Proposed Burlington Quarry Expansion
JART COMMENT SUMMARY TABLE – Agriculture

Please accept the following as feedback from the Burlington 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 (February 2021)	Reference	Source of Comment	Applicant Response (June 2022)	JART Response (June 2023)
1.	The golf course lands in the West Extension are within a prime agricultural area, as mapped by both Halton Region and the Province. The Implementation Procedures for the Agricultural System in Ontario's Greater Golden Horseshoe outlines the process for refining the Provincially mapped prime agricultural area. Specifically, section 3.3.1 provides that: "…within the GGH, any official plan amendment to designate, amend or revoke a prime agricultural area must come to the minister of Municipal Affairs and Housing for approval (other than for the purposes of including all of the applicable land within a settlement area). This means that refinements to the agricultural land base mapping must still come to the Province for approval even where they are proposed outside of an official plan review or municipal comprehensive review." Further, section 3.3.2.1 notes that: "During the municipal refinement process, refinements to prime agricultural areas mapped in OMAFRA's agricultural land base map are to be based on consistency with the Agricultural System mapping method, purpose and outcomes, and may be approved in the following circumstances: …Contiguous areas greater than 250 ha of existing, permitted non-agricultural and non-residential uses19 that are unlikely to be rehabilitated to agriculture and are not characteristic of prime agricultural areas. Non-agricultural uses may include commercial, institutional, cemeteries, golf courses, industrial parks, mineral aggregate resources areas below the water table, built-up areas along highways, developed shoreline areas (as per A Place to Grow policy 4.2.4.5), infrastructure (named in A Place to Grow Schedules 5 and 6) that has been developed, large impervious surfaces, and designated employment areas. …Municipalities and the Province will work together to avoid refinements to prime agricultural areas in the agricultural land base map in the following circumstances: …To exclude small pockets of land in non-agricultural uses (e.g., severed lots, small commercial or industrial uses)." In the absence of a refinement to the prime agricultural area approved by the Minister of Municipal Affairs and Housing, the City of Burlington views the West Extension as prime agricultural lands regardless of the	General	City of Burlington	As outlined in planning policy there is a difference between "prime agricultural areas" and "prime agricultural lands". Within prime agricultural areas there can be areas that do not contain prime agricultural lands. While the South Quarry Extension and West Quarry Extension are mapped as a Prime Agricultural Area, the South Quarry Extension contains prime agricultural land and the West Quarry Extension does not. This was confirmed based on the soil addendum submitted to JART. Based on a review of this report OMAFRA agrees that the West Quarry Extension does not contain prime agricultural land. As noted in OMAFRA letter dated June 29, 2021 (**Tab 1**), "*OMAFRA staff have had an opportunity to review the Soil Survey Addendum and the additional information in the response. Based on the soil information and the description of the site provided, it seems reasonable to conclude that the current agricultural capability of the soils on the site are likely not representative of prime agricultural land (CLI 1-3).*" As per earlier discussions with JART Map 1E and Map 1G Region of Halton Official Plan map the property as a Prime Agricultural Area. The Niagara Escarpment Plan and City of Burlington Official Plan do not include "prime agricultural area" mapping. To avoid removing land from the Prime Agricultural Area mapping Nelson agrees to amend the proposed Region of Halton Official Plan Amendment to maintain the "Prime Agricultural Area" mapping on Map 1E and 1G of the Region of Halton Official Plan. The proposed Region of Halton Official Plan Amendment is amended as follows: • Item 4. That Region of Halton Official Plan Map 1E – Agricultural System and Settlement Areas, on land legally described as Part of Lots 1 and 2, Concession 2 and Part of Lots 17 and 18, Concession 2 NDS (former geographic Township of Nelson), City of Burlington is hereby amended by adding an overlay of "Mineral Resource Extraction Area", as shown in Schedule "D" attached hereto and forming Part of this Amendment. • Item 6. That Region of Halton Official Plan Map 1G – Key Features within the Greenbelt and Regional Natural Heritage Systems, on lands legally described as Part of Lots 1 and 2, Concession 2 and Part of Lots 17 and 18, Concession 2 NDS (former geographic Township of Nelson), City of Burlington,	Not resolved.

	use that currently operates on them.			Region of Halton is hereby amended by adding an overlay of "Mineral Resource Extraction Area" on areas designated "Prime Agricultural Areas in the Natural Heritage System" and change the designation of land from "Key Features" to "Mineral Resource Extraction Area" as shown in Schedule "F" attached hereto and forming Part of this Amendment. See **Tab 2** for a copy of the proposed revisions to Map 1E and Map 1G.	
2	The AIA has focused almost exclusively on soil-based agricultural production, or the 'Land Evaluation" component of a LEAR and has not sufficiently addressed the 'Area Review' component, or consideration of the agricultural system as a whole. The study should include indoor horticulture, livestock, equine and other non-soil based types of agriculture. The study should speak to all types, sizes and intensities of agricultural operations that may be viable on the subject lands and surrounding lands, both now and in the future, given the constantly changing and evolving nature of the sector. Similarly, the study should also consider agriculture-related uses and on-farm diversified uses which benefit from close proximity to agriculture and/or cannot located in urban areas due to land use compatibility issues. Recent changes to Provincial policy have opened up a variety of options with respect to permitted uses- the study should speak to this when assessing the long-term productive capacity and overall viability of these lands. The AIA should also provide a definition for the term 'disturbed' to inform a more fulsome evaluation of the rehabilitation potential for the Western Extension lands, in relation to both soil and non-soil based agricultural uses, agriculture-related uses and on-farm diversified uses.	General	City of Burlington	As it relates to the subject site the AIA does focus on the quality of the soils on-site since mineral aggregate operations are a permitted land use within prime agricultural areas and the planning policy varies based on the quality of the soils located on-site. As it relates to off-site impacts the AIA considers and documents all existing agricultural operations ('soil-based' and non 'soil-based') and concludes that the proposed extension will minimize impacts on surrounding agricultural operations. As it relates to the West Quarry Extension, additional soil surveys were completed and it was concluded that the West Quarry Extension does not contain prime agricultural land. To assist JART with its review of the application, the following additional information exchanged between OMAFRA and MHBC has been included: • OMARFA comments dated December 14, 2020 included as **Tab 3**; • MHBC response dated June 1, 2021 included as **Tab 4**; • OMAFRA comments dated June 29, 2021 included as **Tab 1**; • MHBC response August 25, 2021 included as **Tab 5**; • OMAFRA and MHBC email exchange January 20, 2022 to February 2, 2022 included as **Tab 6**; OMAFRA sign-off letter dated February 7, 2022 included as **Tab 7**.	Not resolved.
3.	NEC Staff do not agree with the exclusion of the western expansion lands from the soil assessment. While it is understood the proposal seeks to excavate the majority of the Class 1 & 2 lands present on the site, conclusions of the report with regards to rehabilitation must be substantiated through field investigation. At this time NEC Staff view the western expansion lands as prime agricultural lands regardless of the use that currently operates on them.	General	Niagara Escarpment Commission	A soil assessment for the West Extension was submitted to JART and confirmed the West Extension does not contain prime agricultural lands. As noted in OMAFRA letter dated June 29, 2021 (attached), "*OMAFRA staff have had an opportunity to review the Soil Survey Addendum and the additional information in the response. Based on the soil information and the description of the site provided, it seems reasonable to conclude that the current agricultural capability of the soils on the site are likely not representative of prime agricultural land (CLI 1-3).*"	Acknowledged.
4	The AIA states that fragmentation of prime agricultural lands is minimized as the project is being proposed as an 'expansion' to an existing extraction operation. This argument has merit for the western expansion area, however it is noted that the southern expansion is not contiguous with the existing site and, in NEC Staffs opinion, introduces a fragmenting effect on surrounding agricultural lands. Summary of net impacts table provides 'below water extraction' as justification to avoid fragmentation. This is not a recognized mitigation	General	Niagara Escarpment Commission	Mineral Resource Extraction is permitted on prime agricultural land within prime agricultural areas. The policies of the Niagara Escarpment Plan do not require mitigation to avoid fragmentation. Although not applicable the lands surrounding the South Quarry Extension, include No. 2 Side road to the north and natural features to the east, south and west. Also see MHBC response to OMAFRA dated June 1, 2021 included in **Tab 4**.	Comment acknowledged

