and Discharge Location Plan



Legend

- FM - Proposed Dewatering Discharge and Flow Meter Locations
- Area 4 - Surface Runoff, Fairwinds Subdivision Areas
- Area 1 - Fairwinds Phase 1, 2, 3 North Dewatering Alignments
- Area 2 - Fairwinds Phase 5 Dewatering Alignments
- Area 3 - Storm Water Management Pond

GEMS

Drawn By: MA
Checked By: JA
Date: May 16, 2008
Project Number: 08-105
Scale: As shown

DRAWING 4

SI OC NE C03 220

Ministry of the Environment
Ottawa District Office
2430 Don Reid Drive
Ottawa ON K1H 1E1

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Téléc. : (613) 521-5437

Ontario

March 29, 2010

Edelson Clifford D'Angelo, Barristers LLP
200 Elgin Street, Suite 600
Ottawa ON K2P 1L5

ATTENTION: Aaron R.W. Shull, Barrister

Dear Mr. Shull

RE: Voluntary Abatement Plan, Permit to Take Water 4563-7RMPHR, Mattamy (Half-Moon Bay) Ltd.

I am writing in response to your letter of March 26, 2010 that is marked "without prejudice".

The Ministry of the Environment is requesting that you kindly resubmit this letter and remove any references to it being "without prejudice" or any references to confidentiality.

The information was requested by the undersigned Provincial Officer in accordance with conditions in Permit to Take Water ("PTTW") 4563-7RMPHR. Information requested from your client is also in accordance with Section 15 of the *Ontario Water Resources Act*. If Mattamy (Half-Moon Bay) Ltd. is not willing to provide the information requested on this basis, I will consider utilizing a mandatory abatement approach such as issuing a Provincial Officer's Order, in accordance with the ministry's Compliance Policy.

Therefore, please resubmit this letter and let me know if you have any other questions.

Sincerely,

Tor Rustad
Senior Environmental Officer

TR:jdv

File Code: QSS 85/ SI OC NE C03 220

Page 13

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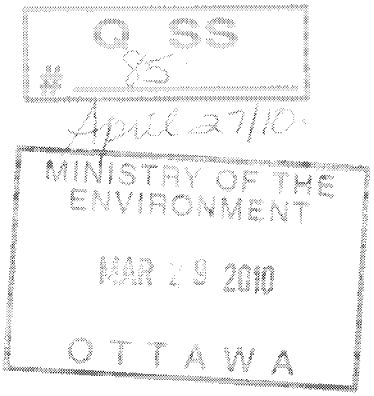
EDELSON CLIFFORD D'ANGELO

200 ELGIN STREET, SUITE 800, OTTAWA, ONTARIO K2P 1L5 TEL: (613) 237-2290 FAX (613) 237-0071 MAIL@EDELSONLAW.CA

WITHOUT PREJUDICE

March 26, 2010



VIA EMAIL
VIA COURIER

Tor Rustad
Senior Environmental Officer
Ministry of the Environment
2430 Don Reid Drive
Ottawa, ON K1H 1E1

Dear Mr. Rustad,

Re: Mattamy Half Moon Bay, Permit to Take Water No. 4563-7RMPHR
Voluntary Abatement Plan

Please be advised that we have been retained to represent Mattamy Homes (Half Moon Bay) Limited in connection with the above-noted matter. It is our understanding that in relation to Permit to Take Water 4563-7RMPHR (the "**Permit**") you have alleged that no calibrated flow meter or totalizer were used to record the volumes of water taken at the Half Moon Bay site. In this respect, by way of your February 24, 2010 correspondence addressed to Sean MacFarlane, Construction Manager, of Mattamy Homes, you indicated that the Ministry of the Environment (the "**MOE**") intended to enter into a voluntary abatement plan in order to remedy the alleged non-compliance. Consequently, you requested a response by Monday, March 29, 2010, with respect to Mattamy Homes (Half Moon Bay) Limited's intention to remedy the non-compliance as alleged by the MOE.

Mattamy Homes (Half Moon Bay) Limited is willing to enter into a voluntary abatement plan as suggested. Moreover, Mattamy Homes (Half Moon Bay) Limited looks forward to assisting MOE in any way possible with respect to this matter. However, please note that this document is provided on a confidential and without prejudice basis. It is subject to litigation privilege and is intended for the exclusive use of the addressee. Any other person is strictly prohibited from disclosing, distributing or reproducing it. It is not intended to be used for any further investigative purposes nor may it be introduced during any prosecution or litigation. This document is being provided solely for the purposes of resolving allegations already made by the MOE against Mattamy Homes. If the matter cannot be resolved on this basis, all of the provided material is to be returned to our office forthwith without any copies being made or otherwise disclosed.

MICHAEL D. EDELSON[†] B.A. (HONS.), LL.B
W. VINCENT CLIFFORD[†] B.SC. (HONS.), LL.B, LL.M.
AARON R.W. SHULL B.A. (HONS.), M.A., LL.B.

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[†]CERTIFIED BY THE LAW SOCIETY AS A SPECIALIST IN CRIMINAL LAW

[††]COUNSEL & PROFESSOR OF LAW
PROFESSIONAL CORPORATION

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1) Dates in 2010 by which company officials will install calibrated flow meters and totalizer(s) at the site.

Mattamy Homes is currently pursuing municipal and provincial approval to proceed with the next phases of development within the Half Moon Bay area. The impending 2010 development phases are situated within Phase 2 of the PTTW 4563-7RMPHR site location map. Installation of the initial underground servicing associated with these next development phases is dependent on the receipt of approval from the governing agencies, which is anticipated by June 2010.

Prior to commencement of site dewatering operations, Mattamy Homes, and their siteworks contractor(s), will acquire and implement an appropriate flow meter and totalizer system. Due to the nature of dewatering associated with underground servicing projects, it is our recommendation that portable flow meter and totalizer units are appropriate means to measure dewatering volumes and flow rates resulting from pumped surface or ground water during construction. A specific example of such a system is presented below.

2) The make, model and specifications for the flow meters and totalizer(s).

After consultation with local distributors, systems that are being considered for implementation in the Half Moon Bay area are similar to:

- Flow Sensor: SeaMetrics EX100/200 Series Insertion Flow Sensor
- Ratemeter/Totalizer: SeaMetrics FT400 Series Rate/Total Indicator

Product specifications have been attached for reference. I trust the foregoing is satisfactory, however if you have any questions or concerns please do not hesitate to contact the undersigned.

Yours truly,

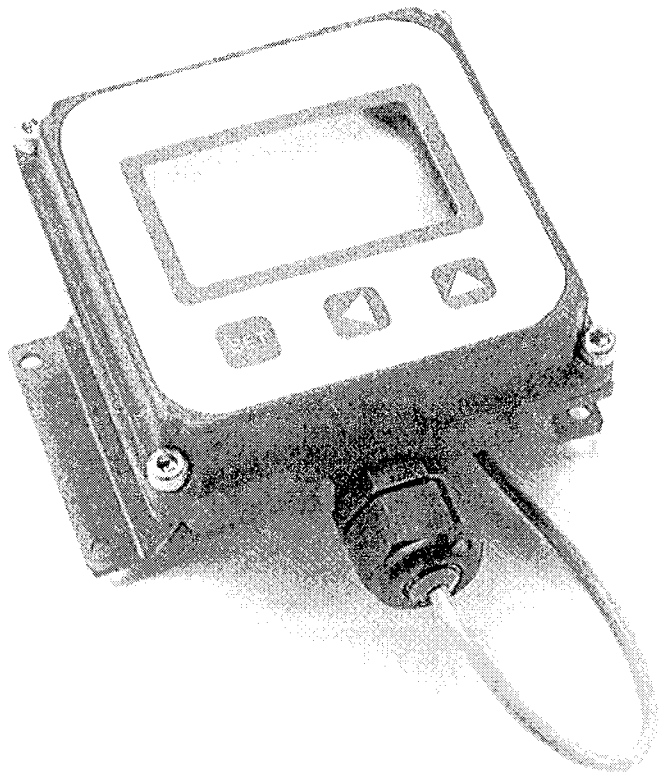
Aaron R.W. Shull

Encl.

SeaMetrics

FT400-SERIES
Rate/Total Indicator

ISO 9001:2000 CERTIFIED



FEATURES

- Simple Setup
- Battery (FT415) or Loop Powered (FT420)
- Remote or Flow Sensor Mounted Indicator
- Rugged Metallic Housing
- Non-volatile Memory

APPLICATIONS

- Water Treatment
- Water Utility
- Industrial Chemical Handling

GENERAL INFORMATION

The FT400-Series flow computers are microcontroller-based indicator/transmitters that display flow rate and total and provide output signals. The FT415 is battery-powered and provides a scalable pulse output. The FT420 is powered by external DC voltage and has both pulse and 4-20 mA analog outputs. The FT420 is a "two-wire" or "loop-powered" device, meaning that the 4-20 mA output signal doubles as its power supply.

The addition of a dual-relay output board FT420 only allows for certain applications requiring contact output isolation (e.g., certain metering pumps and water treatment controls). Dual solid state relays provide exactly the same pulse output as the standard unit, and each can signal one external device. A non-resettable total is also available. The FT420 can be ordered in a plastic enclosure with a 115 Vac power supply for use with mechanical meters, or with a built-in 115 Vac/12-24 Vdc dual power supply for magmeters.

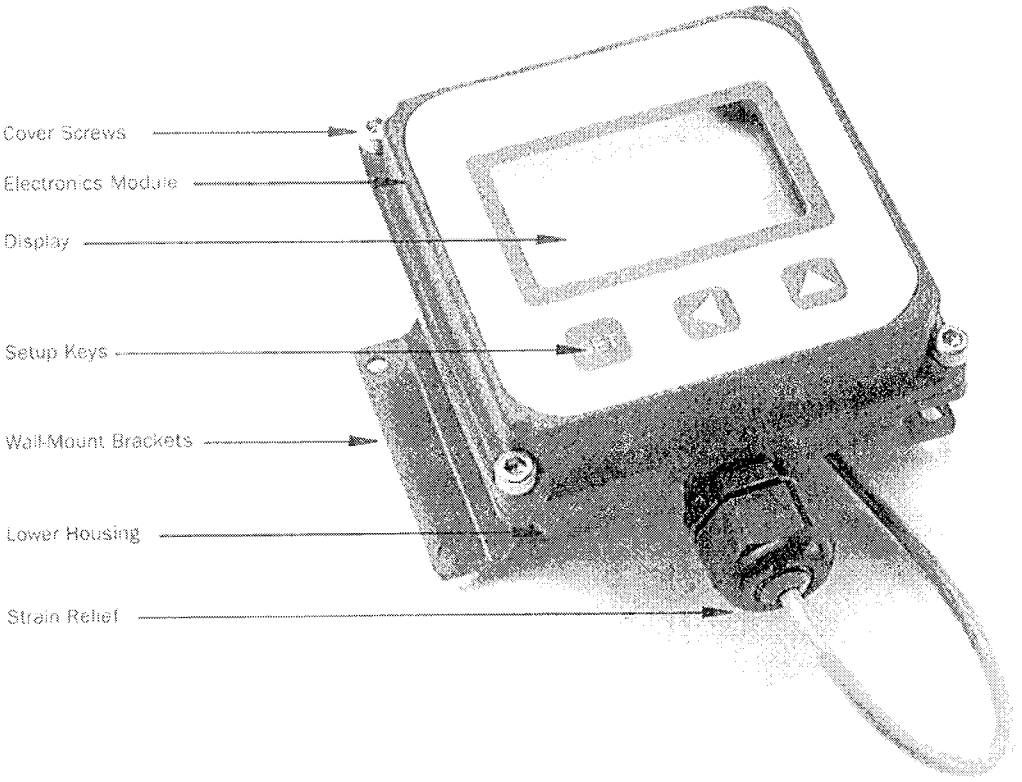
Both the FT415 and the FT420 can be factory-mounted on the meter (-M) or remotely wall mounted with the brackets provided (-W). The FT420 is also available as a panel mount (-P) with an open back for easy installation in the user's own electrical enclosure. Most FT400's can be converted from wall-to-meter or meter-to-wall mount configurations after installation if needed.

Housings for the -W and -M models are rugged cast aluminum, potted and gasketed for maximum environmental protection. A membrane keypad allows settings to be changed without removing the cover. (Password protection, a standard feature, can be used to prevent settings from being changed.)

SeaMetrics

FT400-SERIES
Rate/Total Indicator

FEATURES



SPECIFICATIONS*		FT415	FT420
Power		Lithium "C", 3.6 Vdc, replaceable, 3-5 year life	12-30 Vdc, 4mA (4-20 mA when loop-powered)
Display	Rate	6-digit autorange, 1/2" character height	6-digit autorange, 1/2" character height
	Total	8-digit, 5/16" character height	8-digit, 5/16" character height
Outputs	Current Sinking	Scaled Pulse output (0.1 sec duration 5.1 Hz max) or High Alarm output or Low Alarm output	
		Sensor pass-through Pulse output (unscaled)	
	Analog	None	4-20 mA loop; 24-30 Vdc
Pulse Output Range		0.1 - 9999999.9 units/pulse	0.1 - 9999999.9 units/pulse
Input		Micropower GMR Sensor (square wave)	5V pulse or contact closure
Input Range		1.0 - 150 pulses/second	1.0 - 1,500 pulses/second
K-Factor Range		.001 - 99999.999	.001 - 99999.999
Flow Alarm Output Range		.01 - 999999.99	.01 - 999999.99
Operating Temperature		-30° to 65° C (-22° to 148° F)	-30° to 65° C (-22° to 148° F)
Environmental		NEMA 4X, IP66	NEMA 4X, IP66
EMC		CE EN 61000	CE EN 61000

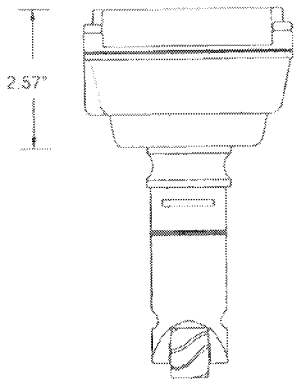
**Specifications subject to change • Please consult our website for current data (www.seametrics.com)*

SeaMetrics

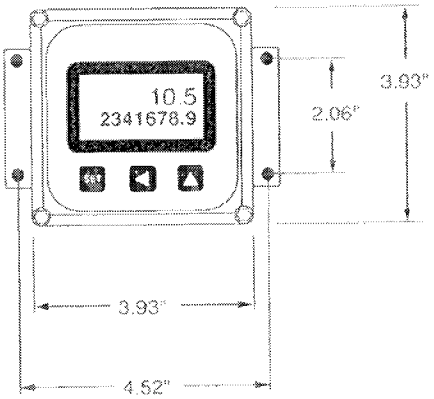
FT400-SERIES
Rate/Total Indicator

DIMENSIONS

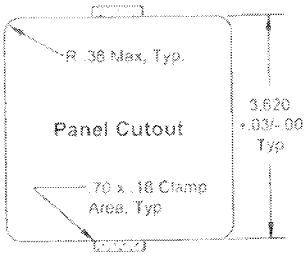
FT415/FT420
Sensor Mount

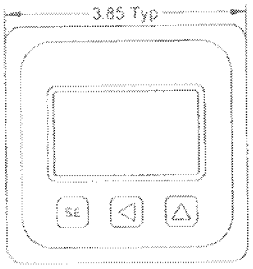


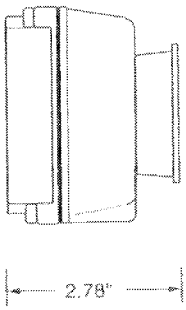
FT415/FT420
with Wall Mount Brackets

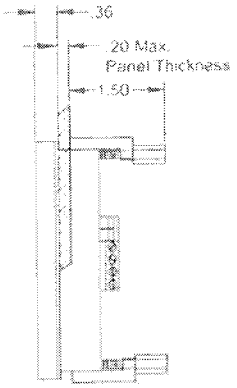


FT420
Panel
Mount

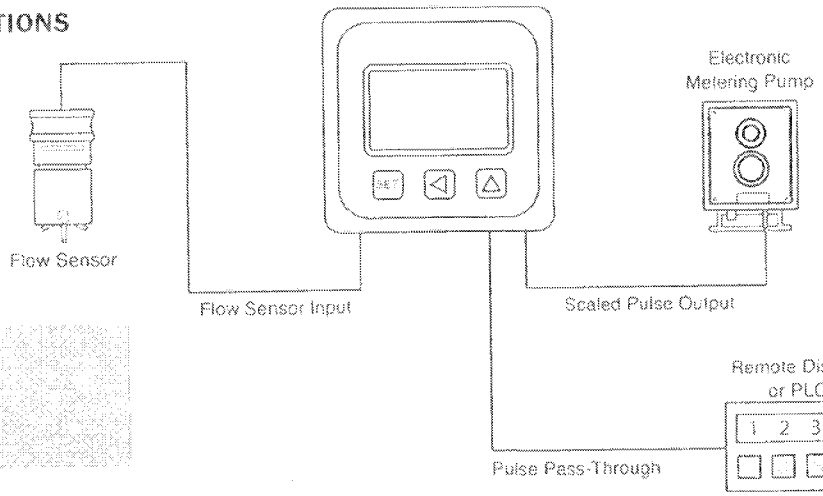








POSSIBLE APPLICATIONS



SeaMetrics

FT400-SERIES
Rate/Total Indicator

HOW TO ORDER

MODEL

Battery-powered indicator = FT415

Loop-powered indicator/transmitter = FT420

MOUNTING

Premounted on meter = M

Wall mount = W

Panel mount = P

OPTIONS

Built-in 115 Vac/12-24 Vdc dual power supply (FT420 only, use with magmeters) = -27

Tamper-evident = -32

Non-resettable total = -64

Built-in 115 Vac power supply (FT420 only, use with mechanical meters) = -65

Dual relay output (FT420 only) = -98

ACCESSORIES

Data logger (wall mount) = DL76W

Power converter, plug-in, 115 Vac, 24 Vdc = PC3

Dual power supply, plug-in, 115 Vac, 12/24 Vdc = PC42

Protective cover, hinged = 30785

Mounting kit, wall-to-meter conversion = MK10

Mounting kit, meter-to-wall conversion = MK20

LMI pump power cable = 07483

LMI pulse out cable = 12010

CONTACT YOUR SUPPLIER

SeaMetrics Incorporated • 19026 72nd Avenue South • Kent, Washington 98032 • USA
(P) 253.872.0284 • (F) 253.872.0285 • 1.800.975.8153 • www.seametrics.com

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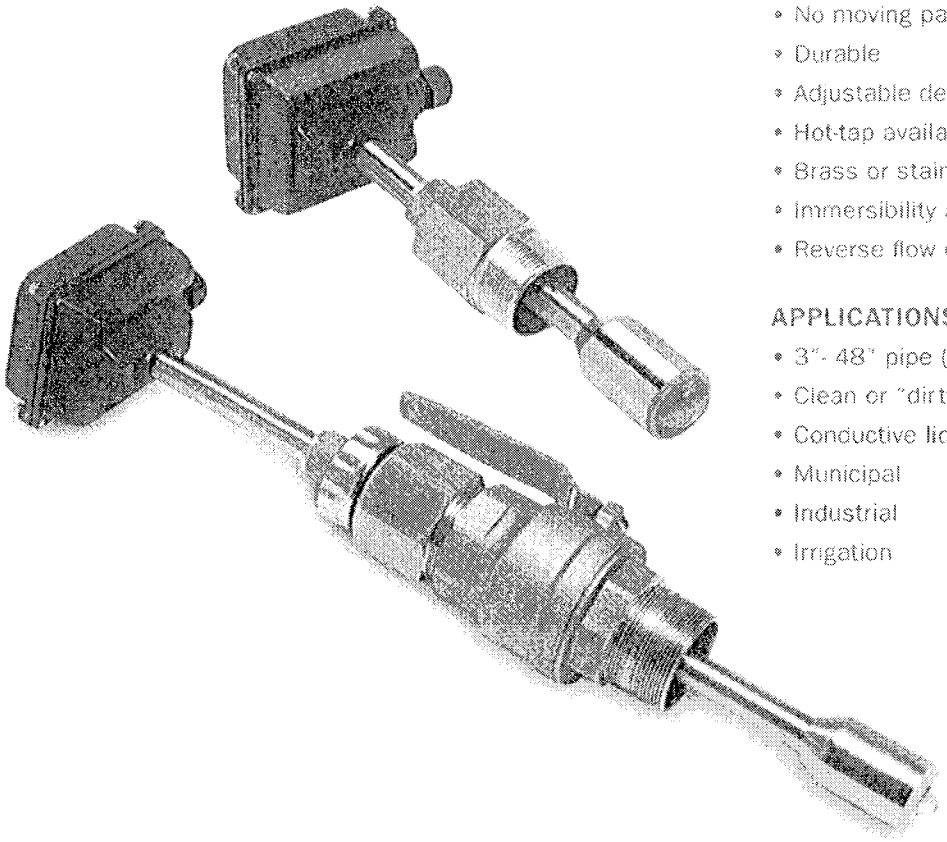
SeaMetrics

EX100/200-SERIES
Insertion Electromagnetic Flow Sensor

ISO 9001:2000 CERTIFIED



FEATURES

- No moving parts
- Durable
- Adjustable depth
- Hot-tap available
- Brass or stainless steel
- Immersibility available
- Reverse flow output available

APPLICATIONS

- 3"- 48" pipe (up to 72" optional)
- Clean or "dirty" liquids
- Conductive liquids
- Municipal
- Industrial
- Irrigation

GENERAL INFORMATION

The complete lack of moving parts of the **EX100/200-Series** insertion flow sensor is the source of its reliability. Brass and stainless steel models withstand a variety of temperature, pressure, and chemical conditions. The EX-Series has no rotor to stop turning in dirty water and there are no bearings to wear out. Like all magmeters, when used in chemical injection applications, these meters should be installed upstream of the chemical line (or far enough downstream to allow complete mixing of fluids before the meter).

A rapidly reversing magnetic field is produced in the lower housing. As the fluid moves through this field, a voltage is generated that is measured and translated into a frequency signal proportional to flow rate. This square wave signal can be sent directly to a PLC or other control or can be converted using any of the SeaMetrics family of indicators and converters.

A modular system of electronics can be attached directly to the flow sensor or remotely mounted. The SeaMetrics FT420 provides full indication of rate and total, plus 4-20 mA output. The AO55 provides blind 4-20 mA output. The FT520 is a batching flow processor, and the DL76 is a battery-powered data logger.

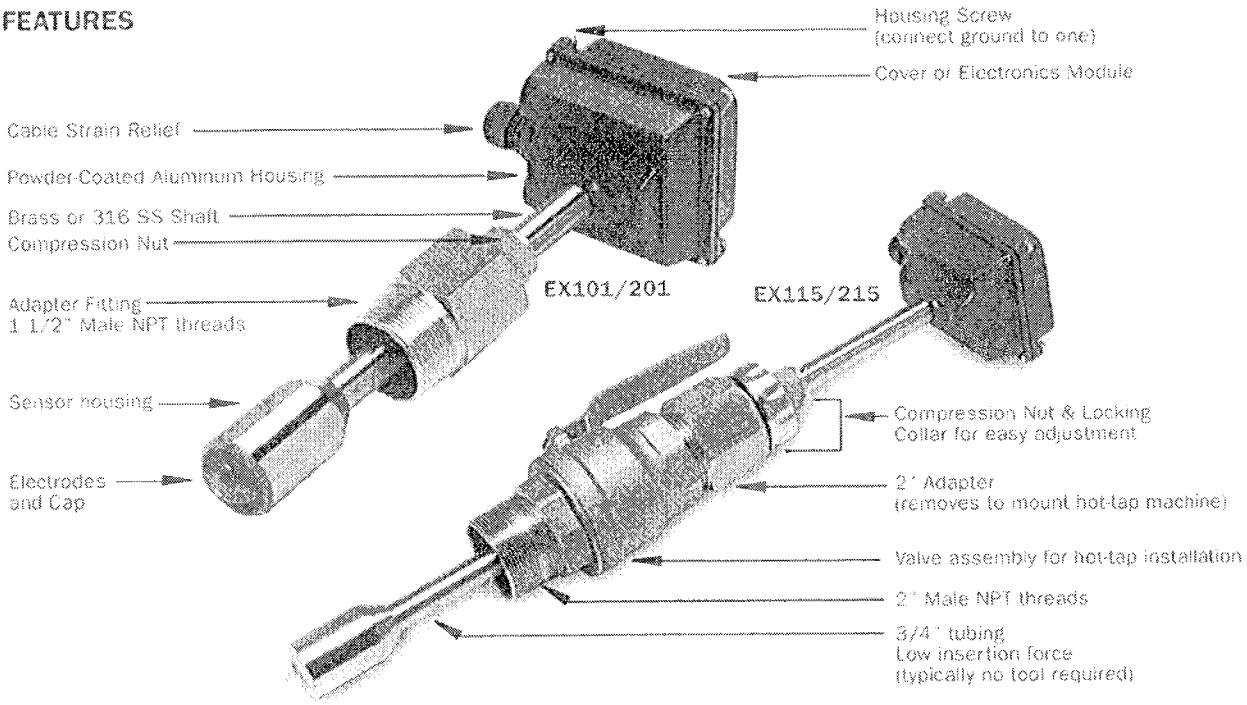
The adapter fitting of the EX sensor is standard male NPT, and can be directly threaded into ordinary saddles or threaded weld fittings. The EX115 and 215 include an isolation valve, allowing hot-tap installation, or installation and removal under pressure: a bronze ball valve is standard, with a 316 stainless steel valve option if needed.

Reverse flow output and immersibility are optional.

SeaMetrics

EX100/200-SERIES
Insertion Electromagnetic Flow Sensor

FEATURES



SPECIFICATIONS*

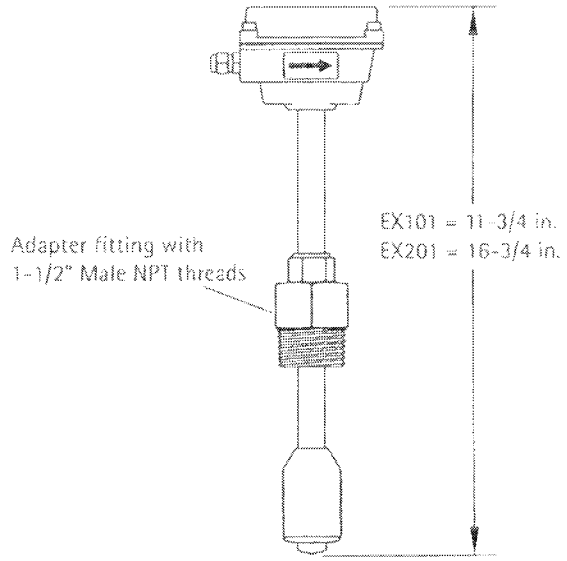
Pipe Sizes		3" to 48" (up to 72" optional)	
Materials	Shaft/Fitting	316 SS or Brass	
	Electrodes	Hastelloy	
	Electrode Cap	PVDF	
	Housing	Cast powder-coated aluminum	
	Valve Assembly (115/215 Only)	Bronze (stainless optional) with bronze ball valve	
	O-Ring (115/215 Only)	EPDM	
Power	Full Power	12-25 Vdc, 250 mA	
	Low Power	12-25 Vdc, 40 mA average with 250 mA peaks	
Flow Range		0.28 to 20 ft/sec (0.08 - 6.09 m/sec)	
Fitting Size		EX101/201	EX115/215
		1 1/2" Male NPT	2" Male NPT
Temperature	Ambient	0° to 160° F (-17° to 72° C)	
	Fluid	32° to 200° F (0° to 93° C)	
Pressure		200 psi (13.8 bar)	
Minimum Conductivity		20 microSiemens/cm	
Calibration Accuracy		+/- 1% of full scale	
Output		Square wave pulse, opto isolated, 550 Hz @ 20 ft/sec 6 mA max, 30 Vdc forward flow standard; reverse flow optional	
Empty Pipe Detection		Software, defaults to zero flow	
Regulatory		CE Mark	

*Specifications subject to change • Please consult our website for current data (www.seametrics.com).

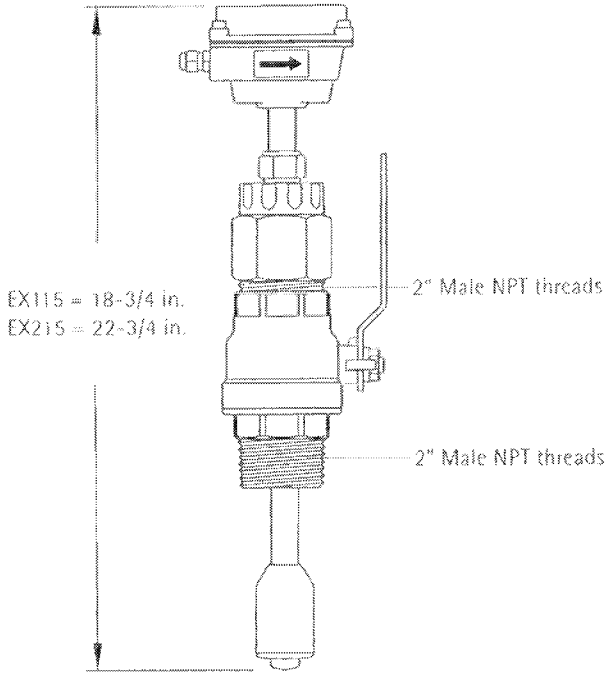
SeaMetrics

EX100/200-SERIES
Insertion Electromagnetic Flow Sensor

DIMENSIONS

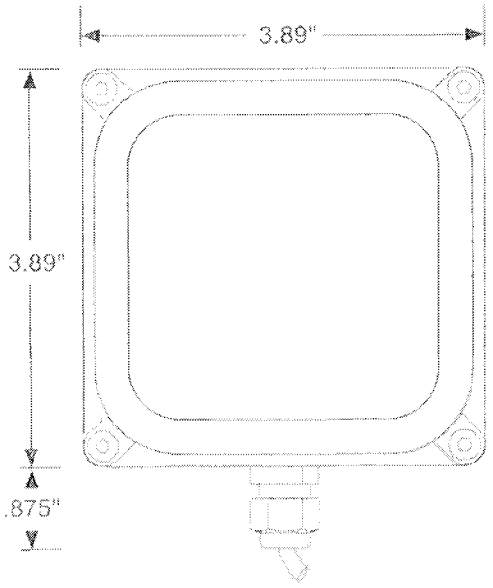


EX101 and EX201



EX115 and EX215

Flow Range (GPM)		
Nominal Pipe Size	Min. Flow	Max. Flow
3	6	440
4	11	783
6	25	1,762
8	44	3,133
10	69	4,895
12	99	7,050
14	134	9,596
16	175	12,533
18	222	15,863
20	274	19,584
24	395	28,200
30	617	44,084
36	885	63,452
48	1,580	112,804



SeaMetrics

EX100/200-SERIES
Insertion Electromagnetic Flow Sensor

HOW TO ORDER

MODEL

3" - 10" pipe size = **EX101**
10" - 48" pipe size = **EX201**
3" - 10" hot tap = **EX115**
10" - 48" hot tap = **EX215**

MATERIAL

Brass = **B**
316 stainless steel = **S**

OPTIONS

Adapter fitting, 2" threads (101/201 only) = **-02**
Stainless valve assembly (115/215 only) = **-08**
No valve assembly (115/215 only) = **-09**
Reverse flow output = **-15**
*Immersible = **-40**
Low power option = **-50**
12" extension (201 & 215 only) = **-72**

*Consult factory for suitable applications

ACCESSORIES

Rate & Total Indicator w/4-20 mA output = **FT420**
Blind 4-20 mA Transmitter = **AO55**
Pulse Divider = **PD10**
Batch Flow Processor = **FT520**
Data Logger = **DL76**
Saddle Fittings = **Consult Factory**
Dual Power Supply, 110-115 Vac, 24 Vdc = **PC42**

CONTACT YOUR SUPPLIER

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EDELSON CLIFFORD D'ANGELO

200 ELGIN STREET, SUITE 500, OTTAWA, ONTARIO K2P 1L5 TEL. (613) 237-2290 FAX (613) 237-0071 MAIL@EDELSONLAW.CA

March 31, 2010

VIA EMAIL
VIA COURIER

Tor Rustad
Senior Environmental Officer
Ministry of the Environment
2430 Don Reid Drive
Ottawa, ON K1H 1E1

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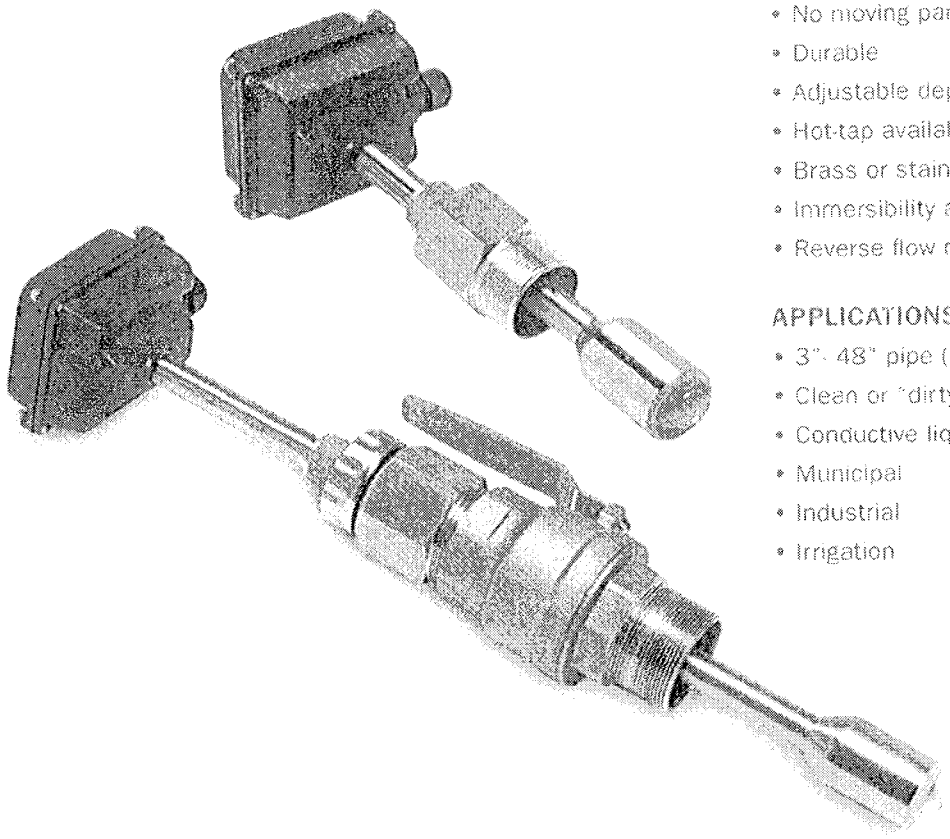
Insertion Electromagnetic Flow Sensor

ISO 9001:2000 CERTIFIED



FEATURES

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- Durable
- Adjustable depth
- Hot-tap available
- Brass or stainless steel
- Immersibility available
- Reverse flow output available

APPLICATIONS

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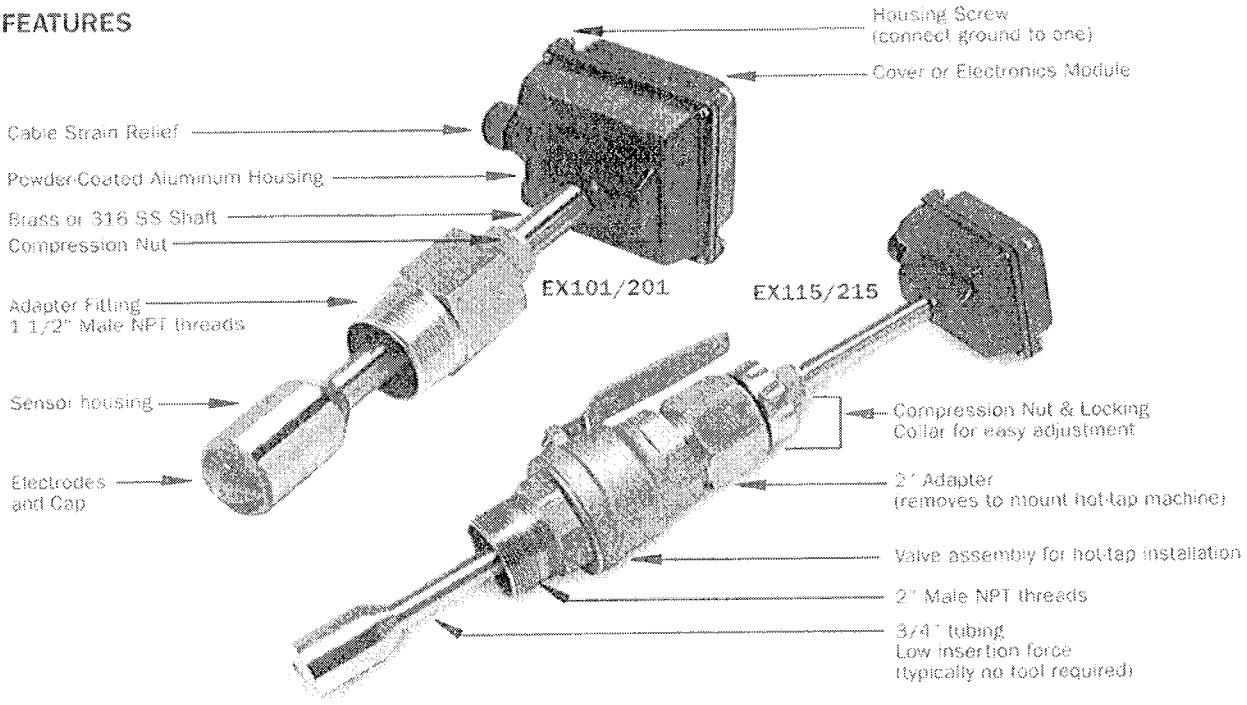
EX100/200-SERIES
Insertion Electromagnetic Flow Sensor

FEATURES



SPECIFICATIONS*

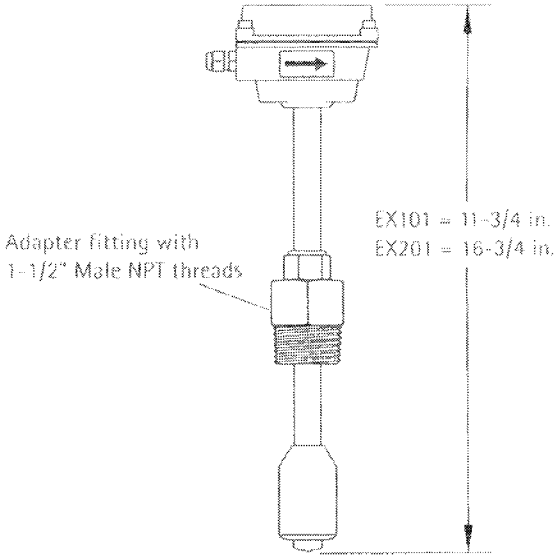
Pipe Sizes		3" to 48" (up to 72" optional)
Materials	Shaft/Fitting	316 SS or Brass
	Electrodes	Hastelloy
	Electrode Cap	PVDF
	Housing	Cast powder-coated aluminum
	Valve Assembly (115/215 Only)	Bronze (stainless optional) with bronze ball valve
	O-Ring (115/215 Only)	EPDM
Power	Full Power	12-25 Vdc, 250 mA
	Low Power	12-25 Vdc, 40 mA average with 250 mA peaks
Flow Range		0.28 to 20 ft/sec (0.08 - 6.09 m/sec)
Fitting Size		EX101/201: 1 1/2" Male NPT; EX115/215: 2" Male NPT
Temperature	Ambient	0° to 160° F (-17° to 72° C)
	Fluid	32° to 200° F (0° to 93° C)
Pressure		200 psi (13.8 bar)
Minimum Conductivity		20 microSiemens/cm
Calibration Accuracy		+/- 1% of full scale
Output		Square wave pulse, opto isolated, 550 Hz @ 20 ft/sec 6 mA max. 30 Vdc forward flow standard; reverse flow optional
Empty Pipe Detection		Software, defaults to zero flow
Regulatory		CE Mark

*Specifications subject to change • Please consult our website for current data (www.seametrics.com).

