



FINAL

Social Impact Assessment Port Colborne Quarries Inc. Pit 3 Extension

**Part of Lot 17, 18 and 19, Concession 2,
(formerly Township of Humberstone)
and Plan 59R-16702
City of Port Colborne, Ontario**



Prepared for Port Colborne Quarries Inc.
by IBI Group
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1 Introduction

This Report has been prepared to support applications for the re-designation, rezoning and licensing of lands owned by Port Colborne Quarries Inc. (PCQ) to permit aggregate extraction. The subject lands are located east of the existing PCQ properties (Pit 2 and Pit 3) that are currently licensed under the Aggregate Resources Act (ARA) to operate a Category 2- Class A Quarry Below Water, identified as Licence 4444.

PCQ is requesting approval to extend the existing Pit 3 licensed operation eastward on additional lands owned by PCQ.

In order for extraction to occur on the subject lands, the following approvals are required:

- Amendment to the Region of Niagara Official Plan 2014, to designate the lands as *Licensed Pits and Quarries*.
- Amendment to the City of Port Colborne Official Plan 2017, to re-designate the lands from *Agricultural* to *Mineral Aggregate Operation*.
- Amendment to the City of Port Colborne Zoning By-Law 6575/30/18, to rezone the lands from *Agricultural (A)* to *Mineral Aggregate Operation*. (MAO) and to reduce the minimum setback from a Provincial Highway from 90.0 m to 30.0 m.
- Application to the Ministry of Natural Resources, under the Aggregate Resources Act for a Category 2 Licence (Class A Quarry Below Water).

The subject lands are in the central portion of the City of Port Colborne just outside and to the northeast of the existing built-up area and bounded by Miller Road to the east, Highway 3 (Main Street) to the south and Second Concession Road to the north. The existing quarry lands owned by PCQ are to the west and rear lot line of homes fronting onto Miller Road are to the east.

As specified during the Pre-Submission Consultation Meeting (April 23, 2020) and as part of the Region of Niagara application requirements for a Regional Official Plan Amendment, is the completion of a Social Impact Assessment. The study is to be informed by the following:

- Technical studies undertaken regarding specific or direct social interactions with the proposed quarry include:
 - Acoustical (noise)
 - Air quality (dust)
 - Blasting / Vibration
 - Traffic
 - Visual
- Technical studies undertaken regarding associated social interactions with the proposed quarry include:
 - Archaeology
 - Cultural Heritage
 - Surface water
 - Groundwater
 - Natural Environment

2 Technical Studies Completed

Port Colborne Quarries Inc. retained experts to undertake technical studies related to the above noted disciplines as follows:

- a) A Noise (Acoustical) Impact Assessment has been completed and is attached to the Planning Justification Report as Appendix B. The report was prepared by Golder Associates Inc. and authored by J. Tomaselli dated December 2020 and updated December 2021. The Curriculum Vitae for J. Tomaselli is also attached to that report.
- b) An Air Quality Impact Study has been completed and is attached to the Planning Justification Report as Appendix D. The report was prepared by Golder Associates Inc. authored E. Lau dated December 2020, and updated December 2021. The Curriculum Vitae for E. Lau is attached to that report.
- c) A Blasting (Vibration) Impact Study has been completed and is attached to the Planning Justification Report as Appendix F. The report was prepared by Golder Associates Inc. and authored by D. Corkery dated July 2020, and updated October 2021. The Curriculum Vitae for D. Corkery is attached to that report.
- d) Traffic Impact Assessment has been completed and is attached to the Planning Justification Report as Appendix O. The report was prepared by IBI Group and authored by D. Hook and dated October 2020. Curriculum Vitae for D. Hook is attached to that report.
- e) Visual Impact Assessment has been completed and is attached to the Planning Justification Report as Appendix P. The report was prepared by IBI Group and authored by D. Sisco dated December 23, 2020 and updated December 2021. The Curriculum Vitae for D. Sisco is attached to that report.

As well as:

- f) Archaeology Study (Stage 1 and 2) has been completed and is attached to the Planning Justification Report as Appendix Ei and Eii). The reports were prepared by Golder Associates Inc. and authored by M. Teal and dated July 2020. The Curriculum Vitae for M. Teal is attached to that report.
- g) Cultural Heritage Screening Report has been completed and is attached to the Planning Justification Report as Appendix G. The report was prepared by Golder Associates Inc. and authored by H. Cary and dated July 2020. The Curriculum Vitae for H. Cary is attached to that report.
- h) Surface water Study has been completed and is attached to the Planning Justification Report as Appendix I. The report was prepared by Golder Associates Inc. and authored by K. Mackenzie dated August 2020, and updated December 2021. The Curriculum Vitae for K. Mackenzie is attached to that report.
- i) Groundwater Study has been completed and is attached to the Planning Justification Report as Appendix J. The report was prepared by Golder Associates Inc. and authored by S. McFarland dated August 2020, and updated October 2021. The Curriculum Vitae for S. McFarland is also attached to that report.
- j) Natural Environment Study has been completed and is attached to the Planning Justification Report as Appendix L. The report was prepared by Golder Associates Inc. and authored by H. Melcher dated August 2020, and updated November 2021. The Curriculum Vitae for H. Melcher is also attached to that report.

