

AGGREGATE RESOURCES ACT **SUMMARY STATEMENT**

JANUARY 2013 / 1251A

ARBOUR FARMS PIT

LOT 23, CONCESSION 7,
TOWNSHIP OF MULMUR, COUNTY OF DUFFERIN

PREPARED FOR ARBOUR FARMS LTD.



MHBC
P L A N N I N G
U R B A N D E S I G N
& L A N D S C A P E
A R C H I T E C T U R E

AGGREGATE RESOURCES ACT SUMMARY STATEMENT
ARBOUR FARMS LTD.
JANUARY, 2013

INTRODUCTION

Arbour Farms Ltd. is applying for a Class A Licence under the Aggregate Resources Act, for a Category 1 Pit with extraction below the groundwater table on Lot 23, Concession 7 East of Hurontario Street, Township of Mulmur, County of Dufferin.

The proposed licence area is 41.68 ha, of which 36 ha is proposed to be extracted.

The annual tonnage limit is 500,000 tonnes per year, comprised of aggregate extracted from the pit as well as the importation and exportation of recycled material.

This application is a resubmission of an Aggregate Resources Act application which was submitted for the subject site in 2001. This resubmission provides an update to the 2001 Aggregate Resources Act application and the technical reports accompanying this application are updates to materials that were previously filed and reviewed by the agencies. This resubmission addresses comments previously provided by the Ministry of Municipal Affairs and Housing through the provincial one window comments, on behalf of the Ministry of the Environment, Ministry of Culture, Ministry of Agriculture, Food and Rural Affairs and the Ministry of Natural Resources (see Tab 1).

The primary purpose of this report is to provide a summary of the information required for an Aggregate Resources Act Summary Statement. The complete licence application consists of the following three (3) parts:

1. Aggregate Resources Act Site Plans;
2. Reports; &
3. Aggregate Resources Act Summary Statement.

PART 1.0 – AGGREGATE RESOURCES ACT SITE PLANS

In accordance with the Aggregate Resources of Ontario Provincial Standards, Version 1.0, Skelton, Brumwell & Associates prepared and submitted complete Aggregate Resources Act Site Plans which provide details on the existing features, operational plan, progressive rehabilitation, planned final rehabilitation and cross-sections of existing conditions and planned final rehabilitation of the site.

PART 2.0 – REPORTS

2.1 SUMMARY STATEMENT

The following sections fulfil the study requirements of the Provincial Standards, Version 1.0, for a Category 1 Pit above the water table.

2.2 TECHNICAL REPORTS

- **2.2.1 & 2.2.2** *“Hydrogeology and Aquatic Level 1 and Level 2 Technical Report”* Golder Associates Ltd., October 2012.
- **2.2.3 & 2.2.4** *“Natural Environment Report”* Azimuth Environmental Consulting Inc., October 2012 and see the above listed report for Natural Environment items related to aquatics.

2.2.5 & 2.2.6 *“Stage I-II Archaeological/Heritage Assessment”* North York Archeological Services, July, 1999, and *“Stage I-II Archaeological/Heritage Assessment”* North York Archeological Services, August 2000.
- **2.2.7** Cultural Heritage Resource Stages 3 and 4 - Not Applicable.
- **2.2.8** *“Sound Impact Analysis”* Valcoustics Canada Ltd., October 2012.

2.3 OTHER TECHNICAL REPORTS

- *“Updated Traffic Impact Study”*, MMM Group Limited, (originally prepared in 2011) updated Addendum October 2012.
- *“Geometric Analysis Study Addendum Report”*, MMM Group Limited, (originally prepared in 2011) updated Addendum October 2012.
- *“Peer Review Letter - Updated Traffic Impact Study and Geometric Analysis Study Addendum Report”*, Intus Road Safety Engineering Inc., (originally prepared in 2011) updated Addendum October 2012.
- *“Aggregate Reserves Study”*, Dalhousie Materials Engineering Ltd., May 2003.

PART 3.0 – SUMMARY STATEMENT: REQUIRED INFORMATION

The following sections are structured to provide information required for an Aggregate Resources Act Summary Statement under the Provincial Standards Version 1.0 for a Class A Category 1 Pit Below Water Aggregate Resources Act Licence Application.