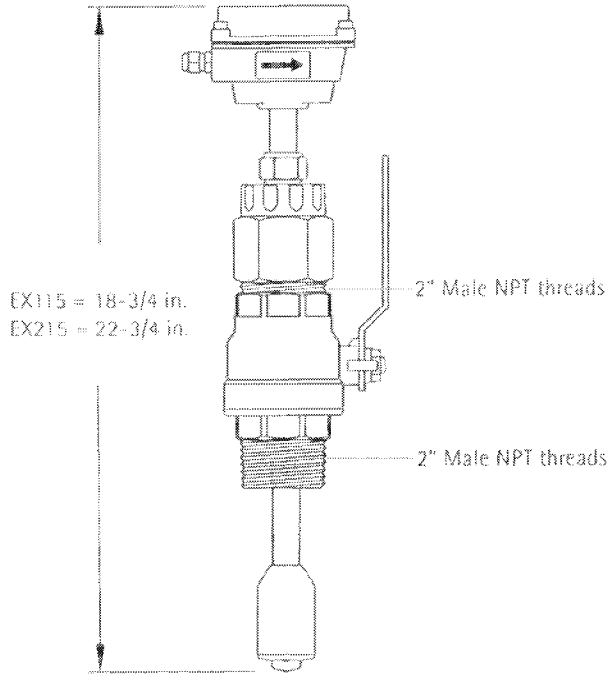
SeaMetrics

EX100/200-SERIES
Insertion Electromagnetic Flow Sensor

DIMENSIONS

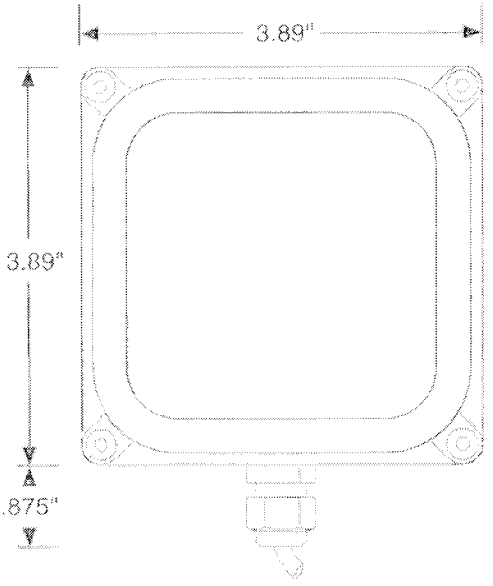


EX101 and EX201



EX115 and EX215

Flow Range (GPM)		
Nominal Pipe Size	Min. Flow	Max. Flow
3	6	440
4	11	783
6	25	1,762
8	44	3,133
10	69	4,895
12	99	7,050
14	134	9,596
16	175	12,533
18	222	15,863
20	274	19,584
24	395	28,200
30	617	44,064
36	888	63,452
48	1,580	112,804



SeaMetrics

EX100/200-SERIES
Insertion Electromagnetic Flow Sensor

HOW TO ORDER

MODEL

3" - 10" pipe size = **EX101**
10" - 48" pipe size = **EX201**
3" - 10" hot tap = **EX115**
10" - 48" hot tap = **EX215**

MATERIAL

Brass = **B**
316 stainless steel = **S**

OPTIONS

Adapter fitting, 2" threads (101/201 only) = **-02**
Stainless valve assembly (115/215 only) = **-08**
No valve assembly (115/215 only) = **-09**
Reverse flow output = **-15**
*Immersible = **-40**
Low power option = **-50**
12" extension (201 & 215 only) = **-72**

*Consult factory for suitable applications

ACCESSORIES

Rate & Total Indicator w/4-20 mA output = **FT420**
Blind 4-20 mA Transmitter = **AO55**
Pulse Divider = **PD10**
Batch Flow Processor = **FT520**
Data Logger = **DL76**
Saddle Fittings = **Consult Factory**
Dual Power Supply, 110-115 Vac, 24 Vdc = **PC42**

CONTACT YOUR SUPPLIER

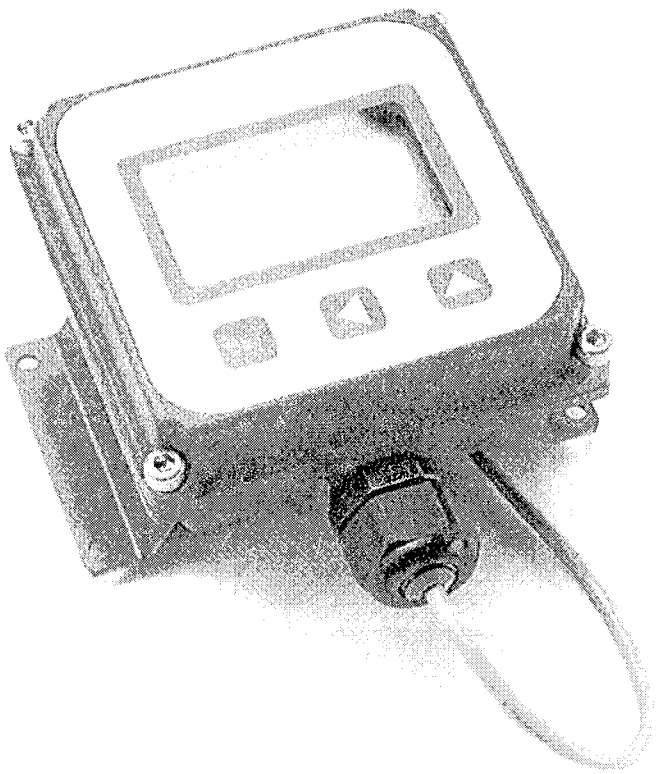
SeaMetrics Incorporated • 19026 72nd Avenue South • Kent, Washington 98032 • USA
(P) 253.872.0284 • (F) 253.872.0285 • 1.800.975.8153 • www.seametrics.com

LT-11757-E
3/23/09

SeaMetrics

FT400-SERIES
Rate/Total Indicator

ISO 9001:2000 CERTIFIED



FEATURES

- Simple Setup
- Battery (FT415) or Loop Powered (FT420)
- Remote or Flow Sensor Mounted Indicator
- Rugged Metallic Housing
- Non-volatile Memory

APPLICATIONS

- Water Treatment
- Water Utility
- Industrial Chemical Handling

GENERAL INFORMATION

The FT400-Series flow computers are microcontroller-based indicator/transmitters that display flow rate and total and provide output signals. The FT415 is battery-powered and provides a scalable pulse output. The FT420 is powered by external DC voltage and has both pulse and 4-20 mA analog outputs. The FT420 is a "two-wire" or "loop-powered" device, meaning that the 4-20 mA output signal doubles as its power supply.

The addition of a dual-relay output board FT420 only allows for certain applications requiring contact output isolation (e.g., certain metering pumps and water treatment controls). Dual solid state relays provide exactly the same pulse output as the standard unit, and each can signal one external device. A non-resettable total is also available. The FT420 can be ordered in a plastic enclosure with a 115 Vac power supply for use with mechanical meters, or with a built-in 115 Vac/12-24 Vdc dual power supply for magmeters.

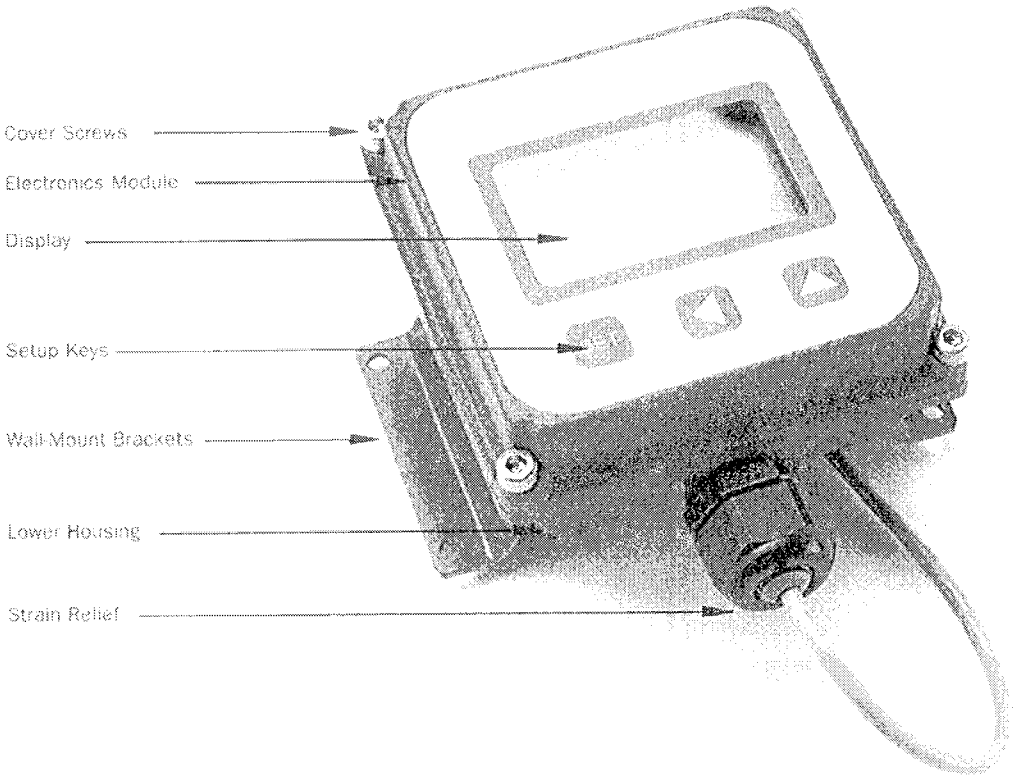
Both the FT415 and the FT420 can be factory-mounted on the meter (-M) or remotely wall mounted with the brackets provided (-W). The FT420 is also available as a panel mount (-P) with an open back for easy installation in the user's own electrical enclosure. Most FT400's can be converted from wall-to-meter or meter-to-wall mount configurations after installation if needed.

Housings for the -W and -M models are rugged cast aluminum, potted and gasketed for maximum environmental protection. A membrane keypad allows settings to be changed without removing the cover. (Password protection, a standard feature, can be used to prevent settings from being changed.)

SeaMetrics

FT400-SERIES
Rate/Total Indicator

FEATURES



SPECIFICATIONS*		FT415	FT420
Power		Lithium "C", 3.6 Vdc, replaceable, 3-5 year life	12-30 Vdc, 4mA (4-20 mA when loop powered)
Display	Rate	6-digit autorange, 1/2" character height	6-digit autorange, 1/2" character height
	Total	8-digit, 5/16" character height	8-digit, 5/16" character height
Outputs	Current Sinking	Scaled Pulse output (0.1 sec duration @ 1 Hz max) or High Alarm output or Low Alarm output	
		Sensor pass-through Pulse output (unscaled)	
	Analog	None	4-20 mA loop, 24-30 Vdc
Pulse Output Range		0.1 - 9999999.9 units/pulse	0.1 - 9999999.9 units/pulse
Input		Micropower GMR Sensor (square wave)	5V pulse or contact closure
Input Range		1.0 - 150 pulses/second	1.0 - 1,500 pulses/second
K-Factor Range		.001 - 99999.999	.001 - 99999.999
Flow Alarm Output Range		.01 - 999999.99	.01 - 999999.99
Operating Temperature		-30° to 65° C (-22° to 148° F)	-30° to 65° C (-22° to 148° F)
Environmental		NEMA 4X, IP66	NEMA 4X, IP66
EMC		CE EN 61000	CE EN 61000

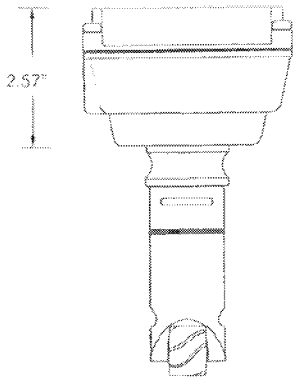
*Specifications subject to change • Please consult our website for current data (www.seametrics.com)

SeaMetrics

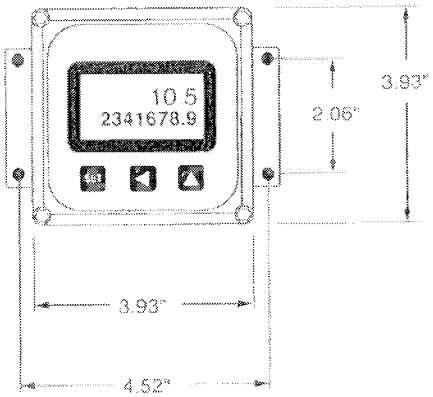
FT400-SERIES
Rate/Total Indicator

DIMENSIONS

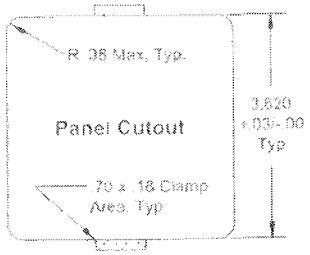
FT415/FT420
Sensor Mount

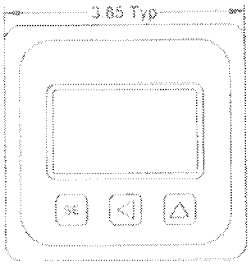


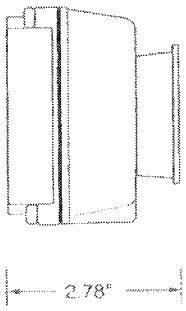
FT415/FT420
with Wall Mount Brackets

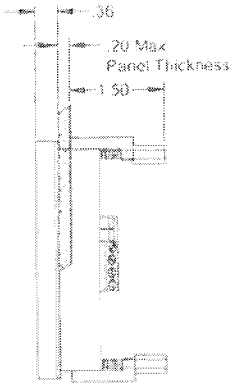


FT420
Panel
Mount

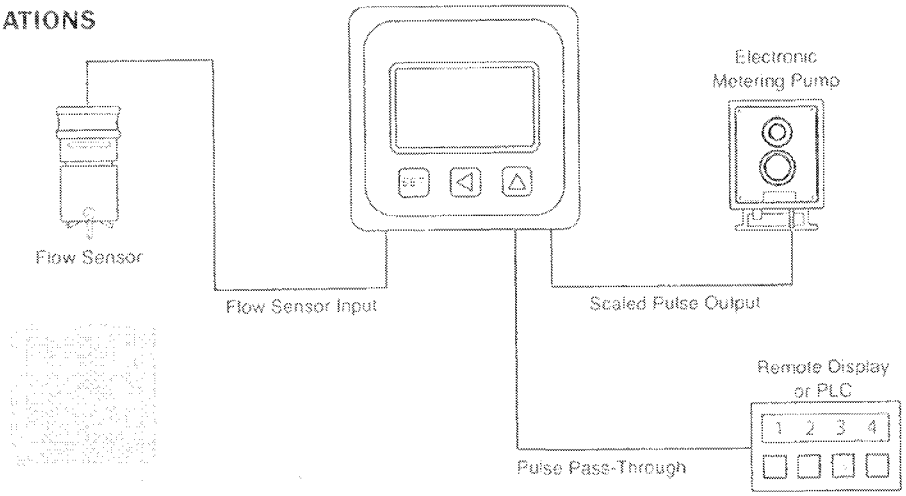








POSSIBLE APPLICATIONS



SeaMetrics

FT400-SERIES
Rate/Total Indicator

HOW TO ORDER

MODEL

Battery-powered indicator = FT415

Loop-powered indicator/transmitter = FT420

MOUNTING

Premounted on meter = M

Wall mount = W

Panel mount = P

OPTIONS

Built-in 115 Vac/12-24 Vdc dual power supply (FT420 only, use with magmeters) = -27

Tamper-evident = -32

Non-resettable total = -64

Built-in 115 Vac power supply (FT420 only, use with mechanical meters) = -65

Dual relay output (FT420 only) = -98

ACCESSORIES

Data logger (wall mount) = DL76W

Power converter, plug-in, 115 Vac, 24 Vdc = PC3

Dual power supply, plug-in, 115 Vac, 12/24 Vdc = PC42

Protective cover, hinged = 30785

Mounting kit, wall-to-meter conversion = MK10

Mounting kit, meter-to-wall conversion = MK20

LMI pump power cable = 07483

LMI pulse out cable = 12010

CONTACT YOUR SUPPLIER

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(P) 253.872.0284 • (F) 253.872.0285 • 1.800.975.8153 • www.seametrics.com

LIT-13027 C
4/8/09

Ministry of the Environment
Ottawa District Office
2430 Don Reid Drive
Ottawa ON K1H 1E1
Telephone: (613) 521-3450
Fax: (613) 521-5437

Ministère de l'Environnement
Bureau de district d'Ottawa
2430, promenade Don Reid
Ottawa ON K1H 1E1
Téléphone: (613) 521-3450
Télécopieur: (613) 521-5437

Ontario

February 24, 2010

Mattamy Homes (Half Moon Bay) Limited
123 Huntmar Drive
Stittsville ON K2S 1B9

ATTTENTION: Mr. Sean MacFarlane, Construction Manager, Land

Dear Mr. MacFarlane:

RE: Inspection Report for Mattamy Homes (Half Moon Bay) Limited

Please find enclosed the report for the inspection noted above.

Section 5.0 of the report notes that no calibrated flow meter and totalizer were used to record volumes of water taken at the Site. This is contrary to Condition 4.2 of Permit to Take Water 4563-7RMPHR (the "PTTW").

The Ministry intends to enter into a voluntary abatement plan to bring your company into compliance with Condition 4.2 of the PTTW. Therefore, by Monday, March 29, 2010, please submit to the undersigned officer a voluntary abatement plan (the "Plan") on how Mattamy Homes (Half Moon Bay) Limited will comply with Condition 4.2 of the PTTW. The Plan should include, but is not limited to:

1) the dates in 2010 by which company officials will install calibrated flow meters and a totalizer(s) at the Site
2) the make, model and specifications for the flow meters and totalizer(s).

If, after reviewing the inspection report, you would like to further discuss the matter, please contact the undersigned officer.

Sincerely,

Tor Rustad
Senior Environmental Officer.

TR/cb
Enclosure
File Code: SI OC NE C03 220

Ontario

Ministry of the Environment
Ministère de l'Environnement

Permit To Take Water Inspection Report

Client:	Mattamy (Half Moon Bay) Limited Mailing Address: 123 Huntmar Dr, Ottawa, Ontario, Canada, K2S 1B9 Physical Address: 123 Huntmar Dr, Ottawa, City, Ontario, Canada, K2S 1B9 Telephone: (613)831-4115, FAX: (613)831-9060 Client #: 9982-77GPCB, Client Type: Corporation		
Inspection Site Address:	Mattamy (Half Moon Bay) Phase 4 Address: Lot: 10, 11 and 12, Concession: 3, Geo. Twp. of Nepean, Ottawa, City District Office: Ottawa GeoReference: Map Datum: NAD83, Zone: 18, Accuracy Estimate: 10-30 metres eg. Medium Quality GPS, Method: GPS, UTM Easting: 440060, UTM Northing: 5010081, UTM Location Description: Phase 4 - Area 6,		
Contact Name:	Sean MacFarlane	Title:	Construction Manager, Land
Contact Telephone:	(613)831-3522 ext	Contact Fax:	(613)831-9060
Last Inspection Date:			
Inspection Start Date:	2009/11/23	Inspection Finish Date:	2010/02/12
Region:	Eastern		

1.0 INTRODUCTION

Mattamy (Half Moon Bay) Limited (the "Company") was issued two Permits to Take Water: 8167-7K7RQV on January 16, 2009 and 4563-7RMPHR on June 5, 2009. The current permit authorizes taking of ground and surface waters.

Permit to Take Water 8167-7K7RQV was cancelled and replaced by PTTW 4563-7RMPHR on June 5, 2009. The inspection will focus on PTTW 4563-7RMPHR.

Water taking at the Site will progress through four intervals, commencing with Phase I and ending with Phase IV.

The whole area encompassed in the 4563-7RMPHR was inspected. Schedule A of PTTW 4563-7RMPHR restricts the dates of water taking at the Site. It must cease by March 31, 2011, in the following areas: Area 1, Phase 2 of the sub-division; the Stormwater Management Pond in Area 2; Area 3, Phase 2 Surface Dewatering. It cannot commence prior to October 1, 2010, and must terminate by September 30, 2015, in the following areas: Area 4, HMB Phase 3; Area 5 Phase 3 Surface Dewatering. Finally, water taking cannot commence prior to April 1, 2013 and must terminate by March 31, 2016 in the following areas: Area 6, HMB Phase 4 and Area 7, Phase 4, Surface Dewatering.

Data and pumping records were provided to the Ministry by David Shaeffer Engineering Ltd. (the "Consultant"), at the request of Company officials. Company officials were requested to provide this data to the Ministry on November 24, 2009 and December 10, 2009. This data was received on January 20, 2010.

An inspection will determine compliance with the conditions on the PTTW.

2.0 INSPECTION OBSERVATIONS

Permit Number:
4563-7RMPHR, expiring on March 31, 2016.

2.1 PURPOSE OF TAKING

Dewatering

Additional Comments:

Items 1 through 11 in Table A delineates the types of de-watering for PTTW 4563-7RMPHR. Table A indicates the following:

Table A

	Source Name / Description:	Source: Type:	Taking Specific Purpose:	Taking Major Category:	Max. Taken per Minute (litres):	Max. Num. of Hrs Taken per Day:	Max. Taken per Day (litres):	Max. Num. of Days Taken per Year:	Zone/ Easting/ Northing:
1	Phase 1- Area 1	Well Dug	Construction	Dewatering Construction	213	24	306,720	365	18 441019 5010586
2	Phase 1- Area 2	Well Bored	Construction	Dewatering Construction	968	24	1,393,920	365	18 441450 5010994
3	Phase 1- Area 3 Surface Water Runoff	Well Dug	Construction	Dewatering Construction	7,000	24	10,080,000	365	18 441019 5010586
4	Phase 1- Retention Pond	Pond Dugout	Construction	Dewatering Construction	2,000	24	2,688,000	365	18 441019 5010586
5	Phase 2 Service - Area 1	Well Dug	Construction	Dewatering Construction	189	24	272,511	365	18 440680 5010575
6	Phase 2 SWMP - Area 2	Well Dug	Construction	Dewatering Construction	388	24	557,038	365	18 440748 5011073
7	Phase 2 Surface Water Runoff - Area 3	Well Dug	Construction	Dewatering Construction	6,618	24	9,529,920	365	18 440680 5010575
8	Phase 3 HMB Area 4	Well Dug	Construction	Dewatering Construction	1,290	24	1,857,112	365	18 441565 5009854
9	Phase 3 Surface Water Runoff - Area 5	Well Dug	Construction	Dewatering Construction	6,129	24	8,826,000	365	18 441565 5009854

10	Phase 4 - Area 6	Well Dug	Construction	Dewatering Construction	268	24	267,457	365	18 440060 5010081
11	Phase 4 Surface Water Runoff - Area 7	Well Dug	Construction	Dewatering Construction	9,362.0	24	13,481,280	365	18 440060 5010081
						Total Taking:	49,259,958		

The aggregate amount of water taken is less than 49,259,958 litres per day and will correspond to the restrictions on dates listed in Item 1 of Schedule A of PTTW 4563-7RMPHR. At the time of the inspection on November 24, 2009, the maximum daily aggregate number of litres of water taken per day should not have been more than 24,828,109.

PTTW 4563-7RMPHR authorized water taking at the Site during 24 hours for 365 days of each year for the particular water taking (as stipulated in Schedule A of the PTTW.)

The details of water taking by a contractor (Taggart Construction Limited) are as follows:

Date	Source	Pump Size	Calculated Volume (L)	Rate (L/min)	Rate (L/day)
July 6 to 10, 2009	Trench	3 inch	807,400	305.83	161,480.00
July 13 to 17, 2009	Trench	3 inch	623,900	305.83	124,780.00
July 20 to 24 2009	Trench	3 inch	678,950	305.83	135,790.00
July 27 to Aug 1 2009	Trench	3 inch	752,350	305.83	150,470.00
Aug 3 to 7, 2009	Trench	3 inch	422,050	305.83	84,410.00

The details of water taking by a contractor (Agrodrain Systems Limited) are as follows:

Date	Pumping Area	Source	Litres per minute	Calculated Daily Volume
May 19, 2009	Phase 2	Surface	450	162,000
May 21, 2009	Phase 2	Surface	450	135,000
May 22, 2009	Phase 2	Surface	450	135,000
July 16, 2009	Phase 2A	Surface	300	90,000
July 17, 2009	Phase 2B	Surface	300	36,000
July 21, 2009	Phase 2B	Surface	300	144,000
July 29, 2009	Phase 2A	Surface	300	18,000
June 12, 2009	Phase 2B	Surface	300	36,000
June 22, 2009	Phase 2B	Surface	300	90,000
October 15, 2009	Phase 2B	Surface	300	18,000

2.2 SYSTEM DESCRIPTION

Surface water source: Yes

Ground water source: Yes

Water taking from items 1 through 3, from Table A of PTTW 8167-7K7RQV was in accordance with the dates specified in that Table. No water had been taken prior to April 1, 2009. That PTTW was superseded on June 5, 2009, by PTTW 4563-7RMPHR.

At the time of inspection, water had only been taken at the Site in accordance with Item 7 on Table A (of PTTW 4563-7RMPHR) from excavation trenches during installation of sewer and water mains. Water had not been taken from Items 1 through 4 of PTTW 4563-7RMPHR.

There was no water taking from Item 5 (Phase 2 Service - Area 1) or Item 6 (Phase 2 SWMP Area 2) at the time of the inspection.
Visual observation of the Site indicated that wells had been drilled in areas not yet developed. Company officials

indicated that no water was being withdrawn from those wells at the time of inspection.

There had not yet been water taking from Items 8 through 11 of Table A of Permit 4563-7RMPHR. A visual inspection of the lands in question confirmed this. This also complied with restrictions in the dates from Schedule A of PTTW 4563-7RMPHR.

2.3 QUANTITY ASSESSMENT

From the data provided to the Ministry by the Consultant, it does not appear that water taking at the Site exceeded the limits imposed by PTTW 4563-7RMPHR. At the time of inspection, water taking only occurred in accordance with Item 7 of Table A. The rate of water taking did not exceed 6,618 litres per minute. Nor did water taking for Item 7 of Table A exceed 9,529,920 litres per day. Therefore, water taking was in accordance with Item 7 of Table A of Permit 4563-7RMPHR.

However, estimates of water taking were provided by the Consultant to the Ministry. Company officials did not use flow meters to measure volumes of water pumped at the Site. Furthermore, no totalizer was used to record the volume of water that was pumped at the Site. Please refer to Section 5.0 for actions to be taken.

2.4 ASSESSMENT OF OTHER PERMIT CONDITIONS

Company officials took samples of surface waters at the Site on July 27, 2009 and November 17, 2009. Analytical results indicate that concentrations of Total Suspended Solids ("TSS") at the outlet to Todd Pond are 6 milligrams per litre (mg/L) on July 27, 2009 and less than 2 mg/L on November 17, 2009.

Company officials installed erosion control and siltation measures at the Site.

2.5 ASSESSMENT OF REGULATION 387/04

Ontario Regulation 387/04 under the *Ontario Water Resources Act* does not apply as none of the water leaves the watershed.

3.0 REVIEW OF PREVIOUS NON-COMPLIANCE ISSUES

Inspections of the Site in 2008 indicated the following:

1) surface waters were diverted from the Site. At that time, only a permit for taking of groundwater had been issued for water taking at the Site. Company officials applied for and obtained an amendment for a permit to take surface waters.
2) silt from construction activities at the Site entered the Jock River. Conditions in PTTW 4563-7RMPHR implemented erosion and sediment control measures.

4.0 SUMMARY OF INSPECTION FINDINGS (HEALTH/ENVIRONMENTAL IMPACT)

Was there any indication of a known or anticipated human health impact during the inspection and/or review of relevant material, related to this Ministry's mandate ?
No

Specifics:

Was there any indication of a known or anticipated environmental impact during the inspection and/or review of relevant material ?
No

Specifics:

Was there any indication of a known or suspected violation of a legal requirement during the inspection and/or review of relevant material which could cause a human health impact or environmental impairment ?
Yes

Specifics: Company officials did not measure flows at the Site using a calibrated flow meter and a totalizer.

Was there any indication of a potential for environmental impairment during the inspection and/or the review of relevant material ?
No

Specifics:

Was there any indication of minor administrative non-compliance?
No

Specifics:

5.0 ACTION(S) REQUIRED

Comments:

Company officials must use a calibrated flow meter and totalizer when measuring flows at the Site. The Ministry and Company officials will enter into a Voluntary Abatement Plan to address compliance with PTTW 4563-7RMPHR.

6.0 OTHER INSPECTION FINDINGS

The undersigned officer requested records under Condition 4 of PTTW 4563-7RMPHR at the time of inspection on November 24, 2009. Those records were not received by the undersigned officer until January 20, 2010. The records received on January 20, 2010, is the first time that the Ministry received pumping records for PTTW 4563-7RMPHR.

Certificates of Approval for a Sewage Works (Municipal and Private) numbers 9531-7EZK5S and 8279-7XBM9P authorize discharge of water taken under the permit to storm and sanitary sewers at the Site.

No surface waters were pumped from the Todd Pond at the Site. Surface waters flowed from the Todd Pond, through erosion control measures, to the Jock River.

Since April 1, 2009, Company officials reported no complaints that surface or ground waters impacted any persons.

Schedule "A" of PTTW 4563-7RMPHR was amended on June 8, 2009. Item 3 was amended by withdrawing Drawing 4 dated September 10, 2008. That drawing was a map that included five sampling points, A, B, C, D and E. Those sampling points are cited in Conditions 5.4, 5.6, 5.7, 5.8 and 5.9 in the PTTW. However, the map that replaced Drawing 4 did not indicate any sampling points. Therefore, no sampling data was submitted for those Conditions.

7.0 INCIDENT REPORT

Applicable
1675-825RA9 ☐

8.0 ATTACHMENTS

PREPARED BY:
Environmental Officer:

Name:	**Tor Rustad**
District Office:	**Ottawa District Office**
Date:	**2010/02/12**
Signature	

Ter Rankad

REVIEWED BY:
District Supervisor:
Name: Paul Kehoe
District Office: Ottawa District Office
Date: 2010/02/17

Signature:

Paul Kehoe.

File Storage Number: SI OC NE CO3 220

Note:
"This inspection report does not in any way suggest that there is or has been compliance with applicable legislation and regulations as they may apply to this facility. It is, and remains, the responsibility of the owner and/or the operating authority to ensure compliance with all applicable legislative and regulatory requirements"

Pages 41 to / à 43

are withheld pursuant to section

sont retenues en vertu de l'article

17

of the Freedom of Information and Protection of Privacy Act

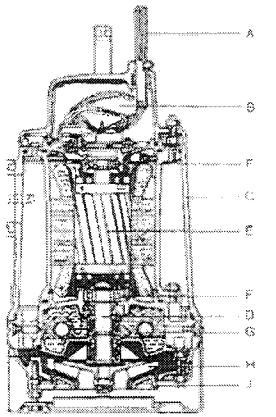
de la Freedom of Information and Protection of Privacy Act

BIBO BS-2066.171

Small Portable Dewatering Pump

Capacity up to 260 GPM, Heads up to 90 ft.

- removes water quickly from ditches,
ail ponds, pools, caissons, etc.



Specifications

A **Cable.** Standard 15 m (50 ft.) of AWG 14/4 SubCab cable. Other lengths available upon request.

B **Junction Chamber.** Cable entry incorporates a strain relief and grommet construction compression sealing. Between the junction box and motor housing a rubber gland provides additional seal protection of the motor.

C **Pump Housing.** High strength, lightweight aluminum alloy. Static seals are lesigned of Nitrile rubber O rings in precision machined grooves, with controlled compression.

D **Shaft.** Stainless steel ANSI 431.

E **Motor.** Air filled, NEMA design B with class H (180°C) insulation; 2 pole, 3450 rpm. Shrink-fit to the motor housing. Allows at least 10 starts per hour. Built-in thermal sensors for additional motor overload protection (optional).

F **Bearings.** Upper and lower: single row ball bearing.

G **Shaft Seals.** Independent double face seals running in environmentally friendly, FDA approved (Standard #172.878) lubricant. Upper seal: carbon/tungsten carbide. Lower seal: tungsten carbide/tungsten carbide. Oil specs: 1.3 pints (0.6 l).

H **Impeller, Multivane, open type. Material:** Alloyed white cast iron ASTM 532 80 Alloy 111A, hardened for high wear resistance to 60 Rc hardness.

I **Diffuser.** Protected by polyurethane (Polyfill) or Nitrile Rubber liner. Adjustable to maintain pump's hydraulic performance.

J **Wear Plate.** Protected by polyurethane (Polyfill) or Nitrile Rubber liner.

K **Strainer.** Hot dip galvanized steel, 110 holes 1/4" x 1 3/16".

Fasteners. Stainless steel ANSI 304.

Options.
Stainless steel impeller (MT). Warm liquid versions (see Section 6).

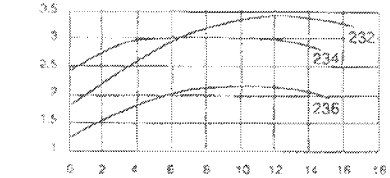
Approval:
CSA approved to UL Standard #778 and CSA C22.2 #108.

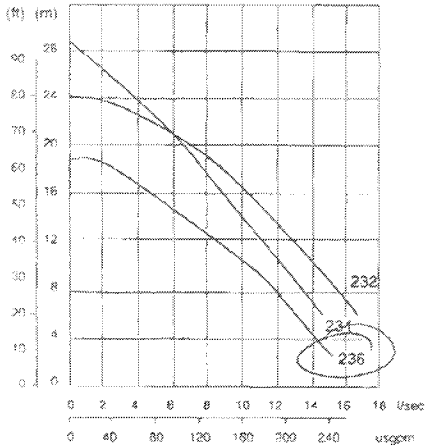
Controls (not shown).
Manual controls, magnetic starter type, providing short circuit and overload protection; housed in EEMAC3 enclosure. Other enclosure types (EEMAC4, EEMAC12) are optional.

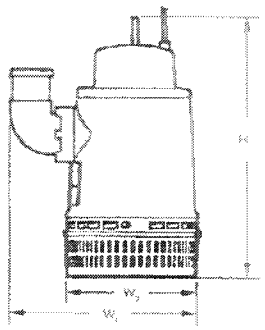
Accessories.
Tandem connection. See section.

BIBO BS-2066.171

Performance Data
Power Input KW







Dimensions

Discharge conn.	W_1 inches	W_1 mm	W_2 inches	W_2 mm	H inches	H mm	Weight lbs	Weight kg	Tandem conn.*
3" - 8 NPSM (male thread)	14 3/4"	360	10	235	20 1/2"	520	66	31	3" Hose conn.
3" Hose conn.* (confined spaces)**	11 5/8"	285	10	255	20 1/2"	520	66	31	3" Hose conn.

* Optional
** Narrower to fit into confined spaces

VERSION	IMP CODE	HP	PHASE	VOLTS	FLA	STARTING CURRENT	CABLE SIZE AWG
High Head HT 3"	234	3.6	3	208	10	55	14/4
			3	230	9.4	49	
			3	460	4.7	28	
			3	600	3.5	21	
Standard MT 3"	236	2.4	1	230	10	43	14/4
	232	3.6	3	208	10	55	14/4
			3	230	9.4	49	
			3	460	4.7	26	
			3	600	3.5	21	

Transport 2/2

000044

Page 45

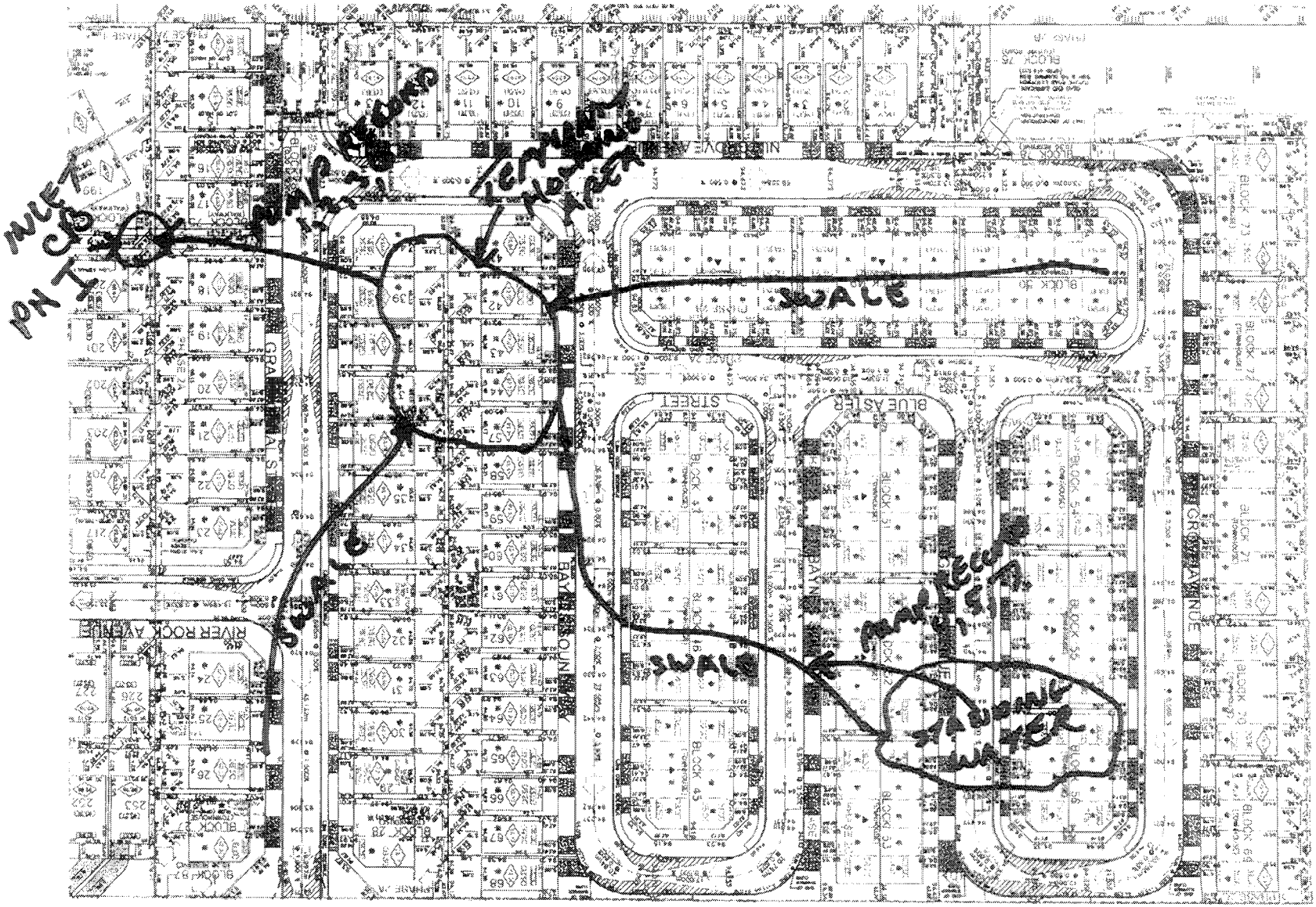
is withheld pursuant to section

est retenue en vertu de l'article

17

of the Freedom of Information and Protection of Privacy Act

de la Freedom of Information and Protection of Privacy Act


SWALE
SWALE
RIVER ROCK AVENUE
BAYMEADOWS ROAD
BLUE ASTER STREET
CROWN AVENUE

ASL 2/3

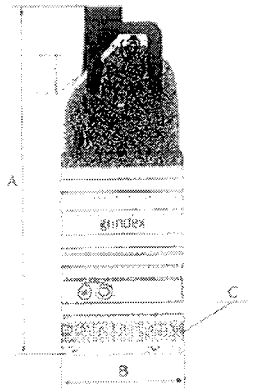
No: PD602-EN | Revision 3 2009.09 | 50 Hz | 8102.171

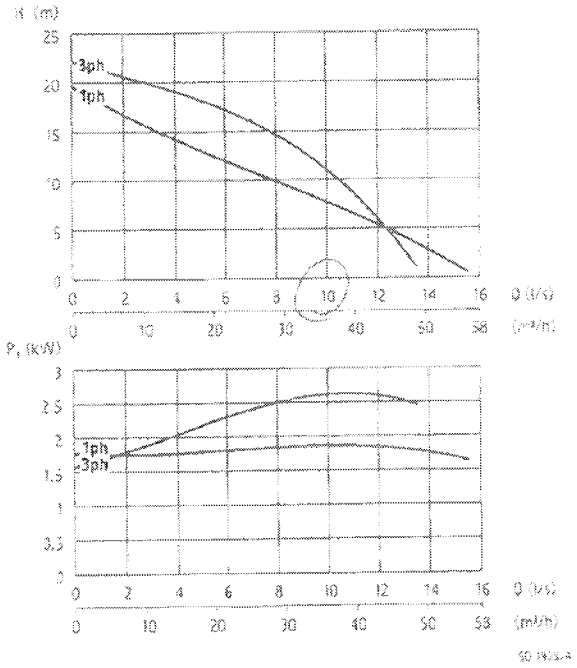
grindex

www.grindex.com

Minette

Electrical submersible drainage pump





50 Hz	1~ph	3~ph
Discharge connection	3"	3"
Rated power P_2 (kW)	1.5	2.2
Max. power consumption P_1 (kW)	1.9	2.7
Shaft speed (1/min.)	2900	2900
Rated current at 230V	8.5 A	8.7 A
Rated current at 400V	-	4.7 A
Rated current at 500V	-	3.7 A
Solids passage	8 mm	8 mm
Dimensions A / B / C	667 / 240 / 8 mm	667 / 240 / 8 mm
Weight	23 kg	22 kg
Other voltages on request		

Classification
Electrical submersible drainage pump
Protection class: IP 68

Electrical motor
1-phase: Squirrel cage induction motor with start and run capacitor
3-phase: Squirrel cage induction motor
Insulation class: F (IEC 85)

Motor protection
1-phase: Temperature guard with a thermal contact in stator opening temperature 125°C (257°F), air valve
3-phase: Phase sequence control, phase failure guard, temperature guard with thermal contacts in the stator opening temperature 125°C (257°F) (= SMART system), air valve

Cable - SubCab
1-phase: 3G1,5mm², 20 m (66 ft) / 14AWG/3, 53 ft
3-phase: 4G1,5mm², 20 m (66 ft) / 14AWG/4, 53 ft

Limitations
Max. submersion depth: 20 m (66 ft)
Max. liquid temperature: 40 °C (104 °F)
Allowed pH range: 5 - 8
Maximum liquid density: 1100 kg/m³ (68 lbs/ft³)

Shaft seals
Cartridge seal: pre-assembled double mechanical seal running in an oil compartment
Material lower seal: *tungsten carbide - tungsten carbide*
Material upper seal: *tungsten carbide - tungsten carbide*

Bearings
Ball bearings with C3 clearance

Discharge connection
3" hose, ISO-G or NPT

Materials
Casted parts: *Aluminium*
Outer casing: *Stainless steel*
Motor shaft: *Stainless steel*
Impeller: *Hard-Iron™*
Suction cover: *Hard-Iron™*
Diffusers: *Nitrile rubber*
Screws and nuts: *Stainless steel*
O-rings: *Nitrile rubber*

Accessories
Float switch (max 400 V)
Zinc anodes
Low suction collar
Pump rail

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Ontario

Ministry of the Environment
Ministère de l'Environnement

AMENDED PERMIT TO TAKE WATER
Surface and Ground Water
NUMBER 4563-7RMPHR

Pursuant to Section 34 of the Ontario Water Resources Act, R.S.O. 1990 this Permit To Take Water is hereby issued to:

Mattamy (Half Moon Bay) Limited
123 Huntmar Drive
Ottawa, Ontario K2S 1B9
Canada

For the water taking from: Phase 1- Area 1, Phase 1- Area 2, Phase 1- Area 3 - Surface Water Runoff, Phase 1- Retention Pond

Phase 2 - Area 1, Phase 2 - Area 2 SWMP, Phase 2 - Area 3 Surface Water Runoff

Phase 3 - Area 4, Phase 3 - Area 5 Surface Water Runoff

Phase 4 - Area 6, Phase 4 - Area 7 Surface Water Runoff

Located at: Lot 11, 12, Concession 3, Geo. Twp. of Nepean
Ottawa

Lot Part of 10 and 11, Concession 3, Geo. Twp. of Nepean
Ottawa

Lot 8, 9, Concession 3, Geo. Twp. of Nepean
Ottawa

Lot 10, 11 and 12, Concession 3, Geo. Twp. of Nepean
Ottawa

For the purposes of this Permit, and the terms and conditions specified below, the following definitions apply:

DEFINITIONS

(a) "Director" means any person appointed in writing as a Director pursuant to section 5 of the OWRA for the purposes of section 34, OWRA.

