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jamie.tellier@burlington.ca

December 3, 2020

BY COURIER AND EMAIL

Nelson Aggregate Co.
Attn: Tecia White
2433 No. 2 Sideroad
P.O. Box 1070
Burlington, ON L7R 4L8
tecia@white-water.ca

Ministry of Natural Resources & Forestry
Integrated Aggregate Operations Section
4th Floor S, 300 Water Street
Peterborough, ON K9J 3C7
ARAApprovals@ontario.ca

RE: Objection Letter to the Aggregate Resources Act (ARA) License Application for the proposed Burlington Nelson Quarry Extension

The City of Burlington Community Planning Department is in receipt of the information package, dated, October 27, 2020 as circulated electronically by the proponent's consultant planner. The ARA package included an Agency Utility Letter, including copies of all technical reports/studies and plans related to the Application, a copy of the Notice of Application for a License (Form 1), and Notice of Public Information Session (Form 2).

The Community Planning Department is actively engaged in the review of applicable land use development applications, including amendments to the Niagara Escarpment Plan, Region of Halton Official Plan and City of Burlington Official Plan as well as the application for Aggregate Resources Act (ARA) License, as it relates to the proposed extension of the Burlington Nelson Quarry.

A coordinated review through a Joint Agency Review Team (JART)(established in 2020) involves cross-consultation with agency partners (including, NEC, MNRF, Halton Region and Conservation Halton) and the applications remain in the early stages of review. It should also be noted that the Ministry of Natural Resources and Forestry (MNRF) cannot issue an Aggregate License without approval from the Niagara Escarpment Commission.

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For these reasons, it is the opinion of the City of Burlington Community Planning Department that to review and comment on the specifics of the ARA License Application is premature given the anticipated duration of the review process and the relative early stage of analysis at this time. We therefore object to any form of ARA approval prior to a further evaluation and decision regarding land use impact, compatibility and appropriateness of the proposed development in the context of provincial and municipal (Region and City) policy.

In its initial review of the applications, City of Burlington staff and peer review consultants have also identified several areas concerning the proposal where either there has not been sufficient information or data provided; where analyses are not sufficiently coordinated with other key areas of review; or, where methodological bases of the information presented in the submitted plans, studies/reports remains undetermined or is inconsistent. Five (5) general theme areas of concern related to this information have been identified, as follows:

Effects on Surface Water Quantity and Quality

- Improved coordination and cross-referencing between the applicant's various disciplines is needed to perform a holistic review and analysis of issues related to groundwater, hydrology (quality and quantity) and impacts on surface water. This includes, but is not limited to, assessment and reporting on any/all water quality issues;

- Confirmation of the suitability of the analytical tools selected by the applicant to simulate the existing and proposed drainage conditions and the accuracy of modeling techniques, assumptions and interpretation of results. This may include additional QA/QC of the monitoring data collected from gauging stations and clarity on the selection of locations for the gauging stations, as the data collected at these stations is applicable to the overall study;

- Further assessment by the applicant of potential impacts to the municipal infrastructure and mitigative measures (roadside ditches along Colling Road) and predicted impacts to the surface water features resulting from the proposed quarry extension is needed;

- A number of hydrologic features will essentially be lost, including an existing pond within the west expansion, as a result of the proposal and additional assessment is required by the applicant to demonstrate that the lost functions are appropriately replicated in the post-development conditions;

- Further review is needed by the applicant of the potential impacts to the Willoughby Creek flow regime and the effects on Medad Valley, as well as new surface water

CITY OF Burlington

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conveyance features proposed within the subject lands and their impact on municipal infrastructure as a result of the expansion of quarry operations; and,

- A mutually agreed upon Adaptive Management Plan is needed that addresses the technical comments of the Joint Agency Review Team (JART)(including a schedule for updating the plan), as are details also needed about the long-term rehabilitation plan and potential financial liabilities related to ongoing and future operations.

Natural Heritage Effects

- There have been several natural heritage features with potential for impacts noted in the proponent's submission that have been identified for further scoping within the study area. These include provinically siginficant wetlands (outside of the 120 metre buffer for adjacent lands); significant wildlife habitat; significant woodlands; fish habitat (zone of influence to be confirmed); and landscape connectivity. Additional need for the evaluation of Species at Risk was also identified.

  The further consideration and analyses of these matters may involve the coordination and review of other technical studies and reports in the context of natural heritage, including potential and/or indirect impacts that may result from the proposed development (i.e. connections and linkages between natural heritage features, surface water features and groundwater).

- Additional information is required to ensure the protection and reduced impacts of the proposed development on signficant natural heritage resource areas, features and functions; particularly as it relates to mitigation and monitoring.

- The assessment of long-term, culmulative impacts of future uses and long-term rehabiliation (after-use) plans may require additional clarification and data support.

Agricultural Effects and Existing Farming Practices

- The Agricultural Impact Assessment (AIA) submitted by the applicant concludes that the permanent loss of the subject agricultural lands is inconsequential, yet the analysis is not systematic and does not examine impacts relative to pressures on the agricultural system at a broader scale (i.e. climate change, demand for settlement area boundary expansions, aggregate extraction, cemetery lands etc.), nor does it address the cumulative effect of the incremental loss of a finite resource over time;

- The agricultural lands within the southern study area have been characterized in the AIA as fragmented, implying lower value/viability. However, the overlapping natural features, limited rural residential uses, and passive recreational uses within the area are generally considered compatible and complementary uses in relation to agriculture. Further, in terms of land use designation, the area is contiguously mapped as prime agricultural lands. Therefore, a comprehensive AIA is required for these lands;

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- The AIA notes that the average parcel sizes are indicative of smaller, 'hobby-sized' farms, implying lower value/viability. The PPS, 2020 does not make a distinction for 'hobby' farms and section 2.3.3.2 notes that "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";

- The extent of soil disturbance within the western study area is presumed as beyond rehabilitation, according to the study. Insuffcient information has been provided to validate this claim;

- The AIA speaks to the consideration of "another property located farther away" but does not provide any detail with respect to the evaluation of this alternative site in relation to the proposal;

- The AIA notes that an expansion to an existing site is less detrimental to agriculture than a new site, based on the use of existing haul routes. Yet it does not assess the impacts associated with an intensification of the existing aggregate use, i.e. increased quarry traffic on existing haul routes, as well as the extension of the life of the quarry and the long-term disturbance to agricultural operations within the area;

- The AIA notes that an open-water feature can provide benefits to the agricultural area by providing flood attenuation and fresh water for irrigation purposes, yet does not present supporting evidence identifying a need/demand for flood attenuation or irrigation within the subject lands.

Human Health (Air Quality)

A technical peer review of the applicant's Air Quality Study, as included with the application submission is ongoing, with particular focus on matters related to methodology, findings and conclusions associated with any potential air quality impacts of the proposed quarry extension.

Operational/Coordination

The City of Burlington expresses concern with the planned future for existing industrial land uses (i.e. processing facility) on the quarry lands and the prospect of the continuation of those activities in the context of an expanded quarry operation.

There has not been consistent or adequate detail pertaining to the use of the existing quarry lands for an industrial use in the event that aggregate resource extraction ceases (or is substantially reduced) on that portion of the quarry operation and its resultant conformity with applicable legislation and policy related to the Niagara Escarpment Area.

It should be noted that concerns have been raised by stakeholders with respect to the timelines of the receipt, review and comment on the ARA License Application and the change in format to

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the Public Information Session (PIS) required as a component of the review process. While the City recognizes and appreciates the rigour of provincial regulation pertaining to public consultation and the restrictions on public gatherings implemented to contain the spread of COVID-19 (as documented in the August 2020 Aggregate Resources Program Bulletin: Resuming Aggregate Application Timelines and Public Consultation under the *Aggregate Resources Act* (Post COVID-19)), issues of public access to this process persist.

While the City Community Planning Department understands that the prescribed format for information sessions is not established through regulation and the Ministry of Natural Resources and Forestry (MNRF) has provided guidance on alternate virtual public information sessions to facilitate verbal exchange between parties, the City Community Planning Department reasserts that maximum public disclosure and access is paramount. At present, the format of the consultation described in the Notice of Public Information Session appears focused on a format that may solicit direct communication between the proponent and an interested individual rather than among and between the larger stakeholder community and the proponent. A virtual public information session in a format that is widely available for a public exchange between all parties (simultaneously), and which is initiated and coordinated by the proponent, is technically possible, and should be a minimum requirement.

The City of Burlington Community Planning Department appreciates the opportunity to provide comments in response to the circulation of the ARA License Application, and requests notification of any future meetings or updates on the review of this file. The City of Burlington reserves the right to raise further issues as the review of these applications progresses.

Sincerely,

Jamie Tellier, MCIP, RPP
Interim Director of Community Planning
Community Planning Department
City of Burlington

Conservation Halton

Planning & Watershed Management
905.336.1158 | Fax: 905.336.6684
2596 Britannia Road West
Burlington, Ontario L7P 0G3
conservationhalton.ca

December 9, 2020

BY EMAIL AND MAIL

Nelson Aggregate Co. Attn: Tecia White
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P.O. Box 1070
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tecia@white-water.ca

AND

Ministry of Natural Resources & Forestry Attn: Calinda Manning
Integrated Aggregate Operations Section
4th Floor S, 300 Water Street
Peterborough, ON K9J 3C7
ARAApprovals@ontario.ca

Dear Tecia White and Calinda Manning:

Re: Application under the Aggregate Resources Act for a Category 2, Class A - Quarry Below Water
Nelson Aggregate – Burlington Quarry Extension
Part Lot 17 & 18, Concession 2 NDS and Part Lot 1 & 2, Concession 2, City of Burlington
Conservation Halton File No: PQ 20

Conservation Halton has reviewed the above-noted Aggregate Resources Act (ARA) application and objects to the application for the following reasons:

1. The 45 day notification and consultation period does not allow for adequate review, given the scale, scope and potential implications of the application. The submitted studies (e.g., Hydrogeological Assessment, Natural Environment Report) require detailed technical review and Conservation Halton's review is still ongoing, in coordination with the Joint Agency Review Team (JART).