	measure nor does it fundamentally address the impact of fragmentation				
5.	The AIA quotes Part 2.8.2 of the NEP which requires development shall comply with minimum distance separation formula; however there is no commentary relative to the proposed rehabilitation plan or the potential for the introduction of new MDS constraints. • Summary of net impacts table provides that 'MDS I and II setbacks are not required for mineral aggregate extraction uses. Are they required for any of the uses proposed in through the rehabilitation plan?	General	Niagara Escarpment Commission	The proposed rehabilitation plan only creates a landform. Any after uses require a future Niagara Escarpment Plan amendment and if applicable consideration of MDS will be considered at that time.	Comment acknowledged.
6.	It is noted that the proposal suggests below water extraction and that the policies of the NEP permits a site with below-water extraction to avoid rehabilitation back to prime agricultural soil conditions. • Part 2.9.11 (i) requires that any remaining areas not subject to such extraction should be prioritized for and maximized as a first priority. NEC Staff notes that the existing Nelson site is subject to this application and that it could contain areas suitable for this type of rehabilitation. Please elaborate as to why this was not explored given the specific wording of Part 2.9.11 (i)? • Currently, there is no consideration of any type of agricultural after-use despite sections of the report identifying that there is a whole suite of ARU and OFDU uses that could be appropriate and that do not require rehabilitation of soils. Were these uses explored as a way to potentially achieve Part 2.9.11 (i)?	General	Niagara Escarpment Commission	As per discussions with JART and OMAFRA, it was determined that the West Quarry Extension and South Quarry Extension lands were not feasible for agricultural rehabilitation unless the sites were filled back to grade. Furthermore, the soils from the West Quarry Extension are not suitable for agricultural rehabilitation. In accordance with the policy requirements other areas were considered for agricultural rehabilitation. Based on these discussions, the proposed rehabilitation plan for the Burlington Quarry was updated to propose an area of agricultural rehabilitation to utilize the soils from the proposed South Quarry Extension. See updated ARA Site Plans for the existing Burlington Quarry and Burlington Quarry Extension.	Comment acknowledged.
7.	Better integration with the direction of the rehabilitation and after-use plan needs to be incorporated into the AIA. Much of the proposed rehabilitation, specifically on the western expansion lands, may result in the lands achieving the criteria for designation as Escarpment Protection Area if the work is successful. Recreation uses are not permitted within this designation but agriculture/ARU/OFDU may be.	General	Niagara Escarpment Commission	Any future after uses will require an amendment to the Niagara Escarpment Plan and only uses permitted within the applicable designation will be permitted. Nelson has proposed to convey the lands to public ownership to form part of the Niagara Escarpment Parks and Open Spaces. Within the Escarpment Protection Area, the Niagara Escarpment Plan permits "uses permitted in the Parks and Open Space System Master / Management Plans that are not in conflict with the Niagara Escarpment Plan." These uses can include recreational uses.	Inclusion of the project area within NEPOSS is speculative, and recreational use is predicated on a supportive management plan.
8.	Summary of net impacts table identifies that the subject lands do not contain any farm infrastructure and makes reference to a storage barn on the western expansion lands. Is there no infrastructure on the southern lands (barn, tile drainage, etc.)?	General	Niagara Escarpment Commission	As noted in the AIA there is no farm infrastructure located within the South Quarry Extension lands.	The absence of built farm infrastructure is acknowledged, though other infrastructure such as farm lanes are present.
9.	Summary of net impacts table could explore the implementation of pollinator gardens/species as broad mitigation.	General	Niagara Escarpment Commission	These mitigation measures were not proposed necessary to mitigate impacts to agricultural resources in accordance with the policy requirements of the Niagara Escarpment Plan.	This response is lacking clarity.

10.	Changes in the type and sensitivity of agricultural uses in the primary and secondary study areas associated with the proposed South and West Extensions will likely be affected by climate change/warming. Agriculture contributes to climate change as does the production and use of aggregate directly or as part of concrete and asphalt. Climate change will affect agriculture on a scale broader than the primary and secondary study areas. Therefore how: i. is the size of the secondary study area sufficient to document off-site agricultural impacts; ii. has the MHBC AIA considered climate change when evaluating agricultural impacts; and, iii. has the MHBC AIA evaluated cumulative agricultural impacts associated with aggregate mining in the context of various scales from Burlington to Halton Region to the Niagara Escarpment as well as to climate change generally?	General	AgPlan Limited	The AIA was completed using the Province's Draft Agricultural Impact Assessment Guidance Document, and OMAFRA has agreed and supported this approach as means to implement the Provincial Plan requirements to complete an AIA. Section 3 of the document outlines the recommended Study Area sizes for new or expanding aggregate operations, 1 km being the recommended size for the Secondary Study area. Additionally, the Guidance Document does not outline or discuss climate change in its recommended Assessment of Impacts section. The AIA was prepared in accordance with this Provincial Guideline document, per the request of OMAFRA.	There is reference in policy to a requirement to consider cumulative impacts. Those impacts need to be defined with respect to kind/characteristics, time, distance and/or area (scale) relative to different kinds of impacts on agriculture. Nothing in my review, presents quantitative cumulative agricultural impact information at different scales related to the lands in the Niagara Escarpment Plan (NEP) area through to the neighbourhood. Therefore, the matter of cumulative impact has not been appropriately discussed by the proponent or by OMAFRA.
11.	Given that the current application South Extension area is similar to the previous application (2004 with modifications to the application at later times), in addition to observations made during the time the current quarry has been in operation, there are previous observations, letters and/or reports available that will assist, in conjunction with other information sources, to ascertain: i. changes, if any, in the type and sensitivity of agricultural activities over time; ii. impacts to agriculture identified by complaint and/or applied mitigation; and, iii. the distance and/or off-site area affected as related to complaint and/or applied mitigation. These previous observations, letters and/or reports need to form part of the impact analysis in the MHBC AIA.	General	AgPlan Limited	The AIA was completed in accordance with the Province's Draft Guidelines. The Draft Guidelines provide a much more fulsome and holistic approach to the Impact assessment than what was required in previous applications, including a statistical representation of agricultural trends in the area using Census of Agriculture data to determine changes in type of agricultural activities over time. The evaluation of this AIA should be based on the most current technical report, which are required by current Provincial and Municipal policy. Previous applications are outside of the scope of this AIA review, as the current AIA follows the guidelines provided by the Province, which includes guidance on what is needed to be reviewed for the report.	Comment noted.
12.	The change in type and sensitivity of agricultural activities will also potentially be affected by the rate and density of urbanization within Halton Region. However, based on the Niagara Escarpment Plan (NEP) and the Greenbelt Plan (GBP) as well as other planning documents, the proposed Nelson South and West Extensions are in an agricultural area (Escarpment Rural Area, Protected Countryside, Prime Agricultural Area) which is planned to remain permanently agricultural within the NEP/GBP. Therefore, agricultural information analyses need to be based on the scale of the NEP/GBP to place the proposed aggregate expansion in that context as well as in the context of Halton and Burlington.	General	AgPlan Limited	The subject lands are designated Escarpment Rural Area in the NEP. Mineral Aggregate operations are a permitted use within the Escarpment Rural Area (Section 1.5.3). As such, the lands are not "planned to remain permanently agricultural" as mineral aggregate is permitted. The AIA satisfies relevant policies within the NEP in section 4.2 of the AIA. The purpose of the NEP is to "provide for the maintenance of the Niagara Escarpment and land in its vicinity substantially as a continuous natural environment, and to ensure only such development occurs as is compatible with that natural environment." Accordingly, policies within the NEP are written with the scale and context of the Niagara Escarpment in mind. Therefore, the AIA addresses the scale of the Niagara Escarpment through its satisfaction of the NEP's policies.	It has been interpreted that agricultural policy in Ontario has, as its base, the need to preserve the better agricultural land by distinguishing what is better and poorer and subsequently saving the better. The Nelson application will remove better agricultural lands from production in a Prime Agricultural Area. Nothing in the information presented on behalf of Nelson that I have reviewed contradicts that conclusion. Therefore, there will be a loss of good agricultural land if the Nelson application is approved and alternative locations for the proposed pit have not been considered at the scales described in the JART Comments column opposite.

