

## Proposed Milton Quarry East Extension JART COMMENT SUMMARY TABLE – Agricultural Impact

Please accept the following as feedback from the Milton Quarry Joint Agency Review Team (JART). Fully addressing each comment below will help expedite the potential for resolutions of the consolidated JART objections and individual agency objections. **Additional, new comments may be provided once a response has been prepared to the comments raised below and additional information provided.**

	JART Comments (November 2022)	Reference	Source of Comment	Applicant Response	JART Response (April 2023)
<b>Report/Date: Agricultural Impact Assessment November 4, 2021</b>					
<b>Author: DBH Soil Services Inc.,</b>					
1.	<p>The previous three AgPlan reports conclude that the DBH Agricultural Impact Assessment (AIA) is comprehensive but does not contain the information requested by the Niagara Escarpment Commission (NEC). The DBH AIA is also limited because it:</p> <p>a) Provides soils and capability information from the Halton published soil survey which is presented at a regional scale of 1:63,360, which is an inappropriate scale, given the relatively small size of the proposed excavation area. The DBH AIA contains no site-specific detailed agricultural soil profile descriptions and soil mapping. Why has DBH not completed a site-specific soil survey of the site given the limitations of minimum mappable area of the 1:63,360 scale published map?</p> <p>b) Does not address information in reports by other disciplines which provide descriptions of soil layers which include reference to colour, soil texture, and other characteristics; which are different from the series called Dumfries loam. The Dumfries series is the predominant soil on the site (90.5% of the site as outlined by DBH Soil Services) as mapped in the soil report by Gillespie et al. (1971). Soil descriptions given by other disciplines suggest that soils other than Dumfries may be present on the site (given that some differences in soil texture nomenclature are due to use of different soil particle size classification as well as soil textural classification from discipline to discipline).</p> <p>The second soil mapped on the site is a shallow to bedrock soil called Farmington. The area of Farmington soil series on the site has been used for agricultural production. Therefore, site specific soil mapping might have revealed that the area mapped as Farmington has a higher soil capability than class 7. Why has DBH not completed a site-specific soil survey of the site given the findings of other disciplines, and agricultural land use?</p>	AIA	AgPlan Limited	<p>a) It is noted in the AIA that the OMAFRA soils data was provided in digital format, downloaded from the Land Information Ontario warehouse. It is also noted that the original paper soils mapping was provided at a scale of 1:63,360, but the digital soils data is considered accurate to a scale of 1:50,000, based on updates to the digital data sets in the 1990's.</p> <p>A review of the OMAFRA <i>Draft Agricultural Impact Assessment (AIA) Guidance Document (March 2018)</i> was completed prior to initiating the AIA. It is noted on page 24 of the OMAFRA document that if the land is to be returned to an agricultural condition that baseline soils data should be collected, including an onsite soil survey. In this instance, the Study Area is not designated as Prime Agriculture, therefore is not required to be returned to an agricultural after use, and the proposed rehabilitation plan will result in the creation of 15.9 hectares of lake, wetlands, islands, and forested areas. There will be no rehabilitation to an agricultural after use, therefore, a soil survey was not warranted or required.</p>	<p>1a) Comment addressed.</p> <p>All of the responses provided by DBH Soil Services Inc. address the original comments provided by AgPlan Limited and there is no need for additional response by DBH Soil Services Inc. on behalf of the applicant. Where there are differences in interpretation of information, planning policy and/or guidelines, between AgPlan Limited the DBH Soil Services Inc., interpretation is included within this JART response without expectation of reply or of additional information. This expectation is made because additional detail will not change the conclusion that the agricultural impact of the proposed site excavation area will be relatively low due to the factors of:</p> <ul style="list-style-type: none"> <li>separation distance from surrounding areas in agricultural use,</li> <li>poor access to the site making use of large farm machinery equipment more difficult, and,</li> <li>the relatively small area available for agricultural use in the context of the aforementioned separation distance and poor access.</li> </ul> <p>There are two principal components that govern the original agricultural JART comments of November 2022. The first component is that an AIA describes what is being affected and the second component is the relative significance of that agriculture which is being affected. Describing what is being affected by the proposed quarry is partially determined by the scale of the information provided and/or available. Hence, the question about scale related to information on soils and soil capability. In speaking with OMAFRA staff, (Mr. Daniel Saurette), the only way that the published paper soil map for Halton could be considered accurate to 1:50,000 would be to complete additional soil observations and/or sampling. He was not aware of any additional soil sampling taken and applied in producing the digital soils information for Halton. Because the</p>