(b) "Provincial Officer" means any person designated in writing by the Minister as a Provincial Officer pursuant to section 5 of the OWRA.

(c) "Ministry" means Ontario Ministry of the Environment.

(d) "District Office" means the Ottawa District Office.

(e) "Permit" means this Permit to Take Water No. 4563-7RMPHR including its Schedules, if any, issued in accordance with Section 34 of the OWRA.

(f) "Permit Holder" means Mattamy (Half Moon Bay) Limited.

(g) "OWRA " means the *Ontario Water Resources Act*, R.S.O. 1990, c. O. 40, as amended.

You are hereby notified that this Permit is issued subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. Compliance with Permit

1.1 Except where modified by this Permit, the water taking shall be in accordance with the application for this Permit To Take Water, dated February 11, 2009 and signed by Frank Cairo, and all Schedules included in this Permit.

1.2 The Permit Holder shall ensure that any person authorized by the Permit Holder to take water under this Permit is provided with a copy of this Permit and shall take all reasonable measures to ensure that any such person complies with the conditions of this Permit.

1.3 Any person authorized by the Permit Holder to take water under this Permit shall comply with the conditions of this Permit.

1.4 This Permit is not transferable to another person.

1.5 This Permit provides the Permit Holder with permission to take water in accordance with the conditions of this Permit, up to the date of the expiry of this Permit. This Permit does not constitute a legal right, vested or otherwise, to a water allocation, and the issuance of this Permit does not guarantee that, upon its expiry, it will be renewed.

1.6 The Permit Holder shall keep this Permit available at all times at or near the site of the taking, and shall produce this Permit immediately for inspection by a Provincial Officer upon his or her request.

1.7 The Permit Holder shall report any changes of address to the Director within thirty days of any such change. The Permit Holder shall report any change of ownership of the property for which this Permit is issued within thirty days of any such change. A change in ownership in the property shall cause this Permit to be cancelled.

2. General Conditions and Interpretation

2.1 Inspections

The Permit Holder must forthwith, upon presentation of credentials, permit a Provincial Officer to carry out any and all inspections authorized by the OWRA, the *Environmental Protection Act* , R.S.O. 1990, the *Pesticides Act* , R.S.O. 1990, or the *Safe Drinking Water Act,* S. O. 2002.

2.2 Other Approvals

The issuance of, and compliance with this Permit, does not:

(a) relieve the Permit Holder or any other person from any obligation to comply with any other applicable legal requirements, including the provisions of the *Ontario Water Resources Act* , and the *Environmental Protection Act* , and any regulations made thereunder; or

(b) limit in any way any authority of the Ministry, a Director, or a Provincial Officer, including the authority to require certain steps be taken or to require the Permit Holder to furnish any further information related to this Permit.

2.3 Information

The receipt of any information by the Ministry, the failure of the Ministry to take any action or require any person to take any action in relation to the information, or the failure of a Provincial Officer to prosecute any person in relation to the information, shall not be construed as:

(a) an approval, waiver or justification by the Ministry of any act or omission of any person that contravenes this Permit or other legal requirement; or

(b) acceptance by the Ministry of the information's completeness or accuracy.

2.4 Rights of Action

The issuance of, and compliance with this Permit shall not be construed as precluding or limiting any legal claims or rights of action that any person, including the Crown in right of Ontario or any agency thereof, has or may have against the Permit Holder, its officers, employees, agents, and contractors.

2.5 Severability

The requirements of this Permit are severable. If any requirements of this Permit, or the application of any requirements of this Permit to any circumstance, is held invalid or unenforceable, the application of such requirements to other circumstances and the remainder of this Permit shall not be affected thereby.

2.6 Conflicts

Where there is a conflict between a provision of any submitted document referred to in this Permit, including its Schedules, and the conditions of this Permit, the conditions in this Permit shall take precedence.

3. Water Takings Authorized by This Permit

3.1 Expiry

This Permit expires on **March 31, 2016**. No water shall be taken under authority of this Permit after the expiry date.

3.2 Amounts of Taking Permitted

The Permit Holder shall only take water from the source, during the periods and at the rates and amounts of taking specified in Table A. Water takings are authorized only for the purposes specified in Table A.

Table A

	Source Name / Description:	Source: Type:	Taking Specific Purpose:	Taking Major Category:	Max. Taken per Minute (litres):	Max. Num. of Hrs Taken per Day:	Max. Taken per Day (litres):	Max. Num. of Days Taken per Year:	Zone/ Easting/ Northing:
1	Phase 1- Area 1	Well Dug	Construction Completed	Dewatering Construction	213	24	306,720	365	18 441019 5010586
2	Phase 1- Area 2	Well Bored	Construction Completed	Dewatering Construction	968	24	1,393,920	365	18 441450 5010994
3	Phase 1- Area 3 Surface Water Runoff	Well Dug	Construction Completed	Dewatering Construction	7,000	24	10,080,000	365	18 441019 5010586
4	Phase 1- Retention Pond	Pond Dugout	Construction Completed	Dewatering Construction	2,000	24	2,688,000	365	18 441019 5010586
5	Phase 2 Service - Area 1	Well Dug	Construction Not yet started. New well	Dewatering Construction	189	24	272,511	365	18 440680 5010575
6	Phase 2 SWMP - Area 2 Clarke Pond	Well Dug	Construction No dewatering as of Nov 2015	Dewatering Construction	388	24	557,038	365	18 440748 5011073
7	Phase 2 Surface Water Runoff - Area 3	Well Dug	Construction	Dewatering Construction	6,618	24	9,529,920	365	18 440680 5010575
8	Phase 3 HMB Area 4	Well Dug	Construction	Dewatering Construction	1,290	24	1,857,112	365	18 441565 5009854
9	Phase 3 Surface Water	Well	Construction	Dewatering Construction	6,129	24	8,826,000	365	18 441565

	Runoff - Area 5	Dug							5009854
10	Phase 4 - Area 6	Well Dug	Construction	Dewatering Construction	268	24	267,457	365	18 440060 5010081
11	Phase 4 Surface Water Runoff - Area 7	Well Dug	Construction	Dewatering Construction	9,362.0	24	13,481,280	365	18 440060 5010081
						Total Taking:	49,259,958		

3.3 No water shall be taken from Phase 1 Sources (1, 2, 3 and 4 in Table A above) after May 1, 2011.

3.4 The Permit Holder shall ensure that water takings for Phases 2, 3 and 4 Sources (5 through 11 in Table A above) are in accordance with the dates set out in Item #1 of Schedule A of this Permit.

3.5 Notwithstanding Table A, no discharge shall occur unless the quality of the discharge meets the criteria outlined in Table 2 of the City of Ottawa Storm Sewer By-Law 2003-514 (Refer to Item #2 of Schedule A of the Permit). The discharge shall be undertaken in accordance with Section 5.0 of the application.

4. Monitoring

4.1 The Permit Holder shall maintain a record of all water takings. This record shall include the dates and times of water takings, and the total measured amounts of water pumped per day for each day that water is taken under the authorization of this Permit. A separate record shall be maintained for each source. The Permit Holder shall keep all required records up to date and available at or near the site of the taking and shall produce the records immediately for inspection by a Provincial Officer upon his or her request.

4.2 The total amounts of water pumped shall be measured using a calibrated flow meter and totalizer.

4.3 The Permit Holder shall submit to the Director a record of water quality and flow data by the second Monday of each month that samples were taken for the previous month.

5. Impacts of the Water Taking

5.1 Notification

The Permit Holder shall immediately notify the local District Office of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint. The Permit Holder shall immediately notify the local District Office if the taking of water is observed to have any significant impact on the surrounding waters. After hours, calls shall be directed to the Ministry's Spills Action Centre at

1-800-268-6060.

5.2 For Surface-Water Takings
The taking of water (including the taking of water into storage and the subsequent or simultaneous withdrawal from storage) shall be carried out in such a manner that streamflow is not stopped and is not reduced to a rate that will cause interference with downstream uses of water or with the natural functions of the stream.

For Groundwater Takings
If the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to initial issuance of a Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of doing so.

If permanent interference is caused by the water taking, the Permit Holder shall restore the water supplies of those permanently affected.

5.3 In addition to Condition 5.2, if the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to the date of issuance of this Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of doing so. If permanent interference is caused by the water taking, the Permit Holder shall restore the water supplies of those permanently affected.

5.4 The Permit Holder shall install sediment and erosion control measures at each discharge location (A, B, C, D, E as per Drawing 4 in the Application for PTTW dated September 22, 2008, Item #3 of Schedule A of the Permit). The Permit Holder shall ensure that erosion and siltation control measures installed at the discharge site(s) are sufficient to control the discharge volume(s). Continuous care shall be taken to properly maintain the erosion and siltation control devices.

5.5 The Permit Holder shall regulate the rate of water discharged such that there is no flooding, soil erosion or channel scouring in the receiving water body, downstream water bodies, ditches or properties.

5.6 The Permit Holder shall establish water quality monitoring stations at each of the

discharge locations (A, B, C, D, E noted on Drawing 4, (Item #3 of Schedule A of the Permit)).

5.7 The Permit Holder shall sample Locations A, B, C, D, and E for water quality. During periods of continuous discharge, all the locations where discharge occurs are to be sampled every 4 days. During periods of intermittent discharge, all the locations where discharge occurs are to be sampled on the first day that discharge occurs, and every 4 days thereafter. For periods of either continuous or intermittent discharge, the initial water sample is to be anaylzed for the parameters listed in Table 2 of the City of Ottawa Sewer Use Bylaw 2003-514 (Item #2 of Schedule A of the Permit). Subsequent samples are to be analyzed for Total Suspended Solids (TSS) and Total Phosphorous (TP).

5.8 The Permit Holder shall measure discharge flows daily at Locations A, B, C, D, and E when discharges occur.

5.9 The Permit Holder shall ensure that the initial discharge for each discharge event for locations A , B, C, D and E meets the criteria in Table 2 of City of Ottawa Bylaw 2003-514 (Item #2 of Schedule A of the Permit) before discharge occurs. If the initial discharge analysis shows exceedances of any of the Table 2 criteria, or if any TSS concentration of any one sample exceeds 15 mg/L, then subsequent samples shall be analyzed for the full suite of parameters listed in Table 2 until the discharge falls below the criteria in Table 2. If there is an exceedance of the discharge criteria the Permit Holder shall implement the mitigation measures as proposed in Table 10 of the "Recommended Monitoring and Mitigation Plan" provided as Item #4 of Schedule A of the Permit.

6. Director May Amend Permit

The Director may amend this Permit by letter requiring the Permit Holder to suspend or reduce the taking to an amount or threshold specified by the Director in the letter. The suspension or reduction in taking shall be effective immediately and may be revoked at any time upon notification by the Director. This condition does not affect your right to appeal the suspension or reduction in taking to the Environmental Review Tribunal under the *Ontario Water Resources Act* , Section 100 (4).

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is included to ensure that the conditions in this Permit are complied with and can be enforced.

2. Condition 2 is included to clarify the legal interpretation of aspects of this Permit.

3. Conditions 3 through 6 are included to protect the quality of the natural environment so as to safeguard the ecosystem and human health and foster efficient use and conservation of waters. These conditions allow for the beneficial use of waters while ensuring the fair sharing,

conservation and sustainable use of the waters of Ontario. The conditions also specify the water takings that are authorized by this Permit and the scope of this Permit.

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, you may by written notice served upon me, the Environmental Review Tribunal and the Environmental Commissioner, ***Environmental Bill of Rights****, R.S.O. 1993, Chapter 28, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 101 of the Ontario Water Resources Act, as amended provides that the Notice requiring a hearing shall state:*

1. The portions of the Permit or each term or condition in the Permit in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

In addition to these legal requirements, the Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Permit to Take Water number;
6. The date of the Permit to Take Water;
7. The name of the Director;
8. The municipality within which the works are located;

This notice must be served upon:

The Secretary
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto ON
M5G 1E5

AND

The Environmental Commissioner
1075 Bay Street
6th Floor, Suite 605
Toronto, Ontario M5S 2W5

AND

The Director, Section 34
Ministry of the Environment
1259 Gardiners Rd, PO Box 22032
Kingston, ON
K7P 3J6

Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal:

by telephone at (416) 314-4600 ***by fax at (416) 314-4506*** ***by e-mail at www.ert.gov.on.ca***

This instrument is subject to Section 38 of the ***Environmental Bill of Rights*** *that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek to appeal for 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry, you can determine when the leave to appeal period ends.*

This Permit cancels and replaces Permit Number 8167-7K7RQV, issued on 16/01/2009 12:00:00 AM.

Dated at Kingston this 5th day of June, 2009.

Peter Taylor

Peter Taylor
Director, Section 34
Ontario Water Resources Act , R.S.O. 1990

Schedule A

This Schedule "A" forms part of Permit To Take Water 4563-7RMPHR, dated June 5, 2009.

1.

Source Name	Earliest Date of Taking	Latest Date of Taking
Area 1 Phase 2	April 1, 2009	March 31, 2011
Area 2 SWMP	April 1, 2009	March 31, 2011
Area 3 Phase 2Surface Dewatering	April 1, 2009	March 31, 2011
Area 4 HMB Phase 3	October 1, 2010	September 30, 2015
Area 5 Phase 3 Surface Dewatering	October 1, 2010	September 30, 2015
Area 6 HMB Phase 4	April 1, 2013	March 31, 2016
Area 7 Phase 4 Surface Dewatering	April 1, 2013	March 31, 2016

2. Table 2 Limits for Storm Sewer Discharge, City of Ottawa Sewer Use Bylaw 2003-514.

3. Section 5 and Drawing 4 in the Application for PTTW dated September 22, 2008 for Half Moon Bay- Phase 2, 3, 4 Residential development, Ottawa, Ontario.

4. Table 10 - "Recommended Monitoring and Mitigation Plan", from page 23 of the report entitled Groundwater Management Plan, Half Moon Bay - Phase 2, 3, 4 Residential Development, Ottawa, Ontario prepared for Mattamy (Half Moon Bay) Limited by Groundwater & Environmental Management Services Inc., dated September 22, 2008.

1) A B C D E

2) Erosion + Sediment Control

~~3) Area 1 Phase 1~~

~~4~~ 3) Area 1 SWMP

~~5~~ 4) Area 3 Phase 1 Surface Dewatering.

Ontario

Ministry of the Environment and Climate Change
Ministère de l'Environnement et de l'Action en matière de changement climatique

INCIDENT REPORT

Reference Number:	7627-9SBMVA	**Module Type:**	ECA/CofA/Permit Non-Compliance
Status:	Closed	**File Storage Number:**	SI
Program:	Water - Ground & Surface	**Activity:**	Approvals - PTTW - Surface

Caller or PO Reporting/Receiving Information

First Name:	**Last Name:**
Anthony	Francis
Name of Company:	
Kilgour & Associates	

MAILING ADDRESS			
Civic Address:		**Unit Identifier:**	
Delivery Designator:		**Delivery Identifier:**	
Municipality/ Unorganized Twp:	**County/District:**	**Province/State:**	**Postal Code:**
(1)		Ontario	
Postal Station:		**Country:**	Canada
Telephone Number:	**Extension:**	**Other Number:**	**Email Address:**
		Fax	

Date Reported to MOE:	2014/12/11	**Time Reported to MOE:**	11:56
Date of Incident:	2014/12/11	**Time of Incident:**	
Incident Date Confirmation:	Estimated		

Client(s)

Client Details
Mattamy (Half Moon Bay) Limited Mailing Address: 123 Huntmar Dr, Kanata, Ontario, Canada, K2S 1B9 Physical Address: 123 Huntmar Dr Kanata, Ottawa, City, Ontario, Canada, K2S 1B9 Telephone: (613)831-3503, FAX: (613)831-9060

Client #: 4205-75PLZL, Client Type: Corporation
Additional Address Info: Kanata

Site(s)

Site Details
Mattamy (Half Moon Bay) Phase 2 Address: Lot: 10 11 & 12, Concession: 3, Geographic Township: NEPEAN, Ottawa, City District Office: Ottawa GeoReference: Map Datum: NAD83, Zone: 18, Accuracy Estimate: 10-30 metres eg. Medium Quality GPS, Method: GPS, UTM Easting: 440680, UTM Northing: 5010575, UTM Location Description: Phase 2 - Area 1, LIO GeoReference: Zone: , UTM Easting: , UTM Northing: , Latitude: 45.2465, Longitude: -75.7468 Site #: 0446-7ETP4W + + + + Mattamy (Half Moon Bay) Phase 3 Address: Lot: 8 & 9, Concession: 3, Geographic Township: NEPEAN, Ottawa, City District Office: Ottawa GeoReference: Map Datum: NAD83, Zone: 18, Accuracy Estimate: 10-30 metres eg. Medium Quality GPS, Method: Map, UTM Easting: 441565, UTM Northing: 5009854, UTM Location Description: Phase 3 - Area 4, Site #: 4830-7JUN9F + + + + Mattamy (Half Moon Bay) Phase 4 Address: Lot: 10 11 & 12, Concession: 3, Geographic Township: NEPEAN, Ottawa, City District Office: Ottawa GeoReference: Map Datum: NAD83, Zone: 18, Accuracy Estimate: 10-30 metres eg. Medium Quality GPS, Method: GPS, UTM Easting: 440060, UTM Northing: 5010081, UTM Location Description: Phase 4 - Area 6, LIO GeoReference: Zone: , UTM Easting: , UTM Northing: , Latitude: 45.25, Longitude: -75.7489 Site #: 1937-7S8LQF

Incident Summary:
Manganese (Mg) exceedance reported

Initial Incident Description (as reported):
Created: Jennifer Faria (Ottawa District Office) - 2014/12/31 11:56:25 AM
Discharge sampling as per PTTW yielded an exceedance of Mn.

SAC Action Class:	
Non-Standard Procedure:	No

Incident Description:
Last update: Jennifer Faria (Ottawa District Office) - 2014/12/31 12:44:45 PM
December 11, 2014 - Spoke with Tony Francis of Kilgour. Discharging/dewatering occurring at Mattamy HMB site. Have been sampling in accordance with PTTW 1413-8H9LLY, however, a sample result yielded an exceedance of Manganese (Mn) over the concentration allowed by the CIty of Ottawa Sewer Use by-law. TF wondering if possible to reanalyze the subsequent samples for just Mn. Provided TF with email response (to include requested e-copy of the issued PTTW) and to advise that subsequent sampling must be in accordance with the PTTW (will need to resample and reanalyze for all parameters as per PTTW) December 12, 2014 - Rec'd call from TF inquiring if subsequent samples could be taken from the pump instead of the outflow - this would determine if the exceedances are coming from the dewatering activities or the SWM Pond. Consulted with PTTW which outlines sampling must be done at specified locations (C in this case). Spoke with Nick Murphy to inquire - provided information for Dana Cruikshank who dealt with PTTW in past.

Left message for DC.

December 15, 2014 - Spoke with DC - advised must follow the ECA, sampling at discharge point. Provided me with map outlining sample locations.

December 16, 2014 - Left vm for TF. Advised I consulted with Kingston and they advised sampling must be done in accordance with the PTTW - at the discharge location. Advised that may sample at the pump in addition to the discharge sampling, as long as discharge sample is collected in accordance with PTTW.

December 19, 2014 - Received email from TF - provided research paper indicating ponds lose metal retention in the wintertime - could explain why they're seeing the results they are. Paper was forwarded to DC for review and opinion.
Spoke with TF - advised I have sent the paper for review but in the interim, must conduct discharging/dewatering activities in accordance with PTTW. TF advised it's costly to sample for all the parameters, considering results suggest not caused by dewatering activities. Discussed the mitigation measures as outlined in the PTTW, however, may not be applicable to this scenario (TF advised). Discussed why seeing exceedances now and not previously. TF advised this is the first winter where dewatering activities have occurred - mostly done in the warmer months. Exceedances unexpected and unforeseen.

December 22, 2014 - Spoke with TF - advised haven't heard from DC yet and in the meantime will need to continue operating within PTTW as I don't have the authority to change any of the conditions. TF advised would likely be contacting supervisor Jena Leavoy.
Spoke with DC - he will discuss the matter with Peter Taylor (signing Director for PTTWs) to determine if anything could be done.

December 23, 2014 - Spoke with DC. Advised that an amendment is necessary to the PTTW should they wish to change the Conditions.
Rec'd email from DC containing email from PT - long term amendment required but in the interim will provide a letter so they don't have to do all the Schedule 2 sampling. DC will work with TF to address concerns.

December 31, 2014 - Received email from PT - new monitoring conditions have been drafted to reflect wintertime scenario. New conditions have been placed in file. Company is aware of requirement for amendment as long-term solution. KDO will look out for PTTW application (as per PT's email).

No further action required - recommend CLOSE.

Incident Description Continuation:
Not Available

Incident Update:
Not Available

Was there an MOE field response?	No
Were there samples collected / analyzed at any time?	No
Health / Environmental Consequences at the Time of Incident	
Health / Environmental Consequences:	0 - No Impact

Has a Water Body been impacted?	

Receiving Environment:	
Incident Event:	
Incident Reason:	
MOE/Other Agencies Involved:	
Was there a discharge / emission / spill of a contaminant to the environment?	
No	

Environmental Compliance Reporting (ECR)

Is this an air emission (measured or modelled) or wastewater (sewage) discharge exceedance that will become part of the Environmental Compliance Report? **(legislation, certificate of approval, order, or guideline)**
No

Voluntary / Mandatory Abatement

Was there Non-Compliance/Non-Conformance Identified?	○ Yes ● No

Voluntary / Mandatory Abatement Items
Not Available

Waste / EGR Information

Waste / EGR Information entries:
Not Available

Document Related Information

Cross Reference:	(doc link)	**Task Link:**	0614-9SBNQN
Originating Document:		**Created by:**	Jennifer Faria
Date Created:	2014/12/31	**Date Completed:**	2015/01/05
Office Receiving Incident Report:	Ottawa District Office	**Incident Info Received By:**	Jennifer Faria
Bring Forward Date:		**Bring Forward Reason:**	

Signatures

Provincial Officer:

Name:	**Jennifer Faria**
Badge No:	
Work Unit:	
District/Area Office:	**Ottawa District Office**
Date:	**2014/12/31**
Signature:	

Senior Environmental Officer:

Name:	**Jena Leavoy**
Work Unit:	
District/Area Office:	**Ottawa District Office**
Date:	**2015/01/05**
Signature:	

Ontario

Ministry of the Environment
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INCIDENT REPORT

Reference Number:	0327-8SUTTB	**File Storage Number:**	SI OC NE CO3 220
Module:	Incident Reporting	**Module Type:**	CofA/Permit Non-Compliance
Cross Reference:	(doc link)	**Task Link:**	0662-8SUTVT
Originating Document:		**Created by:**	Kyle Straberger
Incident Report Reference Number:		0327-8SUTTB	
Date Created:	2012/03/29	**Date Completed:**	
Bring Forward Date:		**Bring Forward Reason:**	
Status:	Recommended		
Program	Water - Ground & Surface	**Activity:**	Inspections - PTTW

Is this an **air emission** (measured or modelled) or **wastewater** (sewage) **discharge exceedance** that will become part of the Environmental Compliance Report?

(legislation, certificate of approval, order, or guideline)

○ Yes ● No ○ To be determined *Click here for Guidance*

Caller or PO Information

Reported By:

First Name	Last Name
Kyle	Straberger

Contact Mailing Address

Municipality:			
Ottawa			

Reported By:

MOE Information

Date & Time Reported to MOE:	2012/03/29 17:59		
Office Receiving Incident Report:	Ottawa District Office		
Incident Info Received By:	Kyle Straberger		
MOE Response:	No Field Response	**Site Region:**	Eastern
Date & Time of MOE Arrival at Scene:			
Master Incident Report Number:			
SAC Action Class:			
Non-Standard Procedure:	No		
ERP Call-out Initiated:			

Client(s)

Client Details

Mattamy (Half Moon Bay) Limited
Mailing Address: 123 Huntmar Dr, Kanata, Ontario, Canada, K2S 1B9
Physical Address: 123 Huntmar Dr Kanata, Ottawa, City, Ontario, Canada, K2S 1B9
Telephone: (613)831-3503, FAX: (613)831-9060
Client #: 4205-75PLZL, Client Type: Corporation
Additional Address Info: Kanata

Site(s)

Site Details

Mattamy (Half Moon Bay) Phase 4
Address: Lot: 10 11 & 12, Concession: 3, Geographic Township: NEPEAN, Ottawa, City
District Office: Ottawa
GeoReference: Map Datum: NAD83, Zone: 18, Accuracy Estimate: 10-30 metres eg. Medium Quality GPS, Method: GPS, UTM Easting: 440060, UTM Northing: 5010081, UTM Location Description: Phase 4 - Area 6,
Site #: 1937-7S8LQF
+ + + +
Mattamy (Half Moon Bay) Phase 3
Address: Lot: 8 & 9, Concession: 3, Geographic Township: NEPEAN, Ottawa, City
District Office: Ottawa
GeoReference: Map Datum: NAD83, Zone: 18, Accuracy Estimate: 10-30 metres eg. Medium Quality GPS, Method: Map, UTM Easting: 441565, UTM Northing: 5009854, UTM Location Description: Phase 3 - Area 4,
Site #: 4830-7JUN9F
+ + + +
Mattamy (Half Moon Bay) Phase 2
Address: Lot: 10 11 & 12, Concession: 3, Geographic Township: NEPEAN, Ottawa, City
District Office: Ottawa
GeoReference: Map Datum: NAD83, Zone: 18, Accuracy Estimate: 10-30 metres eg. Medium Quality GPS, Method: GPS, UTM Easting: 440680, UTM Northing: 5010575, UTM Location Description: Phase 2 - Area 1,
LIO GeoReference: Zone: , UTM Easting: , UTM Northing: , Latitude: 45.2465, Longitude: -75.7468
Site #: 0446-7ETP4W

Incident Information

Incident Summary:	Non-compliance with PTTW - Inspection Findings *cannot be longer than 60 characters*
Incident Description:	As a result of an inspection to determine compliance with issued PTTW # 1413-8H9LLY the following non-compliance issues were identified: 1. It is unclear whether Mattamy has installed the calibrated flow meter and totalizer as required by Condition 4.2 of the PTTW and the previous insepction report dated November 23, 2009. 2. As per Condition 5.7 of the PTTW, sampling requirements were not completed as required during periods of continuous and intermittent discharges at the established monitoring stations.

Links & Comments:	
Attachments Names:	

Date & Time of Incident	**Incident Date Confirmation?** Estimated

	2011/10/27		
Source Type:		**Sector Type:**	
Nearest Watercourse:		**Watershed Category Code:**	
Environmental Impact:	Possible		
Nature of Impact:			
Incident Cause:		**Incident Reason:**	
Damaged Party:	No		

Contaminants Table

Contaminant Name	Code	UN#	Limit	Quantity	[units]	[freq]

Controller of Material:		**Owner of Material:**	
Estimated Clean Up Cost:		**Who Cleaned Up:**	
% Clean Up:	%	**Agencies Involved:**	

Voluntary / Mandatory Abatement

Is there Voluntary Abatement Activity?	● Yes	○ No	○ To be determined

Voluntary / Mandatory Compliance Items

Type	Parent RefNo	Work Summary (may be truncated)	Date	AttainList
VA	0327-8SUTTB	Confirm compliance	2012/05/16	VA not Required
VAI	3833-8MRJ4B	Provide a written response, by ...	2012/05/16	2012/05/16

Offence(s)

Suspected Violation(s)/Offence(s):	
Act - Regulation - Section, **Description** **{General Offence}**	

Provincial Officer:

Name:
Badge No:

Work Unit:
District/Area Office:
Date:

Signature:

District/Area Supervisor:
Name:

Work Unit:
District/Area Office:
Date:

Signature:

Additional Disclosure Information

Reference Number:	0327-8SUTTB	**File Storage Number:**	SI OC NE CO3 220
Module:	Incident Reporting	**Module Type:**	CofA/Permit Non-Compliance
Cross Reference:	(doc link)	**Task Link:**	0662-8SUTVT
Originating Document:		**Created by:**	Kyle Straberger
Incident Report Reference Number:		0327-8SUTTB	
Date Created:	2012/03/29	**Date Completed:**	
Bring Forward Date:		**Bring Forward Reason:**	
Status:	Recommended	**Main Document Reference Number:**	0327-8SUTTB
Program	Water - Ground & Surface	**Activity**	Inspections - PTTW

General Comments

Signing Comments

Abatement Items

ITEM 1
Type : Voluntary Compliance
Compliance Date : 05/16/2012
Attained : VA not Required

Confirm compliance

Reason :
Duplication of VA item

ITEM 2
Type : unknown
Compliance Date : 05/16/2012
Attained : Compliance Attained 05/16/2012

Confirm compliance

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INCIDENT REPORT

Reference Number:	1675-825RA9	**File Storage Number:**	SI OC NE CO3 220
Module:	Incident Reporting	**Module Type:**	CofA/Permit Non-Compliance
Cross Reference:	6863-7SUJ53 (doc link)	**Task Link:**	4586-825RDN
Originating Document:	Inspections 6863-7SUJ53	**Created by:**	Tor Rustad
Incident Report Reference Number:		1675-825RA9	
Date Created:	2010/01/28	**Date Completed:**	2010/04/13
Bring Forward Date:		**Bring Forward Reason:**	
Status:	Closed		
Program	Water - Ground & Surface	**Activity:**	Inspections - PTTW

Is this an **air emission** (measured or modelled) or **wastewater** (sewage) **discharge exceedance** that will become part of the Environmental Compliance Report?

(legislation, certificate of approval, order, or guideline)

○ Yes ● No ○ To be determined *Click here for Guidance*

Caller or PO Information

Reported By:

First Name	**Last Name**
Tor	Rustad

Contact Mailing Address

Municipality:
Ottawa

Reported By:

MOE Information

Date & Time Reported to MOE:	2010/01/28 14:50		
Office Receiving Incident Report:	Ottawa District Office		
Incident Info Received By:	Tor Rustad		
MOE Response:	Planned Field Response	**Site Region:**	Eastern
Date & Time of MOE Arrival at Scene:	2009/11/24 15:25		
Master Incident Report Number:			
SAC Action Class:			
Non-Standard Procedure:	No		
ERP Call-out Initiated:			

Client(s)

Client Details
Mattamy (Half Moon Bay) Limited Mailing Address: 123 Huntmar Dr, Ottawa, Ontario, Canada, K2S 1B9 Physical Address: 123 Huntmar Dr, Ottawa, City, Ontario, Canada, K2S 1B9 Telephone: (613)831-4115, FAX: (613)831-9060 Client #: 9982-77GPCB, Client Type: Corporation

Site(s)

Site Details
Mattamy (Half Moon Bay) Phase 4 Address: Lot: 10, 11 and 12, Concession: 3, Geo. Twp. of Nepean, Ottawa, City District Office: Ottawa GeoReference: Map Datum: NAD83, Zone: 18, Accuracy Estimate: 10-30 metres eg. Medium Quality GPS, Method: GPS, UTM Easting: 440060, UTM Northing: 5010081, UTM Location Description: Phase 4 - Area 6, Site #: 1937-7S8LQF

Incident Information

Incident Summary:	Non-Compliance with Permit *cannot be longer than 60 characters*
Incident Description:	Inspection of the Site indicated the following: 1) Flows of water taken at the Site under Permit to Take Water 4563-7RMPHR (the "PTTW") were not measured. No flow meter that had been calibrated, or a totalizer, was used to measure the flows. Company officials (through their consultant) submitted estimates of the flow rates to the Ministry. This is contrary to Condition 4.2 of the PTTW. 2) The PTTW was issued on June 5, 2009. Item 3 of Schedule "A" of that map listed five sampling points at the Site for Conditions 3.5, 5.4, 5.6, 5.7, 5.8 and 5.9 of the PTTW. On June 8, 2009, a Director, Section 34, Ontario Water Resources Act, substituted the map listed in Item 3 of Schedule "A" of the PTTW. The replacement map did not provide any sampling points on it. Therefore, sampling of the aforementioned conditions is not feasible. Wednesday, March 31, 2010: a letter from Mr. Aaron Schull, legal counsel for Mattamy Homes, indicated that monitoring pumps and totalizers will be installed when water is pumped at the Site. Mr. Schull also included copies of the make, model and specifications for those pumps. No further action required. Document and file.

Links & Comments:	
Attachments Names:	

Date & Time of Incident	**Incident Date Confirmation?** Actual 2010/01/28		
Source Type:		**Sector Type:**	
Nearest Watercourse:		**Watershed Category Code:**	
Environmental Impact:	Not Anticipated		
Nature of Impact:			
Incident Cause:		**Incident Reason:**	

Damaged Party:	No		

Contaminants Table

Contaminant Name	Code	UN#	Limit	Quantity	[units]	[freq]

Controller of Material:	Mattamy (Half Moon Bay) Limited	**Owner of Material:**	Mattamy (Half Moon Bay) Limited
Estimated Clean Up Cost:		**Who Cleaned Up:**	
% Clean Up:	%	**Agencies Involved:**	

Voluntary / Mandatory Abatement

Is there Voluntary Abatement Activity?	● Yes	○ No	○ To be determined

Voluntary / Mandatory Compliance Items

Type	Parent RefNo	Work Summary (may be truncated)	Date	AttainList
VA	1675-825RA9	Plan to install and calibrate flo...	2010/05/31	2010/03/31

Offence(s)

Suspected Violation(s)/Offence(s):
Act - Regulation - Section, Description {General Offence}

Provincial Officer:

Name: Tor Rustad
Badge No: 392

Work Unit:
District/Area Office: Ottawa District Office
Date: 2010/04/13

Signature: Tor Rustad

Area Supervisor:

Name: Paul Kehoe

Work Unit:
District/Area Office: Ottawa District Office
Date: 2010/04/13

Signature:

Additional Disclosure Information

Reference Number:	1675-825RA9	**File Storage Number:**	SI OC NE CO3 220
Module:	Incident Reporting	**Module Type:**	CofA/Permit Non-Compliance
Cross Reference:	(doc link)	**Task Link:**	4586-825RDN
Originating Document:	Inspections 6863-7SUJ53	**Created by:**	Tor Rustad
Incident Report Reference Number:		1675-825RA9	
Date Created:	2010/01/28	**Date Completed:**	2010/04/13
Bring Forward Date:		**Bring Forward Reason:**	
Status:	Closed	**Main Document Reference Number:**	1675-825RA9
Program	Water - Ground & Surface	**Activity**	Inspections - PTTW

General Comments

Signing Comments

Abatement Items

ITEM 1
Type : Voluntary Compliance
Compliance Date : 05/31/2010
Attained : Compliance Attained 03/31/2010

Plan to install and calibrate flow meters at the Site to measure water flows. Plan to install totalizers to measure pumping volumes at the Site.

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INCIDENT REPORT

Reference Number:	6617-7BLRJQ	**File Storage Number:**	SI
Module:	Incident Reporting	**Module Type:**	Legislation Non-Compliance
Cross Reference:	(doc link)	**Task Link:**	0854-7BLSBM
Originating Document:		**Created by:**	Jena Leavoy
Incident Report Reference Number:		6617-7BLRJQ	
Date Created:	2008/02/07	**Date Completed:**	2008/11/13
Bring Forward Date:		**Bring Forward Reason:**	
Status:	Closed		
Program	Sewage - Municipal/Private and commercial	**Activity:**	Notifications

Is this an **air emission** (measured or modelled) or **wastewater** (sewage) **discharge exceedance** that will become part of the Environmental Compliance Report?

(legislation, certificate of approval, order, or guideline)

○ Yes ● No ○ To be determined *Click here for Guidance*

Caller or PO Information

Reported By:		**Name of Company:**	
First Name Charlie	**Last Name** Argue	City of Ottawa	
Contact Mailing Address			
Civic Address:			**Unit Identifier:**
Delivery Designator:			**Delivery Identifier:**
Municipality:	**Postal Station:**	**Province/State:**	**Postal Code:**
Ottawa		Ontario	
Telephone Number:	**Extension:**	**Other Number:**	**Email Address:**

Reported By:	

MOE Information

Date & Time Reported to MOE:	2008/01/21 14:01		
Office Receiving Incident Report:	Ottawa District Office		
Incident Info Received By:	Jena Leavoy		
MOE Response:	Planned Field Response	**Site Region:**	Eastern
Date & Time of MOE Arrival at Scene:	2008/01/25 14:00		
Master Incident Report Number:			

SAC Action Class:	
Non-Standard Procedure:	No
ERP Call-out Initiated:	

Client(s)

Client Details

Mattamy (Half Moon Bay) Limited
Mailing Address: 123 Huntmar Dr Kanata, Ottawa, Ontario, Canada, K2S 1H9
Physical Address: 123 Huntmar Dr Kanata, Ottawa, City, Ontario, Canada, K2S 1H9
Telephone: (613)831-3507, FAX: (613)831-9060
Client #: 9982-77GPCB, Client Type: Corporation
Additional Address Info: Kanata

Site(s)

Site Details

Half Moon Bay - Phase 1 Residential Development
Address: Lot: 11 and 12, Concession: 3, Geographic Twp of Nepean, Ottawa, City
District Office: Ottawa
GeoReference: Zone: 17, UTM Easting: 441019, UTM Northing: 5010586, UTM Location Description: Area 1,
Site #: 1972-77GPHG

Incident Information

Incident Summary:	Construction of sewage works without Certificate of Approval *cannot be longer than 60 characters*
Incident Description:	On January 21, 2008, Charlie Argue from City of Ottawa notified the MOE Ottawa District Office of construction of sewage works without Certificate of Approval at the Mattamy Homes Half Moon Bay Subdivision. The City of Ottawa issued a stop order. On January 24 I received a voice message from Charlie Argue - Development Services with the City of Ottawa that the City issued a stop order on Mattamy (Half Moon Bay) Subdivision. He provided information of the location of the subdivision. He indicated that the contractor began excavating for the SWMP. No MOE approval for the construction of the sewage works (SWMP). City staff to complete additional site visit to ensure the contractor and developper are in compliance with the stop order. On January 24, 2008 I sopke to Charlie Argue regarding construction activities at Mattamy (Half Moon Bay) Subdision. Charlie to provide photos taken by City staff of excavation of SWMP and site grading. I indicated that Charles Goulet MOE Ottawa District Engineer has been in contact with Mattamy Homes and that we have a pre-consultation meeting scheduled for next week. City was on site today, still completing site grading, contractor is believed to be Taggart Construction. On January 25, 2008 I completed site visit. Large area excavated where SWMP is planned to be located. Not constructing SWMP at time of site visit. Contractor continuing with site grading on-site. Photos were taken of construction for SWMP and active contruction areas. Taggart Construction vehicles on-site. Signage advertizing the Subdisivion Plan shows SWMP which is located in the same area as where they have begun the construction of the SWMP. The excavation for the SWMP is very large and a great depth. A meeting was held with the developer Mattamy Homes representatives Nisha Wellstein, Susan Murphy and their consultant Steve Pichette from DSEL on January 30/08 at 1:30pm. The purpose of the meeting was to seek clarification on MOE approval requirements for the Mattamy on Half Moon Bay subdivision and related activities. During the meeting a discussion took place on the excavation within the designated SWM pond block. According to the consultant the excavation was carried out as part of the earthworks program for the subdivision. It was clairified that we (MOE) had no objections to the earthwork carried out for grading the general topography of the subdivision but not for trenching/excavating as part of establishing sewage works and drinking water systems when no approval has been issued by MOE for such works. The excavation occurred where sewage

works are ultimately intended and that it currently needs MOE approval. At the meeting Mattamy representatives and their consultant agreed to submit an Application for Approval of Municipal and Private Sewage Works for the Interim Drainage Control System application to the City to forward to MOE for approval by this Friday (February 8, 2008). I indicated that we (MOE) are considering referring the violation of construction of the SWM pond without approval to the Ministry's Investigation and Enforcement Branch for further review.