2. Notwithstanding the above, based on Conservation Halton's preliminary review of the information submitted, a number of key issues and/or deficiencies have been identified, including, but not limited to the following:

    a. Insufficient detail has been provided to determine what impacts the proposed quarry may have on the surrounding surface water and groundwater resources, as well as natural heritage features, functions and areas including, but not limited to, the Grindstone Creek, Bronte Creek and all related tributaries, provincially significant wetlands, endangered species / species at risk, significant wildlife habitat, significant woodlands and fish habitat. Further, it is not clear whether the proposed mitigation

measures will adequately ensure that the features and their functions will not be impacted over the long term.

b. The study area(s) identified in the submitted reports may not be sufficient to fully assess potential impacts of the proposed quarry on surrounding features (e.g., groundwater zone of influence should be evaluated not just those within 120m of site).
c. Insufficient detail has been provided to assess cumulative impacts to surface water, groundwater and the natural environment. Further, the 10-year period of baseline data for groundwater and surface water is insufficient to evaluate impacts.
d. The various studies submitted have not been adequately coordinated and integrated to provide a comprehensive evaluation of impacts and the identification of appropriate mitigation measures.

Conservation Halton is participating in the review of the proposal through the Region of Halton's JART process. The JART has agency representation from the Region of Halton, City of Burlington, Niagara Escarpment Commission and Conservation Halton. Additional comments will be provided through the JART review process.

Based on the reasons outlined above, Conservation Halton is of the opinion that the ARA application should not be approved.

We trust that these comments are of assistance. Should you have any questions, please contact the undersigned via email lsmith@hrca.on.ca or phone 905-336-1158 ext. 2235.

Yours truly,

Leah Smith MCIP, RPP
Manager, Environmental Planning
Conservation Halton
2596 Britannia Rd W
Burlington ON L7P 0G3

Cc (by email): Joe Nethery, Region of Halton
Gordon Dixon, City of Burlington
John Stuart, Niagara Escarpment Commission
Steven Strong, MNR Aurora District
Brian Zeman, MHBC Planning

Legislative and Planning Services
Planning Services
Halton Region
1151 Bronte Road
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December 14, 2020

Nelson Aggregate Co.
Attn: Tecia White
2433 No. 2 Sideroad, P.O. Box 1070
Burlington, ON L7R 4L8

Calinda Manning
c/o Integrated Aggregate Operations Section
Ministry of Natural Resources and Forestry
4th Floor S, 300 Water Street
Peterborough, ON K9J 3C7

(delivered by email and courier)

RE: Objection Letter to the Nelson Aggregate – Burlington Quarry Extension *Aggregate Resources Act* Licence Application, File #626477

Dear: Ms. White and Ms. Manning:

Halton Region is in receipt of your submission package. This letter is being provided by email in accordance with the direction provided in Form 1 approved by the Ministry of Natural Resources and Forestry. The Region's mailing address is above. Hard copies will follow by courier or delivery.

In initial review of the information, Halton Region has identified a number of concerns with the application. Halton Region, therefore, objects to the *Aggregate Resources Act* Licence application. Staff are of the opinion that the application in its current form does not have appropriate regard for the matter listed in s.12 of the *Aggregate Resources Act.* Furthermore, it is our opinion that the application does not constitute good planning and is not in the public interest—consequently, it should not be approved in its present form.

Halton Region is responsible for implementing matters of Provincial and Regional interest, as expressed by the 2020 Provincial Policy Statement, the range of Provincial plans, and the Halton Region Official Plan.

Please note that these concerns represent the results of our initial review and that Halton Region reserves the right to identify further concerns, to provide more detail and to provide additional recommendations for the resolution of any concerns identified as the review of this application continues.

The potential effects of the operation of the proposed pit and quarry on the environment have not been adequately addressed

1. The proposed extension lands include and are surrounded by natural features. The impacts of the proposed extension on the natural heritage system, features and functions have not been fully or adequately evaluated.
2. The reports submitted analyze the impact of the proposed extension against existing conditions and without reference to pre-quarry conditions. Cumulative impacts on the natural environment should be assessed.
3. The potential of the proposed extension to fragment the natural heritage system has not been adequately addressed. The quarry is surrounded by natural features that include woodlands and wetlands. The proposed westerly extension has the potential to fragment an existing woodlot, removing connectivity and linkages with other natural areas.
4. The potential impacts of the proposal on fish habitat have not been adequately assessed. The lack of integration between the supporting reports contributes to this lack of assessment. The applicant's hydrogeology and surface water reports identify potential impacts on water resources beyond 120m from the proposed expansion. However, the Natural Environment Report has restricted its assessment to 120m. Further, the Blast Impact Assessment needs to address potential impacts on fish habitat. Therefore there are potential ecological impacts that have not been assessed.
5. Insufficient detail and justification have been provided regarding the proposed Adaptive Management Plan.

The potential effects of the operation of the proposed pit and quarry on nearby communities have not been adequately addressed

1. A safety analysis has not been completed as part of the traffic study and is required to demonstrate that the proposal is not going to be detrimental to safety.
2. The truck routes to and from the quarry have not been detailed in the noise assessment, and acoustical mapping for those routes has not been completed.
3. The air quality study assesses too small an area, and only assesses individual phases. Potential overlap of phases has not been assessed. The study also makes assumptions about emission rates when the actual emissions from the operating quarry would provide a more accurate basis for assessment.
4. The proposed blasting impacts have not been adequately assessed. Data and formulas used in the report require clarification and consistent application throughout the report. Critical conditions for blasting and proximity to infrastructure and sensitive receptors need to be recognized in the study and associated documents.
5. The broader potential effects of the quarry on human health have not been addressed.

The suitability of the progressive and final rehabilitation plans for the site have not been adequately addressed

1. The subject lands contain Key Features and include Prime Agricultural Areas as well as NHS Enhancements/ Linkages/ Buffers. The Progressive and Final Rehabilitation and Monitoring Study focuses heavily on the proposed after use of parklands and fails to adequately consider the potential to rehabilitate the subject lands to accommodate natural features or agricultural uses.
2. Insufficient detail has been provided on long term and post-rehabilitation mitigation and management measures that may be required. More detail is required on how any such measures will be secured and funded over the long term.

The potential effects on ground and surface water resources including on drinking water sources and private wells have not been adequately addressed

1. With insufficient integration between the reports submitted by the applicant, the assessment of impacts on water resources is incomplete. The reports should be revised to address the inter-related impacts linking ground water and surface water to natural heritage. It is not possible to determine the potential impacts on the surrounding and nearby natural features without a full assessment of the surface water and groundwater impacts on ponds and other features that are outside of the area of study but likely to be within the area of influence. An integrated and cumulative assessment needs to be submitted in order to determine and analyze the extent of the potential impacts.
2. The Level 1 and Level 2 Hydrogeological and Hydrological Impact Assessment Report does not address groundwater quality. Both groundwater quality and drinking water standards will need to be addressed in order to adequately assess the potential impacts on drinking water sources and private wells.
3. The proposed mitigation measures lack adequate detail and justification. It has not been demonstrated that the proposed mitigation measures would be successful.
4. The analysis contained within the water resources reports is largely model driven. It has not been adequately established that the model used provides an adequate representation of either existing or future conditions. Further, there has been insufficient work done to ensure that the model results correlate with observed data. Confirmation is needed that model results are consistent with data and long term water levels.

The potential effects on agricultural lands have not been adequately addressed

1. A portion of the subject lands are designated Prime Agricultural Area under the Regional Official Plan. The removal of agricultural lands isn't supported by the Regional Official Plan as its objectives include preserving prime agricultural lands and maintaining as much land as possible for existing and future farm use. Based on the wording of the Provincial Policy Statement, the agricultural lands still need to be, "*promoted and protected*."
2. The ability of the lands to be rehabilitated to accommodate agricultural uses has not been assessed. It is worth noting that agriculture is not just soil based and that the agricultural system includes rural lands for the other aspects of agriculture beyond growing crops and therefore having lands for other agricultural related uses and linkages are integral to the agricultural system.

Planning and land use considerations require further assessment

1. Approval of a Niagara Escarpment Plan Amendment and Development Permit under the *Niagara Escarpment Planning and Development Act* process is first required prior to any approvals being issued. This has not yet occurred, and conformity with that Plan has not yet been demonstrated.
2. Amendments to the Halton Region and City of Burlington Official Plans are required prior to the Licence being issued. In this context, a variety of land use planning considerations must be addressed, including consistency with the Provincial Policy Statement (2020) and conformity with A Place to Grow: Growth Plan for the Greater Golden Horseshoe (2019) as well as the Halton Region Official Plan and City of Burlington Official Plan. Nelson has not provided sufficient assessment of these critical planning tests.

Haulage routes and effects related to truck traffic have not been adequately addressed

1. A safety analysis has not been undertaken to assess whether there will be any effect on traffic safety both entering and leaving the site and on the haul route.
2. The potential effect of increased noise from increased truck traffic on the haul route has not been assessed.
3. Information on traffic volumes is required. There is little discussion of mitigation strategies related to increased traffic along Regional roads likely to serve as haul routes.

Considerations remain with respect to the applicant's existing licence

1. The proposed rehabilitation plan indicates an overall plan to create a park on the entire quarry site (including the current and proposed expansion lands). Questions remain as to how the applicant is proposing to accommodate this plan within the context and confines of the current rehabilitation plan (natural filling of the excavated lands as a groundwater-fed lake). The necessary amendments to the rehabilitation plan for the existing quarry should be provided so that the rehabilitation plan and after use can be evaluated in a comprehensive manner.