3.1 PLANNING AND LAND USE CONSIDERATIONS – STANDARD 2.1.1

3.1.1 Introduction

Arbour Farms Ltd. filed applications for an Official Plan Amendment and a Zoning By-law Amendment in 2000 to permit aggregate extraction within the subject site. The resubmission of the Aggregate Resources Act application provides an update to the 2001 Aggregate Resources Act application and the technical reports accompanying this application are updates to materials that were previously filed and reviewed by the agencies. The review of the Planning Act applications remains on-going, however, based on the resubmission of the Aggregate Resources licence application, updates will be required to the Official Plan and Zoning By-law Amendments were submitted to the Township in 2012 to reflect the reduced licence area and relocated entrance/exit.

The Aggregate Resources Act application is proposed in an area that the Township of Mulmur Official Plan has identified as a “Mineral Resource Area” and is not located within a prime agricultural area or on prime agricultural lands (see Tab 2).

3.1.2 Natural Heritage and Water Resources

There are no provincially significant natural heritage features within the proposed extraction area, with the exception of two small extensions of a Significant Woodland. The Level 1 and 2 Natural Environment Report has assessed these features and concluded that the removal of these extensions would not result in a negative impact to the Significant Woodland feature or its functions. Please see the “*Natural Environment Report*” for complete details. On lands surrounding the subject site there are Significant Woodlands, fish habitat, significant habitat for Butternut Trees (endangered species) and significant wildlife habitat. The Level 1 and 2 Natural Environment Report and Level 1 and 2 Hydrogeology and Aquatic Report have examined each of these features and concluded that there will be no negative impacts with the provisions of the setbacks and recommendations which are included on the Site Plans, including the monitoring program for Lisle Creek.

Lisle Creek is located immediately south of the proposed licence area and has been identified as a cold water creek. In order to ensure that Lisle Creek is protected, the extraction of below water aggregate and the washing of aggregate shall not be permitted between September 15 and April 15. The Site Plans also include maximum weekly and annual volumes regarding levels of below water extraction and washing that can occur between April 15 and September 15. In addition, a detailed monitoring program has been prepared to ensure the protection of this feature. Please refer to the “*Hydrogeology and Fisheries Level 1 and Level 2 Technical Report*” for complete details.

3.1.3 Haul Route

The proposed operation will have direct access to Airport Road (County Road 18), which is a County Road that currently accommodates high volumes of traffic including truck traffic. The transportation aspects of the application have been well studied. An *“Updated Traffic Impact Study”, “Geometric Analysis Study Addendum Report”* and *“Peer Review Letter - Updated Traffic Impact Study and Geometric Analysis Study Addendum Report”* have been prepared and submitted with the application. Please see these studies for complete details. These studies conclude that the operation has been designed to minimize risk to protect public safety and Airport Road has the capacity to accommodate additional truck traffic from the site.

Notwithstanding the above noted completed studies, Arbour Farms Ltd. has agreed to restrict shipping hours on weekends and during non-daylight hours. As a result, the proposed hours for shipping are:

- 7:00 am to 6:00 pm from March to October
- 8:00 am to 5:00 pm from November to February
- No shipping between 12:00 pm Friday and Monday mornings throughout the year.

The shipping operations will be restricted as noted above with the exception of winter sanding and maintenance operation for the benefit of a road authority such as the County or Township.

3.1.4 Surrounding Receptors

There are limited residential receptors and sensitive land uses in the area of the proposed limit of extraction. The sensitive receptors located in proximity to the pit are detached residential dwellings. These residences are well separated from the proposed extraction limit. The closest residences are located 300m to the south, 450m to the northwest, 560m to the north and 1.3km to the east.

The operation has been designed to ensure that there are no adverse impacts to adjacent land uses including private residential and agricultural wells. Setbacks, temporary berms near the processing plant, visual screening adjacent to Airport Road, and operational restrictions resulting from the completed technical reports, have been incorporated into the Aggregate Resources Act Site Plans. In addition, as a preventative measure, Arbour Farms Ltd. has agreed to replace a shallow dug agricultural well prior to the extraction of material below the water table, subject to landowner permission.

3.1.5 Cultural Heritage Resources

The subject site does not contain any buildings or structures and is not identified as a significant cultural heritage landscape. Archeological Assessments were completed which confirmed that there are no significant archeological resources on site.