13.	The MHBC AIA neglects to address some matters described in policy and/or guidelines. For example, Halton Region's AIA Guidelines include reference to agricultural viability and farm management. The MHBC AIA needs to address these agricultural characteristics in their assessment.	General	AgPlan Limited	The AIA uses the Provincial Draft Agricultural Impact Assessment Guidelines to determine what should be included in the AIA. These Guidelines were developed more recently (2018) than the Region's Guidelines (2014). As such, there is no section dedicated to agricultural viability or farm management. However, throughout the report, comments are made on the viability of the lands/operation through an analysis of characteristics such as fragmentation, surrounding land uses, investment in agricultural infrastructure, size of the lands, etc. The report also includes information regarding the ownership of the lands (Nelson). It can therefore be concluded that the current agricultural operation on the lands is leased. A description of the site also indicates that there is no residence on site.	Comment noted.
14.	Reference has been made within the AIA to reports by other disciplines. However, there is a lack of integration of information from other disciplines. For example, the infiltration of water into the soil profile and subsequent (unsaturated flow of water within the agricultural soil profile which occurs during the time of crop growth) may change because of the pumping of water during the excavation of aggregate materials below the water table. The probability of change will require the integration of information from the disciplines of Hydrology, Hydrogeology, and Agrology (soil physics). Information needs to be integrated either within the AIA or within another report. If the information is described in another (different discipline) report, the other report should be quoted as well as referenced within the AIA.	General	AgPlan Limited	A Hydrogeology Report was completed and referenced in the assessment of impacts section. Their mitigation measures and conclusion of no negative impacts was used to inform the AIA's conclusion that there would be no anticipated negative impacts to surrounding agricultural uses.	Comment noted.
15.	Firstly, based on this peer review, the MHBC Agricultural Impact Assessment and supporting documents provided by DBH lack some information where that information would assist in evaluating whether the proposed change in use has relatively low agricultural impacts and is appropriate and reasonable. Secondly, the current AIA, and supporting documentation, in addition to information requested within this peer review, is needed to establish whether the MHBC AIA and DBH documents address impacts to agricultural characteristics described in the published literature, policy, and guidelines.	General	AgPlan Limited	The AIA was completed in accordance with the Province's Draft Guidelines. The Draft Guidelines provide a much more fulsome and holistic approach to the Impact assessment than what was required in previous applications, including a statistical representation of agricultural trends in the area using Census of Agriculture data to determine changes in type of agricultural activities over time. The evaluation of this AIA should be based on the most current technical report, which are required by current Provincial and Municipal policy. Previous applications are outside of the scope of this AIA review, as the current AIA follows the guidelines provided by the Province, which includes guidance on what is needed to be reviewed for the report.	Which meaning of the word "fulsome" is being used here. Comment noted
16.	In the introduction (page 1), the AIA refers to the West Extension as non- agricultural based on the current golf course use and in the AIA Response, the fact that the golf course is part of a prime agricultural area is recognized. In addition, the AIA Response states that the golf course lands have been substantially disturbed and therefore have no capability rating for the production of common field crops. The level of disturbance can only be ascertained by soil observation. Therefore, the AIA statement with respect to "substantially disturbed" has not been verified.	Page 1 Introduction	AgPlan Limited	A Soil Survey Addendum was completed and provided to OMAFRA, which provided soil information and a description of the site. The addendum concluded that the current agricultural capability of the soils on the site are likely not representative of prime agricultural land (CLI 1-3). OMAFRA's response dated June 29, 2021 confirms this conclusion. See **Tab 1**.	Comment noted

17.	On page 3 it is stated that the potential for impacts will vary and mitigation is dependent on the type and sensitivity of the agricultural activities identified in the primary and secondary study areas. A reasonable statement, but, given the length of time that the quarry "additions" will be in operation, the type and sensitivity of agricultural activities will potentially vary. How this change in type and sensitivity of agricultural activity will be analyzed and mitigated is not described in the MHBC AIA.	Page 3	AgPlan Limited	The AIA partially relies on the results of the technical studies (e.g. Noise, Hydrogeology, Traffic, etc.) submitted with the application to assess and mitigate against the potential impacts. The technical studies largely assumed 'worst-case' scenarios in their analysis, as a result, the anticipated impacts from these activities on agricultural uses has been considered in our assessment of impact under Section 5.0 of our report. As noted in our report, the most significant impact on the agriculture system is the loss of approximately 12.7 hectares of productive agricultural land. In response to this loss, Nelson has agreed to amend their existing Burlington Quarry Site Plan to include approximately 14 hectares of rehabilitated agricultural land on the rehabilitated quarry floor of the existing quarry. This area is equivalent to proposed extraction area of the South Extension lands. This will allow stripped soils from the South Extension to be immediately placed in the existing quarry to facilitate the proposed agricultural rehabilitation. This approach will avoid the need to stockpile/store stripped material for long periods of time, which will help maintain the soil fertility and structure and improve the success of the rehabilitation efforts. See updated ARA Site Plans for the existing Burlington Quarry and Burlington Quarry Extension.	Comment noted.
18.	The AIA (pages 4 and 5) states that the proposed after use vision for the extension and existing quarry is to develop a landform suitable for a future park. As a result, the rehabilitation plan for the South extension includes a beach, lake, exposed quarry faces, wetlands, and forested areas. The rehabilitation plan for the West Extension includes a series of ponds, wetlands, exposed quarry faces and forested areas. There is no discussion how this proposed after use is compatible with agriculture in the context of agricultural use and soil capability in the area potentially influenced or affected by the existing quarry and proposed quarry extensions as well as the NEP, GBP, PPS, Halton, and Burlington plans.	Pages 4 and 5	AgPlan Limited	As noted above, Nelson has agreed to amend their existing license to include approximately 14 hectares of rehabilitated agricultural land on the rehabilitated quarry floor of the existing quarry. This will allow stripped soils from the South Extension to be immediately placed in the existing quarry to facilitate the proposed agricultural rehabilitation. This approach will avoid the need to stock pile/store stripped material for long periods of time, which will help maintain the soil fertility and structure and improve the success of the rehabilitation efforts. A number of recommendations have also been made to the site plan conditions to ensure the rehabilitated agricultural area be returned back to the same average soil capability and production as the South Extension lands. See updated ARA Site Plans for the existing Burlington Quarry and Burlington Quarry Extension. As noted in response to comment #1 Nelson is modifying their application to not remove both extension areas from the Prime Agricultural Areas designation. The intent is to apply an extraction overlay in the Region's Official Plan.	Comment noted for all paragraphs.
19.	It is stated in the AIA (page 5) that; furthermore, a soil survey and Canada Land Inventory (CLI) Evaluation was completed by DBH Soil Services Inc. to document the existing soil conditions and provide a more detailed assessment of the Canada Land Inventory (CLI) classification for the soil resources on both properties. If the assumption is made that the reference to both properties means the South Extension and the West Extension, the quote above is interpreted to indicate that a CLI classification for both extensions has been presented. In addition, the DBH Addendum (November, 2020) states on page 3 that the Addendum soil survey included completion of mapping to illustrate the location of the property, the occurrence of soil polygons and appropriate CLI capability ratings. Subsequently, DBH presents no maps of soil polygons or	Page 5 and DBH Addendum	AgPlan Limited	Both the original soil survey of the South Extension and the addendum soil survey on the West Extension were completed to the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) Guidelines for Detailed Soil Surveys for Agricultural Land Use Planning, a copy of which may be found at the following link: http://www.omafra.gov.on.ca/english/landuse/facts/soil_survey.htm Further, as per the OMAFRA guidelines, the soil survey referenced the Field Manual for Describing Soils in Ontario (Ontario Centre for Soil Resource Evaluation, 1993), and the OMAFRA document Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for the Application of the Canada Land Inventory in Ontario, a copy of	Comment noted for all paragraphs.