<p>c) Has the study area of only 1 km. Therefore mapping, such as agricultural land use, cannot show how far away, in all directions, active agricultural use is from the proposed site. Why has the relative distance of the site from other agricultural uses not measured and discussed by DBH?</p> <p>d) Does not discuss cumulative effects after observing the differences in the amount of different soil series and agricultural land present currently, in the 1971 soil mapping by Gillespie et al., and in the 1954 aerial photography.</p>			<p>b) It is noted that other disciplines have provided comment on soil layers. It should be noted that other disciplines do not assess soils</p>	<p>soil complex digital data set contain several different scales, Mr. Surette hypothesized that the 1:50,000 scale indicated for all of the soil complex mapping was probably a matter of choosing a single scale given that some information that is part of the digital soil database is at a more detailed scale (for example, Niagara Region). Based on the <i>Soil Survey Manual - Chapter Two Soil Systematics United States Department of Agriculture</i>, the minimum mappable area for a scale of 1:63,360 (the scale at which Halton soils are mapped) is 16.2 ha. Therefore, there are likely to be some differences in the soils found on the proposed aggregate mining site relative to the soils mapped in the published Halton soil map. The lack of site-specific detailed soil survey means that there may be better and/or poorer soil capability soils than that indicated by the Halton published soil map. However, the DBH AIA recognizes that <i>Prime Agricultural Lands</i> (soil capability classes 1 through 3) will be lost for agricultural production. Regardless, as described in the <i>Canadian System of Soil Classification</i> (Third Edition, 1998), the soil survey information is not designed or intended for use solely for agriculture. A detailed soil survey would provide a more precise indication of the characteristics of the soils available for use in rehabilitation generally, irrespective of the fact that the proposed quarry will not be rehabilitated to an agricultural after use. The detailed soil survey could be of assistance to other disciplines related to compliance with Ontario Regulation 406/19 On-Site And Excess Soil Management, for example.</p> <p>Given the wording on page 24 of OMAFRA's AIA guidelines, this interpretation can be supported. However, a detailed soil survey could provide useful information to other disciplines as described previously.</p> <p>1b) Comment addressed. It is agreed that different disciplines assess soils differently. Regardless, given the lack of a detailed agricultural soil survey of the site, the next best information sources available at the site scale are those provided by other disciplines. The descriptions, laboratory analysis of samples and/or the photography provided by those disciplines support the view that soils other than the Dumfries soil series are likely present on the</p>
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	<p>e) Does not consider cumulative effects, including agriculture, due to changes to the Niagara Escarpment Plan resulting from aggregate operations in total over time at different scales such as provincial, regional, as well as local.</p> <p>f) Has been sampled (boreholes and trenching) extensively by various professional disciplines over time and may therefore have cumulative effects due to soil disturbance. Why have the kinds of cumulative effects, listed in the aforementioned (numbers 4, 5, and 6), not been discussed in the DBH AIA?</p>		<p>for the purposes of agricultural capability, and often make use of soil assessments that are significantly different from the requirements of a detailed soil survey. OMAFRA has specific guidelines for detailed soil survey.</p> <p>DBH Soil Services Inc. did not complete an onsite soil survey as per the comments in a) above (not required as the site is not in a Prime Agriculture Area, and the site will not be returned to an agricultural after use).</p> <p>c) It is noted in the AIA that the Study Area is defined as the proposed license area. The Secondary Study Area was defined as a 1 km buffer around the Study Area. A review of the OMAFRA <i>Draft Agricultural Impact Assessment (AIA) Guidance Document (March 2018)</i> was completed prior to initiating the AIA. It is noted on page 18 of the OMAFRA document that a recommended 1 km radius from the proposed license area be a starting point for the investigation. Therefore, in an effort to meet the requirements of the OMAFRA draft AIA document, a 1 km Secondary Study Area was adopted. A review of Google Earth imagery has indicated that the nearest agricultural fields are located approximately 1.8 km to the east, 1.2 km to the northeast, and 1.6 km to the west.