3.1.6 Conclusion

In summary, the proposed area to be extracted contains a viable aggregate deposit and its recovery is not constrained by any natural heritage features, water resources, agricultural

resources, cultural heritage resources or incompatible land uses that would preclude extraction of the subject site.

3.2 AGRICULTURAL CLASSIFICATION OF THE PROPOSED SITE – STANDARD 2.1.2

The proposed licence area is mapped as Class 4 and 6 agricultural lands, and the general area is predominated by Class 6 agricultural lands (see Tab 2). As such, the proposed licence area does not consist of prime agricultural lands and is not within a prime agricultural area.

The site is not being rehabilitated to an agricultural use; rather, a biologically diverse terrestrial and aquatic landform will be created.

3.3 QUALITY AND QUANTITY OF AGGREGATE ON-SITE – STANDARD 2.1.3

The proposed licence area contains approximately 8-9 million tonnes of recoverable sand and gravel aggregate resource. Please see the *“Aggregate Reserves Study”* for more information.

Sand and gravel aggregate resource is used in a variety of construction and road building uses. The following list provides some of the prospective end uses of material from the proposed operation:

- Fill
- Selected granulars
- Erosion protection
- Winter sand
- Structural concrete
- Precast concrete
- Concrete pavers
- Asphaltic concrete
- Roofing granules
- Pavement sub-base
- Landfill cover
- Bricks
- Masonry mortar
- Concrete blocks
- Portable water filter media
- Landscaping

3.4 MAIN HAULAGE ROUTES – STANDARD 2.1.4

The proposed licence area has direct access onto Airport Road which is a County Road (County Road 18) that accommodates a high degree of traffic including truck traffic. The proposed operation includes one entrance/exit onto Airport Road.

It is anticipated that approximately 50% of the trucks leaving the proposed licence area will travel north to markets in the Collingwood/Wasaga Beach areas and approximately 50% will travel south to service the GTA market.

The proposed entrance/exit has been situated in accordance with the location requested by the Township's Peer Reviewer based on a review of earlier traffic reports.

A total of three traffic studies have been prepared which take into consideration the updated location of the entrance/exit and form part of this application (*"Updated Traffic Impact Study"*, *"Geometric Analysis Study Addendum Report"* and *"Peer Review Letter - Updated Traffic Impact Study and Geometric Analysis Study Addendum Report"*). Please refer to these technical studies for full and complete information.

3.5 PROGRESSIVE AND FINAL REHABILITATION – STANDARD 2.1.5

The Aggregate Resources Act Site Plans include the requirement for progressive and final rehabilitation of the site. As shown on the Aggregate Resources Act Site Plans, the site will be progressively rehabilitated as extraction occurs.

The rehabilitation plan for this site focuses on site-specific ecological restoration within the licensed boundary, the goal of which is to create a natural heritage area consisting of both terrestrial and aquatic habitats.

Specifically, the final landform will include stabilized slopes, re-vegetated surfaces, as well as deep and shallow water habitat. The rehabilitation plan for the site includes re-vegetating the site, replanting portions of the extraction area with native tree species and allowing other areas to naturally regenerate. In addition, a ± 21 ha pond will be created having irregular, vegetated shorelines which will create a variety of habitats.

The final landform will be self-sustaining and will not have any long-term impacts to surrounding natural heritage features such as Lisle Creek. The rehabilitated site will increase the level of biodiversity on-site and consist of a passive, natural area that is compatible with surrounding land uses.

Respectfully submitted,

MacNaughton Hermsen Britton Clarkson Planning Limited



Brian A. Zeman, BES, MCIP, RPP
Vice President, Partner



Adrian K. Cammaert, HBA, CNU-A, MCIP, RPP
Senior Planner

TAB 1

**Ministry of
Municipal Affairs
and Housing**

Municipal Services Office
Central Ontario
777 Bay Street, 2nd Floor
Toronto ON M5G 2E5
Phone: 416-585-6226
Fax: 416-585-6882
Toll-Free: 1-800-668-0230

**Ministère des
Affaires municipales
et du Logement**

Bureau des services aux municipalités
Centre de l'Ontario
777, rue Bay, 2nd étage
Toronto ON M5G 2E5
Téléphone: 416-585-6226
Télécopieur: 416-585-6882
Sans frais: 1-800-668-0230



May 20, 2010

Ron Mills
Planner
Township of Mulmur
758070 2nd Line East
Terra Nova, ON
L0M 1M0

Dear Mr. Mills:

**Re: Draft Official Plan Amendment No. 5
Proposed Sand and Gravel Extraction Operation
Arbour Farms, MMAH File No. 22-DP-0021-03005**

As per your request, my staff has reviewed the above-noted file and can advise on the status of the provincial one-window review and any outstanding provincial issues related to the proposed OPA to permit the establishment of a new sand and gravel extraction pit in Part Lot 23, Concession 7 in the Township of Mulmur.