3 Social Impact Analysis

3.1 Potential Direct Social Impacts

Each of the above investigations identified potential impacts related to social impacts. Specifically, those that may have the potential for direct social impacts include the following:

- a) **Noise:** Noise issues will include:
 - noise from the rock drill rig preparing the blasting holes,
 - the actual blasting,
 - the extraction of the rock from the quarry face with front-end loaders,
 - quarry trucks hauling the rock to the off-site processing area, (Pit 1 and then eventually to Pit 3),
 - the aggregate processing, (crushing, screening, washing),
 - stockpile stackers,
 - haul trucks [dump trucks] being loaded and
 - hauling the material from the quarry,
 - importation of clean inert fill for rehabilitation.
 - Other incidental and minor noises would include vehicle activity including: employee vehicles, maintenance / service trucks such as fuel deliveries and equipment repair, road sweepers and/or wash-trucks.

The threshold for stationary noise limits has been established by the Ministry of Environment Conservation and Parks (MECP). The Acoustical (noise) Impact Study specifically included in their modeling, all the above noted noise sources and made assumptions to ensure that worst-case scenarios were being considered. The result was that the Report made numerous recommendations to address and attenuate noise to the surrounding community which include:

- Minimum berm heights of 4 metres high along the south property line and a minimum 2 metres high along the east and north property lines.
- Identifying areas requiring additional and/or specific noise controls and/or quieter types of equipment (Noise Zone 1, Noise Zone 2 and Noise Zone 3).
- The local barrier height and alternative controls required to achieve compliance with applicable noise limits within the identified areas are noted below:

NOISE ZONE	EQUIPMENT SPECIFIC NOISE CONTROLS
1	Drill – local barrier extending 2.0 m above major noise source associated with the drill.
2	Drill – local barrier extending 3.0 m above major noise source associated with the drill.
3	Drill – attenuated equipment (i.e. reduced noise emissions or replace with quieter equipment)

- Extraction and processing operations will occur only during the daytime period (7:00 am – 7:00 pm).
- The general extraction progression to be followed is shown on the Operational Plan.

Prepared for Port Colborne Quarries Inc.

- Setback distances between the drilling rig/blasting and receptors will be determined/ confirmed through the blast monitoring program.
- All existing on-site/perimeter berms shall remain in place for the Port Colborne Quarries Inc.: Pit 1, Pit 2 and Pit 3 lands.
- Extraction equipment will not exceed specified Overall Sound Power Levels.
- On-site haul trucks will not exceed 35 km/h.

Based on the above, it can be determined that the possible social impacts have been identified, and the noise report has identified the nearest sensitive receivers. In some portions of the site, the report has recognised that additional and/or overriding noise restrictions are expected based on the blast monitoring program. As such, the report has provided detailed recommendations to ensure the proposed quarry noise is attenuated to meet provincial noise guidelines, and therefore, social impacts are deemed to have been successfully met.

In addition, site-specific noise modeling will be finalized to reflect the aggregate processing activity being proposed to be sited on the Pit 3 quarry floor. This supporting documentation will accompany a pending Site Plan Amendment for the Pit 3 License (Licence 4444).

b) Dust: This will include particulate matter that may be created as a result of:

- blasting,
- front-end loader activity in loading the blasted rock and
- general activity in and around the quarry face,
- haul trucks travelling to and from the quarry face to the processing plant,
- stockpile stackers used to create segregated/processed aggregate stockpiles,
- haul trucks being loaded and from the trucks hauling aggregate through the quarry to the weigh scales and from there to the Highway 3 exit.

The Air Quality Impact Assessment Study specifically included in their modeling, all the above noted dust sources and made assumptions to ensure that worst-case scenarios were being considered. The result was that the Assessment made numerous recommendations to address and mitigate fugitive dust to the surrounding community including the requirement for a Best Management Practices Plan for the Control of Fugitive Dust (BMPP) and these include:

- The amount of explosive used will be reduced to less than 6,160 kg when meteorological conditions require it, such as wind gusts exceeding 40 km/hr, and/or when the extraction face approaches the property line and/or sensitive receptors. The actual reduced amount of explosive will be determined through the blast monitoring program.
- The amount of material handling at the extraction face will be reduced to less than 4,500 tonnes per day when meteorological conditions require it, such as wind gusts exceeding 40 km/hr, and/or extraction face approaches the property line and/or sensitive receptors.
- The licensee shall use water as a dust suppressant to control fugitive emissions as necessary and during dry periods.
- The Best Management Practices Plan for the Control of Fugitive Dust (BMPP) prepared by Golder Associates Ltd. dated December 2020, and as amended, shall be posted in the on-site pit administration office. Compliance with the BMPP is deemed to be a Site Plan condition.

Further passive techniques being implemented into the operational plan to augment the potential for fugitive dust include:

- Significant setbacks for sensitive receivers.
- The construction of perimeter berms that will be vegetated with a grass-type legume as soon as possible. The vegetation not only will prevent erosion from occurring but will help capture dust.
- Quarry activity, extraction and trucking activity to be operated at the lowest quarry floor whenever possible which will be a minimum 8.0 m below grade.

Based on the above, it can be determined that potential social impacts have been identified, and the air quality report has identified all nearest 76 sensitive receivers. The report has also provided recommendations to ensure quarry dust is mitigated on-site to meet federal guidelines. However, most importantly is the implementation of the Best Management Practices Plan (BMPP) which will be a living document that is updated as necessary to address and necessary regulatory changes. Therefore, social impacts are deemed to have been successfully met.