Based on the site visit findings and discussion at the January 30 meeting it has been determined that construction of a sewage works was undertaking without a Certificate of Approval.

Under the OWRA Section 53(1) No person shall establish, alter, extend or replace new or existing sewage works except under and in accordance with an approval granted by a Director. R.S.O. 1990, c. O.40, s. 53 (1); 2007, c. 12, s. 1 (14). No application has been submitted to date.

On February 12/08 the incident was been referred to IEB for further review.

Certificate of Approval information:
March 18/08 - requested information on the status of the sewage works application for approval. According to Susan Murphy from Mattamy Homes - David Schaffer Engineering Limited (DSEL) on behalf of Mattamy Homes prepared and submitted an application to the City of Ottawa for approval of municipal and private sewage works for the Interim Drainage Control System on February 4, 2008. Mattamy Homes is now preparing the final civil engineering detailed design submission which includes the Todd Pond stormwater management facility and outlet channel. They are anticipating that the civil engineering for Mattamy on Half Moon Bay Phase 1 will be sent out to the MOE at the end of next week (March 27th/28th).

EAAB aknowledged receipt of an application for Approval of Municipal and Private Sewage Works Drainage Control System for Half Moon Bay dated April 16, 2008 and received on April 21, 2008. This application was cancelled at the consultant's request.

The sewage works application was dated May 12, 2008 and received on May 16, 2008. The Certificate of Approval 9531-7EZK5S was issued on June 5, 2008 for sanitary sewers, storm sewers and Geotube® containers or equivalent approved by the District Manager, required for the management and treatment of stormwater, drainage waters and groundwater during construction; receiving flows from the 'drainage collection system' for Half Moon Bay - Phase 1.

The sewage works application was dated May 12, 2008 and received on May 16, 2008. The Certificate of Approval 4522-7FBRPC was issued on June 13, 2008 to construct an interim drainage control pond for storage, including Geotubes pumping system and temporary diversion of the Todd Drain and Clarkes Drain to serve Half Moon Bay Subdivision Phase 1.

The sewage works application was dated May 12, 2008 and received on May 16, 2008. The Certifiate of Approval 6638-7FQSS8 was issued on July 11, 2008 to construct an interim drainage control system for storage, including Geotube® pumping system and temporary diversion of the Todd Drain and Clarkes Drain to serve Half Moon Bay Subdivision - Phase 1. This Certificate of Approval revokes and replaces Certificate(s) of Approval No. 4522-7FBRPC issued on June 13, 2008.

The sewage works application was dated May 14, 2008 and received on May 21, 2008. The Certificate of Approval 4308-7GZQPE was issued on August 21, 2008 for the establishment of interim drainage control system and permanent stormwater management system for Half Moon Bay Subdivision - Phase 1. This Certificate of Approval revokes and replaces Certificate(s) of Approval No. 6638-7FQSS8 issued on July 11, 2008.

Certificates of Approval are in place for the development of Mattamy HMB Phase -1.

IR closed. Document to file.

Attachments, Links & Comments:	

Date & Time of Incident	**Incident Date Confirmation?** Actual 2008/01/21 14:01		
Source Type:		**Sector Type:**	
Nearest Watercourse:		**Watershed Category Code:**	

Environmental Impact:			
Nature of Impact:			
Incident Cause:		**Incident Reason:**	
Damaged Party:	No		

Contaminants Table

Contaminant Name	Code	UN#	Limit	Quantity	[units]	[freq]

Controller of Material:		**Owner of Material:**	
Estimated Clean Up Cost:		**Who Cleaned Up:**	
% Clean Up:	%	**Agencies Involved:**	

Voluntary / Mandatory Abatement

Is there Voluntary Abatement Activity?	○ Yes	● No	○ To be determined

Voluntary / Mandatory Compliance Items

Type	Parent RefNo	Work Summary (may be truncated)	Date	AttainList

IEB 8152-7BQRS2 Date Sent to IEB 2008/02/12

Offence(s)

Suspected Violation(s)/Offence(s):

Act - Regulation - Section,
Description
{General Offence}
1) OWRA - 53 (1),
No person shall establish, alter, extend or replace new or existing sewage works except under an approval granted by a Director.
{107 (1)}

Provincial Officer:

Name: Jena Leavoy
Badge No: 814

Work Unit:
District/Area Office: Ottawa District Office
Date: 2008/09/22

Signature:

Area Supervisor:

Name: Paul Kehoe

Work Unit:

District/Area Office: Ottawa District Office
Date:

Signature:

Ontario

Ministry of the
Environment

IEB Referral

Reference Number:	8152-7BQRS2	**File Storage Number:**	ER-402-08-0010
Module:	IEB Referral	**Module Type:**	Legislation Non-Compliance
Cross Reference:	6617-7BLRJQ (doc link)	**Task Link:**	6125-7BQRSF
Originating Document:	Incident Reporting 6617-7BLRJQ	**Created by:**	Jena Leavoy
Incident Report Reference Number:		6617-7BLRJQ	
Date Created:	2008/02/11	**Date Completed:**	2008/02/13
Bring Forward Date:		**Bring Forward Reason:**	
Status:	Closed - Investigation Case File Created		
Program	Sewage - Municipal/Private and commercial	**Activity:**	Notifications

General

Case Name:	Mattamy (Half Moon Bay) Limited
Case File Number:	6853-7BQRS3

Type of Proceeding:	Part III Provincial/Federal Information		
Referral Type:	Legislation Non-Compliance		
Ticket References:			
Referring Officer (Badge#)/Section:	Jena Leavoy (814)/Eastern Region - Ottawa District Office		
Incident Summary:	Construction of sewage works without Certificate of Approval		
Start Date of Offence:	2008/01/21	**End Date of Offence:**	
Start Time of Offence:	14:01	**End Time of Offence:**	
Report to MOE Date:	2008/01/21	**Report to MOE Time:**	14:01
Date Sent to IEB:	2008/02/12	**Hazard Flag:**	No
Investigator Assigned: (Provincial Officer)	Clinton King	**Date Assigned:**	2008/02/13
ICF Reference Number:	6853-7BQRS3		
Attachments:			

Offence(s)

Suspected Violation(s)/Offence(s):
Act - Regulation - Section, **Description** **{General Offence}** 1) OWRA - - 53 (1), No person shall establish, alter, extend or replace new or existing sewage works except under an approval granted by a Director. {107 (1)}

Client(s)

Client Details
Mattamy (Half Moon Bay) Limited Mailing Address: 123 Huntmar Dr Kanata, Ottawa, Ontario, Canada, K2S 1H9 Physical Address: 123 Huntmar Dr Kanata, Ottawa, City, Ontario, Canada, K2S 1H9 Telephone: (613)831-3507, FAX: (613)831-9060 Client #: 9982-77GPCB, Client Type: Corporation

Additional Address Info: Kanata

Site(s)

Site Details
Lot 11 and 12, Concession 3, Former Township of Nepean, now City of Ottawa<UNOFFICIAL> Address: Lot: , Part: , Ottawa, City, District Office: Ottawa

Ontario

Ministry of the Environment
Ministère de l'Environnement

AMENDED PERMIT TO TAKE WATER
Surface and Ground Water
NUMBER 7114-7E5M23

Pursuant to Section 34 of the Ontario Water Resources Act, R.S.O. 1990 this Permit To Take Water is hereby issued to:

Mattamy (Half Moon Bay) Limited
123 Huntmar Drive
Kanata, Ontario
K2S 1B9
Canada

For the water taking from: Area 3, Area 1, Area 2, Retention Pond

Located at: Lot 11 and 12, Concession 3, Geographic Twp of Nepean
Ottawa

For the purposes of this Permit, and the terms and conditions specified below, the following definitions apply:

DEFINITIONS

(a) "Director" means any person appointed in writing as a Director pursuant to section 5 of the OWRA for the purposes of section 34, OWRA.

(b) "Provincial Officer" means any person designated in writing by the Minister as a Provincial Officer pursuant to section 5 of the OWRA.

(c) "Ministry" means Ontario Ministry of the Environment.

(d) "District Office" means the Ottawa District Office.

(e) "Permit" means this Permit to Take Water No. 7114-7E5M23 including its Schedules, if any, issued in accordance with Section 34 of the OWRA.

(f) "Permit Holder" means Mattamy (Half Moon Bay) Limited.

(g) "OWRA " means the *Ontario Water Resources Act,* R.S.O. 1990, c. O. 40, as amended.

You are hereby notified that this Permit is issued subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. Compliance with Permit

1.1 Except where modified by this Permit, the water taking shall be in accordance with the application for this Permit To Take Water, dated April 21, 2008 and signed by Frank Cairo, and all Schedules included in this Permit.

1.2 The Permit Holder shall ensure that any person authorized by the Permit Holder to take water under this Permit is provided with a copy of this Permit and shall take all reasonable measures to ensure that any such person complies with the conditions of this Permit.

1.3 Any person authorized by the Permit Holder to take water under this Permit shall comply with the conditions of this Permit.

1.4 This Permit is not transferable to another person.

1.5 This Permit provides the Permit Holder with permission to take water in accordance with the conditions of this Permit, up to the date of the expiry of this Permit. This Permit does not constitute a legal right, vested or otherwise, to a water allocation, and the issuance of this Permit does not guarantee that, upon its expiry, it will be renewed.

1.6 The Permit Holder shall keep this Permit available at all times at or near the site of the taking, and shall produce this Permit immediately for inspection by a Provincial Officer upon his or her request.

1.7 The Permit Holder shall report any changes of address to the Director within thirty days of any such change. The Permit Holder shall report any change of ownership of the property for which this Permit is issued within thirty days of any such change. A change in ownership in the property shall cause this Permit to be cancelled.

2. General Conditions and Interpretation

2.1 Inspections

The Permit Holder must forthwith, upon presentation of credentials, permit a Provincial Officer to carry out any and all inspections authorized by the OWRA, the *Environmental Protection Act* , R.S.O. 1990, the *Pesticides Act* , R.S.O. 1990, or the *Safe Drinking Water Act,* S. O. 2002.

2.2 Other Approvals

The issuance of, and compliance with this Permit, does not:

(a) relieve the Permit Holder or any other person from any obligation to comply with any other applicable legal requirements, including the provisions of the *Ontario Water Resources Act* , and the *Environmental Protection Act* , and any regulations made thereunder; or

(b) limit in any way any authority of the Ministry, a Director, or a Provincial Officer, including the authority to require certain steps be taken or to require the Permit Holder to furnish any further information related to this Permit.

2.3 Information

The receipt of any information by the Ministry, the failure of the Ministry to take any action or require any person to take any action in relation to the information, or the failure of a Provincial Officer to prosecute any person in relation to the information, shall not be construed as:

(a) an approval, waiver or justification by the Ministry of any act or omission of any person that contravenes this Permit or other legal requirement; or

(b) acceptance by the Ministry of the information's completeness or accuracy.

2.4 Rights of Action

The issuance of, and compliance with this Permit shall not be construed as precluding or limiting any legal claims or rights of action that any person, including the Crown in right of Ontario or any agency thereof, has or may have against the Permit Holder, its officers, employees, agents, and contractors.

2.5 Severability

The requirements of this Permit are severable. If any requirements of this Permit, or the application of any requirements of this Permit to any circumstance, is held invalid or unenforceable, the application of such requirements to other circumstances and the remainder of this Permit shall not be affected thereby.

2.6 Conflicts

Where there is a conflict between a provision of any submitted document referred to in this Permit, including its Schedules, and the conditions of this Permit, the conditions in this Permit shall take precedence.

3. Water Takings Authorized by This Permit

3.1 **Expiry**

This Permit expires on **January 31, 2009**. No water shall be taken under authority of this Permit after the expiry date.

3.2 Amounts of Taking Permitted

The Permit Holder shall only take water from the source, during the periods and at the rates and amounts of taking specified in Table A. Water takings are authorized only for the purposes specified in Table A.

Table A

	Source Name / Description:	Source: Type:	Taking Specific Purpose:	Taking Major Category:	Max. Taken per Minute (litres):	Max. Num. of Hrs Taken per Day:	Max. Taken per Day (litres):	Max. Num. of Days Taken per Year:	Zone/ Easting/ Northing:
1	Surface Water Runoff At Area 3	Pond Dugout	Other - Construction	Construction	7,000	24	10,080,000	270	18 441019 5010586
2	Area 1	Well Dug	Construction	Dewatering Construction	213	24	306,720	243	18 441019 5010586
3	Area 2	Well Dug	Construction	Dewatering Construction	968	24	1,393,920	182	18 441450 5010994
4	Retention Pond	Pond Dugout	Construction	Dewatering Construction	2,000	16	2,688,000	270	18 441019 5010586
						Total Taking:	11,780,640		

3.3 Notwithstanding Table A no water shall be discharged from the Retention Pond if concentrations of Total Suspended Solids exceed a concentration of 25 mg/L in any one sample.

4. Monitoring

4.1 The Permit Holder shall maintain a record of all water takings. This record shall include the dates and times of water takings, the rates of pumping, and an estimated calculation of the total amounts of water pumped per day for each day that water is taken under the authorization of this Permit. A separate record shall be maintained for each source. The Permit Holder shall keep all required records up to date and available at or near the site of the taking and shall produce the records immediately for inspection by a Provincial Officer upon request.

5. Impacts of the Water Taking

5.1 Notification

The Permit Holder shall immediately notify the local District Office of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint. The Permit Holder shall immediately notify the local District Office if the taking of water is observed to have any significant impact on the

surrounding waters. After hours, calls shall be directed to the Ministry's Spills Action Centre at 1-800-268-6060.

5.2 For Surface-Water Takings

The taking of water (including the taking of water into storage and the subsequent or simultaneous withdrawal from storage) shall be carried out in such a manner that streamflow is not stopped and is not reduced to a rate that will cause interference with downstream uses of water or with the natural functions of the stream.

For Groundwater Takings

If the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to initial issuance of a Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of doing so.

If permanent interference is caused by the water taking, the Permit Holder shall restore the water supplies of those permanently affected.

5.3 The Permit Holder shall ensure that all water taken under the authority of this Permit from Areas 1, Area 2 and Area 3 (Area 3 is the total area encompassed by Area 1 and Area 2 as per Drawing 2 in Schedule A) is discharged to a temporary siltation retention pond. The temporary siltation retention pond and associated sediment control mechanisms must ensure that the discharge of water to the Jock River does not exceed a concentration of 25 mg/L Total Suspended Solids.

5.4 The Permit Holder shall monitor the discharge to the Jock River at the outlet of the temporary Retention Pond on a weekly basis (Monday to Sunday) during weeks when discharge to the Jock River occurs for Total Suspended Solids, Temperature and Total Phosphorus.

6. Director May Amend Permit

The Director may amend this Permit by letter requiring the Permit Holder to suspend or reduce the taking to an amount or threshold specified by the Director in the letter. The suspension or reduction in taking shall be effective immediately and may be revoked at any time upon notification by the Director. This condition does not affect your right to appeal the suspension or reduction in taking to the Environmental Review Tribunal under the *Ontario Water Resources Act* , Section 100 (4).

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is included to ensure that the conditions in this Permit are complied with and can be enforced.

2. Condition 2 is included to clarify the legal interpretation of aspects of this Permit.

3. Conditions 3 through 6 are included to protect the quality of the natural environment so as to safeguard the ecosystem and human health and foster efficient use and conservation of waters. These conditions allow for the beneficial use of waters while ensuring the fair sharing, conservation and sustainable use of the waters of Ontario. The conditions also specify the water takings that are authorized by this Permit and the scope of this Permit.

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, you may by written notice served upon me, the Environmental Review Tribunal and the Environmental Commissioner, ***Environmental Bill of Rights****, R.S.O. 1993, Chapter 28, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 101 of the Ontario Water Resources Act, as amended provides that the Notice requiring a hearing shall state:*

1. The portions of the Permit or each term or condition in the Permit in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

In addition to these legal requirements, the Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Permit to Take Water number;
6. The date of the Permit to Take Water;
7. The name of the Director;
8. The municipality within which the works are located;

This notice must be served upon:

The Secretary
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto ON
M5G 1E5

AND

The Environmental Commissioner
1075 Bay Street
6th Floor, Suite 605
Toronto, Ontario M5S 2W5

AND

The Director, Section 34
Ministry of the Environment
1259 Gardiners Rd, PO Box 22032
Kingston, ON
K7P 3J6

Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal:

by telephone at (416) 314-4600 ***by fax at (416) 314-4506*** ***by e-mail at www.ert.gov.on.ca***

This instrument is subject to Section 38 of the ***Environmental Bill of Rights*** *that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek to appeal for 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry, you can determine when the leave to appeal period ends.*

This Permit cancels and replaces Permit Number 7124-79CQG7, issued on 2008/01/17.

Dated at Kingston this 1st day of May, 2008.

Peter Taylor

Peter Taylor
Director, Section 34
Ontario Water Resources Act , R.S.O. 1990

Schedule A

This Schedule "A" forms part of Permit To Take Water 7114-7E5M23, dated May 1, 2008.

Drawing 2 from the Report entitled "groundwater Management Plan. Half Moon Bay - Phase 1 Residential Development, Ottawa, Ontario" completed by Groundwater and Environmental Management Services Inc. and dated September 27,2007.

Ontario

Ministry of the Environment
Ministère de l'Environnement

CERTIFICATE OF APPROVAL
MUNICIPAL DRINKING WATER SYSTEMS
NUMBER 8402-7JDKLT
Issue Date: September 12, 2008

McNeil Farm Limited
225 Metcalfe St
Ottawa, Ontario
K2P 1P9

Site Location: Half Moon Bay/Taggart Subdivision
Lots 11, Concession 2, Rideau Front, Ward 3, formerly City of Nepean
City of Ottawa

Pursuant to the Safe Drinking Water Act, 2002, S.O. 2002, c. 32, and the regulations made thereunder and subject to the limitations thereof, this approval is issued under Part V of the Safe Drinking Water Act, 2002, S.O. 2002, c. 32 to:

construct watermains in the City of Ottawa, on Abetti Ridge, Espin Heights, Half Moon Bay (from Espin Heights to Tucana Way), and Tucana Way (from the northern limit to the southern property line);

all in accordance with the application from McNeil Farm Limited, dated August 25, 2008, including final plans and specifications prepared by IBI Group.

All or part of this decision may be reviewable in accordance with the provisions of Part X of the SDWA. In accordance with Section 129(1) of the Safe Drinking Water Act, Chapter 32 Statutes of Ontario, 2002, as amended, you may by written notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this notice, require a hearing by the Tribunal. Section 129(2) sets out a procedure upon which the 15 days may be extended by the Tribunal. Section 129(3) of the Safe Drinking Water Act, Chapter 32 Statutes of Ontario, 2002, provides that the Notice requiring the hearing shall state:

1. The aspect of the decision, including the portion of the permit, licence, approval, order or notice of administrative penalty in respect of which the hearing is required; and
2. The grounds for review to be relied on by the person at the hearing.

Except with leave of the Tribunal, a person requiring a hearing in relation to a reviewable decision is not entitled to,
(a) a review of an aspect of the decision other than that stated in the notice requiring the hearing; or
(b) a review of the decision other than on the grounds stated in the notice

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Certificate of Approval number;
6. The date of the Certificate of Approval;
7. The name of the Director;
8. The municipality within which the works are located;

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto, Ontario
M5G 1E5

AND

The Director
Part V, *Safe Drinking Water Act*
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or www.ert.gov.on.ca**

The above noted water works are approved under Part V of the Safe Drinking Water Act

DATED AT TORONTO this 12th day of September, 2008

Zafar Bhatti

Zafar Bhatti, P.Eng.
Director
Part V *of the Safe Drinking Water Act, 2002*

YB/
c: District Manager, MOE Ottawa District Office
Pierre Page, City Clerk, City of Ottawa
J.Taracha, Sr.Engineer, Development Services, City of Ottawa
Terry Brule, IBI Group

Ontario

Ministry of the Environment
Ministère de l'Environnement

AMENDED CERTIFICATE OF APPROVAL
MUNICIPAL AND PRIVATE SEWAGE WORKS
NUMBER 8279-7XBM9P
Issue Date: November 9, 2009

Mattamy (Half Moon Bay) Limited
123 Huntmar Drive
Kanata, Ontario K2S 1B9

Site Location: Mattamy (Half Moon Bay) Phases 1, 2 & 3
Geographic Township of Nepean
Part of Lot 10 and 11, Concession 3,
City of Ottawa, Ontario

You have applied in accordance with Section 53 of the Ontario Water Resources Act for approval of:

the establishment of interim drainage control system and permanent stormwater management system for Half Moon Bay Subdivision - Phase 1, 2 and 3 development in the City of Ottawa with a drainage area of approximately 92 hectares to provide Enhanced Level water quality protection, draining into a rock lined channel which in turn discharges into the Jock River, and comprising the following *Works* :

Interim Drainage Control System

- temporary diversion of the East Clark Drain to the West Clark Drain, silt fence barrier system and straw bale barrier system during construction of the subdivision;

Permanent Stormwater Management System

- Todd Pond Stormwater Management Facility located on the open block at the northeast corner of Cambrian Road and River Mist Road. This is an extended detention pond with three sediment forebays and a main stormwater detention cell, having a total permanent pool volume of 23,710 m^3, an extended detention storage volume of 27,270 m^3 for sediment control, complete with inlet pipes and headwalls, emergency spillway, outflow control manhole with orifice, outfall pipe, plunge pool and outflow channel discharging the Jock River. This pond services the Half Moon Bay development with the following approximate areas:

    - Phase 1 - 37 ha
    - Phase 2 - 4.8 ha
    - Phase 3 - 2.74 ha

- A remaining area of 47.76 ha (not yet developed)

All in accordance with the following submitted supporting documents:

1. Application for Approval of Municipal and Private Sewage Works dated May 16, 2008 for the Interim Drainage Control System for the Half Moon Bay Subdivision - Phase 1 and all supporting documentation and information associated with the application including Stormwater Management Report, Erosion Control Plan and specifications prepared by David Schaeffer Engineering Ltd.

2. Application for Approval of Municipal and Private Sewage Works dated May 21 for Stormwater Management Works for Half Moon Bay Subdivision - Phase 1 submitted by Guy Bourgon of City of Ottawa as a direct submission, including Design Brief for Todd Pond Half Moon Bay Subdivision prepared by David Schaeffer Engineering Limited and engineering plans.

3. The procedure for the management, treatment and disposal of storm water, drainage water and ground water during construction as delineated in the letter dated May 29, 2008 to Charles Goulet, District Engineer of MOE Ottawa District Office and published as electronic file "3798.pdf" and co-signed by Frank Cairo, Mattamy Homes Ottawa and Jeff Mulcock, Taggart Construction Ltd.

4. Revised Stormwater Management Report for the Phase 1 of the Half Moon Bay Development (Barrhaven South) prepared by J.F. Sabourin and Associates Inc. and updated ICD design data submitted by Stephen Pichette of David Schaeffer Engineering Limited on July 09 and July 11, 2008 respectively.

5. Application for Approval of Municipal and Private Sewage Works dated June 12, 2009 for the Half Moon Bay Subdivision - Phase 2 and all supporting documentation and information associated with the application.

6. Servicing Brief for the Half Moon Bay Subdivision Phase 2, for Mattamy Homes in the City of Ottawa, prepared by David Schaeffer Engineering Ltd. dated May 5, 2009.

7. Letter from Jennifer Ailey, P.Eng., of David Schaeffer Engineering Ltd., dated June 10, 2009, with the description of the proposed sewage works, engineering estimates and background information.

8. Revised engineering drawing for the diversion ditch from the East Clarke to West Clarke Drain, submitted by DSEL David Shaeffer Engineering Ltd., dated August 5, 2009.

9. Email from Jennifer Ailey, P.Eng., of David Schaeffer Engineering Ltd., dated November 4, 2009, with the breakdown of serviced area by the Todd Pond.

For the purpose of this Certificate of Approval and the terms and conditions specified below, the following definitions apply:

"*Certificate* " means this entire certificate of approval document, issued in accordance with Section 53 of the Ontario Water Resources Act, and includes any schedules;

"*Director* " means any *Ministry* employee appointed by the Minister pursuant to section 5 of the Ontario Water Resources Act;

"*District Manager* " means the District Manager of the Ottawa District Office of the *Ministry* ;

"*Ministry* " means the Ontario Ministry of the Environment;

"*Owner* " means Mattamy (Half Moon Bay) Limited and includes its successors and assignees;

"*Works* " means the sewage works described in the *Owner* 's application, this *Certificate* and in the supporting documentation referred to herein, to the extent approved by this *Certificate* .

You are hereby notified that this approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL PROVISIONS

(1) The *Owner* shall ensure that any person authorized to carry out work on or operate any aspect of the *Works* is notified of this *Certificate* and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

(2) Except as otherwise provided by these Conditions, the *Owner* shall design, build, install, operate and maintain the *Works* in accordance with the description given in this *Certificate* , the application for approval of the works and the submitted supporting documents and plans and specifications as listed in this *Certificate* .

(3) Where there is a conflict between a provision of any submitted document referred to in this *Certificate* and the Conditions of this *Certificate* , the Conditions in this *Certificate* shall take precedence, and where there is a conflict between the listed submitted documents, the document bearing the most recent date shall prevail.

(4) Where there is a conflict between the listed submitted documents, and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.

(5) The requirements of this *Certificate* are severable. If any requirement of this *Certificate* , or the application of any requirement of this *Certificate* to any circumstance, is held invalid or unenforceable, the application of such requirement to other circumstances and the remainder of this certificate shall not be affected thereby.

(6) The approval granted by this *Certificate* is based upon a review of the *Works* in the context of its effect on the environment, its process performance and general principles of wastewater engineering. The review did not include a consideration of the architectural, mechanical, structural components and minor details of the *Works* or the compliance with other regulatory agency requirements except to the extent necessary to review the *Works* .

2. EXPIRY OF APPROVAL

The approval issued by this *Certificate* will cease to apply to those parts of the *Works* which have not been constructed within five (5) years of the date of this *Certificate* .

3. CHANGE OF OWNER

The *Owner* shall notify the *District Manager* and the *Director* , in writing, of any of the following changes within thirty (30) days of the change occurring:

(a) change of *Owner* ;

(b) change of address of the *Owner* ;

(c) change of partners where the *Owner* is or at any time becomes a partnership, and a copy of the most recent declaration filed under the Business Names Act, R.S.O. 1990, c.B17 shall be included in the notification to the *District Manager* ; and

(d) change of name of the corporation where the *Owner* is or at any time becomes a corporation, and a copy of the most current information filed under the Corporations Information Act, R.S.O. 1990, c. C39 shall be included in the notification to the *District Manager* .

4. EFFLUENT OBJECTIVES

(1) The *Owner* shall use best efforts to design, construct and operate the *Works* with the objective that the concentrations of the materials named below as effluent parameters are not exceeded in the effluent from the *Works* .

Table 1 - Effluent Objectives

Effluent Parameter	**Concentration Objective** (milligrams per litre unless otherwise indicated)
Total Suspended Solids	25

5. OPERATION AND MAINTENANCE.

(1) The *Owner* shall ensure that the design minimum liquid retention volumes are maintained at all times.

(2) The *Owner* shall inspect the *Works* at least once a year and, if necessary, clean and maintain the *Works* to prevent the excessive buildup of sediments and vegetation.

(3) The *Owner* shall maintain a logbook to record the results of these inspections and any cleaning

and maintenance operations undertaken, and shall keep the logbook at the Ottawa corporate office of the *Owner* for inspection by the *Ministry* . The logbook shall include the following:

(a) the name of the *Works* ; and

(b) the date and results of each inspection, maintenance and cleaning, including an estimate of the quantity of any materials removed.

6. MONITORING AND RECORDING

The *Owner* shall , upon the issuance of this *Certificate* , carry out the following monitoring program:

(1) All samples and measurements taken for the purposes of this *Certificate* are to be taken at a time and in a location characteristic of the quality and quantity of the effluent streams over the time period being monitored.

(2) Samples shall be collected weekly commencing no later than May 15 and ending not earlier than September 15 of each calendar year and analyzed for each parameter listed in Table 2:

Table 2 - Effluent Monitoring Sample point: at the outlet of the Todd Pond.	
Frequency	Weekly
Sample Type	Composite
Parameters	Total Suspended Solids

(3) The methods and protocols for sampling, analysis, and recording shall conform, in order of precedence, to the methods and protocols specified in the following:

(a) the *Ministry* 's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" (August 1994), ISBN 0-7778-1880-9, as amended from time to time by more recently published editions; and

(b) the publication "Standard Methods for the Examination of Water and Wastewater" (21st edition), as amended from time to time by more recently published editions.

(4) The measurement frequencies specified in subsection (2) in respect to any parameter are minimum requirements which may, after eighty percent build up of the entire development, in accordance with this Condition, be modified by the *District Manager* in writing.

(5) The *Owner* shall retain for a minimum of five (5) years from the date of their creation, all records and information related to or resulting from the operation and maintenance activities and effluent quality monitoring program required by this *Certificate* at the Ottawa corporate office of the *Owner* for inspection by *Ministry* staff.

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is imposed to ensure that the Works are built and operated in the manner in which they were described for review and upon which approval was granted. This condition is also included to emphasize the precedence of Conditions in the Certificate and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review.

2. Condition 2 is included to ensure that, when the *Works* are constructed, the *Works* will meet the standards that apply at the time of construction to ensure the ongoing protection of the environment.

3. Condition 3 is included to ensure that the *Ministry* records are kept accurate and current with respect to the approved works and to ensure that subsequent owners of the *Works* are made aware of the *Certificate* and continue to operate the *Works* in compliance with it.

4. Condition 4 is imposed to establish effluent quality objectives which the *Owner* is obligated to use best efforts to strive towards on an ongoing basis. These objectives are to be used as a mechanism to trigger corrective action proactively and voluntarily for the protection of water quality, fish and other aquatic life in the receiving water body before environmental impairment occurs.

5. Condition 5 is included to require that the *Works* be properly operated and maintained such that the environment is protected.

6. Condition 6 is included to ensure that relevant effluent parameters are monitored during construction and on an ongoing basis after construction to allow for an evaluation of the performance of the *Works* , to provide an overview of the treatment performance and adequacy of the *Works* , and to ensure that the *Ministry* is made aware of problems as they arise so that the *Ministry* can work with the *Owner* in resolving the problems in a timely manner and that all records are retained for a sufficient time period to adequately evaluate the performance and long-term operation and maintenance of the *Works* .

This Certificate of Approval revokes and replaces Certificate(s) of Approval No. 4308-7GZQPE issued on August 21, 2008.

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, as amended, you may by written notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 101 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, provides that the Notice requiring the hearing shall state:

1. The portions of the approval or each term or condition in the approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;

5. The Certificate of Approval number;
6. The date of the Certificate of Approval;
7. The name of the Director;
8. The municipality within which the works are located;

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto, Ontario
M5G 1E5

AND

The Director
Section 53, *Ontario Water Resources Act*
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or www.ert.gov.on.ca**

The above noted sewage works are approved under Section 53 of the Ontario Water Resources Act.

DATED AT TORONTO this 9th day of November, 2009

Mansoor Mahmood, P.Eng.
Director
Section 53, *Ontario Water Resources Act*

ET/
c: District Manager, MOE Ottawa District Office
Jennifer Ailey, P.Eng., David Schaeffer Engineering Ltd.

Ontario

Ministry of the Environment
Ministère de l'Environnement

CERTIFICATE OF APPROVAL
MUNICIPAL AND PRIVATE SEWAGE WORKS

NUMBER 9696-8ASHGQ
Issue Date: November 12, 2010

Mattamy (Half Moon Bay) Limited
123 Huntmar Drive
Kanata, Ontario
K2S 1B9

Site Location: Half Moon Bay Subdivision, Phase 6
Lots 11 and 12, Concession 3, Nepean
City of Ottawa, Ontario

You have applied in accordance with Section 53 of the Ontario Water Resources Act for approval of:

storm sewers and ***sanitary sewers*** to be constructed in the City of Ottawa, on Seeley's Bay Street, Burritts Rapids Place, Watercolours Way, Freshwater Way, Dovetail Heights, and River Run Avenue;

all in accordance with the application from Mattamy (Half Moon Bay) Limited, dated **September 15, 2010**, including final plans and specifications prepared by David Schaeffer Engineering Limited.

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, as amended, you may by written notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 101 of the Ontario Water Resources Act , R.S.O. 1990, Chapter 0.40, provides that the Notice requiring the hearing shall state:

1. The portions of the approval or each term or condition in the approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Certificate of Approval number;
6. The date of the Certificate of Approval;
7. The name of the Director;
8. The municipality within which the works are located;

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto, Ontario
M5G 1E5

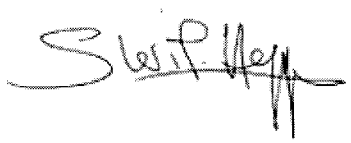
AND

The Director
Section 53, *Ontario Water Resources Act*
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or www.ert.gov.on.ca**

The above noted sewage works are approved under Section 53 of the Ontario Water Resources Act.

DATED AT TORONTO this 12th day of November, 2010



Sherif Hegazy, P.Eng.
Director
Section 53, *Ontario Water Resources Act*

MW/

c: District Manager, MOE Ottawa
M. R. O'Connor, City Clerk, City of Ottawa (File Number D07-16-07-0002)
J. Ailey, P. Eng., David Schaeffer Engineering Ltd.
G. Bourgon, Program Manager, Development Review, City of Ottawa
C. White, Program Manager, Development Review, City of Ottawa
L. Carkner, Program Manager, Infrastructure Services, City of Ottawa

Ontario

Ministry of the Environment and Climate Change
Ministère de l'Environnement et de l'Action en matière de changement climatique

ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 3029-ACNJPT
Issue Date: August 12, 2016

Mattamy (Half Moon Bay) Limited
50 Hines Road, Unit 100
Kanata, Ontario
K2K 2M5

Site Location: Half Moon Bay North Phases 4 and 7
Part of Lots 10, 11 and 12, Concession 3 (Rideau Front)
City of Ottawa

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

storm and sanitary sewers to be constructed in the City of Ottawa, on River Run Avenue (from 0+031.6 to 0+167.9), Burbot Street (from 0-001.6 to 0+351.5), Brassy Minnow Crescent (from 0+004.2 to 0+292.7), Pumpkinseed Crescent (from 0+002.1 to 0+175.4), Riverboat Heights (from 0+023.8 to 0+138.7), Logperch Circle (from 0+001.2 to 0+421.9), Pearl Dave Crescent (from 0-002.0 to 0+370.9), Finescale Way (from 0+000.0 to 132.1), Millars Sound Way (from 0-000.6 to 0+287.3), River Landing Avenue (from 0+011.7 to 0+160.0), Block 203 (from 0-002.3 to 0+070.9), Block 204 (from 0+015.5 to 0+090.5), Block 205 (from 0+000.0 to 0+156.3), Half Moon Bay Road (from 0+014.7 to 0+234.4), Greenbank Storm Pond Inlet (0-000.4 to 0+013.4), Greenbank Storm Pond Outlet (from 0+000.0 to 0+030.0);

all in accordance with the application from Mattamy (Half Moon Bay) Limited, dated July 28, 2016, including final plans and specifications prepared by David Schaeffer Engineering Ltd..

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

1. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

3. The name of the appellant;

4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

AND

The Director appointed for the purposes of
Part II.1 of the Environmental Protection Act
Ministry of the Environment and
Climate Change
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

* **Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 326-5370 or www.ert.gov.on.ca**

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 12th day of August, 2016

Gregory Zimmer, P.Eng.
Director
appointed for the purposes of Part II.1 of the
Environmental Protection Act

AF/

c: District Manager, MOECC Ottawa
M. Rick O'Connor, City Clerk, City of Ottawa
Jeff Shillington, Project Manger, Development Review City of Ottawa (File No. D07-16-13-0019)
Linda Carkner, Program Manager, Infrastructure Services, City of Ottawa
Jennifer Ailey, P. Eng., David Schaeffer Engineering Limited (DSEL)

Ontario

Ministry of the Environment and Climate Change
Ministère de l'Environnement et de l'Action en matière de changement climatique

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 6068-AWUPL5
Issue Date: April 11, 2018

Mattamy (Half Moon Bay) Limited
50 Hines Road, Suite 100
Kanata, Ontario
K2K 2M5

Site Location: Half Moon Bay West – Clarke Stormwater Management Pond
Part of Lot 10, 11, 12, Concession 3 (Rideau Front)
City of Ottawa, Ontario

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

An amendment to the interim stormwater management system with the replacement of the existing sediment control pond, temporary drainage swales and erosion and sediment control measures with the establishment of the proposed wet pond and outlet channel serving Half Moon Bay West, Half Moon Bay North, Meadows in Half Moon Bay and Half Moon Bay South in Barrhaven South, located in the vicinity of Cambrian Road, east of Borrisokane Road (formerly Cedarview Road), for the collection, transmission, treatment and disposal of stormwater run-off from a total catchment area of approximately 123.41 ha, within the Jock River watershed, in the City of Ottawa providing Enhanced Level water quality control, consisting of the following:

Proposed Works:

one (1) wet pond, located within the Half Moon Bay West lands, serving a total drainage area of 123.41 hectares and having a total length of 180 m and a total width of 160 m, consisting of:

- two (2) riprap-lined sediment forebays that have a minimum length-to-width ratio of 2:1, a depth of 2.0 m, and are separated from the main cell via a berm;
- a main cell that has a minimum permanent storage volume of 22400 m3, a minimum active storage volume of 6803 m3, a maximum permanent pool depth of 3.0 m and a maximum available depth of 5.543 m, including a freeboard of 0.3 m;

- an inlet structure consisting of a 3000 mm diameter storm inlet pipe and a concrete headwall;
- an inlet structure consisting of a 1800 mm diameter storm inlet pipe, a 2700 mm diameter storm inlet pipe and a concrete headwall;
- two (2) overland flow routes with 5 m bottom width and erosion control mat located on the east and west side of the pond;
- a low flow outlet structure comprised of a 1350 mm diameter storm outlet pipe equipped with a 250 mm diameter orifice plate and a 700 mm long weir, allowing a maximum discharge of 1389 L/s under the 100-year storm event to a proposed outlet channel and the Jock River located north of the pond;
- a high flow outlet structure consisting of a 50 m long broad crested weir, spillway and scour pool. Outlet structure to include toe wall and concrete block surface treatment. Designed to convey flows of 0.469 m3/s (2 year event) to 17.946 m3/s (100 year event) and to function as an emergency overflow.

AND

- **an outlet channel**, 340 m long, with 15.0 m bottom width, 0.1% longitudinal slope and 3:1 side slopes, complete with a 9000 mm x 2400 mm culvert crossing under Street 18.

Previous Works:

Interim West Clarke Drain realignment (catchment area approximately 109 hectares):

- construction of a new ditch to redirect the West Clarke Drain flows consisting of:
- a ditch approximately 1.0 m deep with a 4.0 m wide bottom and 3:1 side slopes, with approximately 595 m at a slope of 0.12% and approximately 572.5 m at a slope of 0.10%, designed to convey the 100-year flows of 4.62 m^3/s and 4.85 m^3/s respectively;

including erosion/sedimentation control measures during construction and all other controls and appurtenances essential for the proper operation of the aforementioned Works;

all in accordance with the submitted application and supporting documents listed in Schedule "A" forming part of this approval.

For the purpose of this environmental compliance approval, the following definitions apply:

1. "*Approval* " means this entire document and any schedules attached to it, and the application;

2. "*Director* " means a person appointed by the Minister pursuant to section 5 of the *EPA* for the purposes of Part II.1 of the *EPA* ;

3. "*District Manager* " means the District Manager of the appropriate local District Office of the *Ministry* , where the *Works* are geographically located;}

4. "*EPA* " means the *Environmental Protection Act,* R.S.O. 1990, c.E.19, as amended;

5. "*Equivalent* " means a substituted oil and grit separator that meets the required quality and performance standards of the approved oil and grit separator;

6. "*Interim Works* " means the interim stormwater management works, described in this *Approval* and that are to be used for short-term purposes only in accordance with this *Approval,* until otherwise approval for an extension of this period has been granted;

7. "*Ministry* " means the ministry of the government of Ontario responsible for the *EPA* and *OWRA* and includes all officials, employees or other persons acting on its behalf;

8. "*Owner* " means Mattamy (Half Moon Bay) Limited, and includes its successors and assignees;

9. "*OWRA* " means the *Ontario Water Resources Act, R.S.O. 1990, c. O.40* , as amended;

10. "*Previous Works* " means those portions of the sewage Works previously approved under an Approval;

11. "*Proposed Works* " means the sewage works described in the *Owner's* application, this *Approval* , to the extent approved by this *Approval* ;

12. "*Works* " means the sewage Works described in the *Owner's* application, and this *Approval* , and includes *Proposed Works* and *Previous Work* .

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL CONDITIONS

1. The *Owner* shall ensure that any person authorized to carry out work on or operate any aspect of the *Works* is notified of this *Approval* and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

2. Except as otherwise provided by these Conditions, the *Owner* shall design, build, install, operate and maintain the *Works* in accordance with the description given in this *Approval* , and the application for approval of the *Works* .