Other matters that are appropriate to address

1. The financial impacts of the proposal on the City of Burlington and Halton Region have not been adequately assessed. The net financial impact to each municipality cannot be estimated based on the information provided.
2. The *Aggregate Resources Act* Site Plan and notes require revisions to address the above issues.
3. Halton Region notes letters of objection are anticipated from the City of Burlington, Niagara Escarpment Commission, and Conservation Halton. Halton Region is generally supportive of having those issues addressed through the review of the application.
4. Halton Region wants assurances that all objectors will be engaged by the proponent in a collaborative and constructive manner.
5. All commitments made during the consultation process by the applicant need to be fully detailed and properly secured through site plan conditions or appropriate agreements.

Conclusion

Given the volume and technical detail of the material provided in support of this application, Halton Region has not had sufficient time to fully analyze and assess the potential effects of the quarry

as proposed. Halton Region reserves the right to raise further issues and make further recommendations as its review progresses.

A Joint Agency Review Team (JART) approach will be used to review this proposal under the auspices of Halton Region's Halton Consolidated – Streamlined Mineral Aggregate Review Protocol. This was most recently updated by Halton Region Council in February 2020. The function of a JART is to review, analyze and comment on the completeness of the submissions supporting a proposal for new or expanded mineral aggregate extraction operations, and to comment and analyze the proposal on its technical merits. The JART will provide coordinated technical comments that will inform decision-making of the parties. Halton Region looks forward to engaging with the proponent through this process alongside our agency partners, and to involving Provincial staff at key intervals (confirmed via correspondence from Calinda Manning received August 14, 2020). This includes the production and provision of detailed comments to support discipline-to-discipline conversations on issues with the proposal.

Halton Region requests notification of any future meetings or updates on the review of this file.

For further questions and correspondence on this file, Halton Region's project manager is Joe Nethery (joe.nethery@halton.ca, 905-825-6000 ext.3035), using the mailing address on page 1 of our submission.

Sincerely,

Curt Benson, MCIP, RPP
Director of Planning Services and Chief Planning Official

cc: Jamie Tellier, City of Burlington (by email)
Barb Veale, Conservation Halton (by email)
Debbie Ramsay, Niagara Escarpment Commission (by email)
Kevin Powers, Project Advocacy Inc. (by email)
Quinn Moyer, Nelson Aggregates Co. (by email)
Brian Zeman, MHBC (by email)

Ministry of Natural Resources and Forestry

Integrated Aggregate Operations Section

Regional Operations Division
300 Water Street
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E: ARAApprovals@ontario.ca

Ministère des Richesses naturelles et des Forêts

Section de la gestion intégrée des agrégats

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300, rue Water
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Ontario

December 14, 2020

Via Email

Nelson Aggregate Co.
Att: Tecia White
2433 No. 2 Sideroad
P.O. Box 1070
Burlington ON, L7R 4L8
e-mail: tecia@white-water.ca

Dear Ms. White:

Subject: *Aggregate Resources Act* (ARA) Licence Application - 626477
Nelson Aggregate Co. (Burlington Quarry Extension)
Class "A", Category 2 – Quarry Below Water
Pt. Lots 17 & 18, Conc. 2 NDS, and Pt. Lots 1 & 2 Conc. 2
Geographic Township of Nelson, City of Burlington, Halton Region

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The Ministry of Natural Resources and Forestry (MNRF/Ministry), Integrated Aggregate Operations Section (IAOS), has reviewed your application for a Category 2 licence for a quarry operation under the Aggregate Resources Act (ARA) which was received on October 29, 2020.

The MNRF review of the application included review of the following documents that were submitted in support of this application:

- Aggregate Resources Act Site Plan prepared by MacNaughton Hermsen Britton Clarkson Planning Limited (MHBC) and dated September 2020;
- Planning Justification Report & Aggregate Resources Act Summary Statement, Burlington Quarry Extension, prepared by MHBC and dated September 2020;
- Burlington Quarry Extension Surface Water Assessment, Nelson Aggregate Co., prepared by Tatham Engineering and dated April 2020;
- Level 1 and Level 2 Hydrogeological and Hydrological Impact Assessment Report of the Proposed Burlington Quarry Extension, Nelson Aggregates Co., prepared by Earthfx Incorporated and dated April 2020;

- Level 1 and Level 2 Natural Environment Technical Report Proposed Burlington Quarry Extension, Nelson Aggregates Co., prepared by Savanta and dated April 2020;

- Archaeological Assessment (Stages 1, 2 & 3), Nelson Aggregates Quarry Expansion prepared by Archaeologix Inc. and dated August 2003;

- Stage 1-2 Archaeological Assessment prepared by Golder Associates Ltd. and dated September 15, 2020;

- Archaeological Assessment (Stage 4) Nelson Aggregates Quarry Expansion prepared by Archaeologix Inc. and dated August 2004;

- Cultural Heritage Impact Assessment Report, Burlington Quarry Extension, City of Burlington, prepared by MHBC and dated April 2020;

- Noise Impact Assessment, Nelson Aggregate Quarry Extension, Burlington, Ontario, prepared by HGC Engineering and dated April 22, 2020; and

- Blast Impact Analysis, Burlington Quarry Extension, prepared by Explotech and dated April 23, 2020.

In addition to the above list, we are aware that additional reports were prepared that were not required under the ARA. MNRF relies on other agencies to comment on these related to their interests and mandates. If there are changes to the ARA site plan as a result, we may have further comments to provide.

As per the ARA process, The Ministry offers the following comments and issues for your attention:

1 GENERAL

1.1 The application and the interrelationship between various supporting reports is, at times, confusing. There are several instances where one report references detail from another report without providing what those specific details are. The reviewer is subsequently required to search and cross-reference information in other reports to understand a particular document. For ease of review, details related to the recommendations and conclusions of each report should be described within that report even if it has stemmed from information in another report.

1.2 Current, adjacent ARA licence #5499 is referenced throughout the application in reports, recommendations and on the site plan. An ARA site plan and/or licence amendment application needs to be submitted for the existing licence including all proposed changes that will be sought to incorporate the operational conditions and rehabilitation plans as per the proposed licence application. The amendment application for the current licence needs to show how it will address all items that are found within the new application (e.g., a new berm to be created around asphalt

plant located on license #5499 was referenced as how the noise report was assessed for the new application).

1.3 The West Extension/golf course lands are stated to be currently owned by someone other than Nelson Aggregate Co. (Nelson) throughout the application. Prior to any approval of a licence for this property proof of the right to extract by ownership (copy of deed), lease or extraction agreement will need to be provided to the Ministry.

1.4 The site plans will need to be updated as the Ministry's comments and concerns are resolved (and all other agency/public resolution of concerns). Attention should be given to wording to ensure that conditions are clear, concise and enforceable.

2 SUMMARY STATEMENT

2.1 The Ministry acknowledges the site will produce an estimated 30 million tonnes of high-quality limestone close to the Greater Toronto Area market.

2.2 The application will also require approvals pursuant to the Niagara Escarpment Planning and Development Act (NEPDA). Specifically, a Niagara Escarpment Plan Amendment and associated development permit must be approved before an ARA licence can be Issued. MNRF notes that any changes to the application that may occur to address policies and requirements of the NEDPA approval process may require changes to the ARA proposal and result in additional comments.

3 HYDROGEOLOGICAL LEVEL 1 AND 2 REPORT

We have several comments related to both the model used in support of the application and the characterization of potential impacts of natural heritage features within the zone of influence from the proposed expansion. Of particular interest to the Ministry is the characterization of surface and groundwater input of water-based natural heritage features (i.e., watercourses and wetlands).

3.1 Groundwater model calibration results provided for the flow stations show graphs of actual measured flow and predicted calculated flow. The calibration graphs presented in the report show varying levels of calibration (i.e., some results demonstrate good calibration, others are not well calibrated). In order to assess if the calibration achieved is acceptable for the predictive simulations, the applicant should provide calibration graphs for all the flow monitoring stations as well as the entire period of flow measurements.

3.2 The Ministry notes that several wetlands outside of the 120 metre study area may be impacted by the proposed quarry expansion. Please assess for potential impacts on all wetlands, streams and springs located within the quarry's groundwater zone of influence. This information can subsequently be used to ensure that appropriate mitigation targets and thresholds are included in the adaptive management plan.

3.3 The current cut-off drawdown of 2.0 metres for the Zone of Influence may not be appropriate to evaluate potential impacts to the wetlands and watercourses from the proposed expansion. Further discussion will be required.

3.4 In addition to water quantity and quality, thermal impacts to the nearby streams, wetlands and springs within the quarry's zone of influence should be assessed.

3.5 Please describe surficial deposits underlaying the wetlands based on field investigations at the scale of a particular wetland. If the subsurface information is not available, the installation of additional monitoring wells may be required. Installation of multi-level monitoring nests is recommended to understand vertical movement of groundwater and its relationship with surface water. Depending on the size of the wetland, more than one monitoring well may be necessary to characterize a feature.

3.6 The Ministry notes that evaluation of potential impacts to the wetlands are based on applying a uniform hydraulic conductivity for Halton Till. We require further information on local variability of till hydraulic conductivity at a wetland-specific scale.

3.7 In order to ensure that all wetlands are assessed for potential impacts as a result of the quarry expansion, please provide maps showing calculated drawdowns within Layer 1 and Layer 2 for surficial deposits of the groundwater model in predictive calculations. Further, an appropriate drawdown cut-off for each wetland needs to be selected. The Ministry notes even a small change in groundwater level below a wetland may impact the wetland's hydroperiod and groundwater-surface water interaction.

3.8 For wetlands within the Zone of Influence, wetland hydroperiod, water level and temperature thresholds for each of the wetlands should be assessed to determine the potential for impacts from the quarry expansion and identify appropriate mitigation.