The application was originally received by the Ministry of Municipal Affairs and Housing (MMAH) in October 2002 and was subsequently circulated to partner ministries and agencies in March 2003. A summary of provincial one-window comments that have been received by MMAH from partner ministries and agencies in response to this proposal is provided below:

- The Ministry of Environment indicated primary concerns with the potential impacts to surface water (Lisle Creek) resulting from extraction below the water table.
- The Ministry of Culture indicated that an archaeological assessment had been completed and no archaeological resources were identified. No further concerns were identified.
- The Ministry of Agriculture, Food and Rural Affairs indicated the subject lands were not considered prime agricultural lands and were not considered part of a prime agricultural area. No further concerns were identified.
- The Ministry of Natural Resources indicated that no provincially significant wetlands or Areas of Natural and Scientific Interest were identified on or adjacent to the subject lands. Initial concerns regarding the potential habitat of endangered and threatened species and wildlife habitat were resolved through subsequent discussions and the realignment of the proposed haul route. No further concerns were identified.
- Under its mandated review of Section 3.0 of the Provincial Policy Statement, the Nottawasaga Valley Conservation Area (NVCA) indicated the proposed use appears to be outside any flood and erosion hazard areas.

In 2005, MMAH prepared a staff report which identified that while the application has had regard for the mineral aggregate policies of the PPS (1997), additional information was still required to demonstrate that appropriate regard for policies 2.4.1 (Water Quality) and 2.3.1b) (Fish Habitat). These concerns were raised by Ministry of Environment (MOE) and NVCA to specifically address potential negative impacts to Lisle Creek. It was recommended that an adaptive management plan, including impact monitoring and appropriate mitigative measures/strategies, should be prepared in support of the application. An adaptive management plan was prepared by Golder and Associates Ltd. and submitted to MOE and the NVCA for their review in July 2006.

In a letter, dated June 2009, the NVCA indicates that the proponents have made progress in addressing the concerns and issues that were previously identified with this proposal. However, the NVCA has recently indicated that it continues to have outstanding concerns with natural heritage matters including impacts to Lisle Creek.

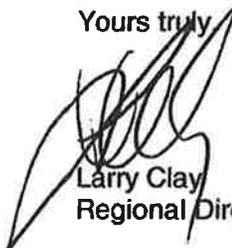
MMAH received a letter from the Ministry of Environment (MOE) on October 29th, 2009 advising that the majority of concerns relating to surface water issues have been addressed by the proponents. MOE is satisfied that any remaining concerns can be resolved through the *Aggregate Resource Act* and the license review process. A copy of this letter is attached.

Most recently, MMAH has reviewed previous comments provided by partner ministries and agencies to assess their status due to the age and history of this file. Partner ministries and agencies were contacted where necessary, to ensure that additional review of the file is not necessary.

In summary, it appears that outstanding matters of provincial interest, with respect to this proposal, have been addressed or will be dealt with by the proponent through additional approvals that are required through the *Aggregate Resources Act*. We encourage the Township to continue working closely with the proponent and the NVCA to address outstanding issues and concerns.

Please contact Ms. Sybelle von Kursell (Acting) Manager of Community Planning and Development at (416) 585-6053 at the Municipal Services Office – Central Region, if you have any questions or require additional information.

Yours truly



Larry Clay
Regional Director

cc: Gary Bell, Skelton Brumwell and Associates Inc.
Barbara Slattery, MOE
Chris Hibberd, NVCA
Craig Laing, MNR

Ministry of the Environment
West Central Region

119 King Street West
12th Floor
Hamilton, Ontario L8P 4Y7
Tel.: 905 521-7640
Fax: 905 521-7820

Ministère de l'Environnement

119 rue King ouest
12^e étage
Hamilton (Ontario) L8P 4Y7
Tél. : 905 521-7640
Télec. : 905 521-7820



October 27, 2009

Mr. A. Doersam
Ministry of Municipal Affairs and Housing
Municipal Services Office – Central Ontario
2-777 Bay Street
Toronto, Ontario
M5G 2E5



Dear Mr. Doersam:

**Re: Arbour Farms OPA #5, Mulmur Township
 Additional Comments**

As you may recall, on May 28, 2007 we provided you with technical comments outlining our concerns with potential water resource impacts as a result of the proposed below-watertable sand and gravel extraction proposed at this location.