3. Where there is a conflict between a provision of any document in the schedule referred to in this *Approval* and the conditions of this *Approval* , the conditions in this *Approval* shall take precedence, and where there is a conflict between the documents in the schedule, the document bearing the most recent date shall prevail.

4. Where there is a conflict between the documents listed in Schedule "A" and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.

5. The conditions of this *Approval* are severable. If any condition of this *Approval* , or the application of any requirement of this *Approval* to any circumstance, is held invalid or unenforceable, the application of such condition to other circumstances and the remainder of this *Approval* shall not be affected thereby.

6. The issuance of, and compliance with the conditions of, this *Approval* does not:

   a. relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement, including, but not limited to, the obligation to obtain approval from the local conservation authority/MNR necessary to construct or operate the sewage works; or

   b. limit in any way the authority of the *Ministry* to require certain steps be taken to require the *Owner* to furnish any further information related to compliance with this *Approval* .

2. EXPIRY OF APPROVAL

1. This *Approval* will cease to apply to those parts of the Work which have not been constructed within five (5) years of the date of this *Approval* .

2. In the event that completion and commissioning of any portion of the *Works* is anticipated to be delayed beyond the specified expiry period, the *Owner* shall submit an application of extension to the expiry period, at least twelve (12) months prior to the end of the period. The application for extension shall include the reason(s) for the delay, whether there is any design change(s) and a review of whether the standards applicable at the time of Approval of the *Works* are still applicable at the time of request for extension, to ensure the ongoing protection of the environment.

3. This Approval to the Interim Works shall become null and void on March 21, 2023.

3. CHANGE OF OWNER

1. The *Owner* shall notify the *District Manager* and the *Director* , in writing, of any of the following changes within thirty (30) days of the change occurring:

   a. change of Owner;

   b. change of address of the *Owner* ;

   c. change of partners where the *Owner* is or at any time becomes a partnership, and a copy of the most recent declaration filed under the *Business Names Act* , R.S.O. 1990, c.B17 shall be included in the notification to the *District Manager* ; or

   d. change of name of the corporation where the *Owner* is or at any time becomes a corporation, and a copy of the most current information filed under the *Corporations Information Act* , R.S.O. 1990, c. C39 shall be included in the notification to the *District Manager* .

2. In the event of any change in ownership of the *Works* , other than a change to a successor municipality, the *Owner* shall notify in writing the succeeding owner of the existence of this *Approval* , and a copy of such notice shall be forwarded to the *District Manager* and the *Director* .

3. The *Owner* shall ensure that all communications made pursuant to this condition refer to the number at the top of this *Approval* .

4. Notwithstanding any other requirements in this *Approval* , upon transfer of the ownership or assumption of the *Works* to a municipality if applicable, any reference to the *District Manager* shall be replaced with the *Water Supervisor* .

4. OPERATION AND MAINTENANCE

1. If applicable, any proposed storm sewers or other stormwater conveyance in this *Approval* can be constructed but not operated until the proposed stormwater management facilities in this *Approval* or any other *Approval* that are designed to service the storm sewers or other stormwater conveyance are in operation.

2. The *Owner* shall make all necessary investigations, take all necessary steps and obtain all necessary approvals so as to ensure that the physical structure, siting and operations of the *Works* do not constitute a safety or health hazard to the general public.

3. The *Owner* shall inspect and ensure that the design minimum liquid retention volume is maintained in the *Works* at all times, except when maintenance is required.

4. The *Owner* shall undertake an inspection of the condition of the *Works* , at least once a year, and undertake any necessary cleaning and maintenance to ensure that sediment, debris and excessive decaying vegetation are removed from the *Works* to prevent the excessive build-up of sediment, oil/grit, debris and/or decaying vegetation, to avoid reduction of the capacity and/or permeability of the *Works* , as applicable. The *Owner* shall also regularly inspect and clean out the inlet to and outlet from the *Works* to ensure that these are not obstructed.

5. The *Owner* shall design, construct and operate the *Works* with the objective that the effluent from the *Works* is essentially free of floating and settleable solids and does not contain oil or any other substance in amounts sufficient to create a visible film, sheen, foam or discoloration on the receiving waters.

6. The *Owner* shall maintain a logbook to record the results of these inspections and any cleaning and maintenance operations undertaken, and shall keep the logbook at the *Owner's* administration office for inspection by the *Ministry* . The logbook shall include the following:

    a. the name of the *Works* ; and

    b. the date and results of each inspection, maintenance and cleaning, including an estimate of the quantity of any materials removed and method of clean-out of the *Works* .

7. The *Owner* shall prepare an operations manual prior to the commencement of operation of the *Works* that includes, but is not necessarily limited to, the following information:

    a. operating and maintenance procedures for routine operation of the *Works* ;

    b. inspection programs, including frequency of inspection, for the *Works* and the methods or tests employed to detect when maintenance is necessary;

    c. repair and maintenance programs, including the frequency of repair and maintenance for the *Works* ;

    d. contingency plans and procedures for dealing with potential spills and any other abnormal situations and for notifying the *District Manager* ; and

    e. procedures for receiving, responding and recording public complaints, including recording any follow-up actions taken.

8. The *Owner* shall maintain the operations manual current and retain a copy at the location of the *Works* for the operational life of the *Works* . Upon request, the *Owner* shall make the manual available to *Ministry* staff.

5. TEMPORARY EROSION AND SEDIMENT CONTROL

1. The *Owner* shall install and maintain temporary sediment and erosion control measures during construction and conduct inspections once every two (2) weeks and after each significant storm event (a significant storm event is defined as a minimum of 25 mm of rain in any 24 hours period). The inspections and maintenance of the temporary sediment and erosion control measures shall continue until they are no longer required and at which time they shall be removed and all disturbed areas reinstated properly.

2. The *Owner* shall maintain records of inspections and maintenance which shall be made available for inspection by the *Ministry* , upon request. The record shall include the name of the inspector, date of inspection, and the remedial measures. if any, undertaken to maintain the temporary sediment and erosion control measures.

6. MONITORING AND RECORDING

The *Owner* shall, upon commencement of operation of the *Works* , carry out the following monitoring program:

1. All samples and measurements taken for the purposes of this *Approval* are to be taken at a time and in a location characteristic of the quality and quantity of the effluent stream over the time period being monitored.

2. Samples shall be collected at the following sampling points, at the frequency specified, by means of the specified sample type and analyzed for each parameter listed and all results recorded, as outlined in Schedule "B".

3. The methods and protocols for sampling, analysis and recording shall conform, in order of precedence, to the methods and protocols specified in the following:

    a. the *Ministry's* Procedure F-10-1, "Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works (Liquid Waste Streams Only)", as amended from time to time by more recently published editions;

    b. the *Ministry's* publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" (January 1999), ISBN 0-7778-1880-9, as amended from time to time by more recently published editions; and

    c. the publication "Standard Methods for the Examination of Water and Wastewater" (21st edition), as amended from time to time by more recently published editions.

7. REPORTING

1. One (1) week prior to the start-up of the operation of the *Works* , the *Owner* shall notify the *District Manager* (in writing) of the pending start-up date.

2. The *Owner* shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to *Ministry* staff.

3. The *Owner* shall prepare and submit a performance report to the *District Manager* on an annual basis, within ninety (90) days following the end of the period being reported upon. The first such report shall cover the first annual period following the commencement of operation of the *Works* and subsequent reports shall be submitted to cover successive annual periods following thereafter. The reports shall contain, but shall not be limited to, the following information:

   a. a summary and interpretation of all monitoring data and an overview of the success and adequacy of the *Works* , including demonstration using the monitoring data that the appropriate level of quality control has been achieved;

   b. a description of any operating problems encountered and corrective actions taken;

   c. a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the *Works* , including an estimate of the quantity of any materials removed from the *Works* ;

   d. a summary of the calibration and maintenance carried out on all monitoring equipment;

   e. a summary of any complaints received during the reporting period and any steps taken to address the complaints;

   f. a summary of all spill or abnormal discharge events; and

   g. any other information the *District Manager* requires from time to time.

SCHEDULE "A"

1. Application for Approval of Sewage Works , dated November 2, 2012, submitted by Mark Parsons, President of Mattamy (Half Moon Bay) Limited, and supporting documentation;

2. Email from Jennifer Ailey of David Schaeffer Engineering Ltd. to the Ministry, dated February 1, 2013;

3. Application for Approval of Municipal and Private Sewage Works, dated December 4, 2013 and received on February 28, 2014, submitted by the City of Ottawa;

4. Copy of letter from Jennifer Ailey of David Schaeffer Engineering Ltd. to the City of Ottawa, dated February 24, 2013, and supporting documentation;

5. Erosion Control Plan, Sheet 1 and Siltation Control Plan Details, Sheet 2, dated January 20, 2014, prepared by David Schaeffer Engineering Ltd.;

6. E-mail from Jennifer Ailey of David Schaeffer Engineering Ltd. to the Ministry, dated May 30, 2014;

7. Application for Approval of Municipal and Private Sewage Works, dated June 7, 2016 and received on June 9, 2016, submitted by the Mattamy (Half Moon Bay) Limited;

8. Application for Environmental Compliance Approval, dated February 13, 2018, and received on February 15, 2018, including final plans and specifications prepared by David Schaeffer Engineering Ltd.;

9. Transfer of Review Letter of Recommendation, dated February 9, 2018 and signed by Charles Warnock, Program Manager, Development Review, City of Ottawa.

10. Emails from Jennifer Ailey, David Schaeffer Engineering Ltd., dated March 19, 2018 and Jeffrey Shillington, dated March 20, 2018 and March 21, 2018 responses to draft ECA sent by Ricki Allum, Ministry of the Environment and Climate Change dated March 16, 2018.

SCHEDULE "B"

Table 1: Effluent Monitoring

(Samples to be collected from the influent and effluent streams of the Half Moon Bay West - Clarke Stormwater Management Pond)

Sample Type	Grab
Frequency	Three (3) rainfall *Wet Events* per year, with two (2) of the events occurring between May and September
Parameters	Total Suspended Solids, Phosphorus and Temperature

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is imposed to ensure that the *Works* are constructed and operated in the manner in which they were described and upon which approval was granted. This condition is also included to emphasize the precedence of conditions in the *Approval* and the practice that the *Approval* is based on the most current document, if several conflicting documents are submitted for review. Condition 1.6 is included to emphasize that the issuance of this *Approval* does not diminish any other statutory and regulatory obligations to which the *Owner* is subject in the construction, maintenance and operation of the *Works* . The Condition specifically highlights the need to obtain any necessary conservation authority approvals. The Condition also emphasizes the fact that this *Approval* doesn't limit the authority of the *Ministry* to require further information.

2. Condition 2 is included to ensure that, when the *Works* are constructed, the *Works* will meet the standards that apply at the time of construction to ensure the ongoing protection of the environment.

3. Condition 3 is included to ensure that the *Ministry* records are kept accurate and current with respect to approved Works and to ensure that subsequent owners of the *Works* are made aware of the *Approval* and continue to operate the *Works* in compliance with it.

4. Condition 4 is included to prevent the operation of stormwater pipes and other conveyance until such time that their required associated stormwater management *Works* are also constructed. This Condition is included as regular inspection and necessary removal of sediment and excessive decaying vegetation from the *Works* are required to mitigate the impact of sediment, debris and/or decaying vegetation on the treatment capacity of the *Works* . The Condition also ensures that adequate storage is maintained in the *Works* at all times as required by the design. Furthermore, this Condition is included to ensure that the *Works* are operated and maintained to function as designed.

5. Condition 5 is included as installation, regular inspection and maintenance of the temporary sediment and erosion control measures is required to mitigate the impact on the downstream receiving watercourse during construction until they are no longer required.

6. Condition 6 is included to enable the *Owner* to evaluate and demonstrate the performance of the *Works* , on a continual basis, so that the *Works* are properly operated and maintained at a level which is consistent with the design objectives specified in the *Approval* and that the *Works* do not cause any impairment to the receiving watercourse or the environment.

7. Condition 7 is included to provide a performance record for future references, to ensure that the *Ministry* is made aware of problems as they arise, and to provide a compliance record for all the terms and conditions outlined in this *Approval* , so that the *Ministry* can work with the *Owner* in resolving any problems in a timely manner.

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 1153-ACHP3E issued on August 17, 2016

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

a. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
b. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

1. The name of the appellant;
2. The address of the appellant;
3. The environmental compliance approval number;
4. The date of the environmental compliance approval;
5. The name of the Director, and;
6. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

AND

The Director appointed for the purposes of Part II.1 of the Environmental Protection Act
Ministry of the Environment and Climate Change
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

* **Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 326-5370 or www.ert.gov.on.ca**

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 11th day of April, 2018

C. Labarge

Christina Labarge, P.Eng.
Director

appointed for the purposes of Part II.1 of the *Environmental Protection Act*

RA/

c: District Manager, MOECC Ottawa
Jason Rumer, Mattamy (Half Moon Bay) Limited
Jeffery Shillington, City of Ottawa
Jennifer Ailey, David Schaeffer Engineering Ltd.

Ministry of the Environment
Eastern Region
Technical Support Section
Water Resources
1259 Gardiners Rd. Unit 3
PO Box 22032
Kingston, ON
K7M 8S5
Tel: (613) 549-4000

Ministère de l'Environnement
Direction régionale de l'Est
Secteur du Soutien Technique
Ressource en eau
1259 Chemin Gardiners, Unité 3
CP 22032
Kingston, ON
K7M 8S5
Tél:(613) 549-4000

Ontario

January 16, 2009

Mattamy (Half Moon Bay) Limited
123 Huntmar Drive
Ottawa, Ontario
K2S 1B9
Canada

Dear Sir/Madam:

RE: Permit To Take Water No. 8167-7K7RQV
Lot: Part of 10 and 11, Concession: 3, Ottawa
Lot: 12, Concession: 3, Nepean, Ottawa
Lot 8 and 9, Concession 3, Nepean, Ottawa
Reference Number 6623-7JUKMA

Please find attached Permit To Take Water No. 8167-7K7RQV which authorizes the withdrawal of water in accordance with the application for this Permit To Take Water, dated September 12, 2008 and signed by Frank Cairo.

Please note the attached Permit expires on March 31, 2016.

The Water Taking and Transfer Regulation, O. Reg. 387/04 came into effect on January 1, 2005. It requires that permit holders track the volume of water they take daily and report these volumes to the Ministry the following year. Please ensure that you inform yourself of the monitoring and reporting requirements related to your permit. You can find additional information on the MOE web site at www.ene.gov.on.ca or by calling the nearest MOE office.

Take notice that in issuing this Permit to Take Water, terms and conditions pertaining to the taking of water and to the results of the taking have been imposed. The terms and conditions have been designed to allow for the development of water resources, while providing reasonable protection to existing water uses and users.

Please note that it is the responsibility of the Permit Holder to ensure that all other approvals required by law are obtained for this project.

Yours truly,

Peter Taylor

Peter Taylor
Director, Section 34, Ontario Water Resources Act, R.S.O. 1990
Eastern Region

File Storage Number: P 8167 OTT

Ontario

Ministry of the Environment
Ministère de l'Environnement

PERMIT TO TAKE WATER
Ground Water
NUMBER 8167-7K7RQV

Pursuant to Section 34 of the Ontario Water Resources Act, R.S.O. 1990 this Permit To Take Water is hereby issued to:

Mattamy (Half Moon Bay) Limited
123 Huntmar Drive
Ottawa, Ontario
K2S 1B9
Canada

For the water taking from: Area 1 Phase 2 Service, Area 2 Phase 2 SWMP, Area 3 Phase 2 Surface Water Runoff, Area 4 - HMB Phase 3, Area 5 Phase 3 Surface Water Runoff, Area 6 - HMB Phase 4, Area 7 Phase 4 Surface Water Runoff

Located at: Lot Part of 10 and 11, Concession 3
Ottawa

Lot 12, Concession 3, Nepean
Ottawa

Lot: 8, 9, Concession: 3, Nepean
Ottawa

For the purposes of this Permit, and the terms and conditions specified below, the following definitions apply:

DEFINITIONS

(a) "Director" means any person appointed in writing as a Director pursuant to section 5 of the OWRA for the purposes of section 34, OWRA.

(b) "Provincial Officer" means any person designated in writing by the Minister as a Provincial Officer pursuant to section 5 of the OWRA.

(c) "Ministry" means Ontario Ministry of the Environment.

(d) "District Office" means the Ottawa District Office.

(e) "Permit" means this Permit to Take Water No. 8167-7K7RQV including its Schedules, if any, issued in accordance with Section 34 of the OWRA.

(f) "Permit Holder" means Mattamy (Half Moon Bay) Limited.

(g) "OWRA " means the *Ontario Water Resources Act,* R.S.O. 1990, c. O. 40, as amended.

You are hereby notified that this Permit is issued subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. Compliance with Permit

1.1 Except where modified by this Permit, the water taking shall be in accordance with the application for this Permit To Take Water, dated September 12, 2008 and signed by Frank Cairo, ASO, and all Schedules included in this Permit.

1.2 The Permit Holder shall ensure that any person authorized by the Permit Holder to take water under this Permit is provided with a copy of this Permit and shall take all reasonable measures to ensure that any such person complies with the conditions of this Permit.

1.3 Any person authorized by the Permit Holder to take water under this Permit shall comply with the conditions of this Permit.

1.4 This Permit is not transferable to another person.

1.5 This Permit provides the Permit Holder with permission to take water in accordance with the conditions of this Permit, up to the date of the expiry of this Permit. This Permit does not constitute a legal right, vested or otherwise, to a water allocation, and the issuance of this Permit does not guarantee that, upon its expiry, it will be renewed.

1.6 The Permit Holder shall keep this Permit available at all times at or near the site of the taking, and shall produce this Permit immediately for inspection by a Provincial Officer upon his or her request.

1.7 The Permit Holder shall report any changes of address to the Director within thirty days of any such change. The Permit Holder shall report any change of ownership of the property for which this Permit is issued within thirty days of any such change. A change in ownership in the property shall cause this Permit to be cancelled.

2. General Conditions and Interpretation

2.1 Inspections
The Permit Holder must forthwith, upon presentation of credentials, permit a Provincial Officer to carry out any and all inspections authorized by the OWRA, the *Environmental Protection Act* , R.S.O. 1990, the *Pesticides Act* , R.S.O. 1990, or the *Safe Drinking Water Act,* S. O. 2002.

2.2 Other Approvals
The issuance of, and compliance with this Permit, does not:

(a) relieve the Permit Holder or any other person from any obligation to comply with any other applicable legal requirements, including the provisions of the *Ontario Water Resources Act* , and the *Environmental Protection Act* , and any regulations made thereunder; or

(b) limit in any way any authority of the Ministry, a Director, or a Provincial Officer, including the authority to require certain steps be taken or to require the Permit Holder to furnish any further information related to this Permit.

2.3 Information
The receipt of any information by the Ministry, the failure of the Ministry to take any action or require any person to take any action in relation to the information, or the failure of a Provincial Officer to prosecute any person in relation to the information, shall not be construed as:

(a) an approval, waiver or justification by the Ministry of any act or omission of any person that contravenes this Permit or other legal requirement; or

(b) acceptance by the Ministry of the information's completeness or accuracy.

2.4 Rights of Action
The issuance of, and compliance with this Permit shall not be construed as precluding or limiting any legal claims or rights of action that any person, including the Crown in right of Ontario or any agency thereof, has or may have against the Permit Holder, its officers, employees, agents, and contractors.

2.5 Severability
The requirements of this Permit are severable. If any requirements of this Permit, or the application of any requirements of this Permit to any circumstance, is held invalid or unenforceable, the application of such requirements to other circumstances and the remainder of this Permit shall not be affected thereby.

2.6 Conflicts
Where there is a conflict between a provision of any submitted document referred to in this Permit, including its Schedules, and the conditions of this Permit, the conditions in this Permit shall take precedence.

3. Water Takings Authorized by This Permit

3.1 **Expiry**
This Permit expires on **March 31, 2016**. No water shall be taken under authority of this Permit after the expiry date.

3.2 Amounts of Taking Permitted
The Permit Holder shall only take water from the source, during the periods and at the rates and amounts of taking specified in Table A. Water takings are authorized only for the purposes specified in Table A.

Table A

	Source Name / Description:	Source: Type:	Taking Specific Purpose:	Taking Major Category:	Max. Taken per Minute (litres):	Max. Num. of Hrs Taken per Day:	Max. Taken per Day (litres):	Max. Num. of Days Taken per Year:	Zone/ Easting/ Northing:
1	Area 1 Phase 2 Service	Well Dug	Construction	Dewatering Construction	189	24	272,511	365	18 440680 5010575
2	Area 2 Phase 2 SWMP	Well Dug	Construction	Dewatering Construction	388	24	557,038	365	18 440748 5011073
3	Area 3 Phase 2 Surface Water Runoff	Well Dug	Construction	Dewatering Construction	6,618	24	9,529,920	365	18 440680 5010575
4	Area 4 - HMB Phase 3	Well Dug	Construction	Dewatering Construction	1,290	24	1,857,112	365	18 441565 5009854
5	Area 5 Phase 3 Surface Water Runoff	Well Dug	Construction	Dewatering Construction	6,129	24	8,826,000	365	18 441565 5009854
6	Area 6 - HMB Phase 4	Well Dug	Construction	Dewatering Construction	268	24	267,457	365	18 440060 5010081
7	Area 7 Phase 4 Surface Water Runoff	Well Dug	Construction	Dewatering Construction	9,362	24	13,481,280	365	18 440060 5010081
						Total Taking:	34,791,318		

3.3 The water taking shall be in accordance with the dates and times set out in Item #1 of Schedule A.

3.4 Notwithstanding Table A no discharge shall occur unless the quality of the discharge meets the criteria outlined in Table 2 of the City of Ottawa Storm Sewer By-Law 2003-514 (Refer to Item #2 of Schedule A of the Permit). The discharge shall be undertaken in accordance with Section 5.0 of the Application .

4. Monitoring

4.1 The Permit Holder shall maintain a record of all water takings. This record shall include the dates and times of water takings, and the total measured amounts of water pumped per day for each day that water is taken under the authorization of this Permit. A separate record shall be maintained for each source. The Permit Holder shall keep all required records up to date and available at or near the site of the taking and shall produce the records immediately for inspection by a Provincial Officer upon his or her request.

4.2 The total amounts of water pumped shall be measured using a calibrated flow meter and totalizer.

5. Impacts of the Water Taking

5.1 Notification
The Permit Holder shall immediately notify the local District Office of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint. The Permit Holder shall immediately notify the local District Office if the taking of water is observed to have any significant impact on the surrounding waters. After hours, calls shall be directed to the Ministry's Spills Action Centre at 1-800-268-6060.

5.2 For Groundwater Takings
If the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to initial issuance of a Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of doing so.

If permanent interference is caused by the water taking, the Permit Holder shall restore the water supplies of those permanently affected.

5.3 In addition to condition 5.2, if the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to the date of issuance of this Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of doing so. If permanent interference is caused by the water taking, the Permit Holder shall restore the water supplies of those permanently affected.

5.4 The Permit Holder shall install sediment and erosion control measures at each discharge location (A, B, C, D E as per Drawing 4 in the Application for PTTW dated September 22, 2008, Item #3 of Schedule A of the Permit). The Permit Holder shall ensure that erosion and siltation control measures installed at the discharge site(s) are sufficient to control the discharge volume(s). Continuous care shall be taken to properly maintain the erosion and siltation control devices.

5.5 The Permit Holder shall regulate the rate of water discharged such that there is no flooding, soil erosion or channel scouring in the receiving water body, downstream water bodies, ditches or properties.

5.5 The Permit Holder shall establish water quality monitoring stations at each of the discharge locations (A, B, C, D, E) noted on Drawing 4, (Item #3 of Schedule A of the Permit).

5.6 The Permit Holder shall sample Locations A, B, C, D, and E for water quality. During periods of continuous discharge, all the locations where discharge occurs are to be sampled every 4 days. During periods of intermittent discharge, all the locations where discharge occurs are to be sampled on the first day that discharge occurs, and every 4 days thereafter. For periods of either continuous or intermittent discharge, the initial water sample is to be anaylzed for the parameters listed in Table 2 of the City of Ottawa Sewer Use Bylaw 2003-514 (Item #2 of Schedule A of the Permit). Subsequent samples are to be analyzed for Total Suspended Solids (TSS) and Total Phosphorous (TP).

5.7 The Permit Holder shall measure discharge flows daily at Locations A, B, C, D, and E when discharges occur.

5.8 The Permit Holder shall ensure that the initial discharge for each discharge event for locations A , B, C, D and E meets the criteria in Table 2 of City of Ottawa Bylaw 2003-514 (Item #2 of Schedule A of the Permit) before discharge occurs. If the initial discharge analysis shows exceedances of any of the Table 2 criteria, or if any TSS concentration of any one sample exceeds 15 mg/L, then subsequent samples shall be analyzed for the full suite of parameters listed in Table 2 until the discharge falls below the criteria in Table 2. If there is an exceedance of the discharge criteria the Permit Holder shall implement the mitigation measures as proposed in Table 10 of the "Recommended Monitoring and Mitigation Plan" provided as Item #4 of Schedule A of the Permit.

6. **Director May Amend Permit**

The Director may amend this Permit by letter requiring the Permit Holder to suspend or reduce the taking to an amount or threshold specified by the Director in the letter. The suspension or reduction in taking shall be effective immediately and may be revoked at any time upon notification by the Director. This condition does not affect your right to appeal the suspension or reduction in taking to the Environmental Review Tribunal under the *Ontario Water Resources Act* , Section 100 (4).

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is included to ensure that the conditions in this Permit are complied with and can be enforced.

2. Condition 2 is included to clarify the legal interpretation of aspects of this Permit.

3. Conditions 3 through 6 are included to protect the quality of the natural environment so as to safeguard the ecosystem and human health and foster efficient use and conservation of waters. These conditions allow for the beneficial use of waters while ensuring the fair sharing, conservation and sustainable use of the waters of Ontario. The conditions also specify the water takings that are authorized by this Permit and the scope of this Permit.

*In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, you may by written notice served upon me, the Environmental Review Tribunal and the Environmental Commissioner, **Environmental Bill of Rights**, R.S.O. 1993, Chapter 28, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 101 of the Ontario Water Resources Act, as amended provides that the Notice requiring a hearing shall state:*

1. The portions of the Permit or each term or condition in the Permit in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

In addition to these legal requirements, the Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Permit to Take Water number;
6. The date of the Permit to Take Water;
7. The name of the Director;
8. The municipality within which the works are located;

This notice must be served upon:

The Secretary
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto ON
M5G 1E5

AND

The Environmental Commissioner
1075 Bay Street
6th Floor, Suite 605
Toronto, Ontario M5S 2W5

AND

The Director, Section 34
Ministry of the Environment
1259 Gardiners Rd, PO Box 22032
Kingston, ON
K7P 3J6

Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal:

by telephone at (416) 314-4600 ***by fax at (416) 314-4506*** ***by e-mail at www.ert.gov.on.ca***

*This instrument is subject to Section 38 of the **Environmental Bill of Rights** that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek to appeal for 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry, you can determine when the leave to appeal period ends.*

Dated at Kingston this 16th day of January, 2009.

Peter Taylor

Peter Taylor
Director, Section 34
Ontario Water Resources Act , R.S.O. 1990

Schedule A

This Schedule "A" forms part of Permit To Take Water 8167-7K7RQV, dated January 16, 2009.

1.

Source Name	Earliest Date of Taking	Latest Date of Taking
Area 1 Phase 2	April 1, 2009	March 31, 2011
Area 2 SWMP	April 1, 2009	March 31, 2011
Area 3 Phase 2Surface Dewatering	April 1, 2009	March 31, 2011
Area 4 HMB Phase 3	October 1, 2010	September 30, 2015
Area 5 Phase 3 Surface Dewatering	October 1, 2010	September 30, 2015
Area 6 HMB Phase 4	April 1, 2013	March 31, 2016
Area 7 Phase 4 Surface Dewatering	April 1, 2013	March 31, 2016

2. Table 2 Limits for Storm Sewer Discharge, City of Ottawa Sewer Use Bylaw 2003-514.

3. Section 5 and Drawing 4 in the Application for PTTW dated September 22, 2008 for Half Moon Bay- Phase 2, 3, 4 Residential development, Ottawa, Ontario.

4. Table 10 - "Recommended Monitoring and Mitigation Plan", from page 23 of the report entitled Groundwater Management Plan, Half Moon Bay - Phase 2, 3, 4 Residential Development, Ottawa, Ontario prepared for Mattamy (Half Moon Bay) Limited by Groundwater & Environmental Management Services Inc., dated September 22, 2008.

Table 2 . Limits for Storm Sewer Discharge

Parameter	Limit (mg/l)	Parameter	Limit (mg/l)
Biochemical Oxygen Demand	25	1,2-dichlorobenzene	0.0056
Cyanide (total)	0.02	1,4-dichlorobenzene	0.0068
Phenolics (4AAP)	0.008	Cis-1,2-dichloroethylene	0.0056
Phosphorous (total)	0.4	Trans-1,3-dichloropropylene	0.0056
Suspended Solids (total)	15	Ethylbenzene	0.002
Arsenic (total)	0.02	Methylene chloride	0.0052
Cadmium (total)	0.008	1,1,2,2-tetrachloroethane	0.017
Chromium (total)	0.08	Tetrachloroethylene	0.0044
Copper (total)	0.04	Toluene	0.002
Lead (total)	0.12	Trichloroethylene	0.0076
Manganese (total)	0.05	Xylene (total)	0.0044
Mercury (total)	0.0004	Naphthalene	0.0064
Nickel (total)	0.08	Hexachlorobenzene	4e-005
Selenium (total)	0.02	Nonylphenols	0.001
Silver (total)	0.12	Nonylphenol ethoxylates	0.01
Zinc (total)	0.04	PCBs	0.0004
Benzene	0.002	Total PAHs	0.006
Chloroform	0.002		

Ontario

Ministry of the Environment
Ministère de l'Environnement

AMENDED CERTIFICATE OF APPROVAL
MUNICIPAL AND PRIVATE SEWAGE WORKS
NUMBER 6638-7FQSS8
Issue Date: July 11, 2008

Mattamy (Half Moon Bay) Limited
123 Huntmar Dr
Kanata, Ontario
K2S 1B9

Site Location: Half Moon Bay - Phase 1
Rideau Front, Geographic Township of Nepean
Lot Part of Lots 10 & 11, Concession 3
Ottawa City, Ontario

You have applied in accordance with Section 53 of the Ontario Water Resources Act for approval of:

to construct an interim drainage control system for storage, including ***Geotube®*** *pumping system and temporary diversion of the Todd Drain and Clarkes Drain to serve* Half Moon Bay Subdivision - Phase 1 development, in the City of Ottawa, comprising the following:

Interim Drainage Control System

a storage pond for the management and treatment of storm water and ground water during construction of the subdivision will be located within the future Todd Pond Stormwater Management Facility footprint, on Cambrian Road, to serve approximately 65 ha parcel of residential subdivision will provide quality control for storm events up to and including the 100-year return periods, with portable pumps connected to the ***Geotube®*** containers or equivalent approved by the *District Manager*, outletting into a rock lined channel which in turn discharges into Jock River;

all in accordance with:

1. Application for Municipal and Sewage Works, dated May 14, 2008 and received on May 16, 2008, and all supporting documentation and information associated with the application including Stormwater Management Report, final plans and specifications prepared by David Schaeffer Engineering Ltd., and

2. the procedure, dated May 29, 2008, published as electronic file "3798.pdf" and co-signed by Frank Cairo, Mattamy Homes Ottawa and Jeff Mulcock, Taggart Construction Ltd.

For the purpose of this Certificate of Approval and the terms and conditions specified below, the following definitions apply:

1. "*Certificate* " means this entire Certificate of Approval document, issued in accordance with Section 53 of the *Ontario Water Resources Act* , and includes any schedules;

2. "*District Manager* " means the District Manager of the Ottawa District Office of the Ministry;

3. "*Director* " means any *Ministry* employee appointed by the Minister pursuant to section 5 of the *Act* ;

4. "*Ministry* " means the Ontario Ministry of the Environment;

5. "*Owner* " means Mattamy (Half Moon Bay) Limited, and includes its successors and assignees; and

6. "*Works* " means the sewage works described in the *Owner* 's application, this *Certificate* and in the supporting documentation referred to herein, to the extent approved by this *Certificate* .

You are hereby notified that this approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL CONDITIONS

1.1 The *Owner* shall ensure that any person authorized to carry out work on or operate any aspect of the *Works* is notified of this *Certificate* and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

1.2 Except as otherwise provided by these Conditions, the *Owner* shall design, build, install, operate and maintain the *Works* in accordance with the description given in this *Certificate* , the application for approval of the works and the submitted supporting documents and plans and specifications as listed in this *Certificate* .

1.3 Where there is a conflict between a provision of any submitted document referred to in this *Certificate* and the Conditions of this *Certificate* , the Conditions in this *Certificate* shall take precedence, and where there is a conflict between the listed submitted documents, the document bearing the most recent date shall prevail.

1.4 Where there is a conflict between the listed submitted documents, and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.

1.5 The requirements of this *Certificate* are severable. If any requirement of this *Certificate*, or the application of any requirement of this *Certificate* to any circumstance, is held invalid or unenforceable, the application of such requirement to other circumstances and the remainder of this *Certificate* shall not be affected thereby.

2. EXPIRY OF APPROVAL

2.1 The approval issued by this *Certificate* will cease to apply to those parts of the *Works* which have not been constructed within five (5) years of the date of this *Certificate*.

3. OPERATION AND MAINTENANCE

3.1 The *Owner* shall make all necessary investigations, take all necessary steps and obtain all necessary approvals so as to ensure that the physical structure, siting and operations of the *Works* do not constitute a safety or health hazard to the general public.

3.2 The *Owner* shall undertake regular inspections of the condition of the *Works*, and undertake any necessary cleaning and maintenance to ensure that sediment, debris and excessive decaying vegetation are removed from the above noted *Works* to avoid reduction in the treatment capacity.

3.3 The *Owner* shall maintain a logbook to record the results of all inspections and any cleaning and maintenance operations undertaken and shall make the logbook available for inspection by the *Ministry* upon request.

4. SPECIAL CONDITION – CONSTRUCTION AND OPERATIONAL PROCEDURE

4.1 The written procedure issued on May 29, 2008, published as electronic file "3798.pdf" and co-signed by Frank Cairo, Mattamy Homes Ottawa and Jeff Mulcock, Taggart Construction Ltd., representing the *Owner*, shall be carried out for as long as the *District Manager* has not given his/her consent in writing to discontinue its use.

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is imposed to ensure that the *Works* are built and operated in the manner in which they were described for review and upon which approval was granted. This condition is also included to emphasize the precedence of Conditions in the *Certificate* and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review. The condition also advises the *Owner* his/her responsibility to notify any person they authorized to carry out work pursuant to this *Certificate* the existence of this *Certificate*.

2. Condition 2 is included to ensure that, when the *Works* are constructed, the *Works* will meet the standards that apply at the time of construction to ensure the ongoing protection of the environment.

3. Condition 3.1 is imposed because it is not in the public interest for the *Director* to approve facilities

which, by reason of potential health and safety hazards do not generally comply with legal standards or approval requirements falling outside the purview of this *Ministry* .

4. Condition 3.2 is included as regular inspection and necessary removal of sediment and excessive decaying vegetation from this approved *Works* are required to mitigate the impact of sediment, debris and/or decaying vegetation on the treatment capacity of the *Works* . It is also required to ensure that adequate storage is maintained in the *Works* at all times as required by the design, and to prevent stormwater impounded in the *Works* from becoming stagnant.

5. Condition 3.3 is included to ensure that the *Works* are operated and maintained to function as designed.

6. Condition 4 is included to ensure that established and accepted procedures are used during construction of the *Works* to minimize the potential for adverse environmental impacts on the receiver.

This Certificate of Approval revokes and replaces Certificate(s) of Approval No. 4522-7FBRPC issued on June 13, 2008.

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, as amended, you may by written notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 101 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, provides that the Notice requiring the hearing shall state:

1. The portions of the approval or each term or condition in the approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Certificate of Approval number;
6. The date of the Certificate of Approval;
7. The name of the Director;
8. The municipality within which the works are located;

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto, Ontario
M5G 1E5

AND

The Director
Section 53, *Ontario Water Resources Act*
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

* **Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the**

The above noted sewage works are approved under Section 53 of the Ontario Water Resources Act.

DATED AT TORONTO this 11th day of July, 2008

Zafar Bhatti

Zafar Bhatti, P.Eng.
Director
Section 53, *Ontario Water Resources Act*

RS/
c: District Manager, MOE Ottawa District Office
City Clerk, City of Ottawa
Stephen Pichette, David Schaeffer Engineering Limited

Ontario

Ministry of the Environment
Ministère de l'Environnement

CERTIFICATE OF APPROVAL
MUNICIPAL AND PRIVATE SEWAGE WORKS
NUMBER 4522-7FBRPC
Issue Date: June 13, 2008

Mattamy (Half Moon Bay) Limited
123 Huntmar Dr
Kanata, Ontario
K2S 1B9

Site Location: Half Moon Bay - Phase 1
Rideau Front, Geographic Township of Nepean
Lot Part of Lots 10 & 11, Concession 3
Ottawa City

You have applied in accordance with Section 53 of the Ontario Water Resources Act for approval of:

to construct an interim drainage control pond for storage, including Geotubes pumping system *and temporary diversion of the Todd Drain and Clarkes Drain to serve* Half Moon Bay Subdivision Phase 1, in the Municipality of Ottawa, comprising the following:

Interim Drainage Control Pond

a storage pond for the management and treatment of storm water and ground water during construction of the subdivision will be located on future Todd Pond Stormwater Management Facility and outlet channel, on Cambrian Road, to serve approximately 65 ha parcel of residential subdivision will provide quality control for storm up to and including 100-year return periods, will have portable pumps connected to the Geotubes, or approved equivalent that outlet into a rock lined channel which in turn discharges into Jock River;

all in accordance with the application dated May 14, 2008 and received on May 16, 2008, and all supporting documentation and information associated with the application including Stormwater Management Report, final plans and specifications prepared by David Schaeffer Engineering Ltd., including the letter dated May 29, 2008, by Mattamy Homes Limited.

For the purpose of this Certificate of Approval and the terms and conditions specified below, the following definitions apply:

1. "*Certificate* " means this entire Certificate of Approval document, issued in accordance with Section 53 of the *Ontario Water Resources Act* , and includes any schedules;

2. "*Director* " means any *Ministry* employee appointed by the Minister pursuant to section 5 of the *Act* ;

3. "*Ministry* " means the Ontario Ministry of the Environment;

4. "*Owner* " means Mattamy Homes Limited, and includes its successors and assignees; and

5. "*Works* " means the sewage works described in the *Owner* 's application, this *Certificate* and in the supporting documentation referred to herein, to the extent approved by this *Certificate* .

You are hereby notified that this approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL CONDITIONS

1.1 The *Owner* shall ensure that any person authorized to carry out work on or operate any aspect of the *Works* is notified of this *Certificate* and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

1.2 Except as otherwise provided by these Conditions, the *Owner* shall design, build, install, operate and maintain the *Works* in accordance with the description given in this *Certificate* , the application for approval of the works and the submitted supporting documents and plans and specifications as listed in this *Certificate* .

1.3 Where there is a conflict between a provision of any submitted document referred to in this *Certificate* and the Conditions of this *Certificate* , the Conditions in this *Certificate* shall take precedence, and where there is a conflict between the listed submitted documents, the document bearing the most recent date shall prevail.

1.4 Where there is a conflict between the listed submitted documents, and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.

1.5 The requirements of this *Certificate* are severable. If any requirement of this *Certificate* , or the application of any requirement of this *Certificate* to any circumstance, is held invalid or unenforceable, the application of such requirement to other circumstances and the remainder of this *Certificate* shall not be affected thereby.

2. EXPIRY OF APPROVAL

2.1 The approval issued by this *Certificate* will cease to apply to those parts of the *Works* which have not been constructed within five (5) years of the date of this *Certificate* .

3. OPERATION AND MAINTENANCE

3.1 The *Owner* shall make all necessary investigations, take all necessary steps and obtain all necessary approvals so as to ensure that the physical structure, siting and operations of the stormwater works do not constitute a safety or health hazard to the general public.

3.2 The *Owner* shall undertake an inspection of the condition of the stormwater management system, at least once a year, and undertake any necessary cleaning and maintenance to ensure that sediment, debris and excessive decaying vegetation are removed from the above noted stormwater management system to prevent the excessive build-up of sediment, debris and/or decaying vegetation to avoid reduction of capacity of the pond. The *Owner* shall also regularly inspect and clean out the inlet to and outlet from the works to ensure that these are not obstructed.

3.3 The *Owner* shall prepare operational manual which should include, but not limited to, frequency and method of clean-out of stormwater management works within six (6) months from the date of issuance of this *Certificate* or the commissioning of the works. The *Owner* shall keep the operations manual up to date with such revisions as may be required. Upon request, the *Owner* shall make the manual available for inspection by *Ministry* personnel and furnish a copy to the *Ministry* .

3.4 The *Owner* shall maintain a logbook to record the results of all inspections and any cleaning and maintenance operations undertaken and shall make the logbook available for inspection by the *Ministry* upon request.