In addition, site-specific dust modeling will be finalized to reflect the aggregate processing activity being proposed to be sited on the Pit 3 quarry floor. This supporting documentation will accompany a pending Site Plan Amendment for the Pit 3 License (License 4444).

- c) **Blasting / Vibration:** Although the duration of blasting is measured in milliseconds, and expected to only occur about twice per week, noise and vibration impacts can result. Impacts might include:

- excessive noise,
- excessive vibration
- structural damage to buildings or other infrastructure.

The threshold for blasting noise has been established by the Ministry of Environment Conservation and Parks (MECP) and specifically NPC 119. The Blast Impact Assessment specifically included in their modeling, all the above noted dust sources and made assumptions to ensure that worst-case scenarios were being considered. The result was that the Report made numerous recommendations to address and mitigate dust to the surrounding community which include:

- The initial series of test blasts, occurring with approximately one month of the commencement of blasting shall be monitored at a minimum of five (5) locations at varying distances from each blast to refine the ground and air vibration attenuation characteristics and confirm that MECP – NPC 119 of the Model Municipal Noise Control By-Law is being met. This will entail establishing monitoring stations between the blast site and neighbouring receptors [residences], during the sinking cut and development of the initial bench face. The site-specific attenuation data developed during this monitoring period shall then be used to better define ground vibration and air concussion effects at the nearest receptors.
- Routine monitoring of all blasting operations shall be carried out in the vicinity of the closest receptor to the proposed blasting operations. As extraction continues with the quarry and blasting operations move, the actual monitoring site shall be routinely and regularly reviewed so that the closest receptor is always being monitored for ground and air vibration effects.
- Maintained a record of all blasting details including a seismic record of the ground and air vibration monitoring results. The blast details and monitoring results shall be

made available to the Ministry of Natural Resources and Forestry (MNRF) and the Ministry of Environment, Conservation and Parks (MECP) upon request.

- Prohibit blasting on Saturdays, Sundays and Statutory holidays.
- When blasting within approximately 300.0 metres of adjacent residences, the quarry shall regularly review their blast procedures in conjunction with the blast monitoring results to assess when it is necessary to reduce the maximum explosive weight detonation per delay period with the blast. The termination point for the blasting operations will be governed by the results of the on-site monitoring program.

Based on the above, and the detailed assessment undertaken via the Blasting Impact Assessment, it can be determined that the resolution of potential social impacts due to blasting impacts has been successfully attained.

d) Traffic:

- A) Internal truck traffic - has the potential to result in noise and dust impacts.

As noted above, both the noise study and dust study included internal truck traffic into their modelling calculations and therefore, the above noted applicable recommendations will apply to this use of internal truck movements.

- B) Off-site traffic – has the potential for safety concerns as trucks egress and ingress and to have implication to the larger road system in terms of capacity.

Initially, truck traffic generated from Pit 3 Extension will be directed through the existing Pit 1 entrance / exit onto Ramey Road and Highway 140.

Eventually, and during the Phase 1 extraction, a new entrance will be required. Based on initial discussions with MTO regarding their position/direction for a new quarry access location onto a provincial highway, it was denied and that Ministry identified the preferred option was that truck traffic would access the highway at Miller Road, (thereby necessitating an entrance on the Miller Road frontage). Such an entrance location was perceived by the Region, City and PCQ as having the potential for land-use conflicts due to traffic, off-site noise, and the general sense of quarry activity spilling out onto the regional road. Furthermore, the Region had concerns with the engineering capacity of the road to accommodate large aggregate trucks.

Further to ongoing discussions with MTO initiated by the Regional staff, MTO agreed to support a quarry access location subject to it being coincident with the existing Weaver Street intersection (at Carl Road location).

The findings of the Traffic report concluded that from a capacity basis, no impacts are predicted. From a safety basis, the report made one recommendation:

1. Construct a minimum 35-metre-long eastbound left-turn lane by 2039 (or upon completion of Pit 1 backfilling) to accommodate quarry-related traffic reassigned to the proposed Highway 3 access.

PCQ will be required to obtain a Provincial Highway access permit and be responsible for all the design and construction costs associated with constructing the quarry access.

Based on the above, and the detailed assessment undertaken via the Traffic Impact Study, it can be determined that the resolution of potential social impacts due to traffic, has been successfully attained.

- e) Visual:** Although the majority of quarry activities will be a considerable depth below grade, there is a general public preference that all extraction activity be visually screened to limit views of the industrial activity in an otherwise rural setting. The focus

of the visual screening is primarily for the neighbouring residents and less so on vehicular traffic on adjacent roads.

The critical views toward the quarry are primarily the Miller Road residents which back onto the quarry, and those along Highway 3 which front or back onto the quarry site. The visual impact will include:

- Possible views of on-going quarry activity
- Especially those which will occur at the upper grades of the quarry, (drill rig and blasting truck) and initial quarry lift (8.0 metres below grade) which might include the top portions of a stock pile and/or stacker.

The key tool for visual screening is earth berms constructed along the perimeter of the site. The berms serve a variety of mitigation purposes (noise, dust) but certainly are the primary strategy to block sight-lines.