3.9 Please provide additional information on seasonal surface/groundwater interaction patterns for the streams located within the zone of influence by completing additional monitoring wells near the streams. Please develop seasonal flow and temperature thresholds for all the streams that may be impacted (based on stream function).

3.10 Please provide additional assessment on how lowering of the groundwater divide as a result of the western quarry expansion could impact water levels to the Medad Valley Provincially Significant Wetland complex (and specifically Wetland 24) to ensure there is no negative impacts to the wetland. The Ministry notes that lowering of the groundwater divide has the potential reduce the flow to the valley and the spring flows. A water balance assessment of this wetland may also be required to determine potential impacts.

3.11 In some of the documentation, the wetland boundaries are not well delineated or described. Further, the boundaries and designation of the wetlands vary between reports and, occasionally, within the reports themselves. We request revised figures clearly showing wetland boundaries and monitoring points used to characterize the

wetlands. The reports should be updated to reflect consistent designation of monitoring points so conclusions can be more easily reviewed.

3.12 Potential impacts to the springs located at the east slope of the Medad valley and Niagara escarpment should be characterized and appropriately assessed to ensure the springs' flows are not impacted. Monitoring data for the flow of the springs should also be collected as part of characterizing these features.

3.13 The Adaptive Management Plan identifies Wetland 13034/13035 for mitigation; however, no information is provided with respect to a hydrogeological or surface water assessment of these features. Additional information related to the characterization of the wetland is required.

3.14 Alternative mitigation measures for the western expansion infiltration ponds is required in the event the water levels in the bedrock do not reach the anticipated final elevation levels. Additional information and monitoring is required to demonstrate that the proposed mitigation measures will work as intended.

3.15 Attached Table 1 identifies more technical details to be addressed.

4 NATURAL ENVIRONMENT LEVEL 1 AND 2 REPORT

The Level 1 and Level 2 Natural Environment Technical Report has been reviewed in comparison to the Natural Environment Level 1 and Natural Environment Level 2 Report Standards for a Category 2 Application and in consideration of relevant provincial legislation and policies including the Provincial Policy Statement and associated technical guidance material.

Overall, the technical report provides an adequate summary of the natural heritage feature assessment, including methods of investigation, results and qualifications of the principal investigators. However, the Level 1 assessment is considered incomplete and does not currently meet the report standards for the following reasons:

- it does not clearly conclude whether some features are present (e.g., significant wetlands);
- conclusions regarding absence of some features are not adequately substantiated (e.g., significant wildlife habitats);
- the summary of features present does not include a provincially significant Area of Natural and Scientific Interest that overlaps the 120 m adjacent lands; and
- because the Ministry is seeking confirmation from other agencies that their interests have been appropriately considered.

The Level 2 assessment is also considered incomplete because not all significant features have been considered, the impacts of some operational activities have not been included or sufficiently characterized, and because it has not been adequately demonstrated there will be no negative impact on fish habitat or certain significant natural heritage features and their ecological functions.

General and feature-specific comments and issues are described below.

General

4.1 Several operational activities involve work near wetlands, fish habitat or aquatic significant wildlife habitat (e.g., Woodland Amphibian Breeding Habitat). Development adjacent to these features is prohibited unless it has been demonstrated that there will be no negative impacts on the feature or its ecological functions. The language for proposed preventative or mitigative measures needs to be directive and free from ambiguity. It should also provide detail on the minimum requirements to avoid negative impacts to protected features rather than identifying several broad elements that should be included in a plan. For example, please specify a timeframe for stabilization of exposed or disturbed soils and inspection and monitoring frequency, as well as requirements for record-keeping. Records should be made available to MNRF upon request.

4.2 To ensure no negative impact to significant features or habitats within the adjacent lands, please ensure recommendations for naturalizing areas with plantings specify that only native, non-invasive species appropriate for the site conditions will be planted (e.g., within setbacks).

4.3 Section 11.4 of the report should provide a summary of the recommendations. The recommendations need to be written in clear, concise and directive language for use on the site plan. There must also be enough detail to be enforceable. Please confirm that all report recommendations have been accurately reflected on the site plan and in the Adaptive Management Plan (where appropriate).

Significant Wetlands

4.4 Section 6 of the report describes a few unevaluated wetlands within the study area but does not provide a conclusion regarding their significance. A deciduous swamp community was overlooked in this section, as well as in Table 2 (see adjacent lands on the west side of the limit of extraction in Figure 3b). Please provide a conclusion on the status of all wetlands within the licence area and 120 metres adjacent lands (e.g., evaluated - significant, evaluated - not significant, unevaluated - assumed significant). If unevaluated wetlands will be assumed significant for planning purposes, further discussion is required to ensure certain minimum information requirements are met to adequately inform the impact assessment. All provincially significant wetlands (PSW) (i.e., significant through evaluation or assumed significant for planning purposes) must be carried forward to the Level 2 assessment and no negative impact must be demonstrated.

4.5 The potential for impacts to the water budget, water levels and hydroperiod of all wetland units (evaluated as significant or assumed) within the quarry dewatering zone of influence has not been adequately characterized. Please see comments on Hydrogeological Level 1 and Level 2 Assessments. The potential to impact each wetland must be evaluated and agreed upon before thresholds for negative impact can be identified and monitoring requirements and triggers for adaptive management responses to ensure no negative impact can be finalized. Further discussion is required.

4.6 The report identifies potential indirect impacts to wetlands within the adjacent lands related to changes in catchment area sizes, infiltration rates or discharge of pumped water from the quarry, but does not really qualify or quantify the impacts so the extent, duration, and likelihood of impact can be understood.

a. Please clarify the likelihood and extent to which water levels in wetlands could be impacted, including whether site dewatering may result in wetter conditions than those observed pre-development.

b. Please clarify what portion of the catchment area for Wetland 13200 will be reinstated through site rehabilitation, whether pumping will still be required to maintain its hydroperiod after the grade is reinstated and confirm whether this area is enough to maintain the features and functions of the wetland and the Large Toothwort community (significant wildlife habitat).

c. Please confirm whether water pumped to Wetland 13200 (and significant woodland) to maintain the hydroperiod will be dispersed to reduce energy and potential for sedimentation and erosion to occur.

d. Please confirm how discharge from the overflow weir will drain overland into the Grindstone Creek Headwaters Wetland Complex PSW (wetland 13037) and whether there is potential for sedimentation and erosion to occur. Also, please clarify whether the proposed aggregate extraction will impact seeps identified within wetland 13037 (see Ontario Wetland Evaluation System record). No negative impacts to this feature must be demonstrated.

e. A figure showing the catchments for the wetlands (and fish habitat) in the study area relative to the limit of extraction and licence area should be included as context for this assessment.

f. Please clarify the quarry filling period for the lake features in the south and west extensions to inform the impact assessment for natural heritage features and to better understand the timing for final rehabilitation.

4.7 The report indicates water quality conditions in wetlands within the adjacent lands are anticipated to remain unaffected by the operation. Please substantiate this conclusion by confirming whether the quality of water being pumped to wetlands to maintain the pre-development hydroperiod will meet appropriate guidelines (e.g., provincial water quality objectives and Canadian Council of Ministers of the

Environment aquatic life guidelines), if thermal impacts are anticipated and whether any monitoring is required to ensure appropriate quality or temperature.

4.8 A berm is being proposed within 30 metres of Wetland 13202. The significance of this wetland remains to be confirmed; however, the wetland has already been confirmed as fish habitat and significant wildlife habitat. A 14 metre buffer on these features may not be adequate to avoid negative impacts and further discussion on wetland significance, berm design and berm location is required.

4.9 With respect to the visual berm at the south end of the south extension, please confirm the setback from the Grindstone Creek Headwaters Wetland Complex PSW, whether any impacts are anticipated and any preventative, mitigative or remedial measures necessary to ensure no negative impact.

Fish Habitat

4.10 The report describes how Largemouth Bass are present in the irrigation ponds and channel on the golf course within the West Expansion and that the population appears to be reproducing. This suggests spawning and nursery habitat is present. We defer to Fisheries and Oceans Canada (DFO) on whether this constitutes fish habitat and request confirmation that Fisheries Act obligations for this proposal, if any, have been met.

4.11 The potential for impacts to the water balance of streams has not been adequately characterized (see comments on Hydrogeological Level 1 and Level 2 Assessments). The water balance must be established, and agreed upon, before an adaptive management plan to address negative impacts can be finalized. Given the expansion sites are located on the Mount Nemo Plateau, an important source of water for Bronte Creek, Grindstone Creek and the Medad Valley (including Lake Medad), potential cumulative impacts should also be considered, to the extent possible. Further discussion is required.

4.12 Please clarify whether the footprint, construction or operation of the temporary settling pond and longer-term sump for the south extension will impact fish or fish habitat, and if so, minimum requirements to prevent, mitigate or remediate impacts. Also, please expand the related site plan note to provide MNRF with confirmation from DFO that Fisheries Act obligations, if any, have been met prior to construction or installation of the discharge to the West Arm of the West Branch of the Mount Nemo Tributary.

4.13 Please clarify whether blasting may result in water overpressures or streambed vibrations that will negatively impact fish and/or fish habitat, and if so, please propose preventative, mitigative or remedial measures to address negative impacts.

4.14 Please confirm that the seasonal water temperature targets for the Unnamed Tributary at Colling Road and in the downstream Willoughby Creek (Tatham, 2020) are appropriate for the fish community present in each feature. Similarly, please confirm for all fish habitats whether the proposed thresholds for minimum baseflow (Tatham, 2020) are appropriate for the fish community and habitats present.