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is imposed to ensure that the *Works* are built and operated in the manner in which they were described for review and upon which approval was granted. This condition is also included to emphasize the precedence of Conditions in the *Certificate* and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review. The condition also advises the *Owner* his/her responsibility to notify any person they authorized to carry out work pursuant to this *Certificate* the existence of this *Certificate* .

2. Condition 2 is included to ensure that, when the *Works* are constructed, the *Works* will meet the standards that apply at the time of construction to ensure the ongoing protection of the environment.

3. Condition 3.1 is imposed because it is not in the public interest for the *Director* to approve facilities which, by reason of potential health and safety hazards do not generally comply with legal standards or approval requirements falling outside the purview of this *Ministry* .

4. Condition 3.2 is included as regular inspection and necessary removal of sediment and excessive decaying vegetation from this approved stormwater management system are required to mitigate the impact of sediment, debris and/or decaying vegetation on the treatment capacity of the works. It is also required to ensure that adequate storage is maintained in the stormwater management facilities at all times as required by the design, and to prevent stormwater impounded in the works from becoming stagnant.

5. Conditions 3.3 and 3.4 are included to ensure that the stormwater management facility is operated and maintained to function as designed.

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, as amended, you may by written notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 101 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, provides that the Notice requiring the hearing shall state:

1. The portions of the approval or each term or condition in the approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Certificate of Approval number;
6. The date of the Certificate of Approval;
7. The name of the Director;
8. The municipality within which the works are located;

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto, Ontario
M5G 1E5

AND

The Director
Section 53, *Ontario Water Resources Act*
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

* **Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or www.ert.gov.on.ca**

The above noted sewage works are approved under Section 53 of the Ontario Water Resources Act.

DATED AT TORONTO this 13th day of June, 2008

Zafar Bhatti

Zafar Bhatti, P.Eng.
Director
Section 53, *Ontario Water Resources Act*

AM/

c: District Manager, MOE Ottawa
Stephen Pichette, David Schaeffer Engineering Limited

Ontario

Ministry of the Environment
Ministère de l'Environnement

PERMIT TO TAKE WATER
Surface and Ground Water
NUMBER 1413-8H9LLY

Pursuant to Section 34 of the Ontario Water Resources Act, R.S.O. 1990 this Permit To Take Water is hereby issued to:

Mattamy (Half Moon Bay) Limited
123 Huntmar Drive
Ottawa, Ontario
K2S 1B9
Canada

For the water taking from: Area 1 - Phase 2 Service, Area 2 - Phase 2 SWMP, Area 3 - Phase 2 Surface Water, Area 4 - HMB Phase 3, Area 5 - Phase 3 Surface Water, Area 6 - HMB Phase 4, Area 7 - Phase 4 Surface Water

Located at: Lot 10, 11 & 12, Concession 3, Geo. Twp. of Nepean
Ottawa

Lot 8 & 9, Concession 3, Geo. Twp. of Nepean
Ottawa

Lot 10, 11 & 12, Concession 3, Geo. Twp. of Nepean
Ottawa

For the purposes of this Permit, and the terms and conditions specified below, the following definitions apply:

DEFINITIONS

(a) "Director" means any person appointed in writing as a Director pursuant to section 5 of the OWRA for the purposes of section 34, OWRA.

(b) "Provincial Officer" means any person designated in writing by the Minister as a Provincial Officer pursuant to section 5 of the OWRA.

(c) "Ministry" means Ontario Ministry of the Environment.

(d) "District Office" means the Ottawa District Office.

(e) "Permit" means this Permit to Take Water No. 1413-8H9LLY including its Schedules, if any,

issued in accordance with Section 34 of the OWRA.

(f) "Permit Holder" means Mattamy (Half Moon Bay) Limited.

(g) "OWRA " means the *Ontario Water Resources Act,* R.S.O. 1990, c. O. 40, as amended.

You are hereby notified that this Permit is issued subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. Compliance with Permit

1.1 Except where modified by this Permit, the water taking shall be in accordance with the application for this Permit To Take Water, dated May 4, 2011 and signed by Susan Murphy, and all Schedules included in this Permit.

1.2 The Permit Holder shall ensure that any person authorized by the Permit Holder to take water under this Permit is provided with a copy of this Permit and shall take all reasonable measures to ensure that any such person complies with the conditions of this Permit.

1.3 Any person authorized by the Permit Holder to take water under this Permit shall comply with the conditions of this Permit.

1.4 This Permit is not transferable to another person.

1.5 This Permit provides the Permit Holder with permission to take water in accordance with the conditions of this Permit, up to the date of the expiry of this Permit. This Permit does not constitute a legal right, vested or otherwise, to a water allocation, and the issuance of this Permit does not guarantee that, upon its expiry, it will be renewed.

1.6 The Permit Holder shall keep this Permit available at all times at or near the site of the taking, and shall produce this Permit immediately for inspection by a Provincial Officer upon his or her request.

1.7 The Permit Holder shall report any changes of address to the Director within thirty days of any such change. The Permit Holder shall report any change of ownership of the property for which this Permit is issued within thirty days of any such change. A change in ownership in the property shall cause this Permit to be cancelled.

2. General Conditions and Interpretation

2.1 Inspections
The Permit Holder must forthwith, upon presentation of credentials, permit a Provincial Officer to carry out any and all inspections authorized by the OWRA, the *Environmental Protection Act* ,

R.S.O. 1990, the *Pesticides Act* , R.S.O. 1990, or the *Safe Drinking Water Act,* S. O. 2002.

2.2 Other Approvals

The issuance of, and compliance with this Permit, does not:

(a) relieve the Permit Holder or any other person from any obligation to comply with any other applicable legal requirements, including the provisions of the *Ontario Water Resources Act* , and the *Environmental Protection Act* , and any regulations made thereunder; or

(b) limit in any way any authority of the Ministry, a Director, or a Provincial Officer, including the authority to require certain steps be taken or to require the Permit Holder to furnish any further information related to this Permit.

2.3 Information

The receipt of any information by the Ministry, the failure of the Ministry to take any action or require any person to take any action in relation to the information, or the failure of a Provincial Officer to prosecute any person in relation to the information, shall not be construed as:

(a) an approval, waiver or justification by the Ministry of any act or omission of any person that contravenes this Permit or other legal requirement; or

(b) acceptance by the Ministry of the information's completeness or accuracy.

2.4 Rights of Action

The issuance of, and compliance with this Permit shall not be construed as precluding or limiting any legal claims or rights of action that any person, including the Crown in right of Ontario or any agency thereof, has or may have against the Permit Holder, its officers, employees, agents, and contractors.

2.5 Severability

The requirements of this Permit are severable. If any requirements of this Permit, or the application of any requirements of this Permit to any circumstance, is held invalid or unenforceable, the application of such requirements to other circumstances and the remainder of this Permit shall not be affected thereby.

2.6 Conflicts

Where there is a conflict between a provision of any submitted document referred to in this Permit, including its Schedules, and the conditions of this Permit, the conditions in this Permit shall take precedence.

3. Water Takings Authorized by This Permit

3.1 **Expiry**

This Permit expires on **March 31, 2016**. No water shall be taken under authority of this Permit after the expiry date.

3.2 Amounts of Taking Permitted

The Permit Holder shall only take water from the source, during the periods and at the rates and amounts of taking specified in Table A. Water takings are authorized only for the purposes specified in Table A.

Table A

	Source Name / Description:	Source: Type:	Taking Specific Purpose:	Taking Major Category:	Max. Taken per Minute (litres):	Max. Num. of Hrs Taken per Day:	Max. Taken per Day (litres):	Max. Num. of Days Taken per Year:	Zone/ Easting/ Northing:
1	Area 1 - Phase 2 Service	Well Dug	Construction	Dewatering Construction	189	24	272,511	365	18 440680 5010575
2	Area 2 - Phase 2 SWMP	Well Dug	Construction	Dewatering Construction	388	24	557,038	365	18 440748 5011073
3	Area 3 - Phase 2 Surface Water	Pond Dugout	Construction	Dewatering Construction	6,618	24	9,529,920	365	18 440680 5010575
4	Area 4 - HMB Phase 3	Well Dug	Construction	Dewatering Construction	1,290	24	1,857,112	365	18 441565 5009854
5	Area 5 - Phase 3 Surface Water	Well Dug	Construction	Dewatering Construction	6,129	24	8,826,000	365	18 441565 5009854
6	Area 6 - HMB Phase 4	Well Dug	Construction	Dewatering Construction	268	24	267,457	365	18 440060 5010081
7	Area 7 - Phase 4 Surface Water	Well Dug	Construction	Dewatering Construction	9,362	24	13,481,280	365	18 440060 5010081
						Total Taking:	34,791,319		

3.3 Notwithstanding Table A, no discharge shall occur unless the quality of the discharge meets the criteria outlined in Table 2 of the City of Ottawa Storm Sewer By-Law 2003-514 (Refer to Item #1 of Schedule A of the Permit). The discharge shall be undertaken in accordance with Section 5.0 of the initial application and the J.F Sabourin Letter to the Ministry dated April 20th, 2011.

4. Monitoring

4.1 The Permit Holder shall maintain a record of all water takings. This record shall include the dates and times of water takings, and the total measured amounts of water pumped per day for each day that water is taken under the authorization of this Permit. A separate record shall be maintained for each source. The Permit Holder shall keep all required records up to date and available at or near the site of the taking and shall produce the records immediately for inspection by a Provincial Officer upon his or her request.

4.2 The total amounts of water pumped shall be measured using a calibrated flow meter and totalizer.

4.3 The Permit Holder shall submit to the Director a record of water quality and flow data by the second Monday of each month that samples were taken for the previous month.

5. Impacts of the Water Taking

5.1 Notification
The Permit Holder shall immediately notify the local District Office of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint. The Permit Holder shall immediately notify the local District Office if the taking of water is observed to have any significant impact on the surrounding waters. After hours, calls shall be directed to the Ministry's Spills Action Centre at 1-800-268-6060.

5.2 For Surface-Water Takings
The taking of water (including the taking of water into storage and the subsequent or simultaneous withdrawal from storage) shall be carried out in such a manner that streamflow is not stopped and is not reduced to a rate that will cause interference with downstream uses of water or with the natural functions of the stream.

For Groundwater Takings
If the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to initial issuance of a Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their

reasonable costs of doing so.

If permanent interference is caused by the water taking, the Permit Holder shall restore the water supplies of those permanently affected.

5.3 In addition to Condition 5.2, if the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to the date of issuance of this Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of doing so. If permanent interference is caused by the water taking, the Permit Holder shall restore the water supplies of those permanently affected.

5.4 The Permit Holder shall install sediment and erosion control measures at each discharge location (A, B, C, D, E as per Figure 2 in the Renewal Application for PTTW dated May 04, 2011, Item #2 of Schedule A of the Permit) and described in Table 2 of the J.F. Sabourin letter dated April 20th, 2011. The Permit Holder shall ensure that erosion and siltation control measures installed at the discharge site(s) are sufficient to control the discharge volume(s). Continuous care shall be taken to properly maintain the erosion and siltation control devices.

5.5 The Permit Holder shall regulate the rate of water discharged such that there is no flooding, soil erosion or channel scouring in the receiving water body, downstream water bodies, ditches or properties.

5.6 The Permit Holder shall establish water quality monitoring stations at each of the discharge locations (A, B, C, D, E noted on Figure 2, (Item #2 of Schedule A of the Permit)).

5.7 The Permit Holder shall sample Locations A, B, C, D, and E for water quality. During periods of continuous discharge, all the locations where discharge occurs are to be sampled every 4 days. During periods of intermittent discharge, all the locations where discharge occurs are to be sampled on the first day that discharge occurs, and every 4 days thereafter. For periods of either continuous or intermittent discharge, the initial water

sample is to be anaylzed for the parameters listed in Table 2 of the City of Ottawa Sewer Use Bylaw 2003-514 (Item #1 of Schedule A of the Permit). Subsequent samples are to be analyzed for Total Suspended Solids (TSS) and Total Phosphorous (TP).

5.8 The Permit Holder shall measure discharge flows daily at Locations A, B, C, D, and E when discharges occur.

5.9 The Permit Holder shall ensure that the initial discharge for each discharge event for locations A , B, C, D and E meets the criteria in Table 2 of City of Ottawa Bylaw 2003-514 (Item #1 of Schedule A of the Permit) before discharge occurs. If the initial discharge analysis shows exceedances of any of the Table 2 criteria, or if any TSS concentration of any one sample exceeds 15 mg/L, then subsequent samples shall be analyzed for the full suite of parameters listed in Table 2 until concentrations in the discharge fall below the criteria in Table 2. If there is an exceedance of the discharge criteria the Permit Holder shall implement the mitigation measures as proposed in Table 10 of the "Recommended Monitoring and Mitigation Plan" provided as Item #3 of Schedule A of the Permit.

6. Director May Amend Permit

The Director may amend this Permit by letter requiring the Permit Holder to suspend or reduce the taking to an amount or threshold specified by the Director in the letter. The suspension or reduction in taking shall be effective immediately and may be revoked at any time upon notification by the Director. This condition does not affect your right to appeal the suspension or reduction in taking to the Environmental Review Tribunal under the *Ontario Water Resources Act* , Section 100 (4).

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is included to ensure that the conditions in this Permit are complied with and can be enforced.

2. Condition 2 is included to clarify the legal interpretation of aspects of this Permit.

3. Conditions 3 through 6 are included to protect the quality of the natural environment so as to

safeguard the ecosystem and human health and foster efficient use and conservation of waters. These conditions allow for the beneficial use of waters while ensuring the fair sharing, conservation and sustainable use of the waters of Ontario. The conditions also specify the water takings that are authorized by this Permit and the scope of this Permit.

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, you may by written notice served upon me, the Environmental Review Tribunal and the Environmental Commissioner, ***Environmental Bill of Rights****, R.S.O. 1993, Chapter 28, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 101 of the Ontario Water Resources Act, as amended provides that the Notice requiring a hearing shall state:*

1. The portions of the Permit or each term or condition in the Permit in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

In addition to these legal requirements, the Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Permit to Take Water number;
6. The date of the Permit to Take Water;
7. The name of the Director;
8. The municipality within which the works are located;

This notice must be served upon:

The Secretary *Environmental Review Tribunal* *655 Bay Street, 15th Floor* *Toronto ON* *M5G 1E5*	*AND*	*The Environmental Commissioner* *1075 Bay Street* *6th Floor, Suite 605* *Toronto, Ontario M5S 2W5*	*AND*	*The Director, Section 34* *Ministry of the Environment* *1259 Gardiners Rd, PO Box 22032* *Kingston, ON* *K7P 3J6*

Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal:

by telephone at (416) 314-4600 ***by fax at (416) 314-4506*** ***by e-mail at www.ert.gov.on.ca***

This instrument is subject to Section 38 of the ***Environmental Bill of Rights*** *that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek to appeal for 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry, you can determine when the leave to appeal period ends.*

This Permit cancels and replaces Permit Number 4563-7RMPHR, issued on 2009/06/05 12:00:00 AM.

Dated at Kingston this 30th day of May, 2011.

Peter Taylor

Peter Taylor
Director, Section 34
Ontario Water Resources Act , R.S.O. 1990

Schedule A

This Schedule "A" forms part of Permit To Take Water 1413-8H9LLY, dated May 30, 2011.

1. Table 2 Limits for Storm Sewer Discharge, City of Ottawa Sewer Use Bylaw 2003-514.

2. Section 5 and the J.F Sabourin Letter to the Ministry dated April 20th, 2011 and Figure 2 in the renewal Application for PTTW dated May 4th, 2011 for Half Moon Bay- Phase 2, 3, 4 Residential development, Ottawa, Ontario.

3. Table 10 - "Recommended Monitoring and Mitigation Plan", from page 23 of the report entitled Groundwater Management Plan, Half Moon Bay - Phase 2, 3, 4 Residential Development, Ottawa, Ontario prepared for Mattamy (Half Moon Bay) Limited by Groundwater & Environmental Management Services Inc., dated September 22, 2008.

51 OTTNE 003220

Ministry of the Environment and Climate Change
Eastern Region
Technical Support Section
Water Resources
1259 Gardiners Rd, PO Box 22032
Kingston, ON
K7P 3J6
Tel: (613) 549-4000

Ministère de l'Environnement et de l'Action en matière de changement climatique
Direction régionale de l'Est
Section du Soutien Technique
Ressource en eau
1259 Chemin Gardiners, CP 22032
Kingston, ON
K7P 3J6
Tél:(613) 549-4000

Ontario

January 27, 2016

Bronwyn Anderson
Mattamy (Half Moon Bay) Limited
2360 Bristol Circle
Oakville, Ontario
L6H 6M5

Dear Sir/Madam:

RE: Permit To Take Water 3205-A4ZLZ6
Proposed Multi-Use Development - Half Moon Bay
Lot: 8-12, Concession: 3
Geographic Township of Nepean
Ottawa
Reference Number 6071-A3PQPJ

Please find attached Permit to Take Water 3205-A4ZLZ6 which authorizes the withdrawal of water in accordance with the application for this Permit to Take Water, dated October 7, 2015 and signed by Bronwyn Anderson.

Please note this Permit expires December 31, 2025 and cancels and replaces Permit 1413-8H9LLY. This Permit has been amended to more accurately reflect the water takings at the site.

Please also note that it is the responsibility of the Permit Holder to ensure that all other approvals required by law are obtained for this project. Such approvals may include but are not limited to a Section 53, Ontario Water Resources Act, R.S.O. 1990 (Sewage Works Environmental Compliance Approval).

Ontario Regulation 387/04 (Water Taking and Transfer) requires all water takers to report daily water taking amounts to the Water Taking Reporting System (WTRS) electronic database (https://www.lrcsde.lrc.gov.on.ca/wtrs/). Daily water taking must be reported on a calendar year basis. If no water is taken, then a "no taking" report must be entered. Please consult the Regulation and Section 4 of this Permit for monitoring requirements.

If you have questions about reporting requirements, please call the WTRS Help Desk at 416-235-6322 (toll free: 1-877-344-2011) or by email, WTRSHelpdesk@ontario.ca. It is preferred that you submit your data directly and electronically to the WTRS. Where this is impracticable, please contact the WTRS Help Desk to arrange for written submission of your data.

Please note that the contact information for the Environmental Review Tribunal has recently changed. The Environmental Review Tribunal's new contact information is as follows:

New public inquiry telephone number: (416) 212-6349; toll free: 1 (866) 448-2248
New fax number: (416) 326-5370; toll free: 1 (844) 213-3474

Take notice that in issuing this Permit, terms and conditions pertaining to the taking of water and to the results of the taking have been imposed. The terms and conditions have been designed to allow for the development of water resources, while providing reasonable protection to existing water uses and users.

Yours truly,

Greg Faaren
Director, Section 34.1, Ontario Water Resources Act, R.S.O. 1990
Eastern Region

File Storage Number: SI OT 3205 220 (TS)

c: Michael Laflamme, Paterson Group, mlaflamme@patersongroup.ca

Ottawa District Office

Ontario

Ministry of the Environment and Climate Change
Ministère de l'Environnement et de l'Action en matière de changement climatique

AMENDED PERMIT TO TAKE WATER
Surface and Ground Water
NUMBER 3205-A4ZLZ6

Pursuant to Section 34.1 of the Ontario Water Resources Act, R.S.O. 1990 this Permit To Take Water is hereby issued to:

Mattamy (Half Moon Bay) Limited
2360 Bristol Circle
Oakville, Ontario L6H 6M5
Canada

For the water taking from:
Housing Excavation - North (S1)
Site Servicing Excavation - North (S2)
Greenbank Stormwater Management Pond Excavation (S3)
Housing Excavation - West (S4)
Site Servicing Excavation - West (S5)
Clarke Stormwater Management Pond Excavation (S6)
Housing Excavation - South (S7)
Site Servicing Excavation - South (S8)

Located at:
Lot 8-12, Concession 3, Geographic Township of Nepean
Ottawa

For the purposes of this Permit, and the terms and conditions specified below, the following definitions apply:

DEFINITIONS

(a) "Director" means any person appointed in writing as a Director pursuant to section 5 of the OWRA for the purposes of section 34.1, OWRA.

(b) "Provincial Officer" means any person designated in writing by the Minister as a Provincial Officer pursuant to section 5 of the OWRA.

(c) "Ministry" means Ontario Ministry of the Environment and Climate Change.

(d) "District Office" means the Ottawa District Office.

(e) "Permit" means this Permit to Take Water No. 3205-A4ZLZ6 including its Schedules, if any, issued in accordance with Section 34.1 of the OWRA.

(f) "Permit Holder" means Mattamy (Half Moon Bay) Limited.

(g) "OWRA " means the *Ontario Water Resources Act*, R.S.O. 1990, c. O. 40, as amended.

You are hereby notified that this Permit is issued subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. Compliance with Permit

1.1 Except where modified by this Permit, the water taking shall be in accordance with the application for this Permit To Take Water, dated October 7, 2015 and signed by Bronwyn Anderson, and all Schedules included in this Permit.

1.2 The Permit Holder shall ensure that any person authorized by the Permit Holder to take water under this Permit is provided with a copy of this Permit and shall take all reasonable measures to ensure that any such person complies with the conditions of this Permit.

1.3 Any person authorized by the Permit Holder to take water under this Permit shall comply with the conditions of this Permit.

1.4 This Permit is not transferable to another person.

1.5 This Permit provides the Permit Holder with permission to take water in accordance with the conditions of this Permit, up to the date of the expiry of this Permit. This Permit does not constitute a legal right, vested or otherwise, to a water allocation, and the issuance of this Permit does not guarantee that, upon its expiry, it will be renewed.

1.6 The Permit Holder shall keep this Permit available at all times at or near the site of the taking, and shall produce this Permit immediately for inspection by a Provincial Officer upon his or her request.

1.7 The Permit Holder shall report any changes of address to the Director within thirty days of any such change. The Permit Holder shall report any change of ownership of the property for which this Permit is issued within thirty days of any such change. A change in ownership in the property shall cause this Permit to be cancelled.

2. General Conditions and Interpretation

2.1 Inspections

The Permit Holder must forthwith, upon presentation of credentials, permit a Provincial Officer to carry out any and all inspections authorized by the OWRA, the *Environmental Protection Act* , R.S.O. 1990, the *Pesticides Act* , R.S.O. 1990, or the *Safe Drinking Water Act*, S. O. 2002.

2.2 Other Approvals

The issuance of, and compliance with this Permit, does not:

(a) relieve the Permit Holder or any other person from any obligation to comply with any other applicable legal requirements, including the provisions of the *Ontario Water Resources Act* , and the *Environmental Protection Act* , and any regulations made thereunder; or

(b) limit in any way any authority of the Ministry, a Director, or a Provincial Officer, including the authority to require certain steps be taken or to require the Permit Holder to furnish any further information related to this Permit.

2.3 Information

The receipt of any information by the Ministry, the failure of the Ministry to take any action or require any person to take any action in relation to the information, or the failure of a Provincial Officer to prosecute any person in relation to the information, shall not be construed as:

(a) an approval, waiver or justification by the Ministry of any act or omission of any person that contravenes this Permit or other legal requirement; or

(b) acceptance by the Ministry of the information's completeness or accuracy.

2.4 Rights of Action

The issuance of, and compliance with this Permit shall not be construed as precluding or limiting any legal claims or rights of action that any person, including the Crown in right of Ontario or any agency thereof, has or may have against the Permit Holder, its officers, employees, agents, and contractors.

2.5 Severability

The requirements of this Permit are severable. If any requirements of this Permit, or the application of any requirements of this Permit to any circumstance, is held invalid or unenforceable, the application of such requirements to other circumstances and the remainder of this Permit shall not be affected thereby.

2.6 Conflicts

Where there is a conflict between a provision of any submitted document referred to in this Permit, including its Schedules, and the conditions of this Permit, the conditions in this Permit shall take precedence.

3. Water Takings Authorized by This Permit

3.1 **Expiry**

This Permit expires on **December 31, 2025**. No water shall be taken under authority of this Permit after the expiry date.

3.2 Amounts of Taking Permitted

The Permit Holder shall only take water from the source, during the periods and at the rates and amounts of taking specified in Table A. Water takings are authorized only for the purposes specified in Table A.

Table A

	Source Name / Description:	Source: Type:	Taking Specific Purpose:	Taking Major Category:	Max. Taken per Minute (litres):	Max. Num. of Hrs Taken per Day:	Max. Taken per Day (litres):	Max. Num. of Days Taken per Year:	Zone/ Easting/ Northing:
1	Housing Excavation - North (S1)	Pond Dugout	Other - Dewatering	Dewatering	8,500	24	5,000,000	365	18 441394 5011476
2	Site Servicing Excavation - North (S2)	Pond Dugout	Other - Dewatering	Dewatering	8,500	24	6,000,000	210	18 441394 5011476
3	Greenbank Stormwater Management Pond Excavation (S3)	Pond Dugout	Other - Dewatering	Dewatering	5,000	24	2,000,000	210	18 441840 5011790
4	Housing Excavation - West (S4)	Pond Dugout	Other - Dewatering	Dewatering	8,500	24	5,000,000	365	18 440999 5010853
5	Site Servicing Excavation - West (S5)	Pond Dugout	Other - Dewatering	Dewatering	8,500	24	5,000,000	210	18 440999 5010853
6	Clarke Stormwater Management Pond Excavation (S6)	Pond Dugout	Other - Dewatering	Dewatering	5,000	24	3,500,000	210	18 440817 5010974
7	Housing Excavation - South (S7)	Pond Dugout	Other - Dewatering	Dewatering	8,500	24	6,000,000	365	18 442168 5010109
8	Site Servicing Excavation - South (S8)	Pond Dugout	Other - Dewatering	Dewatering	8,500	24	6,000,000	210	18 442168 5010109
						Total Taking:	38,500,000		

3.3 Notwithstanding Table A above, water shall only be taken from the Stormwater Management Ponds (Source 3 and Source 6) during construction of the ponds for construction purposes.

4. Monitoring

4.1 The Permit Holder shall maintain a record of all water takings. This record shall include the dates and times of water takings, the rates of taking and an estimated calculation of the total amounts of water taken per day for each day that water is taken under the authorization of this Permit. A separate record shall be maintained for each source. The Permit Holder shall keep all required records up to date and available at or near the site of the taking and shall produce the records immediately for inspection by a Provincial Officer upon his or her request.

5. Impacts of the Water Taking

5.1 Notification
The Permit Holder shall immediately notify the local District Office of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint. The Permit Holder shall immediately notify the local District Office if the taking of water is observed to have any significant impact on the surrounding waters. After hours, calls shall be directed to the Ministry's Spills Action Centre at 1-800-268-6060.

5.2 For Surface-Water Takings
The taking of water (including the taking of water into storage and the subsequent or simultaneous withdrawal from storage) shall be carried out in such a manner that streamflow is not stopped and is not reduced to a rate that will cause interference with downstream uses of water or with the natural functions of the stream.

For Groundwater Takings
If the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to initial issuance of a Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of doing so.

If permanent interference is caused by the water taking, the Permit Holder shall restore the water supplies of those permanently affected.

5.3 Prevention of Adverse Effects:
The Permit Holder shall ensure the taking of water under authority of this Permit does not result in an adverse effect on area waters.

5.4 Prevention of Structural Adverse Effects:

The Permit Holder shall take all measures necessary to prevent damage to buildings, bridges, structures, roads and/or railway lines that may be impacted either directly or indirectly by this taking.

5.5 The Permit Holder shall ensure that any water that is taken for dewatering purposes and discharged to the City of Ottawa sewer system is in accordance with a City of Ottawa Sewer Use Agreement.

5.6 The Permit Holder shall ensure that any water that is taken for dewatering purposes and discharged to the on-site Stormwater Management Ponds is in accordance with an Environmental Compliance Approval issued by this Ministry.

5.7 The Permit Holder shall ensure that any water that is taken for dewatering purposes and discharged to the temporary holding ponds labelled as Housing or Site Services Excavation ponds and numbered as Sources S1, S2, S4, S5 ,S7 and S8 in Section 3.0 of this Permit is analyzed for turbidity and meets the criteria in Condition 5.12 prior to discharge to the Jock River or the requirements in Condition 5.5 if discharged to the City of Ottawa sewer system.

5.8 The Permit Holder shall keep a record of all discharge dates to either the Jock River or the City of Ottawa sewer system from either the housing excavation or site servicing ponds and/or the Greenbank and Clarke Stormwater Management Ponds as well as a record of the water quality analyses conducted to determine if the discharge water quality meets the requirements of Condition 5.5 and Condition 5.12.

5.9 Discharge Control Measures for Water that is Discharged to the Natural Environment: Siltation control measures shall be installed at the discharge site(s) and shall be sufficient to control the volumes. Continuous care shall be taken to properly maintain the siltation control devices.

5.10 The discharge of water shall be controlled in such a way as to avoid erosion and sedimentation in the receiving stream.

5.11 The Permit Holder shall ensure that any water discharged to the natural environment does not result in scouring, erosion or physical alteration of stream channels or banks and that there is no flooding in the receiving area or water body, downstream water bodies, ditches or properties caused or worsened by this discharge.

5.12 The Permit Holder shall not discharge turbid water to any watercourse. Turbid water shall be defined as any discharge water from the excavation or diverted water with a maximum increase of 8 NTUs above the receiving stream's background levels.

6. **Director May Amend Permit**
The Director may amend this Permit by letter requiring the Permit Holder to suspend or reduce the taking to an amount or threshold specified by the Director in the letter. The suspension or reduction in taking shall be effective immediately and may be revoked at any time upon notification by the Director. This condition does not affect your right to appeal the suspension or reduction in taking to the Environmental Review Tribunal under the *Ontario Water Resources Act* , Section 100 (4).

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is included to ensure that the conditions in this Permit are complied with and can be enforced.

2. Condition 2 is included to clarify the legal interpretation of aspects of this Permit.

3. Conditions 3 through 6 are included to protect the quality of the natural environment so as to safeguard the ecosystem and human health and foster efficient use and conservation of waters. These conditions allow for the beneficial use of waters while ensuring the fair sharing, conservation and sustainable use of the waters of Ontario. The conditions also specify the water takings that are authorized by this Permit and the scope of this Permit.

*In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, you may by written notice served upon me, the Environmental Review Tribunal and the Environmental Commissioner, **Environmental Bill of Rights**, R.S.O. 1993, Chapter 28, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 101 of the Ontario Water Resources Act, as amended provides that the Notice requiring a hearing shall state:*

1. The portions of the Permit or each term or condition in the Permit in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

In addition to these legal requirements, the Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Permit to Take Water number;
6. The date of the Permit to Take Water;
7. The name of the Director;
8. The municipality within which the works are located;

This notice must be served upon:

The Secretary
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto ON
M5G 1E5
Fax: (416) 326-5370
Email:
ERTTribunalsecretary@ontario.ca

AND

The Environmental Commissioner
1075 Bay Street
6th Floor, Suite 605
Toronto, Ontario M5S 2W5

AND

The Director, Section 34.1,
Ministry of the Environment and Climate Change
1259 Gardiners Rd, PO Box 22032
Kingston, ON
K7P 3J6

Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal:

by Telephone at	by Fax at	by e-mail at
(416) 212-6349	(416) 326-5370	www.ert.gov.on.ca
Toll Free 1(866) 448-2248	Toll Free 1(844) 213-3474	

*This instrument is subject to Section 38 of the **Environmental Bill of Rights** that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek to appeal for 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry, you can determine when the leave to appeal period ends.*

This Permit cancels and replaces Permit Number 1413-8H9LLY, issued on 2011/05/30.

Dated at Kingston this 27th day of January, 2016.

Greg Faaren
Director, Section 34.1
Ontario Water Resources Act , R.S.O. 1990

Schedule A

This Schedule "A" forms part of Permit To Take Water 3205-A4ZLZ6, dated January 27, 2016.

Ontario

Ministry of the Environment
Ministère de l'Environnement

AMENDED PERMIT TO TAKE WATER
Surface and Ground Water
NUMBER 4563-7RMPHR

Pursuant to Section 34 of the Ontario Water Resources Act, R.S.O. 1990 this Permit To Take Water is hereby issued to:

Mattamy (Half Moon Bay) Limited
123 Huntmar Drive
Ottawa, Ontario K2S 1B9
Canada

For the water taking from: Phase 1- Area 1, Phase 1- Area 2, Phase 1- Area 3 - Surface Water Runoff, Phase 1- Retention Pond

Phase 2 - Area 1, Phase 2 - Area 2 SWMP, Phase 2 - Area 3 Surface Water Runoff

Phase 3 - Area 4, Phase 3 - Area 5 Surface Water Runoff

Phase 4 - Area 6, Phase 4 - Area 7 Surface Water Runoff

Located at: Lot 11, 12, Concession 3, Geo. Twp. of Nepean
Ottawa

Lot Part of 10 and 11, Concession 3, Geo. Twp. of Nepean
Ottawa

Lot 8, 9, Concession 3, Geo. Twp. of Nepean
Ottawa

Lot 10, 11 and 12, Concession 3, Geo. Twp. of Nepean
Ottawa

For the purposes of this Permit, and the terms and conditions specified below, the following definitions apply:

DEFINITIONS

(a) "Director" means any person appointed in writing as a Director pursuant to section 5 of the OWRA for the purposes of section 34, OWRA.

(b) "Provincial Officer" means any person designated in writing by the Minister as a Provincial Officer pursuant to section 5 of the OWRA.

(c) "Ministry" means Ontario Ministry of the Environment.

(d) "District Office" means the Ottawa District Office.

(e) "Permit" means this Permit to Take Water No. 4563-7RMPHR including its Schedules, if any, issued in accordance with Section 34 of the OWRA.

(f) "Permit Holder" means Mattamy (Half Moon Bay) Limited.

(g) "OWRA " means the *Ontario Water Resources Act,* R.S.O. 1990, c. O. 40, as amended.

You are hereby notified that this Permit is issued subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. Compliance with Permit

1.1 Except where modified by this Permit, the water taking shall be in accordance with the application for this Permit To Take Water, dated February 11, 2009 and signed by Frank Cairo, and all Schedules included in this Permit.

1.2 The Permit Holder shall ensure that any person authorized by the Permit Holder to take water under this Permit is provided with a copy of this Permit and shall take all reasonable measures to ensure that any such person complies with the conditions of this Permit.

1.3 Any person authorized by the Permit Holder to take water under this Permit shall comply with the conditions of this Permit.

1.4 This Permit is not transferable to another person.

1.5 This Permit provides the Permit Holder with permission to take water in accordance with the conditions of this Permit, up to the date of the expiry of this Permit. This Permit does not constitute a legal right, vested or otherwise, to a water allocation, and the issuance of this Permit does not guarantee that, upon its expiry, it will be renewed.

1.6 The Permit Holder shall keep this Permit available at all times at or near the site of the taking, and shall produce this Permit immediately for inspection by a Provincial Officer upon his or her request.

1.7 The Permit Holder shall report any changes of address to the Director within thirty days of any such change. The Permit Holder shall report any change of ownership of the property for which this Permit is issued within thirty days of any such change. A change in ownership in the property shall cause this Permit to be cancelled.

2. General Conditions and Interpretation

2.1 Inspections

The Permit Holder must forthwith, upon presentation of credentials, permit a Provincial Officer to carry out any and all inspections authorized by the OWRA, the *Environmental Protection Act* , R.S.O. 1990, the *Pesticides Act* , R.S.O. 1990, or the *Safe Drinking Water Act,* S. O. 2002.

2.2 Other Approvals

The issuance of, and compliance with this Permit, does not:

(a) relieve the Permit Holder or any other person from any obligation to comply with any other applicable legal requirements, including the provisions of the *Ontario Water Resources Act* , and the *Environmental Protection Act* , and any regulations made thereunder; or

(b) limit in any way any authority of the Ministry, a Director, or a Provincial Officer, including the authority to require certain steps be taken or to require the Permit Holder to furnish any further information related to this Permit.

2.3 Information

The receipt of any information by the Ministry, the failure of the Ministry to take any action or require any person to take any action in relation to the information, or the failure of a Provincial Officer to prosecute any person in relation to the information, shall not be construed as:

(a) an approval, waiver or justification by the Ministry of any act or omission of any person that contravenes this Permit or other legal requirement; or

(b) acceptance by the Ministry of the information's completeness or accuracy.

2.4 Rights of Action

The issuance of, and compliance with this Permit shall not be construed as precluding or limiting any legal claims or rights of action that any person, including the Crown in right of Ontario or any agency thereof, has or may have against the Permit Holder, its officers, employees, agents, and contractors.

2.5 Severability

The requirements of this Permit are severable. If any requirements of this Permit, or the application of any requirements of this Permit to any circumstance, is held invalid or unenforceable, the application of such requirements to other circumstances and the remainder of this Permit shall not be affected thereby.

2.6 Conflicts

Where there is a conflict between a provision of any submitted document referred to in this Permit, including its Schedules, and the conditions of this Permit, the conditions in this Permit shall take precedence.

3. Water Takings Authorized by This Permit

3.1 **Expiry**

This Permit expires on **March 31, 2016**. No water shall be taken under authority of this Permit after the expiry date.

3.2 Amounts of Taking Permitted

The Permit Holder shall only take water from the source, during the periods and at the rates and amounts of taking specified in Table A. Water takings are authorized only for the purposes specified in Table A.

Table A

	Source Name / Description:	Source: Type:	Taking Specific Purpose:	Taking Major Category:	Max. Taken per Minute (litres):	Max. Num. of Hrs Taken per Day:	Max. Taken per Day (litres):	Max. Num. of Days Taken per Year:	Zone/ Easting/ Northing:
1	Phase 1- Area 1	Well Dug	Construction	Dewatering Construction	213	24	306,720	365	18 441019 5010586
2	Phase 1- Area 2	Well Bored	Construction	Dewatering Construction	968	24	1,393,920	365	18 441450 5010994
3	Phase 1- Area 3 Surface Water Runoff	Well Dug	Construction	Dewatering Construction	7,000	24	10,080,000	365	18 441019 5010586
4	Phase 1- Retention Pond	Pond Dugout	Construction	Dewatering Construction	2,000	24	2,688,000	365	18 441019 5010586
5	Phase 2 Service - Area 1	Well Dug	Construction	Dewatering Construction	189	24	272,511	365	18 440680 5010575
6	Phase 2 SWMP - Area 2	Well Dug	Construction	Dewatering Construction	388	24	557,038	365	18 440748 5011073
7	Phase 2 Surface Water Runoff - Area 3	Well Dug	Construction	Dewatering Construction	6,618	24	9,529,920	365	18 440680 5010575
8	Phase 3 HMB Area 4	Well Dug	Construction	Dewatering Construction	1,290	24	1,857,112	365	18 441565 5009854
9	Phase 3 Surface Water	Well	Construction	Dewatering Construction	6,129	24	8,826,000	365	18 441565

	Runoff - Area 5	Dug							5009854
10	Phase 4 - Area 6	Well Dug	Construction	Dewatering Construction	268	24	267,457	365	18 440060 5010081
11	Phase 4 Surface Water Runoff - Area 7	Well Dug	Construction	Dewatering Construction	9,362.0	24	13,481,280	365	18 440060 5010081
						Total Taking:	49,259,958		

3.3 No water shall be taken from Phase 1 Sources (1, 2, 3 and 4 in Table A above) after May 1, 2011.

3.4 The Permit Holder shall ensure that water takings for Phases 2, 3 and 4 Sources (5 through 11 in Table A above) are in accordance with the dates set out in Item #1 of Schedule A of this Permit.

3.5 Notwithstanding Table A, no discharge shall occur unless the quality of the discharge meets the criteria outlined in Table 2 of the City of Ottawa Storm Sewer By-Law 2003-514 (Refer to Item #2 of Schedule A of the Permit). The discharge shall be undertaken in accordance with Section 5.0 of the application.

4. Monitoring

4.1 The Permit Holder shall maintain a record of all water takings. This record shall include the dates and times of water takings, and the total measured amounts of water pumped per day for each day that water is taken under the authorization of this Permit. A separate record shall be maintained for each source. The Permit Holder shall keep all required records up to date and available at or near the site of the taking and shall produce the records immediately for inspection by a Provincial Officer upon his or her request.

4.2 The total amounts of water pumped shall be measured using a calibrated flow meter and totalizer.

4.3 The Permit Holder shall submit to the Director a record of water quality and flow data by the second Monday of each month that samples were taken for the previous month.

5. Impacts of the Water Taking

5.1 Notification

The Permit Holder shall immediately notify the local District Office of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint. The Permit Holder shall immediately notify the local District Office if the taking of water is observed to have any significant impact on the surrounding waters. After hours, calls shall be directed to the Ministry's Spills Action Centre at

1-800-268-6060.

5.2 For Surface-Water Takings
The taking of water (including the taking of water into storage and the subsequent or simultaneous withdrawal from storage) shall be carried out in such a manner that streamflow is not stopped and is not reduced to a rate that will cause interference with downstream uses of water or with the natural functions of the stream.

For Groundwater Takings
If the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to initial issuance of a Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of doing so.

If permanent interference is caused by the water taking, the Permit Holder shall restore the water supplies of those permanently affected.

5.3 In addition to Condition 5.2, if the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to the date of issuance of this Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of doing so. If permanent interference is caused by the water taking, the Permit Holder shall restore the water supplies of those permanently affected.

5.4 The Permit Holder shall install sediment and erosion control measures at each discharge location (A, B, C, D, E as per Drawing 4 in the Application for PTTW dated September 22, 2008, Item #3 of Schedule A of the Permit). The Permit Holder shall ensure that erosion and siltation control measures installed at the discharge site(s) are sufficient to control the discharge volume(s). Continuous care shall be taken to properly maintain the erosion and siltation control devices.