	appropriate CLI capability ratings. The information presented in the DBH indicates: i. There are differences in depth to bedrock, or at least to refusal, when a Dutch auger is used to expose the soil profile (were other methods of exposing the soil profile used to determine the reason for refusal?). ii. There are differences in soil drainage (in the sense that some profiles are identified by DBH as imperfectly drained and others are "unknown"). Differences in vegetation as well as in characteristics within a soil profile are used to distinguish soil drainage class. In those areas planted to grasses, how were water tolerant versus water intolerant grasses differentiated by DBH in the field? DBH also identifies on page 2 of the Addendum that topography information was provided by MHBC Planning. These aforementioned three pieces of information (depth to bedrock, soil drainage class and slope class) could have been used to differentiate soil polygons within the West Extension. Why were soil polygons not differentiated on the basis of these three characteristics?			which may be found at the following link (http://www.omafra.gov.on.ca/english/landuse/classify.htm). As stated in the original soil survey and the addendum (South Extension and West Extension respectively), a Dutch Soil Auger and/or Dutch Stone Auger was used to extract soil material to a minimum depth of one meter (or to refusal). Further, observations, or visual evidence of landforms and rock outcropping was used to determine areas of shallow to bedrock soils. The assessment of drainage class is a function of the degree of soil mottling as based on size of the soil mottle, the relative colour (Hue/Chroma/Value, matrix as compared to mottle), depth of mottling and depth of colour change (Pages 26 and 27 of the Field Manual for Describing Soils in Ontario). There is no consideration within the Field Manual for Describing Soils in Ontario for determining soil drainage class as based on vegetation. It is noted that vegetation may be used an indicator of soil drainage and is a function of the Ecological Land Classification (ELC) as defined by the Ontario Ministry of Natural Resources and Forestry (MNRF). A link to the ELC is provided as follows (https://www.ontario.ca/page/introduction-ecological-land-classification-systems). For the purposes of these soil surveys, the assessment of drainage was conducted as per the Field Manual for Describing Soils in Ontario. The evaluation of soil resources for the South Extension and the West Extension areas was completed to determine the extent of soil resources in both areas. The evaluation determined the location and extent of the soil resources on the South Extension area by defining soil polygons and assigning Canada Land Inventory (CLI) ratings as per the OMAFRA document Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for the Application of the Canada Land Inventory in Ontario. It has been documented within the addendum report (West Extension) that "Due to the scale of mapping, the areas of disturbed soils comprise large portions of the Subject Lands, while the minor areas of shallow to bedrock soils are too small to map. Therefore, the entire site (Subject Lands) is considered as disturbed and is considered as not rated in the CLI system." As such, the entire site has been mapped as one soil polygon and has been determined to be "not rated in the CLI system". Therefore, the DBH reports have provided detailed information regarding soils, soil resources, and comment on soil capability rating per the Canada Land Inventory classification system.	
20.	The legend in Figure 4 "Agricultural Land Uses" has various crops listed but they are not visible on the Figure 4 map that the retained consultant has been able to access. The report should be revised to include this information.	Figure 4	AgPlan Limited	Attached as **Tab 8** is a copy of Figure 4, which hopefully is more legible and addresses your comment.	Comment addressed.

21.	On page 7 of the MHBC AIA, the site visit confirmed that there are not many productive and contiguous agricultural operations within the Primary Study Area, as this area is already fragmented by the existing aggregate, recreational, natural and rural residential uses. And then on page 10, in addition to the existing aggregate extraction operations within the Study Area, there are few active agricultural operations within the Secondary Study Area [underlining added]. “Few” and “not many” are not defined and are not put in context, with what occurs on average, or within a specific range of values within different areas or at different scales such as Halton Region, the City of Burlington, and the Primary and Secondary Study Areas. The PPS has the principal determining factor for prime agricultural areas and prime agricultural lands as soil capability. For example, in OMAFRA’s Land Evaluation and Area Reviews (LEAR) for the Greater Golden Horseshoe, (Agricultural System Mapping Method, technical document, January 2018) soil capability was assigned a relative importance of 60.0% and farm production is assigned 30.0% of the score leaving 10.0% for parcel fragmentation. Therefore, the specific meaning of productive and contiguous agricultural operations and active agricultural operations found in the MHBC AIA need to be defined in the context of specific wording in plans, guidelines, and technical documents.	Pages 7 and 10	AgPlan Limited	Noted. As indicated on Figure 4, the Primary Study Area for the South Expansion contains 5 different active parcels within the expansion boundary. The Parcels are not typically shaped (rectangular), which would indicate that the lands within the primary study area are fragmented, and not considered contiguous. It is noted that in the description the study area there is no numerical definition of few, however the parcel fabric information is available on Figure 4. The total size of the 5 parcels is noted as being consistent with the average parcel size in the City of Burlington (p.7). Similarly, a detailed numerical value was not used to define the number of large cash cropping fields or livestock operations. However, the details can be ascertained via the information in Figure 4.	Comment noted.
22.	There are equestrian operations, ranging in size from hobby farms to training facilities is stated in the AIA on page 11. While the use of the phrase “hobby farm” has been in use for at least 50 years, the definition of the phrase has not been provided in the MHBC AIA and is generally not provided, when the phrase is used, in other AIA’s. If a hobby is something that provides enjoyment, and costs more money than it generates, then an argument can be put forward that approximately 80.0% of farms can be classified as hobby given that: • The 80.0% of farms have higher off-farm income than on-farm income; • The off-farm income is necessary to sustain the farm and the farmers operating that farm. Additionally, the PPS (2020) in section 2.3.3.2 states, in prime agricultural areas, all types, sizes and intensities of agricultural uses and normal farm practices shall be promoted and protected in accordance with provincial standards. This can be interpreted to mean that discriminating amongst agricultural uses by type, size, and/or intensity, is prohibited, and therefore, distinguishing a hobby farm use versus an equestrian or common field crop use is inappropriate. Recognizing differences in agricultural land uses is only of importance in the PPS when identifying areas of fruit and vegetable production (which are part of the definition of specialty crop area). The MHBC AIA needs to define the meaning of “hobby farm” and provide a measure of the relative predominance of hobby farms at various scales from the municipal to the regional. As well, the AIA needs to explain why the differentiation of hobby farms is of significance in the context of the wording of planning policy.	Page 11	AgPlan Limited	Noted. The use of the Term “Hobby Farm” was used only to describe the size and nature of the operation when describing the Primary and Secondary Study area. The evaluation of potential impacts on Hobby Farms and larger operations is the same, as is the mitigation measures. The term is not used to differentiate in terms of Planning Policy requirements. Because all agricultural operations identified are considered equally in the analysis of impacts, and proposed mitigation measures, there is no discrimination based on size of operation.	Comment addressed.

