

**Application Booklet**  
**Proposed Milton Quarry East Extension**  
**Dufferin Aggregates, a Division of**  
**CRH Canada Group Inc.**

**Prepared by:**



**December 2021**

Dufferin Aggregates, a division of CRH Canada Group Inc.  
Milton Quarry East Extension  
Application Booklet  
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# Tab 1

## Instructions

- An aggregate licence is required to extract aggregate from private land in areas of Ontario that are designated under the *Aggregate Resources Act* (ARA).
- An aggregate permit is required for aggregate/topsoil extraction on Crown land or where the Crown owns the aggregate, and all extraction from under the bed of a lake or river. All Crown land in Ontario is subject to the ARA.
- A wayside permit is required to extract aggregate for temporary road construction or road maintenance projects by Public Authorities, or their agents.
- There are two Classes of aggregate licences. A "Class A" Licence is required for operations that will remove more than 20,000 tonnes of aggregate from the site annually. A "Class B" Licence is required for operations that will remove 20,000 tonnes of aggregate or less annually.
- Aggregate permit application requirements are determined by the proposed tonnage limit. An aggregate permit application may propose 20,000 tonnes or less of aggregate will be removed from the site annually, or a number greater than 20,000 tonnes.
- Application requirements can be found in both [Ontario Regulation 244/97](#) under the ARA and the [Aggregate Resources of Ontario Provincial Standards](#).
- These requirements include submitting a Site Plan, Summary Statement, Maximum Predicted Water Table Report, Water Report (if proposing to extract below the water table), Natural Environment Report, Cultural Heritage Report, Agricultural Impact Assessment Report (if applicable), Noise Assessment Report (if applicable) and Blast Design Report (if applicable).
- An application fee applies and is identified in [Ontario Regulation 244/97](#). Cheques payable to the Minister of Finance can be mailed to: Integrated Aggregate Operations Section, Ministry of Natural Resources and Forestry, 300 Water Street, Peterborough, ON K9J 3C7.
- For more information on how to apply please visit [www.ontario.ca/aggregates](http://www.ontario.ca/aggregates).

## Submission of Form

Submit this form and application documents online using the [Natural Resources Information Portal](#), or if web access is unavailable, by mail to the Integrated Aggregate Operations Section, Ministry of Natural Resources and Forestry, 300 Water Street, Peterborough ON K9J 3C7.

## Notice of Collection and Use

Personal Information is collected by MNR, under the authority of the *Aggregate Resources Act* and Ontario Regulation 244/97 and will be used for data administration, analysis and aggregate resources program management, including communication and audit/enforcement purposes. Personal information will only be disclosed in compliance with *Freedom of Information and Protection of Privacy Act* or as required by law. If you have any questions about the collection and use of your personal information, please contact Ministry of Natural Resources and Forestry, Natural Resources Information and Support Centre (NRISC), 300 Water Street, Peterborough ON K9J 3C7, Toll free: 1-800-667-1940.

# 1. Applicant

Company/Individual Name

Dufferin Aggregates, a division of CRH Canada Group Inc.

Contact Name

Kevin Mitchell

## Current Mailing Address

Unit Number

Street Number

2300

Street Name

Steeles Avenue West, 4th Floor

PO Box

City/Town

Concord

Province

Ontario

Postal Code

L4K 5X6

Telephone Number

416-560-9573

ext.

Mobile Number

416-788-0015

Email Address

kevin.mitchell@ca.crh.com

## 2. Type of Application

"Class A" Aggregate Licence (greater than 20,000 tonnes per year)

"Class B" Aggregate Licence (20,000 tonnes or less per year)

Aggregate Permit (greater than 20,000 tonnes per year)

Aggregate Permit (20,000 tonnes or less per year)

Aggregate Permit to Extract from Under the Bed of a Lake or River

Wayside Permit for Public Authority Contracts

HST Registration Number \_\_\_\_\_ Public Authority Contract Number \_\_\_\_\_

### Type of Operation (select all that apply)

Pit  Quarry

Is this aggregate application proposing extraction below the maximum predicted water table?

Yes  No

### Type of material to be removed (select all that apply)

Sand and Gravel

Crushed Stone

Dimensional Stone

Clay

Other \_\_\_\_\_

Total Area of Licence / Permit proposed is 30.2 hectares

Total Extraction Area proposed is 15.9 hectares

Proposed quantity of aggregate to be removed is Unlimited tonnes per year

Will the proposed maximum annual tonnage limit stated above be combined with the tonnage of one or more existing, approved sites?

Yes  No

Enter the existing licence/permit number(s) that will require amendments.

Licence/Permit Number

608621

Licence/Permit Number

5481

Licence/Permit Number

### 3. Location of Application Site

Lot Parts of 11 & 12	Concession 1	Geographic Township Esquesing
Local Municipality Town of Halton Hills		County/Region Halton Region
Territorial District	Street Address	

### Universal Transverse Mercator (UTM)

Location coordinates for the main corners of the application site

Datum NAD83	Northing 4822575	Easting 582960	UTM Zone 17
Datum	Northing	Easting	UTM Zone

Add (+)

### 4. Signature

Name and Title of Signing Officer  
Director Property, Planning & Approvals

Signature of Applicant 	Date (yyyy/mm/dd) 2021/12/01
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Save Form

Print Form

Clear Form

# Tab 2

FILE # \_\_\_\_\_

(For NEC office use only)



## NIAGARA ESCARPMENT COMMISSION

# APPLICATION TO AMEND THE NIAGARA ESCARPMENT PLAN

(FMS #0115 – Revised August 15, 2019)

THE NIAGARA ESCARPMENT PLANNING AND DEVELOPMENT ACT, R.S.O. 1990, AS AMENDED

NIAGARA ESCARPMENT COMMISSION  
 232 GUELPH STREET  
 GEORGETOWN, ONTARIO  
 L7G 4B1

Phone: 905-877-5191  
 Fax: 905-873-7452  
 Email: [necgeorgetown@ontario.ca](mailto:necgeorgetown@ontario.ca)  
 Website: <http://www.escarpment.org>

NIAGARA ESCARPMENT COMMISSION  
 1450 7<sup>th</sup> AVENUE  
 OWEN SOUND, ONTARIO  
 N4k 2Z1

Phone: 519-371-1001  
 Fax: 519-371-1009  
 Email: [necowensound@ontario.ca](mailto:necowensound@ontario.ca)  
 Website: <http://www.escarpment.org>

This form is intended to assist an applicant and the Niagara Escarpment Commission in considering proposed amendments to the Niagara Escarpment Plan. Not all parts of this application may be necessary or relevant to each proposal. Please attach additional pages or reports as required. Please include justification and supporting information with the application. Niagara Escarpment Commission staff would be pleased to discuss the form and assist in completing it. The Niagara Escarpment Commission may request more information after reviewing the complete submission.

**1. OWNER (Required)**

Name: See Schedule A attached

Mailing Address: \_\_\_\_\_  
*Street/P.O. Box*

*City/Town* \_\_\_\_\_ *Province* \_\_\_\_\_ *Postal Code* \_\_\_\_\_

Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_

**2. APPLICANT or AGENT (if applicable)**

Name: Dufferin Aggregates, a division of CRH Canada Group Inc. (c/o Kevin Mitchell)

Mailing Address: 2300 Steeles Avenue, 4th Floor  
*Street/P.O. Box*

Concord Ontario L4K 5X6  
*City/Town* *Province* *Postal Code*

Phone: (416) 788-0015 E-mail: kevin.mitchell@ca.crh.com

**3. PROPERTY LOCATION & INFORMATION**

Municipality: See Schedule A attached Civic/Street Address #: \_\_\_\_\_  
*(Fire/Emergency #)*

Lot: \_\_\_\_\_ Concession: \_\_\_\_\_ and/or Lot: \_\_\_\_\_ Plan: \_\_\_\_\_

Assessment roll number or PIN: \_\_\_\_\_ Lot Size: \_\_\_\_\_

The Niagara Escarpment Plan Amendment applies to the Milton Quarry East Extension, the existing Milton Quarry Extension and Milton Quarry operation.



**4. PROPERTY SERVICING** Milton Quarry East Extension have frontage on an unopened road allowance.

Existing Road Frontage:  Municipal  Private

Proposed Road Frontage:  Municipal  Private

Existing Water Supply:  Municipal  Private  
n/a

Proposed Water Supply:  Municipal  Private  
n/a

Existing Sewage Disposal:  Municipal  Private  
n/a

Proposed Sewage Disposal:  Municipal  Private  
n/a

**5. IS THE PROPOSAL THE SUBJECT OF A CURRENT APPLICATION? Please identify:**

- Development Permit under Niagara Escarpment Planning and Development Act
- The Planning Act (Official Plan or Zoning By-law Amendment)
- The Aggregate Resources Act (License)
- Committee of Adjustment (Minor Variance)
- Land Division Committee (Severance)
- Other \_\_\_\_\_

**6. DESCRIPTION OF THE PROPERTY**

**Describe** the current use of the property including any existing buildings or structures:

The property is currently vacant and consists of open field/pasture, wooded area. The proposed licence area only consists of 30.2 ha of the broader property.

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**7. CATEGORY OF THE PROPOSED AMENDMENT:**

- Change in Designation
- Change to Policy
- Request for Urban Servicing
- Change to Plan Boundary
- Other \_\_\_\_\_

**8. DETAILED DESCRIPTION OF PROPOSED AMENDMENT (Please use additional page(s) as required)**

**Provide** a detailed description of the proposed amendment:

Extension to CRH's existing Milton Quarry. Application entails re-designation of the Milton Quarry East Extension (MQEE) lands from "Escarpment Rural Area" to "Mineral Resource Extraction Area" and adding a site specific policy to the existing Milton Quarry (Licence # 5481) and Milton Quarry Extension (Licence # 608621) to allow the existing Milton Quarry and Milton Quarry Extension to be used in conjunction with the proposed MQEE. See Application Booklet for a copy of the proposed Niagara Escarpment Plan Amendment.

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**9. JUSTIFICATION AND RATIONALE  
(INCLUDING REASONS, ARGUMENT AND EVIDENCE IN SUPPORT OF THE AMENDMENT)  
(See Niagara Escarpment Plan Amendment Guidelines)**

- a) The justification submitted with the application should address the following:
1. Analysis of how the proposed amendment is consistent with the *Niagara Escarpment Planning and Development Act*, the Niagara Escarpment Plan, and shall be consistent with other relevant Provincial plans.
  2. A justification which includes the rationale for the amendment, as well as reasons, arguments or evidence in support of the change to the Plan proposed through the amendment.

The following studies and reports may be necessary to be submitted in support of justification of the proposed amendment (The applicability of the following will depend on the nature of the application.):

- Agricultural Land Use Impacts
  - Air Quality Impact Assessment
  - Engineering Reports
  - Environmental Impact Study
  - Geological Studies
  - Grading Plans – Existing and proposed and Slope Stabilization Plans and Typical Cross Sections
  - Historical/Cultural/Archeological Impact Assessment
  - Hydrogeological Impact Assessment
  - Landscape/Visual Impact Analysis
  - Noise Impact Assessment
  - Setback from the Brow of the Escarpment
  - Suitable for Septic Systems
  - Traffic Impact Assessment
  - Tree Removal / Planting including Berming and Landscaping
  - Other: \_\_\_\_\_
- See cover letter for list of required studies  
determined through pre-consultation with NEC

**10. SITE PLAN**

Please attach an accurate Site Plan drawn to scale. The Site Plan may be drawn on a blank sheet; on an attached Survey, or by using mapping software (Ontario Make a Map etc.). The Site Plan must show existing features, such as, buildings and structures, streams, changes in grades, rock outcrops, driveways, forested areas and proposed uses or changes to the property or the features.

Note: For Amendments regarding Mineral Resource Extraction Areas please provide copies of the Site Plan as required by Regulation under the Aggregates Resources Act. Enclosed are copies of the proposed Site Plans for the Milton Quarry East Extension.

**11. SIGNATURES**

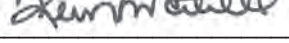
Personal information (i.e., name, address, phone, email) is being collected under the authority of the *Niagara Escarpment Planning and Development Act, RSO, 1990, as amended*, and will be used to process this application, which will include site visit notifications and in some cases appeals and hearings. Questions regarding the collection and use of this personal information should be directed to the Manager, Administration at the Georgetown Office phone, email and mailing address set out on the front page of this application form.

By signing this application form below, I consent to the collection of my personal information. This information may be used in public meetings and in Public Interest Advisory Committee (PIAC) meetings. **This application cannot be processed without the required signatures as set out below.**

**I CERTIFY THAT THIS STATEMENT IS TRUE AND CORRECT**

**OWNER(S):** See Schedule A & B for Owners Authorization Form  
(Required) \_\_\_\_\_

**DATE:** \_\_\_\_\_

**APPLICANT(S) or AGENT(S):**   
(if different from owner) \_\_\_\_\_

**DATE:** Dec 1, 2021

## SCHEDULE A

### OWNERSHIP AND DESCRIPTION OF SUBJECT LANDS

The following properties constitute the Subject Lands within which the Milton Quarry East Extension has been proposed. Also see attached map.

1. The *Aggregate Resources Act* Licence, Region of Halton Official Plan Amendment, and Town of Halton Hills Official Plan Amendment apply to the Milton Quarry East Extension;
2. The Niagara Escarpment Plan Amendment applies to the Milton Quarry East Extension (mapping change), Milton Quarry Extension, and Milton Quarry (policy change to allow site to be used for processing);
3. The Niagara Escarpment Plan Amendment, Region of Halton Official Plan Amendment, and Town of Halton Hills Official Plan Amendment also include a mapping change to designate the south 15 metre extraction setback within the Milton Quarry Extension to "Mineral Resource Extraction Area."
4. The Niagara Escarpment Development Permit applies to the Milton Quarry East Extension, Milton Quarry Extension, Milton Quarry and the Buffer Lands to ensure all lands are covered off to allow for any changes to operation and construction of mitigation measures.

#### SUBJECT LANDS

#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
1	747752 Ontario Inc.	249780005	Buffer Lands	N/A	PT LT 14, CON 1 ESQ , PART 1 , 20R8819 ; HALTON HILLS/ESQUESING	4.74	158.3	259.2
2	Peninsula Ready-Mix Inc.	249780006	Buffer Lands	N/A	PT LT 14, CON 1 ESQ , AS IN 691414 ; HALTON HILLS/ESQUESING	12.21	131.6	671.4
3	CRH Canada Group Inc.	249780217	Milton Quarry Extension	10479 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	CONSOLIDATION OF VARIOUS PROPERTIES : PT LTS 13 & 14, CON 1 ESQ, AS IN 575334; HALTON HILLS/ESQUESING.	88.36	443.6	912.9
			Buffer Lands					
4	Peninsula Ready-Mix Inc.	249780008	Milton Quarry Extension	10461 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 13, CON 1 ESQ , PART 1 , 20R7139 ; HALTON HILLS/ESQUESING	3.44	185.2	166.9
5	CRH Canada Group Inc	249780009	Milton Quarry Extension	10413 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 13, CON 1 ESQ , PART 2 , 20R7139 ; HALTON HILLS/ESQUESING	0.40	45.5	88.3
6	Peninsula Ready-Mix Inc.	249780010	Milton Quarry Extension	10391 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 13, CON 1 ESQ , AS IN 816894 ; HALTON HILLS/ESQUESING	0.40	45.5	88.3
7	CRH Canada Group Inc.	249780011	Milton Quarry Extension	10379 NASSAGAWEYA ESQUESING TLINE	PT LT 13, CON 1 ESQ , AS IN 718652 ; HALTON HILLS/ESQUESING	0.34	37.9	88.3

#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
				HALTON HILLS				
8	747752 Ontario Ltd.	249780012	Milton Quarry Extension	10371 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 12 & 13, CON 1 ESQ, PART 1 & 2, 20R2983 ; HALTON HILLS/ESQUESING	0.92	36.2	182.4
9	CRH Canada Group Inc.	249780013	Proposed Milton Quarry East Extension	10327 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 12, CON 1 ESQ, AS IN 618957 ; HALTON HILLS/ESQUESING	0.38	69.0	37.2
10	1336811 Ontario Inc.	249780014	Proposed Milton Quarry East Extension Buffer Lands	10305 NASSAGAWEYA ESQUESING TLINE ES HALTON HILLS	LT 5, RCP 1551 ; PT LT 12, CON 1 ESQ, AS IN 469952 & 120626 ; HALTON HILLS/ESQUESING	66.27	464.6	1004.9
11	CRH Canada Group Inc.	249780015	Buffer Lands	N/A	LT 1 & 7, RCP 1551 ; HALTON HILLS/ESQUESING	39.34	343.4	667.2
12	CRH Canada Group Inc.	249780208	Milton Quarry	NA	LT 3, RCP 1551 ; HALTON HILLS/ESQUESING	1.41	58.2	185.9
13	CRH Canada Group Inc.	249780017	Milton Quarry	N/A	LT 2, RCP 1551 ; LT 1, RCP 1553 ; HALTON HILLS/ESQUESING	110.95	111.0	859.0 (varied)
14	CRH Canada Group Inc.	249780210	Milton Quarry	N/A	LT 2, RCP 1554 ; S/T 84170 ; "MILTON" "AMENDED MAR 24 '99 J. MENARD"	21.24	214.7	812.4
15	CRH Canada Group Inc.	249780166	Milton Quarry Buffer Lands	N/A	LT 1, RCP 1554; LT 2, RCP 1552, LT 4, RCP 1554; RDAL BTN LOTS 10 & 11 CON 7 NAS, AS CLOSED BY BYLAW 829306 ; HALTON HILLS "AMENDED APR 26 '99 J. MENARD"	270.52	1,009.7	1,403.1
16	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	249780164	Buffer Lands	10131 SIXTH LINE MILTON L9T2X7	LT 12, RCP 1552 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 24 '99 J. MENARD"	2.44	123.6	167.5
17	CRH Canada Group Inc.	249780158	Buffer Lands	N/A	LT 7, RCP 1552 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"	4.09	224.7	135.5
18	CRH Canada Group Inc.	249780157	Milton Quarry	N/A	LT 1, RCP 1552 ; S/T 178422 ; S/T LIFE INTEREST IN 178422 ;	66.89	286.2	1,265.9 (varied)

#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
					"MILTON" /NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"			
19	CRH Canada Group Inc.	249780162	Milton Quarry Extension	10248 NASSAGAWEYA ESQUESING TLINE MILTON	LT 10, RCP 1552, PT 4, 20R7609 ; MILTON	0.17	38.0	45.7
20	CRH Canada Group Inc.	249780161	Milton Quarry Extension	10256 NASSAGAWEYA ESQUESING TLINE MILTON	LT 9, RCP 1552, PT 3, 20R7609 ; MILTON	0.17	38.0	45.7
21	Peninsula Ready-Mix Inc.	249780160	Milton Quarry Extension	10262 NASSAGAWEYA ESQUESING TLINE MILTON	PT LT 8, RCP 1552, PT 1, 20R7609; MILTON.	3.55	57.3	174.2
22	CRH Canada Group Inc.	249780159	Milton Quarry Extension	Not available.	PT LT 8, RCP 1552, PT 2, 20R7609; MILTON.	0.98	60.5	160.8
23	Peninsula Ready-Mix Inc.	249780156	Milton Quarry Extension	10380 NASSAGAWEYA ESQUESING TLINE MILTON L7J2L7	LT 3, RCP 1552 , PART 1 , 20R3808 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD	2.03	106.1	190.4
24	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	249780155	Milton Quarry Extension Buffer Lands	10446 NASSAGAWEYA ESQUESING TLINE MILTON	LT 4, RCP 1552 ; MILTON	16.49	129.7	638.4
25	747752 Ontario Inc.	249780153	Buffer Lands	10449 SIXTH LINE MILTON L9T2X7	LT 5, RCP 1552 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"	9.60	130.2	638.1
26	CRH Canada Group Inc.	249780149	Milton Quarry Extension Buffer Lands	10494 NASSAGAWEYA ESQUESING TLINE MILTON L9T5S3	PT LT 14, CON 7 NAS , PART 2 & 3 , 20R2017 , EXCEPT PART 2, 20R11685 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"	51.54	257.2	1,259.7 (varied)
27	CRH Canada Group Inc.	249780236	Buffer Lands	10580 NASSAGAWEYA ESQUESING TLINE	PT LT 14, CON 7, PT 1, 20R2017 EXCEPT PT 1, 20R15065; MILTON/NASS	13.30	132.3	568.1

#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
				MILTON				
28	CRH Canada Group Inc.	249780147	Buffer Lands	10545 NASSAGAWEYA ESQUESING TLINE MILTON	PT LT 14, CON 7 NAS , AS IN 853727 ; "MILTON"/NASSAGAWEYA ; "AMENDED MAR 23 '99 J. MENARD"	1.72	161.0	50.7
29	CRH Canada Group Inc.	249780146	Buffer Lands	10648 NASSAGAWEYA ESQUESING TLINE MILTON	PT LT 15, CON 7 NAS , PART 1 , 20R6918 , EXCEPT PT "2", 20R8819; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"	2.04	50.7	56.8

# Dufferin Land Holdings

## Milton Quarry

Town of Halton Hills  
Regional Municipality of Halton

### Legend

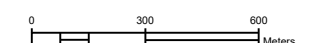
- Land Owned by Dufferin
- Existing Parcel Fabric
- Proposed Milton Quarry East Extension
- Milton Quarry (1962)
- Milton Quarry Extension (2007)

#	PIN	Ownership	Easement	Area (ha)
1	249780005	747752 Ontario Inc.	0	4.74
2	249780006	Peninsula Ready-Mix Inc.	0	12.21
3	249780217	CRH Canada Group Inc.	0	88.36
4	249780008	Peninsula Ready-Mix Inc.	0	3.44
5	249780009	CRH Canada Group Inc.	0	0.40
6	249780010	Peninsula Ready-Mix Inc.	0	0.40
7	249780011	CRH Canada Group Inc.	0	0.34
8	249780012	747752 Ontario Ltd.	0	0.92
9	249780013	CRH Canada Group Inc.	0	0.38
10	249780014	1336811 Ontario Inc.	0	66.27
11	249780015	CRH Canada Group Inc.	0	39.34
12	249780208	CRH Canada Group Inc.	0	1.41
13	249780017	CRH Canada Group Inc.	0	110.95
14	249780210	CRH Canada Group Inc.	1	21.24
15	249780166	CRH Canada Group Inc.	0	270.52
16	249780164	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	0	2.44
17	249780158	CRH Canada Group Inc.	0	4.09
18	249780157	CRH Canada Group Inc.	2	66.89
19	249780162	CRH Canada Group Inc.	0	0.17
20	249780161	CRH Canada Group Inc.	0	0.17
21	249780160	Peninsula Ready-Mix Inc.	0	3.55
22	249780159	CRH Canada Group Inc.	0	0.98
23	249780156	Peninsula Ready-Mix Inc.	0	2.03
24	249780155	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	0	16.49
25	249780153	747752 Ontario Inc.	0	9.60
26	249780149	CRH Canada Group Inc.	0	51.54
27	249780236	CRH Canada Group Inc.	0	13.30
28	249780147	CRH Canada Group Inc.	0	1.72
29	249780146	CRH Canada Group Inc.	0	2.04

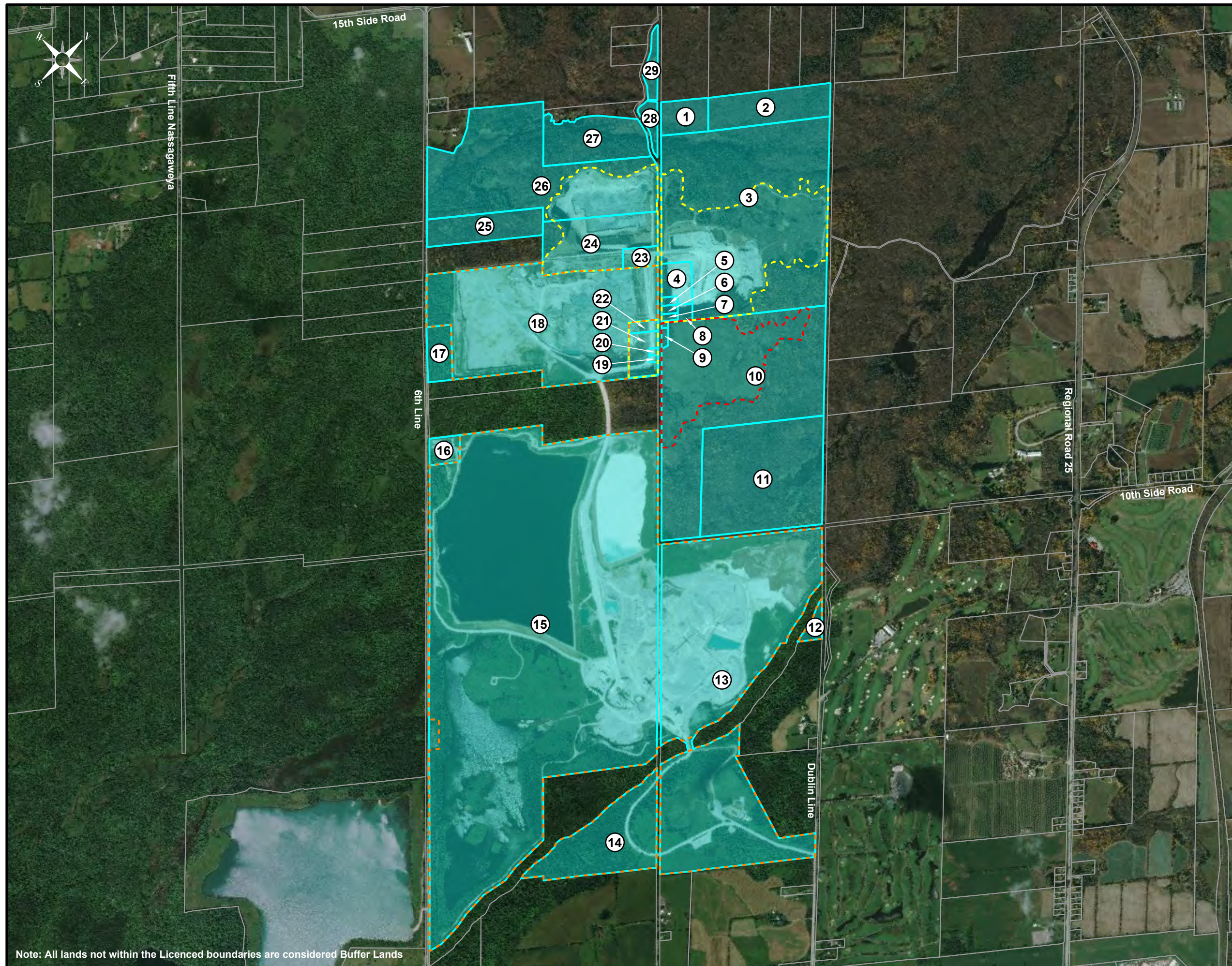
Date: June 2021

Sources: Microsoft Corporation Bing Imagery, date unknown  
Parcel fabric from Municipal Property Assessment Corporation - Last updated prior to 2010

Scale - 1:20,000



N:\Bram\90610J - Dufferin - Milton Quarry East Extension\Drawings - Must be in NAD 27\Land Owned by Dufferin - June 2021\CAD\90610J - Land Owned by Dufferin - June 2021.dwg



Note: All lands not within the Licenced boundaries are considered Buffer Lands


**PLANNING  
URBAN DESIGN  
& LANDSCAPE  
ARCHITECTURE**  
 113 COLLIER STREET, BARRIE, ON, L4M 1H2  
 P: 705.728.0045 F: 705.728.2010 | WWW.MHBCPLAN.COM


SCHEDULE B  
OWNERS AUTHORIZATION

I, Kevin Mitchell, signing officer for the following companies:

1. 747752 Ontario Inc;
2. Peninsula Ready-Mix Inc;
3. CRH Canada Group Inc; and,
4. 1336811 Ontario Inc.

hereby authorize CRH Canada Group Inc. to prepare and submit all necessary applications to permit and operate a quarrying use on lands identified on Schedule A. Applications include, but are not limited to, application for licence under the *Aggregate Resource Act*, application for amendment to the Niagara Escarpment Plan, application for development permit within the Niagara Escarpment Development Control Area, application to amend the existing licenced operation, application for amendment to the Region of Halton Official Plan, and application for amendment to the Town of Halton Hills Official Plan.

I, Kevin Mitchell, also authorizes agency staff to enter lands identified on Schedule A for the purposes of evaluating the merits of an application. Prior to any entry of the property however, please contact CRH Canada Group Inc., and CRH Canada Group Inc. will accompany agency staff for safety reasons.

  
\_\_\_\_\_  
Signature

December 1, 2021  
\_\_\_\_\_  
Date



# Tab 3

FILE # \_\_\_\_\_

(For NEC office use only)

## NIAGARA ESCARPMENT DEVELOPMENT PERMIT APPLICATION

(FMS #0113 - Revised November 29, 2018)

**THE NIAGARA ESCARPMENT PLANNING AND DEVELOPMENT ACT, RSO, 1990, AS AMENDED**

**NIAGARA ESCARPMENT COMMISSION**  
232 Guelph Street, 3<sup>rd</sup> Floor  
Georgetown, ON L7G 4B1

Phone: 905-877-5191  
Fax: 905-873-7452  
Website: [www.escarpment.org](http://www.escarpment.org)  
Email: [necgeorgetown@ontario.ca](mailto:necgeorgetown@ontario.ca)

*Serving the areas of:*

Dufferin County (Mono)  
Region of Halton  
Region of Peel  
Region of Niagara  
City of Hamilton

**NIAGARA ESCARPMENT COMMISSION**  
1450 7<sup>th</sup> Avenue, 1<sup>st</sup> Floor  
Owen Sound, ON N4K 2Z1

Phone: 519-371-1001  
Fax: 519-371-1009  
Website: [www.escarpment.org](http://www.escarpment.org)  
Email: [necowensound@ontario.ca](mailto:necowensound@ontario.ca)

*Serving the areas of:*

Bruce County  
Grey County  
Simcoe County  
Dufferin County (Mulmur, Melancthon)

- Please ensure that the information you provide in this application is complete and accurate.
- Incomplete or inaccurate information will delay the processing of your application.
- Please contact your local Commission office if you have any questions about your proposal or this application.

**1. APPLICANT**

Name: Dufferin Aggregates, a division of CRH Canada Group Inc. (c/o Kevin Mitchell)

Mailing Address: 2300 Steeles Avenue, 4th Floor      Concord      Ontario      L4K 5X6  
Street/P.O. Box      City/Town      Province      Postal Code

Phone: (416) 788-0015      Fax: \_\_\_\_\_      E-mail: kevin.mitchell@ca.crh.com

**2. AGENT (if any) - N/A**

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
Street/P.O. Box      City/Town      Province      Postal Code

Phone: \_\_\_\_\_      Fax: \_\_\_\_\_      E-mail: \_\_\_\_\_

**3. OWNER (if different from applicant)**

Name: See Schedule A.

Mailing Address: \_\_\_\_\_  
Street/P.O. Box      City/Town      Province      Postal Code

Phone: \_\_\_\_\_      Fax: \_\_\_\_\_      E-mail: \_\_\_\_\_

**4. CONTRACTOR (if applicable) - N/A**

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
Street/P.O. Box      City/Town      Province      Postal Code

Phone: \_\_\_\_\_      Fax: \_\_\_\_\_      E-mail: \_\_\_\_\_

**5. PROPERTY LOCATION**

County/Region See Schedule A. Municipality \_\_\_\_\_ (former) Municipality \_\_\_\_\_  
Lot \_\_\_\_\_ Concession \_\_\_\_\_ and/or Lot \_\_\_\_\_ Plan \_\_\_\_\_  
Civic Address # \_\_\_\_\_ Street Address \_\_\_\_\_  
(Fire/Emergency #)  
Assessment roll number \_\_\_\_\_

**6. LOT INFORMATION**

Lot Size See Schedule A. Frontage \_\_\_\_\_ Depth \_\_\_\_\_

**7. SERVICING** Existing Milton Quarry has frontage on Dublin Line. The Milton Quarry Extension and Milton Quarry East Extension have frontage on an unopened road allowance.

<b>Existing Road Frontage:</b>	<input checked="" type="checkbox"/> Municipal	<input type="checkbox"/> Private	<input type="checkbox"/> Right-of-Way	<input type="checkbox"/> Year-round
Proposed Road Frontage:	<input checked="" type="checkbox"/> Municipal	<input type="checkbox"/> Private	<input type="checkbox"/> Right-of-Way	<input type="checkbox"/> Year-round
<b>Existing Water Supply:</b>	<input type="checkbox"/> Municipal	<input type="checkbox"/> Communal	<input type="checkbox"/> Private Well	<input checked="" type="checkbox"/> Other: <u>N/A</u>
Proposed Water Supply:	<input type="checkbox"/> Municipal	<input type="checkbox"/> Communal	<input type="checkbox"/> Private Well	<input checked="" type="checkbox"/> Other: <u>N/A</u>
<b>Existing Sewage System:</b>	<input type="checkbox"/> Municipal	<input type="checkbox"/> Communal	<input type="checkbox"/> Private Septic	<input checked="" type="checkbox"/> Other: <u>N/A</u>
Proposed Sewage System:	<input type="checkbox"/> Municipal	<input type="checkbox"/> Communal	<input type="checkbox"/> Private Septic	<input checked="" type="checkbox"/> Other: <u>N/A</u>

**8. EXISTING and PROPOSED DEVELOPMENT**

Note: "Development" includes the construction of buildings and structures, alterations to the landscape, (e.g: placing fill, drainage alterations, pond construction or alteration), any change of use or new use (e.g: residential to commercial, new home business, etc). If additional space is required please include a separate attachment.

<b>Existing Development:</b> (describe) ↓	<b>Proposed Development:</b> (describe) ↓
Residential <u>N/A</u>	Mineral Aggregate Operation
Recreational <u>N/A</u>	
Agricultural <u>N/A</u>	
Commercial <u>N/A</u>	
Other <u>Vacant lands</u> (e.g., industrial, institutional)	

**9. EASEMENTS, COVENANTS, AGREEMENTS**

Describe the type and terms of any easements, right-of-ways, covenants, agreements or other restrictions registered on or affecting the title of the property and/or attach a copy:  
\_\_\_\_\_  
\_\_\_\_\_

**10. DATE OF PURCHASE**

Date the property was purchased by the current owner: Various dates. Milton Quarry East Extension lands were purchased December 2019.  
Date the property will be purchased by the applicant (if purchasing from current owner): N/A

**Note regarding Sections 11, 12, 13, 14, 15, 16:**

Depending on the type or nature of the proposed development and/or the characteristics of the property, supporting information such as Environmental Impact Studies, Landscape Plans, Lighting Plans, Visual Assessments, Grading Plans, Erosion Control Plans, Slope Stability Studies, etc., may be required in support of the following information.

**11. CONSTRUCTION DETAILS**

**PLEASE NOTE**

**Ground Floor Area** is the total exterior measurements of any building, including attached garages and enclosed decks (as applicable).

**Total Floor Area** (i.e., total mass) is based on the exterior measurements of the building and includes the total of the ground floor area (including attached garages, etc), plus walkout basements, plus full or half second storeys, etc.

**Maximum Height** is measured from the lowest grade (e.g., walkout side), to the peak of the roof.

	Ground Floor Area (Exterior measurements)	Total Floor Area	# of Storeys	Maximum Height (to peak)	Use of structure
Dwelling	_____	_____	_____	_____	_____
Dwelling Addition	<del>No buildings or structures, with the exception of the pumphouse required for water mitigation. See enclosed Milton Quarry East Extension site plan for location and details.</del>				
Accessory Building 1					
Accessory Building 2					
Accessory Building Addition					
Other Building					
Demolition (specify what structure)	_____	_____	_____	_____	_____

\*If fill is required for any of the developments proposed above please provide details in Section 12 below.

**12. ACCESSORY FACILITIES, STRUCTURES, FILLING, GRADING, etc.**

(e.g: Driveways, Decks, Gazebos, Swimming Pools, Tennis Courts, Lighting, Signs, Wind Turbines, free-standing Solar Panels, Hydro Poles/Lines, Retaining Walls, Placement of Fill, Grading, Berms, Parking Areas, Tree/Site Clearing, etc.) (See next page for **Ponds**)

**Describe and provide information** such as: dimensions, size, height, amount of fill etc.

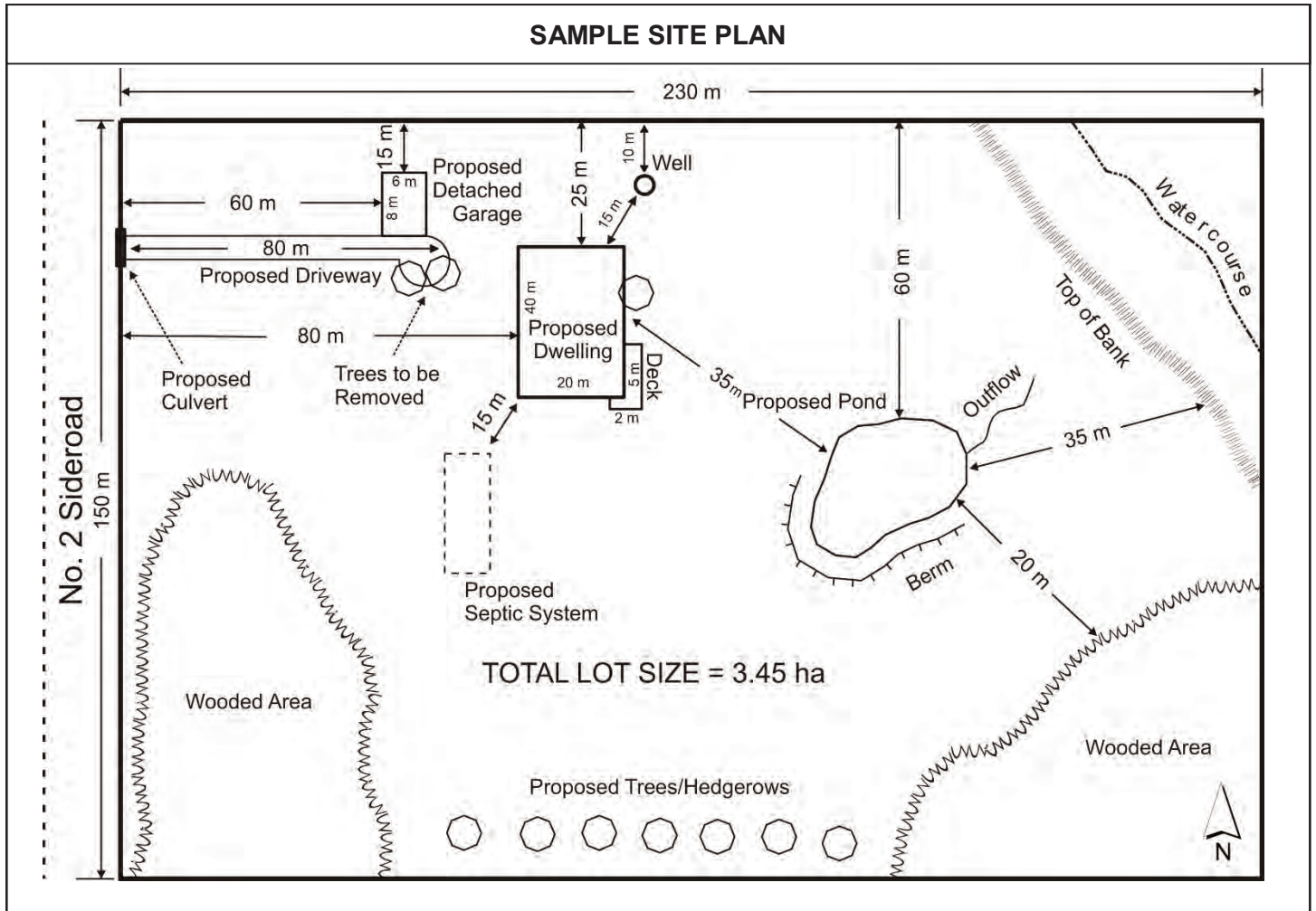
Accessory facilities and structures at the existing Milton Quarry East Extension and Milton Quarry are proposed to be used in conjunction with the proposed Milton Quarry East Extension. See Application Booklet for the proposed development permit.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_





## 18. SITE PLAN



An **accurate Site Plan** must be provided. The Site Plan may be drawn on the following page (Section 20); on an attached Survey; or based on an on-line aerial photography mapping.

Please refer to the **SAMPLE SITE PLAN** opposite.

Your **SITE PLAN** must show the following information:

- Location of all proposed and existing development including:
  - existing and proposed main buildings, accessory buildings, facilities, structures;
  - driveway, septic system, well, hydro lines, parking areas;
  - proposed grading, cut and/or fill areas, berms, filling, retaining walls, culverts, etc.
- Measurements showing distance from all proposed development to:
  - front, side and rear lot lines;
  - streams, wetlands, ponds; woods, fence lines, cliff edges, top of slope or bank, etc;
  - nearest barn.
- Lot frontage and depth measurements and total size.
- If your application involves severance of a proposed new lot, show the location, dimension and size of the proposed lot in relation to the existing lot.
- North arrow (have the north portion of your lot located at the top of the page).





**20. SITE PLAN**



## SCHEDULE A

### OWNERSHIP AND DESCRIPTION OF SUBJECT LANDS

The following properties constitute the Subject Lands within which the Milton Quarry East Extension has been proposed. Also see attached map.

1. The *Aggregate Resources Act* Licence, Region of Halton Official Plan Amendment, and Town of Halton Hills Official Plan Amendment apply to the Milton Quarry East Extension;
2. The Niagara Escarpment Plan Amendment applies to the Milton Quarry East Extension (mapping change), Milton Quarry Extension, and Milton Quarry (policy change to allow site to be used for processing);
3. The Niagara Escarpment Plan Amendment, Region of Halton Official Plan Amendment, and Town of Halton Hills Official Plan Amendment also include a mapping change to designate the south 15 metre extraction setback within the Milton Quarry Extension to "Mineral Resource Extraction Area."
4. The Niagara Escarpment Development Permit applies to the Milton Quarry East Extension, Milton Quarry Extension, Milton Quarry and the Buffer Lands to ensure all lands are covered off to allow for any changes to operation and construction of mitigation measures.

#### SUBJECT LANDS

#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
1	747752 Ontario Inc.	249780005	Buffer Lands	N/A	PT LT 14, CON 1 ESQ , PART 1 , 20R8819 ; HALTON HILLS/ESQUESING	4.74	158.3	259.2
2	Peninsula Ready-Mix Inc.	249780006	Buffer Lands	N/A	PT LT 14, CON 1 ESQ , AS IN 691414 ; HALTON HILLS/ESQUESING	12.21	131.6	671.4
3	CRH Canada Group Inc.	249780217	Milton Quarry Extension	10479 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	CONSOLIDATION OF VARIOUS PROPERTIES : PT LTS 13 & 14, CON 1 ESQ, AS IN 575334; HALTON HILLS/ESQUESING.	88.36	443.6	912.9
			Buffer Lands					
4	Peninsula Ready-Mix Inc.	249780008	Milton Quarry Extension	10461 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 13, CON 1 ESQ , PART 1 , 20R7139 ; HALTON HILLS/ESQUESING	3.44	185.2	166.9
5	CRH Canada Group Inc	249780009	Milton Quarry Extension	10413 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 13, CON 1 ESQ , PART 2 , 20R7139 ; HALTON HILLS/ESQUESING	0.40	45.5	88.3
6	Peninsula Ready-Mix Inc.	249780010	Milton Quarry Extension	10391 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 13, CON 1 ESQ , AS IN 816894 ; HALTON HILLS/ESQUESING	0.40	45.5	88.3
7	CRH Canada Group Inc.	249780011	Milton Quarry Extension	10379 NASSAGAWEYA ESQUESING TLINE	PT LT 13, CON 1 ESQ , AS IN 718652 ; HALTON HILLS/ESQUESING	0.34	37.9	88.3

#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
				HALTON HILLS				
8	747752 Ontario Ltd.	249780012	Milton Quarry Extension	10371 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 12 & 13, CON 1 ESQ, PART 1 & 2, 20R2983 ; HALTON HILLS/ESQUESING	0.92	36.2	182.4
9	CRH Canada Group Inc.	249780013	Proposed Milton Quarry East Extension	10327 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 12, CON 1 ESQ, AS IN 618957 ; HALTON HILLS/ESQUESING	0.38	69.0	37.2
10	1336811 Ontario Inc.	249780014	Proposed Milton Quarry East Extension Buffer Lands	10305 NASSAGAWEYA ESQUESING TLINE ES HALTON HILLS	LT 5, RCP 1551 ; PT LT 12, CON 1 ESQ, AS IN 469952 & 120626 ; HALTON HILLS/ESQUESING	66.27	464.6	1004.9
11	CRH Canada Group Inc.	249780015	Buffer Lands	N/A	LT 1 & 7, RCP 1551 ; HALTON HILLS/ESQUESING	39.34	343.4	667.2
12	CRH Canada Group Inc.	249780208	Milton Quarry	NA	LT 3, RCP 1551 ; HALTON HILLS/ESQUESING	1.41	58.2	185.9
13	CRH Canada Group Inc.	249780017	Milton Quarry	N/A	LT 2, RCP 1551 ; LT 1, RCP 1553 ; HALTON HILLS/ESQUESING	110.95	111.0	859.0 (varied)
14	CRH Canada Group Inc.	249780210	Milton Quarry	N/A	LT 2, RCP 1554 ; S/T 84170 ; "MILTON" "AMENDED MAR 24 '99 J. MENARD"	21.24	214.7	812.4
15	CRH Canada Group Inc.	249780166	Milton Quarry Buffer Lands	N/A	LT 1, RCP 1554; LT 2, RCP 1552, LT 4, RCP 1554; RDAL BTN LOTS 10 & 11 CON 7 NAS, AS CLOSED BY BYLAW 829306 ; HALTON HILLS "AMENDED APR 26 '99 J. MENARD"	270.52	1,009.7	1,403.1
16	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	249780164	Buffer Lands	10131 SIXTH LINE MILTON L9T2X7	LT 12, RCP 1552 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 24 '99 J. MENARD"	2.44	123.6	167.5
17	CRH Canada Group Inc.	249780158	Buffer Lands	N/A	LT 7, RCP 1552 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"	4.09	224.7	135.5
18	CRH Canada Group Inc.	249780157	Milton Quarry	N/A	LT 1, RCP 1552 ; S/T 178422 ; S/T LIFE INTEREST IN 178422 ;	66.89	286.2	1,265.9 (varied)

#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
					"MILTON" /NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"			
19	CRH Canada Group Inc.	249780162	Milton Quarry Extension	10248 NASSAGAWEYA ESQUESING TLINE MILTON	LT 10, RCP 1552, PT 4, 20R7609 ; MILTON	0.17	38.0	45.7
20	CRH Canada Group Inc.	249780161	Milton Quarry Extension	10256 NASSAGAWEYA ESQUESING TLINE MILTON	LT 9, RCP 1552, PT 3, 20R7609 ; MILTON	0.17	38.0	45.7
21	Peninsula Ready-Mix Inc.	249780160	Milton Quarry Extension	10262 NASSAGAWEYA ESQUESING TLINE MILTON	PT LT 8, RCP 1552, PT 1, 20R7609; MILTON.	3.55	57.3	174.2
22	CRH Canada Group Inc.	249780159	Milton Quarry Extension	Not available.	PT LT 8, RCP 1552, PT 2, 20R7609; MILTON.	0.98	60.5	160.8
23	Peninsula Ready-Mix Inc.	249780156	Milton Quarry Extension	10380 NASSAGAWEYA ESQUESING TLINE MILTON L7J2L7	LT 3, RCP 1552 , PART 1 , 20R3808 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD	2.03	106.1	190.4
24	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	249780155	Milton Quarry Extension Buffer Lands	10446 NASSAGAWEYA ESQUESING TLINE MILTON	LT 4, RCP 1552 ; MILTON	16.49	129.7	638.4
25	747752 Ontario Inc.	249780153	Buffer Lands	10449 SIXTH LINE MILTON L9T2X7	LT 5, RCP 1552 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"	9.60	130.2	638.1
26	CRH Canada Group Inc.	249780149	Milton Quarry Extension Buffer Lands	10494 NASSAGAWEYA ESQUESING TLINE MILTON L9T5S3	PT LT 14, CON 7 NAS , PART 2 & 3 , 20R2017 , EXCEPT PART 2, 20R11685 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"	51.54	257.2	1,259.7 (varied)
27	CRH Canada Group Inc.	249780236	Buffer Lands	10580 NASSAGAWEYA ESQUESING TLINE	PT LT 14, CON 7, PT 1, 20R2017 EXCEPT PT 1, 20R15065; MILTON/NASS	13.30	132.3	568.1

#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
				MILTON				
28	CRH Canada Group Inc.	249780147	Buffer Lands	10545 NASSAGAWEYA ESQUESING TLINE MILTON	PT LT 14, CON 7 NAS , AS IN 853727 ; "MILTON"/NASSAGAWEYA ; "AMENDED MAR 23 '99 J. MENARD"	1.72	161.0	50.7
29	CRH Canada Group Inc.	249780146	Buffer Lands	10648 NASSAGAWEYA ESQUESING TLINE MILTON	PT LT 15, CON 7 NAS , PART 1 , 20R6918 , EXCEPT PT "2", 20R8819; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"	2.04	50.7	56.8

# Dufferin Land Holdings

## Milton Quarry

Town of Halton Hills  
Regional Municipality of Halton

### Legend

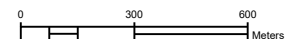
- Land Owned by Dufferin
- Existing Parcel Fabric
- Proposed Milton Quarry East Extension
- Milton Quarry (1962)
- Milton Quarry Extension (2007)

#	PIN	Ownership	Easement	Area (ha)
1	249780005	747752 Ontario Inc.	0	4.74
2	249780006	Peninsula Ready-Mix Inc.	0	12.21
3	249780217	CRH Canada Group Inc.	0	88.36
4	249780008	Peninsula Ready-Mix Inc.	0	3.44
5	249780009	CRH Canada Group Inc.	0	0.40
6	249780010	Peninsula Ready-Mix Inc.	0	0.40
7	249780011	CRH Canada Group Inc.	0	0.34
8	249780012	747752 Ontario Ltd.	0	0.92
9	249780013	CRH Canada Group Inc.	0	0.38
10	249780014	1336811 Ontario Inc.	0	66.27
11	249780015	CRH Canada Group Inc.	0	39.34
12	249780208	CRH Canada Group Inc.	0	1.41
13	249780017	CRH Canada Group Inc.	0	110.95
14	249780210	CRH Canada Group Inc.	1	21.24
15	249780166	CRH Canada Group Inc.	0	270.52
16	249780164	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	0	2.44
17	249780158	CRH Canada Group Inc.	0	4.09
18	249780157	CRH Canada Group Inc.	2	66.89
19	249780162	CRH Canada Group Inc.	0	0.17
20	249780161	CRH Canada Group Inc.	0	0.17
21	249780160	Peninsula Ready-Mix Inc.	0	3.55
22	249780159	CRH Canada Group Inc.	0	0.98
23	249780156	Peninsula Ready-Mix Inc.	0	2.03
24	249780155	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	0	16.49
25	249780153	747752 Ontario Inc.	0	9.60
26	249780149	CRH Canada Group Inc.	0	51.54
27	249780236	CRH Canada Group Inc.	0	13.30
28	249780147	CRH Canada Group Inc.	0	1.72
29	249780146	CRH Canada Group Inc.	0	2.04

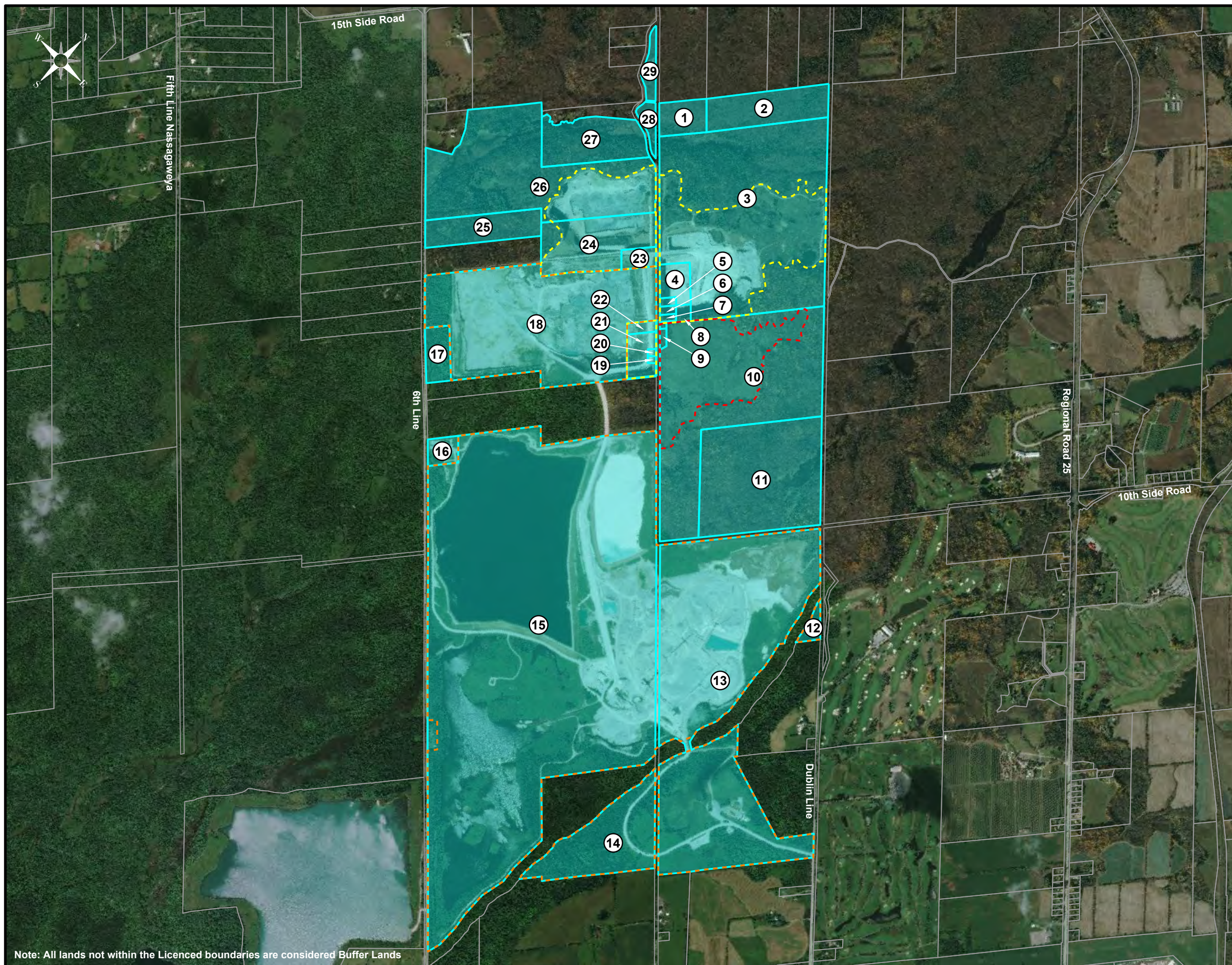
Date: June 2021

Sources: Microsoft Corporation Bing Imagery, date unknown  
Parcel fabric from Municipal Property Assessment Corporation - Last updated prior to 2010

Scale - 1:20,000



N:\Bram\90610J - Dufferin - Milton Quarry East Extension\Drawings - Must be in NAD 27\Land Owned by Dufferin - June 2021\CAD\90610J - Land Owned by Dufferin - June 2021.dwg



Note: All lands not within the Licenced boundaries are considered Buffer Lands

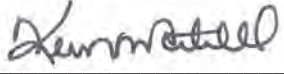
SCHEDULE B  
OWNERS AUTHORIZATION

I, Kevin Mitchell, signing officer for the following companies:

1. 747752 Ontario Inc;
2. Peninsula Ready-Mix Inc;
3. CRH Canada Group Inc; and,
4. 1336811 Ontario Inc.

hereby authorize CRH Canada Group Inc. to prepare and submit all necessary applications to permit and operate a quarrying use on lands identified on Schedule A. Applications include, but are not limited to, application for licence under the *Aggregate Resource Act*, application for amendment to the Niagara Escarpment Plan, application for development permit within the Niagara Escarpment Development Control Area, application to amend the existing licenced operation, application for amendment to the Region of Halton Official Plan, and application for amendment to the Town of Halton Hills Official Plan.

I, Kevin Mitchell, also authorizes agency staff to enter lands identified on Schedule A for the purposes of evaluating the merits of an application. Prior to any entry of the property however, please contact CRH Canada Group Inc., and CRH Canada Group Inc. will accompany agency staff for safety reasons.

  
\_\_\_\_\_  
Signature

December 1, 2021  
\_\_\_\_\_  
Date

Tab 4



## APPLICATION TO AMEND THE REGION OF HALTON OFFICIAL PLAN

### Note to Applicants

This application form is to be used to request an amendment to the Regional Official Plan pursuant to Section 22 of the *Planning Act*.

### Pre-Consultation

The Pre-Consultation is a mandatory component of the application process. The intention of the Pre-Consultation meeting is to determine what the applicant must submit for the application to be deemed complete and provides an opportunity to discuss the nature of the application, relevant issues, the need for additional information/reports and the planning approval process. Contact Planning Services Division, Community Planning Section at (905) 825-6000 ext. 7764 to set up a Pre-Consultation meeting.

### Completeness of the Application

The information required pursuant to O. Reg. 543/06 under the *Planning Act*, must be provided with the required application fee and any documents or studies identified during the Pre-Consultation meeting. Subsection 22(6) of the *Planning Act* and Regional Official Plan Amendment No. 33 also allow the Region to require additional information that will assist in the planning evaluation of the proposal.

All applicable questions on this form should be answered or identified as Not Applicable with an explanation as to why. In accordance with subsection 22(6.1) of the *Planning Act*, this application will not be deemed complete/ accepted and further consideration of this application will not occur until the required information and fee have been submitted. In this form, the term "Subject Land" means the land that is subject of the requested amendment.

### Submission of the Application

The Applicant must consult with Regional Planning Services staff at a Pre-Consultation meeting prior to submission of the following:

- **1 Pre-consultation Form** completed by appropriate Regional Planning Services staff
- **1 copy** of the completed application form (including 1 with original signatures).
- **1 copy** of the information/reports as required (unless more copies are requested).
- Required drawing information as identified at the Pre-Consultation
- Application Fee (See Fees By-law)
- **1 copy** of the Proposed Amendment

Where the scale or nature of the requested amendment appear to affect the interests of a large number of public bodies, additional copies of the above-noted information may be required. The Application Fee shall be used to pay all planning and associated costs covered by this application form with the exception of costs for signage relating to the Notice of Complete Application and the Notice of Public Meeting and costs for the peer review of certain studies.

Date Received	Date Complete	File No.	Fee(s) Paid

## 1. PRE-CONSULTATION

1.1 Prior to the submission of this application, has a pre-consultation meeting with staff of the Region of Halton, the local municipality and applicable agencies been held? Yes No

1.2 Date of Pre-consultation meeting:

1.3 Parties who attended:

## 2. APPLICANT INFORMATION

2.1 Complete the information below and indicate one contact as the Prime Contact. All communications will be directed to the Prime Contact.

Prime Contact:

<b>Registered Owner(s):</b>	
Name:	Phone:
Mailing Address:	
Email:	Fax:

<b>Applicant(s):</b> Dufferin Aggregates, a division of CRH Canada Group Inc.	
Name:	Phone:
Mailing Address:	
Email:	Fax:

<b>Agent (Planning Consultant):</b>	
Name:	Phone:
Mailing Address:	
Email:	Fax:

\* If a numbered company, please give name, phone number and email address of principal owner (or president)

### 3. DESCRIPTION OF SUBJECT LANDS

#### 3.1 Particulars of the Subject Land:

Frontage:	Depth:	Area:
Lot(s)/Block(s):	Concession:	
Registered Plan #:	Former Township:	
Reference Plan No.:	Part(s):	
Parcel No.:	Assessment Roll #:	
Municipal Address:		

### 4. EXISTING AND PREVIOUS USE

4.1 What is the existing use(s) of the Subject Land?

4.2 What was the previous use(s) of the Subject Land, if known?

Is the Subject Land (or Buildings) subject to a Demolition Control By-law or is it either Designated or identified for possible Designation under the *Ontario Heritage Act*?  Yes  No

### 5. PROPOSED USE (attach any additional information on a separate page)

5.1 What is the proposed use(s) of the Subject Land?

5.2 Indicate Existing Land Uses on Abutting Properties

North:

South:

East:

West:

## REQUESTED OFFICIAL PLAN AMENDMENT

### 5.3 **FILL THE SECTION IF APPLICABLE**

An Official Plan Amendment that requests to change, delete, or replace an approved Official Plan Policy or to add a new policy to the Official Plan.

Describe the purpose of the requested amendment.

Identify the policy to be changed, replaced or deleted (if any).

What is the current Official Plan land use designation on the subject land?

What land uses are permitted by the current Official Plan designation on the subject land?

What land uses would the requested amendment permit on the subject land?

### 5.4 **FILL THE SECTION IF APPLICABLE**

An Official Plan Amendment that requests to change or replace the approved Official Plan land use designation on the subject land.

Describe the purpose of the requested amendment.

Identify the policy to be changed, replaced or deleted (if any).

What is the current Official Plan land use designation on the subject land?

What land uses are permitted by the current Official Plan designation on the subject land?

What land uses would the requested amendment permit on the subject land?

5.5 A requested Official Plan Amendment that changes or replaces a schedule in the Official Plan.

The requested schedule and the text that accompanies the requested amendment must be included with this application. Is the schedule and text attached?  Yes  No

5.6 A Planning Justification Report must be submitted with this application to amend the Regional Official Plan. Is the required Planning Justification Report attached?  Yes  No

## 6. STATUS OF OTHER APPLICATIONS

6.1 Is there any other application under the *Planning Act*, the *Ontario Planning and Development Act* or the *Niagara Escarpment Planning and Development Act*, such as for approval of a plan of subdivision, an amendment to a municipal official plan, a minor variance, a consent or a site plan that involves:

a) that is the subject land?  Yes  No

b) that is within 120 metres of the subject land in Halton Region or an adjacent Municipality?  Yes  No

c) if Yes to a) or b), and if known, list below:

Purpose of the application(s) and the effect of the application(s) on the requested Official Plan Amendment:

**Local Official Plan Amendment**  Yes  No

File No.

Status:

Approval Authority:

Legal Description of Lands:

**Zoning By-law Amendment**  Yes  No

File No.

Status:

Approval Authority:

Legal Description of Lands:

**Plan of Subdivision**  Yes  No

File No.

Status:

Approval Authority:

Legal Description of Lands:

**Plan of Condominium**  Yes  No

File No.

Status:

Approval Authority:

Legal Description of Lands:

**Minor Variance**  Yes  No

File No.

Status:

Approval Authority:

Legal Description of Lands:

**Consent**  Yes  No

File No.

Status:

Approval Authority:

Legal Description of Lands:

**Development Permit**  Yes  No

File No.

Status:

Approval Authority:

Legal Description of Lands:

**Niagara Escarpment Development Permit /Amendment**  Yes  No

File No. TBD

Status:

Approval Authority:

Legal Description of Lands: See Schedule A.

**Parkway Belt West Plan Amendment**  Yes  No

File No.

Status:

Approval Authority:

Legal Description of Lands:

**Minister's Zoning Order**  Yes  No

File No.

Status:

Approval Authority:

Legal Description of Lands:

## 7. SERVICING

7.1 Indicate the proposed servicing type for the subject land.

a) Water Supply

- Publicly Owned and Operated Water  Private Well  
 Other, Specify

b) Sewage Disposal

- Publicly Owned and Operated Water  Private Well  
 Other, Specify

Note: If a privately owned and operated individual or communal septic system is proposed and more than 4,500 litres of effluent per day would be produced, a Servicing Options Report and a Hydrogeological Report must be submitted with the application.

c) Road Access and/or Frontage

Name of the Road

- Local Municipal Road  Regional Municipal Road  
 Provincial Highway  Private Road

Existing Milton Quarry has frontage on Dublin Line. The Milton Quarry Extension and Milton Quarry East Extension have frontage on an unopened road allowance.

d) Indicate the proposed Storm Drainage System

- Sewers  Ditches  
 Swales  Other, Specify

Is the requested plan amendment consistent with the recommendations of the watershed plan, if any?  Yes  No N/A

If no, specify the section of plan:

7.2 Does the requested plan amendment conform to the master drainage, sub-watershed?

Yes No

If no, specify the section of the plan: N/A

## 8. PROVINCIAL POLICY and PROVINCIAL PLANS

\*Note: The Region is responsible for protecting provincial land use policy interests (as per Memorandum of Understanding between the Province and the Region, April 1/96)

8.1 Is the subject land within an area designated under any of the following Provincial Plans?

*Greenbelt Plan*  Yes  No

*Niagara Escarpment Plan*  Yes  No

*Parkway Belt West Plan*  Yes  No

Other (Specify)

\*Note: The 2019 Growth Plan for the Greater Golden Horseshoe applies to all lands in the Region of Halton

8.2 Explain how the application conforms to or does not conflict with the provincial plan or plans Section 9.2 above and a proposed strategy for consulting with the public (or incorporate in the Planning Justification Report as required).

8.3 Explain how the requested Official Plan Amendment is consistent with the Provincial Policy Statement (or incorporate in the Planning Justification Report as required).

8.4 Explain is this application to alter all or any part of the boundary of an area of settlement in a local Municipality or to establish a new area of settlement in a local municipality?  
 Yes  No

If Yes, provide the current Regional Official Plan policies, if any, dealing with the alteration or establishment of an area of settlement (or incorporate the Planning Justification Report as required).

8.5 Is this application to remove the Subject Land from an area of employment?  Yes  No

If Yes, provide the current Regional Official Plan policies, if any, dealing with the removal of land from an area of employment as part of the Planning Justification Report as required in Section 5.4 of this application.

8.6 All addressed within the accompanying Planning Justification Report?  Yes  No

## 9. ENVIRONMENTAL SITE SCREENING QUESTIONNAIRE

An Environmental Site-Screening Questionnaire addressing possible soil contamination must be submitted with this application. Is the Environmental Site-Screening Questionnaire attached?

Yes  No

## 10. OTHER INFORMATION


Is there any other information that may be useful to the Region/Local Municipality or other public bodies in reviewing this requested Official Plan Amendment (e.g. efforts made to resolve outstanding objections or concerns, consultation with First Nations)? If so, please attach to this application.



**AFFIDAVIT OR SWORN DECLARATION**

I Kevin Mitchell of the County of Brant  
in the Province of Ontario  
make oath and say (or solemnly declare) that the information contained in this application is true and that the information contained in the documents that accompany this application is true, and I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath, and by virtue of the *Canada Evidence Act*.

SWORN remotely by Kevin Mitchell, stated as being located in the County of Brant in the Province of Ontario, before me at the City of Barrie, this 1 day of December, 2021, in accordance with O. Reg. 431/20, Administering Oath or Declaration Remotely.

  
Commissioner of Oaths

  
Applicant

Kimberley Anne Clements, a Commissioner, etc., Province of Ontario, for MacNaughton Hermsen Britton Clarkson Planning Limited. Expires August 17, 2024.

Kevin Mitchell  
Please PRINT name of Applicant

**ACKNOWLEDGEMENT OF APPLICANT**

Personal information on this form is collected under the authority of the *Planning Act* and will be used by the Region in the processing of Official Plan Amendment applications. The information may be used by other departments and public bodies for the purpose of assessing the proposal and preparing comments. This information may also be released to the public. Questions about the collection of this information should be directed to Region's Planning Services Division.

**OWNERS AUTHORIZATION (If the Owner is NOT the Applicant)**  
(if multiple owners, an Authorization from each Owner is required)

I (We), See Schedules A & B, being the Registered  
(name(s) of Owners(s))

Owner(s) of the subject land, hereby authorize, \_\_\_\_\_  
(name of Agent)

to prepare and submit an Official Plan Amendment application for approval.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\*Note: If the owner is an incorporated company, the Company Seal shall be applied (if there is one).

## SCHEDULE A

### OWNERSHIP AND DESCRIPTION OF SUBJECT LANDS

The following properties constitute the Subject Lands within which the Milton Quarry East Extension has been proposed. Also see attached map.

1. The *Aggregate Resources Act* Licence, Region of Halton Official Plan Amendment, and Town of Halton Hills Official Plan Amendment apply to the Milton Quarry East Extension;
2. The Niagara Escarpment Plan Amendment applies to the Milton Quarry East Extension (mapping change), Milton Quarry Extension, and Milton Quarry (policy change to allow site to be used for processing);
3. The Niagara Escarpment Plan Amendment, Region of Halton Official Plan Amendment, and Town of Halton Hills Official Plan Amendment also include a mapping change to designate the south 15 metre extraction setback within the Milton Quarry Extension to “Mineral Resource Extraction Area.”
4. The Niagara Escarpment Development Permit applies to the Milton Quarry East Extension, Milton Quarry Extension, Milton Quarry and the Buffer Lands to ensure all lands are covered off to allow for any changes to operation and construction of mitigation measures.

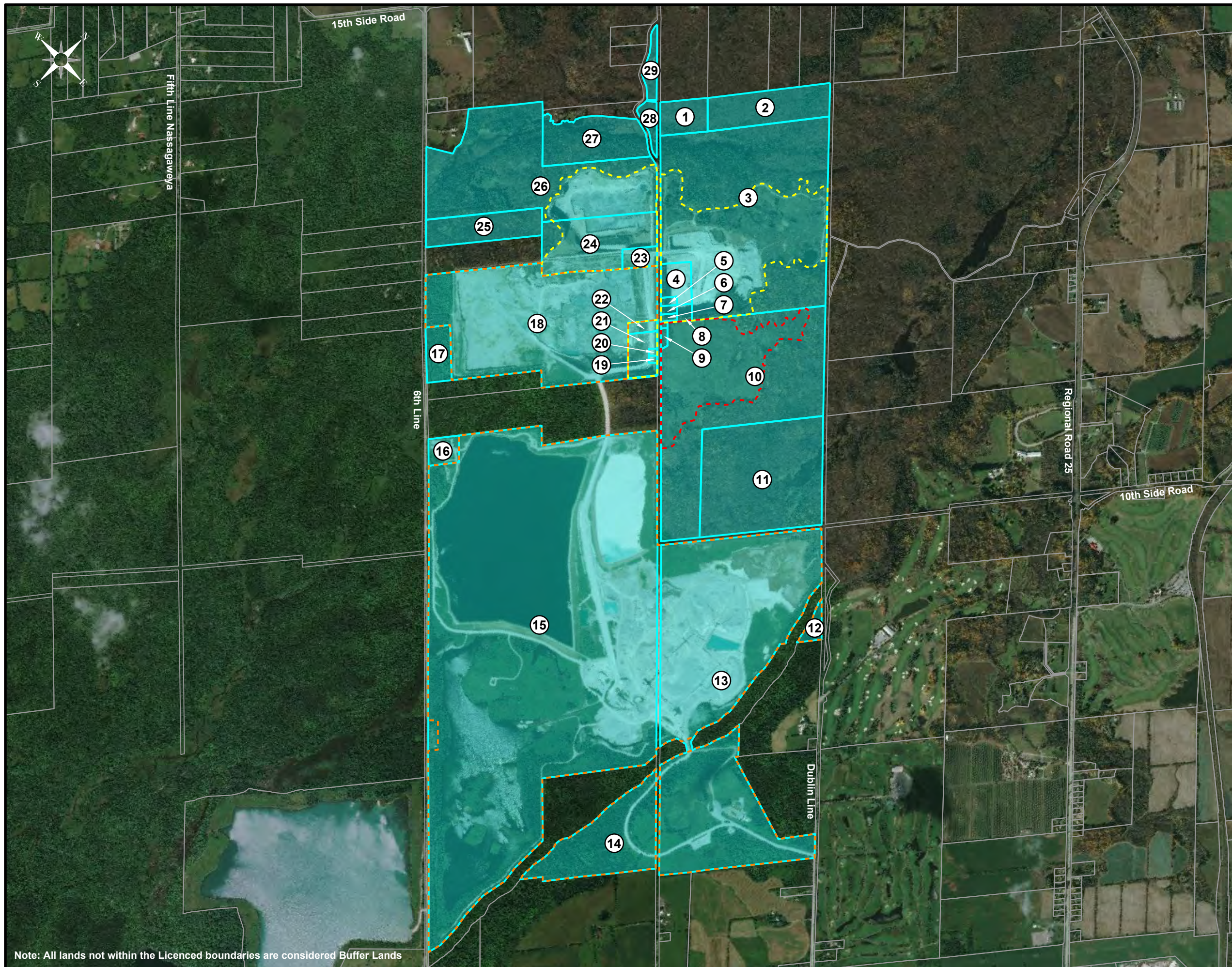
#### SUBJECT LANDS

#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
1	747752 Ontario Inc.	249780005	Buffer Lands	N/A	PT LT 14, CON 1 ESQ , PART 1 , 20R8819 ; HALTON HILLS/ESQUESING	4.74	158.3	259.2
2	Peninsula Ready-Mix Inc.	249780006	Buffer Lands	N/A	PT LT 14, CON 1 ESQ , AS IN 691414 ; HALTON HILLS/ESQUESING	12.21	131.6	671.4
3	CRH Canada Group Inc.	249780217	Milton Quarry Extension	10479 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	CONSOLIDATION OF VARIOUS PROPERTIES : PT LTS 13 & 14, CON 1 ESQ, AS IN 575334; HALTON HILLS/ESQUESING.	88.36	443.6	912.9
			Buffer Lands					
4	Peninsula Ready-Mix Inc.	249780008	Milton Quarry Extension	10461 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 13, CON 1 ESQ , PART 1 , 20R7139 ; HALTON HILLS/ESQUESING	3.44	185.2	166.9
5	CRH Canada Group Inc	249780009	Milton Quarry Extension	10413 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 13, CON 1 ESQ , PART 2 , 20R7139 ; HALTON HILLS/ESQUESING	0.40	45.5	88.3
6	Peninsula Ready-Mix Inc.	249780010	Milton Quarry Extension	10391 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 13, CON 1 ESQ , AS IN 816894 ; HALTON HILLS/ESQUESING	0.40	45.5	88.3
7	CRH Canada Group Inc.	249780011	Milton Quarry Extension	10379 NASSAGAWEYA ESQUESING TLINE	PT LT 13, CON 1 ESQ , AS IN 718652 ; HALTON HILLS/ESQUESING	0.34	37.9	88.3

#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
				HALTON HILLS				
8	747752 Ontario Ltd.	249780012	Milton Quarry Extension	10371 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 12 & 13, CON 1 ESQ, PART 1 & 2, 20R2983 ; HALTON HILLS/ESQUESING	0.92	36.2	182.4
9	CRH Canada Group Inc.	249780013	Proposed Milton Quarry East Extension	10327 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 12, CON 1 ESQ, AS IN 618957 ; HALTON HILLS/ESQUESING	0.38	69.0	37.2
10	1336811 Ontario Inc.	249780014	Proposed Milton Quarry East Extension Buffer Lands	10305 NASSAGAWEYA ESQUESING TLINE ES HALTON HILLS	LT 5, RCP 1551 ; PT LT 12, CON 1 ESQ, AS IN 469952 & 120626 ; HALTON HILLS/ESQUESING	66.27	464.6	1004.9
11	CRH Canada Group Inc.	249780015	Buffer Lands	N/A	LT 1 & 7, RCP 1551 ; HALTON HILLS/ESQUESING	39.34	343.4	667.2
12	CRH Canada Group Inc.	249780208	Milton Quarry	NA	LT 3, RCP 1551 ; HALTON HILLS/ESQUESING	1.41	58.2	185.9
13	CRH Canada Group Inc.	249780017	Milton Quarry	N/A	LT 2, RCP 1551 ; LT 1, RCP 1553 ; HALTON HILLS/ESQUESING	110.95	111.0	859.0 (varied)
14	CRH Canada Group Inc.	249780210	Milton Quarry	N/A	LT 2, RCP 1554 ; S/T 84170 ; "MILTON" "AMENDED MAR 24 '99 J. MENARD"	21.24	214.7	812.4
15	CRH Canada Group Inc.	249780166	Milton Quarry Buffer Lands	N/A	LT 1, RCP 1554; LT 2, RCP 1552, LT 4, RCP 1554; RDAL BTN LOTS 10 & 11 CON 7 NAS, AS CLOSED BY BYLAW 829306 ; HALTON HILLS "AMENDED APR 26 '99 J. MENARD"	270.52	1,009.7	1,403.1
16	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	249780164	Buffer Lands	10131 SIXTH LINE MILTON L9T2X7	LT 12, RCP 1552 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 24 '99 J. MENARD"	2.44	123.6	167.5
17	CRH Canada Group Inc.	249780158	Buffer Lands	N/A	LT 7, RCP 1552 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"	4.09	224.7	135.5
18	CRH Canada Group Inc.	249780157	Milton Quarry	N/A	LT 1, RCP 1552 ; S/T 178422 ; S/T LIFE INTEREST IN 178422 ;	66.89	286.2	1,265.9 (varied)

#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
					"MILTON" /NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"			
19	CRH Canada Group Inc.	249780162	Milton Quarry Extension	10248 NASSAGAWEYA ESQUESING TLINE MILTON	LT 10, RCP 1552, PT 4, 20R7609 ; MILTON	0.17	38.0	45.7
20	CRH Canada Group Inc.	249780161	Milton Quarry Extension	10256 NASSAGAWEYA ESQUESING TLINE MILTON	LT 9, RCP 1552, PT 3, 20R7609 ; MILTON	0.17	38.0	45.7
21	Peninsula Ready-Mix Inc.	249780160	Milton Quarry Extension	10262 NASSAGAWEYA ESQUESING TLINE MILTON	PT LT 8, RCP 1552, PT 1, 20R7609; MILTON.	3.55	57.3	174.2
22	CRH Canada Group Inc.	249780159	Milton Quarry Extension	Not available.	PT LT 8, RCP 1552, PT 2, 20R7609; MILTON.	0.98	60.5	160.8
23	Peninsula Ready-Mix Inc.	249780156	Milton Quarry Extension	10380 NASSAGAWEYA ESQUESING TLINE MILTON L7J2L7	LT 3, RCP 1552 , PART 1 , 20R3808 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD	2.03	106.1	190.4
24	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	249780155	Milton Quarry Extension Buffer Lands	10446 NASSAGAWEYA ESQUESING TLINE MILTON	LT 4, RCP 1552 ; MILTON	16.49	129.7	638.4
25	747752 Ontario Inc.	249780153	Buffer Lands	10449 SIXTH LINE MILTON L9T2X7	LT 5, RCP 1552 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"	9.60	130.2	638.1
26	CRH Canada Group Inc.	249780149	Milton Quarry Extension Buffer Lands	10494 NASSAGAWEYA ESQUESING TLINE MILTON L9T5S3	PT LT 14, CON 7 NAS , PART 2 & 3 , 20R2017 , EXCEPT PART 2, 20R11685 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"	51.54	257.2	1,259.7 (varied)
27	CRH Canada Group Inc.	249780236	Buffer Lands	10580 NASSAGAWEYA ESQUESING TLINE	PT LT 14, CON 7, PT 1, 20R2017 EXCEPT PT 1, 20R15065; MILTON/NASS	13.30	132.3	568.1

#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
				MILTON				
28	CRH Canada Group Inc.	249780147	Buffer Lands	10545 NASSAGAWEYA ESQUESING TLINE MILTON	PT LT 14, CON 7 NAS , AS IN 853727 ; "MILTON"/NASSAGAWEYA ; "AMENDED MAR 23 '99 J. MENARD"	1.72	161.0	50.7
29	CRH Canada Group Inc.	249780146	Buffer Lands	10648 NASSAGAWEYA ESQUESING TLINE MILTON	PT LT 15, CON 7 NAS , PART 1 , 20R6918 , EXCEPT PT "2", 20R8819; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"	2.04	50.7	56.8



# Dufferin Land Holdings

## Milton Quarry

Town of Halton Hills  
Regional Municipality of Halton

- Legend**
- Land Owned by Dufferin
  - Existing Parcel Fabric
  - Proposed Milton Quarry East Extension
  - Milton Quarry (1962)
  - Milton Quarry Extension (2007)

#	PIN	Ownership	Easement	Area (ha)
1	249780005	747752 Ontario Inc.	0	4.74
2	249780006	Peninsula Ready-Mix Inc.	0	12.21
3	249780217	CRH Canada Group Inc.	0	88.36
4	249780008	Peninsula Ready-Mix Inc.	0	3.44
5	249780009	CRH Canada Group Inc.	0	0.40
6	249780010	Peninsula Ready-Mix Inc.	0	0.40
7	249780011	CRH Canada Group Inc.	0	0.34
8	249780012	747752 Ontario Ltd.	0	0.92
9	249780013	CRH Canada Group Inc.	0	0.38
10	249780014	1336811 Ontario Inc.	0	66.27
11	249780015	CRH Canada Group Inc.	0	39.34
12	249780208	CRH Canada Group Inc.	0	1.41
13	249780017	CRH Canada Group Inc.	0	110.95
14	249780210	CRH Canada Group Inc.	1	21.24
15	249780166	CRH Canada Group Inc.	0	270.52
16	249780164	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	0	2.44
17	249780158	CRH Canada Group Inc.	0	4.09
18	249780157	CRH Canada Group Inc.	2	66.89
19	249780162	CRH Canada Group Inc.	0	0.17
20	249780161	CRH Canada Group Inc.	0	0.17
21	249780160	Peninsula Ready-Mix Inc.	0	3.55
22	249780159	CRH Canada Group Inc.	0	0.98
23	249780156	Peninsula Ready-Mix Inc.	0	2.03
24	249780155	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	0	16.49
25	249780153	747752 Ontario Inc.	0	9.60
26	249780149	CRH Canada Group Inc.	0	51.54
27	249780236	CRH Canada Group Inc.	0	13.30
28	249780147	CRH Canada Group Inc.	0	1.72
29	249780146	CRH Canada Group Inc.	0	2.04

Date: June 2021

Sources: Microsoft Corporation Bing Imagery, date unknown  
Parcel fabric from Municipal Property Assessment Corporation - Last updated prior to 2010

Scale - 1:20,000

N:\Bram\90610J - Dufferin - Milton Quarry East Extension\Drawings - Must be in NAD 27\Land Owned by Dufferin - June 2021\CAD\90610J - Land Owned by Dufferin - June 2021.dwg

**PLANNING  
URBAN DESIGN  
& LANDSCAPE  
ARCHITECTURE**

113 COLLIER STREET, BARRIE, ON, L4M 1H2  
P: 705.728.0045 F: 705.728.2010 | WWW.MHBCPLAN.COM

Note: All lands not within the Licenced boundaries are considered Buffer Lands


SCHEDULE B  
OWNERS AUTHORIZATION

I, Kevin Mitchell, signing officer for the following companies:

1. 747752 Ontario Inc;
2. Peninsula Ready-Mix Inc;
3. CRH Canada Group Inc; and,
4. 1336811 Ontario Inc.

hereby authorize CRH Canada Group Inc. to prepare and submit all necessary applications to permit and operate a quarrying use on lands identified on Schedule A. Applications include, but are not limited to, application for licence under the *Aggregate Resource Act*, application for amendment to the Niagara Escarpment Plan, application for development permit within the Niagara Escarpment Development Control Area, application to amend the existing licenced operation, application for amendment to the Region of Halton Official Plan, and application for amendment to the Town of Halton Hills Official Plan.

I, Kevin Mitchell, also authorizes agency staff to enter lands identified on Schedule A for the purposes of evaluating the merits of an application. Prior to any entry of the property however, please contact CRH Canada Group Inc., and CRH Canada Group Inc. will accompany agency staff for safety reasons.

  
\_\_\_\_\_  
Signature

December 1, 2021  
\_\_\_\_\_  
Date

# Tab 5





Town of Halton Hills  
1 Halton Hills Drive  
Halton Hills ON L7G 5G2  
www.haltonhills.ca

## OFFICIAL PLAN AMENDMENT AND/OR ZONING BY-LAW AMENDMENT

### AMENDMENT UNDER SUBSECTION 22(1) AND/OR 34 OF THE PLANNING ACT

---

This application package includes covering material related to applications submitted to the Town of Halton Hills. The total package consists of the following (\* represents forms to be filled out):

1. Completed Pre-consultation Form\*
2. Agreement to Post Signs and Permit Site Visits\*
3. Development Application\*
4. Drawing Requirements
5. Official Plan Amendment and Rezoning Process Flow Charts
6. Fees for Development Applications
7. Development Charges Pamphlet
8. Places and Persons to Contact

While there are time frames for Town positions/decision on applications, with additional periods for final approval, by Halton Region (for Official Plan Amendments), the time frame starts at the submission of a "Complete Application". In order for an application to be "complete", the Pre-consultation Form, Agreement to Post Sign and Permit Site Visits and the Application forms must be filled out in their entirety and the required drawings and fees must be submitted.

It is recommended that you pre-consult with as many of the review agencies as possible. You are expected to manage your own application as it proceeds through the review process, and regularly consult with Planning staff.

It is the Town's practice and preference to consolidate all relevant, and/or statutory, public meetings into one public meeting process unless determined otherwise by Council. At the public meeting, the proponent must make a full and detailed presentation and express to the public and Members of Council the vision, intention and objectives of the proposal. Copies of the Town's public meeting format are available upon request. A "Public Information Centre" meeting may also be involved in the process, at which the proponent must also be present.

As the proponent of an application, you are expected to familiarize yourself with this application package and the relevant processes. Town staff will assist as required throughout the process.



## OFFICIAL PLAN AMENDMENT AND/OR ZONING BY-LAW AMENDMENT

<b>Agreement to Post Sign and Permit Site Visits for Development Applications</b>
---

For the purpose of public notification and staff identification, I agree to erect a sign (2 signs on corner lot) in accordance with the "Town of Halton Hills Sign Requirements" within one (1) week of the date the Town Planner has deemed that the application is **"complete"**.

Furthermore, for the purposes of processing this application, I permit members of the Town of Halton Hills, its various Departments and Committees, and their members/ employees/representatives, to enter into my lands and inspect my property at the following time(s):

Please check one of the following boxes:

Any and all times;

OR

Certain times as specified below:

Days (i.e. Mon. to Fri.) \_\_\_\_\_

Times (i.e. 10:00 am to 4:00 pm) \_\_\_\_\_

OR

By appointment only.



# OFFICIAL PLAN AMENDMENT AND/OR ZONING BY-LAW AMENDMENT

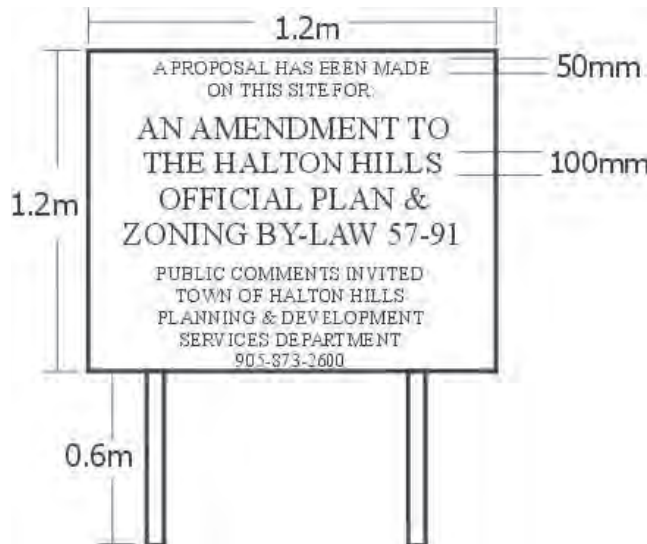
## Town of Halton Hills Sign Requirements

The applicant shall erect a sign in accordance with the attached instructions and file with the Town of Halton Hills Planning & Development Department a letter agreeing to maintain the sign(s) both for structure and paint work to the satisfaction of the Town. For all applications, the applicant is required to erect signs in accordance with the following requirements:

1. The applicant shall erect and maintain, in a structurally sound condition, the required sign(s). For the purpose of these requirements, the applicant means any person, firm or corporation controlling the property under consideration and shall include any authorized agent or person or corporation controlling the property under consideration and shall include any authorized agent of such person, firm or corporation. The sign shall not be erected prior to filing the application with the Town of Halton Hills.
2. Development application signs shall read as follows: An application has been made to develop this site for (i.e.) Townhouses and Apartments. Public comment invited - Town of Halton Hills Planning & Development Department 905-873-2601 ext 2900 (see below).

Subdivision and Condominium application signs shall read as follows: An application has been made to develop this site for (e.g.) 20 single-detached homes within a Plan of Subdivision. For information, please contact the Town of Halton Hills Planning & Development Department at 905-873-2601 ext 2900.

3. The applicant shall remove the sign within 48 hours:
  - (a) After withdrawing the application;
  - (b) After having been notified by the Town or the Local Planning Appeal Tribunal that the application has been approved or denied.
4. It is the applicant's responsibility to maintain the sign, both in structure and paint work.



Note:  
 Sign must indicate that information is available from the Town of Halton Hills Planning and Development Department Tel: 905-873-2601 Ext. 2900



## OFFICIAL PLAN AMENDMENT AND/OR ZONING BY-LAW AMENDMENT

### (A Privately Initiated Application)

#### Note to Applicants:

If this application is being made concurrently with a Draft Plan of Subdivision or Condominium, PLEASE USE THE CONSOLIDATED APPLICATION FORM which can be obtained from the Region or Area Municipality.

#### Completeness of the Application:

Information required in this application form is prescribed in Ontario Regulation 198/96, made under the Planning Act, and must be provided along with the appropriate fee. If the prescribed information and fee are not provided, the municipality will return the application or refuse to further consider the application until the prescribed information and the fee are provided.

The Planning Act also allows for the municipality to require additional information (e.g. technical information and reports) that will assist in the planning evaluation of the proposal. To ensure the quickest and most complete review, this "required" information should be submitted along with the prescribed information. All applicable questions should be answered or identified as Not Applicable with an explanation as to why. In the absence of the required information, it may not be possible to do a complete review within the legislated time frame for making a decision. As a result the proposal may be **denied**.

#### Submission of the Application:

**The Applicant must consult with Planning staff (Pre-Consultation Meeting) prior to submission of the following:**

- Completed Pre-consultation Meeting Form Planning staff,
- 25 copies of the completed application form (including 1 with original signatures),
- Copies of the information/reports if indicated as needed when completing the sections of the application form. The nature of the information/reports varies with the type of land uses proposed and the existing land use and topographic features. **(the number of each required will be identified in the Pre-consultation Form)**
- Drawing information.

This information will be used to consult with various interested agencies. Where the scale or nature of the land use changes appear to require a large number of agencies to be consulted, additional copies of the application may be required. Contact the **Town's Planning & Development Department** or the Region (if a Regional Official Plan Amendment is required) to arrange a Pre-Consultation meeting:

Town of Halton Hills      905-873-2601  
Region of Halton        905-825-6123 or 1-866-442-5866



# OFFICIAL PLAN AMENDMENT AND/OR ZONING BY-LAW AMENDMENT

<b>Office Use Only</b>	
Date Received: _____ (YY/MM/DD)	Date Complete: _____ (YY/MM/DD)
File No(s) Fee(s): _____	Paid: _____

Application for:  Local Official Plan Amendment  Zoning By-law Amendment  
 Part Lot Control  Zoning By-law Amendment Remove of Holding "H" Provision

## 1. Applicant Information

1.1 Complete the information below and indicate one contact as the Prime Contact (**PC**).  
**All communications will be directed to the Prime Contact** Kevin Mitchell  
(give name)

### Owner/Applicant Information

Property Owner Information: Check one  Person(s)  Company

**Registered Land Owner:**  
Surname: \_\_\_\_\_ First Name: \_\_\_\_\_ Initial: \_\_\_\_\_  
Name: See Schedule A. Company Officer: See Schedule B.  
(if company)

**Applicant Contact:**  
Surname: Dufferin Aggregates, a division of CRH Canada Group Inc. First Name: c/o Kevin Mitchell Initial: \_\_\_\_\_  
Position: Director Property, Planning & Approvals Address: 2300 Steeles Avenue  
Municipality: Concord Province: ON Postal Code: L4K 5X6  
Email: kevin.mitchell@ca.crh.com Fax: \_\_\_\_\_ Tel: (416) 788-0015

### Name of Property Purchaser (if applicable)

Surname: \_\_\_\_\_ First Name: \_\_\_\_\_ Initial: \_\_\_\_\_  
Address: \_\_\_\_\_  
Municipality: \_\_\_\_\_ Province: \_\_\_\_\_ Postal Code: \_\_\_\_\_  
Email: \_\_\_\_\_ Fax: \_\_\_\_\_ Tel: \_\_\_\_\_

### Agent, Solicitor, or Planning Consultant

Firm Name: MHBC  
Surname: Zeman First Name: Brian Initial: \_\_\_\_\_  
Position: President Address: 113 Collier Street  
Municipality: Barrie Province: ON Postal Code: L4M 1H2  
Email: bzeman@mhbcplan.com Fax: \_\_\_\_\_ Tel: (705) 627-9004  
Legal Name for use with Agreement: N/A

\* If a numbered company, please give name and phone number(s) of principal owner (or president)



## OFFICIAL PLAN AMENDMENT AND/OR ZONING BY-LAW AMENDMENT

**2. Location of Property** (check an area and complete applicable boxes)

Georgetown     Acton     401 Corridor     Rural Area     Niagara Escarp Plan Area

Assessment Roll Number: 2415- See Schedule A.    Concession Number(s): \_\_\_\_\_

Lot Number(s): \_\_\_\_\_    Former Township: \_\_\_\_\_

Registered Plan Number: \_\_\_\_\_    Lot(s)/Block(s): \_\_\_\_\_

Part(s): \_\_\_\_\_

Street Number & Name of Street/Road: \_\_\_\_\_

**2.1 Particulars of the Subject Land (in metric units):**

Frontage: \_\_\_\_\_    Depth: \_\_\_\_\_    Area: \_\_\_\_\_

**3. Existing and Previous Uses of the Subject Lands**

**3.1 What is the existing use of the subject lands?**

The property is currently vacant and consists of open field/pasture, wooded area. The proposed Official Plan Amendment only applies to 30.2 ha of the broader property.

**3.2 What were the previous uses of the subject land, if known?**

Vacant land.

**3.3 Potentially Contaminated Sites:**

**a) Has there been an industrial or commercial use of the site or adjacent land?**

Yes     No    Last Year of Use: \_\_\_\_\_

**b) Has there been fill placed on the site?**

Yes     No

**c) Have any studies been undertaken to determine whether this site has been contaminated?**

Yes     No    If Yes, give details (on separate page, if necessary)

\_\_\_\_\_  
 \_\_\_\_\_

**d) Is there reason to believe the site may have been contaminated by former uses either on the site or on adjacent sites? (e.g. former industrial use, gas station, petroleum or other fuel stored on site or adjacent site)**

Yes     No

If Yes, then an environmental audit including all former uses of the site and, if appropriate, the adjacent site, to the satisfaction of the municipality, is required. This study must be prepared by a qualified consultant.

Report attached?     Yes

If No, on what basis did you come to this determination?

Historical use of the property based on review of air photos.

\_\_\_\_\_  
 \_\_\_\_\_



## OFFICIAL PLAN AMENDMENT AND/OR ZONING BY-LAW AMENDMENT

3.4 List any existing Buildings or Structures on the Property:

Buildings or Structures*	All Yard Setbacks				Centre line setback from road(s)	No. of Storeys	Building Height	Ground Floor Area
	Front	Rear	Side	Side				
N/A								

\* Indicate any buildings or structures which are proposed to be removed/demolished

3.5 Is the Subject Land (or Buildings) subject to a Demolition Control By-law or is it either Designated or Identified for possible Designation under the **Ontario Heritage Act**?

Yes  No

### 4. Proposed Use of the Subject Lands (attach any additional information on a separate page)

4.1 What is the Proposed use of the Subject Lands?  
Mineral Aggregate Operation (Milton Quarry East Extension)

4.2 List any proposed Buildings or Structures on the Property:

Buildings or Structures*	All Yard Setbacks				Centre line setback from road(s)	No. of Storeys	Building Height	Ground Floor Area
	Front	Rear	Side	Side				
N/A								
No buildings or structures, with the exception of the pumphouse required for water mitigation. See enclosed Milton Quarry East Extension on site plan for location and details.								

4.3 Indicate Land Uses, Zoning, and existing structures on abutting properties:

North: Existing Milton Quarry Extension (Licence # 608621)

East: Existing Milton Quarry (Licence # 5481) & Wooded Area

South: Wooded Area

West: Existing Milton Quarry (Licence # 5481)



## OFFICIAL PLAN AMENDMENT AND/OR ZONING BY-LAW AMENDMENT

### 5. Type of Proposed Amendment

Check the appropriate boxes and complete the section(s). Depending on the purpose of the proposed plan amendment, more than one box may need to be checked.

5.1  **An Official Plan Amendment that proposes to add new policy or change, delete, or replace approved Official Plan policy.**

A. Describe the purpose of the proposed amendment:

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B. Identify the policy to be changed, replaced, or deleted:

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C. What is the current Official Plan land use designation on the subject property?

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D. What land uses are permitted by the current official plan designation on the subject land?

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E. What land uses would be permitted by the proposed official plan amendment on the subject land?

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5.2  **An official plan amendment that proposes to change or replace the approved Official Plan land use designation on the subject land.**

A. What is the current official plan designation of the subject land?

The Town of Halton Hills Official Plan designates the subject property Escarpment Rural Area.

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B. What land uses are permitted by the current designation on the subject land?

Land uses permitted by Section B4.2.3.3 of the Official Plan.

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C. What is the proposed designation on the subject land?

Mineral Resource Extraction Area

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D. What land uses will be permitted by the proposed designation on the subject land?

Land uses permitted by Section E6.3 of the Official Plan.

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# OFFICIAL PLAN AMENDMENT AND/OR ZONING BY-LAW AMENDMENT

## 5.3 The Proposed Official Plan Amendment

5.3 (a) The text of the proposed Official Plan Amendment must be included if a policy is being added, or if a policy is being replaced or deleted in the Official Plan. Is the text attached?

Yes  No N/A

5.3 (b) The proposed schedule must be included if the proposed Official Plan Amendment changes or replaces a schedule in the Official Plan. Is the schedule attached?

Yes  No Proposed Official Plan Amendment relates to Schedule A2

## 6. Zoning Designation (this section MUST be filled in when applying for Zoning By-law Amendment)

6.1 What is the existing Zoning designation on the subject lands? N/A

6.2 What is the proposed Zoning designation on the subject lands? N/A

6.3 What land uses will be permitted in the proposed designation? N/A

6.4 Complete section 5.2 (a) and (b).

## 7. Justification

Provide justification for this application to amend the Official Plan and/or Zoning By-law. (Attach separate report if necessary) (In the case of an Official Plan Amendment, the applicant is required to provide complete planning evidence outlining the justification for the amendment. This should address, but not be limited to, why the proposed change is desirable and how it relates to the overall goals and objectives of the applicable Official Plan. Further studies may be required by the applicant depending on the nature of the application.)

## 8. Status of Other Planning Applications

8.1 Are there any existing, or have there been previous applications made under the Planning Act or the Planning & Development Act: Concurrent NEPA, NEPDP, ROPA & ARA Licence Applications

a) That is the subject land?  Yes  No

b) That is within 120 meters of the subject land?  Yes  No

c) If Yes to a) or b), and if known, list below or attach on a separate page:

The type of application(s) and the file number(s):

Concurrent NEPA, NEPDP, ROPA & ARA Licence Applications - file numbers TBC

The legal description of the land that is the subject of the application(s):

See Schedule A.

The purpose of the application(s) and the effect of the application(s) on the proposed Official Plan Amendment:  
 To allow aggregate extraction on the subject property and to allow the existing operation to be used in conjunction with the extension.

The status of the application(s): Ongoing - Submitted concurrently with Town OPA



## OFFICIAL PLAN AMENDMENT AND/OR ZONING BY-LAW AMENDMENT

### 9. Regional Official Plan

- 9.1 What is the current designation of the subject land in the Regional Official Plan?  
Predominantly designated 'Agricultural Area' and a small portion is designated 'Regional Natural Heritage System' on Map 1.
- 
- 9.2 Explain how the proposed plan amendment conforms to the above plan, if applicable:  
A Regional Official Plan Amendment has been applied for to redesignate the lands to 'Mineral Resource Extraction Area.'
- 
- 9.3 Has a Regional Official Plan Amendment been applied for?  
 Yes  No

### 10. Servicing

- 10.1 Does the proposal conform to the approved servicing and phasing policies or servicing schedule in the Official Plan?  
 Yes  No N/A
- 10.2 Indicate the proposed servicing type for the subject
- land. **A. Water Supply - N/A**  
 Municipal  Private Well  Other, Specify
- B. Sewage Disposal - N/A**  
 Municipally Serviced  On-site Sewage Disposal System  Other, Specify
- C. Road Access and/or Frontage**  
 Please Specify Road Type  
 (e.g. Open Municipal Road, Regional Road, Provincial Highway, Private Road)  
 Name of the Road: Existing Milton Quarry has frontage on Dublin Line. The Milton Quarry Extension and Milton Quarry East Extension have frontage on an unopened road allowance.
- D. Storm Drainage**  
 Indicate the proposed Storm Drainage System (e.g. sewers, ditches, swales):  
N/A
- 
- 10.3 Is the proposed plan amendment consistent with the recommendations of the watershed plan, if any?  
 Yes  No N/A
- 10.4 Does the proposed plan amendment conform to the master drainage, sub-watershed or shoreline management plan, if any?  
 Yes  No N/A

### 11. Regard for Provincial Policy Statement

Information and supporting documentation is to be provided to indicate that the applicant has had regard for the Provincial Policy Statements, as required by the Planning Act. Attach under separate cover as needed.



## OFFICIAL PLAN AMENDMENT AND/OR ZONING BY-LAW AMENDMENT

### Significant Features Checklist

Features or Development Circumstances	a) if a feature, is it on site or within 500m OR b) if a development circumstance, does it apply		If a feature, specify distance in metres	Potential Information Needs
	Yes	No		
Non-farm development near designated urban areas or rural settlement areas		X		Demonstrate sufficient need for 20 yr. projections and that proposed development will not hinder efficient expansion of urban areas or rural settlement areas.
Class 1 Industry		X	metres	Assess development for residential and other sensitive uses within 70 metres.
Class 2 Industry	adjacent		metres	Assess development for residential and other sensitive uses within 300 metres.
Class 3 Industry within 1000 meters		X	metres	Assess development for residential and other sensitive uses within 1000 metres.
Land Fill Site		X	metres	Address possible leachate, odour, vermin and other impacts.
Sewage Treatment Plant		X	metres	Assess the need for a feasibility study for residential and other sensitive land uses.
Waste Stabilisation pond		X	metres	Assess the need for a feasibility study for residential and other sensitive land uses.
Active Railway line		X	metres	Evaluate impacts within 100 metres.
Controlled access highways or freeways, including designated future ones		X	metres	Evaluate impacts within 100 metres.
Airports where noise exposure forecast (NEF) or noise exposure projection (NEP) is 28 or greater		X	metres	Demonstrate feasibility of development above 28 NEF for sensitive land uses. Above the 35 NEF/NEP contour, development of sensitive land uses is not permitted.
High voltage electric transmission line		X	metres	Consult the appropriate electric power service.
Transportation and infrastructure corridors	X			Will the corridor be protected?
Prime agricultural land	X			Demonstrate need for use other than agricultural and indicate how impacts are to be mitigated.
Agricultural operations		X	metres	Development to comply with the Minimum Distance Separation Formulae.



## OFFICIAL PLAN AMENDMENT AND/OR ZONING BY-LAW AMENDMENT

Features or Development Circumstances	a) if a feature, is it on site or within 500m OR b) if a development circumstance, does it apply		If a feature, specify distance in metres	Potential Information Needs
	Yes	No		
Mineral aggregate resource	X			Will development hinder access to the resource or the establishment of new resource operations?
Mineral aggregate operations	X		0 metres	Will development hinder continuation of extraction?
Existing pits and quarries	X		0 metres	Will development hinder continued operation or expansion?
Significant wetlands	X		~70 metres	Demonstrate no negative impacts.
Significant portions of habitat of endangered and threatened species	X		metres	Demonstrate no negative impacts.
Significant fish habitat, valleylands, areas of natural and scientific interest, wildlife habitat	X		metres	Demonstrate no negative impacts.
Sensitive groundwater recharge areas, headwaters and aquifers	X			Demonstrate that groundwater recharge areas, headwaters and aquifers will be protected.
Significant built heritage resources and cultural heritage landscapes		X		Development should conserve significant built heritage resources and cultural heritage landscapes
Significant archaeological resources		X		Assess development proposed in areas of medium and high potential for significant archaeological resources. These sources are to be studied and preserved, or where appropriate, removed, catalogued and analyzed prior to development.
Erosion hazards		X		Determine feasibility within the 1:100 year erosion limits of ravines, river valleys and streams.
Floodplains		X		Where one-zone flood plain management is in effect, development is not permitted within the flood plain.
Hazardous sites and rehabilitated mine sites		X	metres	For development on rehabilitated mine sites, an application for approval from the Ministry of Northern Development and Mines should be made concurrently.
Contaminated sites		X		Assess an inventory of previous uses in areas of possible soil contamination.



Town of Halton Hills  
1 Halton Hills Drive  
Halton Hills ON L7G 5G2  
www.haltonhills.ca

## OFFICIAL PLAN AMENDMENT AND/OR ZONING BY-LAW AMENDMENT

### 12. Other Information

12.1 Is there is any other information that may be useful to the Region/Municipality or other agencies in reviewing this application (e.g. efforts made to resolve outstanding objections or concerns)? If so, explain on a separate page.

### 13. Acknowledgement of Applicant

The personal information on this form is collected under the authority of the Planning Act, as amended. The information is used for the purpose of processing this application. The processing of this application is subject to a public process and the information contained on this application is considered public and available to anyone upon request. Questions regarding the collection of this information should be directed to the Town's Records/FOI Coordinator at 905-873-2601 ext. 2356 or [foi@haltonhills.ca](mailto:foi@haltonhills.ca).



Town of Halton Hills  
 1 Halton Hills Drive  
 Halton Hills ON L7G 5G2  
 www.haltonhills.ca

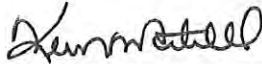
## OFFICIAL PLAN AMENDMENT AND/OR ZONING BY-LAW AMENDMENT

### 14. Affidavit or Sworn Declaration

#### Declaration

I/we Kevin Mitchell of the County of Brant in the Province of Ontario, solemnly declare that all the statements contained in this application are true and I/we make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of the Canada Evidence Act.

SWORN remotely by Kevin Mitchell, stated as being located in County of Brant in the Province of Ontario, before me at the City of Barrie, this 1 day of December 2021, in accordance with O. Reg. 431/20, Administering Oath or Declaration Remotely.

  
 \_\_\_\_\_  
 Signature of Applicant/Authorized Agent

  
 \_\_\_\_\_  
 Commissioner of Oaths

1 Copy Required (with original signature)

**Kimberley Anne Clements, a Commissioner,  
 etc., Province of Ontario, for MacNaughton  
 Hermesen Britton Clarkson Planning Limited.  
 Expires August 17, 2024.**



Town of Halton Hills  
 1 Halton Hills Drive  
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## OFFICIAL PLAN AMENDMENT AND/OR ZONING BY-LAW AMENDMENT

**Owner Authorization** (Required only if party other than owner is making this application)

File No.: \_\_\_\_\_

I/we See Schedule A & B

the owner(s) of the land being subject to this Application to the Town of Halton Hills Committee of Adjustment do hereby authorize and appoint:

\_\_\_\_\_ as my/our agent to make this application on/our behalf and to conduct all communications on my/our behalf respecting same.

Location of Land: See Schedule A

Signature(s):

X \_\_\_\_\_

\_\_\_\_\_ (print name including company, if applicable)

X \_\_\_\_\_

\_\_\_\_\_ (print name including company, if applicable)

Date: \_\_\_\_\_  
 (YY/MM/DD)

**Note:**

- It is required that persons signing this authorization on behalf of companies/corporations have the necessary authority to bind those corporation(s).
- If the owner is an incorporated company, the Company Seal shall be applied.



## Drawing Requirements for Development Applications

### 1. Plan of Survey\*

(25 copies - reflecting current situation; metric figures)

- Key Map
- Scale and North Arrow
- Legal Description
- Land Area
- Buildings and Property Boundaries
- Top of Bank (ESA/Wetland surveyed line)
- Abutting Road(s) Width(s)
- Easements and Rights of Way
- One Foot Reserves

\* please provide an electronic copy of plan

### 2. Basic Information Plan

(25 copies @ 1:300, plus 5 reduced copies on an 8.5" x 11" sheet of paper - indicating existing and proposed - on 2 separate maps, if necessary, for clarity; metric figures)

#### General Areas:

- Key Map Inset to Main Map
- Scale and North Arrow
- Surrounding Land uses/Abutting Lot Buildings
- Other Surrounding Lands Owned by Applicant
- Land Area

#### Natural:

- Vegetation (i.e. woodlots, specimens)
- Topography (i.e. contours)
- Wetlands and Watercourses
- Outcrops
- Other Natural Features as Necessary

#### Development:

- Density (FSI, ground floor coverage)
- Building Envelopes (with gross floor areas by use, perimeter heights, storeys, setbacks, distances between buildings)
- Dwelling Units (number, type, size - per building)
- Outdoor Storage Areas (including size and height)
- Landscape Areas (dimensioned yards)
- Private Amenity Spaces (unit related and common facilities where multi-residential or mixed use)
- Parking and Loading Spaces (number, dimensions, setbacks)
- Driveways/Roads (length, width)
- Municipal Servicing Available



## SCHEDULE A

### OWNERSHIP AND DESCRIPTION OF SUBJECT LANDS

The following properties constitute the Subject Lands within which the Milton Quarry East Extension has been proposed. Also see attached map.

1. The *Aggregate Resources Act* Licence, Region of Halton Official Plan Amendment, and Town of Halton Hills Official Plan Amendment apply to the Milton Quarry East Extension;
2. The Niagara Escarpment Plan Amendment applies to the Milton Quarry East Extension (mapping change), Milton Quarry Extension, and Milton Quarry (policy change to allow site to be used for processing);
3. The Niagara Escarpment Plan Amendment, Region of Halton Official Plan Amendment, and Town of Halton Hills Official Plan Amendment also include a mapping change to designate the south 15 metre extraction setback within the Milton Quarry Extension to "Mineral Resource Extraction Area."
4. The Niagara Escarpment Development Permit applies to the Milton Quarry East Extension, Milton Quarry Extension, Milton Quarry and the Buffer Lands to ensure all lands are covered off to allow for any changes to operation and construction of mitigation measures.