The Visual Impact Assessment confirmed possible views that may be possible and provided a series of detailed cross-sections to identify the potential impacts and how the berms would provide suitable screening. In most cases, the significant separation distance between the sensitive receptor and quarry is significant (i.e., 300 metres).

In addition to the above, numerous additional recommendations were made:

- To visually screen the Pit 3 Extension, the following is recommended:

- | | |
|---------|---|
| Berm A: | A 4.0 metre-high berm along the Second Concession frontage built with a 4:1 slope on the external side and 3:1 on the internal side and with vegetation plant between the berm and boundary fence as recommended in the NEL 1-2 report. |
| Berm B: | A 2.0 metre-high berm along the northern portion of the eastern property boundary with a 3:1 slope. Existing hedgerow vegetation is to be retained where possible. |
| Berm C | A 2.0 metre-high berm along the northern portion of the 'eastern-tab' built with a 3:1 slope. |
| Berm D | A 4.0 metre-high berm along the Miller Road frontage and extending latterly for 100.0 metres along the northern and southern property limits of the 'eastern-tab' with a 4:1 slope on the external side.
Where the 4.0 metre gap is retained at the mid-frontage location in the berm for farm equipment access, a temporary minimum 2.0 metre-high berm (minimum 50.0 metres long) will be constructed behind the 4.0 metre berm at the gap location. |
| Berm E | A 2.0 metre-high berm along the southern portion of the 'eastern tab' built with a 3:1 side slope. |
| Berm F | A 2.0 metre-high berm along the eastern boundary of the property extending south to Main Street and built with a 3:1 slope. |
| Berm G | A 4.0 metre high along the Main Street frontage built with a 4:1 slope on the external side. |
| Berm H | A 3.0 metre-high berm along the western property boundary associated with 1326 Main Street. |

- During the initial 8.0 metre deep excavation lift, all stockpiles within 200.0 metres of Highway 3, Miller Road and Second Concession Road shall not exceed 10.0 metres in height.
- Both coniferous and deciduous trees are to be planted between the berm and the Highway 3 (Main Street) and Miller Road boundary fence.

- That all berms be immediately vegetated with a grass type legume ground cover to avoid erosion, sedimentation and dust.

3.2 Potential In-direct Social Impacts

In addition to the above issues that clearly have the potential for direct and consequential social impacts to neighbouring sensitive land uses, the following matters have indirect and/or associated social interactions between the proposed quarry and the neighbouring community. These include: archaeology, cultural heritage, surface water, groundwater and natural environment. Social concerns are possible to arise if the application has not carefully considered these matters and made accommodations to ensure their protection both, during both the on-going extraction operation and the progressive and final rehabilitation stage as well.

Recommendations arising from these disciplines include:

a) **Agricultural Community**

There is policy support in the Provincial Policy Statement, Regional Official Plan and City of Port Colborne Official Plan that extraction is permitted on prime agricultural lands and that full rehabilitation to an agricultural use is not required subject to:

- outside of a specialty crop area, there is a substantial quantity of mineral aggregate resources below the water table warranting extraction, or the depth of planned extraction in a quarry makes restoration of pre-extraction agricultural capability unfeasible;
- other alternatives have been considered by the applicant and found unsuitable. The consideration of other alternatives shall include resources in areas of Canada Land Inventory Class 4 through 7 lands, resources on lands identified as designated growth areas, and resources on prime agricultural lands where rehabilitation is feasible. Where no other alternatives are found, prime agricultural lands shall be protected in this order of priority: specialty crop areas, Canada Land Inventory Class 1, 2 and 3 lands; and
- agricultural rehabilitation in remaining areas is maximized.

Given that the application has satisfied these requirements, it remains important that the proposed quarry does not socially impact the larger agricultural community that it is partially surrounded by. To address this, an Agricultural Impact Assessment was undertaken by Colville Consulting Inc., dated September 2020 and updated October 2021. Recommendations from that Assessment were provided to ensure no such impacts and included:

- That where possible, displaced topsoil not required for post-extractive rehabilitation, should be available for re-use to improve the agricultural conditions for cultivation at other locations where opportunities exist.
- Lands not immediately required for extraction shall remain available for agricultural production when possible. This will ensure that the agricultural use remain for the longest extent possible. This has been implemented through the Phasing Notes: Phase 1A - Note a), Phase 1B – Note a) Phase 2 – Note a) and Phase 3 – Note a).
- The licensed boundary area should be aligned with existing property boundaries where possible. PCQ has been deliberate to include all their lands in order to avoid fragmentation of the property boundaries.
- Appropriate buffering abutting agricultural lands shall employ such things as:
 - Vegetated berms, which can offer both visual and physical buffers,