23.	The AIA states on page 12 - Based on the site visit, the agricultural lands within the Primary and Secondary Study Areas are significantly fragmented by existing rural residential, natural areas and recreational uses. The parcel sizes are indicative of smaller, hobby-sized farms rather than large cash crop or livestock operations found elsewhere in southern and central Ontario. No extensive farm investment such as tile drainage, irrigation or other specialized cropping practices or equipment were observed or are documented within the Primary or Secondary Study Areas. Following the discussion as already outlined in comment 22 above, the lands still need to be promoted and protected based on the wording of the PPS. Additionally, what does “extensive farm investment” mean and how has that relative investment been compared at different scales (regional, municipal through to site-specific).	Page 12	AgPlan Limited	For comments regarding hobby farms, see response to 22. Extensive farm investment is characterized by tile drainage, irrigation, or other specialized cropping practices or equipment. Identification of these types of investments is used to understand any potential impact the proposal may have to the broader Agricultural System. There were no extensive farm investments identified, which is part of the consideration when determining impact on the agricultural system.	Comment noted.
24.	Limited rural residential uses, natural areas and passive recreational uses are considered complementary uses within prime agricultural areas. It is somewhat misleading to characterize these uses as having ‘significantly’ fragmented a portion of contiguously mapped prime agricultural area. This statement, and others, should be examined in relation to the LEAR scores generated through both the Halton Region and Provincial LEAR studies. While these studies each use different weighting configurations, both have recently confirmed these lands was meeting the criteria for a prime agricultural area, and would have accounted for fragmentation in the scoring. This data should be provided and analyzed in the AIA.	Page 12	City of Burlington	See response to comment # 21. Also mineral aggregate uses can also be considered complementary uses within prime agricultural areas since they are permitted use in accordance with the Provincial Policy Statement.	Comment noted.
25.	“The loss of approximately 12.7 hectares of agricultural land, currently used for cash crop production, will have a negligible effect on the social and economic impacts of agriculture in the City of Burlington, Halton Region and province as a whole.” Without relative comparisons to scale, existing trends of decline and a cumulative impact assessment lens, it is challenging to verify such a statement. For example, the impacts of a changing climate are not addressed anywhere in the study’s evaluation of long-term agricultural viability. The overall system impact of continuously removing small amounts of prime agricultural lands is complicated by the impacts of changing climate, which may compromise agricultural viability and heighten the need to preserve the agricultural land base to enable a strong, diverse agricultural system. Regenerative farming practices and on-farm stewardship can make a significant contribution to mitigating and adapting to the impacts of a changing climate, while supporting the integrity natural heritage system and providing opportunities for passive recreation (i.e. Bruce Trail). The loss of these types of secondary services provided by agricultural lands has not been accounted for.	Page 13	City of Burlington	See response to comment # 6, 17 and 18. The loss of 12.7 hectares of agricultural land is being mitigated.	Comment noted.
26.	The AIA continues on page 13, stating that based on the site visits, the agricultural activities within both the Primary and Secondary study area are indicative of broader agricultural trends in the City of Burlington and the Halton Region. Overall, agricultural uses within both the Primary and Secondary Study Area are representative of normal agricultural production for this area. The loss of approximately 12.7 hectares of agricultural land, currently used for cash crop production, will have a negligible effect on the social and economic impacts of agriculture in the City of Burlington, Halton Region, and province as a whole.	Page 13	AgPlan Limited	The AIA uses two Census years to compare agricultural statistics, 2016 and 2011. This can be seen in the following paragraphs of subsection 2.3: *“The total numbers of farms in Halton Region (451 farms) and the City of Burlington (66 farms) have declined since 2011. The City of Burlington experienced a greater decline (5.7%) in total number of farms when compared to the Region of Halton (3.8%).”* *“The amount of lands in crop production has declined in the both the Region (14.7%) and the City (26.4%). Burlington has*	Comment noted.

	The conclusion in the first paragraph quoted above would appear to be based, at least in part, on the statistical analysis of a single census year. This interpretation is an unnecessary assumption if the AIA report provides information stating what evidence was used in support of the MHBC AIA statement quoted above. Regardless, a one census year analysis is limited because a single year is insufficient to indicate trends. An analysis of trends is necessary because not all components of agriculture are static. Additionally, some of the categories used in that statistical work would appear to be based on the "StatsCan" classification of the predominant use of each farm operation. There are no discussions about the specific Statistics Canada data descriptors used in the MHBC AIA and there is no discussion about the limitations of the classification system. Why weren't direct measures of agricultural uses/activities made based on agricultural census categories for livestock such as total cattle and calves, total hens and chickens etc. (livestock numbers can be calculated per farm operation or per unit area), as well as crops such as total proportionate area of corn, wheat, soybeans, fruit, vegetables etc.? This Statistics Canada information can then be compared at minimum from the regional to municipal scales. Fieldwork could supply the agricultural information from the primary and secondary study areas down to the site- specific scales. Subsequently, the data from the agricultural census and fieldwork can be compared, as an accuracy check for crop production, to area measurements of different crops available from the mapping produced yearly by Agriculture and Agri-Food Canada (AAFC). The data analyses described in this review would provide evidence concerning whether the agricultural activities within both the Primary and Secondary study area are indicative of broader agricultural trends in the City of Burlington and the Halton Region. The description of differences when comparing the Region and City in the analyses presented, could have been entered as numerical data and compared using multi-attribute analysis (a LEAR is an example of one kind of multi- attribute analysis). This kind of analysis, as described in the previous three paragraphs, was not completed, and should be included in the AIA. The second paragraph quoted above concludes that the loss of the 12.7 hectares of agricultural land (the author chose to use number of hectares only in agricultural production, which, suggests incorrectly that land uses such as fence rows have no benefit to, and/or are not part of, agriculture) will have a negligible effect on the social and economic impact of agriculture at three scales - City, Region, and Province. The statistics quoted in the AIA are insufficient to support this conclusion, including context, for the phrase quoted in comment 23 where the agricultural activities within both the Primary and Secondary study area are indicative of broader agricultural trends in the City of Burlington and the Halton Region.			*experienced a stronger decline (5,203 acres to 3,828 acres) in the amount of lands in crop production since 2011 in comparison to Halton Region (61,673 acres to 52,602 acres).”* The use of two census years is to provide a general understanding of broad agricultural trends within the City and Region. For this reason, the number of Farms and total amount of land was sufficient in providing a general agricultural trend. A multi-attribute analysis is outside of the scope of the AIA and is not recommended within the Province's Draft Guidelines. Further, the characterization of the study areas to the City and Region is not an analysis of trends, but a comparison of what is typical in the City and Region. Thus, a single year would be sufficient in justifying that at this given point in time, the Study Areas are indicative of agricultural uses in the City and Region. As previously stated, it is further noted that Nelson has agreed to change the rehabilitated landform of their existing quarry from a lake-based landform to a terrestrial landform, which will include rehabilitated agricultural land equivalent to the to the proposed extraction are of the South Extension lands.	

27.	Figure 5, following page 14, has been reproduced at a scale of 1:25,000. The original mapping, upon which the Land Information Ontario soil shape files are based, were mapped at a scale of 1:63,360 (Gillespie et al., 1971). The scale of the original work is not mentioned in the AIA and the significance of the difference of scale with respect to matters such as minimum mappable area have not been discussed (a map can be accurate to scale but imprecise at a more detailed scale).	Figure 5	AgPlan Limited	Noted. Nevertheless, as you know a detailed soil survey was completed by DBH Soils to confirm the soil classification.	Comment noted.
28.	Tables 2 and 3 on page 15 are based on maps produced at two different scales. Table 2 is based on the work of DBH Soil Services whereas Table 3 is based on the original published information by Gillespie et al. (1971). Therefore, the two tables are not comparable. The AIA analysis on soil capability should compare the two proposed expansion areas based on published information as well as a third table using the more detailed DBH information. Given the need to characterize the soils on the West Extension, the capability comparison should include the current agricultural capability of the golf course lands based on field soil observations as well as to the soil capability of the golf course lands after they have been rehabilitated for agriculture.	Page 15 Tables 2 and 3	AgPlan Limited	The tables are used to present the information. They are not a comparison between one another, and use the most accurate information available. For the South lands, this was DBH's soil sample findings. For the West lands, this was the CLI classification. As you know, an addendum to the Soil Survey was completed by DBH and based on OMAFRA's review of the Addendum OMAFRA staff concluded that the current agricultural capability of the soils on the site are likely not representative of prime agricultural land (CLI 1-3).	Comment noted.
29.	On page 16, there is a discussion in a subsection title indicating microclimate for specialty crop production. However, the discussion does not deal with microclimate including cold air drainage. The data quoted in the AIA are for Crop Heat Units (CHU) mapped at a broad scale. Specialty crop areas mapped by the Province include the Holland Marsh which has similar or lower CHU compared to the Nelson Aggregate site. Therefore, why does the MHBC AIA state that the Nelson Aggregate area has not been mapped as a specialty crop area because of climate?	Page 16	AgPlan Limited	The CHU were used to provide a description of the growing season for the Study Areas, and is one of many characteristics, which are considered in Specialty Crop Mapping. The AIA states that the area has not been mapped as a specialty Crop area as it has not been by OMAFRA, the Region or the City.	Comment noted.
30.	Provincial policy does not provide a hierarchy of interests, only that both are important and must be protected. In this case, assessing long-term local supply and demand for each resource could assist in determining the appropriate prioritization.	Page 18	City of Burlington	See response to comments # 6, 17 and 18. The application has been revised to utilize the prime agricultural land from the south quarry extension. Furthermore, when considering the hierarchy of interests there is a policy framework that permits aggregate extraction within prime agricultural areas, on prime agricultural land and agricultural rehabilitation is not required if certain conditions are satisfied.	Comment noted.
31.	Based on publicly available materials (see link below), the applicant proposes a single/unified rehabilitation plan concept for the existing licensed area (licenses #5657 and #5499) and the southern and western extensions. Recognizing that both the southern and western extensions cannot be rehabilitated if extraction occurs below the water table, the proposed rehabilitation should address opportunities to maximize agricultural rehabilitation in the remaining areas (licenses #5657 and #5499). https://www.mtnemoquarrypark.com/	Page 19	City of Burlington	See response to comments # 6, 17 and 18.	Comment noted.
32.	The MHBC AIA on pages 19 and 20 states that in terms of impacts on surrounding agricultural properties, an expansion of an existing quarry is preferable as it minimizes impacts on the surrounding agricultural system. Why it is preferable to have a larger pit operating over a longer time than several smaller pits over a shorter time has not been explained in the MHBC AIA.	Pages 19 and 20	AgPlan Limited	The expansion is preferable to a new quarry in a new location as it does not introduce new impacts to the area on existing agricultural operations through the use of existing haul routes and processing facilities. An expansion allows the operation to use both licenses collectively, using the same processing equipment, entrance/exit, and existing haul route. This also allows for the comprehensive rehabilitation of the lands.	Comment noted.