The proponent's consultant (Golder Associates) provided this office with a dated September 23, 2009, which we have now reviewed with the following comments for your consideration.

Section D – Adaptive Management Plan (AMP) / Surface Water Monitoring

1. Golder has stated that continuous monitoring will occur at SW4, SW7, and SW8 which satisfies initial comments made by MOE.
2. Although comments made by MOE had recommended a "range of flows" to be collected, the proposed monitoring plan would measure stream flows four (4) times per year over the summer and fall at SW4, SW7, and SW8. Although these measurements may be useful for understanding low flows and baseflow contributions and ultimately pit impacts, the timing and frequency of the data may not be appropriate for establishing a representative stage/discharge rating curve for Lisle Creek. Also, MOE had proposed that SW1 be included for stream flow measurements. Golder has not indicated that this monitor will be included. Clarification should be provided as to why SW1 has been omitted from the monitoring plan.
3. The revised monitoring plan for habitat surveys will occur four (4) times per year during field events. In addition, depth and temperature measurements will be collected. The monitoring frequency is acceptable unless new information suggests otherwise. Accordingly, we would like to see a commitment to increase monitoring frequency if initial results identify the need for more frequent monitoring.
4. Golder agrees that modification to monitoring parameters may change as new information becomes available.
5. Golder agrees that a key objective of the closure/post closure monitoring program is that any potential negative effect to aquatic communities is evaluated.

Section E - Interpretation of AMP peer review

Groundwater Travel Times (Fuel Storage/Spill)

In terms of potential impacts to surface waters from a fuel spill, based on the hydrogeological assessment provided, fuel storage location, and the spill containment measures the potential of a fuel spill to impact Lisle Creek is low.

Monitoring Couplets

Golder has indicated that they do not advocate the use of monitoring couplets as a means to measure the "magnitude of groundwater level fluctuations and gradient changes" as a means to assess stream flows and discharge gradients. Although stream flows may not be directly assessed from the monitor couplets, they will provide valuable information regarding surface water and groundwater interactions for pre/during/post pit operations. In my opinion, more valuable quantitative information can be gained from the monitoring couplets compared to only being able demonstrate if groundwater is discharging or not. Therefore, we maintain our position that monitoring couplets be employed at the site (Lisle Creek).

Instream Monitoring

Comments made initially by MOE regarding the measurement of continuous water levels for calculating a stage/discharge curve to estimate flows and establish/modify trigger parameters was not specifically addressed in Golder's comments. However, the response provided did reiterate that the key characteristic of the AMP allows for changes to monitoring physical and biological parameters to protect aquatic habitat.

Concluding comments

Based on the responses provided by Golder along with the revised monitoring component of the AMP, the majority of MOE's concerns relating to surface water issues have been addressed. The exceptions being disagreement with the monitoring frequency to establish a range of streamflow measurements at SW4, SW7, and SW8 and the installation of the monitor couplets to assess surface/ground water interactions in Lisle Creek. We maintain our position that these modifications to the monitoring component of the AMP should be made.