#### SUBJECT LANDS

#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
1	747752 Ontario Inc.	249780005	Buffer Lands	N/A	PT LT 14, CON 1 ESQ , PART 1 , 20R8819 ; HALTON HILLS/ESQUESING	4.74	158.3	259.2
2	Peninsula Ready-Mix Inc.	249780006	Buffer Lands	N/A	PT LT 14, CON 1 ESQ , AS IN 691414 ; HALTON HILLS/ESQUESING	12.21	131.6	671.4
3	CRH Canada Group Inc.	249780217	Milton Quarry Extension	10479 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	CONSOLIDATION OF VARIOUS PROPERTIES : PT LTS 13 & 14, CON 1 ESQ, AS IN 575334; HALTON HILLS/ESQUESING.	88.36	443.6	912.9
			Buffer Lands					
4	Peninsula Ready-Mix Inc.	249780008	Milton Quarry Extension	10461 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 13, CON 1 ESQ , PART 1 , 20R7139 ; HALTON HILLS/ESQUESING	3.44	185.2	166.9
5	CRH Canada Group Inc	249780009	Milton Quarry Extension	10413 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 13, CON 1 ESQ , PART 2 , 20R7139 ; HALTON HILLS/ESQUESING	0.40	45.5	88.3
6	Peninsula Ready-Mix Inc.	249780010	Milton Quarry Extension	10391 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 13, CON 1 ESQ , AS IN 816894 ; HALTON HILLS/ESQUESING	0.40	45.5	88.3
7	CRH Canada Group Inc.	249780011	Milton Quarry Extension	10379 NASSAGAWEYA ESQUESING TLINE	PT LT 13, CON 1 ESQ , AS IN 718652 ; HALTON HILLS/ESQUESING	0.34	37.9	88.3

#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
				HALTON HILLS				
8	747752 Ontario Ltd.	249780012	Milton Quarry Extension	10371 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 12 & 13, CON 1 ESQ, PART 1 & 2, 20R2983 ; HALTON HILLS/ESQUESING	0.92	36.2	182.4
9	CRH Canada Group Inc.	249780013	Proposed Milton Quarry East Extension	10327 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 12, CON 1 ESQ, AS IN 618957 ; HALTON HILLS/ESQUESING	0.38	69.0	37.2
10	1336811 Ontario Inc.	249780014	Proposed Milton Quarry East Extension Buffer Lands	10305 NASSAGAWEYA ESQUESING TLINE ES HALTON HILLS	LT 5, RCP 1551 ; PT LT 12, CON 1 ESQ, AS IN 469952 & 120626 ; HALTON HILLS/ESQUESING	66.27	464.6	1004.9
11	CRH Canada Group Inc.	249780015	Buffer Lands	N/A	LT 1 & 7, RCP 1551 ; HALTON HILLS/ESQUESING	39.34	343.4	667.2
12	CRH Canada Group Inc.	249780208	Milton Quarry	NA	LT 3, RCP 1551 ; HALTON HILLS/ESQUESING	1.41	58.2	185.9
13	CRH Canada Group Inc.	249780017	Milton Quarry	N/A	LT 2, RCP 1551 ; LT 1, RCP 1553 ; HALTON HILLS/ESQUESING	110.95	111.0	859.0 (varied)
14	CRH Canada Group Inc.	249780210	Milton Quarry	N/A	LT 2, RCP 1554 ; S/T 84170 ; "MILTON" "AMENDED MAR 24 '99 J. MENARD"	21.24	214.7	812.4
15	CRH Canada Group Inc.	249780166	Milton Quarry Buffer Lands	N/A	LT 1, RCP 1554; LT 2, RCP 1552, LT 4, RCP 1554; RDAL BTN LOTS 10 & 11 CON 7 NAS, AS CLOSED BY BYLAW 829306 ; HALTON HILLS "AMENDED APR 26 '99 J. MENARD"	270.52	1,009.7	1,403.1
16	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	249780164	Buffer Lands	10131 SIXTH LINE MILTON L9T2X7	LT 12, RCP 1552 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 24 '99 J. MENARD"	2.44	123.6	167.5
17	CRH Canada Group Inc.	249780158	Buffer Lands	N/A	LT 7, RCP 1552 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"	4.09	224.7	135.5
18	CRH Canada Group Inc.	249780157	Milton Quarry	N/A	LT 1, RCP 1552 ; S/T 178422 ; S/T LIFE INTEREST IN 178422 ;	66.89	286.2	1,265.9 (varied)

#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
					"MILTON" /NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"			
19	CRH Canada Group Inc.	249780162	Milton Quarry Extension	10248 NASSAGAWEYA ESQUESING TLINE MILTON	LT 10, RCP 1552, PT 4, 20R7609 ; MILTON	0.17	38.0	45.7
20	CRH Canada Group Inc.	249780161	Milton Quarry Extension	10256 NASSAGAWEYA ESQUESING TLINE MILTON	LT 9, RCP 1552, PT 3, 20R7609 ; MILTON	0.17	38.0	45.7
21	Peninsula Ready-Mix Inc.	249780160	Milton Quarry Extension	10262 NASSAGAWEYA ESQUESING TLINE MILTON	PT LT 8, RCP 1552, PT 1, 20R7609; MILTON.	3.55	57.3	174.2
22	CRH Canada Group Inc.	249780159	Milton Quarry Extension	Not available.	PT LT 8, RCP 1552, PT 2, 20R7609; MILTON.	0.98	60.5	160.8
23	Peninsula Ready-Mix Inc.	249780156	Milton Quarry Extension	10380 NASSAGAWEYA ESQUESING TLINE MILTON L7J2L7	LT 3, RCP 1552 , PART 1 , 20R3808 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD	2.03	106.1	190.4
24	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	249780155	Milton Quarry Extension Buffer Lands	10446 NASSAGAWEYA ESQUESING TLINE MILTON	LT 4, RCP 1552 ; MILTON	16.49	129.7	638.4
25	747752 Ontario Inc.	249780153	Buffer Lands	10449 SIXTH LINE MILTON L9T2X7	LT 5, RCP 1552 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"	9.60	130.2	638.1
26	CRH Canada Group Inc.	249780149	Milton Quarry Extension Buffer Lands	10494 NASSAGAWEYA ESQUESING TLINE MILTON L9T5S3	PT LT 14, CON 7 NAS , PART 2 & 3 , 20R2017 , EXCEPT PART 2, 20R11685 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"	51.54	257.2	1,259.7 (varied)
27	CRH Canada Group Inc.	249780236	Buffer Lands	10580 NASSAGAWEYA ESQUESING TLINE	PT LT 14, CON 7, PT 1, 20R2017 EXCEPT PT 1, 20R15065; MILTON/NASS	13.30	132.3	568.1

#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
				MILTON				
28	CRH Canada Group Inc.	249780147	Buffer Lands	10545 NASSAGAWEYA ESQUESING TLINE MILTON	PT LT 14, CON 7 NAS , AS IN 853727 ; "MILTON"/NASSAGAWEYA ; "AMENDED MAR 23 '99 J. MENARD"	1.72	161.0	50.7
29	CRH Canada Group Inc.	249780146	Buffer Lands	10648 NASSAGAWEYA ESQUESING TLINE MILTON	PT LT 15, CON 7 NAS , PART 1 , 20R6918 , EXCEPT PT "2", 20R8819; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"	2.04	50.7	56.8

# Dufferin Land Holdings

## Milton Quarry

Town of Halton Hills  
Regional Municipality of Halton

### Legend

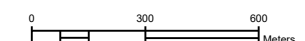
- Land Owned by Dufferin
- Existing Parcel Fabric
- Proposed Milton Quarry East Extension
- Milton Quarry (1962)
- Milton Quarry Extension (2007)

#	PIN	Ownership	Easement	Area (ha)
1	249780005	747752 Ontario Inc.	0	4.74
2	249780006	Peninsula Ready-Mix Inc.	0	12.21
3	249780217	CRH Canada Group Inc.	0	88.36
4	249780008	Peninsula Ready-Mix Inc.	0	3.44
5	249780009	CRH Canada Group Inc.	0	0.40
6	249780010	Peninsula Ready-Mix Inc.	0	0.40
7	249780011	CRH Canada Group Inc.	0	0.34
8	249780012	747752 Ontario Ltd.	0	0.92
9	249780013	CRH Canada Group Inc.	0	0.38
10	249780014	1336811 Ontario Inc.	0	66.27
11	249780015	CRH Canada Group Inc.	0	39.34
12	249780208	CRH Canada Group Inc.	0	1.41
13	249780017	CRH Canada Group Inc.	0	110.95
14	249780210	CRH Canada Group Inc.	1	21.24
15	249780166	CRH Canada Group Inc.	0	270.52
16	249780164	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	0	2.44
17	249780158	CRH Canada Group Inc.	0	4.09
18	249780157	CRH Canada Group Inc.	2	66.89
19	249780162	CRH Canada Group Inc.	0	0.17
20	249780161	CRH Canada Group Inc.	0	0.17
21	249780160	Peninsula Ready-Mix Inc.	0	3.55
22	249780159	CRH Canada Group Inc.	0	0.98
23	249780156	Peninsula Ready-Mix Inc.	0	2.03
24	249780155	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	0	16.49
25	249780153	747752 Ontario Inc.	0	9.60
26	249780149	CRH Canada Group Inc.	0	51.54
27	249780236	CRH Canada Group Inc.	0	13.30
28	249780147	CRH Canada Group Inc.	0	1.72
29	249780146	CRH Canada Group Inc.	0	2.04

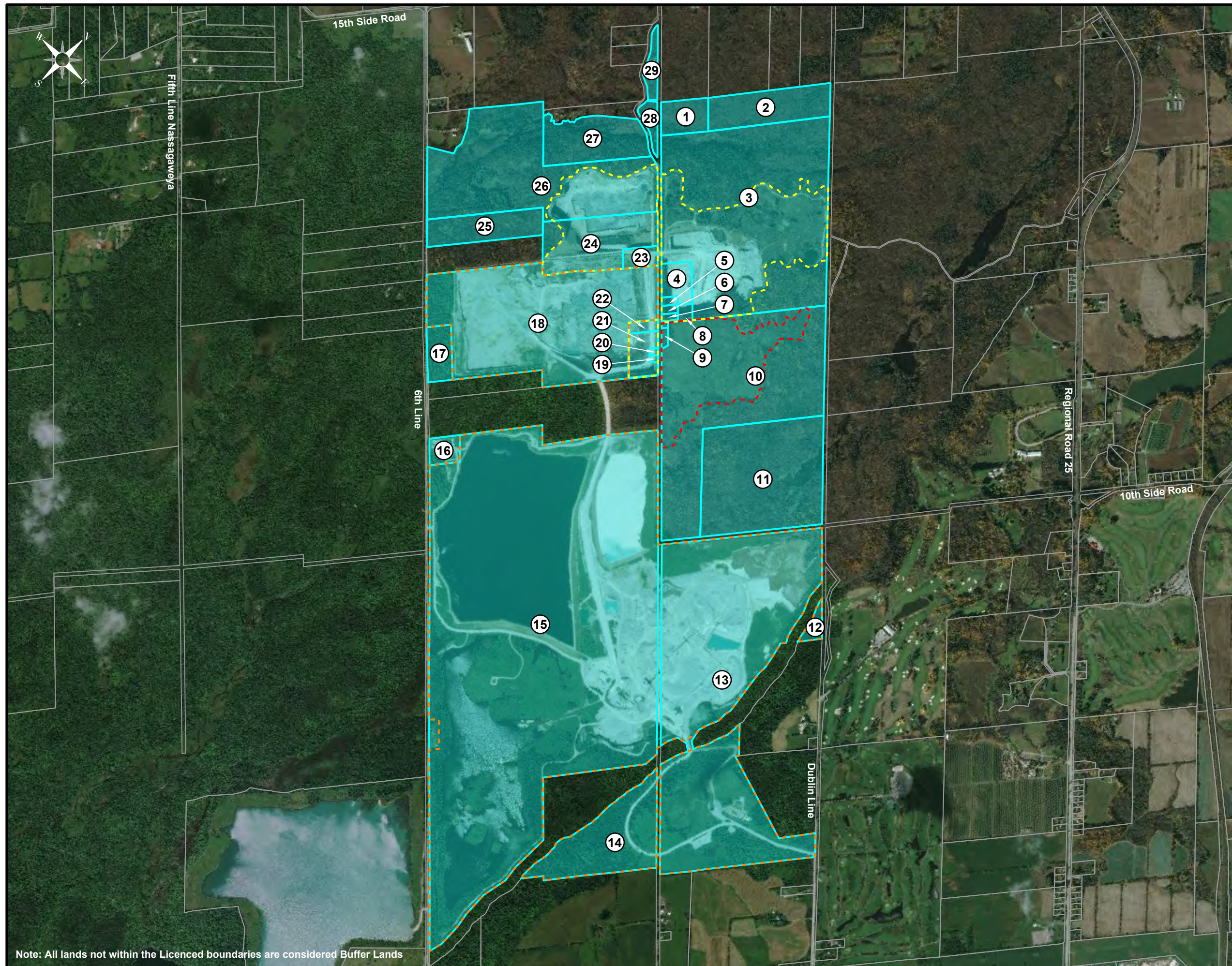
Date: June 2021

Sources: Microsoft Corporation Bing Imagery, date unknown  
Parcel fabric from Municipal Property Assessment Corporation - Last updated prior to 2010

Scale - 1:20,000



N:\Bram\90610J - Dufferin - Milton Quarry East Extension\Drawings - Must be in NAD 27\Land Owned by Dufferin - June 2021\CAD\90610J - Land Owned by Dufferin - June 2021.dwg



Note: All lands not within the Licenced boundaries are considered Buffer Lands


**PLANNING  
URBAN DESIGN  
& LANDSCAPE  
ARCHITECTURE**  
 113 COLLIER STREET, BARRIE, ON, L4M 1H2  
 P: 705.728.0045 F: 705.728.2010 | WWW.MHBCPLAN.COM

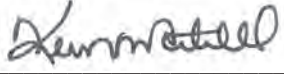
SCHEDULE B  
OWNERS AUTHORIZATION

I, Kevin Mitchell, signing officer for the following companies:

1. 747752 Ontario Inc;
2. Peninsula Ready-Mix Inc;
3. CRH Canada Group Inc; and,
4. 1336811 Ontario Inc.

hereby authorize CRH Canada Group Inc. to prepare and submit all necessary applications to permit and operate a quarrying use on lands identified on Schedule A. Applications include, but are not limited to, application for licence under the *Aggregate Resource Act*, application for amendment to the Niagara Escarpment Plan, application for development permit within the Niagara Escarpment Development Control Area, application to amend the existing licenced operation, application for amendment to the Region of Halton Official Plan, and application for amendment to the Town of Halton Hills Official Plan.

I, Kevin Mitchell, also authorizes agency staff to enter lands identified on Schedule A for the purposes of evaluating the merits of an application. Prior to any entry of the property however, please contact CRH Canada Group Inc., and CRH Canada Group Inc. will accompany agency staff for safety reasons.

  
\_\_\_\_\_  
Signature

December 1, 2021  
\_\_\_\_\_  
Date

# Tab 6



Planning & Public Works  
 Tel: 905-825-6000 Fax: 905-825-8822  
 Toll Free: 1-866-4HALTON (1-866-442-5866)

[www.halton.ca](http://www.halton.ca)

## Environmental Site-Screening Questionnaire

Dufferin Aggregates, a division

Legal/Municipal Address See Schedule A.

Applicant: of CRH Canada Group Inc.

1. Was the subject property ever used for industrial purposes?      yes  no  uncertain
2. Was the subject property ever used for commercial purposes that may have caused contamination (e.g. gasoline station, dry cleaners, etc.)?      yes  no  uncertain
3. Has fill ever been placed on the property?      yes  no  uncertain
4. Is there any reason to believe that the subject property is potentially contaminated based on historic use of the property or a neighbouring lot located within 100m of the property?      yes  no  uncertain
5. Are there or were there ever any above-ground or underground storage tanks or waste disposal activities on the property?      yes  no  uncertain
6. For existing or previous buildings on the property, are there building materials that may be potentially hazardous to human health (i.e. asbestos, lead-based paints, etc.)?      yes  no  uncertain
7. For agricultural properties, were pesticides or herbicides ever applied to the property?      yes  no  **uncertain**
8. Have any of the buildings on the property been heated by fuel oil?      yes  no  uncertain
9. Is the land use changing to a more sensitive land use (e.g. industrial/commercial to residential/institutional)?      yes  no  uncertain   
 Note: Daycare uses are defined in O.Reg.153/04 as institutional.

### General Information:

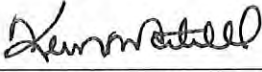
1. Have any environmental documents (e.g. Phase I and II Environmental Site Assessments, Records of Site Condition, etc) ever been prepared for the property? If yes, please submit these documents in digital and hardcopy format with your application together with a letter of reliance granting third party reliance on the documents to the Region of Halton.      yes  no

### Certification

I, 1336811 Ontario Inc. am the registered owner of the land that is the subject of this document and to the best of my knowledge, the information provided in this questionnaire is true.

SWORN remotely by Kevin Mitchell, stated as being located in the County of Brant in the Province of Ontario, before me at the City of Barrie, this 1 day of December 2021, in accordance with O. Reg. 431/20, Administering Oath or Declaration Remotely.

  
 \_\_\_\_\_  
 Commissioner of Oaths (Signature)  
 Kimberley Anne Clements

  
 \_\_\_\_\_  
 Registered Owner (Signature)

Regional File #:

**Kimberley Anne Clements, a Commissioner, etc., Province of Ontario, for MacNaughton Hermson Britton Clarkson Planning Limited. Expires August 17, 2024.**

Local Municipal File #:



## SCHEDULE A

### OWNERSHIP AND DESCRIPTION OF SUBJECT LANDS

The following properties constitute the Subject Lands within which the Milton Quarry East Extension has been proposed. Also see attached map.

1. The *Aggregate Resources Act* Licence, Region of Halton Official Plan Amendment, and Town of Halton Hills Official Plan Amendment apply to the Milton Quarry East Extension;
2. The Niagara Escarpment Plan Amendment applies to the Milton Quarry East Extension (mapping change), Milton Quarry Extension, and Milton Quarry (policy change to allow site to be used for processing);
3. The Niagara Escarpment Plan Amendment, Region of Halton Official Plan Amendment, and Town of Halton Hills Official Plan Amendment also include a mapping change to designate the south 15 metre extraction setback within the Milton Quarry Extension to “Mineral Resource Extraction Area.”
4. The Niagara Escarpment Development Permit applies to the Milton Quarry East Extension, Milton Quarry Extension, Milton Quarry and the Buffer Lands to ensure all lands are covered off to allow for any changes to operation and construction of mitigation measures.

#### SUBJECT LANDS

#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
1	747752 Ontario Inc.	249780005	Buffer Lands	N/A	PT LT 14, CON 1 ESQ , PART 1 , 20R8819 ; HALTON HILLS/ESQUESING	4.74	158.3	259.2
2	Peninsula Ready-Mix Inc.	249780006	Buffer Lands	N/A	PT LT 14, CON 1 ESQ , AS IN 691414 ; HALTON HILLS/ESQUESING	12.21	131.6	671.4
3	CRH Canada Group Inc.	249780217	Milton Quarry Extension	10479 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	CONSOLIDATION OF VARIOUS PROPERTIES : PT LTS 13 & 14, CON 1 ESQ, AS IN 575334; HALTON HILLS/ESQUESING.	88.36	443.6	912.9
			Buffer Lands					
4	Peninsula Ready-Mix Inc.	249780008	Milton Quarry Extension	10461 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 13, CON 1 ESQ , PART 1 , 20R7139 ; HALTON HILLS/ESQUESING	3.44	185.2	166.9
5	CRH Canada Group Inc	249780009	Milton Quarry Extension	10413 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 13, CON 1 ESQ , PART 2 , 20R7139 ; HALTON HILLS/ESQUESING	0.40	45.5	88.3
6	Peninsula Ready-Mix Inc.	249780010	Milton Quarry Extension	10391 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 13, CON 1 ESQ , AS IN 816894 ; HALTON HILLS/ESQUESING	0.40	45.5	88.3
7	CRH Canada Group Inc.	249780011	Milton Quarry Extension	10379 NASSAGAWEYA ESQUESING TLINE	PT LT 13, CON 1 ESQ , AS IN 718652 ; HALTON HILLS/ESQUESING	0.34	37.9	88.3

#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
				HALTON HILLS				
8	747752 Ontario Ltd.	249780012	Milton Quarry Extension	10371 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 12 & 13, CON 1 ESQ, PART 1 & 2, 20R2983 ; HALTON HILLS/ESQUESING	0.92	36.2	182.4
9	CRH Canada Group Inc.	249780013	Proposed Milton Quarry East Extension	10327 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 12, CON 1 ESQ, AS IN 618957 ; HALTON HILLS/ESQUESING	0.38	69.0	37.2
10	1336811 Ontario Inc.	249780014	Proposed Milton Quarry East Extension Buffer Lands	10305 NASSAGAWEYA ESQUESING TLINE ES HALTON HILLS	LT 5, RCP 1551 ; PT LT 12, CON 1 ESQ, AS IN 469952 & 120626 ; HALTON HILLS/ESQUESING	66.27	464.6	1004.9
11	CRH Canada Group Inc.	249780015	Buffer Lands	N/A	LT 1 & 7, RCP 1551 ; HALTON HILLS/ESQUESING	39.34	343.4	667.2
12	CRH Canada Group Inc.	249780208	Milton Quarry	NA	LT 3, RCP 1551 ; HALTON HILLS/ESQUESING	1.41	58.2	185.9
13	CRH Canada Group Inc.	249780017	Milton Quarry	N/A	LT 2, RCP 1551 ; LT 1, RCP 1553 ; HALTON HILLS/ESQUESING	110.95	111.0	859.0 (varied)
14	CRH Canada Group Inc.	249780210	Milton Quarry	N/A	LT 2, RCP 1554 ; S/T 84170 ; "MILTON" "AMENDED MAR 24 '99 J. MENARD"	21.24	214.7	812.4
15	CRH Canada Group Inc.	249780166	Milton Quarry Buffer Lands	N/A	LT 1, RCP 1554; LT 2, RCP 1552, LT 4, RCP 1554; RDAL BTN LOTS 10 & 11 CON 7 NAS, AS CLOSED BY BYLAW 829306 ; HALTON HILLS "AMENDED APR 26 '99 J. MENARD"	270.52	1,009.7	1,403.1
16	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	249780164	Buffer Lands	10131 SIXTH LINE MILTON L9T2X7	LT 12, RCP 1552 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 24 '99 J. MENARD"	2.44	123.6	167.5
17	CRH Canada Group Inc.	249780158	Buffer Lands	N/A	LT 7, RCP 1552 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"	4.09	224.7	135.5
18	CRH Canada Group Inc.	249780157	Milton Quarry	N/A	LT 1, RCP 1552 ; S/T 178422 ; S/T LIFE INTEREST IN 178422 ;	66.89	286.2	1,265.9 (varied)

#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
					"MILTON" /NASSAGAWWEYA "AMENDED MAR 23 '99 J. MENARD"			
19	CRH Canada Group Inc.	249780162	Milton Quarry Extension	10248 NASSAGAWWEYA ESQUESING TLINE MILTON	LT 10, RCP 1552, PT 4, 20R7609 ; MILTON	0.17	38.0	45.7
20	CRH Canada Group Inc.	249780161	Milton Quarry Extension	10256 NASSAGAWWEYA ESQUESING TLINE MILTON	LT 9, RCP 1552, PT 3, 20R7609 ; MILTON	0.17	38.0	45.7
21	Peninsula Ready-Mix Inc.	249780160	Milton Quarry Extension	10262 NASSAGAWWEYA ESQUESING TLINE MILTON	PT LT 8, RCP 1552, PT 1, 20R7609; MILTON.	3.55	57.3	174.2
22	CRH Canada Group Inc.	249780159	Milton Quarry Extension	Not available.	PT LT 8, RCP 1552, PT 2, 20R7609; MILTON.	0.98	60.5	160.8
23	Peninsula Ready-Mix Inc.	249780156	Milton Quarry Extension	10380 NASSAGAWWEYA ESQUESING TLINE MILTON L7J2L7	LT 3, RCP 1552 , PART 1 , 20R3808 ; "MILTON"/NASSAGAWWEYA "AMENDED MAR 23 '99 J. MENARD	2.03	106.1	190.4
24	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	249780155	Milton Quarry Extension Buffer Lands	10446 NASSAGAWWEYA ESQUESING TLINE MILTON	LT 4, RCP 1552 ; MILTON	16.49	129.7	638.4
25	747752 Ontario Inc.	249780153	Buffer Lands	10449 SIXTH LINE MILTON L9T2X7	LT 5, RCP 1552 ; "MILTON"/NASSAGAWWEYA "AMENDED MAR 23 '99 J. MENARD"	9.60	130.2	638.1
26	CRH Canada Group Inc.	249780149	Milton Quarry Extension Buffer Lands	10494 NASSAGAWWEYA ESQUESING TLINE MILTON L9T5S3	PT LT 14, CON 7 NAS , PART 2 & 3 , 20R2017 , EXCEPT PART 2, 20R11685 ; "MILTON"/NASSAGAWWEYA "AMENDED MAR 23 '99 J. MENARD"	51.54	257.2	1,259.7 (varied)
27	CRH Canada Group Inc.	249780236	Buffer Lands	10580 NASSAGAWWEYA ESQUESING TLINE	PT LT 14, CON 7, PT 1, 20R2017 EXCEPT PT 1, 20R15065; MILTON/NASS	13.30	132.3	568.1

#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
				MILTON				
28	CRH Canada Group Inc.	249780147	Buffer Lands	10545 NASSAGAWEYA ESQUESING TLINE MILTON	PT LT 14, CON 7 NAS , AS IN 853727 ; "MILTON"/NASSAGAWEYA ; "AMENDED MAR 23 '99 J. MENARD"	1.72	161.0	50.7
29	CRH Canada Group Inc.	249780146	Buffer Lands	10648 NASSAGAWEYA ESQUESING TLINE MILTON	PT LT 15, CON 7 NAS , PART 1 , 20R6918 , EXCEPT PT "2", 20R8819; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"	2.04	50.7	56.8

# Dufferin Land Holdings

## Milton Quarry

Town of Halton Hills  
Regional Municipality of Halton

### Legend

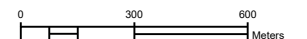
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- Existing Parcel Fabric
- Proposed Milton Quarry East Extension
- Milton Quarry (1962)
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3	249780217	CRH Canada Group Inc.	0	88.36
4	249780008	Peninsula Ready-Mix Inc.	0	3.44
5	249780009	CRH Canada Group Inc.	0	0.40
6	249780010	Peninsula Ready-Mix Inc.	0	0.40
7	249780011	CRH Canada Group Inc.	0	0.34
8	249780012	747752 Ontario Ltd.	0	0.92
9	249780013	CRH Canada Group Inc.	0	0.38
10	249780014	1336811 Ontario Inc.	0	66.27
11	249780015	CRH Canada Group Inc.	0	39.34
12	249780208	CRH Canada Group Inc.	0	1.41
13	249780017	CRH Canada Group Inc.	0	110.95
14	249780210	CRH Canada Group Inc.	1	21.24
15	249780166	CRH Canada Group Inc.	0	270.52
16	249780164	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	0	2.44
17	249780158	CRH Canada Group Inc.	0	4.09
18	249780157	CRH Canada Group Inc.	2	66.89
19	249780162	CRH Canada Group Inc.	0	0.17
20	249780161	CRH Canada Group Inc.	0	0.17
21	249780160	Peninsula Ready-Mix Inc.	0	3.55
22	249780159	CRH Canada Group Inc.	0	0.98
23	249780156	Peninsula Ready-Mix Inc.	0	2.03
24	249780155	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	0	16.49
25	249780153	747752 Ontario Inc.	0	9.60
26	249780149	CRH Canada Group Inc.	0	51.54
27	249780236	CRH Canada Group Inc.	0	13.30
28	249780147	CRH Canada Group Inc.	0	1.72
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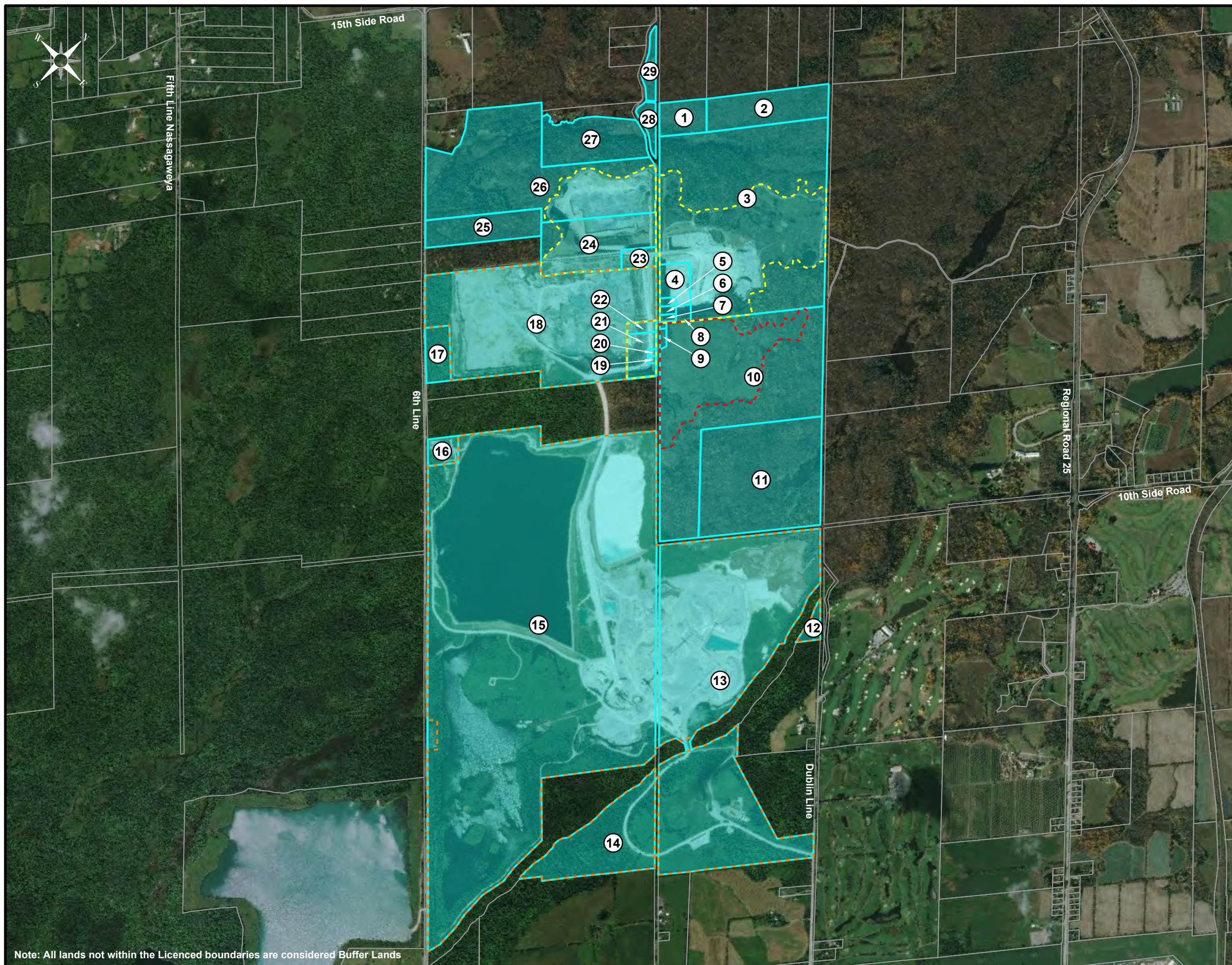
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Scale - 1:20,000



N:\Bram\90610J - Dufferin - Milton Quarry East Extension\Drawings - Must be in NAD 27\Land Owned by Dufferin - June 2021\CAD\90610J - Land Owned by Dufferin - June 2021.dwg



Note: All lands not within the Licenced boundaries are considered Buffer Lands


SCHEDULE B  
OWNERS AUTHORIZATION

I, Kevin Mitchell, signing officer for the following companies:

1. 747752 Ontario Inc;
2. Peninsula Ready-Mix Inc;
3. CRH Canada Group Inc; and,
4. 1336811 Ontario Inc.

hereby authorize CRH Canada Group Inc. to prepare and submit all necessary applications to permit and operate a quarrying use on lands identified on Schedule A. Applications include, but are not limited to, application for licence under the *Aggregate Resource Act*, application for amendment to the Niagara Escarpment Plan, application for development permit within the Niagara Escarpment Development Control Area, application to amend the existing licenced operation, application for amendment to the Region of Halton Official Plan, and application for amendment to the Town of Halton Hills Official Plan.

I, Kevin Mitchell, also authorizes agency staff to enter lands identified on Schedule A for the purposes of evaluating the merits of an application. Prior to any entry of the property however, please contact CRH Canada Group Inc., and CRH Canada Group Inc. will accompany agency staff for safety reasons.

  
\_\_\_\_\_  
Signature

December 1, 2021  
\_\_\_\_\_  
Date

# Tab 7

## SCHEDULE A

### OWNERSHIP AND DESCRIPTION OF SUBJECT LANDS

The following properties constitute the Subject Lands within which the Milton Quarry East Extension has been proposed. Also see attached map.

1. The *Aggregate Resources Act* Licence, Region of Halton Official Plan Amendment, and Town of Halton Hills Official Plan Amendment apply to the Milton Quarry East Extension;
2. The Niagara Escarpment Plan Amendment applies to the Milton Quarry East Extension (mapping change), Milton Quarry Extension, and Milton Quarry (policy change to allow site to be used for processing);
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#### SUBJECT LANDS

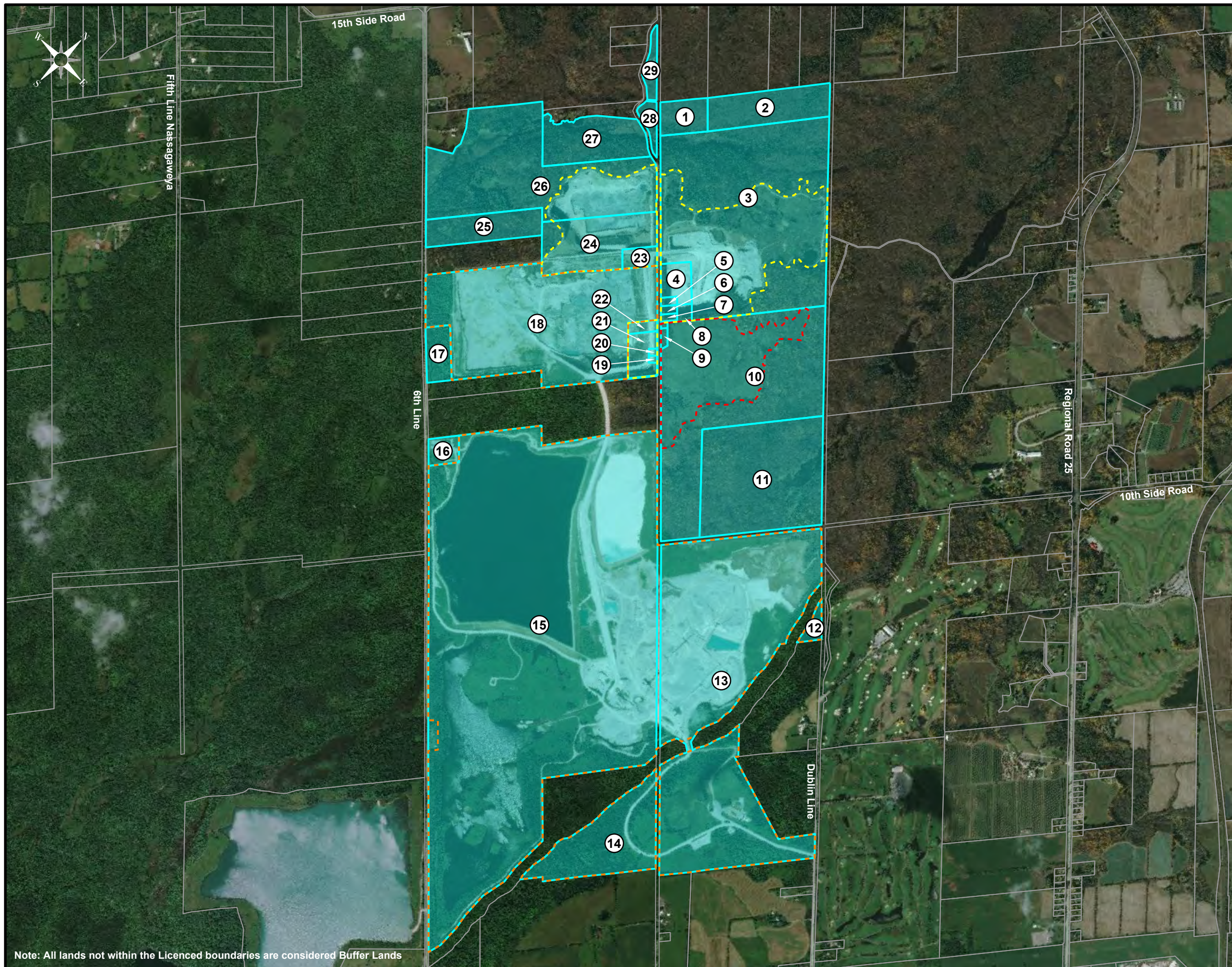
#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
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2	Peninsula Ready-Mix Inc.	249780006	Buffer Lands	N/A	PT LT 14, CON 1 ESQ , AS IN 691414 ; HALTON HILLS/ESQUESING	12.21	131.6	671.4
3	CRH Canada Group Inc.	249780217	Milton Quarry Extension	10479 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	CONSOLIDATION OF VARIOUS PROPERTIES : PT LTS 13 & 14, CON 1 ESQ, AS IN 575334; HALTON HILLS/ESQUESING.	88.36	443.6	912.9
			Buffer Lands					
4	Peninsula Ready-Mix Inc.	249780008	Milton Quarry Extension	10461 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 13, CON 1 ESQ , PART 1 , 20R7139 ; HALTON HILLS/ESQUESING	3.44	185.2	166.9
5	CRH Canada Group Inc	249780009	Milton Quarry Extension	10413 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 13, CON 1 ESQ , PART 2 , 20R7139 ; HALTON HILLS/ESQUESING	0.40	45.5	88.3
6	Peninsula Ready-Mix Inc.	249780010	Milton Quarry Extension	10391 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 13, CON 1 ESQ , AS IN 816894 ; HALTON HILLS/ESQUESING	0.40	45.5	88.3
7	CRH Canada Group Inc.	249780011	Milton Quarry Extension	10379 NASSAGAWEYA ESQUESING TLINE	PT LT 13, CON 1 ESQ , AS IN 718652 ; HALTON HILLS/ESQUESING	0.34	37.9	88.3



#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
				HALTON HILLS				
8	747752 Ontario Ltd.	249780012	Milton Quarry Extension	10371 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 12 & 13, CON 1 ESQ, PART 1 & 2, 20R2983 ; HALTON HILLS/ESQUESING	0.92	36.2	182.4
9	CRH Canada Group Inc.	249780013	Proposed Milton Quarry East Extension	10327 NASSAGAWEYA ESQUESING TLINE HALTON HILLS	PT LT 12, CON 1 ESQ, AS IN 618957 ; HALTON HILLS/ESQUESING	0.38	69.0	37.2
10	1336811 Ontario Inc.	249780014	Proposed Milton Quarry East Extension Buffer Lands	10305 NASSAGAWEYA ESQUESING TLINE ES HALTON HILLS	LT 5, RCP 1551 ; PT LT 12, CON 1 ESQ, AS IN 469952 & 120626 ; HALTON HILLS/ESQUESING	66.27	464.6	1004.9
11	CRH Canada Group Inc.	249780015	Buffer Lands	N/A	LT 1 & 7, RCP 1551 ; HALTON HILLS/ESQUESING	39.34	343.4	667.2
12	CRH Canada Group Inc.	249780208	Milton Quarry	NA	LT 3, RCP 1551 ; HALTON HILLS/ESQUESING	1.41	58.2	185.9
13	CRH Canada Group Inc.	249780017	Milton Quarry	N/A	LT 2, RCP 1551 ; LT 1, RCP 1553 ; HALTON HILLS/ESQUESING	110.95	111.0	859.0 (varied)
14	CRH Canada Group Inc.	249780210	Milton Quarry	N/A	LT 2, RCP 1554 ; S/T 84170 ; "MILTON" "AMENDED MAR 24 '99 J. MENARD"	21.24	214.7	812.4
15	CRH Canada Group Inc.	249780166	Milton Quarry Buffer Lands	N/A	LT 1, RCP 1554; LT 2, RCP 1552, LT 4, RCP 1554; RDAL BTN LOTS 10 & 11 CON 7 NAS, AS CLOSED BY BYLAW 829306 ; HALTON HILLS "AMENDED APR 26 '99 J. MENARD"	270.52	1,009.7	1,403.1
16	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	249780164	Buffer Lands	10131 SIXTH LINE MILTON L9T2X7	LT 12, RCP 1552 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 24 '99 J. MENARD"	2.44	123.6	167.5
17	CRH Canada Group Inc.	249780158	Buffer Lands	N/A	LT 7, RCP 1552 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"	4.09	224.7	135.5
18	CRH Canada Group Inc.	249780157	Milton Quarry	N/A	LT 1, RCP 1552 ; S/T 178422 ; S/T LIFE INTEREST IN 178422 ;	66.89	286.2	1,265.9 (varied)

#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
					"MILTON" /NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"			
19	CRH Canada Group Inc.	249780162	Milton Quarry Extension	10248 NASSAGAWEYA ESQUESING TLINE MILTON	LT 10, RCP 1552, PT 4, 20R7609 ; MILTON	0.17	38.0	45.7
20	CRH Canada Group Inc.	249780161	Milton Quarry Extension	10256 NASSAGAWEYA ESQUESING TLINE MILTON	LT 9, RCP 1552, PT 3, 20R7609 ; MILTON	0.17	38.0	45.7
21	Peninsula Ready-Mix Inc.	249780160	Milton Quarry Extension	10262 NASSAGAWEYA ESQUESING TLINE MILTON	PT LT 8, RCP 1552, PT 1, 20R7609; MILTON.	3.55	57.3	174.2
22	CRH Canada Group Inc.	249780159	Milton Quarry Extension	Not available.	PT LT 8, RCP 1552, PT 2, 20R7609; MILTON.	0.98	60.5	160.8
23	Peninsula Ready-Mix Inc.	249780156	Milton Quarry Extension	10380 NASSAGAWEYA ESQUESING TLINE MILTON L7J2L7	LT 3, RCP 1552 , PART 1 , 20R3808 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD	2.03	106.1	190.4
24	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	249780155	Milton Quarry Extension Buffer Lands	10446 NASSAGAWEYA ESQUESING TLINE MILTON	LT 4, RCP 1552 ; MILTON	16.49	129.7	638.4
25	747752 Ontario Inc.	249780153	Buffer Lands	10449 SIXTH LINE MILTON L9T2X7	LT 5, RCP 1552 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"	9.60	130.2	638.1
26	CRH Canada Group Inc.	249780149	Milton Quarry Extension Buffer Lands	10494 NASSAGAWEYA ESQUESING TLINE MILTON L9T5S3	PT LT 14, CON 7 NAS , PART 2 & 3 , 20R2017 , EXCEPT PART 2, 20R11685 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"	51.54	257.2	1,259.7 (varied)
27	CRH Canada Group Inc.	249780236	Buffer Lands	10580 NASSAGAWEYA ESQUESING TLINE	PT LT 14, CON 7, PT 1, 20R2017 EXCEPT PT 1, 20R15065; MILTON/NASS	13.30	132.3	568.1

#	Registered Owner	PIN	Site	Civic Address	Legal Description	Approx. Area (ha)	Approx. Frontage (m)	Approx. Depth (m)
				MILTON				
28	CRH Canada Group Inc.	249780147	Buffer Lands	10545 NASSAGAWEYA ESQUESING TLINE MILTON	PT LT 14, CON 7 NAS , AS IN 853727 ; "MILTON"/NASSAGAWEYA ; "AMENDED MAR 23 '99 J. MENARD"	1.72	161.0	50.7
29	CRH Canada Group Inc.	249780146	Buffer Lands	10648 NASSAGAWEYA ESQUESING TLINE MILTON	PT LT 15, CON 7 NAS , PART 1 , 20R6918 , EXCEPT PT "2", 20R8819; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"	2.04	50.7	56.8



# Dufferin Land Holdings

## Milton Quarry

Town of Halton Hills  
Regional Municipality of Halton

### Legend

- Land Owned by Dufferin
- Existing Parcel Fabric
- Proposed Milton Quarry East Extension
- Milton Quarry (1962)
- Milton Quarry Extension (2007)

#	PIN	Ownership	Easement	Area (ha)
1	249780005	747752 Ontario Inc.	0	4.74
2	249780006	Peninsula Ready-Mix Inc.	0	12.21
3	249780217	CRH Canada Group Inc.	0	88.36
4	249780008	Peninsula Ready-Mix Inc.	0	3.44
5	249780009	CRH Canada Group Inc.	0	0.40
6	249780010	Peninsula Ready-Mix Inc.	0	0.40
7	249780011	CRH Canada Group Inc.	0	0.34
8	249780012	747752 Ontario Ltd.	0	0.92
9	249780013	CRH Canada Group Inc.	0	0.38
10	249780014	1336811 Ontario Inc.	0	66.27
11	249780015	CRH Canada Group Inc.	0	39.34
12	249780208	CRH Canada Group Inc.	0	1.41
13	249780017	CRH Canada Group Inc.	0	110.95
14	249780210	CRH Canada Group Inc.	1	21.24
15	249780166	CRH Canada Group Inc.	0	270.52
16	249780164	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	0	2.44
17	249780158	CRH Canada Group Inc.	0	4.09
18	249780157	CRH Canada Group Inc.	2	66.89
19	249780162	CRH Canada Group Inc.	0	0.17
20	249780161	CRH Canada Group Inc.	0	0.17
21	249780160	Peninsula Ready-Mix Inc.	0	3.55
22	249780159	CRH Canada Group Inc.	0	0.98
23	249780156	Peninsula Ready-Mix Inc.	0	2.03
24	249780155	CRH Canada Group Inc. and Peninsula Ready-Mix Inc.	0	16.49
25	249780153	747752 Ontario Inc.	0	9.60
26	249780149	CRH Canada Group Inc.	0	51.54
27	249780236	CRH Canada Group Inc.	0	13.30
28	249780147	CRH Canada Group Inc.	0	1.72
29	249780146	CRH Canada Group Inc.	0	2.04

Date: June 2021

Sources: Microsoft Corporation Bing Imagery, date unknown  
Parcel fabric from Municipal Property Assessment Corporation - Last updated prior to 2010

Scale - 1:20,000

N:\Bram\90610J - Dufferin - Milton Quarry East Extension\Drawings - Must be in NAD 27\Land Owned by Dufferin - June 2021\CAD\90610J - Land Owned by Dufferin - June 2021.dwg

113 COLLIER STREET, BARRIE, ON, L4M 1H2  
P: 705.728.0045 F: 705.728.2010 | WWW.MHBCPLAN.COM

Note: All lands not within the Licenced boundaries are considered Buffer Lands


SCHEDULE B  
OWNERS AUTHORIZATION

I, Kevin Mitchell, signing officer for the following companies:

1. 747752 Ontario Inc;
2. Peninsula Ready-Mix Inc;
3. CRH Canada Group Inc; and,
4. 1336811 Ontario Inc.

hereby authorize CRH Canada Group Inc. to prepare and submit all necessary applications to permit and operate a quarrying use on lands identified on Schedule A. Applications include, but are not limited to, application for licence under the *Aggregate Resource Act*, application for amendment to the Niagara Escarpment Plan, application for development permit within the Niagara Escarpment Development Control Area, application to amend the existing licenced operation, application for amendment to the Region of Halton Official Plan, and application for amendment to the Town of Halton Hills Official Plan.

I, Kevin Mitchell, also authorizes agency staff to enter lands identified on Schedule A for the purposes of evaluating the merits of an application. Prior to any entry of the property however, please contact CRH Canada Group Inc., and CRH Canada Group Inc. will accompany agency staff for safety reasons.

  
\_\_\_\_\_  
Signature

December 1, 2021  
\_\_\_\_\_  
Date

# Tab 8

# Certificat de fusion

Loi sur les sociétés par actions (RLRQ, chapitre S-31.1)


J'atteste que les sociétés mentionnées dans les statuts de fusion ont fusionné en vertu de la Loi sur les sociétés par actions le 01 janvier 2016 en une seule société par actions sous le nom

GROUPE CRH CANADA INC.

et sa version

CRH CANADA GROUP INC.

Déposé au registre le 30 décembre 2015 sous le numéro d'entreprise du Québec 1171462923.

  
Registraire des entreprises



## Statuts de fusion

Pour les statuts de fusion simplifiée  
seulement.

Cochez la case appropriée.  Fusion ordinaire  Fusion simplifiée

Numéro d'entreprise du Québec  
NEQ 1 1 7 1 4 6 2 9 2 3

Loi sur les sociétés par actions, L.R.Q., c. S-31.1

**1 Nom de la société par actions**

GRUPE CRH CANADA INC.

Version(s) du nom de la société dans une autre langue que le français, s'il y a lieu  
CRH CANADA GROUP INC.

Désignation numérique pour tenir lieu d'un nom

**2 Capital-actions**

See Schedule 1

**3 Modalités de conversion et de paiement des actions des sociétés fusionnantes, s'il y a lieu**

N/A

**4 Restrictions sur le transfert des titres ou des actions, s'il y a lieu**


See Schedule 2

**5 Nombre d'administrateurs**

Nombre fixe \_\_\_\_\_ ou Nombre minimal 1  
Nombre maximal 10

Signez et retournez ce formulaire accompagné des documents exigés  
et du paiement requis. Ne pas télécopier.

Réserve à l'administration

 10TC ZZ 49488467



6. Limites imposées aux activités, s'il y a lieu

N/A

7. Autres dispositions, s'il y a lieu

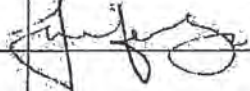
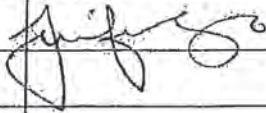
See Schedule 3

8. Date et heure à attribuer au certificat, s'il y a lieu

Date | 2 | 0 | 1 | 6 | 0 | 1 | 0 | 1 |

Heure | | | | |  
heures minutes

9. Sociétés fusionnantes

Nom de la société	Numéro d'entreprise du Québec (NEQ)	Nom de l'administrateur ou du dirigeant autorisé	Signature de l'administrateur ou du dirigeant autorisé
GESTION OLDCASTLE CANADA INC. - OLDCASTLE CANADA HOLDINGS INC.	1   1   7   1   4   6   2   9   2   3	Jennifer Good	
GRUPE CRH CANADA INC. - CRH CANADA GROUP INC.	1   1   6   4   6   3   4   6   1   1	Jennifer Good	
	1   1		
	1   1		
	1   1		
	1   1		
	1   1		
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	1   1		
	1   1		
	1   1		
	1   1		
	1   1		
	1   1		

Si l'espace prévu est insuffisant, joignez une annexe, indiquez la section et numérotez les pages, s'il y a lieu.

## SCHEDULE 1

### SHARE CAPITAL

The Corporation is authorized to issue an unlimited number of common shares, without par value, carrying the following rights:

1. Voting Right. The holders of common shares are entitled to receive notice of, attend and vote at any meeting of shareholders of the Corporation, each common share conferring the right to cast one (1) vote.
2. Dividend. The holders of common shares are entitled to receive any dividend declared by the Corporation.
3. Remaining Property. Upon the liquidation or dissolution of the Corporation, the holders of common shares shall be entitled to share the remaining property of the Corporation.

## SCHEDULE 2

### RESTRICTIONS ON THE TRANSFER OF INSTRUMENTS OR SHARES

#### 1. RESTRICTIONS ON TRANSFER OF SHARES

No share of the share capital of the Corporation shall be transferred without the approval of the directors evidenced by a resolution of the board, which approval may be given after such transfer.

#### 2. RESTRICTIONS ON TRANSFER OF SECURITIES

As long as the Corporation qualifies as a "private issuer" within the meaning of *Regulation 45-106 respecting Prospectus Exemptions*, as amended, supplemented, restated or replaced from time to time, any transfer of securities (other than shares and non-convertible debt securities) of the Corporation, shall be subject to the approval of the directors evidenced by a resolution of the board (which approval may be given after such transfer) or, as the case may be, to restrictions that are contained in any security holders' agreements.

**SCHEDULE 3**  
**OTHER PROVISIONS**

1. MEETINGS OF SHAREHOLDERS

The annual meeting of shareholders of the Corporation may be held outside of the Province of Quebec.

# Tab 9



## Aggregate Resources Act Licence Extraction/Lease Agreement with the Landowner

I/We 747752 Ontario Ltd.

the registered owner(s) of (part) Lot 12 & 13 Concession 1 in the Geographic Township of Esquesing, in the Municipality of (Township, Town, City) Halton Hills, in the County/Regional Municipality/District of Halton, do hereby acknowledge that I/We have entered into an agreement with CRH Canada Group Inc.; hereinafter called the Licensee, to operate an aggregate  pit and/or  quarry on (part of) the above-noted property.

I/We hereby acknowledge that the Licensee is required to rehabilitate the licensed property as required by his/her license and site plans pursuant to the Aggregate Resources Act. Furthermore, I/We agree to permit the Licensee access to the subject property to complete the rehabilitation, notwithstanding that the agreement with the Licensee to operate a pit or quarry may no longer be in force.

I/We further agree that should any part of the subject property be sold, without provision for the continuation of the operation, such sale will acknowledge continuation of this agreement for its term and further acknowledge the right of the Licensee to have access to the property to complete the required rehabilitation.

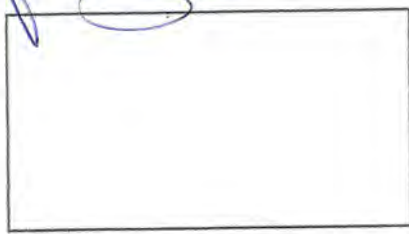
I/We further agree to notify the local District office of the Ministry of Natural Resources prior to termination of the above-noted agreement or sale of any part of the subject property.

This agreement is in effect from 12/01/2021 to 12/31/2061  
(MM/DD/YY) (MM/DD/YY)

747752 Ontario Ltd  
Landowner(s)  
2300 Steeles Avenue W.  
4th Floor, Concord, ON  
Address L4K 5X6  
905-761-7500  
Telephone

[Signature]  
Witness

Corporate Seal



Dated at Toronto this 13 day of December, year 2021

*Personal information required on the form is collected under the authority of the Aggregate Resources Act s.7 and will be used for the administration of the Act.*

*Questions about this information should be directed to the Aggregates Inspector of the Ministry of Natural Resources district in which the site is located.*



## Aggregate Resources Act Licence Extraction/Lease Agreement with the Landowner

I/We 1336811 Ontario Inc.

the registered owner(s) of (part) Lot 12 Concession 1 in the Geographic Township of Esquesing, in the Municipality of (Township, Town, City) Halton Hills, in the County/Regional Municipality/District of Halton, do hereby acknowledge that

I/We have entered into an agreement with CRH Canada Group Inc., hereinafter called the Licensee, to operate an aggregate  pit and/or  quarry on (part of) the above-noted property.


I/We hereby acknowledge that the Licensee is required to rehabilitate the licensed property as required by his/her license and site plans pursuant to the Aggregate Resources Act. Furthermore, I/We agree to permit the Licensee access to the subject property to complete the rehabilitation, notwithstanding that the agreement with the Licensee to operate a pit or quarry may no longer be in force.

I/We further agree that should any part of the subject property be sold, without provision for the continuation of the operation, such sale will acknowledge continuation of this agreement for its term and further acknowledge the right of the Licensee to have access to the property to complete the required rehabilitation.

I/We further agree to notify the local District office of the Ministry of Natural Resources prior to termination of the above-noted agreement or sale of any part of the subject property.

This agreement is in effect from 12/01/2021 to 12/31/2061  
(MM/DD/YY) (MM/DD/YY)

1336811 Ontario Inc.  
Landowner(s)  
2300 Steeles Avenue W.  
4th Floor, Concord, ON  
Address L4K 5X6  
905-761-7500  
Telephone

Witness 

Corporate Seal

Dated at Toronto this 13 day of December, year 2021

*Personal information required on the form is collected under the authority of the Aggregate Resources Act s.7 and will be used for the administration of the Act.*

*Questions about this information should be directed to the Aggregates Inspector of the Ministry of Natural Resources district in which the site is located.*

## ACKNOWLEDGEMENT AND AGREEMENT

THIS AGREEMENT is made as of the 9<sup>th</sup> day of December, 2021

### BETWEEN:

**747752 ONTARIO LTD.**

(the “747752”)

OF THE FIRST PART

- and -

**CRH CANADA GROUP INC. (“CRH”)**

OF THE SECOND PART

### WHEREAS:

- A. 747752 is the registered owner of the lands as described in PIN: 24978-0012 (LT); being Pt Lots 12 & 13, Con 1 Esq, Part 1 & 2, 20R2983, Halton Hills/Esquesing (the “**Property**”).
- B. 747752 is a wholly-owned subsidiary of CRH.
- C. CRH has or will be applying for and securing a licence to extract aggregates pursuant to the *Aggregates Resources Act*, RSO 1990, c.A. 8 (the “**Act**”) with respect to the Property (the “**Aggregates Licence Application**”).

**NOW THEREFORE**, in consideration of the mutual covenants and agreements contained herein and the sum of two dollars (\$2.00), now paid by each of the parties to the other, the receipt and sufficiency of which are hereby acknowledged, the parties acknowledge and agree as follows:

- 1. The parties hereby acknowledge, confirm and agree that the foregoing recitals are true in substance and in fact.
- 2. 747752 and CRH agree as follows:
  - (a) CRH is authorized and directed to execute, submit and process the Aggregates Licence Application and all related documentation on behalf of 747752;
  - (b) CRH is authorized to act as the named licensee of the Property pursuant to the Act or any successor legislation and to operate a pit or quarry at the Property in accordance with such licence, the Act and applicable laws; and



- (c) CRH will be responsible for all rehabilitation obligations as the named licensee of the Property pursuant to the Act or any successor legislation and shall be entitled to access the Property for that purpose
3. The parties agree that they shall at all times execute and deliver at the reasonable request of the other, such further assurances as may be necessary to give full effect to the intent and meaning of this Agreement.
  4. This Agreement shall enure to the benefit of and shall be binding upon the parties and their respective successors and assigns.
  5. If any provision contained in this Agreement or its application to any person or circumstance shall, to any extent, be invalid or unenforceable, the remainder of this agreement or the application of such provision to persons or circumstances other than those to which it is held invalid or unenforceable, shall not be affected, and each provision of this Agreement shall be separately valid and enforceable to the fullest extent permitted by law.
  6. This Agreement shall be governed by and construed in accordance with the laws of the Province of Ontario and the laws of Canada applicable in that Province and shall be treated, in all respects as an Ontario contract.
  7. Both parties agree that this Agreement may be signed in counterpart and transmitted by telecopier, facsimile or other electronic means and that the reproduction of signatures by way of telecopier, facsimile or other electronic means in counterpart will be treated as though such reproduction were executed originals.

*[signature page follows]*

IN WITNESS WHEREOF the parties hereto have executed this Agreement by their duly authorized officer(s) as of the date set out above.

**747752 ONTARIO LTD.**



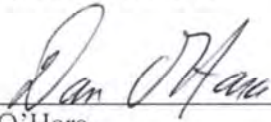
Per: \_\_\_\_\_

Name:

Title:

I have authority to bind the Corporation

**CRH CANADA GROUP INC.**

Per:  \_\_\_\_\_

Name: Dan O'Hara

Title: Vice President

I have authority to bind the Corporation

## ACKNOWLEDGEMENT AND AGREEMENT

THIS AGREEMENT is made as of the 9<sup>th</sup> day of December, 2021

### BETWEEN:

1336811 ONTARIO INC.

(the “Trustee”)

OF THE FIRST PART

- and -

CRH CANADA GROUP INC. (“CRH”) and

1336811 ONTARIO INC. (“1336811”)

(CRH and 1336811 are collectively, the “Beneficial Owners”)

OF THE SECOND PART

### WHEREAS:

- A. By a Declaration of Trust dated December 23, 2019 between the Trustee, as trustee and CRH Canada Group Inc. and 1336811 as Beneficial Owners, the Trustee agreed to act as a trustee for and on behalf of itself and CRH Canada Group Inc., as set out in such Declaration of Trust, with respect to the lands at Lot 5, Register’s Compiled Plan 1551, Part Lot 12, Concession 1, Esquesing, as in 4699512 and 120626, Halton Hills, as described in PIN 24978-0014 (the “Trust Property”).
- B. CRH has or will be applying for and securing a licence to extract aggregates pursuant to the *Aggregates Resources Act*, RSO 1990, c.A. 8 (the “Act”) with respect to the Trust Property (the “Aggregates Licence Application”).

**NOW THEREFORE**, in consideration of the mutual covenants and agreements contained herein and the sum of two dollars (\$2.00), now paid by each of the parties to the other, the receipt and sufficiency of which are hereby acknowledged, the parties acknowledge and agree as follows:

1. The parties hereby acknowledge, confirm and agree that the foregoing recitals are true in substance and in fact.
2. The Trustee, and the Beneficial Owners confirm as follows:
  - (a) CRH is authorized and directed to execute, submit and process the Aggregates Licence Application and all related documentation on behalf of the Beneficial Owners;

- (b) CRH is authorized to act as the named licensee of the Trust Property pursuant to the Act or any successor legislation and to operate a pit or quarry at the Trust Property in accordance with such licence, the Act and applicable laws; and
  - (c) CRH will be responsible for all rehabilitation obligations as the named licensee of the Trust Property pursuant to the Act or any successor legislation and shall be entitled to access the Trust Property for that purpose
3. The parties agree that they shall at all times execute and deliver at the reasonable request of the other, such further assurances as may be necessary to give full effect to the intent and meaning of this Agreement.
  4. This Agreement shall enure to the benefit of and shall be binding upon the parties and their respective successors and assigns.
  5. If any provision contained in this Agreement or its application to any person or circumstance shall, to any extent, be invalid or unenforceable, the remainder of this agreement or the application of such provision to persons or circumstances other than those to which it is held invalid or unenforceable, shall not be affected, and each provision of this Agreement shall be separately valid and enforceable to the fullest extent permitted by law.
  6. This Agreement shall be governed by and construed in accordance with the laws of the Province of Ontario and the laws of Canada applicable in that Province and shall be treated, in all respects as an Ontario contract.
  7. Both parties agree that this Agreement may be signed in counterpart and transmitted by telecopier, facsimile or other electronic means and that the reproduction of signatures by way of telecopier, facsimile or other electronic means in counterpart will be treated as though such reproduction were executed originals.

*[signature page follows]*

IN WITNESS WHEREOF the parties hereto have executed this Agreement by their duly authorized officer(s) as of the date set out above.

**1336811 ONTARIO INC., as Trustee**



Per: \_\_\_\_\_  
Name: Jennifer Good  
Title: Secretary  
I have authority to bind the Corporation

**1336811 ONTARIO INC., as Beneficial  
Owner of 0.0001% interest**



Per: \_\_\_\_\_  
Name: Jennifer Good  
Title: Secretary  
I have authority to bind the Corporation

**CRH CANADA GROUP INC., as Beneficial  
Owner of 99.9999% interest**

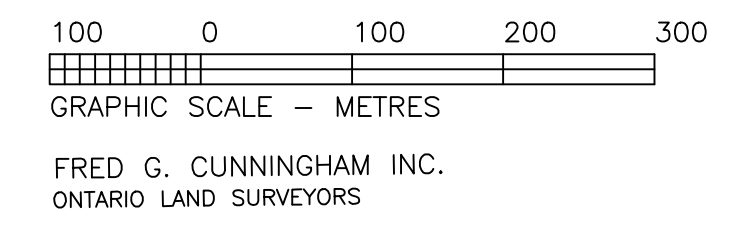


Per: \_\_\_\_\_  
Name: Dan O'Hara  
Title: Vice President  
I have authority to bind the Corporation

# Tab **10**



COMPILED SKETCH OF PART OF  
 THE LANDS OF DUFFERIN AGGREGATES  
 TOWN OF MILTON & TOWN OF HALTON HILLS  
 REGIONAL MUNICIPALITY OF HALTON  
 SCALE: 1:5000



FRED G. CUNNINGHAM INC.  
 ONTARIO LAND SURVEYORS

**METRIC**

ALL DISTANCE SHOWN HEREIN ARE IN METRES  
 AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

**NOTE:**

THIS SKETCH IS A COMPILED SKETCH OF PREVIOUS SURVEYS AND SKETCHES AND NOT A SURVEY.  
 THE LINE WORK SHOWN ON THIS SKETCH IS A GRAPHIC ATTEMPT ONLY  
 TO ILLUSTRATE THE APPROXIMATE LIMITS OF THE VARIOUS PARCELS.  
 THIS DRAWING IS NOT TO BE SOLED FROM BY MEANS OF CONVENTIONAL  
 SCALING WITH A RULER OR ANY CAD FEATURES WHICH IDENTIFY LINE  
 DIRECTION AND OR LENGTH.

FRED G. CUNNINGHAM  
 INCORPORATED  
 ONTARIO LAND SURVEYORS  
 THOMAS J. PACKERD, O.L.S.  
 205 MARK STREET  
 MILTON  
 L7T 1Y2  
 PHONE (905) 878-6672  
 FAX (905) 878-6672  
 CLIENT: DUFFERIN AGGREGATES  
 DATE: DECEMBER 2, 1997  
 O.L.S. FILE # 97-1899 80 188  
 DWG = 97-18598

# Tab 11



**Properties**

*PIN* 24978 - 0012 LT *Estate/Qualifier* Fee Simple Lt Conversion Qualified  
*Description* PT LT 12 & 13, CON 1 ESQ , PART 1 & 2 , 20R2983 ; HALTON  
 HILLS/ESQUESING SUBJECT TO EXECUTION 93-02568, IF ENFORCEABLE. ;  
*Address* 10371 ESQ NASS TWN LINE  
 HALTON HILLS

**Party From(s)**

*Name* 747752 ONTARIO INC.  
*Address for Service*

**Applicant(s)***Capacity**Share*

*Name* 747752 ONTARIO LTD. *Capacity* Beneficial Owner  
*Address for Service* 10371 ESQ NASS TWN LINE  
 HALTON HILLS

I, PAUL OSTRANDER, have the authority to bind the corporation  
 This document is not authorized under Power of Attorney by this party.

**Statements**

The name has changed as a result of a typographical error and this statement is made for no improper purpose.

**Signed By**

Valerie Mary Brink 800- 24 Queen St. East Suit acting for Applicant(s) Signed 2003 08 28  
 Brampton L6V 1A3  
 Tel 905-451-6714  
 Fax 9054541876

**Submitted By**

DAVIS, WEBB, SCHULZE & MOON 800- 24 Queen St. East Suit 2003 08 28  
 Brampton L6V 1A3  
 Tel 905-451-6714  
 Fax 9054541876

**Fees/Taxes/Payment**

*Statutory Registration Fee* \$60.00  
*Total Paid* \$60.00

<b>Properties</b>
-------------------

<i>PIN</i>	07201 – 0033 LT
<i>Description</i>	PCL BLK 8–2 , SEC 20M446 ; PT BLK 8, PL 20M446 , PART 5 , 20R10704 ; BURLINGTON
<i>Address</i>	BURLINGTON
<i>PIN</i>	24848 – 0004 LT
<i>Description</i>	PT LT 25, CON 3 TRAFALGAR, SOUTH OF DUNDAS STREET , AS IN 651908 EXCEPT PT 8, 20R6249, PT 12, 20R7009, PTS 4–11 & 13–17, 20R6754 ; S/T 103936,736628,736629 *516060* OAKVILLE/TRAFALGAR *ADDED 08 11 99 BY J MENARD
<i>Address</i>	731 THIRD LINE OAKVILLE
<i>PIN</i>	24978 – 0009 LT
<i>Description</i>	PT LT 13, CON 1 ESQ , PART 2 , 20R7139 ; HALTON HILLS/ESQUESING
<i>Address</i>	10413 ESQ NASS TWN LINE HALTON HILLS
<i>PIN</i>	24978 – 0011 LT
<i>Description</i>	PT LT 13, CON 1 ESQ , AS IN 718652 ; HALTON HILLS/ESQUESING
<i>Address</i>	10379 ESQ NASS TWN LINE HALTON HILLS
<i>PIN</i>	24978 – 0013 LT
<i>Description</i>	PT LT 12, CON 1 ESQ , AS IN 618957 ; HALTON HILLS/ESQUESING
<i>Address</i>	10327 ESQ NASS TWN LINE HALTON HILLS
<i>PIN</i>	24978 – 0017 LT
<i>Description</i>	LT 2, RCP 1551 ; LT 1, RCP 1553 ; HALTON HILLS/ESQUESING
<i>Address</i>	HALTON HILLS
<i>PIN</i>	24978 – 0146 LT
<i>Description</i>	PT LT 15, CON 7 NAS , PART 1 , 20R6918 , EXCEPT PT "2", 20R8819; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"
<i>Address</i>	10648 TWN LINE HALTON HILLS
<i>PIN</i>	24978 – 0147 LT
<i>Description</i>	PT LT 14, CON 7 NAS , AS IN 853727 ; "MILTON"/NASSAGAWEYA ; "AMENDED MAR 23 '99 J. MENARD"
<i>Address</i>	10545 TOWN LINE HALTON HILLS
<i>PIN</i>	24978 – 0149 LT
<i>Description</i>	PT LT 14, CON 7 NAS , PART 2 & 3 , 20R2017 , EXCEPT PART 2, 20R11685 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"
<i>Address</i>	10494 TWN LINE HALTON HILLS
<i>PIN</i>	24978 – 0157 LT
<i>Description</i>	LT 1, RCP 1552 ; S/T 178422 ; S/T LIFE INTEREST IN 178422 ; 'MILTON" /NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"
<i>Address</i>	MILTON
<i>PIN</i>	24978 – 0158 LT
<i>Description</i>	LT 7, RCP 1552 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"
<i>Address</i>	MILTON
<i>PIN</i>	24978 – 0159 LT
<i>Description</i>	PT LT 8, RCP 1552, PT 2, 20R7609 ; MILTON.
<i>Address</i>	MILTON
<i>PIN</i>	24978 – 0161 LT
<i>Description</i>	LT 9, RCP 1552, PT 3, 20R7609 ; MILTON
<i>Address</i>	10256 TWN LINE HALTON HILLS
<i>PIN</i>	24978 – 0162 LT
<i>Description</i>	LT 10, RCP 1552, PT 4, 20R7609 ; MILTON
<i>Address</i>	10248 TWN LINE HALTON HILLS
<i>PIN</i>	24978 – 0166 LT
<i>Description</i>	LT 1, RCP 1554; LT 2, RCP 1552, LT 4, RCP 1554; RDAL BTN LOTS 10 & 11 CON 7

<b>Properties</b>
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NAS , AS CLOSED BY BYLAW 829306 ; HALTON HILLS "AMENDED APR 26 '99 J. MENARD"

*Address* HALTON HILLS

*PIN* 24978 – 0208 LT

*Description* LT 3, RCP 1551 ; HALTON HILLS/ESQUESING

*Address* HALTON HILLS

*PIN* 24978 – 0210 LT

*Description* LT 2, RCP 1554 ; S/T 84170 ; "MILTON" "AMENDED MAR 24 '99 J. MENARD"

*Address* MILTON

*PIN* 24978 – 0217 LT

*Description* CONSOLIDATION OF VARIOUS PROPERTIES : PT LTS 13 & 14, CON 1 ESQ, AS IN 575334; HALTON HILLS/ESQUESING.

*Address* HALTON HILLS

*PIN* 24978 – 0236 LT

*Description* PT LT 14, CON 7, PT 1, 20R2017 EXCEPT PT 1, 20R15065; MILTON/NASS

*Address* MILTON

*PIN* 24996 – 0348 LT

*Description* PT LT 24, CON 3 ESQ , AS IN EW18774, EXCEPT PT 1, 20R3358 ; HALTON HILLS/ESQUESING

*Address* 12712 THIRD LINE  
HALTON HILLS

*PIN* 24996 – 0359 LT

*Description* PT LTS 24 & 25, CON 4 ESQ , PART 1 , 20R11673 ; HALTON HILLS/ESQUESING

*Address* HALTON HILLS

*PIN* 25017 – 0005 LT

*Description* PT LT 20, CON 3 ESQ , PART 1 , 20R896 ; HALTON HILLS/ESQUESING

*Address* 11998 THIRD LINE  
HALTON HILLS

*PIN* 25017 – 0006 LT

*Description* PT LT 20, CON 3 ESQ , PART 2 , 20R896 ; HALTON HILLS/ESQUESING ;

*Address* 11992 THIRD LINE  
HALTON HILLS

*PIN* 25017 – 0009 LT

*Description* PT LT 20, CON 3 ESQ , PART 5 , 20R896 ; HALTON HILLS/ESQUESING

*Address* 11970 THIRD LINE  
HALTON HILLS

*PIN* 25017 – 0011 LT

*Description* PT LT 19, CON 3 ESQ, AS IN 749120; HALTON HILLS.

*Address* 11762 THIRD LINE  
HALTON HILLS

*PIN* 25059 – 0036 LT

*Description* LT 11, PL 617 ; HALTON HILLS

*Address* HALTON HILLS

*PIN* 24978 – 0155 LT

*Description* LT 4, RCP 1552 ; MILTON

*Address* 10446 TWN LINE  
MILTON

*PIN* 24978 – 0164 LT

*Description* LT 12, RCP 1552 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 24 '99 J. MENARD"

*Address* 10131 SIXTH LINE  
HALTON HILLS

*PIN* 24996 – 0356 LT

*Description* PT LT 23, CON 3 ESQ , PART 3 , 20R1885 ; HALTON HILLS/ESQUESING

*Address* HALTON HILLS

*PIN* 25005 – 0014 LT

*Description* PT LTS 24 & 25, CON 4 ESQ , EIGHTHLY, PARCELS 1 & 2 AS IN 620583; S/T 620583 ; HALTON HILLS/ESQUESING AMENDED OCT 21, 97 A.R.

*Address* HALTON HILLS

**Properties**

*PIN* 25005 – 0031 LT  
*Description* PT LT 23, CON 4 ESQ , SIXTHLY, PARCELS 1 & 2, AS IN 620583 ; PT LT 24, CON 4 ESQ , SEVENTHLY, PARCELS 1 & 2, AS IN 620583 ; PT LT 22, CON 4 ESQ , PT RDAL BTN LTS 22 & 23, CON 4 ESQ , FIFTHLY AS IN 620583 ; PT LT 23, CON 3 ESQ , PART 4 , 20R1885 ; PT RDAL BTN CONS 3 & 4 ESQ , PART 1 , 20R1885 ; S/T 58742 (PARTIALLY RELEASED BY 120232); HALTON HILLS  
*Address* HALTON HILLS

*PIN* 25017 – 0007 LT  
*Description* PT LT 20, CON 3 ESQ , PART 3 , 20R896 ; HALTON HILLS/ESQUESING  
*Address* HALTON HILLS

*PIN* 25017 – 0008 LT  
*Description* PT LT 20, CON 3 ESQ , PART 4 , 20R896 ; HALTON HILLS/ESQUESING  
*Address* HALTON HILLS

*PIN* 25017 – 0033 LT  
*Description* PT LT 21, CON 4 ESQ ; PT LT 22, CON 4 ESQ , AS DESC 3RDLY & 4THLY IN 620583 ; HALTON HILLS/ESQUESING  
*Address* HALTON HILLS

*PIN* 25017 – 0134 LT  
*Description* PT LT 22, CON 3 ESQ , AS IN 620583 FIRSTLY ; HALTON HILLS/ESQUESING  
*Address* HALTON HILLS

*PIN* 25005 – 0024 LT  
*Description* PT LT 24, CON 4 ESQ , AS IN 733005; S/T 733005 ; S/T 138271 HALTON HILLS/ESQUESING  
*Address* HALTON HILLS

**Party From(s)**

*Name* ST. LAWRENCE CEMENT INC.  
*Address for Service* 2300 Steeles Avenue West,  
 4th Floor,  
 Concord, Ontario L4K 5X6

**Applicant(s)***Capacity**Share*

*Name* HOLCIM (CANADA) INC.  
*Address for Service* 2300 Steeles Avenue West,  
 4th Floor,  
 Concord, Ontario L4K 5X6

I, John Pontarollo, General Manager, have the authority to bind the corporation

This document is not authorized under Power of Attorney by this party.

**Statements**

The name has changed as a result of a change of corporate name authorized under Certificat de Modification issued by the Registraire des entreprises Quebec, effective April 15, 2009, as attached with translation from French and this statement is made for no improper purpose.

Schedule: See Schedules

**Signed By**

Merilyn Gail Thompson 333 Bay Street, Suite 2400, Bay acting for Signed 2012 07 17  
 Adelaide Centre Applicant(s)  
 Toronto  
 M5H 2T6

Tel 4163668381

Fax 4163647813

I have the authority to sign and register the document on behalf of the Applicant(s).

**Submitted By**

FASKEN MARTINEAU DUMOULIN LLP

333 Bay Street, Suite 2400, Bay  
Adelaide Centre  
Toronto  
M5H 2T6

2012 07 26

Tel 4163668381

Fax 4163647813

**Fees/Taxes/Payment**

Statutory Registration Fee \$60.00

Total Paid \$60.00

**File Number**

Applicant Client File Number : 229720.01116 NMS



This is Exhibit "A" referred to in the  
Affidavit of Hsiao-Chen Lin  
sworn before me, this 21<sup>st</sup>  
day of December, 2009.

*Elizabeth Anst*  
A Commissioner for taking affidavits



EXHIBIT "A"

Québec 

## CERTIFICAT DE MODIFICATION

*Loi sur les compagnies, Partie IA*  
(L.R.Q., chap. C-38)

J'atteste par les présentes que la compagnie

HOLCIM (CANADA) INC.

a modifié ses statuts le **15 AVRIL 2009**, en vertu de la  
partie IA de la Loi sur les compagnies, comme indiqué dans  
les statuts de modification ci-joints.



Déposé au registre le 14 avril 2009  
sous le numéro d'entreprise du Québec 1164634611

  
Registraire des entreprises



Statuts de modification

Loi sur les compagnies (L.R.Q., c. C-38, partie IA)

1. Nom - Inscrive le nouveau nom de la compagnie si celui-ci est modifié et inscrive le nom antérieur à la section 5. ou - Inscrive le nom actuel si vous le conservez et inscrive S. O. à la section 5.

Table with 10 columns for Quebec company number (NEQ) and values 1, 1, 6, 4, 6, 3, 4, 6, 1, 1.

Form box containing 'HOLCIM (CANADA) INC.' and a checkbox for requesting a company number.

2. Les statuts de la compagnie sont modifiés de la façon suivante :

Large empty rectangular box for describing the changes to the company's bylaws.

3. Date d'entrée en vigueur (si différente de la date du dépôt des statuts de modification) pour les demandes qui ne sont pas visées par la section 4.

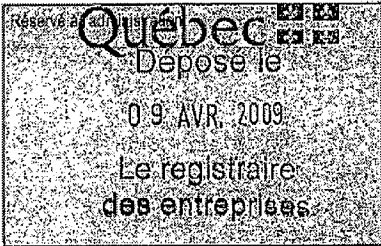
Form box for 'Date postérieure à celle du dépôt' with a date grid showing 2009-04-15.

4. Modification des statuts en vertu de l'article 123.140 et suivants de la Loi sur les compagnies

Form box with checkboxes for modifications under article 123.140 and a date grid for 'Date d'entrée en vigueur'.

5. Nom antérieur à la modification (si différent de celui mentionné à la section 1).

Form box containing 'CIMENT ST-LAURENT INC.' and 'ST. LAWRENCE CEMENT INC.'



Handwritten signature of Paul Ostrander over a horizontal line.

Signature de l'administrateur autorisé

Paul Ostrander

Si l'espace prévu est insuffisant, joindre une annexe remplie en deux exemplaires, identifier la section correspondante et numéroter les pages s'il y a lieu.

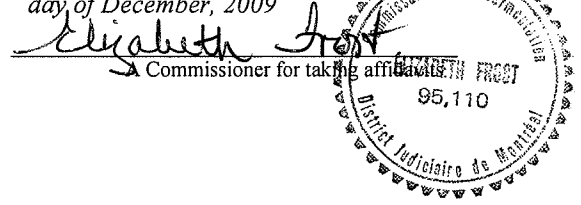
Signer et retourner les deux exemplaires avec votre paiement. Ne pas télécopier.

Ministère du Revenu

LE-50.0.11.04 (2008-10)



This is Exhibit "B" referred to in the  
Affidavit of Hsiao-Chen Lin  
sworn before me, this 21<sup>st</sup>  
day of December, 2009



**EXHIBIT "B"**

**Certificate of Modification**

I attest, by these presents, that the company **HOLCIM (CANADA) INC.** has modified its articles on April 15, 2009, pursuant to the *Companies Act (Quebec) Part IA*, as indicated in the articles of amendment attached hereto.

Filed at the Quebec Enterprises Registry on April 14, 2009 under Quebec Enterprise Number 1164634611.

**Articles of Amendment**

The name of the company is changed to **HOLCIM (CANADA) INC.**

The names of the company prior to the amendment: **CIMENT ST-LAURENT INC.**  
**ST. LAWRENCE CEMENT INC.**

Filed at the Quebec Enterprises Registry on April 9, 2009.

<b>Properties</b>
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<i>PIN</i>	25017 – 0008 LT
<i>Description</i>	PT LT 20, CON 3 ESQ , PART 4 , 20R896 ; HALTON HILLS/ESQUESING
<i>Address</i>	HALTON HILLS
<i>PIN</i>	25017 – 0078 LT
<i>Description</i>	PT LT 19, CON 4 ESQ , AS IN 719727 ; HALTON HILLS/ESQUESING
<i>Address</i>	11749 THIRD LINE HALTON HILLS
<i>PIN</i>	25005 – 0024 LT
<i>Description</i>	PT LT 24, CON 4 ESQ , AS IN 733005; S/T 733005 ; S/T 138271 HALTON HILLS/ESQUESING
<i>Address</i>	HALTON HILLS
<i>PIN</i>	25017 – 0011 LT
<i>Description</i>	PT LT 19, CON 3 ESQ, AS IN 749120; HALTON HILLS.
<i>Address</i>	11762 THIRD LINE HALTON HILLS
<i>PIN</i>	24996 – 0359 LT
<i>Description</i>	PT LTS 24 & 25, CON 4 ESQ , PART 1 , 20R11673 ; HALTON HILLS/ESQUESING
<i>Address</i>	HALTON HILLS
<i>PIN</i>	25005 – 0031 LT
<i>Description</i>	PT LT 23, CON 4 ESQ , SIXTHLY, PARCELS 1 & 2, AS IN 620583 ; PT LT 24, CON 4 ESQ , SEVENTHLY, PARCELS 1 & 2, AS IN 620583 ; PT LT 22, CON 4 ESQ , PT RDAL BTN LTS 22 & 23, CON 4 ESQ , FIFTHLY AS IN 620583 ; PT LT 23, CON 3 ESQ , PART 4 , 20R1885 ; PT RDAL BTN CONS 3 & 4 ESQ , PART 1 , 20R1885 ; S/T 58742 (PARTIALLY RELEASED BY 120232); HALTON HILLS
<i>Address</i>	ACTON
<i>PIN</i>	24996 – 0356 LT
<i>Description</i>	PT LT 23, CON 3 ESQ , PART 3 , 20R1885 ; HALTON HILLS/ESQUESING
<i>Address</i>	HALTON HILLS
<i>PIN</i>	25017 – 0033 LT
<i>Description</i>	PT LT 21, CON 4 ESQ ; PT LT 22, CON 4 ESQ , AS DESC 3RDLY & 4THLY IN 620583 ; HALTON HILLS/ESQUESING
<i>Address</i>	ACTON
<i>PIN</i>	25017 – 0134 LT
<i>Description</i>	PT LT 22, CON 3 ESQ , AS IN 620583 FIRSTLY ; HALTON HILLS/ESQUESING
<i>Address</i>	ACTON
<i>PIN</i>	25005 – 0014 LT
<i>Description</i>	PT LTS 24 & 25, CON 4 ESQ , EIGHTHLY, PARCELS 1 & 2 AS IN 620583; S/T 620583 ; HALTON HILLS/ESQUESING AMENDED OCT 21, 97 A.R.
<i>Address</i>	HALTON HILLS
<i>PIN</i>	25017 – 0006 LT
<i>Description</i>	PT LT 20, CON 3 ESQ , PART 2 , 20R896 ; HALTON HILLS/ESQUESING ;
<i>Address</i>	11992 THIRD LINE HALTON HILLS
<i>PIN</i>	25017 – 0007 LT
<i>Description</i>	PT LT 20, CON 3 ESQ , PART 3 , 20R896 ; HALTON HILLS/ESQUESING
<i>Address</i>	HALTON HILLS
<i>PIN</i>	24996 – 0446 LT
<i>Description</i>	PT LT 25, CON 3 ESQ, PT 2, 20R19753; TOGETHER WITH AN EASEMENT OVER PTS 3, 4, 5, 6, 7, 8, 9, 10, 11 & 12, 20R19753 AS IN HR1162657; TOWN OF HALTON HILLS
<i>Address</i>	HALTON HILLS
<i>PIN</i>	25017 – 0005 LT
<i>Description</i>	PT LT 20, CON 3 ESQ , PART 1 , 20R896 ; HALTON HILLS/ESQUESING
<i>Address</i>	11998 THIRD LINE HALTON HILLS
<i>PIN</i>	24996 – 0348 LT
<i>Description</i>	PT LT 24, CON 3 ESQ , AS IN EW18774, EXCEPT PT 1, 20R3358 ; HALTON HILLS/ESQUESING
<i>Address</i>	12712 THIRD LINE HALTON HILLS

<b>Properties</b>
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<i>PIN</i>	25005 – 0114 LT
<i>Description</i>	PCL 25–1, SEC E4; PT LT 25, CON 4 ESQ, PT 7,8 20R2365.; TOWN OF HALTON HILLS
<i>Address</i>	CHURCHILLROAD SOUTH HALTON HILLS
<i>PIN</i>	25017 – 0009 LT
<i>Description</i>	PT LT 20, CON 3 ESQ , PART 5 , 20R896 ; HALTON HILLS/ESQUESING
<i>Address</i>	11970 THIRD LINE HALTON HILLS
<i>PIN</i>	24978 – 0158 LT
<i>Description</i>	LT 7, RCP 1552 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"
<i>Address</i>	MILTON
<i>PIN</i>	24978 – 0159 LT
<i>Description</i>	PT LT 8, RCP 1552, PT 2, 20R7609 ; MILTON.
<i>Address</i>	MILTON
<i>PIN</i>	24978 – 0146 LT
<i>Description</i>	PT LT 15, CON 7 NAS , PART 1 , 20R6918 , EXCEPT PT "2", 20R8819; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"
<i>Address</i>	10648 TWN LINE MILTON
<i>PIN</i>	24978 – 0162 LT
<i>Description</i>	LT 10, RCP 1552, PT 4, 20R7609 ; MILTON
<i>Address</i>	10248 TWN LINE MILTON
<i>PIN</i>	24978 – 0147 LT
<i>Description</i>	PT LT 14, CON 7 NAS , AS IN 853727 ; "MILTON"/NASSAGAWEYA ; "AMENDED MAR 23 '99 J. MENARD"
<i>Address</i>	10545 TOWN LINE MILTON
<i>PIN</i>	24978 – 0009 LT
<i>Description</i>	PT LT 13, CON 1 ESQ , PART 2 , 20R7139 ; HALTON HILLS/ESQUESING
<i>Address</i>	10413 ESQ NASS TWN LINE HALTON HILLS
<i>PIN</i>	24978 – 0161 LT
<i>Description</i>	LT 9, RCP 1552, PT 3, 20R7609 ; MILTON
<i>Address</i>	10256 TWN LINE MILTON
<i>PIN</i>	24978 – 0217 LT
<i>Description</i>	CONSOLIDATION OF VARIOUS PROPERTIES : PT LTS 13 & 14, CON 1 ESQ, AS IN 575334; HALTON HILLS/ESQUESING.
<i>Address</i>	HALTON HILLS
<i>PIN</i>	24978 – 0236 LT
<i>Description</i>	PT LT 14, CON 7, PT 1, 20R2017 EXCEPT PT 1, 20R15065; MILTON/NASS
<i>Address</i>	MILTON
<i>PIN</i>	24978 – 0011 LT
<i>Description</i>	PT LT 13, CON 1 ESQ , AS IN 718652 ; HALTON HILLS/ESQUESING
<i>Address</i>	10379 ESQ NASS TWN LINE HALTON HILLS
<i>PIN</i>	24978 – 0013 LT
<i>Description</i>	PT LT 12, CON 1 ESQ , AS IN 618957 ; HALTON HILLS/ESQUESING
<i>Address</i>	10327 ESQ NASS TWN LINE HALTON HILLS
<i>PIN</i>	24978 – 0157 LT
<i>Description</i>	LT 1, RCP 1552 ; S/T 178422 ; S/T LIFE INTEREST IN 178422 ; 'MILTON" /NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"
<i>Address</i>	MILTON
<i>PIN</i>	24978 – 0017 LT
<i>Description</i>	LT 2, RCP 1551 ; LT 1, RCP 1553 ; HALTON HILLS/ESQUESING
<i>Address</i>	MILTON
<i>PIN</i>	24978 – 0166 LT

**Properties**

*Description* LT 1, RCP 1554; LT 2, RCP 1552, LT 4, RCP 1554; RDAL BTN LOTS 10 & 11 CON 7 NAS , AS CLOSED BY BYLAW 829306 ; HALTON HILLS "AMENDED APR 26 '99 J. MENARD"

*Address* MILTON

*PIN* 24978 – 0210 LT

*Description* LT 2, RCP 1554 ; S/T 84170 ; "MILTON" "AMENDED MAR 24 '99 J. MENARD"

*Address* MILTON

*PIN* 24978 – 0208 LT

*Description* LT 3, RCP 1551 ; HALTON HILLS/ESQUESING

*Address* HALTON HILLS

*PIN* 24978 – 0015 LT

*Description* LT 1 & 7, RCP 1551 ; HALTON HILLS/ESQUESING

*Address* HALTON HILLS

*PIN* 07201 – 0033 LT

*Description* PCL BLK 8–2 , SEC 20M446 ; PT BLK 8, PL 20M446 , PART 5 , 20R10704 ; BURLINGTON

*Address* BURLINGTON

*PIN* 25059 – 0036 LT

*Description* LT 11, PL 617 ; HALTON HILLS

*Address* GEORGETOWN

*PIN* 24848 – 0004 LT

*Description* PT LT 25, CON 3 TRAFALGAR, SOUTH OF DUNDAS STREET , AS IN 651908 EXCEPT PT 8, 20R6249, PT 12, 20R7009, PTS 4–11 & 13–17, 20R6754 ; S/T 103936,736628,736629 \*516060\* OAKVILLE/TRAFALGAR \*ADDED 08 11 99 BY J MENARD

*Address* 731 THIRD LINE  
OAKVILLE

*PIN* 24978 – 0149 LT

*Description* PT LT 14, CON 7 NAS , PART 2 & 3 , 20R2017 , EXCEPT PART 2, 20R11685 ; "MILTON"/NASSAGAWEYA "AMENDED MAR 23 '99 J. MENARD"

*Address* 10494 TWN LINE  
MILTON

**Party From(s)**

*Name* HOLCIM (CANADA) INC.

*Address for Service* 2300 Steeles Avenue West,  
4th Floor,  
Concord, Ontario L4K 5X6

**Applicant(s)***Capacity**Share*

*Name* CRH CANADA GROUP INC.

*Address for Service* 2300 Steeles Avenue West,  
4th Floor,  
Concord, Ontario L4K 5X6

I, John Pontarollo, Senior Vice President, have the authority to bind the corporation

This document is not authorized under Power of Attorney by this party.

This transaction is not subject to any writs of execution. Execution search(s) completed on 2016/01/25. Clear execution No(s) 27602002–3598875B  
HOLCIM (CANADA) INC. I , Neil M. Smiley confirm the appropriate party(ies) were searched.

**Statements**

The name has changed as a result of a change of corporate name authorized under Certificat de modification by the Registraire des entreprises Quebec effective July 31, 2015, as attached with translation from French, whereby the name of HOLCIM (CANADA) INC. was changed to CRH CANADA GROUP INC. and this statement is made for no improper purpose.

Schedule: See Schedules



**AFFIDAVIT**

I, Suzanne Elie, of the City of Montreal, in the Province of Quebec, **MAKE OATH AND SAY:**

1. I am a Paralegal with the law firm of Fasken Martineau DuMoulin LLP, solicitors for CRH CANADA GROUP INC. and as such I have knowledge of the matters to which I hereinafter depose;
2. I am fluent in both English and French, and have carefully compared the original *Certificat de modification* and *Statuts de modification* (together, the "Certificate of Amendment"), attached hereto as Exhibit "A", with the translation (the "Translation"), attached hereto as Exhibit "B"; and
3. the Translation is in all respects a true and correct translation of the Certificate of Amendment.

SWORN BEFORE ME at the City of )  
Montreal, in the Province of Quebec, this )  
twenty-first (21<sup>st</sup>) day of August 2012 )

  
A Commissioner for taking affidavits

  
SUZANNE ELIE

  
Commissaire à l'Assermentation / Commissioner of Oaths for the Judicial Districts of Quebec / Les Districts Judiciaires du Québec  
DIANE LÉCUYER  
103 985

*This is Exhibit "B" referred to in the Affidavit of Suzanne Elie sworn before me, this 21<sup>st</sup> day of August, 2015*

---

## **EXHIBIT "B"**

### **Certificate of Modification**

I attest, by these presents, that the company **HOLCIM (CANADA) INC.** has modified its articles on July 15, 2015, pursuant to the *Business Corporations Act* (Québec) as indicated in the articles of amendment attached hereto.

Filed at the Quebec Enterprises Registry on July 31, 2015 under Quebec Enterprise Number 1164634611.

### **Articles of Amendment**

The name of the company is changed to **CRH CANADA GROUP INC.**

The names of the company prior to the amendment: **HOLCIM (CANADA) INC.**

Filed at the Quebec Enterprises Registry on July 31, 2015.

## Certificat de modification

Loi sur les sociétés par actions (RLRQ, chapitre S-31.1)

J'atteste que la société par actions

HOLCIM (CANADA) INC.

a modifié ses statuts en vertu de la Loi sur les sociétés par actions afin de changer son nom  
et sa version pour

GROUPE CRH CANADA INC.

et sa version

CRH CANADA GROUP INC.

Le 31 juillet 2015 à 12 h 0 min

Déposé au registre le 31 juillet 2015 sous le  
numéro d'entreprise du Québec 1164634611.

*Gerard Sandhu*

Registraire des entreprises





## Statuts de modification

Numéro d'entreprise du Québec														
NEQ	1	:	1	:	6	4	:	6	3	:	4	6	1	1

Loi sur les sociétés par actions, L.R.Q., c. S-31.1

### 1 Identification de la société

Nom de la société par actions

HOLCIM (CANADA) INC.

Version(s) du nom de la société dans une autre langue que le français, s'il y a lieu

### 2 Modification des statuts

#### 2.1 Modification relative au nom

Nom de la société par actions

GROUPE CRH CANADA INC.

Version(s) du nom de la société dans une autre langue que le français, s'il y a lieu

CRH CANADA GROUP INC.

Désignation numérique pour tenir lieu de nom

#### 2.2 Autres modifications

#### 2.3 Date et heure à attribuer au certificat, s'il y a lieu

Date [ 2 0 1 5 0 7 3 1 ]

Heure [ 1 2 | 0 0 ]  
heures minutes



10VO ZZ 49488679

### 3 Correction des statuts

#### 3.1 Statuts et certificat visés par la correction

Les statuts de \_\_\_\_\_ déposés au registre des entreprises le \_\_\_\_\_ contiennent  
Type de statuts  
 des dispositions illégales, des erreurs ou des irrégularités. Un certificat se rapportant à ces statuts a été délivré par le Registraire des entreprises  
 en date du \_\_\_\_\_ et le cas échéant, à l'heure \_\_\_\_\_.  
heures minutes

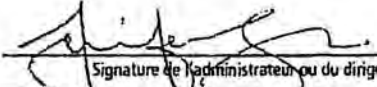
#### 3.2 Corrections demandées

#### 3.3 Droits des actionnaires et des créanciers

Les corrections demandées


- ne risquent pas de porter atteinte aux droits des actionnaires;
- ne risquent pas de porter atteinte aux droits des créanciers;
- risquent de porter atteinte aux droits des actionnaires;
- risquent de porter atteinte aux droits des créanciers.

### 4 Signature

Jennifer Good <hr style="border: 0; border-top: 1px solid black; margin: 0;"/> <small>Nom de l'administrateur ou du dirigeant autorisé</small>	 <hr style="border: 0; border-top: 1px solid black; margin: 0;"/> <small>Signature de l'administrateur ou du dirigeant autorisé</small>
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**Signez et retournez ce formulaire accompagné des documents  
exigés et du paiement requis. Ne pas télécopier.**

Réservé à l'administration

 10VP ZZ 49488680

**Properties**

*PIN* 24978 – 0012 LT *Estate/Qualifier* Fee Simple Lt Conversion Qualified  
*Description* PT LT 12 & 13, CON 1 ESQ , PART 1 & 2 , 20R2983 ; HALTON  
 HILLS/ESQUESING SUBJECT TO EXECUTION 93–02568, IF ENFORCEABLE. ;  
*Address* 10371 ESQ NASS TWN LINE  
 HALTON HILLS

**Applicant(s)**

*Name* GREENWOOD, LORNE DAVID  
*Address for Service* 152 MAIN STREET EAST  
 MILTON, ONTARIO  
 L9T 1N6

This document is not authorized under Power of Attorney by this party.

**Statements**

Schedule: I, LORNE DAVID GREENWOOD, SOLICITOR, TOWN OF MILTON, PROVINCE OF ONTARIO, HEREBY APPLY TO HAVE THE REFERENCE TO EXECUTION NUMBER 93–02568 DELETED FROM THE THUMBNAIL OF THE PARCEL REGISTER FOR THIS PROPERTY. I MAKE OATH AND SAY I AM THE SOLICITOR FOR THE VENDOR FOR THE TRANSFEROR OF THIS PROPERTY, VELLO ENDEL TOOMING, WHO TRANSFERRED THIS PROPERTY TO 747752 ONTARIO INC. ON JULY 17, 2003 BY INSTRUMENT NUMBER HR212275 AND I HAVE RECEIVED A COPY OF A LETTER FROM THE TORONTO–DOMINION BANK TO THE SHERIFF'S OFFICE, REGIONAL MUNICIPALITY OF HALTON REQUESTING THE SHERIFF TO LIFT EXECUTION NUMBER 93–02568. I HAVE FURTHER CAUSED A SEARCH OF THE MINISTRY OF ATTORNEY GENERAL'S EXECUTION BASE IN RESPECT OF WRIT OF EXECUTION NUMBER 93–02568 AND RECEIVED A MESSAGE THAT THE 'WRIT NOT FOUND'.

**Signed By**

Lorne David Greenwood 152 Main Street East acting for Applicant(s) Signed 2003 08 07  
 Milton L9T 1N6  
 Tel 905–693–0336  
 Fax 9056931304

**Submitted By**

LORNE D GREENWOOD 152 Main Street East 2003 08 13  
 Milton L9T 1N6  
 Tel 905–693–0336  
 Fax 9056931304

**Fees/Taxes/Payment**

*Statutory Registration Fee* \$60.00  
*Total Paid* \$60.00

LAND  
REGISTRY  
OFFICE #20

24978-0012 (LT)

PAGE 1 OF 1  
PREPARED FOR DMEDaniel  
ON 2021/12/07 AT 10:49:08

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

PROPERTY DESCRIPTION: PT LT 12 & 13, CON 1 ESQ, PART 1 & 2, 20R2983; HALTON HILLS/ESQUESING

PROPERTY REMARKS:

ESTATE/QUALIFIER:  
FEE SIMPLE  
LT CONVERSION QUALIFIED

RECENTLY:  
FIRST CONVERSION FROM BOOK

PIN CREATION DATE:  
1996/10/28

OWNERS' NAMES  
747752 ONTARIO LTD.

CAPACITY SHARE  
BENO

REG. NUM.	DATE	INSTRUMENT TYPE	AMOUNT	PARTIES FROM	PARTIES TO	CERT/CHKD
<p><b>**EFFECTIVE 2000/07/29 THE NOTATION OF THE "BLOCK IMPLEMENTATION DATE" OF 1996/10/28 ON THIS PIN**</b></p> <p><b>**WAS REPLACED WITH THE "PIN CREATION DATE" OF 1996/10/28**</b></p> <p><b>** PRINTOUT INCLUDES ALL DOCUMENT TYPES (DELETED INSTRUMENTS NOT INCLUDED) **</b></p> <p><b>**SUBJECT, ON FIRST REGISTRATION UNDER THE LAND TITLES ACT, TO:</b></p> <p><b>** SUBSECTION 44(1) OF THE LAND TITLES ACT, EXCEPT PARAGRAPH 11, PARAGRAPH 14, PROVINCIAL SUCCESSION DUTIES *</b></p> <p><b>** AND ESCHEATS OR FORFEITURE TO THE CROWN.</b></p> <p><b>** THE RIGHTS OF ANY PERSON WHO WOULD, BUT FOR THE LAND TITLES ACT, BE ENTITLED TO THE LAND OR ANY PART OF</b></p> <p><b>** IT THROUGH LENGTH OF ADVERSE POSSESSION, PRESCRIPTION, MISDESCRIPTION OR BOUNDARIES SETTLED BY</b></p> <p><b>** CONVENTION.</b></p> <p><b>** ANY LEASE TO WHICH THE SUBSECTION 70(2) OF THE REGISTRY ACT APPLIES.</b></p> <p><b>**DATE OF CONVERSION TO LAND TITLES: 1996/10/28 **</b></p>						
251421	1968/07/17	BYLAW				C
20R2983	1977/02/08	PLAN REFERENCE				C
630081	1985/11/04	DEPOSIT				C
HR212275	2003/07/18	TRANSFER		TOOMING, VELLO ENDEL	747752 ONTARIO INC.	C
		REMARKS: S/T EXEC. NO. 93-02568, TOOMING, VELLO ENDEL;		IF APPLICABLE		
HR218587	2003/08/13	APL (GENERAL)		GREENWOOD, LORNE DAVID		C
HR222971	2003/08/28	APL CH NAME OWNER		747752 ONTARIO INC.	747752 ONTARIO LTD.	C

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.

PROPERTY DESCRIPTION: PT LT 12, CON 1 ESQ , AS IN 618957 ; HALTON HILLS/ESQUESING

PROPERTY REMARKS:

ESTATE/QUALIFIER:  
FEE SIMPLE  
LT CONVERSION QUALIFIED

RECENTLY:  
FIRST CONVERSION FROM BOOK

PIN CREATION DATE:  
1996/10/28

OWNERS' NAMES  
CRH CANADA GROUP INC.

CAPACITY SHARE  
BENO

REG. NUM.	DATE	INSTRUMENT TYPE	AMOUNT	PARTIES FROM	PARTIES TO	CERT/CHKD
<p><b>**EFFECTIVE 2000/07/29 THE NOTATION OF THE "BLOCK IMPLEMENTATION DATE" OF 1996/10/28 ON THIS PIN**</b></p> <p><b>**WAS REPLACED WITH THE "PIN CREATION DATE" OF 1996/10/28**</b></p> <p><b>** PRINTOUT INCLUDES ALL DOCUMENT TYPES (DELETED INSTRUMENTS NOT INCLUDED) **</b></p> <p><b>**SUBJECT, ON FIRST REGISTRATION UNDER THE LAND TITLES ACT, TO:</b></p> <p><b>** SUBSECTION 44(1) OF THE LAND TITLES ACT, EXCEPT PARAGRAPH 11, PARAGRAPH 14, PROVINCIAL SUCCESSION DUTIES *</b></p> <p><b>** AND ESCHEATS OR FORFEITURE TO THE CROWN.</b></p> <p><b>** THE RIGHTS OF ANY PERSON WHO WOULD, BUT FOR THE LAND TITLES ACT, BE ENTITLED TO THE LAND OR ANY PART OF</b></p> <p><b>** IT THROUGH LENGTH OF ADVERSE POSSESSION, PRESCRIPTION, MISDESCRIPTION OR BOUNDARIES SETTLED BY</b></p> <p><b>** CONVENTION.</b></p> <p><b>** ANY LEASE TO WHICH THE SUBSECTION 70(2) OF THE REGISTRY ACT APPLIES.</b></p> <p><b>**DATE OF CONVERSION TO LAND TITLES: 1996/10/28 **</b></p>						
251421	1968/07/17	BYLAW				C
H809198	1999/09/01	TRANSFER	\$200,000	MACLEOD, RONALD STEWART MACLEOD, NORA LORRAINE	ST. LAWRENCE CEMENT INC.	C
REMARKS: PLANNING ACT STATEMENTS						
HR1036516	2012/07/26	APL CH NAME OWNER		ST. LAWRENCE CEMENT INC.	HOLCIM (CANADA) INC.	C
HR1331737	2016/01/25	APL CH NAME OWNER		HOLCIM (CANADA) INC.	CRH CANADA GROUP INC.	C

LAND  
REGISTRY  
OFFICE #20

24978-0014 (LT)

PAGE 1 OF 1  
PREPARED FOR DMEDaniel  
ON 2021/12/07 AT 10:45:56

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

PROPERTY DESCRIPTION: LT 5, RCP 1551 ; PT LT 12, CON 1 ESQ , AS IN 469952 & 120626 ; HALTON HILLS/ESQUESING

PROPERTY REMARKS:

ESTATE/QUALIFIER:

FEE SIMPLE  
LT CONVERSION QUALIFIED

RECENTLY:

FIRST CONVERSION FROM BOOK

PIN CREATION DATE:

1996/10/28

OWNERS' NAMES

1336811 ONTARIO INC.

CAPACITY SHARE

REG. NUM.	DATE	INSTRUMENT TYPE	AMOUNT	PARTIES FROM	PARTIES TO	CERT/CHKD
<p><b>**EFFECTIVE 2000/07/29 THE NOTATION OF THE "BLOCK IMPLEMENTATION DATE" OF 1996/10/28 ON THIS PIN**</b></p> <p><b>**WAS REPLACED WITH THE "PIN CREATION DATE" OF 1996/10/28**</b></p> <p><b>** PRINTOUT INCLUDES ALL DOCUMENT TYPES (DELETED INSTRUMENTS NOT INCLUDED) **</b></p> <p><b>**SUBJECT, ON FIRST REGISTRATION UNDER THE LAND TITLES ACT, TO:</b></p> <p><b>** SUBSECTION 44(1) OF THE LAND TITLES ACT, EXCEPT PARAGRAPH 11, PARAGRAPH 14, PROVINCIAL SUCCESSION DUTIES *</b></p> <p><b>** AND ESCHEATS OR FORFEITURE TO THE CROWN.</b></p> <p><b>** THE RIGHTS OF ANY PERSON WHO WOULD, BUT FOR THE LAND TITLES ACT, BE ENTITLED TO THE LAND OR ANY PART OF</b></p> <p><b>** IT THROUGH LENGTH OF ADVERSE POSSESSION, PRESCRIPTION, MISDESCRIPTION OR BOUNDARIES SETTLED BY</b></p> <p><b>** CONVENTION.</b></p> <p><b>** ANY LEASE TO WHICH THE SUBSECTION 70(2) OF THE REGISTRY ACT APPLIES.</b></p> <p><b>**DATE OF CONVERSION TO LAND TITLES: 1996/10/28 **</b></p>						
Z120626	1961/02/15	REST COV APL ANNEX				C
251421	1968/07/17	BYLAW				C
HR1674430	2019/12/23	TRANSFER	\$2,100,000	LAFARGE CANADA INC.	1336811 ONTARIO INC.	C
REMARKS: PLANNING ACT STATEMENTS.						

# Transfer/Deed of Land

**A**

Form 1 - Land Registration Reform Act

FOR OFFICE USE ONLY

AT 809198

RECEIPT  
SEP 1 PM 4 24  
New Property Identifiers

Executions

(1) Registry  Land Titles  (2) Page 1 of 2 pages

(3) Property Identifier(s) Block Property  
24978-0013 (LT) Additional: See Schedule

(4) Consideration  
Two Hundred Thousand ----- Dollars \$ 200,000.00

(5) Description This is a: Property Division  Property Consolidation   
Part of Lot 12  
Concession 1 ESQ  
Town of Halton Hills  
Regional Municipality of Halton  
Land Titles Division of Halton (No. 20) at Milton  
As in Instrument No. 618957

(6) This Document Contains (a) Redescription New Easement Plan/Sketch  (b) Schedule for: Description  Additional Parties  Other  (7) Interest/Estate Transferred Fee Simple

(8) Transferor(s) The transferor hereby transfers the land to the transferee and certifies that the transferor is at least eighteen years old and that We are spouses of one another.

Name(s)	Signature(s)	Date of Signature Y M D
MACLEOD, Nora Lorraine	<i>Nora Lorraine Macleod</i>	1999 08 31
MACLEOD, Ronald Stewart	<i>Ronald Stewart Macleod</i>	1999 08 31

(9) Spouse(s) of Transferor(s) I hereby consent to this transaction  
Name(s) \_\_\_\_\_ Signature(s) \_\_\_\_\_ Date of Signature Y M D

(10) Transferor(s) Address for Service R. R. # 1, Acton, Ontario L7J 2L7

(11) Transferee(s) ST. LAWRENCE CEMENT INC. Date of Birth Y M D

(12) Transferee(s) Address for Service 3300 Highway # 7, Suite 400, Concord, Ontario L4K 4M3

(13) Transferor(s) The transferor verifies that to the best of the transferor's knowledge and belief, this transfer does not contravene section 50 of the Planning Act.

Signature	Date of Signature Y M D	Signature	Date of Signature Y M D
<i>Ronald Stewart Macleod</i>	1999 08 31	<i>Nora Lorraine Macleod</i>	1999 08 31

Solicitor for Transferor(s) I have explained the effect of section 50 of the Planning Act to the transferor and I have made inquiries of the transferor to determine that this transfer does not contravene that section and based on the information supplied by the transferor, to the best of my knowledge and belief, this transfer does not contravene that section. I am an Ontario solicitor in good standing.

Name and Address of Solicitor Lorne D. Greenwood  
62 Main Street East, Milton

Signature *Lorne D. Greenwood* Date of Signature 1999 08 31

(14) Solicitor for Transferee(s) I have investigated the transferor(s) title to this land and to abutting land where relevant and I am satisfied that the title records reveal no contravention as set out in subclause 50 (22) (c) (ii) of the Planning Act and that to the best of my knowledge and belief this transfer does not contravene section 50 of the Planning Act. I act independently of the solicitor for the transferor(s) and I am an Ontario solicitor in good standing.

Name and Address of Solicitor Neil G. Davis  
8 Nelson Street West, #600  
Brampton, Ontario. L6X 4J2

Signature *Neil G. Davis* Date of Signature 1999 08 31

(15) Assessment Roll Number of Property City Mun Map Sub Par 24 15 070 004 28000

(16) Municipal Address of Property R. R. # 1 Acton, Ontario L7J 2L7

(17) Document Prepared by: LORNE D. GREENWOOD  
Barrister & Solicitor  
62 Main Street East  
Milton, Ontario  
L7J 1N3

Fees and Tax	
Registration Fee	50-
Land Transfer Tax	1725-
Total	1775-

OPTIONAL  
Planning Act -  
After Statement by  
Solicitor for Transferee(s)  
here, if necessary

FOR OFFICE USE ONLY

IN THE MATTER OF THE CONVEYANCE OF (insert brief description of land) Part of Lot 12, Concession 1, Esquesing, Town of Halton Hills, Regional Municipality of Halton

BY (print names of all transferors in full) Nora Lorraine MacLeod and Ronald Stewart MacLeod

TO (see instruction 1 and print names of all transferees in full) St. Lawrence Cement Inc.

I, (see instruction 2 and print name(s) in full) Neil G. Davis

MAKE OATH AND SAY THAT:

1. I am (place a clear mark within the square opposite that one of the following paragraphs that describes the capacity of the deponent(s)): (see instruction 2)

- (a) A person in trust for whom the land conveyed in the above-described conveyance is being conveyed;
- (b) A trustee named in the above-described conveyance to whom the land is being conveyed;
- (c) A transferee named in the above-described conveyance;

(d) The authorized agent or solicitor acting in this transaction for (insert name(s) of principal(s)) St. Lawrence Cement Inc.

described in paragraph(s) (d), (c) above; (strike out references to inapplicable paragraph(s))

(e) The President, Vice-President, Manager, Secretary, Director, or Treasurer authorized to act for (insert name(s) of corporation(s)) \_\_\_\_\_ described in paragraph(s) (a), (b), (c) above; (strike out references to inapplicable paragraph(s))

(f) A transferee described in paragraph ( ) (insert only one of paragraph (a), (b) or (c) above, as applicable) and am making this affidavit on my own behalf and on behalf of (insert name of spouse) \_\_\_\_\_ who is my spouse described in paragraph ( ) (insert only one of paragraph (a), (b) or (c) above, as applicable) and as such, I have personal knowledge of the facts herein deposed to.

2. (To be completed where the value of the consideration for the conveyance exceeds \$400,000).

- I have read and considered the definition of "single family residence" set out in clause 1(1)(ja) of the Act. The land conveyed in the above-described conveyance
- contains at least one and not more than two single family residences. *Note: Clause 2(1)(d) imposes an additional tax at the rate of one-half of one per cent upon the value of consideration in excess of \$400,000 where the conveyance contains at least one and not more than two single family residences.*
  - does not contain a single family residence.
  - contains more than two single family residences. (see instruction 3)

3. I have read and considered the definitions of "non-resident corporation" and "non-resident person" set out respectively in clauses 1(1)(f) and (g) of the Act and each of the following persons to whom or in trust for whom the land is being conveyed in the above-described conveyance is a "non-resident corporation" or a "non-resident person" as set out in the Act. (see instructions 4 and 5) none

4. THE TOTAL CONSIDERATION FOR THIS TRANSACTION IS ALLOCATED AS FOLLOWS:

(a) Monies paid or to be paid in cash	\$ 200,000.00	
(b) Mortgages (i) Assumed (show principal and interest to be credited against purchase price)	\$ nil	
(ii) Given back to vendor	\$ nil	
(c) Property transferred in exchange (detail below)	\$ nil	
(d) Securities transferred to the value of (detail below)	\$ nil	
(e) Liens, legacies, annuities and maintenance charges to which transfer is subject	\$ nil	
(f) Other valuable consideration subject to land transfer tax (detail below)	\$ nil	
(g) VALUE OF LAND, BUILDING, FIXTURES AND GOODWILL SUBJECT TO LAND TRANSFER TAX (Total of (a) to (f))	\$ 200,000.00	\$ 200,000.00
(h) VALUE OF ALL CHATTELS - items of tangible personal property (Retail Sales Tax is payable on the value of all chattels unless exempt under the provisions of the "Retail Sales Tax Act", R.S.O. 1990, c.R.31 as amended)	\$ nil	
(i) Other consideration for transaction not included in (g) or (h) above	\$ nil	
(j) TOTAL CONSIDERATION	\$ 200,000.00	

All Blanks Must Be Filled In. Insert "Nil" Where Applicable.

5. If consideration is nominal, describe relationship between transferor and transferee and state purpose of conveyance. (see instruction 6)

n/a

6. If the consideration is nominal, is the land subject to any encumbrance? n/a

7. Other remarks and explanations, if necessary. n/a

Sworn before me at the City of Brampton,  
in the Regional Municipality of Peel,  
this 5th day of August 19 99

VIVIANNA CARMICHAEL a  
Commissioner, etc., Regional Municipality  
of Peel, for Davis Webb Schulze & Moon,  
A Commissioner for taking Affidavits, etc. Barristers and Solicitors.

Expires June 20, 2000.

*(Signature)*  
Signature(s)

Property Information Record

For Land Registry Office Use Only

- A. Describe nature of instrument: Transfer/Deed of Land
- B. (i) Address of property being conveyed (if available) R. R. #1, Acton, Ontario, L7J 2L7  
(ii) Assessment Roll No. (if available) 24 15 070 004 28000
- C. Mailing address(es) for future Notices of Assessment under the Assessment Act for property being conveyed (see instruction 7) 3300 Highway #7, Suite 400, Concord, Ontario, L4K 4M3
- D. (i) Registration number for last conveyance of property being conveyed (if available) unknown  
(ii) Legal description of property conveyed: Same as in D.(i) above. Yes  No  Not known
- E. Name(s) and address(es) of each transferee's solicitor  
Neil G. Davis, Davis Webb Schulze & Moon, 8 Nelson Street West, Suite 600, Brampton, Ontario L6X 4J2

Registration No.	
Registration Date	Land Registry Office No.

School Tax Support (Voluntary Election) See reverse for explanation

- (a) Are all individual transferees Roman Catholic? Yes  No
  - (b) If Yes, do all individual transferees wish to be Roman Catholic Separate School Supporters? Yes  No
  - (c) Do all individual transferees have French Language Education Rights? Yes  No
  - (d) If Yes, do all individual transferees wish to support the French Language School Board (where established)? Yes  No
- (e) If Yes, do all individual transferees wish to support the French Language School Board (where established)? Yes  No
- (f) If Yes, do all individual transferees wish to support the French Language School Board (where established)? Yes  No
- (g) If Yes, do all individual transferees wish to support the French Language School Board (where established)? Yes  No



**Subject to Writs if enforceable, as noted below**

<i>Writ Number</i>	<i>Name</i>
93-02568	TOOMING, VELLO ENDEL

**Properties**

<i>PIN</i>	24978 - 0012 LT	<i>Estate/Qualifier</i>	Fee Simple Lt Conversion Qualified
<i>Description</i>	PT LT 12 & 13, CON 1 ESQ, PART 1 & 2, 20R2983; HALTON HILLS/ESQUESING; SUBJECT TO EXECUTION 92-02392, IF ENFORCEABLE.; SUBJECT TO EXECUTION 93-02568, IF ENFORCEABLE.;		
<i>Address</i>	10371 ESQ NASS TWN LINE HALTON HILLS		

**Consideration**

<i>Consideration</i>	\$0.00
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**Transferor(s)**

The transferor(s) hereby transfers the land to the transferee(s).

<i>Name</i>	TOOMING, VELLO ENDEL
<i>Address for Service</i>	10580 TOWNLINE ROAD MILTON, ONTARIO

I am at least 18 years of age.

I am not a spouse

This document is not authorized under Power of Attorney by this party.

<i>Writ Number</i>	<i>Name</i>	<i>Statement</i>
93-02568	TOOMING, VELLO ENDEL	This property is subject to this writ

**Transferee(s)**

<i>Name</i>	747752 ONTARIO INC.	<i>Capacity</i>	Beneficial Owner
<i>Address for Service</i>	3300 Highway #7, Suite 400, Concord, Ontario, L4K 4M3		

STATEMENT OF THE TRANSFEROR (S): The transferor(s) verifies that to the best of the transferor's knowledge and belief, this transfer does not contravene the Planning Act.

STATEMENT OF THE SOLICITOR FOR THE TRANSFEROR (S): I have explained the effect of the Planning Act to the transferor(s) and I have made inquiries of the transferor(s) to determine that this transfer does not contravene that Act and based on the information supplied by the transferor(s), to the best of my knowledge and belief, this transfer does not contravene that Act. I am an Ontario solicitor in good standing.

STATEMENT OF THE SOLICITOR FOR THE TRANSFEREE (S): I have investigated the title to this land and to abutting land where relevant and I am satisfied that the title records reveal no contravention as set out in the Planning Act, and to the best of my knowledge and belief this transfer does not contravene the Planning Act. I act independently of the solicitor for the transferor(s) and I am an Ontario solicitor in good standing.

**Signed By**

Lorne David Greenwood	152 Main Street East Milton L9T 1N6	acting for Transferor(s)	Signed	2003 07 17
Tel	9056930336			
Fax	9056931304			
Neil Grenville Davis	800- 24 Queen St. East Suit Brampton L6V 1A3	acting for Transferee(s)	Signed	2003 07 17
Tel	905-451-6714			
Fax	9054541876			

**Submitted By**

DAVIS, WEBB, SCHULZE & MOON 800- 24 Queen St. East Suit  
Brampton L6V 1A3

2003 07 18

Tel 905-451-6714

Fax 9054541876

**Fees/Taxes/Payment**

<i>Statutory Registration Fee</i>	\$60.00
<i>Land Transfer Tax</i>	\$0.00
<i>Total Paid</i>	\$60.00

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**LAND TRANSFER TAX STATEMENTS**

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In the matter of the conveyance of: 24978 – 0012 PT LT 12 & 13, CON 1 ESQ , PART 1 & 2 , 20R2983 ; HALTON HILLS/ESQUESING ; SUBJECT TO EXECUTION 92–02392, IF ENFORCEABLE. ; SUBJECT TO EXECUTION 93–02568, IF ENFORCEABLE. ;

---

BY: TOOMING, VELLO ENDEL

TO: 747752 ONTARIO INC.