</p> <p>d) DBH has consulted with MHBC regarding this comment. From a policy perspective, MHBC advises that the development criteria for mineral aggregate resources (section 2.9) speak to demonstrating “in prime agricultural areas how to avoid, minimize and mitigate impacts on agricultural lands and operations (Section 2.9.3)” and also recognizes that in prime agricultural areas, rehabilitation to agricultural may not be possible or feasible (Section 2.9.11). The only policy in the NEP that relates to single, multiple or successive development, is general development criteria 2.2.1 which states, “The <i>Escarpment environment</i> shall be protected, restored and where possible enhanced for the long term having regard to single, multiple or successive development that have occurred or are likely to</p>	<p>site. The photography also indicates that the Ah or topsoil layer varies in depth and that a Bt horizon (layer of higher clay content below the A horizon) is not always present, varies in thickness and/or depth from the soil surface. The significance of these differences may affect site rehabilitation: when addressed by disciplines other than agriculture, and where soils are required as documented in the rehabilitation plan.</p> <p>1c) Comment addressed. It is agreed that the site is distant/isolated from other agricultural fields.</p> <p>1d) Comment addressed. Policy does make reference to <i>Prime Agricultural Areas</i> but is silent with respect to <i>Prime Agricultural Lands</i> found in an area which is not prime. However, the wording of the Niagara Escarpment Plan (NEP) does make reference to the “cultural environment”, which includes agriculture, as part of the Escarpment environment which is to be protected, restored and where possible, enhanced. Given the proposed mining below the water table, agricultural restoration and enhancement is not possible. Therefore, protection, restoration, and where possible, enhancement, may only occur in a non-agricultural context provided by disciplines other than agriculture.</p>
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			<p>occur.” Escarpment environment is defined as, “The physical and natural heritage features, cultural heritage resources, and scenic resources associated with the Escarpment landscape.” This definition does not specifically include agricultural resources and there is more specific direction on how to address both mineral aggregate resources and agricultural resources in Section 2.9 of the NEP.</p> <p>From potential agricultural impacts, this site is ideal to consider for a future mineral aggregate operation. The existing quarry area (Licence #608621 and 5481) and the proposed east extension are not considered a prime agricultural area, any area previously in agricultural use has been permitted to convert from an agricultural use to mineral aggregate operation in accordance with government policy, and overall the loss of agricultural land which is outside of a prime agricultural area is negligible. From an agricultural perspective, extraction of the east extension would have far less agricultural impact than extracting an alternative site in a prime agricultural area.</p> <p>e) Please see response to 1d.</p> <p>f) It is noted that there has been sampling (boreholes and trenching) completed over time and that there may be some soil disturbance as a result. Generally, borehole sampling is confined to a small area that would be far below a minimal mapping size.</p> <p>As mentioned above (in 1a.), a soil survey was not required as this proposed expansion will not result in an agricultural after use. Therefore, any potential cumulative effects of soil disturbance related to sampling will not impact a rehabilitation to an agricultural condition.</p>	<p>1e) Comment addressed. The site is not ideal for a future mineral aggregate operation because of the loss of <i>Prime Agricultural Land</i>. But, because of its size, surrounding non-agricultural use, distance from other agricultural fields, and planning designation, when being compared to <i>Prime Agricultural Lands</i> found within a <i>Prime Agricultural Area</i>, is an acceptable location, from an agricultural viewpoint, for the proposed aggregate operation.</p> <p>f) Comment addressed. Without the site-specific soil survey, we don't know how much disturbance has occurred. Therefore, we don't know the condition of the soils to be saved for rehabilitation to a non-agricultural after use.</p> <p>NEC does not agree that agricultural resources/lands/areas are not considered part of the “escarpment environment” as defined by the NEP. Agricultural lands are part of the escarpment environment and may also be considered a cultural heritage resource and contribute to the scenic character and open landscape character of the Escarpment. Notwithstanding this, staff is satisfied that the policy test respecting cumulative impacts can be satisfied, relative to agriculture, based on other rationale, including that the lands are not designated prime agricultural areas and acknowledgement of impact in 2C below.</p>