4.15 When removing the golf course irrigation ponds and channel within the West Extension, the report recommends that if water is to be pumped from the feature then it is to be treated as necessary to ensure no turbid water is discharged to a natural watercourse. The site plan indicates that if water is to be pumped from the feature to facilitate site preparation, it will be directed to the existing sump for discharge in accordance with Ministry of Environment Conservation and Parks (MECP), Environmental Compliance Approval (ECA) and Permit To Take Water (PTTW) requirements. Please confirm this approach addresses concerns around potential impacts to water quality in fish habitat downstream.

4.16 A fish rescue should be carried out prior to removing the golf course irrigation ponds and channel within the West Extension. A Licence to Collect Fish for Scientific Purposes is required to permit the fish rescue. Habitat removal should be timed to prevent disruption to sensitive fish life stages by adhering to appropriate fisheries timing windows (i.e., no in-water work between March 15 and July 15 for Largemouth Bass and other spring spawning species). These details should be incorporated into the site plan.

Significant Woodlands

4.17 Woodland features E, F and G are located within the Limit of Extraction. Map 1G *Key Features within the Greenbelt and Regional Natural Heritage Systems* in Halton's Regional Official Plan appears to show these woodland features as Key Features. Please confirm whether Halton Region, the City of Burlington and the Niagara Escarpment Commission agree with the assessment of significance for woodlands on and within the 120 metres adjacent lands.

4.18 We request confirmation the municipality and the Niagara Escarpment Commission accept the proposed setbacks from the limit of extraction and the berm locations relative to the Significant Woodlands.

4.19 Please clarify whether the 30 m setback from Significant Woodlands is from the woodland edge or from the dripline.

4.20 A 3 m setback from the edge of the small nodes (Significant Woodland M) and portions of Significant Woodland P may not be enough to protect the root zone of edge trees, especially given the potential for the berm to cause soil compaction and grade changes that could suffocate tree roots. Further discussion on potential impacts to Butternut and the rare vegetation community within Woodland M, berm design and berm location is required.

4.21 Tree protection measures need to be a requirement of the site plan to ensure there is no encroachment during fencing, site preparation and berm construction to protect the root zone of edge trees from any negative impact. Please revise the report recommendations on page 71 to provide detail on minimum requirements for tree protection.

Habitat of Endangered and Threatened Species Habitat

4.22 Butternut, Barn Swallow and Bat habitat are present within the proposed limit of extraction. Butternut, Barn Swallow and Bobolink habitat, as well as regulated habitat for Jefferson Salamander, are present within the adjacent lands. Bat habitat is also assumed present in the adjacent lands. We request confirmation from the MECP that Endangered Species Act obligations, if any, have been met (including confirmation of any registration for removal of habitat). Any operational or rehabilitation requirements necessary to fulfill obligations should be provided in writing to the Ministry as soon as possible and prior to a decision on the licence.

4.23 Butternut, Barn Swallow and Bobolink habitat was confirmed present and should be included in the Level 1 assessment summary (section 6.8).

Significant Wildlife Habitat

4.24 All significant wildlife habitats confirmed at the site should be included in the Level 1 assessment summary (section 6.8) and impacts should be assessed in the Level 2 impact assessment (section 7) (e.g., Deer Winter Congregation Areas, Rare Vegetation Community (Fresh-Moist Black Walnut Lowland Deciduous Forest), Amphibian Movement Corridor, Special Concern and Rare Wildlife Species (Large Toothwort)). As part of the Level 2 impact assessment, please ensure indirect impacts to these features are also considered, including impacts of site alteration or development on the physical site conditions that support the features or functions for which these features were identified (e.g., cover, soil moisture etc.).

4.25 Please provide information on the survey dates from mid-March to May where no seasonal flooding was observed to substantiate conclusions regarding absence of Waterfowl Stopover and Staging Areas (terrestrial).

4.26 Karst features have been identified at or adjacent to the site and bat hibernacula may be found in karsts. Please confirm whether the type of karst present at or within 200 metres of the site could function as a bat hibernaculum, and if so, whether surveys were conducted during the peak swarming period to evaluate significance.

4.27 Suitable ecosites for Bat Maternity Colonies were identified, but the method for identifying candidate maternity roosts was not consistent with the guidance referenced in the Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E (ecoregional criteria). To better understand whether the assessment was acceptable, please explain the rationale for the transect approach used in those sites less than 1 ha and the proportion of each polygon surveyed by the transect approach as compared to the minimum requirements in the guidance referenced in the ecoregional criteria.

4.28 Candidate Bat Maternity Colonies were identified, but the method for evaluating significance was not consistent with the guidance referenced in the ecoregional criteria as exit surveys were not completed. Interpreting the number of individual bats present at a location based on acoustic call survey results is problematic for the reasons recorded in the Natural Environment Technical Report. Exit surveys should be carried out in Polygons F and G to confirm significance, or the features should be assumed significant wildlife habitat and carried forward to the Level 2 assessment.

4.29 Table 19 indicates that candidate Turtle Wintering Areas were identified (i.e., suitable ELC ecosites are present and habitat criteria are met). Basking surveys were carried out on April 22, May 10 and June 11, 2019, but there was significant cloud cover during surveys at most stations on April 22 and at all stations on May 10. Recorded temperatures were less than 15°C. Such environmental conditions result in low detectability because turtles are slow and inactive when they are cold. Surveys carried out under these conditions that fail to find turtles are not conclusive in determining presence/absence. The June 11 survey was carried out too late to identify wintering habitat. Additional surveys to confirm significance should be completed, or the features should be assumed significant wildlife habitat. The status of SWD3-2a is particularly of interest given anticipated impacts to the connectivity of this feature.

4.30 Table 19 indicates that candidate habitats for a Reptile Hibernaculum are present (i.e., suitable ELC ecosites are present and habitat criteria are met). Snake surveys were carried out on April 22, May 16 and June 11, 2019, but the first two surveys were on cool (<15°C) and cloudy days which results in low detectability because reptiles are generally hidden. A visual encounter survey in June is too late to identify potential hibernacula. Please confirm whether candidate habitat is present within the proposed limit of extraction or Woodland D (and the other retained features adjacent to Woodland D), and if not, why. If candidate habitat is present in these areas, then additional surveys to confirm significance should be completed.

4.31 Candidate Waterfowl Nesting Area, Marsh Breeding Bird Habitat and Special Concern and Rare Wildlife Species Habitat (Canada Warbler, Golden-winged Warbler, Grasshopper Sparrow, Red-headed Woodpecker, Wood Thrush, Purple Martin) were identified within the study area (see Table 19). Breeding bird surveys were carried out on June 10, 11, 25 and 26, 2019. This is only two, late season surveys given the consecutive days surveyed. The survey guidelines referenced in the ecoregional criteria specify a minimum of 3 surveys, conducted early in the season, mid-season and later in the season with at least 10 days between surveys. Please confirm whether the timing of surveys and level of effort is considered adequate for documenting presence/absence of these bird-related significant wildlife habitats, and if so, explain why.

4.32 The evaluation record for the Provincially Significant Grindstone Creek Headwaters Wetland Complex (OMNR, Aurora District, February 2007) identifies two seeps within wetland 13037. Table 19 and the Level 1 assessment should be revised to indicate that Seeps and Springs are present within the 120 metres adjacent lands and the feature should be carried forward to the Level 2 assessment. No negative impacts should be demonstrated.

4.33 Please clarify whether SWD3-2/Wetland 13200 meets the habitat criteria for candidate Amphibian Breeding Habitat. The status of this feature is particularly of interest given anticipated impacts to the connectivity of this feature. If candidate habitat is present in these wetlands, then additional surveys to confirm significance should be completed.

4.34 Please confirm how Terrestrial Crayfish surveys were completed, when and by whom to substantiate conclusions regarding absence of this significant wildlife habitat.

4.35 Please clarify why the site does not provide suitable habitat for Common Nighthawk (Special Concern and Rare Wildlife Species), especially where rocky outcrop habitat was described for polygons D, F, H, K, M, Na and Nb. There is an observation for this species in the area from 2011 (ebird) and the species is listed for the Ontario Breeding Bird Atlas squares that overlap the site.

4.36 Suitable habitat for West Virginia White (Special Concern and Rare Wildlife Species) was identified within FOD5-5, however the survey period (i.e., June 10 - August 9) does not correspond well with the adult flight period for West Virginia White in Ontario as described in *Burke, 2013. Management Plan for the West Virginia White (Pieris virginiensis) in Ontario. Prepared for the Ontario Ministry of Natural Resources, Peterborough, Ontario. 44pp*. Please confirm whether the timing of surveys and level of effort is considered adequate for documenting habitat use by this species, and if so, why.

4.37 Environment Canada has established the migratory bird nesting period for region C1 to be from late March to late August. We recommend that tree removal occurs between August 25th and March 30th to protect nesting birds, including Eastern Wood-pewee. If there are open areas suitable for nesting by migratory birds, then these areas should only be stripped outside of the breeding season.

4.38 Please confirm whether any impacts to the hydroperiod of the Amphibian Breeding Habitat (SAS1) and moisture regime of the associated woodland habitat are anticipated, and if so, propose preventative, mitigative or remedial measures to ensure no negative impact. Any hydrological impacts to the Fresh-Moist Black Walnut Lowland Deciduous Forest (Rare Vegetation Type) should also be considered.

4.39 Please clarify whether the footprint, construction or operation of the temporary settling pond and longer-term sump for the south extension will impact significant wildlife habitat (or unevaluated wetlands assumed significant), and if so, minimum requirements to prevent, mitigate or remediate impacts to ensure no negative impact.

4.40 The rehabilitation plan includes reforestation as a remedial measure to address negative impacts to significant wildlife habitats (i.e., Bat Maternity Colonies and Special Concern and Rare Wildlife Species (Eastern Wood-pewee breeding habitat)). The goal should be to restore a minimum of 1000 trees of any size/hectare to create woodland habitat following the Forestry Act definition. As the site plan proposes a planting density of 10 trees/100 m^2, 100% of plantings would need to survive to create woodland. We recommend increasing the planting density to allow for losses due to competition, stress and animal damage. The site plan should also include more specific targets or criteria for successful rehabilitation. We recommend that 'free-to-grow' is clarified to mean survival for a minimum of 2 growing seasons

and that a minimum 1000 trees in 'free-to-grow' condition/hectare is necessary for success (versus 80% survival of plantings).