Beneficial Owner

---

1. PAUL OSTRANDER

I am

- (a) A person in trust for whom the land conveyed in the above–described conveyance is being conveyed;
- (b) A trustee named in the above–described conveyance to whom the land is being conveyed;
- (c) A transferee named in the above–described conveyance;
- (d) The authorized agent or solicitor acting in this transaction for \_\_\_\_\_ described in paragraph(s) ( ) above.
- (e) The President, Vice–President, Manager, Secretary, Director, or Treasurer authorized to act for 747752 ONTARIO INC. described in paragraph(s) (c) above.
- (f) A transferee described in paragraph() and am making these statements on my own behalf and on behalf of \_\_\_\_\_who is my spouse described in paragraph( ) and as such, I have personal knowledge of the facts herein deposed to.
- (g) A transferee described in paragraph() and am making these statements on my own behalf and on behalf of \_\_\_\_\_who is my same–sex partner described above in paragraph(s) ( ).
- 

3. The total consideration for this transaction is allocated as follows:

(a) Monies paid or to be paid in cash	0.00
(b) Mortgages (i) assumed (show principal and interest to be credited against purchase price)	0.00
(ii) Given Back to Vendor	0.00
(c) Property transferred in exchange (detail below)	0.00
(d) Fair market value of the land(s)	0.00
(e) Liens, legacies, annuities and maintenance charges to which transfer is subject	0.00
(f) Other valuable consideration subject to land transfer tax (detail below)	0.00
(g) Value of land, building, fixtures and goodwill subject to land transfer tax (total of (a) to (f))	0.00
(h) VALUE OF ALL CHATTELS –items of tangible personal property	0.00
(i) Other considerations for transaction not included in (g) or (h) above	0.00
(j) Total consideration	0.00

---

4.

Explanation for nominal considerations:

s) other: LAND EXCHANGE PIN 24978–0148 – 10580 Town Line, Halton Hills – Part Lot 14, Conc. 7, Nassagaweya, Part 1 on Reference Plan 20R–15065, Milton

---

**PROPERTY Information Record**

A. Nature of Instrument: Transfer  
LRO 20 Registration No. HR212275 Date: 2003/07/18

B. Property(s): PIN 24978 – 0012 Address 10371 ESQ NASS TWN LINE Assessment 2415070 – 00428010  
HALTON HILLS Roll No

C. Address for Service: 3300 Highway #7, Suite 400,  
Concord, Ontario,  
L4K 4M3

D. (i) Last Conveyance(s): PIN 24978 – 0012 Registration No. 609072  
(ii) Legal Description for Property Conveyed: Same as in last conveyance? Yes  No  Not known

E. Tax Statements Prepared By: Neil Grenville Davis  
800– 24 Queen St. East Suit  
Brampton L6V 1A3

**Properties**

*PIN* 24978 - 0014 LT *Interest/Estate* Fee Simple  
*Description* LT 5, RCP 1551 ; PT LT 12, CON 1 ESQ , AS IN 469952 & 120626 ; HALTON HILLS/ESQUESING  
*Address* 10305 ESQ NASS TWN LINE ES  
 HALTON HILLS

**Consideration**

*Consideration* \$2,100,000.00

**Transferor(s)**

The transferor(s) hereby transfers the land to the transferee(s).

*Name* LAFARGE CANADA INC.  
*Address for Service* 6509 Airport Road, Mississauga, Ontario  
 L4V 1S7

I, Chris McGuckin - Director, Land - Eastern Canada, have the authority to bind the corporation.

This document is not authorized under Power of Attorney by this party.

**Transferee(s)****Capacity****Share**

*Name* 1336811 ONTARIO INC.  
*Address for Service* 2300 Steeles Avenue West, Suite 400, Concord, Ontario L4K  
 5X6

**Statements**

STATEMENT OF THE TRANSFEROR (S): The transferor(s) verifies that to the best of the transferor's knowledge and belief, this transfer does not contravene the Planning Act.

STATEMENT OF THE SOLICITOR FOR THE TRANSFEROR (S): I have explained the effect of the Planning Act to the transferor(s) and I have made inquiries of the transferor(s) to determine that this transfer does not contravene that Act and based on the information supplied by the transferor(s), to the best of my knowledge and belief, this transfer does not contravene that Act. I am an Ontario solicitor in good standing.

STATEMENT OF THE SOLICITOR FOR THE TRANSFEREE (S): I have investigated the title to this land and to abutting land where relevant and I am satisfied that the title records reveal no contravention as set out in the Planning Act, and to the best of my knowledge and belief this transfer does not contravene the Planning Act. I act independently of the solicitor for the transferor(s) and I am an Ontario solicitor in good standing.

**Signed By**

Stephen Ronald Haber 20 Queen St W., Suite 3000 acting for Signed 2019 12 23  
 Toronto Transferor(s)  
 M5H 3R3

Tel 416-597-6888

Fax 416-597-8897

I am the solicitor for the transferor(s) and I am not one and the same as the solicitor for the transferee(s).

I have the authority to sign and register the document on behalf of the Transferor(s).

Neil Morley Smiley 333 Bay Street, Suite 2400, Bay acting for Signed 2019 12 22  
 Adelaide Centre Transferee(s)  
 Toronto  
 M5H 2T6

Tel 416-366-8381

Fax 416-364-7813

I am the solicitor for the transferee(s) and I am not one and the same as the solicitor for the transferor(s).

I have the authority to sign and register the document on behalf of the Transferee(s).

**Submitted By**

FASKEN MARTINEAU DUMOULIN LLP 333 Bay Street, Suite 2400, Bay 2019 12 23  
 Adelaide Centre  
 Toronto  
 M5H 2T6

Tel 416-366-8381

Fax 416-364-7813

**Fees/Taxes/Payment**

Statutory Registration Fee	\$65.05
Provincial Land Transfer Tax	\$38,475.00
Total Paid	\$38,540.05

**File Number**

Transferor Client File Number :	191687 RH
Transferee Client File Number :	229720.01141/11889

---

**LAND TRANSFER TAX STATEMENTS**

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In the matter of the conveyance of: 24978 - 0014 LT 5, RCP 1551 ; PT LT 12, CON 1 ESQ , AS IN 469952 & 120626 ; HALTON HILLS/ESQUESING

---

BY: LAFARGE CANADA INC.

TO: 1336811 ONTARIO INC.

---

1. JENNIFER GOOD

I am

- (a) A person in trust for whom the land conveyed in the above-described conveyance is being conveyed;
- (b) A trustee named in the above-described conveyance to whom the land is being conveyed;
- (c) A transferee named in the above-described conveyance;
- (d) The authorized agent or solicitor acting in this transaction for \_\_\_\_\_ described in paragraph(s) ( ) above.
- (e) The President, Vice-President, Manager, Secretary, Director, or Treasurer authorized to act for 1336811 ONTARIO INC. described in paragraph(s) (c) above.
- (f) A transferee described in paragraph ( ) and am making these statements on my own behalf and on behalf of \_\_\_\_\_ who is my spouse described in paragraph ( ) and as such, I have personal knowledge of the facts herein deposed to.
- 

2. I have read and considered the definition of "single family residence" set out in subsection 1(1) of the Act. The land being conveyed herein:  
does not contain a single family residence or contains more than two single family residences.
- 

3. **The total consideration for this transaction is allocated as follows:**

(a) Monies paid or to be paid in cash	\$2,100,000.00
(b) Mortgages (i) assumed (show principal and interest to be credited against purchase price)	\$0.00
(ii) Given Back to Vendor	\$0.00
(c) Property transferred in exchange (detail below)	\$0.00
(d) Fair market value of the land(s)	\$0.00
(e) Liens, legacies, annuities and maintenance charges to which transfer is subject	\$0.00
(f) Other valuable consideration subject to land transfer tax (detail below)	\$0.00
(g) Value of land, building, fixtures and goodwill subject to land transfer tax (total of (a) to (f))	\$2,100,000.00
(h) VALUE OF ALL CHATTELS -items of tangible personal property	\$0.00
(i) Other considerations for transaction not included in (g) or (h) above	\$0.00
(j) Total consideration	\$2,100,000.00

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6. Other remarks and explanations, if necessary.

- The information prescribed for purposes of section 5.0.1 of the Land Transfer Tax Act is not required to be provided for this conveyance.
  - The transferee(s) has read and considered the definitions of "designated land", "foreign corporation", "foreign entity", "foreign national", "specified region" and "taxable trustee" as set out in subsection 1(1) of the Land Transfer Tax Act. The transferee(s) declare that this conveyance is not subject to additional tax as set out in subsection 2(2.1) of the Act because:
  - (b) This is not a conveyance of "designated land".
  - The transferee(s) declare that they will keep at their place of residence in Ontario (or at their principal place of business in Ontario) such documents, records and accounts in such form and containing such information as will enable an accurate determination of the taxes payable under the Land Transfer Tax Act for a period of at least seven years.
  - The transferee(s) agree that they or the designated custodian will provide such documents, records and accounts in such form and containing such information as will enable an accurate determination of the taxes payable under the Land Transfer Tax Act, to the Ministry of Finance upon request.
- 

**PROPERTY Information Record**

A. Nature of Instrument: Transfer  
LRO 20 Registration No. HR1674430 Date: 2019/12/23

B. Property(s): PIN 24978 - 0014 Address 10305 ESQ NASS Assessment -  
TWN LINE ES Roll No  
HALTON HILLS

C. Address for Service: 2300 Steeles Avenue West, Suite 400, Concord, Ontario L4K 5X6

D. (i) Last Conveyance(s): PIN 24978 - 0014 Registration No. 469952  
(ii) Legal Description for Property Conveyed: Same as in last conveyance? Yes  No  Not known

E. Tax Statements Prepared By: Neil Morley Smiley  
333 Bay Street, Suite 2400, Bay Adelaide Centre  
Toronto M5H 2T6

# Tab **12**

## **Recommended Aggregate Resources Act Licence**

Pursuant to the Aggregate Resources Act and Regulations hereunder, and subject to the limitations thereof and to the conditions of the licence and the requirements of the site plan, this Class A licence is issued to:

Dufferin Aggregates, a division of CRH Canada Group Inc.  
2300 Steeles Avenue West, 4<sup>th</sup> Floor  
Concord, ON  
L4K 5X6

to operate a Quarry on a 30.2 hectare site located in Part of Lots 11 and 12, Concession 1 (former geographic Township of Esquesing), Town of Halton Hills, Region of Halton.

The licence is subject to the following conditions: As shown on attached Schedules “A” and “B”.



## SCHEDULE "A"

### Prescribed Conditions

Licence #: \_\_\_\_\_

Lot: Pt. Lt. 11 & 12, Con. 1 (former geographic Township of Esquesing), Town of Halton Hills, Region of Halton

Licensee: Dufferin Aggregates, a division of CRH Canada Group Inc.

Category: Class "A" Quarry Below Water

This licence is subject to the following conditions:

1. The licensee shall apply water or another provincially approved dust suppressant to internal haul roads and processing areas, as necessary to mitigate dust, if the pit or quarry is located within 1,000 metres of a sensitive receptor.
2. The licensee shall equip any processing equipment that creates dust with dust suppressing or collection devices if it is located within 300 metres of a sensitive receptor.
3. The licensee shall obtain an environmental compliance approval under the *Environmental Protection Act* where required to carry out operations at the pit or quarry.
4. The licensee shall obtain a permit to take water under the *Ontario Water Resources Act* where required to carry out operations at the pit or quarry. O. Reg. 466/20, s. 2 (1).
5. The licensee shall ensure that fuel storage tanks are installed and maintained in accordance with the *Technical Standards and Safety Act, 2000*.
6. The licensee shall ensure that a spill contingency plan is developed prior to any operation of the pit or quarry, and followed during the operations. O. Reg. 466/20, s. 2 (1).
7. No blasting shall occur on a holiday, or between 6 p.m. and 8 a.m., unless the permittee holds an aggregate permit and there is no sensitive receptor located within 2,000 metres of the area in which the blasting takes place.
8. The licensee shall monitor all blasts for ground vibration and blast overpressure and prepare blast monitoring reports in accordance with provincial guidelines on limits on blast overpressure and ground vibration for blasting operations, unless the permittee holds an aggregate permit and there is no sensitive receptor located within 500 metres of the area in which the blasting takes place.
9. The licensee shall retain the blast monitoring reports prepared under paragraph 2 for a period of seven years after each blast. O. Reg. 466/20, s. 2 (1).
10. The licensee shall mitigate the amount of dust generated at the site of the pit or quarry to minimize any off-site impact. O. Reg. 466/20, s. 2 (1).

11. The licensee shall track and report the quantity of recycled aggregate removed from the site each month in an annual production report. O. Reg. 466/20, s. 2 (1).

**SCHEDULE “B”**

Licence #: \_\_\_\_\_

Lot: Pt. Lt. 11 & 12, Con. 1 (former geographic Township of Esquesing), Town of Halton Hills,  
Region of Halton

Licensee: Dufferin Aggregates, a division of CRH Canada Group Inc.

Category: Class “A” Quarry Below Water

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This licence is subject to the following conditions:

1. The amount of aggregate to be removed from this licenced property is unlimited in any calendar year.

# Tab **13**

# **Proposed Niagara Escarpment Plan Amendment No. XX**

## **Introductory Statement**

All of this part constitutes Amendment No. XX to the Niagara Escarpment Plan (2017).

The proposed mapping changes relate to 30.6 hectares of land, comprising of 30.2 hectares in Part of Lots 11 and 12, Concession 1 (former geographic Township of Esquesing), Town of Halton Hills, Regional Municipality of Halton for the Milton Quarry East Extension and 0.4 hectares of land in Part of Lot 13, Concession 1 (former geographic Township of Esquesing), Town of Halton Hills, Regional Municipality of Halton for the previously approved Milton Quarry Extension. The portion of within the Milton Quarry Extension is to redesignate the 15 metre setback that is already located within the Milton Quarry Extension Licence area, but not currently designated to permit extraction.

## **DETAILS OF THE AMENDMENT**

This Amendment consists of two (2) items:

Item 1. That the Niagara Escarpment Plan Map 3 – Halton Region, is hereby amended by redesignating 30.6 hectares of land legally described as Part of Lots 11, 12 and 13, Concession 1 (former geographic Township of Esquesing), Town of Halton Hills, Regional Municipality of Halton from “Escarpment Rural Area” to “Mineral Resource Extraction Area” as shown on, as shown on Schedule “A” attached hereto and forming Part of this Amendment; and

Item 2. That Section 1.9.3.XX be added as follows:

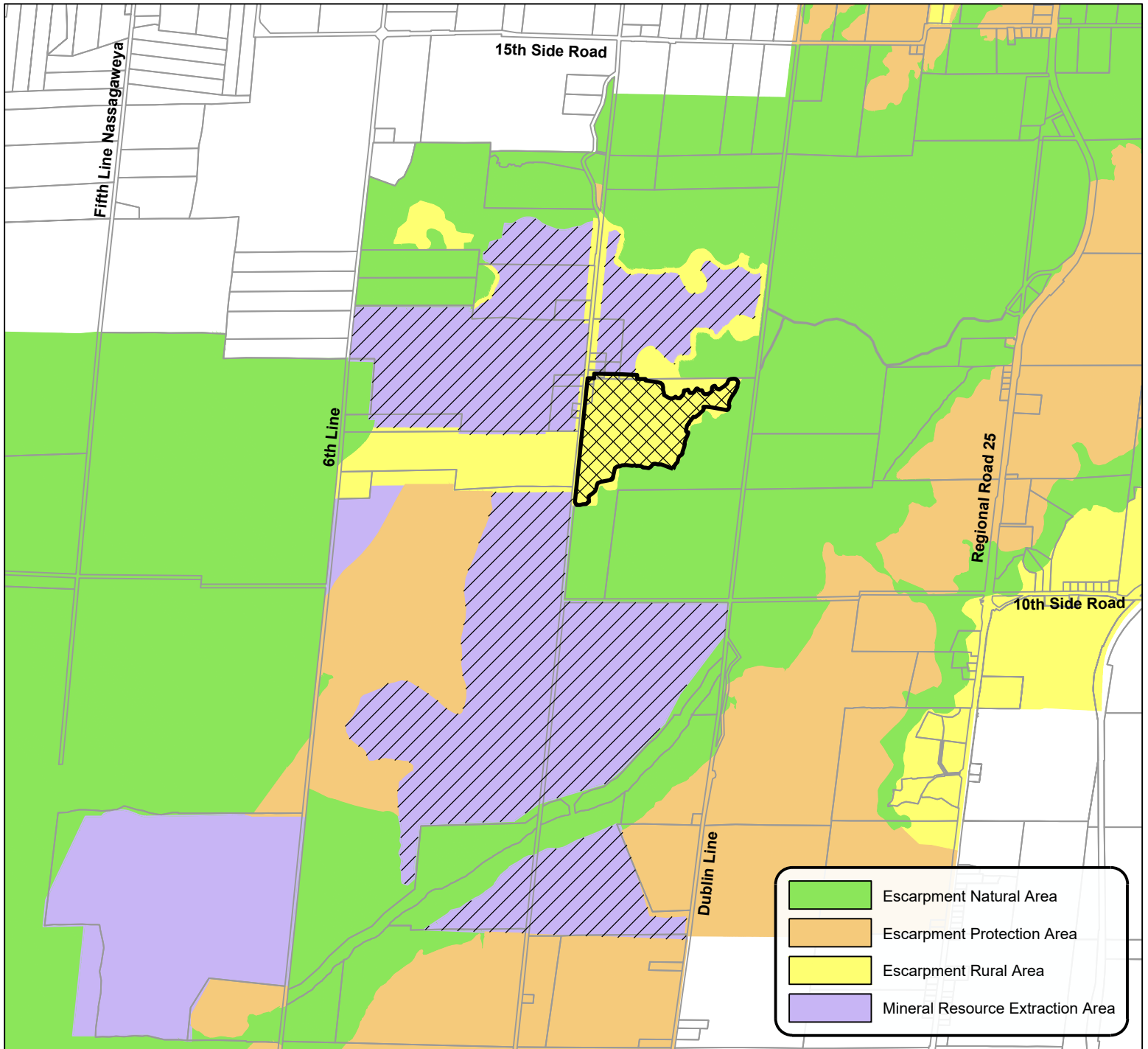
Notwithstanding the policies of the NEP including the permitted uses under section 1.9 Mineral Resource Extraction Area and the definition of accessory use in Appendix 2 of this Plan, for the quarry operating on property described as Part of Lots 8-10, 13 and 14, Concession 1 (former geographic Township of Esquesing), Town of Halton Hills, Regional Municipality of Halton and Part of Lots 8-14, Concession 7 (former geographic Township of Nassagaweya), Town of Milton, Regional Municipality of Halton, the office, maintenance buildings, facilities for washing, processing and stockpiling of aggregate, truck washing facility, recycling facilities and the entrance may be used for the purpose of supporting the extraction of aggregate from the area approved under Amendment XX to the NEP and licences under the Aggregate Resources Act located at Part of Lots 11 and 12, Concession 1 (former geographic Township of Esquesing), Town of Halton Hills, Regional Municipality of Halton provided, and only while the two sites are actively operated by a single licensee, as an integrated operation.



# Schedule 'A' Niagara Escarpment Plan Amendment Area

Part of Lots 8-14, Concession 7  
Geographic Township of Nassagaweya  
Town of Milton  
Regional Municipality of Halton

Part of Lots 8-14, Concession 1  
Geographic Township of Esquesing  
Town of Halton Hills  
Regional Municipality of Halton



Land to be re-designated from Escarpment Rural Area to Mineral Resource Extraction Area



Land subject to site specific policy 1.9.3 xx

Please note the NEC mapping does not accurately reflect the licence boundaries of the existing quarries.

# Tab **14**

## **Recommended NEC Development Permit conditions of approval:**

1. Non-fulfillment or breach of anyone of the conditions shall render the Development Permit void. See Schedule A for the area applicable to the Development Permit.
2. A site inspection(s) to the property may be undertaken by the Niagara Escarpment Commission to ensure that the development complies with the conditions of the Development Permit. Persons may accompany the Commission representative on the site inspection(s) who possess expert or special knowledge related to the conditions of the Development Permit.
3. No building permit or other licence, certificate, permit, or other similar permission relating to development shall be issued or be considered to be in force unless a Development Permit is in effect.
4. The Development Permit shall expire three (3) years from its date of issuance unless the development has commenced and a valid quarry licence has been issued within three (3) years.
5. Development shall take place in accordance with Operational Plans and Progressive Rehabilitation and Final Rehabilitation Plans (the "Plans"), dated December 2021, as may be amended subject to the applicable approvals.
6. No grading of the existing contours in the area of the licence or licences is/are permitted, with the exception of what is permitted on the Plans, dated December 2021, including (but not restricted to) installation of the water management system, stripping of overburden, construction of berms, internal haul routes, stockpiling of overburden, removal and stockpiling of aggregate, progressive and final rehabilitation.
7. Prior to the issuance of a Development Permit, Niagara Escarpment Plan Amendment XX for the Milton Quarry East Extension shall be approved.
8. Prior to the issuance of a Development Permit, the Amendments to the Halton Regional Official Plan and the Town of Halton Hills Official Plan to permit the Milton Quarry East Extension shall be approved.
9. Prior to the issuance of a Development Permit, the Niagara Escarpment Commission shall be notified that a Class "A" (quarry below water table) licence or licences pursuant to the Aggregate Resources Act will be issued. Once issued, a copy of the licence or licences and all associated Plans shall be filed with the Niagara Escarpment Commission.
10. This Permit includes the installation of monitoring wells, ponds, ditches, piping, associated servicing and facilities and all other works related to the implementation of the water mitigation and management system both inside and outside the licensed boundary, as set out in the Adaptive Management Plan.



11. This permit includes all works at the existing Milton Quarry, Milton Quarry Extension, and buffer lands, located on as Part of Lots 8, 9 and 10, and Lots 11, 12, 13 and 14, Concession 1 (former geographic Township of Esquesing), Town of Halton Hills, Regional Municipality of Halton and Part Lots 7, 8, 12, 13, 14 and 15, Lots 9, 10 and 11, Concession 7 (former geographic Township of Nassagaweya), Town of Milton, Regional Municipality of Halton to facilitate a revision to the existing approved rehabilitation plan and the processing, washing and shipping of aggregate extracted from the proposed extension. These activities include: the removal of common setbacks within the Milton Quarry Extension; the construction of internal haul routes and access ramps; the office, maintenance buildings, truck washing facility, use of the existing entrance/exit; processing and stockpiling of aggregate material on the existing quarry; any activities in relation to the production of aggregate from the proposed extension on the existing quarry; any operation of a road construction waste materials recycling and processing use; and a revision to the rehabilitated landform to enhance ecological diversity of the site.
12. The Applicant shall obtain a Permit(s)-To-Take-Water and Environmental Compliance Approval from the Ministry of the Environment, Conservation and Parks, as required, for the proposed quarry dewatering and for the discharge of ground water for use in the mitigation system.
13. This permit includes all works on lands located outside of the licence to permit the natural heritage enhancements as described in the Ecological Enhancement Plan dated December 2021.
14. This conditional approval shall be void if a Development Permit is not issued within two (2) years of the date of confirmation of the decision.

Note: Amendments to the Plans which form part of the licence(s) issued under the Aggregate Resources Act may be made under this Development Permit where the Niagara Escarpment Commission is satisfied following circulation of such an amendment to it by the Ministry of Natural Resources and Forestry that the amendment is minor in nature and therefore would not constitute a change to the conditions of this Permit The approved amendments to the Plans must be filed with the Niagara Escarpment Commission.

# Tab **15**

# **Recommended Region of Halton Official Plan Amendment No. XX**

## **Introductory Statement**

All of this part of the document constitutes Amendment No. XX to the Halton Region Official Plan (1995).

The proposed mapping changes relate to 30.6 hectares of land, comprising of 30.2 hectares in Part of Lots 11 and 12, Concession 1 (former geographic Township of Esquesing), Town of Halton Hills, Regional Municipality of Halton for the Milton Quarry East Extension and 0.4 hectares of land in Part of Lot 13, Concession 1 (former geographic Township of Esquesing), Town of Halton Hills, Regional Municipality of Halton for the previously approved Milton Quarry Extension. The portion of within the Milton Quarry Extension is to redesignate the 15 metre setback that is already located within the Milton Quarry Extension Licence area, but not currently designated to permit extraction.

## **DETAILS OF THE AMENDMENT**

- Item 1. That Region of Halton Official Plan Map 1 – Regional Structure, is hereby amended by redesignating 30.6 hectares of land legally described as Part of Lots 11, 12 and 13, Concession 1 (former geographic Township of Esquesing), Town of Halton Hills, Regional Municipality of Halton from “Agricultural Area” and “Regional Natural Heritage System” to “Mineral Resource Extraction Area” as shown in Schedule “A” attached hereto and forming Part of this Amendment;
- Item 2. That Region of Halton Official Plan Map 1A – Provincial Plan Areas & Land Use Designations, is hereby amended by redesignating 30.6 hectares of land legally described as Part of Lots 11, 12 and 13, Concession 1 (former geographic Township of Esquesing), Town of Halton Hills, Regional Municipality of Halton from “Escarpment Rural Area” to “Escarpment Mineral Resource Extraction Area” as shown in Schedule “B” attached hereto and forming Part of this Amendment;
- Item 3. That Region of Halton Official Plan Map 1D – Municipal Wellhead Protection Zones, is hereby amended by designating 30.6 hectares of land legally described as Part of Lots 11, 12 and 13, Concession 1 (former geographic Township of Esquesing), Town of Halton Hills, Regional Municipality of Halton as “Mineral Resource Extraction Area” as shown in Schedule “C” attached hereto and forming Part of this Amendment;
- Item 4. That Region of Halton Official Plan Map 1E – Agricultural System and Settlement Areas, is hereby amended by redesignating 30.6 hectares of land legally described as Part of Lots 11, 12 and 13, Concession 1 (former geographic Township of Esquesing), Town of Halton Hills, Regional Municipality of Halton currently designated to “Agricultural System outside Prime Agricultural Areas” or

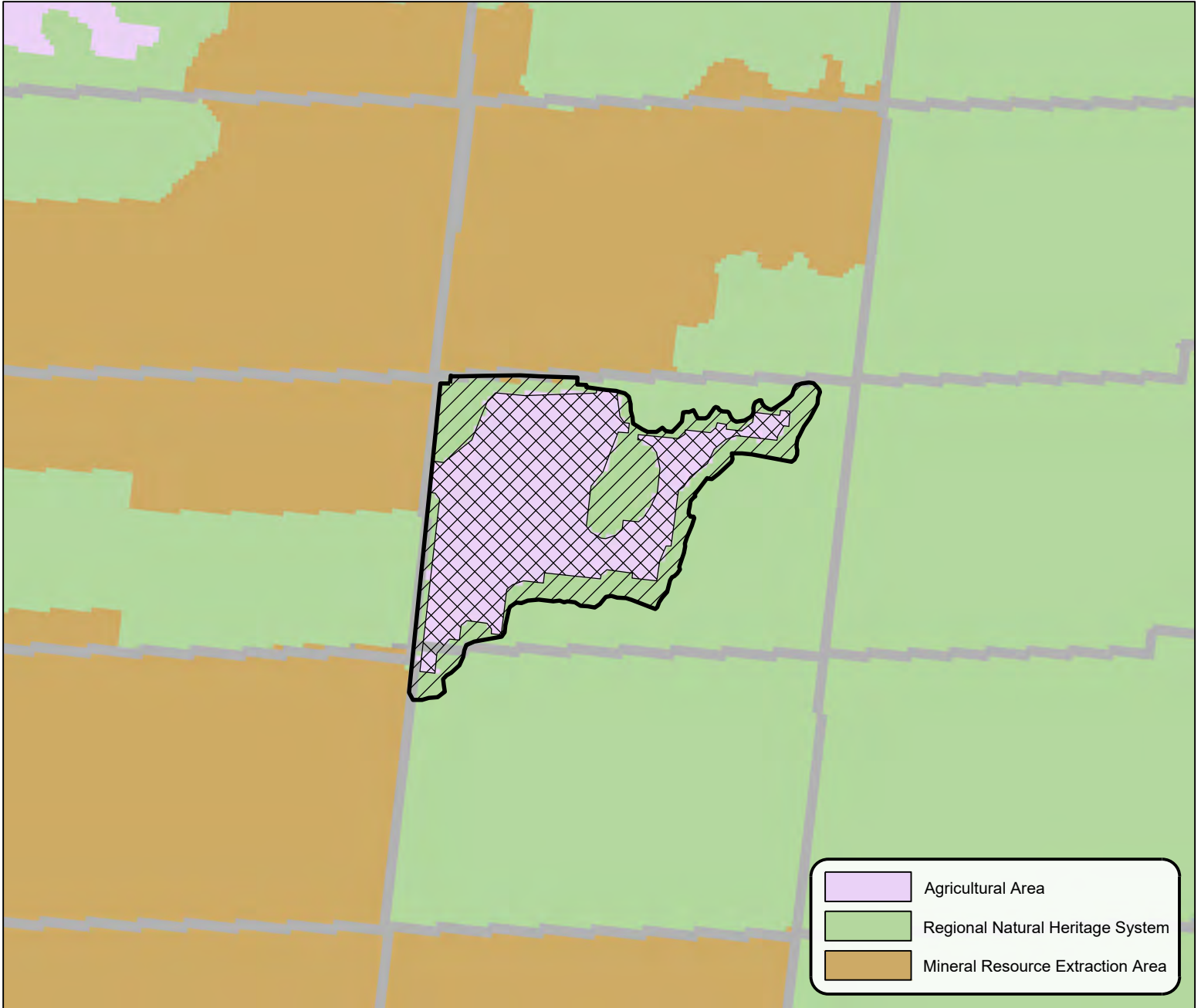
otherwise not designated to “Mineral Resource Extraction Area” as shown in Schedule “D” attached hereto and forming Part of this Amendment;

- Item 5. That Region of Halton Official Plan Map 1F – Identified Mineral Resource Areas, is hereby amended by redesignating 30.6 hectares of land legally described as Part of Lots 11, 12 and 13, Concession 1 (former geographic Township of Esquesing), Town of Halton Hills, Regional Municipality of Halton to currently designated “Identified Mineral Extraction Area” to “Mineral Resource Extraction Area” as shown in Schedule “E” attached hereto and forming Part of this Amendment; and
  
- Item 6. That Region of Halton Official Plan Map 1G – Key Features within the Greenbelt and Regional Natural Heritage Systems, is hereby amended by redesignating 30.6 hectares of land legally described as Part of Lots 11, 12 and 13, Concession 1 (former geographic Township of Esquesing), Town of Halton Hills, Regional Municipality of Halton from “Key Features” and “Enhancement Areas, Linkages and Buffers” or otherwise not designated to “Mineral Resource Extraction Area” as shown in Schedule “F” attached hereto and forming Part of this Amendment.



# Schedule 'A'

Part of Lots 11-13, Concession 1  
Geographic Township of Esquesing  
Town of Halton Hills  
Regional Municipality of Halton



Land to be re-designated from Agricultural Area to Mineral Resource Extraction Area



Land to be re-designated from Regional Natural Heritage System to Mineral Resource Extraction Area

This is Schedule 'A' to  
Official Plan Amendment \_\_\_\_\_  
Passed this \_\_\_\_ day of \_\_\_\_\_, 2021

\_\_\_\_\_  
Mayor

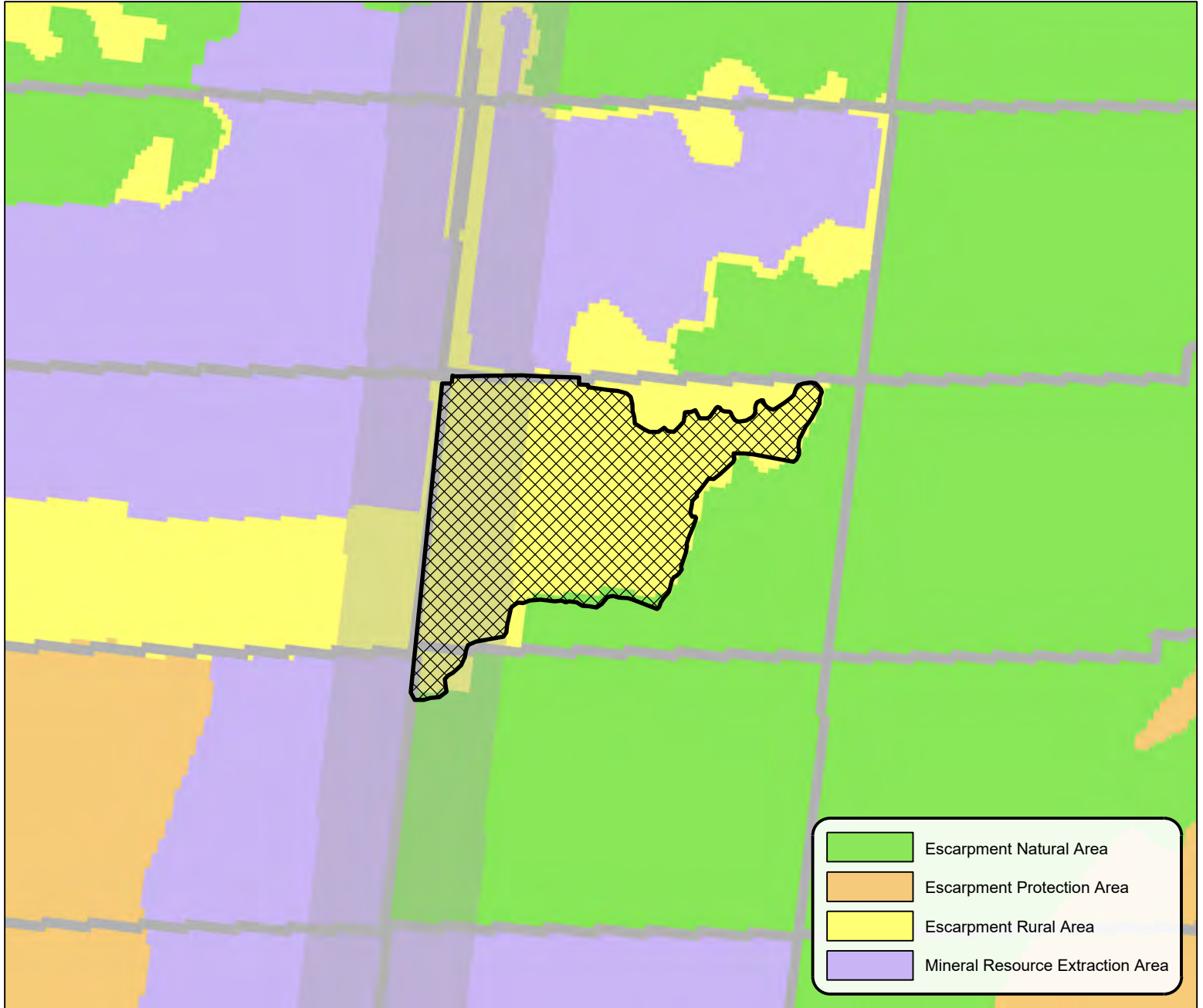
\_\_\_\_\_  
Clerk

The Regional Natural Heritage System mapping is based on a PDF and therefore does not accurately depict the site conditions as confirmed in the field.



# Schedule 'B'

Part of Lots 11-13, Concession 1  
Geographic Township of Esquesing  
Town of Halton Hills  
Regional Municipality of Halton



Land to be re-designated from Escarpment Rural Area to Mineral Resource Extraction Area

This is Schedule 'B' to  
Official Plan Amendment \_\_\_\_\_  
Passed this \_\_\_\_ day of \_\_\_\_\_, 2021

\_\_\_\_\_  
Mayor

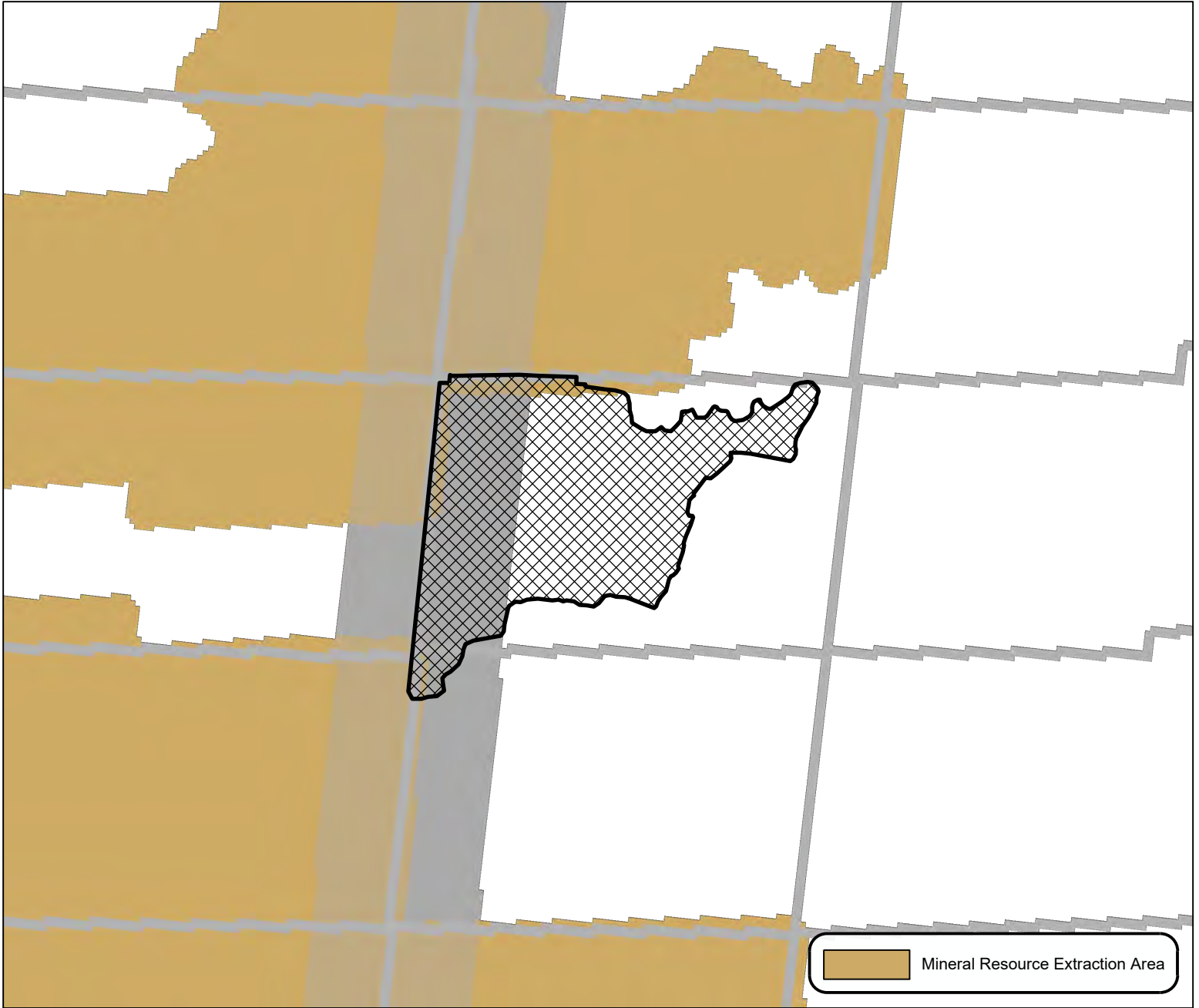
\_\_\_\_\_  
Clerk

The Region of Halton Schedule is based on a PDF and therefore does not accurately depict the Escarpment Natural Area mapping. The NEP identifies this area as Escarpment Rural Area.



# Schedule 'C'

Part of Lots 11-13, Concession 1  
Geographic Township of Esquesing  
Town of Halton Hills  
Regional Municipality of Halton



Land to be designated Mineral Resource Extraction Area

This is Schedule 'C' to  
Official Plan Amendment \_\_\_\_\_  
Passed this \_\_\_\_ day of \_\_\_\_\_, 2021

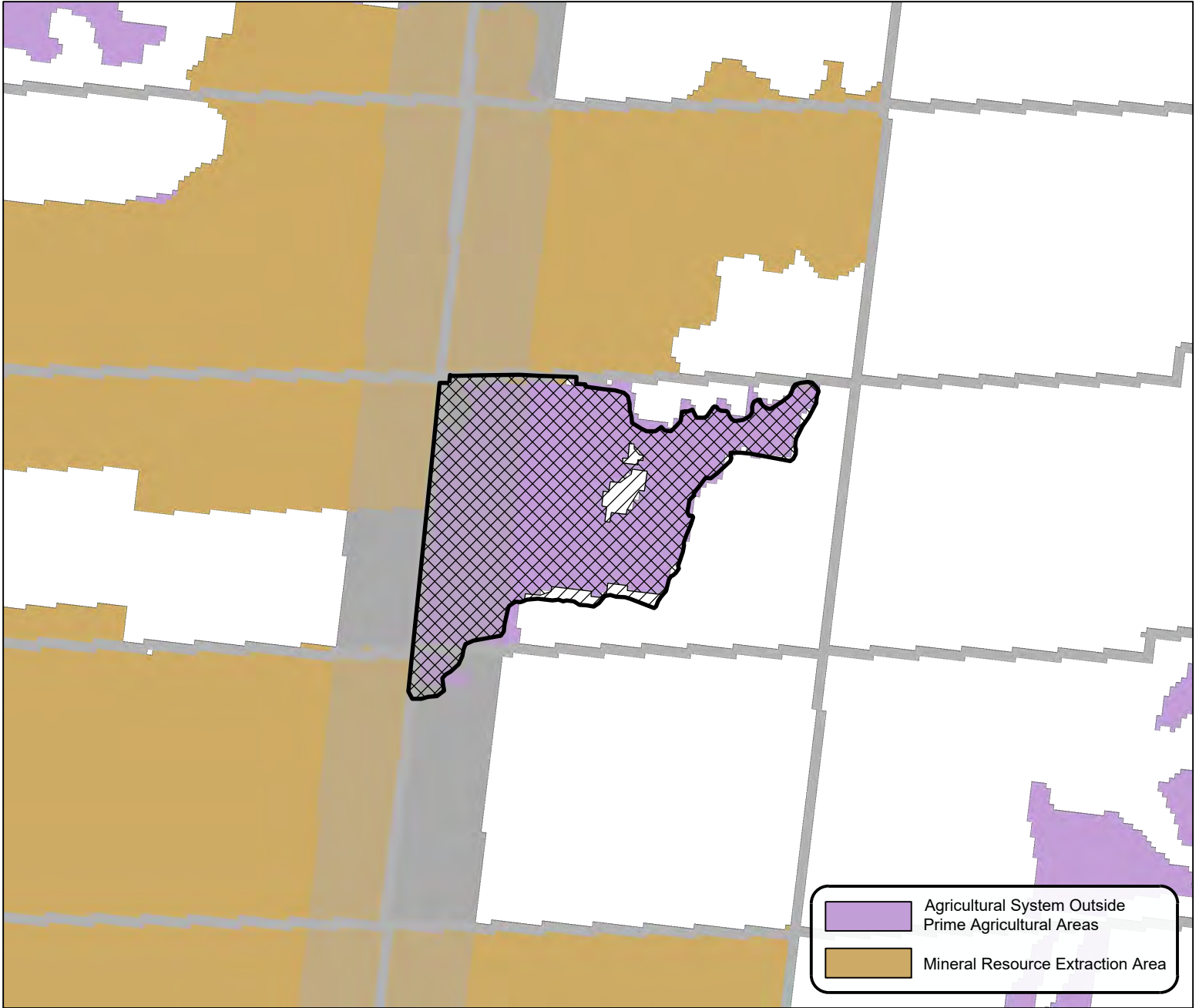
\_\_\_\_\_  
Mayor



\_\_\_\_\_  
Clerk



# Schedule 'D'

Part of Lots 11-13, Concession 1  
Geographic Township of Esquesing  
Town of Halton Hills  
Regional Municipality of Halton



-  Agricultural System Outside Prime Agricultural Areas
-  Mineral Resource Extraction Area



Land to be re-designated from Agricultural System Outside Prime Agricultural Areas to Mineral Resource Extraction Area



Land to be designated Mineral Resource Extraction Area

This is Schedule 'D' to  
 Official Plan Amendment \_\_\_\_\_  
 Passed this \_\_\_\_ day of \_\_\_\_\_, 2021

\_\_\_\_\_  
Mayor

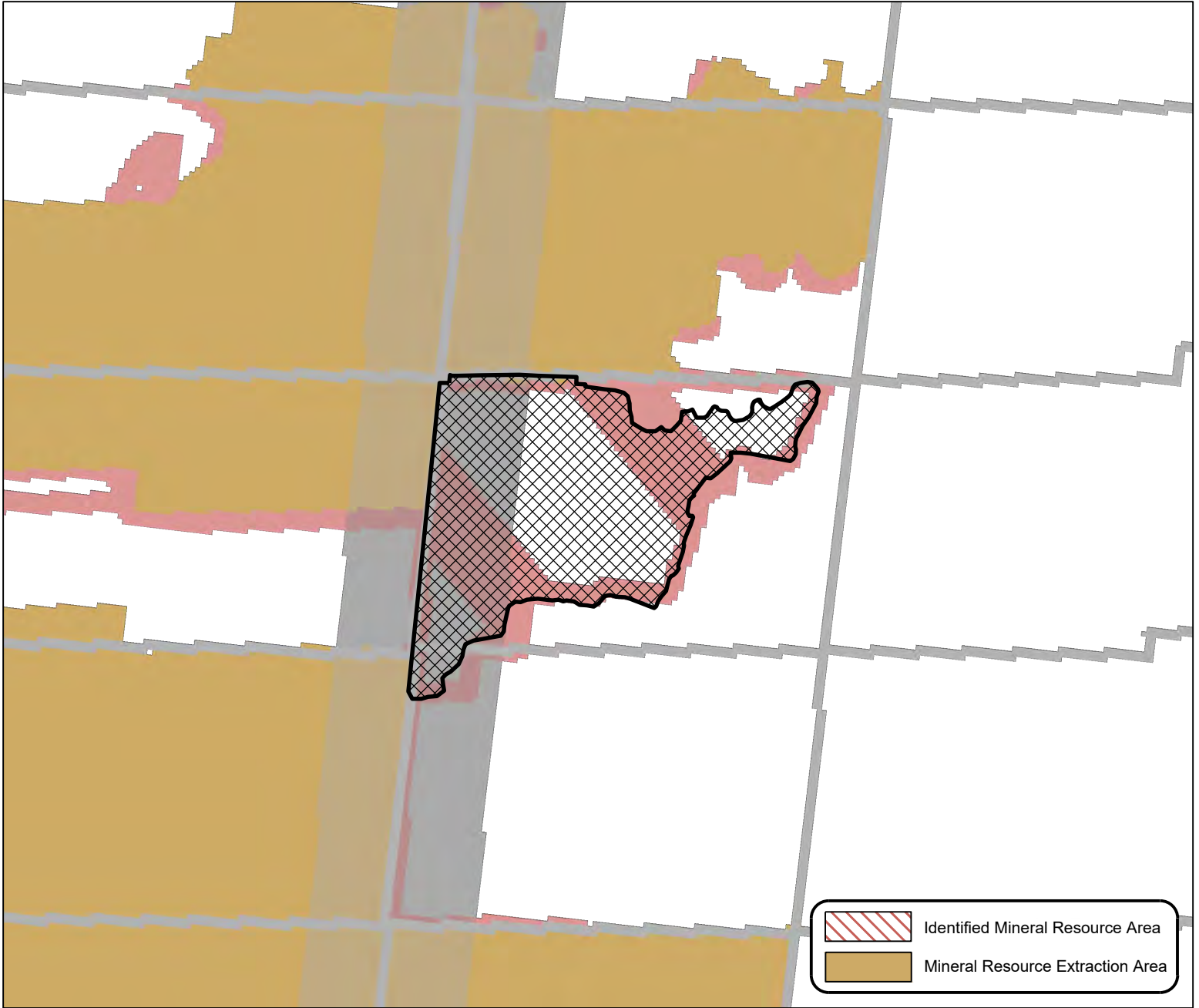
\_\_\_\_\_  
Clerk





# Schedule 'E'

Part of Lots 11-13, Concession 1  
Geographic Township of Esquesing  
Town of Halton Hills  
Regional Municipality of Halton



Land to be re-designated from Identified Mineral Resource Area to Mineral Resource Extraction Area

This is Schedule 'E' to  
Official Plan Amendment \_\_\_\_\_  
Passed this \_\_\_\_ day of \_\_\_\_\_, 2021

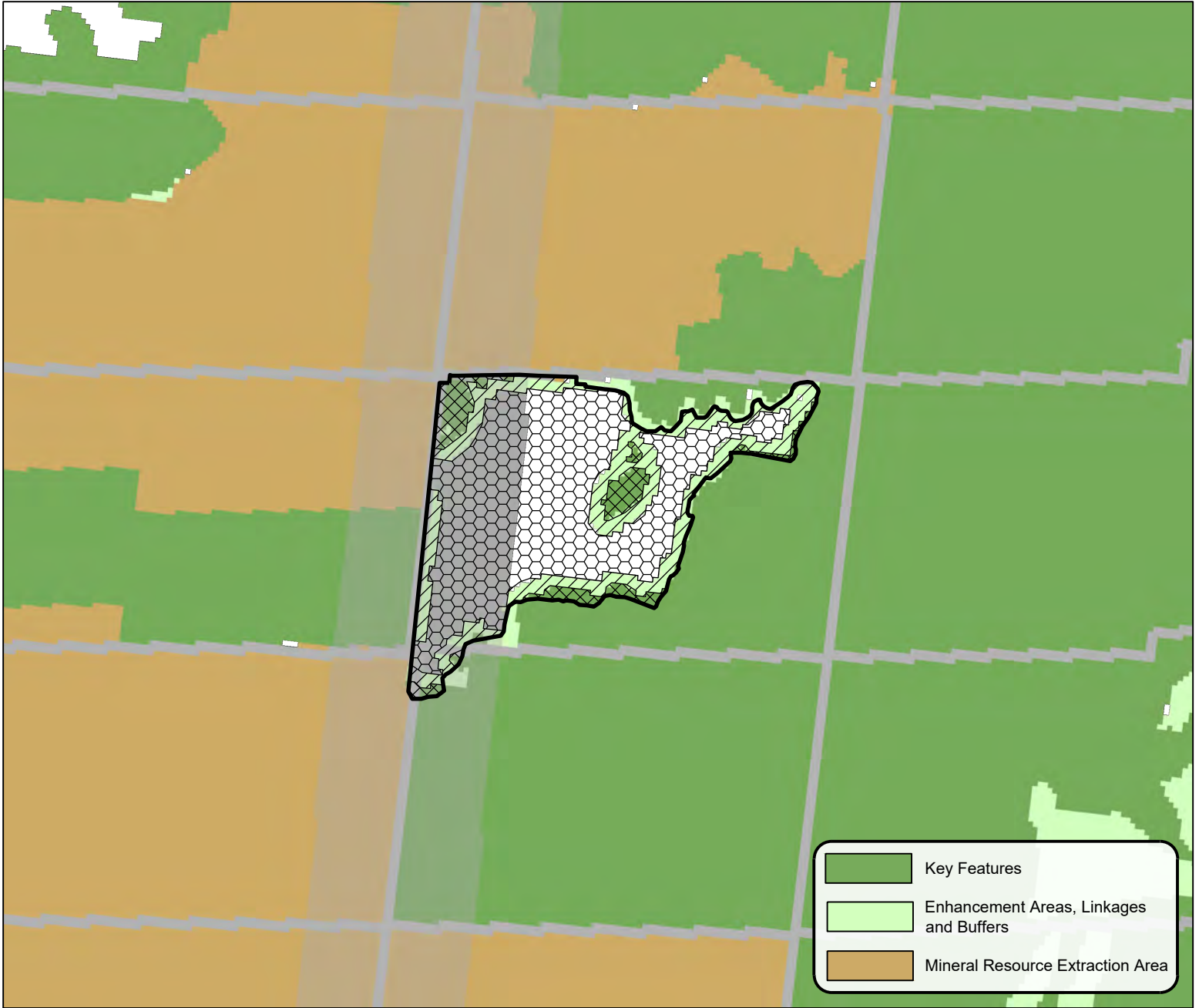
\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Clerk



# Schedule 'F'

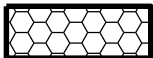
Part of Lots 11-13, Concession 1  
Geographic Township of Esquesing  
Town of Halton Hills  
Regional Municipality of Halton




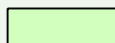

Land to be re-designated from Key Features to Mineral Resource Extraction Area



Land to be re-designated from Enhancement Areas, Linkages and Buffers to Mineral Resource Extraction Area



Land to be designated Mineral Resource Extraction Area

	Key Features
	Enhancement Areas, Linkages and Buffers
	Mineral Resource Extraction Area

This is Schedule 'F' to  
Official Plan Amendment \_\_\_\_\_  
Passed this \_\_\_\_ day of \_\_\_\_\_, 2021

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Clerk

The Key Feature and Buffer mapping is based on a PDF and therefore does not accurately depict the site conditions as confirmed in the field.

# Tab 16

# **Recommended Amendment to the Town of Halton Hills Official Plan No. XX**

## **Introductory Statement**

All of this part constitutes Amendment No. XX to the Town of Halton Hills Official Plan (2006).

The proposed mapping changes relate to 30.6 hectares of land, comprising of 30.2 hectares in Part of Lots 11 and 12, Concession 1 (former geographic Township of Esquesing), Town of Halton Hills, Regional Municipality of Halton for the Milton Quarry East Extension and 0.4 hectares of land in Part of Lot 13, Concession 1 (former geographic Township of Esquesing), Town of Halton Hills, Regional Municipality of Halton for the previously approved Milton Quarry Extension. The portion of within the Milton Quarry Extension is to redesignate the 15 metre setback that is already located within the Milton Quarry Extension Licence area, but not currently designated to permit extraction.

## **DETAILS OF THE AMENDMENT**

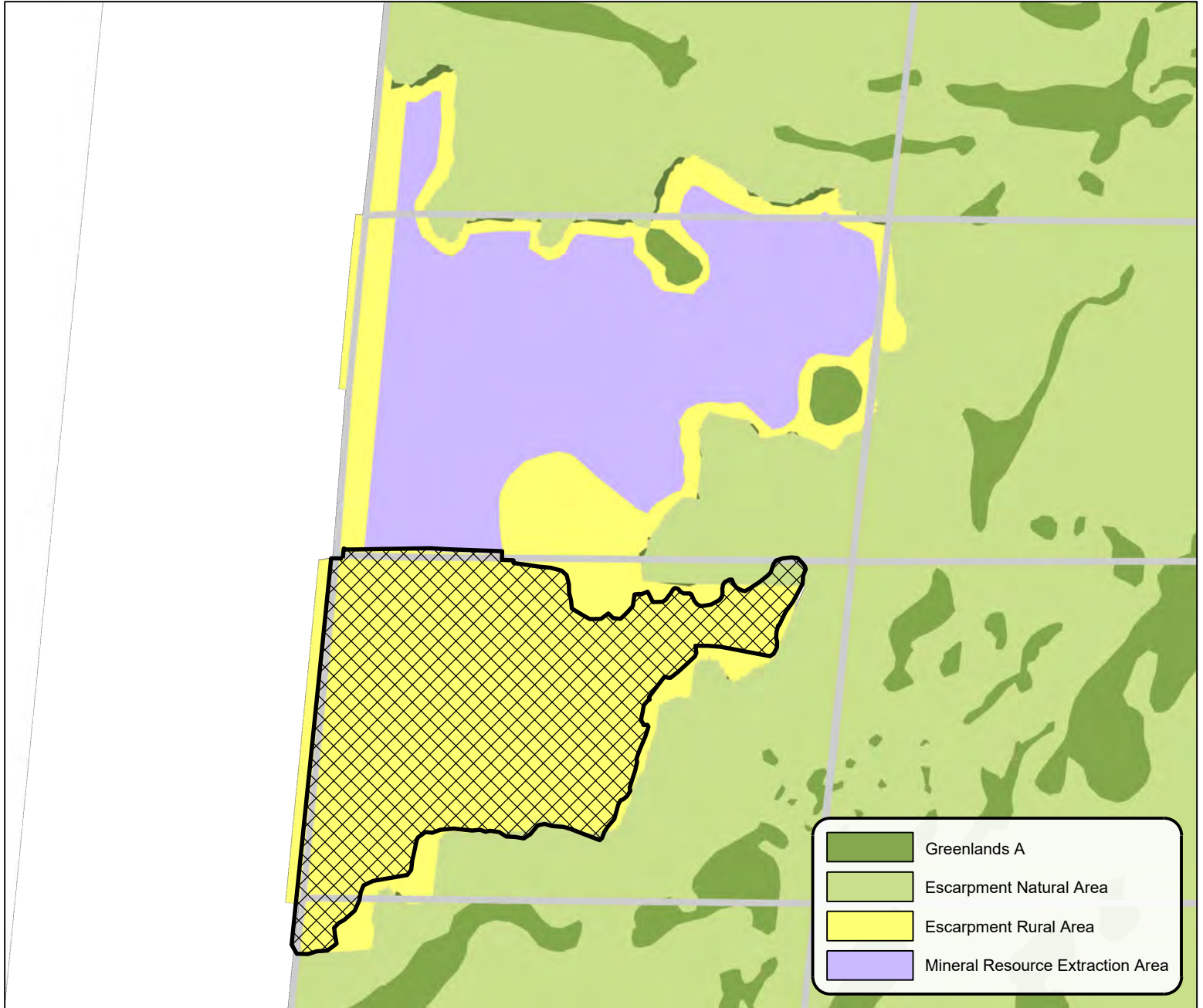
This Amendment consists of one (1) item:

- Item 1. That the Town of Halton Hills Official Plan Schedule A2 – Greenbelt Plan, is hereby amended by re-designating 30.6 hectares of land legally described as Part of Lots 11, 12 and 13, Concession 1 (former geographic Township of Esquesing), Town of Halton Hills, Regional Municipality of Halton from “Escarpment Rural Area” to “Mineral Resource Extraction Area” as shown on, as shown in Schedule “A” attached hereto and forming Part of this Amendment.



# Schedule 'A'

Part of Lots 11-13, Concession 1  
Geographic Township of Esquesing  
Town of Halton Hills  
Regional Municipality of Halton



Land to be re-designated from Escarpment Rural Area to Mineral Resource Extraction Area

This is Schedule 'A' to  
Official Plan Amendment \_\_\_\_\_  
Passed this \_\_\_\_ day of \_\_\_\_\_, 2021

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Clerk

The Halton Hills Schedule is based on a PDF and therefore does not accurately depict the Escarpment Natural Area mapping. The NEP identifies this area as Escarpment Rural Area.

# Tab **17**

September 4, 2020

**Debbie Ramsay**  
**Director**  
**Niagara Escarpment**  
**Commission**  
232 Guelph Street  
Georgetown, Ontario, L7G 4B1

**Kellie McCormack**  
**Senior Manager**  
**Development Planning &**  
**Watershed Management**  
**Conservation Halton**  
2596 Britannia Road West  
Burlington, Ontario, L7P 0G3

**Joe Nethery,**  
**Manager of Community**  
**Planning**  
**Region of Halton**  
1151 Bronte Road  
Oakville, Ontario, L6M 3L1

**John Linhardt**  
**Commissioner of Planning and**  
**Stability**  
**Town of Halton Hills**  
1 Halton Hills Drive  
Halton Hills, Ontario, L7G 5G2

**Jill Hogan**  
**Director of Planning Policy &**  
**Urban Design**  
**Town of Milton**  
150 Mary Street  
Milton, Ontario, L9T 6Z5

Dear Sir/Madame:

**RE: Dufferin Aggregate Milton Quarry East Extension Request for Pre-Consultation**  
**OUR FILE 09165DJ**

---

MHBC has been retained by Dufferin Aggregates, a division of CRH Canada Group Inc. (Dufferin), to provide them with land use planning advice in connection with a proposed application for an extension to the Milton Quarry. Please accept this letter as a request for a pre-consultation meeting to discuss the proposal and application process.

The Milton Quarry began operations in 1962 and consists of 467.67 ha with an approved extraction area of 381.5 ha. In 2007, the Milton Quarry was further extended by 84.5 ha, with an extraction area of 70.6 ha and was supported by the Niagara Escarpment Commission, Ministry of Natural Resources and Forestry, Ministry of Environment, Conservation and Parks, Conservation Halton, Regional Municipality of Halton, Town of Milton, Town of Halton Hills, the Joint Board and ultimately approved by the Provincial Cabinet.

The original Milton Quarry has only a small amount of reserves remaining under the existing processing plant and the Milton Quarry Extension (2007) will be depleted by 2024. In December 2019, Dufferin acquired 66.5 hectares of land contiguous with the existing operation. The subject site is located within Part of Lot 12, Concession 1, Geographic Township of Esquesing, Town of Halton Hills, Regional Municipality of Halton. Of the subject site only 16 hectares is being considered for extraction based on initial site investigations. The proposed extraction area contains 15 million tonnes of the highest quality aggregate in southern Ontario. See Figures 1, 2 and 3.

The proposed Milton Quarry East Extension area represents a less than 4 % increase in the existing approved extraction area and it is appropriate to consider for an extension to the Milton Quarry based on Provincial, Regional and Local policies. Based on a review of the Niagara Escarpment Plan (NEP), Region of Halton Official Plan (RHOP) and the Town of Halton Hills Official Plan (HHOP) the proposed extraction area is:

- an "Identified Mineral Resource Area" in the RHOP. See Figure 4;
- designated Escarpment Rural Area in the NEP and HHOP and predominately designated "Agricultural Area" in the RHOP. Each of these land use designations have an objective to provide for new mineral aggregate operations. See Figures 5, 6, and 7;
- outside of the Provincial and Local Natural Heritage System. See Figures 6 and 8;
- predominately outside of the Regional Natural Heritage System except for a small woodland located in the northwest corner of the subject site. This woodland has been evaluated based on Provincial and Regional criteria and is not considered a significant woodland. See Figures 3 and 9; and
- not located within a prime agricultural area. See Figures 10 and 11.

In addition to these locational attributes, the subject site:

- is located outside of a wellhead protection zone. See Figure 12;
- is 1.2 km from the closest sensitive receptor. In this area surrounding sensitive uses are already located closer to the existing Milton Quarry and Milton Quarry Extension and the proposed Milton Quarry East Extension will not result in any additional impacts. See Figure 13;
- is not visible from public view and access points. See Figure 3;
- would utilize the existing quarry processing equipment, scales, entrance / exit and existing haul route onto Dublin Line and is located +/- 5 km from the Hwy 401 interchange; and
- is located within the Greater Toronto Area which is the highest demand area for aggregate and is experiencing a shortage in high quality aggregate reserves. Making available a close to market aggregate resource is consistent with provincial policy since it reduces the cost of aggregate and reduces environmental impacts associated with fossil fuel consumption and greenhouse gas production by minimizing distances trucks have to travel to market.



Dufferin has a strong legacy at the Milton Quarry, including partnerships with the public authorities and they propose a similar approach for the proposed 16 hectare extension. As part of the application, Dufferin advises that it commits to:

- Transfer Milton Quarry East Extension extraction area and water management system into public ownership. Dufferin has already entered into agreements with the public authorities to transfer 386 hectares of natural and rehabilitated land to public ownership to assist the Conservation Authority in managing water resources and create one of the largest contiguous environmental / recreational areas in public ownership within the Greater Toronto Area. See Figure 14;
- Integrate the subject site into the state-of-the-art water management system (WMS) and Adaptive Management Plan (AMP) that are already in place and have been operating at the Milton Quarry and Milton Quarry Extension since 2007. The water mitigation system has effectively maintained groundwater levels around the perimeter of the Milton Quarry Extension protecting surrounding water resources including water dependent ecological features. All approval agencies are familiar with the AMP and the hydrologic and natural environment data collection and assessment that is provided through annual reports and the WebDT data sharing system that allows agencies direct access to hydrogeological data at any time. The AMP also requires a comprehensive 5-year review to make any adjustments necessary to make sure the groundwater is maintained to an acceptable level thereby protecting the ecological features dependent upon it. The AMP was approved by the agencies and through annual reporting has demonstrated that the proposed mitigation system has protected and enhanced natural heritage features surrounding the extension. The water management system for the Milton Quarry East Extension will be a straightforward addition to the existing system using the same proven techniques for mitigation;
- Develop an ecological restoration plan for the proposed Milton Quarry East Extension taking into account experience and monitoring at the existing Milton Quarry and other Dufferin locations. Large portions of the existing Milton Quarry have already been rehabilitated and designated Escarpment Natural Area and Escarpment Protection in the Niagara Escarpment Plan. The rehabilitation approach for these areas employed a variety of post extraction landforms to include cliffs, wooded area, open lakes and wetlands. The forest and wetland communities are complimentary to the surrounding escarpment landscape. To date, over 150,000 trees have been planted, many during the 26 annual Earth Day Events held at the site. Monitoring of the rehabilitated area has confirmed 340 species of vascular plants, 155 species of birds, including 40 species of breeding birds, 6 species of breeding amphibians, 34 species of butterflies, 30 dragonflies and damselflies, and other wildlife have been observed in the rehabilitated portions of the quarry. The ecological restoration and enhancement plan for the proposed Milton Quarry East Extension will complement the rehabilitation plans for the existing approved operations and the adjacent natural features. A large sheltered wetland, open lake, exposed cliff faces, promontory / beach ridge and terrestrial linkages will be created within the area proposed to be extracted. Ecological enhancement of lands within the licence boundary that will not be extracted will also include tree and shrub plantings and creation of other wildlife habitats. As there is a shortfall of available soils on the subject lands, Dufferin is proposing to import clean soil similar to the current approvals for the existing Milton Quarry. See Figure 15; and
- Enhance the overall water management capacity of the Sixteen Mile Creek Watershed. The current system has three reservoirs. The reservoirs are used for flood control, low flow augmentation and recreation. The reservoir at the Milton Quarry will double Conservation

Halton's watershed management capacity and the other lakes, including the proposed extension, provide additional capacity. The water management system that is being built and funded by Dufferin for long term public use provides additional capacity to help stabilize the watershed and significantly enhances Conservation Halton's ability to manage flow in the Sixteen Mile Creek watershed by providing opportunities to increase streamflow during low flow periods and to provide water storage to control flooding during high flow periods.

Based on our background review we understand that the following approvals would be required before extraction could commence at the proposed extension:

- Aggregate Resources Act Class A, Category 2 License for the extension;
- Aggregate Resources Act, Site Plan Amendments for the existing Milton Quarry and Milton Quarry Extension to integrate the operations;
- Niagara Escarpment Plan Amendment and Development Permit for the proposed Milton Quarry East Extension, existing Milton Quarry and Milton Quarry Extension. The amendment and development permit for the existing quarry is to allow for the aggregate from the extension to be processed at the existing quarry;
- Region of Halton Official Plan Amendment for the extension;
- Town of Halton Hills Official Plan Amendment for the extension;
- Endangered Species Act permit for the extension. Most of the proposed extraction area and surrounding lands would be considered regulated habitat for Jefferson Salamander. The lands surrounding the proposed extraction area include confirmed breeding ponds, potential breeding ponds, terrestrial forest and critical corridors for the species and these areas are proposed for protection. The lands proposed for extraction include some dispersal habitat that are open fields, which is not ideal dispersal habitat for the salamanders. The Endangered Species Act 17(2)(c) "Overall Benefit" Permit Application will include the creation of new forested areas and habitat features to enhance Jefferson Salamander habitat and develop the water management system to enhance the water regime at surrounding confirmed and suitable breeding ponds to improve potential breeding success for the species. See Figure 15. At both the Milton Quarry and Acton Quarry, Dufferin has demonstrated its ability to protect and enhance Jefferson Salamander habitat; and
- Amendments to the existing Permit to Take Water and Environmental Compliance Approval to add the extension lands.

Dufferin will be submitting the Aggregate Resources Act license application, Niagara Escarpment Plan Amendment, Niagara Escarpment Development Permit, Region of Halton Official Plan Amendment and Town of Halton Hills Official Plan Amendment in early 2021. Dufferin will also be in discussion with MNRF regarding the timing to submit the Site Plan Amendments for the existing quarries and MECP regarding the timing to submit the ESA application and amendment to the PTTW and ECA permits.

As part of the pre-consultation process Dufferin would like to work with the agencies to discuss a schedule that allows this application to be reviewed and decisions made by all approval agencies prior to

the remaining reserves at the Milton Quarry being depleted. If the application is approved this will allow employees to remain working at the quarry and the existing processing plant will continue to be used.

As outlined above, there are no neighbours within 1.2 km of the subject lands and the water mitigation system, AMP and legal agreements are proven to be effective and have been in place for more than a decade. These facts support our belief that the studies can be scoped accordingly. In addition, the agency review can be focused on the technical aspects of the site and if approval is recommended the existing agreements and monitoring programs can simply be amended to include the Milton Quarry East Extension.

Since this pre-consultation meeting will involve coordination amongst several agencies, can everyone please advise on your availability the following dates and we will coordinate a video conference:

- September 15 – 9:00-11:00
- September 24 – 9:00-11:00 and 1:00-3:00
- September 28 - 9:00-11:00 and 1:00-3:00

Thank you for consideration of the above and we look forward to discussing this further with the agencies.

Regards,

Yours truly,

**MHBC**



Brian Zeman, BES, MCIP, RPP  
President

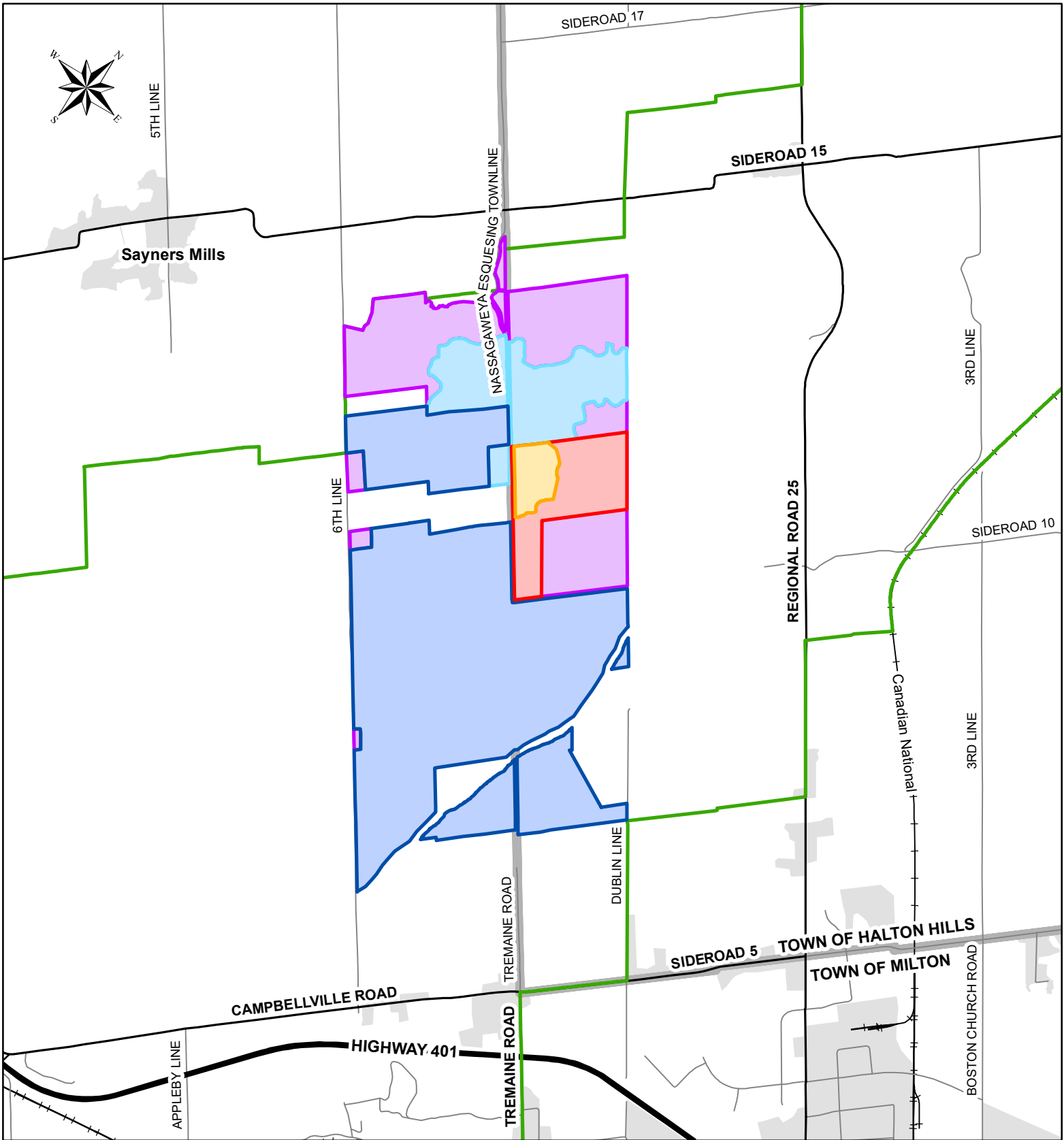


Figure # 1  
Location

**Proposed Milton Quarry East Extension**

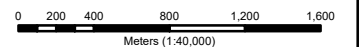
Part Lot 12, Concession 1  
Geographic Township of Esquesing  
Township of Halton Hills  
Region of Halton

**Legend**

- Proposed Milton Quarry East Extension
- Proposed Limit of Extraction
- Milton Quarry (1962)
- Milton Quarry Extension (2007)
- Other Lands Owned by Dufferin
- Niagara Escarpment Plan Boundary
- Built up Area

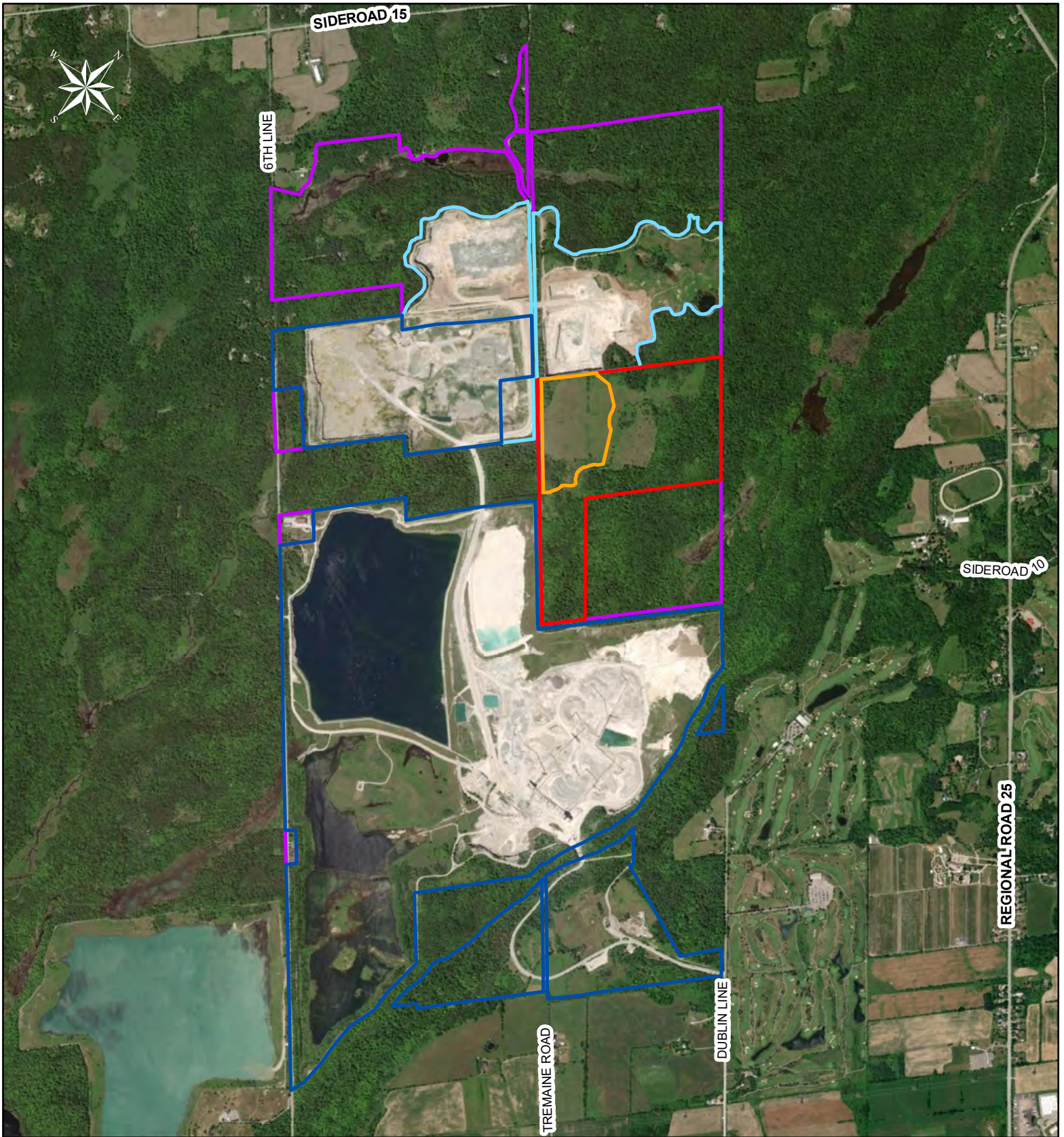
DATE September 2020

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Speyside\Drawings\Due Diligence Report\GIS





**Figure # 2**  
**Overview of Dufferin Aggregates Landholdings**

**Proposed Milton Quarry East Extension**

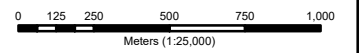
Part Lot 12, Concession 1  
 Geographic Township of Esquesing  
 Township of Halton Hills  
 Region of Halton

**Legend**

- Proposed Milton Quarry East Extension
- Proposed Limit of Extraction
- Milton Quarry (1962)
- Milton Quarry Extension (2007)
- Other Lands Owned by Dufferin

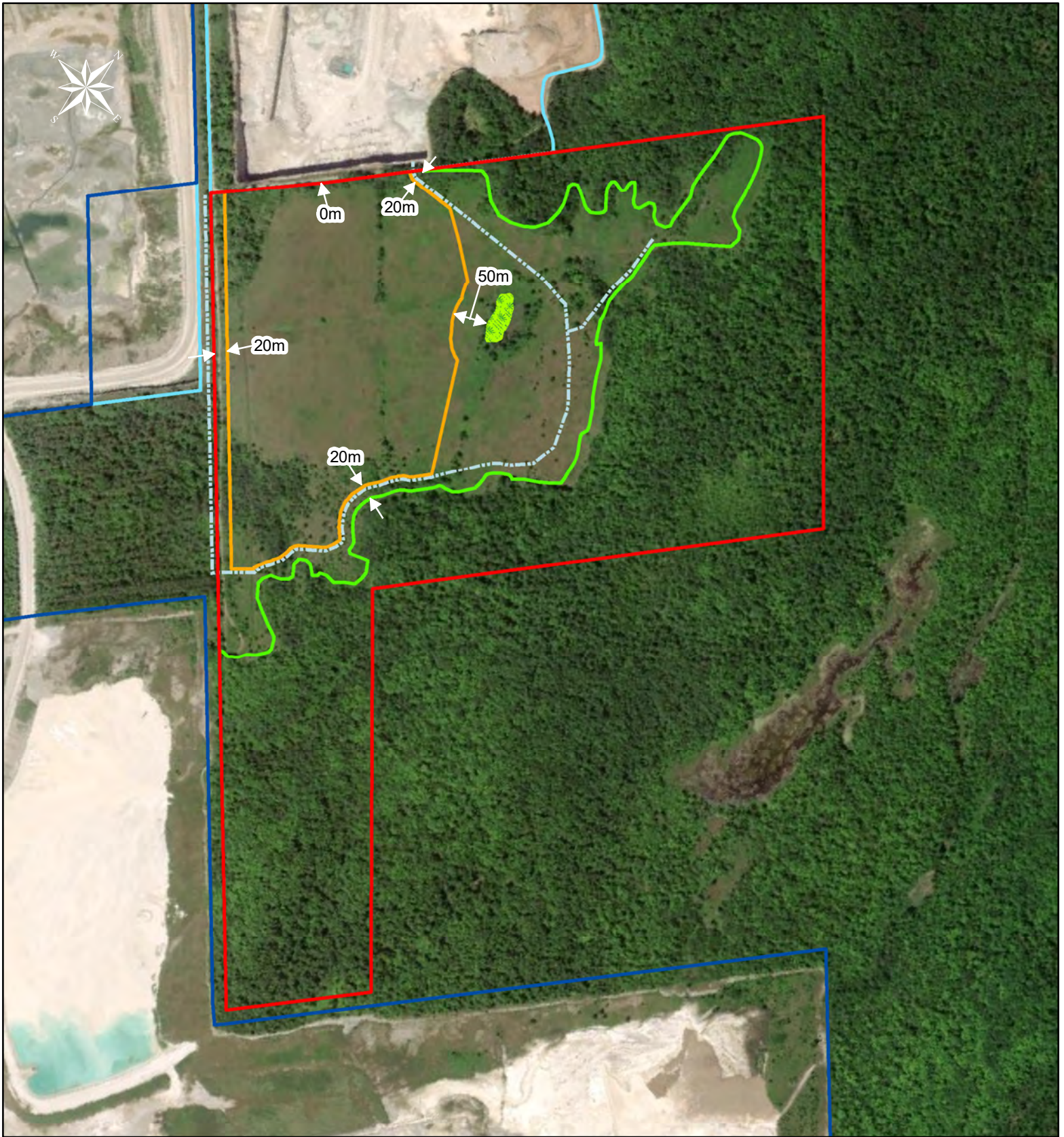
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**Figure # 3**  
**Proposed**  
**Limit of Extraction**

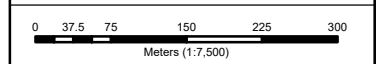
**Proposed Milton Quarry East Extension**  
 Part Lot 12, Concession 1  
 Geographic Township of Esquesing  
 Township of Halton Hills  
 Region of Halton

**Legend**

- Proposed Milton Quarry East Extension (66.5 ha / 164.3 ac)
- Proposed Limit of Extraction (16.0 ha / 39.5 ac)
- Milton Quarry (1962)
- Milton Quarry Extension (2007)
- Wetland U1
- Significant Woodland - GEC
- Proposed Watermain

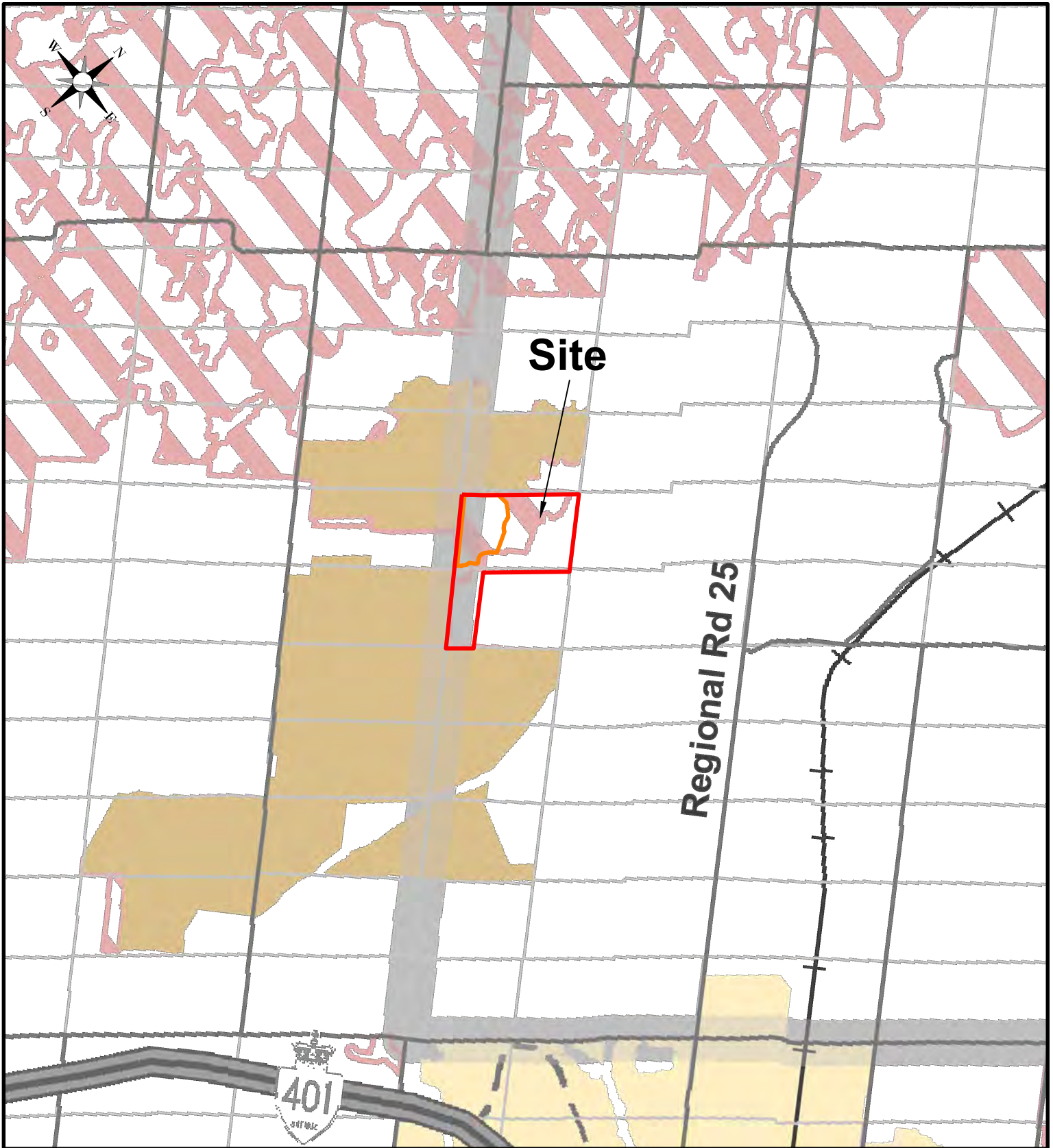
DATE **September 2020**

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**Figure # 4**  
**Identified Mineral Resource Area**  
 Region of Halton Official Plan  
**Proposed Milton Quarry East Extension**

Part Lot 12, Concession 1  
 Geographic Township of Esquesing  
 Township of Halton Hills  
 Region of Halton

**Legend**

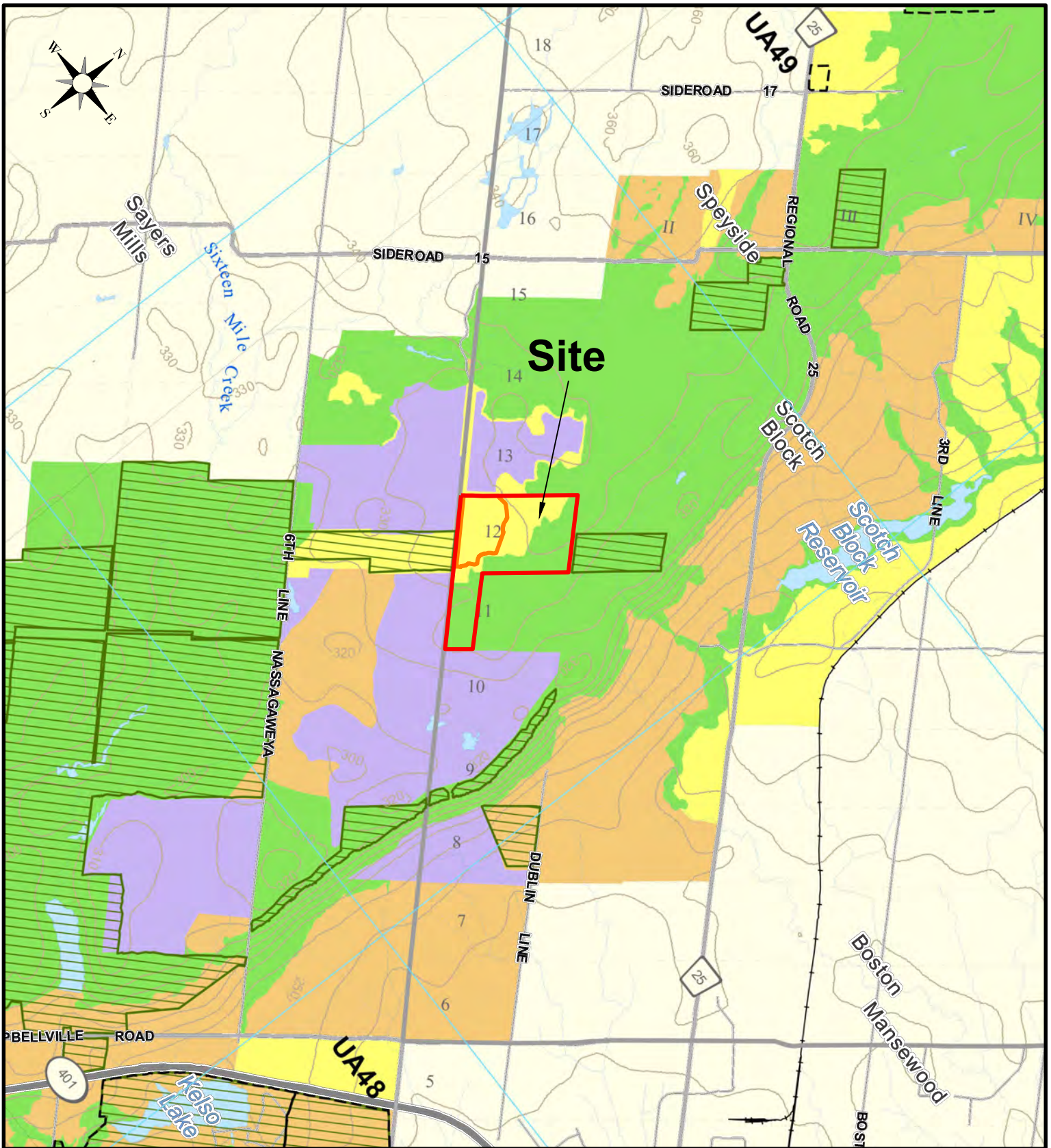
- Proposed Milton Quarry East Extension
- Proposed Limit of Extraction
- Mineral Resource Extraction Area
- Identified Mineral Resource Area
- Urban Area

Date September 2020

Sources  
 Halton Region Official Plan - Map 1F - Identified Mineral Resource Area, dated June 19, 2018

Scale  
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**Figure # 5**  
**Land Use Designations**  
 Niagara Escarpment Plan  
 Region of Halton  
**Proposed Milton Quarry East Extension**

Part Lot 12, Concession 1  
 Geographic Township of Esquesing  
 Township of Halton Hills  
 Region of Halton

**Legend**

- Proposed Milton Quarry East Extension
- Proposed Limit of Extraction
- Niagara Escarpment Parks and Open Space System
- Amendments to the Niagara Escarpment Plan
- Escarpment Natural Area
- Escarpment Rural Area
- Escarpment Protection Area
- Mineral Resource Extraction Area

Date: September 2020

Sources:  
 Niagara Escarpment Plan - Map 3 - Regional Municipality of Halton - Plan Designations, dated June 1, 2017

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**MHBC** PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE



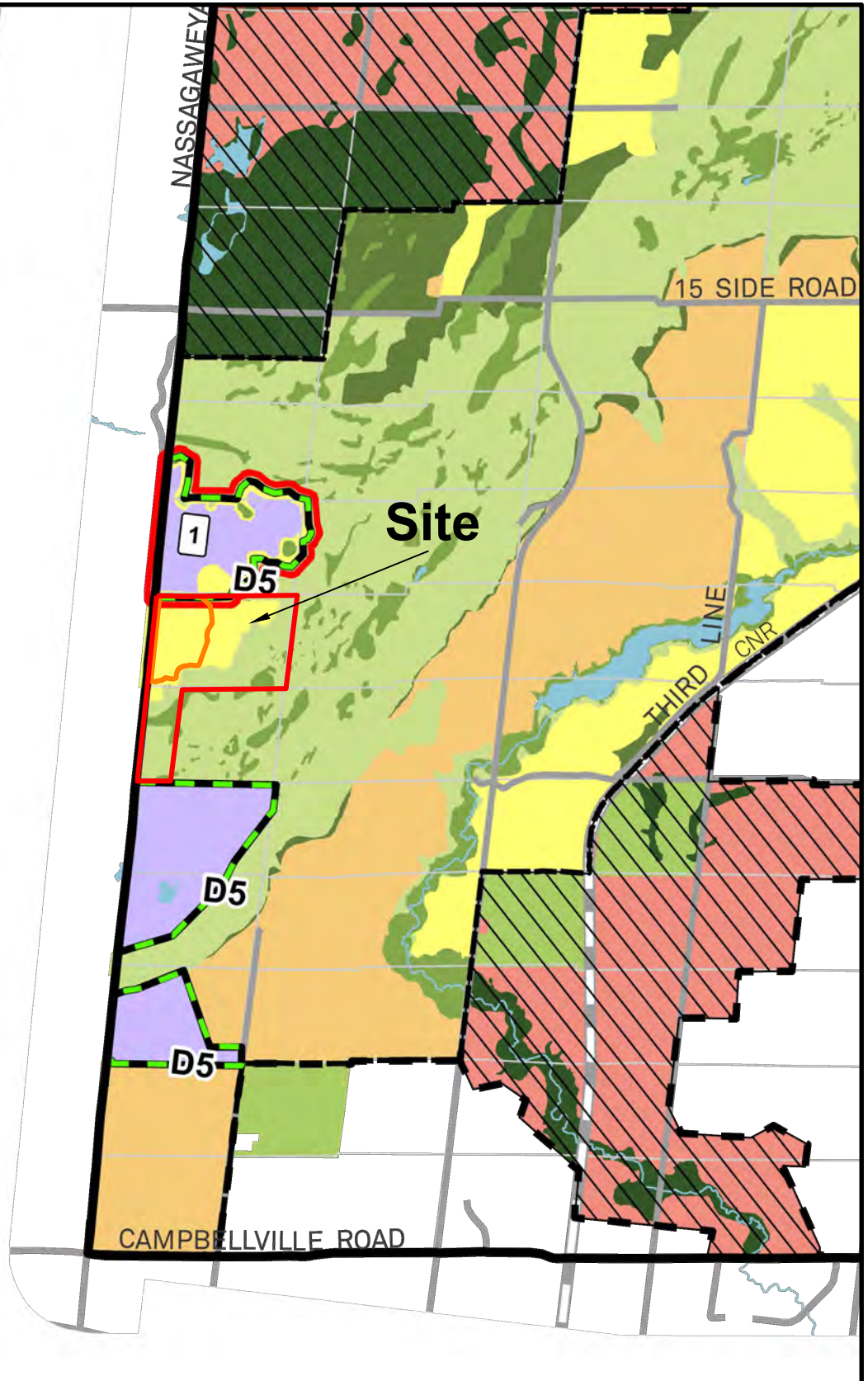


Figure # 6  
**Greenbelt Plan**  
 Town of Halton Hills Official Plan

**Proposed Milton Quarry East Extension**  
 Part Lot 12, Concession 1  
 Geographic Township of Esquesing  
 Township of Halton Hills  
 Region of Halton

**Legend**

- Proposed Milton Quarry East Extension
- Proposed Limit of Extraction
- Natural Heritage System Overlay
- Special Policy Area/Defferal
- Greenbelt Greenlands Area
- Greenlands A & Greenlands B
- Escarpment Natural/Protection Area
- Protected Countryside Area
- Escarpment Rural Area
- Mineral Resource Area
- Private Open Space Area

Date September 2020

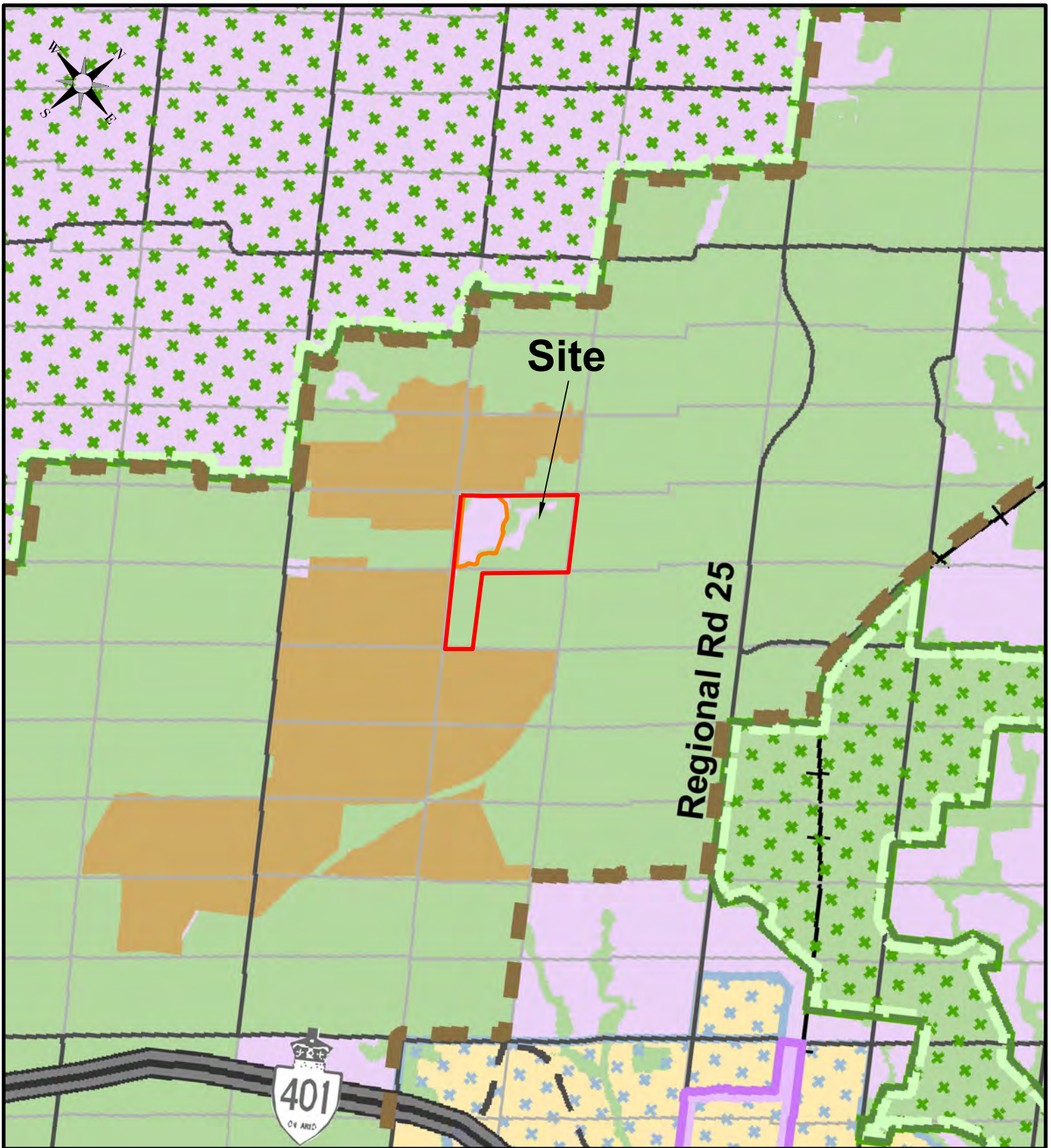
Sources  
 Town of Halton Hills Official Plan - Schedule A2  
 Greenbelt Plan, consolidated May 1, 2019

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**Figure # 7**  
**Regional Structure**  
 Region of Halton Official Plan

**Proposed Milton Quarry East Extension**  
 Part Lot 12, Concession 1  
 Geographic Township of Esquesing  
 Township of Halton Hills  
 Region of Halton

Legend	
	Proposed Milton Quarry East Extension
	Proposed Limit of Extraction
	Niagara Escarpment Plan
	Built Boundary
	Greenbelt Plan Protected Countryside Boundary
	Greenbelt Natural Heritage System
	Regional Natural Heritage System
	Agricultural Area
	Mineral Resource Extraction Area
	Urban Area
	Employment Area

Date: September 2020

Sources: Halton Region Official Plan - Map 1 - Regional Structure, dated June 19, 2018

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**MHBC** PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE

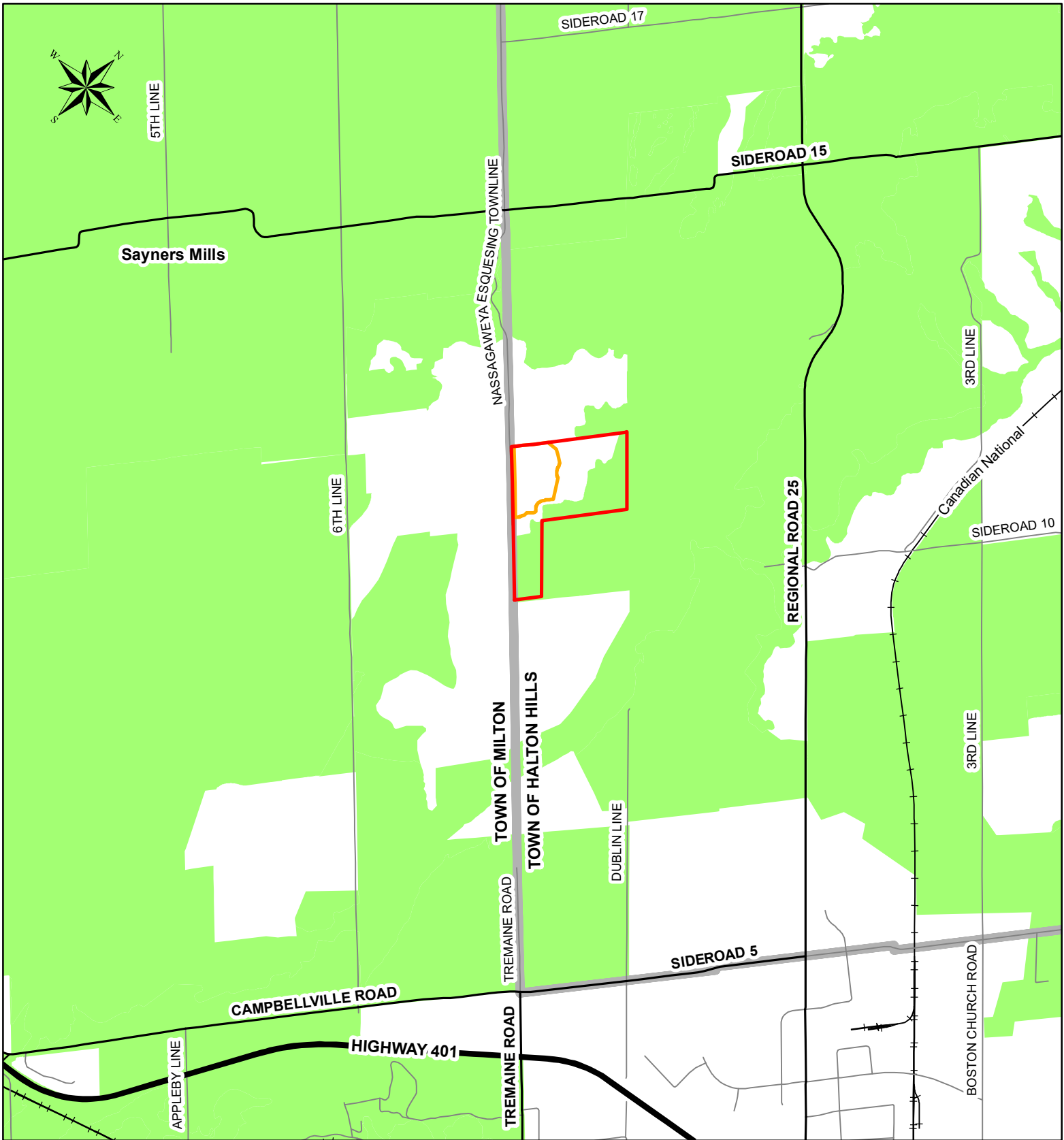


Figure # 8

## Provincial Natural Heritage System

### Proposed Milton Quarry East Extension

Part Lot 12, Concession 1  
 Geographic Township of Esquesing  
 Township of Halton Hills  
 Region of Halton

#### Legend

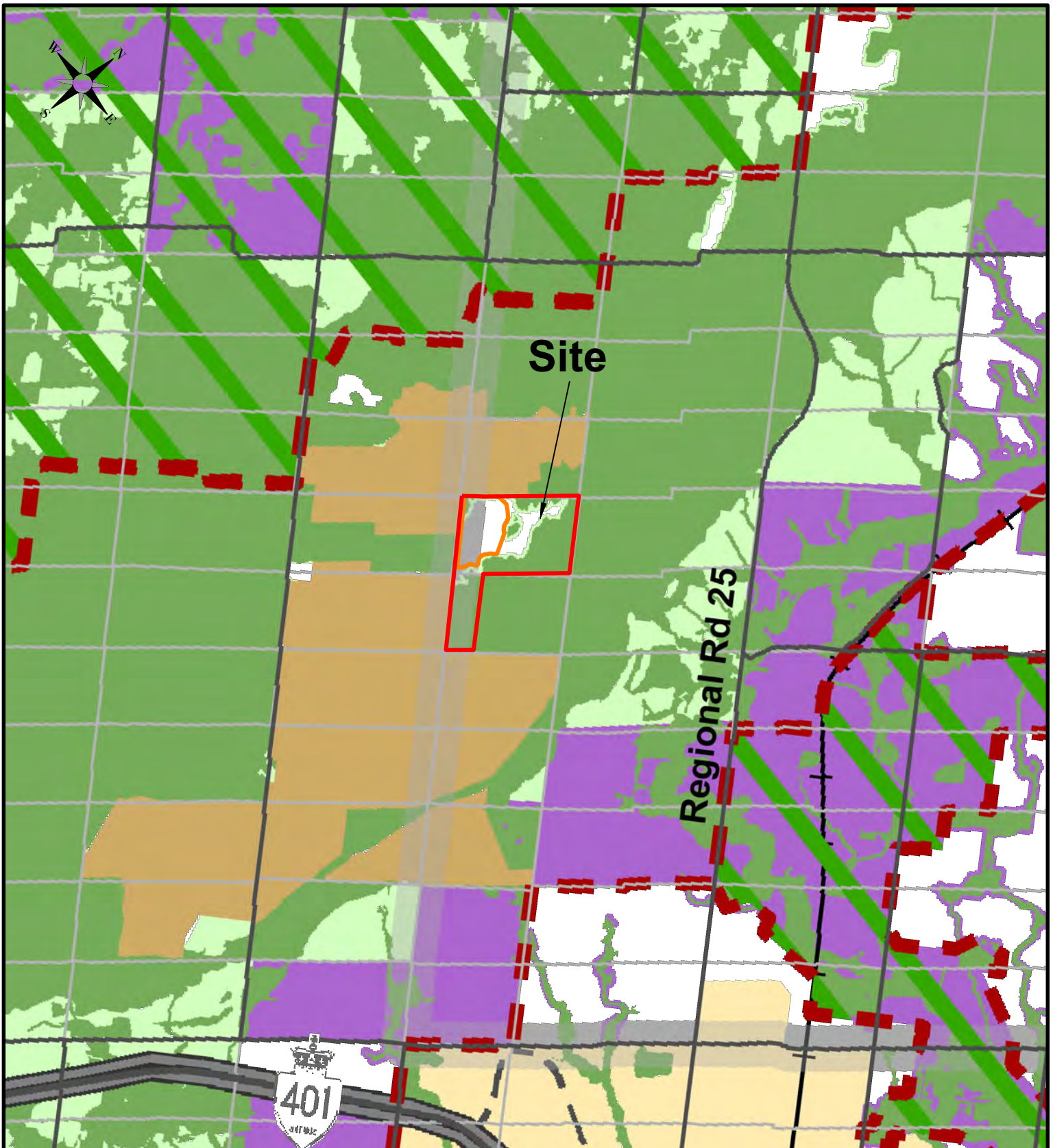
- Proposed Milton Quarry East Extension
- Proposed Limit of Extraction
- Provincial Natural Heritage System

DATE September 2020

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**Figure # 9**  
**Key Features within the Greenbelt & Regional Natural Heritage Systems**  
 Region of Halton Official Plan  
**Proposed Milton Quarry East Extension**  
 Part Lot 12, Concession 1  
 Township of Halton Hills  
 Region of Halton

**Legend**

- Proposed Milton Quarry East Extension
- Proposed Limit of Extraction
- Greenbelt Plan Boundary
- Natural Heritage System (Greenbelt)
- Key Features
- Enhancement Areas, Linkages and Buffers
- Mineral Resource Extraction Area
- Urban Area
- Prime Agricultural Areas in Natural Heritage System Enhancements/Linkages/Buffers

Date: September 2020

Sources: Halton Region Official Plan - Map 1G - Key Features within the Greenbelt & Regional Natural Heritage Systems dated June 19, 2018

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**MHBC** PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE

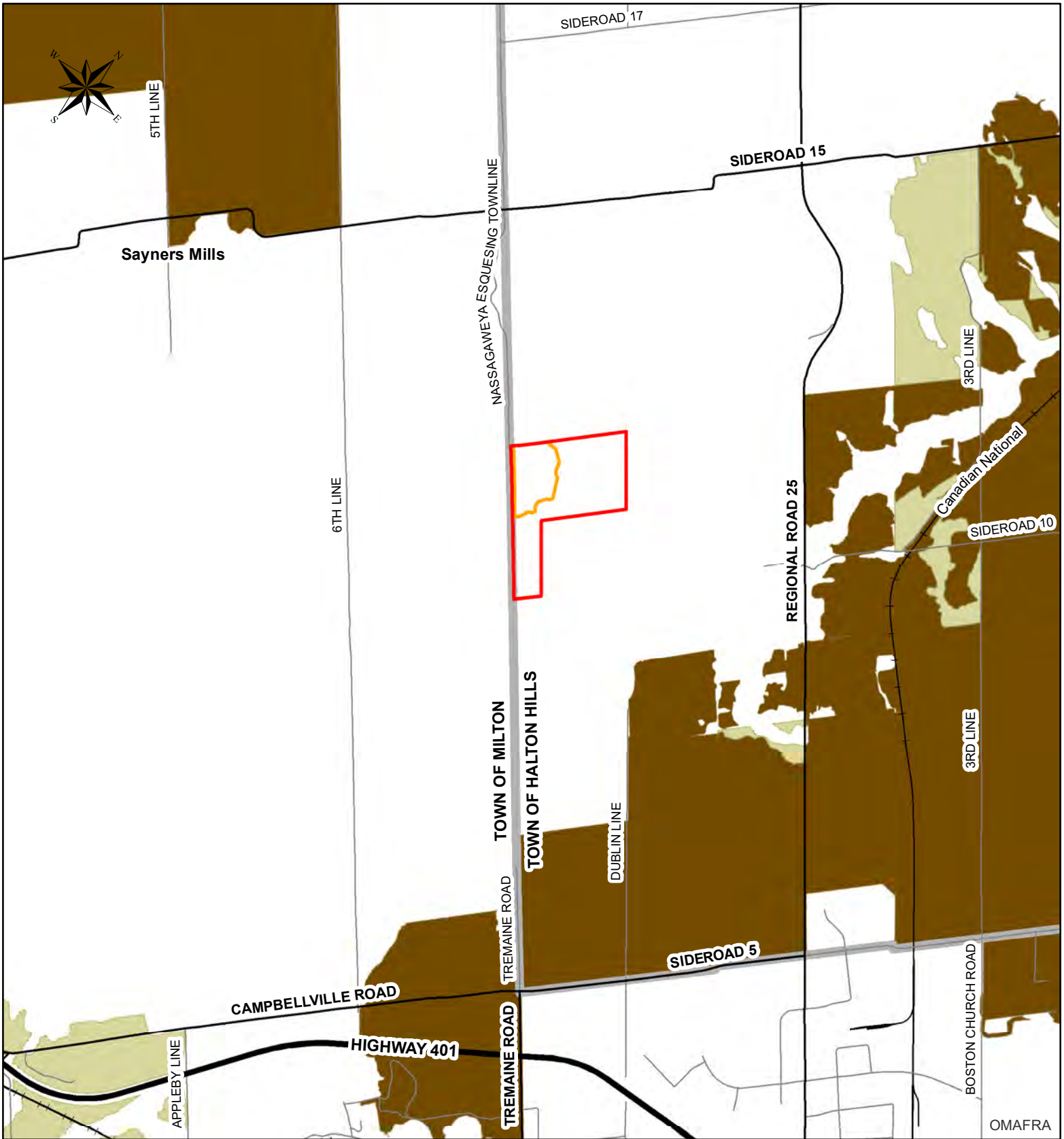


Figure # 10  
**Provincial  
 Agricultural System**

**Proposed Milton Quarry  
 East Extension**

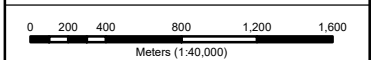
Part Lot 12, Concession 1  
 Geographic Township of Esquesing  
 Township of Halton Hills  
 Region of Halton

Legend

- Proposed Milton Quarry East Extension
- Proposed Limit of Extraction
- Prime Agricultural Area
- Candidate Area

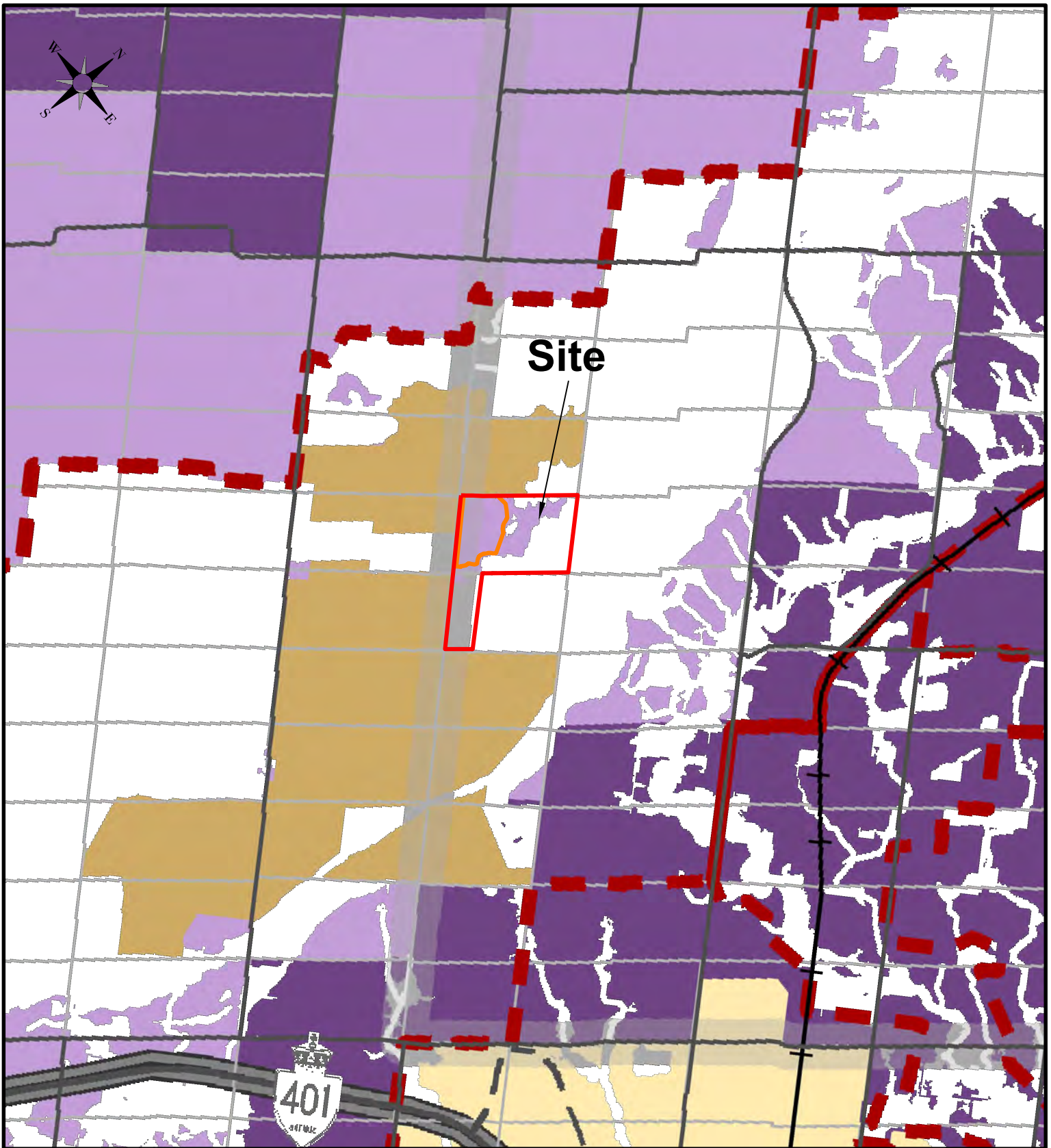
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




**Figure # 11**  
**Agricultural System & Settlement Areas**


Region of Halton Official Plan  
**Proposed Milton Quarry East Extension**  
 Part Lot 12, Concession 1  
 Geographic Township of Esquesing  
 Township of Halton Hills  
 Region of Halton

**Legend**

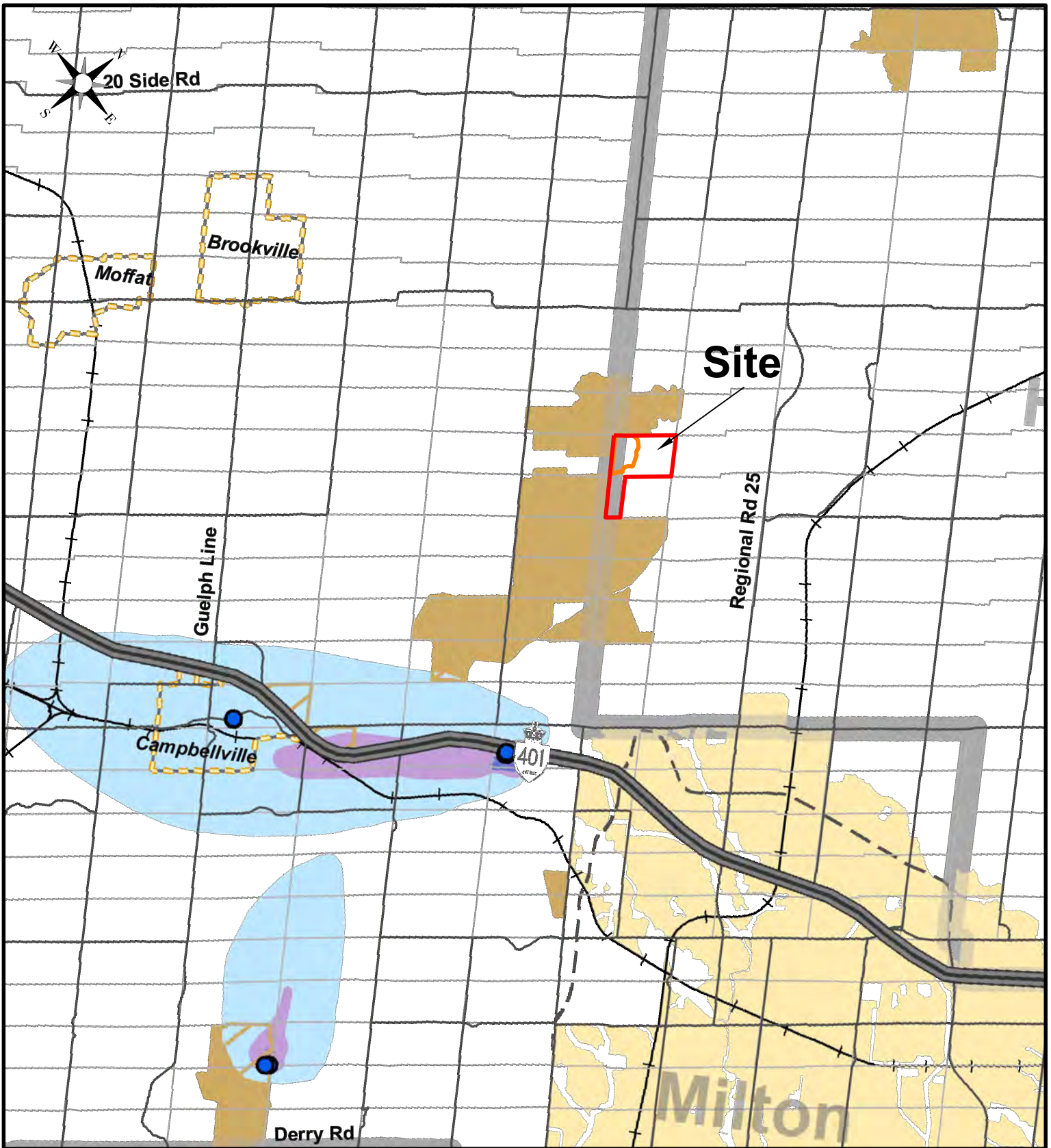
- |   |                                       |   |  |
|---|---------------------------------------|---|--|
|  | Proposed Milton Quarry East Extension |  | Prime Agricultural Areas                             |
|  | Proposed Limit of Extraction          |  | Agricultural System Outside Prime Agricultural Areas |
|  | Niagara Escarpment Plan               |  | Mineral Resource Extraction Area                     |
|  | Greenbelt Plan                        |  | Urban Area   |

Date September 2020

Sources  
 Halton Region Official Plan - Map 1E - Agricultural System and Settlement Areas, dated June 19, 2018

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**Figure # 12**  
**Municipal Wellhead**  
**Protection Zones**


Region of Halton Official Plan  
**Proposed Milton Quarry**  
**East Extension**  
 Part Lot 12, Concession 1  
 Geographic Township of Esquesing  
 Township of Halton Hills  
 Region of Halton

**Legend**

- Proposed Milton Quarry East Extension
- Proposed Limit of Extraction
- Zone 1 (100 Days)
- Zone 2 (100 Days to 2 Years)
- Zone 3 (2 Years to 10 Years)
- Mineral Resource Extraction Area
- Urban Area

Date September 2020

Sources  
 Halton Region Official Plan - Map 1D - Municipal Wellhead Protection Zones, dated June 19, 2018

Scale  
  
 Meters (1:75,000)

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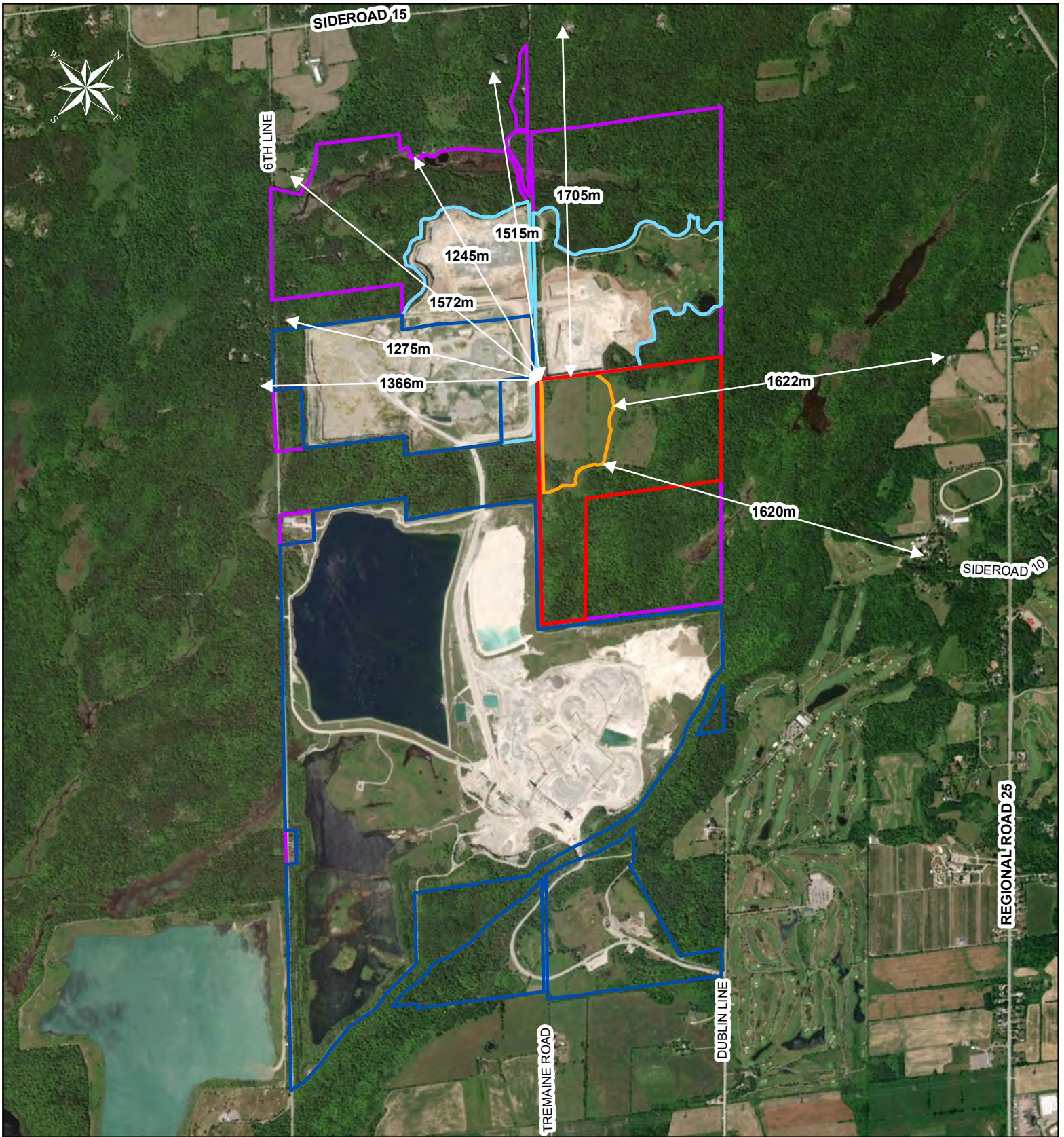


Figure # 13  
**Surrounding Sensitive Receptors**

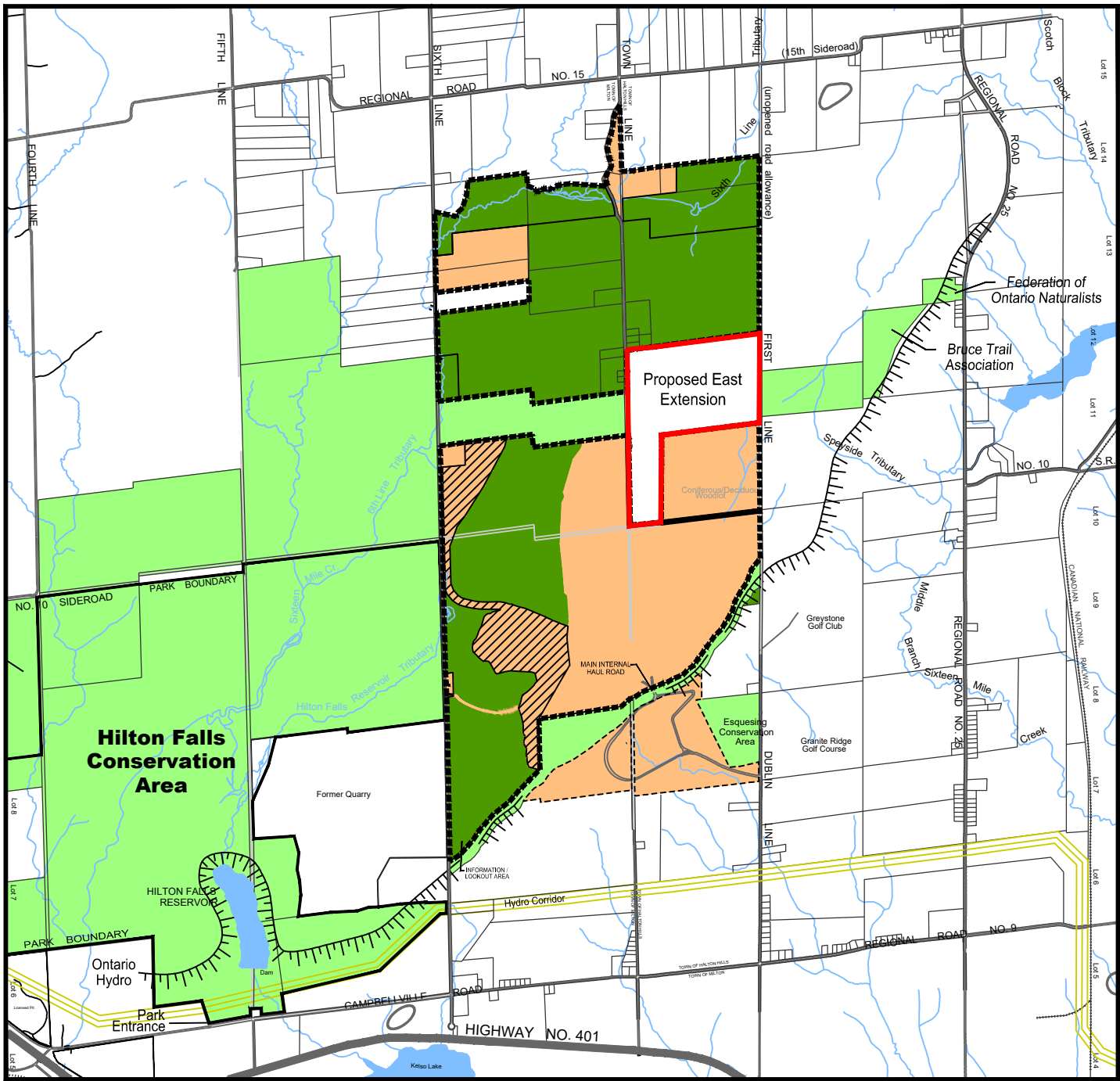
**Proposed Milton Quarry East Extension**  
 Part Lot 12, Concession 1  
 Geographic Township of Esquesing  
 Township of Halton Hills  
 Region of Halton

**Legend**

- Proposed Milton Quarry East Extension
- Proposed Limit of Extraction
- Milton Quarry (1962)
- Milton Quarry Extension (2007)
- Other Lands Owned by Dufferin

<b>DATE</b>	September 2020
<b>SOURCES</b>	Land Information Ontario Contains information licensed under the Open Government Licence - Ontario
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<b>PLANNING          URBAN DESIGN          &amp; LANDSCAPE          ARCHITECTURE</b>	






**Figure # 14**  
**Private and Public**  
**Land Holdings**

**Proposed Milton Quarry**  
**East Extension**

Part Lot 12, Concession 1  
 Geographic Township of Esquesing  
 Township of Halton Hills  
 Region of Halton


**Legend**

 Proposed Milton Quarry East Extension

 Public Lands (±1,100 ha)

 Future Public Lands (±386 ha)


 Private Lands (±285 ha)

 Future Ownership/Use Determined by Master Plan (±54 ha)

Note: MHBC is double checking area calculations against MPAC lot fabric.