- Dust suppression techniques and noise management according to appropriate regulations.
- When agricultural vehicles utilize interior quarry roads to access agricultural lands, a safety protocol will be developed to ensure the safety of all farm traffic through the licensed area, or alternate access should be provided. To avoid this, specific external farm access locations have been created, with one accessing from Miller Road and the second from Second Concession Road. This has been implemented through Site Plan Note 6.
- The proposed quarry entrance onto Highway 3 shall be designed and constructed to accommodate existing land uses in the vicinity.
- Perimeter fencing shall be established to minimize the potential for trespass and vandalism. This has been implemented through Site Plan Note 3.
- Monitoring of all vegetation within the setbacks and on berms will continue throughout the life of the quarry and if any vegetation dies, it will be replaced immediately (during the proper planting season). This has been implemented through Site Plan Note 18e).
- Erosion/Vegetation Monitoring: If there is any substantial areas of erosion that would result in increased levels of sedimentation either during the quarry operation or during the progressive rehabilitation stage, those areas shall be regraded and reseeded immediately. If there is any substantial vegetation die-out, including berm vegetation, upland trees/shrubs, aquatic vegetation, it shall be replaced immediately and/or during the next appropriate planting season. This has been implemented through Site Plan Note 18e).
- The groundwater monitoring program shall identify and monitor any changes related to ground water resources surrounding the quarry operation to ensure farm operations dependent on ground water are not impacted. If any well interference issues are identified, the Licensee shall ensure that adequate water supply is available for adjacent farm operations.
- The Licensee shall ensure that quarry signage on Main Street (Highway 3) includes a phone number for neighbours to call if any issues should arise.
- The Licensee shall ensure that all MOECC standards regarding blasting, noise and dust emissions are met.
- The Licensee shall use non-invasive, native plant species for berm plantings and other landscaped features surrounding the quarry operation.
- **The Licensee will utilize existing haul routes and regional roads designed for transport of goods and services of all types, and because no significant increase in truck traffic is expected, no additional mitigation is required with respect to the use of alternative routes.**

Based on the above, and notwithstanding that the existing PCQ quarry (Pit 2 and Pit 2) already exist as an industrial extractive land use within the rural / agricultural community, the expansion will extend the bounds eastwardly. The proposed recommendations of the AIA will be essential to ensure that the attributes of the agricultural community are maintained and that there will be the least amount of social disruption as possible by focusing all the activities inward and the only external haul access point being onto a provincial highway.

b) Archaeology

A series of archaeological assessments have been carried out on the site including: Archaeological Assessment, Stage 1 and 2, Golder Associates Inc., dated July 2020 and Supplementary Stage 1 and 2, also dated July 2020.

Through the completion of these reports, numerous archaeological find spots were identified and where Stage 3 investigations have been recommended. No soil disturbance or other activities can occur in those sites until further field work has been undertaken and that the sites have been cleared based on MHSTC criteria.

Portions of the PCQ land holdings have been excluded from the Limit of Extraction in areas where significant amounts of archaeological artifacts have been identified and currently there are challenges to economically clear those sites.

The local community including the local First Nations Communities can be reassured that all the site artifacts have either been: i) retrieved, inventoried, documented, and archived into storage, or, ii) remain on-site in locations that have been specifically geo-referenced for future assessment if necessary, and or protected for the long-term.

c) Surface Water (Hydrology)

Given the presence of wetland features on the site, it was critical to have a full in-depth understanding relationship between the surface water, groundwater and natural environment. As such, the Hydrological Study by Golder Associates Inc., dated October 2020, and updated December 2021 is an important document to that understanding.

Through that Study, confirmation was provided that there will be no changes to the surface water regime, and to ensure this, strategic monitoring has been recommended when extraction occurs in proximity to the wetland boundary. Furthermore, because the site will be extracted in dry conditions through dewater, that discharged water that will be released into the Wignell Drain (east and west branch), will be regulated through the provincial Ministry of Environment, Conservation and Parks (MECP) via an Industrial Sewage Works Environmental Compliance Approval (ECA).

As such, the local community can be assured that the natural environment and specifically the surface water regime will be protected.

d) Groundwater (Hydrogeology)

As noted above, the Pit 3 Extension quarry will be operated under dry conditions, meaning that the quarry must be dewatered. The result of dewatering is that a significant drawdown cone results which has been predicted to have a sphere of influence that extends 0.75 - 1.0 km from the quarry boundary. The Hydrogeological Study that was undertaken by Golder (October 2020 and updated October 2021) confirmed that all the private water wells within that radius, access their water source from a deeper aquifer and therefore, no groundwater quantity impacts are predicted but on-going groundwater monitoring will confirm same. In addition, and although no chemicals are used in the extraction process, groundwater quality testing will occur during the on-going quarry operation.

The above actions are being characterized as an in-direct social matter, but it could equally be argued to be a matter directly impacts the social well-being of the local community. However, it is categorized, the important element is that the local community has an understanding and knowledge that their potable water source remains safe and will not be interrupted. Therefore, , the extensive groundwater monitoring program as described on the Site Plans including the 'Private Well Complaints Response Program' are key components to assuring the local community that their potable water access has been protected and to provide the social well-being in that knowledge.

e) **Natural Environment**

In a similar context as the surface water issue, the Natural Environment Report prepared by Golder, dated October 2020 and updated October 2021 is critical to have a full in-depth understanding relationship between the surface water, groundwater and natural environment. As such, the Natural Environment Study is an important document to that understanding.

Through that Study, confirmation was provided that all the significant habitat was identified, and all will be protected. To ensure this, strategic monitoring has been recommended when extraction occurs in proximity to the wetland boundary to monitor potential changes to the wetland vegetation. Furthermore, the report has provided numerous recommendations for ecological enhancement,

As such, the local community can be assured that the natural environment will be protected including matters related to:

- The use of identifiable setbacks
- Bird Breeding Habitat avoidance
- Fish Habitat where necessary, obtaining MNRF permit to collect fish
- Sediment/Erosion Control
- Appropriate noise and dust mitigation
- Wetland Vegetation Monitoring Program
- Proposed Vegetation in strategic locations throughout the site
- Use of locally native, non-invasive species
- Rehabilitated side slopes to be vegetated.

f) **Tree Preservation Plan**

The extraction plan proposes to remove a small grove of trees within Phase 2. The undertaking of the Tree Preservation Plan focused on identifying the quality of this woodlot. Ultimately, the report recommended removal to the trees given the presence of Emerald Ash Borer damage, high occurrence of Ash trees, pioneer species and possible restoration plantings, as the relatively young age of the trees.