4.41 To ensure no negative impacts to significant wildlife habitat, please identify how much habitat meeting the Forestry Act definition of woodland will be created.

Significant Areas of Natural and Scientific Interest

4.42 The Level 1 assessment must determine whether significant Areas of Natural and Scientific Interest (ANSI) exist on the site or within 120 metres of the site. As a portion of the provincially significant Medad Valley Life Science ANSI overlaps the 120 metre adjacent lands, the presence of this feature should be documented in the Level 1 assessment summary (section 6.8) and impacts should be assessed in the Level 2 impact assessment (section 7).

Key Natural Heritage Features

4.43 We defer to the Niagara Escarpment Commission (NEC) regarding compliance with the Niagara Escarpment Plan (NEP). Please provide confirmation the NEC has no issues with the proposed limit of extraction and ensure that any restrictions on operations, or conditions for rehabilitation necessary to address NEP requirements are reflected in an updated site plan as soon as possible and prior to any decision on the licence.

5 ADAPTIVE MANAGEMENT PLAN

Adaptive Management Plans (AMP); April 23, 2020

Establishing Mitigation Targets

The AMP proposes a different methodology to establishing mitigation thresholds/targets from other, active quarries on the Niagara Escarpment (and in Halton Region). For other approved quarries, mitigative actions are tied to pre-established seasonal ground and/or surface water targets appropriate for a given feature. Generally, these targets seek to ensure that mitigation maintains the existing conditions of these features (e.g., prior to any influence of dewatering or discharge from the quarry), while recognizing seasonal variability. Existing conditions are established based on a full assessment of the feature often including several years' worth of surface and groundwater data.

The AMP proposed in support of this application proposes to use a concept known as “Comprehensive Groundwater Trend Analysis” as part of target setting. Part of the rationale provided by the applicant includes concerns over the number of “false-positive” triggers associated with simpler approaches to target setting as well as the inability of other models to address climatic changes resulting from climate change. Because this approach has not been used in the past and deals with a relatively complex statistical analysis to establish targets, further discussion with MNRF will be required to ensure this approach is appropriately protective. Of particular interest will be determining how

(and whether) change in water levels that might result from quarry dewatering can be easily discerned from climate change or other users within the study area.

Specific Comments on AMP

In addition to target setting methodologies, we would also like to provide the following comments on the AMP:

5.1 There appears to be key information missing from the AMP. For example, not all wetland hydroperiod and shallow groundwater monitoring locations have been established. Further, not all wetland hydroperiods within the zone of influence have been characterized and target levels for some features have not been included in the AMP. As suggested earlier in this letter, some of the significant natural heritage features and fish habitat will require additional characterization before impacts are fully understood.

5.2 The Ministry requests clarification that the Surface Water Monitoring Locations Plan (Drawing SW-1) has been included in the report (AMP P.21 Paragraph 1).

5.3 Reference to Table 1 on page 22 (paragraph 2) appears to be incorrect and should refer to Table 4.

5.4 The Ministry requires further explanation how the impact evaluation will determine whether extraction and/or quarry dewatering is (or is not) the cause if streamflow drops below baseflow thresholds, water temperatures exceed target thresholds, or unexpected reduction in wetland hydroperiods occur (AMP, page 25 paragraph 4 and page 26, paragraph 3).

5.5 Please provide further information why maximum water thresholds (where appropriate) have not been established (AMP page 26 Table 8).

5.6 The Ministry requests that performance monitoring data be defined and include an assessment of what trends will be analyzed and what methodologies are proposed to be used. The approach to data analysis must be robust, include meaningful signals of change, and produce conclusive results (AMP page 38, Paragraph 6).

5.7 Please clarify that changes to the AMP can only be implemented with approval from MNRF (AMP page 39, Paragraph 1).

5.8 Task 4 should be clarified to be consistent with reporting requirements outlined in section 8 (i.e., annual reports are due annually on June 30th, beginning the year following the sink cut for the Southern Extension) (AMP page 39, Table AA).

5.9 Task 6 should be revised to require review of the AMP at regular intervals (e.g., 5-year intervals). (AMP page 39, Table AA).

6 CULTURAL HERITAGE RESOURCES REPORT

The Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) letter of clearance for the Archaeological assessments levels 1 to 4 (Archaeologix Inc. 2004), for lots 17 and 18, is dated 2004. The Ministry requests confirmation that MHSTCI is satisfied that the archaeological assessments submitted reflect current standards.

The Golder Resources Archaeological Report level 1 and 2, for Lots 1 and 2, dated September 2020 has not been accompanied with clearance letter from MHSTCI. We request MHSTCI's review and clearance be provided.

7 NOISE REPORT

7.1 The assessed operations of the noise impact assessment must become requirements of the site plan to ensure provincial guidelines for noise are satisfied. This includes the site plan of the existing operation #5499. Please confirm whether the operating conditions and sound power levels of the existing quarry are consistent with the assumptions and recommendations of this noise study, or if a site plan amendment is required (Example noise assessment based its conclusions on operations on 5499 and barrier to be installed around asphalt plant). Also, please detail and confirm that all assumptions of the assessment and recommendations of the report have been accurately reflected on the site plan. For example, the site plan does not appear to indicate that a maximum of three haul trucks can be used to transport material from the working face to the processing area or a maximum speed limit for truck traffic on the site (e.g., 35 km/hour).

7.2 If the Ministry receives a noise complaint, how will the proponent demonstrate compliance with provincial guidelines and the requirements of this noise impact assessment (e.g., acoustical performance of silencers on the baghouse stack and the barrier on the mixing tower, performance of equipment etc.)? Please provide recommendations for the site plan on monitoring and record keeping, as well as any adaptive management actions necessary to ensure on-going compliance.

7.3 Please confirm whether the equipment to be used to create the pond in the West extension setback was considered in the assessment. Updates to the report and site plan may need to be done if not.

8 BLAST DESIGN REPORT

Please confirm that all necessary details or assumptions regarding extraction assessed as part of this report have been adequately incorporated into the site plan to ensure blasting is carried out safely and within guidelines set by the province. For example, Table 2 (Details for Extraction for Each Individual Phase of the Burlington Quarry Extension) describes a location for the sinking cut in the south extension but no location for the sinking cut is included in the site plan note. Is the location of the sinking cut important to ensuring provincial guidelines are met?

9 SITE PLAN

The Ministry requests that when the site plan is updated it follow the Aggregate Resources of Ontario Provincial Standards conditions numerical order in which they are listed for a Category 2 application. The comments below are listed by condition as well as general section references.

Site Plan General:

9.1 Site plan Page 2, H. Offsite Ecological Enhancement Plan – Remove this condition and information from drawings. Anything located off the licence property cannot be enforced by MNRF and should be addressed through other approvals/agreements with appropriate agencies.

9.2 Throughout the site plan the Adaptive Management Plan (AMP) is referenced in several
different manners resulting in some confusion. Further discussion on the best way to reference the AMP is required.

9.3 Site Plan Standards by condition #:

1.1.27 - *significant natural features on and within 120 metres of the site;*
There are missing significant natural features (E.g. PSW, Bobolink habitat) on and within 120m of licence boundary, as identified in the NEL reports and available databases. You can contact the Ministry for more specific details. Please update the site plans as appropriate.

1.2.3 - *the maximum number of lifts and the maximum height of the lifts;*
Where discussed (Pg 2. Section J) on the plan these conditions have not clearly identified what the maximum number of the lifts will be. Please update to identify maximum number vs minimum.

1.2.7 - *any proposed water diversion and points of discharge to surface water;*
Plan Pg 2 Section D.3. Preparation of the pond in west extension needs to be described in more detail. For example, how is it being created, what equipment will be used, where is material from pond excavation going? *This information may impact other reports (E.g. Natural Environment, Noise).

Plan Pg G.2. - Please show on the drawing the discharge location for the South Quarry Extension. Working around wetlands and water mitigation should be referenced here. Minimum requirements to ensure no negative impact to fish habitat (and other significant habitats should be specified, depending on the location and footprint).

1.2.8 - *the location, type and installation schedule or phasing for any proposed fencing around the licensed boundary of the site;*

Plan Pg 2 – C. Mentions closing current accesses at numerous locations – remove this detail. Between the existing features plan and proposed operations this is apparent without being stated.

Variation: common boundary, West extension adjacent licence 5499. This needs to be confirmed once an amendment has been applied for on licence 5499.

1.2.13 - *the location of any proposed fuel storage area(s) on the site;*
Plan Pg 2 L.3. As per the Provincial Standards Prescribed Conditions a Spills contingency program will be developed prior to site preparation (not equipment operations). Please edit this condition to read appropriately.

1.2.18 – *the location of any proposed berms and the minimum height*
Berms are discussed in numerous locations throughout the site plan. On Plan Pg 2. F.5 What distance will berms remain from the pipeline? “Will not encroach” is not specific enough.

1.2.19 - *details on how berms will be vegetated and maintained*
Plan pg. 2. Under F.7/1.2.28 - 4.c – Please clarify was is meant by 'vegetated' and 'natural condition'. Are native species proposed for planting?
O. 4.j. – remove word “recommended” from all sentences.
O.4.k. – replace word “should” with “will,” remove word “preferably” – state they “will” be planted in spring or late summer.

1.2.20 - *the general types of equipment that will normally be used on site;*
Include all equipment needed for all operations (pond creation) and remove word “may.”