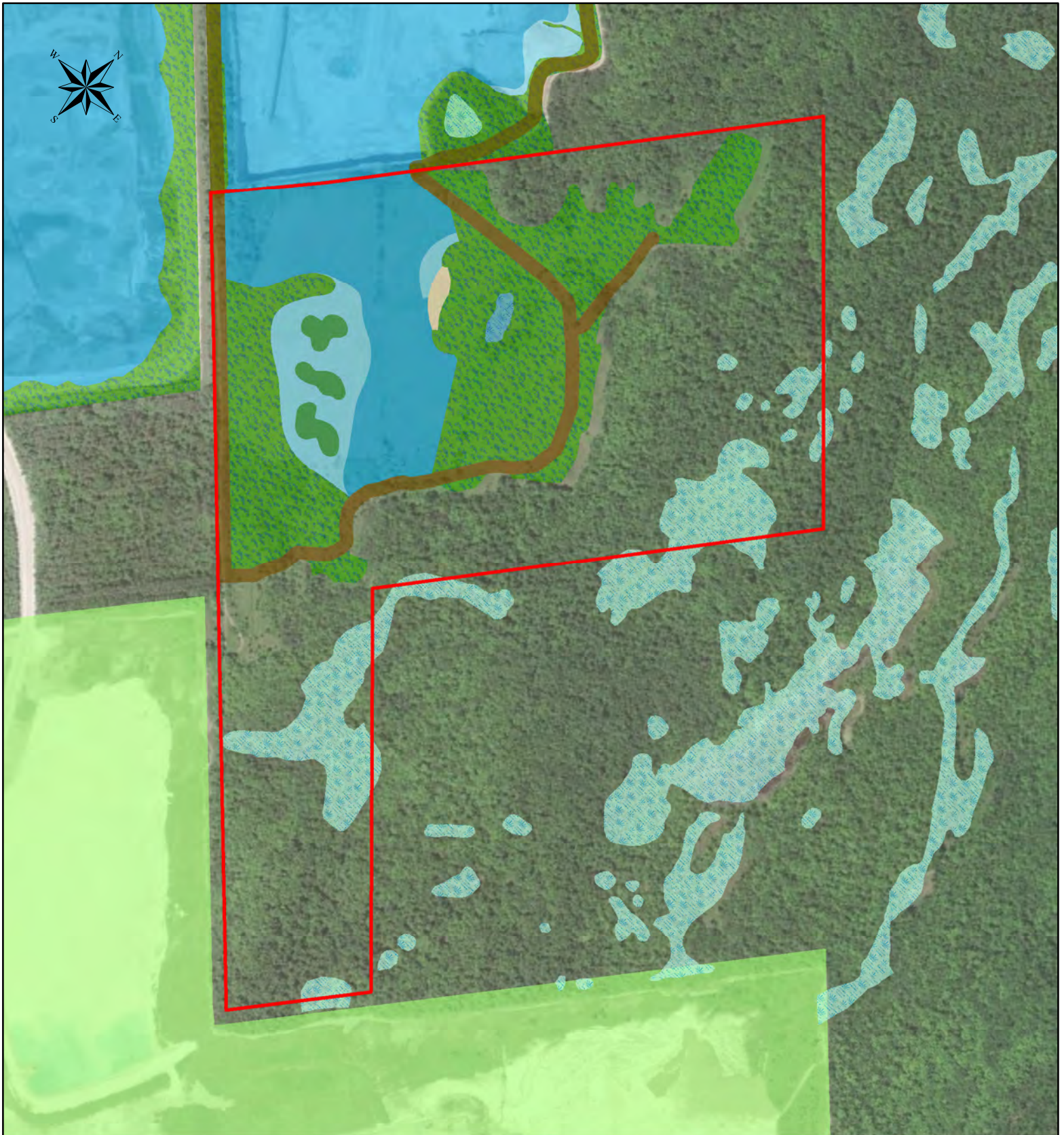
Date September 2020

Sources Land Information Ontario  
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Scale  
  
 Meters (1:40,000)

R:\bham9061DJ - Dufferin - Milton Quarry Extension Spayside\Drawings - Must be in NAD 27\Due Diligence Report - Pre-con figures\AutoCAD - UTM NAD279061DJ - Figure 14 - Public and Private Lands





**Figure # 15**  
**Ecological Enhancement Plan**

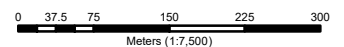
**Proposed Milton Quarry East Extension**  
 Part Lot 12, Concession 1  
 Geographic Township of Esquesing  
 Township of Halton Hills  
 Region of Halton

**Legend**

- Proposed Milton Quarry East Extension
- Trail
- Deep Lake
- Wetland
- Islands
- Promontory & Beach Ridge
- Vegetated Area
- Reforestation Area
- Existing Wetland
- MNRF Wetland

DATE **September 2020**

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 Speyside\Drawings\Due Diligence Report\GIS





## PRE-CONSULTATION MEETING APPLICATION

### General Information

This page provides guidance as follows on Pre-consultation meetings:

- Purpose
- Application types requiring Pre-consultation
- Schedule a meeting
- Attending a meeting
- Application submission standards
- After the pre-consultation meeting

Anyone wishing to initiate a pre-consultation meeting is asked to complete the attached application form and return it to the Town of Halton Hills Planning & Development Department (see "Scheduling a Pre-consultation Meeting" below for more information). Pre-consultation is a **free no charge service** provided by the Town of Halton Hills and commenting agencies.

### Purpose

- Pre-consultations allow future applicants to meet with Town Staff and commenting/approval Agencies on development proposals before an application is filed
- Indicate what makes up a complete application(s)
- Provide a better understanding of the approvals process
- Town Staff and Agencies review the proposal with the Applicant, ask the Applicant questions, provide feedback and an opportunity for further questions and answers
- Staff contact is assigned
- Development processes are reviewed
- Issues for further discussion are flagged
- Notes are taken and the Applicant is provided with a list of the required information necessary to file an Application (usually within 3 weeks)

### Application Types Requiring Pre-consultation

The following applications require pre-consultation unless a special exception is made:

- Official Plan Amendments
- Zoning Bylaw Amendments
- Subdivisions
- Site Plans
- Condominiums
- Multi-lot consents
- Expansions to legal non-conforming uses

Please note that:

- Consents and Minor variances may require pre-consultation on a case by case basis

### Scheduling a Meeting

Town pre-consultation meetings are held every other Thursday between 9:30 am and 11:00 am. A request to schedule a pre-consultation meeting should be filed by 4:30 pm Monday the week prior by emailing your signed Application form and sketch to:

[pre-consultation@haltonhills.ca](mailto:pre-consultation@haltonhills.ca) or delivering in person at Town Hall, 1 Halton Hills Drive, Georgetown, ON L7G 5G2. To confirm receipt of your Application you may want to contact an Administrative Coordinator in the Planning & Development Department at 905-873-2601 Ext. 2900.



Applicants will be contacted no later than Friday the week before to the upcoming pre-consultation meeting to:

- Confirm time and date of their pre-consultation meeting; or
- Arrange the next most suitable meeting date

### Attendance

All pre-consultation meetings are organized by Town Planning & Development Department staff. Meeting attendees include the following:

- applicant and/or his/her authorized agent(s) and/or advisors;
- relevant Town Staff; and
- Agency Staff who may include representatives of Halton Region, the relevant Conservation Authority, the Ministry of Transportation and others as required.

### Submission Standards

Please note that electronic submissions are preferred and include:

- Complete application form, signed by the owner
- Drawing(s)
  - 11X17 PDF format or 1 hardcopy each of any drawings in 11X17 dimensions
- Drawing(s) should detail as much information as possible including:
  - site dimensions
  - proposed and existing buildings
  - access
  - parking areas
  - treed areas
  - other information
- Any additional information that may assist in providing feedback.

**Note:** *Inadequate or premature applications may be refused or require review at additional pre-consultation meetings. The Applicant may be required to attend additional meeting(s) to establish application requirements.*

### After the Pre-consultation Meeting

Notes are sent to applicants within approximately 3 weeks of the meeting.

Applicants may be required to contact Town and Agency staff for additional guidance on issues related to their application including terms of reference of any required studies or reports or any additional studies that may be required on further review of the proposal.

**Confidentiality Note:** *Any information of a confidential nature that is provided to the Town for review should be marked by the applicant as "In Confidence".*



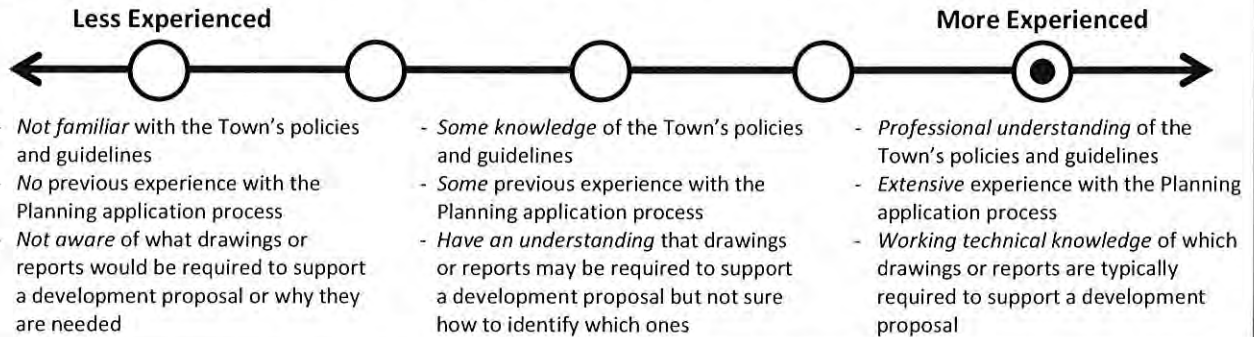
# PRE-CONSULTATION MEETING APPLICATION

This form must be completed by the Owner or Authorized Applicant/Agent and **SIGNED BY THE OWNER.**

If you require assistance in completing this application you can contact the Town of Halton Hills Planning & Development Department at (905) 873-2601 ext. 2900.

**INDIVIDUAL ATTENDING THE PRE-CONSULTATION MEETING MUST COMPLETE SELF-IDENTIFICATION:**

Please self-identify your familiarity with and understanding of the Planning Process. Completing this section will help staff deliver comments on your proposal in the most effective way.



Did you consult with Town Planning staff prior to submitting this pre-consultation application? Yes  No

**1. LOCATION OF PROPERTY**

Georgetown <input type="checkbox"/>	Acton <input type="checkbox"/>	401 Corridor <input type="checkbox"/>	Rural <input type="checkbox"/>	Niagara Escarpment <input checked="" type="checkbox"/>
Address of Subject Lands (Street Number/Name): 10305 Nassagaweya Esqueing Townline				
Legal Description and/or Assessment Roll Number: Part Lot 12, Concession 1, Geographic Township of Esqueing, Town of Halton Hills, Region of Halton				

**2. REGISTERED PROPERTY OWNER – MAILING ADDRESS**

Name of registered Owner(s) of subject land (list Company name along with contact if Owner is a company): 1336811 Ontario Inc. (c/o Kevin Mitchell)			
Address of Owner: 2300 Steeles Avenue, 4th Floor	Town/City: Concord	Province: Ontario	Postal Code: L4K 5X6
Phone: (416) 788-0015	Ext.:	E-mail: kevin.mitchell@ca.crh.com	

**3. APPLICANT/AUTHORIZED AGENT – MAILING ADDRESS** (if different than Owner)

Name of Applicant (list Company name along with contact if Applicant is a company): CRH Canada Group Inc. (c/o Kevin Mitchell)			
Address of Applicant: 2300 Steeles Avenue, 4th Floor	Town/City: Concord	Province: Ontario	Postal Code: L4K 5X6
Phone: (416) 788-0015	Ext.:	E-mail: kevin.mitchell@ca.crh.com	

The personal information collected on this form is collected under the authority of the Planning Act as amended. The information is used for the purposes of scheduling and preparing a pre-consultation meeting. Questions regarding the collection of this information should be directed to the Towns Records/FOI Coordinator at 905-873-2601 ext. 2356 or [foi@haltonhills.ca](mailto:foi@haltonhills.ca).



# PRE-CONSULTATION MEETING APPLICATION

## 4. DESCRIPTION OF EXISTING PROPERTY

Lot Area (metric & imperial): 66.5 ha (164.3 acres)	Frontage (metric & imperial): 666 m (2,185 ft) - along 'opened' portion	Lot Depth (metric & imperial): Varied
Current Use of Property: Residential <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Institutional <input type="checkbox"/> Agricultural <input type="checkbox"/>		
Current Official Plan Designation: Escarpment Rural Area		Current Zoning Designation: n/a - Located within NEC Development Control
Description of existing uses and/or development on the property: The property is currently vacant and consists of open field/pasture, wooded area. The proposed development only applies to 29.9 ha of the sits.		

## 5. PROPOSAL

### Proposed Application Types:

Official Plan Amendment <input checked="" type="checkbox"/>	Subdivision <input type="checkbox"/>	Site Plan <input type="checkbox"/>	Consent <input type="checkbox"/>
Zoning By-law Amendment <input type="checkbox"/>	Condominium <input type="checkbox"/>	Part Lot Control <input type="checkbox"/>	Minor Variance <input type="checkbox"/>

### Details of Proposed Development:

Type of Proposed Development: Residential <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Institutional <input type="checkbox"/> Agricultural <input type="checkbox"/>
Description of proposed development: A proposed east extension of the existing Milton Quarry. The proposed licence boundary of the extension would be 29.9 hectares, of which 16.0 hectares is proposed for extraction.

### Lot Creation:

Lot Creation: No Change <input type="checkbox"/> 1 New Lot <input type="checkbox"/> More than 1 New Lot <input type="checkbox"/> Lot Line Adjustment <input type="checkbox"/>
If more than 1 new lot, how many: _____ Proposed lot area for new lot(s): _____
Method(s) of Lot Creation: Subdivision <input type="checkbox"/> Condominium <input type="checkbox"/> Part Lot Control <input type="checkbox"/> Consent (Severance) <input type="checkbox"/>

### Zoning:

Proposed Zoning: No Change <input checked="" type="checkbox"/> Conventional <input type="checkbox"/> Site Specific <input type="checkbox"/> Minor Variance <input type="checkbox"/>
If proposing a Conventional zoning change, what zone is proposed? n/a - Located within NEC Development Control
If proposing a Site Specific zoning change or a Minor Variance, what relief is being sought?



**6. POLICY FRAMEWORK**

**Town of Halton Hills Official Plan:**

Town of Halton Hills Official Plan designation:	Escarpment Rural Area
Does the proposal conform to the policies of the Town of Halton Hills Official Plan?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
If no, what changes are proposed?	The Official Plan requires an Amendment for all new or expanded mineral aggregate operations. A mapping change to 'Mineral Resource Extraction Area' is required.

Which Secondary Plan applies (if any):	n/a
Does the proposal conform to the policies of the applicable Secondary Plan?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If no, what changes are proposed?	

**Halton Region Official Plan:**

Halton Region Official Plan designation and constraints:	Predominantly designated 'Agricultural Area' and a small portion is designated 'Regional Natural Heritage System' on Map 1, and 'Escarpment Rural Area' on Map 1A.
Does the proposal conform to the policies of the Halton Region Official Plan?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
If no, what changes are proposed?	The Official Plan requires an Amendment for all new or expanded mineral aggregate operations. Mapping changes to 'Mineral Resource Extraction Area' are required.

**Provincial Policy:**

Is the subject property located within the Greenbelt Plan area?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Is the subject property located within the Niagara Escarpment Plan area?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

**Conservation Authorities:**

Is any part of the subject property regulated by a Conservation Authority?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
If yes, which Conservation Authority?	Conservation Halton <input checked="" type="checkbox"/> Credit Valley Conservation (CVC) <input type="checkbox"/> Grand River Conservation <input type="checkbox"/>
If yes, have you previously contacted the Conservation Authority?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
If yes, please provide the name of staff member whom you contacted:	Kellie McCormack



**7. SITE SERVICING**

How is the existing property serviced? Property not serviced.  
**Water:** Municipal Services  Private Well       **Sanitary:** Municipal Services  Private Septic

How is the proposed development intended to be serviced? Property does not require servicing.  
**Water:** Municipal Services  Private Well       **Sanitary:** Municipal Services  Private Septic

If a severance is proposed confirm whether the retained and new lot(s) will all be serviced the same way:  
 n/a

**8. DEVELOPMENT CONSTRAINTS**

**Natural Features:**

Describe any natural features on or adjacent to the subject property (i.e. water courses, slopes to water courses, wetlands, woodlands or other):  
 Site currently comprised of open field/pasture. Woodlands are located adjacent to the site, and three (3) wetlands are situated to the north, east and south. The property is also considered habitat in accordance with the Endangered Species Act.

**Heritage Buildings:**

Is the subject property or buildings listed or designated on the Town's Heritage Register?      Yes  No

Is an adjacent property or buildings listed or designated on the Town's Heritage Register?      Yes  No

If yes to either Heritage question please describe:

**Source Water Protection:**

**A. SALT APPLICATION & STORAGE**  
 Will road salt be stored on-site or used on paved surfaces greater than 200 m<sup>2</sup> (2,152 ft<sup>2</sup>)?      Yes  No   
 Will a snow storage area greater than 100 m<sup>2</sup> (1,076 ft<sup>2</sup>) be located on-site?      Yes  No

**B. FUEL HANDLING & STORAGE**  
 Will liquid fuel or fuel oil greater than 250 L (65 gal.) be stored or handled on-site?      Yes  No

**C. WASTE STORAGE**  
 Will hazardous waste, liquid industrial waste or PCB waste be stored on-site?      Yes  No

**D. CHEMICAL HANDLING & STORAGE**  
 Will chemicals greater than 25 L (6.5 gal.) be stored or handled on-site? (ie. degreasers, coolants, cleaners, paints, adhesives, wood treatments, sealers, inks, rubber, solvents, vehicle fluids, dry cleaning products)      Yes  No

**E. AGRICULTURAL MATERIAL APPLICATION & STORAGE**  
 Will the storage or application of fertilizers greater than 25 kg (55 lbs.) occur on-site?      Yes  No   
 Will the storage or application of pesticides greater than 2,500 kg (5511 lbs.) occur on-site?      Yes  No   
 Will the application or storage of unprocessed plant based materials (ie. fruit or vegetable peels) occur on-site?      Yes  No





# PRE-CONSULTATION MEETING APPLICATION

## 9. DRAWINGS *Drawings are required for all pre-consultation applications*

Drawings and other information provided for review with the pre-consultation application (please list):  
 Please see figures included in pre-consultation request dated September 4, 2020. Attached please find an 11x17 PDF format of the Existing Features page and draft Operational page of the preliminary ARA site plans.

### **Any drawings submitted should be:**

11 x 17 PDF format or 1 hardcopy each of any drawings in 11 x 17 dimensions

Drawings should include:

- site dimensions
- existing and proposed buildings
- existing and proposed access
- existing and proposed parking areas
- treed areas
- water courses
- other information as appropriate

*Note: the committee will review drawings without this information. However, the quality of feedback from Town staff and agencies may be reduced if it is absent.*

## 10. SIGNATURES

### A. Signature of Applicant/Agent (if an Applicant/Agent is advancing this pre-consultation application the current Owner's signature is require to allow/assign the Applicant/Agent to discuss matters related to their property):

Name of

Applicant/Agent: CRH Canada Group Inc. (c/o Kevin Mitchell) Tel: (416) 788-0015

November 4, 2020

Owner's Signature

Date  
(YY/MM/DD)

### B. Current Property Owner's Signature:

As the Owner of the subject lands I consent to this application being considered at a scheduled Town of Halton Hills Pre-consultation meeting and also herby authorize staff of the Town of Halton Hills, and circulated agencies, to enter upon the subject lands and premises, for the limited purpose of evaluating the merits of this application.

Name of Owner: CRH Canada Group Inc. (c/o Kevin Mitchell) Tel: (416) 788-0015

November 4, 2020

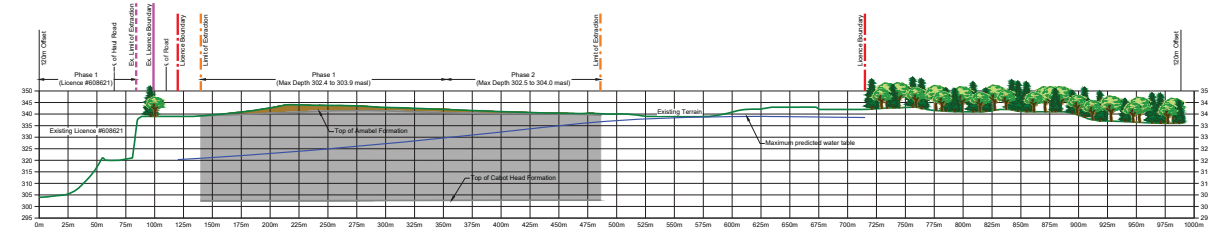
Owner's Signature

Date  
(YY/MM/DD)

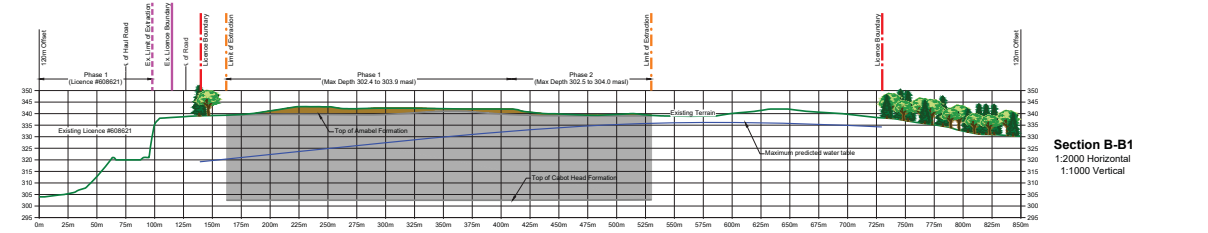
**Note:** While every attempt will be made during the pre-consultation process to identify all requisite reports and documentation, it must be understood that as review of an application proceeds, the need for additional information or studies may arise.

The Town of Halton Hills has a Pre-consultation By-Law #2008-0092 by way of Staff Report No. PD-2008-0021.

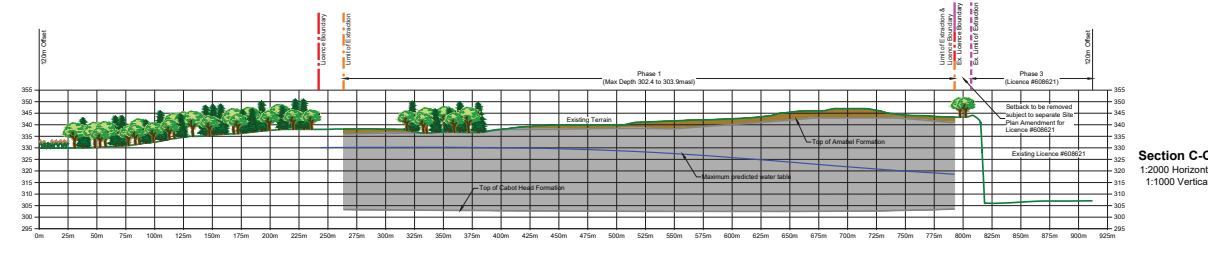
# Preliminary Draft for Discussion



Section A-A1  
1:2000 Horizontal  
1:1000 Vertical



Section B-B1  
1:2000 Horizontal  
1:1000 Vertical



Section C-C1  
1:2000 Horizontal  
1:1000 Vertical



- A. General**
- This site plan is prepared under the Aggregate Resources Act (ARA) for a Class 'A' Licence below the ground water table.
  - Area Calculations:
    - a. Licence boundary 29.9 ha
    - b. Limit of extraction 16.0 ha
  - All references to north, south, east and west are based on site north (not true north).
  - There are no sensitive receptors within 500m of the licence boundary.
- B. References**
- Contours were obtained from the Region of Halton's Open Data Catalogue which were derived from 2019 aerial photography and are displayed in one metre intervals. Elevations shown are in metres above sea level (masl).
  - Topographic information was obtained from numerous sources including Ontario GeoHub (Land Information Ontario), Northway Photomaps Inc. aerial photography captured in the spring of 1997, Google Earth Pro aerial photography captured on May 7, 2018 and field investigations for technical reports.
  - All topographic features are shown to scale in Universal Transverse Mercator (UTM) with North American Datum 1927 (NAD27), Zone 17 (metre), Central Meridian 81 degrees west coordinate system.
  - The licence boundary was established using a Sketch prepared by Fred G. Cunningham - Ontario Land Surveyor, dated December 2, 1997 and the significant wooded boundary provided by Goodman Ecological Consulting Inc. (GEC) dated June 1, 2020. Distances are approximate and for reference purposes only.
  - Land use designations on and within 120 metres of the licence boundary are from the Niagara Escarpment Plan, Map 3 - Regional Municipality of Halton, approved June 1, 2017. All land within the licence boundary is designated Escarpment Rural Area. Municipal zoning in this area does not apply.
  - Land use information identified on or within 120 metres of the licence boundary was determined using Google Earth Pro aerial photography captured on May 7, 2018.
- C. Drainage**
- Surface drainage on and within 120 metres of the licence boundary is by overland flow in the directions shown by arrows on the plan view, or by infiltration.
- D. Groundwater**
- The maximum predicted water table within the limit of extraction varies between 315.0 and 337.0 masl (see plan view on drawing 2 of 2 for location).
- E. Site Access and Fencing**
- A field access exists in the location shown on the plan view.
  - Post and wire fencing (unless noted otherwise) exists in the locations shown on the plan view.
- F. Aggregate Related Site Features**
- There are no existing aggregate operations or features on-site such as processing areas with stationary or portable equipment, stockpiles, recyclable materials, scrap, haul roads, fuel storage, berms or excavation faces.
- G. Cross Sections**
- Cross sections on this drawing depict the existing conditions.
  - Cross section locations are identified on the plan view for each drawing.



**Legal Description**  
Part of Lots 11 and 12, Concession 1 (former geographic Township of Esquesing) Town of Halton Hills Regional Municipality of Halton

**Legend**

- Licence Boundary
- Limit of Extraction
- Existing Licences
- Contours with Elevation
- Road
- Field Access
- Excavation Face
- Disturbed Area
- Wooded Area
- Wetland
- Wetland
- 120m Offset From Licence Boundary
- Parcel Fabric
- Trail Segment
- Overhead Hydro
- Watermain
- Fence
- Entrance / Exit
- Direction of Surface Drainage
- Cross Sections

**Legend - Cross Sections**

- Licence Boundary
- Limit of Extraction
- Existing Licence Boundary
- Existing Limit of Extraction
- Existing Grade
- Maximum Predicted Water Table
- Maximum Depth of Excavation
- Topsail and/or Overburden
- Aggregate Available for Extraction

**Site Plan Amendments**

No.	Date	Description	By

**Site Plan Revisions (Pre-Licensing)**

No.	Date	Description	By

**MHBC** PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE  
113 COLLEGE STREET, MARKHAM, ON, CANADA L3R 0Y7 | P: 905.728.0046 F: 905.728.2292 | WWW.MHBCONLINE.COM

MNR Approval Stamp: \_\_\_\_\_ MHBC Stamp: \_\_\_\_\_ Site North: \_\_\_\_\_ True North: \_\_\_\_\_

**Applicant**  
**CRH** CRH Canada Group Inc. 2300 Steeles Avenue West, 4th Floor Concord, Ontario L4K 5X6

**Project**  
**Milton Quarry East Extension**  
10305 Nassagaweya Esqueing Townline, Halton Hills, Ontario

MNR Licence Reference No. \_\_\_\_\_ Applicant's Signature: \_\_\_\_\_

Plan Scale: 1:2000 (Arch E) Date: October 2020  
Drawn By: C.P. File No.: 9061DJ  
Checked By: \*\*\*

File Name: **Existing Features & Cross Sections**  
Drawing No.: **1 of 2**  
File Path: N:\Biom\9061DJ - Milton Quarry Extension\9061DJ\Drawings - Must be in NAD 27\Site Plan\CRH\9061DJ - Site Plan - October 2020.dwg

# Preliminary Draft for Discussion

**Legal Description**  
Part of Lots 11 and 12, Concession 1  
(former geographic Township of Esqueving)  
Town of Halton Hills  
Regional Municipality of Halton

**Legend**

- Licence Boundary
- Limit of Extraction
- Existing Licences
- Contours with Elevation
- Road
- Field Access
- Extraction Face
- Disturbed Area
- Wooded Area
- Wetland
- Wetland
- 120m Offset From Licence Boundary
- Parcel Fabric
- Trail Segment
- Overhead Hydro
- Watermain
- Fence
- Entrance / Exit
- Gate
- General Direction of Excavation & Boundary
- Spot Elevation - CHECK
- Cross Sections



**A. General**

- Area Calculations:
  - Licence boundary 29.9 ha
  - Limit of extraction 16.0 ha
- The maximum annual tonnage is unlimited.
- All references to north, south, east and west are based on site north (not true north).

**B. Hours of Operation**

- Hours of operation are Monday to Saturday at 6:00am to 12:00pm.
- Site preparation and rehabilitation are permitted only between 7:00am and 7:00pm.
- Maintenance is permitted 24 hours per day, 7 days per week.
- Drilling is only permitted between 7:00am and 7:00pm.
- No operations are permitted on statutory holidays with the exception of maintenance.

**C. Site Access and Fencing**

- The site will be accessed from the common licence boundary to the north with adjacent Licence #608621 (East Cell).
- The licence boundary will be fenced except for the north boundary adjacent to existing Licence #608621 (East Cell).

**D. Site Preparation**

- Topsoil on this licence may be used to rehabilitate the site or to rehabilitate areas of Licence #5481 or Licence #608621. Overburden from this licence may be used to rehabilitate areas of Licence #5481 and/or Licence #608621 or to construct ramps for site traffic.

**E. Extraction Sequence**

- Phase 1
  - Commence extraction in a southerly direction from existing Licence #608621.
  - The maximum depth of extraction varies between 302.4 and 303.9 masl.
- Phase 2
  - Extract in an easterly direction from Phase 1.
  - The maximum depth of extraction varies between 302.5 and 304.0 masl.

**F. Extraction & Processing Details**

- Extraction will occur in a maximum of two benches (above water lift and below water lift) but is permitted to be extracted in a single bench.
- Blasted rock will be transported to the existing quarry (Licence #608621 and #5481) for processing.

**G. Haul Roads**

- The operation will utilize the existing internal haul road in existing Licences #608621 and #5481. If processing occurs in Licence #608621, highway trucks will transport processed material from the East Cell of Licence #608621 through the West Cell, North Quarry and Main Quarry before connecting to Dublin Line to transport material to market.

**H. Variations from Control and Operation Standards**

Section 8.13 Standard	Variation	Rationale
(11) & (12)	Gates will not be required where haul road(s) cross the common boundary with Licence #608621.	This will eliminate constraints to the movement of equipment between licences owned by the same licensee.
(110)	A 0 metre setback will be provided where the licence abuts existing Licence #608621.	This will enable material to be extracted along the common boundary and for rehabilitation to transition between licences. A site plan amendment for existing Licence #608621 is required.
(110.ii)	A 20 metre setback will be provided along the western boundary adjacent to the road allowance.	This will be consistent with Licence #608621 to the north which has a 20 metre setback along the western boundary adjacent to the road allowance.
(117 & 118)	Topsoil and overburden may be transferred to existing Licence #5481 and/or Licence #608621.	This will allow stripped material from site preparation to be used immediately for progressive rehabilitation or for overburden to be used in ramp construction in other parts of the existing licences.
(3)(a)	The common boundary with existing Licence #608621 will not be fenced.	The common licence boundary will be demarcated with marker posts every 30 metres.

**Site Plan Amendments**

No.	Date	Description	By

**Site Plan Revisions (Pre-Licensing)**

No.	Date	Description	By

MHBC PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE  
113 COLLEGE STREET, MARKHAM, ON L3R 0Y2 | P: 905.726.0291 | WWW.MHBCONLINE.COM

MNRF Approval Stamp      MHBC Stamp      Site North

True North

**Applicant**

**CRH** CRH Canada Group Inc.  
2300 Steeles Avenue West, 4th Floor  
Concord, Ontario  
L4K 5X6

**Project** **Milton Quarry East Extension**  
10305 Nassagaweya Esqueving Townline, Halton Hills, Ontario

MNRF Licence Reference No.      Applicant's Signature

Plan Scale: 1:2000 (Arch E)      Date: October 2020

Drawn By: C.P.      File No.: 9061DU

Checked By:      Date:

**File Name** **Operational Plan**

**Drawing No.** **2 of 2**

**File Path** N:\Bim\9061DU - Milton Quarry Extension\9061DU\Drawings - Must be in NAD 2011\Site Plan\9061DU - Site Plan - October 2020.dwg

# Tab **18**



Goodban  
Ecological  
Consulting Inc.

**Terms of Reference for a Level 1 and 2 Natural  
Environment Technical Report (NETR) and  
Environmental Impact Assessment (EIA)**

**Dufferin Aggregates Milton Quarry East Extension**

**October 29, 2020**

Prepared for:

**Dufferin Aggregates**

A Division of CRH Canada Group Inc.  
2300 Steeles Avenue West, 4<sup>th</sup> Floor  
Concord Ontario L4K 5X6

Prepared by:

**Goodban Ecological Consulting Inc.**

879 Cabot Trail  
Milton, Ontario L9T 3W4

# TERMS OF REFERENCE

## Level 1 and 2 Natural Environment Technical Report (NETR) and Environmental Impact Assessment (EIA)

### Dufferin Aggregates Milton Quarry East Extension

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## 1.0 INTRODUCTION

Goodban Ecological Consulting Inc. (GEC) has been retained by Dufferin Aggregates, a division of CRH Canada Group Inc. (Dufferin) to provide them with advice pertaining to the natural environment and ecology in connection with a proposal to extend the Milton Quarry. GEC's advice will include site characterization, impact assessment, and recommendations related to monitoring, mitigation, and rehabilitation. This document presents the proposed Terms of Reference (ToR) for the preparation of a Natural Environment Level 1 and 2 Natural Environment Technical Report (NETR) and Environmental Impact Assessment (EIA). A separate ToR has been prepared by GHD, in collaboration with GEC, pertaining to advice related to an Adaptive Environmental Management and Protection Plan (AMP).

The proposed extension of the Milton Quarry, referred to as the Milton Quarry East Extension (MQEE), represents a proposed extraction area of approximately 16 hectares bounded by the existing East Cell to the north, the existing North Quarry to the west, and the existing Main Quarry at some distance to the southwest and south. The proposed MQEE extraction area is contiguous with the existing East Cell (i.e. it would be extracted as part of the East Cell) and separated from the North Quarry by the Nassagaweya-Esquesing Townline to the west. See **Figures 1 and 2**.

The 66.5 ha property contains some large open fields that were formerly used as hayfields and forested areas, most of which form part of the Halton Forest North ANSI. The Halton Forest, which covers around 35 km<sup>2</sup>, is comprised of the Halton Forest South, Halton Forest North and Speyside Forest ANSIs. There are a number of wetlands located within the forest that form part of the Halton Escarpment Wetland Complex and there is a single small wetland within the open field area (mapped as Wetland U1 on **Figure 3**).

Ecological work related to the Milton Quarry Extension, circa 1998 to 2002, identified several species at risk (SAR) in the local area. A number of wetlands were identified that function as breeding pools for the Jefferson Salamander (Endangered) and Unisexual Ambystoma (Jefferson Salamander Dependent Population) (Endangered). Other species at risk (SAR) identified around that time included American Ginseng (Endangered), Butternut (Endangered) and Louisiana Waterthrush (Threatened).

The Terms of Reference (ToR) for the Level 1 and 2 Natural Environment Technical Report (NETR) and Environmental Impact Assessment (EIA) have been prepared in consideration of the comprehensive understanding that already exists with respect to the natural environment, geology and water resources in the area of the Milton Quarry and the existing mitigation measures that have a long-proven record of successful operation and protection of water resources and related ecological features. The Terms of Reference (ToR) are provided below under the following section headings:

- 2.0 Natural Environment – Legislative and Policy Framework
- 3.0 Natural Environment Study Area
- 4.0 Ecological Field Survey Program
- 5.0 Mitigation Measures, Ecological Enhancements, Quarry Rehabilitation and Impact Assessment
- 6.0 References

## 2.0 NATURAL ENVIRONMENT – LEGISLATIVE AND POLICY FRAMEWORK

The Level 1 and 2 Natural Environment Technical Report (NETR) and Environmental Impact Assessment (EIA) will address the relevant legislative and policy components of the following Acts and Plans:

- *Aggregate Resources Act*;
- *Endangered Species Act (ESA 2007)*;
- Provincial Policy Statement (2020);
- Niagara Escarpment Plan (2017);
- Halton Region Official Plan (2015); and,
- Town of Halton Hills Official Plan (2019).

### 2.1 Aggregate Resources Act (ARA)

Under the *Aggregate Resources Act* there is a requirement to complete a Natural Environment Level 1 study and also a Natural Environment Level 2 study where significant natural features are identified within 120 m of the site during the Level 1 investigations.

The requirements for a Natural Environment Level 1 study are:

*Determine whether any of the following features exist on and within 120 m of the site: significant wetland, significant portions of the habitat of endangered and threatened species, fish habitat, significant woodlands (south and east of the Canadian Shield), significant valley lands (south and east of the Canadian Shield), significant wildlife habitat, and significant areas of natural and scientific interest (MNR 1997).*

The requirements for a Natural Environment Level 2 study are:

*Impact assessment where the Level 1 study identified any features on or within 120 m of the site in order to determine any negative impacts on the natural features or ecological functions for which the area is identified, and any proposed preventative, mitigative, or remedial measures (MNR 1997).*

Policy 2.01.07 compiled by the Lands and Waters Branch of the Aggregate and Petroleum Resources Section of MNR (2006) summarizes the guiding principles of a Natural Environment Report:

*The purposes of the Natural Environment report are to determine the presence of significant natural heritage features/areas and fish habitat in accordance with the Provincial Policy Statement 2005, and to ensure that any necessary preventative, mitigative or remedial measures are undertaken for their protection.*



## 2.2 Endangered Species Act (ESA 2007)

The provincial Endangered Species Act (ESA 2007) was developed to:

- Identify species at risk, based upon best available science;
- Protect species at risk and their habitats and to promote the recovery of species at risk; and
- Promote stewardship activities that would support those protection and recovery efforts.

The ESA protects all Endangered, Threatened and Extirpated species listed on the Species at Risk in Ontario (SARO) list. These species at risk are legally protected from harm or harassment and their associated habitats are legally protected from damage or destruction, as defined under the ESA.

Certain types of development may be permitted in habitats of Endangered and Threatened species under certain conditions. For example, an ESA 17(2)(b) "Overall Benefit" may be issued if a proponent can demonstrate an overall benefit to the species in question. For some species (e.g. Bobolink and Eastern Meadowlark), Ontario Regulation 242/08 allows for development to proceed provided that a larger area of suitable habitat is created elsewhere prior to the activity commencing. In the case of Butternut, retainable trees may be removed provided that compensatory plantings are provided elsewhere and the rules in regulation are followed.

The Ministry of Environment, Conservation and Parks (MECP) is responsible for the administration of the *Endangered Species Act*. The proponent will pursue permits and authorizations for the Milton Quarry East Extension directly with MECP, but relevant information will also be provided in the NETR & EIA.

## 2.3 Provincial Policy Statement (PPS 2020)

The Provincial Policy Statement (2020) was issued under Section 3 of the *Planning Act*. The NETR & EIA will address policies relevant to Natural Heritage (section 2.1) with some reference to certain other policies.

Eight types of natural heritage features are defined in the PPS, as follows:

- Significant Wetlands;
- Significant Coastal Wetlands;
- Significant Woodlands;
- Significant Valleylands;
- Significant Wildlife Habitat (SWH);
- Fish Habitat;
- Habitat of Endangered and Threatened Species; and,
- Significant Areas of Natural and Scientific Interest (ANSIs).

Development and site alteration are not permitted in Significant Wetlands or in Significant Coastal Wetlands. Development and site alteration are not permitted in Significant Woodlands, Significant Valleylands, Significant Wildlife Habitat or Significant ANSIs, unless it is demonstrated that there will be no negative impacts on the associated natural features or their ecological functions.

Development and site alteration are not permitted in the habitat of Endangered and Threatened species or in Fish Habitat, except in accordance with provincial and federal requirements. Development and site alteration may be permitted on lands adjacent to significant natural heritage features (i.e., within 120 m of the Subject Lands, as identified in the Natural Heritage Reference Manual (MNR 2010) if it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

## **2.4 Niagara Escarpment Plan (NEP 2017)**

The Niagara Escarpment Planning and Development Act was first drafted in 1990 and was last amended in 2017 and it is administered by the Niagara Escarpment Commission (NEC). The objectives of the Niagara Escarpment Plan (NEP) specific to this application include Sections 2.7.3 through 2.7.8 and Section 2.7.12 which include:

*a) 2.7.3. The diversity and connectivity between key natural heritage features and key hydrologic features shall be maintained, and where possible, enhanced for the movement of native plants and animals across the landscape.*

*b) 2.7.4. Development in the other natural features not identified as key natural heritage features or key hydrologic features should be avoided. Such features should be incorporated into the planning and design of the proposed use wherever possible, and the impact of the development on the natural feature and its functions shall be minimized.*

*c) 2.7.5 Where policies or standards of other public bodies or levels of government exceed the policies related to key natural heritage features or key hydrologic features in this Plan, such as may occur with habitat of endangered species and threatened species under the Endangered Species Act, 2007; with natural hazards where section 28 regulations of the Conservation Authorities Act apply; or with fisheries under the Federal Fisheries Act, the most restrictive provision or standard applies.*

*d) 2.7.6 If in the opinion of the implementing authority, a proposal for development within 120 metres of a key natural heritage feature has the potential to result in a negative impact on the feature and/or its functions, or on the connectivity between key natural heritage features and key hydrologic features, a natural heritage evaluation will be required that:*

*a. Demonstrates that the development, including any alteration of the natural grade or drainage, will protect the key natural heritage feature or the related functions of that feature;*

*b. Identifies planning, design and construction practices that will minimize erosion, sedimentation and the introduction of nutrients or pollutants and protect and, where possible, enhance or restore the health, diversity and size of the key natural heritage*

feature;

*c. Determines the minimum vegetation protection zone required to protect and where possible enhance the key natural heritage feature and its functions; and*

*d. Demonstrates that the connectivity between key natural heritage features and key hydrologic features located within 240 metres of each other will be maintained and where possible enhanced for the movement of native plants and animals across the landscape. Except with respect to a key natural heritage feature that is solely the habitat of endangered species or threatened species, which is subject to Par 2.7.8 below.*

*e) 2.7.7 For the purposes of 2.7.6, a vegetation protection zone shall:*

*a. Be of sufficient width to protect and where possible enhance the key natural heritage feature and its functions from the impacts of the proposed change and associated activities that may occur before, during, and after, construction;*

*b. Be established to achieve, and be maintained as, natural self-sustaining vegetation; and*

*c. In the case of Areas of Natural and Scientific Interest (Earth Science and Life Science), include without limitation an analysis of land use, soil type and slope class.*

*f) 2.7.8 Development within the habitat of endangered species and threatened species:*

*a. Located within Escarpment Natural Areas and Escarpment Protection Areas, is not permitted, except for development referred to in Parts 2.7.2 a) b) c) d) or e) which may be permitted provided it is in compliance with the Endangered Species Act, 2007; and*

*b. Located within Escarpment Rural Areas, Mineral Resource Extraction Areas, Urban Areas, Minor Urban Centres and Escarpment Recreation Areas, is not permitted unless it is in compliance with the Endangered Species Act, 2007.*

*g) 2.7.12 Development where permitted in woodlands should protect and where possible enhance the woodland and associated wildlife habitat. All development involving the cutting of trees requires approval from the implementing authority, subject to the following criteria:*

*a. Cutting of trees and removal of vegetation shall be limited to the minimum necessary to accommodate the permitted use;*

*b. Using tree-cutting methods designed to minimize negative impacts on the natural environment, including surface drainage and groundwater;*

*c. Minimizing disruption to wildlife habitat in the area;*

*d. Retaining the diversity of native species;*

*e. Aiming over the long term to protect and where possible enhance the quality and*

*biodiversity of the woodland;*

*f. Protecting trees and vegetation to be retained by acceptable means during construction; and*

*g. Maintaining existing tree cover of other stabilizing vegetation, on steep slopes in excess of 25 per cent (1:4 slope).*

Section 2.9 states that mineral aggregate operations may be permitted in key natural heritage features and any vegetation protection zone (VPZ) associated therewith, except for wetlands and significant woodlands, that are not young plantation or early successional habitat (as defined by the MNRF).

Mineral aggregate operations may be permitted in a key natural heritage feature or its VPZ, which is solely the habitat of endangered or threatened species and not any other key natural heritage feature, provided it is in compliance with the Endangered Species Act, 2007.

## **2.5 Halton Region Official Plan (2015) and Guidelines**

### **2.5.1 Halton Region Official Plan (2015)**

The Regional Official Plan (OP) sets its own Natural Heritage System (NHS) policies.

No key features are located within the limit of extraction, but several key features are located within the 120 m adjacent lands. Given that portions of the adjacent lands are located within the RNHS, the following Regional OP policies apply:

*Require the proponent of any development or site alteration that meets the criteria set out in Section 118(3.1) to carry out an Environmental Impact Assessment (EIA) ...The purpose of an EIA is to demonstrate that the proposed development or site alteration will result in no negative impacts to that portion of the Regional Natural Heritage System or unmapped Key Features affected by the development or site alteration by identifying components of the Regional Natural Heritage System as listed in Section 115.3 and their associated ecological functions and assessing the potential environmental impacts, requirements for impact avoidance and mitigation measures, and opportunities for enhancement. The EIA shall, as a first step, identify Key Features on or near the subject site that are not mapped on Map 1G (Section 118(3)).*

As noted in Section 118(3) of the Regional OP, Section 115.3 lists the components of the RNHS as follows:

*115.3 The Regional Natural Heritage System is a systems approach to protecting and enhancing natural features and functions and is scientifically structured on the basis of the following components:*

*(1) Key Features, which include:*

- a. Significant habitat of endangered and threatened species;*
- b. Significant wetlands;*

- c. Significant coastal wetlands;*
- d. Significant woodlands;*
- e. Significant valleylands;*
- f. Significant wildlife habitat;*
- g. Significant areas of natural and scientific interest; and*
- h. Fish habitat;*

*(2) Enhancements to the Key Features including Centres for Biodiversity;*

*(3) Linkages;*

*(4) Buffers;*

*(5) Watercourses within a Conservation Authority Regulation Limit or that provide a linkage to a wetland or a significant woodland; and*

*(6) Wetlands other than those considered significant under Section 115.3(1)b.*

It is noted that Key Features in the Regional Natural Heritage System (RNHS) are not mapped individually on Map 1G. A particular area within the RNHS may contain several key features, e.g. a forested area may qualify as Significant Woodland and also contain Significant Wetlands, Significant Wildlife Habitat, etc.

## **2.5.2 ROP Guidelines – Aggregate Resources Reference Manual**

The ROP Guidelines were prepared to clarify, inform and aid in the implementation of the Halton Region Official Plan policies. They provide direction and outline approaches that can be used to satisfy the relevant policies of the Plan. They are not meant to introduce additional policy requirements.

Section 4.4, Environmental Impact Study, is the relevant section that provides guidance for the preparation of the EIA. The intent of the Guidelines is to demonstrate that the Proposal will not have a negative impact on natural features or their ecological functions; that extraction will occur in a manner that minimizes environmental impacts; that long-term ecological function and biodiversity of the Natural Heritage System can be maintained, restored or even improved; and within the NEP area, that the Proposal will maintain the Niagara Escarpment land in its vicinity as a continuous natural environment and will be compatible with the Niagara Escarpment and the lands in its vicinity.

The objectives of the Proposal when applying the Guidelines include the following:

- 1. To identify all natural heritage features that have the potential to be impacted by the proposed aggregate operations.*
- 2. To identify the connections and linkages between natural heritage features and areas, surface water features and groundwater features.*

3. *To determine how the diversity and connectivity of the natural features in an area and the long-term ecological function and biodiversity of the natural heritage system can be maintained, restored or where possible improved.*
4. *Identify all potential impacts on significant natural heritage features and/or key natural heritage features.*
5. *Determine whether the proposal will have negative impacts on significant natural heritage features and/or key natural heritage features.*
6. *Determine what mitigation and monitoring measures, if required, are necessary to ensure that environmental impacts are minimized.*
7. *To determine and make recommendations on how net environmental gain can be provided in the short term and in the longer term both on the site and for the surrounding area.*
8. *Within the NEP area, identify all potential individual and cumulative impacts on the natural environment.*

## **2.6 Town of Halton Hills Official Plan (2019)**

Part C of the Town of Halton Hills Official Plan (2019) contains *Environmental Management Policies*. Policy C2 details the requirements for Environmental Impact Studies, as follows:

### **C2 ENVIRONMENTAL IMPACT STUDIES**

*Where the policies of this Plan require that an Environmental Impact Study (EIS) be prepared, such an EIS shall be prepared in accordance with the requirements of this section and Terms of Reference approved by the Town and the Region, in consultation with the appropriate Conservation Authority and the proponent. In the preparation of an EIS, reference shall be made to the Environmental Impact Assessment Guidelines of the Region of Halton.*

#### **C2.1 PURPOSE OF AN EIS**

*The purpose of an EIS is to:*

- a) *collect and evaluate the appropriate information in order to have a complete understanding of the boundaries, attributes and functions of natural heritage features and associated ecological and hydrological functions; and,*
- b) *make an informed decision as to whether or not a proposed use will have a negative impact on the natural heritage features and ecological and hydrological functions.*

*Any EIS required by this Plan must describe the natural heritage features and ecological functions, identify their significance and sensitivities and describe how they could be affected by a proposed use. The EIS should give consideration to the relevant aspects*

*and inter relationships of various components of the Natural Heritage System on and off the site. In addition, the EIS must address how the proposed development will protect, maintain or restore the natural features and ecological functions of the Natural Heritage System.*

*The Town and the Region, in consultation with the appropriate Conservation Authority, must approve an EIS prior to the granting of development approvals. The recommendations of an EIS shall be implemented through official plan amendments, zoning by-laws, subdivision conditions, site plan control, or applicable regulations.*

## **C.2.2 WHAT AN EIS SHOULD DEMONSTRATE**

*Before development is approved in the area subject to the EIS, the EIS shall demonstrate that the relevant policies of this Plan are met, including, for mineral aggregate extraction operations, the principle of net environmental gain as set out in Section E6.4.3.5 of this Plan. The EIS should demonstrate that the use will:*

- a) not have a negative impact on significant natural heritage features and related ecological functions;*
- b) not discharge any substance that could have an adverse effect on air quality, groundwater, surface water and associated plant and animal life;*
- c) be serviced by an adequate supply of water and that the groundwater taking associated with the use will not have an adverse effect on existing water supplies, surface water features and associated plant and animal life;*
- d) not cause erosion or siltation of watercourses or unacceptable changes to watercourse morphology;*
- e) not interfere with groundwater recharge to the extent that it would adversely affect groundwater supply for any use;*
- f) not cause an increase in flood potential on or off the site;*
- g) maintain/enhance/restore/rehabilitate the natural condition of affected watercourses, and protect/enhance/restore/rehabilitate aquatic habitat;*
- h) not encourage the demand for further development that would negatively affect wetland function or contiguous wetland areas;*
- i) enhance and restore endangered terrestrial and aquatic habitat where appropriate and feasible;*
- j) not unduly interfere with the function of existing or potential natural corridors that are determined to be of significance;*

- k) *not lead to a reduction to the extent of significant woodlands within the Green lands System; and,*
- l) *not lead to species loss or negative impacts on endangered, threatened or rare species and/or their habitat.*

*In determining whether the above criteria have been satisfied, reference may be made to applicable federal and provincial standards and regulations as well as referring to the relevant policies of this Plan.*

### **3.0 NATURAL ENVIRONMENT STUDY AREA**

Other than along Townline, the proposed licence boundary generally follows the interpreted Significant Woodland boundary as shown on **Figure 3**. The study area extends to 120 m beyond the licence limit. The study area has been extended beyond the 120 m limit in some areas, in order to capture the first tier of wetlands located within the forest.

### **4.0 ECOLOGICAL FIELD SURVEY PROGRAM**

The ecological field survey program for the Milton Quarry East Extension is described below. The data collected through this program will be used to characterize the study area, complete a biophysical analysis and identify key ecological features and functions.

Background information sources will be consulted as appropriate, including the following:

- Ecoplans Limited. 2000. Dufferin Aggregates Milton Quarry Extension – Environmental Impact Assessment. Ecoplans Limited, Kitchener, Ontario. 86 pp + figures + appendices.
- Goodban Ecological Consulting Inc. (GEC) annual wetland monitoring reports for the Milton Quarry Extension from 2007 to 2019.
- Riley, J.L., J.V. Jalava and S. Varga. 1996. Ecological Survey of the Niagara Escarpment Biosphere Reserve. Volume I. Significant Natural Areas. Volume II. Technical Appendices. Ontario Ministry of Natural Resources, Southcentral Region, Peterborough, Ontario. Open File Site Report SR 9601. v + 629 pp., vii + 310 pp.

## **4.1 VEGETATION AND FLORA**

### **4.1.1 Vegetation Communities (ELC Units)**

Vegetation community polygons were first identified on aerial photography and then verified in the field. Vegetation community types were mapped and described generally following the Ecological Land Classification (ELC) for Southern Ontario (Lee et al. 1998). Field surveys were undertaken in 2019 and 2020.



#### **4.1.2 Vascular Plants**

The flora of the study area was characterized through detailed botanical surveys of more sensitive habitats and general surveys of more disturbed habitats. Surveys were completed throughout the growing season during 2019 and 2020. A vascular plant species checklist will be generated and species status will be assessed at several levels, including Ontario (Oldham and Brinker 2009), the Niagara Escarpment (Riley et al. 1996) and Halton Region (Crins et al. 2006).

Particular attention was paid to surveying the flora of the proposed extraction area, the proposed water management system footprint and the first tier of wetlands adjacent to the proposed extraction area.

#### **4.1.3 Species at Risk (SAR) Plants**

Focused surveys for Butternut and American Ginseng were completed in 2020. Searches for Butternut were focused on the proposed extraction area and the proposed water management system footprint. Searches for American Ginseng were focused on the forested areas, particularly those areas that are less disturbed and/or contain bedrock outcrops.

#### **4.1.4 Tree Density Survey**

Tree density surveys were completed in select areas within the proposed extraction footprint, to determine if a particular area meets the woodland definition using stem density values, as required by the Halton Region Official Plan (2015), and to determine if a particular area is an *early successional* woodland.

The tree density surveys were completed using circular plots, the size of which were selected based on the size of the overall community as well as variability of species and density within the feature and ranged between a 4 m and 15 m radii. Trees within plots were tallied by species and categorized as having a diameter at breast height (dbh) of > 20 cm, 13 - 20 cm, 6 - 12 cm or ≤ 5 cm.

#### **4.1.5 Significant Woodland Boundary Delineation and Staking**

The boundary of the Significant Woodland will be staked in those areas where the woodland edge is in proximity to the proposed water management system footprint. The staked boundary will be reviewed with the Region of Halton's forester.

## 4.2 WILDLIFE

The wildlife survey methods are described below under the following headings:

- 4.2.1 Amphibians and Reptiles
- 4.2.2 Breeding Birds
- 4.2.3 Other Wildlife Groups

### 4.2.1 Amphibians and Reptiles

#### *Salamander Surveys*

As part of the ecological work related to the Milton Quarry Extension application, surveys for mole salamanders were completed across a wide area in the vicinity of the original Extension in the late 1990's and 2002. Those surveys focused on checking potentially suitable breeding pools for the presence of Jefferson Salamander Complex egg masses. For each pool containing egg masses, several would be collected and transported to the University of Guelph to be raised and tissue samples were used for genetic identification. The small Wetland U1 (**Figure 3**) in the open field was not surveyed as part of the late 1990's and 2002 salamander surveys.

Minnow trapping for salamanders in selected wetlands, including the small Wetland U1 in the open field, was completed during spring 2019 and 2020. Sampling of adult salamanders involved the setting of minnow traps in suitable pools within wetlands on and adjacent to the Speyside Property on mild, rainy evenings when salamanders are most likely to be moving to breeding pools. The weather forecast was monitored regularly starting in late March. Field reconnaissance was undertaken to monitor ice cover on potential breeding ponds and snow depths within the forest.

Unbaited minnow traps (maximum mesh size of 0.64 cm) were used to capture adult salamanders within selected wetlands. Each trap was marked with flagging tape and the ownership of the trap. Each trap was tied to a suitable anchor on the bank, using nylon rope. The traps were checked early the following morning. The minnow traps were removed from the pools on nights when no/minimal salamander movement was anticipated.

Jefferson Complex salamanders captured in traps were released where they were captured after tissue samples (tail tips) have been collected. Sampling involved the removal of a small portion of the tail (not exceeding 5 mm). Tail tips were removed using a single-edged disposable razor blade or scalpel which was sterilized with 70% ethyl alcohol between each specimen. Handling of each salamander was kept to the absolute minimum. Samples were placed in vials in ethyl alcohol and sent to Dr. Bogart at the University of Guelph for genetic analysis. An MNRF Jefferson Salamander Presence/Absence Form was filled out and a copy was submitted with the samples to Dr. Bogart.

Each sample was labeled with the pond number where the sample was collected, sample number and date of collection. The UTM coordinates of the capture location, the date the sample was collected, the names of the collectors, and the permit numbers for the Scientific

Wildlife Collector's Authorization and the permit under the *Endangered Species Act, 2007* and the Animal Care Protocol number were recorded on the data forms.

Minnow trapping surveys were completed during spring 2019 and 2020 under the following authorizations:

- ESA 17(2)(b) permit or online registration (MECP).
- Wildlife and Scientific Collector's Authorization (MNRF).
- Animal Care Protocol (MNRF).

#### *Amphibian Call Count Surveys*

Song Meter SM4 units were deployed at selected wetlands in 2019 and 2020, from around the time of the spring thaw until late June (approximately 75 nights). Recordings were made in 10-minute intervals, commencing 30 minutes, 90 minutes and 150 minutes after sunset.

Recordings will be analyzed to begin establishing baseline conditions for amphibian breeding activity and as part of the site characterization and assessment. Data from evenings with good frog call activity will be analyzed and call intensity will be assessed using the following criteria:

- Level 1 - Individuals can be counted, calls not overlapping.
- Level 2 – Individual calls overlapping.
- Level 3 – Full chorus.

The aim of the surveys is to confirm the diversity of frogs and toads using a particular wetland for breeding activity, and to determine the peak calling intensity for each species if possible.

#### *Snake Habitat and Visual Encounter Surveys*

Locations of potential snake hibernacula within the proposed extraction area and the proposed water management system footprint were surveyed several times during early periods of warm weather (e.g. April and early May). Snake visual encounter surveys were conducted on mild spring mornings (i.e., minimum 8°C on sunny days or 15°C on overcast days, no greater than 25°C) between 8 am and 5 pm.

Target sites included rock outcrops and fissures, and rock/stone piles along field boundaries. Otherwise, snakes were surveyed on an opportunistic basis. None of the snake species are occurring within the study area are species at risk.

### **4.2.2 Breeding Birds**

#### *Grassland Birds*

Breeding bird surveys of the grassland areas were completed in both 2019 and 2020, on three separate mornings each year, following the MNR's (2011) *Survey Methodology under the Endangered Species Act, 2007: Dolichonyx oryzivorus (Bobolink)*.

MNRF's survey protocol for Bobolink has the following requirements:

- Set up point count stations to provide good coverage. Observers can use a wandering transect survey between point count stations.
- Complete *at least* 3 sets of point count surveys. The surveys should occur between the last week in May and the first week in July, with each survey separated from the previous one by at least a week.
- Surveys should start around dawn and continue until no later than 10 am. The observer will undertake 10 minutes of observations and listening at each point count station. Record information on all Bobolink and Eastern Meadowlark observed or heard. Nest searches should be avoided.
- Record notes on habitat characteristics including broad descriptors (e.g. field, hedgerow, fenceline), vegetation height, dominant species, proportions of grasses versus broad-leaved plants, and depth of thatch layer.

### *Forest Birds*

Breeding bird surveys were completed on three separate mornings during the breeding season in 2020. The focal area was the forested habitats between the edge of the open fields and the first tier of wetlands to the east and south of the proposed extraction area. Point count stations were set up to provide good coverage of the area and the various habitats. A wandering transect survey was completed when moving between point count stations.

Three sets of point count surveys were completed in 2020. The surveys occurred between the last week in May and the first week in July, with each survey separated from the previous one by at least a week. Surveys started around dawn and continued until no later than 10 am (approximately). Ten minutes of observations and listening was completed at each point count station.

Breeding birds were surveyed by 10-minute stationary point counts generally following the Second Ontario Breeding Bird Atlas methodology (Cadman et al. 2007), which called for 5-minute point counts. All species and daily numbers of individuals were recorded during each of the site visits.

The breeding bird codes from the Ontario Breeding Bird Atlas (Cadman et al. 2007) were not used in this study because they are not appropriate for a more intensive study on a small site. The purpose of the Atlas is to determine the highest level of breeding evidence in 10- by 10-km squares. Birds seen within a square of this size have a good probability of nesting somewhere in the square provided that suitable habitat is present. However, the application of these codes to a small site can result in an incorrect assessment of the breeding status of a species. As an example, if a Barn Swallow was observed at the site on more than two occasions and more than a week apart, then according to the Atlas project this would qualify it as a probable breeder, even though there is no suitable nesting habitat for it onsite or nearby. All bird species that were located on the proposed license area and adjacent lands were recorded. A conservative

approach was adopted for the surveys and all species were considered to be breeding unless there was convincing evidence to the contrary.

#### **4.2.3 Other Wildlife Groups**

Observations of other wildlife groups such as dragonflies, damselflies, butterflies and mammals were made in conjunction with the other ecological field surveys described above.

### **5.0 MITIGATION MEASURES, ECOLOGICAL ENHANCEMENTS, QUARRY REHABILITATION AND IMPACT ASSESSMENT**

#### *Preliminary Mitigation Measures*

Dufferin has already committed to integrate the subject site into the state-of-the-art water management system (WMS) and AMP that are already in place and have been operating at the Milton Quarry and Milton Quarry Extension since 2007. In the absence of mitigation measures, the extension of the Milton Quarry below the water table in the MQEE lands would result in a lowering of the surrounding groundwater levels and would be expected to have a negative influence on some of the nearby groundwater-dependent wetlands. The water mitigation system has effectively maintained groundwater levels around the perimeter of the Milton Quarry Extension protecting surrounding water resources including water dependent ecological features. The water management system for the MQEE will be a straightforward addition to the existing system using the same proven techniques for mitigation. GEC will provide ecological input to GHD in relation to setting surface water level targets in Wetland U1 and groundwater level targets in the vicinity of other wetlands located in the forest.

Significant Woodlands onsite will be provided with a minimum 10 m buffer that will be enhanced through tree-planting. This is the same as the approach for the Acton Quarry Extension, which was approved by the relevant review agencies. In many areas the Significant Woodland buffer will be much greater than 10 m.

Tree-clearing will occur outside of the breeding bird season (generally mid-April to late-July) and MECP's bats timing window (active from April to October), meaning that tree-clearing will occur between November and March. Logs, stumps and other woody debris will be utilized as part of the ecological enhancements briefly described below.

#### *Ecological Enhancement Measures*

Most of the open field areas that will not be extracted will be enhanced by tree-planting and the placement of habitat structures such as rock piles, stumps, logs and other woody debris. These areas are shown on **Figure 4**. Ultimately, the proposed reforestation will expand Significant Woodlands in the vicinity and improve connectivity, particularly between Wetland U1 and the nearby forest blocks.

### *Quarry Rehabilitation*

The rehabilitation concept is shown on **Figure 4**. The quarry rehabilitation will include a deep lake, shallow wetlands, islands, a promontory and beach ridge, etc., including a terrestrial linkage with the Cox Tract to the west.

### *Impact Assessment*

The Environmental Impact Assessment will take into account the Operational Plan proposed for the MQEE, mitigation measures, ecological enhancement measures and quarry rehabilitation. The cumulative impact of the MQEE will also be assessed.

Conclusions will be provided with respect to conformity with the various legislative and policy requirements described above in Section 2.0.

## 6.0 REFERENCES

- Cadman, M.D., D.A. Sutherland, G.G. Beck, D. Lepage, and A.R. Couturier, eds. 2007. Atlas of the breeding birds of Ontario, 2001-2005. Toronto, ON: Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources, and Ontario Nature. 706 pp.
- Crins, W.J., W.D. McIlveen, A.G. Goodban and P.G. O'Hara. 2006. The Vascular Plants of Halton Region, Ontario. pp. 1-79 In: Dwyer, J.K. (ed.), Halton Natural Areas Inventory 2006: Volume 2 – Species Checklists. Halton/North Peel Naturalists' Club, South Peel Naturalists' Club, Hamilton Naturalists' Club, Conservation Halton and the Regional Municipality of Halton.
- Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig and S. Murray. 1998. Ecological Land Classification for Southern Ontario: First Approximation and its Application. Ontario Ministry of Natural Resources, Southcentral Science Section, Science Development and Transfer Branch. SCSS Field Guide FG-02.
- Oldham, M.J. and S.R. Brinker. 2009. Rare Vascular Plants of Ontario, Fourth Edition. Ontario Ministry of Natural Resources, Peterborough, Ontario. 188 pp.
- Oldham, M.J., W.D. Bakowsky and D.A. Sutherland. 1995. Floristic Quality Assessment System for Southern Ontario. Natural Heritage Information Centre, Ontario Ministry of Natural Resources, Peterborough, Ontario. 68 pp + computer disk.
- Ontario Ministry of Natural Resources. 1997. Non-renewable resources training manual, Version 1.0. Peterborough, ON: Ontario Ministry of Natural Resources.
- Ontario Ministry of Natural Resources. 2000. Significant Wildlife Habitat Technical Guide. 139 pp + appendices.
- Ontario Ministry of Natural Resources. 2006. Licence Applications: Natural Environment Report Standards. Policy A.R. 2.01.07. Lands & Waters Branch, Aggregate & Petroleum Resources. Issued March 15, 2006.
- Ontario Ministry of Natural Resources. 2010a. Natural Heritage Reference Manual for natural heritage policies of the Provincial Policy Statement, 2005. Second edition. Toronto, ON: Queen's Printer for Ontario. 248 pp.
- Riley, J.L., J.V. Jalava and S. Varga. 1996. Ecological Survey of the Niagara Escarpment Biosphere Reserve. Volume I. Significant Natural Areas. Volume II. Technical Appendices. Ontario Ministry of Natural Resources, Southcentral Region, Peterborough, Ontario. Open File Site Report SR 9601. v + 629 pp., vii + 310 pp.

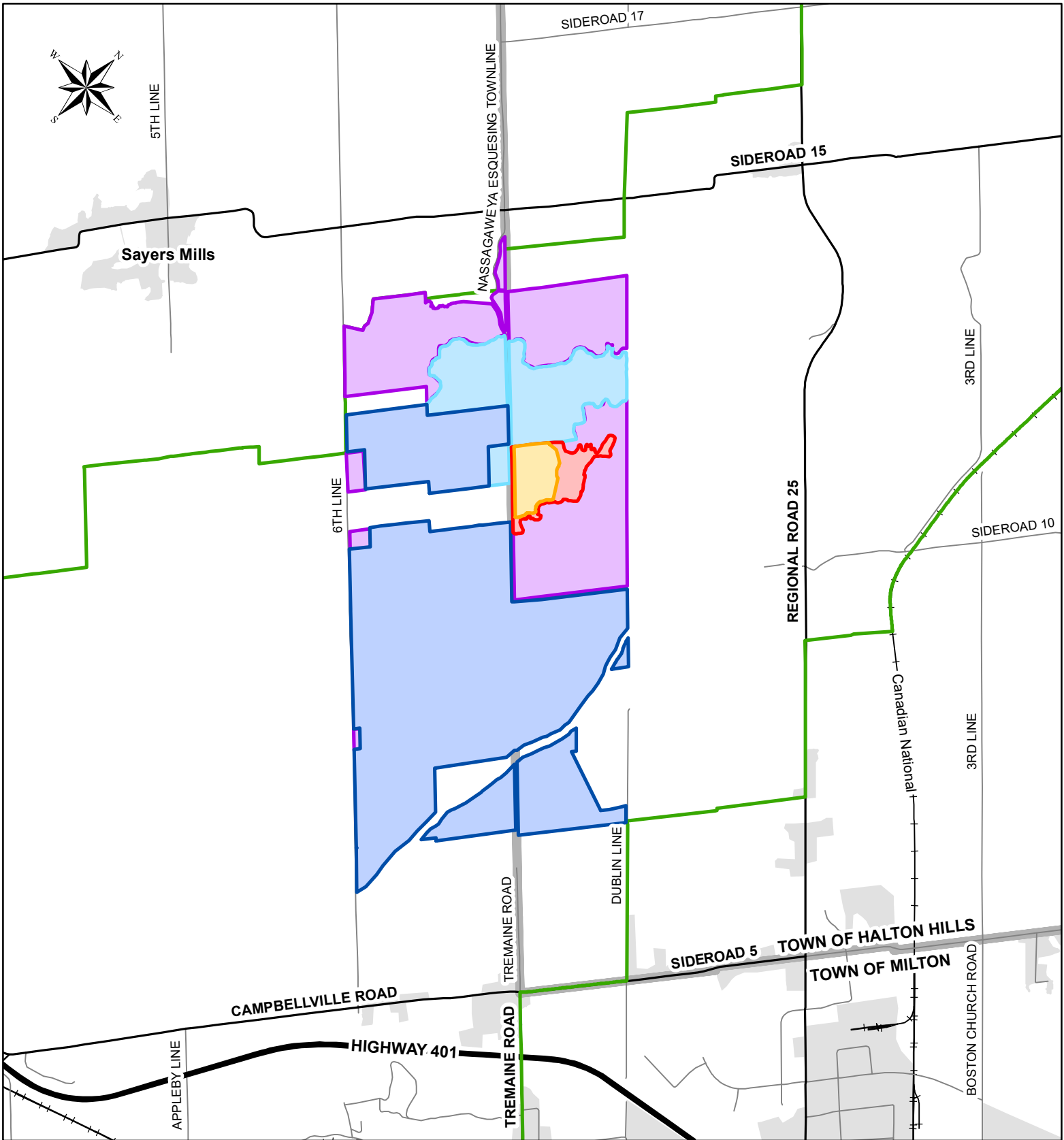


Figure # 1  
Location

**Proposed Milton Quarry  
East Extension**

Part of Lots 11 & 12, Concession 1  
Geographic Township of Esquesing  
Township of Halton Hills  
Region of Halton

**Legend**

- Proposed Milton Quarry East Extension Licence Boundary
- Proposed Milton Quarry East Extension Limit of Extraction
- Milton Quarry (1962)
- Milton Quarry Extension (2007)
- Other Lands Owned by CRH
- Niagara Escarpment Plan Boundary
- Built up Area

DATE October 2020

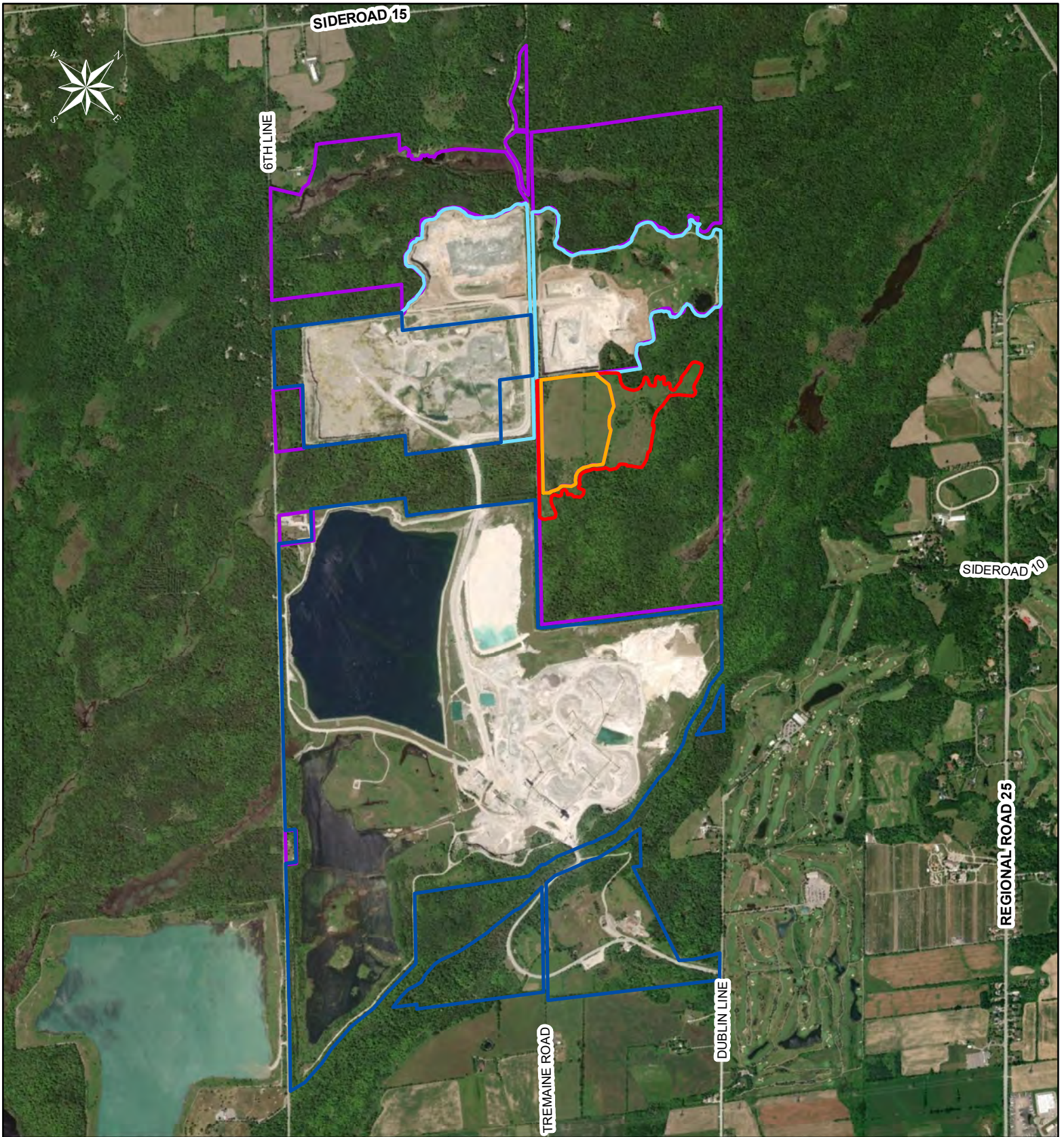
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**Figure # 2**  
**Overview of Dufferin Aggregates Landholdings**

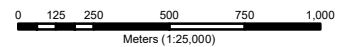
**Proposed Milton Quarry East Extension**  
 Part of Lots 11 & 12, Concession 1  
 Geographic Township of Esquesing  
 Township of Halton Hills  
 Region of Halton

**Legend**

- Proposed Milton Quarry East Extension Licence Boundary
- Proposed Milton Quarry East Extension Limit of Extraction
- Milton Quarry (1962)
- Milton Quarry Extension (2007)
- Other Lands Owned by CRH

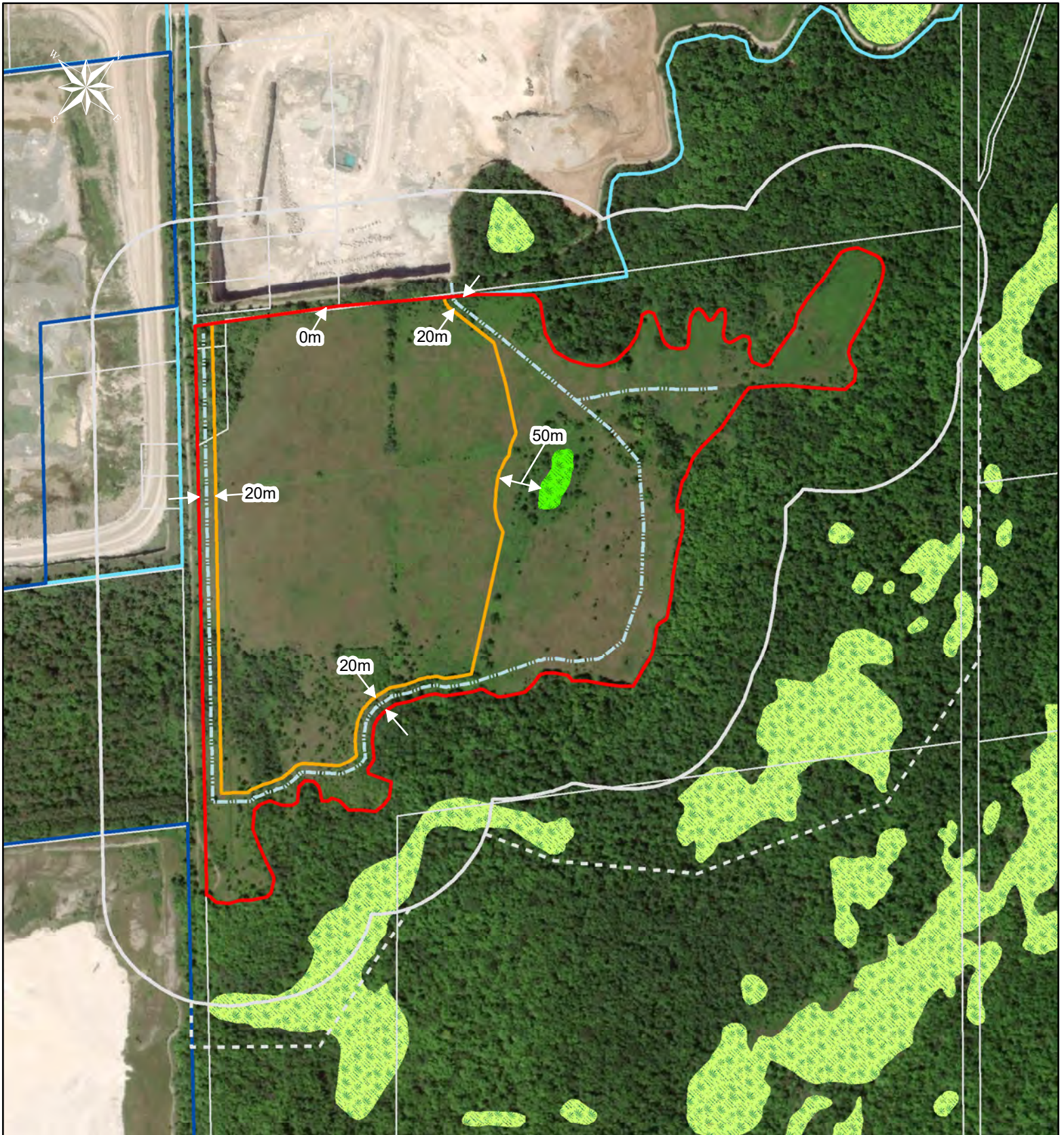
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N:\Bran\906\10\ Dufferin - Milton Quarry Extension Speyside\Drawings - Must be in NAD 27\Miscellaneous Figures\Figures for Goodban\Terms of Reference\906\10 - Figure 2 - Overview of Dufferin Aggregates Land Holdings.mxd





**Figure # 3**  
**Natural Environment**  
**Study Area**

**Proposed Milton Quarry**  
**East Extension**

Part of Lots 11 & 12, Concession 1  
 Geographic Township of Esquesing  
 Township of Halton Hills  
 Region of Halton

**Legend**

- Proposed Milton Quarry East Extension Licence Boundary
- Proposed Milton Quarry East Extension Limit of Extraction
- Milton Quarry (1962)
- Milton Quarry Extension (2007)
- Existing Parcel Fabric
- 120m Adjacent Lands
- Additional Study Area Beyond Limit of 120m Adjacent Lands
- Wetland U1
- MNRF Wetlands
- Watermain

<b>DATE</b>	October 2020
<b>SOURCES</b>	Land Information Ontario Contains information licensed under the Open Government Licence - Ontario
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	<b>Goodban</b> Ecological Consulting Inc.

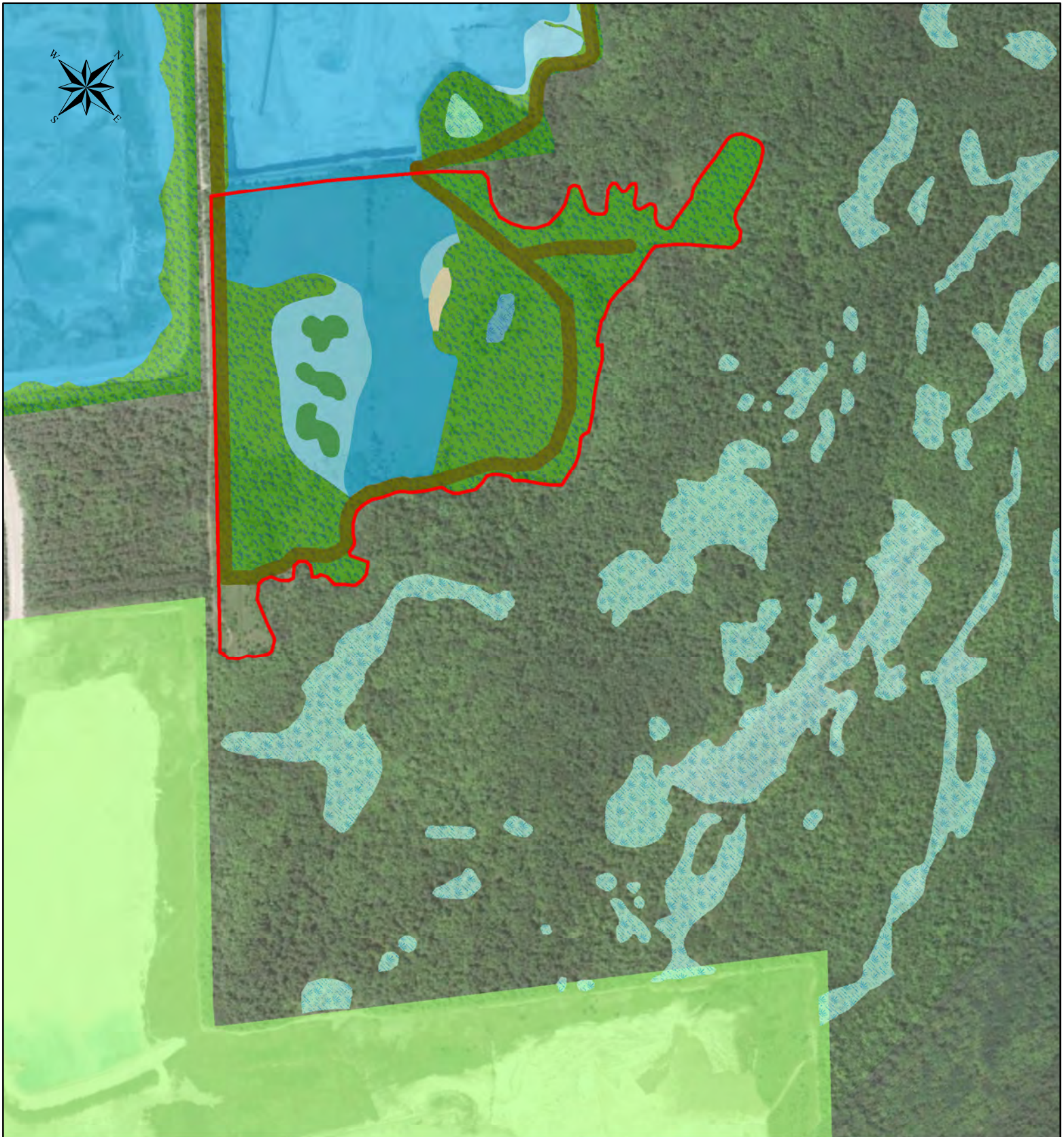


Figure # 4

## Ecological Enhancement & Rehabilitation Plan

### Proposed Milton Quarry East Extension

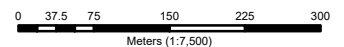
Part of Lots 11 & 12, Concession 1  
 Geographic Township of Esquesing  
 Township of Halton Hills  
 Region of Halton

Legend

- Proposed Milton Quarry East Extension Licence Boundary
- Deep Lake
- Wetland
- Islands
- Promontory & Beach Ridge
- Trail
- Vegetated Area
- Reforestation Area
- Existing Wetland
- MNRF Wetland

DATE **October 2020**

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N:\Bran\9061DJ Dufferin - Milton Quarry Extension Speyside\Drawings - Must be in NAD 27\Miscellaneous Figures\Figures for Goodsam\Terms of Reference\9061DJ - Figure 4 - Ecological Enhancement and Rehabilitation Plan.mxd





# Memorandum

October 29, 2020

To: Brian Zeman, MHBC Ref. No.: 11208056-199

From: Nicholas Fitzpatrick/Kyle Fritz/Richard Murphy/kf3

cc: Kevin Mitchell (CRH); Anthony Goodban (GEC)

**Subject: Terms of Reference: Geology and Water Resources Assessment Report, Including Karst and Hazard Lands Consideration Proposed Dufferin Aggregates Milton Quarry East Extension Region of Halton, Ontario**

## 1. Introduction and Background

GHD has been retained by Dufferin Aggregates, a division of CRH Canada Group Inc. (Dufferin) to provide them with advice pertaining to geology, hydrogeology, and surface water resources in connection with a proposal to extend the Milton Quarry. GHD's advice will include site characterization and impact assessment, as well as recommendations related to monitoring, mitigation, and rehabilitation. This memorandum presents the proposed Terms of Reference (ToR) for this advice. GHD has also prepared a separate ToR in collaboration with Goodban Ecological Consulting (GEC) pertaining to advice related to an Adaptive Environmental Management and Protection Plan (AMP).

The proposed extension of the Milton Quarry, referred to as the Milton Quarry East Extension (MQEE), represents a proposed extraction area of approximately 16 hectares bounded by the existing East Cell to the north, the existing North Quarry to the west, and the existing Main Quarry at some distance to the southwest and south. The proposed MQEE extraction area is contiguous with the existing East Cell (i.e., it would be extracted as part of the East Cell) and separated from the North Quarry by the Town Line to the west.

These Terms of Reference (ToR) have been prepared in consideration of the comprehensive understanding that already exists with respect to the geology, hydrogeology, and surface water resources in the area of the Milton Quarry, and the existing mitigation measures that have a long proven record of successful operation and protection of water resources and related ecological features. Guidelines available from review agencies, including the Ministry of Natural Resources and Forestry Standards for a Class A Quarry below the water table and the Region of Halton Aggregate Resources Reference Manual were also considered.

The study of the proposed MQEE lands and surrounding area commenced more than 40 years ago. Over this time extensive investigation and evaluation has occurred and a truly vast amount of data has been collected. The existing Milton Quarry characterization, impact assessment, mitigation measures, and monitoring plan (refer to AMP) were thoroughly vetted through an extensive Joint Agency Review Team (JART) and public consultation process; evaluated and approved by all related government agencies,



including the Provincial Joint Board and Cabinet; and the approved plans, including mitigation measures have been successfully operating since 2007. The ongoing monitoring and performance assessment is thoroughly reported to, and reviewed by, relevant government agencies with support from their consultants as warranted. This rigorous approval and operating quarry review process represents the highest known standard of care for any aggregate extraction operation in Ontario or elsewhere.

Dufferin has already committed to integrate the subject site into the state-of-the-art water management system (WMS) and AMP that are already in place and have been operating at the Milton Quarry and Milton Quarry Extension since 2007. The water mitigation system has effectively maintained groundwater levels around the perimeter of the Milton Quarry Extension protecting surrounding water resources including water-dependent ecological features. All approval agencies are familiar with the AMP and the hydrologic and natural environment data collection and assessment that is provided through annual reports and the WebDT data sharing system that allows agencies direct access to hydrogeological data (and other information) at any time. The AMP also requires a comprehensive 5-year review to make any adjustments necessary to make sure the groundwater is maintained to an acceptable level thereby protecting the ecological features dependent upon it. The AMP was approved by the agencies and through annual reporting, as well as a recent 5-year review, has demonstrated that the proposed mitigation system has protected and enhanced natural heritage features surrounding the extension. The water management system for the MQEE will be a straightforward addition to the existing system using the same proven techniques for mitigation.

The reliable understanding and operating basis for the existing Milton Quarry, along with the additional studies described in this ToR, form the basis for the advice and recommendations GHD is preparing related to the proposed MQEE. Existing information on Milton Quarry can be found in the recent 5-Year AMP Review report that was recently completed (GHD, WSP, and GEC, January 24, 2020) and provided to the agencies for review. This extensive document provides a comprehensive report and evaluation of all relevant data and findings. In addition to the 5-Year Review and the on-line WebDT data sharing system, a comprehensive annual water monitoring report is provided and presented to the agencies as well as other specific documents that are prepared from time-to-time.

## **2. Geology**

The Milton Quarry, including the MQEE lands, is situated above the Niagara Escarpment in an area of Amabel dolostone overlain by relatively thin glacial drift deposits. The geologic conditions are well known from the ongoing bedrock extraction operations, historic investigations on and around the MQEE lands, as well as additional studies undertaken as part of this ToR, including:

- 33 new test pits were excavated to determine overburden thickness and characterization (denoted as TPxx-20 on Figure 1)
- 7 new boreholes were drilled to install monitoring wells at 5 locations and these boreholes were also used to determine overburden thickness and depth of Amabel dolostone overlying the Reynales and Cabot Head Formations (denoted as OW78-20 through OW82-20 on Figure 1)
- Updated stratigraphic surfaces will be prepared incorporating the new information



- Geologic cross-sections through the MQEE extraction area and surrounding lands will be prepared
- The bedrock resource volume/tonnage will be calculated based on the available information

Investigative locations are shown on the attached Figure 1.

### **3. Surface Water and Hazard Lands**

The MQEE lands are an upland area with no surface water features within the proposed extraction area. The key surface water feature for consideration is a small seasonal wetland pool referred to as Wetland U1, which is located east of the extraction area. There are also a number of seasonal and permanent pools located further to the east and southeast that form part of the Halton Escarpment Wetland Complex. Based on historic and ongoing data collection it is known that some of these wetlands are directly supported by the groundwater table.

In addition to the existing surface water level information, the following additional studies are being undertaken as part of this ToR:

- 10 new staff gauges were installed at key wetland locations determined in collaboration with GEC (denoted as SG57 through SG66 on Figure 1). These locations are east and south of the proposed MQEE extraction area, enhancing the historical surface water level monitoring network in this area.
- Water level transducers were installed at 8 of these surface water monitoring locations
- Water level hydrographs will be prepared for all monitoring locations to assess water level trends and hydroperiods
- Groundwater-surface water interactions will be evaluated as part of the hydrogeology evaluations (Section 4, below)
- Topographic drainage areas will be delineated, including identification of non-draining depressions
- Hazard Land information will be obtained from Conservation Halton and reviewed relative to the proposed MQEE area; however, no Hazard Land concerns are anticipated beyond consideration of the adjacent wetland areas due to the upland nature of the MQEE lands.

Investigative locations are shown on the attached Figure 1.

### **4. Hydrogeology**

In the Milton Quarry area, the groundwater table generally resides in the Amabel dolostone forming an unconfined aquifer. The so-called Amabel Aquifer is a regionally extensive aquifer system (comprised of the thick Amabel and thin Reynales dolostones) and is the primary groundwater resource in the Milton Quarry area. The aquifer is underlain by the Cabot Head shale which forms a regional aquitard. The Amabel Aquifer is routinely used for private water supply wells and supports some of the seasonal and permanent wetlands in the area.



In addition to relying on the extensive existing hydrogeologic information, including over 340 monitoring wells, multiple pumping tests (including 2 conducted on the MQEE lands at TW1-80), over 150,000 water level measurements and analysis over more than 40 years, the following additional studies are being undertaken as part of this ToR:

- 7 new monitoring wells were installed at 5 locations, including nested monitoring wells at 2 of these locations [denoted as OW78-20 through OW82-20 on Figure 1 with shallow and deep nested monitoring well intervals denoted as “S” and “D”, respectively]
- Water level monitoring is being conducted at 26 monitoring wells located on the MQEE lands and areas to the east and south (including some locations that were already part of monitoring programs)
- Water level transducers were installed in 14 of these monitoring wells
- Water level hydrographs will be prepared for all monitoring locations to assess seasonal variations and year-over-year variations where longer term data is available
- Specific combinations of monitoring locations will be utilized to assess water level variations with depth and to compare surface water and groundwater level conditions
- Groundwater level contours will be prepared for spring and fall monitoring events consistent with standard practices for the Existing Milton Quarry. Water levels for these events will also be reflected on the cross-sections
- Groundwater-surface water interactions will be assessed using field observations, combination groundwater/surface water hydrographs, and comparison of groundwater contours to ground surface elevations/topography
- No private water supply well survey is necessary as there are no private lands or water supply wells within 1.2 kilometres of the MQEE extraction area (refer to MHBC letter for September 4, 2020, Figure #13). The water supply wells that are within the Amabel Aquifer are located to the north and west, hydrogeologically separated from the MQEE lands by the other quarry areas and addressed by the existing Milton Quarry monitoring and mitigation measures.
- The MQEE lands are outside all Source Water Protection (SWP) designated Wellhead Protection Areas (WHPAs) and therefore no SWP-related studies are necessary as part of this ToR.
- Groundwater quality conditions have been extensively evaluated at the Milton Quarry and continue to be monitored through the provisions of the WMS and the private well water supply monitoring program under the AMP and the Ontario Water Resources Act (OWRA) approvals. No additional water quality sampling is warranted for these MQEE studies, although monitoring may be included in the recommended monitoring requirements pursuant to the AMP or the OWRA approvals.

Investigative locations are shown on the attached Figure 1.

The various evaluations described in Sections 2, 3, and 4 will include consideration of potential karstification of the dolostone bedrock. Karstification is a normal type of water-driven weathering that is typical of carbonate bedrock in areas such as southern Ontario. The relatively low solubility of the Amabel dolostone



(relative to limestone or gypsum), the carbonate-rich overburden, and the limited surface water closed-catchment areas result in low degrees of weathering or karstification in the area of Milton Quarry.

Karst considerations were thoroughly evaluated as part of the previous Milton Quarry Extension approvals and it was determined by the Region of Halton hydrogeologist at that time as well as by the Joint Board, that there were no unusual or demanding challenges arising from karstification for the Milton Quarry Extension. It was determined that the then-proposed Milton Quarry Extension characterization and proposed mitigation measures sufficiently addressed any considerations related to potential karstification. These measures have proven to be effective in protecting water resources, including bedrock springs that had been indicated to be reliant on karst features by parties opposed to the Extension. The quarry extraction of the North Quarry, West Cell, and East Cell over the last 23 years of involvement by GHD have revealed no significant karst features and no hydrogeologic conditions that could not be addressed by the approved mitigation measures.

Based on the above facts, a separate study based solely on potential karst considerations is not necessary and has not been included in this ToR.

## **5. Impact Assessment, Mitigation, and Rehabilitation Measures**

As identified in Section 1 (above) Dufferin has already committed to integrate the subject site into the state-of-the-art water management system (WMS) and AMP that are already in place and have been operating at the Milton Quarry and Milton Quarry Extension since 2007. In the absence of mitigation measures, the extension of the Milton Quarry below the water table in the MQEE lands would result in a lowering of the surrounding groundwater levels and would be expected to have a negative influence on some of the nearby groundwater-dependent wetlands. The water mitigation system has effectively maintained groundwater levels around the perimeter of the Milton Quarry Extension protecting surrounding water resources including water dependent ecological features. The water management system for the MQEE will be a straightforward addition to the existing system using the same proven techniques for mitigation.

As part of this ToR, GHD will evaluate the potential requirements to adapt the WMS to maintain, or enhance, the existing approved groundwater levels to the east and south of the proposed MQEE extraction area. This will include evaluation and design of additional recharge wells, diffuse discharge(s), watermain, and related equipment as necessary to achieve the mitigation and enhancement objectives for the proposed MQEE.

The evaluation will include a groundwater modelling analysis to estimate potential numbers and locations of recharge wells, recharge and dewatering flows, water budget, and lake filling times. These analyses will build on the groundwater and surface water analyses that have been ongoing over the last 20 years of Milton Quarry evaluation. The most recent version of the models, as reported in the 5-Year AMP Review, will be updated with the information obtained under this ToR and recent monitoring and WMS operating information.

The mitigation and rehabilitation measures will be designed to protect against potential negative effects to water resources and related ecological features. This evaluation will compare the proposed interim extraction groundwater condition to the existing approved interim extraction condition for full extraction with mitigation. Similarly, the proposed rehabilitation groundwater condition will be compared to the existing approved

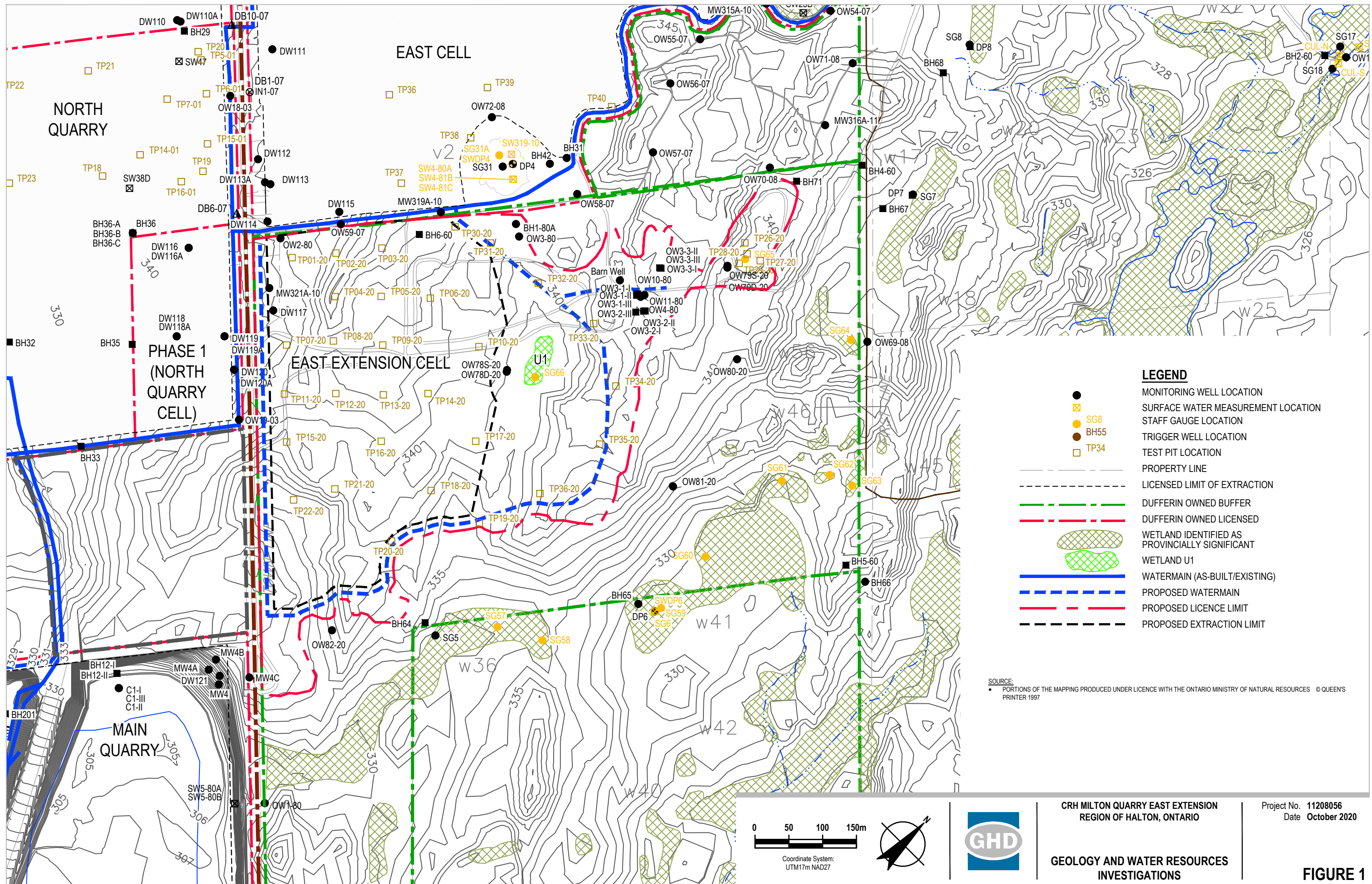




rehabilitation condition. To the extent feasible and practical, these measures will also be designed to enhance existing conditions where it is evident that a net environmental benefit can be achieved.