Based on this assessment, the local community will be provided the social well-being knowledge that the woodlot did not contain any significant tree species.

3.3 Pit 1 Operational Impacts

In addition to the above, past and/or current social impacts arising from the Pit 1 operation should be identified so that:

- a) Further longevity / duration of the processing activity within Pit 1 due to the Pit 3 Extension aggregate being haul there can be assessed and minimized, and
- b) Any negative social impacts identified / originating from Pit 1 can be intentionally avoided as part of the Pit 3 Extension design.

During PCQ Inc.'s ownership of Pit 1, Pit 2 and Pit 3 lands over the past several decades, the following operational elements have been in place:

i. Internal Trucking Activity:

To avoid the use of external provincial municipal roads, (i.e. Second Concession Road or Highway 3, aggregate has historically been trucked into Pit 1 using large quarry trucks via an

internal haul road from Pit 2 and Pit 3. In doing so, the large quarry-type trucks traverse across Babion Road and Snider Road, both which are City of Port Colborne municipal roads.

Babion Road: At the quarry crossing, there are stop signs which are strictly and consistently obeyed by the regular flow of quarry trucks throughout the operating day. Because of the low traffic usage of Babion Road, little to no daily interactions occur with the quarry trucks. Based on this, there are minimal to no social impacts related to this crossing.

Snider Road: It is an opened / travelled road only at its southern extent near Highway 3, with the balance of the right-of-way north to Second Concession being an unopened road allowance. There is no interaction with public with quarry trucks crossing this right-of-way, and and therefore, no social impacts.

Social Impact:

During the initial operation of Pit 3 Extension, (estimated 3-4 years) this haul road will continue to be used until such time that a new processing plant can be located on the Pit 3 quarry floor. Therefore, given that there are minimal to no social impacts occurring currently on these cross-roads, no increase in social impact is predicted.

Once the Pit 3 Extension aggregate begins being processed at the new Pit 3 plant, the internal haulage via Pit 2 and Pit 3 to Pit 1 will cease. It will however be replaced by haulage from Pit 3 Extension to Pit 3, but this will not require any crossing of a municipal road so no similar social impacts related to internal traffic will occur.

ii. Aggregate Processing:

The aggregate trucked into Pit 1 is processed which includes, primary and secondary crushing, screening, washing and blending. The segregated aggregate products are then stockpiled individually, each created to meet a precise MTO specification. The material is awaiting to be loaded to traditional highway dump trucks to be shipped to the provincial, regional and local market.

Stemming from this there are numerous activities that have possible social impacts that will continue during the short duration that Pit 3 Extension material is hauled into the Pit 1 lands.

iii. External Trucking

Currently, once traditional highway dump trucks are loaded from Pit 1, they travel to Highway 140 via Ramey Road and Second Concession Road. This access location involves the least amount on interaction with local traffic as the trucks access Highway 140 at a signalized intersection. PCQ maintains Ramey Road and provides on-going road sweeping out to Second Concession Road.

Social Impact:

During the initial operation of Pit 3 Extension (estimated 3-4 year duration), aggregate processing will occur at the Pit 1 facility, so the Highway 140 access to the provincial, regional and local market will continue until that time.

Although the Traffic Impact Study identified a single issue that the MTO southbound left-turn stacking lane has some design deficiencies, the intersection operates well and PCQ Inc. is not in receipt of any local neighbour complaints related to trucks using this access. Based on this, no change in social impact is predicted given the slight increase of duration due to initial Pit 3 Extension production use.

Once the Pit 3 Extension aggregate is relocated and begins processing in Pit 3, the external haulage via 140 will cease. It will however be replaced by direct access to Highway 3 and that access will be undertaken to meet stringent MTO design standards and therefore, future social impacts related to external traffic are not predicted. The Agricultural Impact Assessment was updated (October 18, 2021) to examine any potential impacts to

neighbouring agricultural land uses related to the proposed Highway 3 entrance, and none were predicted.

iv. Site Maintenance Facility

PCQ Inc. and Rankin Construction have a maintenance facility located within Pit 1 that will continue to be used for the both on-site equipment and other construction equipment. This facility is intended to remain in use for the duration of the Pit 3 Extension.

Social Impact:

PCQ Inc. is not in receipt of any local neighbour complaints related to the maintenance facility. Based on this, no change is predicted related to the ongoing use of this building.

Once the Pit 3 Extension aggregate is relocated and begins processing in Pit 3, and the internal haul road is closed, between Pit 3 and Pit 1 (natural flooding of Pit 2), daily off-site use of Second Concession between Babion Road and Ramey Road will be necessary to transport quarry extraction equipment.

Based on this, limited (start of day, end of day) interaction with local traffic, there will be a small change in the traffic composition, but no social impact is anticipated.

v. Site Access

The only access point for Pit 1 is Ramey Road. Past concerns with a second access at Chippawa Road resulted in that access being eliminated. Since time, vegetation has grown so that the former access is now barely visible.