5.5 The Permit Holder shall regulate the rate of water discharged such that there is no flooding, soil erosion or channel scouring in the receiving water body, downstream water bodies, ditches or properties.

5.6 The Permit Holder shall establish water quality monitoring stations at each of the

discharge locations (A, B, C, D, E noted on Drawing 4, (Item #3 of Schedule A of the Permit)).

5.7 The Permit Holder shall sample Locations A, B, C, D, and E for water quality. During periods of continuous discharge, all the locations where discharge occurs are to be sampled every 4 days. During periods of intermittent discharge, all the locations where discharge occurs are to be sampled on the first day that discharge occurs, and every 4 days thereafter. For periods of either continuous or intermittent discharge, the initial water sample is to be anaylzed for the parameters listed in Table 2 of the City of Ottawa Sewer Use Bylaw 2003-514 (Item #2 of Schedule A of the Permit). Subsequent samples are to be analyzed for Total Suspended Solids (TSS) and Total Phosphorous (TP).

5.8 The Permit Holder shall measure discharge flows daily at Locations A, B, C, D, and E when discharges occur.

5.9 The Permit Holder shall ensure that the initial discharge for each discharge event for locations A , B, C, D and E meets the criteria in Table 2 of City of Ottawa Bylaw 2003-514 (Item #2 of Schedule A of the Permit) before discharge occurs. If the initial discharge analysis shows exceedances of any of the Table 2 criteria, or if any TSS concentration of any one sample exceeds 15 mg/L, then subsequent samples shall be analyzed for the full suite of parameters listed in Table 2 until the discharge falls below the criteria in Table 2. If there is an exceedance of the discharge criteria the Permit Holder shall implement the mitigation measures as proposed in Table 10 of the "Recommended Monitoring and Mitigation Plan" provided as Item #4 of Schedule A of the Permit.

6. Director May Amend Permit

The Director may amend this Permit by letter requiring the Permit Holder to suspend or reduce the taking to an amount or threshold specified by the Director in the letter. The suspension or reduction in taking shall be effective immediately and may be revoked at any time upon notification by the Director. This condition does not affect your right to appeal the suspension or reduction in taking to the Environmental Review Tribunal under the *Ontario Water Resources Act* , Section 100 (4).

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is included to ensure that the conditions in this Permit are complied with and can be enforced.

2. Condition 2 is included to clarify the legal interpretation of aspects of this Permit.

3. Conditions 3 through 6 are included to protect the quality of the natural environment so as to safeguard the ecosystem and human health and foster efficient use and conservation of waters. These conditions allow for the beneficial use of waters while ensuring the fair sharing,

conservation and sustainable use of the waters of Ontario. The conditions also specify the water takings that are authorized by this Permit and the scope of this Permit.

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, you may by written notice served upon me, the Environmental Review Tribunal and the Environmental Commissioner, ***Environmental Bill of Rights****, R.S.O. 1993, Chapter 28, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 101 of the Ontario Water Resources Act, as amended provides that the Notice requiring a hearing shall state:*

1. The portions of the Permit or each term or condition in the Permit in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

In addition to these legal requirements, the Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Permit to Take Water number;
6. The date of the Permit to Take Water;
7. The name of the Director;
8. The municipality within which the works are located;

This notice must be served upon:

The Secretary *Environmental Review Tribunal* *655 Bay Street, 15th Floor* *Toronto ON* *M5G 1E5*	*AND*	*The Environmental Commissioner* *1075 Bay Street* *6th Floor, Suite 605* *Toronto, Ontario M5S 2W5*	*AND*	*The Director, Section 34* *Ministry of the Environment* *1259 Gardiners Rd, PO Box 22032* *Kingston, ON* *K7P 3J6*

Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal:

by telephone at (416) 314-4600 ***by fax at (416) 314-4506*** ***by e-mail at www.ert.gov.on.ca***

This instrument is subject to Section 38 of the ***Environmental Bill of Rights*** *that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek to appeal for 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry, you can determine when the leave to appeal period ends.*

This Permit cancels and replaces Permit Number 8167-7K7RQV, issued on 16/01/2009 12:00:00 AM.

Dated at Kingston this 5th day of June, 2009.

Peter Taylor

Peter Taylor
Director, Section 34
Ontario Water Resources Act , R.S.O. 1990

Schedule A

This Schedule "A" forms part of Permit To Take Water 4563-7RMPHR, dated June 5, 2009.

1.

Source Name	Earliest Date of Taking	Latest Date of Taking
Area 1 Phase 2	April 1, 2009	March 31, 2011
Area 2 SWMP	April 1, 2009	March 31, 2011
Area 3 Phase 2Surface Dewatering	April 1, 2009	March 31, 2011
Area 4 HMB Phase 3	October 1, 2010	September 30, 2015
Area 5 Phase 3 Surface Dewatering	October 1, 2010	September 30, 2015
Area 6 HMB Phase 4	April 1, 2013	March 31, 2016
Area 7 Phase 4 Surface Dewatering	April 1, 2013	March 31, 2016

2. Table 2 Limits for Storm Sewer Discharge, City of Ottawa Sewer Use Bylaw 2003-514.

3. Section 5 and Drawing 4 in the Application for PTTW dated September 22, 2008 for Half Moon Bay- Phase 2, 3, 4 Residential development, Ottawa, Ontario.

4. Table 10 - "Recommended Monitoring and Mitigation Plan", from page 23 of the report entitled Groundwater Management Plan, Half Moon Bay - Phase 2, 3, 4 Residential Development, Ottawa, Ontario prepared for Mattamy (Half Moon Bay) Limited by Groundwater & Environmental Management Services Inc., dated September 22, 2008.

Ontario

Ministry of the Environment
Ministère de l'Environnement

AMENDED PERMIT TO TAKE WATER
Surface and Ground Water
NUMBER 7114-7E5M23

Pursuant to Section 34 of the Ontario Water Resources Act, R.S.O. 1990 this Permit To Take Water is hereby issued to:

Mattamy (Half Moon Bay) Limited
123 Huntmar Drive
Kanata, Ontario
K2S 1B9
Canada

For the water taking from: Area 3, Area 1, Area 2, Retention Pond

Located at: Lot 11 and 12, Concession 3, Geographic Twp of Nepean
Ottawa

For the purposes of this Permit, and the terms and conditions specified below, the following definitions apply:

DEFINITIONS

(a) "Director" means any person appointed in writing as a Director pursuant to section 5 of the OWRA for the purposes of section 34, OWRA.

(b) "Provincial Officer" means any person designated in writing by the Minister as a Provincial Officer pursuant to section 5 of the OWRA.

(c) "Ministry" means Ontario Ministry of the Environment.

(d) "District Office" means the Ottawa District Office.

(e) "Permit" means this Permit to Take Water No. 7114-7E5M23 including its Schedules, if any, issued in accordance with Section 34 of the OWRA.

(f) "Permit Holder" means Mattamy (Half Moon Bay) Limited.

(g) "OWRA " means the *Ontario Water Resources Act,* R.S.O. 1990, c. O. 40, as amended.

You are hereby notified that this Permit is issued subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. Compliance with Permit

1.1 Except where modified by this Permit, the water taking shall be in accordance with the application for this Permit To Take Water, dated April 21, 2008 and signed by Frank Cairo, and all Schedules included in this Permit.

1.2 The Permit Holder shall ensure that any person authorized by the Permit Holder to take water under this Permit is provided with a copy of this Permit and shall take all reasonable measures to ensure that any such person complies with the conditions of this Permit.

1.3 Any person authorized by the Permit Holder to take water under this Permit shall comply with the conditions of this Permit.

1.4 This Permit is not transferable to another person.

1.5 This Permit provides the Permit Holder with permission to take water in accordance with the conditions of this Permit, up to the date of the expiry of this Permit. This Permit does not constitute a legal right, vested or otherwise, to a water allocation, and the issuance of this Permit does not guarantee that, upon its expiry, it will be renewed.

1.6 The Permit Holder shall keep this Permit available at all times at or near the site of the taking, and shall produce this Permit immediately for inspection by a Provincial Officer upon his or her request.

1.7 The Permit Holder shall report any changes of address to the Director within thirty days of any such change. The Permit Holder shall report any change of ownership of the property for which this Permit is issued within thirty days of any such change. A change in ownership in the property shall cause this Permit to be cancelled.

2. General Conditions and Interpretation

2.1 Inspections

The Permit Holder must forthwith, upon presentation of credentials, permit a Provincial Officer to carry out any and all inspections authorized by the OWRA, the *Environmental Protection Act* , R.S.O. 1990, the *Pesticides Act* , R.S.O. 1990, or the *Safe Drinking Water Act,* S. O. 2002.

2.2 Other Approvals

The issuance of, and compliance with this Permit, does not:

(a) relieve the Permit Holder or any other person from any obligation to comply with any other applicable legal requirements, including the provisions of the *Ontario Water Resources Act* , and the *Environmental Protection Act* , and any regulations made thereunder; or

(b) limit in any way any authority of the Ministry, a Director, or a Provincial Officer, including the authority to require certain steps be taken or to require the Permit Holder to furnish any further information related to this Permit.

2.3 Information

The receipt of any information by the Ministry, the failure of the Ministry to take any action or require any person to take any action in relation to the information, or the failure of a Provincial Officer to prosecute any person in relation to the information, shall not be construed as:

(a) an approval, waiver or justification by the Ministry of any act or omission of any person that contravenes this Permit or other legal requirement; or

(b) acceptance by the Ministry of the information's completeness or accuracy.

2.4 Rights of Action

The issuance of, and compliance with this Permit shall not be construed as precluding or limiting any legal claims or rights of action that any person, including the Crown in right of Ontario or any agency thereof, has or may have against the Permit Holder, its officers, employees, agents, and contractors.

2.5 Severability

The requirements of this Permit are severable. If any requirements of this Permit, or the application of any requirements of this Permit to any circumstance, is held invalid or unenforceable, the application of such requirements to other circumstances and the remainder of this Permit shall not be affected thereby.

2.6 Conflicts

Where there is a conflict between a provision of any submitted document referred to in this Permit, including its Schedules, and the conditions of this Permit, the conditions in this Permit shall take precedence.

3. Water Takings Authorized by This Permit

3.1 **Expiry**

This Permit expires on **January 31, 2009**. No water shall be taken under authority of this Permit after the expiry date.

3.2 Amounts of Taking Permitted

The Permit Holder shall only take water from the source, during the periods and at the rates and amounts of taking specified in Table A. Water takings are authorized only for the purposes specified in Table A.

Table A

	Source Name / Description:	Source: Type:	Taking Specific Purpose:	Taking Major Category:	Max. Taken per Minute (litres):	Max. Num. of Hrs Taken per Day:	Max. Taken per Day (litres):	Max. Num. of Days Taken per Year:	Zone/ Easting/ Northing:
1	Surface Water Runoff At Area 3	Pond Dugout	Other - Construction	Construction	7,000	24	10,080,000	270	18 441019 5010586
2	Area 1	Well Dug	Construction	Dewatering Construction	213	24	306,720	243	18 441019 5010586
3	Area 2	Well Dug	Construction	Dewatering Construction	968	24	1,393,920	182	18 441450 5010994
4	Retention Pond	Pond Dugout	Construction	Dewatering Construction	2,000	16	2,688,000	270	18 441019 5010586
						Total Taking:	11,780,640		

3.3 Notwithstanding Table A no water shall be discharged from the Retention Pond if concentrations of Total Suspended Solids exceed a concentration of 25 mg/L in any one sample.

4. Monitoring

4.1 The Permit Holder shall maintain a record of all water takings. This record shall include the dates and times of water takings, the rates of pumping, and an estimated calculation of the total amounts of water pumped per day for each day that water is taken under the authorization of this Permit. A separate record shall be maintained for each source. The Permit Holder shall keep all required records up to date and available at or near the site of the taking and shall produce the records immediately for inspection by a Provincial Officer upon request.

5. Impacts of the Water Taking

5.1 Notification

The Permit Holder shall immediately notify the local District Office of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint. The Permit Holder shall immediately notify the local District Office if the taking of water is observed to have any significant impact on the

surrounding waters. After hours, calls shall be directed to the Ministry's Spills Action Centre at 1-800-268-6060.

5.2 For Surface-Water Takings

The taking of water (including the taking of water into storage and the subsequent or simultaneous withdrawal from storage) shall be carried out in such a manner that streamflow is not stopped and is not reduced to a rate that will cause interference with downstream uses of water or with the natural functions of the stream.

For Groundwater Takings

If the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to initial issuance of a Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of doing so.

If permanent interference is caused by the water taking, the Permit Holder shall restore the water supplies of those permanently affected.

5.3 The Permit Holder shall ensure that all water taken under the authority of this Permit from Areas 1, Area 2 and Area 3 (Area 3 is the total area encompassed by Area 1 and Area 2 as per Drawing 2 in Schedule A) is discharged to a temporary siltation retention pond. The temporary siltation retention pond and associated sediment control mechanisms must ensure that the discharge of water to the Jock River does not exceed a concentration of 25 mg/L Total Suspended Solids.

5.4 The Permit Holder shall monitor the discharge to the Jock River at the outlet of the temporary Retention Pond on a weekly basis (Monday to Sunday) during weeks when discharge to the Jock River occurs for Total Suspended Solids, Temperature and Total Phosphorus.

6. Director May Amend Permit

The Director may amend this Permit by letter requiring the Permit Holder to suspend or reduce the taking to an amount or threshold specified by the Director in the letter. The suspension or reduction in taking shall be effective immediately and may be revoked at any time upon notification by the Director. This condition does not affect your right to appeal the suspension or reduction in taking to the Environmental Review Tribunal under the *Ontario Water Resources Act* , Section 100 (4).

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is included to ensure that the conditions in this Permit are complied with and can be enforced.

2. Condition 2 is included to clarify the legal interpretation of aspects of this Permit.

3. Conditions 3 through 6 are included to protect the quality of the natural environment so as to safeguard the ecosystem and human health and foster efficient use and conservation of waters. These conditions allow for the beneficial use of waters while ensuring the fair sharing, conservation and sustainable use of the waters of Ontario. The conditions also specify the water takings that are authorized by this Permit and the scope of this Permit.

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, you may by written notice served upon me, the Environmental Review Tribunal and the Environmental Commissioner, ***Environmental Bill of Rights****, R.S.O. 1993, Chapter 28, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 101 of the Ontario Water Resources Act, as amended provides that the Notice requiring a hearing shall state:*

1. The portions of the Permit or each term or condition in the Permit in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

In addition to these legal requirements, the Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Permit to Take Water number;
6. The date of the Permit to Take Water;
7. The name of the Director;
8. The municipality within which the works are located;

This notice must be served upon:

The Secretary *Environmental Review Tribunal* *655 Bay Street, 15th Floor* *Toronto ON* *M5G 1E5*	*AND*	*The Environmental Commissioner* *1075 Bay Street* *6th Floor, Suite 605* *Toronto, Ontario M5S 2W5*	*AND*	*The Director, Section 34* *Ministry of the Environment* *1259 Gardiners Rd, PO Box 22032* *Kingston, ON* *K7P 3J6*

Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal:

by telephone at (416) 314-4600 ***by fax at (416) 314-4506*** ***by e-mail at www.ert.gov.on.ca***

This instrument is subject to Section 38 of the ***Environmental Bill of Rights*** *that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek to appeal for 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry, you can determine when the leave to appeal period ends.*

This Permit cancels and replaces Permit Number 7124-79CQG7, issued on 2008/01/17.

Dated at Kingston this 1st day of May, 2008.

Peter Taylor

Peter Taylor
Director, Section 34
Ontario Water Resources Act , R.S.O. 1990

Schedule A

This Schedule "A" forms part of Permit To Take Water 7114-7E5M23, dated May 1, 2008.

Drawing 2 from the Report entitled "groundwater Management Plan. Half Moon Bay - Phase 1 Residential Development, Ottawa, Ontario" completed by Groundwater and Environmental Management Services Inc. and dated September 27,2007.

Ontario

Ministry of the Environment

Ministère de l'Environnement

PERMIT TO TAKE WATER
Ground Water
NUMBER 7124-79CQG7

Pursuant to Section 34 of the Ontario Water Resources Act, R.S.O. 1990 this Permit To Take Water is hereby issued to:

Mattamy (Half Moon Bay) Limited
123 Huntmar Drive, Kanata
Ottawa, Ontario
K2S 1H9
Canada

For the water taking from: Excavation Area 1 and Area 2

Located at: Lot 11 and 12, Concession 3, Geographic Twp of Nepean
Ottawa

For the purposes of this Permit, and the terms and conditions specified below, the following definitions apply:

DEFINITIONS

(a) "Director" means any person appointed in writing as a Director pursuant to section 5 of the OWRA for the purposes of section 34, OWRA.

(b) "Provincial Officer" means any person designated in writing by the Minister as a Provincial Officer pursuant to section 5 of the OWRA.

(c) "Ministry" means Ontario Ministry of the Environment.

(d) "District Office" means the Ottawa District Office.

(e) "Permit" means this Permit to Take Water No. 7124-79CQG7 including its Schedules, if any, issued in accordance with Section 34 of the OWRA.

(f) "Permit Holder" means Mattamy (Half Moon Bay) Limited.

(g) "OWRA " means the *Ontario Water Resources Act,* R.S.O. 1990, c. O. 40, as amended.

You are hereby notified that this Permit is issued subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. Compliance with Permit

1.1 Except where modified by this Permit, the water taking shall be in accordance with the application for this Permit To Take Water, dated September 26, 2007 and signed by Frank Cairo , and all Schedules included in this Permit.

1.2 The Permit Holder shall ensure that any person authorized by the Permit Holder to take water under this Permit is provided with a copy of this Permit and shall take all reasonable measures to ensure that any such person complies with the conditions of this Permit.

1.3 Any person authorized by the Permit Holder to take water under this Permit shall comply with the conditions of this Permit.

1.4 This Permit is not transferable to another person.

1.5 This Permit provides the Permit Holder with permission to take water in accordance with the conditions of this Permit, up to the date of the expiry of this Permit. This Permit does not constitute a legal right, vested or otherwise, to a water allocation, and the issuance of this Permit does not guarantee that, upon its expiry, it will be renewed.

1.6 The Permit Holder shall keep this Permit available at all times at or near the site of the taking, and shall produce this Permit immediately for inspection by a Provincial Officer upon his or her request.

1.7 The Permit Holder shall report any changes of address to the Director within thirty days of any such change. The Permit Holder shall report any change of ownership of the property for which this Permit is issued within thirty days of any such change. A change in ownership in the property shall cause this Permit to be cancelled.

2. General Conditions and Interpretation

2.1 Inspections

The Permit Holder must forthwith, upon presentation of credentials, permit a Provincial Officer to carry out any and all inspections authorized by the OWRA, the *Environmental Protection Act* , R.S.O. 1990, the *Pesticides Act* , R.S.O. 1990, or the *Safe Drinking Water Act,* S. O. 2002.

2.2 Other Approvals

The issuance of, and compliance with this Permit, does not:

(a) relieve the Permit Holder or any other person from any obligation to comply with any other applicable legal requirements, including the provisions of the *Ontario Water Resources Act* , and the *Environmental Protection Act* , and any regulations made thereunder; or

(b) limit in any way any authority of the Ministry, a Director, or a Provincial Officer, including the authority to require certain steps be taken or to require the Permit Holder to furnish any further information related to this Permit.

2.3 Information

The receipt of any information by the Ministry, the failure of the Ministry to take any action or require any person to take any action in relation to the information, or the failure of a Provincial Officer to prosecute any person in relation to the information, shall not be construed as:

(a) an approval, waiver or justification by the Ministry of any act or omission of any person that contravenes this Permit or other legal requirement; or

(b) acceptance by the Ministry of the information's completeness or accuracy.

2.4 Rights of Action

The issuance of, and compliance with this Permit shall not be construed as precluding or limiting any legal claims or rights of action that any person, including the Crown in right of Ontario or any agency thereof, has or may have against the Permit Holder, its officers, employees, agents, and contractors.

2.5 Severability

The requirements of this Permit are severable. If any requirements of this Permit, or the application of any requirements of this Permit to any circumstance, is held invalid or unenforceable, the application of such requirements to other circumstances and the remainder of this Permit shall not be affected thereby.

2.6 Conflicts

Where there is a conflict between a provision of any submitted document referred to in this Permit, including its Schedules, and the conditions of this Permit, the conditions in this Permit shall take precedence.

3. Water Takings Authorized by This Permit

3.1 **Expiry**

This Permit expires on **January 31, 2009**. No water shall be taken under authority of this Permit after the expiry date.

3.2 Amounts of Taking Permitted

The Permit Holder shall only take water from the source, during the periods and at the rates and amounts of taking specified in Table A. Water takings are authorized only for the purposes specified in Table A.

Table A

	Source Name / Description:	Source: Type:	Taking Specific Purpose:	Taking Major Category:	Max. Taken per Minute (litres):	Max. Num. of Hrs Taken per Day:	Max. Taken per Day (litres):	Max. Num. of Days Taken per Year:	Zone/ Easting/ Northing:
1	Area 1	Well Dug	Construction	Dewatering Construction	213	24	306,720	243	18 441019 5010586
2	Area 2	Well Dug	Construction	Dewatering Construction	968	24	1,393,920	182	18 441450 5010994
						Total Taking:	1,700,640		

4. Monitoring

4.1 The Permit Holder shall maintain a record of all water takings. This record shall include the dates and times of water takings, the rates of pumping, and an estimated calculation of the total amounts of water pumped per day for each day that water is taken under the authorization of this Permit. A separate record shall be maintained for each source. The Permit Holder shall keep all required records up to date and available at or near the site of the taking and shall produce the records immediately for inspection by a Provincial Officer upon his or her request.

4.2 Water taken under the authorization of this Permit shall only be from Area 1 and Area 2 as shown in Drawing 2 of Schedule A of this Permit.

5. Impacts of the Water Taking

5.1 Notification

The Permit Holder shall immediately notify the local District Office of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint. The Permit Holder shall immediately notify the local District Office if the taking of water is observed to have any significant impact on the surrounding waters. After hours, calls shall be directed to the Ministry's Spills Action Centre at 1-800-268-6060.

5.2 For Groundwater Takings

If the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to initial issuance of a Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of doing so.

If permanent interference is caused by the water taking, the Permit Holder shall restore the water supplies of those permanently affected.

5.3 The Permit Holder shall ensure that all water taken under the authority of this Permit is discharged to temporary siltation control ponds. The temporary siltation control ponds must be sufficient to prevent the discharge of turbid water to the Jock River. The discharge from the temporary siltation control ponds must not exceed 25 mg/L Total Suspended Solids (TSS).

5.4 The Permit Holder shall monitor for the concentration of TSS at the outlet of the temporary siltation control ponds on a weekly basis during periods of discharge.

5.5 The Permit Holder shall measure the quantity of water and the temperature of the water being discharged from the temporary siltation control ponds on a weekly basis during periods of discharge.

5.6 The Permit Holder shall ensure that the discharge of water is controlled in such a way as to prevent erosion in the ditches leading to the Jock River.

6. Director May Amend Permit

The Director may amend this Permit by letter requiring the Permit Holder to suspend or reduce the taking to an amount or threshold specified by the Director in the letter. The suspension or reduction in taking shall be effective immediately and may be revoked at any time upon notification by the Director. This condition does not affect your right to appeal the suspension or reduction in taking to the Environmental Review Tribunal under the *Ontario Water Resources Act* , Section 100 (4).

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is included to ensure that the conditions in this Permit are complied with and can be enforced.

2. Condition 2 is included to clarify the legal interpretation of aspects of this Permit.

3. Conditions 3 through 6 are included to protect the quality of the natural environment so as to safeguard the ecosystem and human health and foster efficient use and conservation of waters. These conditions allow for the beneficial use of waters while ensuring the fair sharing, conservation and sustainable use of the waters of Ontario. The conditions also specify the water takings that are authorized by this Permit and the scope of this Permit.

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, you may by written notice served upon me, the Environmental Review Tribunal and the Environmental Commissioner, ***Environmental Bill of Rights****, R.S.O. 1993, Chapter 28, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 101 of the Ontario Water Resources Act, as amended provides that the Notice requiring a hearing shall state:*

1. The portions of the Permit or each term or condition in the Permit in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

In addition to these legal requirements, the Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Permit to Take Water number;
6. The date of the Permit to Take Water;
7. The name of the Director;
8. The municipality within which the works are located;

This notice must be served upon:

The Secretary
Environmental Review Tribunal
2300 Yonge Street, Suite 1700
Toronto, Ontario M4P 1E4

AND

The Environmental Commissioner
1075 Bay Street
6th Floor, Suite 605
Toronto, Ontario M5S 2W5

AND

The Director, Section 34
Ministry of the Environment
1259 Gardiners Rd, PO Box 22032
Kingston, ON
K7P 3J6

Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal:

by telephone at (416) 314-4600 ***by fax at (416) 314-4506*** ***by e-mail at www.ert.gov.on.ca***

This instrument is subject to Section 38 of the ***Environmental Bill of Rights*** *that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek to appeal for 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry, you can determine when the leave to appeal period ends.*

Dated at Kingston this 17th day of January, 2008.

Peter Taylor
Director, Section 34
Ontario Water Resources Act , R.S.O. 1990

Schedule A

This Schedule "A" forms part of Permit To Take Water 7124-79CQG7, dated January 17, 2008.

Drawing 2 from the Report entitled "Groundwater Management Plan, Half Moon Bay - Phase 1 Residential Development, Ottawa, Ontario" completed by Groundwater and Environmental Management Services Inc. and dated September 27, 2007.

Ontario

Ministry of the Environment
Ministère de l'Environnement

PERMIT TO TAKE WATER
Ground Water
NUMBER 8167-7K7RQV

Pursuant to Section 34 of the Ontario Water Resources Act, R.S.O. 1990 this Permit To Take Water is hereby issued to:

Mattamy (Half Moon Bay) Limited
123 Huntmar Drive
Ottawa, Ontario
K2S 1B9
Canada

For the water taking from: Area 1 Phase 2 Service, Area 2 Phase 2 SWMP, Area 3 Phase 2 Surface Water Runoff, Area 4 - HMB Phase 3, Area 5 Phase 3 Surface Water Runoff, Area 6 - HMB Phase 4, Area 7 Phase 4 Surface Water Runoff

Located at: Lot Part of 10 and 11, Concession 3
Ottawa

Lot 12, Concession 3, Nepean
Ottawa

Lot: 8, 9, Concession: 3, Nepean
Ottawa

For the purposes of this Permit, and the terms and conditions specified below, the following definitions apply:

DEFINITIONS

(a) "Director" means any person appointed in writing as a Director pursuant to section 5 of the OWRA for the purposes of section 34, OWRA.

(b) "Provincial Officer" means any person designated in writing by the Minister as a Provincial Officer pursuant to section 5 of the OWRA.

(c) "Ministry" means Ontario Ministry of the Environment.

(d) "District Office" means the Ottawa District Office.

(e) "Permit" means this Permit to Take Water No. 8167-7K7RQV including its Schedules, if any, issued in accordance with Section 34 of the OWRA.

(f) "Permit Holder" means Mattamy (Half Moon Bay) Limited.

(g) "OWRA " means the *Ontario Water Resources Act,* R.S.O. 1990, c. O. 40, as amended.

You are hereby notified that this Permit is issued subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. Compliance with Permit

1.1 Except where modified by this Permit, the water taking shall be in accordance with the application for this Permit To Take Water, dated September 12, 2008 and signed by Frank Cairo, ASO, and all Schedules included in this Permit.

1.2 The Permit Holder shall ensure that any person authorized by the Permit Holder to take water under this Permit is provided with a copy of this Permit and shall take all reasonable measures to ensure that any such person complies with the conditions of this Permit.

1.3 Any person authorized by the Permit Holder to take water under this Permit shall comply with the conditions of this Permit.

1.4 This Permit is not transferable to another person.

1.5 This Permit provides the Permit Holder with permission to take water in accordance with the conditions of this Permit, up to the date of the expiry of this Permit. This Permit does not constitute a legal right, vested or otherwise, to a water allocation, and the issuance of this Permit does not guarantee that, upon its expiry, it will be renewed.

1.6 The Permit Holder shall keep this Permit available at all times at or near the site of the taking, and shall produce this Permit immediately for inspection by a Provincial Officer upon his or her request.

1.7 The Permit Holder shall report any changes of address to the Director within thirty days of any such change. The Permit Holder shall report any change of ownership of the property for which this Permit is issued within thirty days of any such change. A change in ownership in the property shall cause this Permit to be cancelled.

2. General Conditions and Interpretation

2.1 Inspections
The Permit Holder must forthwith, upon presentation of credentials, permit a Provincial Officer to carry out any and all inspections authorized by the OWRA, the *Environmental Protection Act* , R.S.O. 1990, the *Pesticides Act* , R.S.O. 1990, or the *Safe Drinking Water Act,* S. O. 2002.

2.2 Other Approvals

The issuance of, and compliance with this Permit, does not:

(a) relieve the Permit Holder or any other person from any obligation to comply with any other applicable legal requirements, including the provisions of the *Ontario Water Resources Act* , and the *Environmental Protection Act* , and any regulations made thereunder; or

(b) limit in any way any authority of the Ministry, a Director, or a Provincial Officer, including the authority to require certain steps be taken or to require the Permit Holder to furnish any further information related to this Permit.

2.3 Information

The receipt of any information by the Ministry, the failure of the Ministry to take any action or require any person to take any action in relation to the information, or the failure of a Provincial Officer to prosecute any person in relation to the information, shall not be construed as:

(a) an approval, waiver or justification by the Ministry of any act or omission of any person that contravenes this Permit or other legal requirement; or

(b) acceptance by the Ministry of the information's completeness or accuracy.

2.4 Rights of Action

The issuance of, and compliance with this Permit shall not be construed as precluding or limiting any legal claims or rights of action that any person, including the Crown in right of Ontario or any agency thereof, has or may have against the Permit Holder, its officers, employees, agents, and contractors.

2.5 Severability

The requirements of this Permit are severable. If any requirements of this Permit, or the application of any requirements of this Permit to any circumstance, is held invalid or unenforceable, the application of such requirements to other circumstances and the remainder of this Permit shall not be affected thereby.

2.6 Conflicts

Where there is a conflict between a provision of any submitted document referred to in this Permit, including its Schedules, and the conditions of this Permit, the conditions in this Permit shall take precedence.

3. Water Takings Authorized by This Permit

3.1 **Expiry**

This Permit expires on **March 31, 2016**. No water shall be taken under authority of this Permit after the expiry date.

3.2 Amounts of Taking Permitted

The Permit Holder shall only take water from the source, during the periods and at the rates and amounts of taking specified in Table A. Water takings are authorized only for the purposes specified in Table A.

Table A

	Source Name / Description:	Source: Type:	Taking Specific Purpose:	Taking Major Category:	Max. Taken per Minute (litres):	Max. Num. of Hrs Taken per Day:	Max. Taken per Day (litres):	Max. Num. of Days Taken per Year:	Zone/ Easting/ Northing:
1	Area 1 Phase 2 Service	Well Dug	Construction	Dewatering Construction	189	24	272,511	365	18 440680 5010575
2	Area 2 Phase 2 SWMP	Well Dug	Construction	Dewatering Construction	388	24	557,038	365	18 440748 5011073
3	Area 3 Phase 2 Surface Water Runoff	Well Dug	Construction	Dewatering Construction	6,618	24	9,529,920	365	18 440680 5010575
4	Area 4 - HMB Phase 3	Well Dug	Construction	Dewatering Construction	1,290	24	1,857,112	365	18 441565 5009854
5	Area 5 Phase 3 Surface Water Runoff	Well Dug	Construction	Dewatering Construction	6,129	24	8,826,000	365	18 441565 5009854
6	Area 6 - HMB Phase 4	Well Dug	Construction	Dewatering Construction	268	24	267,457	365	18 440060 5010081
7	Area 7 Phase 4 Surface Water Runoff	Well Dug	Construction	Dewatering Construction	9,362	24	13,481,280	365	18 440060 5010081
						Total Taking:	34,791,318		

3.3 The water taking shall be in accordance with the dates and times set out in Item #1 of Schedule A.

3.4 Notwithstanding Table A no discharge shall occur unless the quality of the discharge meets the criteria outlined in Table 2 of the City of Ottawa Storm Sewer By-Law 2003-514 (Refer to Item #2 of Schedule A of the Permit). The discharge shall be undertaken in accordance with Section 5.0 of the Application .

4. Monitoring

4.1 The Permit Holder shall maintain a record of all water takings. This record shall include the dates and times of water takings, and the total measured amounts of water pumped per day for each day that water is taken under the authorization of this Permit. A separate record shall be maintained for each source. The Permit Holder shall keep all required records up to date and available at or near the site of the taking and shall produce the records immediately for inspection by a Provincial Officer upon his or her request.

4.2 The total amounts of water pumped shall be measured using a calibrated flow meter and totalizer.

5. Impacts of the Water Taking

5.1 Notification
The Permit Holder shall immediately notify the local District Office of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint. The Permit Holder shall immediately notify the local District Office if the taking of water is observed to have any significant impact on the surrounding waters. After hours, calls shall be directed to the Ministry's Spills Action Centre at 1-800-268-6060.

5.2 For Groundwater Takings
If the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to initial issuance of a Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of doing so.

If permanent interference is caused by the water taking, the Permit Holder shall restore the water supplies of those permanently affected.

5.3 In addition to condition 5.2, if the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to the date of issuance of this Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of doing so. If permanent interference is caused by the water taking, the Permit Holder shall restore the water supplies of those permanently affected.

5.4 The Permit Holder shall install sediment and erosion control measures at each discharge location (A, B, C, D E as per Drawing 4 in the Application for PTTW dated September 22, 2008, Item #3 of Schedule A of the Permit). The Permit Holder shall ensure that erosion and siltation control measures installed at the discharge site(s) are sufficient to control the discharge volume(s). Continuous care shall be taken to properly maintain the erosion and siltation control devices.

5.5 The Permit Holder shall regulate the rate of water discharged such that there is no flooding, soil erosion or channel scouring in the receiving water body, downstream water bodies, ditches or properties.

5.5 The Permit Holder shall establish water quality monitoring stations at each of the discharge locations (A, B, C, D, E) noted on Drawing 4, (Item #3 of Schedule A of the Permit).

5.6 The Permit Holder shall sample Locations A, B, C, D, and E for water quality. During periods of continuous discharge, all the locations where discharge occurs are to be sampled every 4 days. During periods of intermittent discharge, all the locations where discharge occurs are to be sampled on the first day that discharge occurs, and every 4 days thereafter. For periods of either continuous or intermittent discharge, the initial water sample is to be anaylzed for the parameters listed in Table 2 of the City of Ottawa Sewer Use Bylaw 2003-514 (Item #2 of Schedule A of the Permit). Subsequent samples are to be analyzed for Total Suspended Solids (TSS) and Total Phosphorous (TP).

5.7 The Permit Holder shall measure discharge flows daily at Locations A, B, C, D, and E when discharges occur.

5.8 The Permit Holder shall ensure that the initial discharge for each discharge event for locations A , B, C, D and E meets the criteria in Table 2 of City of Ottawa Bylaw 2003-514 (Item #2 of Schedule A of the Permit) before discharge occurs. If the initial discharge analysis shows exceedances of any of the Table 2 criteria, or if any TSS concentration of any one sample exceeds 15 mg/L, then subsequent samples shall be analyzed for the full suite of parameters listed in Table 2 until the discharge falls below the criteria in Table 2. If there is an exceedance of the discharge criteria the Permit Holder shall implement the mitigation measures as proposed in Table 10 of the "Recommended Monitoring and Mitigation Plan" provided as Item #4 of Schedule A of the Permit.

6. Director May Amend Permit

The Director may amend this Permit by letter requiring the Permit Holder to suspend or reduce the taking to an amount or threshold specified by the Director in the letter. The suspension or reduction in taking shall be effective immediately and may be revoked at any time upon notification by the Director. This condition does not affect your right to appeal the suspension or reduction in taking to the Environmental Review Tribunal under the *Ontario Water Resources Act* , Section 100 (4).

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is included to ensure that the conditions in this Permit are complied with and can be enforced.

2. Condition 2 is included to clarify the legal interpretation of aspects of this Permit.

3. Conditions 3 through 6 are included to protect the quality of the natural environment so as to safeguard the ecosystem and human health and foster efficient use and conservation of waters. These conditions allow for the beneficial use of waters while ensuring the fair sharing, conservation and sustainable use of the waters of Ontario. The conditions also specify the water takings that are authorized by this Permit and the scope of this Permit.

*In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, you may by written notice served upon me, the Environmental Review Tribunal and the Environmental Commissioner, **Environmental Bill of Rights**, R.S.O. 1993, Chapter 28, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 101 of the Ontario Water Resources Act, as amended provides that the Notice requiring a hearing shall state:*

1. The portions of the Permit or each term or condition in the Permit in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

In addition to these legal requirements, the Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Permit to Take Water number;
6. The date of the Permit to Take Water;
7. The name of the Director;
8. The municipality within which the works are located;

This notice must be served upon:

The Secretary
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto ON
M5G 1E5

AND

The Environmental Commissioner
1075 Bay Street
6th Floor, Suite 605
Toronto, Ontario M5S 2W5

AND

The Director, Section 34
Ministry of the Environment
1259 Gardiners Rd, PO Box 22032
Kingston, ON
K7P 3J6

Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal:

by telephone at (416) 314-4600 ***by fax at (416) 314-4506*** ***by e-mail at www.ert.gov.on.ca***

*This instrument is subject to Section 38 of the **Environmental Bill of Rights** that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek to appeal for 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry, you can determine when the leave to appeal period ends.*

Dated at Kingston this 16th day of January, 2009.

Peter Taylor

Peter Taylor
Director, Section 34
Ontario Water Resources Act , R.S.O. 1990

Schedule A

This Schedule "A" forms part of Permit To Take Water 8167-7K7RQV, dated January 16, 2009.

1.

Source Name	Earliest Date of Taking	Latest Date of Taking
Area 1 Phase 2	April 1, 2009	March 31, 2011
Area 2 SWMP	April 1, 2009	March 31, 2011
Area 3 Phase 2Surface Dewatering	April 1, 2009	March 31, 2011
Area 4 HMB Phase 3	October 1, 2010	September 30, 2015
Area 5 Phase 3 Surface Dewatering	October 1, 2010	September 30, 2015
Area 6 HMB Phase 4	April 1, 2013	March 31, 2016
Area 7 Phase 4 Surface Dewatering	April 1, 2013	March 31, 2016

2. Table 2 Limits for Storm Sewer Discharge, City of Ottawa Sewer Use Bylaw 2003-514.

3. Section 5 and Drawing 4 in the Application for PTTW dated September 22, 2008 for Half Moon Bay- Phase 2, 3, 4 Residential development, Ottawa, Ontario.

4. Table 10 - "Recommended Monitoring and Mitigation Plan", from page 23 of the report entitled Groundwater Management Plan, Half Moon Bay - Phase 2, 3, 4 Residential Development, Ottawa, Ontario prepared for Mattamy (Half Moon Bay) Limited by Groundwater & Environmental Management Services Inc., dated September 22, 2008.

Ontario

Ministry of the Environment
Ministère de l'Environnement

AMENDED CERTIFICATE OF APPROVAL
MUNICIPAL AND PRIVATE SEWAGE WORKS
NUMBER 6638-7FQSS8
Issue Date: July 11, 2008

Mattamy (Half Moon Bay) Limited
123 Huntmar Dr
Kanata, Ontario
K2S 1B9

Site Location: Half Moon Bay - Phase 1
Rideau Front, Geographic Township of Nepean
Lot Part of Lots 10 & 11, Concession 3
Ottawa City, Ontario

You have applied in accordance with Section 53 of the Ontario Water Resources Act for approval of:

to construct an interim drainage control system for storage, including ***Geotube®*** *pumping system and temporary diversion of the Todd Drain and Clarkes Drain to serve* Half Moon Bay Subdivision - Phase 1 development, in the City of Ottawa, comprising the following:

Interim Drainage Control System

a storage pond for the management and treatment of storm water and ground water during construction of the subdivision will be located within the future Todd Pond Stormwater Management Facility footprint, on Cambrian Road, to serve approximately 65 ha parcel of residential subdivision will provide quality control for storm events up to and including the 100-year return periods, with portable pumps connected to the ***Geotube®*** containers or equivalent approved by the *District Manager,* outletting into a rock lined channel which in turn discharges into Jock River;

all in accordance with:

1. Application for Municipal and Sewage Works, dated May 14, 2008 and received on May 16, 2008, and all supporting documentation and information associated with the application including Stormwater Management Report, final plans and specifications prepared by David Schaeffer Engineering Ltd., and

2. the procedure, dated May 29, 2008, published as electronic file "3798.pdf" and co-signed by Frank Cairo, Mattamy Homes Ottawa and Jeff Mulcock, Taggart Construction Ltd.

For the purpose of this Certificate of Approval and the terms and conditions specified below, the following definitions apply:

1. "*Certificate* " means this entire Certificate of Approval document, issued in accordance with Section 53 of the *Ontario Water Resources Act* , and includes any schedules;

2. "*District Manager* " means the District Manager of the Ottawa District Office of the Ministry;

3. "*Director* " means any *Ministry* employee appointed by the Minister pursuant to section 5 of the *Act* ;

4. "*Ministry* " means the Ontario Ministry of the Environment;

5. "*Owner* " means Mattamy (Half Moon Bay) Limited, and includes its successors and assignees; and

6. "*Works* " means the sewage works described in the *Owner* 's application, this *Certificate* and in the supporting documentation referred to herein, to the extent approved by this *Certificate* .