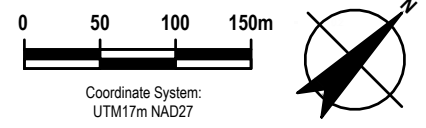
This impact assessment and design analysis will include a water budget assessment, extending the assessments that are presently undertaken for the existing quarry and WMS.

Suitable monitoring and adaptive management measures would also be identified as described in the ToR for the AMP, reported separately.



- LEGEND**
- MONITORING WELL LOCATION
  - SURFACE WATER MEASUREMENT LOCATION
  - SG8
  - BH55
  - TP34
  - PROPERTY LINE
  - LICENSED LIMIT OF EXTRACTION
  - DUFFERIN OWNED BUFFER
  - DUFFERIN OWNED LICENSED
  - WETLAND IDENTIFIED AS PROVINCIALLY SIGNIFICANT
  - WETLAND U1
  - WATERMAIN (AS-BUILT/EXISTING)
  - PROPOSED WATERMAIN
  - PROPOSED LICENCE LIMIT
  - PROPOSED EXTRACTION LIMIT

SOURCE:  
 • PORTIONS OF THE MAPPING PRODUCED UNDER LICENCE WITH THE ONTARIO MINISTRY OF NATURAL RESOURCES © QUEEN'S PRINTER 1997



CRH MILTON QUARRY EAST EXTENSION  
 REGION OF HALTON, ONTARIO

**GEOLOGY AND WATER RESOURCES  
 INVESTIGATIONS**

Project No. 11208056  
 Date October 2020

**FIGURE 1**

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 Plot Date: 29 October 2020 10:48 AM




# Memorandum

October 29, 2020

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To: Brian Zeman, MHBC Ref. No.: 11208056-199

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From:  Richard Murphy(GHD)/Anthony Goodban(GEC)/kf/4

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cc: Kevin Mitchell (CRH)

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**Subject: Terms of Reference: Adaptive Environmental Management and Protection Plan (AMP)  
Proposed Dufferin Aggregates Milton Quarry East Extension  
Region of Halton, Ontario**

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## 1. Introduction and Background

GHD and Goodban Ecological Consulting (GEC) have been retained by Dufferin Aggregates, a division of CRH Canada Group Inc. (Dufferin) to provide them with advice pertaining to an Adaptive Environmental Management and Protection Plan (AMP) for the proposed extension to the Milton Quarry. This memorandum presents the proposed Terms of Reference (ToR) for this advice. GHD has also prepared a separate ToR for advice related to geology and water resources and GEC has prepared a separate ToR for advice related to natural (ecological) resources.

The proposed extension of the Milton Quarry, referred to as the Milton Quarry East Extension (MQEE), represents a proposed extraction area of approximately 16 hectares bounded by the existing East Cell to the north, the existing North Quarry to the west, and the existing Main Quarry at some distance to the southwest and south. The proposed MQEE extraction area is contiguous with the existing East Cell (i.e. it would be extracted as part of the East Cell) and separated from the North Quarry by the Town Line to the west.

These Terms of Reference (ToR) have been prepared in consideration of the comprehensive understanding that already exists with respect to the geology, hydrogeology, surface water, and ecological resources in the area of the Milton Quarry and the existing mitigation measures that have a long proven record of successful operation and protection of water resources and related ecological features. Guidelines available from review agencies, including the Ministry of Natural Resources and Forestry Provincial Standards for a Class A Quarry below the water table and the Region of Halton Aggregate Resources Reference Manual were also considered.

The study of the proposed MQEE lands and surrounding area commenced more than 40 years ago. Over this time extensive investigation and evaluation has occurred and a truly vast amount of data has been collected. The existing Milton Quarry characterization, impact assessment, mitigation measures, and monitoring plan (refer to AMP) were thoroughly vetted through an extensive Joint Agency Review Team (JART) and public consultation process; evaluated and approved by all related government agencies, including the Provincial Joint Board and Cabinet; and the approved plans, including mitigation measures



have been successfully operating since 2007. The ongoing monitoring and performance assessment is thoroughly reported to, and reviewed by, relevant government agencies with support from their consultants as warranted. This rigorous approval and operating quarry review process represents the highest known standard of care for any aggregate extraction operation in Ontario or elsewhere.

Dufferin has already committed to integrate the subject site into the state-of-the-art water management system (WMS) and AMP that are already in place and have been operating at the Milton Quarry and Milton Quarry Extension since 2007. The water mitigation system has effectively maintained groundwater levels around the perimeter of the Milton Quarry Extension protecting surrounding water resources including water dependent ecological features. All approval agencies are familiar with the AMP and the hydrologic and natural environment data collection and assessment that is provided through annual reports and the WebDT data sharing system that allows agencies direct access to hydrogeological data (and other information) at any time. The AMP also requires a comprehensive 5-year review to make any adjustments necessary to make sure the groundwater is maintained to an acceptable level thereby protecting the ecological features dependent upon it. The AMP was approved by the agencies and through annual reporting, as well as a recent 5-year review, has demonstrated that the proposed mitigation system has protected and enhanced natural heritage features surrounding the extension. The water management system and protection for water resources and related ecological features for the MQEE will be a straightforward addition to the existing system using the same proven techniques for mitigation.

The reliable understanding and operating basis for the existing Milton Quarry, along with the established AMP form the basis for the advice and recommendations GHD and GEC are preparing related to the proposed MQEE.

## **2. AMP Development**

The principles and requirements of the AMP have been established and demonstrated to be successful for the existing Milton Quarry Extension, as have earlier comparable requirements for the North Quarry. An addendum to the existing AMP will be developed to extend the protections provided by AMP to the proposed MQEE. The key components of the AMP addendum would include suitable provisions addressing:

- Pre-extraction requirements for baseline monitoring, mitigation implementation and verification, and final target level calculations
- Ongoing monitoring of groundwater, surface water, and ecological conditions
- Response and contingency action measures
- Rehabilitation confirmatory evaluation requirements
- Reporting

October 29, 2020

**Joe Nethery, MCIP, RPP**  
**Manager of Community Planning**  
**Halton Region**  
1151 Bronte Road  
Oakville, Ontario L6M 3L1

Dear Joe Nethery:

**RE: Dufferin Aggregates – Proposed Milton Quarry East Extension**  
**Terms of Reference – Progressive and Final Rehabilitation Monitoring Study**  
**OUR FILE 9061DJ**

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MHBC has been retained by Dufferin Aggregates, a division of CRH Canada Group Inc. (“Dufferin”), to prepare a Progressive and Final Rehabilitation Monitoring Study for the proposed extension to the existing Milton Quarry, known as the Milton Quarry East Extension (“MQEE”). The following are the Terms of Reference for the study.

#### **OVERVIEW OF APPLICATION:**

Dufferin recently acquired 66.5 hectares of land contiguous with their existing Milton Quarry operation, known as Part of Lot 12, Concession 1, Geographic Township of Esquesing, Town of Halton Hills, Regional Municipality of Halton, and is seeking approvals to extract a portion of the site.

The proposed MQEE would have an extraction area of 16.0 ha and would be contiguous with the existing operation to the north. The proposed MQEE represents a less than 4 % increase in the existing approved extraction area at the Milton Quarry. The proposed Ecological Enhancement Plan for the MQEE would provide several landforms including, deep lake, wetlands, islands, a promontory & beach ridge, vegetated areas and reforestation areas.

#### **PURPOSE OF THE STUDY:**

In accordance with the Region of Halton Aggregate Resource Reference Manual, the purpose of the study is to:

1. Demonstrate how the subject lands will be rehabilitated to a land use that is compatible with the land use of the area and in conformity with Provincial, Regional and local policy; and
2. Identify requirements for monitoring and rehabilitation to ensure that the rehabilitation of the site is consistent with the requirements of applicable policy documents.

## **OBJECTIVES OF THE STUDY:**

1. To identify and document the specific elements of a plan for the progressive and timely rehabilitation of the site.
2. To recommend a rehabilitation strategy for progressive rehabilitation, monitoring and post development rehabilitation.
3. To prepare a strategy to rehabilitate sites to a state of greater or equal ecological value.
4. To identify potential after-uses that are compatible with surrounding land uses.
5. To identify ongoing monitoring milestones for monitoring site impacts and rehabilitation requirements.
6. Identify any further planning approvals that may be necessary to facilitate the final end use.

The study will rely upon technical information prepared as part of the Natural Environment Report, Ecological Enhancement Plan, Water Resources Report, and Adaptive Management Plan.

## **STUDY CONTENTS:**

The Progressive and Final Rehabilitation Monitoring Study will include the following components:

### **1. Analysis of Rehabilitation and After Use Policies**

The study will provide a summary and analysis of the following objectives and policies from the Niagara Escarpment Plan, the Provincial Policy Statement, the Halton Region Official Plan and The Town of Halton Hills Official Plan, to determine the appropriateness of the rehabilitation and after use proposed for the site:

#### Niagara Escarpment Plan

- Objectives of the Niagara Escarpment Plan
- Amendments for Mineral Resource Extraction Areas - 1.2.2.3 b), c) & d), 1.2.2.4 c)
- Mineral Resource Extraction Area Objectives - 1.9.1 3., 4., 5. & 6.,
- Mineral Resource Extraction Area After Uses - 1.9.5
- Development Affecting Natural Heritage – 2.7.10
- Mineral Aggregate Resources – 2.9.3 h), 2.9.7, 2.9.8, 2.9.9, 2.9.10 & 2.9.11
- Niagara Escarpment Parks and Open Space System – 3.1.1, 3.2.1 & 3.2.5

#### Provincial Policy Statement

- Rural Lands in Municipalities – 1.1.5.2 b) & 1.1.5.3
- Public Spaces, Recreation, Parks, Trails and Open Space – 1.5.1 b)
- Long-Term Economic Prosperity – 1.7.1 g) & h)
- Rehabilitation – 2.5.3.1 & 2.5.3.2

#### Halton Region Official Plan

- Mineral Aggregate Extraction Areas – 107 (5), 109 (4) d), 110 (6), (6.1), (7.2) d), (8.1) a), b) & c) & (8.2)
- Regional Natural Heritage System – 118 (9)
- Land – 146 (5) & 147 (3)

The Town of Halton Hills Official Plan

- Strategic Objectives – A2.1.2 n)
- Mineral Aggregate Resources – A2.10.2 d)
- Mineral Resource Extraction Area – E6.1 c) & f), E6.4.3.4 e) & g), E6.4.3.5, E6.4.4 a), b), c) & d), E6.4.6, E6.4.7

## **2. Proposed Progressive and Final Rehabilitation**

The proposed progressive and final rehabilitation for the site will be informed by the recommended requirements for rehabilitation and monitoring as outlined in the technical reports for the proposed MQEE, and will provide an after use plan that is designed to be compatible with the surrounding land uses. It is anticipated that the rehabilitation plan for the proposed MQEE will provide several features including deep lake, wetlands, islands, a promontory & beach ridge, vegetated areas and reforestation areas that will rehabilitate the site to a state of greater or equal ecological value.

The rehabilitation and monitoring requirements for the proposed MQEE will be outlined on the Aggregate Resources Act (“ARA”) Site Plans.

This section of the study will detail all of the monitoring and rehabilitation requirements for the site based on technical recommendations and MNR requirements, and is anticipated to include the following components:

- Amount of land to be rehabilitated
- Description of rehabilitated landforms
- Phasing
- Sloping and Grading Requirements
- Seeding/Planting Requirements
- Monitoring Requirements during rehabilitation and long-term

Additionally, the ARA site plan requirements related to the Final Rehabilitation for the site will be outlined in this study.

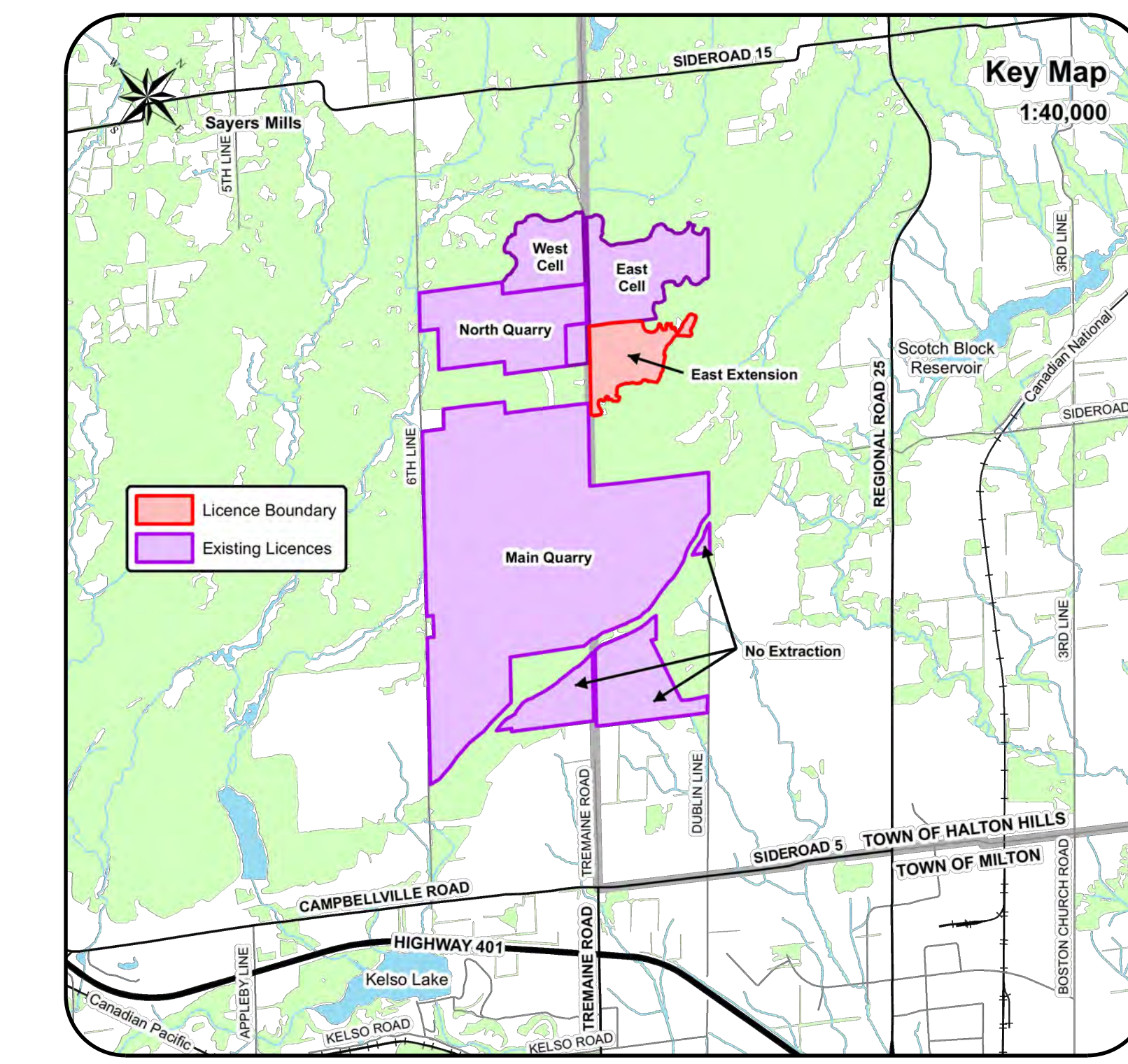
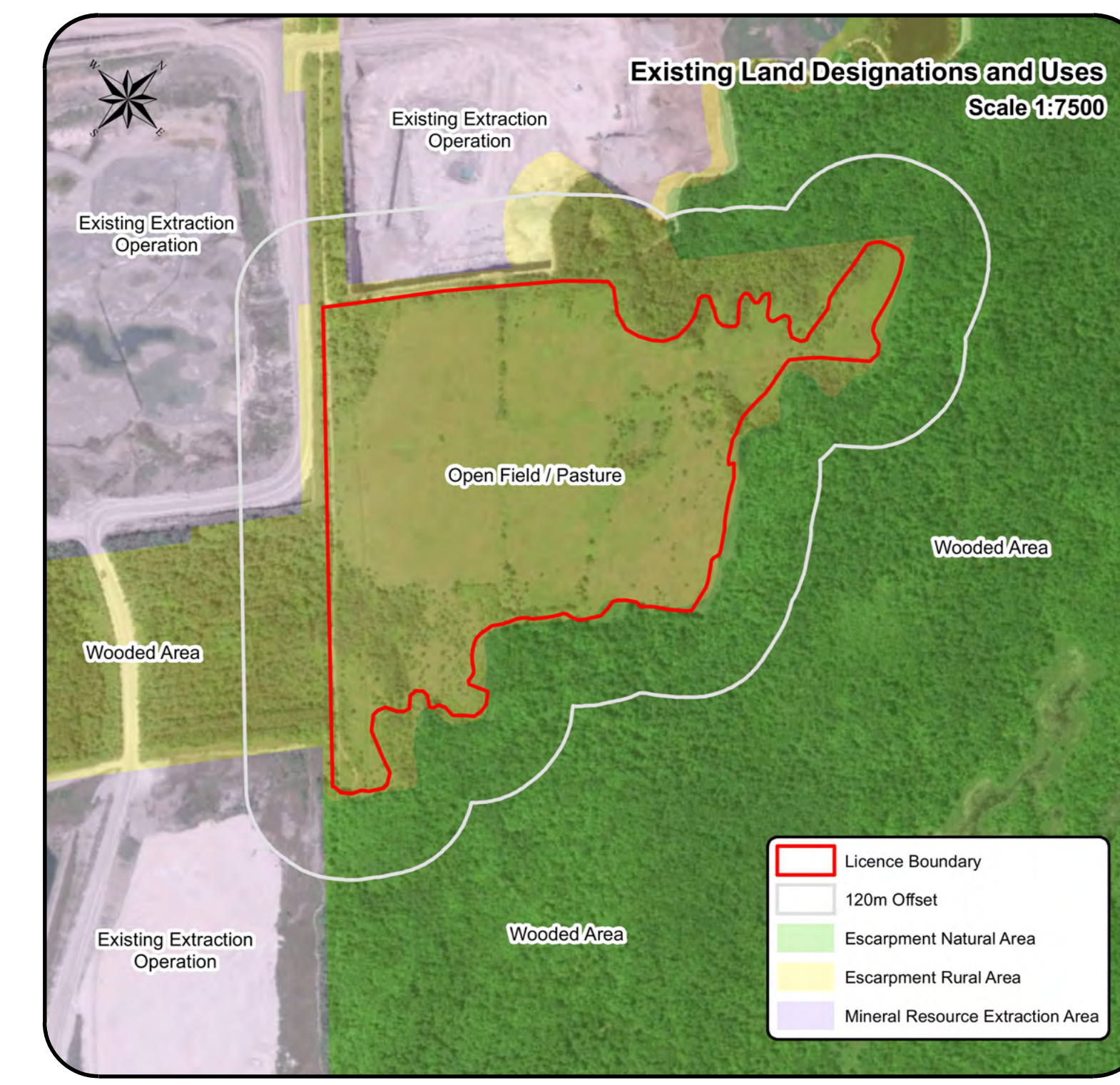
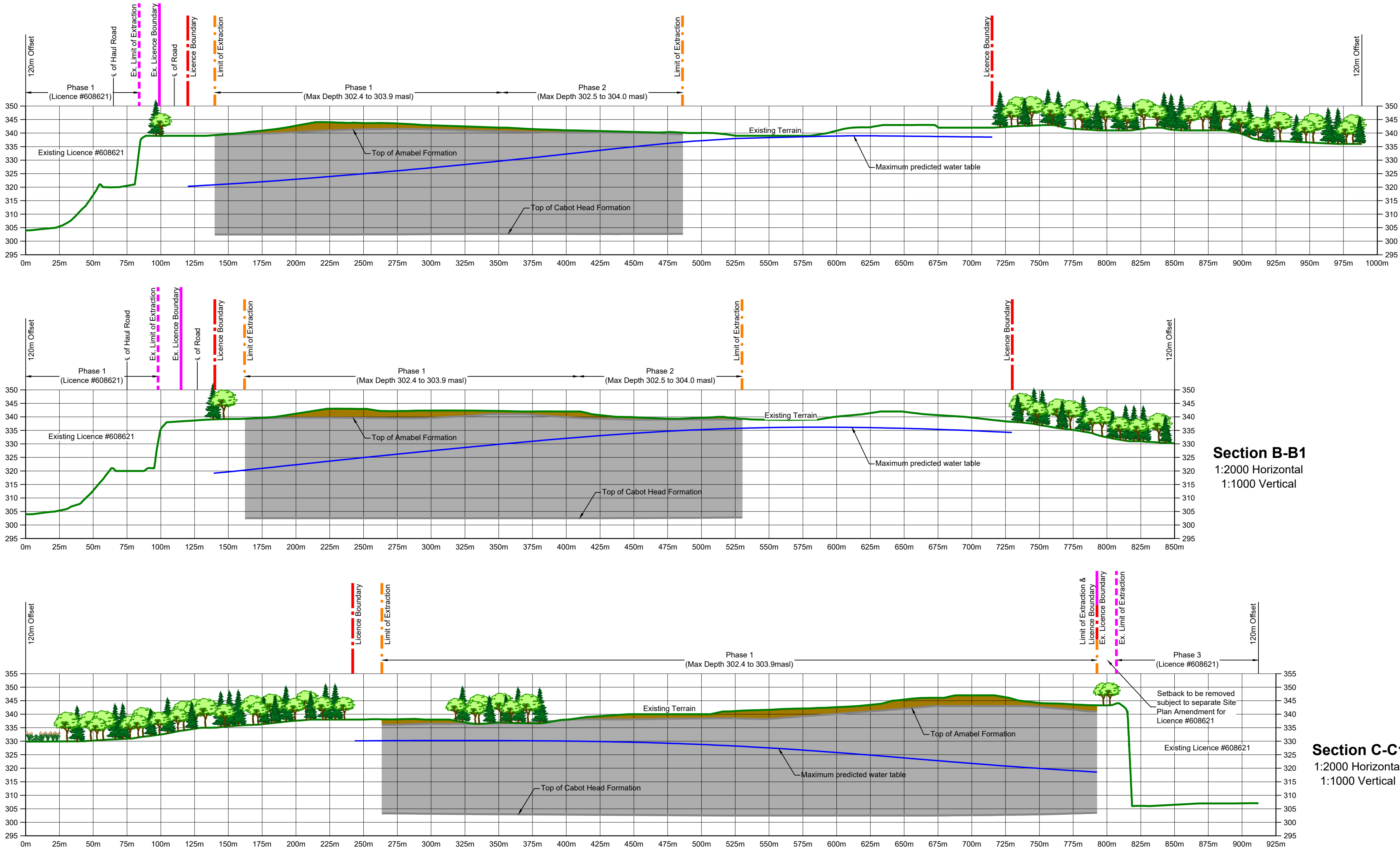
Yours truly,

**MHBC**



Brian Zeman, BES, MCIP, RPP  
President

# Preliminary Draft for Discussion



- A. General**
- This site plan is prepared under the Aggregate Resources Act (ARA) for a Class 'A' Licence below the ground water table.
  - Area Calculations:
    - a. Licence boundary 29.9 ha
    - b. Limit of extraction 16.0 ha
  - All references to north, south, east and west are based on site north (not true north).
  - There are no sensitive receptors within 500m of the licence boundary.
- B. References**
- Contours were obtained from the Region of Halton's Open Data Catalogue which were derived from 2019 aerial photography and are displayed in one metre intervals. Elevations shown are in metres above sea level (masl).
  - Topographic information was obtained from numerous sources including Ontario GeoHub (Land Information Ontario), Northway Photomap Inc. aerial photography captured in the spring of 1997, Google Earth Pro aerial photography captured on May 7, 2018 and field investigations for technical reports.
  - All topographic features are shown to scale in Universal Transverse Mercator (UTM) with North American Datum 1927 (NAD27), Zone 17 (metre), Central Meridian 81 degrees west coordinate system.
  - The licence boundary was established using a Sketch prepared by Fred G. Cunningham - Ontario Land Surveyor, dated December 2, 1997 and the significant woodland boundary provided by Goodban Ecological Consulting Inc. (GEC) dated June 1, 2020. Distances are approximate and for reference purposes only.
  - Land use designations on and within 120 metres of the licence boundary are from the Niagara Escarpment Plan, Map 3 - Regional Municipality of Halton, approved June 1, 2017. All land within the licence boundary is designated Escarpment Rural Area. Municipal zoning in this area does not apply.
  - Land use information identified on or within 120 metres of the licence boundary was determined using Google Earth Pro aerial photography captured on May 7, 2018.
- C. Drainage**
- Surface drainage on and within 120 metres of the licence boundary is by overland flow in the directions shown by arrows on the plan view, or by infiltration.
- D. Groundwater**
- The maximum predicted water table within the limit of extraction varies between 315.0 and 337.0 masl (see plan view on drawing 2 of 2 for location).
- E. Site Access and Fencing**
- A field access exists in the location shown on the plan view.
  - Post and wire fencing (unless noted otherwise) exists in the locations shown on the plan view.
- F. Aggregate Related Site Features**
- There are no existing aggregate operations or features on-site such as processing areas with stationary or portable equipment, stockpiles, recyclable materials, scrap, haul roads, fuel storage, terms or excavation faces.
- G. Cross Sections**
- Cross sections on this drawing depict the existing conditions.
  - Cross section locations are identified on the plan view for each drawing.

**Legal Description**  
Part of Lots 11 and 12, Concession 1  
(former geographic Township of Esquesing)  
Town of Halton Hills  
Regional Municipality of Halton

**Legend**

- Licence Boundary
- Limit of Extraction
- Existing Licences
- Contours with Elevation
- Road
- Field Access
- Excavation Face
- Disturbed Area
- Wooded Area
- Wetland
- Wetland
- 120m Offset From Licence Boundary
- Parcel Fabric
- Trail Segment
- Overhead Hydro
- Watermain
- Fence
- Entrance / Exit
- Direction of Surface Drainage
- Cross Sections

**Legend - Cross Sections**

- Licence Boundary
- Limit of Extraction
- Existing Licence Boundary
- Existing Limit of Extraction
- Existing Grade
- Maximum Predicted Water Table
- Maximum Depth of Excavation
- Topsoil and/or Overburden
- Aggregate Available for Extraction

**Site Plan Amendments**

No.	Date	Description	By

**Site Plan Revisions (Pre-Licensing)**

No.	Date	Description	By

**MHBC**  
PLANNING  
URBAN DESIGN  
& LANDSCAPE  
ARCHITECTURE

113 COLLIER STREET, BARRE, ON, L4M 1H2 | P: 705.728.0245 | F: 705.728.2010 | WWW.MHBCPLAN.COM

MNRF Approval Stamp      MHBC Stamp      Site North

Applicant

**CRH**      **CRH Canada Group Inc.**  
2300 Steeles Avenue West, 4th Floor  
Concord, Ontario  
L4K 5X6

**Project**  
**Milton Quarry East Extension**  
10305 Nassagaweya Esquesing Townline, Halton Hills, Ontario

MNRF Licence Reference No.      Applicant's Signature

Plan Scale: 1:2000 (Arch E)      Date: October 2020

Drawn By: C.P.      File No.: 9061DJ

Checked By: \*\*\*

File Name: **Existing Features & Cross Sections**

Drawing No. **1 of 2**

File Path: N:\08\9061DJ\_Drafting - Milton Quarry Extension Support\Drawings - Must be in NAD 27\Site Plan\CA09061DJ - Site Plan - October 2020.dwg



# Preliminary Draft for Discussion

**Legal Description**  
Part of Lots 11 and 12, Concession 1  
(former geographic Township of Esquesing)  
Town of Halton Hills  
Regional Municipality of Halton

**Legend**

- Licence Boundary
- Limit of Extraction
- Existing Licences
- Contours with Elevation
- Road
- Field Access
- Extraction Face
- Disturbed Area
- Wooded Area
- Wetland
- Wetland
- 120m Offset From Licence Boundary
- Parcel Fabric
- Trail Segment
- Overhead Hydro
- Watermain
- Fence
- Entrance / Exit
- Gate
- General Direction of Excavation & Boundary
- Spot Elevation - CHECK
- Cross Sections



- A. General**
- Area Calculations:
    - Licence boundary 29.9 ha
    - Limit of extraction 16.0 ha
  - The maximum annual tonnage is unlimited.
  - All references to north, south, east and west are based on site north (not true north).
- B. Hours of Operation**
- Hours of operation are Monday at 6:00am to Saturday at 12:00pm.
  - Site preparation and rehabilitation are permitted only between 7:00am and 7:00pm.
  - Maintenance is permitted 24 hours per day, 7 days per week.
  - Drilling is only permitted between 7:00am and 7:00pm.
  - No operations are permitted on statutory holidays with the exception of maintenance.
- C. Site Access and Fencing**
- The site will be accessed from the common licence boundary to the north with adjacent Licence #608621 (East Cell).
  - The licence boundary will be fenced except for the north boundary adjacent to existing Licence #608621 (East Cell).
- D. Site Preparation**
- Topsoil on this licence may be used to rehabilitate the site or to rehabilitate areas of Licence #5481 or Licence #608621. Overburden from this licence may be used to rehabilitate areas of Licence #5481 and/or Licence #608621 or to construct ramps for site traffic.
- E. Extraction Sequence**
- Phase 1
    - Commence extraction in a southerly direction from existing Licence #608621.
    - The maximum depth of extraction varies between 302.4 and 303.9 masl.
  - Phase 2
    - Extract in an easterly direction from Phase 1.
    - The maximum depth of extraction varies between 302.5 and 304.0 masl.
- F. Extraction & Processing Details**
- Extraction will occur in a maximum of two benches (above water lift and below water lift) but is permitted to be extracted in a single bench.
  - Blasted rock will be transported to the existing quarry (Licence #608621 and #5481) for processing.
- G. Haul Route**
- The operation will utilize the existing internal haul road in existing Licences #608621 and #5481. If processing occurs in Licence #608621, highway trucks will transport processed material from the East Cell of Licence #608621 through the West Cell, North Quarry and Main Quarry before connecting to Dublin Line to transport material to market.

**H. Variations from Control and Operation Standards**

Section 0.13 Standard	Variation	Rational
(1)1 & (1)2	Gates will not be required where haul road(s) cross the common boundary with Licence #608621.	This will eliminate constraints to the movement of equipment between licences owned by the same licensee.
(1)10.i	A 0 metre setback will be provided where the licence abuts existing Licence #608621.	This will enable material to be extracted along the common boundary and for rehabilitation to transition between licences. A site plan amendment for existing Licence #608621 is required.
(1)10.ii	A 20 metre setback will be provided along the western boundary adjacent to the road allowance.	This will be consistent with Licence #608621 to the north which has a 20 metre setback along the western boundary adjacent to the road allowance.
(1)17 & (1)18	Topsoil and overburden may be transferred to existing Licence #5481 and/or Licence #608621.	This will allow stripped material from site preparation to be used immediately for progressive rehabilitation or for overburden to be used in ramp construction in other parts of the existing licences.
(3)A	The common boundary with existing Licence #608621 will not be fenced.	The common licence boundary will be demarcated with marker posts every 30 metres.

**Site Plan Amendments**

No.	Date	Description	By

**Site Plan Revisions (Pre-Licensing)**

No.	Date	Description	By

MNRF Approval Stamp

MHBC Stamp

Site North

True North

Applicant

**CRH** CRH Canada Group Inc.  
2300 Steeles Avenue West, 4th Floor  
Concord, Ontario  
L4K 5X6

Project **Milton Quarry East Extension**  
10305 Nassagaweya Esqueing Townline, Halton Hills, Ontario

MNRF Licence Reference No. \_\_\_\_\_ Applicant's Signature \_\_\_\_\_

Plan Scale: 1:2000 (Arch E) Date: October 2020

Drawn By: C.P. File No.: 9061DJ

Checked By: \*\*\*

File Name: **Operational Plan**

Drawing No.: **2 of 2**

File Path: N:\tram\9061DJ - Dufferin - Milton Quarry Extension - Proposed Drawings - Must be in NAD 27/55 Site Plan\CA019061DJ - Site Plan - October 2020.dwg

# Tab 19



**PRE-CONSULTATION / DEVELOPMENT REVIEW COMMITTEE MEETING NOTES**

**NOVEMBER 12, 2020**

**D00ENQ20.035 MILTON QUARRY (Part of Lot 12 Concession 1) ARN:2415070004279**

**How to read these notes**

The studies, reports and documentation listed in these pre-consultation notes form the basis for a complete submission necessary for processing any associated development applications. As review of an application proceeds, the need for additional information or studies may arise. Where additional technical information is needed about any of the requirements listed in these notes, please speak with the key contact in each Department or the JART Chair. The Agencies reserves the right to request additional information as required.

**Where to find applications for the required planning approvals**

Applicants can obtain copies of all required development applications by visiting the following:

NEC – [NEPA form](#) and [DPA form](#) (.pdf for both)

Halton Region – [Aggregate Resources Reference Manual \(.pdf\)](#)

Halton Hills - <http://www.haltonhills.ca/planning/developmentReview.php>

**Disclaimer**

These notes:

- should be interpreted with regard to the specific details of the given proposal and the prevailing legislation, infrastructure planning and policy in place at the time when it was filed;
- are provided in response to an inquiry/proposal;
- are technical in nature, and do not confer approval in whole or in part;
- are to determine the basis for a complete application; and
- are subject to public disclosure upon request.

Pre-consultation notes need to be updated or the update requirement waived by the JART Chair if they are older than 6 months, in the event of property ownership change, in the event of a revised or different proposal or in any other case where so warranted.

*The Town of Halton Hills has a Pre-Consultation By-Law #2008-0092 by way of Staff Report No. PD-2008-0021.*

PROPOSAL/APPLICATION	OWNER/APPLICANT
<input checked="" type="checkbox"/> Niagara Escarpment Plan Amendment	<b>Owner/Applicant:</b> Dufferin Aggregates (CRH Canada Group Inc.) (MHBC Planning Urban Design & Landscape Architecture)
<input checked="" type="checkbox"/> Regional Official Plan Amendment	
<input checked="" type="checkbox"/> Halton Hills Official Plan Amendment	
<input type="checkbox"/> Conservation Halton Permit	<b>Proposed Site:</b> Part of Lot 12, Concession 1
<input type="checkbox"/> Severance (Consent)	
<input type="checkbox"/> Site Plan	<b>Proposal:</b> Milton Quarry Expansion
<input checked="" type="checkbox"/> NEC Permit	
<input type="checkbox"/> Other	



**JOINT AGENCY REVIEW TEAM (JART) COMMENTS**

A Joint Agency Review Team (JART) approach will be used for reviewing this application. The function of a JART is to review, analyze and comment on the completeness of the submissions supporting a proposal for new or expanded mineral aggregate extraction operations, and to comment and analyze the proposal on its technical merits. The JART will provide coordinated technical comments that will inform decision-making of the parties. JART is not a decision-making body, nor does it make recommendations on whether or not the proposal should be approved. It is instead a review process and team that ensures the agencies participating are working together from the same information and analyzing the proposal through all applicable planning policies, guidelines, and by-laws.

The Halton Consolidated Streamlined Mineral Aggregate Review Protocol (Joint Agency Review Team Protocol) followed by JART is [available on the Region's website](#).

Documents submitted with the application need to be compliant with *Accessibility for Ontarians with Disabilities Act (AODA)* requirements as they will be posted on the municipality websites.

Each agency shall receive the same versions/copies of applicable studies and submissions.

Applicant will need to maintain a comprehensive public website that includes a document library updated with information shared with JART members (e.g., addendum reports, letters of clarification). The municipalities want to point inquirers to Dufferin's project website as a source of data and information.

Users to be able to access, download, and search within any documents posted to the proponent's website, and print information that is part of the public record without registering on the site.

Each JART agency will report on the merits of the applications to their respective Council, Board or Commission. The applicant and all JART agencies will be made aware of the staff reports and dates of Council, Board or Commission consideration. All attempts will be made to produce a consolidated set of comments from all agencies (acknowledging that all agencies may not share all comments and/or have different issues).

**NIAGARA ESCARPMENT COMMISSION – Lisa Grbinicek [lisa.grbinicek@ontario.ca](mailto:lisa.grbinicek@ontario.ca)**

**PLANS AND REPORTS:**

- Planning Justification Report
- Agricultural Impact Assessment (scoped)
- Natural Heritage Level 1 & Level 2 Technical
- Reports and Environmental Impact Assessment
- Visual Impact Assessment
- Cultural Heritage Impact Assessment
- Archaeological Assessment
- Hydrogeological and Hydrologic Resources Assessment
- Karst Assessment
- Blasting Impact Assessment
- Air Quality Assessment
- Noise Impact Study
- Transportation/Haul Route Impact Assessment
- Adaptive Management Plan
- Rehabilitation and Monitoring Plan

The subject lands proposed for the aggregate expansion are 66.5 ha in size and are located within the Niagara Escarpment Plan (NEP) Rural Area designation and subject to Development Control as established by Ontario Regulation 826/90, Designation of Area of Development Control. It is staff's understanding that the licensed area boundary being proposed is approximately 29.9 ha in size of which 16 ha is to be proposed for extraction.

Part 1.2.2.1 of the NEP (2017) provides the following policy with regards to proposals for Mineral Resource Extraction Area:

*Mineral aggregate operations within a new Mineral Extraction Area producing more than 20,000 tonnes annually may be considered on lands within the Escarpment Rural Area land use designation through an amendment to the Niagara Escarpment Plan. Such an amendment will be to effect the change from Escarpment Rural Area to Mineral Resource Extraction Area.*

**OTHER DOCUMENTS:**



<input checked="" type="checkbox"/> USB with a set of all drawings to scale and reports in PDF format	<p>Pursuant to the above-noted policy, a Niagara Escarpment Plan Amendment (NEPA) application will be required for consideration by the Commission. The NEPA Guidelines can be found on the NEC website: <a href="#">NEPA Guidelines</a>. Subject to the approval of an Amendment application, a subsequent Development Permit Application (DPA) will also be required to facilitate development on the subject lands.</p> <p><b>Niagara Escarpment Plan (2017)</b>          Part 1.5 of the NEP (2017) provides the Objectives, Criteria for Designation, and Permitted Uses for lands within the Escarpment Rural Area designation. The NEPA application will be required to propose a change in designation from Escarpment Rural Area to Mineral Resource Extraction Area (MREA). Part 1.9 of the NEP (2017) provides the Objectives, Criterion for Designation and Permitted Uses for lands within the MREA designation. The applicant will be required to address the Objectives and applicable policies contained under Parts 1.5 and 1.9 when preparing the supporting planning documentation and technical studies.</p> <p>The NEPA and Development Permit applications will be further subject to demonstrating compliance with all applicable NEP (2017) Part 2 Development Criteria. NEC Staff has identified the following characteristics of the subject lands, based on a desk-top exercise:</p> <ul style="list-style-type: none"> <li>• The subject lands are currently largely vacant lands, comprised of open field and pasture, formally used as hayfields.</li> <li>• Key Natural Heritage Features are situated adjacent to the subject lands, including Significant Woodlands, Life Science Significant Area of Natural and Scientific Interest (Halton Forest North ANSI), Environmentally Sensitive Area (Hilton Falls Complex) and three (unevaluated) wetlands situated to the north, east and south.</li> <li>• The subject lands are identified as containing the regulated habitat of an endangered species under the <i>Endangered Species Act</i> (ESA).</li> <li>• The subject lands are contiguous with the existing Milton Quarry, bounded by the existing Milton Quarry East Cell to the north, the existing North Quarry to the west, and the existing Main Quarry at some distance to the southwest and south.</li> <li>• Niagara Escarpment Parks and Open Space System (NEPOSS) lands are situated immediately to the east (Tirion Tract Resource Management Area) and west of the subject lands (Cox Tract).</li> <li>• The Bruce Trail and Hilton-Falls Side Trail is situated in proximity (to the east) of the subject lands.</li> <li>• The lands are ranked as “Attractive” by the Landscape Evaluation Study (NEC, 1976).</li> <li>• The subject lands appear to be within a known karst area.</li> </ul>
<input type="checkbox"/> Other	

- There do not appear to be private residential lands or water supply wells within close proximity to the subject lands.
- The subject lands are not considered to be prime agricultural area, although they have been identified as previously having been under agricultural production.
- There are known archaeological sites within proximity of the subject lands.

Based on the above preliminary desk-top analysis of the subject lands, the following Part 2 NEP (2017) objectives and policies must be considered and addressed in the applicable supporting planning and technical submissions:

- Part 2.5 (Development Affecting Steep Slopes and Ravines)
- Part 2.6 (Development Affecting Water Resources)
- Part 2.7 (Development Affecting Natural Heritage)
- Part 2.8 (Agriculture)
- Part 2.9 (Mineral Aggregate Resources)
- Part 2.10 (Cultural Heritage)
- Part 2.12 (Infrastructure)
- Part 2.13 (Scenic Resources and Landform Conservation)
- Part 2.11 Recreation (with respect to the proposed rehabilitation plans)

#### **Requested Studies**

The following studies are being requested by NEC Staff to accompany the NEPA application in order to properly assess the proposal against the relevant policies of the NEP (2017):

- Planning Justification Report
- Agricultural Impact Assessment (scoped)
- Natural Heritage Level 1 & Level 2 Technical Reports and Environmental Impact Assessment
- Visual Impact Assessment
- Cultural Heritage Impact Assessment
- Archaeological Assessment
- Hydrogeological and Hydrologic Resources Assessment
- Karst Assessment
- Blasting Impact Assessment
- Air Quality Assessment
- Noise Impact Study
- Transportation/Haul Route Impact Assessment
- Adaptive Management Plan
- Rehabilitation and Monitoring Plan

NEC staff have received and reviewed the draft Terms of Reference (TOR) (October 29, 2020) for the following studies:

- Natural Heritage Level 1 & Level 2 Technical Reports

and Environmental Impact Assessment

- Geology and Water Resources Assessment (including Karst and Hazard Lands)
- Adaptive Environmental Management and Protection Plan (AMP)
- Progressive and Final Rehabilitation / Monitoring Study

Staff provide the following comments on the above noted draft TOR:

**Natural Heritage Level 1 & Level 2 Technical Reports and Environmental Impact Assessment (October 29, 2020):**

- A minor point of clarification is identified in Part 2.4 Niagara Escarpment Plan (pg.4), as follows: The Niagara Escarpment Plan was first approved in 1985 and was last amended in 2017.
- NEP Policy Framework – the Natural Heritage Level 1 & 2 Technical Study places an emphasis on the NEP policies of Part 2.7 Development Affecting Natural Heritage. Staff notes that Part 2.6 Development Affecting Water Resources must also be considered in all applicable technical studies.
- The NH Levels 1 & 2 studies refer to the comprehensive understanding of the area that already exists as a result of the previous approval of the Milton Quarry. While this background information will be useful to the application, the TOR should include a comprehensive characterization of the present-day baseline conditions. This includes sections respecting Landscape Setting, Physiography and surficial geology and soils, and topography and drainage.
- With respect to the adjacent unevaluated wetlands, staff requests that additional (present-day) characterization of these wetlands be provided, including the delineation and evaluation of the wetland boundaries (specifically for the U1 wetland). This should inform buffer widths.
- Cumulative Impacts of the existing and proposed developments on the escarpment environment should be addressed.
- Additional detailed studies with respect to Significant Wildlife Habitat (SWH) should be identified, both on and adjacent to the subject lands, consistent with the Natural Heritage Reference Manual and SWH Ecoregion Criteria Schedules (2015).
- The NEP includes several relevant objectives and policies supporting a landscape systems approach. Considering the lands adjacent to the proposed aggregate operation include the sensitive Escarpment Natural Area which supports Significant Woodlands and ANSI, greater consideration is requested with respect to the assessment of the proposed expansion on landscape connectivity and wildlife corridors and the identification of any potential impacts to existing

corridors as well as opportunities for enhancements through the Rehabilitation/Ecological Enhancement Plan.

- A minimum 10m buffer to Significant Woodlands has been identified with the rationale that this is the same approach that was taken for the Acton Quarry expansion. Proposed buffers to key natural heritage features will be required to demonstrate how the feature and its functions will be maintained and where possible, enhanced. In some cases, it may be necessary for the width of buffers to be increased.
- With respect to Species at Risk (SAR), a more comprehensive evaluation of the potential for SAR habitat (including additional surveys where appropriate), both on and adjacent to the subject lands is requested, or alternatively justification provided for the limits of the studies undertaken. Including but not limited to, the potential impacts to bats. Staff notes that Conservation Halton maintains data for SAR which should be consulted.

**Geology and Water Resources Assessment (including Karst and Hazard Lands) and Adaptive Management Plan**

- The NEC defers in part to Conservation Halton and Halton Region with respect to technical considerations respecting Geology and Water Resources Assessment.
- Consistent with the above noted comment regarding the Natural Heritage TOR, the TOR for the Water Resources Assessment does not include consideration of the NEP Part 2.6 Development Affecting Water Resources.
- The report should provide details regarding the methodologies used to evaluate any alterations in surface water drainage to inform potential negative impacts on wetlands and required mitigation measures.
- Regarding the requirement for pumping in perpetuity, the NEP Part 2.9. Mineral Aggregate Resources requires that in areas with below-water table extraction, mineral aggregate operations requiring perpetual water management after rehabilitation is complete should be avoided unless it can be demonstrated that such would support other public water management needs. The Water Resources Assessment and AMP/Rehabilitation Plan will be required to provide adequate justification for perpetual pumping.

**Progressive and Final Rehabilitation and Monitoring Study**

- The analysis of the NEP objectives and provisions respecting rehabilitation and after use policies should include Part 2.8 Development Affecting Water Resources and Part 2.11 Recreation and Part 2.13 Scenic Resources and Landform Conservation.



	<ul style="list-style-type: none"> <li>• Consideration should be given to the development and implementation of a Tree Preservation Plan and Edge Management Plan as part of the comprehensive rehabilitation and enhancement plans.</li> </ul> <p><b>General Comments</b> Overall, greater integration between the disciplines subject of the technical studies and reports is required in order to provide for a comprehensive understanding of the potential impacts and proposed mitigation measures.</p> <p>The licensed area proposed is substantively larger than the area proposed for extraction, justification for the extent of the licensed area boundary will be required.</p> <p><b>Copies of Materials Requested:</b> Please provide the following copies of all technical studies/reports in the formats identified:</p> <ul style="list-style-type: none"> <li>• One Digital Copy on a Memory Stick</li> <li>• Two hard copies of all the Technical</li> <li>• Reports/Studies requested above (pg.3)</li> </ul> <p>To facilitate the continuation of the review and planning process, submission of the NEPA application to the NEC, together with the requested studies, will be required. The approval of an Amendment application (ultimately by the Minister), and subsequent approval and issuance of a Development Permit is required prior to any decisions being rendered on related <i>Planning Act</i> applications pursuant to Sec. 24(3) of the <i>Niagara Escarpment Planning and Development Act</i> (NEPDA).</p>
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**HALTON REGION – Joe Nethery [Joe.Nethery@halton.ca](mailto:Joe.Nethery@halton.ca), Gena Ali [Gena.Ali@halton.ca](mailto:Gena.Ali@halton.ca), Janice Hogg [Janice.Hogg@halton.ca](mailto:Janice.Hogg@halton.ca), Alina Korniluk**

PLANS AND REPORTS	Background/Description of the Proposal:
<input checked="" type="checkbox"/> Application Form	<ul style="list-style-type: none"> <li>• The proposed Milton Quarry East Expansion (MQEE) consists of expanding the existing Milton Quarry eastward including an expanded licenced area of 66.5 ha of which 16.0 ha is proposed for extraction.</li> <li>• The subject lands are located between Sixth Line Nassagaweya and Regional Road 25 and are predominantly surrounded by the existing quarry lands, the Regional Natural Heritage System which includes the Regional Forest Cox Tract. The Cox Tract Haul Route, leased by the Region to Dufferin Aggregates, is located immediately to the west of the subject site.</li> <li>• The current proposal will require a Regional Official Plan Amendment, a Halton Hills Official Plan Amendment, an amendment to the Niagara Escarpment Plan, a Niagara Escarpment Development Permit, and approval under the Aggregate Resources Act for an aggregate licence.</li> </ul> <p><b>Comments:</b></p>
<input checked="" type="checkbox"/> Regional Review Fee(s)	
<input checked="" type="checkbox"/> Agricultural Impact Assessment	
<input checked="" type="checkbox"/> Cultural Heritage Study (built and landscape)	
<input checked="" type="checkbox"/> Archaeological Study	
<input checked="" type="checkbox"/> Financial Impact Study	
<input checked="" type="checkbox"/> Air Quality Assessment	
<input checked="" type="checkbox"/> Environmental Impact Study	
<input checked="" type="checkbox"/> Planning Justification Report	
<input checked="" type="checkbox"/> Progressive and Final Rehabilitation and Monitoring Study	
<input checked="" type="checkbox"/> Haul Route Study, Transportation Impact Study (TIS) including Safety Analysis	
<input checked="" type="checkbox"/> Water Resources Report (including hazard land assessment and karst)	
<input checked="" type="checkbox"/> Adaptive Management Plan	
<input checked="" type="checkbox"/> Noise and Vibration Study	
<input checked="" type="checkbox"/> Blasting Impact Assessment	

<input checked="" type="checkbox"/> Aggregate Resources Act Site Plans and Summary Statement	<ul style="list-style-type: none"> <li>• A Public Information Session will be required as part of the ARA Licence application process to ensure a forum for active verbal exchange between the public and the applicant           <ul style="list-style-type: none"> <li>○ The Region can leverage tools to support and help facilitate virtual information sessions</li> </ul> </li> </ul>
<input checked="" type="checkbox"/> USB with a set of all drawings to scale and reports in PDF format	<ul style="list-style-type: none"> <li>• Assessment of the impact to the Cox Tract (Leased Lands to Dufferin) needs to be conducted, including protection, monitoring and mitigation measures.</li> <li>• Under the 2009 Regional Official Plan (ROP):           <ul style="list-style-type: none"> <li>○ The subject lands (proposed expansion area) are designated as Regional Natural Heritage System and Agricultural Area on Map 1;</li> <li>○ The subject lands are designated Escarpment Rural Area and Escarpment Natural Area on Map 1A;</li> <li>○ A portion of the subject lands are identified as being in the Agricultural System outside Prime Agricultural Areas on Map 1E;</li> <li>○ A portion of the subject lands are Identified Mineral Resource Area on Map 1F; and,</li> <li>○ The subject lands are identified as having Key Features on map 1G.</li> </ul> </li> <li>• The objectives of the Mineral Resource Extraction Areas under the ROP are intended to ensure the protection of Mineral Resource Extraction Areas and that mineral extraction operations occur in a manner that minimizes social, environmental and human health impacts and ensures the functions and features of the Region's Natural Heritage System are maintained or, where possible, enhanced; and to ensure the progressive and final rehabilitation of these operations to the appropriate after use.</li> <li>• The ROP is intended to be read in its entirety but the following relevant policies have been highlighted. The Planning Justification Report shall comprehensively address the full range of provincial, regional and local policies:           <ul style="list-style-type: none"> <li>○ ROP Section 110(7.2) a) requires where the proposal has the potential to negatively affect Key Features of the Regional Natural Heritage System, as identified in Section 115.3(1), requires the proponent to demonstrate through an EIA that the proposal will result in no negative impact on the Key Features or their ecological functions for which the area is identified.</li> <li>○ ROP Section 110(7.2) b) requires in addition to Section 110(7.2)a), where the proposal has the potential to negatively affect the Regional Natural Heritage System, require the proponent to demonstrate through an EIA that the proposal will maintain, restore or where possible enhance the diversity and connectivity of natural heritage features in an area, and the long term ecological functions and biodiversity of natural heritage</li> </ul> </li> </ul>

	<p>systems, recognizing linkages between and among natural heritage features and areas, surface water features and ground water features.</p> <ul style="list-style-type: none"><li>○ ROP Section 110(11) requires the proponent of a new or expanded Mineral Resource Extraction Area to demonstrate to the satisfaction of the Region that the transportation of aggregate and related products associated with the proposed extractive operation can be adequately accommodated by the transportation system in Halton. Any improvements to the Regional and Local transportation infrastructure to accommodate the transportation of aggregate shall be at the expense of the proponent. If applicable, alternative routes and alternative modes for transporting the products shall be considered and evaluated. Proximity to and use of the Cox Tract Haul Route must be considered.</li><li>○ ROP Section 116.1c) allows the boundaries of the Regional Natural Heritage System to be refined, with addition, deletions and/or boundary adjustments, through similar studies such as a Sub-watershed Study or Environmental Impact Assessment based on terms of references accepted by the Region.<ul style="list-style-type: none"><li>• Based on Section 116.1c) additional scoping of the Terms of Reference for the Environmental Impact Assessment has been included in the Study Requirements section below. The submitted Terms of Reference for the Level 1 and 2 Natural Environment Technical Report (NETR) and Environmental Impact Assessment (EIS), "Dufferin Aggregates Milton Quarry East Extension", prepared by Goodban Ecological Consulting Inc. (GEC) and dated Oct. 29, 2020 shall be revised with a cover letter explaining how this additional scoping has been addressed.</li></ul></li><li>• A portion of the potential Significant Woodlands to the north of the extension area has been removed as part of the current ARA licence approval. However, our comments on the Terms of Reference for the NETR/EIS below still stand that GEC must assess the remaining woodland features for significance per ROP policies and determine the appropriate buffers to the extraction area and water management system infrastructure.</li><li>• Key Features of the Regional Natural Heritage System that are not mapped and may be present on the subject site are Significant Wildlife Habitat and Significant Habitat of Endangered and Threatened Species, which must also be addressed within the NETR/EIS (please see further comments below).</li><li>• Agricultural Impact Assessment will be required, scoping to follow.</li><li>• Wellhead mapping in the ROP is being updated,</li></ul>
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Regional Source Water Protection staff have updated mapping.

- The site is located within a Significant Groundwater Recharge Area and within a Highly Vulnerable Aquifer. The Region will be looking to see how these matters are addressed.
- Data requests for mapping can be discussed, and a data sharing agreement will be required where data can be shared.

**Terms of Reference Comments:**

- 1) **Re: Terms of Reference for Geology and Water Resources (G&WR) Assessment Report, Including Karst and Hazard Lands Consideration, Proposed Dufferin Aggregates Milton Quarry East Extension Region of Halton, Ontario, prepared by GHD, dated October 29, 2020:**

Dufferin's detailed (hydro)geologic work plans shall ensure that all items listed in Section 4.10 of HR's ROP-related *Aggregate Resource Reference Manual* (Guideline) are considered during the course of the assessment, and that the following additional comments are taken into account:

- Results and analysis of pumping test(s) and other advanced testing (e.g. geophysical, packer, tracer, etc.) conducted at the proposed MQEE lands shall be described in detail in the G&WR Assessment Report (i.e. in addition to any data consideration as part of a numerical model).
- Current status and relevance of the former (i.e., 1980s/1990s) monitoring stations, shown in the T of R maps, shall be clarified (i.e., which stations remain in existence?)
- Any anticipated changes to groundwater divides/groundwater contribution zones (relative to on-site and off-site ecological features), would need to be presented in the assessment report.
- Despite the statement in the T of R that no additional water quality sampling is warranted for the MQEE lands, baseline water quality in the area shall be part of the assessment report.
- The anticipated site-specific water management system (WMS) components would need to be described according to their intended purpose and inter-relationship with the existing WMS components (i.e., water diversion routes and related infrastructure; water storage, treatment and testing; mitigation-related triggers; and methods for ensuring WMS effectiveness long-term). This information shall be displayed on maps and profiles in the assessment reports and AMP addendum document.
- Contingencies concerning any unanticipated major karst features would need to be addressed as part

	<p>the assessment reports and AMP-related implementation plans.</p> <ul style="list-style-type: none"><li>• Any post-rehabilitation mitigation measures, if required, would need to be defined in the assessment report and AMP, including whether pumping in perpetuity would be required for mitigation purposes.</li><li>• Relevant baseline monitoring stations, applicable to the MQEE area, would need to be established to serve as a reference in the long-term assessment of water-dependent features in this area.</li><li>• All relevant results arising from (hydro) geologic and natural environment assessments would need to be interlinked as part of the AMP addendum.</li><li>• ROP Section 166.1c) allows for refinements to the RNHS through similar studies based on terms of reference accepted by the Region. The T of R concerning Geology and Water Resources (G&amp;WR) Assessment Report shall be revised with a cover letter explaining how the comments from the JART partners have been addressed and incorporated into the Terms of Reference.</li></ul> <p><b>2) <u>Re: Terms of Reference for Adaptive Environmental Management and Protection Plan (AMP), Proposed Dufferin Aggregates Milton Quarry East Extension Region of Halton, Ontario, prepared by GHD and GEC Inc., dated October 29, 2020:</u></b></p> <p>In addition to items listed in Section 4.11 of the HR's Guideline and AMP-related comments identified above, <u>the following shall be taken into account</u> in terms of the AMP addendum concerning the MQEE site:</p> <ul style="list-style-type: none"><li>• The AMP-related addendum shall be sufficiently detailed to serve as a one-step reference and a key implementation document, if the proposed quarry expansion is approved.</li><li>• The addendum shall consolidate information from (hydro)geologic and natural-environment studies regarding sensitive water-dependent receptors, summarize their current conditions/functions, define methodologies for establishing/refining applicable targets, include adequate monitoring program, define WMS components, identify mitigation and contingency scenarios, and describe rehabilitation and post-rehabilitation mitigation and monitoring needs. The AMP-related document shall be supported by clear maps, graphs, decision-making charts, tables, sections, profiles and current-conditions photographs.</li><li>• The AMP addendum shall identify anticipated pre-extraction and verification tasks and applicable reporting associated with these tasks. All on-going reporting and notification structure shall also be defined.</li></ul>
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- Rehabilitation plan components (as proposed and depicted on Site Plans) shall be described in greater detail in the AMP, including any needs for long-term WMS operations and maintenance, if required. This may involve amendment to the existing Milton Quarry agreements and revision to the AMP- and WMS-related securities.
- Any environmental enhancements/restoration plans shall also be described in the AMP.
- The site plan for the MQEE shall incorporate reference to the site-specific studies and the AMP addendum as the key water-related implementation document for the proposed site.

3) **Re: Terms of Reference Progressive and Final Rehabilitation Monitoring Study, Dufferin Aggregates – Proposed Milton Quarry East Extension, prepared by MHBC, dated October 29, 2020:**

In addition to rehabilitation-related items in Section 4.8 of the HR's Guideline, the following shall be taken into account in regards to the MQEE-specific rehabilitation plans:

- Any anticipated Ecological Enhancement Plan (EEP) shall be provided under a separate cover with all enhancement/restoration plans and schedules clearly defined. This document shall be referenced on Site Plans as it would serve as the primary implementation reference for rehabilitation-related plantings and other restoration needs.

4) **Re: Terms of Reference for Level 1 and 2 Natural Environment Technical Report (NETR) and Environmental Impact Assessment (EIS), Dufferin Aggregates Milton Quarry East Extension”, prepared by Goodban Ecological Consulting Inc. (GEC), dated Oct. 29, 2020**

- 5) The Terms of Reference were reviewed in comparison to the Halton Aggregate Resources Reference Manual, Version 1.0, dated June 18, 2014, and in accordance with applicable Regional Official Plan (ROP) policies.
1. Section 2.5.1 – Halton Region Official Plan (2015):
    - a) Please note that the current Halton Region Official Plan (ROP) office consolidation is dated June 19, 2018.
    - b) Reference shall be made to the following Mineral Resource Extraction Areas policies of the ROP, including Sections 107(3), 107(3.1), 107(5), 110(2), 110(6), 110(7.1), 110(7.2), 110(8), 110(8.1).
    - c) Portions of the subject lands are within the Regional Natural Heritage System land use designation. According to Figure #3 of the Terms of Reference, the proposed limits of

extraction appear to encroach into a potential Significant Woodland feature and the associated buffer located at the north-west portion of the extraction area. The NETR/EIS will need to assess the significance of the woodland in accordance with s.277 of the ROP. If the woodland is significant, the NETR/EIS will need to demonstrate that there will be no negative impact on the Significant Woodland feature and its ecological functions in accordance with the ROP and in accordance with the applicable policies of the Niagara Escarpment Plan.

- d) The proposed buffers range from 0 m from the limit of potential Significant Woodlands to 50 m in width from candidate Significant Wetlands. It is standard practice for the Region to require a minimum 30 m width for buffers from Key Features of the Regional Natural Heritage System. The NETR/EIS will need to provide justification for the proposed buffers that are less than 30 m in accordance with the definition of buffer within the ROP (i.e., s.220.1.1). Buffers are components of the Regional Natural Heritage System. Therefore the proposed limits of the Mineral Resource Extraction Area designation shall not extend into the Key Features and their associated buffers.

2. Section 4.1.5 – Significant Woodland Boundary Delineation and Staking:

- a) Staking of the Significant Woodland edge is proposed where the woodland edge is in proximity to the proposed water management system footprint. Given that the limit of the Significant Woodland and associated buffer are informing the limit of the extraction area, the Significant Woodland is to be staked along the northern and southern limits of the proposed extraction area as well as where the proposed watermain and other groundwater mitigation infrastructure is proposed within 30 m of the candidate Significant Woodland features. As noted in the Terms of Reference, the staked limits of the Significant Woodlands are to be confirmed by the Regional Forester.

3. As noted in Comment 1d), it appears that a 50 m buffer is proposed from two candidate Significant Wetlands. These particular wetlands have not been evaluated by the Ministry of Natural Resources and Forestry (MNRF); however, they have been identified within MNRF and Conservation Halton wetland mapping. It is recommended that the NETR/EIS assess the

significance of these wetlands in accordance with s.276.5(1) of the Regional Official Plan and in consultation with Conservation Halton and MNRF staff, and the appropriate buffer width be determined in accordance with s.220.1.1 of the ROP.

4. Section 4.0 – Ecological Field Survey Program:
  - a) Regional environmental planning staff defer to CH as the Region’s environmental technical advisors (and the Region’s NETR/EIS peer reviewer shall one be retained) to provide comments on whether the proposed field survey program satisfactorily identifies the Key Features and other components of the Regional Natural Heritage System in accordance with s.115.3 and s.155.4 of the ROP.
5. Section 4.2.3 – Other Wildlife Groups:
  - a) Were other significant habitats of endangered and threatened species or significant wildlife habitat confirmed based on field observations? For example, bats?
6. It is staff’s understanding that as part of the proposed groundwater impacts mitigation, the applicant is proposing to evaluate and design additional recharge wells, diffuse discharge(s), watermain and related equipment as necessary to achieve the mitigation and enhancement objectives for the proposed quarry extension project. It appears that a watermain is proposed within the buffer/linkage/enhancement areas of the Regional Natural Heritage System. Any impacts on the Regional Natural Heritage System as a result of the proposed infrastructure required for the groundwater mitigation must be included in the NETR/EIS in accordance with s.110(7.2) of the ROP.
7. In accordance with section 4.4 of the Halton Aggregate Resources Reference Manual, specifically Objective #2, the NETR/EIS must assess the linkages between the Regional Natural Heritage System Key Features and surface and groundwater resources. It is recommended that GEC and GHD coordinate their study findings to comprehensively demonstrate the ecological functions of the Key Features, the cumulative impacts, appropriate mitigation measures and ecological net gain to the Regional Natural Heritage System.
8. Section 5.0 – Mitigation Measures, Ecological Enhancements, Quarry Rehabilitation and Impact



**Assessment:**

- a) A minimum 10 m buffer from the Significant Woodlands is proposed, which will be enhanced through tree planting. While this approach may have been accepted for the Action Quarry Extension, a reduction to the typical 30 m buffer must be justified as noted in Comment 1d).
- b) Please confirm the location of the proposed tree clearing (also related to Comments 1c), 1d) and 2).
- c) Quarry Rehabilitation – Regional environmental planning staff defer to Conservation Halton as the Region's environmental technical advisors (and the Region's NETR/EIS peer reviewer if retained) to provide technical comments and advise on the conceptual rehabilitation plan shown on Figure 4 of the Terms of Reference.

In addition to the guidelines in the Aggregate Resources Reference Manual, the required Environmental Impact Assessment shall address the following:

- Flagging the Key Features: woodlands, wetlands, watercourse and areas Provincially Significant wildlife potential, buffers
- Significant woodland assessment: Regional Forrester shall be consulted for staking
- CH to advise on scoping in relation to wetlands, wildlife and endangered species

Note that the Region's EIA Guidelines were updated in 2020.

**Study Requirements:**

All materials submitted shall be provided in AODA compliant format for the purposes of posting on municipal websites.

The Aggregate Resources Reference Manual provides guidance to decision-makers and development proponents regarding *Planning Act* applications for a new or expanded mineral resource extraction use:

<https://www.halton.ca/getmedia/fbc3a3c7-a584-4872-b0f7-4f6f6ebe5609/LPS-rop-guidelines-aggregate-resources-reference-manual.aspx>

The Regional Official Plan has Guidelines for implementing its policies. A full set of the Guidelines can be found at:

[https://www.halton.ca/The-Region/Regional-Planning/Regional-Official-Plan-\(ROP\)-\(1\)/Regional-Official-Plan-Guidelines](https://www.halton.ca/The-Region/Regional-Planning/Regional-Official-Plan-(ROP)-(1)/Regional-Official-Plan-Guidelines)

The following Guidelines have been highlighted by the Public Works Department, Infrastructure Planning and

Policy Division regarding the preparation of the Haul Route Study, Transportation Impact Study (TIS) including Safety Analysis:

- TIS Guidelines:  
<https://www.halton.ca/Repository/Transportation-Impact-Study-Guidelines>
- Noise Abatement Guidelines:  
<https://www.halton.ca/Repository/Noise-Abatement-Guidelines>
- Access Management Guidelines:  
<https://www.halton.ca/Repository/Access-Management-Guideline>

**List of Required Studies:**

- Application Form
- Regional Review Fee(s)
- Agricultural Impact Assessment (scoped)
  - The lands appear to have been under agricultural production and are part of Halton's agricultural system. Please provide a proposed scope for discussion with JART in January/February.
  - NEC is similarly requesting a study.
- Archaeological Study
- Cultural Heritage Study (built and landscape)
- Environmental Impact Assessment
- Financial Impact Study
- Air Quality Assessment
- Planning Justification Report
- Progressive and Final Rehabilitation and Monitoring Study
- Haul Route Study, Transportation Impact Study (TIS) including Safety Analysis
- Water Resources Report (including hazard land assessment and karst)
- Adaptive Management Plan
- Noise and Vibration Study
- Blasting Impact Assessment
- Aggregate Resources Act Site Plans and Summary Statement

**Application Fees**

The application fee for a Regional Official Plan Amendment for mineral aggregate extraction (pits and quarries) is anticipated to be \$145,315.59 (\$128,597.87, plus HST) per Fees By-law 68-20. Costs associated with peer reviews of development applications studies are billed to proponents on a cost recovery basis, and Halton Region will not release any objections to a mineral aggregate application proposal under the Aggregate Resources Act without all peer review fees having been paid in full. The above is in accordance with Fees By-law 68-20.



<p><b>CONSERVATION HALTON - Kellie McCormack <a href="mailto:kmcCormack@hrca.on.ca">kmcCormack@hrca.on.ca</a>, Leah Smith <a href="mailto:lsmith@hrca.on.ca">lsmith@hrca.on.ca</a>, Janette Brenner <a href="mailto:jbrenner@hrca.on.ca">jbrenner@hrca.on.ca</a>, Jacek Strakoski <a href="mailto:jsakowski@hrca.on.ca">jsakowski@hrca.on.ca</a>, Lisa Jennings <a href="mailto:ljennings@hrca.on.ca">ljennings@hrca.on.ca</a></b></p>	
<p><b>REPORTS:</b></p>	<p><b>General</b></p>
<p><input checked="" type="checkbox"/> Level 1 and Level 2 Natural Environmental Technical Report and Environmental Impact Assessment</p>	<p>1. All studies should be coordinated and integrated. In particular, the findings of the Hydrogeologic and Hydrologic Impact Assessment, Surface Water Assessment and Level 1 and 2 Natural Environment Technical Report should inform each other, and be presented in a coordinated manner.</p> <p>2. All reports (in particular, the Natural Environment Report, Planning Justification Report) should reference the relevant Conservation Halton policies that apply to the site.</p> <p>3. CH staff may have additional feedback on the water resources report once we have completed a review of the 5 year AMP.</p> <p><b>Level 1 and Level 2 Natural Environmental Technical Report and Environmental Impact Assessment Terms of Reference (TOR)</b></p> <p><u>Key Comments</u></p> <p>1. The TOR should indicate the following to be included within the Natural Environment Technical Report (NETR):</p> <p style="margin-left: 20px;">a. The NETR should correspond with the Geology and Water Resources Assessment Report, to ensure the impact assessment is comprehensive. Surface and groundwater evaluation should be discussed in both reports, and the NETR/EIA report should discuss the ecological impacts of any proposed modifications.</p> <p style="margin-left: 20px;">b. Determine the significance of CH identified wetlands to confirm the appropriate buffer width to ensure no negative impact on hydrological/ecological function. Wetland U1 boundary will need to be confirmed by CH during the appropriate season (June – September).</p> <p><u>Technical Comments</u></p> <p>2. The TOR should note that the NETR will undertake the following:</p> <p style="margin-left: 20px;">a. Include mapping that clearly identifies all of the Natural Heritage Features on current air photos.</p> <p style="margin-left: 20px;">b. Obtain a data-share agreement with CH for relevant natural heritage data.</p> <p style="margin-left: 20px;">c. Incorporate full details on surveys including methodologies used for field studies and a table outlining purpose of the study, date, time of visits, weather during the surveys and information about the qualified professional carrying out the surveys, the protocols used.</p> <p style="margin-left: 20px;">d. Identify native plant species based on their</p>
<p><input checked="" type="checkbox"/> Progressive and Final Rehabilitation Monitoring Study</p>	
<p><input checked="" type="checkbox"/> Geology and Water Resources Assessment Report, Including Karst and Hazard Lands</p>	
<p><input checked="" type="checkbox"/> Adaptive Environmental Management and Protection Plan (AMP)</p>	
<p><input type="checkbox"/> Other:</p>	

	<p>coefficient of conservatism to help determine potential impacts based on the tolerances of disturbance.</p> <ul style="list-style-type: none"> <li>e. Incorporate additional surveys to determine if significant wildlife habitat (SWH) is present in accordance with the 2015 SWH Ecoregion Criteria Schedules. Include a screening table to indicate if there are candidate habitats present and how these habitats will be confirmed.</li> <li>f. Include the identification of the connections and linkages between Regions NH features, surface water and groundwater resources, as per Halton Region Aggregate Resource Manual.</li> <li>g. Recommend correspondence with the MECP regarding Endangered or Threatened species to ensure adequate surveys have been completed and effort is supported.</li> <li>h. Confirm adequate surveys are undertaken (i.e. SWH, SAR) to determine the appropriate buffer width to maintain Significant Woodland ecological form and function and ensure no negative impact from proposed quarry extraction works.</li> <li>i. Undertake additional targeted turtle habitat surveys within suitable habitats following the accepted survey protocols within study area and adjacent lands. Incorporate amphibian egg mass surveys within suitable habitats both within study area and adjacent lands.</li> <li>j. Include how the identification of diversity and connectivity of the natural features within the study area and adjacent lands will be conducted, to ensure long-term ecological function can be maintained or enhanced where appropriate.</li> <li>k. Recommend correspondence with DFO regarding potential impacts on fish and fish habitat to determine survey extent and direction.</li> <li>l. Confirm the zone of influence to identify any potential impacts regarding drawdown for both ground and surface water implications and direct appropriate mitigation measures.</li> <li>m. Discuss how net gain will be achieved both short term and longer term within the study area and adjacent lands, as per Halton Region Aggregate Resource Manual.</li> <li>n. Discuss all potential cumulative impacts on natural environment within the NEP area and provide appropriate mitigation measures to ensure natural features ecological/hydrological functions are maintained. As stated within Halton Region Aggregate Resource Manual</li> </ul> <p><b>Progressive and Final Rehabilitation Monitoring Study TOR</b></p> <ul style="list-style-type: none"> <li>1. Considering additional surveys have been recommended to be included within the NETR, the</li> </ul>
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proposed rehabilitation plan and landforms may need to be modified to ensure they are appropriate to achieve overall net gain.

**Geology and Water Resources Assessment Report, Including Karst and Hazard Lands**

1. The ToFR should outline in greater detail the proposed methodology to evaluate changes in surface water drainage to the area's wetlands and outlet points.
2. The ToFR states ground water conditions will be compared to the existing approved interim extraction condition (for full extraction condition with mitigation) but does not outline what surface water conditions will be compared to. Conservation Halton staff will provide further comment on the baseline/point of reference for surface water conditions once we have had an opportunity to review the current 5-year AMP and other relevant background documents.
3. The ToFR should indicate the study will evaluate the potential requirements to adapt the existing water management system to maintain or enhance surface water conditions (in addition to groundwater conditions).
4. To ensure impacts on water resources and natural features relying on groundwater and surface water are not exacerbated during and post extraction, threshold for mitigation measures should account for potential impacts from the existing quarry operation.
5. The final rehabilitation plan must show that any natural features and water resources around the MQEE which require groundwater and/or surface water mitigation during extraction will function post extraction (feedback also applies to the Progressive and Final Rehabilitation Monitoring Study).
6. The report should provide methodologies used to evaluate any alterations in surface water drainage to help determine if there are any expected impacts on wetland as well as provide requirements to adapt, maintain or enhance existing wetlands.
7. The Geology and Water Resources Assessment Report should be more explicit with respect to proposed surface water analysis and potential mitigation. The report should provide methodologies used to evaluate any alterations in surface water drainage and how it informs any proposed mitigation.
8. Recommend that the baseline/point of reference for comparison of the surface water conditions to the Tributaries and wetlands be maintained as per the existing approved interim extraction condition (for full extraction condition with mitigation).
9. Based on the site plan, the subwatershed boundary overlaps the north east corner of the License Boundary. Recommend that the ToFR include methodology to confirm the subwatershed boundary and to evaluate if there are any changes in surface water drainage across

	<p>subwatershed line.</p> <p><b>Adaptive Environmental Management and Protection Plan (AMP)</b></p> <ol style="list-style-type: none"> <li>1. The expanded AMP (or another mechanism) should identify any additional financial securities required to ensure the public and agencies will not be put at financial risk and how they will be provided.</li> <li>2. The report should provide methodologies used to evaluate any surface water changes, to identify potential impacts on wetlands so that they can be mitigated appropriately.</li> <li>3. Ecological monitoring should be undertaken to ensure quarry expansion will not impact the NHS and to ensure mitigation measures and rehabilitation works are functioning as proposed.</li> </ol> <p><b>Fees</b></p> <p>Aggregate Extraction Technical Review: \$80,000 + HST = \$90,400          Niagara Escarpment Plan Amendment: \$16,482.30 + HST = \$18,625          = \$109,025 in 2020 (NOTE: fees should be confirmed using 2021 fee schedule)</p> <p><b>Copies</b></p> <ul style="list-style-type: none"> <li>• One Digital Copy on a Memory Stick</li> <li>• 5 hard copies of the natural environment report, water resources/hazard report, rehab and monitoring report, adaptive management report, and site plans.</li> <li>• 1 hard copy of all other reports</li> </ul>
<p><b>TOWN OF HALTON HILLS - Greg Macdonald ext 2979 <a href="mailto:gmacdonald@haltonhills.ca">gmacdonald@haltonhills.ca</a>,</b></p>	
<p><b>PLANS:</b></p>	<p><b>Planning:</b></p>
<p><input checked="" type="checkbox"/> ARA Site Plan</p>	<p>The portion of the subject lands proposed for extraction are designated as "Escarpment Rural Area" under the Town of Halton Hills Official Plan. The remainder of the subject</p>
<p><input checked="" type="checkbox"/> Survey Plan</p>	<p>lands not proposed for extraction (some of which though may be covered by the quarry license limits) are designated as "Escarpment Natural Area" and Greenlands A.</p>
<p><b>REPORTS:</b></p>	<p>Section B4 of the Halton Hills Official Plan contains the policy frameworks for lands within the Niagara Escarpment Plan Area; more specifically, Policy B.4.2.3 pertains to the Escarpment Rural Area designation. One of the objectives of this designation (B4.2.3.1(d)) is to provide for designation of new Mineral Resource Extraction Areas which can be accommodated in accordance with the policies of this Plan and by amendment to the Niagara Escarpment Plan, the Region of Halton Official Plan and the Town's Plan.</p>
<p><input checked="" type="checkbox"/> Cultural Heritage Resource Assessment</p>	<p>Mineral Resource Extraction is not a permitted use within the Escarpment Rural Area designation. Therefore, an Official Plan Amendment is required in order to change the designation to "Mineral Resource Extraction Area".</p>
<p><input checked="" type="checkbox"/> Transportation Impact Study</p>	
<p><input checked="" type="checkbox"/> Noise Impact Study</p>	
<p><input checked="" type="checkbox"/> Planning Justification Report</p>	
<p><input checked="" type="checkbox"/> Public Consultation Strategy</p>	
<p><b>OTHER DOCUMENTS:</b></p>	
<p><input checked="" type="checkbox"/> USB with a set of all drawings to scale and reports in PDF format</p>	
<p><input checked="" type="checkbox"/> Other:</p>	
<ul style="list-style-type: none"> <li>• Haul Route Agreement</li> </ul>	
<ul style="list-style-type: none"> <li>• Draft Official Plan Amendment</li> </ul>	

Section E.6 of the Halton Hills Official Plan contains the policies applicable to Mineral Resource Extraction Areas. The policy framework includes a number of objectives (Policy E6.1) pertaining to ensuring that extraction activities are done in a proper, sustainable manner. The designation only applies to licensed operations under the Aggregate Resources Act (Policy E6.2). Policy E.6.4.3 sets out the policies that must be considered when evaluating new mineral aggregate operations or expansions to existing operations. The locational criteria (Policy E6.4.3.2) do note that it is the policy of this Plan to direct new or expanded mineral aggregate operations to locate in the Escarpment Rural Area.

Policy E6.4.3.4 contain the application requirements. The range of information and reports required for a complete application are consistent with those identified in Halton Region's Aggregate Resources Reference Manual.

The primary Criteria for Approval for the proposal is contained within Policy E6.4.4. This policy notes that the applicant shall demonstrate that water features shall be protected, improved or restored; that the quantity of water available for other uses and base flow is protected, improved or restored; that there is no negative impact on significant natural heritage features; that as much of the site as possible is rehabilitated; and, that other environmental and social impacts are minimized.

**Engineering:**

Halton Hills Engineering will primarily be reviewing storm water management from the perspective of where Dufferin may propose to redirect flows and will be reviewing the noise and vibration, dust mitigation, and blasting reports.

A license agreement may be required for any proposed crossings of open and/or closed road allowances. It may be that existing crossings that are lacking this license would be corrected at this time. This is subject to confirmation of who has jurisdiction of the road allowances (Milton and/or Halton Hills).

**Recreation and Parks**

Halton Hills Recreation & Parks will be reviewing reports pertaining to quarry rehabilitation and post-excavation uses in order to encourage environmental restoration, to explore future recreational opportunities including trails.

Subject to comments from the NEC, Recreation and Parks also have interest in reviewing the Visual Impact Assessment.

**Submission Requirement Details:**

*Planning Justification Report:* must contain an analysis of the above noted policy framework from the Town of Halton

Hills Official Plan.

*Cultural Heritage Resource Assessment:* this report shall build on the heritage inventory work completed by Heritage Halton Hills and the Town's Heritage Register. It will review and inventory heritage resources in the area within Halton Hills, identify potential cultural heritage resources, and will develop a strategy to conserve those resources where appropriate in accordance with Section F5 of the Official Plan.

*Transportation Impact Study:* must include the following Halton Hills specific analysis:

- Review of the issue of heavy vehicles travelling on 5 Side Road from Milton quarry to Brampton and what mitigation measures can be implemented to avoid this.
- Review of ongoing queuing issues on Dublin Line and 5 Side Road during the A.M. quarry peak time
- Mitigation measures to reduce illegal parking on 5 Side Road
- Evaluation of existing and/or proposed haul routes for the existing and future road network (i.e., Hwy 401/Tremaine interchange)
- Operational issues (i.e., dirt tracked on Dublin Line and noise issues)
- Dublin Line and Main Access - operational review (i.e., collisions, sightlines).

It is requested that a Terms of Reference (ToR) be submitted to the Town of Halton Hills for review prior to initiating the TIS.

A Truck Haul Route Agreement will also be sought that identifies current hauling operations and the future proposed hauling operations.

**Fees:**

Please note that the Town has adopted new Planning & Development Fees. The new fees can be found on the Town's website: <https://www.haltonhills.ca/userfees/>. The fees noted below will be for 2021. Should the application be submitted in 2020 please contact the Planning Department for the 2020 fees.

The fee for the Official Plan Amendment will be calculated as follows:

- Base Fee + Variable Fee for non-residential hectare.
- The variable fee is calculated using the number of hectares contained within the licensed area, NOT the extraction area or the total property size.
- The license boundary on the ARA Site Plan is 29.9 ha. Should these limits change as of the time of submission the variable fee would be different.





	<p>Based on a license area of 29.9 ha, the 2021 fee is expected to be:</p> <ul style="list-style-type: none"> <li>• Base Fee (\$23,769) + Variable Fee (\$57,663) = Total Fee (\$81,432.00)</li> </ul> <p>Additionally, the Town will require the following fee to review the MNRF License/Permit application - \$5,733.00</p> <p>Please contact the Planning Department prior to submission to confirm the change should the license limits changed.</p>
<p><b>TOWN OF MILTON - Mollie Kuchma – <a href="mailto:Mollie.Kuchma@milton.ca">Mollie.Kuchma@milton.ca</a></b></p>	
<p><b>REPORTS:</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Transportation Impact Study</li> <li><input checked="" type="checkbox"/> Water Resources Assessment: Hydrogeology and Hydrology</li> <li><input checked="" type="checkbox"/> Natural Resources Assessment/Environmental Impact Assessment reviewing the Natural Heritage System, Woodlands, Watercourses, etc.</li> <li><input checked="" type="checkbox"/> Noise Impact Study</li> <li><input checked="" type="checkbox"/> Blasting Impact Study</li> <li><input checked="" type="checkbox"/> Air Quality Assessment</li> <li><input checked="" type="checkbox"/> Cultural Resources Impact Assessment</li> <li><input checked="" type="checkbox"/> Adaptive Environmental Management Plan</li> <li><input checked="" type="checkbox"/> Rehabilitation and Monitoring Plan</li> <li><input checked="" type="checkbox"/> Aggregate Resources Act Site Plans and Notes</li> <li><input checked="" type="checkbox"/> Visual Impact Assessment</li> <li><input checked="" type="checkbox"/> Planning Justification Report</li> <li><input checked="" type="checkbox"/> Archaeological Assessment</li> <li><input checked="" type="checkbox"/> Financial Impact Assessment</li> </ul>	<p>A portion of the existing Dufferin Aggregates Milton Quarry is located within the municipal boundaries of the Town of Milton. It is noted that the proposed extension is however located wholly within the Municipal boundaries of the Town of Halton Hills. The Town of Milton will participate in the review of the proposed applications as a commenting agency. We will be monitoring the potential for impacts from the proposed quarry extension on Milton residents within close proximity to the site, as well as matters of interest to the Town of Milton including but not limited to impacts to roads under the Town's jurisdiction and rural private wells. The Town appreciates the opportunity to comment on and review the proposed applications and provide the following comments for your consideration.</p> <p>The Town requests that the following studies and documents be submitted as part of a complete application:</p> <ul style="list-style-type: none"> <li>• Transportation Impact Study</li> <li>• Water Resources Assessment: Hydrogeology and Hydrology</li> <li>• Natural Resources Assessment/Environmental Impact Assessment reviewing the Natural Heritage System, Woodlands, Watercourses, etc.</li> <li>• Noise Impact Study</li> <li>• Blasting Impact Study</li> <li>• Air Quality Assessment</li> <li>• Cultural Resources Impact Assessment</li> <li>• Adaptive Environmental Management Plan</li> <li>• Rehabilitation and Monitoring Plan</li> <li>• Aggregate Resources Act Site Plans and Notes</li> <li>• Visual Impact Assessment</li> <li>• Planning Justification Report</li> <li>• Archaeological Assessment</li> <li>• Financial Impact Assessment</li> </ul> <p>A Transportation Impact Study (TIS) is required to be submitted and reviewed by the Town. A Terms of Reference (TOR) is required and should be based on the guidelines available from Halton Region. The Terms of Reference shall be submitted to the Town for review and comment prior to undertaking the study. Please clarify and articulate where the proposed haul route is located both</p>



internal and external to the site, how Dufferin regulates the operators leaving the quarry and provide a copy of the existing haul route agreement with the Town of Halton Hills and/or the Ministry of Transportation, should they exist. Consideration should be given to adjusting the proposed haul route once the proposed Tremaine Road interchange with the 401 is constructed and operational, and any proposed use of this interchange once completed, should be identified and discussed in the TIS.

The following impacts of the proposed quarry extension, in particular, are of interest to the Town of Milton and will be reviewed accordingly:

- Noise, blasting and air quality impacts to existing adjacent Milton residents.
- Current groundwater and surface water flows and how they may impact Milton Residents, the Milton water supply at Kelso and natural heritage features and functions in the area.
- The sequence of extraction as it relates to the existing quarry operations and timelines for a continuous and progressive rehabilitation prior to any new extraction taking place through an additional new Licence.
- We understand that there may be long term environmental management measures currently in place for perpetual pumping to maintain water flows in perpetuity. Please provide more detail on this, how it is working, and that the appropriate protections are in place to ensure Dufferin is capable of maintaining these systems in perpetuity such that the Town is not negatively impacted over time.

**Town of Milton Review Fees:**

- Regional Official Plan Amendment: \$19,589.00
- MOE/MNRF Permit Applications (Bordering Municipality): \$22,988.00
- NEP Plan Amendment: \$0.00
- Total: \$42,577.00

The Town will review all applications submitted through the Region, Niagara Escarpment Commission and the Town of Halton Hills. Please note all submission documents must be AODA compliant.

Please further note that all submission documents should be available on the project website, in AODA compliant form, with the ability to download all documents, not just review in webpage form. Should you have any questions, please do not hesitate to contact:

Mollie Kuchma, MSc, MPA, MCIP, RPP  
Planner, Development Review

[Mollie.Kuchma@milton.ca](mailto:Mollie.Kuchma@milton.ca)

# Tab 20

**From:** Ellen Ferris

**Sent:** March 2, 2021 9:29 AM

**To:** Nethery, Joe <Joe.Nethery@halton.ca>; Gena.Ali@halton.ca; abuset@haltonhills.ca; lisa.grbinicek@ontario.ca; Janice.Hogg@halton.ca; kmcCormack@hrca.on.ca; Mollie.Kuchma@milton.ca; christian.lupis@milton.ca; gmacdonald@haltonhills.ca; lsmith@hrca.on.ca; Stirling.Todd@milton.ca

**Cc:** Nawfal Kammah <NKammah@tmig.ca>; Michael Dowdall <MDowdall@tmig.ca>; Brian Zeman <bzeman@mhbcplan.com>; 'Mitchell, Kevin (CRH Canada Group Inc.)' <kevin.mitchell@ca.crh.com>

**Subject:** RE: Final Notes from your November 12, 2020, Pre-consultation meeting – Milton Quarry

Good Morning All,

As identified through the pre-consultation notes for the proposed Milton Quarry East Extension (MQEE), please find attached the Terms of Reference for the Traffic Impact Study prepared by The Municipal Infrastructure Group Ltd. for review.

The Terms of Reference for the Agricultural Impact Assessment, as well as the updated Terms of References and responses for the Adaptive Amendment Plan, Natural Environment, Water Resources and Karst work will be provided shortly.

Should there be any questions, please do not hesitate to get in touch.

Regards,

**ELLEN FERRIS**, BSc., MSc. | Planner

*I am currently working remotely and it is best to reach me at [eferris@mhbcplan.com](mailto:eferris@mhbcplan.com) or (416) 988-5227.*

**MHBC** Planning, Urban Design & Landscape Architecture

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March 1, 2021

PROJECT NUMBER 10108

CRH Canada Group Inc.

ATTN: Kevin Mitchell, Director Property, Planning & Approvals

2300 Steeles Avenue West, 4th Floor

Concord, ON

L4K 5X6

Dear Mr. Mitchell,

**Re: Proposed Milton Quarry Expansion Traffic Impact Study – Terms of Reference**

The Municipal Infrastructure Group Ltd., a T.Y. Lin International Company (TMIG) has been retained to complete a Traffic Impact Study (TIS) for the proposed expansion of the Dufferin Aggregates Quarry, located in the Town of Milton. The expansion, consisting of 16 ha of land, is located on the western portion of the site and falls within the Town of Halton Hills. This expansion refers only to the extraction area, as the production capacity and access to the subject lands are proposed to remain as under existing conditions. We understand that the existing Milton Quarry has an unlimited annual extraction license, which we assume would incorporate the proposed expansion area. Please find below a detailed Terms of Reference describing our proposed work plan for your review and input.

1. Study Periods

TMIG proposes to assess traffic operations under the weekday AM and PM peak hours of the roadway to quantify the impacts of the expansion on the boundary road network.

2. Study Intersections

As part of this TIS, TMIG proposes to assess the existing haul route under existing conditions consisting of the following intersections:

- Dublin Line at James Snow Parkway (roundabout);
- Regional Road 25 at James Snow Parkway (signalized);
- Regional Road 25 at Highway 401 WB Off-Ramp (signalized); and
- Regional Road 25 at Highway 401 EB Off-Ramp (signalized).

It is TMIG's understanding that the quarry operations are not projected to change following the expansion. As such under future conditions, as the Tremaine Road realignment and new interchange to the Highway 401 are planned to be completed by 2023, TMIG proposes to assess a modified haul route that would include the study intersections detailed above plus the following:

- New south leg (New Tremaine Road) at Dublin Line and James Snow Parkway (roundabout); and
- The new intersections of New Tremaine Road at the Highway 401 WB Off-Ramp & EB Off-Ramp (signalized).

### 3. Traffic Data

Due to the on-going Covid-19 pandemic, traffic patterns are not normalized, and the completion of up-to-date survey data would not be deemed applicable for use in traffic operations review. Accordingly, TMIG proposes to acquire historical traffic data at the existing study intersections listed above from the municipalities, along with Average Annual Daily Traffic Data (AADT) along the study roadways.

The AADT is proposed to be used to derive annual historical growth rates along the study roadways to be applied to the historical traffic volumes in order to derive 2021 existing traffic volumes.

For the interchange intersections at Regional Road 25, TMIG proposes to acquire various historical TMC surveys to derive an average annual growth for the ramps should AADT not be available. Should historical TMC data sets not be available, TMIG proposes to apply the AADT derived for Regional Road 25 to the Highway 401 ramps as applicable.

### 4. Conservative Baseline Traffic Volumes

The truck haulage to/from the quarry is not projected to change under future conditions. However, in order to derive a conservative analysis, TMIG proposes to remove the surveyed haulage volumes (based on the historical traffic data) from the derived 2021 volumes and replace them with conservative haulage volumes derived based on the operations of the quarry as detailed below.

TMIG proposes to derive trip generation rates for the development based on standard 'first principles' approach (applying a Passenger Car Equivalent (PCE)) and the existing Quarry operations. As part of this exercise, TMIG will take into consideration the existing license for the Quarry, haulage time and days, extraction activities but also any internal haulage that might 'cross' any public roadway (as it would impact the boundary road network), material delivery to the quarry for processing/recycling and any regular passenger vehicle trips (e.g. employee trips). This information will be confirmed with the project team at the start of the study.

- As the Quarry has an unlimited extraction license, TMIG will consider the highest historical truck movements in and out of the site as part of the calculations for trip generation. TMIG will use historical data for the above operations characteristics and derive an appropriate trip generation based on peak activity to analyze a worst case scenario.

Per the above TMIG will derive a conservative trip generation rate to estimate the most conservative haulage volume for the quarry. These volumes will be added into the derived 2021 existing traffic volumes, from which we will subtract the haulage volumes surveyed on the day of the traffic counts, in order to derive conservative 2021 baseline traffic volumes. This ensures that the review of existing conditions (and subsequent future conditions) is the most conservative analysis with regards to the haulage volume.

### 5. Future Conditions

TMIG proposes a 5-year study horizon to 2026 to assess the impact of the proposed expansion.

As per the study horizon year, TMIG asks that the Region and Towns confirm the following:

- All planned roadways improvements to be implemented within the study area by 2026
- All background developments to be included as part of future conditions

The growth rates used to derive existing traffic volumes are proposed to be used to derive the baseline traffic growth to future conditions (to which we will add background development traffic). TMIG will consider truck rerouting as part of the new haulage route reviewed under future conditions.

## 6. Traffic Data Model Alternative:

In the absence of reliable traffic data and as an alternative to Tasks 3 and 5 above, TMIG proposes preparing a baseline future traffic model building upon previous TIS reports prepared for other developments within the study area. Specifically, TMIG suggests utilizing traffic data analyzed as part of the TIS prepared for the 'Emery' Milton Business Park located on the southwest corner of Dublin Line/James Snow Parkway at 5 Sideroad (roundabout). The 'Emery' TIS includes 2021 and 2026 future total traffic volumes at the proposed study intersections. TMIG will apply the same methodology detailed in Task 4 in order to substitute the haulage volume included in the 'Emery' TIS forecast to include the most conservative haulage volumes as per the Quarry operations. Following the substitution, the future total traffic volumes from the report would be used as part of the traffic operations review.

## 7. Trip Distribution and Assignment

The Trip Distribution and assignment for the haulage volume substitution and rerouting to the modified route under future conditions will be based on input from the project team.

## 8. Study Parameters

As part of this study, TMIG will assess traffic operations for the following conditions:

- 2021 Conservative Existing Conditions – which will include a conservative review of the haulage along the existing truck route
- 2026 Future Conditions – which will include the same conservative haulage (as it is not projected to change based on the proposed expansion) along the future truck route

TMIG will complete the traffic operations review using Synchro 10.0 and will complete a review of the projected queues at the turning movements impacted by the truck routes.

As part of the above noted methodology, TMIG also confirmed following in accordance with the JART comments provided for the proposed development:

- TMIG has confirmed with the project team that there are limited trucks registered as travelling from Milton to Brampton along 5 Sideroad. TMIG will consider mitigation measures to prevent this occurrence as applicable.
- TMIG will investigate the queuing issue on Dublin Line and 5 Sideroad during the AM quarry peak time. Based on correspondence with the project team we understand that these issues are very rare (approximately once per year) but do create operational constraint when they occur. As part of the TIS TMIG will derive remedial measures to prevent the queueing as applicable.
- Based on correspondence with the project team, TMIG understands that illegal parking does occur along 5 Sideroad on few instances throughout the year. It should be noted that queuing along the roadway has significantly reduced since the opening of the roundabout and the transition of the truck route to James Snow Parkway. However, Dufferin Aggregates is aware of this issue and does alert the applicable authorities to come and patrol the area when it occurs. Additionally, Dufferin Aggregates is in communication with trucking companies/truckers to prevent this illegal parking occurrence. As part of the study TMIG will detail all measures undertaken by Dufferin Aggregate to resolve the issue, which are deemed adequate. Additional measures will be recommended as part of the study as applicable.
- In addition to the traffic operations review, TMIG will complete a review of the truck site access design to confirm that all applicable sightline requirements and intersection design standards are met.

We hope that the above provided a detailed review of our proposed study methodology. We look forward the municipalities' review and feedback, as well as applicable information that we will require from them (i.e. historical traffic data, AADT data, planned roadway improvements and background developments).

Should you have any questions, please do not hesitate to contact us.

Thank you,

**THE MUNICIPAL INFRASTRUCTURE GROUP LTD.**  
**A T.Y. LIN INTERNATIONAL COMPANY**



Nawfal Kammah, B.Eng., P.Eng.

Project Manager

[nkammah@tmig.ca](mailto:nkammah@tmig.ca)



Michael Dowdall, C.E.T., MITE

Team Lead

[mdowdall@tmig.ca](mailto:mdowdall@tmig.ca)



**From:** Brian Zeman <bzeman@mhbcplan.com>

**Sent:** March 2, 2021 11:14 AM

**To:** Ellen Ferris <eferris@mhbcplan.com>; Nethery, Joe <Joe.Nethery@halton.ca>; Gena.Ali@halton.ca; abuset@haltonhills.ca; lisa.grbinicek@ontario.ca; Janice.Hogg@halton.ca; kmcCormack@hrca.on.ca; Mollie.Kuchma@milton.ca; christian.lupis@milton.ca; gmacdonald@haltonhills.ca; lsmith@hrca.on.ca; Stirling.Todd@milton.ca

**Cc:** 'Mitchell, Kevin (CRH Canada Group Inc.)' <kevin.mitchell@ca.crh.com>; dhodgson@dbhsoilservices.ca

**Subject:** RE: Final Notes from your November 12, 2020, Pre-consultation meeting – Milton Quarry

Good morning

Further to Ellen's email, attached are the Tof R for the AIA. To recall, the subject lands are outside of a Prime Agricultural Area, however the Region and NEC requested an Agricultural Impact Assessment be completed. The Region and NEC said they would confirm the scope of the AIA subject to receipt of the T of R. Lisa / Joe please let us know. Unless we hear otherwise Dave Hodgson will be preparing the AIA in the context of the attached T of R.

Regards,

**BRIAN ZEMAN**, BES, MCIP, RPP | President

**MHBC** Planning, Urban Design & Landscape Architecture

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**Via email**

Mr. Brian Zeman  
President  
MHBC Planning, Urban Design & Landscape Architecture  
113 Collier Street  
Barrie, ON  
L4M 1H2

March 5, 2021

Dear Mr. Zeman:

**Re: Agricultural Impact Assessment (AIA) Study  
Terms of Reference (ToR)  
CRH – Milton Quarry Expansion East  
Part Lots 11 & 12, Concession 1  
Town of Halton Hills (formerly Esquesing)  
Regional Municipality of Halton**

Further to Region of Halton and the Niagara Escarpment Commission request for a Terms of Reference (ToR)/work plan for the Agricultural Impact Assessment (AIA) for the above-mentioned lands, I provide the following.

A review was completed to determine the existence and use of Agricultural Impact Assessment Guidelines in Ontario. This review identified that the Region of Halton has created a document titled "Agricultural Impact Assessment Guidelines, October 1985", and has updated those guidelines with a newer version from June 2014. The Region of Halton has specific standards and guidelines for completing Agricultural Impact Assessments (AIA) within the boundaries of the Region of Halton. The review of AIA guidelines also revealed that the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) had released draft Agricultural Impact Assessment guidelines in a document titled "Draft Agricultural Impact Assessment (AIA) Guidance Document, March 2018". This document is considered as "Draft for Discussion Purposes" and does not have status. Recent discussions with staff from OMAFRA have indicated that the release of the final version of their Agricultural Impact Assessment Guidelines document is imminent, with the document to be available to the public in early 2021.

The above-mentioned lands are a single parcel of land, roughly 'L' shaped, with one long side abutting an unopened road allowance on the west side. These lands are also bounded by the existing CRH Milton Quarry on the north, west (past the unopened road allowance) and to the south. The eastern portion of these lands abuts woodlands and the Niagara Escarpment Area. These lands are designated as Niagara Escarpment Rural Area and Niagara Escarpment Natural Area in the Niagara Escarpment Plan mapping. These lands are designated as Agricultural Area on Map 1 – Regional Structure in the Region of Halton Official Plan (June 19, 2018), and as Agricultural System outside Prime Agricultural Areas.

For the purposes of this AIA, these above-mentioned lands will be referred to as the Study Area. A Secondary Study Area (1.0 km) around the Study Area, will be characterized as part of this AIA. The



1.0 km Secondary Study Area is in reference to the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) Draft Agricultural Impact Assessment (AIA Guidance Document (March 2018) whereby the Secondary Study Area should be justified by “taking into account the potential impacts of the development, as well as the sensitivity of the agricultural lands and farm operations in the area”. With this in mind, the Study Area lands are surrounded by existing quarry lands on three sides, with the brow of the escarpment to the east. An ongoing water well monitoring system and blast monitoring system are in place for the existing quarry lands. The proposed expansion will be surrounded by the existing quarry lands on three sides and will be farther from those point receptor monitoring stations.

Clearly defined and organized environmental practices are necessary for the conservation of land and resources. The long-term protection of quality agricultural lands is a priority of the Province of Ontario and has been addressed in the *Provincial Policy Statement (2020)*. Further, in an effort to protect agricultural lands, the Province of Ontario has adopted policy and guidelines to provide a framework for managing growth. These four provincial land use plans: *Greenbelt Plan (2017)*; *the Oak Ridges Moraine Conservation Plan (2017)*; *the Niagara Escarpment Plan (2017)*; and *the Growth Plan for the Greater Golden Horseshoe (GGH) (2019)* support the long term protection of farmland. The four provincial land use plans have policy plans that require Agricultural Impact Assessments (AIA) in the GGH. The Ontario Ministry of Agriculture, Food and Rural Affairs has produced a document that identifies the requirements of Agricultural Impact Assessments. This document is titled “**Draft Agricultural Impact Assessment (AIA) Guidance Document (March 2018).**”

With respect to the four land use plans, the Study Area lands are located within the Growth Plan for the Greater Golden Horseshoe (2019) area, the Niagara Escarpment Plan (2017) area, and the Greenbelt Plan area mapping.

With further respect to the Provincial policy, the Ontario Ministry of Agriculture, Food and Rural Affairs has a Minimum Distance Separation guideline (*The Minimum Distance Separation (MDS) Document: Formulae and Guidelines for Livestock Facility and Anaerobic Digester Odour Setbacks, Publication 853, (2016)*) that must be addressed as well. It should be noted that MDS Guideline #3 indicates that MDS I calculations are not required for the “extraction of minerals, petroleum resources and mineral aggregate resources”. Therefore MDS I calculations will not be completed as part of this AIA.

### **The Provincial Policy Statement (2020)**

The Provincial Policy Statement (2020) was enacted to document the Ontario Provincial Governments development and land use planning strategies. The Provincial Policy Statement provides the policy foundation for regulating the development and use of land. Agricultural policies are addressed within Section 2.3 of the Provincial Policy Statement. It is noted that the Study Area is not within a Prime Agricultural designation, however, even within Prime Agricultural areas Planning Authorities may permit non-agricultural uses including the extraction of mineral aggregate resources.

Section 2.3.1 of the PPS (2020) states that ‘Prime agricultural areas shall be protected for long term use for agriculture.’ Prime agricultural areas are defined as Specialty Crop Areas and Classes 1 – 3 lands with the order of preservation being Specialty Crop Areas, Classes 1, 2 and 3 in that order respectively, followed by any associated Class 4 through 7 lands within the prime agricultural area, in this order of priority.



Section 2.3.6 Non-Agricultural Uses in Prime Agricultural Areas indicates that  
“2.3.6.1 - Planning authorities may only permit non-agricultural uses in prime agricultural areas for:  
a) extraction of minerals, petroleum resources and mineral aggregate resources, in accordance with policies 2.4 and 2.5”

Further it is stated in Section 2.3.6.2 that:  
“Impacts from any new or expanding non-agricultural uses on surrounding agricultural operations and lands are to be mitigated to the extent feasible.”

The PPS 2020 also refers to an alternate site analysis (Section 2.3.6.1 b 4). The Study Area is not located within a designated Prime Agricultural Area; therefore, this AIA does not require an alternate site analysis. Further, the premise of this study is the proposed expansion of an existing quarry operation, therefore, an alternate site analysis is not required.

### **The Growth Plan for the Greater Golden Horseshoe (GPGGH, 2019)**

A review of the boundaries of the Growth Plan for the Greater Golden Horseshoe area was completed. It was determined that the Study Area lands are located within the Growth Plan for the Greater Golden Horseshoe Area. The Study Area lands are **NOT** in a Specialty Crop area as defined by the Growth Plan.

### **The Niagara Escarpment Plan (2017)**

A review of the Niagara Escarpment Plan (2017) identified the Study Area as comprising Niagara Escarpment Rural Area and Niagara Escarpment Natural Area.

The Niagara Escarpment Plan (2017) states in Section 1.2.2.  
“3c) the protection of *prime agricultural areas*, the capability of the land for *agricultural uses*, and its potential for rehabilitation for *agricultural uses*;”

Section Part 2.9 – Mineral Aggregate Resources 3F states “in *prime agricultural areas*, undertake an Agricultural Impact Assessment to determine how to avoid, minimize and mitigate impacts on agricultural lands and operations”.

It is understood that the proposed extraction will result in a ponded area, with no opportunity to conduct agricultural rehabilitation on those areas. The remaining portions of the Study Area will remain in woodlands and wetland condition, with no opportunity for agricultural rehabilitation.

### **Draft Agricultural Impact Assessment Guidance Document (OMAFRA, 2018)**

The OMAFRA Draft Agricultural Impact Assessment Guidance Document provides comment on the Background for the Technical AIA Guidelines in Section 1.5 – Components of an AIA where it is indicated that there are ten components:

1. An Introduction
2. Process - consultation
3. Study Area Identification
4. Study Methodology



5. Description of soils, land use etc.
6. Assessment of Impacts
7. Mitigation Measures
8. Net Impacts
9. Study Recommendations and Conclusion and
10. Appendices

AIA's may vary in detail depending on the *nature, scale and extent of the development*.

The new OMAFRA Draft Agricultural Impact Assessment Guidance Document was reviewed. It should be noted that the OMAFRA Draft document is for discussion purposes at this stage in its development. As such, any comment or guidelines listed within the document do not have official status but may be used for discussion.

### **The Region of Halton Agricultural Impact Assessment Guidelines**

The standard for completing AIA's at present, make use of the Region of Halton Agricultural Impact Assessment Guidelines. The new OMAFRA draft AIA document contains much of the Region of Halton AIA guidelines. As the Region of Halton guidelines are the standard, this AIA will be completed to the Region of Halton Standard, while keeping the OMAFRA draft AIA guidelines in reference as well. A quick review of the Region of Halton Guidelines is provided below.

These guidelines provide a description of the content necessary for an Agricultural Impact Assessment (AIA) within the Region of Halton. Specifically, that an AIA should provide:

- A description of the proposal
- Site land use features:
  - Type and intensity of existing agriculture
  - Land use (agricultural and non-agricultural)
  - Parcel size, shape and accessibility
  - Capital investment in agriculture (investment in land improvement, irrigation, facilities, drainage)
- Off-site land use features within 1 km
  - Type and intensity of existing agriculture
  - Land use (agricultural and non-agricultural)
  - Parcel size, shape and accessibility
  - Land tenure (ownership)
  - Capital investment in agriculture (investment in land improvement, irrigation, facilities, drainage)
- Assessment of the impacts on agriculture
  - Direct land lost
  - Potential effects of the proposal on existing and potential farming operations on the surrounding lands (eg: traffic, noise, odours, water)
  - Impact on the existing agricultural character of the general area
- Mitigative Measures
  - An indication of any measures that could be taken to reduce the impacts of the proposal

It should be noted that Land Tenure has been identified as a component of an AIA. It should be noted



that land tenure, or the assessment of land ownership is not related to any policy as stated in the Provincial, Regional or Municipal policy documents. Further, that in order to complete an assessment of land tenure would require a review of assessment data to determine the ownership (local/non-local) but has no way of addressing properties that may be owned by a numbered company. Numbered companies may relate to speculative buyer ownership or may relate to a farm that has been incorporated as a business. There is no way to assess this through a review of assessment data. Therefore, the assessment of land tenure will not be completed as a component of this AIA.

Further, the Halton Region Agricultural Impact Assessment Guidelines refer to the 'viability' of a farm. The term viability is not specifically defined within the Halton Region AIA Guidelines. A dictionary definition of viability is the ability to survive, which would ultimately be linked to financial performance. This AIA will not address the financial performance of the Study Lands but will provide comment as to the historical uses and it's ability to 'survive' in the present agricultural market conditions. Further, the Halton Region AIA Guidelines indicates that as part of the viability assessment, that considerations related to alternative agricultural operations that could occur in the future. As the proposed future use of these lands is ponded water, woodlands and wetlands, it is evident that there will be no future agricultural uses on these lands. Therefore, a consideration of alternative agricultural operations will not be addressed in this AIA.

## Data Sources

As a minimum, the following data sources will be used to carry out the AIA for the Study Area and Secondary Study Area:

- *Agricultural Code of Practice for Ontario*, (April 1973). OMAF and OMOE,
- 1:10000 scale Ministry of Natural Resources (MNR) Aerial Photography, 1978,
- 1:10000 scale Ontario Base Map (1983) Ministry of Natural Resources digital files,
- 1:50000 scale NTS Map 1984. Ministry of Energy Mines and Resources, Canada,
- 1:50000 scale NTS Map, Canada Land Inventory (CLI) Capability Mapping,
- *Agricultural Resource Inventory*, Ontario Ministry of Agriculture and Food, 1988,
- *Field Manual for Describing Soils in Ontario* (Ontario Centre for Soil Resource Evaluation, 1993)
- *Greenbelt Plan* (2017)
- *Growth Plan for the Greater Golden Horseshoe* (2019)
- *Guide to Agricultural Land Use*, Ontario Ministry of Agriculture, Food and Rural Affairs, March 1995,
- *Guidelines on Permitted Uses in Ontario's Prime Agricultural Areas, 2016 (Publication 851)*,
- *Ontario Ministry of Agriculture and Food - Land Use Systems Mapping*,
- *Ontario Ministry of Agriculture and Food - Artificial Drainage Mapping*,
- *Ontario Ministry of Agriculture, Food and Rural Affairs – Digital Soil Mapping 2020*,
- *Provincial Policy Statement, 2020*,
- Municipal Official Plans and Guidance Documents.
- The Minimum Distance Separation (MDS) Document – Formulae and Guidelines for Livestock Facility and Anaerobic Digester Odour Setbacks, Publication 853, 2016,
- *The Physiography of Southern Ontario 3<sup>rd</sup> Edition*, Ontario Geological Survey Special Volume 2, Ministry of Natural Resources, 1984,
- Zoning By-laws

An onsite soil survey and land capability study will be completed as part of this AIA. The soil survey



would be completed to determine the extent of the soil resources on the lands and to document the agricultural potential (Canada Land Inventory (CLI)) of the Study Area.

The Agricultural Impact Assessment (AIA) report will include a description of the methodologies, findings, mitigative measures and conclusions for the Study Area. Relevant mapping will be included and will illustrate the location of the Study Area lands and the Secondary Study Area in the regional context, identify the soils and Canada Land Inventory (from OMAFRA mapping), illustrate the location of any agricultural facilities (barns, residences, sheds, silos, grain bins), illustrate the land use, and the land fragmentation.

I trust this information is helpful. Should you have any questions or concerns, please feel free to contact me at your earliest convenience at 519-578-9226.

Sincerely

***DBH Soil Services Inc.***

A handwritten signature in black ink, appearing to read "D Hodgson", is written over a light grey rectangular background.

Dave Hodgson, P. Ag  
President

**From:** Brian Zeman <bzeman@mhbcplan.com>

**Sent:** March 27, 2021 9:49 AM

**To:** Nethery, Joe <Joe.Nethery@halton.ca>; Ellen Ferris <eferris@mhbcplan.com>; Ali, Gena <Gena.Ali@halton.ca>; abuset@haltonhills.ca; lisa.grbinicek@ontario.ca; Hogg, Janice <Janice.Hogg@halton.ca>; kmcCormack@hrca.on.ca; Mollie.Kuchma@milton.ca; christian.lupis@milton.ca; gmacdonald@haltonhills.ca; lsmith@hrca.on.ca; Stirling.Todd@milton.ca

**Cc:** 'Mitchell, Kevin (CRH Canada Group Inc.)' <kevin.mitchell@ca.crh.com>; Kyle Fritz <Kyle.Fritz@ghd.com>; Anthony Goodban (anthony.goodban@sympatico.ca) <anthony.goodban@sympatico.ca>; Richard Murphy <Richard.Murphy@ghd.com>; Nicholas.Fitzpatrick@ghd.com

**Subject:** RE: Final Notes from your November 12, 2020, Pre-consultation meeting – Milton Quarry

Good morning everyone

As per my email below please find GHD and GEC responses to JART's comments. As both consultants are continuing to work on their reports please let us know if there are any concerns based on the responses provided. If JART prefers a follow up meeting to review please let us know.

Regards,

**BRIAN ZEMAN**, BES, MCIP, RPP | President

**MHBC** Planning, Urban Design & Landscape Architecture

113 Collier Street | Barrie | ON | L4M 1H2 | T 705 728 0045 x 226 | F 705 728 2010 | C 705 627 9004 | [bzeman@mhbcplan.com](mailto:bzeman@mhbcplan.com)

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**From:** Brian Zeman

**Sent:** March 24, 2021 9:10 PM

**To:** Nethery, Joe <[Joe.Nethery@halton.ca](mailto:Joe.Nethery@halton.ca)>; Ellen Ferris <[eferris@mhbcplan.com](mailto:eferris@mhbcplan.com)>; Ali, Gena <[Gena.Ali@halton.ca](mailto:Gena.Ali@halton.ca)>; [abuset@haltonhills.ca](mailto:abuset@haltonhills.ca); [lisa.grbinicek@ontario.ca](mailto:lisa.grbinicek@ontario.ca); Hogg, Janice <[Janice.Hogg@halton.ca](mailto:Janice.Hogg@halton.ca)>; [kmcCormack@hrca.on.ca](mailto:kmcCormack@hrca.on.ca); [Mollie.Kuchma@milton.ca](mailto:Mollie.Kuchma@milton.ca); [christian.lupis@milton.ca](mailto:christian.lupis@milton.ca); [gmacdonald@haltonhills.ca](mailto:gmacdonald@haltonhills.ca); [lsmith@hrca.on.ca](mailto:lsmith@hrca.on.ca); [Stirling.Todd@milton.ca](mailto:Stirling.Todd@milton.ca)

**Cc:** 'Mitchell, Kevin (CRH Canada Group Inc.)' <[kevin.mitchell@ca.crh.com](mailto:kevin.mitchell@ca.crh.com)>; [dhodgson@dbhsoilsservices.ca](mailto:dhodgson@dbhsoilsservices.ca); Nawfal Kammah <[NKammah@tmig.ca](mailto:NKammah@tmig.ca)>; Michael Dowdall <[MDowdall@tmig.ca](mailto:MDowdall@tmig.ca)>

**Subject:** RE: Final Notes from your November 12, 2020, Pre-consultation meeting – Milton Quarry

Hi Joe

Thanks for the update. FYI – by end of this week / early next week we will also submit the responses related to Water Resources / Karst, Natural Environment and AMP, including the updated Terms of Reference.