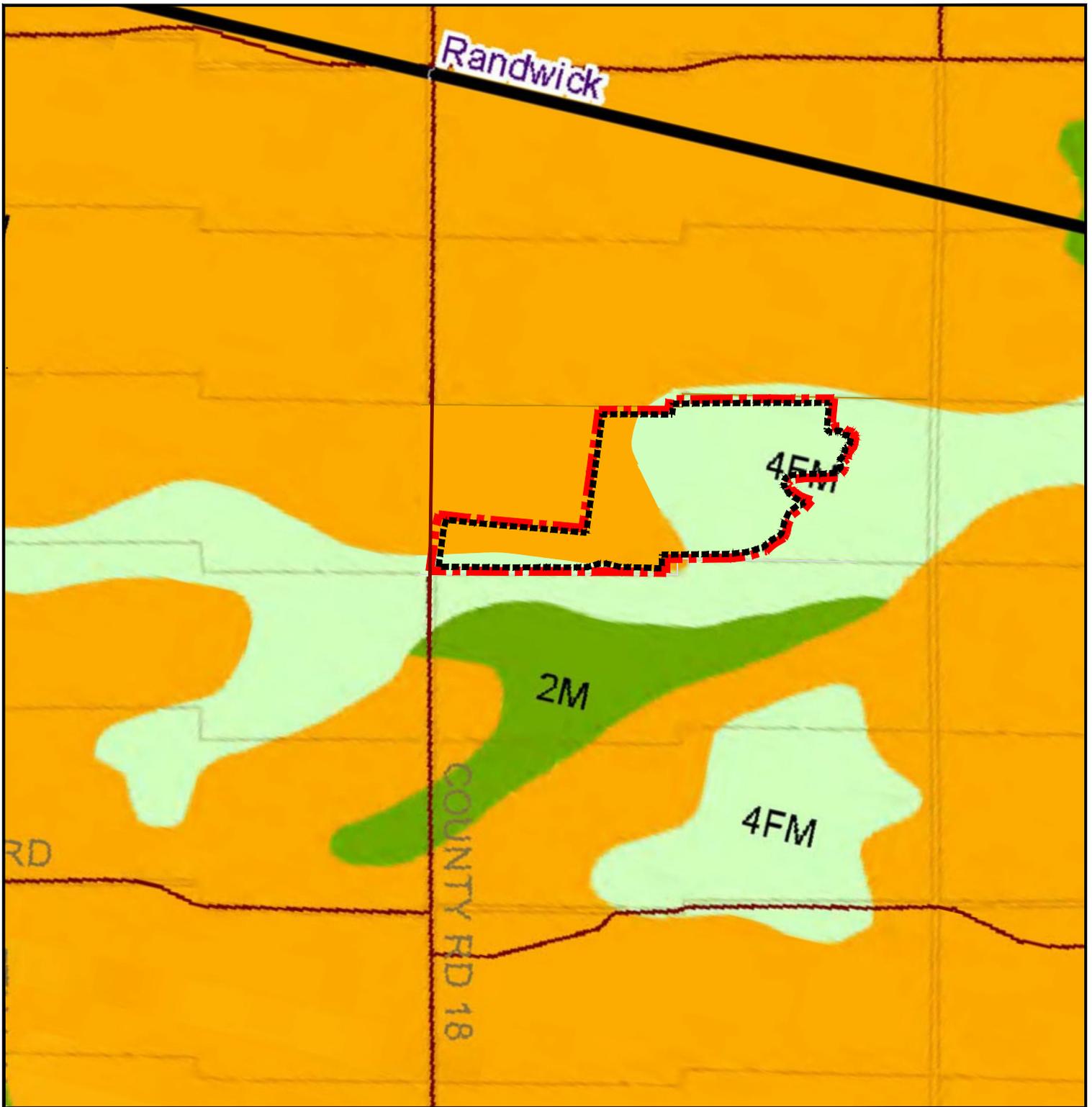
With regards to approval of the amendment, these remaining concerns can be resolved to this ministry's satisfaction through the ARA pit licence review process. Should you have any questions, please do not hesitate to contact me at Barbara.slattery@ontario.ca or at (905) 521-7864. Please note that the applicant has asked for a copy of these comments.

Sincerely,



Barbara Slattery
EA/Planning Coordinator

TAB 2



Source: The Ontario Ministry of Agriculture, Food & Rural Affairs, 2009

Figure 1
**CANADA LAND INVENTORY
 SOIL CLASSIFICATION FOR
 AGRICULTURE**

LEGEND

-  Proposed Licence Area
-  Proposed Extraction Area

Canada Land Inventory Rating:

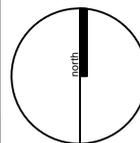
-  Class 2
-  Class 4
-  Class 6

Arbour Farms Pit
 Lot 23, Concession VII,
 Township of Mulmur,
 County of Dufferin

DATE: January, 2013

N.T.S.

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MHBC PLANNING
 URBAN DESIGN
 & LANDSCAPE
 ARCHITECTURE
 113 COLLIER STREET, BARRIE, ON, L4M 1H2
 P: 705 728 0045 F: 705 728 2010 | WWW.MHBCPLAN.COM