33.	There are some questions related to the section in the MHBC AIA discussing the Planning Policy Framework. On page 19, the PPS is quoted relating to extraction below the water table (section 2.5.4.1, d) where agricultural rehabilitation in remaining areas is maximized. This wording is repeated on page 23 of the MHBC AIA when quoting from the Halton Region Official Plan. Subsequently, on page 22, related to the NEP section 2.9.11, the following is quoted: in prime agricultural areas, where rehabilitation to the conditions set out in (g) and (h) above is not possible or feasible due to the depth of planned extraction or due to the presence of a substantial deposit of high quality mineral aggregate resources below the water table warranting extraction, agricultural rehabilitation in the remaining areas will be maximized as a first priority. How does the proposed after use, described in the AIA,demonstrate that the agricultural rehabilitation of remaining areas is maximized and/or agricultural rehabilitation in the remaining areas will be maximized as a first priority? Based on the previous paragraph and description in other parts of this peer review, impacts to agriculture need to be evaluated in the MHBC AIA during extraction, rehabilitation, and post-rehabilitation.	Pages 19, 22, and 23	AgPlan Limited	See response to comments # 6, 17 and 18.	Comment noted.
34.	On page 19 the MHBC AIA states that; it would be difficult to locate any new aggregate operation within the City of Burlington or Region of Halton that would avoid prime agricultural areas. This phrase is an answer to the requirement quoted from the PPS in the MHBC AIA on page 19 as well as repeated in the Halton Region Official Plan (MHBC AIA, page 23). Other alternative locations have been considered by the applicant and found unsuitable. The consideration of other alternatives shall include resources in areas of Canada Land Inventory Class 4 to 7 soils, resources on lands identified as designated growth areas, and resources on prime agricultural lands where rehabilitation is feasible. Where no other alternatives are found, prime agricultural lands shall be protected in this order of priority: specialty crop areas, and Canada Land Inventory Class 1, 2 and 3 lands. However, there are no maps presented demonstrating the relationship between soil capability classes, the location(s) of the same or similar aggregate resources, the presence of other resources, or other factors restricting aggregate mining, used in support of the statement related to the difficulty of locating a new aggregate operation that avoids prime agricultural areas. Additionally, there is no mapping demonstrating where aggregate resources are available and where rehabilitation is feasible. Neither is there mapping to demonstrate the protection of prime agricultural lands relative to the priority outlined in policy. The MHBC AIA needs to contain this mapping as evidence that there are no suitable sites based on the wording of planning policy.	Pages 19 and 23	AgPlan Limited	It is noted that there are no maps pertaining to an evaluation of alternatives. The following is the justification. Although Section 2.5.4.1c) of the Provincial Policy Statement (2020) requires consideration of alternatives on lower quality land (among other areas), the requirement to consider alternatives is based on what is suitable to the applicant (“other alternatives have been considered by the applicant and found unsuitable”). In this regard, it is unsuitable to consider alternatives that are not adjacent to the existing quarry as there has already been a considerable amount of financial and physical resources invested at the existing quarry. As noted in the AIA, expansion of the quarry on adjacent lands will help minimize potential impacts to agriculture as it does not introduce ‘new’ impacts in the area by utilizing established haul routes and existing processing equipment. The new licensed areas will be operated as an expansion to the existing quarry, and does not create further fragmentation of agricultural land in other parts of the Region. It is noted that given the existing physical and land use constraints in the area surrounding the quarry, potential expansion to the quarry is limited to the north, south, and west as the Mount Nemo settlement area is located to the east. Although the focus of this application has been to the south and west extension areas, consideration of expanding in all directions has been given. The following summarizes the land use considerations that have precluded consideration of expanding the quarry in other directions: East/Southeast: Mount Nemo Settlement Area as well as presence of significant Natural Heritage features. Southwest: Existing golf course that is not available for purchase. North/Northeast: Farms are more contiguous and less fragmented by non-agricultural uses and natural features. There is more farm	Agricultural policy involves consideration of alternative locations by the applicant. Nelson Aggregate has taken the view that they, as the applicant, can apply an economic analysis related to the business to eliminate the requirement for an evaluation of alternative locations other than by expansion to adjacent properties. In my opinion, the policy can be interpreted to mean that the applicant is responsible for completing the alternative locations analysis. The approach taken by Nelson does not consider a broader range of alternative locations, from a soil capability perspective, or a cost-benefit analysis, at various scale from the Province through to the sub-tier municipal level, and subsequently to the neighbours around the proposed expansion area. Therefore, the analysis of alternative locations, required by agricultural planning policy, is flawed. For the following paragraphs, comments are noted.

				infrastructure and investment to the north in the form barns, fencing, etc. associated with the 3-4 existing livestock operations. The natural feature along Colling Road from Blind Line to Guelph Line is identified as part of the Regional Natural Heritage System. As noted in the Planning Report, a high pressure gas oil pipeline runs along the Colling Road alignment. The gas line would create operational challenges in terms of cross and working around this established easement. A portion of the Bruce Trail is also located along the north side of the existing quarry along Colling Road. It is noted that protection of the Bruce Trail is identified as a priority in the Niagara Escarpment Plan. Northwest: As noted in the Planning Report, part of the properties between Blind Line and Cedar Springs Road is Escarpment Protection Area and Escarpment Natural Area and would not be available to extraction. Other Rural Areas would be within 200 metres of the Escarpment Brow and aggregate extraction is prohibited in this area. Given the foregoing, the selected locations for expansion are considered more favourable from an agricultural perspective as well as other operational or planning policy perspectives. Lastly, as it relates to the west extension, it is noted that the alternatives test in the PPS does not apply as these land are not considered prime agricultural land (see response to comment 4 below). As a result, the west extension lands are preferred as they are not considered prime agricultural land.	
35.	Impacts avoided would primarily be transportation related (i.e. avoiding the development of new haul routes) but there are other impacts to consider, i.e. the extended duration of use and the intensification of the existing haul routes and activities.	Pages 19, 24, and 27	City of Burlington	The application does not result in the intensification of the existing haul route. The use of the existing haul route is appropriate and is a route that is planned for high volumes of traffic including truck traffic.	Not resolved.
36.	“2.5.3.1 Progressive and final rehabilitation shall be required to accommodate subsequent land uses, to promote land use compatibility, to recognize the interim nature of extraction, and to mitigate negative impacts to the extent possible. Final rehabilitation shall take surrounding land use and approved land use designations into consideration.” Neither the current or proposed extensions sites are currently designated for recreational uses, and nor are any of the surrounding land uses. The broader rehabilitation plan proposed does not align with the current land use designations or demonstrate compatibility with rural area land use objectives.	Page 20	City of Burlington	The rehabilitation plan includes a proposed landform that is appropriate taking into account surrounding land uses and approved land use designations. Furthermore, the current West Quarry Extension is permitted for recreational uses and includes an active golf course. Other recreational uses in the immediate area include the Bruce Trail and the Mount Nemo Conservation Area. Any future after uses will require an amendment to the Niagara Escarpment Plan and only uses permitted within the applicable designation will be permitted. Nelson has proposed to convey the lands to public ownership to form part of the Niagara Escarpment Parks and Open Spaces. The Niagara Escarpment Plan permits “uses permitted in the Parks and Open Space System Master / Management Plans that are not in conflict with the Niagara Escarpment Plan.” These uses can include recreational uses.	Not resolved.