Regards,

**BRIAN ZEMAN**, BES, MCIP, RPP | President

**MHBC** Planning, Urban Design & Landscape Architecture

113 Collier Street | Barrie | ON | L4M 1H2 | T 705 728 0045 x 226 | F 705 728 2010 | C 705 627 9004 | [bzeman@mhbcplan.com](mailto:bzeman@mhbcplan.com)

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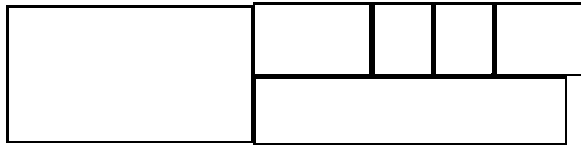
**From:** Nethery, Joe [<mailto:Joe.Nethery@halton.ca>]  
**Sent:** March 24, 2021 2:38 PM  
**To:** Brian Zeman <[bzeman@mhbcplan.com](mailto:bzeman@mhbcplan.com)>; Ellen Ferris <[eferris@mhbcplan.com](mailto:eferris@mhbcplan.com)>; Ali, Gena <[Gena.Ali@halton.ca](mailto:Gena.Ali@halton.ca)>; [abuset@haltonhills.ca](mailto:abuset@haltonhills.ca); [lisa.grbinicek@ontario.ca](mailto:lisa.grbinicek@ontario.ca); Hogg, Janice <[Janice.Hogg@halton.ca](mailto:Janice.Hogg@halton.ca)>; [kmcCormack@hrca.on.ca](mailto:kmcCormack@hrca.on.ca); [Mollie.Kuchma@milton.ca](mailto:Mollie.Kuchma@milton.ca); [christian.lupis@milton.ca](mailto:christian.lupis@milton.ca); [gmacdonald@haltonhills.ca](mailto:gmacdonald@haltonhills.ca); [lsmith@hrca.on.ca](mailto:lsmith@hrca.on.ca); [Stirling.Todd@milton.ca](mailto:Stirling.Todd@milton.ca)  
**Cc:** 'Mitchell, Kevin (CRH Canada Group Inc.)' <[kevin.mitchell@ca.crh.com](mailto:kevin.mitchell@ca.crh.com)>; [dhodgson@dbhsoilservices.ca](mailto:dhodgson@dbhsoilservices.ca); Nawfal Kammah <[NKammah@tmig.ca](mailto:NKammah@tmig.ca)>; Michael Dowdall <[MDowdall@tmig.ca](mailto:MDowdall@tmig.ca)>  
**Subject:** RE: Final Notes from your November 12, 2020, Pre-consultation meeting – Milton Quarry

Brian:

- We have an internal review meeting tomorrow on the AIA, in hopes of having some comments back by next week.
- TIS scoping remains in circulation over here. We'll update with a timeframe once we have that internal review in hand.

Joe

**Joe Nethery, MCIP, RPP**  
**Manager, Priority Development Projects**  
Planning Services  
Legislative & Planning Services  
**Halton Region**  
905-825-6000, ext. 3035 | 1-866-442-5866



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Goodban  
Ecological  
Consulting Inc.

March 26, 2021

Reference No. 010978

Mr. Kevin Mitchell  
Director Property, Planning and Approvals  
CRH Canada Group Inc.  
2300 Steeles Avenue West, 4<sup>th</sup> Floor  
Concord, ON  
L4K 5X6  
Email: kevin.mitchell@ca.crh.com

Dear Mr. Mitchell:

**Re: Response to JART Pre-Consultation Committee Comments  
Meeting of November 12, 2020  
Milton Quarry East Extension, Region of Halton**

GHD and Goodban Ecological Consulting Inc. (GEC) participated in a virtual meeting with the Joint Agency Review Team (JART) on November 12, 2020 to review the Terms of Reference for studies related to the proposed Milton Quarry East Extension application. Following the meeting, JART provided meeting notes on December 18, 2020, including requests for additional information or clarification. The JART notes specifically requested that the water resources consultant (GHD) and the natural environment consultant (GEC) prepare submittals in an integrated manner. Further, they requested written responses to the related comments and updated Terms of Reference (ToR) documents.

This cover letter provides an integrated response from GHD and GEC to these requests. Our response includes the following four attached documents:

- a) Comment and response table for JART notes pertaining directly to the water and natural environment matters
- b) Revised ToR for the Geology and Water Resources Assessment (GWRA)
- c) Revised ToR for the Natural Environment/Environmental Impact Assessment (NE/EIA)
- d) Revised ToR for the Adaptive Management Plan (AMP)

Note that the ToR documents are provided in both a clean format and a strikethrough format to facilitate identification of revisions.

Please do not hesitate to contact either of the undersigned if you have any further questions or comments regarding the Terms of Reference for the proposed Milton Quarry East Extension.



Sincerely,

GHD

J. Richard Murphy, M.A.Sc., P.Eng

JRM/we/12

Encl.

cc: Brian Zeman, MHBC Planning  
Kevin Mitchell, CRH

Goodban Ecological Consulting Inc. (GEC)

Anthony Goodban, B.Sc., M.E.S. (Pl.), MCIP, RPP

**GHD and Goodban Ecological Consulting Inc. (GEC) Integrated Response to Comments (March 26, 2021)**  
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**Milton Quarry (Part of Lot 12 Concession 1)**  
**ARN-2415070004279**

#	Comment	Response
	<p><b>Niagara Escarpment Commission</b></p> <p>Staff has identified the following characteristics of the subject lands, based on a desk-top exercise:</p> <ul style="list-style-type: none"> <li>• The subject lands are currently largely vacant lands, comprised of open field and pasture, formally used as hayfields</li> <li>• Key Natural Heritage Features are situated adjacent to the subject lands, including Significant Woodlands, Life Science Significant Area of Natural and Scientific Interest (Halton Forest North ANSI), Environmentally Sensitive Area (Hilton Falls Complex) and three (unevaluated) wetlands situated to the north, east and south.</li> <li>• The subject lands are identified as containing the regulated habitat of an endangered species under the Endangered Species Act (ESA).</li> </ul>	<ul style="list-style-type: none"> <li>• Can NEC staff please provide a figure that identifies the "...three (unevaluated) wetlands situated to the north, east and south."</li> </ul>
	<ul style="list-style-type: none"> <li>• The subject lands are contiguous with the existing Milton Quarry, bounded by the existing Milton Quarry East Cell to the north, the existing North Quarry to the west, and the existing Main Quarry at some distance to the southwest and south.</li> <li>• Niagara Escarpment Parks and Open Space System (NEPOSS) lands are situated immediately to the east (Tirion Tract Resource Management Area) and west of the subject lands (Cox Tract).</li> <li>• The Bruce Trail and Hilton-Falls Side Trail is situated in proximity (to the east) of the subject lands.</li> <li>• The lands are ranked as "Attractive" by the Landscape Evaluation Study (NEC, 1976)</li> <li>• The subject lands appear to be within a known karst area.</li> </ul>	
	<ul style="list-style-type: none"> <li>• There do not appear to be private residential lands or water supply wells within close proximity to the subject lands.</li> <li>• The subject lands are not considered to be prime agricultural area, although they have been identified as previously having been under agricultural production.</li> </ul>	

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#	Comment	Response
	<ul style="list-style-type: none"> <li>• There are known archaeological sites within proximity of the subject lands</li> </ul> <p>Based on the above preliminary desk-top analysis of the subject lands, the following Part 2 NEP (2017) objectives and policies must be considered and addressed in the applicable supporting planning and technical submissions:</p> <ul style="list-style-type: none"> <li>• Part 2.5 (Development Affecting Steep Slopes and Ravines)</li> <li>• Part 2.6 (Development Affecting Water Resources)</li> <li>• Part 2.7 (Development Affecting Natural Heritage)</li> </ul>	<ul style="list-style-type: none"> <li>• Can NEC staff please identify the areas of concern relating to "Steep Slopes and Ravines."</li> </ul>
	<ul style="list-style-type: none"> <li>• Part 2.8 (Agriculture)</li> <li>• Part 2.9 (Mineral Aggregate Resources)</li> <li>• Part 2.10 (Cultural Heritage)</li> <li>• Part 2.12 (Infrastructure)</li> <li>• Part 2.13 (Scenic Resources and Landform Conservation)</li> <li>• Part 2.11 Recreation (with respect to the proposed rehabilitation plans)</li> </ul>	
	<p><b>Natural Heritage Level 1 &amp; Level 2 Technical Reports and Environmental Impact Assessment (October 29, 2020):</b></p> <ul style="list-style-type: none"> <li>• A minor point of clarification is identified in Part 2.4 Niagara Escarpment Plan (pg.4), as follows: The Niagara Escarpment Plan was first approved in 1985 and was last amended in 2017.</li> <li>• NEP Policy Framework – the Natural Heritage Level 1 &amp; 2 Technical Study places an emphasis on the NEP policies of Part 2.7 Development Affecting Natural Heritage. Staff notes that Part 2.6 Development Affecting Water Resources must also be considered in all applicable technical studies.</li> </ul>	<ul style="list-style-type: none"> <li>• The Natural Environment Technical Report (NETR) Terms of Reference have been revised to reflect this point of clarification.</li> <li>• Section 2.4 of the Terms of Reference has been revised to note that the NETR must also consider NEP Section 2.6 (Development Affecting Water Resources).</li> </ul>

**GHD and Goodban Ecological Consulting Inc. (GEC) Integrated Response to Comments (March 26, 2021)**  
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#	Comment	Response
	<ul style="list-style-type: none"> <li>• The NH Levels 1 &amp; 2 studies refer to the comprehensive understanding of the area that already exists as a result of the previous approval of the Milton Quarry. While this background information will be useful to the application, the TOR should include a comprehensive characterization of the present-day baseline conditions. This includes sections respecting Landscape Setting, Physiography and surficial geology and soils, and topography and drainage.</li> <li>• With respect to the adjacent unevaluated wetlands, staff requests that additional (present-day) characterization of these wetlands be provided, including the delineation and evaluation of the wetland boundaries (specifically for the U1 wetland). This should inform buffer widths.</li> <li>• Cumulative Impacts of the existing and proposed developments on the escarpment environment should be addressed.</li> </ul>	<ul style="list-style-type: none"> <li>• The NETR Terms of Reference have been revised to note that a comprehensive characterization of the present-day existing conditions, including landscape setting, surficial geology, physiography, soils, drainage, vegetation communities and flora, and wildlife, will be provided.</li> <li>• The NETR will provide current, detailed characterizations of wetlands within the study area. The boundary of Wetland U1 will be staked in the field, surveyed in and reviewed with Conservation Halton staff. The NETR Terms of Reference have been revised to reflect this.</li> <li>• A cumulative effects assessment of the existing and proposed developments on the escarpment environment will be included in the NETR.</li> </ul>
	<ul style="list-style-type: none"> <li>• Additional detailed studies with respect to Significant Wildlife Habitat (SWH) should be identified, both on and adjacent to the subject lands, consistent with the Natural Heritage Reference Manual and SWH Ecoregion Criteria Schedules (2015).</li> </ul>	<ul style="list-style-type: none"> <li>• The ecological field survey program for the Milton Quarry East Extension was designed to provide the field data required to identify candidate Significant Wildlife Habitat (SWH). The primary resource for determining what qualifies as Significant Wildlife Habitat is the Significant Wildlife Habitat Technical Guide (SWHTG) prepared by OMNR (2000). OMNRF (2015) has also prepared Significant Wildlife Habitat Ecoregion Criteria Schedules (SWHECS) that may be used to assist in determining what constitutes Significant Wildlife Habitat. The Natural Heritage Reference Manual (NHRM) (OMNR 2010) states that the SWHECS are a resource that may be used to determine which features qualify as Significant Wildlife Habitat, but that the SWHTG <i>"is still the authoritative source for the identification and evaluation of Significant Wildlife Habitat"</i>. GEC will refer to all three sources</li> </ul>

**GHD and Goodban Ecological Consulting Inc. (GEC) Integrated Response to Comments (March 26, 2021)**  
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#	Comment	Response
		for the evaluation of Significant Wildlife Habitat in the NETR, as appropriate.
	<ul style="list-style-type: none"> <li>The NEP includes several relevant objectives and policies supporting a landscape systems approach. Considering the lands adjacent to the proposed aggregate operation include the sensitive Escarpment Natural Area which supports Significant Woodlands and ANSI, greater consideration is requested with respect to the assessment of the proposed expansion on landscape connectivity and wildlife corridors and the identification of any potential impacts to existing corridors as well as opportunities for enhancements through the Rehabilitation/Ecological Enhancement Plan.</li> </ul>	<ul style="list-style-type: none"> <li>The NETR will include an assessment of the Milton Quarry East Extension upon landscape connectivity and wildlife corridors, including the identification of enhancement opportunities through the Ecological Enhancement Plan (EEP) for lands that will not be extracted and the Rehabilitation Plan for lands that will be extracted. The Terms of Reference have been revised to this effect.</li> </ul>
	<ul style="list-style-type: none"> <li>A minimum 10m buffer to Significant Woodlands has been identified with the rationale that this is the same approach that was taken for the Acton Quarry expansion. Proposed buffers to key natural heritage features will be required to demonstrate how the feature and its functions will be maintained and where possible, enhanced. In some cases, it may be necessary for the width of buffers to be increased</li> <li>With respect to Species at Risk (SAR), a more comprehensive evaluation of the potential for SAR habitat (including additional surveys where appropriate), both on and adjacent to the subject lands is requested, or alternatively justification provided for the limits of the studies undertaken. Including but not limited to, the potential impacts to bats. Staff notes that Conservation Halton maintains data for SAR which should be consulted.</li> </ul>	<ul style="list-style-type: none"> <li>It should be noted that the proposed Significant Woodland buffers are, in general, greater than 10m in width. Where possible, the WMS watermain will be routed such that it is more than 30 m from the Significant Woodland boundary. The rationale for buffer widths and treatments will be provided in the NETR. The Terms of Reference have been revised to this effect. The aggregate resource should also be taken into consideration.</li> <li>GEC conducted a Species at Risk (SAR) screening exercise to identify the potential for SAR to occur within the study area. Current SAR data were obtained from the NHIC for the 1km squares within which the study area occurs. The ecological field survey program was designed to specifically address SAR concerns, based on the potential for certain SAR to occur in the area. The SAR preliminary screening and the follow-up detailed surveys (e.g., floristic surveys, minnow trapping for salamanders, breeding bird surveys, etc.) will be thoroughly documented in the NETR. Dufferin will actively engage with the Ministry of Environment, Conservation and Parks (MECP) with respect to Species at Risk (SAR). With regard to bats, GEC notes that recent</li> </ul>



**GHD and Goodban Ecological Consulting Inc. (GEC) Integrated Response to Comments (March 26, 2021)**  
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#	Comment	Response
		<p>guidance from MECP for SAR bats is to restrict tree-clearing activities to the period between November and March, when bats are not present or active. Trees are not a limiting factor for bats in southern Ontario, tree removals for the Milton Quarry East Extension are relatively limited, the Halton Forest covers approximately 35 km<sup>2</sup> and many trees will be planted as part of the Ecological Enhancement Plan (EEP) and Rehabilitation Plan . Certain bat species are Endangered in Ontario because they hibernate communally in caves and abandoned mine shafts, where they are susceptible to the fungal disease known as White Nose Syndrome. GEC did conduct acoustic surveys for bats in proximity to trees within the extraction footprint and the results of these surveys will be provided in the NETR. Please note that Dufferin has obtained relevant data from Conservation Halton's database.</p>
	<p><b>Geology and Water Resources Assessment (including Karst and Hazard Lands) and Adaptive Management Plan</b></p> <ul style="list-style-type: none"> <li>• The NEC defers in part to Conservation Halton and Halton Region with respect to technical considerations respecting Geology and Water Resources Assessment.</li> <li>• Consistent with the above noted comment regarding the Natural Heritage TOR, the TOR for the Water Resources Assessment does not include consideration of the NEP Part 2.6 Development Affecting Water Resources.</li> <li>• The report should provide details regarding the methodologies used to evaluate any alterations in surface water drainage to inform potential negative impacts on wetlands and required mitigation measures.</li> </ul>	<ul style="list-style-type: none"> <li>• Noted.</li> <li>• The Geology and Water Resources Assessment (GWRA) will address the water resources consideration relevant to the NEP Part 2.6. The ToR has been updated to clarify this point. The Planning Summary Report by MHBC will address the planning context relative to the specific plan requirements.</li> <li>• GWRA will document the methodologies relied upon for analysis of all potential negative impacts. The ToR has been updated to clarify this point.</li> </ul>

**GHD and Goodban Ecological Consulting Inc. (GEC) Integrated Response to Comments (March 26, 2021)**  
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#	Comment	Response
	<ul style="list-style-type: none"> <li>Regarding the requirement for pumping in perpetuity, the NEP Part 2.9. Mineral Aggregate Resources requires that in areas with below-water table extraction, mineral aggregate operations requiring perpetual water management after rehabilitation is complete should be avoided unless it can be demonstrated that such would support other public water management needs. The Water Resources Assessment and AMP/Rehabilitation Plan will be required to provide adequate justification for perpetual pumping.</li> </ul>	<ul style="list-style-type: none"> <li>The approved long-term plans for the Milton Quarry include an active water management system with at least seasonal pumping. This requirement and how it applies to the proposed MQEE will be addressed in the GWRA and Planning Summary Report.</li> </ul>
	<p><b>Progressive and Final Rehabilitation and Monitoring Study</b></p> <ul style="list-style-type: none"> <li>The analysis of the NEP objectives and provisions respecting rehabilitation and after use policies should include Part 2.8 Development Affecting Water Resources and Part 2.11 Recreation and Part 2.13 Scenic Resources and Landform Conservation.</li> <li>Consideration should be given to the development and implementation of a Tree Preservation Plan and Edge Management Plan as part of the comprehensive rehabilitation and enhancement plans.</li> </ul>	<ul style="list-style-type: none"> <li>Tree-removals for the proposed Milton Quarry East Extension are limited to a few small areas. The Significant Woodland will be provided with appropriate buffers than will be reforested. An Edge Management Plan and/or Tree Preservation Plan is not necessary. Routing of WMS components will avoid treed areas and specimen trees, to the extent feasible.</li> </ul>
	<p><b>General Comments</b></p> <ul style="list-style-type: none"> <li>Overall, greater integration between the disciplines subject of the technical studies and reports is required in order to provide for a comprehensive understanding of the potential impacts and proposed mitigation measures.</li> <li>The licensed area proposed is substantively larger than the area proposed for extraction, justification for the extent of the licensed area boundary will be required.</li> </ul>	<ul style="list-style-type: none"> <li>The technical studies teams are working in an integrated manner. In particular, the water and ecology teams are working closely together with joint field work programs for investigation and monitoring of water resources features and an integrated approach to impact assessment, mitigation planning, and the AMP.</li> <li>The Planning Summary Report will provide the rationale for the licence boundary. In general, the larger licensed area will cover most of the WMS footprint and the ecological enhancements that will be proposed to expand Significant Woodlands, improve</li> </ul>

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		connectivity and provide an overall benefit to Jefferson Salamander and Unisexual Ambystoma. The licence boundary will be fenced, which will serve to protect ecological enhancement areas from damage resulting from unauthorized access by hikers, ATV users and mountain-bikers. This is a common problem in the local area.
	<b>Halton Region</b>	
	<p><b>Comments</b></p> <ul style="list-style-type: none"> <li>• Assessment of the impact to the Cox Tract (Leased Lands to Dufferin) needs to be conducted, including protection, monitoring and mitigation measures. <ul style="list-style-type: none"> <li>- Based on Section 116.1c) additional scoping of the Terms of Reference for the Environmental Impact Assessment has been included in the Study Requirements section below. The submitted Terms of Reference for the Level 1 and 2 Natural Environment Technical Report (NETR) and Environmental Impact Assessment (EIS), "Dufferin Aggregates Milton Quarry East Extension", prepared by Goodban Ecological Consulting Inc. (GEC) and dated Oct. 29, 2020 shall be revised with a cover letter explaining how this additional scoping has been addressed.</li> </ul> </li> <li>• A portion of the potential Significant Woodlands to the north of the extension area has been removed as part of the current ARA licence approval. However, our comments on the Terms of Reference for the NETR/EIS below still stand that GEC must assess the remaining woodland features for significance per ROP policies and determine the appropriate buffers to the extraction area and water management system infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>• The portion of the Cox Tract that is presently leased to Dufferin was included in the ecological field survey program and discussion will be provided in the NETR on any protection, monitoring and mitigation measures.</li> <li>• GHD and GEC are jointly providing this integrated response table/matrix submitted under our joint cover letter, and a redline version of the NETR/EIS, GWRA, and AMP Addendum Terms of Reference documents which were updated to address the agency comments.</li> <li>• The NETR will include detailed discussion on Significant Woodlands, including their assessment per ROP policies and criteria, and provide the rationale for the various Significant Woodland buffers and their treatments.</li> </ul>

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	<ul style="list-style-type: none"> <li>Key Features of the Regional Natural Heritage System that are not mapped and may be present on the subject site are Significant Wildlife Habitat and Significant Habitat of Endangered and Threatened Species, which must also be addressed within the NETR/EIS (please see further comments below).</li> </ul>	<ul style="list-style-type: none"> <li>Every Natural Environment Technical Report (NETR) that is prepared to address ARA requirements must address Significant Wildlife Habitat and Habitat of Endangered and Threatened Species. These aspects will be thoroughly documented in the NETR/EIS.</li> </ul>
	<ul style="list-style-type: none"> <li>Agricultural Impact Assessment will be required, scoping to follow.</li> <li>Wellhead mapping in the ROP is being updated, Regional Source Water Protection staff have updated mapping.</li> </ul>	<ul style="list-style-type: none"> <li>The proposed MQEE studies will obtain and rely upon the updated Source Water Protection mapping.</li> </ul>
	<ul style="list-style-type: none"> <li>The site is located within a Significant Groundwater Recharge Area and within a Highly Vulnerable Aquifer. The Region will be looking to see how these matters are addressed.</li> <li>Data requests for mapping can be discussed, and a data sharing agreement will be required where data can be shared.</li> </ul>	<ul style="list-style-type: none"> <li>The GWRA will address these considerations.</li> <li>A data sharing agreement has been executed with Conservation Halton to obtain relevant mapping and data. Data exchange has occurred.</li> </ul>
	<p><b>Terms of Reference Comments:</b></p> <p><b>1) <u>Re: Terms of Reference for Geology and Water Resources (G&amp;WR) Assessment Report, Including Karst and Hazard Lands Consideration, Proposed Dufferin Aggregates Milton Quarry East Extension Region of Halton, Ontario, prepared by GHD, dated October 29, 2020:</u></b></p> <p>Dufferin's detailed (hydro)geologic work plans shall ensure that all items listed in Section 4.10 of HR's ROP related Aggregate Resource Reference Manual (Guideline) are considered during the course of the assessment, and that the following additional comments are taken into account:</p>	<ul style="list-style-type: none"> <li>The GWRA will consider these items from the Guideline.</li> </ul>
	<ul style="list-style-type: none"> <li>Results and analysis of pumping test(s) and other advanced testing (e.g., geophysical, packer, tracer, etc.) conducted at the proposed MQEE lands shall be described in detail in the G&amp;WR Assessment Report (i.e. in addition to any data consideration as part of a numerical model).</li> </ul>	<ul style="list-style-type: none"> <li>The GWRA will include comprehensive presentation of data and analysis from the new studies completed for the proposed MQEE as described in the ToR. Reliance will also be placed on information from past studies that provide relevant information such as pumping tests and packer tests conducted on the MQEE</li> </ul>

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		lands and other Milton Quarry lands. Past studies are available on-line for agency technical reviewers using the webDT portal and GHD can also directly provide these documents to individuals as needed. In the particular case referenced regarding the numerical model, a complete report of groundwater model construction, calibration, and predictive simulations along with underlying data will be provided as an appendix in the GWRA.
	<ul style="list-style-type: none"> <li>• Current status and relevance of the former (i.e., 1980s/1990s) monitoring stations, shown in the T of R maps, shall be clarified (i.e., which stations remain in existence?)</li> <li>• Any anticipated changes to groundwater divides/groundwater contribution zones (relative to on-site and off-site ecological features), would need to be presented in the assessment report.</li> </ul>	<ul style="list-style-type: none"> <li>• The GWRA will provide this information subject to access limitations.</li> <li>• Agreed that information will be provided regarding any changes to groundwater flow zones and the potential for impacts to water resources.</li> </ul>
	<ul style="list-style-type: none"> <li>• Despite the statement in the T of R that no additional water quality sampling is warranted for the MQEE lands, baseline water quality in the area shall be part of the assessment report.</li> </ul>	<ul style="list-style-type: none"> <li>• Pursuant to the Region's comment, baseline water quality data will be collected in early 2021 and incorporated into the GWRA. The ToR has been updated accordingly.</li> </ul>
	<ul style="list-style-type: none"> <li>• The anticipated site-specific water management system (WMS) components would need to be described according to their intended purpose and inter-relationship with the existing WMS components (i.e., water diversion routes and related infrastructure; water storage, treatment and testing; mitigation-related triggers; and methods for ensuring WMS effectiveness long-term). This information shall be displayed on maps and profiles in the assessment reports and AMP addendum document.</li> <li>• Contingencies concerning any unanticipated major karst features would need to be addressed as part the assessment reports and AMP-related implementation plans.</li> </ul>	<ul style="list-style-type: none"> <li>• This information will be included in the GWRA and AMP Addendum.</li> <li>• The karst assessment included in the GWRA and the AMP Addendum will include potential response measures and contingency measures that could be used to mitigate the effects of any unanticipated major karst features.</li> </ul>

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	<ul style="list-style-type: none"> <li>• Any post-rehabilitation mitigation measures, if required, would need to be defined in the assessment report and AMP, including whether pumping in perpetuity would be required for mitigation purposes.</li> <li>• Relevant baseline monitoring stations, applicable to the MQEE area, would need to be established to serve as a reference in the long-term assessment of water-dependent features in this area.</li> <li>• All relevant results arising from (hydro) geologic and natural environment assessments would need to be interlinked as part of the AMP addendum.</li> </ul>	<ul style="list-style-type: none"> <li>• The approved long-term plans for the Milton Quarry include an active water management system with at least seasonal pumping. This requirement and how it applies to the proposed MQEE will be addressed in the GWRA and Planning Summary Report. <ul style="list-style-type: none"> <li>• This information will be included in the GWRA and/or AMP Addendum.</li> <li>• The water and natural environment studies and mitigation measures are considered in an integrated manner and the AMP Addendum is being jointly prepared by GHD and GEC (as was the current AMP).</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>• ROP Section 166.1c) allows for refinements to the RNHS through similar studies based on terms of reference accepted by the Region. The T of R concerning Geology and Water Resources (G&amp;WR) Assessment Report shall be revised with a cover letter explaining how the comments from the JART partners have been addressed and incorporated into the Terms of Reference.</li> </ul>	<ul style="list-style-type: none"> <li>• Comment noted with regard to the Regional Plan allowing refinements to the Regional Natural Heritage System. Could the Region please confirm the policy reference? The section referenced refers to Cultural Heritage.</li> <li>• GHD and GEC are jointly providing this integrated response table/matrix submitted under our joint cover letter, and a redline version of the NETR/EIS, GWRA, and AMP Addendum Terms of Reference documents which were updated to address the agency comments.</li> </ul>
	<p><b>2) <u>Re: Terms of Reference for Adaptive Environmental Management and Protection Plan (AMP), Proposed Dufferin Aggregates Milton Quarry East Extension Region of Halton, Ontario, prepared by GHD and GEC Inc., dated October 29, 2020:</u></b></p> <p>In addition to items listed in Section 4.11 of the HR's Guideline and AMP-related comments identified above, the following shall be taken into account in terms of the AMP addendum concerning the MQEE site:</p>	

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	<ul style="list-style-type: none"> <li>The AMP-related addendum shall be sufficiently detailed to serve as a one-step reference and a key implementation document, if the proposed quarry expansion is approved.</li> </ul>	<ul style="list-style-type: none"> <li>The AMP Addendum shall be an operable document, including all the information necessary to implement the water-related monitoring and mitigation requirements for the MQEE. The AMP Addendum will reference and rely upon the existing AMP for areas where it is relevant to the proposed MQEE. The ToR for the AMP Addendum has been updated to provide additional clarity.</li> </ul>
	<ul style="list-style-type: none"> <li>The addendum shall consolidate information from (hydro)geologic and natural-environment studies regarding sensitive water-dependent receptors, summarize their current conditions/functions, define methodologies for establishing/refining applicable targets, include adequate monitoring program, define WMS components, identify mitigation and contingency scenarios, and describe rehabilitation and post-rehabilitation mitigation and monitoring needs. The AMP-related document shall be supported by clear maps, graphs, decision-making charts, tables, sections, profiles and current-conditions photographs.</li> <li>The AMP addendum shall identify anticipated pre-extraction and verification tasks and applicable reporting associated with these tasks. All on-going reporting and notification structure shall also be defined.</li> <li>Rehabilitation plan components (as proposed and depicted on Site Plans) shall be described in greater detail in the AMP, including any needs for long-term WMS operations and maintenance, if required. This may involve amendment to the existing Milton Quarry agreements and revision to the AMP- and WMS-related securities.</li> </ul>	<ul style="list-style-type: none"> <li>As described in response to the above comment, the AMP Addendum shall be an operable document, including all the information necessary to implement the water-related monitoring and mitigation requirements for the MQEE. It will integrate the water and natural environment considerations and the information described by the Region. Some of this information will be incorporated by reference so as to maintain consistency with existing applicable requirements currently provided in the AMP and to provide the most relevant baseline data for the application of the AMP to the MQEE. The ToR has been updated to provide additional clarity.</li> <li>This information will be provided in the AMP Addendum as is described in the ToR.</li> <li>This information will be provided in the AMP Addendum, Site Plans, Legal Agreements, and other approvals, as relevant and applicable. The ToR has been updated to clarify that it addresses mitigation during extraction, lake filling, and long-term rehabilitated conditions.</li> </ul>

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	<ul style="list-style-type: none"> <li>• Any environmental enhancements/restoration plans shall also be described in the AMP.</li> <li>• The site plan for the MQEE shall incorporate reference to the site-specific studies and the AMP addendum as the key water-related implementation document for the proposed site.</li> </ul>	<ul style="list-style-type: none"> <li>• The environmental enhancements//restoration plans extend beyond the scope of the water-related AMP/AMP Addendum. Such plans will be comprehensively documented in an Environmental Enhancement Plan (EEP) and on the Site Plans.</li> <li>• The Site Plans will include the appropriate references to the AMP Addendum and other water-related requirements. This has been clarified in the updated ToR.</li> </ul>
	<p><b>3) <u>Re: Terms of Reference Progressive and Final Rehabilitation Monitoring Study, Dufferin Aggregates – Proposed Milton Quarry East Extension, prepared by MHBC, dated October 29, 2020:</u></b></p> <p>In addition to rehabilitation-related items in Section 4.8 of the HR's Guideline, the following shall be taken into account in regards to the MQEE-specific rehabilitation plans:</p> <ul style="list-style-type: none"> <li>• Any anticipated Ecological Enhancement Plan (EEP) shall be provided under a separate cover with all enhancement/restoration plans and schedules clearly defined. This document shall be referenced on Site Plans as it would serve as the primary implementation reference for rehabilitation-related plantings and other restoration needs.</li> </ul>	<ul style="list-style-type: none"> <li>• A stand-alone Ecological Enhancement Plan (EEP) will be prepared for lands that will not be extracted and the EEP will be referenced on the Site Plans. Key elements of the EEP will be provided in the NETR. The Rehabilitation Plan will be provided directly on the Site Plans, mainly covering lands that will be extracted. Key elements of the Rehabilitation Plan will be provided in the NETR.</li> </ul>
	<p><b>4) <u>Re: Terms of Reference for Level 1 and 2 Natural Environment Technical Report (NETR) and Environmental Impact Assessment (EIS), Dufferin Aggregates Milton Quarry East Extension", prepared by Goodban Ecological Consulting Inc. (GEC), dated Oct. 29, 2020</u></b></p>	



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	<p>5) The Terms of Reference were reviewed in comparison to the Halton Aggregate Resources Reference Manual, Version 1.0, dated June 18, 2014, and in accordance with applicable Regional Official Plan (ROP) policies.</p> <p>1. Section 2.5.1 – Halton Region Official Plan (2015):</p> <p>a) Please note that the current Halton Region Official Plan (ROP) office consolidation is dated June 19, 2018.</p>	<ul style="list-style-type: none"> <li>• The NETR/EIS Terms of Reference have been revised to note the current version of the ROP is from 2018.</li> </ul>
	<p>b) Reference shall be made to the following Mineral Resource Extraction Areas policies of the ROP, including Sections 107(3), 107(3.1), 107(5), 110(2), 110(6), 110(7.1), 110(7.2), 110(8), 110(8.1).</p> <p>c) Portions of the subject lands are within the Regional Natural Heritage System land use designation. According to Figure #3 of the Terms of Reference, the proposed limits of extraction appear to encroach into a potential Significant Woodland feature and the associated buffer located at the north-west portion of the extraction area. The NETR/EIS will need to assess the significance of the woodland in accordance with s.277 of the ROP. If the woodland is significant, the NETR/EIS will need to demonstrate that there will be no negative impact on the Significant Woodland feature and its ecological functions in accordance with the ROP and in accordance with the applicable policies of the Niagara Escarpment Plan</p>	<ul style="list-style-type: none"> <li>• This has been noted in the revised NETR/EIS Terms of Reference.</li> <li>• The NETR/EIS will include an evaluation the significance of woodland features within the proposed Milton Quarry East Extension extraction footprint, in accordance with ROP s.277.</li> </ul>
	<p>d) The proposed buffers range from 0 m from the limit of potential Significant Woodlands to 50 m in width from candidate Significant Wetlands. It is standard practice for the Region to require a minimum 30 m width for buffers from Key Features of the Regional Natural Heritage System. The NETR/EIS will need to provide justification for the proposed buffers that are less than 30 m in accordance with the definition of buffer within the ROP (i.e., s.220.1.1). Buffers are components of the Regional Natural Heritage System. Therefore the proposed limits of the</p>	<ul style="list-style-type: none"> <li>• As described above, the NETR will include detailed discussion on Significant Woodlands, including their assessment per ROP policies and criteria, and provide the rationale for the various Significant Woodland buffers and their treatments.</li> <li>• The proposed boundaries of the mineral resource extraction area will follow the same approach used for the Dufferin Milton Quarry Extension and the Acton Quarry Extension. The protected natural features and buffers will not be within mineral resource extraction</li> </ul>

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	Mineral Resource Extraction Area designation shall not extend into the Key Features and their associated buffers.	areas, however a site specific policy will be added to allow these areas to be licensed under the Aggregate Resources Act.
	<p>2. Section 4.1.5 – Significant Woodland Boundary Delineation and Staking:</p> <p>a) Staking of the Significant Woodland edge is proposed where the woodland edge is in proximity to the proposed water management system footprint. Given that the limit of the Significant Woodland and associated buffer are informing the limit of the extraction area, the Significant Woodland is to be staked along the northern and southern limits of the proposed extraction area as well as where the proposed watermain and other groundwater mitigation infrastructure is proposed within 30 m of the candidate Significant Woodland features. As noted in the Terms of Reference, the staked limits of the Significant Woodlands are to be confirmed by the Regional Forester.</p>	<ul style="list-style-type: none"> <li>The boundary of the Significant Woodland will be staked in those areas where the woodland edge is in proximity to the proposed extraction footprint and water management system footprint. The staked boundaries will be reviewed with the Region of Halton's forester.</li> </ul>
	<p>3. As noted in Comment 1d), it appears that a 50 m buffer is proposed from two candidate Significant Wetlands. These particular wetlands have not been evaluated by the Ministry of Natural Resources and Forestry (MNRF); however, they have been identified within MNRF and Conservation Halton wetland mapping. It is recommended that the NETR/EIS assess the significance of these wetlands in accordance with s.276.5(1) of the Regional Official Plan and in consultation with Conservation Halton and MNRF staff, and the appropriate buffer width be determined in accordance with s.220.1.1 of the ROP.</p>	<ul style="list-style-type: none"> <li>The NETR/EIS will discuss the significance of Wetland U1 in the context of the Ontario Wetland Evaluation System (OWES), and consult with MNRF and CH staff as appropriate. It should be noted that Wetland U1 is proposed to be protected with a 50 m buffer, wetland hydrology will be improved through WMS mitigation measures and the surrounding habitat will be greatly enhanced as part of the proposed Ecological Enhancement Plan (EEP). The rationale for the proposed 50 m buffer from the extraction footprint will be discussed in the NETR/EIS.</li> </ul>
	<p>4. Section 4.0 – Ecological Field Survey Program: Regional environmental planning staff defer to CH as the Region's environmental technical advisors (and the Region's NETR/EIS peer reviewer shall one be retained) to provide comments on whether the proposed field survey program satisfactorily identifies the Key Features and other components of the Regional Natural Heritage System in accordance with s.115.3 and s.155.4 of the ROP.</p>	<ul style="list-style-type: none"> <li>Comment noted. GEC has more than 20 years of field experience within the Milton Quarry East Extension study area. The ecological field survey program was designed to provide all of the information necessary to address matters related to Endangered and Threatened species, Significant Wildlife Habitat, etc.</li> </ul>

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5.	<p>Section 4.2.3 – Other Wildlife Groups:</p> <p>a) Were other significant habitats of endangered and threatened species or significant wildlife habitat confirmed based on field observations? For example, bats?</p>	<ul style="list-style-type: none"> <li>As described above, GEC conducted a Species at Risk (SAR) screening exercise to identify the potential for SAR to occur within the study area. Current SAR data were obtained from the NHIC for the 1km squares within which the study area occurs. The ecological field survey program was designed to specifically address SAR concerns, based on the potential for certain SAR to occur in the area. The SAR preliminary screening and the follow-up detailed surveys (e.g., floristic surveys, minnow trapping for salamanders, breeding bird surveys, etc.) will be thoroughly documented in the NETR. Dufferin will actively engage with the Ministry of Environment, Conservation and Parks (MECP) with respect to Species at Risk (SAR). With regard to bats, GEC notes that recent guidance from MECP for SAR bats is to restrict tree-clearing activities to the period between November and March, when bats are not present or active. Trees are not a limiting factor for bats in southern Ontario, tree removals for the Milton Quarry East Extension are relatively limited, the Halton Forest covers approximately 35 km<sup>2</sup> and many trees will be planted as part of the Ecological Enhancement Plan (EEP) and Rehabilitation Plan. Certain bat species are Endangered in Ontario because they hibernate communally in caves and abandoned mine shafts, where they are susceptible to the fungal disease known as White Nose Syndrome. GEC did conduct acoustic surveys for bats in proximity to trees within the extraction footprint and the results of these surveys will be provided in the NETR.</li> </ul>

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6.	It is staff's understanding that as part of the proposed groundwater impacts mitigation, the applicant is proposing to evaluate and design additional recharge wells, diffuse discharge(s), watermain and related equipment as necessary to achieve the mitigation and enhancement objectives for the proposed quarry extension project. It appears that a watermain is proposed within the buffer/linkage/enhancement areas of the Regional Natural Heritage System. Any impacts on the Regional Natural Heritage System as a result of the proposed infrastructure required for the groundwater mitigation must be included in the NETR/EIS in accordance with s.110(7.2) of the ROP.	<ul style="list-style-type: none"> <li>Comment noted. The potential impacts resulting from the WMS footprint will be addressed in the NETR/EIS. It should be noted that portions of the WMS footprint will be restored and naturalized; this will be explained in the NETR/EIS.</li> </ul>
7.	In accordance with section 4.4 of the Halton Aggregate Resources Reference Manual, specifically Objective #2, the NETR/EIS must assess the linkages between the Regional Natural Heritage System Key Features and surface and groundwater resources. It is recommended that GEC and GHD coordinate their study findings to comprehensively demonstrate the ecological functions of the Key Features, the cumulative impacts, appropriate mitigation measures and ecological net gain to the Regional Natural Heritage System.	<ul style="list-style-type: none"> <li>GEC and GHD recognize the critical importance of taking a multi-disciplinary and highly coordinated approach that addresses the inherent linkages between groundwater, surface water and water-dependent ecological features.</li> </ul>
8.	Section 5.0 – Mitigation Measures, Ecological Enhancements, Quarry Rehabilitation and Impact Assessment: a) A minimum 10 m buffer from the Significant Woodlands is proposed, which will be enhanced through tree planting. While this approach may have been accepted for the Action Quarry Extension, a reduction to the typical 30 m buffer must be justified as noted in Comment 1d).	<ul style="list-style-type: none"> <li>Comment noted. As described above, the NETR will include detailed discussion on Significant Woodlands, including their assessment per ROP policies and criteria, and provide the rationale for the various Significant Woodland buffers and their treatments.</li> </ul>
	b) Please confirm the location of the proposed tree clearing (also related to Comments 1c), 1d) and 2).	<ul style="list-style-type: none"> <li>The NETR/EIS will identify the location and extent of proposed tree-clearing, including the extraction footprint and the WMS footprint.</li> </ul>
	c) Quarry Rehabilitation – Regional environmental planning staff defer to Conservation Halton as the Region's environmental technical advisors (and the Region's NETR/EIS peer reviewer if retained) to provide technical comments and advise on the	<ul style="list-style-type: none"> <li>Comment noted.</li> </ul>

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	conceptual rehabilitation plan shown on Figure 4 of the Terms of Reference.	
	<p>In addition to the guidelines in the Aggregate Resources Reference Manual, the required Environmental Impact Assessment shall address the following:</p> <ul style="list-style-type: none"> <li>• Flagging the Key Features: woodlands, wetlands, watercourse and areas Provincially Significant wildlife potential, buffers</li> </ul> <ul style="list-style-type: none"> <li>• Significant woodland assessment: Regional Forrester shall be consulted for staking</li> <li>• CH to advise on scoping in relation to wetlands, wildlife and endangered species</li> </ul> <p>Note that the Region's EIA Guidelines were updated in 2020.</p>	<ul style="list-style-type: none"> <li>• Significant Woodland boundaries will be staked as appropriate and the Region's forester will be consulted. Wetland U1 boundary will be staked and CH staff will be consulted. Based on the site characteristics and the proposed extraction footprint and WMS footprint, it is not necessary to flag other wetland boundaries, Significant Wildlife Habitat or buffers. The buffers will be generated as offsets from the surveyed features (e.g., Significant Woodland, Wetland U1) and ultimately staked by a surveyor.</li> </ul>
	<p><b>Conservation Halton</b>  General</p> <ol style="list-style-type: none"> <li>1. All studies should be coordinated and integrated. In particular, the findings of the Hydrogeologic and Hydrologic Impact Assessment, Surface Water Assessment and Level 1 and 2 Natural Environment Technical Report should inform each other, and be presented in a coordinated manner.</li> <li>2. All reports (in particular, the Natural Environment Report, Planning Justification Report) should reference the relevant Conservation Halton policies that apply to the site.</li> <li>3. CH staff may have additional feedback on the water resources report once we have completed a review of the 5 year AMP.</li> </ol>	<ul style="list-style-type: none"> <li>• The water and natural environment studies and mitigation measures are considered in an integrated manner and the AMP Addendum is being jointly prepared by GHD and GEC (as was the current AMP).</li> </ul>

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	<p><b>Level 1 and Level 2 Natural Environmental Technical Report and Environmental Impact Assessment Terms of Reference (TOR)</b>  <u>Key Comments</u></p> <p>1. The TOR should indicate the following to be included within the Natural Environment Technical Report (NETR):</p> <p>a) The NETR should correspond with the Geology and Water Resources Assessment Report, to ensure the impact assessment is comprehensive. Surface and groundwater evaluation should be discussed in both reports, and the NETR/EIA report should discuss the ecological impacts of any proposed modifications.</p>	<ul style="list-style-type: none"> <li>GEC and GHD recognize the critical importance of taking a multi-disciplinary and highly coordinated approach that addresses the inherent linkages between groundwater, surface water and water-dependent ecological features.</li> </ul>
	<p>b) Determine the significance of CH identified wetlands to confirm the appropriate buffer width to ensure no negative impact on hydrological/ecological function. Wetland U1 boundary will need to be confirmed by CH during the appropriate season (June – September).</p>	<ul style="list-style-type: none"> <li>The NETR/EIS will discuss the significance of Wetland U1 in the context of the Ontario Wetland Evaluation System (OWES). The boundary will be staked and CH staff will be consulted during the appropriate season. It should be noted that Wetland U1 is proposed to be protected with a 50 m buffer, wetland hydrology will be improved through WMS mitigation measures and the surrounding habitat will be greatly enhanced as part of the proposed Ecological Enhancement Plan (EEP). The rationale for the proposed 50 m buffer from the extraction footprint will be discussed in the NETR/EIS.</li> </ul>
	<p><u>Technical Comments</u></p> <p>2. The TOR should note that the NETR will undertake the following:</p> <p>a) Include mapping that clearly identifies all of the Natural Heritage Features on current air photos.</p>	<ul style="list-style-type: none"> <li>Comment noted.</li> </ul>
	<p>b) Obtain a data-share agreement with CH for relevant natural heritage data.</p>	<ul style="list-style-type: none"> <li>This was completed in late 2020 and the data from CH are under review by GEC and GHD. Relevant information obtained from CH will be incorporated into the technical reports as necessary.</li> </ul>

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	<p>c) Incorporate full details on surveys including methodologies used for field studies and a table outlining purpose of the study, date, time of visits, weather during the surveys and information about the qualified professional carrying out the surveys, the protocols used.</p> <p>d) Identify native plant species based on their coefficient of conservatism to help determine potential impacts based on the tolerances of disturbance.</p>	<ul style="list-style-type: none"> <li>• Field survey details will be provided, including methodologies, summary table for survey dates, purposes, times, weather, surveyors, etc.</li> <li>• In general, the proposed extraction area and WMS footprint are located in old fields and other early successional features with few/no conservative plant species. Where the WMS footprint overlaps with habitats that may support conservative plant species, this information will be provided in the NETR/EIS.</li> </ul>
	<p>e) Incorporate additional surveys to determine if significant wildlife habitat (SWH) is present in accordance with the 2015 SWH Ecoregion Criteria Schedules. Include a screening table to indicate if there are candidate habitats present and how these habitats will be confirmed.</p>	<ul style="list-style-type: none"> <li>• As noted above, the ecological field survey program for the Milton Quarry East Extension was designed to provide the field data required to identify candidate Significant Wildlife Habitat (SWH). The primary resource for determining what qualifies as Significant Wildlife Habitat is the Significant Wildlife Habitat Technical Guide (SWHTG) prepared by OMNR (2000). OMNRF (2015) has also prepared Significant Wildlife Habitat Ecoregion Criteria Schedules (SWHECS) that may be used to assist in determining what constitutes Significant Wildlife Habitat. The Natural Heritage Reference Manual (NHRM) (OMNR 2010) states that the SWHECS are a resource that may be used to determine which features qualify as Significant Wildlife Habitat, but that the SWHTG "is still the authoritative source for the identification and evaluation of Significant Wildlife Habitat". GEC will refer to all three sources for the evaluation of Significant Wildlife Habitat in the NETR, as appropriate.</li> </ul>

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	<p>f) Include the identification of the connections and linkages between Regions NH features, surface water and groundwater resources, as per Halton Region Aggregate Resource Manual.</p> <p>g) Recommend correspondence with the MECP regarding Endangered or Threatened species to ensure adequate surveys have been completed and effort is supported.</p>	<ul style="list-style-type: none"> <li>• As noted above, the NETR will include an assessment of the Milton Quarry East Extension upon landscape connectivity and wildlife corridors, including the identification of enhancement opportunities through the Ecological Enhancement Plan (EEP) for lands that will not be extracted and the Rehabilitation Plan for lands that will be extracted.</li> <li>• As described above, GEC conducted a Species at Risk (SAR) screening exercise to identify the potential for SAR to occur within the study area. Current SAR data were obtained from the NHIC for the 1km squares within which the study area occurs. The ecological field survey program was designed to specifically address SAR concerns, based on the potential for certain SAR to occur in the area. The SAR preliminary screening and the follow-up detailed surveys (e.g., floristic surveys, minnow trapping for salamanders, breeding bird surveys, etc.) will be thoroughly documented in the NETR. Dufferin will actively engage with the Ministry of Environment, Conservation and Parks (MECP) with respect to Species at Risk (SAR).</li> </ul>
	<p>h) Confirm adequate surveys are undertaken (i.e., SWH, SAR) to determine the appropriate buffer width to maintain Significant Woodland ecological form and function and ensure no negative impact from proposed quarry extraction works.</p>	<ul style="list-style-type: none"> <li>• As noted above, the ecological field survey program for the Milton Quarry East Extension was designed to provide the field data required to identify candidate Significant Wildlife Habitat (SWH); see the bullet comment above regarding the adequacy of SAR surveys. Sufficient data have been collected to demonstrate that the features and functions of the Significant Woodlands will not be negatively impacted.</li> </ul>



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	<p>i) Undertake additional targeted turtle habitat surveys within suitable habitats following the accepted survey protocols within study area and adjacent lands. Incorporate amphibian egg mass surveys within suitable habitats both within study area and adjacent lands.</p> <p>j) Include how the identification of diversity and connectivity of the natural features within the study area and adjacent lands will be conducted, to ensure long-term ecological function can be maintained or enhanced where appropriate.</p> <p>k) Recommend correspondence with DFO regarding potential impacts on fish and fish habitat to determine survey extent and direction.</p>	<ul style="list-style-type: none"> <li>• Wetland U1 is not suitable for turtle overwintering, so basking surveys in the spring period are not warranted. Wetland U1 has a very short hydroperiod and it is typically dry in fall and early winter. Wetlands that provide potential habitat for turtles are located at least 300m from the proposed extraction footprint at the closest point; no negative impacts on these habitats are anticipated. Amphibian egg mass surveys will be incorporated into AMP monitoring for wetlands (e.g., salamander egg masses) but they are not necessary for the NETR. Amphibian use of the wetlands within the study area has been determined through the use of Song Meters deployed for several months each season and minnow trapping surveys for salamanders.</li> <li>• Comment noted. The NETR will include an assessment of the Milton Quarry East Extension upon landscape connectivity and wildlife corridors, including the identification of enhancement opportunities through the Ecological Enhancement Plan (EEP) for lands that will not be extracted and the Rehabilitation Plan for lands that will be extracted. The Terms of Reference have been revised to this effect.</li> <li>• Based on GEC's review of CH fish data, no fish were captured from stations located above the escarpment. Fish were captured at a number of stations from below the escarpment. The proposed extraction area is located more than 1.2 km from where the Speyside Tributary drops below the escarpment. The WMS and AMP will mitigate any potential dewatering influences on the wetlands located closest to the proposed Milton Quarry East Extension, so no effects upon fish and fish habitat are anticipated.</li> </ul>

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	<p>l) Confirm the zone of influence to identify any potential impacts regarding drawdown for both ground and surface water implications and direct appropriate mitigation measures.</p> <p>m) Discuss how net gain will be achieved both short term and longer term within the study area and adjacent lands, as per Halton Region Aggregate Resource Manual.</p> <p>n) Discuss all potential cumulative impacts on natural environment within the NEP area and provide appropriate mitigation measures to ensure natural features ecological/hydrological functions are maintained. As stated within Halton Region Aggregate Resource Manual</p>	<ul style="list-style-type: none"> <li>• As will be presented in the Geology and Water Resources Technical Report, the potential zone of influence in the absence of any mitigation may be greater than 500 metres and therefore necessitates the comprehensive mitigation of water resources to prevent undesirable influences. The mitigation measures will limit the zone of influence such that the closest features (as well as more distant features) are protected or enhanced. Therefore, the effective zone of influence for potential negative impacts is limited to less than the distance to the surrounding water resources features. These are the same mitigation measures that have protected coolwater fisheries and wetlands located in close proximity to the North Quarry, West Cell and East Cell in the existing Milton Quarry.</li> <li>• A discussion of how a net environmental gain will be achieved as a result of the proposed Milton Quarry East Extension will be provided in the NETR/EIS.</li> <li>• A cumulative effects assessment of the existing and proposed developments on the escarpment environment will be included in the NETR.</li> </ul>
	<p><b>Geology and Water Resources Assessment Report, Including Karst and Hazard Lands</b></p> <p>1. The ToFR should outline in greater detail the proposed methodology to evaluate changes in surface water drainage to the area's wetlands and outlet points.</p>	<ul style="list-style-type: none"> <li>• The drainage analysis will delineate the surface water catchments and changes related to the proposed MQEE. These changes will include the potential changes in the surface water budget; however, it is important to recognize the general lack of substantive surface water influence associated with the current conditions of the MQEE lands. Any potential for negative influence will be mitigated by the proposed mitigation measures such that</li> </ul>

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		the area's wetlands are maintained or enhanced with respect to their form and function. This has been clarified in the updated ToR.
2.	The ToFR states ground water conditions will be compared to the existing approved interim extraction condition (for full extraction condition with mitigation) but does not outline what surface water conditions will be compared to. Conservation Halton staff will provide further comment on the baseline/point of reference for surface water conditions once we have had an opportunity to review the current 5-year AMP and other relevant background documents.	<ul style="list-style-type: none"> <li>The surface water conditions will also be compared to their approved extraction (or rehabilitation) conditions. This has been clarified in the updated ToR. As indicated above, the proposed mitigation measures will be designed to maintain or enhance the features relative to these conditions.</li> </ul>
3.	The ToFR should indicate the study will evaluate the potential requirements to adapt the existing water management system to maintain or enhance surface water conditions (in addition to groundwater conditions).	<ul style="list-style-type: none"> <li>The goal of the proposed mitigation is to maintain or enhance the surface water conditions relative to the approved conditions. Therefore, the GWRA will include analysis and explanation of how this goal will be met. This has been clarified in the updated ToR.</li> </ul>
4.	To ensure impacts on water resources and natural features relying on groundwater and surface water are not exacerbated during and post extraction, threshold for mitigation measures should account for potential impacts from the existing quarry operation.	<ul style="list-style-type: none"> <li>The goal of the proposed mitigation is to maintain or enhance the water resources conditions relative to the approved conditions. The mitigation goals and approach will be developed in collaboration with the ecological analysis by GEC and considering both the existing quarry and proposed MQEE influences.</li> </ul>
5.	The final rehabilitation plan must show that any natural features and water resources around the MQEE which require groundwater and/or surface water mitigation during extraction will function post extraction (feedback also applies to the Progressive and Final Rehabilitation Monitoring Study).	<ul style="list-style-type: none"> <li>The proposed mitigation and rehabilitation plans will provide protection during extraction, lake filling, and under long-term rehabilitation conditions consistent with the existing Extension Quarry approvals.</li> </ul>
6.	The report should provide methodologies used to evaluate any alterations in surface water drainage to help determine if there are any expected impacts on wetland as well as provide requirements to adapt, maintain or enhance existing wetlands.	<ul style="list-style-type: none"> <li>The GWRA will include analysis of the potential for impacts to wetlands and describe the proposed measures to maintain or enhance the wetlands. This has been clarified in the updated ToR.</li> </ul>
7.	The Geology and Water Resources Assessment Report should be more explicit with respect to proposed surface water analysis and potential mitigation. The report should provide methodologies used to evaluate any alterations in surface water drainage and how it informs any proposed mitigation.	<ul style="list-style-type: none"> <li>The GWRA will describe the surface water analysis and how it relates to the proposed mitigation. This has been clarified in the updated ToR.</li> </ul>

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	<p>8. Recommend that the baseline/point of reference for comparison of the surface water conditions to the Tributaries and wetlands be maintained as per the existing approved interim extraction condition (for full extraction condition with mitigation).</p> <p>9. Based on the site plan, the subwatershed boundary overlaps the north east corner of the License Boundary. Recommend that the ToFR include methodology to confirm the subwatershed boundary and to evaluate if there are any changes in surface water drainage across subwatershed line.</p>	<ul style="list-style-type: none"> <li>• Agreed - Refer to response to CH Comment #2.</li> <li>• The GWRA will provide analysis of drainage alterations resulting from the proposed MQEE. This analysis includes using detailed topographic modelling. No substantive changes are indicated as the identified area of overlap is not influenced by the proposed extraction area.</li> </ul>
	<p><b>Adaptive Environmental Management and Protection Plan (AMP)</b></p> <p>1. The expanded AMP (or another mechanism) should identify any additional financial securities required to ensure the public and agencies will not be put at financial risk and how they will be provided.</p> <p>2. The report should provide methodologies used to evaluate any surface water changes, to identify potential impacts on wetlands so that they can be mitigated appropriately.</p>	<ul style="list-style-type: none"> <li>• The financial assurances that are provided through the Water Management Agreement will be reviewed and updated as part of the overall proposal for the MQEE.</li> <li>• The two wetlands (U1 and W36) that have potential to be influenced by surface water drainage alterations will have detailed water and ecology monitoring requirements. Furthermore, prescribed target water levels as well as ecological criteria will be established to ensure their conditions are maintained or enhanced by the proposed MQEE.</li> </ul>
	<p>3. Ecological monitoring should be undertaken to ensure quarry expansion will not impact the NHS and to ensure mitigation measures and rehabilitation works are functioning as proposed.</p>	<ul style="list-style-type: none"> <li>• The AMP Addendum will include ecological monitoring for the features associated with the MQEE.</li> </ul>
	<p><b>Engineering:</b>  Halton Hills Engineering will primarily be reviewing storm water management from the perspective of where Dufferin may propose to redirect flows and will be reviewing the noise and vibration, dust mitigation, and blasting reports.</p>	<ul style="list-style-type: none"> <li>• Information on surface water drainage and stormwater management will be provided in the GWRA.</li> <li>• Matters pertaining to noise and vibration, dust mitigation, and blasting will be presented in separate reports by others (i.e., not by GHD or GEC).</li> </ul>

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	A license agreement may be required for any proposed crossings of open and/or closed road allowances. It may be that existing crossings that are lacking this license would be corrected at this time. This is subject to confirmation of who has jurisdiction of the road allowances (Milton and/or Halton Hills).	
	<b>Town of Milton</b>	
	The following impacts of the proposed quarry extension, in particular, are of interest to the Town of Milton and will be reviewed accordingly: <ul style="list-style-type: none"> <li>• Current groundwater and surface water flows and how they may impact Milton Residents, the Milton water supply at Kelso and natural heritage features and functions in the area.</li> </ul>	<ul style="list-style-type: none"> <li>• Information on potential groundwater and surface water influences will be provided in the GWRA.</li> </ul>
	<ul style="list-style-type: none"> <li>• We understand that there may be long term environmental management measures currently in place for perpetual pumping to maintain water flows in perpetuity. Please provide more detail on this, how it is working, and that the appropriate protections are in place to ensure Dufferin is capable of maintaining these systems in perpetuity such that the Town is not negatively impacted over time.</li> </ul>	<ul style="list-style-type: none"> <li>• In the long term, Conservation Halton will become the owner and operator of the long-term water management measures and associated lands for the existing Milton Quarry WMS. The land transfer and financial assurance for Conservation Halton are secured through the Water Management Agreement. Dufferin and Conservation Halton are meeting the requirements of this Agreement with a regular exchange and review of relevant engineering and financial information. It is proposed to extend these arrangements between CRH and CH to include the proposed MQEE.</li> </ul>



# Memorandum

Updated: March 26, 2021

To: Brian Zeman, MHBC

Ref. No.: 010978

From: Nicholas Fitzpatrick/Kyle Fritz/Richard Murphy/we/290

cc: Kevin Mitchell (CRH); Anthony Goodban (GEC)

**Subject: Terms of Reference: Geology and Water Resources Assessment Report, Including Karst and Hazard Lands Consideration Proposed Dufferin Aggregates Milton Quarry East Extension Region of Halton, Ontario**

## 1. Introduction and Background

GHD has been retained by Dufferin Aggregates, a division of CRH Canada Group Inc. (Dufferin) to provide them with advice pertaining to geology, hydrogeology, and surface water resources in connection with a proposal to extend the Milton Quarry. GHD's advice will include site characterization and impact assessment, as well as recommendations related to monitoring, mitigation, and rehabilitation. This memorandum presents the proposed Terms of Reference (ToR) for this advice. The relevant data, analysis, conclusions, and recommendations will be documented in the Geology and Water Resources Assessment Report. The water and natural resources teams are working in an integrated manner to ensure alignment between the analyses and recommendations presented in the GWRA and Natural Environment Reports.

GHD has also prepared a separate ToR in collaboration with Goodban Ecological Consulting (GEC) pertaining to advice related to an Adaptive Environmental Management and Protection Plan (AMP).

The proposed extension of the Milton Quarry, referred to as the Milton Quarry East Extension (MQEE), represents a proposed extraction area of approximately 16 hectares bounded by the existing East Cell to the north, the existing North Quarry to the west, and the existing Main Quarry at some distance to the southwest and south. The proposed MQEE extraction area is contiguous with the existing East Cell (i.e., it would be extracted as part of the East Cell) and separated from the North Quarry by the Town Line to the west.

These Terms of Reference (ToR) have been prepared in consideration of the comprehensive understanding that already exists with respect to the geology, hydrogeology, and surface water resources in the area of the Milton Quarry, and the existing mitigation measures that have a long proven record of successful operation and protection of water resources and related ecological features. Guidelines available from review agencies, including the Ministry of Natural Resources and Forestry Standards for a Class A Quarry below the water table, and the Region of Halton Aggregate Resources Reference Manual, and the Niagara Escarpment Plan, were also considered.



The study of the proposed MQEE lands and surrounding area commenced more than 40 years ago. Over this time extensive investigation and evaluation has occurred and a truly vast amount of data has been collected. The existing Milton Quarry characterization, impact assessment, mitigation measures, and monitoring plan (refer to AMP) were thoroughly vetted through an extensive Joint Agency Review Team (JART) and public consultation process; evaluated and approved by all related government agencies, including the Provincial Joint Board and Cabinet; and the approved plans, including mitigation measures have been successfully operating since 2007. The ongoing monitoring and performance assessment is thoroughly reported to, and reviewed by, relevant government agencies with support from their consultants as warranted. This rigorous approval and operating quarry review process represents the highest known standard of care for any aggregate extraction operation in Ontario or elsewhere.

Dufferin has already committed to integrate the subject site into the state-of-the-art water management system (WMS) and AMP that are already in place and have been operating at the Milton Quarry and Milton Quarry Extension since 2007. The water mitigation system has effectively maintained groundwater levels around the perimeter of the Milton Quarry Extension protecting surrounding water resources including water-dependent ecological features. All approval agencies are familiar with the AMP and the hydrologic and natural environment data collection and assessment that is provided through annual reports and the WebDT data sharing system that allows agencies direct access to hydrogeological data (and other information) at any time. The AMP also requires a comprehensive 5-year review to make any adjustments necessary to make sure the groundwater is maintained to an acceptable level thereby protecting the ecological features dependent upon it. The AMP was approved by the agencies and through annual reporting, as well as a recent 5-year review, has demonstrated that the proposed mitigation system has protected and enhanced natural heritage features surrounding the extension. The water management system for the MQEE will be a straightforward addition to the existing system using the same proven techniques for mitigation.

The reliable understanding and operating basis for the existing Milton Quarry, along with the additional studies described in this ToR, form the basis for the advice and recommendations GHD is preparing related to the proposed MQEE. Existing information on Milton Quarry can be found in the recent 5-Year AMP Review report that was recently completed (GHD, WSP, and GEC, January 24, 2020) and provided to the agencies for review. This extensive document provides a comprehensive report and evaluation of all relevant data and findings. In addition to the 5-Year Review and the on-line WebDT data sharing system, a comprehensive annual water monitoring report is provided and presented to the agencies as well as other specific documents that are prepared from time-to-time.

## **2. Geology**

The Milton Quarry, including the MQEE lands, is situated above the Niagara Escarpment in an area of Amabel dolostone overlain by relatively thin glacial drift deposits. The geologic conditions are well known from the ongoing bedrock extraction operations, historic investigations on and around the MQEE lands, as well as additional studies undertaken as part of this ToR, including:

- 33 new test pits were excavated to determine overburden thickness and characterization (denoted as TPxx-20 on Figure 1)



- 78 new boreholes were drilled to install monitoring wells at 65 locations and these boreholes were also used to determine overburden thickness and depth of Amabel dolostone overlying the Reynales and Cabot Head Formations (denoted as OW78-20 through OW823-201 on Figure 1)
- Updated stratigraphic surfaces will be prepared incorporating the new information
- Geologic cross-sections through the MQEE extraction area and surrounding lands will be prepared
- The bedrock resource volume/tonnage will be calculated based on the available information

Investigative locations are shown on the attached Figure 1.

### **3. Surface Water and Hazard Lands**

The MQEE lands are an upland area with no surface water features within the proposed extraction area. The key surface water feature for consideration is a small seasonal wetland pool referred to as Wetland U1, which is located east of the extraction area. There are also a number of seasonal and permanent pools located further to the east and southeast that form part of the Halton Escarpment Wetland Complex. Based on historic and ongoing data collection it is known that some of these wetlands are directly supported by the groundwater table.

In addition to the existing surface water level information, the following additional studies are being undertaken as part of this ToR:

- 10 new staff gauges were installed at key wetland locations determined in collaboration with GEC (denoted as SG57 through SG66 on Figure 1). These locations are east and south of the proposed MQEE extraction area, enhancing the historical surface water level monitoring network in this area.
- Water level transducers were installed at 8 of these surface water monitoring locations
- Water level hydrographs will be prepared for all monitoring locations to assess water level trends and hydroperiods
- Groundwater-surface water interactions will be evaluated as part of the hydrogeology evaluations (Section 4, below)
- Topographic drainage areas will be delineated, including identification of non-draining depressions
- Hazard Land information ~~has been~~will be obtained from Conservation Halton and reviewed relative to the proposed MQEE area ~~;~~; ~~however, n~~No Hazard Land concerns are anticipated beyond consideration of the adjacent wetland areas due to the upland nature of the MQEE lands.

Investigative locations are shown on the attached Figure 1.

### **4. Hydrogeology**

In the Milton Quarry area, the groundwater table generally resides in the Amabel dolostone forming an unconfined aquifer. The so-called Amabel Aquifer is a regionally extensive aquifer system (comprised of the





thick Amabel and thin Reynales dolostones) and is the primary groundwater resource in the Milton Quarry area. The aquifer is underlain by the Cabot Head shale which forms a regional aquitard. The Amabel Aquifer is routinely used for private water supply wells and supports some of the seasonal and permanent wetlands in the area.

In addition to relying on the extensive existing hydrogeologic information, including over 340 monitoring wells, multiple pumping tests (including 2 conducted on the MQEE lands at TW1-80), over 150,000 water level measurements and analysis over more than 40 years, the following additional studies are being undertaken as part of this ToR:

- 78 new monitoring wells were installed at 56 locations, including nested monitoring wells at 2 of these locations [denoted as OW78-20 through OW823-201 on Figure 1 with shallow and deep nested monitoring well intervals denoted as “S” and “D”, respectively]
- Water level monitoring is being conducted at 267 monitoring wells located on the MQEE lands and areas to the east and south (including some locations that were already part of monitoring programs)
- Water level transducers were installed in 145 of these monitoring wells
- Water level hydrographs will be prepared for all monitoring locations to assess seasonal variations and year-over-year variations where longer term data is available
- Specific combinations of monitoring locations will be utilized to assess water level variations with depth and to compare surface water and groundwater level conditions
- Groundwater level contours will be prepared for spring and fall monitoring events consistent with standard practices for the Existing Milton Quarry. Water levels for these events will also be reflected on the cross-sections
- Groundwater-surface water interactions will be assessed using field observations, combination groundwater/surface water hydrographs, and comparison of groundwater contours to ground surface elevations/topography
- No private water supply well survey is necessary as there are no private lands or water supply wells within 1.2 kilometres of the MQEE extraction area (refer to MHBC letter for September 4, 2020, Figure #13). The water supply wells that are within the Amabel Aquifer are located to the north and west, hydrogeologically separated from the MQEE lands by the other quarry areas and addressed by the existing Milton Quarry monitoring and mitigation measures.
- The MQEE lands are outside all Source Water Protection (SWP) designated Wellhead Protection Areas (WHPAs) and therefore no SWP-related studies are necessary as part of this ToR.
- Groundwater quality conditions have been extensively evaluated at the Milton Quarry and continue to be monitored through the provisions of the WMS and the private well water supply monitoring program under the AMP and the Ontario Water Resources Act (OWRA) approvals. No additional water quality sampling is necessary for the purpose of assessing the potential impact to water resources for the proposed MQEE; however, additional water quality sampling was undertaken in early 2021 to provide additional baseline water quality data as requested by the Region. This data will include groundwater



and surface water quality sampling at locations associated with the water resources (wetlands) to the east and south of the proposed MQEE extraction area warranted for these MQEE studies, although Adjustments to the existing Milton Quarry monitoring program may be included in the recommended monitoring requirements pursuant to the AMP or the OWRA approvals.

Investigative locations are shown on the attached Figure 1.

The various evaluations described in Sections 2, 3, and 4 will include consideration of potential karstification of the dolostone bedrock. Karstification is a normal type of water-driven weathering that is typical of carbonate bedrock in areas such as southern Ontario. The relatively low solubility of the Amabel dolostone (relative to limestone or gypsum), the carbonate-rich overburden, and the limited surface water closed-catchment areas result in low degrees of weathering or karstification in the area of Milton Quarry.

Karst considerations were thoroughly evaluated as part of the previous Milton Quarry Extension approvals and it was determined by the Region of Halton hydrogeologist at that time as well as by the Joint Board, that there were no unusual or demanding challenges arising from karstification for the Milton Quarry Extension. It was determined that the then-proposed Milton Quarry Extension characterization and proposed mitigation measures sufficiently addressed any considerations related to potential karstification. These measures have proven to be effective in protecting water resources, including bedrock springs that had been indicated to be reliant on karst features by parties opposed to the Extension. The quarry extraction of the North Quarry, West Cell, and East Cell over the last 23 years of involvement by GHD have revealed no significant karst features and no hydrogeologic conditions that could not be addressed by the approved mitigation measures.

Based on the above facts, a separate study based solely on potential karst considerations is not necessary and has not been included in this ToR.

## **5. Impact Assessment, Mitigation, and Rehabilitation Measures**

As identified in Section 1 (above) Dufferin has already committed to integrate the subject site into the state-of-the-art water management system (WMS) and AMP that are already in place and have been operating at the Milton Quarry and Milton Quarry Extension since 2007. In the absence of mitigation measures, the extension of the Milton Quarry below the water table in the MQEE lands would result in a lowering of the surrounding groundwater levels and would be expected to have a negative influence on some of the nearby groundwater-dependent wetlands. The water mitigation system has effectively maintained groundwater levels around the perimeter of the Milton Quarry Extension protecting surrounding water resources including water dependent ecological features. The water management system for the MQEE will be a straightforward addition to the existing system using the same proven techniques for mitigation.

As part of this ToR, GHD will evaluate the potential requirements to adapt the WMS to maintain, or enhance, the existing approved groundwater levels to the east and south of the proposed MQEE extraction area. This will include evaluation and design of additional recharge wells, diffuse discharge(s), watermain, and related equipment as necessary to achieve the mitigation and enhancement objectives for the proposed MQEE.

The proposed adaptation of the WMS will be described in the GWRA as well as in the AMP Addendum and the Site Plans.



The evaluation will include a groundwater modelling analysis to estimate potential numbers and locations of recharge wells, recharge and dewatering flows, water budget, and lake filling times. These analyses will build on the groundwater and surface water analyses that have been ongoing over the last 20 years of Milton Quarry evaluation. The most recent version of the models, as reported in the 5-Year AMP Review, will be updated with the information obtained under this ToR and recent monitoring and WMS operating information.

The proposed MQEE extraction and licence areas exhibit little to no surface water flow, with only one notable surface water body, Wetland U1. Regardless, the changes in catchment areas and potential influence on runoff and discharge will be evaluated and quantified using the topographic mapping and surface water modelling results from the 5-Year AMP Review. Wetland U1 and the more distant wetlands (e.g W36 and W41) are primarily groundwater-dependant features and will be protected or enhanced by the proposed groundwater mitigation measures.

The mitigation and rehabilitation measures will be designed to protect against potential negative effects to water resources and related ecological features. This evaluation will compare the proposed interim extraction groundwater and surface water condition to the existing approved interim extraction condition for full extraction with mitigation. Similarly, the proposed rehabilitation ~~groundwater~~ condition will be compared to the existing approved rehabilitation condition. To the extent feasible and practical, these measures will also be designed to enhance existing conditions where it is evident that a net environmental benefit can be achieved.

This impact assessment and design analysis will include a water budget assessment, extending the assessments that are presently undertaken for the existing quarry and WMS.

Suitable monitoring and adaptive management measures would also be identified as described in the ToR for the AMP, reported separately.



# Memorandum

Updated: March 26, 2021

To: Brian Zeman, MHBC Ref. No.: 010978

From: *P.N. Fitzpatrick*  
Nicholas Fitzpatrick/Kyle Fritz/Richard Murphy/we/290

cc: Kevin Mitchell (CRH); Anthony Goodban (GEC)

**Subject: Terms of Reference: Geology and Water Resources Assessment Report, Including Karst and Hazard Lands Consideration Proposed Dufferin Aggregates Milton Quarry East Extension Region of Halton, Ontario**

## 1. Introduction and Background

GHD has been retained by Dufferin Aggregates, a division of CRH Canada Group Inc. (Dufferin) to provide them with advice pertaining to geology, hydrogeology, and surface water resources in connection with a proposal to extend the Milton Quarry. GHD's advice will include site characterization and impact assessment, as well as recommendations related to monitoring, mitigation, and rehabilitation. This memorandum presents the proposed Terms of Reference (ToR) for this advice. The relevant data, analysis, conclusions, and recommendations will be documented in the Geology and Water Resources Assessment Report. The water and natural resources teams are working in an integrated manner to ensure alignment between the analyses and recommendations presented in the GWRA and Natural Environment Reports.

GHD has also prepared a separate ToR in collaboration with Goodban Ecological Consulting (GEC) pertaining to advice related to an Adaptive Environmental Management and Protection Plan (AMP).

The proposed extension of the Milton Quarry, referred to as the Milton Quarry East Extension (MQEE), represents a proposed extraction area of approximately 16 hectares bounded by the existing East Cell to the north, the existing North Quarry to the west, and the existing Main Quarry at some distance to the southwest and south. The proposed MQEE extraction area is contiguous with the existing East Cell (i.e., it would be extracted as part of the East Cell) and separated from the North Quarry by the Town Line to the west.

These Terms of Reference (ToR) have been prepared in consideration of the comprehensive understanding that already exists with respect to the geology, hydrogeology, and surface water resources in the area of the Milton Quarry, and the existing mitigation measures that have a long proven record of successful operation and protection of water resources and related ecological features. Guidelines available from review agencies, including the Ministry of Natural Resources and Forestry Standards for a Class A Quarry below the water table, the Region of Halton Aggregate Resources Reference Manual, and the Niagara Escarpment Plan, were also considered.



The study of the proposed MQEE lands and surrounding area commenced more than 40 years ago. Over this time extensive investigation and evaluation has occurred and a truly vast amount of data has been collected. The existing Milton Quarry characterization, impact assessment, mitigation measures, and monitoring plan (refer to AMP) were thoroughly vetted through an extensive Joint Agency Review Team (JART) and public consultation process; evaluated and approved by all related government agencies, including the Provincial Joint Board and Cabinet; and the approved plans, including mitigation measures have been successfully operating since 2007. The ongoing monitoring and performance assessment is thoroughly reported to, and reviewed by, relevant government agencies with support from their consultants as warranted. This rigorous approval and operating quarry review process represents the highest known standard of care for any aggregate extraction operation in Ontario or elsewhere.

Dufferin has already committed to integrate the subject site into the state-of-the-art water management system (WMS) and AMP that are already in place and have been operating at the Milton Quarry and Milton Quarry Extension since 2007. The water mitigation system has effectively maintained groundwater levels around the perimeter of the Milton Quarry Extension protecting surrounding water resources including water-dependent ecological features. All approval agencies are familiar with the AMP and the hydrologic and natural environment data collection and assessment that is provided through annual reports and the WebDT data sharing system that allows agencies direct access to hydrogeological data (and other information) at any time. The AMP also requires a comprehensive 5-year review to make any adjustments necessary to make sure the groundwater is maintained to an acceptable level thereby protecting the ecological features dependent upon it. The AMP was approved by the agencies and through annual reporting, as well as a recent 5-year review, has demonstrated that the proposed mitigation system has protected and enhanced natural heritage features surrounding the extension. The water management system for the MQEE will be a straightforward addition to the existing system using the same proven techniques for mitigation.

The reliable understanding and operating basis for the existing Milton Quarry, along with the additional studies described in this ToR, form the basis for the advice and recommendations GHD is preparing related to the proposed MQEE. Existing information on Milton Quarry can be found in the recent 5-Year AMP Review report that was recently completed (GHD, WSP, and GEC, January 24, 2020) and provided to the agencies for review. This extensive document provides a comprehensive report and evaluation of all relevant data and findings. In addition to the 5-Year Review and the on-line WebDT data sharing system, a comprehensive annual water monitoring report is provided and presented to the agencies as well as other specific documents that are prepared from time-to-time.

## **2. Geology**

The Milton Quarry, including the MQEE lands, is situated above the Niagara Escarpment in an area of Amabel dolostone overlain by relatively thin glacial drift deposits. The geologic conditions are well known from the ongoing bedrock extraction operations, historic investigations on and around the MQEE lands, as well as additional studies undertaken as part of this ToR, including:

- 33 new test pits were excavated to determine overburden thickness and characterization (denoted as TPxx-20 on Figure 1)



- 8 new boreholes were drilled to install monitoring wells at 6 locations and these boreholes were also used to determine overburden thickness and depth of Amabel dolostone overlying the Reynales and Cabot Head Formations (denoted as OW78-20 through OW83-21 on Figure 1)
- Updated stratigraphic surfaces will be prepared incorporating the new information
- Geologic cross-sections through the MQEE extraction area and surrounding lands will be prepared
- The bedrock resource volume/tonnage will be calculated based on the available information

Investigative locations are shown on the attached Figure 1.

### **3. Surface Water and Hazard Lands**

The MQEE lands are an upland area with no surface water features within the proposed extraction area. The key surface water feature for consideration is a small seasonal wetland pool referred to as Wetland U1, which is located east of the extraction area. There are also a number of seasonal and permanent pools located further to the east and southeast that form part of the Halton Escarpment Wetland Complex. Based on historic and ongoing data collection it is known that some of these wetlands are directly supported by the groundwater table.

In addition to the existing surface water level information, the following additional studies are being undertaken as part of this ToR:

- 10 new staff gauges were installed at key wetland locations determined in collaboration with GEC (denoted as SG57 through SG66 on Figure 1). These locations are east and south of the proposed MQEE extraction area, enhancing the historical surface water level monitoring network in this area
- Water level transducers were installed at 8 of these surface water monitoring locations
- Water level hydrographs will be prepared for all monitoring locations to assess water level trends and hydroperiods
- Groundwater-surface water interactions will be evaluated as part of the hydrogeology evaluations (Section 4, below)
- Topographic drainage areas will be delineated, including identification of non-draining depressions
- Hazard Land information has been obtained from Conservation Halton and reviewed relative to the proposed MQEE area. No Hazard Land concerns are anticipated beyond consideration of the adjacent wetland areas due to the upland nature of the MQEE lands

Investigative locations are shown on the attached Figure 1.

### **4. Hydrogeology**

In the Milton Quarry area, the groundwater table generally resides in the Amabel dolostone forming an unconfined aquifer. The so-called Amabel Aquifer is a regionally extensive aquifer system (comprised of the



thick Amabel and thin Reynales dolostones) and is the primary groundwater resource in the Milton Quarry area. The aquifer is underlain by the Cabot Head shale which forms a regional aquitard. The Amabel Aquifer is routinely used for private water supply wells and supports some of the seasonal and permanent wetlands in the area.

In addition to relying on the extensive existing hydrogeologic information, including over 340 monitoring wells, multiple pumping tests (including 2 conducted on the MQEE lands at TW1-80), over 150,000 water level measurements and analysis over more than 40 years, the following additional studies are being undertaken as part of this ToR:

- 8 new monitoring wells were installed at 6 locations, including nested monitoring wells at 2 of these locations (denoted as OW78-20 through OW83-21 on Figure 1 with shallow and deep nested monitoring well intervals denoted as "S" and "D", respectively)
- Water level monitoring is being conducted at 27 monitoring wells located on the MQEE lands and areas to the east and south (including some locations that were already part of monitoring programs)
- Water level transducers were installed in 15 of these monitoring wells
- Water level hydrographs will be prepared for all monitoring locations to assess seasonal variations and year-over-year variations where longer term data is available
- Specific combinations of monitoring locations will be utilized to assess water level variations with depth and to compare surface water and groundwater level conditions
- Groundwater level contours will be prepared for spring and fall monitoring events consistent with standard practices for the Existing Milton Quarry. Water levels for these events will also be reflected on the cross-sections
- Groundwater-surface water interactions will be assessed using field observations, combination groundwater/surface water hydrographs, and comparison of groundwater contours to ground surface elevations/topography
- No private water supply well survey is necessary as there are no private lands or water supply wells within 1.2 kilometres of the MQEE extraction area (refer to MHBC letter for September 4, 2020, Figure #13). The water supply wells that are within the Amabel Aquifer are located to the north and west, hydrogeologically separated from the MQEE lands by the other quarry areas and addressed by the existing Milton Quarry monitoring and mitigation measures
- The MQEE lands are outside all Source Water Protection (SWP) designated Wellhead Protection Areas (WHPAs) and therefore no SWP-related studies are necessary as part of this ToR
- Groundwater quality conditions have been extensively evaluated at the Milton Quarry and continue to be monitored through the provisions of the WMS and the private well water supply monitoring program under the AMP and the Ontario Water Resources Act (OWRA) approvals. No additional water quality sampling is necessary for the purpose of assessing the potential impact to water resources for the proposed MQEE; however, additional water quality sampling was undertaken in early 2021 to provide additional baseline water quality data as requested by the Region. This data includes groundwater and



surface water quality sampling at locations associated with the water resources (wetlands) to the east and south of the proposed MQEE extraction area. Adjustments to the existing Milton Quarry monitoring program may be included in the recommended monitoring requirements pursuant to the AMP or the OWRA approvals

Investigative locations are shown on the attached Figure 1.

The various evaluations described in Sections 2, 3, and 4 will include consideration of potential karstification of the dolostone bedrock. Karstification is a normal type of water-driven weathering that is typical of carbonate bedrock in areas such as southern Ontario. The relatively low solubility of the Amabel dolostone (relative to limestone or gypsum), the carbonate-rich overburden, and the limited surface water closed-catchment areas result in low degrees of weathering or karstification in the area of Milton Quarry.

Karst considerations were thoroughly evaluated as part of the previous Milton Quarry Extension approvals and it was determined by the Region of Halton hydrogeologist at that time as well as by the Joint Board, that there were no unusual or demanding challenges arising from karstification for the Milton Quarry Extension. It was determined that the then-proposed Milton Quarry Extension characterization and proposed mitigation measures sufficiently addressed any considerations related to potential karstification. These measures have proven to be effective in protecting water resources, including bedrock springs that had been indicated to be reliant on karst features by parties opposed to the Extension. The quarry extraction of the North Quarry, West Cell, and East Cell over the last 23 years of involvement by GHD have revealed no significant karst features and no hydrogeologic conditions that could not be addressed by the approved mitigation measures.

Based on the above facts, a separate study based solely on potential karst considerations is not necessary and has not been included in this ToR.

## **5. Impact Assessment, Mitigation, and Rehabilitation Measures**

As identified in Section 1 (above) Dufferin has already committed to integrate the subject site into the state-of-the-art water management system (WMS) and AMP that are already in place and have been operating at the Milton Quarry and Milton Quarry Extension since 2007. In the absence of mitigation measures, the extension of the Milton Quarry below the water table in the MQEE lands would result in a lowering of the surrounding groundwater levels and would be expected to have a negative influence on some of the nearby groundwater-dependent wetlands. The water mitigation system has effectively maintained groundwater levels around the perimeter of the Milton Quarry Extension protecting surrounding water resources including water dependent ecological features. The water management system for the MQEE will be a straightforward addition to the existing system using the same proven techniques for mitigation.

As part of this ToR, GHD will evaluate the potential requirements to adapt the WMS to maintain, or enhance, the existing approved groundwater levels to the east and south of the proposed MQEE extraction area. This will include evaluation and design of additional recharge wells, diffuse discharge(s), watermain, and related equipment as necessary to achieve the mitigation and enhancement objectives for the proposed MQEE. The proposed adaptation of the WMS will be described in the GWRA as well as in the AMP Addendum and the Site Plans.





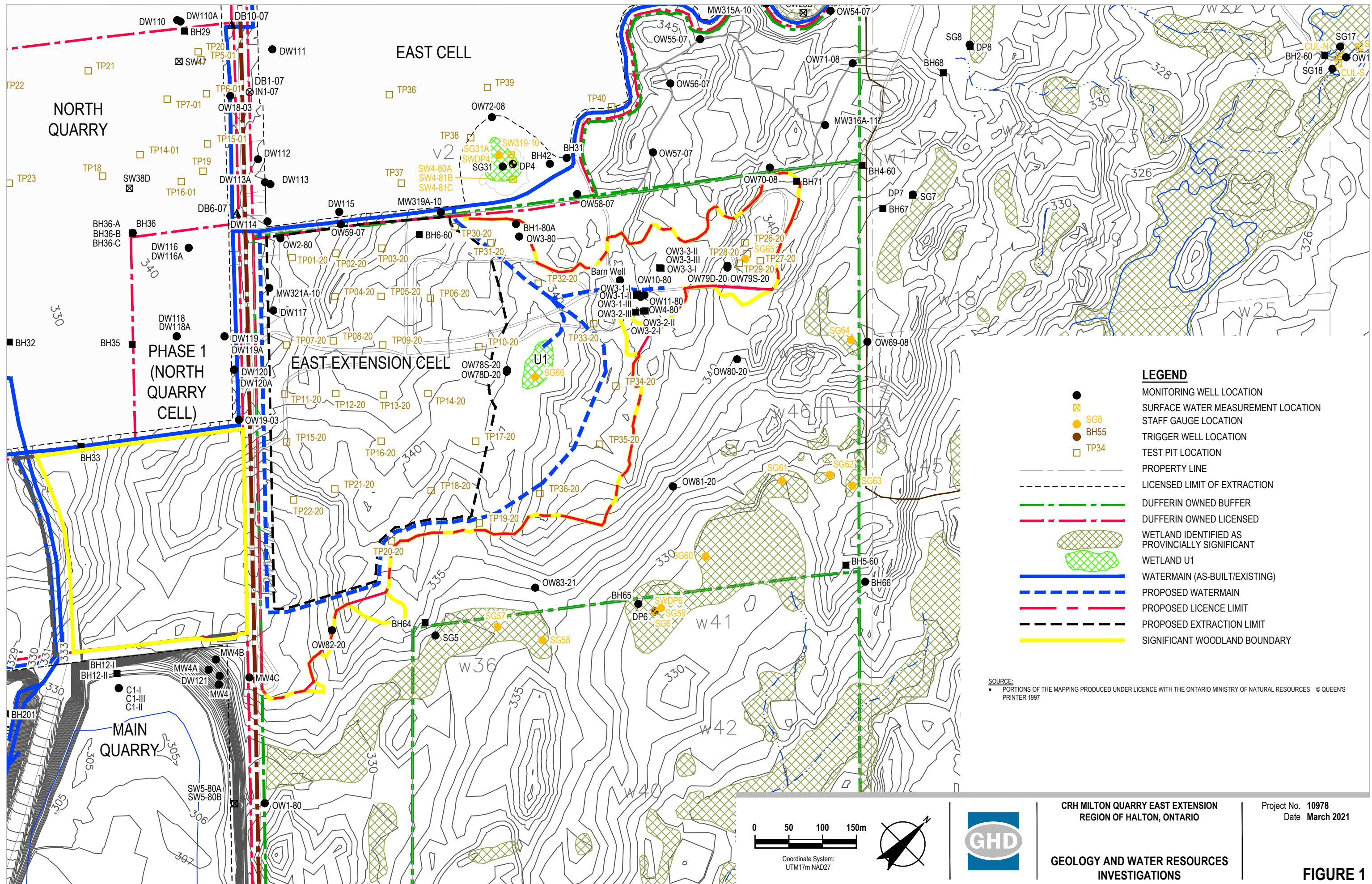
The evaluation will include a groundwater modelling analysis to estimate potential numbers and locations of recharge wells, recharge and dewatering flows, water budget, and lake filling times. These analyses will build on the groundwater and surface water analyses that have been ongoing over the last 20 years of Milton Quarry evaluation. The most recent version of the models, as reported in the 5-Year AMP Review, will be updated with the information obtained under this ToR and recent monitoring and WMS operating information.

The proposed MQEE extraction and licence areas exhibit little to no surface water flow, with only one notable surface water body, Wetland U1. Regardless, the changes in catchment areas and potential influence on runoff and discharge will be evaluated and quantified using the topographic mapping and surface water modelling results from the 5-Year AMP Review. Wetland U1 and the more distant wetlands (e.g. W36 and W41) are primarily groundwater-dependant features and will be protected or enhanced by the proposed groundwater mitigation measures.

The mitigation and rehabilitation measures will be designed to protect against potential negative effects to water resources and related ecological features. This evaluation will compare the proposed interim extraction groundwater and surface water condition to the existing approved interim extraction condition for full extraction with mitigation. Similarly, the proposed rehabilitation condition will be compared to the existing approved rehabilitation condition. To the extent feasible and practical, these measures will also be designed to enhance existing conditions where it is evident that a net environmental benefit can be achieved.

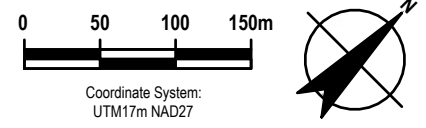
This impact assessment and design analysis will include a water budget assessment, extending the assessments that are presently undertaken for the existing quarry and WMS.

Suitable monitoring and adaptive management measures would also be identified as described in the ToR for the AMP, reported separately.



- LEGEND**
- MONITORING WELL LOCATION
  - SURFACE WATER MEASUREMENT LOCATION
  - SG8
  - BH55
  - TP34
  - PROPERTY LINE
  - LICENSED LIMIT OF EXTRACTION
  - DUFFERIN OWNED BUFFER
  - DUFFERIN OWNED LICENSED
  - WETLAND IDENTIFIED AS PROVINCIALLY SIGNIFICANT
  - WETLAND U1
  - WATERMAIN (AS-BUILT/EXISTING)
  - PROPOSED WATERMAIN
  - PROPOSED LICENCE LIMIT
  - PROPOSED EXTRACTION LIMIT
  - SIGNIFICANT WOODLAND BOUNDARY

SOURCE:  
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CRH MILTON QUARRY EAST EXTENSION  
 REGION OF HALTON, ONTARIO

**GEOLOGY AND WATER RESOURCES  
 INVESTIGATIONS**

Project No. 10978  
 Date March 2021

**FIGURE 1**



Goodban  
Ecological  
Consulting Inc.

**Terms of Reference for a Level 1 and 2 Natural  
Environment Technical Report (NETR) and  
Environmental Impact Assessment (EIA)**

**Dufferin Aggregates Milton Quarry East Extension**

**March 26, 2021**

Prepared for:

**Dufferin Aggregates**

A Division of CRH Canada Group Inc.  
2300 Steeles Avenue West, 4<sup>th</sup> Floor  
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Prepared by:

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# TERMS OF REFERENCE

## Level 1 and 2 Natural Environment Technical Report (NETR) and Environmental Impact Assessment (EIA)

### Dufferin Aggregates Milton Quarry East Extension

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## 1.0 INTRODUCTION

Goodban Ecological Consulting Inc. (GEC) has been retained by Dufferin Aggregates, a division of CRH Canada Group Inc. (Dufferin) to provide them with advice pertaining to the natural environment and ecology in connection with a proposal to extend the Milton Quarry. GEC's advice will include site characterization, impact assessment, and recommendations related to monitoring, mitigation, and rehabilitation. This document presents the proposed Terms of Reference (ToR) for the preparation of a Natural Environment Level 1 and 2 Natural Environment Technical Report (NETR) and Environmental Impact Assessment (EIA). A separate ToR has been prepared by GHD, in collaboration with GEC, pertaining to advice related to an Adaptive Environmental Management and Protection Plan (AMP).

The proposed extension of the Milton Quarry, referred to as the Milton Quarry East Extension (MQEE), represents a proposed extraction area of approximately 16 hectares bounded by the existing East Cell to the north, the existing North Quarry to the west, and the existing Main Quarry at some distance to the southwest and south. The proposed MQEE extraction area is contiguous with the existing East Cell (i.e., it would be extracted as part of the East Cell) and separated from the North Quarry by the Nassagaweya-Esquesing Townline to the west. See **Figures 1 and 2**.

The 66.5 ha property contains some large open fields that were formerly used as hayfields and forested areas, most of which form part of the Halton Forest North ANSI. The Halton Forest, which covers around 35 km<sup>2</sup>, is comprised of the Halton Forest South, Halton Forest North and Speyside Forest ANSIs. There are a number of wetlands located within the forest that form part of the Halton Escarpment Wetland Complex and there is a single small wetland within the open field area (mapped as Wetland U1 on **Figure 3**).

Ecological work related to the Milton Quarry Extension, circa 1998 to 2002, identified several species at risk (SAR) in the local area. A number of wetlands were identified that function as breeding pools for the Jefferson Salamander (Endangered) and Unisexual Ambystoma (Jefferson Salamander Dependent Population) (Endangered). Other species at risk (SAR) identified around that time included American Ginseng (Endangered), Butternut (Endangered) and Louisiana Waterthrush (Threatened).

The Terms of Reference (ToR) for the Level 1 and 2 Natural Environment Technical Report (NETR) and Environmental Impact Assessment (EIA) have been prepared in consideration of the comprehensive understanding that already exists with respect to the natural environment, geology and water resources in the area of the Milton Quarry and the existing mitigation measures that have a long-proven record of successful operation and protection of water resources and related ecological features. The Terms of Reference (ToR) are provided below under the following section headings:

- 2.0 Natural Environment – Legislative and Policy Framework
- 3.0 Natural Environment Study Area
- 4.0 Site Characterization
- 5.0 Natural Environment Level 1 Report
- 6.0 Natural Environment Level 2 Report and EIA
- 7.0 References

## 2.0 NATURAL ENVIRONMENT – LEGISLATIVE AND POLICY FRAMEWORK

The Level 1 and 2 Natural Environment Technical Report (NETR) and Environmental Impact Assessment (EIA) will address the relevant legislative and policy components of the following Acts and Plans:

- *Aggregate Resources Act*;
- *Endangered Species Act (ESA 2007)*;
- Provincial Policy Statement (2020);
- Niagara Escarpment Plan (2017);
- Halton Region Official Plan (2015); and,
- Town of Halton Hills Official Plan (2019).

### 2.1 Aggregate Resources Act (ARA)

Under the *Aggregate Resources Act* there is a requirement to complete a Natural Environment Level 1 study and also a Natural Environment Level 2 study where significant natural features are identified within 120 m of the site during the Level 1 investigations.

The requirements for a Natural Environment Level 1 study are:

*Determine whether any of the following features exist on and within 120 m of the site: significant wetland, significant portions of the habitat of endangered and threatened species, fish habitat, significant woodlands (south and east of the Canadian Shield), significant valley lands (south and east of the Canadian Shield), significant wildlife habitat, and significant areas of natural and scientific interest (MNR 1997).*

The requirements for a Natural Environment Level 2 study are:

*Impact assessment where the Level 1 study identified any features on or within 120 m of the site in order to determine any negative impacts on the natural features or ecological functions for which the area is identified, and any proposed preventative, mitigative, or remedial measures (MNR 1997).*

Policy 2.01.07 compiled by the Lands and Waters Branch of the Aggregate and Petroleum Resources Section of MNR (2006) summarizes the guiding principles of a Natural Environment Report:

*The purposes of the Natural Environment report are to determine the presence of significant natural heritage features/areas and fish habitat in accordance with the Provincial Policy Statement 2005, and to ensure that any necessary preventative, mitigative or remedial measures are undertaken for their protection.*



## 2.2 Endangered Species Act (ESA 2007)

The provincial Endangered Species Act (ESA 2007) was developed to:

- Identify species at risk, based upon best available science;
- Protect species at risk and their habitats and to promote the recovery of species at risk; and
- Promote stewardship activities that would support those protection and recovery efforts.

The ESA protects all Endangered, Threatened and Extirpated species listed on the Species at Risk in Ontario (SARO) list. These species at risk are legally protected from harm or harassment and their associated habitats are legally protected from damage or destruction, as defined under the ESA.

Certain types of development may be permitted in habitats of Endangered and Threatened species under certain conditions. For example, an ESA 17(2)(b) “Overall Benefit” may be issued if a proponent can demonstrate an overall benefit to the species in question. For some species (e.g., Bobolink and Eastern Meadowlark), Ontario Regulation 242/08 allows for development to proceed provided that a larger area of suitable habitat is created elsewhere prior to the activity commencing. In the case of Butternut, retainable trees may be removed provided that compensatory plantings are provided elsewhere and the rules in regulation are followed.

The Ministry of Environment, Conservation and Parks (MECP) is responsible for the administration of the *Endangered Species Act*. The proponent will pursue permits and authorizations for the Milton Quarry East Extension directly with MECP, but relevant information will also be provided in the NETR & EIA.

## 2.3 Provincial Policy Statement (PPS 2020)

The Provincial Policy Statement (2020) was issued under Section 3 of the *Planning Act*. The NETR & EIA will address policies relevant to Natural Heritage (section 2.1) with some reference to certain other policies.

Eight types of natural heritage features are defined in the PPS, as follows:

- Significant Wetlands;
- Significant Coastal Wetlands;
- Significant Woodlands;
- Significant Valleylands;
- Significant Wildlife Habitat (SWH);
- Fish Habitat;
- Habitat of Endangered and Threatened Species; and,
- Significant Areas of Natural and Scientific Interest (ANSIs).

Development and site alteration are not permitted in Significant Wetlands or in Significant Coastal Wetlands. Development and site alteration are not permitted in Significant Woodlands, Significant Valleylands, Significant Wildlife Habitat or Significant ANSIs, unless it is demonstrated that there will be no negative impacts on the associated natural features or their ecological functions.

Development and site alteration are not permitted in the habitat of Endangered and Threatened species or in Fish Habitat, except in accordance with provincial and federal requirements. Development and site alteration may be permitted on lands adjacent to significant natural heritage features (i.e., within 120 m of the Subject Lands, as identified in the Natural Heritage Reference Manual (MNR 2010) if it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

## **2.4 Niagara Escarpment Plan (NEP 2017)**

The Niagara Escarpment Plan was first approved in 1985 and was last amended in 2017 and it is administered by the Niagara Escarpment Commission (NEC). The objectives of the Niagara Escarpment Plan (NEP) specific to this application include Sections 2.6 (Development Affecting Water Resources), 2.7 (Development Affecting Natural Heritage) and 2.9 (Mineral Aggregate Resources). Sections 2.7.3 through 2.7.8 and Section 2.7.12 include specific Development Criteria, as follows:

*a) 2.7.3. The diversity and connectivity between key natural heritage features and key hydrologic features shall be maintained, and where possible, enhanced for the movement of native plants and animals across the landscape.*

*b) 2.7.4. Development in the other natural features not identified as key natural heritage features or key hydrologic features should be avoided. Such features should be incorporated into the planning and design of the proposed use wherever possible, and the impact of the development on the natural feature and its functions shall be minimized.*

*c) 2.7.5 Where policies or standards of other public bodies or levels of government exceed the policies related to key natural heritage features or key hydrologic features in this Plan, such as may occur with habitat of endangered species and threatened species under the Endangered Species Act, 2007; with natural hazards where section 28 regulations of the Conservation Authorities Act apply; or with fisheries under the Federal Fisheries Act, the most restrictive provision or standard applies.*

*d) 2.7.6 If in the opinion of the implementing authority, a proposal for development within 120 metres of a key natural heritage feature has the potential to result in a negative impact on the feature and/or its functions, or on the connectivity between key natural heritage features and key hydrologic features, a natural heritage evaluation will be required that:*

*a. Demonstrates that the development, including any alteration of the natural grade or drainage, will protect the key natural heritage feature or the related functions of that feature;*

*b. Identifies planning, design and construction practices that will minimize erosion, sedimentation and the introduction of nutrients or pollutants and protect and, where possible, enhance or restore the health, diversity and size of the key natural heritage feature;*

*c. Determines the minimum vegetation protection zone required to protect and where possible enhance the key natural heritage feature and its functions; and*

*d. Demonstrates that the connectivity between key natural heritage features and key hydrologic features located within 240 metres of each other will be maintained and where possible enhanced for the movement of native plants and animals across the landscape. Except with respect to a key natural heritage feature that is solely the habitat of endangered species or threatened species, which is subject to Par 2.7.8 below.*

*e) 2.7.7 For the purposes of 2.7.6, a vegetation protection zone shall:*

*a. Be of sufficient width to protect and where possible enhance the key natural heritage feature and its functions from the impacts of the proposed change and associated activities that may occur before, during, and after, construction;*

*b. Be established to achieve, and be maintained as, natural self-sustaining vegetation; and*

*c. In the case of Areas of Natural and Scientific Interest (Earth Science and Life Science), include without limitation an analysis of land use, soil type and slope class.*

*f) 2.7.8 Development within the habitat of endangered species and threatened species:*

*a. Located within Escarpment Natural Areas and Escarpment Protection Areas, is not permitted, except for development referred to in Parts 2.7.2 a) b) c) d) or e) which may be permitted provided it is in compliance with the Endangered Species Act, 2007; and*

*b. Located within Escarpment Rural Areas, Mineral Resource Extraction Areas, Urban Areas, Minor Urban Centres and Escarpment Recreation Areas, is not permitted unless it is in compliance with the Endangered Species Act, 2007.*

*g) 2.7.12 Development where permitted in woodlands should protect and where possible enhance the woodland and associated wildlife habitat. All development involving the cutting of trees requires approval from the implementing authority, subject to the following criteria:*

*a. Cutting of trees and removal of vegetation shall be limited to the minimum necessary to accommodate the permitted use;*

*b. Using tree-cutting methods designed to minimize negative impacts to the natural environment, including surface drainage and groundwater;*

*c. Minimizing disruption to wildlife habitat in the area;*

*d. Retaining the diversity of native species;*

*e. Aiming over the long term to protect and where possible enhance the quality and biodiversity of the woodland;*

*f. Protecting trees and vegetation to be retained by acceptable means during construction; and*

*g. Maintaining existing tree cover of other stabilizing vegetation, on steep slopes in excess of 25 per cent (1:4 slope).*

While the Development Criteria listed above relate to natural heritage, NEP Section 2.6 (Development Affecting Water Resources) must also be considered in the Natural Environment Technical Report.

Section 2.9 states that mineral aggregate operations may be permitted in key natural heritage features and any vegetation protection zone (VPZ) associated therewith, except for wetlands and significant woodlands, that are not young plantation or early successional habitat (as defined by the MNRF).

Mineral aggregate operations may be permitted in a key natural heritage feature or its VPZ, which is solely the habitat of endangered or threatened species and not any other key natural heritage feature, provided it is in compliance with the Endangered Species Act, 2007.

## **2.5 Halton Region Official Plan (2015) and Guidelines**

### **2.5.1 Halton Region Official Plan (2018)**

The Regional Official Plan (OP) sets its own Natural Heritage System (NHS) policies.

No key features are located within the limit of extraction, but several key features are located within the 120 m adjacent lands. Given that portions of the adjacent lands are located within the RNHS, the following Regional OP policies apply:

*Require the proponent of any development or site alteration that meets the criteria set out in Section 118(3.1) to carry out an Environmental Impact Assessment (EIA) ... The purpose of an EIA is to demonstrate that the proposed development or site alteration will result in no negative impacts to that portion of the Regional Natural Heritage System or unmapped Key Features affected by the development or site alteration by identifying components of the Regional Natural Heritage System as listed in Section 115.3 and their associated ecological functions and assessing the potential environmental impacts, requirements for impact avoidance and mitigation measures, and opportunities for enhancement. The EIA shall, as a first step, identify Key Features on or near the subject site that are not mapped on Map 1G (Section 118(3)).*

As noted in Section 118(3) of the Regional OP, Section 115.3 lists the components of the RNHS as follows:

*115.3 The Regional Natural Heritage System is a systems approach to protecting and enhancing natural features and functions and is scientifically structured on the basis of the following components:*

- (1) Key Features, which include:
  - a. Significant habitat of endangered and threatened species;*
  - b. Significant wetlands;*
  - c. Significant coastal wetlands;*
  - d. Significant woodlands;*
  - e. Significant valleylands;*
  - f. Significant wildlife habitat;*
  - g. Significant areas of natural and scientific interest; and*
  - h. Fish habitat;**
- (2) Enhancements to the Key Features including Centres for Biodiversity;*
- (3) Linkages;*
- (4) Buffers;*
- (5) Watercourses within a Conservation Authority Regulation Limit or that provide a linkage to a wetland or a significant woodland; and*
- (6) Wetlands other than those considered significant under Section 115.3(1)b.*

It is noted that Key Features in the Regional Natural Heritage System (RNHS) are not mapped individually on Map 1G. A particular area within the RNHS may contain several key features, e.g., a forested area may qualify as Significant Woodland and also contain Significant Wetlands, Significant Wildlife Habitat, etc.

Reference will also be made to the following Mineral Resource Extraction Areas policies of the ROP, including Sections 107(3), 107(3.1), 107(5), 110(2), 110(6), 110(7.1), 110(7.2), 110(8) and 110(8.1), as appropriate.

## **2.5.2 ROP Guidelines – Aggregate Resources Reference Manual**

The ROP Guidelines were prepared to clarify, inform and aid in the implementation of the Halton Region Official Plan policies. They provide direction and outline approaches that can be used to satisfy the relevant policies of the Plan. They are not meant to introduce additional policy requirements.

Section 4.4, Environmental Impact Study, is the relevant section that provides guidance for the preparation of the EIA. The intent of the Guidelines is to demonstrate that the Proposal will not have a negative impact on natural features or their ecological functions; that extraction will occur in a manner that minimizes environmental impacts; that long-term ecological function and

biodiversity of the Natural Heritage System can be maintained, restored or even improved; and within the NEP area, that the Proposal will maintain the Niagara Escarpment land in its vicinity as a continuous natural environment and will be compatible with the Niagara Escarpment and the lands in its vicinity.

The objectives of the Proposal when applying the Guidelines include the following:

- 1. To identify all natural heritage features that have the potential to be impacted by the proposed aggregate operations.*
- 2. To identify the connections and linkages between natural heritage features and areas, surface water features and groundwater features.*
- 3. To determine how the diversity and connectivity of the natural features in an area and the long-term ecological function and biodiversity of the natural heritage system can be maintained, restored or where possible improved.*
- 4. Identify all potential impacts on significant natural heritage features and/or key natural heritage features.*
- 5. Determine whether the proposal will have negative impacts on significant natural heritage features and/or key natural heritage features.*
- 6. Determine what mitigation and monitoring measures, if required, are necessary to ensure that environmental impacts are minimized.*
- 7. To determine and make recommendations on how net environmental gain can be provided in the short term and in the longer term both on the site and for the surrounding area.*
- 8. Within the NEP area, identify all potential individual and cumulative impacts on the natural environment.*

## **2.6 Town of Halton Hills Official Plan (2019)**

Part C of the Town of Halton Hills Official Plan (2019) contains *Environmental Management Policies*. Policy C2 details the requirements for Environmental Impact Studies, as follows:

### **C2 ENVIRONMENTAL IMPACT STUDIES**

*Where the policies of this Plan require that an Environmental Impact Study (EIS) be prepared, such an EIS shall be prepared in accordance with the requirements of this section and Terms of Reference approved by the Town and the Region, in consultation with the appropriate Conservation Authority and the proponent. In the preparation of an EIS, reference shall be made to the Environmental Impact Assessment Guidelines of the Region of Halton.*

## C2.1 PURPOSE OF AN EIS

*The purpose of an EIS is to:*

- a) *collect and evaluate the appropriate information in order to have a complete understanding of the boundaries, attributes and functions of natural heritage features and associated ecological and hydrological functions; and,*
- b) *make an informed decision as to whether or not a proposed use will have a negative impact on the natural heritage features and ecological and hydrological functions.*

*Any EIS required by this Plan must describe the natural heritage features and ecological functions, identify their significance and sensitivities and describe how they could be affected by a proposed use. The EIS should give consideration to the relevant aspects and inter relationships of various components of the Natural Heritage System on and off the site. In addition, the EIS must address how the proposed development will protect, maintain or restore the natural features and ecological functions of the Natural Heritage System.*

*The Town and the Region, in consultation with the appropriate Conservation Authority, must approve an EIS prior to the granting of development approvals. The recommendations of an EIS shall be implemented through official plan amendments, zoning by-laws, subdivision conditions, site plan control, or applicable regulations.*

## C.2.2 WHAT AN EIS SHOULD DEMONSTRATE

*Before development is approved in the area subject to the EIS, the EIS shall demonstrate that the relevant policies of this Plan are met, including, for mineral aggregate extraction operations, the principle of net environmental gain as set out in Section E6.4.3.5 of this Plan. The EIS should demonstrate that the use will:*

- a) *not have a negative impact on significant natural heritage features and related ecological functions;*
- b) *not discharge any substance that could have an adverse effect on air quality, groundwater, surface water and associated plant and animal life;*
- c) *be serviced by an adequate supply of water and that the groundwater taking associated with the use will not have an adverse effect on existing water supplies, surface water features and associated plant and animal life;*
- d) *not cause erosion or siltation of watercourses or unacceptable changes to watercourse morphology;*
- e) *not interfere with groundwater recharge to the extent that it would adversely affect groundwater supply for any use;*

- f) *not cause an increase in flood potential on or off the site;*
- g) *maintain/enhance/restore/rehabilitate the natural condition of affected watercourses, and protect/enhance/restore/rehabilitate aquatic habitat;*
- h) *not encourage the demand for further development that would negatively affect wetland function or contiguous wetland areas;*
- i) *enhance and restore endangered terrestrial and aquatic habitat where appropriate and feasible;*
- j) *not unduly interfere with the function of existing or potential natural corridors that are determined to be of significance;*
- k) *not lead to a reduction to the extent of significant woodlands within the Green lands System; and,*
- l) *not lead to species loss or negative impacts on endangered, threatened or rare species and/or their habitat.*

*In determining whether the above criteria have been satisfied, reference may be made to applicable federal and provincial standards and regulations as well as referring to the relevant policies of this Plan.*

### **3.0 NATURAL ENVIRONMENT STUDY AREA**

Other than along Townline, the proposed licence boundary generally follows the interpreted Significant Woodland boundary as shown on **Figure 3**. The study area extends to 120 m beyond the licence limit. The study area has been extended beyond the 120 m limit in some areas, in order to capture the first tier of wetlands located within the forest.

### **4.0 SITE CHARACTERIZATION**

The Natural Environment Technical Report will provide a comprehensive characterization of the present-day existing conditions, including landscape setting, surficial geology, physiography, soils, drainage, vegetation communities and flora, and wildlife. The site characterization will be based on at least the following:

- Technical reports prepared for the previous Milton Quarry Extension;
- Standard technical references (e.g., Physiography of Southern Ontario, Soil Survey of Halton County, etc.);
- Other technical reports prepared for the current Milton Quarry East Extension (e.g., Water Resources, Agriculture, etc.);
- Available background information; and,
- Current, detailed ecological field surveys of the Milton Quarry East Extension study area.



## **4.1 BACKGROUND INFORMATION AND INTEGRATION WITH OTHER DISCIPLINES**

The ecological field survey program for the Milton Quarry East Extension is described below. The data collected through this program will be used to characterize the study area, complete a biophysical analysis and identify key ecological features and functions. Relevant information from the Geology & Water Resources Assessment Report in preparation by GHD, and the Adaptive Management and Protection Plan (AMP) Addendum in preparation by GHD and GEC, will be integrated into the NETR/EIA. GEC and GHD recognize the critical importance of taking a multi-disciplinary and highly coordinated approach that addresses the inherent linkages between groundwater, surface water and water-dependent ecological features.

Background information sources will be consulted as appropriate, including the following:

- Conservation Halton Database. Mapping of hazards, wetlands, watercourses, steep slopes, fish survey stations and plant/wildlife observation data.
- Ecoplans Limited. 2000. Dufferin Aggregates Milton Quarry Extension – Environmental Impact Assessment. Ecoplans Limited, Kitchener, Ontario. 86 pp + figures + appendices.
- Goodban Ecological Consulting Inc. (GEC) annual wetland monitoring reports for the Milton Quarry Extension from 2007 to 2019.
- Natural Heritage Information Centre (NHIC) Database.
- Riley, J.L., J.V. Jalava and S. Varga. 1996. Ecological Survey of the Niagara Escarpment Biosphere Reserve. Volume I. Significant Natural Areas. Volume II. Technical Appendices. Ontario Ministry of Natural Resources, Southcentral Region, Peterborough, Ontario. Open File Site Report SR 9601. v + 629 pp., vii + 310 pp.

## **4.2 ECOLOGICAL FIELD SURVEY PROGRAM**

The NETR will provide full details on the ecological field surveys that were/are undertaken, including methodologies used for field studies. A table will be provided that includes the following fields: date, survey type/purpose, observer, timing of survey visit and weather conditions.

### **4.2.1 VEGETATION AND FLORA**

#### **4.2.1.1 Vegetation Communities (ELC Units)**

Vegetation community polygons were first identified on aerial photography and then verified in the field. Vegetation community types were mapped and described generally following the Ecological Land Classification (ELC) for Southern Ontario (Lee et al. 1998). Field surveys were undertaken in 2019 and 2020.

#### **4.2.1.2 Vascular Plants**

The flora of the study area was characterized through detailed botanical surveys of more sensitive habitats and general surveys of more disturbed habitats. Surveys were completed throughout the growing season during 2019 and 2020. A vascular plant species checklist will be generated and species status will be assessed at several levels, including Ontario (Oldham and Brinker 2009), the Niagara Escarpment (Riley et al. 1996) and Halton Region (Crins et al. 2006).

Particular attention was paid to surveying the flora of the proposed extraction area, the proposed water management system footprint and the first tier of wetlands adjacent to the proposed extraction area.

#### **4.2.1.3 Species at Risk (SAR) Plants**

Focused surveys for Butternut and American Ginseng were completed in 2020. Searches for Butternut were focused on the proposed extraction area and the proposed water management system footprint. Searches for American Ginseng were focused on the forested areas, particularly those areas that are less disturbed and/or contain bedrock outcrops.

#### **4.2.1.4 Tree Density Survey**

Tree density surveys were completed in select areas within the proposed extraction footprint, to determine if a particular area meets the woodland definition using stem density values, as required by the Halton Region Official Plan (2015), and to determine if a particular area is an *early successional* woodland.

The tree density surveys were completed using circular plots, the size of which were selected based on the size of the overall community as well as variability of species and density within the feature and ranged between a 4 m and 15 m radii. Trees within plots were tallied by species and categorized as having a diameter at breast height (dbh) of > 20 cm, 13 - 20 cm, 6 - 12 cm or ≤ 5 cm.

#### **4.2.1.5 Significant Woodland Boundary Delineation and Staking**

The boundary of the Significant Woodland will be staked in those areas where the woodland edge is in proximity to the proposed extraction footprint and water management system footprint. The staked boundaries will be reviewed with the Region of Halton's forester.

#### **4.2.1.6 Wetland U1 Boundary Delineation and Staking**

The boundary of Wetland U1 will be delineated and staked by a qualified ecologist certified to evaluate wetlands in Ontario under the Ontario Wetland Evaluation System (OWES). The staked boundary will be reviewed with Conservation Halton staff at the appropriate time of year (June – September).

## 4.2.2 WILDLIFE

The wildlife survey methods are described below under the following headings:

- 4.2.2.1 Amphibians and Reptiles
- 4.2.2.2 Breeding Birds
- 4.2.2.3 Other Wildlife Groups

### 4.2.2.1 Amphibians and Reptiles

#### *Salamander Surveys*

As part of the ecological work related to the Milton Quarry Extension application, surveys for mole salamanders were completed across a wide area in the vicinity of the original Extension in the late 1990's and 2002. Those surveys focused on checking potentially suitable breeding pools for the presence of Jefferson Salamander Complex egg masses. For each pool containing egg masses, several would be collected and transported to the University of Guelph to be raised and tissue samples were used for genetic identification. The small Wetland U1 (**Figure 3**) in the open field was not surveyed as part of the late 1990's and 2002 salamander surveys.

Minnow trapping for salamanders in selected wetlands, including the small Wetland U1 in the open field, was completed during spring 2019 and 2020. Sampling of adult salamanders involved the setting of minnow traps in suitable pools within wetlands on and adjacent to the Speyside Property on mild, rainy evenings when salamanders are most likely to be moving to breeding pools. The weather forecast was monitored regularly starting in late March. Field reconnaissance was undertaken to monitor ice cover on potential breeding ponds and snow depths within the forest.