Social Impact:

The short duration of Pit 3 Extension material being hauled to Pit 1 will make no change in this matter.

As part of the Pit 3 Extension design, it was important to restrict/limit access to the site. Practically, Pit 3 Extension has a large areal extent with multiple frontages onto Municipal, Regional and Provincial roads, coupled with the need to retain farm access for ongoing agricultural production and to ensure the three existing residential properties continue to have access.

To accommodate these factors,

- a) Specific access has been created to accommodate strategic access locations for farming equipment and quarry staff as required. These accesses will be located from:
 - i) Second Concession Road and ii) Miller Road will always remain gated / locked except for limited seasonal access. No extraction equipment or haul truck access will be permitted.
- b) Once the processing plant is located to the Pit 3 quarry floor, the Highway 3 access will be designed, approved constructed as per MTO specifications.
- c) The application submitted included three existing single residential dwellings to be retained inside the ARA License;
 - o One fronting onto Second Concession Road,
 - o Two fronting onto Highway 3

Given that:

- a) NDMNR has advised PCQ Inc. to exclude the wetland area SWD3-2 [Silver Maple Deciduous Swamp], and which immediately abut 1645 Second Concession.
- b) Regional staff have advised that a site-specific Amendment will be required to allow the three residences to be recognized in the Official Plan.

- c) The lands encompassing the 1252 and 1326 Highway 3 dwellings have been confirmed to be uneconomical to extract based on the significant concentration of archaeological artifacts located there.

Therefore, in addition to excluding the Silver Maple Deciduous Swamp from the application, PCQ Inc. has decided to exclude the three dwellings from the license.

Based on this, site access to the Pit 3 lands has been restricted to the maximum extent possible and several (residential) access points will be excluded and therefore future social impacts related to site access are not predicted.

vi. Noise Attenuation

As noted above, the existing aggregate processing plant located in Pit 1 will continue to be used during the first estimated 3-4 years when Pit 3 Extension begins to operate.

The existing processing facility is below grade and on the quarry floor, being approximately 400 metres from existing residences to the north which front onto Second Concession Road and about 300 metres from residences to the west fronting onto Chippawa Road, which are also separated by Highway 140.

Social Impact:

PCQ Inc. is not in receipt of any local neighbour 'noise related' complaints related to the processing plant. Based on this, no change is predicted related to the ongoing use of this processing plant for such an additional short duration of a few years.

Once the Pit 3 Extension aggregate is relocated and begins processing in Pit 3, that processing plant will also be located on the quarry floor and shall be required to meet all MECP Noise Guideline specifications as confirmed by the updated Noise Assessment Report. In addition, computer noise modeling is being undertaken by Golder which will accompany a Site Plan Amendment to NDMNRF. Based on this, no social impact is anticipated to result.

vii. Air Quality

As noted above, the existing aggregate processing plant located in Pit 1 will continue to be used during the first estimated 3-4 years when the Pit 3 Extension begins to operate. PCQ Inc. does utilize best management practices to address potential visible fugitive dust at both the front access (Ramey Road) and the internal haul road (Pit 2 and Pit 3) as necessary when required.

Social Impact:

PCQ Inc. is not in receipt of any local neighbour 'dust related' complaints related to the processing plant or haul road. However, the Air Quality Assessment prepared in support of the Pit 3 Extension application did identify that the lengthy internal haul road (via Pit 2 and Pit 3) was a potential contributor of air borne dust. As such, the prolonged use of the haul road has the potential to have social impact if best management practices for dust were not being proactively used. Based on this, the additional short duration of a few years of use of the haul road and processing plant at expected to have only minor social impact.

Once the Pit 3 Extension aggregate is processing at the relocated Pit 3 plant, the internal haul road via Pit 2 and 3 will cease thereby eliminating that potential dust sources. The Internal haulage distance from Pit 3 Extension to the processing plant in Pit 3 will be considerably shorter, the processing plant will be located on the quarry floor and shall be required to meet all MECP Air Quality Guideline specifications as confirmed by the updated Air Quality Assessment. In addition, computer air quality modeling is being undertaken by Golder which will accompany a Site Plan Amendment to NDMNRF. Based on this, no social impact is anticipated to result.

3.4 Summary

There are numerous potential social impacts that could arise because of this proposed quarry that can be divided into possible direct impacts and possible indirect impacts.

Possible direct impacts include:

- Noise
- Air Quality (dust)
- Blasting (Vibration)
- Traffic
- Visual

Possible in-direct impacts include:

- Archaeology
- Cultural Heritage
- Surface water
- Groundwater
- Natural Environment

As highlighted above, each of these matters has been considered in terms the possible negative impacts that could occur through the active day to day quarrying operation. Each of these impacts was assessed by experts and they each provided specific recommendations to ensure that no real or perceived impacts will result.

4 Public Participation

The planning processes for the Aggregate Resources Act and the Planning Act provide for public participation as highlighted in the [Public Consultation Plan](#) (dated March 15, 2021) submitted to the Region of Niagara as part of the initial submission package.

Although the supporting technical documents were prepared individually and cumulatively with a goal to minimize social impacts, the public may raise issues not previously considered or a different perspective on a social impact matter that was assessed. As such, the public voice is an important avenue to ensure that a wider perspective is considered.