1.2.21 - *the location, design and phasing of any proposed tree screens and identify whether deciduous, coniferous or both;*
Section O, Plan Page 2:
4.d. States existing trees and shrubs will remain in front of proposed Southern noise berm in West Extension. Please explain what these consist of (coniferous/deciduous/ both).
4.e. Native species should be planted (please remove “where appropriate”).
4.h. Recommend linking this comment to the conditions that it is referencing (4e, f, g?). The Ministry requests removing staghorn sumac from the list of species to be potentially planted.

1.2.23 – *details of how trees and stumps shall be disposed of or utilized;*
Plan page 2 E. Site Preparation note 3. - Trees, shrubs and stumps cleared or removed during site preparation should be retained on the site to provide coarse and fine woody debris to enhance soils and created habitats during site rehabilitation.

1.2.28 – *any recommendations and/or monitoring program(s) identified in the technical reports*

There are several reports that were submitted as part of this application and the Ministry will need to ensure that all report recommendations, as may be updated throughout the resolution of objections process, are accurately reflected on the plan prior to any approval.

Air Quality:

1b. For clarity more detail is needed to cross reference the required information for berm creation that addresses air quality concerns.

Noise:

3.1. The Noise report references haul of materials and number of trucks going to and from proposed licence to existing licence 5499. These specific details are not reflected within the recommendations on the site plan and should be identified as per the assessment for noise. Similarly, the equipment controls specified as assessed in noise report (equipment operating hours, implementation of BMPS during site prep, progressive rehab and final rehab) need to be adequately addressed on the plan.

Visual Impact Assessment:

*See comments also under section 1.2.21

4.a. Remove word “should,” and replace with “will” (2 locations).

4.e. Remove “Where appropriate…”

4.j. Remove word “recommended,” and replace with “will” (2 locations).

4.k. Remove would “should” and replace with “will”. Remove word “preferably” before ‘in spring or late summer.’

Traffic:

5.b – remove word “should” and identify where the crossing will be as per drawing.

5.c. – remove word “should” replace with “will.”

Water Resources:

This section will require updates to incorporate resolution of comments made regarding the hydrogeological and hydrological reports and the adaptive management plan.

Natural Environment:

This section will require updates to incorporate resolution of comments made regarding the natural environment reports and the adaptive management plan.

Agricultural:

8.a. Remove word “recommendations” and clearly describe what conditions need to be included on the site plan to prevent impacts to agricultural lands.

When updating this section ensure to remove word “should,” replace with “will,” where necessary.

Financial:

The Ministry will not enforce third party arrangements. Please remove reference to financial agreements.

Plan page 3 Progressive Rehabilitation/ Final Rehabilitation Plan:

C.2. Revisions are required to replace the term “inert fill” and update site plan conditions regarding importation of excess soil to be aligned with the Ministry of Environment, Conservation and Parks regulation, as amended. MNRF aggregate program direction regarding the importation of excess soil is currently being updated to reflect the MECP regulations. We will discuss this with you during the resolution of objections step.

Note: The responsibility for pumping in the long term will need to be defined and the transition to another party clearly established as a pre-requisite to the licence being issued/surrendered if this is the intention.

E. Drainage

This section may change with updates to the application as issues are addressed. E.6. references current licence 5499 – this should be included in 5499 amendment to ensure enforceability.

10. Closure

Based on the deficiencies noted in the technical reports and our comments on the site plans, the Ministry wishes to register an objection to the proposal in this ARA licence application. We require a response to these comments and concerns before we can consider the application any further. Please also be advised that we may have additional comments on the technical reports and/or the site plans based on this response to our comments and concerns.

All correspondence for this application should be directed to my attention at the contact information provided below.

If you have any questions, or require additional information, feel free to contact me at 807-620-6334 or by e-mail at Calinda.manning@Ontario.ca.

Sincerely,

Calinda Manning

Calinda Manning
Aggregate Specialist
Integrated Aggregate Operations Section

c: ARAapprovals@ontario.ca

Attachments: Table 1 – additional Hydrogeological comments

Table 1.

MNRF Wetland No.	Earth FX Wetland ID No	Tatham Wetland No.	Monitoring Points	Comments
13037	20	13037	SW 16A-SG, Golder MP16, SW16B	1. Table 7.2 of hydrogeological report shows that MNRF wetlands numbered 13036, 13037, 13038, 13039 are grouped together under Earthfx number 20. Please show clear boundaries of the wetlands 13036, 13037, 13038, 13039 and how they were grouped together. If all the wetlands are grouped under wetland 1337, please show clear boundaries of wetland 13037. 2. Please show location of SW 16A-SG and MP16 within the wetland. 3. Please provide subsurface logs and completion details for the SW16B and Golder MP16. 4. Please provide information on subsurface conditions recorded in the field and field hydraulic conductivity estimates of the overburden below the wetland. 5. Please show comparison of water levels recorded by SW16-A-SG, Golder MP16 and SW16B. 6. Please provide information on groundwater- surface water interaction 7. Observed and simulated water levels for MP16 shown in Figure 19.44 do not show a good calibration and there is an offset in maximum levels of approximately 3 months. Please provide comment on whether this offset in hydroperiod allows for using this model for predictive simulations to evaluate the wetland hydoperiod 8. Please provide predictive calculations of water level elevations in the the wetland and model layers 1 and 2 and compare them with the baseline and recorded conditions. 9. Please comment on potential impacts based on the predicted water levels. 10. The MNRF Grindstone Creek Headwaters PSW Evaluation notes that the larger wetland of the 13037 is seepage-fed and contains a seep that can be seen discharging to the surface. Please provide comments on potential impacts to the seeps contributing to the wetland 13037
13033	17	13027	SW11, SW11-B, Golder MP5, Golder MP6, Golder SG-1, Golder SG-2, Golder SG-3	1. Please use clear and consistent reference to this wetland and instrumentation in all reports submitted. Tatham refers to this wetland as No. 13027 however Earth FX does not discuss this wetland, however I maybe referring to the wetland as 13033. From the Figure 6.21 of the EarthFx report It can be seen that there are three small wetlands in this area. Please provide information whether these wetlands were grouped together. 2. Please provide clear boundary of the wetland showing location of the monitoring points. 3. Please provide logs describing subsurface conditions for this wetland. 4. Please provide information on subsurface conditions recorded in the field and field hydraulic conductivity estimates of the overburden below the wetland. 5. Please provide comparison and discussions of groundwater - surface water relationship, clearly identifying periods when wetland recharges groundwater and when groundwater recharges wetland. MP5 and SG2 water levels are compared in Figure 19.43 of the report however no discussions are provided with regards to the groundwater/surface water relationship using the rest of monitoring points. 6. Comparison of observed and calculated water levels for MP5 and SG2 presented in Figure 19.43 show that the water level in fact do not match very well and cannot be used for predictive simulations. Groundwater levels calculated show offset of maximums and minimums by approximately 2-3 months which could be important factor in evaluating groundwater/surface water interaction in predictive simulations. Surface water levels match better than the groundwater levels however there is elevation difference up to 20-30 cm which could be significant for species that maybe relying on availability of the surface water. 7. Please provide predictive calculations of water level elevations in the the wetland and model layers 1 and 2 and compare them with the baseline and recorded conditions. 8. Please comment on potential impacts based on the predicted water levels. 9. Please evaluate how species relying on the water in this wetland and woodlands maybe impacted as a result of the development.

13022	16	13022	SW12, SW12B-MP, Golder MP29, Golder MP11	1. Please provide clear and consistent boundary of this wetland throughout the reports and figures. In hydrological report (Figure SW2), the wetland identified as 13022 has very different boundaries than in the hydrogeological report (Figure 7.22). In fact several wetlands would be within the limits of 13022 wetland, namely wetlands No. 13019, 13021, 13017, 13018, 13030 and maybe other if the two above mentioned maps are compared. 2. There is no wetland characterization was found for the wetlands No. 13019, 13021, 13017, 13018, 13030 in either reports. Please characterize those wetlands and evaluate potential impacts. 3. Please provide subsurface information associated with this wetland (or group of wetlands) including providing monitoring well logs, field determined hydraulic conductivity of the underlying material. 4. Please comment on surface / groundwater interaction based on the results from the field program. 5. From the Figures 19.38 and 19.39 of hydrogeological report it can be seen that the calculated and measures water levels at MP11 and MP29 do not match very well and cannot be used for the purpose of predictive simulations because of the offset by approximately 3 months in timing when the maximum water level occur. This can be very significant for the species that rely on the presence of water in the wetland. 6. Please show how the model was calibrated to surface water recorded at staff gauge SW12 or other staff gauge installed in this wetland. 7. Please consider completion of additional monitoring wells to characterize subsurface conditions and obtain water level information in this wetland (or wetlands) 8. Please comment on potential impacts based on the predicted water levels. 9. Please evaluate how species relying on the water in this wetland and woodlands maybe impacted as a result of the development.
13016	11	13016	SW13A, SW13B	1.Please provide clear and consistent mapping of the wetland throughout the reports and use consistent designation for monitoring points. Please clearly show location of monitoring points. 2. Please provide subsurface information associated with this wetland including providing monitoring well logs, field determined hydraulic conductivity of the underlying material. 3. Please comment on surface / groundwater interaction based on the analysis of surface water level and groundwater level obtained as a result from the field program. 4. From the Figure 19.41 of hydrogeological report it can be seen that the calculated and measures water levels SW13A do not match very well and cannot be used for the purpose of predictive simulations because at some times the discrepancy in water levels is approximately 30 cm. This amount could be significant for species relying on the water in this wetland. 5. Please comment on potential impacts based on the predicted surface water and groundwater levels. 6. Please evaluate how species relying on the water in this wetland and woodlands maybe impacted as a result of the development.
13032	19	13032	SW5a - also used as a monitoring point to monitor wetland 13031	1. Please provide a map clearly showing boundary of the wetland. The map can show two wetlands 13032 and 13031.
13025			MP33	1. Please provide a map showing clearly boundary of the wetland and location of the monitoring point. Please complete a monitoring well to understand degree of surface water- groundwater interaction for [potential impact evaluation and to confirm subsurface conditions. 2. Please clarify whether MP33 is a surface water monitoring point or groundwater. Please provide completion details of MP33