Unbaited minnow traps (maximum mesh size of 0.64 cm) were used to capture adult salamanders within selected wetlands. Each trap was marked with flagging tape and the ownership of the trap. Each trap was tied to a suitable anchor on the bank, using nylon rope. The traps were checked early the following morning. The minnow traps were removed from the pools on nights when no/minimal salamander movement was anticipated.

Jefferson Complex salamanders captured in traps were released where they were captured after tissue samples (tail tips) have been collected. Sampling involved the removal of a small portion of the tail (not exceeding 5 mm). Tail tips were removed using a single-edged disposable razor blade or scalpel which was sterilized with 70% ethyl alcohol between each specimen. Handling of each salamander was kept to the absolute minimum. Samples were placed in vials in ethyl alcohol and sent to Dr. Bogart at the University of Guelph for genetic analysis. An MNRF Jefferson Salamander Presence/Absence Form was filled out and a copy was submitted with the samples to Dr. Bogart.

Each sample was labeled with the pond number where the sample was collected, sample number and date of collection. The UTM coordinates of the capture location, the date the sample was collected, the names of the collectors, and the permit numbers for the Scientific

Wildlife Collector's Authorization and the permit under the *Endangered Species Act, 2007* and the Animal Care Protocol number were recorded on the data forms.

Minnow trapping surveys were completed during spring 2019 and 2020 under the following authorizations:

- ESA 17(2)(b) permit or online registration (MECP).
- Wildlife and Scientific Collector's Authorization (MNRF).
- Animal Care Protocol (MNRF).

#### *Amphibian Call Count Surveys*

Song Meter SM4 units were deployed at selected wetlands in 2019 and 2020, from around the time of the spring thaw until late June (approximately 75 nights). Recordings were made in 10-minute intervals, commencing 30 minutes, 90 minutes and 150 minutes after sunset.

Recordings will be analyzed to begin establishing baseline conditions for amphibian breeding activity and as part of the site characterization and assessment. Data from evenings with good frog call activity will be analyzed and call intensity will be assessed using the following criteria:

- Level 1 - Individuals can be counted, calls not overlapping.
- Level 2 – Individual calls overlapping.
- Level 3 – Full chorus.

The aim of the surveys is to confirm the diversity of frogs and toads using a particular wetland for breeding activity, and to determine the peak calling intensity for each species if possible.

#### *Snake Habitat and Visual Encounter Surveys*

Locations of potential snake hibernacula within the proposed extraction area and the proposed water management system footprint were surveyed several times during early periods of warm weather (e.g., April and early May). Snake visual encounter surveys were conducted on mild spring mornings (i.e., minimum 8°C on sunny days or 15°C on overcast days, no greater than 25°C) between 8 am and 5 pm.

Target sites included rock outcrops and fissures, and rock/stone piles along field boundaries. Otherwise, snakes were surveyed on an opportunistic basis. None of the snake species are occurring within the study area are species at risk.

### **4.2.2.2 Breeding Birds**

#### *Grassland Birds*

Breeding bird surveys of the grassland areas were completed in both 2019 and 2020, on three separate mornings each year, following the MNR's (2011) *Survey Methodology under the Endangered Species Act, 2007: Dolichonyx oryzivorus (Bobolink)*.

MNRF's survey protocol for Bobolink has the following requirements:

- Set up point count stations to provide good coverage. Observers can use a wandering transect survey between point count stations.
- Complete *at least* 3 sets of point count surveys. The surveys should occur between the last week in May and the first week in July, with each survey separated from the previous one by at least a week.
- Surveys should start around dawn and continue until no later than 10 am. The observer will undertake 10 minutes of observations and listening at each point count station. Record information on all Bobolink and Eastern Meadowlark observed or heard. Nest searches should be avoided.
- Record notes on habitat characteristics including broad descriptors (e.g. field, hedgerow, fenceline), vegetation height, dominant species, proportions of grasses versus broad-leaved plants, and depth of thatch layer.

### *Forest Birds*

Breeding bird surveys were completed on three separate mornings during the breeding season in 2020. The focal area was the forested habitats between the edge of the open fields and the first tier of wetlands to the east and south of the proposed extraction area. Point count stations were set up to provide good coverage of the area and the various habitats. A wandering transect survey was completed when moving between point count stations.

Three sets of point count surveys were completed in 2020. The surveys occurred between the last week in May and the first week in July, with each survey separated from the previous one by at least a week. Surveys started around dawn and continued until no later than 10 am (approximately). Ten minutes of observations and listening was completed at each point count station.

Breeding birds were surveyed by 10-minute stationary point counts generally following the Second Ontario Breeding Bird Atlas methodology (Cadman et al. 2007), which called for 5-minute point counts. All species and daily numbers of individuals were recorded during each of the site visits.

The breeding bird codes from the Ontario Breeding Bird Atlas (Cadman et al. 2007) were not used in this study because they are not appropriate for a more intensive study on a small site. The purpose of the Atlas is to determine the highest level of breeding evidence in 10- by 10-km squares. Birds seen within a square of this size have a good probability of nesting somewhere in the square provided that suitable habitat is present. However, the application of these codes to a small site can result in an incorrect assessment of the breeding status of a species. As an example, if a Barn Swallow was observed at the site on more than two occasions and more than a week apart, then according to the Atlas project this would qualify it as a probable breeder, even though there is no suitable nesting habitat for it onsite or nearby. All bird species that were located on the proposed license area and adjacent lands were recorded. A conservative

approach was adopted for the surveys and all species were considered to be breeding unless there was convincing evidence to the contrary.

#### **4.2.2.3 Other Wildlife Groups**

Observations of other wildlife groups such as dragonflies, damselflies, butterflies and mammals were made in conjunction with the other ecological field surveys described above.

### **5.0 NATURAL ENVIRONMENT LEVEL 1 REPORT**

As required under the ARA, the Natural Environment Level 1 Report will identify if any of the following features occur within the study area:

- Significant Wetlands;
- Significant Coastal Wetlands;
- Significant Woodlands;
- Significant Valleylands;
- Significant Wildlife Habitat (SWH);
- Fish Habitat;
- Significant Areas of Natural and Scientific Interest (ANSIs); and,
- Habitat of Endangered and Threatened Species.

The Niagara Escarpment Plan (NEP) also requires consideration of a) “Wetlands” and b) “Habitat of Special Concern Species in Escarpment Natural and Escarpment Protection Areas”.

Based on GEC’s review of available background information and detailed ecological field surveys, the following features have been identified within the Milton Quarry East Extension Study Area:

- Significant Wetlands;
- Significant Woodlands;
- Significant Wildlife Habitat (SWH);
- Significant Areas of Natural and Scientific Interest (ANSIs);
- Habitat of Endangered and Threatened Species;
- Wetlands; and,
- Habitat of Special Concern Species in Escarpment Natural and Escarpment Protection Areas”.

The Natural Environment Level 2 Report will describe each of the above-listed features in detail.

## **6.0 NATURAL ENVIRONMENT LEVEL 2 REPORT AND EIA**

The Natural Environment Level 2 Report and EIA will describe each of the above-listed features in detail. A description of the proposed quarry extension will be provided, including details for the proposed mitigation system, Ecological Enhancement Plan (EEP) for land that will not be extracted and the Rehabilitation Plan for land that will be extracted. The impact assessment will take into account the extraction footprint and the footprint of the proposed WMS.

### **6.1 FEATURE-SPECIFIC DESCRIPTIONS, SURVEY RESULTS, EVALUATION AND FINDINGS**

For each of the features listed below, mapping will be provided that clearly identifies all significant natural heritage features on a current air photo base.

#### **6.1.1 SIGNIFICANT WETLANDS**

- The NETR/EIA will characterize in detail each of the wetlands that are located closest to the Milton Quarry East Extension extraction footprint. Information will be provided on wetland hydrology, vegetation communities, flora and wildlife for each wetland.
- The NETR/EIA will discuss the significance of Wetland U1 in the context of the Ontario Wetland Evaluation System (OWES). It should be noted that Wetland U1 is proposed to be protected with a 50 m buffer, wetland hydrology will be improved through WMS mitigation measures and the surrounding habitat will be greatly enhanced as part of the proposed Ecological Enhancement Plan (EEP). The rationale for the proposed 50 m buffer from the extraction footprint will be discussed in the NETR/EIA.

#### **6.1.2 SIGNIFICANT WOODLANDS**

- The NETR/EIA will include detailed discussion on Significant Woodlands, including their assessment per ROP policies and criteria, and provide the rationale for the various Significant Woodland buffers and their treatments.
- The NETR/EIA will include an evaluation of the significance of woodland features within the proposed Milton Quarry East Extension extraction footprint, in accordance with ROP s.277.

#### **6.1.3 SIGNIFICANT WILDLIFE HABITAT**

- The Natural Heritage Reference Manual (OMNR 2010) and the Significant Wildlife Habitat Technical Guide identify four main types of Significant Wildlife Habitat:

Seasonal concentrations of animals;  
Rare and specialized habitats for wildlife;  
Habitats of species of conservation concern; and,  
Animal movement corridors.

- The SWHTG identifies 14 types of seasonal concentrations of animals that may be considered Significant Wildlife Habitat. They are:

Winter deer yards;  
Moose late winter habitat;  
Colonial bird nesting sites;  
Waterfowl stopover and staging areas;  
Waterfowl nesting areas;  
Shorebird migratory stopover areas;  
Landbird migratory stopover areas;  
Raptor winter feeding and roosting areas;  
Wild Turkey winter range;  
Turkey Vulture summer roosting areas;  
Reptile hibernacula;  
Bat hibernacula;  
Bullfrog concentration areas; and,  
Migratory butterfly stopover areas.

Each of the 14 types of seasonal concentrations of animals that may be considered Significant Wildlife Habitat will be discussed in the NETR/EIA.

- Rare habitats are considered to be those vegetation communities that are considered rare in Ontario. Generally, these are communities that have been ascribed an S-rank of S1 to S3 by the NHIC. Any vegetation community types with an S-Rank of S1 to S3 will be discussed in the NETR/EIA.
- The Significant Wildlife Habitat Technical Guide defines 14 specialized habitats that may be considered Significant Wildlife Habitat. They include:

Habitat for area-sensitive species;  
Forests providing a high diversity of habitats;  
Old-growth or mature forest stands;  
Foraging areas with abundant mast;  
Amphibian woodland breeding ponds;  
Turtle nesting habitat;  
Specialized raptor nesting habitat;  
Moose calving areas;  
Moose aquatic feeding areas;  
Mineral licks;  
Mink, otter, marten, and fisher denning sites;  
Highly diverse areas;  
Cliffs; and  
Seeps and springs.

Each of the 14 types of specialized habitats that may be considered Significant Wildlife Habitat will be discussed in the NETR/EIA.



- Three groups of wildlife may be considered species of conservation concern:
  - Species that have a significant proportion of their population in Ontario and that are rare in the planning area;
  - Species that are exhibiting a statistically significant decline in Ontario; and
  - Species that are rare or designated significant at some level.

*Species with a Significant Proportion of their Global Population in Ontario*

There are numerous species in Ontario that have limited representation outside of the province. Habitat for these species may be considered Significant Wildlife Habitat if the species is also rare or significantly declining within the planning area.

*Species Declining Significantly in Ontario*

With a few exceptions, good data on population trends are currently available only for birds. The NHIC has taken into account some of these declines in recent revisions to the S-ranks that it has ascribed various species. Some of the declining species have recently had their S-ranks changed from S5 (secure) to S4 (apparently secure) to reflect these declines.

*Species that are rare or designated as significant at some level*

Significance is defined at six levels:

- Globally significant (with a G-rank of G1 to G3);
- Nationally significant (designated Endangered, Threatened or Special Concern by the Committee on the Status of Endangered Wildlife in Canada). It is noted that the most recent version of the Natural Heritage Reference Manual does not recognize national designations and only those species with provincial designations are considered candidate Significant Wildlife Habitat;
- Provincially significant (with an S-rank of S1 to S3 and S3?, if the latter type of species is being tracked by the OMNRF; species designated Special Concern by the OMNRF);
- Regionally significant (within an Ecoregion, or within one of the old OMNR administrative regions);
- Locally significant (within an Ecodistrict); and,
- Within a planning authority's jurisdiction.

The above is the order of priority that should be given to protection of species of conservation concern.

Of note is the fact that the Significant Wildlife Habitat Ecoregion Criteria Schedules do not consider species that are rare at the global, national, regional, or local levels to qualify as Significant Wildlife Habitat. Only provincially significant species can qualify as Significant Wildlife Habitat when it is used. GEC concurs that globally and nationally significant species that are not provincially significant should not be considered Significant Wildlife Habitat and this is consistent with the Natural Heritage Reference

Manual. Consistent with the Significant Wildlife Habitat Technical Guide, GEC concurs that regionally and locally significant species may qualify as Significant Wildlife Habitat. The mandate for designating Significant Wildlife Habitat lies with local planning authorities and not the MNRF. Consequently, municipalities should be able to identify species that are significant within their jurisdiction as Significant Wildlife Habitat.

Species of conservation concern will be discussed in the context of Significant Wildlife Habitat in the NETR/EIA.

- The Significant Wildlife Habitat Technical Guide defines animal movement corridors as elongated, naturally vegetated parts of the landscape used by animals to move from one habitat to another. To qualify as Significant Wildlife Habitat, these corridors should be a critical link between habitats that are regularly used by wildlife.
- Animal movement corridors will be discussed in the context of Significant Wildlife Habitat in the NETR/EIA.
- Mapping of Significant Wildlife Habitats identified within the study area will be provided in the NETR/EIA.

#### **6.1.4 SIGNIFICANT AREAS OF NATURAL AND SCIENTIFIC INTEREST (ANSI)**

- The NETR/EIA will include a brief description of the Halton Forest North life science ANSI, including a summary of key features and functions. LIO mapping of the ANSI will be included in the NETR/EIA.

#### **6.1.5 HABITAT OF ENDANGERED AND THREATENED SPECIES**

- The NETR/EIA will describe the Species at Risk (SAR) preliminary screening completed by GEC prior to the commencement of ecological field surveys. This will include a summary of SAR records obtained from the Natural Heritage Information Centre (NHIC) database and Conservation Halton's database, as well as GEC's recent observations from the local area.
- The NETR/EIA will describe the occurrences of Endangered and Threatened species within the study area, and their habitats.

#### **6.1.6 WETLANDS**

- The NETR/EIA will describe wetlands that are not presently classified as Provincially Significant Wetlands. The most notable example is Wetland U1.

#### **6.1.7 HABITAT OF SPECIAL CONCERN SPECIES WITHIN ESCARPMENT NATURAL AND ESCARPMENT PROTECTION AREAS**

- The NETR/EIA will describe and map habitats of Special Concern species located with Escarpment Natural and Escarpment Protection Areas.

## 6.2 DESCRIPTION OF THE PROPOSED MILTON QUARRY EAST EXTENSION

- The NETR/EIA will provide an overview of the proposed Milton Quarry East Extension, including the rationale for the proposed licence boundary and the proposed extraction footprint.
- The NETR/EIA will provide a summary of the Operational Plan.
- The NETR/EIA will describe how adjacent water-dependent ecological features will be protected from dewatering effects, by integrating the Milton Quarry East Extension with the existing Water Management System (WMS) and Adaptive Management and Protection Plan (AMP) for the Milton Quarry Extension. Dufferin has already committed to integrate the subject site into the state-of-the-art water management system (WMS) and AMP that are already in place and have been operating at the Milton Quarry and Milton Quarry Extension since 2007. In the absence of mitigation measures, the extension of the Milton Quarry below the water table in the MQEE lands would result in a lowering of the surrounding groundwater levels and would be expected to have a negative influence on some of the nearby groundwater-dependent wetlands. The water mitigation system has effectively maintained groundwater levels around the perimeter of the Milton Quarry Extension protecting surrounding water resources including water dependent ecological features. The water management system for the MQEE will be a straightforward addition to the existing system using the same proven techniques for mitigation. GEC will provide ecological input to GHD in relation to setting surface water level targets in Wetland U1 and groundwater level targets in the vicinity of other wetlands located in the forest.
- The NETR/EIA will describe the key components of the Ecological Enhancement Plan (EEP) that will cover land on the subject property that will not be extracted. The EEP will be prepared under separate cover. Most of the open field areas that will not be extracted will be enhanced by tree-planting and the placement of habitat structures such as rock piles, stumps, logs and other woody debris. These areas are shown on **Figure 4**. Ultimately, the proposed reforestation will expand Significant Woodlands in the vicinity and improve connectivity, particularly between Wetland U1 and the nearby forest blocks.
- The NETR/EIA will describe the key components of the Rehabilitation Plan that will primarily cover land that will be extracted. The rehabilitation concept is shown on Figure 4. The quarry rehabilitation will include a deep lake, shallow wetlands, islands, a promontory and beach ridge, etc., including a terrestrial linkage with the Cox Tract to the west.

## 6.3 IMPACT ASSESSMENT

- The NETR/EIA impact assessment will take into account the Operational Plan proposed for the Milton Quarry East Extension, mitigation measures, ecological enhancement measures and quarry rehabilitation. The cumulative effects of the MQEE will also be assessed.
- The potential impacts resulting from the WMS footprint will be addressed in the NETR/EIA. It should be noted that portions of the WMS footprint will be restored and naturalized; this will be explained in the NETR/EIA.

- The NETR/EIA will include an assessment of the Milton Quarry East Extension upon landscape connectivity and wildlife corridors, including the identification of enhancement opportunities through the Ecological Enhancement Plan (EEP) for lands that will not be extracted and the Rehabilitation Plan for lands that will be extracted.
- The NETR/EIA will discuss how a net environmental gain will be achieved as a result of the Milton Quarry East Extension.

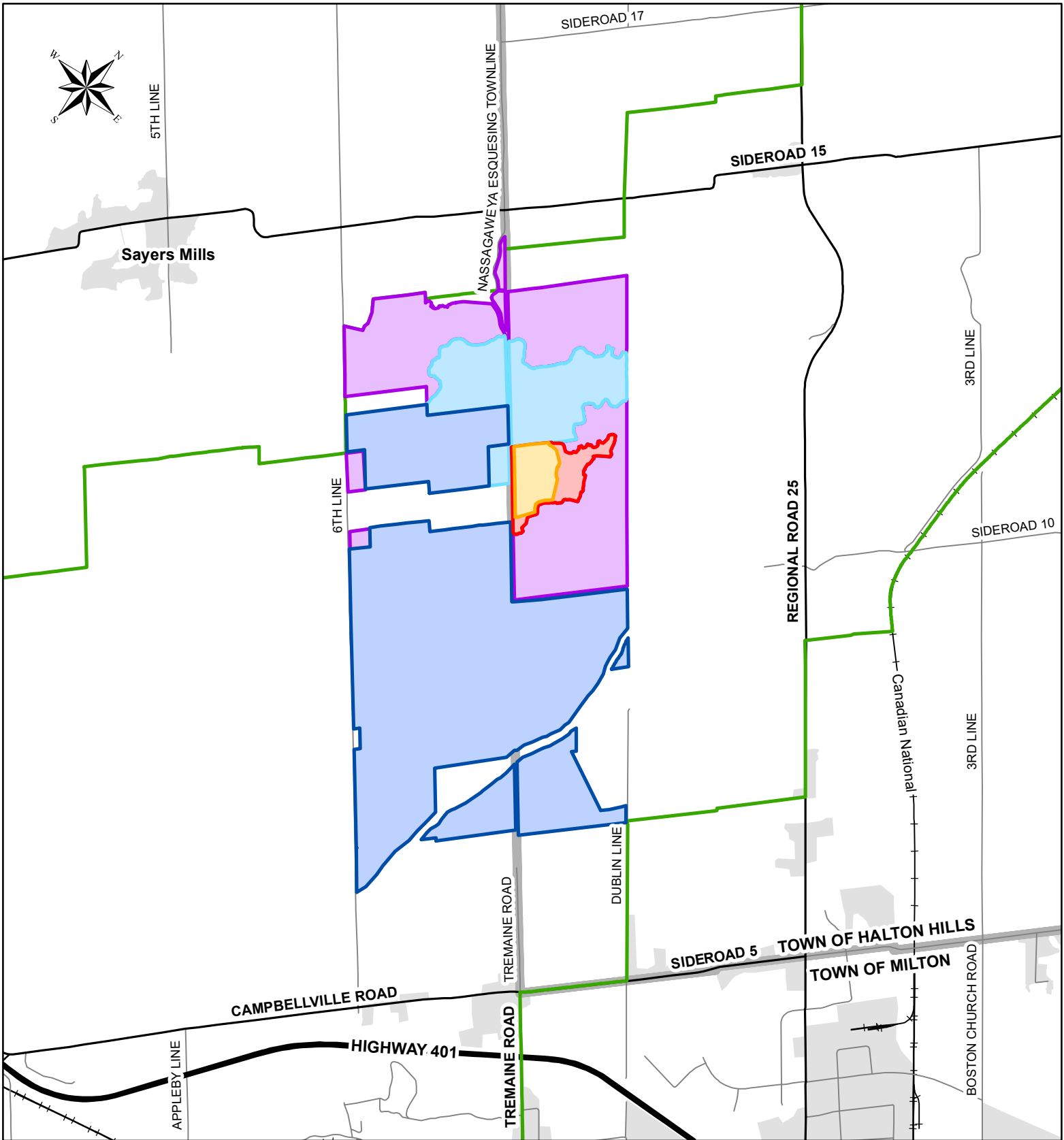
#### **6.4 RECOMMENDATIONS AND CONCLUSIONS**

- The NETR/EIA will provide a summary of GEC's recommendations with respect to the natural environment.
- The NETR/EIA will describe the conclusions reached with respect to conformity with the various legislative and policy requirements described above in **Section 2.0**.

## 7.0 REFERENCES

- Cadman, M.D., D.A. Sutherland, G.G. Beck, D. Lepage, and A.R. Couturier, eds. 2007. Atlas of the breeding birds of Ontario, 2001-2005. Toronto, ON: Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources, and Ontario Nature. 706 pp.
- Crins, W.J., W.D. McIlveen, A.G. Goodban and P.G. O'Hara. 2006. The Vascular Plants of Halton Region, Ontario. pp. 1-79 In: Dwyer, J.K. (ed.), Halton Natural Areas Inventory 2006: Volume 2 – Species Checklists. Halton/North Peel Naturalists' Club, South Peel Naturalists' Club, Hamilton Naturalists' Club, Conservation Halton and the Regional Municipality of Halton.
- Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig and S. Murray. 1998. Ecological Land Classification for Southern Ontario: First Approximation and its Application. Ontario Ministry of Natural Resources, Southcentral Science Section, Science Development and Transfer Branch. SCSS Field Guide FG-02.
- Oldham, M.J. and S.R. Brinker. 2009. Rare Vascular Plants of Ontario, Fourth Edition. Ontario Ministry of Natural Resources, Peterborough, Ontario. 188 pp.
- Oldham, M.J., W.D. Bakowsky and D.A. Sutherland. 1995. Floristic Quality Assessment System for Southern Ontario. Natural Heritage Information Centre, Ontario Ministry of Natural Resources, Peterborough, Ontario. 68 pp + computer disk.
- Ontario Ministry of Natural Resources (OMNR). 1997. Non-renewable resources training manual, Version 1.0. Peterborough, ON: Ontario Ministry of Natural Resources.
- Ontario Ministry of Natural Resources (OMNR). 2000. Significant Wildlife Habitat Technical Guide. 139 pp + appendices.
- Ontario Ministry of Natural Resources (OMNR). 2006. Licence Applications: Natural Environment Report Standards. Policy A.R. 2.01.07. Lands & Waters Branch, Aggregate & Petroleum Resources. Issued March 15, 2006.
- Ontario Ministry of Natural Resources (OMNR). 2010. Natural Heritage Reference Manual for natural heritage policies of the Provincial Policy Statement, 2005. Second edition. Toronto, ON: Queen's Printer for Ontario. 248 pp.
- Ontario Ministry of Natural Resources and Forestry (OMNRF). 2015. Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E. Peterborough, ON: Ontario Ministry of Natural Resources and Forestry. 36 pp.
- Riley, J.L., J.V. Jalava and S. Varga. 1996. Ecological Survey of the Niagara Escarpment Biosphere Reserve. Volume I. Significant Natural Areas. Volume II. Technical Appendices. Ontario Ministry of Natural Resources, Southcentral Region, Peterborough, Ontario. Open File Site Report SR 9601. v + 629 pp., vii + 310 pp.

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**Figure # 1**  
**Location**

**Proposed Milton Quarry East Extension**

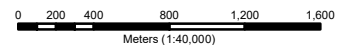
Part of Lots 11 & 12, Concession 1  
Geographic Township of Esquesing  
Township of Halton Hills  
Region of Halton

**Legend**

- Proposed Milton Quarry East Extension Licence Boundary
- Proposed Milton Quarry East Extension Limit of Extraction
- Milton Quarry (1962)
- Milton Quarry Extension (2007)
- Other Lands Owned by CRH
- Niagara Escarpment Plan Boundary
- Built up Area

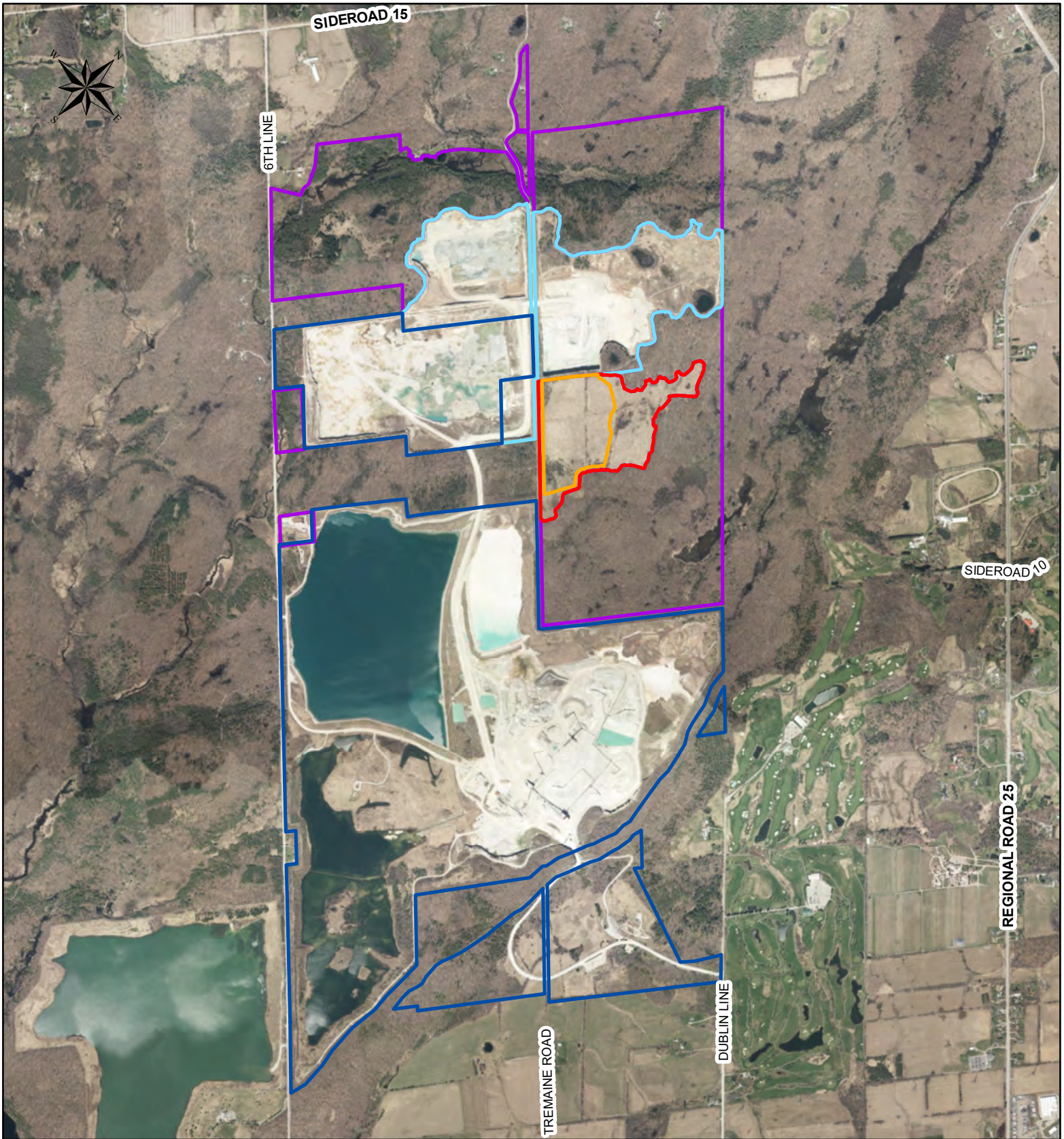
DATE **March 2021**

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**Figure # 2**  
**Overview of Dufferin Aggregates Landholdings**

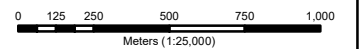
**Proposed Milton Quarry East Extension**  
 Part of Lots 11 & 12, Concession 1  
 Geographic Township of Esquesing  
 Township of Halton Hills  
 Region of Halton

**Legend**

- Proposed Milton Quarry East Extension Licence Boundary
- Proposed Milton Quarry East Extension Limit of Extraction
- Milton Quarry (1962)
- Milton Quarry Extension (2007)
- Other Lands Owned by CRH

DATE **March 2021**

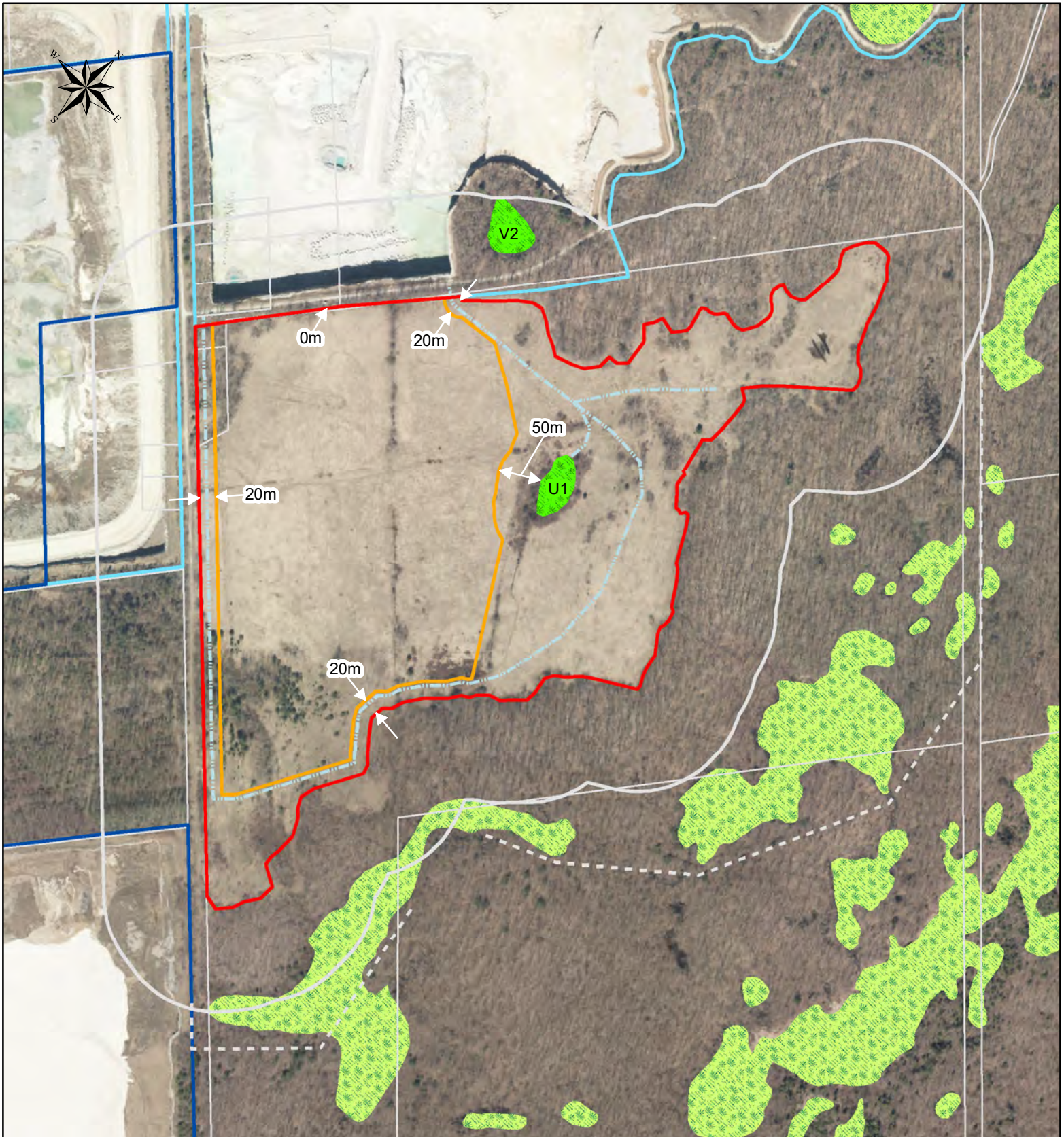
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N:\Bran\9061DJ - Dufferin - Milton Quarry Extension Spyside\Drawings - Must be in NAD 27\Figures\Figures for Goodban\Terms of Reference\GIS\9061DJ - Figure 2 - Overview of Dufferin Aggregates Land Holdings.mxd







**Figure # 3**  
**Natural Environment**  
**Study Area**

**Proposed Milton Quarry**  
**East Extension**

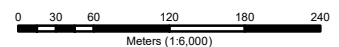
Part of Lots 11 & 12, Concession 1  
 Geographic Township of Esquesing  
 Township of Halton Hills  
 Region of Halton

**Legend**

- Proposed Milton Quarry East Extension Licence Boundary
- Proposed Milton Quarry East Extension Limit of Extraction
- Milton Quarry (1962)
- Milton Quarry Extension (2007)
- Existing Parcel Fabric
- 120m Adjacent Lands
- Additional Study Area Beyond Limit of 120m Adjacent Lands
- Wetland U1 & V2
- MNRF Wetlands
- Watermain

DATE **March 2021**

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 27\Figures\Figures for Goodban\Terms of Reference\GIS\9061DJ - Figure 3 - Natural Environment Study  
 Area.mxd





Figure # 4

## Ecological Enhancement & Rehabilitation Plan

### Proposed Milton Quarry East Extension

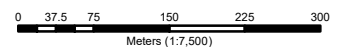
Part of Lots 11 & 12, Concession 1  
 Geographic Township of Esquesing  
 Township of Halton Hills  
 Region of Halton

Legend

- Proposed Milton Quarry East Extension Licence Boundary
- Deep Lake
- Wetland
- Islands
- Promontory & Beach Ridge
- Trail
- Vegetated Area
- Reforestation Area
- Existing Wetland
- MNRF Wetland

DATE **March 2021**

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N:\Bran\9061\DJ Duffin - Milton Quarry Extension Speyside\Drawings - Must be in NAD 27\Figures\Figures for Goodban\Terms of Reference\GIS\061\DJ - Figure 4 - Ecological Enhancement and Rehabilitation Plan.mxd



## 1.0 INTRODUCTION

Goodban Ecological Consulting Inc. (GEC) has been retained by Dufferin Aggregates, a division of CRH Canada Group Inc. (Dufferin) to provide them with advice pertaining to the natural environment and ecology in connection with a proposal to extend the Milton Quarry. GEC's advice will include site characterization, impact assessment, and recommendations related to monitoring, mitigation, and rehabilitation. This document presents the proposed Terms of Reference (ToR) for the preparation of a Natural Environment Level 1 and 2 Natural Environment Technical Report (NETR) and Environmental Impact Assessment (EIA). A separate ToR has been prepared by GHD, in collaboration with GEC, pertaining to advice related to an Adaptive Environmental Management and Protection Plan (AMP).

The proposed extension of the Milton Quarry, referred to as the Milton Quarry East Extension (MQEE), represents a proposed extraction area of approximately 16 hectares bounded by the existing East Cell to the north, the existing North Quarry to the west, and the existing Main Quarry at some distance to the southwest and south. The proposed MQEE extraction area is contiguous with the existing East Cell (i.e., it would be extracted as part of the East Cell) and separated from the North Quarry by the Nassagaweya-Esquesing Townline to the west. See **Figures 1 and 2**.

The 66.5 ha property contains some large open fields that were formerly used as hayfields and forested areas, most of which form part of the Halton Forest North ANSI. The Halton Forest, which covers around 35 km<sup>2</sup>, is comprised of the Halton Forest South, Halton Forest North and Speyside Forest ANSIs. There are a number of wetlands located within the forest that form part of the Halton Escarpment Wetland Complex and there is a single small wetland within the open field area (mapped as Wetland U1 on **Figure 3**).

Ecological work related to the Milton Quarry Extension, circa 1998 to 2002, identified several species at risk (SAR) in the local area. A number of wetlands were identified that function as breeding pools for the Jefferson Salamander (Endangered) and Unisexual Ambystoma (Jefferson Salamander Dependent Population) (Endangered). Other species at risk (SAR) identified around that time included American Ginseng (Endangered), Butternut (Endangered) and Louisiana Waterthrush (Threatened).

The Terms of Reference (ToR) for the Level 1 and 2 Natural Environment Technical Report (NETR) and Environmental Impact Assessment (EIA) have been prepared in consideration of the comprehensive understanding that already exists with respect to the natural environment, geology and water resources in the area of the Milton Quarry and the existing mitigation measures that have a long-proven record of successful operation and protection of water resources and related ecological features. The Terms of Reference (ToR) are provided below under the following section headings:

- 2.0 Natural Environment – Legislative and Policy Framework
- 3.0 Natural Environment Study Area
- 4.0 Site Characterization Ecological Field Survey Program
- 5.0 Natural Environment Level 1 Report Mitigation Measures, Ecological Enhancements, Quarry Rehabilitation and Impact — Assessment
- 6.0 Natural Environment Level 2 Report and EIA
- 7.0 References

## 2.0 NATURAL ENVIRONMENT – LEGISLATIVE AND POLICY FRAMEWORK

The Level 1 and 2 Natural Environment Technical Report (NETR) and Environmental Impact Assessment (EIA) will address the relevant legislative and policy components of the following Acts and Plans:

- *Aggregate Resources Act*;
- *Endangered Species Act (ESA 2007)*;
- Provincial Policy Statement (2020);
- Niagara Escarpment Plan (2017);
- Halton Region Official Plan (2015); and,
- Town of Halton Hills Official Plan (2019).

### 2.1 Aggregate Resources Act (ARA)

Under the *Aggregate Resources Act* there is a requirement to complete a Natural Environment Level 1 study and also a Natural Environment Level 2 study where significant natural features are identified within 120 m of the site during the Level 1 investigations.

The requirements for a Natural Environment Level 1 study are:

*Determine whether any of the following features exist on and within 120 m of the site: significant wetland, significant portions of the habitat of endangered and threatened species, fish habitat, significant woodlands (south and east of the Canadian Shield), significant valley lands (south and east of the Canadian Shield), significant wildlife habitat, and significant areas of natural and scientific interest (MNR 1997).*

The requirements for a Natural Environment Level 2 study are:

*Impact assessment where the Level 1 study identified any features on or within 120 m of the site in order to determine any negative impacts on the natural features or ecological functions for which the area is identified, and any proposed preventative, mitigative, or remedial measures (MNR 1997).*

Policy 2.01.07 compiled by the Lands and Waters Branch of the Aggregate and Petroleum Resources Section of MNR (2006) summarizes the guiding principles of a Natural Environment Report:

*The purposes of the Natural Environment report are to determine the presence of significant natural heritage features/areas and fish habitat in accordance with the Provincial Policy Statement 2005, and to ensure that any necessary preventative, mitigative or remedial measures are undertaken for their protection.*

## 2.2 Endangered Species Act (ESA 2007)

The provincial Endangered Species Act (ESA 2007) was developed to:

- Identify species at risk, based upon best available science;
- Protect species at risk and their habitats and to promote the recovery of species at risk; and
- Promote stewardship activities that would support those protection and recovery efforts.

The ESA protects all Endangered, Threatened and Extirpated species listed on the Species at Risk in Ontario (SARO) list. These species at risk are legally protected from harm or harassment and their associated habitats are legally protected from damage or destruction, as defined under the ESA.

Certain types of development may be permitted in habitats of Endangered and Threatened species under certain conditions. For example, an ESA 17(2)(b) "Overall Benefit" may be issued if a proponent can demonstrate an overall benefit to the species in question. For some species (e.g., Bobolink and Eastern Meadowlark), Ontario Regulation 242/08 allows for development to proceed provided that a larger area of suitable habitat is created elsewhere prior to the activity commencing. In the case of Butternut, retainable trees may be removed provided that compensatory plantings are provided elsewhere and the rules in regulation are followed.

The Ministry of Environment, Conservation and Parks (MECP) is responsible for the administration of the *Endangered Species Act*. The proponent will pursue permits and authorizations for the Milton Quarry East Extension directly with MECP, but relevant information will also be provided in the NETR & EIA.

## 2.3 Provincial Policy Statement (PPS 2020)

The Provincial Policy Statement (2020) was issued under Section 3 of the *Planning Act*. The NETR & EIA will address policies relevant to Natural Heritage (section 2.1) with some reference to certain other policies.

Eight types of natural heritage features are defined in the PPS, as follows:

- Significant Wetlands;
- Significant Coastal Wetlands;
- Significant Woodlands;
- Significant Valleylands;
- Significant Wildlife Habitat (SWH);
- Fish Habitat;
- Habitat of Endangered and Threatened Species; and,
- Significant Areas of Natural and Scientific Interest (ANSIs).

Development and site alteration are not permitted in Significant Wetlands or in Significant Coastal Wetlands. Development and site alteration are not permitted in Significant Woodlands, Significant Valleylands, Significant Wildlife Habitat or Significant ANSIs, unless it is demonstrated that there will be no negative impacts on the associated natural features or their ecological functions.

Development and site alteration are not permitted in the habitat of Endangered and Threatened species or in Fish Habitat, except in accordance with provincial and federal requirements. Development and site alteration may be permitted on lands adjacent to significant natural heritage features (i.e., within 120 m of the Subject Lands, as identified in the Natural Heritage Reference Manual (MNR 2010) if it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

## **2.4 Niagara Escarpment Plan (NEP 2017)**

The Niagara Escarpment ~~Planning and Development Act~~ was first ~~approved~~<sup>drafted</sup> in 1985<sup>90</sup> and was last amended in 2017 and it is administered by the Niagara Escarpment Commission (NEC). The objectives of the Niagara Escarpment Plan (NEP) specific to this application include Sections 2.6 (Development Affecting Water Resources), 2.7 (Development Affecting Natural Heritage) and 2.9 (Mineral Aggregate Resources). Sections 2.7.3 through 2.7.8 and Section 2.7.12 ~~which~~ include specific Development Criteria, as follows:

*a) 2.7.3. The diversity and connectivity between key natural heritage features and key hydrologic features shall be maintained, and where possible, enhanced for the movement of native plants and animals across the landscape.*

*b) 2.7.4. Development in the other natural features not identified as key natural heritage features or key hydrologic features should be avoided. Such features should be incorporated into the planning and design of the proposed use wherever possible, and the impact of the development on the natural feature and its functions shall be minimized.*

*c) 2.7.5 Where policies or standards of other public bodies or levels of government exceed the policies related to key natural heritage features or key hydrologic features in this Plan, such as may occur with habitat of endangered species and threatened species under the Endangered Species Act, 2007; with natural hazards where section 28 regulations of the Conservation Authorities Act apply; or with fisheries under the Federal Fisheries Act, the most restrictive provision or standard applies.*

*d) 2.7.6 If in the opinion of the implementing authority, a proposal for development within 120 metres of a key natural heritage feature has the potential to result in a negative impact on the feature and/or its functions, or on the connectivity between key natural heritage features and key hydrologic features, a natural heritage evaluation will be required that:*

*a. Demonstrates that the development, including any alteration of the natural grade or drainage, will protect the key natural heritage feature or the related functions of that feature;*

*b. Identifies planning, design and construction practices that will minimize erosion,*

*sedimentation and the introduction of nutrients or pollutants and protect and, where possible, enhance or restore the health, diversity and size of the key natural heritage feature;*

*c. Determines the minimum vegetation protection zone required to protect and where possible enhance the key natural heritage feature and its functions; and*

*d. Demonstrates that the connectivity between key natural heritage features and key hydrologic features located within 240 metres of each other will be maintained and where possible enhanced for the movement of native plants and animals across the landscape. Except with respect to a key natural heritage feature that is solely the habitat of endangered species or threatened species, which is subject to Par 2.7.8 below.*

*e) 2.7.7 For the purposes of 2.7.6, a vegetation protection zone shall:*

*a. Be of sufficient width to protect and where possible enhance the key natural heritage feature and its functions from the impacts of the proposed change and associated activities that may occur before, during, and after, construction;*

*b. Be established to achieve, and be maintained as, natural self-sustaining vegetation; and*

*c. In the case of Areas of Natural and Scientific Interest (Earth Science and Life Science), include without limitation an analysis of land use, soil type and slope class.*

*f) 2.7.8 Development within the habitat of endangered species and threatened species:*

*a. Located within Escarpment Natural Areas and Escarpment Protection Areas, is not permitted, except for development referred to in Parts 2.7.2 a) b) c) d) or e) which may be permitted provided it is in compliance with the Endangered Species Act, 2007; and*

*b. Located within Escarpment Rural Areas, Mineral Resource Extraction Areas, Urban Areas, Minor Urban Centres and Escarpment Recreation Areas, is not permitted unless it is in compliance with the Endangered Species Act, 2007.*

*g) 2.7.12 Development where permitted in woodlands should protect and where possible enhance the woodland and associated wildlife habitat. All development involving the cutting of trees requires approval from the implementing authority, subject to the following criteria:*

*a. Cutting of trees and removal of vegetation shall be limited to the minimum necessary to accommodate the permitted use;*

*b. Using tree-cutting methods designed to minimize negative impacts to the natural environment, including surface drainage and groundwater;*

*c. Minimizing disruption to wildlife habitat in the area;*

*d. Retaining the diversity of native species;*

e. Aiming over the long term to protect and where possible enhance the quality and biodiversity of the woodland;

f. Protecting trees and vegetation to be retained by acceptable means during construction; and

g. Maintaining existing tree cover of other stabilizing vegetation, on steep slopes in excess of 25 per cent (1:4 slope).

While the Development Criteria listed above relate to natural heritage, NEP Section 2.6 (Development Affecting Water Resources) must also be considered in the Natural Environment Technical Report.

Section 2.9 states that mineral aggregate operations may be permitted in key natural heritage features and any vegetation protection zone (VPZ) associated therewith, except for wetlands and significant woodlands, that are not young plantation or early successional habitat (as defined by the MNRF).

Mineral aggregate operations may be permitted in a key natural heritage feature or its VPZ, which is solely the habitat of endangered or threatened species and not any other key natural heritage feature, provided it is in compliance with the Endangered Species Act, 2007.

## **2.5 Halton Region Official Plan (2015) and Guidelines**

### **2.5.1 Halton Region Official Plan (201~~8~~5)**

The Regional Official Plan (OP) sets its own Natural Heritage System (NHS) policies.

No key features are located within the limit of extraction, but several key features are located within the 120 m adjacent lands. Given that portions of the adjacent lands are located within the RNHS, the following Regional OP policies apply:

*Require the proponent of any development or site alteration that meets the criteria set out in Section 118(3.1) to carry out an Environmental Impact Assessment (EIA) ...The purpose of an EIA is to demonstrate that the proposed development or site alteration will result in no negative impacts to that portion of the Regional Natural Heritage System or unmapped Key Features affected by the development or site alteration by identifying components of the Regional Natural Heritage System as listed in Section 115.3 and their associated ecological functions and assessing the potential environmental impacts, requirements for impact avoidance and mitigation measures, and opportunities for enhancement. The EIA shall, as a first step, identify Key Features on or near the subject site that are not mapped on Map 1G (Section 118(3)).*

As noted in Section 118(3) of the Regional OP, Section 115.3 lists the components of the RNHS as follows:



115.3 *The Regional Natural Heritage System is a systems approach to protecting and enhancing natural features and functions and is scientifically structured on the basis of the following components:*

- (1) Key Features, which include:*
  - a. Significant habitat of endangered and threatened species;*
  - b. Significant wetlands;*
  - c. Significant coastal wetlands;*
  - d. Significant woodlands;*
  - e. Significant valleylands;*
  - f. Significant wildlife habitat;*
  - g. Significant areas of natural and scientific interest; and*
  - h. Fish habitat;*
- (2) Enhancements to the Key Features including Centres for Biodiversity;*
- (3) Linkages;*
- (4) Buffers;*
- (5) Watercourses within a Conservation Authority Regulation Limit or that provide a linkage to a wetland or a significant woodland; and*
- (6) Wetlands other than those considered significant under Section 115.3(1)b.*

It is noted that Key Features in the Regional Natural Heritage System (RNHS) are not mapped individually on Map 1G. A particular area within the RNHS may contain several key features, e.g., a forested area may qualify as Significant Woodland and also contain Significant Wetlands, Significant Wildlife Habitat, etc.

Reference will also be made to the following Mineral Resource Extraction Areas policies of the ROP, including Sections 107(3), 107(3.1), 107(5), 110(2), 110(6), 110(7.1), 110(7.2), 110(8) and 110(8.1), as appropriate.

## **2.5.2 ROP Guidelines – Aggregate Resources Reference Manual**

The ROP Guidelines were prepared to clarify, inform and aid in the implementation of the Halton Region Official Plan policies. They provide direction and outline approaches that can be used to satisfy the relevant policies of the Plan. They are not meant to introduce additional policy requirements.

Section 4.4, Environmental Impact Study, is the relevant section that provides guidance for the preparation of the EIA. The intent of the Guidelines is to demonstrate that the Proposal will not have a negative impact on natural features or their ecological functions; that extraction will occur in a manner that minimizes environmental impacts; that long-term ecological function and biodiversity of the Natural Heritage System can be maintained, restored or even improved; and within the NEP area, that the Proposal will maintain the Niagara Escarpment land in its vicinity

as a continuous natural environment and will be compatible with the Niagara Escarpment and the lands in its vicinity.

The objectives of the Proposal when applying the Guidelines include the following:

- 1. To identify all natural heritage features that have the potential to be impacted by the proposed aggregate operations.*
- 2. To identify the connections and linkages between natural heritage features and areas, surface water features and groundwater features.*
- 3. To determine how the diversity and connectivity of the natural features in an area and the long-term ecological function and biodiversity of the natural heritage system can be maintained, restored or where possible improved.*
- 4. Identify all potential impacts on significant natural heritage features and/or key natural heritage features.*
- 5. Determine whether the proposal will have negative impacts on significant natural heritage features and/or key natural heritage features.*
- 6. Determine what mitigation and monitoring measures, if required, are necessary to ensure that environmental impacts are minimized.*
- 7. To determine and make recommendations on how net environmental gain can be provided in the short term and in the longer term both on the site and for the surrounding area.*
- 8. Within the NEP area, identify all potential individual and cumulative impacts on the natural environment.*

## **2.6 Town of Halton Hills Official Plan (2019)**

Part C of the Town of Halton Hills Official Plan (2019) contains *Environmental Management Policies*. Policy C2 details the requirements for Environmental Impact Studies, as follows:

### **C2 ENVIRONMENTAL IMPACT STUDIES**

*Where the policies of this Plan require that an Environmental Impact Study (EIS) be prepared, such an EIS shall be prepared in accordance with the requirements of this section and Terms of Reference approved by the Town and the Region, in consultation with the appropriate Conservation Authority and the proponent. In the preparation of an EIS, reference shall be made to the Environmental Impact Assessment Guidelines of the Region of Halton.*

## C2.1 PURPOSE OF AN EIS

*The purpose of an EIS is to:*

- a) *collect and evaluate the appropriate information in order to have a complete understanding of the boundaries, attributes and functions of natural heritage features and associated ecological and hydrological functions; and,*
- b) *make an informed decision as to whether or not a proposed use will have a negative impact on the natural heritage features and ecological and hydrological functions.*

*Any EIS required by this Plan must describe the natural heritage features and ecological functions, identify their significance and sensitivities and describe how they could be affected by a proposed use. The EIS should give consideration to the relevant aspects and inter relationships of various components of the Natural Heritage System on and off the site. In addition, the EIS must address how the proposed development will protect, maintain or restore the natural features and ecological functions of the Natural Heritage System.*

*The Town and the Region, in consultation with the appropriate Conservation Authority, must approve an EIS prior to the granting of development approvals. The recommendations of an EIS shall be implemented through official plan amendments, zoning by-laws, subdivision conditions, site plan control, or applicable regulations.*

## C.2.2 WHAT AN EIS SHOULD DEMONSTRATE

*Before development is approved in the area subject to the EIS, the EIS shall demonstrate that the relevant policies of this Plan are met, including, for mineral aggregate extraction operations, the principle of net environmental gain as set out in Section E6.4.3.5 of this Plan. The EIS should demonstrate that the use will:*

- a) *not have a negative impact on significant natural heritage features and related ecological functions;*
- b) *not discharge any substance that could have an adverse effect on air quality, groundwater, surface water and associated plant and animal life;*
- c) *be serviced by an adequate supply of water and that the groundwater taking associated with the use will not have an adverse effect on existing water supplies, surface water features and associated plant and animal life;*
- d) *not cause erosion or siltation of watercourses or unacceptable changes to watercourse morphology;*
- e) *not interfere with groundwater recharge to the extent that it would adversely affect groundwater supply for any use;*

- f) *not cause an increase in flood potential on or off the site;*
- g) *maintain/enhance/restore/rehabilitate the natural condition of affected watercourses, and protect/enhance/restore/rehabilitate aquatic habitat;*
- h) *not encourage the demand for further development that would negatively affect wetland function or contiguous wetland areas;*
- i) *enhance and restore endangered terrestrial and aquatic habitat where appropriate and feasible;*
- j) *not unduly interfere with the function of existing or potential natural corridors that are determined to be of significance;*
- k) *not lead to a reduction to the extent of significant woodlands within the Green lands System; and,*
- l) *not lead to species loss or negative impacts on endangered, threatened or rare species and/or their habitat.*

*In determining whether the above criteria have been satisfied, reference may be made to applicable federal and provincial standards and regulations as well as referring to the relevant policies of this Plan.*

### **3.0 NATURAL ENVIRONMENT STUDY AREA**

Other than along Townline, the proposed licence boundary generally follows the interpreted Significant Woodland boundary as shown on **Figure 3**. The study area extends to 120 m beyond the licence limit. The study area has been extended beyond the 120 m limit in some areas, in order to capture the first tier of wetlands located within the forest.

### **4.0 SITE CHARACTERIZATION ~~ECOLOGICAL FIELD SURVEY PROGRAM~~**

The Natural Environment Technical Report will provide a comprehensive characterization of the present-day existing conditions, including landscape setting, surficial geology, physiography, soils, drainage, vegetation communities and flora, and wildlife. The site characterization will be based on at least the following:

- Technical reports prepared for the previous Milton Quarry Extension;
- Standard technical references (e.g., Physiography of Southern Ontario, Soil Survey of Halton County, etc.);
- Other technical reports prepared for the current Milton Quarry East Extension (e.g., Water Resources, Agriculture, etc.);
- Available background information; and,
- Current, detailed ecological field surveys of the Milton Quarry East Extension study area.

## 4.1 BACKGROUND INFORMATION AND INTEGRATION WITH OTHER DISCIPLINES

The ecological field survey program for the Milton Quarry East Extension is described below. The data collected through this program will be used to characterize the study area, complete a biophysical analysis and identify key ecological features and functions. Relevant information from the Geology & Water Resources Assessment Report in preparation by GHD, and the Adaptive Management and Protection Plan (AMP) Addendum in preparation by GHD and GEC, will be integrated into the NETR/EIA. GEC and GHD recognize the critical importance of taking a multi-disciplinary and highly coordinated approach that addresses the inherent linkages between groundwater, surface water and water-dependent ecological features.

Background information sources will be consulted as appropriate, including the following:

- Conservation Halton Database. Mapping of hazards, wetlands, watercourses, steep slopes, fish survey stations and plant/wildlife observation data.
- Ecoplans Limited. 2000. Dufferin Aggregates Milton Quarry Extension – Environmental Impact Assessment. Ecoplans Limited, Kitchener, Ontario. 86 pp + figures + appendices.
- Goodban Ecological Consulting Inc. (GEC) annual wetland monitoring reports for the Milton Quarry Extension from 2007 to 2019.
- Natural Heritage Information Centre (NHIC) Database.
- Riley, J.L., J.V. Jalava and S. Varga. 1996. Ecological Survey of the Niagara Escarpment Biosphere Reserve. Volume I. Significant Natural Areas. Volume II. Technical Appendices. Ontario Ministry of Natural Resources, Southcentral Region, Peterborough, Ontario. Open File Site Report SR 9601. v + 629 pp., vii + 310 pp.

## 4.2 ECOLOGICAL FIELD SURVEY PROGRAM

The NETR will provide full details on the ecological field surveys that were/are undertaken, including methodologies used for field studies. A table will be provided that includes the following fields: date, survey type/purpose, observer, timing of survey visit and weather conditions.

### 4.2.1 VEGETATION AND FLORA

#### 4.2.1.1 Vegetation Communities (ELC Units)

Vegetation community polygons were first identified on aerial photography and then verified in the field. Vegetation community types were mapped and described generally following the Ecological Land Classification (ELC) for Southern Ontario (Lee et al. 1998). Field surveys were undertaken in 2019 and 2020.

#### **4.2.1.2 Vascular Plants**

The flora of the study area was characterized through detailed botanical surveys of more sensitive habitats and general surveys of more disturbed habitats. Surveys were completed throughout the growing season during 2019 and 2020. A vascular plant species checklist will be generated and species status will be assessed at several levels, including Ontario (Oldham and Brinker 2009), the Niagara Escarpment (Riley et al. 1996) and Halton Region (Crins et al. 2006).

Particular attention was paid to surveying the flora of the proposed extraction area, the proposed water management system footprint and the first tier of wetlands adjacent to the proposed extraction area.

#### **4.2.1.3 Species at Risk (SAR) Plants**

Focused surveys for Butternut and American Ginseng were completed in 2020. Searches for Butternut were focused on the proposed extraction area and the proposed water management system footprint. Searches for American Ginseng were focused on the forested areas, particularly those areas that are less disturbed and/or contain bedrock outcrops.

#### **4.2.1.4 Tree Density Survey**

Tree density surveys were completed in select areas within the proposed extraction footprint, to determine if a particular area meets the woodland definition using stem density values, as required by the Halton Region Official Plan (2015), and to determine if a particular area is an *early successional* woodland.

The tree density surveys were completed using circular plots, the size of which were selected based on the size of the overall community as well as variability of species and density within the feature and ranged between a 4 m and 15 m radii. Trees within plots were tallied by species and categorized as having a diameter at breast height (dbh) of > 20 cm, 13 - 20 cm, 6 - 12 cm or ≤ 5 cm.

#### **4.2.1.5 Significant Woodland Boundary Delineation and Staking**

The boundary of the Significant Woodland will be staked in those areas where the woodland edge is in proximity to the proposed extraction footprint and water management system footprint. The staked boundary iesy will be reviewed with the Region of Halton's forester.

#### **4.2.1.6 Wetland U1 Boundary Delineation and Staking**

The boundary of Wetland U1 will be delineated and staked by a qualified ecologist certified to evaluate wetlands in Ontario under the Ontario Wetland Evaluation System (OWES). The staked boundary will be reviewed with Conservation Halton staff at the appropriate time of year (June – September).

## 4.2.2 WILDLIFE

The wildlife survey methods are described below under the following headings:

- 4.2.2.1 Amphibians and Reptiles
- 4.2.2.2 Breeding Birds
- 4.2.2.3 Other Wildlife Groups

### 4.2.2.1 Amphibians and Reptiles

#### *Salamander Surveys*

As part of the ecological work related to the Milton Quarry Extension application, surveys for mole salamanders were completed across a wide area in the vicinity of the original Extension in the late 1990's and 2002. Those surveys focused on checking potentially suitable breeding pools for the presence of Jefferson Salamander Complex egg masses. For each pool containing egg masses, several would be collected and transported to the University of Guelph to be raised and tissue samples were used for genetic identification. The small Wetland U1 (**Figure 3**) in the open field was not surveyed as part of the late 1990's and 2002 salamander surveys.

Minnow trapping for salamanders in selected wetlands, including the small Wetland U1 in the open field, was completed during spring 2019 and 2020. Sampling of adult salamanders involved the setting of minnow traps in suitable pools within wetlands on and adjacent to the Speyside Property on mild, rainy evenings when salamanders are most likely to be moving to breeding pools. The weather forecast was monitored regularly starting in late March. Field reconnaissance was undertaken to monitor ice cover on potential breeding ponds and snow depths within the forest.

Unbaited minnow traps (maximum mesh size of 0.64 cm) were used to capture adult salamanders within selected wetlands. Each trap was marked with flagging tape and the ownership of the trap. Each trap was tied to a suitable anchor on the bank, using nylon rope. The traps were checked early the following morning. The minnow traps were removed from the pools on nights when no/minimal salamander movement was anticipated.

Jefferson Complex salamanders captured in traps were released where they were captured after tissue samples (tail tips) have been collected. Sampling involved the removal of a small portion of the tail (not exceeding 5 mm). Tail tips were removed using a single-edged disposable razor blade or scalpel which was sterilized with 70% ethyl alcohol between each specimen. Handling of each salamander was kept to the absolute minimum. Samples were placed in vials in ethyl alcohol and sent to Dr. Bogart at the University of Guelph for genetic analysis. An MNRF Jefferson Salamander Presence/Absence Form was filled out and a copy was submitted with the samples to Dr. Bogart.

Each sample was labeled with the pond number where the sample was collected, sample number and date of collection. The UTM coordinates of the capture location, the date the sample was collected, the names of the collectors, and the permit numbers for the Scientific

Wildlife Collector's Authorization and the permit under the *Endangered Species Act, 2007* and the Animal Care Protocol number were recorded on the data forms.

Minnow trapping surveys were completed during spring 2019 and 2020 under the following authorizations:

- ESA 17(2)(b) permit or online registration (MECP).
- Wildlife and Scientific Collector's Authorization (MNRF).
- Animal Care Protocol (MNRF).

#### *Amphibian Call Count Surveys*

Song Meter SM4 units were deployed at selected wetlands in 2019 and 2020, from around the time of the spring thaw until late June (approximately 75 nights). Recordings were made in 10-minute intervals, commencing 30 minutes, 90 minutes and 150 minutes after sunset.

Recordings will be analyzed to begin establishing baseline conditions for amphibian breeding activity and as part of the site characterization and assessment. Data from evenings with good frog call activity will be analyzed and call intensity will be assessed using the following criteria:

- Level 1 - Individuals can be counted, calls not overlapping.
- Level 2 – Individual calls overlapping.
- Level 3 – Full chorus.

The aim of the surveys is to confirm the diversity of frogs and toads using a particular wetland for breeding activity, and to determine the peak calling intensity for each species if possible.

#### *Snake Habitat and Visual Encounter Surveys*

Locations of potential snake hibernacula within the proposed extraction area and the proposed water management system footprint were surveyed several times during early periods of warm weather (e.g., April and early May). Snake visual encounter surveys were conducted on mild spring mornings (i.e., minimum 8°C on sunny days or 15°C on overcast days, no greater than 25°C) between 8 am and 5 pm.

Target sites included rock outcrops and fissures, and rock/stone piles along field boundaries. Otherwise, snakes were surveyed on an opportunistic basis. None of the snake species are occurring within the study area are species at risk.

### **4.2.2.2 Breeding Birds**

#### *Grassland Birds*

Breeding bird surveys of the grassland areas were completed in both 2019 and 2020, on three separate mornings each year, following the MNR's (2011) *Survey Methodology under the Endangered Species Act, 2007: Dolichonyx oryzivorus (Bobolink)*.



MNRF's survey protocol for Bobolink has the following requirements:

- Set up point count stations to provide good coverage. Observers can use a wandering transect survey between point count stations.
- Complete *at least* 3 sets of point count surveys. The surveys should occur between the last week in May and the first week in July, with each survey separated from the previous one by at least a week.
- Surveys should start around dawn and continue until no later than 10 am. The observer will undertake 10 minutes of observations and listening at each point count station. Record information on all Bobolink and Eastern Meadowlark observed or heard. Nest searches should be avoided.
- Record notes on habitat characteristics including broad descriptors (e.g. field, hedgerow, fenceline), vegetation height, dominant species, proportions of grasses versus broad-leaved plants, and depth of thatch layer.

### *Forest Birds*

Breeding bird surveys were completed on three separate mornings during the breeding season in 2020. The focal area was the forested habitats between the edge of the open fields and the first tier of wetlands to the east and south of the proposed extraction area. Point count stations were set up to provide good coverage of the area and the various habitats. A wandering transect survey was completed when moving between point count stations.

Three sets of point count surveys were completed in 2020. The surveys occurred between the last week in May and the first week in July, with each survey separated from the previous one by at least a week. Surveys started around dawn and continued until no later than 10 am (approximately). Ten minutes of observations and listening was completed at each point count station.

Breeding birds were surveyed by 10-minute stationary point counts generally following the Second Ontario Breeding Bird Atlas methodology (Cadman et al. 2007), which called for 5-minute point counts. All species and daily numbers of individuals were recorded during each of the site visits.

The breeding bird codes from the Ontario Breeding Bird Atlas (Cadman et al. 2007) were not used in this study because they are not appropriate for a more intensive study on a small site. The purpose of the Atlas is to determine the highest level of breeding evidence in 10- by 10-km squares. Birds seen within a square of this size have a good probability of nesting somewhere in the square provided that suitable habitat is present. However, the application of these codes to a small site can result in an incorrect assessment of the breeding status of a species. As an example, if a Barn Swallow was observed at the site on more than two occasions and more than a week apart, then according to the Atlas project this would qualify it as a probable breeder, even though there is no suitable nesting habitat for it onsite or nearby. All bird species that were located on the proposed license area and adjacent lands were recorded. A conservative

approach was adopted for the surveys and all species were considered to be breeding unless there was convincing evidence to the contrary.

#### **4.2.2.3 Other Wildlife Groups**

Observations of other wildlife groups such as dragonflies, damselflies, butterflies and mammals were made in conjunction with the other ecological field surveys described above.

### **5.0 NATURAL ENVIRONMENT LEVEL 1 REPORT**

As required under the ARA, the Natural Environment Level 1 Report will identify if any of the following features occur within the study area:

- Significant Wetlands;
- Significant Coastal Wetlands;
- Significant Woodlands;
- Significant Valleylands;
- Significant Wildlife Habitat (SWH);
- Fish Habitat;
- Significant Areas of Natural and Scientific Interest (ANSIs); and,
- Habitat of Endangered and Threatened Species.

The Niagara Escarpment Plan (NEP) also requires consideration of a) “Wetlands” and b) “Habitat of Special Concern Species in Escarpment Natural and Escarpment Protection Areas”.

Based on GEC’s review of available background information and detailed ecological field surveys, the following features have been identified within the Milton Quarry East Extension Study Area:

- Significant Wetlands;
- Significant Woodlands;
- Significant Wildlife Habitat (SWH);
- Significant Areas of Natural and Scientific Interest (ANSIs);
- Habitat of Endangered and Threatened Species;
- Wetlands; and,
- Habitat of Special Concern Species in Escarpment Natural and Escarpment Protection Areas”.

The Natural Environment Level 2 Report will describe each of the above-listed features in detail.

### **6.0 NATURAL ENVIRONMENT LEVEL 2 REPORT AND EIA**

The Natural Environment Level 2 Report and EIA will describe each of the above-listed features in detail. A description of the proposed quarry extension will be provided, including details for the proposed mitigation system, Ecological Enhancement Plan (EEP) for land that will not be

extracted and the Rehabilitation Plan for land that will be extracted. The impact assessment will take into account the extraction footprint and the footprint of the proposed WMS.

## 6.1 FEATURE-SPECIFIC DESCRIPTIONS, SURVEY RESULTS, EVALUATION AND FINDINGS

For each of the features listed below, mapping will be provided that clearly identifies all significant natural heritage features on a current air photo base.

### 6.1.1 SIGNIFICANT WETLANDS

- The NETR/EIA will characterize in detail each of the wetlands that are located closest to the Milton Quarry East Extension extraction footprint. Information will be provided on wetland hydrology, vegetation communities, flora and wildlife for each wetland.
- The NETR/EIA will discuss the significance of Wetland U1 in the context of the Ontario Wetland Evaluation System (OWES). It should be noted that Wetland U1 is proposed to be protected with a 50 m buffer, wetland hydrology will be improved through WMS mitigation measures and the surrounding habitat will be greatly enhanced as part of the proposed Ecological Enhancement Plan (EEP). The rationale for the proposed 50 m buffer from the extraction footprint will be discussed in the NETR/EIA.

### 6.1.2 SIGNIFICANT WOODLANDS

- The NETR/EIA will include detailed discussion on Significant Woodlands, including their assessment per ROP policies and criteria, and provide the rationale for the various Significant Woodland buffers and their treatments.
- The NETR/EIA will include an evaluation of the significance of woodland features within the proposed Milton Quarry East Extension extraction footprint, in accordance with ROP s.277.

### 6.1.3 SIGNIFICANT WILDLIFE HABITAT

- The Natural Heritage Reference Manual (OMNR 2010) and the Significant Wildlife Habitat Technical Guide identify four main types of Significant Wildlife Habitat:

Seasonal concentrations of animals;  
Rare and specialized habitats for wildlife;  
Habitats of species of conservation concern; and,  
Animal movement corridors.

- The SWHTG identifies 14 types of seasonal concentrations of animals that may be considered Significant Wildlife Habitat. They are:

Winter deer yards;

Moose late winter habitat;  
Colonial bird nesting sites;  
Waterfowl stopover and staging areas;  
Waterfowl nesting areas;  
Shorebird migratory stopover areas;  
Landbird migratory stopover areas;  
Raptor winter feeding and roosting areas;  
Wild Turkey winter range;  
Turkey Vulture summer roosting areas;  
Reptile hibernacula;  
Bat hibernacula;  
Bullfrog concentration areas; and,  
Migratory butterfly stopover areas.

Each of the 14 types of seasonal concentrations of animals that may be considered Significant Wildlife Habitat will be discussed in the NETR/EIA.

- Rare habitats are considered to be those vegetation communities that are considered rare in Ontario. Generally, these are communities that have been ascribed an S-rank of S1 to S3 by the NHIC. Any vegetation community types with an S-Rank of S1 to S3 will be discussed in the NETR/EIA.
- The Significant Wildlife Habitat Technical Guide defines 14 specialized habitats that may be considered Significant Wildlife Habitat. They include:

Habitat for area-sensitive species;  
Forests providing a high diversity of habitats;  
Old-growth or mature forest stands;  
Foraging areas with abundant mast;  
Amphibian woodland breeding ponds;  
Turtle nesting habitat;  
Specialized raptor nesting habitat;  
Moose calving areas;  
Moose aquatic feeding areas;  
Mineral licks;  
Mink, otter, marten, and fisher denning sites;  
Highly diverse areas;  
Cliffs; and  
Seeps and springs.

Each of the 14 types of specialized habitats that may be considered Significant Wildlife Habitat will be discussed in the NETR/EIA.

- Three groups of wildlife may be considered species of conservation concern:

Species that have a significant proportion of their population in Ontario and that are rare in the planning area;  
Species that are exhibiting a statistically significant decline in Ontario; and

Species that are rare or designated significant at some level.

*Species with a Significant Proportion of their Global Population in Ontario*

There are numerous species in Ontario that have limited representation outside of the province. Habitat for these species may be considered Significant Wildlife Habitat if the species is also rare or significantly declining within the planning area.

*Species Declining Significantly in Ontario*

With a few exceptions, good data on population trends are currently available only for birds. The NHIC has taken into account some of these declines in recent revisions to the S-ranks that it has ascribed various species. Some of the declining species have recently had their S-ranks changed from S5 (secure) to S4 (apparently secure) to reflect these declines.

*Species that are rare or designated as significant at some level*

Significance is defined at six levels:

- o Globally significant (with a G-rank of G1 to G3);
- o Nationally significant (designated Endangered, Threatened or Special Concern by the Committee on the Status of Endangered Wildlife in Canada). It is noted that the most recent version of the Natural Heritage Reference Manual does not recognize national designations and only those species with provincial designations are considered candidate Significant Wildlife Habitat;
- o Provincially significant (with an S-rank of S1 to S3 and S3?, if the latter type of species is being tracked by the OMNRF; species designated Special Concern by the OMNRF);
- o Regionally significant (within an Ecoregion, or within one of the old OMNR administrative regions);
- o Locally significant (within an Ecodistrict); and,
- o Within a planning authority's jurisdiction.

The above is the order of priority that should be given to protection of species of conservation concern.

Of note is the fact that the Significant Wildlife Habitat Ecoregion Criteria Schedules do not consider species that are rare at the global, national, regional, or local levels to qualify as Significant Wildlife Habitat. Only provincially significant species can qualify as Significant Wildlife Habitat when it is used. GEC concurs that globally and nationally significant species that are not provincially significant should not be considered Significant Wildlife Habitat and this is consistent with the Natural Heritage Reference Manual. Consistent with the Significant Wildlife Habitat Technical Guide, GEC concurs

that regionally and locally significant species may qualify as Significant Wildlife Habitat. The mandate for designating Significant Wildlife Habitat lies with local planning authorities and not the MNRF. Consequently, municipalities should be able to identify species that are significant within their jurisdiction as Significant Wildlife Habitat.

Species of conservation concern will be discussed in the context of Significant Wildlife Habitat in the NETR/EIA.

- The Significant Wildlife Habitat Technical Guide defines animal movement corridors as elongated, naturally vegetated parts of the landscape used by animals to move from one habitat to another. To qualify as Significant Wildlife Habitat, these corridors should be a critical link between habitats that are regularly used by wildlife.
- Animal movement corridors will be discussed in the context of Significant Wildlife Habitat in the NETR/EIA.
- Mapping of Significant Wildlife Habitats identified within the study area will be provided in the NETR/EIA.

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#### **6.1.4 SIGNIFICANT AREAS OF NATURAL AND SCIENTIFIC INTEREST (ANSI)**

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- The NETR/EIA will include a brief description of the Halton Forest North life science ANSI, including a summary of key features and functions. LIO mapping of the ANSI will be included in the NETR/EIA.

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#### **6.1.5 HABITAT OF ENDANGERED AND THREATENED SPECIES**

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- The NETR/EIA will describe the Species at Risk (SAR) preliminary screening completed by GEC prior to the commencement of ecological field surveys. This will include a summary of SAR records obtained from the Natural Heritage Information Centre (NHIC) database and Conservation Halton's database, as well as GEC's recent observations from the local area.
- The NETR/EIA will describe the occurrences of Endangered and Threatened species within the study area, and their habitats.

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#### **6.1.6 WETLANDS**

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- The NETR/EIA will describe wetlands that are not presently classified as Provincially Significant Wetlands. The most notable example is Wetland U1.

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#### **6.1.7 HABITAT OF SPECIAL CONCERN SPECIES WITHIN ESCARPMENT NATURAL AND ESCARPMENT PROTECTION AREAS**

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- The NETR/EIA will describe and map habitats of Special Concern species located with Escarpment Natural and Escarpment Protection Areas.

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### **6.2 DESCRIPTION OF THE PROPOSED MILTON QUARRY EAST EXTENSION**

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- The NETR/EIA will provide an overview of the proposed Milton Quarry East Extension, including the rationale for the proposed licence boundary and the proposed extraction footprint.
- The NETR/EIA will provide a summary of the Operational Plan.
- The NETR/EIA will describe how adjacent water-dependent ecological features will be protected from dewatering effects, by integrating the Milton Quarry East Extension with the existing Water Management System (WMS) and Adaptive Management and Protection Plan (AMP) for the Milton Quarry Extension. Dufferin has already committed to integrate the subject site into the state-of-the-art water management system (WMS) and AMP that are already in place and have been operating at the Milton Quarry and Milton Quarry Extension since 2007. In the absence of mitigation measures, the extension of the Milton Quarry below the water table in the MQEE lands would result in a lowering of the surrounding groundwater levels and would be expected to have a negative influence on some of the nearby groundwater-dependent wetlands. The water mitigation system has effectively maintained groundwater levels around the perimeter of the Milton Quarry Extension protecting surrounding water resources including water dependent ecological features. The water management system for the MQEE will be a straightforward addition to the existing system using the same proven techniques for mitigation. GEC will provide ecological input to GHD in relation to setting surface water level targets in Wetland U1 and groundwater level targets in the vicinity of other wetlands located in the forest.
- The NETR/EIA will describe the key components of the Ecological Enhancement Plan (EEP) that will cover land on the subject property that will not be extracted. The EEP will be prepared under separate cover. Most of the open field areas that will not be extracted will be enhanced by tree-planting and the placement of habitat structures such as rock piles, stumps, logs and other woody debris. These areas are shown on **Figure 4**. Ultimately, the proposed reforestation will expand Significant Woodlands in the vicinity and improve connectivity, particularly between Wetland U1 and the nearby forest blocks.
- The NETR/EIA will describe the key components of the Rehabilitation Plan that will primarily cover land that will be extracted. The rehabilitation concept is shown on Figure 4. The quarry rehabilitation will include a deep lake, shallow wetlands, islands, a promontory and beach ridge, etc., including a terrestrial linkage with the Cox Tract to the west.

### **6.3 IMPACT ASSESSMENT**

- The NETR/EIA impact assessment will take into account the Operational Plan proposed for the Milton Quarry East Extension, mitigation measures, ecological enhancement measures and quarry rehabilitation. The cumulative effects of the MQEE will also be assessed.
- The potential impacts resulting from the WMS footprint will be addressed in the NETR/EIA. It should be noted that portions of the WMS footprint will be restored and naturalized; this will be explained in the NETR/EIA.

- The NETR/EIA will include an assessment of the Milton Quarry East Extension upon landscape connectivity and wildlife corridors, including the identification of enhancement opportunities through the Ecological Enhancement Plan (EEP) for lands that will not be extracted and the Rehabilitation Plan for lands that will be extracted.
- The NETR/EIA will discuss how a net environmental gain will be achieved as a result of the Milton Quarry East Extension.

#### **6.4 RECOMMENDATIONS AND CONCLUSIONS**

- The NETR/EIA will provide a summary of GEC's recommendations with respect to the natural environment.
- The NETR/EIA will describe the conclusions reached with respect to conformity with the various legislative and policy requirements described above in **Section 2.0**.

#### **5.0 MITIGATION MEASURES, ECOLOGICAL ENHANCEMENTS, QUARRY REHABILITATION AND IMPACT ASSESSMENT**

##### *Preliminary Mitigation Measures*

~~Dufferin has already committed to integrate the subject site into the state-of-the-art water management system (WMS) and AMP that are already in place and have been operating at the Milton Quarry and Milton Quarry Extension since 2007. In the absence of mitigation measures, the extension of the Milton Quarry below the water table in the MQEE lands would result in a lowering of the surrounding groundwater levels and would be expected to have a negative influence on some of the nearby groundwater dependent wetlands. The water mitigation system has effectively maintained groundwater levels around the perimeter of the Milton Quarry Extension protecting surrounding water resources including water dependent ecological features. The water management system for the MQEE will be a straightforward addition to the existing system using the same proven techniques for mitigation. GEC will provide ecological input to GHD in relation to setting surface water level targets in Wetland U1 and groundwater level targets in the vicinity of other wetlands located in the forest.~~

~~Significant Woodlands onsite will be provided with a minimum 10 m buffer that will be enhanced through tree planting. This is the same as the approach for the Acton Quarry Extension, which was approved by the relevant review agencies. In many areas the Significant Woodland buffer will be much greater than 10 m.~~



Tree clearing will occur outside of the breeding bird season (generally mid-April to late July) and MECP's bats timing window (active from April to October), meaning that tree clearing will occur between November and March. Logs, stumps and other woody debris will be utilized as part of the ecological enhancements briefly described below.

#### *Ecological Enhancement Measures*

Most of the open field areas that will not be extracted will be enhanced by tree planting and the placement of habitat structures such as rock piles, stumps, logs and other woody debris. These areas are shown on **Figure 4**. Ultimately, the proposed reforestation will expand Significant Woodlands in the vicinity and improve connectivity, particularly between Wetland U1 and the nearby forest blocks.

#### *Quarry Rehabilitation*

The rehabilitation concept is shown on **Figure 4**. The quarry rehabilitation will include a deep lake, shallow wetlands, islands, a promontory and beach ridge, etc., including a terrestrial linkage with the Cox Tract to the west.

#### *Impact Assessment*

The Environmental Impact Assessment will take into account the Operational Plan proposed for the MQEE, mitigation measures, ecological enhancement measures and quarry rehabilitation. The cumulative impact of the MQEE will also be assessed.

Conclusions will be provided with respect to conformity with the various legislative and policy requirements described above in Section 2.0.

## 67.0 REFERENCES

Cadman, M.D., D.A. Sutherland, G.G. Beck, D. Lepage, and A.R. Couturier, eds. 2007. Atlas of the breeding birds of Ontario, 2001-2005. Toronto, ON: Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources, and Ontario Nature. 706 pp.

Crins, W.J., W.D. McIlveen, A.G. Goodban and P.G. O'Hara. 2006. The Vascular Plants of Halton Region, Ontario. pp. 1-79 In: Dwyer, J.K. (ed.), Halton Natural Areas Inventory 2006: Volume 2 – Species Checklists. Halton/North Peel Naturalists' Club, South Peel Naturalists' Club, Hamilton Naturalists' Club, Conservation Halton and the Regional Municipality of Halton.

Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig and S. Murray. 1998. Ecological Land Classification for Southern Ontario: First Approximation and its Application. Ontario Ministry of Natural Resources, Southcentral Science Section, Science Development and Transfer Branch. SCSS Field Guide FG-02.

Oldham, M.J. and S.R. Brinker. 2009. Rare Vascular Plants of Ontario, Fourth Edition. Ontario Ministry of Natural Resources, Peterborough, Ontario. 188 pp.

Oldham, M.J., W.D. Bakowsky and D.A. Sutherland. 1995. Floristic Quality Assessment System for Southern Ontario. Natural Heritage Information Centre, Ontario Ministry of Natural Resources, Peterborough, Ontario. 68 pp + computer disk.

Ontario Ministry of Natural Resources ([OMNR](#)). 1997. Non-renewable resources training manual, Version 1.0. Peterborough, ON: Ontario Ministry of Natural Resources.

Ontario Ministry of Natural Resources ([OMNR](#)). 2000. Significant Wildlife Habitat Technical Guide. 139 pp + appendices.

Ontario Ministry of Natural Resources ([OMNR](#)). 2006. Licence Applications: Natural Environment Report Standards. Policy A.R. 2.01.07. Lands & Waters Branch, Aggregate & Petroleum Resources. Issued March 15, 2006.

Ontario Ministry of Natural Resources ([OMNR](#)). 2010. Natural Heritage Reference Manual for natural heritage policies of the Provincial Policy Statement, 2005. Second edition. Toronto, ON: Queen's Printer for Ontario. 248 pp.

[Ontario Ministry of Natural Resources and Forestry \(OMNRF\). 2015. Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E. Peterborough, ON: Ontario Ministry of Natural Resources and Forestry. 36 pp.](#)

Riley, J.L., J.V. Jalava and S. Varga. 1996. Ecological Survey of the Niagara Escarpment Biosphere Reserve. Volume I. Significant Natural Areas. Volume II. Technical Appendices. Ontario Ministry of Natural Resources, Southcentral Region, Peterborough, Ontario. Open File Site Report SR 9601. v + 629 pp., vii + 310 pp.



# Memorandum

Updated: March 26, 2021

To: Brian Zeman, MHBC

Ref. No.: 010978

From: Richard Murphy(GHD)/Anthony Goodban(GEC)/we/289

cc: Kevin Mitchell (CRH)

**Subject: Terms of Reference: Adaptive Environmental Management and Protection Plan (AMP)  
Proposed Dufferin Aggregates Milton Quarry East Extension  
Region of Halton, Ontario**

## 1. Introduction and Background

GHD and Goodban Ecological Consulting Inc. (GEC) have been retained by Dufferin Aggregates, a division of CRH Canada Group Inc. (Dufferin) to provide them with advice pertaining to an Adaptive Environmental Management and Protection Plan (AMP) for the proposed extension to the Milton Quarry. This memorandum presents the proposed Terms of Reference (ToR) for this advice. GHD has also prepared a separate ToR for advice related to geology and water resources and GEC has prepared a separate ToR for advice related to natural (ecological) resources.

The proposed extension of the Milton Quarry, referred to as the Milton Quarry East Extension (MQEE), represents a proposed extraction area of approximately 16 hectares bounded by the existing East Cell to the north, the existing North Quarry to the west, and the existing Main Quarry at some distance to the southwest and south. The proposed MQEE extraction area is contiguous with the existing East Cell (i.e., it would be extracted as part of the East Cell) and separated from the North Quarry by the Town Line to the west.

These Terms of Reference (ToR) have been prepared in consideration of the comprehensive understanding that already exists with respect to the geology, hydrogeology, surface water, and ecological resources in the area of the Milton Quarry and the existing mitigation measures that have a long proven record of successful operation and protection of water resources and related ecological features. Guidelines available from review agencies, including the Ministry of Natural Resources and Forestry Provincial Standards for a Class A Quarry below the water table and the Region of Halton Aggregate Resources Reference Manual were also considered.

The study of the proposed MQEE lands and surrounding area commenced more than 40 years ago. Over this time extensive investigation and evaluation has occurred and a truly vast amount of data has been collected. The existing Milton Quarry characterization, impact assessment, mitigation measures, and monitoring plan (refer to AMP) were thoroughly vetted through an extensive Joint Agency Review Team (JART) and public consultation process; evaluated and approved by all related government agencies, including the Provincial Joint Board and Cabinet; and the approved plans, including mitigation measures




# Memorandum

Updated: March 26, 2021

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To: Brian Zeman, MHBC Ref. No.: 010978

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From:  Richard Murphy(GHD)/Anthony Goodban(GEC)/we/289

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**Subject: Terms of Reference: Adaptive Environmental Management and Protection Plan (AMP)  
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have been successfully operating since 2007. The ongoing monitoring and performance assessment is thoroughly reported to, and reviewed by, relevant government agencies with support from their consultants as warranted. This rigorous approval and operating quarry review process represents the highest known standard of care for any aggregate extraction operation in Ontario or elsewhere.

Dufferin has already committed to integrate the subject site into the state-of-the-art water management system (WMS) and AMP that are already in place and have been operating at the Milton Quarry and Milton Quarry Extension since 2007. The water mitigation system has effectively maintained groundwater levels around the perimeter of the Milton Quarry Extension protecting surrounding water resources including water dependent ecological features. All approval agencies are familiar with the AMP and the hydrologic and natural environment data collection and assessment that is provided through annual reports and the WebDT data sharing system that allows agencies direct access to hydrogeological data (and other information) at any time. The AMP also requires a comprehensive 5-year review to make any adjustments necessary to make sure the groundwater is maintained to an acceptable level thereby protecting the ecological features dependent upon it. The AMP was approved by the agencies and through annual reporting, as well as a recent 5-year review, has demonstrated that the proposed mitigation system has protected and enhanced natural heritage features surrounding the extension. The water management system and protection for water resources and related ecological features for the MQEE will be a straightforward addition to the existing system using the same proven techniques for mitigation.

The proposed long-term rehabilitation conditions for the MQEE are also readily integrated into the rehabilitation plans for the existing quarry. The rehabilitation lake in the East Cell will be extended south into the MQEE extraction area, thereby passively supporting the surrounding groundwater levels and extending the water and terrestrial resource opportunities for the long-term land use. Any need for seasonal recharge support to maintain or enhance the water resources in the long term (beyond extraction and lake filling period) will be a straight-forward augmentation of the existing long-term water management requirements. These considerations will be addressed through the AMP requirements.

The reliable understanding and operating basis for the existing Milton Quarry, along with the established AMP form the basis for the advice and recommendations GHD and GEC are preparing related to the proposed MQEE.

## **2. AMP Development**

The principles and requirements of the AMP have been established and demonstrated to be successful for the existing Milton Quarry Extension, as have earlier comparable requirements for the North Quarry. An addendum to the existing AMP will be developed to extend the protections provided by AMP to the proposed MQEE. It is anticipated that the AMP Addendum will be referenced on the Site Plans as the key document pertaining to water-related monitoring and mitigation measures.

The key components of the AMP addendum would include suitable provisions addressing:

- Pre-extraction requirements for baseline monitoring, mitigation implementation and verification, and final target level calculations



- Ongoing monitoring of groundwater, surface water, and ecological conditions, including both Performance and Supplemental monitoring programs
- Response and contingency action measures
- Rehabilitation confirmatory evaluation of mitigation and monitoring requirements
- Feature-specific management plans for water-dependent receptors, summarizing the integrated water and natural environment baseline characteristics, mitigation objectives or target rationale, planned mitigation and rehabilitation measures, and monitoring requirements
- Reporting

The following are some additional specific notes on the planned AMP Addendum content:

- a) The AMP will also require an updated integrated description of baseline conditions to be prepared as part of the Pre-Extraction report, allowing the maximum amount of baseline data to be available from the ongoing monitoring programs
- b) Groundwater level targets for the MQEE will follow the successful approach used in the existing AMP. This will provide a consistent approach for the Existing Quarry and the MQEE, avoiding potential confusion if different approaches are employed
- c) The desired surface water level targets proposed for Wetland U1 will be identified in the Natural Environment Report and they will be included in the AMP Addendum
- d) The response action framework for the MQEE will follow that implemented in the existing AMP as it is desirable to provide a consistent approach for the Existing Quarry and the MQEE portions of the operations. The AMP language describing the framework will be reviewed and updated, if necessary, in the AMP Addendum to reflect the current state of WMS implementation



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The key components of the AMP addendum would include suitable provisions addressing:

- Pre-extraction requirements for baseline monitoring, mitigation implementation and verification, and final target level calculations



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## **TERMS OF REFERENCE DUFFERIN MILTON EAST QUARRY EXPANSION, VISUAL IMPACT ASSESSMENT REPORT**

**Date Prepared:** June 08, 2021

### **Background and Professional Expertise**

MHBC was retained by Dufferin Aggregates to prepare a Visual impact Assessment (VIA) Report for Dufferin's proposed Milton Quarry Expansion. The Terms of Reference for this study have been prepared based on past experience with aggregate applications in the Region of Halton including the Acton Quarry, as well as other VIA reports prepared for numerous telecommunication towers within the Niagara Escarpment Plan (NEP) area. The 2020 NEC Visual Impact Assessment Technical Criteria has been considered in the preparation of this Terms of Reference.

### **Details of Stages, Methodology, and Study Parameters:**

MHBC's proposed methodology is as follows:

#### *Preliminary Project Investigation:*

- Background information including related reports and digital base materials will be collected and reviewed.
- Coordinate with governing agencies (NEC) and any stakeholder groups to define expectations and key considerations.
- Synthesis of all collected data and summarization of this information for project team followed by submission of a detailed methodology for approval by the NEC.

#### *Field Work and Data Collection:*

- Field work will be completed during leaf-off conditions to illustrate worst case scenario and will include on-site observation complete with both written and photo documentation.
- A basic vegetative summary will be included as part of the field work. Where beneficial, follow up field work will be completed in the following spring (leaf-on conditions). Photo documentation of these conditions will be included in the report as support for the provision or absence of proposed visual mitigation.

#### *Preparation of the Draft VIA Report:*

- Data collected from the field reviews will be compiled into a report which will summarize pertinent receptors, significant views and proposed visual mitigation. The report will contain a combination of plans, cross sections, aerial and ground photography (including panoramic photos), as required to clearly and objectively illustrate existing conditions.
- If required, digitally rendered visual simulations will be provided in order to illustrate the existing and proposed conditions.

- The draft report will be submitted to pertinent team members for review, comment and coordination. Comments will be received for consideration and incorporated as part of a revision for the Final Report.

Preparation of the Final VIA Report:

- Data collected from leaf-on field reviews will be incorporated into the report at this stage along with any comments that were received as part of the Draft Report Review.
- The report will include suggestions for visual mitigation, which will take into account any structures (berms, etc.), that may be proposed as part of other disciplines' recommendations. Final recommendations for mitigation will be summarized with both text and supporting graphics.

**NEP Policies to be Considered:**

The following sections of the Niagara Escarpment Plan (2017) will be considered:

Introduction:

Landscape Approach

Purpose and Objectives

Part 1 – Land Use Policies:

- 1.2, 1.5, 1.9

Part 2 – Development Criteria:

- 2.2, 2.7, 2.8, 2.9, 2.10, 2.13

Part 3 – The Niagara Escarpment Plan and Open Space System:

- 3.1.1, 3.2

**Details of the VIA Study Process That are Objective and Reproducible:**

In order to illustrate objective and reproducible results, the VIA study and report will contain information such as:

- GPS coordinates;
- Detailed description of photo equipment and settings used;
- Detailed description of software products, methods and settings used;
- Detailed methodology used in the production of any digital renderings or photo simulations;
- Listing of all base material used, including sources.

# Tab **21**

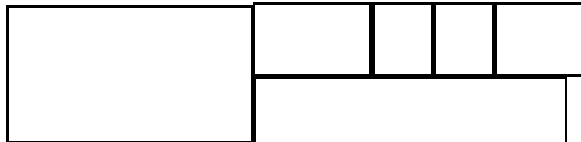
**From:** Hogg, Janice <Janice.Hogg@halton.ca>  
**Sent:** May 21, 2021 10:55 AM  
**To:** Brian Zeman <bzeman@mhbcplan.com>  
**Cc:** Nethery, Joe <Joe.Nethery@halton.ca>; Ellen Ferris <eferris@mhbcplan.com>; Ali, Gena <Gena.Ali@halton.ca>; abuset@haltonhills.ca; lisa.grbinicek@ontario.ca; kmcCormack@hrca.on.ca; Mollie.Kuchma@milton.ca; christian.lupis@milton.ca; gmacdonald@haltonhills.ca; lsmith@hrca.on.ca; Jessica Bester <jbester@hrca.on.ca>; Stirling.Todd@milton.ca; 'Mitchell, Kevin (CRH Canada Group Inc.)' <kevin.mitchell@ca.crh.com>; Kyle Fritz <Kyle.Fritz@ghd.com>; Anthony Goodban (anthony.goodban@sympatico.ca) <anthony.goodban@sympatico.ca>; Richard Murphy <Richard.Murphy@ghd.com>; Nicholas.Fitzpatrick@ghd.com  
**Subject:** Milton Quarry East, TOR Review - TIS and AIA

Hi Brian,

On behalf of JART, please find attached a copy of the agency comment tables and peer review letters on the submitted Terms of Reference for the TIS and AIA.

Thanks,  
Janice

**Janice Hogg, MCIP, RPP**  
**Senior Planner**  
Planning Services  
Legislative & Planning Services  
**Halton Region**  
905-825-6000, ext. 2921 | 1-866-442-5866



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## Proposed Milton Quarry East Expansion JART COMMENT SUMMARY TABLE – Transportation Impact Study

Please accept the following as feedback from the Milton Quarry East Joint Agency Review Team (JART) on the submitted Terms of Reference for the proposed Milton Quarry Expansion Transportation Impact Study.

	JART Comments (May 2021)	Source of Comment				
		Region	Halton Hills	Milton	CH	NEC
1.	Please also confirm requirements with Halton Region and the Town of Milton prior to commencing the TIS.		X			
2.	As the Town does not currently have Transportation Impact Study (TIS) Guidelines, please follow the Region's TIS Guidelines for transportation impact studies within the Town of Halton Hills.		X			
3.	Queuing issues on Dublin Line and 5 Side Road during the A.M. quarry peak time		X			
4.	Review of Illegal parking on the north side of 5 Side Road, east of Regional Road 25		X			
5.	Operational issues (i.e., dirt tracked on Dublin Line and noise issues)		X			
6.	Dublin Line and Main Access - operational review (i.e., collisions, sightlines)		X			
7.	Trip distribution is to be based on anticipated truck routes to/from the site, with detailed justification provided.		X			
8.	Note that traffic count data and Synchro analysis reports shall be appended to the TIS document.		X			
9.	Please provide the synchro analysis electronically as part of the submission.		X			
10.	Review and identify truck route(s) to/from the Milton Quarry		X			
11.	Identify local aggregate processing sites (i.e., Armstrong Avenue, Georgetown plant)		X			
12.	Identify the measures implemented by the Milton Quarry to educate truck drivers with regard to truck routes		X			



## MEMO

**TO** : Janice Hogg, MCIP, RPP - Senior Planner, Halton Region

**COPY TO** : David Germain – Thomson Rogers

**FROM** : Jaime Garcia, Senior Project Manager, CIMA Canada Inc.

**DATE** : May 11, 2021

**SUBJECT** : Milton Aggregate Quarry Extension Traffic Impact Study – Terms of Reference Peer Review (CIMA+ File: B001331) -

Dear Janice,

As per your request, CIMA Canada Inc. (CIMA+) hereby provides the Region of Halton (the Region) our comments with respect to the proposed Terms of Reference (ToR) for the Transportation Impact Study (TIS) in support of the proposed extensions of the Dufferin Aggregate Quarry in the Town of Milton prepared by The Municipal Infrastructure Group Limited, a T.Y. Lin International Company (TMIG). The proposed ToR is attached as Appendix A to this memo.

The focus of this peer review is to ensure that the proposed ToR includes a proper level of analysis and a proper study area, and that it follows the Halton Region's Transportation Impact Study Guidelines and the requirements identified by the Region's Aggregate Resources Reference Manual for the preparation of a Transportation/Haul Route Study.

After our review of the proposed ToR, we offer the following comments:

1. The introduction indicates that the expansion is located on the western portion of the site and falls within the Town of Halton Hills. Additionally, Dublin Line is a municipal road located within Halton Hills.
  - Section 1.2.1 of the Provincial Policy Statement (PPS), which is included in the Region's Aggregate Resources Reference Manual, indicates that due to the haul route crossing municipal boundaries, the impacts to the road network should be coordinated between the municipalities. The ToR should include a section that discusses the coordination between the affected municipalities regarding the impacts of the haul route;
2. Section 2 (Study Intersections) should include No. 5 Sideroad at James Snow Parkway (signalized) intersection and the stop-controlled quarry site access on Dublin Line. Additionally, provide clarification for the current and future use of the existing quarry site access on Sixth Line Nassagaweya located approximately 2.85 km east of 15 Side Road;
3. Section 2 should include a map showing the future roadway network and modified haul route along the Tremaine Road realignment and new Highway 401 interchange as part of the ToR. The map will facilitate the ToR review and discussion prior to preparation of the TIS. The proposed study scope includes the existing Highway 401 ramp terminals on

Regional Road 25 and the future Highway 401 ramp terminals on new Tremaine Road. As these ramp terminals are MTO jurisdiction, the Town of Milton should ensure that the study is circulated to the MTO for their review.

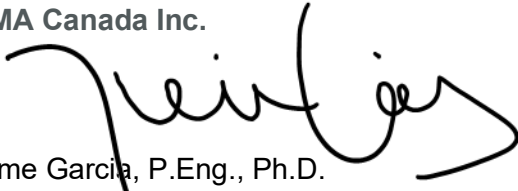
4. Section 5 (Future Conditions) should include a comparative analysis of the existing and future haul routes. The net increase in haulage volumes should be clearly presented so the Region can understand the impacts of the quarry expansion. The study should analyze and compare future traffic operations for both the existing haul route and modified haul route to determine the impacts to traffic operations of modifying the haul route vs. maintaining the existing haul route.
  - o The study must provide justification and demonstrate that the proposed modified haul route is feasible from a traffic operations perspective.
5. Section 7 (Trip Distribution and Assignment) should indicate what are the intended trip distribution assumptions (e.g. truck routes data collected from Dufferin Aggregate - Milton Quarry);
6. Section 8 (Study Parameters) discusses a review of the projected queues at the turning movements impacted by the truck routes. However, traffic operation analysis for the surrounding roadways should include existing and projected queue lengths (per Region's TIS Guidelines, Section 3.6.1) at all study area intersections as well as mitigation measures for queues that are expected to exceed available storage. The use of SimTraffic is recommended for the queuing analysis;
7. It is suggested for the ToR to indicate that a 'Safety Analysis' section will be included in the report to discuss potential safety or operational issues (per Region's TIS Guidelines, Section 3.6.2) in the study area. Even if there are no safety issues, a review should be completed and documented in the TIS report.
  - o A critical component of the Safety Analysis and of the study as a whole will be to assess the heavy truck routing to and from the quarry; more specifically, the proposed modified route that includes new Tremaine Road and the future Highway 401 interchange. The study must provide justification and demonstrate that the proposed modified haul route is feasible from a traffic safety perspective.
8. It is suggested for the ToR to indicate the need of follow the Region's Aggregate Resources Reference Manual for the preparation of a Transportation/Haul Route Study.
  - o Section 4.0 of the Region's Aggregate Resources Reference Manual outlines what format each study should follow (Sections A to H on Page 27-28) and identifies the purpose and objectives of each study.
  - o Section C identifies all policies in any Provincial, Regional or local planning document that deal with the subject matter of the report and which may have an impact on the consideration of the application.
  - o Appendix A (specifically Section 8.0) to this Manual should be considered in this regard. The ToR should include and address the requirements identified by the most current versions of the PPS, Greenbelt Plan and Niagara Escarpment Plan. For example, the existing quarry is adjacent to a designated Niagara Escarpment Natural Area. The ToR should discuss how the proposed quarry extension avoids the Escarpment Natural Area.
  - o Consideration should be given to traffic safety components including (but not limited to) heavy truck maneuverability at the Dublin Road and James Snow Parkway roundabout

and the impacts of increased truck volumes on both the existing and modified haul routes.

Aside of the aforementioned comments it is recommended that the consultant's proponent discuss with the Region of Halton the availability of historical traffic data as well as the traffic volume forecasts identified as part of other Traffic Impact Studies.

Sincerely,

**CIMA Canada Inc.**

A handwritten signature in black ink, appearing to read 'Jaime Garcia', written over the printed name.

Jaime Garcia, P.Eng., Ph.D.

Associate Partner, Senior Project Manager, Transportation

[jaime.garcia@cima.ca](mailto:jaime.garcia@cima.ca)







## **Appendix A: Terms of Reference**



March 1, 2021

PROJECT NUMBER 10108

CRH Canada Group Inc.

ATTN: Kevin Mitchell, Director Property, Planning & Approvals

2300 Steeles Avenue West, 4th Floor

Concord, ON

L4K 5X6

Dear Mr. Mitchell,

**Re: Proposed Milton Quarry Expansion Traffic Impact Study – Terms of Reference**

The Municipal Infrastructure Group Ltd., a T.Y. Lin International Company (TMIG) has been retained to complete a Traffic Impact Study (TIS) for the proposed expansion of the Dufferin Aggregates Quarry, located in the Town of Milton. The expansion, consisting of 16 ha of land, is located on the western portion of the site and falls within the Town of Halton Hills. This expansion refers only to the extraction area, as the production capacity and access to the subject lands are proposed to remain as under existing conditions. We understand that the existing Milton Quarry has an unlimited annual extraction license, which we assume would incorporate the proposed expansion area. Please find below a detailed Terms of Reference describing our proposed work plan for your review and input.

1. Study Periods

TMIG proposes to assess traffic operations under the weekday AM and PM peak hours of the roadway to quantify the impacts of the expansion on the boundary road network.

2. Study Intersections

As part of this TIS, TMIG proposes to assess the existing haul route under existing conditions consisting of the following intersections:

- Dublin Line at James Snow Parkway (roundabout);
- Regional Road 25 at James Snow Parkway (signalized);
- Regional Road 25 at Highway 401 WB Off-Ramp (signalized); and
- Regional Road 25 at Highway 401 EB Off-Ramp (signalized).

It is TMIG's understanding that the quarry operations are not projected to change following the expansion. As such under future conditions, as the Tremaine Road realignment and new interchange to the Highway 401 are planned to be completed by 2023, TMIG proposes to assess a modified haul route that would include the study intersections detailed above plus the following:

- New south leg (New Tremaine Road) at Dublin Line and James Snow Parkway (roundabout); and
- The new intersections of New Tremaine Road at the Highway 401 WB Off-Ramp & EB Off-Ramp (signalized).

### 3. Traffic Data

Due to the on-going Covid-19 pandemic, traffic patterns are not normalized, and the completion of up-to-date survey data would not be deemed applicable for use in traffic operations review. Accordingly, TMIG proposes to acquire historical traffic data at the existing study intersections listed above from the municipalities, along with Average Annual Daily Traffic Data (AADT) along the study roadways.

The AADT is proposed to be used to derive annual historical growth rates along the study roadways to be applied to the historical traffic volumes in order to derive 2021 existing traffic volumes.

For the interchange intersections at Regional Road 25, TMIG proposes to acquire various historical TMC surveys to derive an average annual growth for the ramps should AADT not be available. Should historical TMC data sets not be available, TMIG proposes to apply the AADT derived for Regional Road 25 to the Highway 401 ramps as applicable.

### 4. Conservative Baseline Traffic Volumes

The truck haulage to/from the quarry is not projected to change under future conditions. However, in order to derive a conservative analysis, TMIG proposes to remove the surveyed haulage volumes (based on the historical traffic data) from the derived 2021 volumes and replace them with conservative haulage volumes derived based on the operations of the quarry as detailed below.

TMIG proposes to derive trip generation rates for the development based on standard 'first principles' approach (applying a Passenger Car Equivalent (PCE)) and the existing Quarry operations. As part of this exercise, TMIG will take into consideration the existing license for the Quarry, haulage time and days, extraction activities but also any internal haulage that might 'cross' any public roadway (as it would impact the boundary road network), material delivery to the quarry for processing/recycling and any regular passenger vehicle trips (e.g. employee trips). This information will be confirmed with the project team at the start of the study.

- As the Quarry has an unlimited extraction license, TMIG will consider the highest historical truck movements in and out of the site as part of the calculations for trip generation. TMIG will use historical data for the above operations characteristics and derive an appropriate trip generation based on peak activity to analyze a worst case scenario.

Per the above TMIG will derive a conservative trip generation rate to estimate the most conservative haulage volume for the quarry. These volumes will be added into the derived 2021 existing traffic volumes, from which we will subtract the haulage volumes surveyed on the day of the traffic counts, in order to derive conservative 2021 baseline traffic volumes. This ensures that the review of existing conditions (and subsequent future conditions) is the most conservative analysis with regards to the haulage volume.

### 5. Future Conditions

TMIG proposes a 5-year study horizon to 2026 to assess the impact of the proposed expansion.

As per the study horizon year, TMIG asks that the Region and Towns confirm the following:

- All planned roadways improvements to be implemented within the study area by 2026
- All background developments to be included as part of future conditions

The growth rates used to derive existing traffic volumes are proposed to be used to derive the baseline traffic growth to future conditions (to which we will add background development traffic). TMIG will consider truck rerouting as part of the new haulage route reviewed under future conditions.

## 6. Traffic Data Model Alternative:

In the absence of reliable traffic data and as an alternative to Tasks 3 and 5 above, TMIG proposes preparing a baseline future traffic model building upon previous TIS reports prepared for other developments within the study area. Specifically, TMIG suggests utilizing traffic data analyzed as part of the TIS prepared for the 'Emery' Milton Business Park located on the southwest corner of Dublin Line/James Snow Parkway at 5 Sideroad (roundabout). The 'Emery' TIS includes 2021 and 2026 future total traffic volumes at the proposed study intersections. TMIG will apply the same methodology detailed in Task 4 in order to substitute the haulage volume included in the 'Emery' TIS forecast to include the most conservative haulage volumes as per the Quarry operations. Following the substitution, the future total traffic volumes from the report would be used as part of the traffic operations review.

## 7. Trip Distribution and Assignment

The Trip Distribution and assignment for the haulage volume substitution and rerouting to the modified route under future conditions will be based on input from the project team.

## 8. Study Parameters

As part of this study, TMIG will assess traffic operations for the following conditions:

- 2021 Conservative Existing Conditions – which will include a conservative review of the haulage along the existing truck route
- 2026 Future Conditions – which will include the same conservative haulage (as it is not projected to change based on the proposed expansion) along the future truck route

TMIG will complete the traffic operations review using Synchro 10.0 and will complete a review of the projected queues at the turning movements impacted by the truck routes.

As part of the above noted methodology, TMIG also confirmed following in accordance with the JART comments provided for the proposed development:

- TMIG has confirmed with the project team that there are limited trucks registered as travelling from Milton to Brampton along 5 Sideroad. TMIG will consider mitigation measures to prevent this occurrence as applicable.
- TMIG will investigate the queuing issue on Dublin Line and 5 Sideroad during the AM quarry peak time. Based on correspondence with the project team we understand that these issues are very rare (approximately once per year) but do create operational constraint when they occur. As part of the TIS TMIG will derive remedial measures to prevent the queueing as applicable.
- Based on correspondence with the project team, TMIG understands that illegal parking does occur along 5 Sideroad on few instances throughout the year. It should be noted that queuing along the roadway has significantly reduced since the opening of the roundabout and the transition of the truck route to James Snow Parkway. However, Dufferin Aggregates is aware of this issue and does alert the applicable authorities to come and patrol the area when it occurs. Additionally, Dufferin Aggregates is in communication with trucking companies/truckers to prevent this illegal parking occurrence. As part of the study TMIG will detail all measures undertaken by Dufferin Aggregate to resolve the issue, which are deemed adequate. Additional measures will be recommended as part of the study as applicable.
- In addition to the traffic operations review, TMIG will complete a review of the truck site access design to confirm that all applicable sightline requirements and intersection design standards are met.

We hope that the above provided a detailed review of our proposed study methodology. We look forward the municipalities' review and feedback, as well as applicable information that we will require from them (i.e. historical traffic data, AADT data, planned roadway improvements and background developments).

Should you have any questions, please do not hesitate to contact us.

Thank you,

**THE MUNICIPAL INFRASTRUCTURE GROUP LTD.**  
**A T.Y. LIN INTERNATIONAL COMPANY**



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Team Lead

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## Proposed Milton Quarry East Expansion JART COMMENT SUMMARY TABLE – Agricultural Impact Study

Please accept the following as feedback from the Milton Quarry East Joint Agency Review Team (JART) on the submitted Terms of Reference for the Agricultural Impact Study prepared for the Milton Quarry Expansion East.

	JART Comments (May 2021)	Source of Comment				
		Region	Halton Hills	Milton	CH	NEC
1.	Discussion on the weight of the Regional Guidelines vs. the OMAFRA Guidelines					X
2.	Regarding the Agricultural System – consideration of the broader agricultural system should be given, extending beyond the 1km and regional in scope.					X
3.	Under the policy analysis section, NEP (2017), in addition to the NEP Sections identified, analysis of the following relevant NEP Objectives and Policies are also required: <ul style="list-style-type: none"> <li>• Part 1.5 Escarpment Rural Area Objectives &amp; Policies</li> <li>• Part 2.8 Agriculture</li> </ul>					X
4.	Address the compatibility of the rehabilitation plan with surrounding land uses.					X
5.	Address potential impacts associated with the haul route, including intensification of the use of the existing haul route.					X
6.	Cumulative agricultural impacts associated with the broader Niagara Escarpment should be considered (in AIA or Planning Justification Report).					X



**REVIEW OF THE DBH AGRICULTURAL IMPACT ASSESSMENT TERMS OF  
REFERENCE FOR THE DUFFERIN AGGREGATES MILTON QUARRY EAST  
EXPANSION APPLICATION, REGION OF HALTON**

Prepared for:  
Mr. David N. Germain (Thomson, Rogers)

By:  
AgPlan Limited

May 13, 2021



## BACKGROUND

AgPlan Limited (Michael K. Hoffman) has been retained for soils and agricultural work by Mr. David N. Germain of Thomson, Rogers Lawyers to assist in evaluating a proposed expansion of a quarry called the Milton Quarry East Expansion. The proposed quarry expansion is located within Part Lots 11 and 12, Concession 1, Town of Halton Hills in the Regional Municipality of Halton, as shown on Map 1 (Halton Region, November 3, 2020). While the proposed quarry is located in Halton Hills, the name attached in communication with Halton Region is “Milton Quarry East” and that name will be used as reference within this review.

This AgPlan report summarizes findings for the review of the Terms of Reference (TOR) prepared by DBH Soil Services Inc. which is dated March 5, 2021 and has the title *Agricultural Impact Assessment (AIA) Study Terms of Reference (ToR) CRH – Milton Quarry Expansion East Part Lots 11 & 12, Concession 1 Town of Halton Hills (formerly Esquesing) Regional Municipality of Halton*.

The information summarized in this AgPlan DBH TOR review may be supplemented, reconsidered, or otherwise revised by the author due to:

- new (including reply information which results from this review) or previously unknown information;
- reasoned and reasonable interpretation of policy, guidelines, legislation, published literature etc. (not previously presented in the TOR or subsequently in the Milton East quarry AIA; and/or,
- findings presented within the reports produced by disciplines other than agriculture.

## FINDINGS

Region of Halton staff have prepared a matrix checklist related to information requirements described within their *Agricultural Impact Assessment Guidelines* (2014). This matrix checklist has been used by AgPlan, with some formatting changes (Matrix 1), to summarize presence/absence observations, discussion, and questions related to the DBH AIA TOR, given Halton’s AIA Guideline requirements. The Matrix 1 checklist has agricultural factors or variables which are similar to those described in the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) AIA draft guidelines (2018). The final OMAFRA AIA guidelines have been completed but await instruction for their release (OMAFRA staff, personal communication, 2021). Halton’s (2014) as well as OMAFRA’s draft guidelines (2018) predate the current Provincial Policy Statement (PPS, 2020). Therefore, additional or changed agricultural factors/ variables, wording and/or definitions may need to be considered when the Province releases the final version of the OMAFRA AIA guidelines. This consideration applies to the DBH TOR as well as to this review of that TOR.

Regardless, AIA guidelines tend to focus on *prime agricultural areas* but there is specific wording in the PPS (2020) discussing the relative role and importance of *rural lands* and *rural areas*. Additionally, documents such as the *Guidelines on Permitted Uses in Ontario’s Prime Agricultural Areas* (2018) have relevance to *rural areas* and *rural lands*.

The DBH AIA TOR makes relatively little reference to *rural lands* and *rural areas* in its policy discussions and the lack of detailed reference needs to be addressed as part of the DBH TOR.

Finally, some of the information proposed to be examined by DBH, for example, soil observations and descriptions, may have relevance to other disciplines but the DBH TOR makes no reference to interdisciplinary study.