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<p>2. Field observations on the site were visual as I walked in a northeasterly direction across the site. I did not dig soil pits at any locations. Based on the information and soil capability classification supplied in the published literature and in the DBH AIA, I expected to find limitations to plant growth due to stoniness and other limitations such as topography.</p> <p>Observations include:</p> <p>a) No stone piles which were continuous and linear along field boundaries were seen. Therefore, I could see no evidence of the continuing limitation associated with stoniness. Some surface stone was observed but observation was limited because much of the soil surface was obscured by existing vegetation. Given these observations, how did DBH determine surface soil stoniness for the proposed site relative to the published soil map by Gillespie et al. (1971)?</p> <p>b) Parts of the site had slopes significant enough to reduce soil capability ratings. No measurements of slope were taken. However, there is topographic mapping that can be used to produce a slope map using Geographic Information System (GIS) software. Why did DBH not produce a slope map based on this available topographic/contour information and interpret the slope map for soil capability?</p> <p>c) The site is effectively the only remaining agricultural area that has not been excavated in an area surrounded by tree cover or non-agricultural land use. The extent of agricultural use, as identified in the 1954 aerial photograph provided in a report by Golder, was previously more extensive in the area adjacent to, or around, the proposed excavation site. Why does the DBH AIA not describe how much of lands no longer in agricultural production are due to aggregate extraction?</p> <p>d) The site is accessed by going through existing excavated areas. Therefore, agricultural use of the site, using farm machinery, is restricted. Why was this restriction, and the presence or absence of methods available to eliminate that restriction, not discussed in detail within the DBH AIA?</p>	<p>Field Observations</p>	<p>AgPlan Limited</p>	<p>a) Staff from DBH Soil Services Inc. attended the site on October 25, 2021. At the time of the onsite reconnaissance survey, the fields had been plowed (for archeology assessment), and the relative size and quantity of surface stone could be assessed. It was noted during this review of onsite conditions that there were coarse fragments in the gravelly (<math>\leq 8</math> cm), cobbly (8 – 25 cm), and bouldery (<math>&gt;25</math> cm) size ranges. These definitions are presented in the <i>Field Manual for Describing Soils in Ontario (1993)</i>. It was noted that there was less than 1 percent surface cover.</p> <p>The soils mapping provided in the DBH AIA was from the OMAFRA digital soils data (including soil series and Canada Land Inventory (CLI) ratings).</p> <p>As indicated above, DBH Soil Services Inc. did not complete an onsite soil survey as per the comments in a) above (not required as the site is not Prime Agriculture and the site will not be returned to an agricultural after use).</p> <p>b) As indicated above, DBH Soil Services Inc. did not complete an onsite soil survey (including slope assessment) as per the comments in a) above (not required as the site is not designated as a prime agriculture and the site will not be returned to an agricultural after use). Therefore a detailed assessment of soil capability (including slope assessment) was not necessary.</p> <p>c) The DBH AIA has provided comment on the present-day land use, which includes comment on the extent of the lands in quarry operation. It is noted that the amount of lands used for agricultural production in the Secondary Study Area has been reduced by the life span of the existing quarry, and this loss of agricultural land use may be considered a cumulative effect.</p> <p>d) The site may be accessed either through the quarry operations area, or through an existing unopened road allowance (fenced at the end of Nassagaweya Esquesing Town line). The DBH AIA (page 55, second paragraph) states: <i>the</i></p>	<p>2a) Comment addressed. Thank you for this information related to stoniness.</p> <p>2b) Comment addressed.</p> <p>2c) It is agreed that the loss of agricultural land due to aggregate operations on the lands surrounding the proposed site has resulted in a cumulative loss of agricultural lands. There is disagreement with the statement that previous and proposed current removal of agricultural lands “may” be a cumulative effect. Given the lack of specific definition for the meaning of cumulative effects in the context of agriculture, and/or generally; and that cumulative effects include biophysical, social, and economic components; a lack of agreement is to be expected.</p> <p>2c) For clarity, confirm the insertion of the word “by” as indicated in the response statement.</p> <p>2d) Comment addressed Thank you for directing us to this information which confirms that the site agricultural lands</p>