37.	"Assessment of Impact" should address the following: • There is no evidence produced in support of the statement the resulting loss of 12.7 hectares of productive agricultural lands is considered to be a negligible loss (page 28).	Assessment of Impact Page 28	AgPlan Limited	See response to comments # 6, 17 and 18	Comment noted.
38.	"Assessment of Impact" should address the following: • The section on fragmentation does not discuss fragmentation (page 28).	Assessment of Impact Page 28	AgPlan Limited	The Fragmentation section is in reference to the degree of agricultural fragmentation as a result of the proposal. As such, reference is made to the investment, amount of land taken out of production, and compatibility of the rehabilitated landform.	Comment noted.
39.	"Assessment of Impact" should address the following: • The discussion on air quality (page 29) does not quote information related to the monitoring of contaminants during the lifetime of the current Nelson Aggregate pit. There is no evidence provided based on actual performance of no significant health impacts and the reader is not referred to a document that defines the meaning of "significant". It should be noted that agriculture itself potentially produces dust, noise, odours, light; can or does contribute to problems with water quality and quantity; and has documented accident rates, and occupational health problems. Given matters such as those described in the previous sentence, there is no discussion about the contribution of agriculture relative to the proposed Nelson Aggregate Expansion in the MHBC AIA. Neither is there a discussion about the combined contribution of the proposed expansion plus the contributions of agriculture.	Assessment of Impact Page 29	AgPlan Limited	The Air Quality assessment assessed five maximum emission operating scenarios, which takes into account the operations at the current quarry. The evaluation of significant health impacts is in accordance with the Ontario Ministry of Environment, Conservation, and Parks Guidelines.	Comment noted.
40.	"Assessment of Impact" should address the following: • The section on hydrogeology (page 30) states that the management of water resources is an important consideration for farm operations particularly for watering field/vegetable crops and hydrating livestock. The irrigation of field crops will be soil dependent and the definition of field crops used in the AIA is not specified. Elsewhere in the report, there is a statement that the lands are not suitable for specialty crops, but they have mentioned vegetables (but not fruit) in relation to irrigation use of water resources. The South Extension lands do have potential for producing specialty crops (fruits and vegetables), and the West Extension will have potential for producing specialty crops assuming that not all the area has been disturbed and/or can be rehabilitated (even though The South and West Extensions are not a specialty crop area). There is no mention of previous water quality and/or quantity complaints related to agricultural use and/or aggregate mining in or around the current quarry. Additionally, there is no discussion concerning whether the complainants were satisfied with mitigation applied. The AIA also indicates there is no evidence of irrigation systems or crops that are dependent on extensive irrigation. This statement in the AIA assumes that agriculture in the area will not change during the time of the extraction and rehabilitation.	Assessment of Impact Page 30	AgPlan Limited	The Hydrogeological assessment concluded that surrounding wells will be protected. Vegetable production was identified in this subsection to highlight the importance of Hydrogeology on potential vegetable production, however as indicated in previous sections of the report, there was no specialty crop or vegetable production identified in the Study Areas. According to the PPS, the definition of specialty crop areas is those areas that are 'designated using guidelines developed by the Province' in which specialty crops are predominantly grown, resulting from; soils that have suitability to produce specialty crops, or lands that are subject to special climatic conditions, or a combination of both; Farmers skilled in the production of specialty crops, and; a long term investment of capital. DBH concluded that the south and west extension lands do not meet the criteria for specialty crop soils or climate. Additionally, no specialty crop production was identified in the Study Areas, nor was there any significant long-term investment identified. Lastly, and most importantly, there are no specialty crop areas designated in the Primary or Secondary Area.	Comment noted.

41.	“Assessment of Impact” should address the following: • The section on traffic states it is not anticipated that the truck traffic on the haul route will conflict with agricultural traffic on No. 2 Sideroad. While there is one field access along Guelph Line (between No. 2 Sideroad and 1 Sideroad), Guelph Line is designed with wide shoulders that agricultural traffic can use to move between fields, if needed. This opinion further recognizes that neighbouring property owners have been accustomed to the truck traffic patterns from the existing quarry operation in the area. Furthermore, given the limited operating hours of the aggregate operations it is anticipated that any potential impacts/conflicts with agricultural traffic/machinery would be nominal and only concentrated during planting and harvest periods (early spring/ late fall). There is no evidence provided that the road shoulders are wide enough for the farm machinery used in Halton and/or in Burlington. The reference to impacts/conflicts as “nominal”, because they only occur during planting and harvesting, is specious	Assessment of Impact	AgPlan Limited	As stated in the Transportation subsection, Guelph Line is a major arterial road designed and meant to carry high volumes of heavy and light traffic. Agricultural traffic is not anticipated to be high as it would generally avoid high volume routes and be directed toward local roads.	Comment noted.
42.	“Assessment of Impact” should address the following: • Under “blasting impacts” (page 31) the statement is made that while impacts to water quality and production capacity of groundwater supply wells is a common concern for residents near blasting operations, the report emphasizes that blasting operations do not result in any permanent impact on wells outside of the immediate blast zone. The statement begs the question - what intermittent impacts occur, what are those impacts and what is their frequency and duration, and, who or what is affected?	Assessment of Impact Page 31	AgPlan Limited	The Following excerpt is from the BIA (p.23) *There is an intuitive belief that blasting operations have dramatic and disastrous impacts on residential water wells for large distances around such operations.* *Unfortunately, there is no scientific basis for such claims. Outside of the immediate radius of approximately 20-25 blast hole diameters from a loaded hole, there is no permanent ground displacement. As such, barring blasting activity within several meters of an existing well, the probability of damage to residential wells is essentially non- existent.* *Despite the scientific support for the above conclusion, numerous studies have been performed to verify the validity of this statement. These studies have investigated the effects of blasting on varied well configurations and in varied geological mediums to ensure results could be readily extrapolated to all blasting operations. The conclusion of these studies has confirmed that with the exception of possible temporary increases in turbidity, blasting operations did not result in any permanent impact on wells outside of the immediate blast zone of the blast until vibrations levels reached exceedingly high intensities. Applying universally accepted threshold levels for ground vibrations eliminates the possibility for any long term adverse effects on wells in the vicinity of blasting operations.* *In a study by Froedge (1983), blast vibration levels of up to 32.3mm/s were recorded at the bottom of a shallow well located at a distance of 60 meters (200 feet) from an open pit blast. There was no report of visible damage to the well nor was there any change in the water pumping flow rate. This study concluded that the commonly accepted limit of 50mm/s PPV level is adequate to protect wells from any damage. We reiterate, the current guideline limit for vibrations from quarry and mining operations is 12.5mm/s.* Based on the conclusions presented here from the BIA, there are minimal to no intermittent impacts that will occur as a	Comment noted.