To date, (Dec. 2021), the following public participation has been completed:

ARA:

- 45 Day Public Notification including:
 - Multiple (6) simultaneous discipline specific Public Information Sessions (via Zoom) where hosted by PCQ Inc. (April 20, 2021) and numerous members of the public participated in all the Zoom calls.
 - Receipt of 14 'letters of objections', from the local community, one interest group (Niagara Water Protection Alliance) and formal objection letters from review agencies, (NDMNRF, OMAFRA, NPCA, Region of Niagara and the City of Port Colborne).

As required under the ARA, PCQ Inc. must provide individual response letters to each of the letters received to address their concerns where applicable and feasible. Although many of the issues raised were addressed in the support documents, the response letters will either clarify this or will provide further explanation.

However, as an example of social impact issues that were raised through public participation that have necessitated further documentation include;

- Pit 1 Processing Relocated: Although PCQ Inc. confirmed their intent for the aggregate processing of Pit 3 Extension material is to be relocated from Pit 1 to Pit 3, the comments from the public highlighted this as a positive action and noted their preference for expedience.
- Pit 1 Processing Impacts: During the Public Information Session, one participant raised an issue that water as a dust suppressant isn't applied on weekends which results in [non-operational fugitive dust] arising on Sundays.
- Pit 2 Rehabilitation: Although PCQ confirmed the eventual rehabilitation of the Pit 2 lands, the comments from the public highlighted the need for more certainty in timing. This in turn resulted in a more specific timeline for the balance of in-field works and a more defined timeline for dewatering to cease.

Planning Act

Planning Act: [ROPA, OPA, Zoning]

- Open House hosted by the Region and City on September 9, 2021 in advance of the Statutory Public Meeting.

If found to be substantially different, we anticipate that comments from the public received through the Planning Act process will be incorporated into responses from the Region and/or City where applicable for PCQ Inc. to address at a future date.

5 Shifts in Social Impacts

As noted by the supporting documentation, Pit 3 Extension is not forecasted to commence for an estimated 8-12 years and upon becoming operational, it will have a minimum quarry life of 45 years. As such, the quarry will extend potentially over multiple generations. Under the umbrella of social impacts, it is our opinion that;

- All social impacts have been identified and addressed at the start of the quarry life,
- That the licensee shall undertake the operation of the quarry according to the approved Site Plans and further enforced by NDMNRF staff.

Based on this, future social impacts (relative to future generations) would be equally addressed based on current provincial thresholds being maintained.

What can not be known or predicted is any future societal shifts regarding a specific social issue. However, it is anticipated that if any such shift did occur which aligned with a provincially mandated threshold (e.g., noise, blasting, air quality, traffic, natural environment), that at some interval in the quarry life, such discrepancies would be acknowledged and addressed. As an example, if the existing aggregate processing operation in Pit 1 did not meet increasingly stringent provincial noise thresholds, MECP has the authority to issue applicable directives for the operation to comply. Furthermore, through the Aggregate Resources Act [Section 13 (1)], the Minister has the authority to order Site Plan Amendments.

13 (1) The Minister may at any time,

- (a) add a condition to a licence, rescind or vary a condition of a licence or amend a licence in any other way; or*
- (b) require a licensee to amend the site plan or to submit a new site plan. 2019, c. 14, Sched. 15, s. 5 (2).*

6 Enforcement

Knowing that the Licensee is both responsible and accountable to others is important to creating trust. As they currently do, PCQ is responsible to undertake an annual self-assessment of the quarry which is known as a Compliance Assessment Report that must be conducted annually to ensure the quarry operation is in compliance with the approved Site Plans.

In addition, MNRF has dedicated and trained aggregate staff whose role it is to carry out regular and random site audits and if compliance is not occurring, they have a range of enforcement powers up to and including locking the quarry gates until such time that the matter is addressed.

Lastly, the public are always afforded the opportunity to raise any operational matter that they see might not be in conformity. The preferred first point of action is to call quarry as this route usually can result in the fastest action. This is one of the key reasons that the quarry phone number is listed on the prescribed quarry notice sign at the front gate. However, if immediate action is not taken or the action is not sufficient, the public are encouraged to contact MNRF.

One of the key mechanisms to ensure that there is no mis-understanding of the Licensee's responsibilities in operating the quarry, is that all the notes associated with the Site Plans must be clear, succinct and worded enforceable. This is achieved by avoiding ambiguous language and through actionable terms such as will, shall, must.

Such action applies to all the General Operational notes that deal with matters of timing of berm construction, timing of vegetation planting, direction of extraction, ongoing monitoring responsibilities, immediate replacement of eroded areas and replanting of significant dead vegetation.

7 Summary

Based on the above, and subject to the inclusion of all the technical recommendations and general operational notes, it is our opinion that all forms of social impacts being direct and indirect have been addressed

Yours truly

IBI GROUP



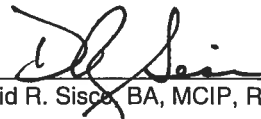
David R. Sisco, BA, MCIP, RPP
Senior Planner

DRS/baw



I hereby certify that the Social Impact Assessment was prepared by a Registered Professional Planner, within the meaning of the Ontario Professional Planner's Institute Act, 1994.

Jan 28th 2022
Date


David R. Sisco, BA, MCIP, RPP