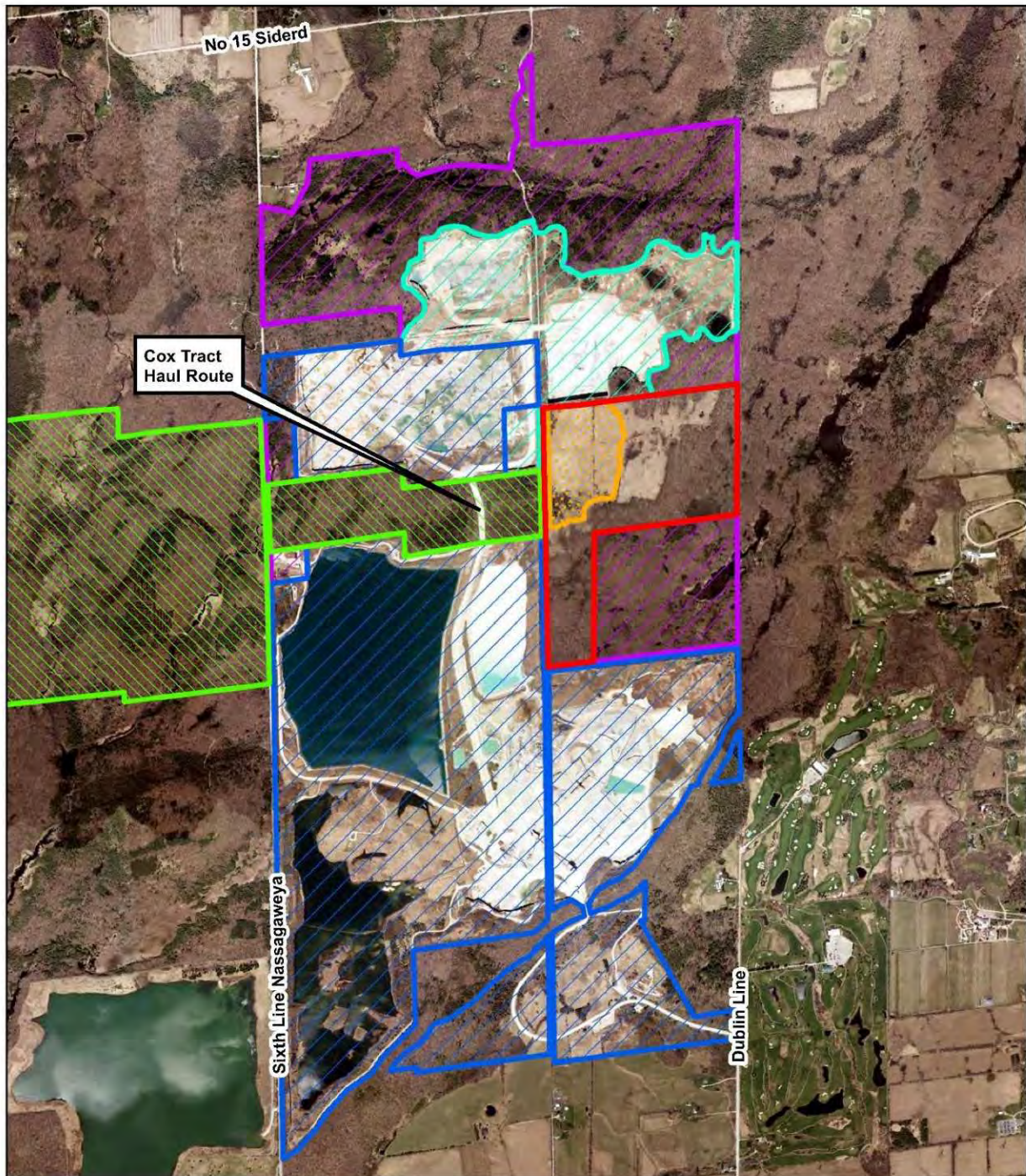
Notwithstanding the previous three paragraphs, the DBH TOR addresses many of the agricultural factors or variables described within the Halton AIA Guidelines (2014) as documented by the checkmarks in the fourth column of Matrix 1. Where additional information needs to be included in the TOR, that is described or requested in the matrix. As there are different ways of evaluating agricultural impact, in addition to opportunities to provide information at different scales, there may be additional information requested from DBH after the review of the initial DBH AIA. Unfortunately, the final OMAFRA AIA guidelines may become available during the time of application for Milton Quarry East. This also may necessitate requests for additional information.

AgPlan Limited

A handwritten signature in black ink, appearing to read 'M. Hoffman', with a long horizontal line extending to the right.

Michael K. Hoffman

# MAP 1

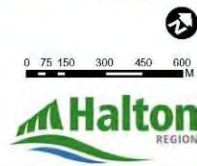


November 3, 2020

## Proposed Milton Quarry East Expansion

- |  |  |  |                                 |
|--|--|--|---------------------------------|
|  | Approximate Proposed Milton Quarry East Extension* |  | Milton Quarry (1962)*           |
|  | Approximate Proposed limit of Extraction*          |  | Milton Quarry Extension (2007)* |
|  | Regional Forest (Cox and Robertson tracts)         |  | Other Lands Owned by Dufferin   |

\* Based on maps provided by Applicant, approximate location only due to georeferencing.



## Matrix 1 Agricultural Impact Assessment (AIA) Scoped Study Requirements

(Based on Halton Regional Official Plan Guidelines – Agricultural Impact Assessment Guidelines, 2014)

Halton Regional Official Plan Guidelines – Agricultural Impact Assessment Guidelines Description		Scoped Requirements for Milton Quarry East	
2.1	Description of Proposal	a) Description of the type of application and the nature of the proposal including a site plan and a plan showing the location of the proposal in the context of the surrounding area.	Not mentioned in the Terms of Reference (TOR). Please include this as part of the AIA.
		b) A description of any activities or processes associated with the proposal. If the proposal would provide for a range of possible uses, the AIA should address all possible scenarios involving permitted or proposed uses causing the maximum adverse impacts on agriculture.	Not mentioned in the Terms of Reference (TOR). Please include this as part of the AIA.
2.2	Applicable Planning Policies	a) A review of the policy context and regulatory framework in which the development is proposed, from an agricultural perspective, including relevant provisions of the Provincial Policy Statement, Niagara Escarpment Plan, Greenbelt Plan and other Provincial Plans, the Regional Official Plan, Local Official Plan and Zoning By-law.	✓ General policy review already completed as part of the TOR. This needs to be repeated in the AIA with additions if required by changes in policy or guidelines that have been used to frame the agricultural characteristics discussed in the AIA.
		b) Identification of the existing and proposed official plan designations and zoning on the property as well as location within Provincial planning policy areas.	✓ Mentioned in the TOR.
		c) An assessment of applicable agricultural-related policies in the above plans and by-law and demonstration of how the proposed development is consistent with these policies, or, when the application is for an official plan amendment, justification of why a change in designation should be approved.	✓ Mentioned in the TOR at least with respect to no requirement for alternative site analysis and MDS. However, the TOR states that, for a proposed expansion of an existing quarry, an alternative site analysis is not required. There is no reference to provide the basis for this last statement.
2.3	On-site and Surrounding Area Physical	a) <b>Soils:</b> A detailed description, including mapping, of the soil composition of the site and surrounding area and the CLI agricultural capability ratings of the soils. A description of the inherent limitations to agricultural capability should be	✓ Mentioned in the TOR.

Halton Regional Official Plan Guidelines – Agricultural Impact Assessment Guidelines		Scoped Requirements for Milton Quarry East	
Description			
	<b>Resource Inventory</b>	included. Verification/refinement of existing soil capability mapping may be necessary.	
	b) <b>Climate:</b> A general description of climatic features including Crop Heat Units, number of frost-free days, and the general climatic patterns of the area. A description of any microclimatic conditions particular to the site should be included (e.g., frost pockets).	Not mentioned in the TOR. Given that the proposed site is not a <i>specialty crop area</i> , and that climate information is only available on a broad scale, this broad scale climate information may be of little assistance in characterizing the proposed quarry site and surrounding study area.	
	c) <b>Slope / Topography:</b> A general description of slope and topographic features including contour mapping of the site and surrounding area. If there are CLI notations regarding topography, an assessment of this information should be completed. A description of any limitations to agricultural capability based on slope should be included.	Not specifically mentioned in the TOR. If fieldwork, in addition to aerial photo interpretation, indicates that the CLI soil capability for agriculture ratings on the site and/or in the surrounding study area are likely to change because of slope, then slope information needs to be incorporated in the AIA.	
	d) <b>Drainage:</b> A description of the details regarding drainage including existing or past improvements. If tile drainage exists a description of the system and its status should be provided. If no system exists, the need for one and the potential improvements that could be achieved through tile drainage should be addressed.	✓ Mentioned in the TOR.	
2.4	<b>On-site Features</b>	a) <b>Past Farming Practices:</b> An outline of the history of the type and extent of agricultural operations on the site, including any recent changes.	✓ Mentioned in the TOR.
		b) <b>Type and Intensity of Existing Agricultural Production:</b> A description of current cultivation patterns, livestock operations, and any wooded or currently idle areas.	✓ Mentioned in the TOR.
		c) <b>Non-Agricultural Land Use On-site:</b> A description of on-site non-agricultural lands uses. Indicate conflicts with existing and potential on-site agriculture.	✓ Mentioned in the TOR.

Halton Regional Official Plan Guidelines – Agricultural Impact Assessment Guidelines Description		Scoped Requirements for Milton Quarry East
	<p>d) <b>Parcel Size, Shape, and Accessibility:</b> A description of fields on the site and their relationship to transportation routes and neighbouring farm properties vis-a-vis accessibility by farm machinery. Indicate limitations on farming efficiency posed by same.</p> <p>e) <b>Existing Farm Management:</b> A description of land tenure and management on-site i.e., leased or owner-operated, on or off-site residence, size of the total operation of which property is part.</p> <p>f) <b>Capital Investment in Agriculture:</b> A description and evaluation of the degree of investment in land improvements, irrigation systems, tile drainage, rootstocks, facilities, buildings, machinery, etc.</p>	<p>✓ Described in Terms of Reference. Parcel size, shape and accessibility will be completed as described in the TOR. No reference to field sizes in TOR. Field size information could be added to the AIA if it has relevance to characterizing impact.</p> <p>✓ TOR indicates land tenure/ownership not required by policy and is limited – and will not be done – but indicates later that ownership will be evaluated in the secondary study area. Based on the relevance of this factor to wording in policy and guidelines, some reference to these factors may be required in the AIA.</p> <p>✓ Listed in the TOR as will be done.</p>
2.5	<p><b>Off-site Land Use Features</b></p> <p>a) <b>Surrounding Land Use Types:</b> A description of the location, type and intensity of surrounding agricultural and non-agricultural land uses, and proposed land use changes up to 1 km from the property boundary of the site<sup>3</sup>. These should be indicated on a map with details about the history of surrounding agricultural uses.</p> <p>Note (3): The exact study area will be confirmed during the pre-consultation process based on area features including property fabric, road infrastructure, topographic features, and planning designations but it is suggested that 1km zone of influence be considered</p> <p>b) <b>Existing and Potential Constraints to On-site Agriculture:</b> An evaluation of constraints on agricultural production on-site arising as a result of existing and proposed non-agricultural uses in the area, including Minimum Distance Separation, nutrient management, traffic impacts, etc.</p>	<p>✓ Already listed as part of proposed AIA as documented in the TOR.</p> <p>How the 1 km secondary study area will be sufficient for the evaluation on the “agricultural system” and “agri-food network” is not documented in the TOR. Additionally, OMAFRA’s final AIA guidelines may have different study area minimum distance and therefore area.</p> <p>✓ MDS does not apply, as stated in the TOR. No discussion of constraints resulting from existing and proposed non-agricultural uses in this may be required based on an interpretation of policy and guidelines.</p>

Halton Regional Official Plan Guidelines – Agricultural Impact Assessment Guidelines Description		Scoped Requirements for Milton Quarry East
	c) <b>Regional Land Use, Lot and Tenure Patterns:</b> In order to determine the general character of the area which might influence the long-term agricultural potential of the site, an overall description of the broad rural area containing the site, including the extent of the area considered, a description of the fragmentation and tenure (absentee, non-farm) characteristics, non-agricultural land uses, the general agricultural (soil and macroclimatic) capability, and a review of non-agricultural commitments in the pertinent planning documents. Indicate the availability of agricultural support services to the site.	✓ Macroclimate is not mentioned in the TOR - see previous comment on climate.
2.6	<b>Agricultural Viability</b>	
	a) An assessment of the viability of the site property as an agricultural operation on its own and in consolidation with a larger existing operation. The flexibility of the site for different types of agricultural operations should be considered in the viability assessment. This review should include considerations related to alternative agricultural operations that could occur into the future.	The TOR indicates limitations of “viability” measurement and that this assessment will not be provided. Will the DBH AIA provide additional rationale, further to that described in the TOR, for the lack of the measurement of viability?  The TOR states that alternative or different types of future agriculture will not be considered as the proposed future use of the site is <i>ponded water, wood lands and wetlands</i> . The future use described in the TOR, assumes that pit excavation will occur. The AIA guidelines are requesting an evaluation of the loss of future use/opportunities in agriculture should that pit excavation not occur as well as if the excavation does occur.
	b) Impact on the viability of neighbouring agricultural operations resulting from increased restrictions that may occur as a result of the proposed development.	Viability will not be considered (see above). As stated previously, will additional reasons for the lack of consideration of viability be presented within the AIA other than the rationale presented in the TOR?
2.7	<b>Assessment of the Impacts on Agriculture</b>	
	a) A description of the short- and long-term effects of the proposal on the agricultural community through the direct loss of agricultural resources including a description of the quantity and quality of land lost from agricultural production	✓ Mentioned in the TOR.



Halton Regional Official Plan Guidelines – Agricultural Impact Assessment Guidelines		Scoped Requirements for Milton Quarry East
Description		
	and the effects on existing or potential operations on the site.	
	b) A description of the potential effects of the proposal on existing and potential farming operations on surrounding lands. The discussion should consider Minimum Distance Separation criteria, Nutrient Management issues, the compatibility of the proposal with agricultural operations, and the effects on the flexibility of surrounding lands to accommodate both changes in types of farming, such as from cash crops to livestock, and expansions to livestock operations. Potential impacts on existing wells or impacts due to noise and increased traffic should be addressed.	✓ MDS not applicable. Other factors may require interdisciplinary evaluation. The TOR makes no reference to interdisciplinary studies.
	c) Consideration of the proposal's impact on the existing agricultural character of the general area including implications for land use, tenure, or fragmentation patterns. The effect of the proposal as an intrusion in an agricultural area or on the continuity of the agricultural area should be considered.	✓ Already described in the TOR.
	d) Consideration of the potential cumulative impacts of this proposed development in the context of other decisions in the area.	Not referenced in the TOR. Will cumulative impacts be ascertained by including information from other disciplines?
2.8	<b>Alternative Location Analysis</b> If the AIA is being completed to satisfy the policies of the PPS, a Provincial Plan, or the Regional Official Plan to address the proposed removal of land from prime agricultural areas, an alternative location analysis should be completed to demonstrate that the proposed development location has the least impact on agriculture and to demonstrate the need, within an appropriate planning horizon, for additional land to be designated to accommodate the proposed use.	✓ Analysis of alternative locations not required if the lands are not designated as <i>prime agricultural area</i> given the wording in the PPS as described in the TOR.  However, wording in the TOR also can be interpreted to state that an alternatives analysis is not necessary given that the proposal is an expansion of an existing pit. This interpretation related to expansion needs to be supported by reference to sources such as policy and/or guidelines.
2.9	a) A description of any measures that could be taken to reduce the impacts of the proposal on both on-site and off-site	

Halton Regional Official Plan Guidelines – Agricultural Impact Assessment Guidelines Description		Scoped Requirements for Milton Quarry East
	<p>agriculture and the degree to which the impacts would be reduced (e.g., confining the development to areas on the site with poorer capability land and retaining as much good quality land in production as possible, establishing appropriate buffers on the development site so as not to impact the ability of abutting operations to expand).</p> <p>b) Identification of the impact of removal and/or mitigation measures the proponent proposes to undertake as part of the proposal.</p> <p>c) Identification of any notices that could be included as conditions of development to ensure that the presence of surrounding agricultural operations is recognized and to advise future landowners that those operations may be subject to future expansion or shifts in production.</p>	<p>✓ Mentioned in TOR. Mitigation can include many components including soil conservation or preservation as well as rehabilitation of disturbed soils. Will the DBH AIA address soil conservation and rehabilitation based on soil characteristics observed and mapped? If soils are to be preserved/conserved and used for non-agricultural purposes such as wood lands, will the soil preservation/conservation and use be described as part of the AIA or will they be described by another discipline in a different report? For example, will the soils observations made by DBH be used when making decisions about rehabilitation? Will soils information gathered by other disciplines be correlated with the observations made by DBH?</p>
2.10	<p><b>Conclusions</b></p> <p>The main findings from the study should be summarized. Net potential impacts to agriculture resulting from approval of the proposed development after implementation of agreed to mitigation measures should be identified. Opinions regarding the implications for the Regional agricultural sector of proceeding with the proposal as described should be provided. If appropriate, mitigation measures to reduce any negative impacts on the agricultural sector should be proposed. Proposals for ongoing monitoring to assess future impacts should be included. 7 The report should include professional opinions as to the extent to which the development can satisfy the directions of the Provincial Policy Statement (PPS), the agricultural development policies of the Regional Official Plan and Local Official Plan, and why the proposal represents good planning.</p>	<p>✓ Study recommendations and conclusion(s) will be presented.</p>

Halton Regional Official Plan Guidelines – Agricultural Impact Assessment Guidelines		Scoped Requirements for Milton Quarry East
Description		
2.11	<p><b>Background Information to Accompany the AIA</b></p> <p>The AIA should be supported with the following background information:</p> <ul style="list-style-type: none"> <li>a) literature cited;</li> <li>b) all background data sources;</li> <li>c) a list of people contacted during the study;</li> <li>d) a description of the methodologies and survey techniques employed in the study, including a description of soil sampling techniques and method of viability assessment;</li> <li>e) soil survey site investigation data (e.g., soil profile descriptions and slope measurements); and,</li> <li>f) curriculum vitae of study team members.</li> </ul>	<p>✓ The minimum number of data sources to be consulted as part of the AIA is listed in the TOR. Any additional sources used in the preparation of the AIA need to be referenced.</p> <p>The TOR does not state specifically that limitations in sources and methods will be discussed. However, the TOR does include some discussion related to limitations for viability and landownership. Will the proposed DBH AIA include a comprehensive discussion on missing data, methods, and/or or limitations, for all agricultural characteristics described in policy and guidelines and the AIA?</p>
2.12	<p><b>Summary</b></p> <p>Include a summary at the front of the report containing a description of the proposal, its effects on agriculture and all conclusions and recommendations arising from the study.</p>	<p>Not specifically stated in the TOR. Please provide a short summary related to policy and guidelines interpretation, findings, conclusions, and recommendations, if any.</p>

**From:** Hogg, Janice <Janice.Hogg@halton.ca>

**Sent:** May 25, 2021 5:00 PM

**To:** Brian Zeman <bzeman@mhbcplan.com>

**Cc:** Nethery, Joe <Joe.Nethery@halton.ca>; Ellen Ferris <eferris@mhbcplan.com>; Ali, Gena <Gena.Ali@halton.ca>; abuset@haltonhills.ca; lisa.grbinicek@ontario.ca; kmcCormack@hrca.on.ca; Mollie.Kuchma@milton.ca; christian.lupis@milton.ca; gmacdonald@haltonhills.ca; lsmith@hrca.on.ca; Stirling.Todd@milton.ca; 'Mitchell, Kevin (CRH Canada Group Inc.)' <kevin.mitchell@ca.crh.com>; Kyle Fritz <Kyle.Fritz@ghd.com>; Anthony Goodban (anthony.goodban@sympatico.ca) <anthony.goodban@sympatico.ca>; Richard Murphy <Richard.Murphy@ghd.com>; Nicholas.Fitzpatrick@ghd.com; Pakulski, Betty <Betty.Pakulski@halton.ca>

**Subject:** Milton Quarry East, TOR Review

Hi Brian,

On behalf of JART, please find attached a copy of the peer review letters and agency comments on the revised Terms of Reference for the following reports/ studies:

1. Geology and Water Resources Assessment;
2. Natural Environment/ Environmental Impact Assessment; and
3. Adaptive Management Plan.

This email contains the following attachments:

Peer review letters from:

- North South Environmental
- Matrix Solutions Inc.
- Norbert Woerns
- Daryl Cowell
- S. S. Papadopulos & Associates, Inc.
- Ron Scheckenberger

Conservation Halton and the NEC have also provided comments in the attached table.

Thanks,  
Janice

**Janice Hogg, MCIP, RPP**

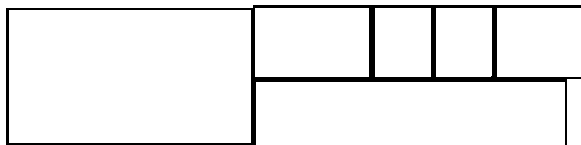
**Senior Planner**

Planning Services

Legislative & Planning Services

**Halton Region**

905-825-6000, ext. 2921 | 1-866-442-5866



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**GHD and Goodban Ecological Consulting Inc. (GEC) Integrated Response to Comments (March 26, 2021)**  
**Halton Region, Niagara Escarpment, Conservation Halton, Town of Halton Hills, Milton**  
**Pre-Consultation Development Review Committee Meeting Notes**  
**November 12, 2020**  
**Milton Quarry (Part of Lot 12 Concession 1)**  
**ARN-2415070004279**

#	Comment	Applicant Response	Agency Response
1	<p><b>Niagara Escarpment Commission</b></p> <p>Staff has identified the following characteristics of the subject lands, based on a desk-top exercise:</p> <ul style="list-style-type: none"> <li>• The subject lands are currently largely vacant lands, comprised of open field and pasture, formally used as hayfields</li> <li>• Key Natural Heritage Features are situated adjacent to the subject lands, including Significant Woodlands, Life Science Significant Area of Natural and Scientific Interest (Halton Forest North ANSI), Environmentally Sensitive Area (Hilton Falls Complex) and three (unevaluated) wetlands situated to the north, east and south.</li> <li>• The subject lands are identified as containing the regulated habitat of an endangered species under the Endangered Species Act (ESA).</li> </ul>	<ul style="list-style-type: none"> <li>• Can NEC staff please provide a figure that identifies the "...three (unevaluated) wetlands situated to the north, east and south."</li> </ul>	<ul style="list-style-type: none"> <li>• <i>NEC Staff response/clarification</i> – the statement in the second bullet was intended to document that all of the (adjacent) natural features identified (i.e. significant woodlands, ANSI, ESA and unevaluated wetlands) are collectively situated to the north, east and south of the proposed extraction area. NEC staff confirms understanding that in addition to the Halton Escarpment Wetland complex, only one unevaluated wetland (UA1) is situated adjacent (adjacent understood to include beyond 120m).</li> </ul>
2	<ul style="list-style-type: none"> <li>• The subject lands are contiguous with the existing Milton Quarry, bounded by the existing Milton Quarry East Cell to the north, the existing North Quarry to the</li> </ul>		

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3	<p>west, and the existing Main Quarry at some distance to the southwest and south.</p> <ul style="list-style-type: none"> <li>• Niagara Escarpment Parks and Open Space System (NEPOSS) lands are situated immediately to the east (Tirion Tract Resource Management Area) and west of the subject lands (Cox Tract).</li> <li>• The Bruce Trail and Hilton-Falls Side Trail is situated in proximity (to the east) of the subject lands.</li> <li>• The lands are ranked as "Attractive" by the Landscape Evaluation Study (NEC, 1976)</li> <li>• The subject lands appear to be within a known karst area.</li> </ul>		
4	<ul style="list-style-type: none"> <li>• There do not appear to be private residential lands or water supply wells within close proximity to the subject lands.</li> <li>• The subject lands are not considered to be prime agricultural area, although they have been identified as previously having been under agricultural production.</li> </ul>		
5	<ul style="list-style-type: none"> <li>• There are known archaeological sites within proximity of the subject lands</li> </ul> <p>Based on the above preliminary desk-top analysis of the subject lands, the following Part 2 NEP (2017) objectives and policies must be considered and addressed in the applicable supporting planning and technical submissions:</p> <ul style="list-style-type: none"> <li>• Part 2.5 (Development Affecting Steep Slopes and Ravines)</li> </ul>	<ul style="list-style-type: none"> <li>• Can NEC staff please identify the areas of concern relating to "<i>Steep Slopes and Ravines.</i>"</li> </ul>	<ul style="list-style-type: none"> <li>• <i>NEC Staff response:</i> The provision of all of the potentially applicable Part 2 Development Criteria are intended to be comprehensive at this stage, if the</li> </ul>

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	<ul style="list-style-type: none"> <li>• Part 2.6 (Development Affecting Water Resources)</li> <li>• Part 2.7 (Development Affecting Natural Heritage)</li> <li>• Part 2.8 (Agriculture)</li> <li>• Part 2.9 (Mineral Aggregate Resources)</li> <li>Part 2.10 (Cultural Heritage)</li> <li>• Part 2.12 (Infrastructure)</li> <li>• Part 2.13 (Scenic Resources and Landform Conservation)</li> <li>• Part 2.11 Recreation (with respect to the proposed rehabilitation plans)</li> </ul>		<p>consultant is of the view that the Criterion is not applicable, statement to that effect is acceptable in this case. Consideration as to whether Part 2.5 is applicable to the rehabilitation/restoration phase is recommended.</p>
8	<p><b>Natural Heritage Level 1 &amp; Level 2 Technical Reports and Environmental Impact Assessment (October 29, 2020):</b></p> <ul style="list-style-type: none"> <li>• A minor point of clarification is identified in Part 2.4 Niagara Escarpment Plan (pg.4), as follows: The Niagara Escarpment Plan was first approved in 1985 and was last amended in 2017.</li> <li>• NEP Policy Framework – the Natural Heritage Level 1 &amp; 2 Technical Study places an emphasis on the NEP policies of Part 2.7 Development Affecting Natural Heritage. Staff notes that Part 2.6 Development Affecting Water Resources</li> </ul>	<ul style="list-style-type: none"> <li>• The Natural Environment Technical Report (NETR) Terms of Reference have been revised to reflect this point of clarification.</li> <li>• Section 2.4 of the Terms of Reference has been revised to note that the NETR must also consider NEP Section 2.6 (Development Affecting Water Resources).</li> </ul>	<ul style="list-style-type: none"> <li>•</li> <li>•</li> </ul>

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	<p>must also be considered in all applicable technical studies.</p>		
9	<ul style="list-style-type: none"> <li>• The NH Levels 1 &amp; 2 studies refer to the comprehensive understanding of the area that already exists as a result of the previous approval of the Milton Quarry. While this background information will be useful to the application, the TOR should include a comprehensive characterization of the present-day baseline conditions. This includes sections respecting Landscape Setting, Physiography and surficial geology and soils, and topography and drainage.</li> <li>• With respect to the adjacent unevaluated wetlands, staff requests that additional (present-day) characterization of these wetlands be provided, including the delineation and evaluation of the wetland boundaries (specifically for the U1 wetland). This should inform buffer widths.</li> <li>• Cumulative Impacts of the existing and proposed developments on the escarpment environment should be addressed.</li> </ul>	<ul style="list-style-type: none"> <li>• The NETR Terms of Reference have been revised to note that a comprehensive characterization of the present-day existing conditions, including landscape setting, surficial geology, physiography, soils, drainage, vegetation communities and flora, and wildlife, will be provided.</li> <li>• The NETR will provide current, detailed characterizations of wetlands within the study area. The boundary of Wetland U1 will be staked in the field, surveyed in and reviewed with Conservation Halton staff. The NETR Terms of Reference have been revised to reflect this.</li> <li>• A cumulative effects assessment of the existing and proposed developments on the escarpment environment will be included in the NETR.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> </ul>
10	<ul style="list-style-type: none"> <li>• Additional detailed studies with respect to Significant Wildlife Habitat (SWH) should be identified, both on and adjacent to the subject lands, consistent with the Natural Heritage Reference Manual and SWH Ecoregion Criteria Schedules (2015).</li> </ul>	<ul style="list-style-type: none"> <li>• The ecological field survey program for the Milton Quarry East Extension was designed to provide the field data required to identify candidate Significant Wildlife Habitat (SWH). The primary resource for determining what qualifies as Significant</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>



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		<p>Wildlife Habitat is the Significant Wildlife Habitat Technical Guide (SWHTG) prepared by OMNR (2000). OMNRF (2015) has also prepared Significant Wildlife Habitat Ecoregion Criteria Schedules (SWHECS) that may be used to assist in determining what constitutes Significant Wildlife Habitat. The Natural Heritage Reference Manual (NHRM) (OMNR 2010) states that the SWHECS are a resource that may be used to determine which features qualify as Significant Wildlife Habitat, but that the SWHTG <i>"is still the authoritative source for the identification and evaluation of Significant Wildlife Habitat"</i>. GEC will refer to all three sources for the evaluation of Significant Wildlife Habitat in the NETR, as appropriate.</p>	
11	<ul style="list-style-type: none"> <li>The NEP includes several relevant objectives and policies supporting a landscape systems approach. Considering the lands adjacent to the proposed aggregate operation include the sensitive Escarpment Natural Area which supports Significant Woodlands and ANSI, greater consideration is requested with respect to the assessment of the proposed expansion on landscape connectivity and wildlife corridors and the identification of any potential impacts to existing corridors as well as opportunities for enhancements</li> </ul>	<ul style="list-style-type: none"> <li>The NETR will include an assessment of the Milton Quarry East Extension upon landscape connectivity and wildlife corridors, including the identification of enhancement opportunities through the Ecological Enhancement Plan (EEP) for lands that will not be extracted and the Rehabilitation Plan for lands that will be extracted. The Terms of Reference have been revised to this effect.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

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	through the Rehabilitation/Ecological Enhancement Plan.		
12	<ul style="list-style-type: none"> <li>• A minimum 10m buffer to Significant Woodlands has been identified with the rationale that this is the same approach that was taken for the Acton Quarry expansion. Proposed buffers to key natural heritage features will be required to demonstrate how the feature and its functions will be maintained and where possible, enhanced. In some cases, it may be necessary for the width of buffers to be increased</li>   <li>• With respect to Species at Risk (SAR), a more comprehensive evaluation of the potential for SAR habitat (including additional surveys where appropriate), both on and adjacent to the subject lands is requested, or alternatively justification provided for the limits of the studies undertaken. Including but not limited to, the potential impacts to bats. Staff notes that Conservation Halton maintains data for SAR which should be consulted.</li> </ul>	<ul style="list-style-type: none"> <li>• It should be noted that the proposed Significant Woodland buffers are, in general, greater than 10m in width. Where possible, the WMS watermain will be routed such that it is more than 30 m from the Significant Woodland boundary. The rationale for buffer widths and treatments will be provided in the NETR. The Terms of Reference have been revised to this effect. The aggregate resource should also be taken into consideration.</li>   <li>• GEC conducted a Species at Risk (SAR) screening exercise to identify the potential for SAR to occur within the study area. Current SAR data were obtained from the NHIC for the 1km squares within which the study area occurs. The ecological field survey program was designed to specifically address SAR concerns, based on the potential for certain SAR to occur in the area. The SAR preliminary screening and the follow-up detailed surveys (e.g., floristic surveys, minnow trapping for salamanders, breeding bird surveys, etc.) will be thoroughly documented in the NETR. Dufferin will actively engage with the Ministry of Environment, Conservation and</li> </ul>	<ul style="list-style-type: none"> <li>•</li>   <li>•</li> </ul>

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		<p>Parks (MECP) with respect to Species at Risk (SAR). With regard to bats, GEC notes that recent guidance from MECP for SAR bats is to restrict tree-clearing activities to the period between November and March, when bats are not present or active. Trees are not a limiting factor for bats in southern Ontario, tree removals for the Milton Quarry East Extension are relatively limited, the Halton Forest covers approximately 35 km<sup>2</sup> and many trees will be planted as part of the Ecological Enhancement Plan (EEP) and Rehabilitation Plan . Certain bat species are Endangered in Ontario because they hibernate communally in caves and abandoned mine shafts, where they are susceptible to the fungal disease known as White Nose Syndrome. GEC did conduct acoustic surveys for bats in proximity to trees within the extraction footprint and the results of these surveys will be provided in the NETR. Please note that Dufferin has obtained relevant data from Conservation Halton's database.</p>	
13	<p><b>Geology and Water Resources Assessment (including Karst and Hazard Lands) and Adaptive Management Plan</b></p> <ul style="list-style-type: none"> <li>The NEC defers in part to Conservation Halton and Halton Region with respect to technical considerations respecting</li> </ul>	<ul style="list-style-type: none"> <li>Noted.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

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	<p>Geology and Water Resources Assessment.</p> <ul style="list-style-type: none"> <li>• Consistent with the above noted comment regarding the Natural Heritage TOR, the TOR for the Water Resources Assessment does not include consideration of the NEP Part 2.6 Development Affecting Water Resources.</li> <li>• The report should provide details regarding the methodologies used to evaluate any alterations in surface water drainage to inform potential negative impacts on wetlands and required mitigation measures.</li> </ul>	<ul style="list-style-type: none"> <li>• The Geology and Water Resources Assessment (GWRA) will address the water resources consideration relevant to the NEP Part 2.6. The ToR has been updated to clarify this point. The Planning Summary Report by MHBC will address the planning context relative to the specific plan requirements.</li> <li>• GWRA will document the methodologies relied upon for analysis of all potential negative impacts. The ToR has been updated to clarify this point.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> <li>•</li> </ul>
14	<ul style="list-style-type: none"> <li>• Regarding the requirement for pumping in perpetuity, the NEP Part 2.9. Mineral Aggregate Resources requires that in areas with below-water table extraction, mineral aggregate operations requiring perpetual water management after rehabilitation is complete should be avoided unless it can be demonstrated that such would support other public water management needs. The Water Resources Assessment and AMP/Rehabilitation Plan will be required to provide adequate justification for perpetual pumping.</li> </ul>	<ul style="list-style-type: none"> <li>• The approved long-term plans for the Milton Quarry include an active water management system with at least seasonal pumping. This requirement and how it applies to the proposed MQEE will be addressed in the GWRA and Planning Summary Report.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

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ith	<p><b>Progressive and Final Rehabilitation and Monitoring Study</b></p> <ul style="list-style-type: none"> <li>The analysis of the NEP objectives and provisions respecting rehabilitation and after use policies should include Part 2.8 Development Affecting Water Resources and Part 2.11 Recreation and Part 2.13 Scenic Resources and Landform Conservation.</li> <li>Consideration should be given to the development and implementation of a Tree Preservation Plan and Edge Management Plan as part of the comprehensive rehabilitation and enhancement plans.</li> </ul>	<ul style="list-style-type: none"> <li>Tree-removals for the proposed Milton Quarry East Extension are limited to a few small areas. The Significant Woodland will be provided with appropriate buffers than will be reforested. An Edge Management Plan and/or Tree Preservation Plan is not necessary. Routing of WMS components will avoid treed areas and specimen trees, to the extent feasible.</li> </ul>	<ul style="list-style-type: none"> <li>Note that a Tree Preservation Plan may be a requirement of the Development Permit Application.</li> </ul>
	<p><b>General Comments</b></p> <ul style="list-style-type: none"> <li>Overall, greater integration between the disciplines subject of the technical studies and reports is required in order to provide for a comprehensive understanding of the potential impacts and proposed mitigation measures.</li> <li>The licensed area proposed is substantively larger than the area proposed for extraction, justification for the</li> </ul>	<ul style="list-style-type: none"> <li>The technical studies teams are working in an integrated manner. In particular, the water and ecology teams are working closely together with joint field work programs for investigation and monitoring of water resources features and an integrated approach to impact assessment, mitigation planning, and the AMP.</li> <li>The Planning Summary Report will provide the rationale for the licence boundary. In general, the larger licensed area will cover</li> </ul>	<ul style="list-style-type: none"> <li></li> <li></li> </ul>

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	<p>extent of the licensed area boundary will be required.</p>	<p>most of the WMS footprint and the ecological enhancements that will be proposed to expand Significant Woodlands, improve connectivity and provide an overall benefit to Jefferson Salamander and Unisexual Ambystoma. The licence boundary will be fenced, which will serve to protect ecological enhancement areas from damage resulting from unauthorized access by hikers, ATV users and mountain-bikers. This is a common problem in the local area.</p>	
	<b>Halton Region</b>		
	<p><b>Comments</b></p> <ul style="list-style-type: none"> <li>• Assessment of the impact to the Cox Tract (Leased Lands to Dufferin) needs to be conducted, including protection, monitoring and mitigation measures.</li> <li>- Based on Section 116.1c) additional scoping of the Terms of Reference for the Environmental Impact Assessment has been included in the Study Requirements section below. The submitted Terms of Reference for the Level 1 and 2 Natural Environment Technical Report (NETR) and Environmental Impact</li> </ul>	<ul style="list-style-type: none"> <li>• The portion of the Cox Tract that is presently leased to Dufferin was included in the ecological field survey program and discussion will be provided in the NETR on any protection, monitoring and mitigation measures.</li> <li>• GHD and GEC are jointly providing this integrated response table/matrix submitted under our joint cover letter, and a redline version of the NETR/EIS, GWRA, and AMP Addendum Terms of Reference documents which were updated to address the agency comments.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> <li>•</li> </ul>

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	<p>Assessment (EIS), Dufferin Aggregates Milton Quarry East Extension", prepared by Goodban Ecological Consulting Inc. (GEC) and dated Oct. 29, 2020 shall be revised with a cover letter explaining how this additional scoping has been addressed.</p> <ul style="list-style-type: none"> <li>A portion of the potential Significant Woodlands to the north of the extension area has been removed as part of the current ARA licence approval. However, our comments on the Terms of Reference for the NETR/EIS below still stand that GEC must assess the remaining woodland features for significance per ROP policies and determine the appropriate buffers to the extraction area and water management system infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>The NETR will include detailed discussion on Significant Woodlands, including their assessment per ROP policies and criteria, and provide the rationale for the various Significant Woodland buffers and their treatments.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	<ul style="list-style-type: none"> <li>Key Features of the Regional Natural Heritage System that are not mapped and may be present on the subject site are Significant Wildlife Habitat and Significant Habitat of Endangered and Threatened Species, which must also be addressed within the NETR/EIS (please see further comments below).</li> </ul>	<ul style="list-style-type: none"> <li>Every Natural Environment Technical Report (NETR) that is prepared to address ARA requirements must address Significant Wildlife Habitat and Habitat of Endangered and Threatened Species. These aspects will be thoroughly documented in the NETR/EIS.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	<ul style="list-style-type: none"> <li>Agricultural Impact Assessment will be required, scoping to follow.</li> <li>Wellhead mapping in the ROP is being updated, Regional Source Water Protection staff have updated mapping.</li> </ul>	<ul style="list-style-type: none"> <li>The proposed MQEE studies will obtain and rely upon the updated Source Water Protection mapping.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

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	<ul style="list-style-type: none"> <li>• The site is located within a Significant Groundwater Recharge Area and within a Highly Vulnerable Aquifer. The Region will be looking to see how these matters are addressed.</li> <li>• Data requests for mapping can be discussed, and a data sharing agreement will be required where data can be shared.</li> </ul>	<ul style="list-style-type: none"> <li>• The GWRA will address these considerations.</li> <li>• A data sharing agreement has been executed with Conservation Halton to obtain relevant mapping and data. Data exchange has occurred.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> <li>•</li> </ul>
	<p><b>Terms of Reference Comments:</b>  <b>1) <u>Re: Terms of Reference for Geology and Water Resources (G&amp;WR) Assessment Report, Including Karst and Hazard Lands Consideration, Proposed Dufferin Aggregates Milton Quarry East Extension Region of Halton, Ontario, prepared by GHD, dated October 29, 2020:</u></b></p> <p>Dufferin's detailed (hydro)geologic work plans shall ensure that all items listed in Section 4.10 of HR's ROP related Aggregate Resource Reference Manual (Guideline) are considered during the course of the assessment, and that the following additional comments are taken into account:</p>	<ul style="list-style-type: none"> <li>• The GWRA will consider these items from the Guideline.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Results and analysis of pumping test(s) and other advanced testing (e.g., geophysical, packer, tracer, etc.) conducted at the proposed MQEE lands shall be described in detail in the G&amp;WR Assessment Report (i.e. in addition to any data consideration as part of a numerical model).</li> </ul>	<ul style="list-style-type: none"> <li>• The GWRA will include comprehensive presentation of data and analysis from the new studies completed for the proposed MQEE as described in the ToR. Reliance will also be placed on information from past studies that provide relevant information</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>



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		<p>such as pumping tests and packer tests conducted on the MQEE lands and other Milton Quarry lands. Past studies are available on-line for agency technical reviewers using the webDT portal and GHD can also directly provide these documents to individuals as needed. In the particular case referenced regarding the numerical model, a complete report of groundwater model construction, calibration, and predictive simulations along with underlying data will be provided as an appendix in the GWRA.</p>	
	<ul style="list-style-type: none"> <li>• Current status and relevance of the former (i.e., 1980s/1990s) monitoring stations, shown in the T of R maps, shall be clarified (i.e., which stations remain in existence?)</li> <li>• Any anticipated changes to groundwater divides/groundwater contribution zones (relative to on-site and off-site ecological features), would need to be presented in the assessment report.</li> </ul>	<ul style="list-style-type: none"> <li>• The GWRA will provide this information subject to access limitations.</li> <li>• Agreed that information will be provided regarding any changes to groundwater flow zones and the potential for impacts to water resources.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Despite the statement in the T of R that no additional water quality sampling is warranted for the MQEE lands, baseline water quality in the area shall be part of the assessment report.</li> </ul>	<ul style="list-style-type: none"> <li>• Pursuant to the Region's comment, baseline water quality data will be collected in early 2021 and incorporated into the GWRA. The ToR has been updated accordingly.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• The anticipated site-specific water management system (WMS) components would need to be described according to</li> </ul>	<ul style="list-style-type: none"> <li>• This information will be included in the GWRA and AMP Addendum.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

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	<p>their intended purpose and inter-relationship with the existing WMS components (i.e., water diversion routes and related infrastructure; water storage, treatment and testing; mitigation-related triggers; and methods for ensuring WMS effectiveness long-term). This information shall be displayed on maps and profiles in the assessment reports and AMP addendum document.</p> <ul style="list-style-type: none"> <li>• Contingencies concerning any unanticipated major karst features would need to be addressed as part the assessment reports and AMP-related implementation plans.</li> </ul>	<ul style="list-style-type: none"> <li>• The karst assessment included in the GWRA and the AMP Addendum will include potential response measures and contingency measures that could be used to mitigate the effects of any unanticipated major karst features.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Any post-rehabilitation mitigation measures, if required, would need to be defined in the assessment report and AMP, including whether pumping in perpetuity would be required for mitigation purposes.</li> <li>• Relevant baseline monitoring stations, applicable to the MQEE area, would need to be established to serve as a reference in the long-term assessment of water-dependent features in this area.</li> <li>• All relevant results arising from (hydro) geologic and natural environment assessments would need to be interlinked as part of the AMP addendum.</li> </ul>	<ul style="list-style-type: none"> <li>• The approved long-term plans for the Milton Quarry include an active water management system with at least seasonal pumping. This requirement and how it applies to the proposed MQEE will be addressed in the GWRA and Planning Summary Report. <ul style="list-style-type: none"> <li>• This information will be included in the GWRA and/or AMP Addendum.</li> </ul> </li> <li>• The water and natural environment studies and mitigation measures are considered in an integrated manner and</li> </ul>	<ul style="list-style-type: none"> <li>•</li> <li>•</li> </ul>

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		the AMP Addendum is being jointly prepared by GHD and GEC (as was the current AMP).	
	<ul style="list-style-type: none"> <li>ROP Section 166.1c) allows for refinements to the RNHS through similar studies based on terms of reference accepted by the Region. The T of R concerning Geology and Water Resources (G&amp;WR) Assessment Report shall be revised with a cover letter explaining how the comments from the JART partners have been addressed and incorporated into the Terms of Reference.</li> </ul>	<ul style="list-style-type: none"> <li>Comment noted with regard to the Regional Plan allowing refinements to the Regional Natural Heritage System. Could the Region please confirm the policy reference? The section referenced refers to Cultural Heritage.</li> <li>GHD and GEC are jointly providing this integrated response table/matrix submitted under our joint cover letter, and a redline version of the NETR/EIS, GWRA, and AMP Addendum Terms of Reference documents which were updated to address the agency comments.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	<p><b>2) <u>Re: Terms of Reference for Adaptive Environmental Management and Protection Plan (AMP), Proposed Dufferin Aggregates Milton Quarry East Extension Region of Halton, Ontario, prepared by GHD and GEC Inc., dated October 29, 2020:</u></b></p> <p>In addition to items listed in Section 4.11 of the HR's Guideline and AMP-related comments identified above, the following shall be taken into account in terms of the AMP addendum concerning the MQEE site:</p>		

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	<ul style="list-style-type: none"> <li>The AMP-related addendum shall be sufficiently detailed to serve as a one-step reference and a key implementation document, if the proposed quarry expansion is approved.</li> </ul>	<ul style="list-style-type: none"> <li>The AMP Addendum shall be an operable document, including all the information necessary to implement the water-related monitoring and mitigation requirements for the MQEE. The AMP Addendum will reference and rely upon the existing AMP for areas where it is relevant to the proposed MQEE. The ToR for the AMP Addendum has been updated to provide additional clarity.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	<ul style="list-style-type: none"> <li>The addendum shall consolidate information from (hydro)geologic and natural-environment studies regarding sensitive water-dependent receptors, summarize their current conditions/functions, define methodologies for establishing/refining applicable targets, include adequate monitoring program, define WMS components, identify mitigation and contingency scenarios, and describe rehabilitation and post-rehabilitation mitigation and monitoring needs. The AMP-related document shall be supported by clear maps, graphs, decision-making charts, tables, sections, profiles and current-conditions photographs.</li> </ul>	<ul style="list-style-type: none"> <li>As described in response to the above comment, the AMP Addendum shall be an operable document, including all the information necessary to implement the water-related monitoring and mitigation requirements for the MQEE. It will integrate the water and natural environment considerations and the information described by the Region. Some of this information will be incorporated by reference so as to maintain consistency with existing applicable requirements currently provided in the AMP and to provide the most relevant baseline data for the application of the AMP to the MQEE. The ToR has been updated to provide additional clarity.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

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	<ul style="list-style-type: none"> <li>• The AMP addendum shall identify anticipated pre-extraction and verification tasks and applicable reporting associated with these tasks. All on-going reporting and notification structure shall also be defined.</li> <li>• Rehabilitation plan components (as proposed and depicted on Site Plans) shall be described in greater detail in the AMP, including any needs for long-term WMS operations and maintenance, if required. This may involve amendment to the existing Milton Quarry agreements and revision to the AMP- and WMS-related securities.</li> </ul>	<ul style="list-style-type: none"> <li>• This information will be provided in the AMP Addendum as is described in the ToR.</li> <li>• This information will be provided in the AMP Addendum, Site Plans, Legal Agreements, and other approvals, as relevant and applicable. The ToR has been updated to clarify that it addresses mitigation during extraction, lake filling, and long-term rehabilitated conditions.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• Any environmental enhancements/restoration plans shall also be described in the AMP.</li> <li>• The site plan for the MQEE shall incorporate reference to the site-specific studies and the AMP addendum as the key water-related implementation document for the proposed site.</li> </ul>	<ul style="list-style-type: none"> <li>• The environmental enhancements//restoration plans extend beyond the scope of the water-related AMP/AMP Addendum. Such plans will be comprehensively documented in an Environmental Enhancement Plan (EEP) and on the Site Plans.</li> <li>• The Site Plans will include the appropriate references to the AMP Addendum and other water-related requirements. This has been clarified in the updated ToR.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> <li>•</li> </ul>

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	<p>3) <b><u>Re: Terms of Reference Progressive and Final Rehabilitation Monitoring Study, Dufferin Aggregates – Proposed Milton Quarry East Extension, prepared by MHBC, dated October 29, 2020:</u></b></p> <p>In addition to rehabilitation-related items in Section 4.8 of the HR's Guideline, the following shall be taken into account in regards to the MQEE-specific rehabilitation plans:</p> <ul style="list-style-type: none"> <li>Any anticipated Ecological Enhancement Plan (EEP) shall be provided under a separate cover with all enhancement/restoration plans and schedules clearly defined. This document shall be referenced on Site Plans as it would serve as the primary implementation reference for rehabilitation-related plantings and other restoration needs.</li> </ul>	<ul style="list-style-type: none"> <li>A stand-alone Ecological Enhancement Plan (EEP) will be prepared for lands that will not be extracted and the EEP will be referenced on the Site Plans. Key elements of the EEP will be provided in the NETR. The Rehabilitation Plan will be provided directly on the Site Plans, mainly covering lands that will be extracted. Key elements of the Rehabilitation Plan will be provided in the NETR.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
	<p>4) <b><u>Re: Terms of Reference for Level 1 and 2 Natural Environment Technical Report (NETR) and Environmental Impact Assessment (EIS), Dufferin Aggregates Milton Quarry East Extension", prepared by Goodban Ecological Consulting Inc. (GEC), dated Oct. 29, 2020</u></b></p>		

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	<p>5) The Terms of Reference were reviewed in comparison to the Halton Aggregate Resources Reference Manual, Version 1.0, dated June 18, 2014, and in accordance with applicable Regional Official Plan (ROP) policies.</p> <p>1. Section 2.5.1 – Halton Region Official Plan (2015):</p> <p>a) Please note that the current Halton Region Official Plan (ROP) office consolidation is dated June 19, 2018.</p>	<ul style="list-style-type: none"> <li>• The NETR/EIS Terms of Reference have been revised to note the current version of the ROP is from 2018.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<p>b) Reference shall be made to the following Mineral Resource Extraction Areas policies of the ROP, including Sections 107(3), 107(3.1), 107(5), 110(2), 110(6), 110(7.1), 110(7.2), 110(8), 110(8.1).</p> <p>c) Portions of the subject lands are within the Regional Natural Heritage System land use designation. According to Figure #3 of the Terms of Reference, the proposed limits of extraction appear to encroach into a potential Significant Woodland feature and the associated buffer located at the north-west portion of the extraction area. The NETR/EIS will need to assess the significance of the woodland in accordance with s.277 of the ROP. If the woodland is significant, the NETR/EIS will</p>	<ul style="list-style-type: none"> <li>• This has been noted in the revised NETR/EIS Terms of Reference.</li> <li>• The NETR/EIS will include an evaluation the significance of woodland features within the proposed Milton Quarry East Extension extraction footprint, in accordance with ROP s.277.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> <li>•</li> </ul>

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	<p>need to demonstrate that there will be no negative impact on the Significant Woodland feature and its ecological functions in accordance with the ROP and in accordance with the applicable policies of the Niagara Escarpment Plan</p>		
	<p>d) The proposed buffers range from 0 m from the limit of potential Significant Woodlands to 50 m in width from candidate Significant Wetlands. It is standard practice for the Region to require a minimum 30 m width for buffers from Key Features of the Regional Natural Heritage System. The NETR/EIS will need to provide justification for the proposed buffers that are less than 30 m in accordance with the definition of buffer within the ROP (i.e., s.220.1.1). Buffers are components of the Regional Natural Heritage System. Therefore the proposed limits of the Mineral Resource Extraction Area designation shall not extend into the Key Features and their associated buffers.</p>	<ul style="list-style-type: none"> <li>• As described above, the NETR will include detailed discussion on Significant Woodlands, including their assessment per ROP policies and criteria, and provide the rationale for the various Significant Woodland buffers and their treatments.</li> <li>• The proposed boundaries of the mineral resource extraction area will follow the same approach used for the Dufferin Milton Quarry Extension and the Acton Quarry Extension. The protected natural features and buffers will not be within mineral resource extraction areas, however a site specific policy will be added to allow these areas to be licensed under the Aggregate Resources Act.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<p>2. Section 4.1.5 – Significant Woodland Boundary Delineation and Staking:  a) Staking of the Significant Woodland edge is proposed where the woodland edge is in proximity to the proposed water management system footprint. Given that the limit of the Significant</p>	<ul style="list-style-type: none"> <li>• The boundary of the Significant Woodland will be staked in those areas where the woodland edge is in proximity to the proposed extraction footprint and water</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>



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	Woodland and associated buffer are informing the limit of the extraction area, the Significant Woodland is to be staked along the northern and southern limits of the proposed extraction area as well as where the proposed watermain and other groundwater mitigation infrastructure is proposed within 30 m of the candidate Significant Woodland features. As noted in the Terms of Reference, the staked limits of the Significant Woodlands are to be confirmed by the Regional Forester.	management system footprint. The staked boundaries will be reviewed with the Region of Halton's forester.	
3.	As noted in Comment 1d), it appears that a 50 m buffer is proposed from two candidate Significant Wetlands. These particular wetlands have not been evaluated by the Ministry of Natural Resources and Forestry (MNRF); however, they have been identified within MNRF and Conservation Halton wetland mapping. It is recommended that the NETR/EIS assess the significance of these wetlands in accordance with s.276.5(1) of the Regional Official Plan and in consultation with Conservation Halton and MNRF staff, and the appropriate buffer width be determined in accordance with s.220.1.1 of the ROP.	<ul style="list-style-type: none"> <li>The NETR/EIS will discuss the significance of Wetland U1 in the context of the Ontario Wetland Evaluation System (OWES), and consult with MNRF and CH staff as appropriate. It should be noted that Wetland U1 is proposed to be protected with a 50 m buffer, wetland hydrology will be improved through WMS mitigation measures and the surrounding habitat will be greatly enhanced as part of the proposed Ecological Enhancement Plan (EEP). The rationale for the proposed 50 m buffer from the extraction footprint will be discussed in the NETR/EIS.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
4.	Section 4.0 – Ecological Field Survey Program:		

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	<p>Regional environmental planning staff defer to CH as the Region's environmental technical advisors (and the Region's NETR/EIS peer reviewer shall one be retained) to provide comments on whether the proposed field survey program satisfactorily identifies the Key Features and other components of the Regional Natural Heritage System in accordance with s.115.3 and s.155.4 of the ROP.</p>	<ul style="list-style-type: none"> <li>• Comment noted. GEC has more than 20 years of field experience within the Milton Quarry East Extension study area. The ecological field survey program was designed to provide all of the information necessary to address matters related to Endangered and Threatened species, Significant Wildlife Habitat, etc.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<p>5. Section 4.2.3 – Other Wildlife Groups:</p> <p>a) Were other significant habitats of endangered and threatened species or significant wildlife habitat confirmed based on field observations? For example, bats?</p>	<ul style="list-style-type: none"> <li>• As described above, GEC conducted a Species at Risk (SAR) screening exercise to identify the potential for SAR to occur within the study area. Current SAR data were obtained from the NHIC for the 1km squares within which the study area occurs. The ecological field survey program was designed to specifically address SAR concerns, based on the potential for certain SAR to occur in the area. The SAR preliminary screening and the follow-up detailed surveys (e.g., floristic surveys, minnow trapping for salamanders, breeding bird surveys, etc.) will be thoroughly documented in the NETR. Dufferin will actively engage with the Ministry of Environment, Conservation and Parks (MECP) with respect to Species at Risk (SAR). With regard to bats, GEC notes that recent guidance from MECP for SAR bats is</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

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		<p>to restrict tree-clearing activities to the period between November and March, when bats are not present or active. Trees are not a limiting factor for bats in southern Ontario, tree removals for the Milton Quarry East Extension are relatively limited, the Halton Forest covers approximately 35 km<sup>2</sup> and many trees will be planted as part of the Ecological Enhancement Plan (EEP) and Rehabilitation Plan. Certain bat species are Endangered in Ontario because they hibernate communally in caves and abandoned mine shafts, where they are susceptible to the fungal disease known as White Nose Syndrome. GEC did conduct acoustic surveys for bats in proximity to trees within the extraction footprint and the results of these surveys will be provided in the NETR.</p>	

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6.	<p>It is staff's understanding that as part of the proposed groundwater impacts mitigation, the applicant is proposing to evaluate and design additional recharge wells, diffuse discharge(s), watermain and related equipment as necessary to achieve the mitigation and enhancement objectives for the proposed quarry extension project. It appears that a watermain is proposed within the buffer/linkage/enhancement areas of the Regional Natural Heritage System. Any impacts on the Regional Natural Heritage System as a result of the proposed infrastructure required for the groundwater mitigation must be included in the NETR/EIS in accordance with s.110(7.2) of the ROP.</p>	<ul style="list-style-type: none"> <li>Comment noted. The potential impacts resulting from the WMS footprint will be addressed in the NETR/EIS. It should be noted that portions of the WMS footprint will be restored and naturalized; this will be explained in the NETR/EIS.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
7.	<p>In accordance with section 4.4 of the Halton Aggregate Resources Reference Manual, specifically Objective #2, the NETR/EIS must assess the linkages between the Regional Natural Heritage System Key Features and surface and groundwater resources. It is recommended that GEC and GHD coordinate their study findings to comprehensively demonstrate the ecological functions of the Key Features, the cumulative impacts, appropriate mitigation measures and ecological net gain to the Regional Natural Heritage System.</p>	<ul style="list-style-type: none"> <li>GEC and GHD recognize the critical importance of taking a multi-disciplinary and highly coordinated approach that addresses the inherent linkages between groundwater, surface water and water-dependent ecological features.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

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	<p>8. Section 5.0 – Mitigation Measures, Ecological Enhancements, Quarry Rehabilitation and Impact Assessment:</p> <p>a) A minimum 10 m buffer from the Significant Woodlands is proposed, which will be enhanced through tree planting. While this approach may have been accepted for the Action Quarry Extension, a reduction to the typical 30 m buffer must be justified as noted in Comment 1d).</p>	<ul style="list-style-type: none"> <li>• Comment noted. As described above, the NETR will include detailed discussion on Significant Woodlands, including their assessment per ROP policies and criteria, and provide the rationale for the various Significant Woodland buffers and their treatments.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<p>b) Please confirm the location of the proposed tree clearing (also related to Comments 1c), 1d) and 2).</p> <p>c) Quarry Rehabilitation – Regional environmental planning staff defer to Conservation Halton as the Region's environmental technical advisors (and the Region's NETR/EIS peer reviewer if retained) to provide technical comments and advise on the conceptual rehabilitation plan shown on Figure 4 of the Terms of Reference.</p>	<ul style="list-style-type: none"> <li>• The NETR/EIS will identify the location and extent of proposed tree-clearing, including the extraction footprint and the WMS footprint.</li> <li>• Comment noted.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> <li>•</li> </ul>
	<p>In addition to the guidelines in the Aggregate Resources Reference Manual, the required Environmental Impact Assessment shall address the following:</p> <ul style="list-style-type: none"> <li>• Flagging the Key Features: woodlands, wetlands, watercourse and areas</li> </ul>	<ul style="list-style-type: none"> <li>• Significant Woodland boundaries will be staked as appropriate and the Region's forester will be consulted. Wetland U1</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

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	<p>Provincially Significant wildlife potential, buffers</p> <ul style="list-style-type: none"> <li>• Significant woodland assessment: Regional Forrester shall be consulted for staking</li> <li>• CH to advise on scoping in relation to wetlands, wildlife and endangered species</li> </ul> <p>Note that the Region's EIA Guidelines were updated in 2020.</p>	<p>boundary will be staked and CH staff will be consulted. Based on the site characteristics and the proposed extraction footprint and WMS footprint, it is not necessary to flag other wetland boundaries, Significant Wildlife Habitat or buffers. The buffers will be generated as offsets from the surveyed features (e.g., Significant Woodland, Wetland U1) and ultimately staked by a surveyor.</p>	
	<p><b>Conservation Halton</b>  General</p> <ol style="list-style-type: none"> <li>1. All studies should be coordinated and integrated. In particular, the findings of the Hydrogeologic and Hydrologic Impact Assessment, Surface Water Assessment and Level 1 and 2 Natural Environment Technical Report should inform each other, and be presented in a coordinated manner.</li> <li>2. All reports (in particular, the Natural Environment Report, Planning Justification Report) should reference the relevant Conservation Halton policies that apply to the site.</li> </ol>	<ul style="list-style-type: none"> <li>• The water and natural environment studies and mitigation measures are considered in an integrated manner and the AMP Addendum is being jointly prepared by GHD and GEC (as was the current AMP).</li> </ul>	<p>Addressed.</p> <p>Comment not addressed. The relevant Conservation Halton policies that apply to the site will need to be included in the report submissions.</p>

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	3. CH staff may have additional feedback on the water resources report once we have completed a review of the 5 year AMP.		Addressed.
	<p><b>Level 1 and Level 2 Natural Environmental Technical Report and Environmental Impact Assessment Terms of Reference (TOR)</b></p> <p><u>Key Comments</u></p> <p>1. The TOR should indicate the following to be included within the Natural Environment Technical Report (NETR):</p> <p>a) The NETR should correspond with the Geology and Water Resources Assessment Report, to ensure the impact assessment is comprehensive. Surface and groundwater evaluation should be discussed in both reports, and the NETR/EIA report should discuss the ecological impacts of any proposed modifications.</p>	<ul style="list-style-type: none"> <li>GEC and GHD recognize the critical importance of taking a multi-disciplinary and highly coordinated approach that addresses the inherent linkages between groundwater, surface water and water-dependent ecological features.</li> </ul>	Addressed.
	<p>b) Determine the significance of CH identified wetlands to confirm the appropriate buffer width to ensure no negative impact on hydrological/ecological function. Wetland U1 boundary will need to be confirmed by CH during the appropriate season (June – September).</p>	<ul style="list-style-type: none"> <li>The NETR/EIS will discuss the significance of Wetland U1 in the context of the Ontario Wetland Evaluation System (OWES). The boundary will be staked and CH staff will be consulted during the appropriate season. It should be noted that Wetland U1 is proposed to be protected with a 50 m buffer, wetland hydrology will be improved through WMS mitigation measures and the surrounding habitat will be greatly enhanced as part of the proposed Ecological</li> </ul>	Addressed.





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		species, this information will be provided in the NETR/EIS.	
	e) Incorporate additional surveys to determine if significant wildlife habitat (SWH) is present in accordance with the 2015 SWH Ecoregion Criteria Schedules. Include a screening table to indicate if there are candidate habitats present and how these habitats will be confirmed.	<ul style="list-style-type: none"> <li>As noted above, the ecological field survey program for the Milton Quarry East Extension was designed to provide the field data required to identify candidate Significant Wildlife Habitat (SWH). The primary resource for determining what qualifies as Significant Wildlife Habitat is the Significant Wildlife Habitat Technical Guide (SWHTG) prepared by OMNR (2000). OMNRF (2015) has also prepared Significant Wildlife Habitat Ecoregion Criteria Schedules (SWHECS) that may be used to assist in determining what constitutes Significant Wildlife Habitat. The Natural Heritage Reference Manual (NHRM) (OMNR 2010) states that the SWHECS are a resource that may be used to determine which features qualify as Significant Wildlife Habitat, but that the SWHTG "is still the authoritative source for the identification and evaluation of Significant Wildlife Habitat". GEC will refer to all three sources for the evaluation of Significant Wildlife Habitat in the NETR, as appropriate.</li> </ul>	Addressed.

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	<p>f) Include the identification of the connections and linkages between Regions NH features, surface water and groundwater resources, as per Halton Region Aggregate Resource Manual.</p> <p>g) Recommend correspondence with the MECP regarding Endangered or Threatened species to ensure adequate surveys have been completed and effort is supported.</p>	<ul style="list-style-type: none"> <li>• As noted above, the NETR will include an assessment of the Milton Quarry East Extension upon landscape connectivity and wildlife corridors, including the identification of enhancement opportunities through the Ecological Enhancement Plan (EEP) for lands that will not be extracted and the Rehabilitation Plan for lands that will be extracted.</li> <li>• As described above, GEC conducted a Species at Risk (SAR) screening exercise to identify the potential for SAR to occur within the study area. Current SAR data were obtained from the NHIC for the 1km squares within which the study area occurs. The ecological field survey program was designed to specifically address SAR concerns, based on the potential for certain SAR to occur in the area. The SAR preliminary screening and the follow-up detailed surveys (e.g., floristic surveys, minnow trapping for salamanders, breeding bird surveys, etc.) will be thoroughly documented in the NETR. Dufferin will actively engage with the Ministry of Environment, Conservation and Parks (MECP) with respect to Species at Risk (SAR).</li> </ul>	<p>Addressed.</p> <p>Addressed.</p>

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#	Comment	Applicant Response	Agency Response
	<p>h) Confirm adequate surveys are undertaken (i.e., SWH, SAR) to determine the appropriate buffer width to maintain Significant Woodland ecological form and function and ensure no negative impact from proposed quarry extraction works.</p>	<ul style="list-style-type: none"> <li>• As noted above, the ecological field survey program for the Milton Quarry East Extension was designed to provide the field data required to identify candidate Significant Wildlife Habitat (SWH); see the bullet comment above regarding the adequacy of SAR surveys. Sufficient data have been collected to demonstrate that the features and functions of the Significant Woodlands will not be negatively impacted.</li> </ul>	<p>Addressed.</p>

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	<p>i) Undertake additional targeted turtle habitat surveys within suitable habitats following the accepted survey protocols within study area and adjacent lands. Incorporate amphibian egg mass surveys within suitable habitats both within study area and adjacent lands.</p> <p>j) Include how the identification of diversity and connectivity of the natural features within the study area and adjacent lands will be conducted, to ensure long-term ecological function can be maintained or enhanced where appropriate.</p>	<ul style="list-style-type: none"> <li>• Wetland U1 is not suitable for turtle overwintering, so basking surveys in the spring period are not warranted. Wetland U1 has a very short hydroperiod and it is typically dry in fall and early winter. Wetlands that provide potential habitat for turtles are located at least 300m from the proposed extraction footprint at the closest point; no negative impacts on these habitats are anticipated. Amphibian egg mass surveys will be incorporated into AMP monitoring for wetlands (e.g., salamander egg masses) but they are not necessary for the NETR. Amphibian use of the wetlands within the study area has been determined through the use of Song Meters deployed for several months each season and minnow trapping surveys for salamanders.</li> <li>• Comment noted. The NETR will include an assessment of the Milton Quarry East Extension upon landscape connectivity and wildlife corridors, including the identification of enhancement opportunities through the Ecological Enhancement Plan (EEP) for lands that will not be extracted and the Rehabilitation Plan for lands that will be extracted. The Terms of Reference have been revised to this effect.</li> </ul>	<p>Addressed.</p> <p>Addressed.</p>

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	<p>k) Recommend correspondence with DFO regarding potential impacts on fish and fish habitat to determine survey extent and direction.</p>	<ul style="list-style-type: none"> <li>Based on GEC's review of CH fish data, no fish were captured from stations located above the escarpment. Fish were captured at a number of stations from below the escarpment. The proposed extraction area is located more than 1.2 km from where the Speyside Tributary drops below the escarpment. The WMS and AMP will mitigate any potential dewatering influences on the wetlands located closest to the proposed Milton Quarry East Extension, so no effects upon fish and fish habitat are anticipated.</li> </ul>	<p>Addressed.</p>
	<p>l) Confirm the zone of influence to identify any potential impacts regarding drawdown for both ground and surface water implications and direct appropriate mitigation measures.</p>	<ul style="list-style-type: none"> <li>As will be presented in the Geology and Water Resources Technical Report, the potential zone of influence in the absence of any mitigation may be greater than 500 metres and therefore necessitates the comprehensive mitigation of water resources to prevent undesirable influences. The mitigation measures will limit the zone of influence such that the closest features (as well as more distant features) are protected or enhanced. Therefore, the effective zone of influence for potential negative impacts is limited to less than the distance to the surrounding water resources features. These are the same mitigation measures that have protected</li> </ul>	<p>Addressed.</p>

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	<p>m) Discuss how net gain will be achieved both short term and longer term within the study area and adjacent lands, as per Halton Region Aggregate Resource Manual.</p> <p>n) Discuss all potential cumulative impacts on natural environment within the NEP area and provide appropriate mitigation measures to ensure natural features ecological/hydrological functions are maintained. As stated within Halton Region Aggregate Resource Manual</p>	<p>coolwater fisheries and wetlands located in close proximity to the North Quarry, West Cell and East Cell in the existing Milton Quarry.</p> <ul style="list-style-type: none"> <li>• A discussion of how a net environmental gain will be achieved as a result of the proposed Milton Quarry East Extension will be provided in the NETR/EIS.</li> <li>• A cumulative effects assessment of the existing and proposed developments on the escarpment environment will be included in the NETR.</li> </ul>	<p>Addressed.</p> <p>Addressed.</p>
	<p><b>Geology and Water Resources Assessment Report, Including Karst and Hazard Lands</b></p> <p>1. The ToFR should outline in greater detail the proposed methodology to evaluate changes in surface water drainage to the area's wetlands and outlet points.</p>	<ul style="list-style-type: none"> <li>• The drainage analysis will delineate the surface water catchments and changes related to the proposed MQEE. These changes will include the potential changes in the surface water budget; however, it is important to recognize the general lack of substantive surface water influence associated with the current conditions of the MQEE lands. Any potential for negative influence will be mitigated by the proposed mitigation measures such that the area's</li> </ul>	<p>Addressed.</p>

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		<p>wetlands are maintained or enhanced with respect to their form and function. This has been clarified in the updated ToR.</p>	
2.	<p>The ToFR states ground water conditions will be compared to the existing approved interim extraction condition (for full extraction condition with mitigation) but does not outline what surface water conditions will be compared to. Conservation Halton staff will provide further comment on the baseline/point of reference for surface water conditions once we have had an opportunity to review the current 5-year AMP and other relevant background documents.</p>	<ul style="list-style-type: none"> <li>The surface water conditions will also be compared to their approved extraction (or rehabilitation) conditions. This has been clarified in the updated ToR. As indicated above, the proposed mitigation measures will be designed to maintain or enhance the features relative to these conditions.</li> </ul>	Addressed.
3.	<p>The ToFR should indicate the study will evaluate the potential requirements to adapt the existing water management system to maintain or enhance surface water conditions (in addition to groundwater conditions).</p>	<ul style="list-style-type: none"> <li>The goal of the proposed mitigation is to maintain or enhance the surface water conditions relative to the approved conditions. Therefore, the GWRA will include analysis and explanation of how this goal will be met. This has been clarified in the updated ToR.</li> </ul>	Addressed.
4.	<p>To ensure impacts on water resources and natural features relying on groundwater and surface water are not exacerbated during and post extraction, threshold for mitigation measures should account for potential impacts from the existing quarry operation.</p>	<ul style="list-style-type: none"> <li>The goal of the proposed mitigation is to maintain or enhance the water resources conditions relative to the approved conditions. The mitigation goals and approach will be developed in collaboration with the ecological analysis by GEC and considering both the existing quarry and proposed MQEE influences.</li> </ul>	Addressed.

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	5. The final rehabilitation plan must show that any natural features and water resources around the MQEE which require groundwater and/or surface water mitigation during extraction will function post extraction (feedback also applies to the Progressive and Final Rehabilitation Monitoring Study).	<ul style="list-style-type: none"> <li>• The proposed mitigation and rehabilitation plans will provide protection during extraction, lake filling, and under long-term rehabilitation conditions consistent with the existing Extension Quarry approvals.</li> </ul>	Addressed.
	6. The report should provide methodologies used to evaluate any alterations in surface water drainage to help determine if there are any expected impacts on wetland as well as provide requirements to adapt, maintain or enhance existing wetlands.	<ul style="list-style-type: none"> <li>• The GWRA will include analysis of the potential for impacts to wetlands and describe the proposed measures to maintain or enhance the wetlands. This has been clarified in the updated ToR.</li> </ul>	Addressed.
	7. The Geology and Water Resources Assessment Report should be more explicit with respect to proposed surface water analysis and potential mitigation. The report should provide methodologies used to evaluate any alterations in surface water drainage and how it informs any proposed mitigation.	<ul style="list-style-type: none"> <li>• The GWRA will describe the surface water analysis and how it relates to the proposed mitigation. This has been clarified in the updated ToR.</li> </ul>	Addressed.
	<p>8. Recommend that the baseline/point of reference for comparison of the surface water conditions to the Tributaries and wetlands be maintained as per the existing approved interim extraction condition (for full extraction condition with mitigation).</p> <p>9. Based on the site plan, the subwatershed boundary overlaps the north east corner of the License Boundary. Recommend that the ToFR include methodology to confirm the subwatershed boundary and to evaluate if there are any changes in</p>	<ul style="list-style-type: none"> <li>• Agreed - Refer to response to CH Comment #2.</li> <li>• The GWRA will provide analysis of drainage alterations resulting from the proposed MQEE. This analysis includes using detailed topographic modelling. No substantive changes are indicated as the</li> </ul>	<p>Addressed.</p> <p>Addressed.</p>



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	surface water drainage across subwatershed line.	identified area of overlap is not influenced by the proposed extraction area.	
	<p><b>Adaptive Environmental Management and Protection Plan (AMP)</b></p> <p>1. The expanded AMP (or another mechanism) should identify any additional financial securities required to ensure the public and agencies will not be put at financial risk and how they will be provided.</p> <p>2. The report should provide methodologies used to evaluate any surface water changes, to identify potential impacts on wetlands so that they can be mitigated appropriately.</p>	<ul style="list-style-type: none"> <li>• The financial assurances that are provided through the Water Management Agreement will be reviewed and updated as part of the overall proposal for the MQEE.</li> <li>• The two wetlands (U1 and W36) that have potential to be influenced by surface water drainage alterations will have detailed water and ecology monitoring requirements. Furthermore, prescribed target water levels as well as ecological criteria will be established to ensure their conditions are maintained or enhanced by the proposed MQEE.</li> </ul>	<p>Addressed.</p> <p>Addressed.</p>
	3. Ecological monitoring should be undertaken to ensure quarry expansion will not impact the NHS and to ensure mitigation measures and rehabilitation works are functioning as proposed.	<ul style="list-style-type: none"> <li>• The AMP Addendum will include ecological monitoring for the features associated with the MQEE.</li> </ul>	Addressed.
	<p><b>Engineering:</b></p> <p>Halton Hills Engineering will primarily be reviewing storm water management from the perspective of where Dufferin may propose to redirect flows and will be reviewing the noise and vibration, dust mitigation, and blasting reports.</p>	<ul style="list-style-type: none"> <li>• Information on surface water drainage and stormwater management will be provided in the GWRA.</li> <li>• Matters pertaining to noise and vibration, dust mitigation, and blasting will be</li> </ul>	

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		presented in separate reports by others (i.e., not by GHD or GEC).	
	A license agreement may be required for any proposed crossings of open and/or closed road allowances. It may be that existing crossings that are lacking this license would be corrected at this time. This is subject to confirmation of who has jurisdiction of the road allowances (Milton and/or Halton Hills).		
	<b>Town of Milton</b>		
	<p>The following impacts of the proposed quarry extension, in particular, are of interest to the Town of Milton and will be reviewed accordingly:</p> <ul style="list-style-type: none"> <li>• Current groundwater and surface water flows and how they may impact Milton Residents, the Milton water supply at Kelso and natural heritage features and functions in the area.</li> </ul>	<ul style="list-style-type: none"> <li>• Information on potential groundwater and surface water influences will be provided in the GWRA.</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
	<ul style="list-style-type: none"> <li>• We understand that there may be long term environmental management measures currently in place for perpetual pumping to maintain water flows in perpetuity. Please provide more detail on this, how it is working, and that the appropriate protections are in place to ensure Dufferin is capable of maintaining these systems in perpetuity such that the Town is not negatively impacted over time.</li> </ul>	<ul style="list-style-type: none"> <li>• In the long term, Conservation Halton will become the owner and operator of the long-term water management measures and associated lands for the existing Milton Quarry WMS. The land transfer and financial assurance for Conservation Halton are secured through the Water Management Agreement. Dufferin and Conservation Halton are meeting the requirements of this Agreement with a regular exchange and review of relevant engineering and financial information. It is</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

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#	Comment	Applicant Response	Agency Response
		proposed to extend these arrangements between CRH and CH to include the proposed MQEE.	

May 4<sup>th</sup>, 2021

David N. Germain  
Thomson, Rogers  
390 Bay Street, Suite 3100  
Toronto, Ontario  
M5H 1W2

**RE: Review of Terms of Reference - Natural Environment Technical Report & Environmental Impact Assessment, Dufferin Aggregates Milton Quarry East Extension**

Dear Mr. Germain,

North-South Environmental Inc. was retained in April 2021 to review the application documents for the extension of the Dufferin Aggregates Milton Quarry. This letter provides our comments on the Terms of Reference prepared for the studies associated with the extension. Our review focused on the following document:

- Terms of Reference for a Level 1 and 2 Natural Environment Technical Report (NETR) and Environmental Impact Assessment (EIA), Dufferin Aggregates Milton Quarry East Extension, March 26, 2021. Prepared for: Dufferin Aggregates. Prepared by: Goodban Ecological Consulting Inc.

In addition, we have reviewed the following documents:

- Terms of Reference: Adaptive Environmental Management and Protection Plan (AMP): Proposed Dufferin Aggregates Milton Quarry East Extension, Region of Halton, Ontario. Memo prepared March 26, 2021 by Richard Murphy and Anthony Goodban, to Brian Zeman, MHBC.
- GHD and Goodban Ecological Consulting Inc. (GEC) Integrated response to comments (March 26, 2021), Halton Region, Niagara Escarpment, Conservation Halton, Town of Halton Hills, Milton. Pre-consultation development review committee meeting notes, November 12, 2020. Milton Quarry (Part of Lot 12 Concession 1).

In a meeting with the Region on 20 April, 2021, we were provided with a summary of background information on past groundwater and surface water studies. We understand that a considerable amount of information has been derived from studies of the previous quarrying impacts over decades, including annual monitoring dealing with fisheries, benthic and ecology (mainly wetlands) monitoring results. These materials should be provided to us to help with the review of the application.

We provide general comments in the first section of this memo, and then provide specific comments in later sections, with references to the sections where the comment applies.

## Summary of Comments

1. The TOR generally describes a work plan that is acceptable, with the modifications described below.
2. The TOR does not include sufficient information to confirm that the surveys proposed will adequately characterize the study area or use appropriate methods. It is requested that the TOR be updated to include a map showing proposed survey locations / coverage. The details on survey dates and weather conditions will be evaluated in the draft report
3. There is no mention of specialized surveys for marsh birds. Marsh bird surveys should be included in the work plan, as most of the species that are indicators of significant wildlife habitat are cryptic and not often detected by point counts and area surveys.
4. Information on significant species (e.g., Species at Risk, species that are considered indicators of Significant Wildlife Habitat) should be supported by maps that show the habitat polygons in which the species were documented. The analysis should then clearly show why the habitat does/does not meet the criteria for SWH or other types of significance.
5. Information on each wetland should be comprehensively summarized. The summary should include both biotic and abiotic data; for example, water balance, results of amphibian and breeding bird surveys, hydrologic regime, whether the wetland is supported by groundwater or surface water, etc.
6. The discussion of impacts should clearly summarize, for each wetland, the potential impacts on the hydrology and hydrogeology, with an analysis of potential impacts on biota.
7. A well-publicized TVO documentary on the Niagara Escarpment Biosphere Reserve (please see the following link <https://youtu.be/R59Q5WBzdwI>), the credits for which indicate that the author of the NETR (Goodban Ecological Consulting Inc.) provided archival material, noted that as part of the enhancement and restoration efforts by Dufferin Aggregates, restoration wetlands have been created for breeding salamanders. If restoration wetlands have been constructed on the Milton Quarry site, the location and functions of these wetlands should be shown, and they should be included in the summary of functions and in the analysis of potential impacts of future quarrying.

## Specific Comments

### 4.0 Site Characterization:

- Searches of public science databases should be added to the list of background materials, including eBird, iNaturalist and the Ontario Herpetofaunal Atlas.
- The Halton Natural Areas Inventory should be added to the list.

#### 4.2.1 Vegetation and Flora

The following sentence should be clarified: *The flora of the study area was characterized through detailed botanical surveys of more sensitive habitats and general surveys of more disturbed habitats.* Since almost every habitat in southern Ontario has evidence of disturbance, it should be stated clearly which communities were characterized through detailed botanical surveys and which were not.

#### 4.2.2 Wildlife

##### 4.2.2.1 Amphibians and Reptiles

- It is noted that selected wetlands were sampled for mole salamanders by minnow trapping. The rationale for omitting some wetlands from sampling should be clearly stated. A conservative approach should be taken; wetlands should be included even if the habitat appears marginal.
- As with sampling for mole salamanders, the locations for sampling calling amphibians are key, so the rationale for leaving out any wetlands should be provided. A conservative approach should be taken; i.e. wetlands should be included in surveys even if the habitat appears marginal.
- Snake habitat and visual encounter surveys have to be conducted with sufficient effort, otherwise they are not effective. The number of days and the weather conditions for each day should be described.

##### 4.2.2.2 Breeding Birds

- Breeding bird surveys should have included Marsh Bird Monitoring at wetlands, as most of the indicator species for Significant Wildlife Habitat in southern Ontario are cryptic and call very infrequently. A detailed rationale should be provided for wetland habitats omitted from these surveys. A conservative approach should be taken; wetlands should be included even if the habitat appears marginal.
- Distance between point count stations should be noted. A figure should be provided showing locations of point counts.
- It is noted that a conservative approach was adopted for the surveys and all species were considered to be breeding unless there was convincing evidence to the contrary, and we concur with this approach.

## 6.0 Natural Environment Level 2 Report and EIA

### 6.1. Feature-Specific Descriptions, Survey Results, Evaluation and Findings

- Locations of SAR and species that indicate significant wildlife habitat should be shown on mapping.

#### 6.1.1 Significant Wetlands

- A comprehensive summary should be provided for the biotic and abiotic features of each wetland. It should include:
  - Groundwater and surface water regime, including a summary of dates when standing water is present;
  - Summary of amphibian survey data including call codes for each species;
  - Summary of mole salamander survey data.
  - Summary of other biological data (bird and vegetation survey results).
- In considering impacts on each wetland, the potential change in hydrology should be described, with the anticipated change in hydrological regime, so the impacts and mitigation can be considered.

#### 6.1.3 Significant Wildlife Habitat

- Detailed maps should be provided that support the analysis - if indicator species are found, show their location within the polygon in which they were found, and show why the polygon does/does not meet the criteria for SWH.
- The interpretation of candidate and confirmed SWH should be comprehensively summarized and mapped.

#### *Species that are rare or designated as significant at some level*

- We do not agree that the direction in the NHRM is to specifically exclude species that are considered globally or nationally rare, but not provincially rare. While we understand the rationale for not including nationally or globally significant species in this analysis, we feel the approach is short-sighted, as the COSEWIC evaluation and global and national status specifically identified species that are declining, which is a criterion for SWH. The Canadian Biodiversity Strategy urges a focus on biodiversity conservation at all levels, and it is particularly important to have regard for other levels of rarity because there are many rare species that have not received the studies that allow an accurate status to be assigned at all levels. Many species are rare that are not formally acknowledged as such. For example, Western Chorus Frog (Great Lakes-St. Lawrence Population) is often considered in SWH evaluation, even though they have national status but not provincial status. Black Ash has recently been evaluated as Threatened in Canada by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and Endangered by the Committee on the Status of Species at Risk in Ontario (COSSARO) because of precipitous declines, and habitat for species such as these should be identified as SWH.

May 21, 2021

Version 1.0  
Matrix 32783-504

**Mr. David N. Germain**  
**THOMSON ROGERS LAWYERS**  
Suite 3100, 390 Bay St.  
Toronto, ON M5H 1W2

**Subject: Peer Review Report, Proposed Dufferin Aggregates Milton Quarry East Extension, Fish Habitat Impacts Review Comments for Terms of Reference Level 1 and Level 2 Natural Environment Technical Report and Environmental Impact Assessment**

Dear Mr. Germain:

## 1 INTRODUCTION

Matrix Solutions Inc. was commissioned by the Regional Municipality of Halton in May 2021 to review the Terms of Reference (ToR) for the Level 1 and Level 2 Natural Environment Technical Report (NETR) and Environmental Impact Assessment (EIA) that addresses the Milton Quarry East Extension (MQEE), authored by Goodban Ecological Consulting Inc. (dated March 26, 2021). Matrix is part of an extensive Review Team that includes several firms, each for different disciplines.

Reports reviewed as part of this peer review include the following:

- Current Reports
  - ✦ Terms of Reference for a Level 1 and 2 Natural Environment Technical Report (NETR) and Environmental Impact Assessment (EIA), Dufferin Aggregates Milton Quarry East Extension, prepared by Goodban Ecological Consulting Inc. (March 2021).

This review provides general comments on the ToR, followed by individual comments on specific sections. It should be noted that Matrix is providing comment primarily on aquatic habitat and fisheries. The review of other natural heritage issues is provided by another member of the Study Team.

## 2 GENERAL COMMENTS

- The proposed extension of the Milton Quarry, referred to as the Milton Quarry East Extension (MQEE), represents a proposed extraction area of approximately 16 hectares bounded by the existing East Cell to the north, the existing North Quarry to the west, and the existing Main Quarry at some distance to the southwest and south. The expansion footprint will be primarily within large open fields that do not appear to contain fish habitat. Future ecological enhancement and rehabilitation plans for the MQEE include a deep lake which would be contiguous to the larger lake envisioned for other parts of the quarry area.



- The ToR mentions fish habitat as habitat for inclusion in the policy context of the site, however there is no plan for fish sampling as there appears to be no fish habitat within the MQEE study area. It is presumed that earlier plans for extraction within the larger Milton Quarry would have historically affected fish habitat. Impacts from extraction at the MQEE should include discussion of cumulative impacts to the fish habitat as a result of future extension of the deep lake into the MQEE footprint.

### 3 SPECIFIC COMMENTS

#### 3.1 Section 1 Introduction

The fourth paragraph in this section refers the comprehensive understanding of the applicant's consultant with regards to the long record of successful operation and protection of water resources and ecological features in the areas of the Milton Quarry.

As reviewers may not have a full understanding of the overall history of this site, the applicant should also be able to demonstrate that those measures have been independently verified as being successful. A reference should be provided as part of the ToR which refer to those records, indicating that operation/mitigation measures are indeed functioning successfully as designed.

#### 3.2 Section 4.2 Ecological Field Survey Program

This section omits any mention of fish sampling presumably as fish habitat does not exist within 120m of the MQEE. The omission of fish sampling within this section should be stated to allow reviewers to understand that remnant water features do not support fish because of various reasons. Background information sources of the site included review of Conservation Halton Databases and annual wetland monitoring reports undertaken by Goodban Ecological Consulting Inc. The applicant should state whether the lack of fish habitat was based on the contents of these reports or that fish sampling was previously undertaken to verify the lack of fish habitat within 120m of the MQEE.

The applicant should also confirm whether terrestrial crayfish (i.e., Chimney Crayfish) are included in field surveys. In the event that terrestrial crayfish are found, their status with respect to habitat protection under existing legislation should be clarified (for example crustaceans are defined as "fish" under the *Fisheries Act*) and their habitat may also be protected as Significant Wildlife Habitat, which is discussed further in Section 6.1.3 of the ToR).

#### 3.3 Section 6.2 Description of the Proposed Milton Quarry Extension

Section 6.2 provides an overview of the proposed MQEE and will describe the Ecological Enhancement Plan which includes a deep lake. This deep lake will be hydrologically connected to the lake which is planned for other sections of the Milton Quarry. Although the MQEE may not currently contain fish habitat, future extension of the lake would result in the creation of new fish habitat. Discussion of cumulative impacts from the incremental increase in lake habitat, with regards to the Milton Quarry should be provided for context.

### 3.4 Section 6.3 Impact Assessment

Section 6.3 will discuss the Operational Plan for the MQEE which also includes a cumulative effects assessment. As groundwater and surface water changes are linked to fish habitat, effects on fish populations affected by these changes should also be included in the assessment.

If ponds or wetlands are currently used by Jefferson Salamanders and amphibians, the applicant should discuss the future viability of these breeding ponds in the event that predatory or invasive fish species were to expand into these habitats from expansion of the lake habitat.

The applicant should include a discussion of how transformation of the farmland into a lake and raising water levels would affect the moisture regimes of the adjacent natural heritage features.

## 4 CLOSURE

I trust that this letter suits your present requirements. If you have any questions or comments, please me at 519.772.3777.

Yours truly,

**MATRIX SOLUTIONS INC.**



J. Arnel (Arnie) Fausto, M.Sc.  
Senior Ecologist

JAF/vc

#### DISCLAIMER

Matrix Solutions Inc. certifies that this report is accurate and complete and accords with the information available during the project. Information obtained during the project or provided by third parties is believed to be accurate but is not guaranteed. Matrix Solutions Inc. has exercised reasonable skill, care, and diligence in assessing the information obtained during the preparation of this report.

**Norbert M. Woerns, M.Sc., P.Geo.**  
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April 26, 2021

Halton Region  
Planning Policy, Legislative and Planning Services  
1151 Bronte Road  
Oakville, Ontario L6M 3L1 (Email: Joe.Nethery@halton.ca)

**PRIVILEGED AND CONFIDENTIAL**

Attention: Joe Nethery, Manager, Community Planning

**Re: Hydrogeological Review Comments on the Milton Dufferin Quarry East Expansion  
Terms of Reference**

I have examined the following documents:

- 1) Terms of Reference: Geology and Water Resource Assessment Report (GWRA), Including Karst and Hazard Lands Consideration, Proposed Dufferin Aggregates Milton Quarry East Extension, Region of Halton, Ontario.
- 2) Terms of Reference: Adaptive Management and Protection Plan (AMP), Proposed Dufferin Aggregates Milton Quarry East Extension, Region of Halton, Ontario.

In addition, I have also examined the Pre-Consultation Development Review Committee Meeting Notes, November 12, 2020, Milton Quarry (Part of Lot 12, Concession 1) ARN-2415070004279 with Dufferin's response.

The above noted Terms of Reference are based upon the understanding of the geology, hydrogeology and surface water resources of the area of the existing Milton Quarry and vicinity. The proposed Milton Quarry East Extension (MQEE) consists of about 16 hectares bounded on the north and west by the formerly approved quarry operations. It is proposed to integrate the MQEE lands into the Water Management System and AMP that are already in place and have been operating at the Milton Quarry and Milton Quarry Extension since 2007. The Terms of Reference refer to a considerable body of work and information including site investigations as well as the recent 5-Year AMP review (January 24, 2020).

The Terms of Reference describes the proposed expansion, and additional studies completed as part of the Terms of Reference. The following comments are for the most part requests for clarification on the proposed studies.

## 1) Comments on the GWRA Terms of Reference

The Terms of Reference relies to some extent on the existing understanding of the geology, hydrogeology, and surface water resources in the area. It lists the additional studies undertaken on and around the Milton Quarry East Extension (MQEE) Lands which includes the completion of 32 new test pits and eight new boreholes with locations shown on attached Figure 1. Water level data is being collected at 27 monitoring wells located on the MQEE lands and areas to the west and south. Water quality sampling was undertaken in early 2021 to provide additional baseline water quality data as requested by the Region as part of the draft Terms of Reference review (November, 2020). In addition, it is intended that the GWRA will rely upon the existing hydrogeologic information including over 340 monitoring wells and multiple pumping tests, including 2 conducted on the MQEE lands at TW1-80. Based on the information from Halton Region, TW1-80 was located within a cluster of the former wells denoted OW3-1 to OW3-3, OW4-80, and OW 11-80 (Ref. Halton Region referred to Water Assessment Report, CRA 2000). Are these locations in existence?

It is assumed that the new boreholes, which were instrumented with observation wells OW78-20 to OW83-21, were completed in 2020 and 2021 and constitute the primary baseline monitoring locations for the pending application. What are the designated background wells for the proposed expansion area?

It appears as though there will be a limited period of time for monitoring the new groundwater monitors. It is not clear how long of a monitoring period is proposed for these locations nor how much monitoring data is already available for the MQEE lands. Updated hydrographs as well as geological Cross-sections will be prepared through the MQEE extraction area and adjacent lands. Sufficient monitoring data should be available for site characterization to identify both seasonal and annual trends, including groundwater and surface water fluctuation ranges adjacent to the site.

A surface water assessment includes the installation of 10 new staff gauges (SG57 to SG66) at key wetlands locations which are located south and east of the MQEE extraction area. Based upon historic data, it is known that some of these wetlands are directly supported by the groundwater table. Water level transducers will be installed at 8 of these surface water monitoring locations. Groundwater-surface water interactions will be evaluated using field observations, combination of groundwater/surface hydrographs and comparison of groundwater contours to ground surface elevations/topography. It is not clear whether the agreed to water quality sampling will be of assistance in differentiating between surface water and groundwater resources.

The terms of reference state that *“No private water supply well survey is necessary as there are no private lands or water supply wells within 1.2 kms of the MQEE extraction area (refer to MHBC letter for September 4, 2020) Figure #13). The water supply wells that are within the Amabel Aquifer are located to the north and west, hydrogeologically separated from the MQEE lands by the other quarry areas and addressed by the existing Milton Quarry monitoring and mitigation measures.”* The GWRA should identify all water users including both groundwater and surface water users within the vicinity of the MQEE lands both up-

gradient and down-gradient as well as natural features dependent upon local groundwater and surface water resources. Evidence to support the conclusions regarding the hydrogeological separation of the MQEE lands from groundwater wells should also be provided in the GWRA.

Although the GWRA Terms of Reference recognize the importance of protecting groundwater dependent features such as wetlands, it is not clear how the groundwater and surface water modelling analysis specifically address the hydrologic function (i.e., recharge/discharge) of the MQEE lands and the potential impact of the proposed aggregate extraction expansion will have on these functions and related natural heritage features as well as surface water and groundwater users.

The terms of reference state at the bottom of page 4, that *“No additional water quality sampling is necessary for the purpose of assessing potential impact to water resources for the proposed MQEE; however, additional water quality sampling was undertaken in early 2021 to provide additional baseline water quality data as requested by the Region.”* It is not clear what the role of water quality sampling will be or whether it will be used to differentiate between surface water and groundwater.

(Karst Issue to be addressed by Daryl Cowell)

The Terms of reference states that as part of the Milton Quarry Extension approvals: *“Karst considerations were thoroughly evaluated as part of the previous Milton Quarry Extension approvals and it was determined by the Region of Halton hydrogeologist at that time as well as by the Joint Board, that there were no unusual or demanding challenges arising from karstification for the Milton Quarry Extension. It was determined that the then-proposed Milton Quarry Extension characterization and proposed mitigation measures sufficiently addressed any considerations related to potential karstification. These measures have proven to be effective in protecting water resources, including bedrock springs that had been indicated to be reliant on karst features by parties opposed to the Extension.”* The GWRA should include data and evidence to support these conclusions.

The GWRA should include; a) the identification of pre- and post- expansion groundwater conditions within and adjacent to the proposed expansion area including groundwater impacts and or drawdown conditions and other influences from the existing approved quarry operations, b) the existing mitigation systems effects on the proposed expansion area, and c) demonstration of how the performance/effectiveness of the existing and proposed mitigation measures would support the anticipated extension.

The water budget assessment should include an assessment of climate change impacts.

## 2) AMP Terms of Reference

The terms of reference indicate that *“Dufferin has already committed to integrate the subject site into the state-of-the-art water management system (WMS) and AMP that are already in place and have been operating at the Milton Quarry and Milton Quarry Extension since 2007. The water mitigation system has effectively maintained groundwater levels around the*

*perimeter of the Milton Quarry Extension protecting surrounding water resources including water dependent ecological features. ... The AMP was approved by the agencies and through annual reporting, as well as a recent 5-year review, has demonstrated that the proposed mitigation system has protected and enhanced natural heritage features surrounding the extension. The water management system and protection for water resources and related ecological features for the MQEE will be a straightforward addition to the existing system using the same proven techniques for mitigation.”* Information will be required in the new AMP or AMP addendum, as proposed, to demonstrate the above assertions with respect to the proposed water management system providing protection and enhancements of natural Heritage features on and adjacent the MQEE lands. The feasibility of maintaining or enhancing the water resources in the long term (beyond extraction and lake filling period) will also need to be demonstrated and/or supported with available onsite hydrogeological data and/or groundwater/surface water modelling. The AMP Addendum should include a practical and financially sustainable implementation strategy to ensure that the agreed to long term rehabilitation objectives will be met.

I trust the above comments are self explanatory and meet your needs at this time. Please contact me at (519) 596-2967 or email [nwoerns@eastlink.ca](mailto:nwoerns@eastlink.ca) should you have any questions or require additional information.

Yours very truly



Norbert Woerns, M.Sc. P.Geo. (Member No.232)  
Hydrogeologist

Cc: David Germain, ([dgermain@thomsonrogers.com](mailto:dgermain@thomsonrogers.com))

Mr. Joe Nethery, MCIP, RPP  
Manager, Community Planning  
Planning Services  
Legislative & Planning Services  
Halton Region  
1151 Bronte Road, Oakville, ON L6M 3L1  
(via e-mail)

April 30, 2021

**PRIVILEGED AND CONFIDENTIAL**

**Re: Hydrogeological review comments on the Terms of Reference for the proposed Dufferin Aggregates Milton Quarry East Extension.**

I have reviewed the following documents:

1) Terms of Reference – Geology and Water Resources Assessment Report (GWRA), Including Karst and Hazard Lands Consideration, Proposed Dufferin Aggregates Milton Quarry East Extension, Region of Halton, Ontario (GHD, updated March 26, 2021);

2) Terms of Reference – Adaptive Management and Protection Plan (AMP), Proposed Dufferin Aggregates Milton Quarry East Extension, Region of Halton, Ontario (GHD and Goodban Ecological Consulting Inc., updated March 26, 2021); and

3) Integrated Response to Comments, Pre-Consultation Development Review Committee Meeting Notes, November 12, 2020 (GHD and Goodban Ecological Consulting Inc., March 26, 2021).

I have also reviewed comments recently provided to the Region by Norbert M. Woerns (April 26, 2021) and S.S. Papadopoulos & Associates (April 26, 2021) on the documents noted above. I support those review comments and will not duplicate them here. Instead, I will add a couple of additional notes but otherwise, will focus on the karst issues that both N.M. Woerns and S.S. Papadopoulos raised.

1. The GWRA ToR (Section 3.) notes that “Hazard Land Information obtained from Conservation Halton” had already been undertaken and “No Hazard Land concerns are anticipated beyond consideration of the adjacent wetland areas...”.

It is not clear what information was obtained or reviewed. Wetlands may be zoned as “hazardous” by planning authorities but are not defined as such under the PPS (2014) nor under CH regulations. The PPS distinguishes between “Hazard Lands” and “Hazardous Sites”. These are very much different and not inclusive of wetlands (other than “organic soils”). Hazard Lands includes lands adjacent to the Great Lakes subject to flooding, erosion, etc. and areas adjacent to rivers and inland lakes also subject to flooding and/or erosion. Hazardous Sites on the other hand, include a number of naturally occurring conditions that could be unsafe to development and humans including (but not limited to) sensitive marine clays, organic soils and karst topography.

Please specify what was reviewed.

Karst topography is known to occur on/in the Amabel Formation and should be considered present unless demonstrated otherwise. In my experience, karst hazardous site mapping is very incomplete and should not be relied where carbonate bedrock outcrops or subcrops the area.

2. The GWRA ToR (Section 5) notes that “No additional water quality sampling is necessary for the purpose of assessing the potential impact to water resources...however, additional water quality sampling was undertaken in early 2021...Adjustments to the existing Milton Quarry monitoring program *may* be included in the recommended monitoring requirements pursuant to the AMP or in the OWRA approvals.” (highlighting mine).

I have no idea what this says with regard to committing to undertake a water quality sampling program – should this be considered part of the terms of references (GWRA and AMP documents) or not? Will sampling take place and, if so, where?

Also, what is meant by ‘water quality’? Natural waters have distinct chemical signatures which can be used to separate water types between, for example, surface and groundwater sources (especially on carbonate bedrock terrains). This requires measurements of temperature, conductivity, TDS, major ions, etc. all of which are measures of ‘water chemistry’. ‘Water quality’ is more associated with the presence of specific nutrients, organic chemicals, metals, etc. which can identify potential contamination and/or natural changes due to ecosystem components.

A clear purpose of the ‘water quality’ sampling program (that may or may not actually be incorporated into the studies) needs to be defined along with specific parameters and purpose.

3. The AMP ToR do not refer to the presence of karst. However, the GHD/GEC response to a comment by Halton Region (bottom of page 9) is as follows: “The karst assessment included in the GWRA and the AMP Addendum will include *potential* response measures and contingency



measures that *could* be used to mitigate the effects of any *unanticipated major* karst features.” (highlighting mine). This statement drips with uncertainty: Will there be a response or not? Will mitigation measures be implemented or not? When/how does the unanticipated become anticipated? What is a major karst feature?

A ‘major’ karst feature may be discovered as part of pre-excavation studies or unexpectedly during excavation. Mitigation and contingency measures would be much different for each scenario and need to be clearly defined prior to excavation.

4. The GWRA ToR indicate (according to the title) that it will include “Karst and Hazard Lands Consideration”. As noted above, does this refer to Hazard Lands or Hazardous Sites (which includes karst)? There is no reference to karst in the AMP ToR.

The GWRA (Section 4) specifically states that “Based on the above facts, a separate study based solely on potential karstic considerations is not necessary and has not been included in this ToR.” The document title says that the ToR includes karst consideration but the document states that “potential karst consideration” isn’t necessary. It appears the only “consideration” is not to consider it!

So what are the “facts” on which this conclusion is based? The first refers to a blanket statement two paragraphs above that because the rock is dolostone (and not limestone), and because there is carbonate-rich overburden on top and because there are limited “closed-catchment areas” there will only be “low degrees of weathering or karstification” in this area. If any of this were true there would be no karst in southern Ontario at all...however, we know there is lots of karst.

Dolostone is agreed to be less soluble than limestone...All Else Equal. However, all else is not equal and, in fact, solution rates on southern Ontario dolostones equal or exceed those on Kentucky limestones (I will provide the paper if requested). Again, we know karst exists in southern Ontario dolostones (Smithville Cave, Eramosa Karst, Medad Valley springs, St. Edmunds Karst System, etc.) so this statement is clearly false.

The presence of carbonate-rich overburden limits amount of solution in the underlying bedrock. Again...All Else Equal...the solution processes is driven by partial pressures of CO<sub>2</sub>. I would be happy to provide the details but suffice is to say, the CO<sub>2</sub> concentration of infiltrating soil water can be augmented up to 10X or more due to soil organisms. Again, I will provide references if required.

The third reason – limited closed-catchment areas – makes no sense to me at all.

In the paragraph immediately preceding the conclusion of no karst, are other ‘facts’: “Karst consideration were thoroughly evaluated as part of the previous Milton Quarry Extension approvals and it was determined...that there were no unusual or demanding challenges arising from karstification for the Milton Quarry Extension.” This paragraph also refers to the presence of “bedrock springs that had been indicated to be reliant on karst features by parties opposed to the Extension.”

- Was a karst expert involved in the thorough evaluation of karst considerations noted?
- If so, whom?
- What was evaluated – actual evidence of karst or only “karst considerations” as the statement reads? and
- Who documented the presence of karst springs?

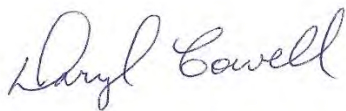
I look forward to reviewing all the documentation referred to in the GWRA ToR, above.

I would note that the presence or absence of karst in the area of previous extension does not disqualify karst from being present in the vicinity of the East Extension.

5. The results of previous pumping tests at observation wells in the vicinity of TW1-80, had geometric mean hydraulic conductivities that ranged from  $1.0 \times 10^{-2}$  cm/s (DW127) to  $1.2 \times 10^{-3}$  cm/s (OW2-4) (The Water Resources Assessment Report, Volume 1: Appendix C – CRA 2000). These values are one to two orders of magnitude above the threshold that defines a limestone or dolostone mass as being a “karst aquifer” by Freeze and Cherry (1979, Table 2.2).

If you have any questions or comments or would like more information, please do not hesitate to call me at 519-596-8187 or 905-467-1067 or via e-mail ([dcowell@amtelecom.net](mailto:dcowell@amtelecom.net)).

Yours truly,



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Daryl W. Cowell, M.Sc., P.Geo. (#0791)  
cc: David Germain ([dgermain@thomsonrogers.com](mailto:dgermain@thomsonrogers.com))



**S.S. PAPADOPULOS & ASSOCIATES, INC.**  
**ENVIRONMENTAL & WATER-RESOURCE CONSULTANTS**

April 26, 2021

Mr. Joe Nethery, MCIP, RPP  
Manager, Community Planning  
Planning Services  
Legislative & Planning Services  
Halton Region

**Subject: Review comments on the Terms of Reference for the proposed Dufferin Aggregates Milton Quarry East Extension**

**PRIVILEGED AND CONFIDENTIAL**

Dear Mr. Nethery:

We have reviewed the following documents:

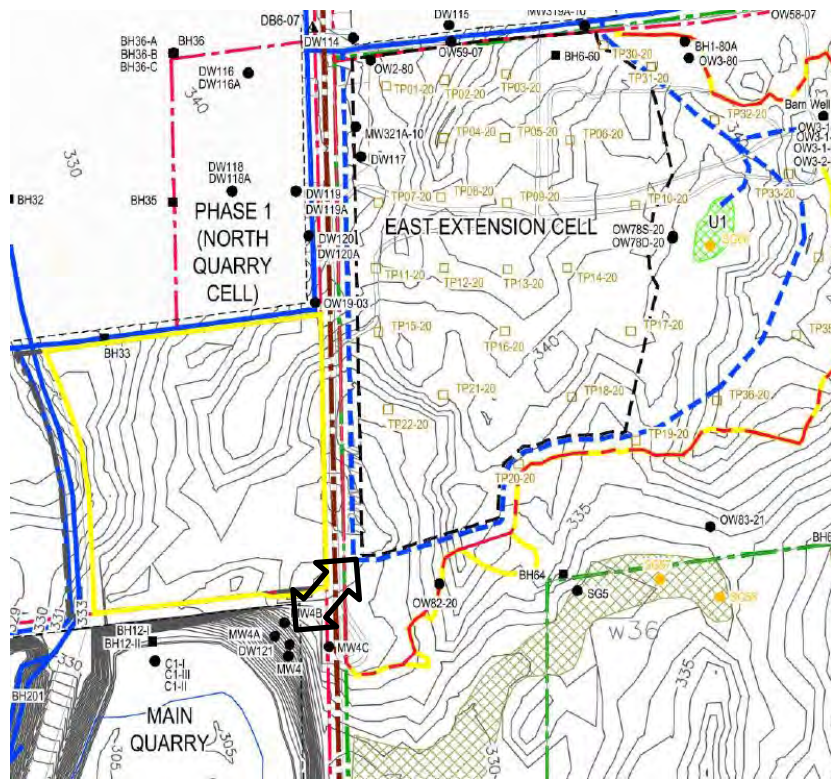
- Terms of Reference: Geology and Water Resources Assessment Report, Including Karst and Hazard Lands Consideration, Proposed Dufferin Aggregates Milton Quarry East Extension, Region of Halton, Ontario (GHD, March 26, 2021);
- Terms of Reference: Adaptive Environmental Management and Protection Plan (AMP), Proposed Dufferin Aggregates Milton Quarry East Extension, Region of Halton, Ontario (GHD and Goodban Ecological Consulting Inc., March 26, 2021); and
- Integrated Response to Comments, Pre-Consultation Development Review Committee Meeting Notes, November 12, 2020 (GHD and Goodban Ecological Consulting Inc., March 26, 2021).

In our opinion, the two Terms of Reference are generally clear and complete and reflect the extensive experience from the operation of the quarry and its extensions, and from the implementation and monitoring of mitigation measures. We expect that this experience is documented in the 5-Year AMP Review report. Our comments are limited to requests for clarification.

Mr. Joe Nethery, MCIP, RPP  
 April 26, 2021  
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**1. Comments on the Terms of Reference for the Geology and Water Resources Assessment Report**

1. There are a lot of acronyms in the Terms of Reference. We recommend that the Geology and Water Resources Assessment Report include a glossary for quick reference.
2. We are curious about the references to the distance between the proposed extension and the existing Main Quarry. It is indicated in both Terms of Reference documents that the proposed extension is located “at some distance” from the Main Quarry. Are we missing something, or is the southwest corner for the proposed extraction area about 50 m from the Main Quarry?



Mr. Joe Nethery, MCIP, RPP

April 26, 2021

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3. The Water Management System is a highly engineered system with active water-supply measures that have been operating since 2007. In the supporting groundwater modelling analyses, we expect to see results for a closure scenario in which there are no active mitigation measures. In our opinion it is realistic to envision a time when either active measures cease, or Dufferin and its successor companies are no longer going concerns. The results of a “passive” closure scenario will support an assessment as to whether the final lake levels will be sufficient to support all current hydrologic functions.

The analysis of closure conditions should also include an indication of the expected duration of operation of the Water Management System.

4. We are not clear whether the Geology and Water Resources Assessment will include a karst assessment. It is indicated in the Terms of Reference that “... a separate study based solely on potential karst considerations is not necessary and has not been included in this ToR.” We interpret this to mean that a karst assessment will not be included in the Geology and Water Resources Assessment Report, as was done for the Acton Quarry<sup>1</sup>, for example. However, in the responses to the pre-consultation comments it is indicated that:

*The karst assessment included in the GWRA and the AMP Addendum will include potential response measures and contingency measures that could be used to mitigate the effects of any unanticipated major karst features.*

The Niagara Escarpment Commission has commented that the subject lands “appear to be within a known karst area.” We would be more confident in the site characterization if a karst expert is engaged to either prepare a karst characterization document or to confirm that a separate document is not required for the proposed extension.

5. The Town of Milton commented on the potential impacts of the proposed extension on groundwater and surface water flows with respect to the Milton water supply at Kelso. How will this be addressed? Do the limits of the groundwater and surface water models of the quarry extend to the Kelso wells?

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<sup>1</sup> Worthington Groundwater, 2008: Geology and Water Resources Assessment Report, Acton Quarry Extension - Town of Halton Hills, Ontario, Appendix C: Karst Assessment, October 30, 2008.

Mr. Joe Nethery, MCIP, RPP  
April 26, 2021  
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## **2. Comments on the Terms of Reference for the Adaptive Environmental Management and Protection Plan**

1. We appreciate that there is now abundant experience with the Adaptive Management Plan for the existing quarry and extensions. As part of our review we expect to study the 5-Year AMP Review report. We understand that Halton Region reviewed the 5-Year AMP Review and provided an extensive summary and comments to Dufferin. We do not propose duplicating Halton Region's review by undertaking our own detailed review. Rather, we intend to focus on identifying instances where conditions have differed from those that were anticipated, and how the differences have been handled. It is possible that key issues from the 5-Year AMP Review may be incorporated in the Geology and Water Resources Assessment Report for the proposed East Extension. As part of our review, we expect to communicate with Conservation Halton to check whether certain aspects of the AMP performance referred to in Halton Region's comments that relate to Conservation Halton's areas of expertise and responsibilities have been addressed.
2. It is not clear how the current Adaptive Environmental Management and Protection Plan will be updated to accommodate the proposed extension.

An "AMP Addendum" is referred to in the Terms of Reference. Will the AMP Addendum be issued as a separate, stand-alone document, or as a separate document that will have to be read in conjunction with the current Plan? It is indicated in the responses to comments that "Some of this information will be incorporated by reference so as to maintain consistency with existing applicable requirements ...". Does this mean that the characterization of water and natural environment conditions in the AMP Addendum will be limited to references to other documents? In our opinion, it would be preferable to conceive of an addendum for the proposed east extension as an additional section of the existing Adaptive Environmental Management and Protection Plan. When completed, the additional section would be inserted in the Adaptive Environmental Management and Protection Plan, so that there would be only one final AMP rather than an AMP and a separate addendum.

Mr. Joe Nethery, MCIP, RPP  
April 26, 2021  
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## Closing

We hope that our comments are useful in the evaluation of the Terms of Reference. We appreciate the opportunity to serve Halton Region on this interesting and important assignment. If you have any questions regarding our comments, please contact Christopher Neville by E-mail at [cneville:sspa.com](mailto:cneville:sspa.com), or by phone at (519) 579-2100.

Sincerely,

S.S. PAPADOPULOS & ASSOCIATES, INC.



Christopher J. Neville, M.Sc., P.Eng.  
Chief Hydrogeologist



- Christopher J. Neville: PEO #100013705  
(valid through December 31, 2021)
- S.S. Papadopoulos & Associates, Inc.: PEO Certificate of Authorization #100077381  
(valid through June 30, 2021)

CJN/cjn

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Surface Water Review – TOR: Geology and Water Resources Assessment Report, Proposed Dufferin Aggregates Milton Quarry East Extension (MQEE), Region of Halton, March 26, 2021

1. Good that the Geology and Water Resources Assessment (GWRA) and Natural Environment Report are being integrated; this will be central in establishing the proposed mitigation and management measures.
2. MQEE (16ha) is contiguous with East Cell, separated from North Cell by Town Line.
3. Applied Class A Quarry guidelines for below water table extraction (MNR). (Note: MNR is not MNRF)
4. Reference made to AMP and JART process of 2007.
5. Proposed to integrate MQEE into the Water Management System (WMS) and Adaptive Environmental Management and Protection plan (AMP) in-place.
6. AMP requires 5-year review to make any adjustments based on data feedback; most recent January 24, 2020.
7. GHD reports no surface water features in the extraction area; only a small wetland pool (U1) located east of the extraction area, is notable. Also, the Halton Escarpment Wetland Complex is of interest due to their reliance on groundwater (not surface water).
8. Scope of work (surface water and hazard lands)
  - a. 10 new staff gauges in wetlands
  - b. Groundwater-surface water interaction evaluation.
  - c. Topographic delineations
  - d. Hazard land review (none noted)
9. Additional Hydrogeology Scope:
  - a. 8 new wells
  - b. 27 monitoring wells on MQEE
  - c. GW contours to be developed (seasonal)
  - d. No private well survey
  - e. No SWP studies
  - f. No additional water quality surveys/sampling
  - g. Consideration of potential Karstification – no separate study
10. Plan to update the most recent groundwater and surface water analyses (limited details - GHD makes reference to AMP). Plan to assess impacts of changes in catchment runoff (i.e., reduction to downstream areas). The TOR provides no details on the approach (only back reference to the AMP) and also no details on the baseline conditions for comparison and the planned mitigation. This needs to be more fulsome for a TOR. Note: this comment is mirrored by the JART summary of comments.

Surface Water Review – TOR: Adaptive Environmental Management and Protection Plan (AMP), Proposed Dufferin Aggregates Milton Quarry East Extension (MQEE), Region of Halton, March 26, 2021

1. Same introductory comments as for the GWRA
2. Plan to provide information on pre-extraction baseline monitoring but no information provided.
3. Reference on-going monitoring programs for ground and surface water (and ecology).



4. AMP to include details on “response and contingency action measures” as well as “rehabilitation confirmatory evaluation of mitigation and monitoring requirements” – document is light on details though.
5. Reference to “Feature specific management plans” – appears like this will focus on Wetland U1.
6. Notes that the Surface water level targets will be provided in the Natural Environment Report – trusting this will be cross-linked to the GWRA?
7. Notes that the “Response Action Framework” will follow the existing AMP – but no details provided.

Notes by Ron Scheckenberger P.Eng.

**From:** Hogg, Janice <Janice.Hogg@halton.ca>

**Sent:** June 25, 2021 3:54 PM

**To:** Brian Zeman <bzeman@mhbcplan.com>

**Cc:** Nethery, Joe <Joe.Nethery@halton.ca>; Ellen Ferris <eferris@mhbcplan.com>; Ali, Gena <Gena.Ali@halton.ca>; abuset@haltonhills.ca; lisa.grbinicek@ontario.ca; kmcCormack@hrca.on.ca; Mollie.Kuchma@milton.ca; christian.lupis@milton.ca; gmacdonald@haltonhills.ca; lsmith@hrca.on.ca; Stirling.Todd@milton.ca; 'Mitchell, Kevin (CRH Canada Group Inc.)' <kevin.mitchell@ca.crh.com>; Kyle Fritz <Kyle.Fritz@ghd.com>; Anthony Goodban (anthony.goodban@sympatico.ca) <anthony.goodban@sympatico.ca>; Richard Murphy <Richard.Murphy@ghd.com>; Nicholas.Fitzpatrick@ghd.com; Pakulski, Betty <Betty.Pakulski@halton.ca>

**Subject:** Milton Quarry East, VIA TOR Review

Hi Brian,

On behalf of JART, there no comments on the Terms of Reference submitted for the VIA.

Thanks,  
Janice

**Janice Hogg, MCIP, RPP**

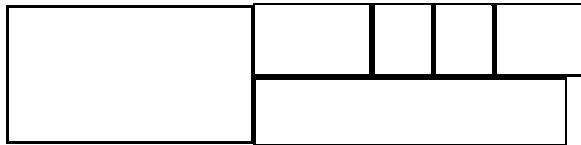
**Senior Planner**

Planning Services

Legislative & Planning Services

**Halton Region**

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