You are hereby notified that this approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL CONDITIONS

1.1 The *Owner* shall ensure that any person authorized to carry out work on or operate any aspect of the *Works* is notified of this *Certificate* and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

1.2 Except as otherwise provided by these Conditions, the *Owner* shall design, build, install, operate and maintain the *Works* in accordance with the description given in this *Certificate* , the application for approval of the works and the submitted supporting documents and plans and specifications as listed in this *Certificate* .

1.3 Where there is a conflict between a provision of any submitted document referred to in this *Certificate* and the Conditions of this *Certificate* , the Conditions in this *Certificate* shall take precedence, and where there is a conflict between the listed submitted documents, the document bearing the most recent date shall prevail.

1.4 Where there is a conflict between the listed submitted documents, and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.

1.5 The requirements of this *Certificate* are severable. If any requirement of this *Certificate* , or the

application of any requirement of this *Certificate* to any circumstance, is held invalid or unenforceable, the application of such requirement to other circumstances and the remainder of this *Certificate* shall not be affected thereby.

2. EXPIRY OF APPROVAL

2.1 The approval issued by this *Certificate* will cease to apply to those parts of the *Works* which have not been constructed within five (5) years of the date of this *Certificate* .

3. OPERATION AND MAINTENANCE

3.1 The *Owner* shall make all necessary investigations, take all necessary steps and obtain all necessary approvals so as to ensure that the physical structure, siting and operations of the *Works* do not constitute a safety or health hazard to the general public.

3.2 The *Owner* shall undertake regular inspections of the condition of the *Works* , and undertake any necessary cleaning and maintenance to ensure that sediment, debris and excessive decaying vegetation are removed from the above noted *Works* to avoid reduction in the treatment capacity.

3.3 The *Owner* shall maintain a logbook to record the results of all inspections and any cleaning and maintenance operations undertaken and shall make the logbook available for inspection by the *Ministry* upon request.

4. SPECIAL CONDITION – CONSTRUCTION AND OPERATIONAL PROCEDURE

4.1 The written procedure issued on May 29, 2008, published as electronic file "3798.pdf" and co-signed by Frank Cairo, Mattamy Homes Ottawa and Jeff Mulcock, Taggart Construction Ltd., representing the *Owner* , shall be carried out for as long as the *District Manager* has not given his/her consent in writing to discontinue its use.

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is imposed to ensure that the *Works* are built and operated in the manner in which they were described for review and upon which approval was granted. This condition is also included to emphasize the precedence of Conditions in the *Certificate* and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review. The condition also advises the *Owner* his/her responsibility to notify any person they authorized to carry out work pursuant to this *Certificate* the existence of this *Certificate* .

2. Condition 2 is included to ensure that, when the *Works* are constructed, the *Works* will meet the standards that apply at the time of construction to ensure the ongoing protection of the environment.

3. Condition 3.1 is imposed because it is not in the public interest for the *Director* to approve facilities which, by reason of potential health and safety hazards do not generally comply with legal standards or

approval requirements falling outside the purview of this *Ministry* .

4. Condition 3.2 is included as regular inspection and necessary removal of sediment and excessive decaying vegetation from this approved *Works* are required to mitigate the impact of sediment, debris and/or decaying vegetation on the treatment capacity of the *Works* . It is also required to ensure that adequate storage is maintained in the *Works* at all times as required by the design, and to prevent stormwater impounded in the *Works* from becoming stagnant.

5. Condition 3.3 is included to ensure that the *Works* are operated and maintained to function as designed.

6. Condition 4 is included to ensure that established and accepted procedures are used during construction of the *Works* to minimize the potential for adverse environmental impacts on the receiver.

This Certificate of Approval revokes and replaces Certificate(s) of Approval No. 4522-7FBRPC issued on June 13, 2008.

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, as amended, you may by written notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 101 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, provides that the Notice requiring the hearing shall state:

1. The portions of the approval or each term or condition in the approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Certificate of Approval number;
6. The date of the Certificate of Approval;
7. The name of the Director;
8. The municipality within which the works are located;

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto, Ontario
M5G 1E5

AND

The Director
Section 53, *Ontario Water Resources Act*
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or www.ert.gov.on.ca**

The above noted sewage works are approved under Section 53 of the Ontario Water Resources Act.

DATED AT TORONTO this 11th day of July, 2008

Zafar Bhatti

Zafar Bhatti, P.Eng.
Director
Section 53, *Ontario Water Resources Act*

RS/
c: District Manager, MOE Ottawa District Office
City Clerk, City of Ottawa
Stephen Pichette, David Schaeffer Engineering Limited

Ontario

Ministry of the Environment
Ministère de l'Environnement

CERTIFICATE OF APPROVAL
MUNICIPAL AND PRIVATE SEWAGE WORKS
NUMBER 4522-7FBRPC
Issue Date: June 13, 2008

Mattamy (Half Moon Bay) Limited
123 Huntmar Dr
Kanata, Ontario
K2S 1B9

Site Location: Half Moon Bay - Phase 1
Rideau Front, Geographic Township of Nepean
Lot Part of Lots 10 & 11, Concession 3
Ottawa City

You have applied in accordance with Section 53 of the Ontario Water Resources Act for approval of:

to construct an interim drainage control pond for storage, including Geotubes pumping system *and temporary diversion of the Todd Drain and Clarkes Drain to serve* Half Moon Bay Subdivision Phase 1, in the Municipality of Ottawa, comprising the following:

Interim Drainage Control Pond

a storage pond for the management and treatment of storm water and ground water during construction of the subdivision will be located on future Todd Pond Stormwater Management Facility and outlet channel, on Cambrian Road, to serve approximately 65 ha parcel of residential subdivision will provide quality control for storm up to and including 100-year return periods, will have portable pumps connected to the Geotubes, or approved equivalent that outlet into a rock lined channel which in turn discharges into Jock River;

all in accordance with the application dated May 14, 2008 and received on May 16, 2008, and all supporting documentation and information associated with the application including Stormwater Management Report, final plans and specifications prepared by David Schaeffer Engineering Ltd., including the letter dated May 29, 2008, by Mattamy Homes Limited.

For the purpose of this Certificate of Approval and the terms and conditions specified below, the following definitions apply:

1. "*Certificate* " means this entire Certificate of Approval document, issued in accordance with Section 53 of the *Ontario Water Resources Act* , and includes any schedules;

2. "*Director* " means any *Ministry* employee appointed by the Minister pursuant to section 5 of the *Act* ;

3. "*Ministry* " means the Ontario Ministry of the Environment;

4. "*Owner* " means Mattamy Homes Limited, and includes its successors and assignees; and

5. "*Works* " means the sewage works described in the *Owner* 's application, this *Certificate* and in the supporting documentation referred to herein, to the extent approved by this *Certificate* .

You are hereby notified that this approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL CONDITIONS

1.1 The *Owner* shall ensure that any person authorized to carry out work on or operate any aspect of the *Works* is notified of this *Certificate* and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

1.2 Except as otherwise provided by these Conditions, the *Owner* shall design, build, install, operate and maintain the *Works* in accordance with the description given in this *Certificate* , the application for approval of the works and the submitted supporting documents and plans and specifications as listed in this *Certificate* .

1.3 Where there is a conflict between a provision of any submitted document referred to in this *Certificate* and the Conditions of this *Certificate* , the Conditions in this *Certificate* shall take precedence, and where there is a conflict between the listed submitted documents, the document bearing the most recent date shall prevail.

1.4 Where there is a conflict between the listed submitted documents, and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.

1.5 The requirements of this *Certificate* are severable. If any requirement of this *Certificate* , or the application of any requirement of this *Certificate* to any circumstance, is held invalid or unenforceable, the application of such requirement to other circumstances and the remainder of this *Certificate* shall not be affected thereby.

2. EXPIRY OF APPROVAL

2.1 The approval issued by this *Certificate* will cease to apply to those parts of the *Works* which have not been constructed within five (5) years of the date of this *Certificate* .

3. OPERATION AND MAINTENANCE

3.1 The *Owner* shall make all necessary investigations, take all necessary steps and obtain all necessary approvals so as to ensure that the physical structure, siting and operations of the stormwater works do not constitute a safety or health hazard to the general public.

3.2 The *Owner* shall undertake an inspection of the condition of the stormwater management system, at least once a year, and undertake any necessary cleaning and maintenance to ensure that sediment, debris and excessive decaying vegetation are removed from the above noted stormwater management system to prevent the excessive build-up of sediment, debris and/or decaying vegetation to avoid reduction of capacity of the pond. The *Owner* shall also regularly inspect and clean out the inlet to and outlet from the works to ensure that these are not obstructed.

3.3 The *Owner* shall prepare operational manual which should include, but not limited to, frequency and method of clean-out of stormwater management works within six (6) months from the date of issuance of this *Certificate* or the commissioning of the works. The *Owner* shall keep the operations manual up to date with such revisions as may be required. Upon request, the *Owner* shall make the manual available for inspection by *Ministry* personnel and furnish a copy to the *Ministry* .

3.4 The *Owner* shall maintain a logbook to record the results of all inspections and any cleaning and maintenance operations undertaken and shall make the logbook available for inspection by the *Ministry* upon request.

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is imposed to ensure that the *Works* are built and operated in the manner in which they were described for review and upon which approval was granted. This condition is also included to emphasize the precedence of Conditions in the *Certificate* and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review. The condition also advises the *Owner* his/her responsibility to notify any person they authorized to carry out work pursuant to this *Certificate* the existence of this *Certificate* .

2. Condition 2 is included to ensure that, when the *Works* are constructed, the *Works* will meet the standards that apply at the time of construction to ensure the ongoing protection of the environment.

3. Condition 3.1 is imposed because it is not in the public interest for the *Director* to approve facilities which, by reason of potential health and safety hazards do not generally comply with legal standards or approval requirements falling outside the purview of this *Ministry* .

4. Condition 3.2 is included as regular inspection and necessary removal of sediment and excessive decaying vegetation from this approved stormwater management system are required to mitigate the impact of sediment, debris and/or decaying vegetation on the treatment capacity of the works. It is also required to ensure that adequate storage is maintained in the stormwater management facilities at all times as required by the design, and to prevent stormwater impounded in the works from becoming stagnant.

5. Conditions 3.3 and 3.4 are included to ensure that the stormwater management facility is operated and

maintained to function as designed.

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, as amended, you may by written notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 101 of the Ontario Water Resources Act , R.S.O. 1990, Chapter 0.40, provides that the Notice requiring the hearing shall state:

1. The portions of the approval or each term or condition in the approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Certificate of Approval number;
6. The date of the Certificate of Approval;
7. The name of the Director;
8. The municipality within which the works are located;

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto, Ontario
M5G 1E5

AND

The Director
Section 53, *Ontario Water Resources Act*
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or www.ert.gov.on.ca**

The above noted sewage works are approved under Section 53 of the Ontario Water Resources Act.

DATED AT TORONTO this 13th day of June, 2008

Zafar Bhatti

Zafar Bhatti, P.Eng.
Director
Section 53, *Ontario Water Resources Act*

AM/
c: District Manager, MOE Ottawa
Stephen Pichette, David Schaeffer Engineering Limited

File Number: D06-03-22-0182

December 23, 2022

Pierre D'Angelo
SLR Consulting (Canada) Ltd.
55 University Ave, Suite 501, Toronto

*Sent via email [*pdangelo@slrconsulting.com*]*

Dear Pierre D'Angelo,

Re: Information Request
3850 Cambrian Road, Ottawa, Ontario ("Subject Property")

Internal Department Circulation

The Planning, Infrastructure and Economic Development Department has the following information in response to your request for information regarding the Subject Property:

- **Disposals and Environmental Remediation Unit:** The City's Environmental Remediation Unit has environmental records on file pertaining to the subject property noted above either directly on or adjacent to the subject property. To submit requests for information under the Municipal Freedom of Information and Protection of Privacy Act, please visit https://ottawa.ca/en/city-hall/accountabilityand-transparency/accountability-framework/freedom-information-and-protectionprivacy/access-information

Documents Provided:

Excel

The Excel Spread Sheet identifies HLUI area, point and line features within 250 metres of the Subject Property, as shown on the provided Map. Within 500 metres of the Subject Property, landfills and Environmental Risk Management Area (ERMA) are also identified if applicable.

For more information on how to interpret the HLUI data identified in the attached excel sheet ('ADDRESS – HLUI Summary report.xlsx'), please refer to the "Overview and User Guide".

Additional information may be obtained by contacting:

Ontario's Environmental Registry

The Environmental Registry found at http://www.ebr.gov.on.ca/ERS-WEB-External/ contains "public notices" about environmental matters being proposed by all government ministries covered by the Environmental Bill of Rights. The public notices may contain information about proposed new laws, regulations, policies and programs or about proposals to change or eliminate existing ones. By using keys words i.e. name of proponent/owner and the address one can ascertain if there is any information on the proponent and address under the following categories: Ministry, keywords, notice types, Notice Status, Acts, Instruments and published date (all years).

The Ontario Land Registry Office

Registration of real property is recorded in the Ontario Land Registry Office through the Land Titles Act or the Registry Act. Documents relating to title and other agreements that may affect your property are available to the public for a fee. It is recommended that a property search at the Land Registry Office be included in any investigation as to the historic use of your property. The City of Ottawa cannot comment on any documents to which it is not a party.

Court House
161 Elgin Street 4th Floor
Ottawa ON K2P 2K1
Tel: (613) 239-1230
Fax: (613) 239-1422

Please note, as per the HLUI Disclaimer, that the information contained in the HLUI database has been compiled from publicly available records and other sources of information. The HLUI may contain erroneous information given that the records used as sources of information may be flawed. For instance, changes in municipal addresses over time may introduce error. Accordingly, all information from the HLUI database is provided on an "as is" basis with no representation or warranty by the City with respect to the information's accuracy or exhaustiveness in responding to the request.

Furthermore, the HLUI database and the results of this search in no way confirm the presence or absence of contamination or pollution of any kind. This information is provided on the assumption that it will not be relied upon by any person for any purpose whatsoever. The City of Ottawa denies all liability to any persons attempting to rely on any information provided from the HLUI database.

Please note that in responding to your request, the City of Ottawa does not guarantee or comment on the environmental condition of the Subject Property. You may wish to contact the Ontario Ministry of Environment and Climate Change for additional information.

If you have any further questions or comments, please contact Insert Your Name at 613-580-2424 ext. Insert Your Extension or HLUI@ottawa.ca

Sincerely,

Ashvinya Moorthy (She/Her)
Student Planner | Étudiante en Urbanism
Development Review West | Examen des projects d'amenagement Ouest
City of Ottawa | Ville d'Ottawa
613-580-2424 Ext. 23569
Ashvinyamoorthy.thatchinamoorthy@ottawa.ca

Per:

Michael Boughton, MCIP, RPP
Senior Planner
Development Review East
Planning Services
Planning, Infrastructure and Economic Development Department

MB / AM

Enclosures.

cc: File no. D06-03-22-0182

HISTORIC LAND USE INVENTORY (HLUI) - REPORT REFERENCE MAP

Legend

Subject Property - 3850 Cambrian Road

METERS

0 40 80 120

N

Planning Co-op Student
Development Review West
Dec 22 2022
City of Ottawa

Pierre D'Angelo

From: Generic Payments <genpay@ottawa.ca>
Sent: January 25, 2023 1:18 PM
To: Pierre D'Angelo
Subject: City of Ottawa Online Payment.

Hello,

This letter acknowledges receipt of your Municipal Freedom of Information and Protection of Privacy Act access to information request. It will be considered received by the City of Ottawa's Access to Information and Privacy Office on the next business day.

An Access to Information Analyst will follow-up with you directly to acknowledge your request and to advise that the access review procedures have been initiated.

A formal response to your request will be provided within the legislated timeline. In the event that a time extension is required, you will be notified in writing of the revised timeline.

ENVIRONMENTAL RISK INFORMATION SERVICES

CITY DIRECTORY

Project Property: *3850 Cambrian Road, Nepean, Ontario*
Report Type: *City Directory*
Order No: *22102400251*
Information Source: *Vernon's Ottawa, Ontario City Directory (LAC)*
Date Completed: *02/11/2022*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

City Directory Information Source
Vernon's Ottawa, Ontario City Directory

PROJECT NUMBER: 22102400251	
Site Address:	3850 Cambrian Road, Nepean, Ontario
Year: 2011	
Site Listing:	-Address Not Listed
Adjacent Properties:	
Cambrian Road (3650-3855)	3651 – Residential (1 Tenant)
Alcor Terrace (All)	-Street Not Listed
Aphelion Crescent (All)	-Street Not Listed
Bellatrix Walk (All)	-Street Not Listed
Burritts Rapids Place (3140-3145)	-No Listings Within Radius
Cape Jack Walk (745-760)	-Street Not Listed
Celestial Grove (155-175)	-Street Not Listed

Chimney Corner Terrace (500-510)	-Street Not Listed
Foxhound Way (3243-3259 odd)	-All Residential
Freshwater Way (3045-3085)	-Street Not Listed
Megrez Way (700-725)	-Street Not Listed
Merak Way (All)	-Street Not Listed
Nutgrove Avenue (2450-2480 even)	-No Listings Within Radius
Regulus Ridge (815-845)	-Street Not Listed
Seeley's Bay Street (All)	-Street Not Listed
Trout Private (All)	-Street Not Listed
Umbra Place (All)	-Street Not Listed
Walleye Private (All)	-Street Not Listed
Watercolours Way (2220-2355)	-Street Not Listed

Zenith Private (All)	-Street Not Listed

PROJECT NUMBER: 22102400251	
Site Address:	3850 Cambrian Road, Nepean, Ontario
Year: 2006/07	
Site Listing:	-Address Not Listed
Adjacent Properties:	
Cambrian Road (3650-3855)	3853 – Residential (1 Tenant)
Alcor Terrace (All)	-Street Not Listed
Aphelion Crescent (All)	-Street Not Listed
Bellatrix Walk (All)	-Street Not Listed
Burritts Rapids Place (3140-3145)	-Street Not Listed
Cape Jack Walk (745-760)	-Street Not Listed
Celestial Grove (155-175)	-Street Not Listed

Chimney Corner Terrace (500-510)	-Street Not Listed
Foxhound Way (3243-3259 odd)	-Street Not Listed
Freshwater Way (3045-3085)	-Street Not Listed
Megrez Way (700-725)	-Street Not Listed
Merak Way (All)	-Street Not Listed
Nutgrove Avenue (2450-2480 even)	-Street Not Listed
Regulus Ridge (815-845)	-Street Not Listed
Seeley's Bay Street (All)	-Street Not Listed
Trout Private (All)	-Street Not Listed
Umbra Place (All)	-Street Not Listed
Walleye Private (All)	-Street Not Listed
Watercolours Way (2220-2355)	-Street Not Listed
Zenith Private (All)	-Street Not Listed

PROJECT NUMBER: 22102400251	
Site Address:	3850 Cambrian Road, Nepean, Ontario
Year: 2001/02	
Site Listing:	-Address Not Listed
Adjacent Properties:	
Cambrian Road (3650-3855)	3853 – Residential (1 Tenant)
Alcor Terrace (All)	-Street Not Listed
Aphelion Crescent (All)	-Street Not Listed
Bellatrix Walk (All)	-Street Not Listed
Burritts Rapids Place (3140-3145)	-Street Not Listed
Cape Jack Walk (745-760)	-Street Not Listed
Celestial Grove (155-175)	-Street Not Listed
Chimney Corner Terrace (500-510)	-Street Not Listed

Foxhound Way (3243-3259 odd)	-Street Not Listed
Freshwater Way (3045-3085)	-Street Not Listed
Megrez Way (700-725)	-Street Not Listed
Merak Way (All)	-Street Not Listed
Nutgrove Avenue (2450-2480 even)	-Street Not Listed
Regulus Ridge (815-845)	-Street Not Listed
Seeley's Bay Street (All)	-Street Not Listed
Trout Private (All)	-Street Not Listed
Umbra Place (All)	-Street Not Listed
Walleye Private (All)	-Street Not Listed
Watercolours Way (2220-2355)	-Street Not Listed
Zenith Private (All)	-Street Not Listed

PROJECT NUMBER: 22102400251	

Site Address:	3850 Cambrian Road, Nepean, Ontario
Year: 1996/97	
Site Listing:	-Address Not Listed
Adjacent Properties:	
Cambrian Road (3650-3855)	3853 – Residential (1 Tenant)
Alcor Terrace (All)	-Street Not Listed
Aphelion Crescent (All)	-Street Not Listed
Bellatrix Walk (All)	-Street Not Listed
Burritts Rapids Place (3140-3145)	-Street Not Listed
Cape Jack Walk (745-760)	-Street Not Listed
Celestial Grove (155-175)	-Street Not Listed
Chimney Corner Terrace (500-510)	-Street Not Listed
Foxhound Way (3243-3259 odd)	-Street Not Listed

Freshwater Way (3045-3085)	-Street Not Listed
Megrez Way (700-725)	-Street Not Listed
Merak Way (All)	-Street Not Listed
Nutgrove Avenue (2450-2480 even)	-Street Not Listed
Regulus Ridge (815-845)	-Street Not Listed
Seeley's Bay Street (All)	-Street Not Listed
Trout Private (All)	-Street Not Listed
Umbra Place (All)	-Street Not Listed
Walleye Private (All)	-Street Not Listed
Watercolours Way (2220-2355)	-Street Not Listed
Zenith Private (All)	-Street Not Listed

PROJECT NUMBER: 22102400251	
Site Address:	3850 Cambrian Road, Nepean, Ontario

Year: 1992	
Site Listing:	-Address Not Listed
Adjacent Properties:	
Cambrian Road (3650-3855)	3853 – Residential (1 Tenant)
Alcor Terrace (All)	-Street Not Listed
Aphelion Crescent (All)	-Street Not Listed
Bellatrix Walk (All)	-Street Not Listed
Burritts Rapids Place (3140-3145)	-Street Not Listed
Cape Jack Walk (745-760)	-Street Not Listed
Celestial Grove (155-175)	-Street Not Listed
Chimney Corner Terrace (500-510)	-Street Not Listed
Foxhound Way (3243-3259 odd)	-Street Not Listed

Freshwater Way (3045-3085)	-Street Not Listed
Megrez Way (700-725)	-Street Not Listed
Merak Way (All)	-Street Not Listed
Nutgrove Avenue (2450-2480 even)	-Street Not Listed
Regulus Ridge (815-845)	-Street Not Listed
Seeley's Bay Street (All)	-Street Not Listed
Trout Private (All)	-Street Not Listed
Umbra Place (All)	-Street Not Listed
Walleye Private (All)	-Street Not Listed
Watercolours Way (2220-2355)	-Street Not Listed
Zenith Private (All)	-Street Not Listed

Nepean, Ontario (Manotick & Barhaven areas) is listed within the city directory archives from 1992-2011.*

-All listings for businesses were listed as they are in the city directory.

-Listings that are residential are listed as "residential" with the number of tenants. The name of the residential tenant is not listed in the above city directory.

Appendix D Aerial Photographs

Phase One Environmental Site Assessment

3850 Cambrian Road
Ottawa, Ontario

Choice Properties Limited Partnership

SLR Project No. 209.013940.00001

January 31, 2023

HISTORICAL AERIALS

Project Property:	Cambrian Road 3850 Cambrian Road Nepean ON K2J 0T2
Project No:	C00.13940.000PP
Requested By:	SLR Consulting (Canada) Ltd.
Order No:	22102400251
Date Completed:	October 25, 2022

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

Decade	Year	Image Scale	Source
1940	1946	20000	NAPL
1960	1963	25000	NAPL

0 0.125 0.25 0.5
Kilometers

Order Number: 22102400251

Year: 1946
Source: NAPL
Map Scale: 1: 10000
Comments:

ERIS

0 0.125 0.25 0.5
Kilometers

Order Number: 22102400251

Year: 1963
Source: NAPL
Map Scale: 1: 10000
Comments:

Appendix E Topographic Maps

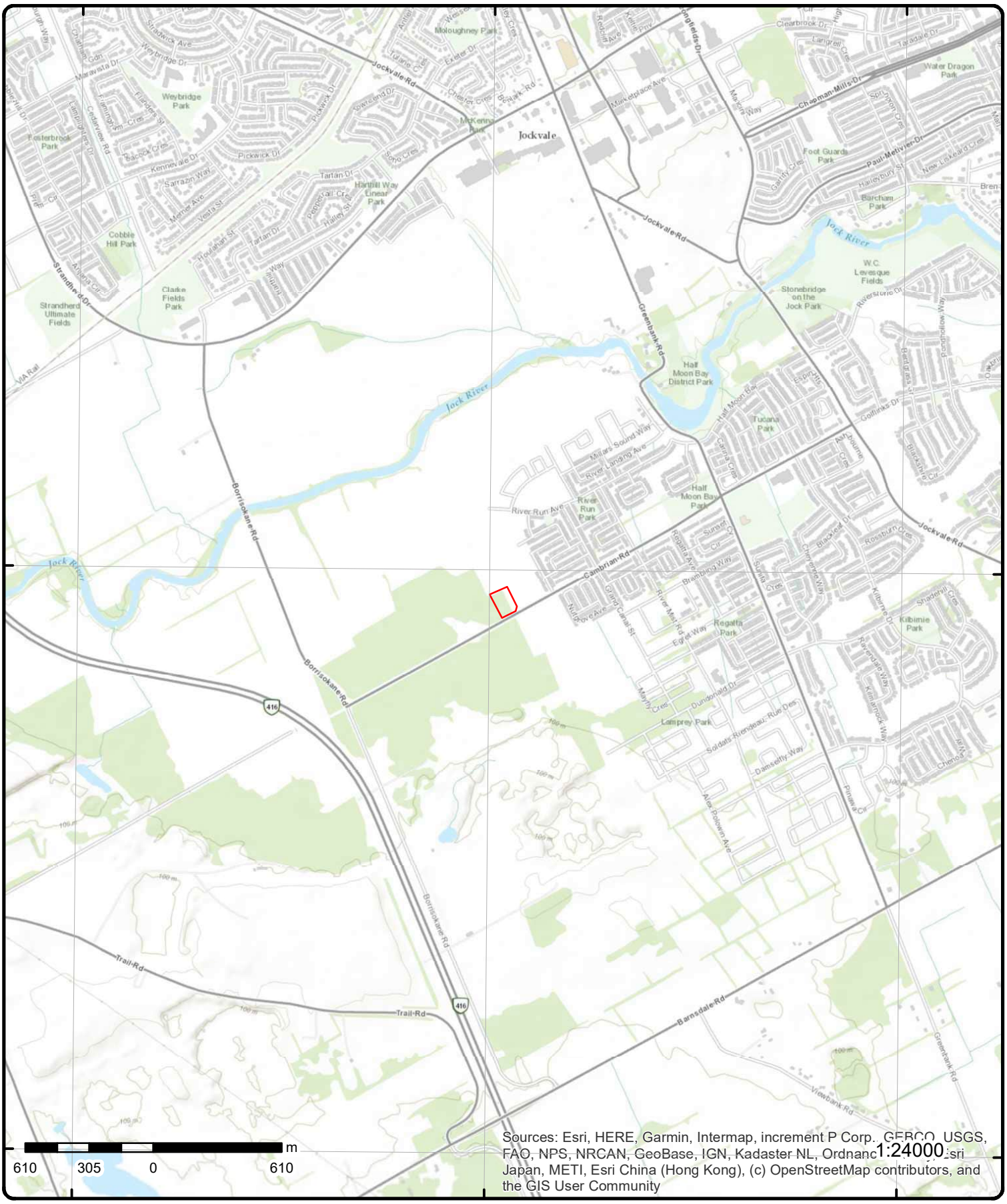
Phase One Environmental Site Assessment

3850 Cambrian Road
Ottawa, Ontario

Choice Properties Limited Partnership

SLR Project No. 209.013940.00001

January 31, 2023



Topographic Map

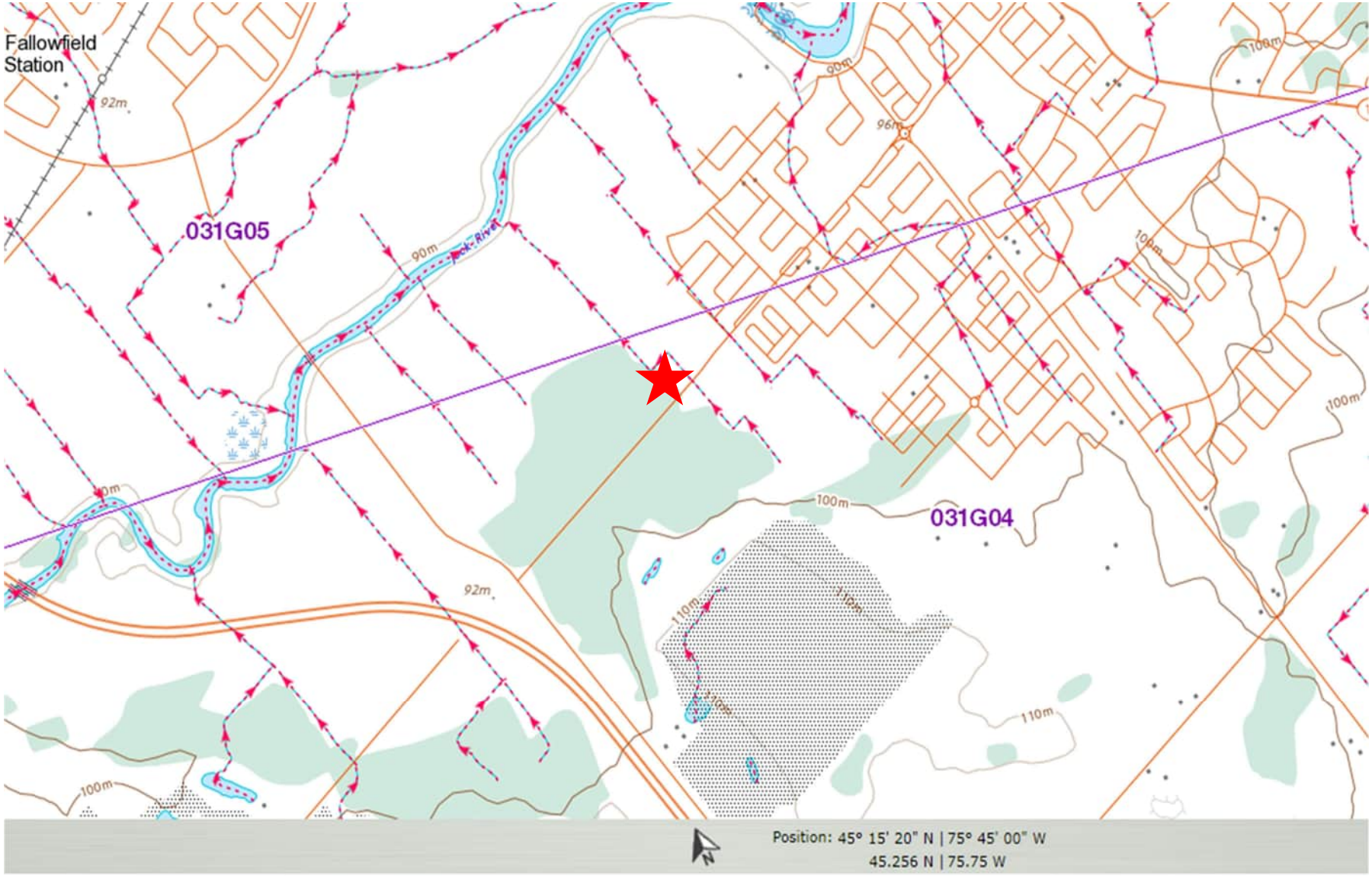
Address: 3850 Cambrian Road, ON

Source: ESRI World Topographic Map

Order Number: 22102400251

ERIS

Source: *The Atlas of Canada – Toporama (Government of Canada)*



Legend

★ Phase One Property Location

SLR	Phase One Environmental Site Assessment 3850 Cambrian Road, Ottawa, Ontario
Topographic Map	SLR Project No.: 209.013940.00001

Appendix F Site Photographs

Phase One Environmental Site Assessment

3850 Cambrian Road
Ottawa, Ontario

Choice Properties Limited Partnership

SLR Project No. 209.013940.00001

January 31, 2023

Photo 1: **The Site, facing north from the south-central portion of the Site and view of adjacent residential properties to the north**

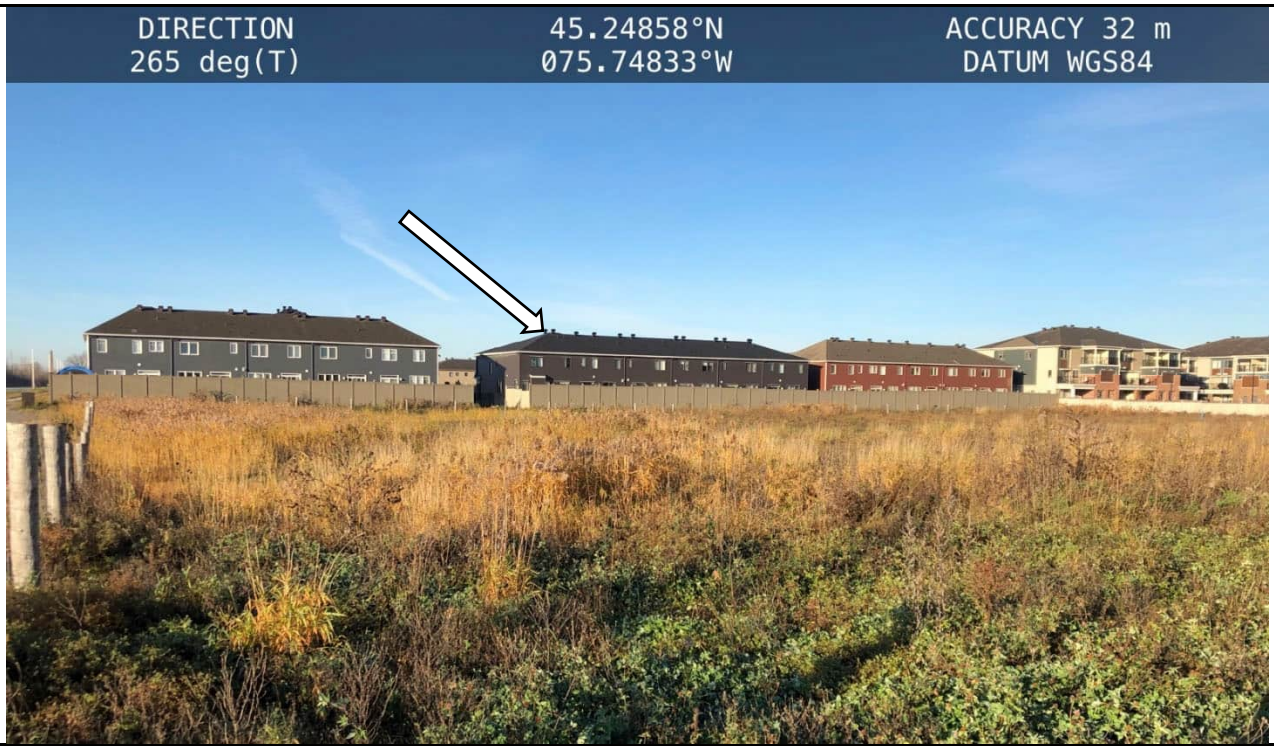


Photo 2: **The Site, facing west from the south-central portion of the Site and view of adjacent residential properties to the west**

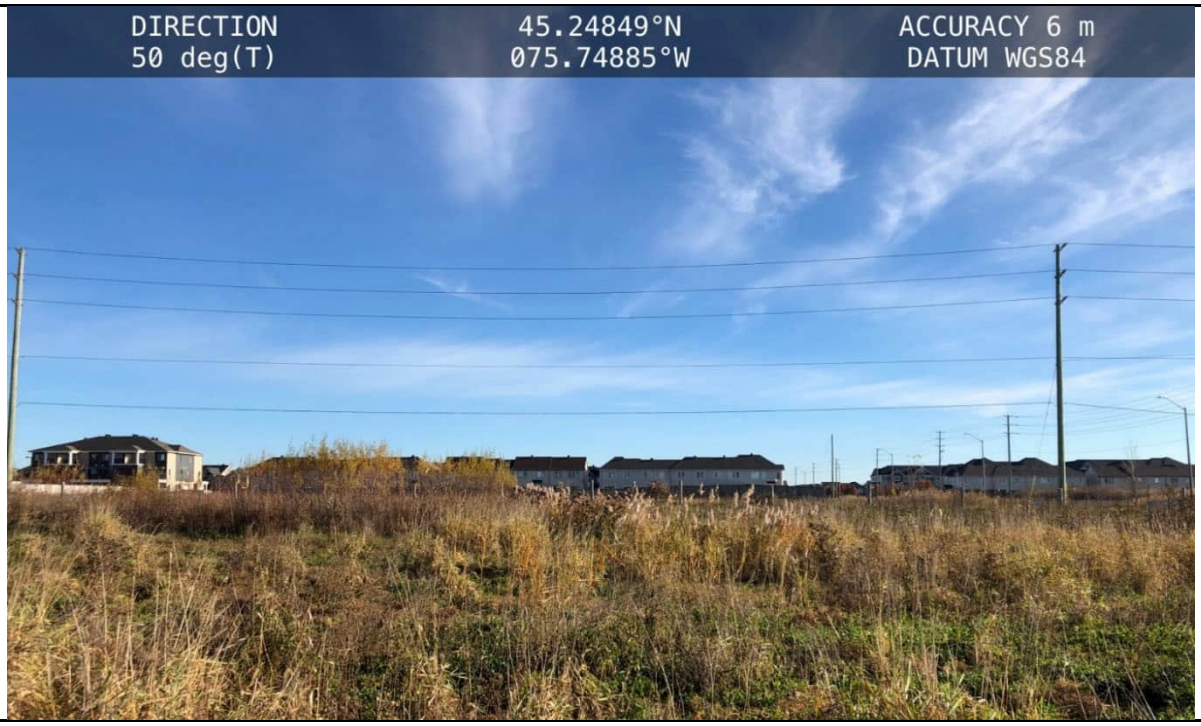


Photo 3: **The Site, facing east from the south-central portion of the Site**

Photo 4: **Southern portion of Site, facing south from the central portion of the Site. Storage containers (sea cans) and soil piles visible at off-site property to the south of the Site (see arrow).**

Photo 5: **Gated Site entrance southeast portion of the Site with access via Cambrian Road, facing east.**

Photo 6: **Storm drain and sanitary manhole (see arrow) observed on-site along southern fence line, facing northeast from the south-central portion of the Site at the Site boundary.**

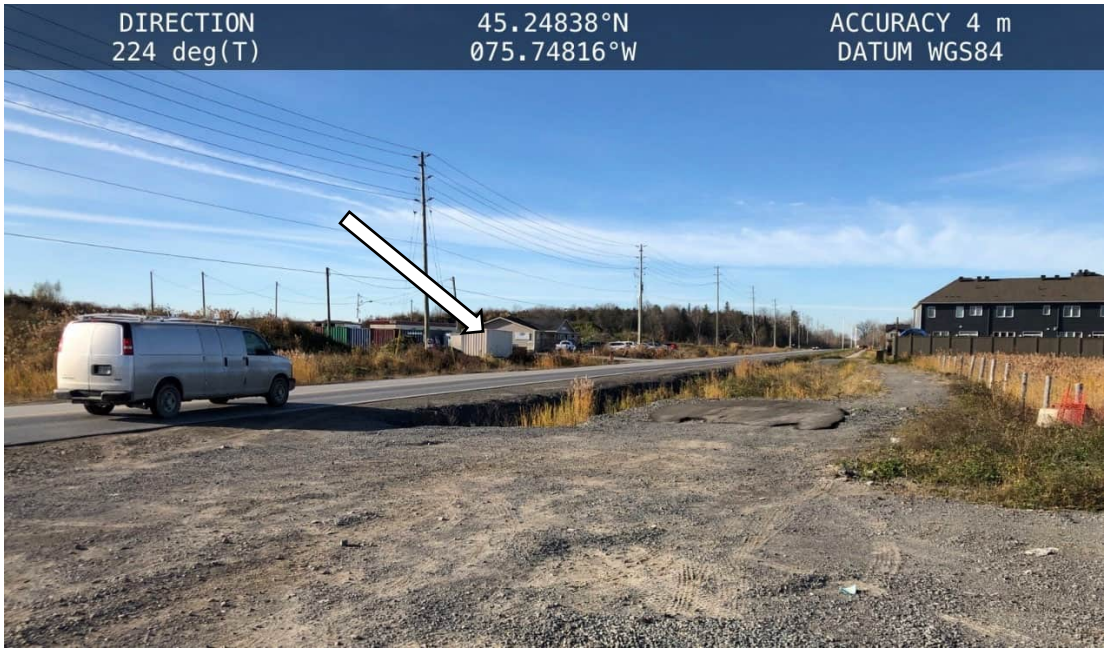


Photo 7: **Facing southwest towards the Mattamy Homes Sales Centre and nearby storage containers (sea cans) and office trailer, located southwest of the Site across Cambrian Road.**

Photo 8: **The Clarke Stormwater Management Pond, located to the northwest of the Site, within the Phase One Study Area**

Photo 9: **Large gravel pile within Phase One Study Area, located off-site to the southeast of the Site, facing southeast**

Photo 10: **Soil piles located south of the Mattamy Homes Sales Centre (approximately 200 m south of the Site), facing East.**