13015	10		Golder MP17, Golder MP13	1.Please provide clear and consistent mapping of the wetland throughout the reports and use consistent designation for monitoring points. Please clearly show location of monitoring points. 2. This wetland was not characterized. Please provide information on the water level in this wetland, how it relates to groundwater level, groundwater-surface water interaction, subsurface conditions and evaluate potential impacts. 3. Shallow groundwater levels recorded in MP17 and calculated levels for the same location presented in Figure 19.36 of EarthFx report do not show acceptable calibration for the purpose of accessing potential impacts to the wetland. The calculated and observed water level do not match well and there could be up to 0.7 m difference between them when the water levels are high. During low water level periods, the difference between measured and calculated water levels could be up to 5 m. 4. Shallow groundwater levels recorded in MP13 also do not show acceptable calibration when compared with calculated levels shown in Figure 19.37 of the hydrogeological report. The difference between calculated and measured water levels is approximately 1 m.
13014	9		GP03-37	1.Please provide clear and consistent mapping of the wetland throughout the reports and use consistent designation for monitoring points. Please clearly show location of monitoring points. 2. This wetland was not characterized. Please provide information on the water level in this wetland, how it relates to groundwater level, groundwater-surface water interaction, subsurface conditions and evaluate potential impacts. 3. Please provide completion details for GP-03-37. Please comment on whether this monitoring location measure water level in the wetland or shallow groundwater. 4. Shallow water levels recorded in GP03-37 and calculated levels for the same location presented in Figure 19.35 of hydrogeological report do not show acceptable calibration for the purpose of accessing potential impacts to the wetland. Neither maximums nor elevations of the measured and calculated water levels show an acceptable match. The difference in water levels could be around 2 metres and the timing of occurrence of maximum water levels is offset by approximately 3 months.
	8			1. This wetland was included in Figure 7.22 of the hydrogeological report as significant wetland feature selected for budget analysis however no information about this wetland is contained in the report. Please characterize this wetland and provide evaluation of potential impacts as a result of the quarry development.
13203	18	13203		1. Please show boundaries of this wetland, characterize the wetland and evaluate potential impacts.
13201	21	13201		1. This wetland was not fully characterized. Please provide information on the water level in this wetland, how it relates to groundwater level, groundwater-surface water interaction, subsurface conditions and evaluate potential impacts. Please provide details of mitigation measures during operations and post-operations.
13200	22	13200		1. This wetland was not fully characterized. Please provide information on the water level in this wetland, how it relates to groundwater level, groundwater-surface water interaction, subsurface conditions and evaluate potential impacts. the EarthFx report states that the wetland is "perched" however no support for this statement is provided. Please provide details of mitigation measures during operations and post-operations.
13202		13202		1. This wetland was not fully characterized. Please provide information on the water level in this wetland, how it relates to groundwater level, groundwater-surface water interaction, subsurface conditions and evaluate potential impacts. Please provide details of mitigation measures during operations and post-operations.

Niagara Escarpment Commission

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Niagara Escarpment Commission
An agency of the Government of Ontario

December 14, 2020

Nelson Aggregate Co. Attn: Tecia White
2433 No. 2 Sideroad, P.O. Box 1070
Burlington, ON L7R4L8.
tecia@white-water.ca

AND

Ministry of Natural Resources & Forestry (MNRF) Attn: Calinda Manning
Integrated Aggregate Operations Section
4th Floor S, 300 Water Street
Peterborough, ON K9J 3C7
ARAApprovals@ontario.ca

Dear Ms. Tecia White and Ms. Calinda Manning:

RE: Application under the Aggregate Resources Act for a Class A, Category 2 (Quarry Below Water) License.
ERO REF #: 019-2698
Part Lot 17 & 18, Concession 2 NDS, Part Lot 1 & 2, Concession 2, City of Burlington, Region Of Halton
Niagara Escarpment Commission File Nos: NEPA PH 219 20, DPA H/E/2020-2021/108.

This is in response to the above-noted application being considered under the Aggregate Resources Act (ARA). Please accept this correspondence as notice that the Niagara Escarpment Commission (NEC), an agency of the Province of Ontario under the Ministry of Natural Resources and Forestry (MNRF), objects to the approval of the application for the following reasons:

1. Pursuant to Section 24 (3) of the Niagara Escarpment Planning and Development Act (NEPDA) which provides:

> *No building permit, work order, certificate or licence that relates to development shall be issued, and no approval, consent, permission or other decision that is authorized or required by an Act and that relates to development shall be made, in respect of any land, building or structure within an area of development control, unless the development is exempt under the regulations or,*

(a) a development permit relating to the land, building or structure has been issued under this Act; and

(b) the building permit, work order, certificate, licence, approval, consent, permission or decision is consistent with the development permit. 1999, c. 12, Sched. N, s. 4 (9).

The NEC maintains that until such time that an NEC Development Permit is issued, any approval or licence under the Aggregate Resources Act being contemplated would be premature as the lands are subject to NEC Development Control established by *O.Reg 826/90, as amended*. NEC Development Permit Application H/E/2020-2021/108 is currently be processed in conjunction with the Niagara Escarpment Plan Amendment (NEPA) application PH 219 20. NEC Staff participate in the Region of Halton Joint Agency Review Team (JART) that is convened to review complex aggregate applications. As this process progresses through technical review, and as the NEPA and DPA applications are circulated for comment, NEC Staff will endeavor to provide updates to MNRF Staff on any substantial developments.

2. At this time, NEC Staff are of the opinion that, based on a preliminary review of the technical studies, the applicant has provided insufficient detail to demonstrate conformity with the policies of the Niagara Escarpment Plan (NEP) 2017. A number of conformity issues have been identified including, but not limited to, the following:

   a. Cumulative impacts associated with the current extraction operation and recreation use are not well assessed or discussed within the context of a continued and expanded extraction operation. They are also not well expressed through the proposed rehabilitation plan. Cumulative impacts associated with the impact on groundwater relative to the existing quarrying operation have not been discussed; the NEP requires a proposal have regard for multiple or successful development that may have occurred or are likely to occur. The data provided to establish baseline groundwater and surface water is not sufficient to afford a fulsome view of past impacts to water resources that may have resulted from the existing extraction operation.

   b. The scope of the assessment of key natural heritage features (KHNF) and key hydrologic features (KHF), including their connectivity, is limited to 120 m of the lands. Connectivity, considering the movement of native plants and animals across the landscape includes KNHFs & KHFs within 240 m of each other as provided by the NEP (2017). In some instances, connecting features are proposed to be removed and KNHFs & KHFs identified for protection become isolated.

   c. Impacts to critical fish habitat as a result of proposed changes to surface and ground water, as well as proposed blasting, are not well explored in the technical submission. In addition, the extent of critical fish habitat on site, and in proximity to the site has not been confirmed by the Department of Fisheries and Oceans (DFO).

d. The submission has not been adequately assessed from a cultural heritage perspective. No consultation with Indigenous communities was conducted despite the area being identified as being within traditional territory of the Haudenonsaunee and Anishinaabe communities. More information is required on mitigation for the future protection of built cultural heritage located on the proposed southern extension lands. Findings from the conducted archaeology studies and visual impact assessment study have not been incorporated into the cultural heritage study in discussion of cultural heritage landscapes. A portion of the western expansion lands has not yet been assessed for archaeological resources.

e. The proponent has not adequately demonstrated the appropriateness of the proposed progressive and rehabilitation plan. The proposed rehabilitation plan focuses on a specific after-use instead of considering the past and current context of the subject lands from a natural heritage, hydrologic feature, prime agricultural, or open landscape character perspective. NEC Staff recognize the effort by the proponent to consider integration with NEPOSS through the rehabilitation plan, however it is predominantly focused on a recreational after-use. If NEPOSS inclusion is proposed as part of the after-use plan, it should integrate findings of the other technical studies in consideration of what NEPOSS park classifications may be more appropriate and/or achievable.

f. The ability for the lands to be rehabilitated to accommodate future agricultural use of the site has not been well explored. The expansion lands are considered to be prime agricultural despite what current use may be operating on them. Any rehabilitation plan should consider the inclusion of future agricultural use; the scope of which would not be limited to traditional field cropping agriculture but should consider all agricultural uses as permitted through Provincial policy.

g. A broader assessment of the open landscape character and the inclusion of additional viewpoints is required through the submitted visual impact assessment to better define impacts that may be realized from the Mount Nemo plateau and other surrounding areas. These findings should be incorporated in a fulsome definition of the cultural heritage landscape that exists in the area.

3. Overall, a better integration of the findings from the various technical studies is requested. It is suggested that this integration be completed predominantly through the lens of natural heritage and ecology.

The above reasons for objection will be expanded upon and provided to the proponent as part of the JART technical review that is on-going. NEC Staff anticipate additional public consultation, through the NEPA and DPA processes, during the first half of 2021. The technical review will continue through that period as well.

Based on the provided reasons, the Niagara Escarpment Commission is of the opinion that the ARA application should not be approved until such time as further public consultation and technical review has taken place, and until such time as a Niagara Escarpment Plan Amendment is approved and a Development Permit been issued for the proposal.

We trust these comments are of assistance. Should you have any questions or concerns please to do not hesitate to contact John Stuart, Senior Strategic Advisor (acting) at John.Stuart@Ontario.ca.

Regards,

Debbie Ramsay, RPP MCIP,
Director (A)
Niagara Escarpment Commission

Cc: Joe Nethery, Region of Halton
Gordon Dickson, City of Burlington
Leah Smith, Conservation Halton