				result of blasting from an agricultural perspective.	
43.	"Assessment of Impact" should address the following: • Under "noise impacts", there is no evidence presented about the efficacy of mitigation applied during the lifetime associated with the current Nelson Aggregate pit. Neither is there a review of complaints received associated with noise. On the other hand, as stated previously, agriculture can be a noisy industry and comparatively speaking, can potentially be more or less noisy than the pit operation depending on several factors. The comparison and additive result of noise is not discussed in the MHBC AIA.	Assessment of Impact	AgPlan Limited	Nelson's current and proposed operation are governed by the MECP noise guideline limits. The Noise Impact Study concluded that under worst-case operating scenarios, with recommended noise control measures, the proposed application will comply with the MECP guideline limits. The Noise Impact Study takes into account current noise levels within the respective Study Area. This would account for surrounding Agricultural Operations, and their noise contribution.	Comment noted.
44.	The "summary of net impacts" (starting on page 32) is limited given questions raised previously in this review. For example, the areas planned as buffers have not been demonstrated to be effective through field study and/or the published literature, and the people affected by the current operation have not been interviewed with respect to their opinion about Nelson's "open-door policy" and its effectiveness (or if they have been interviewed/surveyed, their comments are not in the AIA).	Page 32	AgPlan Limited	Buffers and other impact mitigation measures are recommended on the basis of other technical studies to mitigate impacts on surrounding land uses. Each respective report has demonstrated how mitigation measures are effective in mitigating impacts. It is noted that persons who may have been potentially impacted by current operations have not been interviewed on their opinion of the "Open-door policy" and its effectiveness. From an Agricultural perspective, this policy is intended to help educate surrounding landowners of the operations and rehabilitation. Formal complaints regarding Nelson's operations may still be filed with MNDMNRF.	Comment noted.
45.	Conclusions of Section 6 – Proposed Rehabilitation Plan may require updating as a result of the above NEC Staff comments.	Section 6	Niagara Escarpment Commission	The proposed rehabilitation plan for the proposed Burlington Quarry Extension and Burlington Quarry have been updated and included additional considerations and conditions related to agricultural rehabilitation.	Tab not specified or not attached.
46.	Additional information is required to substantiate these proposed benefits. - Are there known flooding hazards/concerns in this area? - Are the surrounding agricultural operations in need of additional irrigation?	Page 37	City of Burlington	Overall this is not applicable to overall policy framework governing the review of the application. Mineral aggregate operations are permitted in prime agricultural areas on prime agricultural lands. From a policy perspective the proposed quarry is permitted to be located on-site and is required to be designed to minimize impacts on surrounding agricultural resources/ operations.	Comment noted.
47.	On page 37, the AIA opines that this final rehabilitated land-use is compatible with the surrounding agricultural uses and operations and will create landscape diversity. The open-water feature can provide benefits to the agricultural uses in the area through flood attenuation and the storage of fresh water for potential irrigation purposes. The MHBC AIA does not describe the probable use of the rehabilitated lands given human behaviour in areas with open water. There is some probability that the rehabilitated lands will be used for recreation rather than open space uses. Under those circumstances, OMAFRA's MDS Document would characterize the proposed rehabilitated use as type "B" because it would have a higher intensity of recreational use (formerly called active recreational use). Therefore, there is evidence that the proposed after use may be less compatible with agriculture if adjacent uses have or will have livestock production. Additionally, there is no discussion about whether open space uses and/or recreational uses will affect water quality. Neither is there any discussion about whether recreational uses	Page 37	AgPlan Limited	The proposed rehabilitation plan only creates a landform. Any after uses require a future Niagara Escarpment Plan amendment and if applicable consideration of MDS will be considered at that time.	Comment noted.

	such as swimming and the necessity for washroom facilities will affect coliform counts.				
48.	The South Extension does contain soils that would support specialty crops such as apples, sweet corn, garlic, cole crops etc. (and the West Extension will support specialty crops in areas where soil profiles have not been disturbed during the creation and use of the golf course or, could support fruit and vegetable production after rehabilitation).	Page 39 Bullet 2	AgPlan Limited	The DBH soil report concluded that the soils in both extension areas are not suitable for Specialty Crop production. The Extension areas are not within climactic conditions, which are unique to specialty crop areas. As such, the extensions are not mapped as Specialty Crop Areas, nor are they considered Specialty Crop areas under the PPS.	Comment noted.
49.	New agricultural impacts may be introduced by the expansions depending on whether there are changes in technology associated with agriculture and/or aggregate extraction.	Page 39 Bullet 4	AgPlan Limited	Noted – The impact assessment considers operational technology as it currently exists.	Comment noted.
50.	There has been no mapped evidence demonstrating that there are no reasonable alternatives in prime agricultural areas and there may be alternatives which avoid prime agricultural land.	Page 39 Bullet 5	AgPlan Limited	It is noted that there was no map produced to demonstrate no reasonable alternatives. For justification, refer to response to comment # 34.	Refer to JART Comment #34. Comment noted.
51.	There may be impacts to the adjacent agricultural uses or operations due to cumulative impacts.	Page 39 Bullet 8	AgPlan Limited	The impact assessment considers the current operation in conjunction with the proposed extensions. There are no other mineral aggregate operations within the Study Areas to contribute to cumulative impacts.	Comment noted.
52.	The proposed after use does not demonstrate that the agricultural rehabilitation of remaining areas [areas not underwater] is maximized and/or agricultural rehabilitation in the remaining areas will be maximized as a first priority. The presence of open water may result in water-based activities and other recreational uses. These active recreational uses have the potential to be incompatible with agricultural use.	Page 39 Bullet 10	AgPlan Limited	See response to comment # 6, 17 and 18.	Comment noted.
53.	The DBH Addendum concludes that the entire West Extension site (identified in the DBH Addendum as the subject lands) is considered as disturbed and is considered as not rated in the CLI system. On that basis, it can be interpreted that no soils that have been disturbed can be rated using the CLI system. Therefore, following that statement, farmlands that have been land levelled (disturbed) to improve surface drainage, for example, so as to improve crop yields, would not be rated under the CLI system. However, the CLI system states that good soil management practices that are feasible and practical under a largely mechanized system of agriculture are assumed and that soils considered feasible for improvement by drainage, by irrigating, by removing stones, by altering soil structure, or by protecting from overflow, are classified according to their continuing limitations or hazards in use after the improvements have been made. Land leveling can be considered as an improvement rather than an indication of disturbance. Secondly, the PPS (2020) defines an agricultural condition with respect to the rehabilitation of mineral extraction areas found within specialty crop areas and prime agricultural land as needing to result in substantially the same areas and same average soil capability for agriculture are restored. Because former quarries and mined aggregate areas, where extraction has not been completed below the water table, have been disturbed, then, following the conclusion of the DBH Addendum, those former quarries and mined aggregate areas could not be rated in the CLI system. Therefore, the lack of the CLI rating would not allow anyone to establish whether the rehabilitated lands could be and/or had been restored to the same average soil capability as required by the PPS (2020). Does DBH take the view that language in the PPS, related to the	DBH Addendum	AgPlan Limited	Noted. OMAFRA staff have concluded that the current agricultural capability of the soils on the West Extension site are likely not representative of prime agricultural land (CLI 1-3).	The viewpoint of those involved in land rehabilitation often is that lands formerly in agricultural production can be returned to that approximate level of production after aggregate extraction and land rehabilitation. There is nothing in the information provided by Nelson and OMAFRA that demonstrate scientifically that the same, or very similar: • range, diversity, and yield of crops, • inputs (water, fertilizer, farm management) requirements, and • ecological effects; have consistently occurred on lands rehabilitated to an agricultural after-use. Therefore, the proposed agricultural rehabilitation plan (currently a road accessible “island” in a lake) cannot be assessed based on the probability of the same, or very similar, crop diversity and yields, inputs/management, and ecological effects.

	level of acceptable rehabilitation, cannot be reached because the CLI capability classification cannot be applied to disturbed soils?				
54.	DBH Soil Services concludes that the West Extension lands should not be considered as Prime Agricultural Land and should not be considered as part of the Provincial Land Base Prime Agricultural Area mapping. The PPS (2020) definition of Prime Agricultural Area means areas where prime agricultural lands predominate. This includes areas of prime agricultural lands and associated Canada Land Inventory Class 4 through 7 lands, and additional areas where there is a local concentration of farms which exhibit characteristics of ongoing agriculture. Therefore, it can be interpreted that a given map polygon defined as Prime Agricultural Area would need to have more than 50.0% by area of Specialty Crop Area and/or CLI Class 1, 2, and 3 lands as well as associated Class 4 through 7 lands and areas of ongoing agriculture. Given the previous discussion in comments 19 and 53 as well as the definition of a Prime Agricultural Area in the PPS (2020), it is unclear how DBH concluded that the West Extension lands should not be considered as Prime Agricultural Land and should not be considered as part of the Provincial Land Base Prime Agricultural Area mapping. Additional explanation is required in support of the conclusion reached in the DBH Addendum.	DBH Addendum	AgPlan Limited	Noted. OMAFRA staff have concluded that the current agricultural capability of the soils on the West Extension site are likely not representative of prime agricultural land (CLI 1-3).	Comment noted.