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	<p>e) Agricultural operations are relatively distant from the site and confirmation by measurement of mapping available from the Ontario Ministry of Agriculture Food and Rural Affairs (OMAFRA) indicate that farm tax rated land ranges approximately from, 920 m to the northeast, to 1600 m to the southwest, from the site. Therefore, why did the DBH AIA not include detailed discussion of the relative isolation of the site for agricultural use relative to the closest agricultural land uses?</p> <p>f) Roadside tree cover prevented or restricted observations of current activity on agricultural land in the study area and in the area beyond that study area. Could DBH have found a way to reduce this restriction on observations, and subsequently, have discussed current agricultural activity more specifically and accurately within its AIA?</p>		<p><i>Study Area is bordered on three sides by existing quarry operations, and on the fourth side by woodlands and the Niagara Escarpment. There is an unopened road allowance along the southwest side of the Study Area, between the existing quarry operations and the Study Area. As a result, there is no open road access to the Study Area without crossing access to the existing quarry operations.</i></p> <p>A farm tractor and a variety of implements were able to access the site to complete plowing activities for the archeology assessment, and to seed a cover crop on completion of the archeological assessment.</p> <p>e) The DBH AIA provided comment on the existing land use within both the Study Area and the Secondary Study Area. The assessment of existing land use in the Secondary Study Area provided a clear indication of the lack of agricultural use within 1 km Secondary Study Area.</p> <p>f) The DBH AIA states on page 29: <i>It should be noted that the roadside survey is based on a line-of-sight assessment process. Therefore, dense brush, woodlands, tall crops, and topography can prevent an accurate assessment of some fields and/or buildings. In those instances, measures are taken to try to identify the crop and/or buildings through conversations with landowners (if applicable, or possible in this Covid-19 environment) and/or review of aerial photography and online imagery.</i></p> <p><i>In some instances, no information is available. In those instances, the field polygon will be identified as 'unknown crop' or 'unknown building use or type'.</i></p> <p>Therefore, a variety of methods were used to reduce the restriction and to provide discussion on current land uses.</p> <p>It is also noted in the response for 1e) that there is limited agricultural land use within 1 km of the Study Area.</p>	<p>need to be accessed by crossing existing quarry operations.</p> <p>2e) Comment addressed. DBH provided additional information beyond the 1 km study area boundary to confirm the relative isolation of the proposed aggregate operation site from agricultural fields (described in this response previously).</p> <p>2f) Comment addressed.</p>
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3.	<p>Part 3.4 Niagara Escarpment Plan of the AIA submitted (Nov 4, 2021) erroneously cites NEP policy Part 1.5.3.17 and .18 Escarpment Rural Area as being applicable to the current application. Part 1.5.3.17 and .18 are in consideration of a mineral resource extraction area operation producing 20,000 tonnes or less annually. Such operations are identified as Permitted Uses, subject to the applicable Part 2 Development Criteria, and an Amendment to the NEP is not required (and the sites once approved, do not receive the MREA designation).</p> <p>The current Dufferin application under review is for a below-the-water table quarry in excess of 20,000 tonnes annually, and as such is only considered in the Escarpment Rural Area through application for amendment to the NEP.</p> <p>As noted by the Peer Review comments above, NEP policy considerations have not been fully addressed in the AIA, as per the requested TOR (i.e., NEP Part 2.8). NEC staff concurs with the Peer Review comments above, including respecting the noted deficiencies (i.e., does not consider cumulative impacts), in consideration of the comments submitted on the TOR.</p>	AIA	NEC	<p>It is noted that the proposed Milton Quarry Expansion will result in more than 20,000 tonnes produced annually and that the AIA has referenced the incorrect section of the NEP.</p> <p>The proposed Milton Quarry Expansion will require an amendment to the Niagara Escarpment Plan to designate the Study Area to Mineral Resource Extraction Area.</p> <p>The appropriate NEP policy to cite should include sections 1.2.2.</p> <p>With respect to cumulative impacts, please see the response to 1d) above.</p>	NEC satisfied with the noted correction in the applicable NEP policy, and expects that all relevant policies are assessed through the Planning Justification accordingly.
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